

# The Bristol Dock Company,

## 1803-1848

The **Bristol Dock Company** was set up in 1803 to finance, carry out and operate the improved harbour which had long been urged. But the company structure and capital reflected the local politics and tensions which had delayed action hitherto, and which continued to handicap its operations over its 45-year life. It was never popular (see the front cover illustration, rejoicing at its demise) and was much criticised in its lifetime and subsequently, but this detailed and fully documented account sets out to show that most if not all its weaknesses arose from the compromises and constraints built into its very foundations.

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Cover picture: **Free Port Day in celebration of the takeover of the Dock by the Bristol Corporation in 1848.**  
by S G Tovey (Bristol City Museum and Art Gallery).



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#### **Author's Amendment** (not in original)

On page 5 it is stated that William Milton was the vicar of Temple parish.

This is a repetition of a mistake that has appeared in a number of publications over many years. In fact Milton was not the vicar of Temple and had no known connection with the parish. This is explained in an article by Kath Hapgood and Peter Malpass in the *Bristol Industrial Archaeology Society Journal* No. 43, 2010, pp 37-40. Recent research by Andy King has revealed the existence of an 1812 copy of Milton's essay on harbour improvement written in 1791. The essay, addressed to the Society of Merchant Venturers, can be found in the Bristol Archives, reference 42943/2.

#### **Editor's Note**

BRO (Bristol Record Office) has been updated to BA (Bristol Archives).



*Cumberland Basin and New Cut 1825*<sup>1</sup>



*Cumberland Basin 1929*<sup>2</sup>

## **Introduction**

The Bristol Dock Company was formed in 1803 by Bristol Corporation and the Society of Merchant Venturers (SMV) in order to build and manage the Floating Harbour. As such, the Company has been implicated in the relative decline of Bristol in the first half of the 19<sup>th</sup> century. This is not simply a modern view: the Dock Company was under attack from the outset, initially by opponents of major investment in harbour improvement works and subsequently by people who criticised the Company's performance. For example, in the 1820s the newly formed Chamber of Commerce alleged that high port charges levied by the Company were driving away trade. A decade later the commissioners investigating municipal government nationally were scathing in their judgement:

The condition of the City of Bristol is indissolubly connected with the prosperity of its port; and it is notorious that the trade of Bristol has not kept pace with the increase of other ports, once its rivals. Far below her former station as the second port of the empire she now has to sustain a mortifying competition with second-rate ports in her own Channel. If it were not for its Irish trade and the West Indies monopoly, of which the circumstances still enable Bristol to retain its share, it is possible that there would soon be nothing in the Floating Harbour but a few coasters and fishing boats.<sup>3</sup>

The charge repeatedly made against the Dock Company was that it had damaged trade:

The record of the next forty years [after completion of the Harbour] is one of a fatuous policy, which, by her supineness, reduced Bristol

from her proud position of the second seaport in the kingdom, drove the trade from her by exorbitant dues and suffered Liverpool and other ports to outbid her for the commerce of the world.<sup>4</sup>

Much has been written about the port of Bristol and the Floating Harbour,<sup>5</sup> but the Dock Company itself has not been subjected to detailed historical research, despite the wealth of archive material available, including a full set of accounts from 1809 to 1848, and the minutes of all board meetings. Lack of research has not prevented a number of writers from expressing opinions about the Company, in virtually every case negative. The least critical observation is that the Company was ‘more sinned against than sinning’<sup>6</sup> at least in the 1820s. Writing about the 1830s, Bush says that ‘Almost unanimously [Bristol’s] stagnation was pinned on the Dock Company’<sup>7</sup>; and the Company has often been condemned by writers concerned with the history of Bristol’s trade. MacInnes, for example, was particularly harsh in his comments, referring to its ‘unenlightened and penurious policy’, calling the Company ‘hidebound and unprogressive’,<sup>8</sup> while Buchanan describes it as displaying ‘characteristic irresolution’<sup>9</sup> in response to Brunel’s recommendations about essential improvements in the 1830s. Harvey and Press have summed up the literature by saying that most critics agree that before municipalisation in 1848 the port had been ‘badly mismanaged to the detriment of local trade and industry’.<sup>10</sup> However, Neale’s description of the Dock Company as ‘an early masterpiece of legal and financial manipulation’<sup>11</sup> points in a rather different direction.

The question of harbour improvement had been discussed for fifty years before anything was actually done: it was a politically contentious issue that divided opinion within the Corporation and the town as a whole, and it continued to do so both during and after the construction of the Floating Harbour. We need to read the contemporary record with politics in mind, remembering two things in particular: the opponents of harbour improvement worked to obstruct what they could not prevent; and their politically motivated criticisms and judgements are not necessarily to be taken as objective truth. The explanation to be developed here is one that gives more weight to these contextual, structural and constitutional considerations. A more balanced account of the Dock Company shows how its behaviour can be understood in terms of its unique constitution and a series of key decisions made in the very first years of the 19<sup>th</sup> century.

## The Origins and Creation of the Dock Company

Bristol enjoyed a golden age in the mid-18<sup>th</sup> century, for a while standing second only to London as the chief port in England. The wealth generated from overseas trade, including the appalling trade in enslaved Africans carried to the Americas, made Bristol merchants rich and increased the numbers of ships crowding into the harbour. At that time the port infrastructure was pretty much as it had been for several hundred years: ships had to make their way up the winding, tidal river Avon before they could tie up at the stone quays, which, by the end of the 18<sup>th</sup> century, extended all the way from the Broad Quay round to Bristol Bridge via the Grove and Welsh Back. Nevertheless there was considerable congestion in the port, made worse by the fact that at low tide the rivers were reduced to small streams, dumping vessels on the mud for several hours in each 24 hour period. There was no guarantee, of course, that high tides would coincide with daylight hours, and so there could be serious delays in loading and unloading ships. Wooden ships stranded on the mud presented a potentially serious fire hazard, for if one caught fire it would be impossible to remove it from the vicinity of others moored nearby. It was also the case that on neap tides there was not enough water in the river for ships to get up to Bristol. What was needed, therefore, was a scheme that would allow ships to approach Bristol even on neap tides, and keep them afloat at the quaysides at all stages of the tide.\* Several plans and proposals were discussed from the 1760s onwards but nothing was done to implement any of them.<sup>13</sup> Cost was a factor but so too was uncertainty about the sustainability of high volumes of traffic in the future. Trade passing through Bristol was adversely affected by the American war of independence (1775-83)<sup>†</sup> and it has been argued that by the end of the century Bristol had become dangerously specialized and dependent on

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\* Even after the Floating Harbour was built until the 1820s ships were only permitted to proceed up river in daylight and only then when the tide ebbed earlier than a specified time in the morning or flowed later than a given time in the afternoon. Ships were not allowed to pass from the Basin into the Float except in daytime and not until 2 hours after high water; they were not allowed down unless they were in the Basin 3 hours before high water.<sup>12</sup>

† Nationally exports fell by 20 per cent in 1772-80, and exports to the American mainland fell by almost 50 per cent.<sup>14</sup>

imports from the West Indies.<sup>15</sup> Nevertheless, the national economy grew faster after 1780 and by 1791 the port of Bristol was busy enough to engender a renewed sense of urgency about the question of improvement.

In addition to a feasible engineering solution it was necessary for someone or some body to take legal, financial and organisational responsibility for the project. The Corporation and the SMV were the two corporate bodies that might have taken on the task, either individually or together, but neither was prepared to take the risk. The Corporation at that time was an entirely undemocratic body with rights and responsibilities derived from a series of royal charters dating back to 1373. It consisted of the mayor, 12 aldermen and 30 councillors drawn from the group of freemen of the city; vacancies were filled by co-option and members generally served for life. The Corporation owned significant amounts of landed property, including the quays, from which it drew revenue \* but its members recognised no obligation on them to provide services to the public at large. The SMV had represented the interests of Bristol's merchants since the early 17<sup>th</sup> century, when the Corporation had given it the responsibility for the maintaining the quays and navigation, and the right to levy charges on shippers. By 1799 the Society's membership had declined from a peak of 145 in 1745 to only 100. Although the Society continued to be a force in the city, '...it tended to become more of a cosy little club with limited membership restricted to certain closely-related families than a body representing all the mercantile interests in Bristol'.<sup>16</sup> Membership of the Corporation and SMV tended to overlap and together they operated as a powerbase for the exclusively male social and economic elite of the city.

In the early months of 1791 the SMV set up a committee to revive discussion of port improvement, and in October sent a resolution to the Corporation, which set up its own committee to respond. The first conclusion in the Corporation committee's report in December 1791 was

That the state of the Harbour of Bristol is by nature so inferior to the natural or improved state of many other of the Ports of Great Britain

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\* Town Dues were charged on imports and exports and Mayor's Dues on vessels, while other fees were paid directly to the Quay Warden and Water Bailiff, both officers of the Corporation.

that the Ship-holders of Bristol are not on an equal footing with the Ship-holders of such other Ports, either to the security of their Ships whilst in Port or to the ease and expedition with which they can be discharged, loaded and proceed again to sea.<sup>17</sup>

The Corporation and the SMV then set up a joint committee. The historian has the benefit of two sets of minutes, by Mr George Webb Hall, on behalf of the Corporation, and by Mr Jeremiah Osborne for the SMV.<sup>18</sup> Both men, local solicitors, carried on providing advice to the committee and in due course Hall and John Osborne (Jeremiah's son) became joint clerks to the Dock Company. At its first meeting, 6 January 1792, the joint committee received, and rejected as too expensive, a plan for port improvement from Rev William Milton, vicar of the parish of Temple (though it was effectively on Milton's plan that the Floating Harbour was eventually constructed). In December 1792 the committee rejected a private enterprise solution and resolved:

That if it should be deemed expedient to carry [its] plan into execution, such a Revenue only should be provided as would be sufficient to pay the interest of the sums borrowed to complete the works, the Expenses of its maintenance and to raise a small Surplus towards a Sinking Fund; so that the Debt would be gradually lessened, the Tax might be reduced and ultimately cease; And that the Corporation and Society have therefore resolved, that the Plans, if adopted, ought to be carried into Execution for the sole Benefit of the Public, and that no Individuals or Bodies of Men should derive any private Emolument from them.<sup>19</sup>

The joint committee met regularly until September 1793, and seems then to have suspended its activities, probably because of the serious financial crisis created by the outbreak of war with France in February. Nineteen Bristol finance houses failed for a sum exceeding £1 million;<sup>20</sup> other bankruptcies followed the collapse of a brief local mania for investment in canal projects<sup>21</sup> and a speculative house building bubble which left many uncompleted houses in Clifton. The joint committee did not meet again until July 1801, a whole year after the SMV took the first step towards reviving it.<sup>22</sup>

## Key Decisions before the Company was Formed

Before the Company was even set up, key decisions had been made on the construction plans, on financing and on the structure of the Company.

In March 1802 the joint committee set up in 1792 finally produced a report on plans for the improved harbour, supporting a scheme devised by William Jessop, possibly 'the greatest harbour engineer of his day'.<sup>23</sup> (see Fig 1b) In this scheme, the floating harbour was to include only the Frome and the Avon west of Canon's Marsh; the Marsh itself would be excavated to form a 9 acre floating basin; but the existing quays from the confluence with the Frome up to Bristol Bridge would remain tidal. The scheme included a new cut from the confluence of the Avon and Frome west to Rowham. Jessop costed the work at about £150,000, plus the price of land, estimated at £44,000.<sup>24</sup>

The Corporation decided to go ahead on this basis. 2,000 copies of the plan<sup>25</sup> were printed to publicise the proposal to prospective investors and solicitors began to prepare a parliamentary Bill to enable the Dock Company to be formed and to empower it to acquire the land for the proposed new cut. Then in the following August, after the public had subscribed for £144,500 of shares in the project, the committee adopted a radical expansion brought forward by Thomas Hill. The new scheme was to abandon the Canon's Marsh basin and instead to extend the new course of the river as far as Totterdown, thereby impounding a considerably longer stretch of water and including within the floating harbour all of the existing quays.<sup>26</sup> (see Fig 1c) The new concept was sufficiently similar to the plan advanced by Rev Milton in 1791 for him later to claim credit for the idea, although his plan did not include a large entrance basin, it was not specific about the location of the entrance to the harbour (it might be as far upstream as to be adjacent to Canon's Marsh), and seems not have included an entry at Trim Mills (Bathurst Basin).<sup>27</sup> The new plan was swiftly referred to William Jessop.<sup>28</sup> He felt that the entrance needed to be further downstream, to make the most of neap tides,<sup>29</sup> but he approved the plan within less than a fortnight, pronouncing it to be 'the most perfect' yet devised, providing advantages that would justify the additional cost, which he estimated to be £62,000, plus the cost of buying more land.<sup>30</sup>

After decades of debate about different approaches to the civil engineering problem it was not until the early months of 1802 that there was any serious discussion about finance and administration. The second

set of decisions concerned finance. The joint committee's report of March 1802 proposed that £150,000 should be raised as share capital, and £50,000 should be borrowed on mortgage, with interest on the latter to be guaranteed by the Corporation and SMV. The report claimed that the revenue costs of the project could be covered by securing an income of £10,000, to be derived from a tonnage charge on ships entering the harbour and a rate on houses and lands in the city 'not exceeding one shilling in the pound' (reduced only a week later to 6d). But the improved scheme led the committee to increase the budgeted cost to £300,000, of which they now proposed to raise £250,000 as share capital, even though the initial offer of £150,000 had been undersubscribed and only achieved by members of the joint committee promising to buy more shares.<sup>31</sup> It was now assumed that they could achieve an income of £13,000 to cover the higher capital expenditure; and by December 1802 the committee was saying it expected an annual income as high as £18,570. This was, mainly but not exclusively, to come from charges to be levied on goods as well as on ships.<sup>32</sup>

The 1802 report envisaged that dividends should be limited to 4% of share capital (rising to 8% after 6 years), with any surplus retained as a fund for 'the gradual Redemption of the Harbour' by buying back shares, so that eventually the Corporation and SMV would own all the assets. After this, operating surpluses would accumulate in another fund, which would eventually reach £60,000, reckoned sufficient to maintain the port indefinitely from the investment income and allow shipping charges to cease.<sup>33</sup>

The third set of key decisions concerned the creation and capitalisation of the Dock Company itself. The problem facing any large infrastructural project at that time was how to raise significant amounts of capital for an undertaking that would not generate a return for some years at least. In principle there were probably four options. The Corporation as the owner of the quays could have undertaken the work itself or in collaboration with the SMV as lessees, in the same way that the Corporation in Liverpool had undertaken dock building. Second, the Corporation could have set up a Trust, of the type already established for turnpike roads. Trusts provided an attractive alternative to the third option, a joint stock company, because they were seen as acting in the general interest rather than simply on behalf of the private interests of investors. However, in London private joint stock companies had been responsible for developing the first enclosed docks,

completed in 1802. In Hull, too, a private company set up by the Corporation in 1774 had built a dock and proved to be highly successful, in the short term at least. The final option and the one adopted was some kind of hybrid; and just as 'The Hull Dock Company was not at first looked on as a private company. It was one of the three Corporations that cared for the wellbeing of the town'<sup>34</sup> so the Bristol Dock Company (though not exactly like Hull's) shared this ambiguity and was later referred to in much the same way.<sup>35</sup>

How it was decided to set up a joint stock company is not recorded. The March 1802 report did not mention it, referring simply to a board of directors comprising 9 councillors, including the Mayor, 9 nominees of the SMV, including the Master, plus 9 directors elected from among subscribers owning at least 10 shares (later termed 'proprietary directors'). The Mayor was to take the chair, or in his absence the Master. The draft Bill which followed provided for a joint stock company owned by the three groups so represented: the mayor and all members of the Corporation, the master and members of the SMV and the subscribing shareholders.

Compared with a modern business, the board was top-heavy with non-executive directors, and indeed it had many more directors than salaried staff. Leadership and continuity were not helped by the lack of a permanent chairman: meetings were chaired by the Mayor or the SMV Master who held their offices for only a year to be succeeded by new men, who were not necessarily already directors.

The constitution was unique in its day, and it is probably better to think of it as a quasi-public body, rather than a normal commercial enterprise. The private shareholders had little to gain from increased profits. Their dividends could not go beyond the statutory ceiling, and greater profits simply advanced the point when they would be bought out. Financial gain was not likely to be the main motivation for investors.

The Corporation and the SMV on the other hand with no direct interest in dividends had between them a controlling voice. As Buchanan has written:

It is possible to interpret the formation of the company as a clever device on the part of the old and corrupt corporate bodies to achieve power without financial responsibility: to get the improvements done without involving themselves in any financial risk.<sup>36</sup>

Indeed, one could go further and point out that the Company represented a way of the Corporation acquiring expensive and potentially highly valuable assets without spending a penny of its own money. These considerations must have influenced the choice of company structure. However, it might have been that the only way to build the Floating Harbour was to adopt some device of this kind, given the level of opposition within the Corporation itself. Whatever view you take on this, it is clear that the Dock Company was not a normal private enterprise controlled by its shareholders in pursuit of their business interests.

The Company also differed from private enterprises in that it was not meant, nor allowed, to be enterprising. It was set up for a specific purpose, to build the works necessary to improve the harbour, and then to manage those works until the debts had been repaid. In modern parlance, the Company was effectively a project management team, acting primarily on behalf of the established public bodies controlling the port. It is important to remember here that the Corporation retained ownership of the port as a whole, and continued to derive revenue from it, while the SMV retained its lease on the quays, and the revenues generated there. The only land and assets owned by the Company were those acquired under the various Dock Acts of 1803-09 for the purposes of creating the Floating Harbour.

### **The Bristol Dock Act**

In January 1803 a Bill based on these proposals was tabled and scrutinised clause by clause at Council meetings in February and March. Although approved, it met with 'a most determined and persevering opposition'<sup>37</sup> in Council and in Parliament.

The Corporation had assented to the Bill with its tax on ships and its rate on fixed property by a majority of only one, and there was a great opposition throughout the city. Before the House of Commons it was urged by shipowners of the standing of Messrs Bailey, Bright, Gibbs, King, Pinney and Protheroe that they ought not to be compelled to pay for dock facilities whether they wanted them or not.<sup>38</sup>

In its progress through Parliament it was decided that the Corporation alone would acquire the assets when the shareholders had been bought out. Of greater significance was a change made at the request of the Corporation: the provisions guaranteeing the interest on the mortgage were

withdrawn. It was later alleged that this change was driven through by members of Corporation who remained wedded to the Canon's Marsh scheme: although lacking the strength to scupper the new plan completely they were able to damage it financially.<sup>39</sup> Without the guarantees, the Dock Company was unable to raise the £50,000 mortgage and had to call on shareholders for more money.

The Dock Company was formally created as by the Bristol Dock Act, 1803,<sup>40</sup> and directors were appointed. Inevitably they did not divide into three neatly separate groups: several councillors were also members of the SMV and of the first set of directors in 1803 all 27 were investors.<sup>41</sup> It seems that nearly 50 members of the SMV subscribed for shares in the Dock Company, and that 5 of the first set of proprietary directors were also members of the Society.<sup>42</sup> Altogether 14 mayors between 1801 and 1836 were subscribers, but there was a period of 12 years between 1807 and 1819 when none of the mayors chairing the Dock Company was himself a subscriber.<sup>43</sup>

259 investors subscribed for £250,000 of shares in the company, all individuals except for 8 companies. Capital for projects of this kind tended to be drawn from the immediate locality and although there is no list of addresses it is safe to assume that the great majority of investors lived in or around Bristol.\* There were numerous small investors, with 15 people putting up the minimum amount of £100 for a single share. However a quarter of the initial £250,000 was advanced by just 5 families:<sup>45</sup> Richard Hart Davis was the largest single subscriber, with 80 shares; other leading investors were Thomas Daniel and John Weare (both 70 shares); and the various members of the Harford family subscribed for a massive 286 shares. The other major shareholders were the Hills. These families were well represented on the first board of directors: two Harfords, two Hills, Thomas Daniel and Richard Hart Davis. Thus wealth generated, directly and indirectly, from slaving and from West Indian estates provided a significant contribution to the cost of the harbour.

The asymmetry built into the Company was highlighted in 1807 when it was pointed out that the people actually risking their own capital had only

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\* The capital for the Hull Dock Company in 1774 was raised from the people of the town.<sup>44</sup>

one voice in three when it came to making decisions about how to spend that money.<sup>46</sup> But this claim should not be taken at face value. As pointed out above, the first board of directors consisted entirely of people who were subscribers, some of them very wealthy and powerful individuals in the town. The minutes do not permit us to identify any occasions when subscribers acted as a block largely because there is no evidence that decisions were made by voting (at least not until the 1840s). On paper a full turnout of subscribers at general meetings would outnumber the Corporation (maximum 43 votes) and SMV (c.100) combined. However, the chances of everyone turning up were remote, and general meetings were usually attended by no more than 50-60 people, whose overlapping qualifications make it difficult to determine in what capacity they attended.

Nevertheless, there is evidence of tension as early as 1806-07 when the Corporation accused the Company of failing to inform it of plans to secure more resources via another parliamentary Bill.<sup>47</sup> This was plainly absurd mischief-making, since the Corporation's strong presence on the BDC board, not to mention the Mayor's chairmanship, meant that the Company could not do anything without the Corporation knowing about it. Nevertheless, this has entered the historical record as an example of 'underhand' behaviour by the Company.<sup>48</sup> The Corporation then opposed the Company's pursuit of this Bill, and was joined by a formally constituted committee of opposition.<sup>49</sup> In May 1807 a deputation of directors who had been to London to support the Bill in parliament reported that they had encountered 'a most unceasing, but as it appeared to [them] ineffectual Opposition both from the Corporation of Bristol and the voluntary subscribers to such Opposition'.<sup>50</sup> At the same meeting the board considered a resolution from the Committee of Merchants and Traders petitioning against the Bill.

### **Construction costs**

The process of building the Floating Harbour has been described by others<sup>51</sup> and need not be repeated here. But it is worth noting the scale of the project. It involved excavating the New Cut, between Totterdown and Rownham, the huge basin at Rownham (Cumberland Basin), the secondary Bathurst Basin, and the Feeder Canal to bring fresh water into the harbour from Netham. Locks were built for the basins and the canal; and locks and dams at the points where the old Avon and the New Cut met. The New Cut required the construction of two bridges. The construction work employed

established technology, but cost control and project management on this scale presented serious challenges.

Jessop had estimated the total cost would be £300,000 and the Act of 1803 required that the work be completed within four years. In fact the final cost was £594,000, very nearly double the original estimate, and it took five years. The Floating Harbour project suffered from all three factors that commonly contribute to overruns on large capital projects: unforeseen problems, deliberate changes of plan and poor cost control.



*Construction work on the north bank of Cumberland Basin in about 1805* <sup>52</sup>

Unforeseen problems included the need to line the Cumberland and Bathurst Basins with masonry, thereby adding to both time and cost. Cumberland Basin alone was £100,000 over budget, having been estimated by William Jessop in 1802 to cost just £18,600, including the locks. Costs were also increased by augmenting the original plans. A third bridge was built at Prince Street, dividing the Harbour into two parts, either of which could be independently drained for essential repairs and maintenance while normal port activity carried on in the other. Piers were built out from each side of the Harbour, with a swing bridge between them and gates to close the gap when required. Another significant change was the decision to build a new road alongside the Feeder Canal and the New Cut. This was presented as an addition of great benefit to the public, but it may have been

adopted to offer investors something extra at a time when additional funds were being sought.



*Construction of the Cumberland Basin Locks in about 1808* <sup>53</sup>

The third kind of problem arose from the way that contracts were set up (the Dock Company itself employed very few people directly). Most if not all the work was put out to tender and it seems that the directors were scrupulous about seeking the lowest prices. But rather than fixing the price for a certain length and depth of excavation, the Company made contracts on the basis of a price per cubic yard of earth or rock removed. This was indeed the standard practice of the time<sup>54</sup>, but it must have made budgeting and cost control difficult.

Not that the Company was unaware of or unconcerned about rising costs. On the contrary, the directors adopted a number of measures to reduce them. For example, to offset the cost of lining the basins the area of the Cumberland Basin was reduced from 6 acres to 4, one of the locks communicating with the Harbour was deleted, and the Overfall Dam at Rownham was redesigned to save money.

During the construction work the directors ordered Josias Jessop (William Jessop's son and the on-site manager of the Floating Harbour

works) to attend their offices every Monday morning, ‘that he may be consulted by the Board as occasion required’.<sup>55</sup> He was then required to provide a monthly abstract of work done under contract so that payments could be made.<sup>56</sup> The system also required that payments to contractors were made only against certificates signed off by Josias Jessop, and duly countersigned by one of the joint clerks and ‘a sufficient number of Directors’.<sup>57</sup> Where there was a disagreement between the contractor and Jessop there was provision for referral to Mr White, the surveyor who had often been consulted by the joint committee in the past and who was now retained by the Company. There is at least one recorded case of a refusal to agree to claims made by the main contractor, Thomas Thatcher, leading to Thatcher threatening to walk away from the job.<sup>58</sup>

Certainly the Company itself was not extravagantly administered. Directors themselves received nothing for their services, although meetings were frequent. The board first met on 21 September 1803 and 34 times over the next 12 months, every 10 or 11 days on average. Meetings went on being held more or less weekly throughout the period up to 1848. Admittedly most directors missed more meetings than they attended. Average attendance at meetings was only 10.7, about 40 per cent, and proprietary directors representing shareholders were only marginally more likely to attend than non-proprietary.

From the end of March 1804 the directors met at rented rooms in Broad Street, in the offices of Messrs Hall and Jarman, solicitors. For 50 guineas a year they rented

a front room for the Directors up one flight of stairs with a closet adjoining, another room for the accountant on the same floor with a room for a repository adjoining and an office on the ground floor for the Solicitors’ clerks.<sup>59</sup>

Not until 1847 did they move to grander premises in Queen Square.

Virtually all the key executive posts were, as we say today, outsourced to consultants. George Webb Hall and John Osborne, solicitors in private practice, were appointed as clerks to the Company, at a retainer of 200 guineas per annum, with freedom to work for other clients, and, moreover, to bill the Company for additional sums for work outside a specified range of tasks.<sup>60</sup> In June 1804 Mr Wintour Harris (already Deputy Chamberlain of the City<sup>61</sup>) was appointed as accountant, on £100 per annum,<sup>62</sup> but it

was not until March 1847 that the Company appointed a full-time secretary, Edward Hinton, at £300 p.a.<sup>63</sup> Operationally, the Dock Master was also in effect Superintendent of Works; but the posts were split in 1843 when the Board dismissed Martin Hilhouse, in post for more than 20 years, for excessive lowering of the water and damaging the *Augusta*, with a consequent claim against the Company.<sup>64</sup>

Overall then the fact that the work eventually cost nearly double the original estimate cannot be blamed on mismanagement, negligence or irresponsibility. On the contrary, the evidence shows that the directors conducted themselves and the project in a properly businesslike fashion.

### First Signs of Intransigence

Given the extent of the overrun however, not all the shareholders were satisfied with the Company’s cost control. In September 1810 a general meeting appointed a committee of three shareholder directors and six other shareholders\* to investigate. The committee reported in January 1813 (it is not clear why it took them so long), castigating the Company for its alleged laxity. The committee was particularly unhappy about the Company’s inability to produce all of the building contracts (without which, it was argued, it was impossible to tell whether the Company had been over-charged, and who was liable for the cost overrun), and the apparent readiness to hand large amounts of money to the solicitors Hall & Osborne without being properly billed for it.

And your Committee are of opinion that the Bills of Costs of the Solicitors which have been delivered, are so unreasonable and objectionable, that they ought to undergo a regular examination and taxation.<sup>66</sup>

This was neither the first nor last time that outrage has been expressed at the size of legal bills, but the committee was not just complaining about the effrontery of Hall & Osborne, but about the Company’s failure in its stewardship on behalf of shareholders by not challenging their claims.

And your Committee give it as their opinion, from what they have seen, that the concerns of the Company have suffered most

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\* The six non-directors were Joseph Jones, Gabriel Goldney, George Daubeny, Thomas Jones, Andrew Drummond and John Barrow.<sup>65</sup>

materially for want of regularity and judicious management, and must grow worse, unless a more prudent system, with the strictest economy is immediately pursued.<sup>67</sup>

The Board responded by setting up its own committee which produced a long and trenchant rebuttal, giving no ground at all, and including a letter from Josias Jessop which appeared to support them. Undaunted, the shareholders' committee came back in September 1813, arguing that they had interviewed Jessop several times,

and that they have maturely considered as well the arrangements for the prosecution of the Work, as the manner in which the Work has been conducted, and that the result is by no means satisfactory to them, but quite the reverse.<sup>68</sup>

They stuck to the claims made about the solicitors and the damage done to the Company by poor management, but the directors still refused to yield to any of the arguments or demands.

This episode shows how the Company was riven by internal dissension and strife, in addition to the attacks of critics who had always been opposed to the Floating Harbour in principle, and resistance by those affected by its construction and operation. Simply to get the Harbour built had required a whole range of arguments and vested interests to be overcome. Once it was in operation there were new conflicting interests to be appeased. Shareholders and lenders wanted a return on their investment, but merchants and ship owners wanted reduced charges, arguing that the dues levied by the port of Bristol were driving away trade. Ship builders and owners of dry docks wanted the harbour to be drained for their convenience, but shippers were obviously opposed to this because of the disruption posed to their activities; they also wanted a suitable depth of water to be maintained, but were opposed to regular draining and scouring.

These problems bore in on the Company from the start: the first request for the Harbour to be drained came from the shipbuilders Hilhouse Sons and Co. just *one week* after the Harbour was completed.<sup>69</sup> In September 1809 the Company ordered a steam engine and barge to carry out dredging,<sup>70</sup> and by 1810 (if not sooner) people were complaining about the offensive smell coming from the sewage-polluted water in the Harbour.<sup>71</sup>

## Dock Company Finances

It was not just the high cost of the Floating Harbour that caused problems for the Company but also the way that capital was raised. The initial offer of £150,000 shares had been under-subscribed and some who had subscribed dropped out once the scale of the project was increased only a few weeks later. Thus there was pressure on the Company to raise the necessary capital, even before the withdrawal of the guarantee of interest on the proposed £50,000 mortgage, and the later escalation in costs. The withdrawal of the guarantee resulted in the Company being unable to raise the necessary mortgage. But the money had to be found: once started the project could not be abandoned. In 1806 the company obtained a second Act permitting it to make a compulsory call on shareholders for a further £35 for every £100 share (they could be sued if they failed to comply, unless all their shares could be sold at auction to someone who would.)

Making compulsory calls on shareholders for investment beyond their initial commitment was not unprecedented, but it was certainly an unpopular route to take. Given the impossibility of borrowing without guarantees from the Corporation, the only alternative seemed to be the issue of new shares.<sup>72</sup> But the Board felt that these must be offered on more attractive terms, say as 6% preference shares (ie payable in full before any dividend to the existing shareholders).<sup>73</sup> The solution adopted was to make further calls on existing shareholders, while at the same time giving them the alternative of buying 'promissory notes' to the same value. These notes were irresistible since they carried a fixed rate of interest, irrespective of profits. This financial device (which had appeared in canal finance in 1798<sup>74</sup>) was more attractive from the shareholders' point of view than offering similar preference to outsiders.

A third Act was eventually obtained in 1808, after some difficulty, giving the Company powers to raise a further £180,000, either by calls on shareholders or by issuing such promissory notes. A fourth Act, in 1809, gave access to another £100,000, enabling the Company to complete the Harbour, but piling up problems for the future. The notes were issued at 5% and it seems that all the shareholders took the notes instead of new shares.<sup>75</sup> As a result the Company was burdened with an interest charge which, unlike the dividend, was fixed and not at the discretion of the directors. Moreover, perhaps by a drafting error, the options were one way

only: the Company retained no right to redeem the notes. This completely negated the plan of buying out the private investors in the long term, and gave them in effect a controlling interest.



*Quay Head 1826*<sup>76</sup>

In 1825 some 45 per cent of the Company's capital expenditure to date was represented by promissory notes worth £268,324, costing around £13,500 per annum in interest payments.<sup>77</sup> This was clearly a heavy burden, given that income from rates and dues in that year was £22,833. In the same year the Company paid £8,807 to shareholders in two dividends of 1.25 per cent each.

In fact the 1802 estimate of annual income from rates and dues of £18,570 was not far out. Although in three years interest exceeded income from rates and dues and it was several years before the 1802 estimate was achieved, in the whole of the period from 1810 to 1825 the average income from these sources was £17,922. The problem, then, was that the finance costs were so high that in most years interest absorbed around three quarters of income from rates and dues, leaving very little to be distributed

as dividends to shareholders (let alone other expenditure heads, such as repair and maintenance work).

It is not true, however, that the Company failed to pay any dividend until 1823, as has been often alleged.<sup>78</sup> A quotation from John Latimer illustrates how the Company's reputation has been besmirched:

The benefit conferred on local commerce by the dock was...in the opinion of some, outweighed by the extortionate dues imposed by the directors in their short-sighted and self-destructive efforts to realise large dividends for the shareholders. Complaints respecting this policy soon made themselves heard, and they increased from year to year; but...they long failed to produce the least effect upon the Board. No dividend on share capital was paid until 1823.<sup>79</sup>

Not only is it false to say that no dividends were paid until 1823 (the minutes and accounts show that dividends were in fact paid each year from 1806-1810<sup>80</sup>) but Latimer's attack is surely unfair in accusing the Company of both pursuing high yields and failing to deliver them.

As Neale has said, 'The Dock Company's dues were far from excessive from the angle of interest on capital expended'.<sup>81</sup> The problem was that there was no means of generating additional income to meet the increased costs apart from raising rates and dues. It could be argued that there was another way to increase income, namely by drumming up more business, but that would have required a level of commitment to and expertise in marketing that the Company simply did not possess. In those days port authorities were essentially passive providers of facilities for shippers and merchants to use or not use as they chose. There is no evidence that anyone even considered a policy of actively seeking more business, other than by reduced rates and dues: 'it is small profits and low rates which create a great trade and large revenue'.<sup>82</sup> The obvious comparator was Liverpool, where charges were lower and trade was thriving. At various times in the 1820s and '30s tables were compiled purporting to show that Bristol was far more expensive than Liverpool, London and Hull.<sup>83</sup> These sorts of comparisons need to be treated with some caution, because Bristol was not alone in facing accusations of high charges. Ship owners everywhere wanted to load and unload vessels at uneconomically low rates, with someone else providing the expensive facilities.<sup>84</sup>

When trade in the Floating Harbour failed to grow in ways that would have justified the level of investment, the Company's critics blamed its pricing policy for driving away business. But this was clearly a result of seeking a scapegoat rather than a well-founded theory. Trade in Bristol, just like everywhere else, was subject to short term fluctuations, and in the years after 1815 the country as a whole experienced a period of economic difficulty, leading Jackson to comment that 'Many ports in the 1820s were wondering if they had not been too generous in the provision of spectacular improvements'.<sup>85</sup> This prompts the question of whether the Floating Harbour was too ambitious or just too expensive.

Over the long term, trade in Bristol increased substantially under the Dock Company, with especially large increases in coastal traffic, which grew more than three times between 1791 and 1841.<sup>86</sup> In the same period overseas traffic declined very slightly, so overall the port remained busy, although it was falling back relative to its rivals. At any rate, it is by no means clear that the Bristol's charges were the main cause of the port's relative decline, and some attention needs to be given to the economic hinterland.<sup>87</sup>

### **The Strategy of Denial and Delay**

The chronic shortage of revenue must have contributed to the Dock Company's reluctance to entertain even reasonable requests for it to spend more money. Its basic approach in the face of such demands was to deny responsibility and/or delay action. This was exemplified by the way the Company responded to the problem of sewage draining into the Harbour. As early as September 1810 a general meeting of the Dock Company called upon

the Directors to take effective action to remove the nuisance so justly and generally complained of by the inhabitants in consequence of the present increased offensive state of the water in the River From.

This became a long-running source of conflict, with the Company's refusal to accept liability playing into the hands of its critics. But it is arguable that the Company's position reflected its dire financial circumstances rather than disregard for the wellbeing of the people of Bristol, although Latimer felt that it 'treated appeals for improvement with contemptuous indifference'.<sup>88</sup>

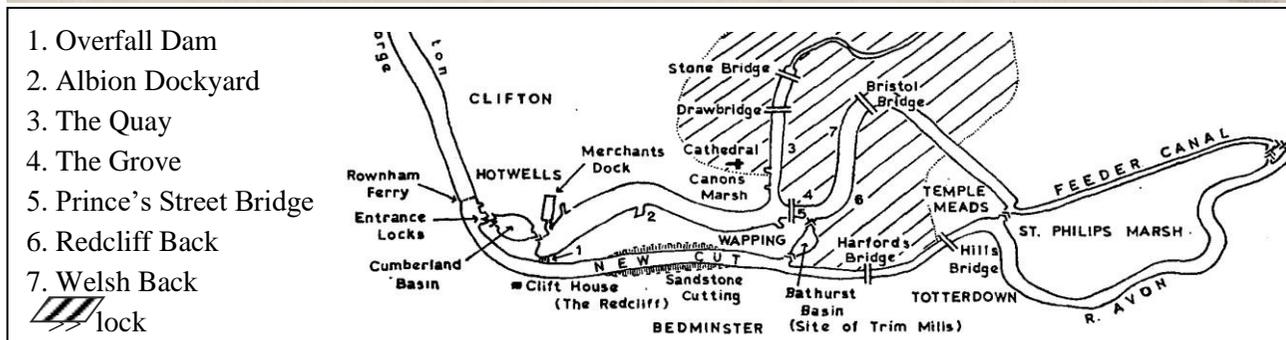
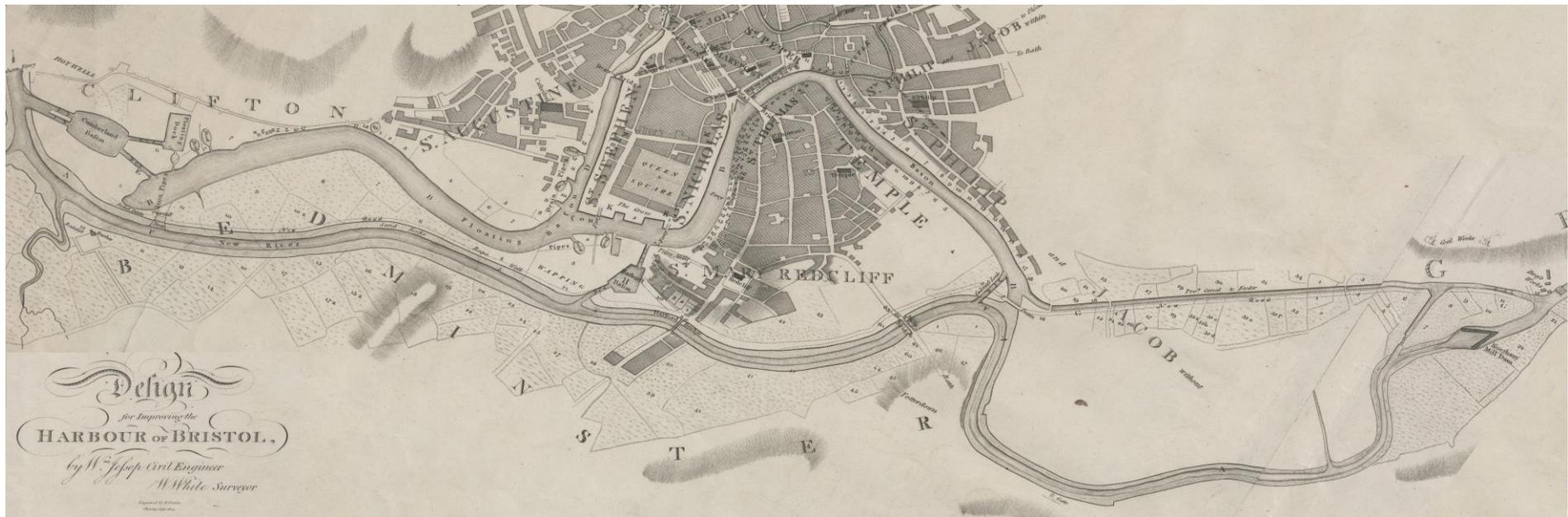
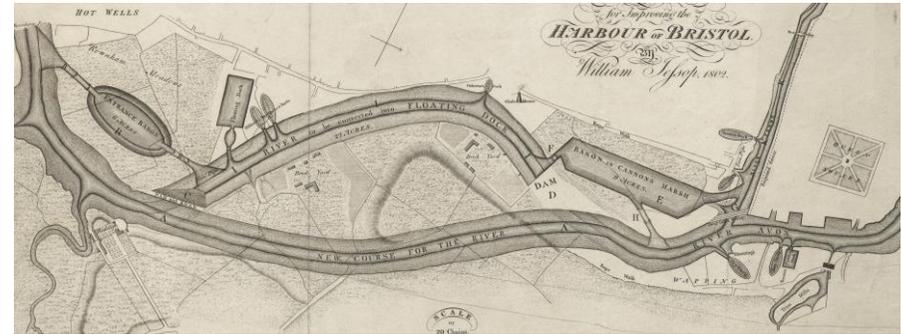


*St Augustine's Reach about 1825* <sup>89</sup>

The question of what to do about sewage had been raised before work started on the Harbour, and Jessop at that stage dismissed fears of a problem, arguing that the water would be so frequently renewed that the quality would not be much affected. Nevertheless he did include a sewer to prevent waste from entering the Harbour above Bristol Bridge, diverting it to flow out into the New Cut at Totterdown.<sup>90</sup> But in practice the water was not renewed frequently enough to keep the part fed by the Frome from deteriorating badly. Every summer there were complaints while the Dock Company denied both responsibility and power to act. Eventually

in the Summer of 1825, the weather was at periods extremely hot, during which time the appearance of the Frome part of the Floating Harbour was particularly offensive to the eye, and the stench emitted therefrom was disgusting to the smell and nauseous to the stomach.<sup>91</sup>

On 1 August 1825 the Paving Commissioners, who had responsibility for the common sewers, set up a committee to see what could be done. The committee spotted that S37 of the Dock Act, 1803, required the Company 'to make such alterations and amendments in the Sewers of the City, as may or shall be necessary, in consequence of the Floating Harbour'.



**Figure 1. Maps**  
 1a Top left: The river in 1800, before the new harbour works (Donne)  
 1b Top right Jessops original plan  
 1c Centre: Jessop's revised plan  
 1d Left: Keyed Outline of the final plan

This might seem to be conclusive proof that the Company was responsible and empowered to act, but the Company continued to deny liability. Its reply did not arrive until January 1826, but the Commissioners moved swiftly and in the February the Attorney General secured an order from the court of King's Bench in London requiring the Company to show good cause why it should not be compelled to execute the necessary works. A full summary of the proceedings was subsequently published by the Paving Commissioners, and what follows here draws from that account.<sup>92</sup>

The case came before the King's Bench in May 1826. Counsel for the Company did not deny that there was a problem, but argued that the Company had no powers to act, whereas the Paving Commissioners did. The Act only bound the Company to build a sewer removing sewage from the upper part of the Harbour, and to make sure that sewers entering the Frome were below water level, both of which it had done. Moreover, the Company's powers to buy land had expired after 7 years and therefore it would be impossible to build a new sewer. Nevertheless, a writ of *mandamus* was issued, requiring the Company immediately to make

all such alterations and amendments in the sewers of the...City as have become and are necessary, in consequence of the floating of the harbour..., or that [it] show good cause to the contrary....<sup>93</sup>

The Company's lawyers played for time, and were given until October to produce their reply. The answer, when it came, stated that no alteration or amendment to the sewers had become necessary. After three days of procedural argument in November 1826, the final hearing took place in February 1827 before the Lord Chief Justice sitting with Mr Justice Holroyd and Mr Justice Bayley. The judges were unanimous in their view that the writ must stand and the Company must remedy the situation in the Harbour. The Lord Chief Justice dismissed the argument that the Company could not build a sewer because it had no power to buy land, pointing out that it was not necessary to own land in order to make a sewer under it.

The Company then caved in and complied with the court order. Josias Jessop who had been consulting engineer to the Company had died in 1826 and so the directors commissioned William Mylne, an architect and engineer of repute, who in the same year entered the competition to build a bridge across the Avon gorge, to devise a suitable plan. In April 1827 he presented a proposal for a culvert from the stone bridge on the Frome (near

the Quayhead) running under the harbour at Prince Street Bridge and thence to discharge into the New Cut. Much of this route ran beneath land owned by the Corporation and the Dock Company. The directors accepted the plan and Mylne's Culvert was completed in June 1828, at a cost of £6,276<sup>94</sup>, much to the relief of people living and working adjacent to the Floating Harbour, if not those near the New Cut, which must have been particularly unpleasant at low tide.

The culvert effectively prevented the water flowing down the Frome from entering the Floating Harbour, but although this improved the situation the Company could do nothing about the waste discharged from vessels in the Harbour, and there continued to be complaints. In 1842 one local newspaper referred to the citizens being 'poisoned by the pestilential miasma from [the] stagnant ditch' that was the Floating Harbour.<sup>95</sup>

### **The Dock Company and Isambard Kingdom Brunel**

Having dealt with the problem of sewage the Company turned to another difficult issue, the tendency of the Harbour to silt up. Traditionally accumulations of silt had been dealt with by sending in teams of men at low tide to push the mud towards the main stream so that it would be removed on the next ebb tide. Blocking the tidal scouring effect and holding the water at high tide level within the harbour was known to lead to increased silting. When the problem was discussed with William Jessop he had mentioned dredging as the way to deal with it,<sup>96</sup> and as early as September 1809 the Dock Company ordered a steam engine and barge for this purpose.<sup>97</sup> But although the dredger removed up to 120 tons of mud per day its use was discontinued after only four years, and nothing effective was put in place.<sup>98</sup>

It became established practice that the harbour would be drained for several days or weeks at a time in order to manually scrape the mud away from the sides. It is not entirely clear how often the Harbour was drained, nor when the practice stopped, but it seems to have been normal to empty it twice a year at least up to 1840.<sup>99</sup> However, this was not a sufficient solution and in August 1832 the Dock Company commissioned the young engineer Isambard Kingdom Brunel to report on what could be done. Brunel was thenceforth retained as consultant engineer to the Dock Company and its successor, the Town Council, until 1849.

Brunel noted that 'large banks or shoals have in the course of several years formed themselves in different parts of the Dock'<sup>100</sup>; but in contrast

to his ambitious and innovative approach to designing ships, his work on the harbour was cautious and incremental, avoiding grand gestures and expensive untried solutions: 'I do not pretend to suggest anything which shall produce any extraordinary effect.' He was respectful of Jessop's work: 'The most that I can recommend is to extend and carry more fully into effect the general system upon which the Docks were originally designed'.<sup>101</sup> He also wrote that the shallows and banks were '...not consequences of any fault in the original plans nor of a mere want of scouring power but that partly from a misconception of the intention of Mr Jessop and partly perhaps from the original designs not having been carried fully into effect by him from motives of economy...'.<sup>102</sup>

In his first report, written within three weeks of being commissioned, Brunel was confident that the most effective measure was that all the water coming down the Avon should be channelled through the harbour.

The only possible means of preventing deposits is by keeping the whole mass of water in motion...A constant stream though nearly imperceptible in its motion will carry away with it the lighter particles of mud which form the principal part of such deposits. If the whole of the River Avon were at all times running through the float and which I have no doubt Mr Jessop originally intended should be the case such a stream might generally be obtained...<sup>103</sup>

This however would not wash away existing deposits, so he recommended that the harbour should first be laid dry to permit manual removal.

Unfortunately, Brunel's clear vision was expressed in rather ambivalent and even contradictory recommendations. Brunel argued that a culvert through the north pier of Prince Street Bridge was 'indispensable', but that the raising of the height of the Netham Dam was 'of the highest importance though perhaps not altogether indispensable'. This second point is odd, because of the over-riding importance of increasing the flow of water, and the crucial role of Netham Dam in achieving that goal. He also proposed a culvert through the Overfall Dam, describing this as 'very desirable [but] by no means absolutely necessary'.



*The Overfall Dam and the New Cut in 1827*<sup>104</sup>

When Brunel was first able to inspect the harbour with the water let out in February 1833, he submitted a second report, with significantly different recommendations. He retained the culvert through Prince Street Bridge, but changed his mind about a similar structure at the Overfall Dam. As he pointed out, overfall allowed the cleanest water to escape whereas underfall sucked out the deepest and therefore muddiest levels of water. Indeed it has been claimed that Brunel converted the Overfall dam to an underfall by introducing new culverts<sup>105</sup>, but he did not go so far:

For the purposes of drawing off the water at the lower end of the float I do not now think it is necessary to recommend any new culvert through the Overfall Dam but by a very simple arrangement the present culverts may be rendered sufficient...<sup>106</sup>

This simple arrangement was a 'trunk' formed by two parallel underwater fences creating between them a ditch through which a fast current of water could be channelled towards the low level culverts built into the dam by Jessop. By shifting the emphasis from overfall to underfall Brunel made an important contribution to the long term viability of the harbour.

In addition he proposed the acquisition of a 'drag boat'. This was a device for moving banks and shoals by scraping mud into the faster

flowing channel so that it would be hydraulically removed from the harbour. These three proposals were costed by Brunel at £2,800,

Brunel re-emphasised the importance of increased and constant flow of water into the harbour, but backed away from insisting on raising the dam:

I think that by proper care and management [and] by paying due attention to the draught of the vessels which may at the particular time require to be afloat and to other circumstances the water may almost always be kept much lower than it now is and the inconvenience and expense of any addition to the dam may be obviated. At all events the experiment is worth making as if unsuccessful the expedient of raising the dam may at any time be resorted to.<sup>107</sup>

The Dock Company adopted Brunel's recommendations for the Prince Street Bridge culvert, the trunk at the Overfall and the drag boat, but they did not raise the Netham Dam, costed at a mere £300\*, nor did they remove the existing mud banks by persistent and effective scouring. It seems that Brunel's recommendations, as implemented, were less than wholly successful for in 1835 it was claimed that:

The harbour is now choked with mud. The Act requires 21 feet of water in a sufficient number of berths, but the deepest part now has only 16½, and that only in two berths; it shoals in other parts to 13 and 12. Above the iron swivel-bridge [on the Frome], which may be passed by vessels of 100 tons, are only 10½ in the deepest part, shoaling to 8.<sup>108</sup>

In October 1840 a Town Council committee looking at port accommodation noted that:

mud has been allowed to accumulate in the Floating Harbour, particularly above Princes Street Bridge, so as seriously to obstruct the Trade of the Port.<sup>109</sup>

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\* This was not merely penny-pinching: raising the Netham weir would have raised the level of the river upstream, with adverse effects on the owners of land and of water mills, and a risk of legal claims.

The committee interviewed the Water Bailiff (a council employee responsible for aspects of the Harbour upstream from Prince Street Bridge) and was told that the water was only 12 feet deep at the start of his district. He thought that the mud was then 3 feet deeper than it had been 20 years ago, and that there had been no attempt to remove it in his time.<sup>110</sup>

In 1842 the Dock Company sought another report from Brunel on further measures that might be taken to reduce the amount of mud in the harbour.<sup>111</sup> Brunel treated the directors to a summary of his earlier reports, castigating them for only partially implementing his recommendations. He criticised them for giving in to the traders who objected to the inconvenience of the harbour being drained for scouring. The structural measures, plus the drag boat, which, he emphasised, were conceived as aids to cleanliness only when the mud banks had been removed and the flow of water increased, had come to be relied as sufficient in themselves.<sup>112</sup> He repeated his insistence that ways had to be found to divert the whole of the River Avon into the harbour and that the level of water in the harbour should be kept as low as possible without inconveniencing shipping.

For the first few years after 1809 the Dock Company appears to have spent nothing on repairs, but by the 1830s it was spending at least £1,000 each year on cleaning, and £2-3,000 on repairs. However, in 1839 the cost of repairs jumped to £7,900, and remained above earlier levels thereafter. Between 1846 and 1848 the Company spent a total of £87,000 on repairs, of which £23,800 was due to the work on the south entrance lock at Cumberland Basin, the smaller of the two built by Jessop.<sup>113</sup> With evidence that some of the masonry was in a very bad state, requiring urgent and complete renewal<sup>114</sup> Brunel was commissioned in 1836 to advise on repairs and possible enlargement.

The south lock project turned out to be a prolonged and unhappy experience for Brunel, and the last work that he undertook in the Floating Harbour. His report of 1836 outlined four options: the first, a simple repair, Brunel regarded as 'almost inadmissible'; the second involved widening the smaller lock to 54 feet but not lengthening it<sup>115</sup>, and repairing the north lock; third, widening both locks (the north lock was 45 feet wide), taking the smaller one first; and finally he considered widening the 45 feet wide junction lock between the entrance basin and the Floating Harbour

itself.\* Widening the entrance locks obviously implied also widening the junction lock, for there was little point in admitting larger ships to the Cumberland Basin but no further.

In spite of Brunel's clear rejection the Dock Company settled for mere repair work, and it was not until 1843 that he was called in to give further advice. Only then did the company resolve to go ahead with option two, a rebuilt south lock, 54 feet by 245 feet. Work was put out to tender and contractors began on site in the early part of 1845, but progress was far too slow for the directors of the Dock Company, whose relations with Brunel became strained.<sup>117</sup> Only in 1849 was the rebuilt lock at last brought into working order: this relatively small project had taken four years to complete as compared with five years for the initial construction of the entire Floating Harbour. But it was the first investment to improve the Floating Harbour since its completion 40 years before, and no further work to improve the locks was undertaken until the 1870s.



*Entrance to the Floating Harbour in about 1860, after Brunel's reconstruction of the south lock*<sup>118</sup>

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\* There is a hint in Brunel's report of the impact of technological change, for he referred to 'making such improvements in the entrance generally as the increasing dimensions of vessels, more particularly Steam Boats, . . . may require'.<sup>116</sup>

### **The Dock Company and Brunel's Ships**

In addition to his consultancy work, Brunel was involved in two major ship building projects in the Floating Harbour. Although the Dock Company was not directly involved in the decisions to build these ships, it became implicated in the subsequent controversies and recriminations. How much of the criticism was justified? The first ship, the *Great Western*, was a paddle steamer launched from Patterson's yard at Wapping in 1837. This vessel was not only the largest in the world at that time, it was also too wide to pass through the Cumberland Basin locks without first having at least one of its paddle wheels removed. In consequence the ship moored outside the Floating Harbour, eventually using the Kingroad moorings near the mouth of the Avon. But the Dock Company insisted on charging the owners, the Great Western Steam Ship Company (GWSSC), fees of £106 on each visit, as if the vessel had entered the Harbour.<sup>119</sup> Naturally this hard-nosed commercial behaviour was seized upon by the Company's critics as yet more evidence of the mismanagement of the port.

In 1839 Brunel began work on his second and even more ambitious ship, the *Great Britain*. This huge iron vessel, driven by a steam-powered screw propeller, was criticised as a 'museum of inventions' and a 'congregation of experiments'.<sup>120</sup> Wells has described it as a 'fatal error' by the GWSSC: a sister ship of the same design as the *Great Western* would have enabled Bristol to compete more effectively for the lucrative transatlantic mail contract offered in 1839 (won by Cunard, operating out of Liverpool).<sup>121</sup> However, Bristol's failure to secure the mail contract cannot be pinned on the Dock Company, despite Buchanan's argument that the Company persistently refused to consider building deep water facilities at the mouth of the Avon.<sup>122</sup> The simple fact is that the Company had no powers to build such facilities, even if it had had the money.

The Dock Company's stance did, however, contribute to the decision by the GWSSC to operate both the *Great Western* and *Great Britain* from other ports. Their failure to widen and lengthen the locks, and to provide affordable mooring outside the Harbour, led Brunel to write off Bristol as a port for large ships. The difficulties involved in getting the *Great Britain* out of the Harbour must have confirmed him in this view. Despite his recommendations in 1836, no enlargement work had been even started when the *Great Britain* was launched in July 1843. Fitting out the ship then made her sit deeper in the water, thereby adding to the problem.

This business of getting the *Great Britain* out of the Floating Harbour has been written up as an example of the Dock Company's perpetually un-co-operative attitude, but this is not supported by the evidence. The GWSSC first approached the Dock Company on 1 January 1844 about temporarily removing gates and bridges from the junction lock for 2 weeks, and the bridges at the entrance lock for as long as necessary, plus the removal of 2 or 3 courses of masonry. The GWSSC undertook to bear the costs of all this, including restoration and indemnity, but the Dock Company asked for more detail, and for the request to be put in writing.<sup>123</sup> Instead, Brunel himself attended a Board meeting on 5 February, without anything in writing, but he did subsequently send a letter with a full explanation. A week later the Board agreed to the request, despite an attempt by some directors to block any co-operation.



*The launch of the SS Great Britain* <sup>124</sup>

The problem then was that the GWSSC did not accept the Board's conditions: a legally binding agreement and the work to be carried out, to the Dock Company's satisfaction, by 19<sup>th</sup> March. The GWSSC then sought mediation by the Board of Trade in London.<sup>125</sup> The Dock Company agreed to provide copies of all the relevant papers, but the minutes give no indication whether this was done. However, in September the GWSSC

again sought permission to move the great ship, and again were told to put the request in writing.<sup>126</sup> By the end of the month it was all agreed, including the GWSSC indemnifying the Dock Company for up to £100,000. Masonry was removed from one side only of the junction lock, the water was raised by 2 feet 6 inches and the *Great Britain* eased through into Cumberland Basin in the last week of October.<sup>127</sup> A month later she squeezed out into the river and was gone.

### **The Committee of Deputations**

The determination of the Dock Company to charge fees on the *Great Western* and other ships mooring outside the Floating Harbour prompted the formation in 1839 of a committee made up of deputations from the Town Council, the SMV, the Chamber of Commerce and the GWSSC.<sup>128</sup> Why would the Town Council and the SMV need to send deputations to a body that, on paper at least, they controlled? In the early part of the century the subscribers complained about having only one voice in three on the board of directors. But discussions of the events from the late 1830s up to the municipal takeover in 1848, notably by Bush,<sup>129</sup> portray the Dock Company, and in particular the proprietary directors, as holding the upper hand. How had this come about? The answer might be that in the construction phase of the project the subscribers had little choice but to go along with finding ways to meet rising costs; after all, once money had been spent excavating the New Cut the only way to generate any sort of return on the investment was to carry on and to complete the project. However, the issue of inalienable promissory notes meant that, more than thirty years later, the holders were in a strong position. The notes effectively scuppered the Corporation's long term plan to acquire the Floating Harbour without spending any money; and the Town Council's decision to join the Committee of Deputations positioned it as a body trying its best to solve the problems, while at the same time obscuring the fact that its direct predecessor had been deeply implicated in creating them.

The old corrupt Corporation, intent on minimising its own financial liabilities and yet ultimately acquiring the assets, had been reconstituted as the Town Council by the Municipal Reform Act of 1835. Despite much continuity of personnel, it was now an elective body, responsive to the interests of its ratepayers. It was imbued with the contemporary spirit of reform (eg the Bristol Improvement Act of 1840) and busy setting its finances on a sounder footing. Harbour improvement met both concerns.<sup>130</sup>

The committee referred to both a growing volume of trade, and the need to act for the 'renovation of the city', reflecting a certain contradictoriness in the way that the prevailing situation was described. But if property values in Bristol had fallen by 30-40 % in the 20 years up to 1833,<sup>131</sup> and the port was in a parlous state in the mid-1830s,<sup>132</sup> this was also the time when Bristol, thanks to Brunel, was leading the world in the design and construction of steamships, and local entrepreneurs were establishing the Great Western Railway and the Great Western Cotton Works: what Buchanan has called a 'spirited commercial revival'.<sup>133</sup>

By 1840 port revenues were 25 per cent up on 1834, prompting the Town Council to set up a committee to look at congestion in the Harbour.<sup>134</sup> In evidence to this committee the Quay Warden (Christopher Claxton) said that:

'It was absolutely necessary some additional berths should be provided for steamers of the larger class, which cannot pass through Prince Street Bridge'.<sup>135</sup>

Claxton was not a disinterested witness, since he was also a GWSSC director. However, his stance was backed up, first by the Water Bailiff, Mr Wilson, who said that 2,400 vessels visited his part of the Harbour (above the Prince Street Bridge) each year, and second by the firm of Wait and James on the Welsh Back, who reported that they often had vessels lined up 3 or 4 deep at their wharf.<sup>136</sup> Some of the congestion in the Harbour may have been due to accumulations of mud making some berths inaccessible, which was a Dock Company responsibility; but building new wharves and quays remained the responsibility of the Town Council and the SMV, neither of which had taken any such action for more than 50 years.

The Port Accommodation Committee was in effect merely adding to the build up of pressure on the Dock Company, begun by the Committee of Deputations in the previous year. The committee's report and the Dock Company's response were published in June 1839, as a supplement to the *Bristol Standard*.

The report of the Committee of Deputations called for a wider entrance to the Floating Harbour, a new wharf for small steamers, and some 'floating accommodation' within the river downstream of Sea Mills. It also asserted that

it is absolutely necessary to the preservation of the trade of the port, that the tonnage rates now paid to the Dock Company should be greatly reduced.<sup>137</sup>

More relevant than its substantive suggestions were the committee's remarks on the unsuitability of the constitution of the Company to profitable operation of the harbour, as distinct from its initial construction.

the very construction of the Board, consisting of representatives both of the shareholders and of the public bodies of the city, had worked injuriously; that the efficiency of the representatives of the latter class was unavoidably impeded by the interests of their constituents being in apparent conflict with those of a body of shareholders, whose money had been embarked in an unprofitable investment; whilst the minority of the Board have unfortunately been compelled to look, rather to the means of guarding the shareholder from public pressure, than to those by which his ultimate interests would be advanced from increasing trade.<sup>138</sup>

The committee identified the promissory notes as a burden from which the Company should be relieved as a prerequisite for further improvement of the port. The proposal was that the Company should be recapitalised by the issue of 5000 shares at £75, raising an amount sufficient to buy back the promissory notes and to pay for the necessary infrastructural work. It was argued that the beneficial impact of removing the rate on houses in the old city, together with lower port dues, would reinvigorate the local economy and attract people to invest. The Dock Company appointed its own committee to respond, and a scathing response it was, dismissing the proposals in its the very first paragraph:

it is with the deepest concern [we] observe that the labours of the joint committee should have terminated in a result so little likely to be productive of any practical effect in accomplishing the important public objects they had in view.<sup>139</sup>

The Company's reply demonstrated the effective control of the note-holders. It defended their rights in vigorous terms and indicated that they would not voluntarily give them up. This effectively blocked any possibility of change. The sense of grievance felt by Dock Company

investors can be gauged from the following resolution passed by a meeting of the proprietary directors in July 1839:

However disposed the Proprietors are to contribute towards the attainment of any public objects considered to be for the general benefit of the City at large, they cannot recognise the justice or equity of the principle which would impose the whole burden thereof upon one portion of the Citizens, and that too the portion to whom the City is indebted for the existing Improvement of the Port; an improvement which was carried into effect at their Cost, upon a Scheme projected in all its parts by the Corporation of Bristol and their lessees the Society of Merchants, and which has proved to the Subscribers to be so losing an undertaking.<sup>140</sup>

### **Municipalisation of the Port**

The Committee of Deputations did not propose the sale of the Dock Company's assets to the Town Council, but within weeks of its report in April 1839 this idea was under discussion, apparently on the initiative of the Chamber of Commerce, and the Dock Company accepted that it was an idea 'deserving of attention'.<sup>141</sup> It was, after all, always intended that the Council would acquire the assets of the Company, albeit only when the finances were on a much healthier footing than they were in 1839. A takeover posed difficult political challenges, because on the one hand the shareholders and note holders had to be won over by a sufficiently attractive offer, but on the other hand this implied a cost to the ratepayers of the city. To add to the problem, the reorganisation of boundaries in 1835 had brought within the city a number of neighbourhoods whose ratepayers had not been party to the initial decision to build the Floating Harbour and who now argued that it was unfair to ask them to contribute towards solving a problem that was not of their making. The centre of resistance was Clifton, which generated a substantial proportion of the city's rates.

It may be that in these circumstances the Council was not disposed to press for municipalisation after its first scheme, developed in the winter of 1839, was rebuffed by the shareholders. It seems that nothing much happened for several years, but then according to Bush:

It became fashionable to make the beleaguered Company the scapegoat for empty houses, unemployment, deserted wharves, unpaid rates, bankruptcies and the prevailing commercial malaise.<sup>142</sup>

Pressure on the Council increased and in September 1845 negotiations were reopened. Then in 1846 a Free Port Association was set up to campaign for a port free of

all charges on goods and shipping inwards and outwards - except such trifling charges as may be necessary for the convenience of the port.<sup>143</sup>

The Association was well organised, amply funded and supported by the majority of local newspapers. A key part of the campaign was the publication of a series of *Free Port Tracts* addressing the main points for and against reform, but cultivating the idea that municipalisation was virtually inevitable.<sup>144</sup> In February 1847 the Council and the Association began to confer and in due course the Dock Company was persuaded to accept an offer. Shareholders and noteholders were to become creditors of the Council, a rate of 4 pence in the pound would be levied on property in the city and port dues would be reduced by a specified amount (£9,400). Ratepayers in Clifton remained unhappy. In February 1848 there was a public meeting in Broadmead Assembly Rooms said to have been attended by 2-3,000 ratepayers to debate the issues.<sup>145</sup> Nevertheless in April the Bristol Dock Bill was considered by the Commons and received royal assent at the end of June.<sup>146</sup>

In August 1848 the Council appointed a Docks Committee, chaired by a Redcliffe ship-owner Councillor Richard Poole King, to run the port. The Committee recommended reductions in dues on a wide range of items, saving port users about £12,000 a year. According to Wells<sup>147</sup> the burden on ships was reduced by about 50 per cent and on goods by about 20 per cent. Almost exactly forty years after the completion of the Floating Harbour, the demise of the Dock Company and these substantial reductions were celebrated with a public holiday on 13 November 1848. But the port was not free, and the price of reduced charges was an additional rates burden. Some saw the municipal takeover as a triumph for the merchants at the expense of ratepayers in general. The Town and Mayor's dues carried on and in fact yielded more than the rates contribution in 1849 and every year from 1860-1890.<sup>148</sup>

Trade passing through Bristol picked up immediately, and grew by two thirds in the next decade, compared with only one third in the two decades up to 1848.<sup>149</sup> This led Neale to claim that the Dock Company had sold out

too soon.<sup>150</sup> His argument was that a number of external factors were working in favour of increased volumes of international trade: the repeal of the Corn Laws and the Navigation Acts in the 1840s, together with the opening up of the North American prairies meant more grain was imported into Britain, and declining supplies of home grown timber also boosted imports. Others have pointed in the same direction, noting that the middle decades of the nineteenth century were an era of rapid growth in the global economy, and that trade grew faster than industrial production.<sup>151</sup> It was the British economy that dominated world trade, especially in manufactured goods, and it was British ships that carried the majority of cargoes. So Neale might be correct, or it may be that the municipalisation of the Floating Harbour came at just the right time to enable Bristol to take advantage of this global phenomenon.

### **Conclusion**

The Floating Harbour was a brilliant technical solution to the problems of the port of Bristol, allowing the docks to operate successfully for another 150 years, belatedly vindicating William Milton's 1812 prediction that 'In fifty years hence the variance between Estimate and Cost will be forgotten'.<sup>152</sup> In one sense of course that variance has not been forgotten, for the Dock Company's reputation has continued to suffer. But the evidence presented above suggests that the Company was actually making the best of the very difficult situation that it found itself in due to the political struggle between the improvers and their indefatigable opponents. This is not to absolve the Company of all the charges levied against it: there is no point in trying to argue that the Company emerged with honour from the unseemly wrangle over the removal of sewage from the harbour in the 1820s. But it is fair to say that the more general inference that the Dock Company was responsible for more or less all the city's economic woes was, and is, unwarranted. Although the Company was blamed for driving away trade, it is hard to see any grounds for believing that trade would have been greater in the absence of port improvement.

The poisonous reputation of the Dock Company in the historiography of Bristol stems, first, from the tendency for the Company to be referred to in the context of studies focused on other questions, such as the relative decline of the city at that time. The Company remains a convenient scapegoat for a process that had much broader and deeper causes. Secondly, the Company was born out of conflict and struggle around the

question of port improvement, and politics remained at the heart of many critical comments made over the years. However, subsequent accounts have perhaps been too ready to reproduce, and implicitly accept at face value, comments that need to be treated with caution and placed in the context of contemporary political debates.

Finally, most critical judgements are based on the *behaviour* of the Company, but we need to look at the structural and constitutional factors that explain that behaviour. Set up by the Corporation and the Society of Merchants as a device to achieve port improvement without spending their own money, it was, in truth, a scam, and much of the opprobrium heaped upon it would be better directed to the Corporation. In this context a key finding of this research concerns the way in which the Corporation rapidly distanced itself from the floating harbour project, leaving the Dock Company to cope with the consequences and to take the blame.

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