

The port of Bristol in the second half of the eighteenth century: An examination of the organisational structure of the port pertaining to the management and operation of its shipping with special reference to ships trading with the West Indies and America.

**Volume 2 of 2.
General Appendices.**

Submitted by John Gilbert MacMillan
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Introduction

The period of this research is the second half of the eighteenth century and is aimed at a level where there are few surviving documents or publications describing the day to day work processes of the port of Bristol and its ships as a whole. However, many contemporary documents do survive which contain descriptions or data relating to specific operational practices, and when this information is extracted and brought together, a model of the integrated operational systems is obtained.

To attain this, it was necessary to adopt a comparative method of research which involved cross-referencing primary documents and tabulating the results before analysis. In order to sustain the argument developed in the thesis from the use of this method it was essential to record the results for verification and this was done in the form of the appendices that follow. However, their magnitude meant that another volume, separate from the main body of the thesis, was necessary.

In Volume 2, for convenience sake, all non-textual items such as the Bibliography, Illustrations and Glossary are included.

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Abbreviations.

Bristol Record Office.	BRO
Bristol Record Society.	BRS
Bristol Reference Library.	BRL
Felix Farley's Bristol Journal	FFBJ
Mariner's Mirror.	MM
National Maritime Museum	NMM
Society of Merchant Venturers.	SMV

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Appendices.

Chapter 1.

Appendix 1.001. Duties of the Haven Master, 1797.

The following is the report of a committee of the Society drawing up regulations and pay governing the Haven and Ballast Masters in response to a letter from the Common Council.

Duties of the Haven Master, 1797.

The committee having examined and perused the different orders of sessions relating to the duty and emoluments of the Ballast Master and Haven Master of this port, and having heard evidence on the subject are of opinion that the duty of Ballast Master consists of the following.

1. To direct the removal of ballast from one ship to another or to a proper place by him appointed and from what part of the river ballast may be taken.
2. To prevent ballast rubbish being laid below the high water mark or thrown or discharged into the river.
3. To take care sufficient banks and stanks are made at all quarries to prevent stones rolling below the high water mark and to prevent stones, rubble, ashes or filth being thrown into the river between Hanham and Crookham Pill.
4. The committee are further of the opinion that the duty of the Haven Master is to direct and order the placing of the anchors and mooring and lying of all vessels in all parts of the river (except the Quay, Back, and other parts under the direction of the Quay Warden – added on ‘ and other officers of the Corporation’) and particularly at Limekiln, Rownham and Hungroad and that all pilots are obliged to obey his orders.
5. To prevent fire being made onboard ships at anchor or moored in any part of the river at unseasonable times.
6. To prevent small craft from coming up the river before the time of Tides at which they are allowed to pass Hungroad.
7. To notice all miscarriages and inconveniencies done or committed in any part of the Haven or port.
8. To render the Mayor an account monthly of all vessels which arrive and anchor for twenty four hours in Hungroad etc or any part of the river under his jurisdiction.
9. To attend and keep in order at the expense of the Society all the chains and moorings at Hungroad and also to attend to keep in order all the mooring posts, buoys, and eye bolts towing path and bridges in every part of the river.
10. To direct and make soundings and observations reflecting the shifting of sands or any change of the channel, the river at the Swash, Hungroad and as far as the Holmes and mark such changing of sands and alterations in the course of the river on a chart to be kept for that purpose.
11. To superintend and direct the person having the care of the watering pipes at Pill and all repairs thereof.

12. To assist at the examination of and to enquire into the character and abilities of all persons being candidates to become pilots and to report thereon according to his best judgement unbiased and without respect to the interest and connection of the person applying and in conformity with the rules and orders that are or may be hereafter made in respect to qualification necessary to (allow) a man to be made and act as a pilot.
13. To supervise and report the conduct of all persons acting as pilots or boatmen on the river to enforce due observance of all regulations made respecting them and to report any misbehaviour to the Society.
14. To examine into the states of the craft of the pilots at least twice every year and to attend when any accident happens in the river and enforce the assistance of the pilots and boatmen.
15. The committee are further of the opinion that the emoluments of the Ballast Master consists of a salary of £20 per annum, and of the Haven Master of a salary of £50 per annum and of one shilling paid him on each note of a pilot checked and examined by him and also of one shilling paid him for the use of a boat when a ship is moored at Hungroad.
16. It further appears to the committee that due execution of these offices in all the various particulars as above stated will require the whole time and constant activities exertions of whosoever may be appointed thereto. And it will be necessary for the Haven Master for the proper discharge of his duty to reside at or near Hung Road, to employ an assistant and that such assistant should be removable by the Haven Master or by the Society should they have reason to disapprove of his conduct and that some increase of the emoluments of his officer will be absolutely necessary.

Source. BRO: SMV/2/1/1/13 Hall Book 13, 1797 – 1807, 30 January 1797; Instituted by the Act of Parliament: 11 and 12. William III c 23. An Act for the better preserving the Navigation of the River Froome and for Cleansing, Paving and Lightening the streets of the City of Bristol.

Appendix 1.002. Berths at Hungroad in 1728.

Berth	Number ships	Depth in feet	Comment
Uppermost	2	11	Inside mud; outside sand
Next	3	12	
Next	4	13	
Next	1	12	Single or wreck berth
Next	3	6	Lighter sunk on outside
Next	1		One small ship. Dutch ship sunk there

Source. BRO: SMV/2/1/1/5 Hall Book 5 1723-1733, 29 April 1778.

Appendix 1.003. Ordinance for Hungroad, 1551.

The Ordinance for Hungrode.

A proclamation devised and made for the preservation and maintenance and also for the good order of the Port of Hungroad. 1551.

Mr Mayor of the City of Bristol , and the Justices of the same being commissioners of the Admiralty of the said City, sufficiently authorised, do straightly charge and command all owners of the ships and all masters and mariners and all other person and persons, what position they be, that they and any of them from henceforth be obedient to the Waterbaliff of Bristol and to the pilots of Shirehampton that be appointed for the oversight of the Rode called Hungrode concerning the removing and placing of their ships that they shall happen to anchor within the same Rode, and not refuse, deny or withstand the said Waterbaliff or pilots or any of them exercising their office, for the placing, removing and mooring of the said ships, that is to say, when a great ship comes laden with any kind of merchandise or wares, then to remove a smaller vessel by their discretion for the placing and mooring of the greater ship, upon pain to forfeit and pay for any time so offending being duly approved before the said Mayor the sum of 100 ducats, after 5s a part of English money, whereof 80 ducats to be paid to the Chamber of Bristol, and the other 20 ducats to the said Waterbaliff and pilots for presenting thereof.

Then it is further commanded and ordained by the said Mayor and Justices that no master of any ship, nor mariner, nor any other person, what person he be, do moor their anchors in any other place of the said Rode, called Hungrode, but where the said Waterbaliff or pilots or one of them, shall appoint, and also that the said masters and mariners, do put a pole or lugg at any at any of the same anchors for a mark and point to all vessels passing through the same Rode, upon to lose for any default at any tide duly proved by the said pilots, 5s, whereof half to be paid to the Chamberlain and the other half to the said officers for presenting thereof.

Then it is further ordained and commanded by the said Mayor and Justices that no person or persons, what person he or they be do presume from henceforth to fetch or take any sand within the precincts of the said Rode of Hungrode for the ballast of any ship, hulk or other vessel, upon the pain to forfeit and lose for any default duly approved before the said Mayor, 20 ducats, whence half to be to the Chamber and the other half to him or them that do present it.

Then it is ordained and commanded by the said Mayor and Justices, that no person or persons, what person he or they do presume from henceforth to take any sand for ballast of any ship or other vessel being in the said Rode, but only in such place where the said Waterbaliff or pilots, or one of them, shall limit or appoint, upon to forfeit or lose for any ton of sand that shall be so taken contrary to this article, the sum of 4d, to be divided as it is aforesaid, that is to pay half to the Chamber for every ton of sand so taken for ballast a penny and also to agree with the lighterman for his labour.

Then it is ordained and commanded by the said Mayor and Justices that no person or persons, whatever he or they be, do from henceforth cast the said sand out of the lighter or boat into any ship or vessel within the said Rode, except there be a sail put between the ship and the boat so that none fall into the water upon pain to forfeit for any default duly proved 4 ducats, half to the chamber and half to the presenters.

Then it is ordained and commanded that no owner of ships, master nor mariner do from henceforth take any pilot to bring in or out their ships but such pilots of Shirehampton as be appointed for the same upon pain to forfeit and lose for any ship so brought in or out contrary to this article the sum of 20 ducats, whereof half to be to the Chamber and the other half to the pilots provided always that it shall be lawful to all masters of ships applying this City to bring in their own ships if they will take charge thereof upon them this proclamation not withstanding.

Source. Copied from the modern English version in Rich, *Bristol Pilots*, pp. 22-24; BRO: 04272 Ordinances of the Common Council 1505-1667. Ordinance for Hungroad; A proclamation devised and made for the preservation and maintenance and also for the good order of the Port of Hungroad, 1551.

Appendix 1.004. The water supply at Pill, 1765-1790.

The process of providing a new fresh water supply at Hungrood, began after Henry Bright, a Bristol merchant, wrote to the Society in July 1765 outlining his plan for providing this service and having considered it, the Society referred the matter to the Committee and provided initial financial support.¹ The Committee proceeded to Hungrood and directed a survey be made to assess the practicability of a pipe being laid from a mill pond to the waterside. The pond belonged to a Mr. Wilkins who was at the meeting and consented.² On 5 September, an estimate of the expense was laid before the Committee and the consent of the Lady of the Manor was asked for and obtained by 10 November, but no more was done until 3 March the following year when a proposal from Wilkins that a branch pipe be laid to Pill for the benefit of the inhabitants was turned down mainly on the grounds of costs.³

As part of the project, a slipway would need to be built next to the Custom House and the water pipe would also come out there, so on 5 June 1766 the Committee decided that the project would not go ahead unless Customs agreed to pay half as 'their officers would receive the principal benefit of this'.⁴ To the impartial observer, this seems nonsense as the point of the scheme was to provide water for shipping, and although Customs would benefit from the slipway, the Society gained most. Customs obviously felt the same and did not answer, whereupon the Committee backed down on 3 July and decided to advertise for tenders.⁵ However, frugality again entered into the equation and on 9 August all tenders were turned down and the Committee delegated the matter to a number of dignitaries including Mr Bright and asked them to get the project completed 'as expeditiously and with as little expense as possible'.⁶

It was probably finished on 6 November as the Committee visited Pill to view the works,⁷ but when it is considered that permission was so easily obtained from local landlords, and that the project was seen as a great asset to the port, it could have been completed within a few months had they not been so niggardly.

However, easy access to fresh water at the port was a tremendous asset to shipping and according to Farr, it was taken to the village as well as the ships.⁸ There is some confusion about the ownership of the millpond from where the water was taken. The Committee minutes on different dates say that it belonged to Mr Wilkins whilst on a later date allocated it to Mr Morgan, the squire. The latter's family tended to be antagonistic towards the Society and in 1779 they arranged for pilots to be pressed when they should have been immune, stopped the pilots working on Sundays in 1790, and in 1800 interfered with the water pipes.⁹

¹ BRO: SMV/2/1/2/4 Index 4, 4 July 1765, p. 96; BRO: SMV/2/1/1/9 Hall Book 9, 4 July 1765.

² BRO: SMV/2/1/1/9 Hall Book 9, 5 July 1765.

³ BRO: SMV/2/1/1/9 Hall Book 9, 3 March 1765.

⁴ BRO: SMV/2/1/1/9 Hall Book 9, 5 June 1766.

⁵ BRO: SMV/2/1/1/9 Hall Book 9, 3 July 1766.

⁶ BRO: SMV/2/1/1/9 Hall Book 9, 9 August 1766.

⁷ BRO: SMV/2/1/2/4 Index 4, 4 July 1765, p. 97.

⁸ Farr, *Somerset Harbours*, p. 36.

⁹ Farr, *Somerset Harbours*, p. 37.

The technical details of the system were that it consisted of an inlet at the millpond – Captain Shaw refers to this as the fountainhead – taking water by wooden pipes to the waterside along the Watch House side of the pill. It was necessary to build a slipway for boats and this was to be ‘from the low water mark to range up by the side of several cocks’, no doubt the cocks were positioned so that they could be used at different levels of tide again showing the effect of the Avon tides.¹⁰ Kingroad was supplied by boat as well as the port.¹¹

The Society allowed Mr Wilkins two guineas per year in 1771 to take the pipes under his protection after the locals damaged them,¹² but in a letter to the Society from the Haven Master in 1785 he says that the pipes were choked as they had not been cleaned since first installed.¹³ The oversight of the water system became his concern and it was written into his duties in 1797 that he was to ‘superintend and direct the person having the care of the watering pipes at Pill and all repairs thereof’.¹⁴ There is no evidence of a caretaker actually being employed so it is possible that the Society were being frugal over his wages, or it may have been that his tasks involved only cleaning the slipway.

In 1782, Captain Shaw advised the Committee that the pipes near the fountainhead were being damaged by carriage wheels as they were not sunk deeply in the ground. He was directed to cover them with stones,¹⁵ but this was obviously an uneconomical repair as by 1785 the pipes had actually broken and had to be repaired and protected by posts and ‘great stones’. He himself had a two foot square copper plate with holes in it installed behind the grating at the inlet to stop small sticks getting into them.

Further evidence of possible neglect of the pipes comes from another letter by Shaw to the Society in 1790 after the pipes had to be examined following damage caused by tanners living above the fountainhead opening their reservoir causing silt to be brought down and clog them. He describes them as 2½ inch iron pipes, ‘much cankered’ which may mean that the original wooden pipes had been replaced at some stage. The remedy was to build a wall above the pond to block future incursions, and as this was done in consultation with Bright and Wilkins; it places the fountainhead at the conjunction of their lands. The letter expresses relief that Wilkins himself had agreed to build a wall to block future incursions and was ‘very thankful’ that Wilkins agreed to pay for it.¹⁶

¹⁰ BRO: SMV/2/1/1/9 Hall Book 9, 5 September 1765.

¹¹ BRO: SMV/2/1/1/12 Hall Book 12, 20/3/92, 20 March 1792. After complaints about a pilot’s note, the Committee reduced the sum charged for taking water to Kingroad from 3s to 1s6d.

¹² BRO: SMV/2/1/1/9 Hall Book 9, 24 October 1771.

¹³ BRO: SMV/7/1/6/4 Complaints against the pilots, 14 May 1785.

¹⁴ BRO: SMV/2/1/1/13 Hall Book 13, Listed in the duties of the Haven Master.

¹⁵ BRO: SMV/2/1/2/4 Index 4, 27 February 1782, p. 107.

¹⁶ BRO: SMV/7/1/4/19 Haven Master’s correspondence, 1785-1790, 23 February 1790.

Appendix 1.005. Rules, orders and instructions of the Quarter Sessions to be observed by the Ballast Master, 1786.

Rules, Orders and Instructions of the Quarter Sessions to be observed by the Ballast Master

1. It is ordered that every person digging or raising stones out of the rocks adjoining to the river who shall throw or roll any stones out of, or from any quarries or any other places near the river do make sufficient stanks and hedges at a convenient distance from high water mark, whereby the rolling of any stones or falling of any rubbish into the river be effectually prevented and whosoever shall omit doing thereof shall forfeit the sum of twenty shillings for each offence as a penalty and to be bound to the Quarter Sessions unless he pay the same upon demand.
2. That all masters of ships or other vessels discharging ballast shall give notice to the Ballast Master thereof and lay it on the ballast wharf or in such other place as the said Ballast Master decide and in no other place unless by liberty from the Ballast Master it be removed out of one ship into another under the penalty of forty shillings and to be bound to the next Quarter Sessions thereto be punished for such offence and breach of this order.
3. That all lightermen and others bringing ballast to ships (except to Virginia ships) do take the same out of the ledges or shelves in the river in such places as the said Ballast Master shall direct or shall be obliged to take the ballast from the ballast wharf and pay for it so much per ton as the Ballast Master shall think fit not exceeding sixpence per ton and whosoever shall do otherwise or offend in either of these particulars shall forfeit the sum of twenty shillings for each offence and be bound to the Quarter Sessions in case of refusal to pay the same.
4. That no person whatsoever lay any stones rubble or ashes or other filth below high water mark in the River Avon or Frome between Hanham's Mills and Crookham Pill in order to raise slips, gain ground or on any other pretence whatsoever without the licence of this court first obtained under penalty of five shillings for every offence and to be bound to the Quarter Sessions.
5. That all lightermen and other persons bringing stones for building or to any lime kilns shall within twenty four hours remove the same above the high water mark at a convenient distance under the penalty of twenty shillings and to be bound to the Quarter Sessions.
6. And it is ordered that the due and exact observation of all these orders be the more especial duty of the ballast master from time to time who by omission to inform the mayor of such who break any of them or failure of seeing them observed is to forfeit his place and also the bond entered into by him to the Chamberlain of the City.

Source. BRO: SMV/2/1/1/11 Hall Book 11, 2 August 1786.

Appendix 1.006. The Construction of Merchants' Dock, 1776-1784.

At the time of purchase, the Floating Dock consisted of the area denoted 'A' on Appendix Illustration 1,¹ produced by James Paty in 1776,² but without the chamber as shown. It incorporated an entrance, was walled but not pitched on all four sides, and dug to a depth of 22ft at the east wall sloping upwards towards the west allowing laden ships to lie at the former and light at the latter.³ If finished as originally planned, it could have taken 11 ships.⁴ Buildings consisted of sundry sheds, a brick kiln, a smelting house, boat house and a smithy,⁵ together with several properties including a public house. Spoil left over from the original digging was lying on the east side of the dock.

The Society called upon the engineer William Paty's assistance to decide the dock's final dimensions. He offered three options, shown on the illustration as A, B and C,⁶ and eventually after obtaining estimates, they decided upon a compromise combining A, B and part of C.⁷ Paty had allowed 110 x 30ft per ship, which gave space for the largest ships liable to come up river with room to manoeuvre. This formed a dock calculated to take 32 large ships and it would be perfectly feasible that that space could accommodate 36 or 40 ships of average size.⁸

On the strength of this the Society advertised for tenders for excavating and walling the dock according to the accepted plan. Although some firms tendered for both, separate contracts were awarded⁹ and it is significant that one John Beswick of Stafford rather than a local man was awarded the excavation contract and even allowed to bring in his own men. The likelihood was that he had experience of canal digging in his own area and could tender lower rates.¹⁰

The west wall of Champion's dock was to be demolished and the dock dug to the original level of 22ft but with a gap to be left in the wall between the entrance and the new west wall, the bank sloping down to the dock bottom. No reason was stated for this but it was probably intended to provide an area for dragging out awkward lengths of timber. Labourers dug out the dock and the spoil, including that left from the original excavation, and it was 'wheeled' an obligatory 170ft or more

¹ This is a dedicated Appendix Illustration hence the sequence number.

² BRO: SMV/7/1/3/5 (8a) Floating Dock, 1764-1781. Survey by James Paty, 1776. This plan is being used retrospectively as there does not appear to be any surviving before this date.

³ BRO: SMV/7/1/3/5(18) Floating Dock, 22 May 1776. Articles of agreement between John Beswick and the Society. This provides the information that the original dock was walled and indicates the depth; BRO: SMV/7/1/3/2 Management Committee reports on the Floating Dock, 1770-75, 14 January 1771, p. 8.

⁴ BRO: SMV/7/1/3/2 Management Committee reports on the Floating Dock, 6 November 1770, p. 7.

⁵ BRO: SMV/7/1/3/2 Management Committee reports on the Floating Dock, 24 September 1770, pp. 5, 10.

⁶ BRO: SMV/7/1/3/5 (10c) Floating Dock, Nd.

⁷ BRO: SMV/7/1/3/5 Floating Dock, (11).

⁸ Described as '40 sail of stout ships deeply laden' in Matthews, *Bristol Directory*, 1794, p. 36; Minchinton said that the original dock had been able to take 36 ships, but Illustration 1.001 A, shows that this would have been impossible and he must have been commenting on the eventual dock. Minchinton, 'Port of Bristol', pp. 139-140; Latimer refers to a local pamphlet published in 1790 which asserts the dock was capable of containing 36 ships but had never been filled. Latimer, *History of the Society of Merchant Venturers*, p. 210.

⁹ BRO: SMV/2/1/2/4 Index 4, pp. 228-9.

¹⁰ BRO: SMV/7/1/3/5 (18) Floating Dock. Draft articles of agreement between the Society and Beswick, 22/5/76.

from the edge of the dock where it was made into a mound or bank 20ft high. As will be described below, this became the basic material for brick making.

The contract for building the walls was given to a Bristol mason, Edward Rosser,¹¹ and they were to be made of limestone blocks 10½ inches thick in the same fashion as the original to a height of 26 ft, width 7ft and coped on the top. The west wall was to slope upwards towards the south-west end.¹² This was a substantial construction with the lime for mortar being burned on site and the stones being brought from the Society's quarry at Honey Pen Hill at a cost to the contractor as set by the Committee, who always kept down the costs as much as possible by making full use of their own resources.¹³

Digging and walling was completed by May, 1778¹⁴ and that September the Society advertised for tenders to pitch the area round the dock wall to a width of 48 ft, with an upward gradient from the sides of 18 inches. The pitch was laid on stone and gravel to a depth of 7 inches with the material again coming from the Society's quarries. The contract was awarded to a Bristol man, John Yandell¹⁵ against the bid of Edward Rosser.¹⁶ Again, a solid construction was necessary in anticipation of the heavy goods it would bear.

During the period, 1770 till 1776, other work had been ongoing. With the future use of the dock in mind, the Society deemed Champion's outer lock too small and so it had to be altered, enlarged, and piers and river walls built to protect it.¹⁷ A pier head had already been built on the east side of the entrance from the river with a key wall stretching back as far as the place the stones landed for the kiln.¹⁸ A similar pier head was ordered to be built on the west side, with a sea wall 10 ft deep and 4 ft thick stretching from there to the level of the dock west wall, about 140ft, both walls being for 'keeping up the banks'.¹⁹ There is no note as to whether this wall was used by shipping but it would be surprising if it were not as at high tide it would be easy to work cargo especially into lighters. It was described as a key (quay) wall. Nonetheless it was not a legal quay and goods handled would have to have to have been either local or brought from within.

The river entrance was protected by the customary two sets of double-leafed gates and the dock access by a single gate, all with timber aprons obtained by felling local elm trees; another saving.²⁰ To make up these gates, three were bought new,²¹ the others partly constructed from Champion's originals, and all sheathed

¹¹ BRO: SMV/2/1/2/4 Index 4, 24 June 1776, p. 229; Edward Rosser is listed as a mason with premises on the Quay in *Bristol Directory*, 1785, p. 47.

¹² BRO: SMV/7/1/3/5 (12), (14) Floating Dock.

¹³ BRO: SMV/2/1/2/4 Index 4, 24 June 1776, p. 229.

¹⁴ BRO: SMV/2/1/2/4 Index 4, 25/5/78, 25 May 1778, p. 231.

¹⁵ Yandell is listed as a pitcher of 28, Hilgrove-street in Sketchley, *Bristol Directory*, 1775, p. 110.

¹⁶ BRO: SMV/7/1/3/5 (27) Floating Dock, 29 September 1778; SMV/2/1/2/4. Index 4. 29 October 1778.

¹⁷ BRO: SMV/7/1/3/2 Management Committee reports on the Floating Dock, 26 March 1772, p. 13.

¹⁸ BRO: SMV/7/1/3/2 Management Committee reports on the Floating Dock, 14 September 1773, p. 28.

¹⁹ BRO: SMV/2/1/2/4 Index 4, 24/11/77. 24 November 1777, p. 230.

²⁰ BRO: SMV/7/1/3/2 Management Committee reports on the Floating Dock, 18 June 1771, p. 13.

²¹ BRO: SMV/7/1/3/1 Purchase of Champion's Dock, 1770-78, 23 October 1770.

with easily replaced wood and paper to allow for damage.²² They were operated using capstans and ran on wheels attached to their bottoms, swinging on a system of cogs and lignum vitae sheaves.²³ Water pressure was controlled by a system of leather sluices.²⁴ The chamber itself was elliptical with a wall built 90 ft long and 26 ft deep on the western side 'for the ships to lie safely which might by any accident be prevented from going into the dock'. The area adjacent to the western wall was pitched indicating it could be used for discharge of cargo, but its status as a legal quay was questionable.²⁵ It is likely that there was a wall on the eastern side but it is not mentioned in any documentation.

Within the dock, ships handling cargo could berth or work from five or six chain moorings stretching from the eastern wall.²⁶ Ladders at convenient places were erected together with a tool house.²⁷ There were at least two cranes, one built new in 1775,²⁸ and the other was erected in 1781 at the lowest berth at the quay. Although the dock had been constructed with a level bottom, this was impossible to maintain and boards showing the various depths had to be set up.²⁹ The second crane needed to be the largest in the harbour and the contract was awarded to a Mrs Deverell who quoted a price of £150, but a later book entry accused her of breach as she did not make it large enough.³⁰ Another firm, James Hicks and Thomas Clarke, had submitted their detailed tender in July 1781 and it describes their crane as 'a large size turnabout crane for unloading large oak timber'. They estimated a figure of £208.1.10d and ended with a note.

This is as near as it can be made for it to be done in a workman like manner and the best of timber and iron for such a large crane which must be a deal stronger than any crane on the quay for heavy long oak timber is always jamming against one another before it can be cleared therefore it is necessary for the crane to lift a much greater weight than the piece of timber it is to lift.³¹

It is likely that the Society awarded the contract to the lowest bidder. However, the necessity of ordering a crane of this size three years after the dock opened shows that it had been difficult to anticipate the proportions and awkwardness of the merchandise to be handled. In 1785, a slipway 14ft wide with two lignum vitae rollers, one under water, had to be constructed to land masts, again an indication

²² BRO: SMV/7/1/3/4 Merchants' Dock receipt book, 1771-1781, 10 August 1781, 27 August 1773.

²³ BRO: SMV/7/1/3/1 Purchase of Champion's Dock, 4 July 1777; BRO: SMV/7/1/3/2 Management Committee reports on the Floating Dock, December 1771, p. 132.

²⁴ BRO: SMV/7/1/3/4 Merchants' Dock receipt book, 12 December 1774.

²⁵ BRO: SMV/7/1/3/2 Management Committee reports on the Floating Dock, 5 June 1773, pp. 27-28; BRO: SMV/7/1/3/11 (11) Problems attending the Floating Dock. Letter dated 4 February 1789 from Helicar's complaining to the Society that they had been charged at the rate for ships discharging at the quays rather than the floating dock charges. They argue that the west side of the chamber is a legal quay; BRO: SMV/2/1/2/4 Index 4, 28 September 1778, 28 October 1778.

²⁶ BRO: SMV/2/1/2/4 Index 4, 20 September 1775, 28 October 1778.

²⁷ BRO: SMV/2/1/2/4 Index 4, 20 September 1775, 28 October 1778.

²⁸ BRO: SMV/7/1/3/1 Purchase of Champion's Dock, 26 October 1775.

²⁹ BRO: SMV/7/1/3/1 Purchase of Champion's Dock 25 May 1778.

³⁰ BRO: SMV/2/1/2/4 Index 4, 28 May 1781, 18 September 1781.

³¹ BRO: SMV/7/1/3/5 (35) Floating Dock, 22 May 1776.

of the difficulty of handling such goods.³² Also, some timber needed to be under cover during certain seasons and sheds had to be built.³³

The eastern, non-legal, side of the dock was designated for ship repair and refitting and although a partition had been built between the dock and the shipyards, Hilhouse had a clause in his lease allowing him access night and day through a gate on the north-east side.³⁴ It is not always clear from the documentation when facilities were being shared and this can cause confusion. For example, one of the essentials for shipping was a supply of clean water and a well was dug in 1775 by James Hilhouse for which he billed the Society.³⁵ This well could have been for his own use, and it would be paid for by the Society as part of his lease, but Hilhouse was used by them as a consultant engineer so it is likely that this would be the main source of supply for the complex.

There was no lack of fresh water in the area as it ran off Clifton Hill into the docks and Rownham Meads; and further east from Jacob Wells into Limekiln Dock. However, this brought its own problems because the high tides of the Avon acted against drainage causing flooding. At the eastern end of the area the Society built an underground drain from the bottom of Jacob Wells Road to Limekiln Dock³⁶ and at the western end a gout collected the excess water and fed it into the river.³⁷ This gout was a source of conflict with locals as its gate flap was badly constructed causing houses to be flooded.³⁸ The committee had to discipline the man responsible and pay for its repair. The plentiful water had previously allowed the Great Dock to be scoured by an outlet from a reservoir, but in order to increase the available land it was arched over and replaced by a new system using a feather (pipe) from the Floating Dock.³⁹ Again, the ever present tidal system interfered with geographical features that should have been assets.

Although some of the clay from the diggings was used to level the ground, the rest was not discarded as it was valuable material for brick and tile making. Ever ready to turn a profit, the Society in 1770 purchased an on-site kiln with its sheds and leased it at an annual rent plus a set sum for each thousand bricks or tiles made with the target being set at 500,000 per year. Only two-thirds of the this was reached by 1774 due to interference from building work at the docks.⁴⁰ The

³² BRO: SMV/2/1/2/4 Index 4, 15 February 1785, 18 September 1782, p. 262.

³³ BRO: SMV/7/1/3/11 (6) Problems attending the use of the Floating Dock, 2 June 1787.

³⁴ BRO: SMV/2/1/2/4 Index 4, 28 May 1773, p. 224.

³⁵ BRO: SMV/7/1/3/1 Purchase of Champion's Dock, 16 November 1775.

³⁶ BRO: SMV/7/1/3/2 Management Committee reports on the Floating Dock, 14 June 1771, p. 8.

³⁷ Gout. This is a relatively simple tidal flap system similar to that used by the Romans nearly 2000 years ago. Fresh water from the ditches and reens goes through the sea wall at low tide via a flap (a kind of trapdoor or one way valve) and out to the sea. When the tide comes in as far as the gout the incoming seawater pushes against the flap and closes it. The fresh water on the other side of the wall builds up temporarily in the reens until the tide turns and goes back out. The weight of the fresh water then pushes the flap open again – draining out to the sea until the next high tide.

bbc.co.uk/Wales/nature/sites/walking/pages/se_gwent_levels.shtml;

³⁸ BRO: SMV/7/1/3/2 Management Committee reports on the Floating Dock, 8/10/72. 8 October 1772, p. 20.

³⁹ BRO: SMV/7/1/3/2 Management Committee reports on the Floating Dock, 14 January 1771, p. 8; BRO: SMV/2/1/2/4 Index 4, 25 May 1778, p. 231.

⁴⁰ BRO: SMV/7/1/3/2 Management Committee reports on the Floating Dock. pp. 5, 9, 22, 31.

problems with quotas continued but they were kept in place when the lease was re-auctioned in 1784.⁴¹ The tides again caused problems with arguments in 1781 between the Society and the lessees as to who was responsible for repairing a breach in the brickyard bank.⁴²

The 1776 legislation authorized the Society to enlarge the existing floating dock on the north-western side and to build a quay with storehouses, warehouses, sheds, yards and places for landing, storing and laying up of the combustible goods; timber, planks and boards, deals and staves, tar, pitch, resin and turpentine.⁴³ It also brought the locality under the jurisdiction of the Corporation of Bristol allowing the Society to acquire land under compulsory purchase if required – wide areas of storage space being necessary because timber of large dimensions and volume was to be handled, much of it needing to be stockpiled in the open with passageways in between.

The extent of this is shown in a schedule to the Act (See Appendix 1.007) denoting the proposed weekly rates as it gives differential tariffs depending on type of merchandise and on whether the timber could be laid in piles or needed individual plots. Merchants were to pay both storage and handling charges. The area of ground required stretched from the floating dock westward to the river, but the purchase of this proved problematic. There are copious references in the Hall Books to a legal battle between the owners of 10½ acres of land, mistakenly believed by the Society to have been bought by Champion, and this dispute was not settled until 1791 when a jury awarded against them and they had to pay the market price.⁴⁴ Meantime, the need for storage space had forced the Society to pay rent for the ground. Other leases were altered, cancelled or bought out.

Storehouses were built specially for liquid inflammables with a drainage system to contain leakage and spillage from barrels. There are no descriptions of the buildings in place when the dock opened, but in 1784 a new tar house copied from similar buildings in Hull was built 140 ft from the edge of the centre of the west wall.⁴⁵ Three more were added in 1785 with arguments among the Committee as to whether the floors should be pitched or paved.⁴⁶ Their dimensions were probably as in the following estimate.

An estimate for building a warehouse one story high at the floating dock forty four feet long by twenty-five feet wide. The east front to be 52 feet from the dock. The whole to be built with rough stone; pointed brick arches in front with free stone import keystones, fascia, and coping stone paving laid in brown mortar. With cisterns to catch the waste, a strong king post roof gutter in front with lead, and one or three strong rail gates with hinges and locks.

⁴¹ BRO: SMV/2/1/2/4 Index 4, 6 June 1780, 18 March 1783, pp. 234, 237.

⁴² BRO: SMV/7/1/3/5 (36) Floating Dock List of Society's decisions re the brickyard 1770-1781 Not dated.

⁴³ Geo III c.33. An Act to remove the danger of fire amongst the ships in the port of Bristol by preventing the landing of certain commodities on the present quays; and for providing a convenient quay and proper places for landing and storing the same; and for regulating the said quay, and the lighters, boats and other vessels carrying goods for hire within the said Port of Bristol and for other purposes therein mentioned.

⁴⁴ McGrath, *Merchant Venturers of Bristol*, pp. 194-195.

⁴⁵ BRO: SMV/2/1/1/11 Hall Book 11, 27 October 1784.

⁴⁶ BRO: SMV/2/1/2/4 Index 4, 30 April 1785, 6 May 1775, pp. 262-263.

The roof covered with good hand tile and pointed inside. The whole to be completed for the sum of £138.12.0d.⁴⁷

This was a substantial building and Appendix Illustration 2 taken from the same source almost certainly represents it. Although denoted as tar warehouses, it is possible that this was a generic name for buildings containing inflammable fluid, though each would be dedicated to one substance.⁴⁸

As time passed the dock was improved. A stoutly built custom's house 'not exceeding 14 feet squares' was built in 1784 after customs officers on duty at the dock complained of 'great inconveniences for the sake of a couple of rooms'.⁴⁹ Illustration 1.008 shows a drawing of the intended customs house.⁵⁰ The road to the dock was widened and boundary walls built,⁵¹ whilst upright railings were erected near the road entrance to the to the quay, together with gateways to 'prevent improper things being brought there and to secure the goods'.⁵² This may indicate that there had been a problem with theft and illegal dumping.

⁴⁷ BRO: SMV/7/1/3/10. Estimates for building Tar Houses in Merchants' Dock. Bundle.

⁴⁸ BRO: SMV/2/1/2/4 Index 4, 28 March 1787, p. 265. Committee ask for a report as to who takes the tar that drains off. A mixture of liquids would not be of any value.

⁴⁹ BRO: SMV/2/1/2/4 Index 4, 3 November 1784, p. 262.

⁵⁰ BRO: SMV/7/1/3/11 Problems attending the use of the Floating Dock, 1784-91.

⁵¹ BRO: SMV/2/1/2/4 Index 4, 25 May 1771, p. 235..

⁵² BRO: SMV/2/1/1/11 Hall Book 11, 27 October 1784.

Appendix 1.007. Rules for the better government of the Floating Dock, 1778.

Merchants-Hall, Bristol, August 28, 1778.

Rules for the better government of the Floating Dock

That for preventing the Dock from being choked with mud, no ship or vessel shall be admitted when the water in the river shall be higher than the water in the chamber; and that for giving time for the tide water to subside in the chamber, every vessel shall lye there twelve hours.

That for the like good purpose, every person wanting to take a ship out of the dock shall give sufficient notice for the tide water to be let into the chamber and remain there the like space of twelve hours.

That all vessels intending to pass out of the dock shall be taken out as soon as the tide is as high as the water in the chamber. And in default, the Dock Master shall immediately shut the gates and present the proceedings of the pilot or other person having the charge of the vessel to the Master of this Society.

That no vessel shall be permitted to come into the dock with their anchors or lumber over their sides, or other obstructions which may endanger the gates.

That all gates shall have ropes sufficient for mooring them.

That if through default of observance of either of the two last articles any damage shall be done to the dock or gates, the owner, or commander, or other person having charge of the vessel by which such damage shall be done, shall make good the same.

That every person intending to bring a ship or vessel into the dock shall give twelve hours notice thereof in writing to the Dock Master and upon neglecting to bring such ship or vessel in, shall pay to the Dock Master his fee for opening the gates as for an empty ship.

That no person shall be permitted to make any fire on board any vessel being in the said dock nor to throw any chips, rubbish, or dirt into the dock under the penalty of five pounds for making such fire, and ten shillings for throwing chips, rubbish or dirt into the dock.

As to ships and vessels coming in to unload.

Empty ships or vessels lying in the dock are to give way to a vessel coming in to unload.

Such ships and vessels as have not brought in a cargo to be un-laden are to give way to a vessel which shall have brought in a cargo to be un-laden, if the owner, master or commander of such last mentioned ship or vessel shall be desirous of continuing her in the dock at the rates after mentioned.

If there shall not be room for all such vessels as shall have brought in a cargo such empty vessel as shall have been there longest is to leave the dock.

Every person having the charge of any ship or vessel lying in the dock who shall be guilty of a breach of these rules forfeits £50.

All ships coming in to unload goods are not to pay any fee for opening the gates in order to pass in or out.

As to empty ships and vessels.

A fee of five shillings for opening the gates is to be paid by the person having the charge of any empty ship or vessel coming into the dock.

The rates.

For every ship or vessel of the burthen 300 tons or upwards. 9s per week,
For every ship or vessel of 200 tons or upwards and under 300. 7s per week
For every ship or vessel of 150 tons or upwards and under 200, 6s per week.
For every ship or vessel of under 150 tons. 5s per week.

Source. BRO: SMV/7/1/3/7 Rules for the better Government of the Floating Dock, 28 October 1778.

Appendix 1.008. Schedule to the act to remove the danger of fire amongst the ships in the Port of Bristol, 1776.

For the housing of tar, a farthing per barrel per week and so in proportion.

For housing pitch, half the price for housing tar.

For turning pitch and tar in, a halfpenny per barrel, and the same rate for turning out.

For housing rosin or turpentine, two pence per ton gross per week and so in proportion.

For turning in resin or turpentine, four pence per ton gross, and the like rate for turning out, and so in proportion.

For every hundred square feet of ground (and so in proportion for a less quantity) which shall be occupied by any kind of plank not exceeding two inches and a half thick, boards, or staves, or any other articles which shall be piled, nine-pence for week, and so in proportion; and that over and above the expense of piling, which is to be paid for by the proprietor of such goods.

All kinds of American deals of irregular lengths to pay three fourths of the above rate.

For every hundred square feet of ground (and so in proportion for a less quantity) which shall be occupied by balks, masts, spars and all kinds of timber, or by plank of the thickness of three inches or upwards, and of the length of twenty-five feet or upwards, sixpence per week, and so in proportion; and above the expense of placing away, which is to be paid for by the proprietors of such goods.

Source. Geo III c.33. p. 537.

Appendix 1.009. Memorial re the Floating Dock, 1788.¹

**To the worshipful the Master, Wardens and Society of Merchant Venturers of
the City of Bristol.
The Memorial of Sundry Merchants and Traders of the same City individually
respectfully praying.**

Relief from the grievous operation of that Act under the direction of your Society so far as it relates to the landing of lumber mahogany at the floating dock for:

Your Memorialists beg leave to observe that if said Act in its present form is continued to be enforced they are of the opinion it will highly militate against the trade of this port particularly as the extra expenses are enormous and of a nature that your Memorialists had not envisaged when that bill was framed which makes it grievously partial to one description of traders and exceedingly oppressive by subjecting those articles to so heavy a tax which from their small value and great bulk cannot by any means bear.

Your Memorialists with confidence appeal to their respectable Society as guardians of the interest and trade of the port and to whom it must be unnecessary to observe that an attention to convenience, dispatch and lessening of the port charges ought to take place of all other considerations else cannot hope to preserve that rank in the commerce of the kingdom which many citizens should be zealous of maintaining especially as Liverpool is become so formidable a rival and now meet us at markets that were formally wholly supplied from Bristol. Your Memorialists having experienced these injurious disadvantages want to impress your minds with a true statement of the many evils they are subjected to being persuaded that they need only to be substantiated to find relief at your hands.

Your Memorialists therefore observe that the navigation of our river is difficult and uncertain at all times and that there are but few days in any spring that ships can go into the floating dock and to wait for this is often injurious to charters delaying the vessels bringing them demurrage and breaking in upon their intended voyages.

The ships have tobacco on board, they go first by a subsequent Act to a wharf in Bristol to discharge, and are then ordered down with their lumber to the floating dock at a great expense and the ship wholly at the risqué of the owners, her insurance having ended 24 hours after she moored at the quay. That though the ship discharges at the floating dock we are made to pay wharfage at the custom house the same as if we had landed at the wharf in Bristol. That when the vessel is in dock she incurs an extra charge of at least one shilling a day for lying there that notwithstanding wharfage has been paid on the whole cargo at the Custom House yet must be paid an extra charge for all the ground the cargo covers at the dock when landed at the rate of 9d per week for every ten square feet as these are the regulations and demands of the Act.

Your Memorialists imagine they were all the inconveniences which were apprehended on the passing of that Act, but considerable as they are, they are small in comparison of the losses sustained upon the prices of goods sold at that

place occasioned by the distance from the market and the additional expense of haulage circumstances that will be confirmed to you by any carpenters, coopers and dealers in lumber.

Your Memorialists will demonstrate this truth by a recent case of the ship *Rockhampton* from New York whose cargo cost but £365 sterling, the proceeds of which proved to be only £288 of course sustained a loss of £77 – wholly occasioned by the said cargo incurring a loss and extra charges at the floating dock of £99.5s above what the same would have sustained had it been landed as usual on the quay of Bristol – as by a true statement hereunto annexed. And, which enormous loss is a tax not less than 35% on the proceeds of that cargo, a serious circumstance to the owners and a convincing proof of the hardship and injustice which the timber and lumber trade labour under. And with respect to Naval stores, the extra charges are not less than 20% on their net proceeds. And both buyers and sellers feel the greatest inconvenience in being forced down from their seats of business to attend at so unreasonable a distance which is a tax upon time of the nature and value not to be estimated but by those who unfortunately are reduced to the necessity of experiencing such trespass. Therefore be given them, and particularly in the timber deal and lumber, liberty to land on the keys of Bristol and private wharfs is much diminished in a high degree as this port cannot be upon a 'par' with any other in the kingdom nor will American cargoes continue to be brought here in any quantities whilst subject to so partial and offensive a tax.

Your Memorialists would have no objection, on the contrary would readily contribute in any general tax for the support of a place so useful as the floating dock, but the present regulation is extremely partial and against all policy equity and justice.

Your Memorialists observe that the wharfs in Bristol are always more or less encumbered with ships unemployed to the great inconvenience of others who are loading or unloading and conceive it would be a good regulation to empower the key warden to order all vessels that are for sale down to the floating dock which would be a safe repository. The buyers see at one view and place the ships that are for sale there as they could lie in that basin secure without the ship keepers or that tide attention which they are obliged to have at the quays. The expense to the owners would not on an average be more for their ships lying in the floating dock than maintaining ship keepers on board as the quays, beside escaping the danger of many accidents and injuries they are liable to meet with there.

Your Memorialist having stated with candour their grievances under the operation of the before mentioned Act of Parliament humbly hope for that relief which to this worshipful corporation shall seem most and as in duty bound will ever pray.

¹BRO: SMV/7/1/3/11. Problems attending the use of the floating dock. 1784-91. This is an unnumbered bundle of documents, this one given the personal number (9). To the Worshipful, the Master, and Society of Merchant Venturers of the Port of Bristol. The Memorial of Sundry Merchants and Traders of the same City, individually, respectfully praying ... It is undated but recorded in the Hall Index 5 28/2/88 as being read.

Appendix 1.010. The results of three surveys ordered by the Committee regarding nuisances on the river, 1764-1783.

1764. ¹	1771. ²	1783. ³
Losing water at Hungroad due to rubbish arriving from upstream and silt.	Lightermen have left rubble near the junction of the Frome and Avon.	Key wall built by Deal Yard which is an encroachment on the river.
Losing water above the Powder House due to rubbish and silt.	Cinders and ashes have been thrown out by the Glasshouse near Limekiln Dock.	Cinders from the Glass House at Limekiln Dock are an encroachment on the bank of the river.
Discarded ballast between the Powder House and Seamills has had rubble added.	A stank made by quarrymen projects too far into the river.	Earth on the river bank is liable to slide in unless it is supported.
Large stones outside quarry need broken up.	Ditto another stank by a brickyard.	A stank on the southward bank of the river is dangerous to shipping.
The Ledge below Hotwells is dangerous to early ships.	A great number of stones are left on the river banks and drop into the river.	A stank belonging to a brickyard pushes out into the river and should be removed
Point of land above this juts out and takes ships.	The point Ledge Rock is dangerous and should be removed.	Two Quarries need a flat. Unless they work at the bottom they will be turned out.
The quarry above the last mentioned has large stones that should be broken up and taken away.	Shaking Rock is a danger to the towpath and should be removed	Another quarry has large stones lying in the river. Must remove or he will be turned out.
The quarries on either side below the Hotwell as their stanks are jutting into the river and ships have recently hit them.	The key wall built for the new Hotwell is falling into the river and should be removed.	Above the river. Stones x 9.
Glasshouses on the riverside let cinders into the river.	The large loose rocks near the Powder House should be blown up and carried away.	Above the river. Dung wheeled in x 5
	The towing path on the Somerset side has fallen in several places and should be repaired.	Above the bridge. Broken pots etc. x 2.
	A bank of rubble is forming at the mouth of Southwell's Pill. It is ordered it should be removed.	Above the bridge. Rubble x 4.
	Hungroad has filled with rubbish. See Bro 30/20 for details.	Above the bridge Ashes and cinders x 3.

¹ BRO: SMV/2/1/1/9 Hall Book 9, 16 August 1764.

² BRO: SMV/2/1/1/9 Hall Book 9, 24 October 1771.

³ BRO: SMV/2/1/1/11 Hall Book 11, 1 July 1783.

Appendix. 1.011. Chronology of harbour improvements, 1240-1793.

- 1240-1247. Frome diverted.
- 1250. Bristol Bridge built.
- 1475. First recorded crane built by Alice Chester.
- 1552. The Society of Merchant Venturers (Society) founded.
- 1620. Aldworth's Dock excavated.
- 1626. Limekiln Dock established at Mardyke.
- 1663. Quay extended between Lower Slip on the Quay and Aldworth's Dock.
- 1687. Aldworth's Dock filled in.
- 1690. Quay was extended 462 ft from Aldworth's Dock to Hobb's Yard.
- 1690-1693. Quay lengthened 420 feet down towards the River Avon.
- 1690-1693. Repairs done to Quay and Back.
- 1690-1693. Tower Slip near Vielle's Great Tower removed and quay wall made level.
- 1700. Quay extended a further 70ft.
- 1709. Green Bank above Great Tower walled in.
- 1711. Customs House built in Queens Square.
- 1712. Sea Mills dock begun.
- 1714. First drawbridge across the Frome between the Quay and St. Augustine's Back.
- 1717. Quay extended to the end of the Frome channel giving 2,505 of uninterrupted wharfage.
- 1717. Fish market moved from the High Street to Quay opposite St. Stevens.
- 1722. Great Tower on the Quay demolished.
- 1724. Back lengthened by 310ft beyond Back Gate towards Graving Place.
- 1724. Work began extending the Grove 472 ft from the Quay.
- 1724. Two slips, Passage and Gibb built on the Grove.
- 1724. On St Augustine's Back, 150 feet wharf built for coastal timber.
- 1725. Wall built to support Tombs dock.
- 1727. Canal to Bath completed.
- 1735. Padmore's Great Crane erected beside the Mud Dock.
- 1744. Tombs opened his dry dock at Dean's Marsh.
- 1745. Limekiln Dock becomes a dry dock.
- 1750. Wapping becomes an important shipbuilding and repairing centre.
- 1755. The Drawbridge replaced by a bascule bridge.
- 1760. Tombs Dock opens Cannons Marsh.
- 1762-1768. Champions Dock built.
- 1762-1768. Farr's Dock opened next to Champions'.
- 1763. Bristol Bridge demolished.
- 1764. Wapping Dock opens west of Prince Street.
- 1764-1768. New Bristol Bridge built.
- 1770. Champions Dock sold to Society and renamed Merchants' Dock.
- 1770. Hilhouse's dockyard opens at Hotwells.
- 1770. Work completed linking existing wharves at the Back and Grove.
- 1771. Quay completed at St. Augustine's Back.
- 1774. Fourteen cranes were available on the quay including Padmore's.
- 1776. Bill passed to enlarge Merchants' Dock on its western side, erect storehouses, and lay out yards.

1780. Hillhouse opens Redcliff Yard on the Somerset bank of the Avon.
1790. Teast's docks open Cannons Marsh.
1793. Mardyke Dock opens, 1793.

Sources. The above was based on information from the following. Elkin, 'Aspects of the Port of Bristol', 27-35; Farr, *Bristol Shipbuilding in the Nineteenth Century*; Farr, *Shipbuilding in the Port of Bristol*; Latimer, *Annals*; Lord and Southam, *Floating Harbour*; McGrath, *Merchant Venturers of Bristol*; Minchinton, 'Port of Bristol'; Wells, *Short History of the Port of Bristol* Williams, 'Bristol Port Plans and Improvement Schemes'.

Appendix 1.012. The building of the New Dock at the Grove, 1767-71.

The state of affairs at the Grove had been surveyed for the Society by the engineer Ferdinando Stratford during the wharfage negotiations in 1762 and he had provided a plan of the area (Illustration 1.010). It does not show the particular details of the proposed construction of the new dock at the Grove but depicts the situation at the Grove before 1767.¹ The quay wall on the eastern side had been completed in 1724 and stretched for about 150ft from the east wall of the Mud Dock and on the western side of the Grove the wall of the Back stopped just beyond the last market shed. The area between these points, was not developed but included a crane on the east wall of the Mud Dock, a shed, a slipway for the Grove Ferry and the city dung wharf, approximately 60ft wide and enough to take a barge or lighter.

The engineer responsible for constructing the dock, Thomas Paty² proposed the removal 48ft of the east wall and to start the new dock inwards from there with the opposite side returning to the riverside about 300 ft away and as late as 25 February 1767, when the Society put the matter out to tender, these were still the dimensions envisaged.³ This would have removed the ferry slip and so just above the dock a new slipway was planned. However, the Committee had viewed the area themselves on 18 February, and after examining his plans had not been entirely in agreement and had asked for another plan with an estimate of costs whereby 'the proper births for the greatest number of ships' was obtained.⁴

The Committee then met on the 23rd February, and decided that the best way of constructing the new dock was firstly to dig a trench for the foundation of the wall barrowing the rubble along a stage to lighters, the work being to the cost of the 'undertaker', i.e. contractor, and the lighters paid by the Society. Once the wall was erected, the mud and as much as possible of the outer bank was to be thrown into the river during the period of 'freshes' (floods), the disposal of the remainder of the outer bank to be considered later.⁵

The Committee met again on 30 March, 1767,⁶ and viewed two documents prepared after the last meeting. The first contrasted the ways of constructing the new walls, one method being the digging of a trench to take the foundations and wall leaving a bank of earth facing the river and building the wall inside; a sort of natural coffer dam. The earth from the trench would be barrowed away along stages to be loaded into lighters moored near the other side of the bank. The other was to dig out one segment at a time from the water's edge to the position of the

¹ BRO: SMV/7/1/4/29 Plan of the Bristol Quays.

² It is not certain whether the plans were made by Thomas Paty or his son William. Patrick McGrath says it was William. McGrath, *The Merchant Venturers of Bristol*, p. 154.

³ BRO: SMV/7/1/4/5 New quay wall at the Grove, Bristol. 1767-69. A collection of documents concerning the building of the wall, not numbered and sometimes untitled. The document in this case is a copy of the Society's original tender dated 25 February 1767.

⁴ BRO: SMV/2/1/1/9 Hall Book 9, Standing Committee meeting, 18 February 1767.

⁵ BRO: SMV/2/1/1/9 Hall Book 9, Standing Committee meeting, 23 February 1767.

⁶ BRO: SMV/2/1/1/9 Hall Book 9, Standing Committee meeting, 30 March 1767.

inward wall and then build the wall before moving on to the next. The author did not offer an opinion but the tone appears to favour the latter on the grounds of cost.⁷

The second document was simply an estimate of the cost of building the wall and digging out the new dock and foundations, though the figures given do not tally with the eventual costs.⁸ Although they accepted that both methods had advantages and disadvantages, the high costs of digging and carrying away the earth heavily influenced their decision so they hedged, declaring that it would be wrong to make a contract for the whole work to be done by one method alone and that initially decide but authorise work on the first 40 yards only.

It was, however, the second method they chose to start with and this appears to be entirely due to the costs involved in raising and barrowing spoil to lighters, especially as they were assured by Captain Bennett that a great deal of material could simply be 'thrown' into the river without causing any 'inconvenience'. When the Society's attitude to others doing this is considered, there can be no doubt that in their minds the savings involved was the prime concern. Mr Paty was ordered to mark out the ground and Captain Bennett to oversee the work and employ the labourers, whilst a superintendent of the men was also appointed at the same meeting.⁹

A further and probably the most significant example of the frugality of the Society, occurred at a meeting of the Committee on 28 April, 1767¹⁰ when they decided not only to discard the scheme to remove the 48ft of the eastern wall, but to actually extend it by a further 50ft. This would reduce the length of the dock by nearly 100ft solely to save £1500 by cutting down the amount of earth to be removed. They claimed that there was more earth in this area than any other and intimated they were only losing berths for three ships in doing it that way, but when it is considered that only two months before they were insisting upon as many berths as possible, it is a clear indication that saving money was the driving force behind the project.

Appendix Illustration 3 shows the original design for the work and the result of the Society's amendments. At the same meeting they instructed members to buy second-hand lighters and appointed a supervisor to oversee them. The lighters were purchased from William Champion for £200, 15 during the second half of 1767¹¹ but in October, 1768 they needed major repairs, possibly an indication that their frugality did not pay in the long run.¹²

Regarding the construction of the dock and walls, the latter had to be built to the same height as those at the quay, about 20ft with 2ft foundation below the bed of

⁷ BRO: SMV/7/1/4/5 Considerations on the expediency of the different methods of digging the wall. There was no date or signature on this document but was almost certainly the Clerk of the Society following the Committee's instruction.

⁸ BRO: SMV/7/1/4/5 Estimate. No Date.

⁹ BRO: SMV/2/1/1/9 Hall Book 9, Standing Committee meeting, 30 March 1767.

¹⁰ BRO: SMV/2/1/1/9 Hall Book 9, Standing Committee meeting, 28 April 1767.

¹¹ BRO: SMV/7/1/4/5 Expense of Building the Key Wall and New Dock at the Grove. Not dated.

¹² BRO: SMV/7/1/4/30 Account book, 10 October 1768.

the river. The heavier spoil still needed removing by lighter and according to the tender, this would be dumped near Temple Meads and in Cannon's Marsh, the latter being swampy ground.¹³ The tender made it clear that the work could be split between contractors and one contract survives for providing the masonry and lime awarded to a quarry owner, John Crouch,¹⁴ and also a bill for the making of foundations for the cranes sent by a James Walters.¹⁵

In addition there is a bill¹⁶ listing the payments to artisans throughout the project which shows that Daniel and West, masons; Gilbert Davis, carpenter; and William Robertson, smith, had won these contracts. but the greatest expense throughout was the day labourers earning 8s for a six day week. The two superintendents earned 12s per week. This bill divides the project into five 'measurements' carried out by Thomas Patty who would determine the first area to be constructed and after it was finished do the same with the next and so on, each having its expenses recorded separately. The table below records the dates the 'measurements' were worked and the expenses in sterling.

Expenses excavating the dock and building walls per measurement in pounds sterling.

	Dates	Months	Labour	Material	Masons	Carp'ter	Smith
1.	6/4/67-25/12/67.	8m 19d	940	523	358	136	57
2.	25/12/67-30/6/68.	6m 6d	604	301	313	79	67
3.	30/6/68-10/12/68.	5m 10d	489	447	328	43	55
4.	10/12/68-24/6/69.	6m 14d	584	410	559	83	80
5.	24/6/69-6/11/70.	15m 12d	865	666	998	121	193

Throughout the project, barges supplied stone and lime whilst spoil was removed by lighters. Only in the first measurement were they hired, which probably meant that it took time for the society to buy their own, or that more were needed during the initial phases. The former is more likely as the first phase would be to extend the eastward part of the key wall, where there would be less spoil than from the other 'measurements' as it was foreshore, much of which could be thrown into the river. Both the lighterage firms used were owned by females.

After that the Society had its own three lighters in place working from two permanent anchors on the seabed and supported by a tender. Four regular lightermen at 12s per week each manned them, but each time they were used, charges were made of 2s6d, or 2s indicating different sizes of lighter. Any number of discharges per week up to 27 are recorded. Stones and lime were regularly delivered, but by barges, and they were discharged at 1s so the inference must be

¹³ BRO: SMV/7/1/4/5 Original tender, 25 February 1767.

¹⁴ BRO: SMV/7/1/4/5 Articles of agreement with John Crouch, 4 April 1767.

¹⁵ BRO: SMV/7/1/4/5 Making the sills for the New Dock.

¹⁶ BRO: SMV/7/1/4/5 Expense of Building the Key Wall and New Dock at the Grove. Not dated.

that the heavier barges carried stone easily discharged onto the site whilst the lighters, after being filled by the day labourers, carried away spoil, the charges being for work at the discharge site.

In August the wall crumbled due to the pressure of land water after heavy rain seeped in and after inspecting the damage, the Committee and ordered that in future 'the bank be dug shelving so as to lighten the upper part thereof', which probably meant digging a gap between the upper part of the wall and the soil behind. Nevertheless, they did not radically change the technique but ordered the labourers to do 'spell and spell above and below no one work below longer than three hours at a time'.¹⁷

The workforce had difficult conditions in which to work, the labourers and masons being periodically obliged to work semi-submersed in river water, rewarded by allowances of ale for their trouble. Another regular expense was for lanterns, candles and torches, an indication work being carried on at night. Entries for besums (twig brooms), baskets, scoops, shovels and planks probably means that the normal method of work was for the labourer to fill a basket with rubble and carry it to the lighters over planks, leaving the softer material to be swept into the river during the higher tides. The nature of the work of the carpenter and smith is not clear, but payments to them are regularly noted. The former is likely to have had to provide some form of scaffolding, or perhaps buffers on the quay wall, whilst the latter would have had tools to repair and when finished, ladders had to be constructed on the walls.¹⁸

The method of mooring at the new dock was the same as used at the old, that is the ship was at right angles to the wall rather than alongside. During the work on each measurement anchor shanks were sunk in the new part of the wall and anchors laid in the river behind them. At least four sets of anchors and shanks were recorded, and shortly after the laying of the first in September 1768, a ship came into the dock unloading timber. The superintendents collected the port dues from these ships and paid them at the customs office, a task that is recorded in all further 'measurements' and so the dock was being used long before it was finished.

During the construction of the fifth 'measurement' large coping stones were hauled in from the Back, and the hitherto small payments for pitching were substantially increased showing that the whole area round the new dock was now covered. This surface is denoted on Illustration 1.010 where Stafford has marked in red the area of 'pitching' which was the responsibility of the lessees. Strong foundations for the three cranes had been laid and a shed was built which is not marked on any plan although must have been substantial as it included a tiled roof.

There is no mention of the fate of the dung wharf, but it must have been repositioned as the new dock and slipway would have covered its original location. The plan by Richard Tombs made in 1792 (Illustration 1.007), shows two

¹⁷ BRO: SMV/2/1/1/9 Hall Book 9, Standing Committee meeting 17/8/67.

¹⁸ SMV/7/1/4/30. Account book 1745 – 1788. Section. Account of Labour.

indentations between the Passage slipway and the last market shed which were not there before the work started. Both of these have had cranes added since 1770 and one is likely to have been designated as the new Dung Wharf.¹⁹ The work in 1770 completed the City Quays and no further major improvements were made till the floating harbour was created.

¹⁹ This plan was one of the many concocted by individuals with an interest in floating the harbour that was never put into effect but its depiction of the basic quays can be taken as being reasonably accurate.

Appendix 1.013. List of cranes, slips and ladders with ports they served, 1785, 1794.

(Repeated in Chapter 4 as 4.032)

Name of slip or crane	Serves
Quay Head	Severn trows. Bewdley, Bridgenorth, Brosley, Frampton. Gloucester, Newnham, Stroud, Shrewsbury, Stourport, Tewkesbury, Upton, Worcester.
Quay	
1 st Slip below the Drawbridge	Barnstaple. Biddeford, Boscastle, Bude, Hartland, Liverpool, Porlock.
Little slip at the Quay.	Chester, Dartmouth, Exeter, Lancaster.
Dial slip at the Quay.	Falmouth, Ilfracombe, Padstow, Plymouth, Portsmouth, Scilly, Southampton, Truro.
Broad slip at the Quay.	Falmouth, Fowey, Hayle, Padstow, Penzance, Plymouth, Poole. Portsmouth, St. Ives, Southampton, Truro.
Quay near Drawbridge	Dublin, Greenock, Waterford.
Crane No 1.	Cork, Liverpool, London, St. Ives.
Crane No 2.	Cork, Liverpool, London.
Crane No 3.	London.
Crane No 4.	London..
Back.	
1 st Ladder, Back	Aberthaw, Newton, Tenby:
2 nd Ladder, Back	Cardiff.
1 st Slip, Back	Caermarthen, Haverford West, Laughern, Milford. Pembroke.
2 nd Slip, Back	Market Boats: Caerleon, Chepstow, Newport.
3 rd Slip.	No reference
4 th Slip	Cardigan, Neath, Swansea.
5 th Slip	Minehead, Watchet.
6 th Slip	Porlock.
Market Houses, Back	Wye Trows: Brockweir, Gatecombe, Tintern Abbey.
Market Houses Bath Barge, Queen's Street.	Barges to Bath:
New Bridgewater Slip, Back	Bridgewater.
Bell on the Back	Llandogar. (probably a Wye trow).

Source. Taken from the *Bristol Directory*, 1785 and Matthews, *Bristol Directory*, 1794.

Appendix 1.014. Ordinance of the Company of Porters, 1669.

In the Common Council Proceedings, 1 March, 1669, there were read proposals concerning the regulation of the Porters of the City under the hand of the Master of the Company of Merchants. It was ordered and ordained that it be referred to the Mayor and Aldermen of this City, His Majesties Justices of the Peace within the same, to consider of the premises and set downe such rules and instruction for their regulation and to appoint the said porters and their several rates and wages they shall take within this City and to require them to wear a badge and frock with the City Arms thereon and such orders rules and instructions as shall be made by the Mayor and Aldermen as aforesaid and subscribe under their hands with the seale of office of Mayoralty thereunto annexed for their better order rule and government and shall duly and strictly observe from time to time by the porters of this city.

The Council then drew up a series of ordinances for the porters of which the following is a summary.

1. That they should be a Body or Society with a Common Hall, every member to attend at the reasonable call of the Master (a penalty of 12d in default).
2. That bye laws agreed by the Hall and allowed by Mayor and Aldermen shall be observed.
3. A Master and two Wardens be elected annually between 1 and 10, October, and be presented to the Mayor, and they to take the oath according to custom.
4. The Master and Wardens to report to the Mayor all disorders by members of the Company and also other persons acting as porters without consent of the Mayor.
5. There then follows a list of members and where they were licensed to labour –
Key Porters 39; Back Porters 41; Bridge End 17; High Cross 25; Priors Slip 5; Peter's Pump 5.
6. Members were to provide at their own expense a frock and tin badge (with City Arms thereon). A fine of 12d. levied for members walking in the street without frock or badge.
7. Quarteredge to be paid, 4d.

Source. BRO: 39290/FW/LN/37. Papers of F.G. Webb. The Company of Porters. p. 3: Original. BRO: 6787. Book of the Porters Company, 1671-1799.

Chapter 2.

Appendix 2.001. Comparisons between traditional and professional shipowning.

Traditional Shipowning.	Professional Shipowning
A large number of partners with one managing shipowner.	Single ownership or small number of partners.
Carries cargo for the benefit of the owner.	Carries cargo mainly for income from freight charges.
Trades to a single area.	Trades to any area where there is an income from freight.
Ship numbers kept low to suit the quantity of goods likely to be carried.	Increased numbers of ships as income is only from freight.
Charters ships when needed for company business.	Ships available for charter to bring in additional income.
New ships as seasonal and regular trade routes need to be adhered to.	Comparatively old fleets as deadlines do not have to be kept.
Ships bought to withstand the conditions of the trading ports.	Cheaper ships bought as they were not intended to last.
Tonnage of ships according to the needs of the trade area.	Ships bought of a tonnage suitable for flexible trading and for resale.
Buying locally as shipbuilders know the needs of the company.	Flexible in their approach to ship buying and repair.
Partners brought in to spread the cost of the enterprise.	Self funding.
Stores and chandlery purchased according to need.	Maintained their own supply of stores in their own warehouses.
Hired cargo handling craft according to need.	Owned their own wharves and cargo handling craft.

Source. Ville, *English Shipowning*, pp. 2-13.

Appendix 2.002. Total number of ships for given years per shipping company, 1778-1792.

Company.	1778	1787	1792		Company.	1778	1787	1792
Anderson		2	4		Harford			8
Bonbonus	3				Harris			3
Baille		2	5		Jacks & Co.		2	14
Bright & Co.	7	6	2		Jones & Co.	6	?	20
Champion	4				Lockier		3	5
Coulson		4			Maxse & Co.			3
Cooke			3		Meyler	4		1
Cruger	3	2	1		Miles & Co.	6	6	5
Daniel & Son		5	3		Munckley S.	3	3	3
Davis & Co.	7				Noble	3		3
Deane & Co.			4		Protheroe & Co.		10	8
Deefe & Co.		4			Randolf	3	3	
Delpratt	3				Rogers James	3	?	32
Eustace & Co.	3				Span S	2	8	5
Fisher & Co.			5		Teast		6	7
Fitzhenry		3	4		Tobin & Pinney		1	2
Fydall			8		Weare & Co.	4	2	1
Gordon	3		5					

Source. *Lloyds Register*, 1778, 1787 and 1792.

Appendix 2.003. Bristol's overseas trading areas in the eighteenth century.

Trade Area	Cargoes Inward	Cargoes Outward
Ireland and the Channel Islands.	Dairy produce, salted beef and pork, linen and yarn, leather and hides, timber.	Manufactured goods ¹ and colonial products.
Africa.	Ivory, timber, palm oil, logwood, guinea grains, piemento, horse teeth, cow horn.	Manufactured goods.
Africa slave trade.	As of West Indies.	Trade items. ² Manufactured goods.
Baltic.	Naval stores, iron, logwood, timber, tar, resin, deals, skins, hemp, flax, bristles, tallow, potash, linseed, mats.	Manufactured goods, re-exports.
Newfoundland and Quebec.	Fish, train oil, caplin, hides, train oil, cranberries, flax seed, potash, pine.	Salt. Manufactured goods.
North America.	Tobacco, iron, rice, skins, naval stores, grain wine, brandy oil, fruit, dairy produce, linen, yarn, timber and naval stores (pitch, tar, turpentine) furs, skins.	Manufactured goods, flour, wheat, pig iron. Immigrants, convicts, and indentured servants.
North West Europe All Atlantic and North Sea ports except those of Spain and Portugal.	Paper, steel, wine, brandy, linen and other fabrics, iron, steel, seltzer.	Ballast, manufactured or plantation goods.
Mediterranean Not including Spain and France.	Flour, oil, fruit, wine, brandy, olives, hams, brimstone, hides, nuts, vinegar.	Manufactured goods.
Spain-Portugal-France Excepting Atlantic France.	Oil, fruit, wine, wool, brandy, vinegar, shumac.	Manufactured goods, especially glass bottles to Spain.
Southern Whale Fisheries.	Whale oil, bone and blubber.	A few dutiable goods.
West Indies.	Sugar, molasses, rum, cotton, dyewoods, coffee, mahogany, limes, ginger.	Manufactured goods and building materials

¹ Manufactured goods; Window glass, bottles, cider, beer, Hotwell water, refined sugar, copper and brassware, wrought iron and leather ware, plus hardware and metal ware, textiles, woollens, hats etc. See Minchinton, 'The Port of Bristol'; MacInnis, *Gateway of Empire*; Morgan, *Bristol and the Atlantic Trade*.

² Trade items. See, 'Voyage of the Snow Africa'; Minchinton, ed., *Trade of Bristol*; For North American cargoes see H, Heaton, 'The American Trade' in C. Northcote Parkinson ed., *The Trade Winds*.

Appendix 2.004. Breakdown of ownership of Bristol shipping and cargoes carried by trade area, 1792.

Trade area.	Total number ships in	Bristol Owned.	Foreign owned	Owned by Captain	Not in Lloyds Reg.	Bristol ship. Owners cargo	Bristol ship. Owner/freight	Bristol ship. Freight cargo		Total number ships out	Bristol Owned.	Foreign owned	Owned by Captain	Not in Lloyds Reg.	Bristol ship. Owners cargo	Bristol ship. Owner/freight	Bristol ship. Freight cargo
Africa Direct	7	7	0	0	0	7	0	0		5	5	0	0	0	3	1	1
Africa Slavery	16	16	0	0	0	3	0	1		34	34	0	0	0	34	0	0
Baltic	64	12	39	1	12	10	0	2		21	4	16	0	1	3	0	1
N'fnd Quebec	10	5	4	1	1	3	1	1		19	13	4	0	2	6	0	7
N. America	42	8	27	0	7	4	2	2		56	8	45	0	3	7	0	1
N'west Europe	25	3	19	2	1	0	3	0		14	5	7	1	1	0	3	2
Med'terranean	19	9	5	3	2	6	1	2		7	7	0	0	0	1	1	5
Spn. Port. Fr.	61	16	33	3	9	2	1	13		38	21	15	2	0	2	4	15
S. Fisheries	3	3	0	0	0	2	0	1		3	3	0	0	0	3	0	0
W. Indies	67	59	2	3	3	51	3	5		64	63	0	0	1	48	2	13

Sources. Bristol, *Presentments*, Import and Export, 1792; *Lloyd's Register*, 1792.

Appendix 2.005. Trading areas of Bristol shipping companies and numbers of ships owned in 1792.

Shipping Company	Numbers ships	Africa Direct	Africa Slavery	Baltic	N'fnd/Quebec	N. America	N'west Europe	Mediterranean	S. Europe	S. Fisheries	W. Indies	London
John Anderson	4	+	*								*	
Evan Baille & Co.	5					+					*	
Henry Cooke & Co.	3				*							
T. Daniel & Son	3										*	
Thomas Deane & Co.	4											*
G & F Fisher & Co.	5	+				+	+	+			+	+
Patrick Fitzhenry & Co.	4		*		+						*	
Richard Fydall & Co.	8				+		+				*	
John Gordon & Co.	5					+					*	
J. Harford & Co.	8	+		+	+	+	+		+			+
John Harris & Co.	3			+		*						
Walter Jacks, & Co.	14		+								*	
James Jones & Co.	20		*				+			+	*	+
James Lockier & Co.	5	+		+	+	*					+	+
John Maxse & Co.	3										*	
William Miles & Co.	5						+				*	
Samuel Munckley & Co.	3										*	
John Noble	3				*				+			
Phillip Protheroe	8										*	
James Rogers & Co.	32		*		+	+		+			*	
Samuel Span,	5										*	
Syndenham Teast & Son	7	*								*		

* Primary trading area.

+ Secondary trading areas.

Sources. *Lloyd's Register*, 1792; *Bristol Presentments*, Import and Export, 1792; *FFBJ*, 1791 and 1792; Richardson. *Bristol, Africa and the Slave Trade*,. 4.

Appendix 2.006. West Indian shipping companies and numbers of ships owned in 1792.

Evan Baille & Co.	5	John Maxse & Co.	3
T. Daniel & Son	3	Willam Miles & Co.	5
Richard Fydall & Co.	8	Samuel Munckley & Co.	3
John Gordon & Co.	5	Phillip Protheroe	8
Walter Jacks, & Co.	14	Samuel Span	5

Source. *Lloyd's Register*, 1792.

Appendix 2.007. Shipping companies operating outside of the West Indies and the slave trade with ship numbers in 1792.

Henry Cooke & Co.	3	James Lockier & Co.	5
Thomas Deane & Co.	4	G. & F. Fisher & Co.	5
John Noble	3	J. Harford & Co.	8
John Harris & Co.	3		

Source. *Lloyd's Register*, 1792.

Appendix 2.008. Shipping companies operating in the slave trade and ship numbers in 1792.

John Anderson	4	James Jones & Co.	20
Patrick Fitzhenry & Co.	4	James Rogers & Co.	32
Walter Jacks & Co.	3		

Source. *Lloyd's Register*, 1792.

Appendix 2.009. James Jones & Co. Number of ships per tonnage band in 1792.

Tonnage band	0-50	51-99	100-199	200-299	300
Number ships	3	1	6	9	1

Source. *Lloyd's Register*, 1792.

Appendix 2.010. James Jones & Co. Age of ships in 1792.

Age band	1755	1768	1770-1779	1780-1789	Unknown
Number ships	1	1	4	8	6

Source. *Lloyds Register*, 1792.

Appendix 2.011. James Rogers & Co. Number of ships per tonnage band in 1792.

Tonnage band	0-50	51-99	100-199	200-299	300-350	400
Number ships	8	4	7	6	5	2

Source. *Lloyd's Register*, 1792.

Appendix 2.012. James Rogers & Co. Age of ships in 1792.

Age band	1770-1779	1780-1789	1791	Unknown
Number ships	7	16	3	6

Source. *Lloyd's Register*, 1792.

Appendix 2.013. Trading areas of minor Bristol shipping companies and numbers of ships owned in 1792.

Shipping Company	Numbers ships	Africa Direct	Africa Slavery	Baltic	N'fnd/Quebec	N. America	N'west Europe	Mediterranean	S. Europe	S. Fisheries	W. Indies	London
J. Bower	1				*							
Bright & Co.	1										*	
J. Brown	1			*								
R. Bruce	1										*	
J. Byron	1										*	
J. Cave	1							*				
H Cooke	1				*							
J. Cullom	1								*			
T. Dansom	1					*						
E. Doughty	1						*					
Doyle & Co.	1											
Eames & Co.	1							*				
Flemming	1								*			
Fowler & Co.	1			*			*					
Goodrich	1										*	
Greaves	1								*			
J. Harris & Co.	2			*		*						
Harvey & Co.	1			*								*
Hellicars	1				*			*	*			
Hogg & Co.	2								*			
Hunter & Co.	2		*								*	
W. James	2			*								
Joyner & Co.	1									*		
Laughter & Co.	1										*	
Manning	1										*	
Meyler & Co.	1										*	
Pinney & Co.	1										*	
R. Price.	1					*					*	
J. Purnell	1								*			
S. Skey	1							*	*			
W. Snow & Co.	2						*	*	*			
D. Taylor	1	*										
H. Tobin	1										*	
R. Tombs	1										*	
T. Vaughan	1	*										
J. Wadham	1										*	
J. Warne	1				*							
J. Weare	2										*	
H. Wife	1				*							

* Trading area; Sources. *Lloyd's Register*, 1792; *Bristol Presentments*, Import and Export, 1792; *FFBJ*, 1791 and 1792; Richardson. *Bristol, Africa and the Slave Trade*, 4.

Appendix 2.014. *Fanny*. Breakdown of crew composition at the beginning of all voyages, 1777-1788.

Voyage	1st *	2ⁿ d	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
Year 17..	'77	'7 8	'7 9	'8 0	'8 1	'8 2	'8 3	'8 4	'8 5	'86	'87	'88
Master	1	1	1	1	1	1	1	1	1	1	1	1
Chief Mate	1	1	1	1	1	1	1	1	1	1	1	1
2 nd Mate	1		1	1	1	1	1	1	1	1		1
3 rd Mate						1	1					
Carpenter	1	1	1	1	1	1	1	1	1	1	1	1
Boatswain	1	1	1		1	1	1			1	1	1
Cook	1	1	1	1	1	1	1	1	1	1	1	1
Steward		1	1	1	1	1						1
Gunner							1					
Seaman	6	5	6	10	9	9	6		7	7	7	8
Seaman $\frac{3}{4}$										1		
Seaman $\frac{1}{2}$		1		1				1			2	
S'man Ord									1			
Apprentice		2	5	2	2		4	2	1			
Boys paid	2	1									1	1
Boys un'pd		1		1	1	2				2		1
Total crew	14	16	18	20	19	19	18	15	14	16	15	17

*The *Fanny's* maiden voyage was to the Baltic carrying less crew.

Source. BRO: 12162 Shipping Account Book of the Snow *Fanny*, 1777-1791.

Appendix 2.015. The methods of Liverpool merchants regarding the manning and trading of ships as compared to London and Bristol.

Gomer Williams when comparing the working practices of Liverpool to London and Bristol says that Liverpool merchants were able to dispose of Guinea cargoes of 'prime negroes' at about 12 percent less than the rest of the kingdom, and still make the same profit. To substantiate this he quotes a contemporary author, James Wallace.

'The reason the port of Liverpool could undersell the merchants of London and Bristol was the restriction in their outfits and methods of factorage. The London and Bristol merchants not only allowed ample monthly pay to their captains, but privileges and daily port charges; they also allowed their factors five percent on the sales, and five percent on the returns, and their vessels were always full manned by seamen at a monthly rate. The Liverpool merchants proceeded on a more economical but less liberal plan, the generality of their captains were at annual salaries, or if at monthly pay, four pounds were thought great wages at that time, no cabin privileges were permitted, primage was unknown amongst them, and as to port allowances, not a single shilling was given while five shillings a day was the usual pay from Bristol and seven and six from London.

The captains from these ports could, therefore, occasionally eat on shore, and drink their bottle of Madeira; whereas the poor Liverpool skipper was obliged to repair on board to his piece of salt beef and biscuit, and a bowl of new rum punch sweetened with brown sugar. The factors, instead of a rate per centum, had an annual salary and were allowed the rent of their store, negro hire, and other incidental charges; therefore, if the consignments were great or small the advantages to the factor suffered no variation. Their portage was still more economical, their method was to take poor boys apprentice for long terms who were annually increased, became good seamen, were then second mates, then first mates, then captains, and afterwards factors on the islands. This was the usual graduation at the time, whereby few men at monthly pay were required to navigate a Liverpool vessel.'

Source. Gomer Williams, *History of the Liverpool Privateers and Letters of Marque with and account of the Liverpool Slave Trade* (London: William Heinemann, 1897) p. 471; James Wallace, *A General and Descriptive History of Liverpool* (Liverpool, 1795).

Appendix 2.016. Sailing record of the *Fanny's* apprentices, 1777-1783.

Apprentices	History
Joseph Devonish	Started as a boy and then sailed one voyage only but later a Joseph Devonish became 2 nd mate on the ship with John Devonish, Captain. Probably father and son.
Louis Cowper	Sailed three voyages as apprentice, then one as third mate at less wages than a seaman and then one with equal wages to a seaman.
Sam Stokes	Sailed two voyages as apprentice and then two as a boy on the 5 th and 6 th before reverting to apprentice on the 7 th , 8 th and 9 th . On the 10 th and 11 th he was a full seaman on pay.
Joe Kendricks	Sailed one voyage as apprentice then became boatswain at less wages than a seamen. Next voyage as boatswain on same wages as a seaman followed by another with higher wages than seaman or third mate. Promoted to 2 nd mate on the eight voyage and then chief mate on the 9 th .

Four apprentices sailed one trip only and two sailed two. All finished their voyages.
 Source. BRO: SMV/9/3/1/8 Muster Rolls 1777-83.

Appendix 2.017. Triton. Breakdown of crew composition at the beginning of all voyages, 1777-1788.

Voyage	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
Year	'77	'79	'80	'81	'82	'84	'85	'87	'88
Master	1	1	1	1	1	1	1	1	1
Chief Mate	1	1	1	1	1	1	1	1	1
2 nd Mate	1		1	1	1	1	1	1	1
Carpenter	1	1	1	1	1	1	1	1	1
Boatswain	1	1	1	1	1	1		1	1
Cook	1	1	1		1	1	1	1	1
Steward					1		1		1
Cooper				1					
Gunner	1	1			1				
Seaman	6	6	5	6	8	6	8	10	5
Seaman $\frac{3}{4}$	1	5	4	6					1
Seaman $\frac{2}{3}$						3			
Seaman $\frac{1}{2}$	3	1	1	4	1				
Seaman $\frac{1}{4}$		1	1						
Boys paid	4	2		2	6	1	1		3
Boys un'pd					1 ¹		1		
Landsman	3	1	4						
Total	24	23²	21	24	24	16	16	16	16

¹Also called a 'lad'. ² One crewman without rating.

Source. BRO: 39654/3 Voyage accounts for the *Triton*, 1777-90.

Appendix 2.018. Fanny. List of crewmen, 1777-1788.

Surname	Name	Rating	Wages in £.s	Voyage
Adamson	George	Boy	0	10
Adamson	George	Boy	0.15	11
Adamson	George	Boy	0.15	12
Browne	Joseph	½ Seaman	1.5	8
Browne	Joseph	Seaman	1.10	9
Clutsam	George	2 nd Mate	2.5	9
Clutsam	George	Chief Mate	3.10	10
Clutsam	George	Chief Mate	3.10	11
Clutsam	George	Chief Mate	3.10	12
Clutsam	Thomas	Apprentice	0	7
Clutsam	Thomas	Ord Seaman	1.5	9
Cowper	Lewis	Apprentice	0	3
Cowper	Lewis	Apprentice	0	4
Cowper	Lewis	Apprentice	0	5
Cowper	Lewis	3 rd Mate	3	6
Cowper	Lewis	3 rd Mate	3.10	7
Davis	William	Carpenter	3.10	1
Davis	William	Steward	3.10	3
Devonish	John	Chief Mate	3.10	8
Devonish	John	Master	6	9
Devonish	John	Master	6	10
Devonish	John	Master	6	11
Devonish	John	Master	6	12
Devonish	Joseph	Boy	0	2
Devonish	Joseph	Apprentice	0	3
Devonish	Joseph	2 nd Mate	2.5	10
Friar	Abraham	Seaman	1.10	8
Friar	Abraham	Cook	1.10	9
Fuss	William	½ Seaman	1.10	2
Fuss	William	2 nd Mate	3	3
Fuss	William	Chief Mate	4	4
Fuss	William	Chief Mate	4.10	5
Fuss	William	Chief Mate	4.10	6

Surname	Name	Rating	Wages in £.s	Voyage
Fuss	William	Chief Mate	4.10	7
Gerrish	James	Seaman	3.15	6
Gerrish	James	Cook	3.10	7
Glanville	John	Seaman	3.15	6
Glanville	John	Seaman	3.10	7
Healey	Thomas	Boatswain	4	3
Healey	Thomas	2 nd Mate	4	4
Healey	Thomas	2 nd Mate	4.5	5
Healey	Thomas	2 nd Mate	4.5	6
Healey	Thomas	2 nd Mate	4.5	7
Hurley	Dennis	Seaman	3.15	5
Hurley	Dennis	Seaman	3.15	6
Hurley	Dennis	Gunner	3.10	7
Jones	Edward	Seaman	2.15	1
Jones	Edward	Seaman	3	2
Kenrick	Joseph	Apprentice	0	5
Kenrick	Joseph	Boatswain	3	6
Kenrick	Joseph	Boatswain	4.	7
Kenrick	Joseph	2 nd Mate	2.5	8
Kenrick	Joseph	Chief Mate	3.10	9
Medbury	Walter	Chief Mate	3.10	1
Medbury	Walter	Chief Mate	4	2
Medbury	Walter	Chief Mate	4	3
Newport		Cook	1.10	3
Newport		Cook	0	4
Plank	John	Boy	1	1
Plank	John	Boy app'tice	0	2
Plank	John	Apprentice	0	3
Powell	James	Seaman	1.10	10
Powell	James	2 nd Mate	2.5	12
Richards	Thomas	Master	6	2
Richards	Thomas	Master	6	3
Richards	Thomas	Master	6	4
Richards	Thomas	Master	6	5

Surname	Name	Rating	Wages in £.s	Voyage
Richards	Thomas	Master	6	6
Richards	Thomas	Master	6	7
Richards	Thomas	Master	6	8
Skeete	John	Cook	2	5
Skeete	John	Cook	0	6
Slaughter	Andrew	Carpenter	4	2
Slaughter	Andrew	Carpenter	4	3
Slaughter	Andrew	Carpenter	4	4
Slaughter	Andrew	Carpenter	4.10	5
Slaughter	Andrew	Carpenter	4.10	6
Slaughter	Andrew	Carpenter	4.10	7
Slaughter	Andrew	Carpenter	4	8
Slaughter	Andrew	Carpenter	4	9
Slaughter	Andrew	Carpenter	4	10
Slaughter	Andrew	Carpenter	4	11
Slaughter	Andrew	Carpenter	4	12
Spear	Thomas	Boy	0	6
Spear	Thomas	Apprentice	0	7
Spear	Thomas	Apprentice	0	8
Spear	William	Seaman	2.10.	3
Spear	William	Seaman	3.15	4
Spear	William	Seaman	1.10	8
Stokes	Samuel	Apprentice	0	3
Stokes	Samuel	Apprentice	0	4
Stokes	Samuel	Boy	0	5
Stokes	Samuel	Boy	0	6
Stokes	Samuel	Apprentice	0	7
Stokes	Samuel	Apprentice	0	8
Stokes	Samuel	Apprentice	0	9
Stokes	Samuel	Seaman	1.10	10
Stokes	Samuel	Seaman	1.10	11
Taylor	Charles	Seaman $\frac{3}{4}$	1.5	10
Taylor	Charles	Seaman $\frac{1}{2}$	1.5	11
Williams	Richard	Seaman	2.15	1
Williams	Richard	Seaman	3	2
Williams	Richard	Seaman	3.10	3
Wilson	Cornelius	Seaman	3.15	6

Surname	Name	Rating	Wages in £.s	Voyage
Wilson	Cornelius	Seaman	3.10	7
Worth	George	Steward	2.10	4
Worth	George	Steward	3	5
Worth	George	Steward	3	6
Young	Thomas	Seaman	1.10	8
Young	Thomas	Seaman	1.10	9
Young	Thomas	Boatswain	1.15	10
Young	Thomas	Boatswain	2	11

Source. BRO: 12162 Shipping Account Book of the Snow *Fanny*, 1777-1791.

Appendix 2.019. Triton. List of crewmen, 1777-1788.

Surname	Name	Rating	Wages in £.s	Voyage
Aubrey	William	Boy	15. 0	2
Aubrey	William	Landsman	1.10. 0	3
Bristol	Richard	½ Seaman	2.10. 0	1
Bristol	Richard	Seaman	3. 0. 0	2
Bristol	Richard	¾ Seaman	3. 0. 0	3
Bristol	Richard	¾ Seaman	3. 0. 0	4
Bristol	Richard	Steward	1.10. 0	7
Charles	John	Boy	2. 5. 0	5
Charles	John	2/3 Seaman	1. 7. 6	6
Davis	George	Seaman	3.10. 0	5
Davis	George	Seaman	1.10. 0	6
Drought	James	Chief Mate	4. 0. 0	1
Drought	James	Chief Mate	4.10. 0	2
Drought	John	Chief Mate	4.15. 0	3
Drought	John	Chief Mate	4.15. 0	4
Dymock	William	Seaman	3. 5. 0	5
Dymock	William	Seaman	1.10. 0	6
Evans	John	2 nd Mate	4. 5. 0	3
Evans	John	2 nd Mate	4.15. 0	4
Henderson	James	Master	6. 0. 0	5
Henderson	James	Master	6. 0. 0	6
Henderson	James	Master	6. 0. 0	7
Jenkins	Joseph	Gunner	4. 0. 0	5
Jenkins	Joseph	Second Mate	2. 5. 0	6
Jolly	James	Chief Mate	4.15. 0	5
Jolly	James	Chief Mate	3.10. 0	6
Jolly	James	Chief Mate	3.10. 0	7
Jolly	James	Master	6. 0. 0	9
Jones	William	½ Seaman	3. 3. 0	3
Jones	William	2 nd Mate	2. 5. 0	7

Surname	Name	Rating	Wages in £.s	Voyage
Langford	William	½ Seaman	2. 0. 0	2
Langford	William	¾ Seaman	3. 3. 0	3
Mattocks	William	Master	6. 0. 0	2
Mattocks	William	Master	6. 0. 0	3
Mattocks	William	Master	6. 0. 0	4
Milsom	Richard	Seaman	1.10. 0	6
Milsom	Richard	Seaman	1.10. 0	7
Milsom	Richard	Seaman	3.10. 0	5
Morris	William	½ Seaman	2.10. 0	5
Morris	William	Seaman	1.10. 0	9
Stoper	Joseph	Seaman	3.10. 0	2
Stoper	Joseph	Second Mate	2. 5. 0	8
Webb	Thomas	Seaman	3. 5. 0	5
Webb	Thomas	Seaman	1.10. 0	7
Welsh	William	Boy	1.15. 0	5
Welsh	William	2/3 Seaman	1. 5. 0	6
Young	Thomas	Boy	1.15. 0	5
Young	Thomas	2/3 Seaman	1. 5. 0	6

Source BRO: 39654/3 Voyage accounts for the *Triton*, 1777-90.

Appendix 2.020. Crewmen sailing more than one voyage on the *Fanny* and *Triton*, 1777-1788.

Number of Voyages crewman sailed.	2	3	4	5	6	7	8	9	10	11	12
<i>Fanny</i> (Total crew for 12 voyages, 202.)	12	9	2	4	1	1		1		1	
<i>Triton</i> . (Total crew for 9 voyages, 178.)	13	3	2	1							

Source. Taken from Appendices 2.018 and 2.019.

Appendix 2.021. *Fanny*. Crew returning for consecutive voyages and moving between company ships, 1777-1788.

Muster date	Captain	Port sailed to	Crew out**	Prior <i>Fanny</i>	First voyage	Apprentices Boys	Unknown	From other Munckley ships	Cork
1777	Olive	Petersburg	13		3		3		
1778	Richards	Jamaica	14	2	1	3	2		
1779	Richards	Jamaica	18	8	1	6	6		
1780	Richards	Jamaica	20	5	1	4	1		3
1781	Richards	Jamaica	19	6	2	3	5		3
1782	Richards	Jamaica	19	9		3	3		
1783*	Richards	Jamaica	18	12		4			
1784	Richards	Jamaica	15	6		2	2	<i>Exeter 2</i>	
1785	Devonish	Jamaica	14	6		1	6		
1786	Devonish	Jamaica	16	6	1	1	5		
1787	Devonish	Jamaica	15	7	1		7		
1788*	Devonish	Jamaica	17	3		1			
			198	70					

* Muster Roll missing. ** Includes men taken on at Cork and unpaid apprentices and boys not on Muster Roll.

Sources. BRO: SMV/9/3/1/8 Muster Rolls, 1777-83; BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

Appendix 2.022. Exeter. Crew returning for consecutive voyages and moving between company ships, 1777-1788.

Muster date	Captain	Port to	Crew out	Prior Exeter	First voyage	Apprentices	Unknown	From Other Muncckley Ships	From Cork
1777	Winder	Petersburg	16	12			1		
1778	Winder	Petersburg	15	6	1		7		
1779	Winder	Jamaica	14	8	1		2		
1780	Winder	Jamaica	17	6	1	6	18		6
1782	Winder	Jamaica	17	10			11		3
1783	Winder	Jamaica	16	9	1		8		5
1784	Sims	Jamaica	16	4			10	<i>Fanny</i> 2	
1785	Fuss	Jamaica	16	2			12	<i>Fanny</i> 1	
1786	Fuss	Jamaica	18	6	3		5		
1787	Fuss	Jamaica	15	4	2		6		
1788	Fuss	Jamaica	17	10	1		5		
			177	77					

Sources. BRO: SMV/9/3/1/8 Muster Rolls, 1777-83; BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

Appendix 2.023. Triton. Crew returning for consecutive voyages and moving between company ships, 1777-1789.

Muster date	Captain	Port sailed to	Crew out	Prior Triton	First voyage	Boys	Unknown	From other Bright's ships
1778	Mattocks	Jamaica	24	4	9	4	7	1
1779	Mattocks	Jamaica	23	6	8	2	0	0
1780	Mattocks	Jamaica	20	8	?	0	?	0
1782	Mattocks	Jamaica	25	4	6	2	1	4
1783	Henderson	Jamaica	18	0	2	7	2	5
1784	Henderson	Jamaica	16	8	0	0	0	1
1786	Henderson	Jamaica	16	7	1	1	0	0
1788	Honeywell	Jamaica	16	1	1	0	19	2
1789*	Jolly	Jamaica	16	0	?	3	?	?
			174	38				

* Muster Roll missing.

Sources. BRO: SMV/9/3/1/8 Muster Rolls, 1777-83; BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

Appendix 2.024. *Druid*. Crew returning for consecutive voyages and moving between company ships, 1778-1788.

Muster date	Captain	Port sailed to	Crew out	Prior <i>Druid</i>	First voyage	Unknown	From other Bright's ships	From Cork
1778	Stott	Jamaica	25	new	4	0	1	
1779	Stott	Jamaica	26	9	4	0	0	
1780	Stott	Jamaica	26	11	1	0	1	3
1781	Stott	Jamaica	25	8	4	0	3	
1782	Powell	Jamaica	22	5	1	3	0	2
1783	Powell	Jamaica	18	4	1	0	2	
1784	Powell	Jamaica	23	8	0	6	0	
1785	Powell	Jamaica	14	3	?	21	?	
1786	Powell	Jamaica	16	4	?	14	?	
1787	Powell	Jamaica	19	5	2	3	0	
1788	Powell	Jamaica	16	5	?	11	?	

?. Indicates no information due to lack of detail on muster roll.

Sources. BRO: SMV/9/3/1/8 Muster Rolls, 1777-83; BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

Appendix 2.025. Crew movements in West Indies, 1777-1788.

Ship	Pressed	Disch'd	Died or hospital	Run	Taken on W. Indies	Comment
<i>Fanny</i>						
1777						Petersburg*
1778					4	
1779		4			5	
1780	2			3	7	
1781	3	6			6	Two Bristol - Cork
1782			1			
1783						Muster missing
1784		1				
1785						No crew changes
1786		6			8	Crew taken on just before return.
1787		7			6	
1788						Muster missing
<i>Exeter</i>						
1777						Petersburg*
1778						Petersburg*
1779		5			5	
1780	1	8			11	1 sailed Bristol – Cork
1782	4	3	1		5	Voyage nearly eighteen months.
1783		2	1		3	
1784		1			1	
1785		6			3	
1786		4				
1787		2			2	
1788		3			2	
<i>Triton</i>						
1778			1	10	4	Muster lacks detail
1779		12			4	Lacks detail on crew leaving.

Ship	Pressed	Disch'd	Died or hospital	Run	Taken on W. Indies	Comment
<i>Triton cont.</i>						
1780		11			12	Lacks detail on crew leaving
1782	11			2	8	Detail from portledge
1783						All returned
1784			1		2	
1786			5		6	
1788		15		2	15	Lacks detail on why they left the ship
<i>Druid</i>						
1778			1			All but one returned
1779	5	1			3	
1780	2			5	8	
1781	7		2		4	
1782	2	1		2	1	
1783					7	
1784			2			All others returned
1785		1	2		10	
1786					5	
1787		4			7	
1788					6	

* No details were recorded of the Munckley ships Petersburg voyages.
Sources. BRO:12162 Shipping Account Book of the Snow *Fanny*, 1777-1791; BRO:39654/3 Voyage accounts for the *Triton*, 1777-90; BRO: 39654/4 Voyage Accounts for the *Druid*, 1790-91; BRO: SMV/9/3/1/8 Muster Rolls, 1777-83; BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

Appendix 2.026. Précis. Crew movements in the West Indies, 1777-1788.

Ship	Pressed	Disch'd	Died or hospital	Run	Taken on in W. Indies
War 1778-1782					
<i>Fanny</i> *	5	10	1	3	22
<i>Exeter</i> *	5	16	1	0	24
<i>Triton</i>	11	23	1	12	28
<i>Druid</i>	16	2	3	7	23
Peace 1783-1788					
<i>Fanny</i>		14			14
<i>Exeter</i>		18	1		11
<i>Triton</i>		15	6	2	23
<i>Druid</i>		5	4		28

*Voyages to Petersburg ignored.

Source. Appendix 2.025.

Appendix 2.027. Articles of agreement for the ship *Sybil*, 1785.

Articles of Agreement.

Articles of Agreement made concluded and agreed upon this Twenty Third day of November the year of our Lord one thousand and seven hundred and eighty five and in the Twenty Sixth Year of the Reign of our Sovereign Lord George the Third by the Grace of God of Great Britain France and Ireland and King Defender of the Faith and so forth. **Between** William Mattocks of the City of Bristol Mariner Commander of the Ship *Sybil* of the Port of Bristol of the one part and the several and respective persons whose names and seals are hereunto set and subscribed the intended Mates, Men and Mariners of the other part as follows...

Whereas the said ship is now bound on a voyage from the Port of Bristol to the Islands of Antigua and Jamaica and then back to her Port of Discharge in Great Britain, but if a freight cannot be obtained there then to any port of North America the Bay of Honduras and from thence to any part of the Leeward and Windward Islands or Jamaica and from thence to the port of discharge in Great Britain for the end of her voyage. **Now** it is hereby agreed that the said Mates, Men and Mariners whose names and seals are hereunto set and subscribed. **In**

Consideration of the monthly wages hereinafter agreed to be paid them and set opposite their respective names/and of one months in the part thereof being advanced to them/ do for themselves severally and not jointly and for their several respective executors as administrators assigns covenant promise and agree to and with the said William Mattocks that they the said Mates Men and Mariners shall and will repair onboard and proceed in the said ship during the said intended voyage and shall not nor will not depart from or desert the said ship during the said intended voyage but shall and will well and truly perform all acts and duties on board the said ship as good and faithful seamen and mariners ought to do each according to his station and conformable to the statute in this case made good and provided. **In Consideration** whereof the said William Mattocks doth hereby covenant promise and agree to and with the said Mates, Men and Mariners whose hands and seals are hereunto set and subscribed that the said William Mattocks shall and will well and truly pay or cause to be paid unto the said Mates, Men and Mariners their respective wages vis the same sum by the month and no more which is set down over against their respective names subscribed to the general receipt heron indorsed. And it is hereby mutually agreed that the said wages shall not begin or commence before the said ships last departure from the Port of Bristol in prosecution of her said intended voyage and that the said wages shall not be payable until the said ships homeward cargo shall be safely delivered by them agreeable to the Custom of the Port of Bristol.

And Lastly for the true performance of all and every the covenants and agreements herein contained on the parts and on behalf of the said Mates, Men and Mariners, they the said Mates Men and Mariners and each and every one of them do oblige and bind himself and themselves in the penalty of forfeiture of fifty pounds of the lawful money of Great Britain to be paid to the said William Mattocks, his executors, administrators or assigns for the sole use and benefit of the owners

of the said ship. In witness whereof, the said parties to these presents their hands and seals have hereunto interchangeably set the day and date first above written.

Source. 2 Geo II c. 36. An Act for the better regulation and government of seamen in merchants service: Made perpetual by 2 Geo. III c. 31: Desertion of Seamen Act, 37 Geo III, c 73, sect 1.
Taken from BRL 21258: Account book of the *Sybil* and *Success*. *Success*, 1779, p. 46.

Appendix 2.028. Crew movements of Munckley's ship *Clifton*, 1761-1762.

Movements	Number of men	Movements	Number of men
Sailed from Bristol	37	Pressed at Ilfracombe	9
Joined Barbados	11	Discharged at Ilfracombe	8
Run at Barbados	11	Returned to Bristol	11
Pressed Barbados	2	Returned apprentices	2
Enlisted as soldiers	5		
Total crew used	48		

Source. BRO: AC/MU/1/9 Wages book fro the ship *Clifton* 1761-1762.

Appendix 2.029. Letter from Captain Smith at Ilfracombe to Samuel Munckley and Co., 1762.¹

Ilfracombe. 17th March, 1762. Captain John Smith.

Gentlemen.

This to inform you of my being safe in this harbour after a tedious passage of nine weeks from Barbados. I have been beating in the channel for this eight days past endeavouring to get up to Kingroad and was got up near the Holmes when I was obliged to run for the first harbour I could make with safety by reason of the hard gale that blew on Monday night and being in want of every kind of necessary especially provisions it being all expended except of a ten gallon keg of flour and my people being almost froze with excessive cold as well as want. I could not have kept the ship one night longer beating in this channel and had I not been well acquainted with the Channel I must have actually gone on shore as I could get none of my people except four or five of the officers to do the least thing to keep clear of the land they being too jaded by the excessive bad weather we had all the passage. My sails is all split and torn to pieces. I have this day got them on but by the tender's men and my officers. The *sailors being all pressed* and getting them mended and shall be in a condition to embrace the first opportunity of wind in three days as I am putting everything to rights as fast as possible. The men impressed I shall pay here as they are in want of necessaries and their wages not amounting to a great deal as there is but nine pressed the remainder being foreigners. I have drawn a bill on you for thirty three pounds one shilling and sixpence in favour of Mr Irons here for thirty guineas he supplied me with. I hope with the money I have of my own will be sufficient to defray my charges here as I shall be as frugal as possible in my *circumstances*. I have not one man shipped by the run therefore my portledge bill will be very small for the number of men.

¹ Words in italics indicate they are not decipherable in the original document.

Source. BRO: AC/MU/1/8e. Letter from John Smith to SM from Ilfracombe. 17 March, 1762.

Appendix 2.030. Breakdown of *Fanny's* crews' outsett wages for all voyages and the wage bill per insett, 1777-1788.*

Voyage	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
Year	1777	1778	1779	1780	1781	1782	1783	1784	1785	1786	1787	1788
	£.s	£.s	£.s	£.s	£.s	£.s	£.s	£.s	£.s	£.s	£.s	£.s
Master	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0
Chief Mate	3.10	4. 0	4. 0	4. 0	4.10	4.10	4.10	3.10	3.10	3.10	3.10	3.10
2nd Mate	3. 5		3.10	4. 0	4. 5	4. 5	4. 5	2. 5	2. 5	2. 5		2. 5
3rd Mate						3. 0	3.10					
Carpenter	3.10	4. 0	4. 0	4. 0	4.10	4.10	4.10	4. 0	4. 0	4. 0	4. 0	4. 0
Boatswain	3. 0	3. 5	4. 0		4. 0	3. 0	3. 0			1.15	2. 0	2. 5
Cook	1.10	1.10	1.10	1.10	2. 0		3.10		1.10	1.10	1.10	1.10
Steward		3. 0	3.10	2.10	3. 0	3. 0						1.10.
Gunner							3.10					
Seaman	2.15	3. 0	3. 0	3.15	3.15	3.15	3.10	1.10	1.10	1.10	1.10	1.10
Seaman ³/₄										1. 5		
Seaman ¹/₂				2.10	1.10			1. 5			1. 5	
S'man Ord												
Apprentice												
Boys paid	15	2. 0										
Total per month	24.5	26.15	29.10	28.5	33.10	32.0	36.5	18.10	18.15	21.15	19.15	22.10
Wage Bill per insett	133.8	252.18	264.13	254.7	397.11	376.12	133.8	154.12	111.12	123.6	108.4	145.2

* The figures have been rounded up to the nearest shilling and the data has been averaged where, on a voyage, there was a range of wages for one rating.

Source. BRO: 12162 Shipping Account Book of the Snow *Fanny*, 1777-1791.

Appendix 2.031. Breakdown of *Triton's* crews' outsett wages for all voyages and the wage bill per insett, 1777-1788.*

Voyage	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
Year	1777	1779	1780	1781	1782	1784	1785	1787	1788
	£.s	£.s	£.s	£.s	£.s	£.s	£.s	£.s	£.s
Master	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0
Chief Mate	4. 0	4.10	4.15	4.15	4.15	3.10	3.10	3.10	3.10
2nd Mate	3.10		4. 5	4.15	4. 0	2. 5	2. 5	2. 5	2. 5
Carpenter	4. 0	4.10	4.15	4.15	4.15	3.10	3.10	3.10	3.10
Boatswain	3.10	4. 0	4. 0	4. 5	4. 0	2. 5	2. 5.	2. 5.	2. 5
Cook	3. 0	2.10	3. 0		3.10	1.10	1.10	1.15	1.10
Steward					3. 5		1.10		1.10
Gunner	3. 5	3.15			4. 0				
Seaman	3. 0	3.10	3.15	4. 0	3. 5	1.10	1.10	1.10	1.10
Seaman ³/₄	2.10	3. 0	3. 5	3. 5					1. 5
Seaman ¹/₂	2. 5	2. 0	3. 5	2.10	2.10				
Boys paid	1. 0	0.15		1. 5	2.15	1. 0	1. 5		0.15
Landsman	1. 5	2.10	1.15						
Total per month	37.5	37.0	38.15	35.10	42.15	21.10	23.15	20.15	24.0
Wage bill per insett	326.1	364.2	492.2	486.8	311.0	244.2	231.5	267.0	223.2
Wives advances		44.1	20.1	10.1	12.6				12.2

* The figures have been rounded up to the nearest shilling and the data has been averaged where on a voyage there was a range of wages for one rating.

Source. BRO: 39654/3 Voyage accounts for the *Triton*, 1777-90.

Appendix 2.032. Voyage by voyage breakdown of *Fanny's* wage bills, 1777-1788, compared with the *Sally*, 1768.

Voyage	<i>Sally</i>	1st	2nd	3rd	4th	5th	6th	7th	8-12th
Year	1768	1777	1778	1779	1780	1781	1782	1783	84-88
Master	5. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0
Chief Mate	3.10	3.10	4. 0	4. 0	4. 0	4.10	4.10	4.10	3.10
2 nd Mate	2. 0	3. 5		3.10	4. 0	4. 5	4. 5	4. 5	2. 5
Carpenter	3. 5	3.10	4. 0	4. 0	4. 0	4.10	4.10	4.10	4. 0
Boatswain	None	3. 0	3. 5	4. 0		4. 0	3. 0	3. 0	2. 0
Cook	1. 0	1.10	1.10	1.10	1.10	2. 0		3.10	1.10
Seaman	1. 5	2.15	3. 0	3. 0	3.15	3.15	3.15	3.10	1.10
Boys	0.10	0.15	2. 0						0.15

The above figures are in pounds and shillings. Pence was not used. Where there was a range of wages, they have been averaged out.

Source. BRO: 12162 Shipping Account Book of the Snow *Fanny*, 1777-1791; BRO: 39654/2 Voyage accounts for the *Sally* (1767-72).

Appendix 2.033. Voyage by voyage breakdown of *Triton's* wage bills 1777-1788, compared with the *Sally*, 1768.

Voyage	<i>Sally</i>	1st	2nd	3rd	4th	5th	6-9th
Year	1768	1777	1779	1780	1781	1782	84-88
Master	5. 0	6. 0	6. 0	6. 0	6. 0	6. 0	6. 0
Chief Mate	3.10	4. 0	4.10	4.15	4.15	4.15	3.10
2 nd Mate	2. 0	3.10		4. 5	4.15	4. 0	2. 5
Carpenter	3. 5	4. 0	4.10	4.15	4.15	4.15	3.10
Boatswain	None	3.10	4. 0	4. 0	4. 5	4. 0	2. 5
Cook	1. 0	3. 0	2.10	3. 0		3.10	1.10
Seaman	1. 5	3. 0	3.10	3.15	4. 0	3. 5.	1.10
Boys paid	0.10	1. 0	15.0		1. 5	2. 5.	0.15

The above figures are in pounds and shillings. Pence was not used. Where there was a range of wages, they have been averaged out.

Sources. BRO: 39654/3 Voyage accounts for the *Triton*; BRO: 39654/2 Voyage accounts for the *Sally* (1767-72).

Appendix 2.034. Percentage rise in wages by rank from peace to first war year to wartime peak, 1777-1788.

Rating	<i>Fanny</i> 1st Year	<i>Triton</i> 1st Year	<i>Fanny</i> Peak	<i>Triton</i> Peak
Master	Nil	Nil	Nil	Nil
Chief Mate	Nil	14	29	35
2 nd Mate	63	75	112	138
Carpenter	8	23	38	46
Boatswain*			100	88
Cook	50	200	250	250
Seaman	120	140	200	220
Boys	50	100	300	350

* No pre-war figure. Compared to post-war Sources. Appendices 2.032 and 2.033.

Appendix 2.035. Ships *Fanny* and *Triton*. Total of portledge bills per month, 1777-1788.

<i>Fanny</i>						
Year	1777	1778	1779	1780	1781	1782
Per month	24.5	26.15	29.10	28.5	33.10	32.0
Year	1783	1784	1785	1786	1787	1788
Per month	36.5	18.10	18.15	21.15	19.15	22.10
<i>Triton</i>						
Year	1777	1779	1780	1781	1782	1784
Per month	37.5	37.0	38.15	35.10	42.15	21.10
Year	1785	1787	1788			
Per month	23.15	20.15	24.0			

Figures are in pounds and shillings.
Sources. Appendices 2.030 and 2.031.

Appendix 2.036. Voyages of Deane's London coasters, 1785-1787.¹

Chard	Voyage 1	Voyage 2			
Time at Bristol		1m28d			
Voyage begins	29/9/85	15/2/86			
Left Bristol	29/9/85	18/2/86			
Arr London	10/10/85	18/3/86			
Bristol-Ldn	11d	28d			
Left London	15/11/85	28/5/86			
Time at Ldn	1m4d	2m10d			
Arr Bristol	18/12/85	11/6/86			
Ldn-Bristol	1m3d	14d			
Voyage ends	29/1/86	21/6/86			
Length voyage	4m	4m6d			

Pollard	Voyage 1	Voyage 2	Voyage 3	Voyage 4	
Time at Bristol		2m16d	2m9d	2m3d	
Voyage begins	24/8/85	31/1/86	9/8/86	1/2/87	
Left Bristol	24/8/85	31/1/86	9/8/86	1/2/87	
Arr London	5/9/85	30/3/86	26/8/86	7/3/87	
Bristol-Ldn	12d	2m	17d	1m6d	
Left London	17/10/85	12/5/86	19/10/86	14/4/87	
Time at Ldn	1m12d	1m13d	1m23d	1m7d	
Arr Bristol	15/11/85	31/5/86	29/11/86	4/5/87	
Ldn-Bristol	28d	19d	1m10d	1m	
Voyage ends	16/11/85	31/5/86	29/11/86	4/5/87	
Length Voyage	2m23d	4m	2m10d	3m3d	

Partridge	Voyage 1	Voyage 2	Voyage 3		
Time at Bristol		6m5d	1m9d		
Voyage begins	11/5/85	3/4/86	5/11/86		
Left Bristol	11/5/85	12/6/86	12/11/86		
Arr London	31/5/85	23/6/86	4/12/86		
Bristol-Ldn	20d	11d	22d		
Left London	19/8/85	9/9/86	19/2/86		
Time at Ldn	2m19d	2m16d	2m15d		

Partridge cont.	Voyage 1	Voyage 2	Voyage 3		
Arr Bristol	29/8/85	26/9/86	26/2/86		
Ldn-Bristol	10d	15d	7d		
Voyage ends	29/9/85	7/11/86	8/4/87		
Length Voyage	4m18d	8m4d	5m26d		

Mervin	Voyage 1	Voyage 2	Voyage 3	Voyage 4	Voyage 5
Time at Bristol		2m8d	1m8d	1m18d	2m1d
Voyage begins	27/6/85	13/12/85	30/4/86	10/10/86	3/4/87
Left Bristol	30/6/85	14/12/85	1/5/86	11/10/86	4/4/87
Arr London	22/7/85	16/1/86	16/5/86	25/11/86	26/4/87
Bristol-Ldn	22d	1m2d	15d	1m14d	22d
Left London	25/9/85	2/3/86	2/8/86	5/1/87	21/6/87
Time at Ldn	2m3d	1m16d	2m16d	1m11d	1m26d
Arr Bristol	5/10/85	22/3/86	22/8/86	2/2/87	9/7/87
Ldn-Bristol	10d	20d	20d	28d	18d
Voyage ends	13/12/85	29/4/86	10/10/86	3/4/87	14/9/87
Length Voyage	5m16d	4m15d	5m10d	4m24d	5m11d

Daniel	Voyage 1	Voyage 2	Voyage 3	Voyage 4	Voyage 5
Time at Bristol		3m13d	1m10d	1m23d	2m2d
Voyage begins	27/3/85	4/11/85	29/3/86	1/9/86	7/3/87
Left Bristol	28/3/85	8/11/85	31/3/86	23/9/86	18/3/87
Arr London	9/4/85	26/11/85	16/4/86	2/10/86	28/3/87
Bristol-Ldn	12d	18d	16d	9d	10d
Left London	9/7/85	12/1/86	25/6/86	20/11/86	24/5/87
Time at Ldn	3m	1m17d	2m9d	1m18d	1m26d
Arr Bristol	21/7/85	19/2/86	8/7/86	2/1/87	6/6/87
Ldn-Bristol	12d	38d	13d	1m11d	13d
Voyage ends	26/8/85	4/3/86	29/7/86	15/1/87	7/7/87
Length Voyage	4m29d	4m	4m	3m14d	4m

¹ The method used was to examine the individual muster rolls for each ship for the period 1785-87 and by comparing the signing on and discharge dates of the crew at London and Bristol, a chronology of the movements of the vessel was possible.
Source. BRO: SMV 9/3/1/9 Muster Rolls 1785-87.

Appendix 2.037. Crew movements on Deane's ships, 1785-1787 ¹

Chard*	Voyage 1	Voyage 2
Number crew out	8	8
Number crew back	8	8
Number ship keepers	1	1
Outward men returning.**	1	1
Master's offspring	1	0
Previous ship not Deane and Co.	9	11
Men returning from last voyage.		2

* The *Chard's* master did not include detail on his musters.

** Not including the master or ship-keepers.

Pollard	Voyage 1	Voyage 2	Voyage 3	Voyage 4
Number crew out	8	8	8	8
Number crew back	8	8	8	8
Number ship keepers	2.	2	2	2
Outward men returning.**	0	1	1	3
Master's offspring	0	1	1	0
Last ship not Deane and Co.	7	5	8	7
Men returning from last voyage.		2	1	2

** Not including the master or ship-keepers

Partridge	Voyage 1	Voyage 2	Voyage 3
Number crew out	8	8	9*
Number crew back	8	8	8
Number shipkeepers	2	1	3
Outward men	0	0	0

Partridge cont.	Voyage 1	Voyage 2	Voyage 3
returning.**			
Master's offspring	0	0	0
Last ship not Deane and Co.	3	8	10
Men returning from last voyage.		1	1

* One man ran. **. Not including the master or ship-keepers.

Mervin	Voyage 1	Voyage 2	Voyage 3	Voyage 4	Voyage 5
Number crew out	9	9	9	9	9
Number crew back	9	9	9	9	9
Number ship keepers	3	3	3	3	3
Outward men returning.**	0	1	0	2	0
Master's offspring	0	0	0	0	0
Last ship not Deane and Co.	5	6	6	9	8
Men returning from last voyage.		4	4	4	4

** Not including the master or ship-keepers

Daniel	Voyage 1	Voyage 2	Voyage 3	Voyage 4	Voyage 5
Number crew out	9	11	9	9	9
Number crew back	9	9	9	9	9
Ship keepers	2	1	2	3	2
Outward men returning.**	1	0	0	1	
Master's offspring	0	0	0	0	0
Last ship not Deane	4	9	6	3	3
Men returning from last voyage		3	3	3	2

** Not including the master or ship-keepers¹ Source. BRO: SMV 9/3/1/9 Muster Rolls 1785-87. Note. The method used was to peruse the individual muster rolls for each ship for the period 1785-87. It has been assumed that the outward leg of the voyage ended when the majority of the crew were paid off – that is they stopped paying dues – and the inward when the crew returned to full strength.

Appendix 2.038. Regular crew members of Deane's ships, 1785-1787.¹

William Eldridge.*

Name Ship	Voy.	From	To	T/From London	Previous Ship	Usual abode
<i>Daniel</i>	1	28/3/85	9/4/85	To	<i>Partridge</i>	
<i>Mervin</i>	1	30/6/85	22/7/85	To	<i>Chard</i>	Lynn
<i>Partridge</i>	1	19/8/85	29/8/85	From	<i>Mervin</i>	Bristol
<i>Pollard</i>	2	12/5/86	31/5/86	From	<i>Daniel</i>	Bristol
<i>Partridge</i>	2	12/6/86	23/6/86	To	<i>Pollard</i>	Bristol
<i>Mervin</i>	3	2/8/86	22/8/86	From	<i>Partridge</i>	Lynn
<i>Daniel</i>	4	23/9/86	2/10/86	To	<i>Mervin</i>	Lynn
<i>Daniel</i>	4	20/11/86	2/1/87	From	<i>Daniel</i>	Lynn

* There is an anomaly that he is listed under two abode names. This could mean two men, but the likelihood is that it was the same man listed differently by two masters.

Alexander Kirkwood.*

Name Ship	Voy	From	To	T/From London	Previous Ship
<i>Pollard</i>	1	24/8/85	5/9/85	To	<i>Pollard</i>
<i>Daniel</i>	2	8/11/85	25/11/85	To	<i>Pollard</i>
<i>Daniel</i>	2	12/1/86	19/2/86	From	<i>Daniel</i>
<i>Daniel</i>	3	31/3/86	15/5/86	To	<i>Daniel</i>
<i>Pollard</i>	2	12/5/86	31/5/86	From	<i>Chard</i>
<i>Partridge</i>	2	12/6/86	23/6/86	To	<i>Pollard</i>
<i>Pollard</i>	3	9/8/86	26/8/86	To	<i>Molle</i>
<i>Partridge</i>	2	29/9/86	7/11/86	From	<i>Pollard</i>
<i>Daniel</i>	5	18/3/87	28/3/87	To	<i>Mary</i>
<i>Pollard</i>	4	14/4/87	4/5/87	From	<i>Daniel</i>

* It is possible that there are actually two Kirkwood's as the master of the *Daniel* spells the name Elixan'.

Joseph Pratten.

Name Ship	Voy	From	To	T/From London	Previous Ship
<i>Partridge</i>	2	12/6/86	23/6/86	To	<i>Pomona</i>
<i>Mervin</i>	3	2/8/86	22/8/86	From	<i>Partridge</i>
<i>Daniel</i>	4	23/9/86	2/10/86	To	<i>Mervin</i>
<i>Partridge</i>	3	5/12/86	5/3/87	Shipkeeper	<i>Daniel</i>

William Knight.

Name Ship	Voy	From	To	T/From London	Previous Ship
<i>Mervin</i>	1	30/6/85	22/7/85	To	<i>Britannia</i>
<i>Partridge</i>	1	19/8/85	29/8/85	From	<i>Mervin</i>
<i>Daniel</i>	2	8/11/85	5/12/85	To	<i>Westbury</i>
<i>Mervin</i>	4	11/10/86	25/11/86	To	<i>unknown</i>

Robert Heath.

Name Ship	Voy	From	To	T/From London	Previous Ship
<i>Partridge</i>	1	11/5/85	31/5/85	To	<i>Pollard</i>
<i>Daniel</i>	1	1/7/85	21/7/85	From	<i>Partridge</i>
<i>Pollard</i>	1	24/8/85	5/9/85	To	<i>Mervin</i>
<i>Mervin</i>	1	25/9/85	5/10/85	From	<i>Pollard</i>
<i>Daniel</i>	2	8/11/85	26/11/85	To	<i>Partridge</i>

John Perkins.

Name Ship	Voy	From	To	T/From London	Previous Ship
<i>Mervin</i>	1	30/6/85	22/7/85	To	<i>Britannia</i>
<i>Partridge</i>	1	19/8/85	29/8/85	From	<i>Mervin</i>
<i>Mervin</i>	2	14/12/85	16/1/86	To	<i>Partridge</i>

John White.

Name Ship	Voy	From	To	T/From London	Previous Ship
<i>Daniel</i>	1	28/3/85	6/5/85	To	<i>Partridge</i>
<i>Mervin</i>	3	1/5/86	16/5/86	To	<i>Daniel</i>
<i>Chard</i>	2	28/5/86	11/6/86	From	<i>Chard</i>

William James.

Name Ship	Voy	From	To	T/From London	Previous Ship
<i>Pollard</i>	2	12/5/86	31/5/86	From	<i>Chard</i>
<i>Partridge</i>	2	12/6/86	23/6/86	To	<i>Pollard</i>

Hector Reece.

Name Ship	Voy	From	To	T/From London	Previous Ship
<i>Partridge</i>	1	12/5/85	14/9/85	Watchm	<i>Partridge</i>
<i>Partridge</i>	2	12/6/86	23/6/86	To	<i>Duke of York*</i>
<i>Mervin</i>	3	12/8/86	22/8/86	From	<i>Partridge</i>
<i>Daniel</i>	5	24/5/87	6/6/87	From	<i>Partridge</i>

*See Index 103. 7/1-17/5/86 to and from Dublin. Means he went to an Irish ship.

¹ The method used was to trace the movements of crewmen who had made two or more voyages on Deane's London coasters in the period 1785-87 with a view to ascertaining if there were any patterns of re-employment within company ships. The data does not include the masters who remained the same on all voyages.

Source. BRO: SMV 9/3/1/9 Muster Rolls 1785-87.

Appendix 2.039. Data regarding Thomas Deane and Co. ships, 1786-1792.

Ship	Master	Type	Tons	Built	Year	Comment
<i>Chard</i>	Honeywell	Brig	160	Bristol	1776	Sold and replaced 1786-87.
<i>Daniel</i>	Powell	Brig	160	Bristol	1780	Replaced, 1792.
<i>Mervin</i>	Garman	Brig	190	Bristol	1774	Sold 1792.
<i>Partridge</i>	Borrowdale	Brig	189	Bristol	1776	Sold and replaced 1785-86.
<i>Pollard</i>	Farquarson	Brig	150	Bristol	1773	Repaired and sold 1788.

Source. *Lloyd's Registers*, 1786, 1788, 1792.

Appendix 2.040. Voyages of the *Bristol*, 1785-87.

<i>Bristol</i>	Voyage 1*	Voyage 2	Voyage 3	Voyage 4	Voyage 5	Voyage 6	Voyage 7
Time at Bristol		10d	36d	2m	1m16d	1m28d	27d
Voyage begins	20/4/85	11/6/85	5/10/85	16/2/86	10/6/86	22/11/86	20/4/87
Left Bristol	22/4/85	20/6/85	15/10/85	16/2/86	11/6/86	22/11/86	21/4/87
Arrived Liverpool	3/5/85	16/7/85	22/10/85	10/3/86	18/6/86	30/11/86	13/5/87
Bristol-Liverpool	11d	26d	7d	16d	7d	8d	22d
Left Liverpool	16/5/85	20/7/85	10/12/85	20/4/86	6/9/86	22/2/87	22/6/87
Time at Liverpool	11d	4d	19d	1m10d	2m18d	2m22d	1m6d
Arr Bristol	10/6/85	29/8/85	16/12/85	26/4/86	23/9/86	23/3/87	30/6/87
Liverpool Bristol	25d	1m8d	6d	6d	7d	1m1d	8d
Voyage ends	11/6/85	5/10/85	15/2/86	10/6/86	21/11/86	20/4/87	23/8/87
Length Voyage	1m21d	5m15d	5m10d	3m25d	5m	4m28d	4m3d

As with the chronology of Deane's ships, the dates are taken from the roll with date the voyage began and finished being the first man to sign on and last to sign off. The dates of arrival and departure at ports during the voyage are similarly taken. This does not ensure absolute accuracy but is precise enough for the research.

* This first voyage is complicated by two voyages being recorded on the one muster roll.

Source. SMV/9/3/1/9 Muster Rolls, 1783-89; SMV/9/2/1/13 Thomas Rothley's Account Book 1747-1787. (An index to the Muster Rolls).

Appendix 2.041. *Bristol*. Crew and ship-keeper numbers for seven voyages to Liverpool, 1785-1787.

<i>Bristol</i>	1	2	3	4	5	6	7
Number crew out	7	8	8	8	8	7	8
Number crew back	7	8	8	8	8	7	8
Number ship keepers*	2	2	2	2	2	1	2
Outward men returning.**	2	2	4	3	1	2	2
Men returning from last voyage		0	2	4	2	2	4

* Master always stayed onboard.

** Not including the master or ship-keepers

Source. SMV/9/3/1/9 Muster Rolls, 1783-89.

Appendix 2.042. Bristol. Examination of crew movements, 1785-1787.

Bristol	1 out	1 in	2	2	3 out	3 in	4 out	4 in	5 out	5 in	6 out	6 in	7 out	7 in
Moon John	x	x	x	x	x	x	x	x	x	x				
Thomas, David	x	x	x	x	x	x	x	x			x	x	x	x
Brownell, Hugh					x	x	x	x						
Holder, Benji					x	x	x	x	x	x		x		x
Edwards, Roger					x	x	x							
White, Edward		x			x									
Listone, Henry									x			x	x	
Garrett, Richard										x	x			
Gibbett, Issac										x			x	
Anderson, Wm											x	x		
Jenkins, Thomas												x	x	
Oliver, James												x		x

Source. SMV/9/3/1/9 Muster Rolls, 1783-89.

Appendix 2.043. Ships operating in the general coasting trade, 1785-1787.

(a) Voyages of the *Elisabeth*. John Massey.

<i>Elisabeth</i>	Voyage 1	Voyage 2	Voyage 3	Voyage 4	Voyage 5	Voyage 6	Voyage 7
Time at Bristol		2m26d	1m20d	0m28d	2m25d	0m27d	2m5d
Voy. begins	17/6/85	7/8/85	13/2/86	26/5/86	25/8/86	20/12/86	24/4/87
Left Bristol	17/6/85	3/11/85	13/2/86	26/5/86	25/8/86	20/12/86	24/4/87
Arrived from	Cowes	Cowes	Cowes	Galway	Portsm'th	Limerick	Cowes
Date arrival	7/8/85	23/12/85	28/4/86	30/6/86	23/11/86	19/2/87	14/6/87
Voyage ends	7/8/85	13/2/86	26/5/86	25/8/86	20/12/86	24/4/87	12/7/87
Time away	1m20d	1m20d	2m15d	1m4d	2m28d	1m29d	1m20d

Source. BRO: SMV 9/3/1/9 Muster Rolls 1785-86, 21,64,111,155. 1786-87, 40,101,150.

(b) Voyages of the *Cams Delight*. Henry Morris.

<i>Cams Delight</i>	Voyage 1	Voyage 2	Voyage 3	Voyage 4	Voyage 5.
Time at Brist		2m5d	2m16d	2m12d	1m6d
Left Bristol	23/8/85	31/12/85	1/7/86	3/11/86	6/2/87
Arrived from	Cowes	Cowes	Cowes	Cowes	South'ton
Date arrival	26/10/85	14/4/86	21/8/86	1/1/87	16/4/87
Time away	2m3d	3m11d	1m20d	1m29d	2m10d

Source. BRO: SMV 9/3/1/9 Muster Rolls 1785-86, 44,126. 1786-87, 4,18,62,144.

(c) Voyages of the *Nancy*, William Hamley, St Ives.

<i>Nancy</i>	Submission 1	Submission 2	Submission 3	Submission 4
Left Bristol	15/6/85	2/1/86	21/10/86	8/1/87
Arrived	St Ives	St Ives	Swansea	St Ives

<i>Nancy cont.</i>	Submission 1	Submission 2	Submission 3	Submission 4
Date arrival	2/12/85	21/10/86	8/1/87	16/6/87
Time away	5m17d	10m19d	2m18	5m8d

Source. BRO. SMV 9/3/1/9 Muster Rolls 1785-86, 33. 1786-87, 12,52,126.

Appendix 2.044. General coastal trade. Examination of crew movements.

(a) *Elisabeth*, William Morris.

Name	Voy. 1	Voy. 2	Voy. 3	Voy. 4	Voy. 5	Voy. 6	Voy. 7
John Jones	x						
John Vault	x						
Albin Hughes	x	x	x				
Wm. Trevasher		x					
John Phillips		x					
Wm. Rawlins			x	x	x	x	
Wm. Hughes			x	x			
John Hughes				x			
Thomas Perkins					x		
John Davis					x		
Richard Jenkins						x	
Sam Perkins						x	
Nicholas Whitefield							x
Thomas Windsor							x
Thomas Wood							x

Source. BRO: SMV 9/3/1/9 Muster Rolls 1785-86, 21,64,111,155. 1786-87, 40,101,150.

(b) *Cams Delight*. Henry Morris.

Name	Voy. 1	Voy. 2	Voy. 3	Voy. 4	Voy. 5
John Finn	x				
Lewis Comberthy	x				
Issac Rice	x				
William Trevasher*		x			
Jacob Price		x			
Sam Bakorlegs		x			
Albin Hughes*			x		
William Hughes*			x	x	x
Thos Coleman			x		
Peter Doyle				x	
Griff Rowland				x	
Thomas Windsor*					x
Richard Davis					x

Source. BRO: SMV 9/3/1/9 Muster Rolls 1785-86, 44,126. 1786-87 4,18,62,144.

* Also sailed on the *Elisabeth*.

(c) **Nancy, Hamley.**

Name	Voy. 1	Voy. 2	Voy. 3	Voy. 4
William Trevasher*	x			
Charles Randall	x			
William James	x	x		
J. Syms		x		
Sam Bale		x		
John Clark		x		
John Firth		x		
William Stanbury		x		
James Scovell		x		
Abraham Norring			x	x
Henry Williams			x	
John Perkins				x
Ralph Warne				x

Source. BRO. SMV 9/3/1/9 Muster Rolls 1785-86. 33. 1786-87. 12,52,126.

* Sailed on the *Elisabeth* and *Cams Delight*.

Appendix 2.045. Details of Bristol ships trading to Ireland, 1787.

Ship	Master	Owner	Trading to	Built	Tons
<i>Bristol</i>	Jones	J McCulm	Dublin	1768	120
<i>Draper</i>	Tripe	J McCulm	Dublin	1766	130
<i>Duke York</i>	James	Lunnell	Dublin	1763	130
<i>Warren</i>	Hodgson	Jane & Co	Dublin	1783	100
<i>Juno</i>	White	Williams	Cork	1765	130
<i>Endeavour</i>	Campbell	J Curtis	Galway, Limerick and Cork	1767	40
<i>Elisabeth</i>	Gall	Capt & Co	Dublin, Exeter, Galway, Chester, Limerick and Cork.	1760	60
<i>Denizen</i>	Volk	Curtis & Co	Lisbon, Drogheda, Waterford, Milford and Rotterdam	1780	80

Source. *Lloyd's Register*, 1787.

Appendix 2.046. Bristol ships operating in the Irish trade, 1785-1787.

(a) *Bristol*, Jones. Dublin.

<i>Bristol</i>	Voyage 1	Voyage 2	Voyage 3	Voyage 4
Time at Bristol		1m24d	29d	1m3d
Left Bristol	9/7/85	16/10/85	18/2/86	1/6/86
Arr Dublin		4/11/85	1/4/86	7/6/86
Bristol-Dublin		19d	1m14d	6d
Left Dublin		14/12/85	15/4/86	3/7/86
Time at Dublin		1m9d	14d	26d
Arr Bristol	22/8/85	20/1/86	29/4/86	10/7/86
Dublin-Bristol		1m6d	14d	7d
Bristol-Bristol	1m13d	3m4d	2m11d	1m10d

<i>Bristol</i>	Voyage 5	Voyage 6	Voyage 7	Voyage 8
Time at Bristol	1m18d	1m10d	1m2d	1m7d
Left Bristol	6/9/86	25/12/86	30/3/87	12/6/87
Arr Dublin	20/9/86	10/1/86	10/4/87	
Bristol-Dublin	14d	16d	11d	
Left Dublin	15/10/86	15/2/86	29/4/87	
Time at Dublin	25d	1m5d	19d	
Arr Bristol	15/11/86	28/2/87	5/5/87	18/7/87
Dublin-Bristol	1m	13d	6d	
Bristol-Bristol	2m7d	2m3d	1m6d	1m6d

Source BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

(b) *Draper*. Dublin.

<i>Draper</i>	Voyage 1	Voyage 2	Voyage 3	Voyage 4
Time at Bristol		1m1d	1m12d	17d
Left Bristol	27/8/85	5/12/85	24/3/86	18/7/86
Arr Dublin		25/12/86		
Bristol-Dublin		20d		
Left Dublin		20/1/86		
Time at Dublin		26d		
Arr Bristol	4/11/85	11/2/86	1/6/86	31/8/86
Dublin-Bristol		22d		
Bristol-Bristol	2m8d	2m6d	2m8d	1m16d

Draper	Voyage 5	Voyage 6	Voyage 7
Time at Bristol	1m3d	1m14d	23d
Left Bristol	4/10/86	6/2/87	10/5/87
Arr Dublin	20/10/86		
Bristol-Dublin	15d		
Left Dublin	1/12/86		
Time at Dublin	1m10d		
Arr Bristol	23/12/86	17/4/87	5/7/87
Dublin-Bristol	22d		
Bristol-Bristol	2m19d	2m3d	1m26d

Source BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

(c) Duke of York. Dublin.

Duke of York	Voyage 1	Voyage 2	Voyage 3
Time at Bristol		1m29d	1m12d
Left Bristol	10/9/85	7/1/86	29/4/86
Arr Bristol	9/11/85	17/3/86	29/6/86
Bristol-Bristol	2m	2m10d	1m

Duke of York	Voyage 4	Voyage 5	Voyage 6
Time at Bristol	28d	22d	1m29d
Left Bristol	27/7/86	18/10/86	1/3/87
Arr Bristol	26/9/86	3/1/87	9/5/87
Bristol-Bristol	2m	2m14d	2m9d

Source BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

(d) Warren. Dublin.

Warren	Voyage 1	Voyage 2	Voyage 3	Voyage 4
Time at Bristol		26d	15d	21d
Left Bristol	24/11/86	23/2/87	13/4/87	16/6/87
Arr Dublin			24/4/87	
Bristol-Dublin			11d	

Warren cont.	Voyage 1	Voyage 2	Voyage 3	Voyage 4
Arr Bristol	25/1/87	29/3/87	25/5/87	18/7/87
Bristol-Bristol	2m1d	1m6d	1m12d	1m2d

Source BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

(e) Juno. Cork.

Juno	Voyage 1	Voyage 2	Voyage 3	Voyage 4	Voyage 5
Time at Bristol		22d	21d	1m21d	30d
Left Bristol	26/7/85	3/10/85	5/12/85	28/3/86	5/6/86
Arr Cork	5/8/85	20/10/85	11/12/85	1/4/86	14/6/86
Bristol-Cork	10d	17d	6d	4d	11d
Left Cork	4/9/85	5/11/85	13/1/86	29/4/86	28/7/86
Time at Cork	30d	15d	1m2d	28d	1m14d
Arr Bristol	11/9/85	14/11/85	5/2/86	5/5/86	2/8/86
Cork-Bristol	10d	9d	23d	6d	5d
Bristol-Bristol	1m15d	1m11d	2m	1m7d	1m27d

Juno	Voyage 6	Voyage 7	Voyage 8	Voyage 9
Time at Bristol	2m21d	1m8d	23d	15d
Left Bristol	23/10/86	26/1/87	7/4/87	26/5/87
Arr Cork	26/10/86	6/2/87	12/4/87	10/6/87
Bristol-Cork	3d	11d	5d	15d
Left Cork	1/12/86	6/3/87	4/5/87	6/7/87
Time at Cork	1m5d	1m	22d	26d
Arr Bristol	18/12/86	14/3/87	11/5/87	16/7/87
Cork-Bristol	17d	8d	5d	10d
Bristol-Bristol	1m25d	1m16d	1m4d	1m20d

Source BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

(f) Denizen, Various ports.

Denizen	Voyage 1	Voyage 2	Voyage 3
	Lisbon	Drogheda	Waterford
Time at Bristol		1m24d	1m3d
Left Bristol	22/9/85	5/3/86	27/5/86
Arr Port			
Bristol-Port			
Left Port			
Time at Port			
Arr Bristol	11/1/86	24/4/86	24/6/86
Port-Bristol			
Bristol-Bristol	3m20d	1m19d	28d

Denizen	Voyage 4	Voyage 5	Voyage 6
	Milford	Waterford	Rotterdam*
Time at Bristol	1m7d	23d	28d
Left Bristol	31/7/86	4/10/86	23/12/86
Arr Port			
Bristol-Port			
Left Port			
Time at Port			
Arr Bristol	11/9/86	25/11/86	21/6/87
Port-Bristol			
Bristol-Bristol	1m11d	1m21d	5m29d

* Must have been to other ports due time taken for the trip.
Source BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

Elisabeth, Tramping.

Elisabeth	Voyage 1	Voyage 2	Voyage 3	Voyage 4	Voyage 5
	Dublin*	Exeter*	Galway	Chester*	Londonderry
Time at Bristol		28d	1m3d	1m20d	20d
Left Bristol	13/5/85	28/2/86	26/6/86	6/10/86	7/6/87
Arr Bristol	30/1/86	22/5/86	16/8/86	18/5/86	10/7/87
Bristol-Bristol	8m17d	2m24d	1m21d	7m14d	1m3d

Source BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

(g) Endeavour, Various ports.

Endeavour	Voyage 1	Voyage 2	Voyage 3
	Galway	Limerick	Cork
Time at Bristol			22d
Left Bristol	5/9/86	5/12/86	22/3/87
Arr Bristol	5/12/86	1/3/87	21/5/87
Bristol-Bristol	3m	2m24	1m29d

Source BRO: SMV/9/3/1/9 Muster Rolls, 1783-89.

Appendix 2.047. Average itinerary of Irish ships, 1785-1787.

Ship	Av. Time in Bristol	Av. time voyage out	Av. time at destination	Av. time voyage in	Av. time ship away
<i>Bristol</i>	1m30d	18d	26d	18d	1m26d
<i>Draper</i>	1m2d				2m4d
<i>Duke York</i>	1m12d				2m1d
<i>Warren</i>	21d				1m13d
<i>Juno</i>	1m5d	9d	29d	10d	1m12d
<i>Endeavour</i>					2m18d
<i>Elisabeth</i>	1m3d				4m10d
<i>Denizen</i>	1m5d				2m26d

Sources. Same as Appendix 2.046.

Appendix 2.048. Irish vessels. Examination of crew movements, 1785-1787.

(a) *Bristol, Jones.*

Name	Voy. 1	Voy. 2	Voy. 3	Voy. 4	Voy. 5	Voy. 6	Voy. 7	Voy. 8
John Jones	x	x	x	x	x	x	x	x
John Gardner	x	x	x	x	x	x	x	x
Abraham Prize	x	x		x	x	x	x	x
John Neil	x	x	x	x	x	x	x	
Richard Branan	x	x						
David Mitchell	x	x						
Pat Redmond	x	x						
Wm Mathews	x					x	x	
Edward English		x						
Thomas Coleman		x						
Thomas Powell		x						
Richard Wilson		x						
Nic Wilson		x						
Thomas Rees		x						
Sam Quail			x					
James Mullons			x	x				
Jonas Young Green			x					
Richard Dickinson			x	x	x			
John Murphy			x					
John Gardner Jun.				x				
William Marks				x				
David Eaton					x		x	x
Robert Fitzhenry					x			
Thomas Cox						x	x	x
Richard Cox						x		
Richard Doyle								x
David Morgan								x

(b) *Draper, Tripe.*

Name	Voy. 1	Voy. 2	Voy. 3	Voy. 4	Voy. 5	Voy. 6	Voy. 7
Samuel Tripe	x	x	x	x	x	x	x
William Prosser	x	x					
William Smith	x	x	x	x	x	x	
William Taylor	x	x					
Pat McArdle	x	x	x	x	x	x	x
John Bennett	x						

<i>Draper cont.</i>	Voy. 1	Voy. 2	Voy. 3	Voy. 4	Voy. 5	Voy. 6	Voy. 7
Boddy Bouch	x						
Richard Mullins		x					
James Quail		x					
Richard Mountain			x	x			
John Brooks			x	x			
Joseph Bulger			x		x	x	x
John Harris			x	x	x	x	x
John White				x		x	
Michael Doyle					x		
Ian Hamilton					x		
Dennis Sherriden						x	
Edward English							x
Robert Corridon							x
Michael Sheil							x

(c) *Duke of York, James.*

Name	Voy. 1	Voy. 2	Voy. 3	Voy. 4	Voy. 5	Voy. 6
Bancroft James	x	x	x			
Richard Thomas	x	x	x	x	x	x
Francis Shrivere	x		x			
Henry Rees	x	x	x			
Hector Rees	x	x				
John Purford	x					
Richard Branam		x	x	x	x	
John Parfit		x				
Thomas Crow		x				
David Thomas			x	x	x	x
Thomas Day			x	x		
Richard Keagin			x			
James Neath				x	x	x
John Curtis				x		
George Evans				x		
John Williams					x	
William Knowles					x	
William Roberts						x
John Davies						x
James Bennett						x

(d) Warren, Hodgson

Name	Voy. 1	Voy. 2	Voy. 3	Voy. 4
Thomas Hodgson	x	x	x	x
Robert Hodgson	x	x	x	x
George Barrow	x	x	x	x
Matthew Taylor	x		x	
Thomas Richards	x	x		
John Hale (Hare?)	x	x		
Matthew Evans		x		
Pat Dillon			x	x
Lawrence Murphy			x	x
James Barrow				x
Matthew Linch				x

(e) Juno, White.

Name	Voy. 1	Voy. 2	Voy. 3	Voy. 4	Voy. 5	Voy. 6	Voy. 7	Voy. 8	Voy. 9
Joseph White	x	x	x	x	x	x	x	x	x
Boyle White	x	x	x	x	x	x	x	x	x
William Sullivan	x	x	x	x					
William Clare	x	x	x	x	x	x	x	x	x
? Sullivan	x								
Martin Joyce	x	x							
James McGrath	x								
Martin White		x							
Edward Jones		x							
Laurence Smith			x						
Edmund Harris			x						
John Sullivan			x						
Laurence Jones				x					
Francis Seymour				x					
Edward Thomas				x					
Jos Blackburn					x	x	x		
Chris Darby					x	x			
John Ryan					x				
Thomas Carroll					x	x	x	x	
Thomas Brennan						x			
Sam Christian							x		
Michael Ryan							x		
William Thompson								x	
Michael Scanlan								x	
Thomas Norris								x	x

<i>Juno cont.</i>	Voy. 1	Voy. 2	Voy. 3	Voy. 4	Voy. 5	Voy. 6	Voy. 7	Voy. 8	Voy. 9
Jo Richardson									
Jo Thomas									x
William Jones									x

(f) *Denizen, Volk.*

Name	Voy. 1	Voy. 2	Voy. 3	Voy. 4	Voy. 5	Voy. 6
William Volk	x	x	x	x	x	x
William Love	x	x				
John Hetley	x	x				
Thomas Rigaby	x					
William Volk	x	x				
Edward Grey	x	x				
Pat Gibbons	x	x	x	x	x	
James Neath		x				
William Mason			x	x		
Joseph Richard			x			
John Thomas			x			
Hew Blake			x			
Charles Randell				x		
Simon Stoneham				x		
Joseph Griffiths				x	x	x
Charles Reynolds					x	
John Dunkin					x	
Simon Showhan					x	
Dan Roch						x
George Davis						x
Thomas Lewis						x
William Hughes						x
Lewis Morgan						x
James Davis						x
John Roberts						x
David Miller						x

(g) *Elisabeth, Gall.*

Name	Voy. 1	Voy. 2	Voy. 3	Voy. 4	Voy. 5
John Gall	x	x	x	x	x
William Williams	x	x	x	x	x

<i>Elisabeth cont.</i>	Voy. 1	Voy. 2	Voy. 3	Voy. 4	Voy. 5
John Hawkins	x				
Maurice Long	x				
John Williams	x	x	x	x	
Ben Foster		x			
John Lyons		x			
Sam Bailey		x			
Thomas Griffiths		x			
John Walton		x			
John Morgan			x		
Jeffry Thomson			x		
John Thomas				x	
George Jones				x	
Robert Jolleff				x	x
John Foneys				x	
John Muir				x	x
John Christian				x	
Sam Christian					x

(h) *Endeavour*, Campbell

Name	Voy. 1	Voy. 2	Voy. 3
John Campbell	x	x	x
David Volk	x	x	x
Edward Warren	x	x	
Edward Woseley	x	x	
Neil McCloud			x
Edward Hoseley			x

Sources. Same as Appendix 2.046.

Appendix 2.049. Irish ships. Number of men completing multiple trips per voyage, 1785-1787.

Ship	Total Voy's.	Total men	Voyages completed per man								
			2	3	4	5	6	7	8	9	
<i>Bristol</i>	8	27	4	4	0	0	0	2	2		
<i>Draper</i>	7	20	5		1	1	1	2			
<i>Duke' York</i>	6	20	3	3	2	0	1				
<i>Warren</i>	4	11	5	0	3						
<i>Juno</i>	9	28	2	1	2	0	0	0	0	3	

Source. Appendix 2.048.

Chapter 3.

Appendix 3.001. Customs officers' duties at Bristol, 1794.

The Customs officials at Bristol were listed in Matthew's, *Bristol Directory*, 1794, as follows.

Collectors*; Comptroller*; Customer Inwards and Outwards*; Examiner; Cheque Clerk and Receiver of Greenwich and Bristol Hospitals; Jerquer; Receiver of the Prisage¹, of the Holmes and Small Lights; Landing Surveyors; King's-waiters*; Land waiters; Coast Officer; Patent Searcher*; Comptrolling Searchers; Housekeeper; Tide surveyors and Superintendent of the Weighing Porters. Those with deputies and clerks are marked * ²

However, many of these were not involved in the everyday working of the port, their duties being minimal. The following are listed by Hoon as being the officers responsible for actually collecting the revenue at an outport.³

Collectors.* The outport collector received all customs receipts and was directly responsible for the conduct of all the men in his port and acted as warehouse-keeper as well.⁴

Comptroller or Controller*. Oversaw the financial side of operations. He was treated as an equal of the collector and if there was any difference in opinion about the way the port was being run separate reports were to be sent to the Board.⁵

Surveyor. Hoon says that compared to London, where there were two separate positions of land and tide-surveyor, at the outports there was only one occupation that of Surveyor. Both, however, are listed in Matthew's *Directory*. They oversaw the work of both land-waiters and searchers, and on the quays were present when goods of particular value were examined. They also approved allowances for tare and damage. It is noted that compared to land-waiters few searchers are listed and so it is possible that the post of tide surveyor could be combined with searcher.⁶

Land-waiter. The nucleus of the import system were the land-waiters. They supervised the landing of all imported goods and had the responsibility of seeing that they were correctly recorded on the warrant for landing them made out upon a merchant's entry and payment of duty. Two landwaiters would be assigned to the discharge of each ship. Upon delivery of a ship to them, they attended the discharge of goods, supervised the weighing – making proper allowance for damage, draught, and tare – and entered the marks, numbers and weight of each

¹ A customs duty levied until 1809 upon wine imported into England.

² Matthews, *Bristol Directory*, 1794, p. 91.

³ Hoon, *English Customs System*, p. 173.

⁴ Hoon, *English Customs System*, p. 173.

⁵ Hoon, *English Customs System*, pp. 188-189.

⁶ Hoon, *English Customs System*, pp. 142, 173; Matthews, *Bristol Directory*, p. 91.

article in a 'Blue Book'. If there was a surplus between the warrant and the actual quantity landed they initiated further payment from the importer.⁷

Searchers. They were the equivalent of the land-waiter for exports, superintending the outward business on the quays. On receiving a cocket from a merchant containing the entry of all goods to be cleared onto a vessel they attended the shipping, comparing the weight, number, or measure of each with the marks specified on the cocket and could require goods to be opened and weighed to prevent fraud.⁸

Tide-waiters. They were stationed on the vessels to see that the goods that had been entered out were fairly shipped. They entered on their books an account of the goods shipped and visited them daily to see that the goods were on board and guarded against re-landing and pilferage. The duty of tidewaiters stationed on all ships, was to guard the cargo against fraudulent landing. When the landwaiters gave orders for the delivery of the goods the tidewaiters kept a careful record of what was put into the lighters and sent it ashore to them.

Weighers. It was the duty of the weigher to weigh the goods and call out the result to the land-waiter. They also opened and repacked goods for examination at importation or before exportation.

Gaugers. It was the duty of the gauger to gauge all commodities capable of liquid measure the goods and call out the result to the land-waiter.

⁷ Hoon, *English Customs System*, p. 140.

⁸ Hoon, *English Customs System*, pp, 145-146.

Appendix 3.002. List of ships' papers and agency of origin.

Document.	Agency of Origin.	Comment.
Letter of instructions to captain	Ship's owners	
Customs house clearances	Customs	All clearances home and abroad had to be in the papers
Plantation certificate	Customs	
Mediterranean Pass	Admiralty/Customs	
Light receipts	Customs	Holmes and Small lighthouses
Hospital receipts	Customs	Both Greenwich and Bristol
List of provisions and stores	Customs	
Invoice of goods consigned to master on behalf of the owners	Shipowner	
Sailors articles	Owners	
Crew list	Shipowner	
Protections	Admiralty	
Letter of Marque.	Admiralty	
Bonds and cancellation cert.	Customs	
Manifest	Shipowner	Copies had to be ready on return
Ships certificate	Shipowner	Sworn before customs officers
Bills of Lading	Merchants	For all cargo

Source. Ships' account books referenced throughout the thesis.

Appendix 3.003. Labour costs at the river's mouth, 1779-1786.

Name of ship.	Year	No. men	No. days	Rate/ day/man	Cost	Comment
<i>Success</i>	1779	2	5	3s	£1.10s0d	Kingroad
<i>Success</i>	1779	Riggers			£0.11s9d	Not known
<i>Success</i>	1780	4	9	3s	£5.8s0d	Kingroad
<i>Success</i>	1780	4	2	3s6d	£1.8s0d	Sea Mills
<i>Sybil</i>	1785	6	3	2s	£1.16s0d	Kingroad
<i>Sybil</i>	1786	5	3	3s	£2.5s.0d	Hollowbacks
<i>Sybil</i>	1786		3	3s	£0.9s0d	Use of boat
<i>Sybil</i>	1786	6	1	2s	£0.12s0d	Hungroad

Source. BRL: 21258 Account Book of the *Sybil* and *Success*, 1779-86.

Appendix 3.004. Incidental inward costs and fees, 1780-1791.

Ship	Item	Cost
<i>Fanny.</i>	Warner.	10s6d
<i>Triton..</i>	Warner	10s6d
<i>Druid.</i>	Warner	10s6d
<i>Sybil.</i>	Post Chaise to Bristol	10s6d
<i>Sybil.</i>	Post chaise to Bristol	11s8d
<i>Sybil.</i>	Expenses at for dinner at the Lamplighters Hall	5s6d
<i>Success.</i>	Post chaise from Bristol to Sea Mills.	9s6d
<i>Sybil.</i>	Ship-keeping per day	1s0d
<i>Success.</i>	Ship-keeping per day	1s0d
<i>Triton.</i>	Ship-keeping per day	1s0d
<i>Druid.</i>	Ship-keeping per day	1s0d

Sources. BRL: 21258 Account Book of the *Sybil* and *Success. Sybil*, Post chaise to Bristol in 1785-86, pp. 24, 81. Expenses for dinner and ship-keeping, 1786, p. 81; *Success* Post chaise to Bristol, 1780, p. 145. Ship-keeping, 1780, p. 98; BRO: 12162 Shipping Account Book of the Snow *Fanny*. Warner's fees are in all insetts 1780-88; BRO: 39654/3 Voyage accounts for the *Triton*. Warner's fees, pp. 120, 144. Ship-keeping, 1787-88, pp. 120, 144; BRO:39654/4 Voyage Accounts for the *Druid*, 1790-91. Ship-keeping, 1790, p. 18.

Appendix 3.005. List of pilot rates, 1773-1799.

Manoeuvre.	Cost.
Channel pilot. Lundy, to and from Kingroad.	£3.3s.0d
Minehead to Kingroad.	£3.1s.0d
Holmes to Kingroad.	10s6d
Bristol to Kingroad.	10s0d
Bristol to Kingroad	15s0d
Kingroad to Hungroad	10s0d
Hungroad to Bristol	10s0d
Kingroad to Hollowbacks	5s0d
Hollowbacks to Hungroad	10s0d
Mooring and unmooring.	5s0d
Pilot staying onboard 2 days	6s0d

Sources. BRO: AC/MU/3/7a-c. Voucher for pilotage Blaze Castle. 1773; BRL: 21258 Account book of the *Sybil* and *Success*, pp. 49, 81, 118, 148; J. Rich, *The Bristol Pilots*, p. 55.

Appendix 3.006. Cost of boat work, 1779-1786.

Purpose	Hire of boat	Cost of men
General boat work	1s6d	1s
Towing	3s	2s
Chain boat	3s	1s

Source. BRL: 21258 Account book of the *Sybil* and *Success*, pp. 49, 81, 118, 148.

Appendix 3.007. Total cost of incoming and outgoing pilot fees by ship and year, 1777-1791.

Total cost of incoming pilot fees by ship and year.

<i>Fanny</i>	Cost £.s.d.	Pilot	<i>Triton</i>	Cost £ .s. d.	Pilot	<i>Druid</i>	Cost £.s. d.
207t*			219t*			300t*	
1777	10.17.9	Thomas Adams	1778	14.02.0	Barnes: Thayer	1790	16.17.6
1778	19.15.9	Marshal: Lockier	1779	9.16.0	Thomas Adams	1791	18.19.6
1779	22.05.9	Courtney: Snow	1780	14.14.0	John Harmore		
1780**	10.10.3	George Parfitt	1782	11.16.4	Baines: Tudor		
1781	15.13.0	Hamlin:	1783	11.05.9	Peter Seville		
1782	15.09.4	Harris: Hiatt	1784	13.11.9	James Lockier		
1783	13.14.9	John Highatt	1786	12.01.6	John Parfitt		
1784	15.01.10	James Harris	1788	18.04.1	Not known		
1785	12.14.4	Joseph Richards	1789	12.18.6	James Thayer		
1786	11.06.7	Jere Hanmore					
1787	12.18.7	Thomas Ray					
1788	12.12.6	John Beavan					

* Registered tonnage, post 1787. ** The Comb pilot was paid £2.12.6d, by the master who recorded it in his disbursements and when added to the branch pilots £10.10.3d makes £13.9.2d, bringing the payment more in line with the average. Sources. BRO: 12162, Account book of the *Fanny*; BRO: 39654/3, Voyage accounts for the *Triton*; BRO: 39654/4, Voyage accounts for the *Druid*, 1790-91.

Total cost of outgoing pilot fees by ship and year, 1777-1791.

<i>Fanny</i>	Cost £.s.d.	Pilot	<i>Triton</i>	Cost £.s.d.	Pilot	<i>Druid</i>	Cost £.s.d.
207t*			219t*			300t*	
1777	14.07.0	T Adams	1777	13.16.6	P. Rowland	1790	15.03.6
1778	18.12.0	J. Lockyer	1778	none		1791	23.14.0
1779	17.03.0	G. Snow	1779	21.04.1 0	J. Thayer		
1780	13.13.6	T Adams	1780	12.02.8	T. Adams		
1781	19.12.0	H. Tudor	1781	12.18.9	J Hanmore		
1782	20.14.6	J. Hiatt	1782	19.06.3	H.Tudor		
1783	12.06.6	J. Hyatt	1783	None.			
1784	None		1784	8.15.6	P. Seville		
1785	11.09.3	J. Harris	1785	13.13.6	No name		
1786	13.06.0	J Hanmore	1787	11.16.6	J. Parfitt		

<i>Fanny cont.</i>	Cost £.s.d.	Pilot	<i>Triton Cont.</i>	Cost £.s.d.	Pilot	<i>Druid cont.</i>	Cost £.s.d.
1786	11.09.10	J Hanmore	1788	10.18.0	J. Kidwell		
1788	15.11.7	J. Hiatt					

Sources. BRO: 12162, Account book of the *Fanny*; BRO: 39654/3, Voyage accounts for the *Triton*; BRO: 39654/4, Voyage accounts for the *Druid*, 1790-91.

Appendix 3.008. Mates disbursements for cargo handling. *Sybil* and *Success*.

Operation	Per day	Men	Days	Cost
<i>Sybil. 1785.</i>				
Workforce servicing various items	2s	3	1 ½	8s6d
Clearing hold for cargo	2s	6	½	6s0d
Loading the ship	2s	6	9	£5.8s0d
Boatswain and one man servicing items.	2s	1	2	4s0d
Loading the ship	1s6d	6	4 ½	£2.0s6d
Mates attendance				£3.3s0d
<i>Sybil. 1786,</i>				
Labour at the roads.	2s	4	6	£2.8s 0d
Clearing for discharging.	1s6d	5	1 ½	11s3d
Discharging 1/6	1s6d	5	3 ½	£1.6s3d
Cleaning and clearing after discharge.	1s6d	6	2	18s0d
<i>Success. 1780.</i>				
Labour at the roads.	3s	4	9	£5.8s0d
Loading a trow at Sea Mills.	3s	4	2	£1.4s.0 d
Discharging the ship.	2s	5	8	£4.0s0d
Cleaning and clearing after discharge.	2s	5	1	10s0d
Preparation for lay-up and moving ship.	2s	4	4	£1.12s0 d

Sources. Based on information given in the mate's disbursements. BRL: 21258, Account book of the *Sybil* and *Success*, pp. 43, 82, 116, 150.

Appendix 3.009. Comparison of discharge and loading costs for cargo handling on *Triton* and *Druid*, 1778-1791.

Item	<i>Triton</i> 1st	<i>Triton</i> 2nd	<i>Triton</i> 3rd	<i>Triton</i> 4th	<i>Triton</i> 5th	<i>Triton</i> 6th
Mates disbur'nts loading	£8.0s0d	£24.17s3d	£6.19s0d	£15.14s6d	£12.2s4d	£25.16s3d
Mates disbur'nts discharging	£5.2s6d		£8.15s0d	£6.10s0d	£10.12s0d	
Item	<i>Triton</i> 7th	<i>Triton</i> 8th	<i>Triton</i> 9th	<i>Druid</i> 1790	<i>Druid</i> 1791	
Mates disbur'nts loading	£12.15s7d	£11.2s6d	£10.11s6d	£14.4s0d	£11.13s0d	
Mates disbur'nts discharging		£ 6.11s0d	£5.5s0d	£8.8s0d	£8.4s0d	

Sources. BRO: 39654/3, Voyage accounts for the *Triton*; BRO: 39654/4, Voyage accounts for the *Druid*, 1790-91.

Appendix 3.010. Tasks of the managing owner (ships husband) in the eighteenth century.

- Freight of the last voyage to be collected.
- Negotiations conducted over the allowances to be made for damaged cargo.
- Crew paid off.
- Ship examined for repair needs.
- Replacement of equipment.
- New voyage determined on.
- Charterers or cargo to be found.
- Ship stored and provisioned.
- Crew to be hired.
- Passes and protections negotiated with the Admiralty for the crew.
- Customs formalities completed.

Source. Davis, *Rise of the English Shipping Industry*, p. 160.

Appendix 3.011. Rates of Anchorage and Moorage, 1792-1793.

Vessels.	Anchorage	Moorage	Anchorage and moorage
Coasting vessels* under 30 tons for each voyage.			9d
Coasting vessels* over 30 tons for each voyage.			1s6d
Foreign going vessels under 30 tons.	2s6d	½d per ton.	
Foreign going vessels between 30 and under 100 tons.	5s	½d per ton.	
Foreign going vessels 100 tons and above.	5s	1d per ton.	

* Vessels from ports to the westward of the Holmes.

Source. BRO: SMV/7/1/1/78 Wharfage Book, 1792-93. (No page numbers)

Appendix 3.012. Cost of inward customs clearance and reporting.

Ship clearing in or reporting	Cost	Comment
Clearing in at Pill.		
<i>Triton</i> 1787-1788	£0.15s6d	Disbursement of the agent Captain Stott. Also includes the hire of a boat
<i>Sybil</i> 1785	£0.10s6d	Masters disbursements.
<i>Success</i> 1779-1780	£0.15s6d	Master's disbursements. Tide surveyors for clearing.
Reporting fees.		
<i>Fanny</i> 1778-1786.	£5.6s1d	Account book direct. Averaged, but only a few pence difference each year.
<i>Fanny</i> 1787-1788.	£6.4s3d	Account book direct. No difference between the years.
<i>Triton</i> 1787-1788	£6.12s3d	Bright's disbursements. Little difference between the two years.
<i>Druid</i> 1790-1791	£8.18s5d	Brights disbursements. No difference between the years.

Source. BRO: 39654/3 Voyage accounts for the *Triton*, p. 120. BRO: 12162 Shipping account book of the snow *Fanny*. p.72; BRL: 21258 Account Book of the *Sybil* and *Success*, 1779-86. *Sybil* p.24. *Success* p. 98. BRO: 39654/4 Voyage Accounts for the *Druid*, 1790-91.

Appendix 3.013. *Fanny*. Harbour costs, 1777-1788.

Item	1 st	2 nd	3 rd	4 th	5 th	6 th
	voyage	voyage	voyage	voyage	voyage	voyage
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Society landing cargo		6. 7.11	7. 6.10	8. 2.11	8. 9. 9	8.10. 9
Ditto shipping cargo	3. 7	10.10	6. 5	4. 4	9. 9	5. 0
Society for dockage						
Lighters		4.15. 0	3. 3. 0	21. 1. 0		
Coopers discharging		11.14. 9	13. 7. 0	21. 1. 0	16. 2. 0	17. 0. 0
Halling		1.13. 4	3. 0	18. 0	1. 0. 0	18. 1
Petty expenses discharging		14. 6	14. 6	18. 0	17. 0	15. 6
Mending cotton bags						1. 1. 0
Landwaiters				2. 4. 0		
Landwaiters breakfasts		1. 1. 9	15. 0	1. 4. 0	1. 4. 9	18. 9
Warner		10. 6	10. 6	10. 6	10. 6	10. 6
Postage in	5. 0		12. 8	9. 4	2. 9. 2	1. 2. 4
Postage out			12. 8	7. 7	1. 4. 8	
Postage in and receipt stamps in						
Postage out and receipt stamps out						
Entering protest	5. 0	5. 0	1. 6. 1			5. 0
Advertising sailing						
Pursership in	5. 5	5. 5	5. 5	5. 5	5. 5	5. 5
Pursership out	5. 5	5. 5	5. 5	5. 5	5. 5	5. 5
Permit to load goods		4.15. 6	15. 0			11. 0
Certificate to cancel bond		5. 0	5. 0			
Protections	2. 2. 0		1.16. 0	1.12. 0	1.10. 0	1.10. 0
Boat hire		17. 6		3. 3. 0	3.18. 0	6.11. 0
Med pass				1. 1. 0		1. 1. 0
Entering out ship		19. 0	19. 0	19. 0	18. 6	18. 6
Chaise hire to Pill				10. 6		
Measuring mahogany						

Source. BRO: 12162 Shipping account book of the snow *Fanny*. Voyages 1-6.

Item	7 th	8 th	9 th	10 th	11 th	12 th
	voyage	voyage	voyage	voyage	voyage	voyage
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Society landing cargo	8. 8. 2	8.15. 5	8.16. 3	9. 7. 0	8.16.10	9. 4. 1
Ditto shipping cargo	7. 9	12. 3	8. 9	11. 0	9. 5	8. 4
Society for dockage		3. 9. 0	5.17. 0	7. 0. 0		1. 5. 0
Lighters				12. 0. 0		
Coopers discharging	18. 4. 0	13. 2. 0	10. 8. 0	11. 7. 0	9. 9. 0	10. 6
Halling	1.11.10	3. 0	16. 4	13. 0		1. 2. 0
Petty expenses discharging	15. 6	14. 6	15. 6	15. 6	15. 6	15. 6

Item cont.	7 th voyage	8 th voyage	9 th voyage	10 th voyage	11 th voyage	12 th voyage
Mending cotton bags					2. 7. 0	4. 1. 0
Landwaiters	4. 6		1. 1. 0	1. 1. 0	1. 1. 0	1. 1. 0
Landwaiters breakfasts	13. 6	14. 3	4. 6	1. 0. 3	15. 9	12. 0
Warner	10. 6	10. 6	10. 6	10. 6	10. 6	10. 6
Postage in						
Postage out	15. 0					
Postage in and receipt stamps in	12. 0	18. 1	18. 1	17. 0	11. 6	10. 5
Postage out and receipt stamps out			11.10	17. 0	1. 2. 0	9. 0
Entering protest						
Advertising sailing				5. 0		
Pursership in	5. 5	5. 5	5. 5	5. 5	5. 5	5. 5
Pursership out	5. 5	5. 5	5. 5	5. 5	5. 5	5. 5
Permit take load goods			15. 6		15. 6	15. 6
Certificate to cancel bond						
Protections	15. 0					
Boat hire	12. 0		4.10. 0			
Med pass	1. 1. 0		1. 1. 0	1. 1. 0	1. 1. 0	1. 1. 0
Entering out ship	18. 6	2. 5. 6	2. 5. 6	1.15. 6	1.11. 6	1. 1. 0
Chaise hire to Pill						
Measuring mahogany		1. 0. 0				

Source. BRO: 12162 Shipping account book of the snow *Fanny*. Voyages 7-12.

**Appendix 3.014. Account of Captain Mattocks
of the ship *Sybil*, 1785.**

Item	<i>Sybil</i>
To my wages, 9 months and 5 days at £6.	£55.
To 140 days allowance in the country at 5s per day currency is £35 Exc. 140%	£25.
To my privilege home, 40cwt at 4s	£8.
Total	£88.

Source. BRL: 21258 Account book of the *Sybil* and *Success*, p. 23

Appendix 3.015. *Fanny/Triton*. Profits from carrying freight against costs.

Fanny.

Voyage	Outset Freight	Outset Costs	Outset Loss	Inset Freight	Inset Costs	Inset Profit	Outset Loss	Freight Profit	Actual Profit
1. 1777									
2. 1777	604	632	-28	1162	918	252	-28	224	565
3. 1779	575	771	-196	1724	998	726	-196	530	729
4. 1780	724	1047	-323	1560	731	829	-323	506	637
5. 1781	647	1145	-499	1501	838	663	-499	164	263
7. 1783	916	1209	-293	933	350	583	-293	290	303
8. 1784	614	574	+40	1180	301	879	+40	919	922
9. 1785	278	743	-465	972	203	769	-465	331	336
11.1787	391	555	-164	1006	215	791	-164	627	779
12.1788	353	487	-134	1065	239	826	-134	692	692
Total	5102	7163	-2102	11103	4793	6318	-2102	4283	5226
Av. pa.								476	

Figures rounded to the nearest pound sterling.

The cost of the ship and its eventual sale price not included.

The actual profit is the freight profit plus any ancillary business done by the ship itself,

Total profit. This data is taken from the final profit recorded in the *Fanny's* insetts minus the losses recorded for the outset.

Triton.

Voyage	Outset Freight	Outset Costs	Outset Loss	Inset Freight	Inset Costs	Inset Profit	Loss Outset	Freight Profit	Total Profit
1. 1777	548	1728	-1180	2096	775	1321	-1180	141	140
2. 1779	337	669	-332	1949	769	1180	-332	848	850
3. 1780	82	780	-698	1896	1140	756	-698	58	377
4. 1781	933	1334	-401	1703	977	726	-401	325	388
5. 1783	847	1123	-276	976	652	324	-276	48	51
6. 1784	339	557	-218	1031	532	499	-218	281	286
7. 1785	419	708	-289	997	1107	-110	-289	-399	-311
8. 1787	293	1065	-772	987	1065	-78	-772	-850	-479
9. 1788	419	792	-373	1162	337	825	-373	452	583
Total	4217	8756	-4539	12797	7354	5443	-4539	904	1885
Av. pa.								100	

Figures rounded to the nearest pound sterling.

The cost of the ship and its eventual sale price not included.

The actual profit is the freight profit plus any ancillary business done by the ship itself.

Total profit. This data is taken from the final profit recorded in the *Fanny's* insetts minus the losses recorded for the outset.

Sources. BRO: 12162 Shipping account book of the snow *Fanny*; BRO: 39654/3 Voyage accounts for the *Triton*.

Appendix 3.016. Value of owners goods exported by the *Fanny* and *Triton*, 1777-1788.

Voyages of the <i>Fanny</i>	Cost pounds sterling	Voyages of the <i>Triton</i>	Cost pounds sterling
2. 1777	2296	1. 1777	No invoice
3. 1778	1306	2. 1779	48
4. 1779	77	3. 1780	30
5. 1780	1167	4. 1781	80
7. 1783	646	5. 1783	14
8. 1784	132	6. 1784	No invoice
9. 1785	289	7. 1785	42
10. 1786	573	8. 1787	196
11. 1787	1121	9. 1788	321
12. 1788	705		
Total	8312		731

Sources. Voyages equalised as for Appendix 3.007. Figures rounded to the nearest pound sterling. Data taken from invoices recorded in BRO: 12162 Shipping account book of the snow *Fanny*, pp. 13-14,22,44,64,79,95,114,123,136,152,167 and BRO: 39654/3 Voyage accounts for the *Triton*, pp. 23,42,59,76,104,114,133-134,152.

Appendix 3.017. Letter from Captain Smith at Barbados to Samuel Munckley and Co, 1762.

Barbados. January 13, 1762.

Gentlemen.

This serves to acquaint you of my being loaded and this day intends sailing for Bristol. I take this opportunity of writing by a prize Snow bound for Liverpool who sails with me. This may come to hand before I arrives as the Snow sails fast. I have on board twenty four hogsheads of sugar shipped by myself on account of the owners and have likewise inclosed you Bills of Exchange as under for twelve hundred and fourteen pounds thirteen shillings and eight pence sterling. I have inclosed you sales of the goods shipped to my address this voyage and have likewise inclosed you invoice and bill loading for the above 24 hogsheads sugar with a list of the outstanding debts that was left out last voyages amounting to £287.17.0 and your account current for the whole. I sent you 1st 2nd and 3rd bills on Denison of London for £60 sterling by way of North America and by and by an express sent from Barbados which I hope came to hand. I am well manned and fitted for defence and hopes not easily to be taken, you may always depend on my diligence and care for your interest, and am

Gentlemen, your obliged humble servant, John Smith.

Geoney Clarke Esq. on Mess. Lassells and Maxwell for	£400..0..0 Sterling.
Bartholomew Smith on Mr. Samuel Munckley	£614.13.8
John Thorne on Samuel Munckley and Co.	<u>£200. 0.0</u>
	<u>1214.13.8</u>

BRO: AC/MU/1/8b Letter from John Smith, Commander of the ship *Clifton*.

Appendix 3.018. *Fanny/Triton* Merchants' export commission in pounds sterling, 1778-1788.

Voyage <i>Fanny</i>	Owners goods invoice	Freight charge	Ratio invoice/ freight	Freight for com'n goods	Value/costs com'n goods	Com'n income at 2½%	Owners invoice at 2½%
3	1306	240	5.6	87	493	12	33
6	625	127	5	151	755	19	16
10	926	120	7.7	62	478	12	23
12	705	187	4	62	248	6	18
Total						49	90
Av.						12	23
<i>Triton</i>							
5	14	6	2.3	270*	621	16	7s
8	186	64	2.9	125	363	9	5
9	306	113	2.7	119	321	8	8
Total						33	
Av						11	

*On all goods, an advance of 100% was charged probably for 'average' – see *Falconer's Dictionary*, p. 26.

Source BRO: 12162 Shipping account book of the snow *Fanny*, pp. 22,74,133,142; BRO: 39654/3 Voyage accounts for the *Triton*, pp. 76,111,124.

Appendix 3.019. Cost of insurance taken out on *Fanny* for Voyages 1-12 to Barbados, 1777-1788.

Voyage	Ship outward	Owners Goods outward	Ship inward	Freight inward	Return premium
1. 1777	1400@37 ¹ 1000@27 ²	Not known	2500@63 ¹¹	400@11 ² For freight	Nil
2. 1777	1400@105 ¹ 1000@84 ³	400@21 ¹	1500@190 ¹ 1000@126 ³	1000@126 ³ For goods and freight.	340
3. 1778	1800@142 ¹ 1500@8 ¹ Port insurance for one year	1200@93 ³	1600@202 ¹ 400@84 ¹	700@111 ¹ 300@63 ¹ For freight	169
4. 1779	1400@148 ¹ 1200@7 ¹ Port insurance for one year	1500@190 ²	2500@315 ²	Freight included in inward insurance	130
5. 1780	1500@126 ²	1200@102 ¹	1000@158 ¹ 1000@158 ¹³	Not known	100
6. 1781	1000@126 ¹	500@53 ¹	1500@237 ¹²	Not known	45
7. 1782	1200@101 ⁴ 1200@7 ¹ Port insurance for one year	150@9 ¹	1200@60 ¹ Barbados/Jamaica/Bristol	Not known	10
8. 1783	1200@31 ¹ Madeira/Jamaica	Not known	1000@20 ⁷	400@12 ¹ Freight Madeira/Barbados/Bristol	Nil
9. 1785	1000@20 ¹ Cork/Barbados	400@6 ⁷	1000@20 ¹	500@10 ¹⁴ Freight 400@8 ¹ For deck cotton	Nil
10. 1786	1000@40 ¹ Out/home 200@4 out ⁵	600@13 ² 200@4 ⁸	Included in outward insurance	300@9 ¹ Freight Mad'ra/Barbados 400@8 for deck cotton	Nil
11. 1787	1000@35 ¹ Out/home	600@9 ⁹	Included in outward insurance	500@10 ⁶ Freight 400@8 for deck cotton	Nil
12 1788	800@28 ¹ Out/home	600@12 ¹⁰	Included in outward insurance	500@10 ⁶ Freight For freight	Nil

The superscript numbers indicate the insurance broker involved – see below. Note that 1400@37 etc, is short for £1400 insurance at a premium of £37: Figures given are to nearest pound sterling.

Source. BRO: 12162 Shipping account book of the snow *Fanny*. See Appendix 3.026 for page numbers of outsets and insets.

Insurance Brokers.

- ¹ Schimmelpenning and Co. Insurance broker, the Exchange.
- ² Gresley, Blake and Co. Merchant and insurance brokers, the Exchange.
- ³ Whitehead and Chambers. Insurance office, Corn Street.
- ⁴ William Marshal.
- ⁵ Rogers, Whitehead and Co.
- ⁶ Samuel Whitechurch. Merchant, Queens Square.
- ⁷ Paul Farr. Merchant, the Butts.
- ⁸ Rogers Whitebread and Blake.
- ⁹ Seyer, Maxse and Reid. Insurance office, All Saints Passage.
- ¹⁰ Robert Dyer. Gun powder merchant, the Exchange.
- ¹¹ Marshal and Weare.
- ¹² George Champion. Merchant, Clifton.
- ¹³ Miles, Farr and Co. Insurance office, Small Street.
- ¹⁴ Joseph Bower. Ships-broker and for merchandise, Kings Down Parade, office in Exchange.

Source. *Bristol Directory*, 1785.

Appendix 3.020. Sale of 5 hhds sugar, 1779.

Sales of 5 hhds sugar received by Sam Munckley per the *Brittania* Jos. Fisher master from Barbados for account of *Fanny's* owners 3rd Insett.

14th August 1779.

By Christopher Ludlow for 5 hhds sugar.

	cwt	
SF	21.10.3.0	
	22. 10.3.5	
	23. 10.3.14	
	24. 10.1.7	
	<u>25. 9.3.19</u>	
5	52.2.17	
	<u>- 5.1.7</u>	Tare and super-tare.
Net	<u>47.1.10</u>	at 55s per cwt. £130.3s.6d

To paid duty on 46.3.15 cwt	£14.16s6d	
New duty at 5 percent	14s.10d	
Fees	<u>2s.11d</u>	£15.14s.3d
To freight on ditto at 7s 6d.	£17 11s 7d	
Average	<u>3s 9d</u>	£17.15s.4d
To halling 2s.6d.	2s 6d	
Brokerage 5s.0d abated 7d	5s 7d	
To turning in and out 2s.6d.	2s 6d	
Weighing and cellarage 2s.6d	2s 6d	
To commission ½ percent	<u>13s 0d</u>	
	£1.6s.1d	<u>£34.15s.8d</u>
To net proceeds carried to account of <i>Fanny's</i> 3 rd insett.		£95.7s.11d

Source. BRO: 12162 Shipping account book of the snow *Fanny*. pp. 35, 49.

Appendix 3.021. Merchant shipowner's commission earned on the sale of imported sugar, 1786-1792*

Ship	Sugar hh	Cwt	Price per cwt	Selling price	Costs @ 28%	Selling price plus costs	Comiss'n @ 2½ %
<i>Sybil</i>	217	2361	Oct 1786 49.4s	£5832	£1633	£7465	£187
<i>Charlotte</i>	202	2198	May 1787. 48.8s.	£5363	£1502	£6865	£172
<i>Charlotte</i>	202	2198	May 1792. 69.7s.	£7660	£2145	£9805	£245
<i>Hero</i>	370	4026	May 1787 48.8s	£9823	£2751	£12574	£314
<i>Hero</i>	370	4026	Oct. 1792 68.5s	£13789	£3861	£17650	£441

* The figures taken to the nearest whole number but the price per cwt is left as a decimal as given by Kenneth Morgan.

Source. Morgan, *Bristol and the Atlantic Trade*, p. 210; BRL: 21258 Account book of the *Sybil and Success*. *Sybil's* Discharge Book, p. 1-8; BRO: 12162 Shipping account book of the snow *Fanny*, pp. 144, 147; BRO: 39654/3 Voyage accounts for the *Triton*, pp. 117,120; *Lloyd's Register*, 1772; G. Farr, *Shipbuilding in the Port of Bristol*, p. 29; *Lloyd's Register*, 1772; G. Farr, *Shipbuilding in the Port of Bristol*, p. 29.

Appendix 3.022. Annual income earned by Munckley and the Brights' in their capacity of ship's husbands of the *Fanny* and *Triton*, 1777-1788.¹

Voyages <i>Fanny</i> ½ share	Outsett debits + goods costs	Insett profit	Profit/ loss	Voyages <i>Triton</i> share	Outsett debits + goods costs	Insett profit	Profit/ loss
1 ²				1 ²			
2	1235	1177	-58	2	225	690	465
3	794	1299	505	3	424	627	203
4	1043	1300	257	4	264	430	166
5	921	932	11	5	95	244	149
6	422	879	457	6	254	381	127
7	501	417	-84	7	227	16	-221
8	42	517	475	8	726	279	-447
9	345	532	217	9	843	1044 ³	201
10	667	700	33				
11	631	511	-120				
12	415	663	248 ³				
Total			1941	Total			790
Per annum			176	Per annum			99

¹ Munckley owned a half-share of the vessel on all voyages. The Brights owned seven –twelve's of their vessel for Voyages 2,3,4 and three-quarters for the rest.

² The first voyage was not to the West Indies.

³ The sale price of the ship was not included.

Source. BRO: 12162 Shipping account book of the snow *Fanny*; BRO: 39654/3 Voyage accounts for the *Triton*.

Appendix 3.023. Estimated commission earned by secondary imports, 1792.

Ship	Goods	Quantity	Price	Selling price	Costs @28%	Selling + costs	Comiss'n @ 2½ %
<i>Charlotte</i>	6 pun rum	642 gal ¹	7s.10d per gal ²	£251	£70	£321	£8
<i>Charlotte</i>	73 bags cotton	8176 lb ³	19d per lb ⁴	£647	£181	£828	£21
<i>Hero</i>	42 pun rum	4271 gal	7s10d per gal.	£1673	£468	£2141	£54
<i>Hero</i>	20 tons logwood	20 tons	£4.10s per ton ⁵	£90	£25	£115	£3

¹ To estimate the volume of a puncheon a figure of 101.7 gal was obtained by averaging the volume of 12 puncheons rum imported by the *Sybil* in 1786. BRL: 21258 Account book of the *Sybil and Success*. *Sybil's* Discharge Book p. 10.

² Sales of a puncheon of rum on account of *Industry*, 1785. BRO: FX/20. Microfilm. Bristol Shipping Account Books, Volume 2. No page numbers.

³ To estimate the weight of each bag, a figure of 1 cwt was obtained by averaging the weights of 4 bags of cotton imported by the *Sybil* in 1786. BRL: 21258 Account book of the *Sybil and Success*. *Sybil's* Discharge Book p. 11.

⁴ Sales of a bag of cotton, 1779. BRO: 12162 Shipping account book of the snow *Fanny* p 46.

⁵ Listed in 1775. Morgan, ed., *Bright – Meyler Papers*, p. 478.

Appendix 3.024. Estimated commission per year earned from importing sugar by Munckley and the Brights during the period 1775-1780.

Merchant	Sugar hh per year¹	Cwt²	Price Cwt³	Selling Price Sept	Costs @ 28%	Selling +costs	Comiss'n @ 2½ %
Munckley	708	7646	50s.	£19115	£5352	£24467	£612
Brights	664	7171	50s	£17937	£5022	£22959	£574

¹Average number of hh per year 1770-1780. Morgan, *Bristol and the Atlantic Trade*, p. 197.

²Average weight of a hh of sugar as carried by *Sybil* in 1786. BRL: 21258, Account book of the *Sybil and Success*. *Sybil's* Discharge Book p. 1-8.

³Average sugar sale price for September for the period 1775-1780. See Morgan, *Bristol and the Atlantic Trade*, p. 210.

Appendix 3.025. Estimated commission earned from importing sugar by Munckley and the Brights for the year 1792.

Merc'nt	No. of imports	Hhds	Cwt¹	Price cwt²	Selling price	Costs @ 28%	Selling +costs	Comiss'n @ 2½ %
Munckley	10	901	9730	Sept 73s.	£35,515	£9944	£45,459	£1136
Brights	7	765	8262	Sept 73s	£30,156	£8444	£38600	£965

¹Average weight of a hh of sugar, 10.8cwt, as carried by *Sybil* in 1786. BRL: 21258 Account book of the *Sybil and Success*. *Sybil's* Discharge Book pp. 1-8.

²Price of sugar for September, 1792. See Morgan *Bristol and the Atlantic Trade*, p. 210.

Appendix 3.026. Page numbers of outsets, insets and invoices of *Fanny* and *Triton*.

BRO: 12162 Shipping account book of the snow *Fanny*. Outsets, pp. 1st) 5. 2nd) 18-19. 3rd) 32-33. 4th) 50-51. 5th) 68-69. 6th) 82-83. 7th) 100-101. 8th) 115-116. 9th) 129-130. 10th) 143-144. 11th) 157-158. 12th) 172-173.

BRO: 12162 Shipping account book of the snow *Fanny*. Insets, pp. 1st) 6-7. 2nd) 20-21. 3rd) 48-49. 4th) 54-55. 5th) 72-73. 6th) 85-86. 7th) 104-104. 8th) 117-118. 9th) 131-132. 10th) 147-148. 11th) 159-161. 12th) 175-176.

BRO: 39654/3 Voyage accounts for the *Triton*. Outsets, pp. 1st) 8-10. 2nd) 29-30. 3rd) 44-45. 4th) 63-64. 5th) 80-81. 6th) 94-95. 7th) 105-106. 8th) 116-117. 9th) 136-137.

BRO: 39654/3 Voyage accounts for the *Triton*. Insets, pp. 1st) 16-17. 2nd) 34-35. 3rd) 48-49. 4th) 68-69. 5th) 86-87. 6th) 98-99. 7th) 108-109. 8th) 120-121. 9th) 144-145.

Invoices

BRO: 12162 Shipping account book of the snow *Fanny*, pp. 2nd) 13-14. 3rd) 22. 4th) 44. 5th) 64. 6th) 79. 7th) 95. 8th) 114. 9th) 123. 10th) 136. 11th) 152, 12th) 167.

BRO: 39654/3 Voyage accounts for the *Triton*, pp. 2nd) 23, 3rd) 42. 4th) 59. 5th) 76. 6th) Nil. 7th) 104. 8th) 114. 9th) 133-134.

Chapter 4.

Appendix 4.001. Resolutions of the Society regarding the scheme for keeping the ships afloat in the harbour, 13 October, 1791.

First. That the state of the harbour of Bristol is by nature so inferior to many other ports of Great Britain that the ship holders are not on equal terms with those of other ports either in respect to the security of the ships whilst in port or the ease and expedition with which they may be discharged, loaded and proceeded again to sea.

Secondly. That from the same causes the ships of strangers and the charterers of such ships are under similar inconveniencies.

Thirdly. That the actual losses sustained from these causes amount to a large sum annually.

Fourthly. That the prosperity of the port must depend in great measure on its goodness and security and with its prosperity (that is its foreign and coasting trade the welfare and affluence of the city are closely connected).

Fifthly. That the great inconveniences under which the port labours may be remedied without injury to the health of the citizens by erecting a dam across the river Avon at the Redcliff and by cutting a canal with locks and sluices thereon in Rownham Meads agreeably to the plans proposed by Mr Smeaton and Mr Jessop and by adopting such of the provisions of that of Mr. Nickals as shall be hereafter deemed expedient.

Sixthly. That there is every reason to believe that the whole expense of this improvement and of indemnifying those whose property will be injured by it will not be greater than the advantages acquired by it will much more than counterbalance.

Seventhly. That such annual revenue should be provided as not only to pay the interest of the money laid out, and the charges of management etc, but also to create a sinking fund for the final discharge of the debt increased in a moderate number of years and to provide for repairs and improvements. And that such an annual revenue as will be fully adequate for the purposes will be produced by a toll on the proposed bridge over the dam and by a tax on shipping not exceeding the dock rates paid at Liverpool.

Eighthly. That this improvement should be executed for the sole advantage and benefit of the citizens and public at large by the commissioners or trustees and that no individual or body of men should derive any emolument there from.

Ninthly. That the Society having at a large expense and with the sole view of benefiting the public procured the plans, estimates and opinions above referred to, they conceive they have done all that is incumbent upon them as a corporate body but that they should cooperate with the Corporation and Citizens at large in perfecting the plan and carrying the improvement into effect.

Source. BRO: SMV/2/1/2/5 Index 5, 13 October 1791. pp. 71-72.

Appendix 4.002. Bright's data on ships entering Bristol from trade areas, 1789-1792.

Location	1789	1790	1791	1792	Tariff
Africa	19	18	23	27	1s9d
Honduras	5	7	3	8	
Surinam	0	1	0	0	
United States	56	56	68	53	
West Indies	63	56	56	79	
Egypt	1	1	1	2	
Greece	3	0	4	6	
Italy	9	12	12	9	
Southern Fisheries	1	1	2	5	
British Colonies	29	26	25	13	1s3d
Portugal	30	23	26	19	
Prussia	8	12	16	13	
Russia	13	16	26	22	
Spain	48	48	44	47	
Sweden	8	5	6	11	
Flanders	1	1	1	0	10d
France	14	14	6	9	
Germany	2	5	6	3	
Guernsey	6	4	6	6	
Holland	3	9	5	14	
Jersey	2	3	1	6	
Norway	20	19	27	26	
Poland	4	7	1	3	
Zeeland	0	1	0	0	
Ireland	176	198	159	157	
Isle Man	1	3	3	1	6d
Scotland	12	8	10		
Coasters ¹	290	396	445		4d
Trows ²					5s voyage
Market boats					2s6d
Foot passengers ³					½d

¹ Coasters from the Bristol Channel or above it are not included

² Trows from the Bristol Channel making an entry at the customs house.

³ Paid on bridge over dam. Horses and cattle at the toll house.

Source. BRO: 11168/3/I Tonnages of ships into Bristol.

Appendix 4.003. Ships entering port 1792, month by month by trade area.

Location	J	F	M	A	M	J	J	A	S	O	N	D	Total
Africa Triangular		3	3		1		4	1	2		3	2	19
Africa Direct	1				2		1		3				7
Honduras		1		2		2		1		1			7
United States	3	3	1	1	3	7	8	8	4	1	8	6	53
West Indies			2	3	3	5	16	7	21	2	2	0	61
Egypt											2		2
Greece		1	1	1							2		5
Italy		2		1	1		2		1		1	1	9
Southern Fish		1			2			2					5
Newfoundland*			2				1	1	1		6		11
Quebec*							1	1					2
Portugal		2		2	1	4	1	1	1	1	6		19
Prussia						5	3	1	1	1	2		13
Russia							1	6	3	1	8	3	22
Spain	2	4		3		3	1	5	5	10	9	3	45
Sweden			1				1	2		5	2		11
Flanders**													
France	1	1		3	2	1				1			9
Germany						1		1			1		3
Guernsey	1				1	1	1		1		1		6
Holland/Flanders	1			1			2					10	14
Jersey				1		1	1		1	1	1		6
Norway			1	2	6	2	1	5	1	4	4		26
Poland						3							3
Ireland	5	13	10	7	10	16	11	16	13	7	30	18	156
Isle Man											1		1
Total	14	31	21	27	32	51	56	58	58	35	89	43	515

* Bright uses the term 'British Colonies' but it is hard to isolate them. These two are definitely not included in any other location.

** The actual ports are not designated.

Sources. BRO: 11168/3/I Tonnages of ships into Bristol; *Bristol Presentments*, 1792.

Appendix 4.004. Average dimensions of ships entering Bristol by class between 1789-1791.

Location	Number ships	Total tonnage	Ships per year	Average tonnage	Average length Ft.	Average Breadth Ft.	Average Draught Ft.
Africa	60	10457	20	174	80	22	12-13
Honduras	15	2528	5	169	76	23	12-13
Surinam	1	300		300	104	28	14-16
United States	180	33980	60	189	80	24	13-14
West Indies	175	45369	58	259	93	25	14-15
Egypt	3	529	1	176	80	22	12-13
Greece	7	968	3	138	71	22	11-12
Italy	33	3946	11	120	71	20	10-11
Southern Fisheries	4	832	1	208	84	24	12-13
Portugal	79	9197	26	116	65	20	10-11
Prussia	36	10035	12	279	95	26	14-16
Russia	55	14135	18	257	93	25	14-15
Spain	140	13640	47	97	65	19	10-11
Sweden	19	3279	6	173	80	22	12-13
Flanders	3	354	1	118	70	20	10-11
France	34	3431	11	101	63	22	9-10
Germany	13	1207	4	99	50	19	9-10
Guernsey	16	1070	5	67	55	17	8-9
Holland	17	2071	6	122	71	22	11-12
Jersey	6	338	2	56	50	17	8-10
Norway	66	16203	22	246	84	28	14-15
Poland	12	3623	4	302	105	28	14-15
Zeeland	1	194		194	84	23	13-14
Ireland	533	33273	178	62	52	17	8-9
Isle Man	7	290	2	41	44	15	7-8
Scotland		1893					

Ships are both from Bristol and Foreign.

Sources. This table has been compiled from the dimensions of ships given as examples in the following books. MacGregor, *Merchant Sailing Ships*; Christopher. J. French, 'Merchant Shipping of the British Empire', in R. Gardiner, ed., *The Heyday of Sail: The Merchant Sailing Ship 1650–1830*, (London: Conway, 1995), 10-33; Farr, ed., *Records of Bristol Ships*; The ship's average draughts are taken from *Lloyd's Register*, 1792.

Appendix 4.005. Data. West Indian ships at Bristol in 1792.

Ship	Master	Tons	Draft	Owner	Date in	From	Date Cleared	To	Days in port
<i>Albion</i>	Withenb'ry	350	16	Protheroe	No info		9/2/92	Madeira Jamaica St. Kitts	00
<i>Ann</i>	Sands	280	15	Daniel & S	No info		20/2/92	Jamaica	00
<i>Ann</i>	Sands	280	15	Daniel & S	7/6/92	Barbados	17/10/92	Jamaica	130
<i>Ann</i>	Marshal	301	18	Weare	12/3/92	Leghorn	23/3/92	Jamaica	11
<i>Ann</i>	Marshal	301	18	Weare	26/9/92	Jamaica	1/2/93	Jamaica	125
<i>Apollo</i>	Seaton	250	15	S. Span	29/8/92	Anguilla St Vincent	12/11/92	St Vincent	77
<i>Bacchus</i>	Hamilton	240	14	Span	No info		4/1/92	St Vincent	00
<i>Bacchus</i>	Hamilton	240	14	Span	18/7/92	St Vincent	17/8/92	St Vincent	29
<i>Barzillia</i>	Byron	281	15	Byron	6/6/92	Honduras	23/7/92	Grenada	47
<i>Bristol</i>	Dale	300	16	Rogers	21/8/92	Honduras	15/9/92	Grenada	90
<i>British Queen</i>	Melvell	200	14	Jacks	25/4/92	Honduras	9/7/92	Granada	44
<i>Catherine</i>	Fifthe	180	13	Capt	13/2/92	Honduras	9/4/92	St Vincent	56
<i>Catherine</i>	Manning	180	13	Capt ??	29/9/82	Jamaica	6/11/92	Antigua	37
<i>Charlotte</i>	Wilson	183	14	Munckley.	25/4/92	Barbados	3/5/92	Barbados	8
<i>Charlotte</i>	Wilson	183	14	Munckley	5/9/92	Barbados	19/11/92	Barbados	74
<i>Clarendon</i>	Russell	450	15	Protheroe	3/8/92	Jamaica	2/10/92	Jamaica	60
<i>Colin</i>	Baxter	268	16	Baillie	4/7/92	Nevis St Kitts	19/11/92	St Kitts Nevis	135
<i>Commerce</i>	Blake	218	16	Rogers	21/7/92	Jamaica	No info		00

Ship cont.	Master	Tons	Draft	Owner	Date in	From	Date Cleared	To	Days in port
<i>Deane</i>	Devonish	270	15	Daniel	25/4/92	Barbados	7/5/92	Barbados	12
<i>Deane</i>	Devonsih	270	15	Daniel	5/9/92	Barbados	24/1/93	Barbados	139
<i>Denizen</i>	Sale	82	10	Wadham	No info	No info	19/11/92	Tortola St Thomas	00
<i>Druid</i>	Myres	287	17	Fisher	21/8/92	Barbados Maryland	15/9/92	Madeira Barbados	24
<i>Duke of Clarence</i>	Deak	220	14	Jacks.	5/3/92	Dominica	20/4/92	Dominica	45
<i>Duke of Clarence</i>	Deake	220	14	Jacks	12/9/92	Dominica	24/1/93	Dominica	132
<i>Edward</i>	Moors	270	15	Protheroe	26/9/9	Nevis	11/2/92	Nevis	135
<i>Edward</i>	Moors	270	15	Protheroe	11/9/92	Nevis	19/11/92	Nevis	68
<i>Elisabeth</i>	Simms	230	15	Munckley	10/10/91	Jamaica	21/1/92	Jamaica Barbados	101
<i>Elisabeth</i>	Simms	230	15	Munckley	26/9/92	Jamaica	28/11/92	Jamaica	62
<i>Emilia</i>	Robertson	230	15	E Baillie	21/7/92	Grenada	4/10/92	Grenada	73
<i>Esther</i>	Gardener	320	15	Jacks	31/8/92	Jamaica	13/11/92	Jamaica	73
<i>Europa</i>	Leyson	200	14	Fisher	1/2/92	Jamaica	27/3/92	Jamaica	55
<i>Europa</i>	Leyson	200	14	Fisher	16/10/92	Jamaica	24/1/93	Granada	95
<i>Fame</i>	Moyes	289	17	Protheroe	26/9/92	Jamaica	22/4/92	Jamaica	206
<i>Friends Adventure</i>	O'Brien	103	10	Ware	19/10/92	St Eustatia	No info		00
<i>Friendship</i>	Thorp	291	16	Maxse	14/9/92	Jamaica	13/11/92	Jamaica	59
<i>Good Hope</i>	Howells	400	16	Miles & Co	1/10/91	Jamaica	11/1/92	Jamaica	71
<i>Good Hope</i>	Howells	400	16	Miles & Co	11/9/92	Jamaica	26/11/92	St Kitts Jamaica	75

Ship cont.	Master	Tons	Draft	Owner	Date in	From	Date Cleared	To	Days in port
<i>Hanover Planter</i>	Neilson	350	16	Gordon	3/7/92	Jamaica	7/8/92	NY Jamaica	34
<i>Hector</i>	Ronaldson	400	16	Maxse	3/8/92	Jamaica	4/10/92	Jamaica	61
<i>Hercules</i>	Everit	422	17	Protheroe	14/9/92	Jamaica	7/1/93	Jamaica	113
<i>Hermit</i>	Barge	280	15	Jacks	5/9/92	Antigua	30/12/92	Antigua	115
<i>Hero</i>	Powell	328	16	Brights	5/9/92	Jamaica	27/11/92	Jamaica	52
<i>Hester & Ann</i>	White	28	6	H Tobin	New built 92	New built 92	23/7/92	Nevis	00
<i>Hope</i>	Fuss	269	16	Munckley	11/9/92	Jamaica	No info		00
<i>Jamaica</i>	Sherry	458	17	R. Fydel	21/7/92	Jamaica	22/10/92	Jamaica Antigua	91
<i>Jarrett</i>	Birch	356	16	Miles	3/9/91	Jamaica	24/1/92	Jamaica	141
<i>Jarrett</i>	Birch	356	16	Miles	11/9/92	Jamaica	8/4/93	Jamaica	207
<i>Levant</i>	Ducket	221	11	Jacks	5/6/92	Dominica	No info		00
<i>Maria</i>	Inglis	300	16	E Bailie	14/7/92	St Vincent	9/11/92	St Vincent	115
<i>Marquis of Worster</i>	Shilstone	315	17	Fydell	9/8/92	Jamaica	19/11/92	Jamaica	100
<i>Martha Brae</i>	Munt	450	17	Miles & Co	17/7/92	Jamaica	23/11/92	Jamaica	126
<i>Mary</i>	Murrow	73	10	Capt.	6/4/92	Tortola St Thomas	3/5/92	Tortola	27
<i>Mary</i>	Tomlinson	250	16	Maxse	No info		14/2/92	Jamaica	00
<i>Mary</i>	Tomlinson	250	16	Maxse	19/9/92	Jamaica	17/12/92	Jamaica	88
<i>Mercury</i>	Harris	53	7	Fydell Ldn? New	New Chepstw	New Chepstow	6/3/92	St Kitts Jamaica	00
<i>Mercury</i>	Hawkins	250	15	Protheroe	14/11/91	Jamaica	9/4/92	Ditto	00

Ship cont.	Master	Tons	Draft	Owner	Date in	From	Date Cleared	To	Days in port
<i>Mermaid</i>	Hunter	250	15	Leitch Gr	3/7/92	Jamaica	No info		00
<i>Milford</i>	Shaw	301	17	Gordon	14/9/92	Jamaica	17/12/92	Jamaica	93
<i>Nancy</i>	Eames	100	10	Day	17/5/92	Barbados	6/6/92	Oporto	21
<i>Neptune</i>	Chirnside	265	16	Meyler	18/7/92	Jamaica	16/11/92	Jamaica	118
<i>Nevis</i>	Maies	270	15	Pinney	2/6/92	Nevis	20/6/92	Nevis	18
<i>Nevis</i>	Maies	270	15	Pinney	21/11/92	Nevis	5/4/93	Nevis St. Kitts	134
<i>New Lioness</i>	Balano	220	15	Randolf	19/9/92	Nevis St Kitts	No info		00
<i>Pan</i>	Shedden	132	12	Span.	20/3/92	Anguilla	24/4/92	St. Eustasia	34
<i>Pan</i>	Shedden	132	12	Span	17/8/92	Anguilla	29/10/92	St Kitts	72
<i>Pilgrim</i>	Baxter	300	16	Baillie	19/6/92	St Kitts	23/10/92	St Kitts	124
<i>Recovery</i>	McDonnagh. Wade in	120	11	Capt	29/8/92	Honduras	12/11/92	St Eustatia Grenada Honduras	73
<i>Richard</i>	Walker	302	18	Gordon's	18/7/92	Jamaica	11/10/92	Jamaica	83
<i>Ruby</i>	Kennedy Learne out	100	9	Ex Rogers Teast	3/7/92	Jamaica	4/1/93	Africa	157
<i>Simon Taylor</i>	Baker	400	16	Miles	10/7/92	Jamaica	6/11/92	Jamaica	116
<i>St James</i>	Thatcher	351	16	Gordon	3/9/91	Jamaica	25/2/92	Jamaica	172
<i>St Thomas</i>	Drew	285	16	Protheroe	No info		4/1/92	Jamaica	00
<i>St Thomas</i>	Drew	285	16	Protheroe	7/9/92	Jamaica	7/1/93	Jamaica	120
<i>Stephen</i>	Bundy	180	13	Jacks	10/10/91	Jamaica	21/4/92	Jamaica	191
<i>Stephen</i>	Bundy	180	13	Jacks	14/11/92	Madeira Jamaica	21/1/93	Jamaica	67
<i>Thetis</i>	Matthews	400	16	Rogers	bought	bought	28/2/92	Dominica	00

Ship cont.	Master	Tons	Draft	Owner	Date in	From	Date Cleared	To	Days in port
<i>Trusty</i>	Hall	306	17	Daniel	23/5/92	Barbados	8/6/92	Barbados	15
<i>Union</i>	Hensley	306	16	J F. Weare	24/7/92	Jamaica	12/11/92	Jamaica	108
<i>Union Island</i>	Pocock	265	15	S. Span.	17/5/92	St Vincent	19/11/92	Madeira Gibraltar St Vincent	182
<i>Venus</i>	Hunt	268	18	S. Span	10/7/92	St Kitts	18/9/92	St Kitts	68
<i>Westbury</i>	Smith	190	14	Baillie	1/6/92	St Vincent	4/10/92	St Vincent	123
Total.									5707

Data is only available on the harbour movements of 65 out of the total of 81 ships due to two of these being new buildings, one newly bought, and no information on 13. Total tonnage 21054. Average 249t. Average time spent in port of the 65 ships was 88 days. Sources. *Bristol Presentments*, Import and Export, 1792; *Lloyd's Register*, 1792.

Appendix 4.006. Statistics of West Indian ships in port, 1792.

Number Ships	Registered tons	Draught in feet	Average length feet	Average breadth feet
1	0-99	6-10	36-60	15-19
12	100-199	10-14	63-85	20-23
28	200-299	14-17	74-103	23-26
16	300-399	15-18	103-107	26-29
8	400-499	15-16	105-115	28-30
Total 65	Total tonnage 17297			
	Average tonnage 270			

Sources. The data has been compiled by combining that contained in Appendices 4.004 and 4.005.

Appendix 4.007. West Indian ships' time in port compared to tonnage, 1792.

Days in port	0-99 Tons	100- 199 Tons	200- 299 Tons	300- 399 Tons	400- 499 Tons	All ships
00-30	1	2	4	2	0	9
31-60	0	3	5	2	1	11
61-90	0	4	6	3	3	16
91-120	0	0	5	4	3	12
120+	0	3	8	5	1	17
Total of ships per tonnage	1	12	28	16	8	65
Total days of ships in port						5707
Average days of ships in port						88

Sources. The data has been compiled from Appendix 4.005.

Appendix 4.008. Comparison between ships from the various West Indian islands and time spent in port, 1792.

Days in port.	Anguilla	Barbados	Dominica	Grenada	Honduras	Jamaica	Nevis	St Kitts	St Vincent	Tortola
00-30		5				1	1		1	1
31-60	1		1		3	6				
61-90	1	1		1	2	8	1	1	1	
90-120	1					10			1	
120+		2	1			8	3	1	2	
Total ships	3	8	2	1	5	33	5	2	5	1
65										

Sources. The data has been compiled from Appendix 4.005.

Appendix 4.009 Ships less than one month in port, 1792.

Ship	Tons	Owner	Date in	From	Date out	To	Days
<i>Ann</i>	301	Weare	12/3/92	Leghorn	23/3/92	Jamaica	11
<i>Bacchus</i>	240	Span	18/7/92	St Vincent	17/8/92	St Vincent	29
<i>Charlotte</i>	183	Munckley.	25/4/92	Barbados	3/5/92	Barbados	8
<i>Deane</i>	270	Daniel	25/4/92	Barbados	7/5/92	Barbados	12
<i>Druid</i>	287	Fisher	21/8/92	Maryland	15/9/92	Madeira Barbados	24
<i>Mary</i>	73	Captain	6/4/92	Tortola St Thomas	3/5/92	Tortola	27
<i>Nancy</i>	100	Day	17/5/92	Barbados	6/6/92	Oporto	21
<i>Nevis</i>	270	Pinney	2/6/92	Nevis	20/6/92	Nevis	18
<i>Trusty</i>	306	Daniel	23/5/92	Barbados	8/6/92	Barbados	15

Sources. The data has been compiled from Appendix 4.005.

Appendix 4.010. Chronological list of American ships arriving at Bristol in 1792 and status with reference to Merchants' Dock.

Ship ¹	Master	Tons	Dock ²	Date in	From	Date Cleared	To	Days In port
<i>Lively</i>	Clark	140	x	21/12/91	NY	20/2/92	NY	78
<i>William</i>	Dekay	139	x	8/12/91	NY	16/2/92	NY	96
<i>Dianna</i>	Goodwin	226	x	16/1/92	Boston	10/3/92	Boston	54
<i>Mercury</i>	Stevens	183	x	19/1/92	Philadelphia	10/3/92	NY	51
<i>Hero</i>	Blunt	252	x	1/2/92	Portsmouth	20/3/92	Boston Portsmouth	50
<i>Maria</i>	Rich	250	x	1/2/92	Bath	24/4/92	NY	84
<i>Ariadne</i>	Hatch	272	x	10/2/92	Portland	21/4/92	Boston	71
<i>Franklyn</i>	Davis	167	x	22/12/91	Freeport	17/2/92	Boston	55
<i>Louis</i>	Greybell	219		15/11/91	Maryland	24/2/92	Baltimore	99
<i>Sophia</i>	Kerr	258	x	22/12/91	Philadelphia	25/2/92	Philadelphi a	63
<i>Harriot*</i>	Hastier	196	2/3	20/12/91	Virginia	25/2/92	Virginia	63
<i>Birming'm Packet</i>	Simmons	281	x	2/12/91	Phil	3/3/92	Philadelphi a	121
<i>Friendship</i>	Davidson	143	x	14/11/91	NY	5/3/92	NY	141
<i>Sisters</i>	Webb	204	x	22/12/91	Portland	9/3/92	Boston	107
<i>Roebuck</i>	Bliss	262	x	29/12/91	Philadelphia	9/3/92	Philadelphi a	100
<i>Baltic Merchant*</i>	Robson	339		20/12/91	Petersburg	12/3/92	NY	112
<i>Fortune</i>	Winter	00		No info		12/3/92	Philadelphi a	00
<i>James*</i>	Murray	233	2/3	20/3/92	Charleston	23/6/92	Charleston	93
<i>Westbury*</i>	Fisher	279	2/3	4/4/92	Charleston	11/6/92	Charleston	67
<i>Russia Merchant*</i>	Matthews	255	x	8/5/92	NY	4/7/92	NY	56

Ship ¹ cont.	Master	Tons	Dock ²	Date in	From	Date Cleared	To	Days In port
<i>Mary*</i>	Cashedy	146	x	17/5/82	NY		NY	00
<i>Peggy*</i>	Henshaw	191	2/3	29/5/92	NY	5/7/92	NY	36
<i>Olive Branch</i>	Leuvenigh	208	x	5/6/92	NY	23/7/92	NY	48
<i>Union</i>	Potter	170	x	6/6/92	Boston	16/7/92	Boston	40
<i>Trenton</i>	Lowther	138	x	20/6/92	Portland	10/7/92	Portland	20
<i>Louis</i>	Greybell	219	x	26/6/92	Baltimore	1/8/92	Baltimore	35
<i>Ohio</i>	Kemp	290	x	27/6/92	NY	10/8/92	NY	43
<i>Sophia</i>	Kerr	258	x	27/6/92	Phil	30/7/92	Phil	33
<i>Lively</i>	Clark	121	2/3	27/6/92	NY	31/8/92	NY	64
<i>Birmingham Packet</i>	Simmons	281	x	14/7/92	Philadelphia	31/7/92	Philadelphi a	17
<i>Sovereign</i>	Pickering	00		No info		18/7/92	Virginia	00
<i>Diligence</i>	Neil	226	2/3	18/7/92	NY	15/9/92	NY	57
<i>Diana</i>	Goodwin	226	x	21/7/92	Boston	18/8/92	NY	27
<i>Harriot*</i>	Hastier	196	2/3	21/7/92	Virginia	18/8/92	Virginia	27
<i>Baltic* Merchant</i>	Robson	339	x	24/7/92	NY	No info.		00
<i>Franklin</i>	Davis	167	x	24/7/92	Freeport	18/8/92	Portland	24
<i>Hero</i>	Bunt	252	x	27/7/92	Portsmouth	29/8/92	Boston	32
<i>Roebuck</i>	Bliss	262	2/3	27/7/92	Philadelphi a	29/8/92	Philadelphi a	32
<i>Sally</i>	Wilson	212	x	7/8/92	Wiscaset	12/9/92	Boston	35
<i>Mercury</i>	Stevens	183	x	9/8/92	Philadelphia	14/9/92	Philadelphi a	35
<i>Maria & Elisa</i>	Bowles	183	x	17/8/92	Portsmouth	3/10/92	Boston	46
<i>Friendship</i>	Lord	183	x	21/8/92	NY	24/9/92	Boston	33
<i>Mary</i>	Prebell	268	x	21/8/92	NY	28/9/92	NY	37

Ship ¹ cont.	Master	Tons	Dock ²	Date in	From	Date Cleared	To	Days In port
<i>Brothers*</i>	Aselby	105	x	21/8/92	Wilmington	Sold	Sold	00
<i>Elisa</i>	Smith	212	x	24/8/92	Freeport	25/9/92	Portland	31
<i>Sally & Polly</i>	Rich	166	x	24/8/92	Portland	25/9/92	Boston	31
<i>Sisters</i>	Webb	204	x	1/9/92	Portland	13/10/92	Norfolk	43
<i>Rooksby</i>	Jones	189	x	11/9/92	Portsmouth	4/10/92	Boston	23
<i>Betsey</i>	Flagg	182	x	12/9/92	Portsmouth	11/10/92	Portsmouth	29
<i>Cato</i>	Sellars	275	2/3	14/9/92	Virginia	No info		00
<i>Harriet</i>	Howland	00				12/10/92	Boston	00
<i>Westbury*</i>	Maslin	279	x	16/10/92	Charleston	13/11/92	Charleston	27
<i>Pilgrim*</i>	Walstrum	145	2/3	26/9/92	Africa	24/10/92	Maryland	28
<i>Olive Branch</i>	Leuvenigh	205	2/3	14/11/92	NY	11/3/93	NY	147
<i>Thomas</i>	Revell	180	x	14/11/92	S. Carolina	1/12/92	S. Carolina	17
<i>Ohio</i>	Kemp	290	x	16/11/92	NY	7/1/93	NY	51
<i>Cumberland</i>	Scott	00	x	16/11/92	Portland	24/12/92	Charleston	68
<i>Russia Merchant*</i>	Adamson	255	2/3	16/11/92	NY	No info.		00
<i>Portland</i>	Robinson	00	x	21/11/92	NY	4/3/93	NY	133
<i>Columbia</i>	Baley	00	x	21/11/92	Portland	No info		00
<i>James*</i>	Murray	233	2/3	23/11/92	Charleston	21/1/93	Charleston	58
<i>Dispatch*</i>	Shepherd	250				29/11/92	Charleston	00
<i>Albion*</i>	Simmons	81	2/3	4/12/92	Virginia	No info		00
<i>Birmingham Packet</i>	Simmons	281	x	11/12/92	Philadelphia	11/3/92	Philadelphi a	120
<i>Sovereign</i>	Pickering	00	2/3	14/12/92	Virginia	No info.		00
<i>Thomas</i>	Staples	00	x	14/12/92	Bath	4/3/93	Baltimore	110
<i>Sophia</i>	Lowther	00	x	14/12/92	Portland	1/2/93	Charleston	47
<i>Union</i>	Potter	170	x	18/12/92	Wiscasses	11/3/93	Virginia	83

							Boston Maryland	
Total.		12579					3179	3328

¹ * Denotes a British ship. ² x. Denotes mandatory berthing at Merchants' Dock; 2/3. indicates the two-thirds rule applies. Statistics. Total 68 ships of which 16 were British owned. Ships with full information available, 57. Ships destined for Merchants' Dock. 47. Ships with less than 2/3 enumerated cargo. 15. Tonnage information available on 59 ships. Total tonnage 12579. Average tonnage 213t.. Total days in port 3328. Average stay 58 days. Sources. *Bristol Presentments*, Import and Export, 1792; *Lloyd's Register*, 1792. All tonnage data from BRO: SMV/7/1/1/78 Wharfage Book, 1792-93.

Appendix 4.011. Statistics of United States trading ships in port, 1792.

Number Ships	Registered tons	Draught in feet	Average length feet	Average breadth feet
1	0-99	6-10	36-60	15-19
23	100-199	10-14	63-85	20-23
33	200-299	14-17	74-103	23-26
2	300-399	15-18	103-107	26-29
0	400-499			
59	Total tonnage 12579			
	Average tonnage 213			

Source. Data has been compiled from Appendices 4.004 and 4.010.

Appendix 4.012 American ships' time in port compared to tonnage, 1792.

Days in port	0-99 Tons	100- 199 Tons	200- 299 Tons	300- 399 Tons	All ships*
00-30		7	3		10
31-60		9	15		24
61-90		3	4		7
90-120		1	5	1	7
120+		1	2		3
Total ships					51

* Does not include ships where tonnage is unknown.

Source. Data has been compiled from Appendix 4.010.

Appendix 4.013. Numbers of West Indian (WI) and American (A) ships arriving and departing monthly, 1792.

Ships	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	To
A. In	2	3	1	1	3	7	8	8	4	1	8	6	52
WI. In	0	0	2	3	3	5	16	7	21	2	2	0	61
Total	2	3	3	4	6	12	24	15	25	3	10	6	
A. Out	0	5	9	2	1	2	7	8	7	6	1	2	52
WI Out	5	6	3	5	3	3	3	2	3	9	19	2	63
Total	5	11	12	7	4	5	10	10	10	15	20	4	

Sources. Data has been compiled from Appendices 4.005 and 4.010.

Appendix 4.014. American ships time in port per season, 1792.

Season	Number ships	Total stay in days	Av. stay in days*
Per annum	51	2889	57
Spring. Jan – April, 1792	16	1345	84
Autumn. June – Aug, 92	17	694	40
Spring. Jan – Mar 93	4	378	94

* Does not include ships where the tonnage is unknown.
 Source. Data has been compiled from Appendix 4.010.

Appendix 4.015. Direct African ships arriving at Bristol in 1792.

Ship	Master	Date	Tons	Draught	Owner	Cargo
<i>Nancy</i>	Wilcox	7/1	60	9	Vaughan	Elephant's teeth, bees wax,
<i>Martha's Goodwill</i>	Gilchrist	4/5	26	7	Anderson	Elephant's teeth and cam wood
<i>Flora</i>	Morlay	23/5	43	8	Rogers	Elephant's teeth, Cam wood, bees wax, gum copal, Guinea grains
<i>Brothers</i>	Learne	31/7	45	6	Teast	Elephant's teeth, gum copal, Guinea grains, cam wood.
<i>Arab</i>	Muirson	7/9	170	13	Teast	Ostrich feathers, gum lenegal.
<i>Triton</i>	Prosser	19/9	219		Rogers	Elephant's teeth, bees wax, oeulr palm, redwood.
<i>Pilgrim</i>	Walstrum	26/9	145	12	Fisher	Elephants teeth, redwood, camwood, bees wax, guinea grains, skins, ebony, coconuts.
Average tonnage			101			

Sources. *Bristol Presentments, Imports, 1792; Lloyd's Register, 1792.*

Appendix 4.016. Cargoes of slave trading ships arriving at Bristol in 1792.

Composition of ships' cargoes.	Number Ships	Goods only for owner	Goods for more than one importer	Comment
Ships arriving in ballast	3			
Ships with a minimum of goods.	11	11		A few teeth or casks
Ships with African goods only.	2	2		Enough goods to be considered a cargo
Ships with W. Indian goods only	2	1	1	Ditto
Ships with goods from both areas.	4		4	Ditto
Total	22 out of 36			

Source. *Bristol Presentments*, Imports, 1792.

Appendix 4.017. Data. Triangular trade ships at Bristol leaving for Africa in 1792.

Ship	Master	Ton	Owner	Date in	From	Date out	Length Stay
<i>Active</i>	Williams	222	Anderson	5/6/91		21/8/92	14m 16d
<i>African Queen</i>	Lloyd	227	Rogers	2/12/90		14/1/92	13m 12d
<i>Albion</i>	Mentor	164	J. Jones	14/8/91		28/7/92	11m 14d
<i>Alfred</i>	Williams	199	J. Jones	10/10/91	Jamaica	12/4/92	6m 2d
<i>Betsey</i>	Spencer	194	Hunter	Not in as slaver*		17/3/92	
<i>Crescent</i>	Roper	164	Rogers	9/3/92	Jamaica	9/7/92	4m 0d
<i>Fame</i>	Jenkins	119	Rogers	10/10/91	Jamaica	14/4/92	6m
<i>Fanny</i>	Phillips	183	Rogers	Not in as slaver		23/5/92	
<i>Favourite</i>	Crangle	161	Fitzhenry	29/8/92	Jamaica	10/10/92	1m 12d
<i>Friendshp</i>	Hutchesn	149	Fitzhenry	Not in as slaver		5/7/92	
<i>General Orde</i>	Smith	148	Jacks	Not in as slaver		14/4/92	
<i>Hector</i>	Frazer	540	Anderson	28/6/91	Jamaica	25/5/92	10m 27d
<i>Hester</i>	Martin	191	J. Jones	4/7/92	Jamaica	13/10/92	3m 9d
<i>Jupiter</i>	Goodrich	296	Rogers	23/3/92	Granada St Eust.	17/10/92	6m 24d
<i>Langrishe</i>	Fitzhenry	268	Fitzhenry	Not in as slaver	Jamaica	7/12/92	
<i>Levant</i>	Kimber	210	Jacks	Not in as slaver		19/11/92	
<i>Lovely Lass</i>	Wade	282	J. Jones	19/5/91		31/12/91 3/1/92 R	7m 12d
<i>Mary</i>	Grimes	101	J. Jones	21/10/91		4/1/92	1m 13d
<i>Mermaid</i>	Mulling	96	Rogers	Bought 31/12/91		9/4/92	4m 9d
<i>Morning Star</i>	Fitz-simmons	74	Rogers	14/11/91	Africa	8/3/92	4m 24d
<i>Nassau</i>	Morley	197	J. Jones	21/7/92	London	20/10/92	3m
<i>Pearl</i>	Simmons	420	Rogers	2/7/91		18/7/92	12m 16d
<i>Pilgrim</i>	Taylor	279	Anderson	8/2/92	St Vinc'nt	9/6/92	4m 1d
<i>Prince</i>	Gordon	273	T. Jones	14/7/92		29/10/92	3m 15d
<i>Queen Charlotte</i>	George	44	J. Jones	28/4/91		18/6/92	13m 20d
<i>Recovery</i>	Price	189	Jacks	22/12/91	Grenada	30/4/92	4m 8d
<i>Rodney</i>	Blake	290	Rogers	17/11/91	Jamaica	10/6/92	7m 23d

Ship cont.	Master	Ton	Owner	Date in	From	Date out	Length Stay
<i>Roman Emperor</i>	Langly	273	J. Jones	9/6/92.	London	12/8/92	2m 3d
<i>Royal Charlotte</i>	Smerdon	78	Keowen & Hunter	2/7/91		11/2/92	7m 9d
<i>Royal Charlotte</i>	Souter	261	J. Jones	10/7/92	Jamaica	8/10/92	2m 28d
<i>Sarah</i>	Hunt	154	Rogers	8/2/92	Jamaica	28/10/92	8m 20d
<i>Surprise</i>	Taylor	40	Rogers	18/8/91		18/2/92	6m
<i>Swift</i>	Laroche	171	Rogers	17/5/92	Grenada	28/11/92	6m 11d
<i>Thomas</i>	Phillips	241	J. Jones	10/2/92	Jamaica	11/6/92	4m 1d
<i>Trusty</i>	Harford	287	Ireland & Wright	Not in as slaver		14/1/92	
<i>Wasp</i>	Jones	141	T. Jones	23/3/92	Granada	22/6/92	3m
Total ships 36							
Total tonnage		732 6					
Average tonnage		204					

* The length of stay was not calculated for ships not arriving as slavers.

Sources. *Bristol Presentments*, Exports, 1792; *Lloyd's Register*, 1792; *FFBJ*, 1792; Richardson, ed., *Bristol, Africa and the Slave Trade*, 4.

Appendix 4.018. Statistics of slave trading ships in port, 1792.

Number Ships	Registered tons	Draught in feet	Average length feet	Average breadth feet
5	0-99	6-10	36-60	15-19
16	100-199	10-14	63-85	20-23
13	200-299	14-17	74-103	23-26
0	300-399	15-18	103-107	26-29
1	400-499	15-18	103-107	26-29
1	500 +	15-18	103-107	26-29
Total tons	7326			
Average tons	204			

Sources. The data has been compiled by combining that contained in Appendices 4.004 and 4.017.

Appendix 4.019. Slave ships' time in port compared to tonnage, 1792.

Months in port	0-99t	100 – 199t	200 – 299t	300 – 399t	400 – 499t	500t +	Total ships
1-3		5	3	0			8
4-6	3	5	3	0			11
7-11	1	2	2	0		1	6
12-14	1	0	2	0	1		4

Sources. Data has been compiled from Appendix 4.017.

Appendix 4.020. Numbers of slave trade ships arriving and departing monthly, 1792.

Ships	From 1791	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	To 1793
In	16	0	3	3	0	1	0	4	1	2	0	3	2	35
Out		3	2	1	2	2	5	4	2	1	6	2	2	31

Source. *Bristol Presentments*, Imports and Exports, 1792.

Appendix 4.021. Ships arriving at Bristol with goods conforming to the Merchant Dock Act of 1776, 1796-1798.¹

1796.

Name ship	Captain	Date	Page Pres.²	From	In dock	Non entry	Less 2/3rd	Other goods
<i>Portland</i>	Hussey	14/1	3	NY	x			
<i>Vulcan</i>	Smith	16/1	4	Petersburg				
<i>Venilia</i>	Adamson	16/1	4	NY	x			
<i>Planter</i>	Montague	23/1	5	Virginia			x	Tobacco
<i>Merchant</i>	Rosseter	5/2	6	NY			x	Rice
<i>Triton</i>	Butler	16/3	8	Petersburg				
<i>Gratis</i>	Berg	16/3	12	Longsound				
<i>Adventure</i>	Larson	16/3	12	Longsound				
<i>Schien</i>	Hiestendahl	16/3	12	Longsound				
<i>Catherina</i>	Blom	16/3	12	Longsound				
<i>Orion</i>	Shaw	22/3	13	Bath USA	x			
<i>Venus</i>	Morrell	8/6	29	Willmington		x		
<i>Mohawk</i>	King	1?/6	30	Africa			x	Wood
<i>Jane</i>	Ingley	29/6	34	Machais and Madeira	x			
<i>Venilia</i>	Adamson	12/7	40	NY	x			
<i>Philadelphia</i>	Bliss	21/7	43	Philadelphia	x			
<i>Levant</i>	Allyne	21/7	43	Dominica	x			
<i>Experience</i>	Norton	4/8	46	Manchester USA			x	Wheat
<i>Planter</i>	Montague	12/8	48	Virginia			x	Tobacco

Name ship cont.	Captain	Date	Page Pres. ²	From	In dock	Non entry	Less 2/3 rd	Other goods
<i>King David</i>	Lenden	?/8	50	Quebec	x			
<i>Actaeon</i>	Burnham	?/8	50	Boston	x			
<i>Charles</i>	Nightengale	23/8	51	Petersburg				
<i>Jacobus & Anna</i>	Lindwed	2?/8	52	Longsound				
<i>Caritas</i>	Ibsen	31/8	54	Longsound				
<i>Reith</i>	Lyons	9/9	57	Petersberg				
<i>Gratis</i>	Berg	9/9	57	Longsound				
<i>Juno</i>	Baxter	16/9	59	Petersberg				
<i>Elisabeth</i>	Duncan	1/10	62	Petersberg				
<i>Zacherman</i>	Master	4/10	63	Stockholm				
<i>Perseverance</i>	Burrow	4/10	63A	Petersberg				
<i>Rossetti</i>	Fawcett	4/10	63A	Petersberg				
<i>Triton</i>	Butler	4/10	63A	Petersberg				
<i>Unitas</i>	Pederson	?/10	64	Longsound				
<i>Providence</i>	Plesner?	21/10	69	Longsound				
<i>Nancy</i>	Cunningham	4/11	72	Wilmington	x			
<i>William</i>	Burmeister	4/11	72	Dantzig				
<i>Petronelle</i>	Hall	9/11	73	Longsound				
<i>Pearl</i>	Winteringham	22/11	76	Petersburg				
<i>Charles</i>	Nightengale	2/12	78	Petersburg				
<i>William</i>	Shotten	7/12	79	Memel				
<i>Louisa Dorethea</i>	Zimmerman	7/12	79A	Pillaw				
<i>Hunter</i>	Capp	10/12	80	Petersburg				
Total 42				N. Europe 26 Atlantic 16	10	1	5	

1797

Name ship	Captain	Date	Page Pres.	From	In dock	Non entry	Less 2/3 rd	Other goods
<i>Betsy</i>	Phelps	17/1	4	Charleston	x			
<i>Portland</i>	Hussey	17.1	4	NY	x			
<i>Venilia</i>	Adamson	21/1	5	NY			x	
<i>Queen</i>	Bebel	21/1	5	NY		x		
<i>Venus</i>	Morrell	21/1	5	NY	x			
<i>Philadelphia</i>	Bliss	25/1	6	Philadelphia	x			
<i>Thomas</i>	Fernald	25/1	6	Portsmouth	x			
<i>Warren</i>	Church	25/1	6	NY	x			
<i>Juno</i>	Hookey	28/1	7	Virginia	x			
<i>Zephr</i>	Hinchman	28/1	7	Virginia	x			
<i>Jane</i>	Inglee	2/2	8	Machias USA		x		
<i>Atlantic</i>	Cowper	18/2	11	Virginia			x	Tobacco
<i>Providentia</i>	Plesner	25/3	16	Longsound				
<i>Emanuel</i>	Altenburg	25/3	16	Longsound				
<i>Haabets Anker</i>	Paus	25/3	16	Longsound				
<i>Resolution</i>	Brede	28/3	17	Christiana				
<i>Mathea</i>	Nelson	31/3	18	Christiana				
<i>Two Brothers</i>	Sydleman	31/3	18	Portland		x		
<i>Juno</i>	Peak	31/3	18	Baltimore			x	Tobacco
<i>Catherine</i>	Gardener	31/3	18	Honduras and Charleston		x		
<i>Jerusa</i>	Giles	4/4	19	Charleston		x		
<i>Providentia</i>	Jordenson	27/4	21	Longsound				

Name ship cont.	Captain	Date	Page Pres.	From	In dock	Non entry	Less 2/3rd	Other goods
<i>Patty</i>	Halstead	27/4	21	NY		x		
<i>Light Horse</i>	Haff	12/5	24	NY		x		
<i>Light Horse</i>	Gibson	21/6	31	Baltimore		x		
<i>Chesapeake</i>	Adamson	24/6	32	NY			x	Rice
<i>Venus</i>	Morrell	24/6	32	NY			x	Tobacco Rice
<i>Fredock Lycha</i>	Toutin	28/6	33	Stockholm				
<i>Penelope</i>	Waddell	28/6	33	NY		x		
<i>Gratis</i>	Berg	4/7	34	Dram				
<i>Resolution</i>	Berde	4/7	34	Christiana				
<i>Betsy</i>	Phelps	4/7	34	NY			x	
<i>Mary</i>	Heatly	7/7	35	Wilmington		x		
<i>Thomas</i>	Fernard	20/7	38	Portsmouth		x		
<i>Roba & Betsy</i>	Nimmo	20/7	38	Virginia			x	Tobacco
<i>William</i>	Burmeister	20/7	39	Dantzic				
<i>Union</i>	Caldwell	22/7	39	Philadelphia		x		
<i>Jason</i>	Brass	4/8	41	Memel				
<i>Portland*</i>	Hussey	5/8	42	NY				
<i>Perseverance</i>	Burrows	9/8	43	Petersberg				
<i>Symmetry</i>	Willis	9/8	43	Petersberg				
<i>Rosetti</i>	Jacques	9/8	43A	Petersberg				
<i>Schien</i>	Hvistendal	11/8	44C	Longsound				
<i>Petronelle</i>	Blom	11/8	44C	Longsound				
<i>Royal Recovery</i>	Embleton	16/8	45	Archangel				
<i>Porsground</i>	Wright	23/8	47	Porsground Norway				

Name ship cont.	Captain	Date	Page Pres.	From	In dock	Non entry	Less 2/3rd	Other goods
<i>Trafficker</i>	MacVicar	23/8	47	Riga				
<i>Henry</i>	Guest	26/8	48	Petersburg				
<i>Ann</i>	Henderson	29/8	49	Archangel				
<i>King David</i>	Lenden	29/8	49	Quebec		x		
<i>Lucy</i>	Grant	1/9	50	Waldoborough Maine		x		
<i>Betsy</i>	Smith	1/9	50	Petersburg				
<i>Carl Friedrich</i>	Rahtske	13/9	53	Dantzic				
<i>Philadelphia</i>	Bliss	20/9	55	Philadelphia		x		
<i>Charles</i>	Nightingale	27/9	57	Petersburg				
<i>Lynx</i>	Lazenby	27/9	57A	Onega (Russia)				
<i>Commerce</i>	Caleff	4/10	59	Virginia			x	Tobacco
<i>Maria</i>	Gooding	19/10	62	Petersberg				
<i>Middleton</i>	Liddle	19/10	62	Petersburg				
<i>Providence</i>	Robson	18/10	62	Dantzig				
<i>Abraham</i>	Hanson	24/10	63	Longsoud				
<i>Haabeth</i>	Peterson	24/10	63	Longsoud				
<i>Juno</i>	Watkins	24/10	63	Petersburg				
<i>Triton</i>	Greenaway	24/10	63	Petersburg				
<i>Queen</i>	Groves	24/19	63A	Archangel				
<i>Two Brothers</i>	Sydleman	18/11	67	Portland	x			
<i>Ann</i>	Balmanno	22/11	68	Virginia			x	Tobacco
<i>Aeolus</i>	Norman	5/12	71	Oregrund Swed.	x			
<i>Chesapeake</i>	Waddell	30/12	76	NY			x	Rice ashes
Total 69				N. Europe 34 Atlantic 35	10	15	10	

*Cargo not landed

1798

Name of ship	Captain	Date	Page Pres.	From	In dock	Non entry	Less 2/3 rd	Other goods
<i>Foxwell</i>	Stevens	1/1	30/12/97	Boston	x			
<i>Patty</i>	Halstead	4/1	1	NY	x			
<i>Perseverance</i>	Burrow	17/1	3	Peter				
<i>Penelope</i>	Morrell	25/1	5	NY	x			
<i>Helen</i>	Keefe	27/1	6	Quebec		x		
<i>Zebra</i>	Stone	14/2	9	Virginia	x			
<i>Betsey</i>	Phelps	6/3	14	NY	x			
<i>Roebuck</i>	Shewell	3/4	19	NY			x	
<i>Providentia</i>	Jordenson	27/4	21	Longsound				
<i>Patty</i>	Halstead	27/4	21	NY		x		
<i>Thomas</i>	Luscombe	12/5	24	Charleston	x			
<i>Light Horse</i>	Haff	12/5	24	NY		x		
<i>Gratitude</i>	Roman	6/6	32	Danzig				
<i>Commerce</i>	Delano	6/6	32	NY			x	
<i>Atlas</i>	Wilson	27/6	36	NY	x			
<i>Roba and Betsey</i>	Nimmo	3/7	37	Virginia			x	Tobacco
<i>Ranger</i>	Hopkins	25/7	40	Baltimore			x	Tobacco
<i>Providence</i>	Body	27/7		Guernsey	x			
<i>Foxwell</i>	Stevens	14/8	45	Boston	x			
<i>Mercurius</i>	Laug	28/8	49	Stockholm				
<i>Pallas</i>	Collins	31/8	50	Charleston			x	Tobacco Rice

Name ship cont.	Captain	Date	Page Pres.	From	In dock	Non entry	Less 2/3 rd	Other goods
<i>Laurel</i>	Eldride	11/9	53	Petersburg				
<i>Hannah</i>	Moreland	14/9	54	Virginia			x	Tobacco
<i>George</i>	Hasier	26/9	56	Quebec	x			
<i>Canada</i>	Lenden	26/9	56	Quebec	x			
<i>Nancy</i>	David	10/10	59	Swansea ³	x			
<i>Amity</i>	Waters	10/10	59	Danzig				
<i>Mary</i>	Irvine	13/10	60	Petersburg				
<i>Abraham</i>	Hanson	13/10	60	Longsoud				
<i>Fanny</i>	Joyner	24/10	62	Swansea*	x			
<i>Ann</i>	Balmano	24/10	62	Virginia			x	Tobacco
<i>Elisabeth Coates</i>	Hodge	8/11	64	NY			x	Tobacco
<i>Navigator</i>	Waite	22/11	66	Petersburg				
<i>Providentia</i>	Plesner	28/11	67	Longsoud				
<i>Unknown</i>	Unknown	12/12	68	Virginia			x	Tobacco
<i>Unknown</i>	Unknown	12/12	68	Longsoud				
	De H???	12/12	68	Danzig				
<i>Race Horse</i>	Read?	12/12	68	Petersburg				
<i>Gresvinan</i>	James	12/12	68	Geffle	x			
<i>El</i>	??	12/12	68	Longsoud				
<i>Ranger</i>	Martin	28/12	69	Baltimore			x	
Total 41				N. Europe 15 Atlantic 27	14	3	10	

¹ Ships from North Europe would not normally discharge mandatory cargoes up-river. The deposition of other ships is marked 'x'.

² *Bristol Presentments*. A column containing the page number in the relevant presentments has been included.

³ Wood. Saved out of the *Two Brothers* from Portland brought by coasters.

Sources. *Bristol Presentments*, Imports, 1796, 1797. 1798; BRO: SMV/7/1/3/13 Dock Master's Day Book, 1795-99; BRO: SMV/7/1/3/14 Dock Master's Ledger 1796-99; BRO: SMV/7/1/3/16 Dock Master's Journal 1799-1807.

Appendix 4.022. Deposition of ships arriving at Bristol carrying a substantial percentage of timber and/or naval stores, 1796-1798 compared with 1792.

Year	Total ships	North Europe	North Atlantic	Mandatory in Dock	Mandatory evading dock	Total Mandatory	Mixed
1792	131	78	53	39	0	39	14
1796	42	26	16	9	1	10	5
1797	69	34	34	10	14	24	10
1798	43	15	30	14	3	17	10

Sources. *Bristol Presentments*, Imports, 1792; Appendix 4.021.

Appendix 4.023. Status of cargoes landed at Merchants' Dock, 1796-98.

Ship	Mandatory only	General Cargo	Mandatory/ general. All landed	Mandatory/ general. Part landed	Mandatory/ general. None landed
1796					
<i>Portland</i>					x
<i>Venilia</i>				x	
<i>Orion</i>	x				
<i>Jane</i>	x				
<i>Venilia</i>					x
<i>Portland</i>			x		
<i>Levant</i>		x			
<i>Philadelphia</i>				x	
<i>Actaeon</i>			x		
<i>Sally and Nancy</i>		x			
<i>King David</i>				x	
<i>Nancy</i>					x
1797					
<i>Betsy</i>	x				
<i>Portland</i>					x
<i>Venus</i>					x
<i>Thomas</i>	x				
<i>Zephyr</i>	x				
<i>Juno</i>	x				
<i>Warren</i>	x				
<i>Philadelphia</i>			x		
<i>Two Brothers</i>			x		
<i>Aeolus</i>			x		
<i>Foxwell</i>					x
1798					
<i>Patty</i>	x				
<i>Penelope</i>			x		
<i>Zebra</i>	x				
<i>Betsy</i>	x				
<i>Levant</i>		x			
<i>Thomas</i>	x				
<i>Atlas</i>				x	

Ship	Mandatory only	General Cargo	Mandatory/general. All landed	Mandatory/general. Part landed	Mandatory/general. None landed
<i>Mohawk</i>		x			
<i>Foxwell</i>					x
<i>George</i>	x				
<i>Canada</i>					x
<i>Grisvinan</i>			x		
<i>Mohawk</i>		x			

Note. Mandatory goods are as listed in the 1776 Act. General refers to all other types of cargo. Sources. *Bristol Presentments*, Imports, 1796, pp. 3, 4, 13, 24, 40, 41, 43, 50, 72; *Bristol Presentments*, Imports, 1797 pp. 4, 5, 6, 7, 67, 71, 76; *Bristol Presentments*, Imports, 1798, pp. 6, 9, 14, 20, 27, 36, 40, 45, 56, 68.

Appendix 4.024. Condensed data regarding ship's cargoes landed at Merchants' Dock, 1796-98.

Category of incoming cargo and deposition	Number of ships
Carrying only mandatory goods and landing all	12
Carrying only general goods and landing all	5
Carrying a mixture of mandatory goods and general, and landing all.	7
All mandatory goods landed and part of a general cargo	4
Carrying mandatory goods and general cargo and landing the former but none of the latter.	8
Total number of ships landing cargo	36

Source. Appendix 4.023.

Appendix 4.025. Shipping using Merchants' Dock, October 1795 till August 1799.

Year	Months in year	Ship numbers	Landing cargo	Shipping cargo	Landing stores	Shipping stores	Shipping provisions
1795	2.5	4	1	2	1	2	1
1796	12	24	13	8	2	9	6
1797	8	18	10	7	1	2	4
1798	12	27	15	11	1	4	3
1799	8	16	10	3	0	2	0
Total	42.5	89	49	31	5	19	14

Source. BRO: SMV/7/1/3/13 Dock Master's Day Book, 1795-1799; and BRO: SMV/7/1/3/14 Dock Master's Ledger, 1796-1799.

Appendix 4.026. Guppy and Co. Exports, 1790-1798.

Port	1790	1791	1792	1793	1794	1795	1796	1797	1798	1799	1800
Bal'more	0	0	0	1	0	0	0	0	0		
Boston,	3	1	2	4	3	3	3	4	3		
NY	0	1	1	6	5	8	5	6	3		
Portland	0	0	1	1	0	0	1	0	1		
Philadel	0	0	0	2	0	5	1	4	0		
Charlstn	1	0	0	0	0	1	0	2	2		
Virginia	0	1	0	1	0	0	1	0	0		
Norfolk	0	0	1	0	0	0	0	0	0		
Total America	4	3	5	15	8	17	11	16	9		
Ch. Isles	8	10	12	3	11	8	10	16	14	0	0

Source. *Bristol Presentments*, Exports, 1790-1798.

Appendix 4.027. Guppy and Co. Imports, 1791-1798.

Port	1790	1791	1792	1793	1794	1795	1796	1797	1798	1799
Boston,		0	0	0	2	1	1	1	1	
NY		0	0	1	3	3	1	4	2	
Portland		0	0	0	0	0	0	1	0	
Philadel		0	0	0	1	0	0	2	0	
Charlstn		0	0	0	0	0	0	2	0	
Virginia		0	0	1	0	0	0	0	0	
Po'smth		0	0	0	0	0	0	2	0	
Wa'brth		0	0	0	0	0	0	1	0	
Total America		0	0	2	6	4	2	13	3	
Ch. Isles		2	4	0	5	1	1	0	0	

Sources. *Bristol Presentments*, Imports, 1791-1798. No import presentments available for 1790.

Appendix 4.028. Summary of statistics compiled by James Jolly for 1792-1793.

Month	Number of days proper to go down	Number of days improper to go down	Number of days proper to come up	Number of days improper to come up	Neap tides
1792					
Mar	1	4	2	3	2
April	14	3	17	0	13
May	7	9	16	0	15
June	15	3	17	1	13
July	12	5	16	1	14
Aug.	14	4	18	0	13
Sept.	10	7	16	1	13
Oct.	7	11	14	4	13
Nov.	13	4	16	1	13
Dec.	11	7	17	1	13
1793					
Jan.	1	17	14	4	13
Feb	5	13	18	0	10
Mar	5	2	5	2	7
Total	115	89	186	18	152

Source. BRO: 11168/6a(i-iii) Diary of wind and tide taken at Bristol from 25th March 1792 to 14th March, 1793 by Captain James Jolly at the request of Richard Bright. Only 7 days were recorded in March 1792 and 14 in March 1793.

Appendix 4.029. Proof of water calculations.

Software from the United Kingdom Hydrographic Office gives tidal information which can be applied to the eighteenth century, but their standard port of application is the Port of Bristol (Avonmouth) which was not, of course, built till the nineteenth century. In order to justify the use of this software,¹ it is essential to prove that the levels of water in the River Avon and harbour in the late eighteenth century were basically the same as in modern times. To establish this it is necessary to demonstrate that water levels given on a contemporary plan were the same as those shown on a modern chart at a specific point in the river. The contemporary plan is shown on Illustration 4.001,² and an extract from the chart chosen on (Illustration 4.002).³ It was decided to prove that the 37ft tide of 13 September, 1787 at Black Rock, noted on the contemporary plan was approximately the same height as that calculated using information from the Admiralty Chart dated September, 1985. Any modern chart could have been chosen.

According to Chart 1859, the depth of water at Avonmouth at Mean High Water Springs (MHWS) equals 44ft (13.2m) and the depth of water at Black Rock is 8ft (2.5m) less, that is 36ft (10.8m). The contemporary plan gives the depth at Black Rock as 37ft, one foot more, but this is within a tolerable error level and can be accepted as evidence that depth of water was the same in both centuries for the same conditions.

Further calculations from the same documents give additional proof. The contemporary plan shows a line marked, 'tide is known to rise to this line, 26ft on the Floating Dock gauge' which can be taken as one of the highest recorded tides and is 1ft higher than the gauge at the Quay (Gauge at Floating Dock shows 16ft for the 15ft line of the Quay marker post). By measurement the Black Rock line is 44ft high and as the difference in height of tide between Avonmouth and Black Rock has been established as 8ft, the height of tide at the former would be 52ft. This figure was compared to the spring equinoxial tide in 2002 which was 48 ft (14.6m), and again they proved to be within verification limits

For the purposes of calculation in this thesis, it is necessary to establish the difference in height of tide between Avonmouth and the Quay marker. It has been shown above that a height of tide of 44ft at Avonmouth will give 37ft at Black Rock which on the plan shows there would be 19ft at the marker post. The difference between Avonmouth and the Quay marker is therefore $44 - 19$ ft, that is 25ft and this is the figure used in future calculations.

A caveat must be given that it is impossible to compare like for like between the two centuries as conditions in a tidal river inevitably change. However, the building of the Floating Harbour does not appear to have altered the basic levels and the results of these calculations show that the software data can be applied with some confidence.

Source. ¹United Kingdom Hydrographic Office: TotalTide software for tidal prediction, 2003; BRO: 11168/2e Section of the river at Black Rock showing level of high and low water; ³Extract from Admiralty Chart International Series. The Port of Bristol, 1973, reprinted 1986. No 1859.

Appendix 4.030. Tide table July, 1792 with reference to the marker post on the Quay.

July 1792	Moon Phase	State of Tide	Capt. Jolly's Time HW ⁵	Total Tide Time HW	2Hours before HW(Feet)	1Hours before HW(Feet)	High tide at the Quay (Feet)	1 Hour after HW(Feet)	2 Hours after HW(Feet)
1			04.10	03.48					
		N ⁴	16.42	16.27	5.7	10.3	12.5	9.9	4.0
2			05.24	04.55					
			17.45	17.28	7.3	13.2	15.5	12.2	5.6
3			06.16	05.54					
			18.46	18.23	8.2	15.1	17.4	14.2	6.0
4			07.14	06.49					
	Fm ¹		19.42	19.14	8.6	16.5	19.8	15.8	7.3
5			08.04	07.41					
			20.26	20.04	8.6	17.5	20.8	16.5	7.3
6			08.40	08.31					
			20.54	20.53	8.6	17.5	20.8	16.5	7.3
7			09.16	09.19					
			21.38	21.39	8.6	16.1	20.0	15.8	7.3
8			0954	10.04					
			22.10	22.24	8.6	15.1	18.1	13.8	6.3
9			10.27	10.47					
			22.44	23.08	6.0	13.9	16.5	12.9	4.7
10			11.30	11.30					
		N	23.22	23.55	5.7	11.8	14.2	7.3	4.0
11	Hm ²	N	11.44	12.17	4.0	9.6	11.6	8.6	2.0
12			00.29	00.50					
		N	12.52	13.15	2.7	7.3	9.2	6.6	1.4
13			01.18	01.57					
		N	13.44	14.24	2.7	7.0	8.3	6.3	1.4
14			02.16	03.03					
		N	14.48	15.29	2.7	7.0	8.6	6.3	1.4
15			03.20	04.04					
		N	15.52	16.28	4.0	8.6	9.9	7.9	2.7
16			04.24	04.58					
		N	16.56	17.20	5.3	9.9	12.2	9.3	3.4
17			05.28	05.47					
			18.00	18.06	6.0	11.6	13.9	10.6	4.0
18			06.31	06.32					
			19.02	18.49	6.6	12.5	15.1	11.9	5.0
19			07.17	07.13					
	Nm ³		07.32	19.29	6.6	12.5	15.5	11.9	5.0
20			07.53	07.53					
			20.14	20.07	6.6	12.5	15.5	11.9	5.0

July 1792 cont.	Moon Phase	State of Tide	Capt. Jolly's Time HW ⁵	Total Tide Time HW	2Hours before HW(Feet)	1Hours before HW(Feet)	High tide at the Quay (Feet)	1 Hour after HW(Feet)	2 Hours after HW(Feet)
21			08.33	08.30					
			20.52	20.43	6.6	12,5	15.2	11.9	5.0
22			09.09	09.04					
			21.26	21.15	6.0	11.9	14.5	11.2	4.3
23			09.42	09.36					
			21.58	21.45	6.0	11.9	14.2	11.2	4.3
24			10.15	10.07					
			20.32	22.18	6.0	10.6	13.2	9.9	3.4
25			10.51	10.42					
			23.10	22.58	6.0	10.6	12.9	9.9	3.4
26		N	11.32	11.24					
			23.54	23.45	5.3	9.6	11.9	9.3	3.0
27		N	12.42	12.15	4.7	8.6	10.6	8.2	2.4
				None					
28		N	01.08	00.43					
			13.34	13.18	3.7	7.6	9.2	7.0	2.0
29		N	02.04	01.55					
			14.34	14.40	4.0	8.0	9.2	7.3	2.4
30		N	03.06	03.21					
			15.38	16.04	4.3	9.6	11.2	8.9	3.0
31			04.08	04.47					
		N	16.42	17.11	6.6	11.9	12.5	11.2	4.7

¹Full moon. ²Half moon. ³New moon. ⁴Neap. ⁵Converted to 24 hr clock.

To simplify the tide table calculations were made for the later high tide only.

The flood tide arrived at the marker post between 2hr 30-50min before high water and took 2hr 10-50min to ebb.

Source. BRO: 11168/59. A plan of part of the River Avon and Frome and also sections of the same with proposed dams, locks for the improving of the harbour of Bristol; BRO:11168/2e. Section of the river at Black Rock showing level of high and low water; BRO: 11168/3y. Letter from Dr Falconer to Richard White saying he had sent his opinion; Extract from Admiralty Chart International Series. The Port of Bristol, 1973, reprinted 1986, No. 1859; United Kingdom Hydrographic Office, TotalTide software for tidal prediction, 2003.

Appendix 4.031. Water depths throughout the harbour with reference to 15 feet on the marker post, 1792.

Location	Depth Factor¹	Location	Depth Factor¹	Location	Depth Factor¹
Quay		Quay Head		Gibb to Grove.	-1
Drawbridge.	-5.	Berth 1.	-6	Backs.	-2
Dial.	-3.	Berth 2.	-7		
Crane 1.	-3.	Berth 3.	-8	Bristol Bridge Centre	+2
Crane 2.	-2.	Berth 4.	-8		
Crane 3.	-2.	Berth 5.	-8	West Bank of the Frome.	
Crane 4.	-1.	Berth 6.	-9		
Crane 5.	0.	Berth 7.	-9	Teasts Little Dock.	-7
Crane 6.	0.			Tomb's Dock.	-4
Crane 7.	0.				
Crane 8.	0.			River Avon	
Crane 9.	0.				
				Osbourn's	-4.5
				Hillhouse's	+3.5

¹ The figure in this column is in feet and must be added or subtracted from the height of tide at the marker post, that is the figure on the tide table.

² The depths marked on the gauges of the docks are from the aprons but there was also a sill of about 9 inches on each. This depth is compared to the 15 foot mark on the Quay gauge.

Source. See Data Appendix 4.030.

Appendix 4.032. List of cranes, slips and ladders with ports they served, 1785, 1794.*

Name of slip or crane	Serves
Quay Head	Severn trows. Bewdley, Bridgenorth, Brosley, Frampton. Gloucester, Newnham, Stroud, Shrewsbury, Stourport, Tewkesbury, Upton, Worcester.
Quay	
1 st Slip below the Drawbridge	Barnstaple. Biddeford, Boscastle, Bude, Hartland, Liverpool, Porlock.
Little slip at the Quay.	Chester, Dartmouth, Exeter, Lancaster.
Dial slip at the Quay.	Falmouth, Ilfracombe, Padstow, Plymouth, Portsmouth, Scilly, Southampton, Truro.
Broad slip at the Quay.	Falmouth, Fowey, Hayle, Padstow, Penzance, Plymouth, Poole. Portsmouth, St. Ives, Southampton, Truro.
Quay near Drawbridge	Dublin, Greenock, Waterford.
Crane No 1.	Cork, Liverpool, London, St. Ives.
Crane No 2.	Cork, Liverpool, London.
Crane No 3.	London.
Crane No 4.	London..
Back.	
1 st Ladder, Back	Aberthaw, Newton, Tenby:
2 nd Ladder, Back	Cardiff.
1 st Slip, Back	Caermarthen, Haverford West, Laughern, Milford. Pembroke.
2 nd Slip, Back	Market Boats: Caerleon, Chepstow, Newport.
3 rd Slip.	No reference
4 th Slip	Cardigan, Neath, Swansea.
5 th Slip	Minehead, Watchet.
6 th Slip	Porlock.
Market Houses, Back	Wye Trows: Brockweir, Gatecombe, Tintern Abbey.
Market Houses Bath Barge, Queen's Street.	Barges to Bath:
New Bridgewater Slip, Back	Bridgewater.
Bell on the Back	Llandogar. (probably a Wye trow).

* This appendix is the same as Appendix 1.013 but repeated again here for convenience. Source. *Bristol Directory*, 1785; Matthews, *Bristol Directory*, 1794.

Appendix 4.033. Ships' dimensions in feet per registered tons.

Tons	Length	Breadth	Height	Draught		Tons	Length	Breadth	Height	Draught
29	36	15	5	7		198	85	23	15	13-14
31	38	15	6	7		200	74	25	12	13-14
36	47	12	7	7		213	84	24	16	13-15
48	37	16	6	7		220	82	26	13	13-15
53	51	16	8	7		221	85	26	15	13-15
57	49	17	9	8-10		227	85	23	11	14-15
60	50	16	10	8-10		239	93	25	16	14-15
68	53	17	8	8-10		245	76	27	13	14-15
75	58	18	11	8-10		250	84	28	11	14-15
88	62	19	8	8-10		252	93	25	11	14-15
97	50	19	10	9-10		261	93	25	17	15
100	63	27	13	9-10		267	95	26	11	15
106	59	22	9	10-11		270	92	26	17	15
121	71	20	8	10-11		275	103	25	12	15
137	71	22	8	11-12		302	105	28	11	15
141	63	22	10	12		307	106	27	12	16
153	65	21	10	12		333	103	28	17	16
164	74	23	14	12		341	99	27	19	16
168	78	23	16	12		350	104	29	18	15-17
170	76	23	10	12-14		374	107	29	18	15-17
175	80	22	13	13		391	107	29		17
180	80	24	14	14		402	105	30	15	16
182	84	22	15	15		418	107	28	18	16
188	80	23	16	16		532	118	33	15	19
189	77	24	13	13		618	128	30	14	20
190	83	23	15	13						

Sources. This table has been compiled from the dimensions of ships given as examples in the following books. MacGregor, *Merchant Sailing Ships*; French, 'Merchant Shipping of the British Empire'; Farr, *Records of Bristol Ships*; Farr, Card Index; The ships' average draughts are taken from *Lloyds Register*, 1792.

Appendix 4.034. Large foreign ships in Bristol at the end of June, 1792.

Ship	Master	Tons	Draught	Date in	Date cleared
Triangular					
<i>Active</i>	Williams	222	12	5/6/91	21/8/92
<i>Albion</i>	Mentor	164	12	14/8/91	28/7/92
<i>Sarah</i>	Hunt	154	12	8/2/92	28/10/92
<i>Crescent</i>	Roper	164	18	9/3/92	9/7/92
<i>Friendship</i>	Hutcheson	149	12	Not in as a Slaver	5/7/92
<i>Jupiter</i>	Goodrich	296	14	23/3/92	17/10/92
<i>Langrishe</i>	Fitzhenry	268	14	Not in as a Slaver	7/12/92
<i>Levant</i>	Kimber	210	11	Not in as a Slaver	19/11/92
<i>Swift</i>	Laroche	171	13	17/5/92	28/11/92
<i>Roman Emperor</i>	Langly	273	13	9/6/92.	12/8/92
American					
<i>Russia Merchant</i>	Matthews	255	16	8/5/92	4/7/92
<i>Mary</i>	Cashedy Preble	146	13	17/5/82	No info.
<i>Peggy</i>	Henshaw	191	12	29/5/92	5/7/92
<i>Olive Branch</i>	Leuvenigh	208	13	5/6/92	23/7/92
<i>Union</i>	Potter	170	13	6/6/92	16/7/92
<i>Trenton</i>	Lowther	138	12	20/6/92	10/7/92
<i>Louis</i>	Greybell	219	14	26/6/92	1/8/92
<i>Ohio</i>	Kemp	290	14	27/6/92	10/8/92
<i>Sophia</i>	Kerr	258	16	27/6/92	30/7/92
<i>Lively</i>	Clark	121	12	27/6/92	31/8/92
West Indian					
<i>British Queen</i>	Melvell	200	14	25/4/92	9/7/92
<i>Union Island</i>	Pocock	265	15	17/5/92	19/11/92
<i>Westbury</i>	Smith	190	14	1/6/92	4/10/92
<i>Levant</i>	Ducket	221	11	5/6/92	No info
<i>Barzillia</i>	Byron	281	15	6/6/92	23/7/92
<i>Ann</i>	Sands	280	15	7/6/92	17/10/92
<i>Pilgrim</i>	Baxter	300	16	19/6/92	23/10/92
<i>Hester & Ann</i>	White	28	6	New built 92	23/7/92

Source. *Bristol Presentments, Imports and Exports, 1791-1792*; *Lloyd's Register, 1792*; Data from Appendix 4.033.

Appendix 4.035. Other foreign shipping in the Port of Bristol, July, 1792.

Ship	Master	Arrived from	Sailed for	Date in	Date out	Days in	Tons
<i>Eastly</i>	Copplestone	Vienna	N'foundland	21/1	23/7	182	202
<i>Minerva</i>	Roberts	Barcelona	Palermo	21/4	3/7	72	172
<i>Elisabeth</i>	Barrow	Rouen	Guernsey	23/5	28/7	65	78
<i>St Cecelia</i>	Maslin	Leghorn	Leghorn	25/5	20/7	55	89
<i>King George</i>	Burnell	Santander	Santander	5/6	23/7	48	119
<i>Elisabeth</i>	Prance	Oporto		6/6		00	183
<i>Mary</i>	Maybury	Lisbon		12/6		00	78
<i>Bremen Merchant</i>	Beckman	Bremen	Bremen	12/6	4/7	22	130
<i>Mary & Betty</i>	Agnew	Teneriffe	Newcastle	14/6	28/7	42	85
<i>Brothers</i>	Peters	Guernsey	St Ives	14/6	2/7	18	41
<i>Princess Royal</i>	Pearce	Oporto		19/6		00	185
<i>Joanna</i>	Phillips	Cadiz	Cadiz	20/6	13/8	43	113
<i>Endeavour</i>	Pyne	Rouen	Nantz/Rouen	20/6	14/7	24	97
<i>Cognac</i>	Thorne	Oporto	Oporto	26/6	11/8	45	118
<i>Hector</i>	Griffith	Leghorn	Liverpool	10/7		00	91
<i>Nancy</i>	Eames	Oporto	Malaga	17/7	28/8	41	100
<i>Recovery</i>	Welsh	Guernsey	Guernsey	18/7	7/8	19	34
<i>Ant</i>	Litson	N'foundland		21/7		00	87
<i>Ilfracombe</i>	Wade	Oporto	Ilfracombe	21/7	18/8	27	100
<i>Union</i>	Perkins	Rotterdam		21/7		00	122
<i>Queen</i>	Le Feuvre	Jersey	G'nsey Jersey	28/7	21/8	24	37
<i>Endeavour</i>	Richardson	Rotterdam	Rotterdam	31/7	11/9	41	109
<i>Jenny</i>	O'Brien	Malaga		31/7			
						768	

Sources. *Bristol Presentments*, Imports and Exports, 1791-1792; *Lloyd's Register*, 1792; *FFBJ*, 1791-1792.

Appendix 4.036. Irish ships in port, July, 1792.

Ship	Master	Arrived from	Sailed for	Date in	Date out	Days in port	Tons
<i>Jane and Ann</i>	Evans	Aberystwith	Ross	18/6	9/7	21	88
<i>Lark</i>	James	Aberystwith	Wicklow	18/6	9/7	21	84
<i>Liberty</i>	McBloy	Belfast		17/7			?
<i>Sophia</i>	Philips	Cork	Cork	23/6	9/7	16	43
<i>Sally</i>	Phillips	Cork	Cork		9/7		?
<i>Sybella</i>	Ellis	Cork	Cork	2/6	16/7	44	78
<i>Lady Fitzgerald</i>	Crosby	Cork	Cork	15/6	2/7	17	56
<i>Prince of Wales</i>	Hall	Cork	Cork	13/6	20/7	37	55
<i>Adventure</i>	Knight	Cork	Cork	19/6	20/7	30	31
<i>Penelope</i>	Barry	Cork	Cork	21/6	11/8	50	46
<i>Dolphin</i>	Keene	Cork	Cork	20/6	14/7	24	46
<i>Elisabeth</i>	Wearham	Cork		2/7			33
<i>Two Brothers</i>	Hodgson	Cork	Cork	2/7	18/7	15	42
<i>Barrymore</i>	Dexdon	Cork	Cork	9/7	30/7	20	43
<i>Prince of Wales</i>	Hall	Cork	Cork	17/7	20/7	3	55
<i>Sally</i>	Philips	Cork	Cork	20/7	4/8	14	29
<i>Elisabeth</i>	Wearham	Cork	Cork	21/7	4/8	12	33
<i>Sophia</i>	Philips	Cork	Cork	26/7	11/8	14	43
<i>Draper</i>	Gardener	Dublin	Dublin	2/6	10/7	38	130
<i>Favourite Nanny</i>	Gundersn	Dublin		13/6			165
<i>Bristol</i>	Chirnside	Dublin	Dublin	20/6	4/8	43	116
<i>Jupiter</i>	Watkins	Dublin	Leghorn	20/6	21/7	28	130
<i>Mary</i>	Jones	Dublin	Dublin	13/7	18/7	4	154
<i>Flora</i>	Hodgson	Dublin	Dublin	30/7	25/8	25	129
<i>Favourite</i>	Clark	Galway	Galway		9/7		
<i>Union</i>	Parry	Galway		18/7			84
<i>Susannah</i>	James	Isle Wight	Limerick	28/5	4/7	36	84
<i>Minerva</i>	Wilson	Jamaica	Belfast		23/7		
<i>Mary</i>	Cashidy	New York	Londondery	21/5	2/7	41	146
<i>Hawk</i>	Patrick	Newry	Newry		30/7		?
<i>Thomas and Mary</i>	Casey	Waterford	Waterford	2/6	5/7	33	40
<i>Happy Return</i>	Redmond	Waterford	Waterford	26/6	20/7	23	32
<i>St Patrick</i>		Waterford		30/6			22
<i>Helen</i>	Drummond	Waterford	Waterford	7/7	4/8	24	72

Ship cont.	Master	Arrived from	Sailed for	Date in	Date out	Days in port	Tons
<i>Thomas and Betsy</i>	Morrow	Waterford	Waterford	7/7	30/7	20	19
<i>Providence</i>	Genery	Waterford	Waterford	26/7	12/8	12	36
<i>Nancy</i>	Bydder	Wexford		8/6			17
<i>Prince William Henry</i>	Christian	Youghal	Youghall	25/6	9/7	14	57

Sources. *Bristol Presentments*, Imports and Exports, 1791-1792; *Lloyd's Register*, 1792; *FFBJ*, 1791-1792.

Appendix 4.037. London and Liverpool ships in the Port of Bristol, July, 1792 by date.

Ship	Master	Arrived from	Sailed for	Date in	Date out	Days in port	Tons
<i>Betsy and Nancy</i>	Humphries	Liverpool		25/6			
<i>Bristol</i>	Prust	Liverpool	Liverpool	23/7	13/8	20	127
<i>Friendship</i>	Parry	Liverpool	Liverpool	16/7	21/7	5	61
<i>Salcombe</i>	Sturgeon		Liverpool		30/7		
<i>Union</i>	Parry	Galway	Liverpool	23/7	13/8	20	70
<i>Briton</i>	Taylor	London	London	5/7	30/7	25	111
<i>Daniel</i>	Powell	London	London	16/7			182
<i>Martha</i>	Mathais	London	Liverpool	17/7	21/7	4	177
<i>Minerva</i>	Davis	London	Naples/Alex	17/7	4/8	17	211
<i>Nassau</i>	Moreley	London	Africa	16/7	25/10	39	189
<i>Pollard</i>	Farquarson	London	London	31/7	11/8	11	181

Source. *Bristol Presentments*, Imports and Exports, 1791-1792; *Lloyd's Register*, 1792; *FFBJ*, 1791-1792.

Appendix 4.038. Coastal shipping at the slips on the Quay in July, 1792.

Quays	Ships	Slip
Barnstaple	2	First
Bideford	4	First
Chester	2	Little
Exeter	2	Little
Falmouth	1	Dial
Lancaster	1	Little
Lymington	1	Dial
Padstow	6	Dial
Penzance	1	Broad
Plymouth	5	Dial. Broad
Poole	1	Broad
Portsmouth	2	Dial
Scilly	1	Dial
St Ives	3	Broad
Truro	2	Dial. Broad
Total	34	

Sources. Matthews, *Bristol Directory*, 1793-94, p. 98-100. Unfortunately there is no directory for 1792; *FFBJ*, 1792; *Bristol Mercury and Universal Advertiser*, 1792.

Appendix 4.039. Frequency of visits of July coasters to the Quays and Backs in the period, 1791-92.

Quay		Backs	
Visits	No. ships	Visits	No. ships
1	13	1	13
2	9	2	1
3	4	3	4
4	4	4	2
5	2	5	2
6	2	6	3
		7	4
		9	1
Total	34		30

Sources. *FFBJ*, 1792; *Bristol Mercury and Universal Advertiser*, 1792.

Appendix 4.040. Goods imported to the four slips on the Quay, 1792.

Slip	Port	Goods
First	Barnstaple	Extractive goods, copper, agriculture, metal ware.
	Biddeford	Earthenware, sugar, train oil, salt, tobacco pipe clay wood ashes, kelp
	Bocastle	No particular import
	Hartland	No particular import
	Porlock	No particular import
Little	Chester	Lead, calamine
	Dartmouth	No particular import
	Exeter	Cloth, wine, pipe clay, tobacco
	Lancaster	Calamine
Dial	Falmouth	No particular import
	Plymouth	Copper ore
	Truro	Copper, tin, tiles
	Ilfracombe	No particular import
	Padstow	Extractive, metals. Important misc goods in
	Portsmouth	No particular import
	Scilly	No particular import
Broad	Plymouth	Copper ore
	Fowey	No particular import
	Padstow	Extractive, metals. Important misc goods in
	Poole	Clay and stone
	Portsmouth	No particular import
	Southampton	Bricks
	St Ives	Extractive, metals. Tin sugar tobacco, copper ore
	Hayle	No particular import No particular import
	Penzance	Tin, train oil.
	Truro	Metal

Sources. Minchinton, 'Bristol-Metropolis of the West'; D. Hussey, *Coastal and River Trade in Pre-Industrial England: Bristol and its Region, 1680-1730* (Exeter, 2000).

Appendix 4.041. Coasters at the Quay slips by time in port, 1792.

Ship	Master	Arrived from	Sailed for	Date in	Date out	Days in
<i>Ceres</i>	Nichols	Bideford		18/6		
<i>Dove</i>	Cooper	Cowes	Plymouth	18/6	30/7	12
<i>Endeavour</i>	Harding	Padstow		18/6		
<i>Thomas</i>	Hay	Lymington	Bideford	25/6		
<i>Peggy</i>	Richards	Padstow		25/6		
<i>Lamb</i>	Heale	Plymouth	Plymouth	25/6	2/7	7
<i>Elisabeth</i>	Cooper	Portsmouth	Portsmouth		2/7	
<i>Brothers</i>	Peters		St Ives		2/7	
<i>Sprightly</i>	Legworthy	Barnstaple	Barnstaple	2/7	9/7	7
<i>Thomas</i>	Kay	Bideford	Bideford	2/7	14/7	12
<i>Patsy</i>	Peters	Padstow	Padstow	2/7	18/8	46
<i>William & Mary</i>	Taylor	Padstow	Padstow	2/7	9/7	7
<i>Hero</i>	Green	Plymouth	Looe Ply'th	2/7	14/7	12
<i>Fowey</i>	Ball	Exeter	Dart Exeter	9/7	14/7	5
<i>Rover</i>	Lowman	Plymouth	Plymouth	9/7		
<i>Sally</i>	Stoney	Plymouth	Hull	9/7	4/8	25
<i>Friends</i>	Tredegars on	Scilly	Penz.Scilly	9/7	14/7	5
<i>Hopewell</i>	Roswell	Falm'th Truro	Falm'th Truro		14/7	
<i>Industry</i>	Rowe		Penzance		14/7	
<i>Hayle Trader</i>	Hambly	St Ives	St Ives		14/7	
<i>Riviere</i>	Millet	St Ives	St Ives		14/7	
<i>Charlotte</i>	Beybele	Portsmouth		16/7		
<i>Active</i>	Day	Barnstaple	Barnstaple		21/7	
<i>Richard</i>	Trevaikes	Padstow	Padstow		21/7	
<i>Dispatch</i>	Watkins	Bideford	Bideford	30/7	4/8	5
<i>Polly</i>	May	Bideford	Bideford	30/7	4/8	5
<i>Royal George</i>	Owen	Exeter	Exeter	30/7	30/7	0
<i>Hannah</i>	Moss	Lancaster	Lancaster		30/7	
<i>Diligence</i>	Lovering	Plymouth		30/7		
<i>Speedwell</i>	Dennis	Truro	Falm'th Truro	30/7	4/8	5
<i>Friends Goodwill</i>	Reed	Poole		31/7		
<i>Annerly</i>	Harvey		Chester		4/8	
<i>Charlotte</i>	Ellis		Chester		4/8	
<i>William and Jane</i>	Cundy	Truro	Falm'th Truro	31/7	25/8	

Sources. FFBJ, 1792; *Bristol Mercury and Universal Advertiser*, 1792.

Appendix 4.042. Coastal shipping at the Backs in July, 1792.

Backs	Ships	Slips Ladders
Aberthaw	2	1 st Ladder
Aberystwith	5	1 st Slip
Bridgewater	2	2 nd Slip
Cardiff	0	2 nd Ladder
Cardigan	7	4 th Slip
Carmarthen	6	1 st Slip
Haverford W.	2	1 st Slip
Milford	3	1 st Slip
Minehead	2	5 th Slip
Neath	3	4 th Slip
Newton	3	1 st Slip
Swansea	3	4 th Slip
Tenby	1	1 st Slip
Watchet	1	5 th Slip
Total	40	

Sources. *FFBJ*, 1792; *Bristol Mercury and Universal Advertiser*, 1792.

Appendix 4.043. Goods imported to the Backs, 1792.

Slip or ladder	Port from	Goods
1 st Ladder	Aberthaw	Coal, wool, hides, dairy produce
	Newton	Coal, wool, hides, dairy produce.
	Tenby	Coal, grain, agricultural and dairy produce,
2 nd Ladder	Cardiff	Agricultural and dairy produce wool,
1 st Slip	Carmarthen	Agricultural produce, oats, cattle
	Laugharne	Agricultural produce, oats, cattle
	Milford	Coal, wool leather, grain, agricultural.
	Haverford West	Coal, leather, grain, agricultural.
	Pembroke	Culm, dairy produce
2 nd Slip	Bridgewater	Wood ashes, peas, beans, corn, cider, leather, cloth, malt, wheat, barley, hay, cider, elm timber.
3 rd Slip		
4 th Slip	Cardigan	Oats, pigs, dairy products, wheat
	Neath	Coal
	Swansea	Coal, iron, leather, tin plate
5 th Slip	Watchet	Dairy produce, poultry, kelp.
	Minehead	Cloth, wheat, fish, dairy, leather.

Sources. Minchinton, 'Bristol-Metropolis of the West'; Hussey, *Coastal and River Trade in Pre-Industrial England*.

Appendix 4.044. Movements of Severn trows, Wye trows, and market boats, 1793.

Severn Trows		Wye Trows		Market Boats	
In/out every spring		In/out every spring		In Wednesday out Thursday every week	
Berth. Head of Quay		Berth. Market houses		Berth. 2 nd Slip Back.	
Home port	Ships	Home port	Ships	Home port	Ships
Bewdley	4	Abbey Tintern and Brockweir	3	Caerleon	1
Bridgenorth	2	Hereford	1	Chepstow	1
Frampton	1	Monmouth	2	Newport	2
Gloucester	3				
Newnham	1				
Stroud	1				
Tewkesbury	1				
Upton	2				
Worcester	6				
Total.	21		6		4

Source. Matthews, *Bristol Directory*, 1794, p. 100.

Appendix 4.045. Coasters at the Back by time in port, 1792.*

Ship	Master	Arrived from	Sailed for	Date in	Date out	Days in
<i>Jane and Ann</i>	Evans	Aberystwith	Ross	18/6	7/7	19
<i>Lark</i>	James	Aberystwith	Wicklow	18/6	7/7	19
<i>Friendship</i>	Davis	Beaumaris		18/6		
<i>Rodney</i>	Lewis	Carmarthen	Carmarthen	18/6		
<i>Solva</i>	Gibbon	Milford		18/6		
<i>Sally</i>	Nethley	Neath		18/6		
<i>Swallow</i>	Gibbs	Swansea		18/6		
<i>Ann and Sally</i>	Jenkins	Aberystwith		25/6		
<i>Loyalty</i>	Davis	Aberystwith	Liverpool	25/6	2/7	7
<i>Friends</i>	Venn	Bridgewater	Bridgewater	25/6	2/7	7
<i>Neath Trader</i>	Walters	Neath	Neath	25/6	2/7	7
<i>Greyhound</i>	Perry	Aberystwith		2/7		
<i>Two Brothers</i>	Nichols	Cardigan		2/7		
<i>Ann</i>	Jones	Carmarthen		2/7		
<i>Constant Trader</i>	Sheppard	Carmarthen	Carmarthen	2/7	9/7	7
<i>Blessing</i>	Wickland	Tenby	Tenby	2/7	9/7	7
<i>Lovely Cruiser</i>	Lewis		Milford		9/7	
<i>Phoenix</i>	Diamond	Swansea	Swansea		9/7	
<i>Nancy</i>	Lewis	Newton	Newton		14/7	
<i>William & Katherine</i>	Guy	Newton (Swan	Newton		14/7	
<i>Morning Star</i>	Horsington	Aberthaw	Aberthaw	9/7	14/7	5
<i>Swift</i>	Bowen	Cardigan		9/7		
<i>Hazard</i>	Philips	Carmarthen	Laugharne	9/7	14/7	5
<i>Milford</i>	Crurn	Haverford W.	Haverford W.	9/7		
<i>Nancy</i>	Jenkins	Minehead	Minehead	9/7	14/7	5
<i>William & Mary</i>	Perkman	Beaumaris		17/7		
<i>Mary</i>	Dessin	Bridgewater	Bridgewater		21/7	
<i>Emlyn</i>	Mills	Carmarthen	Carmarthen		21/7	
<i>Susanna</i>	Jenkins		Milford		21/7	
<i>Mermaid</i>	Herbert		Newport		21/7	
<i>Sisters</i>	Nichols	Swansea	Swansea		21/7	
<i>Prosper</i>	Jenkins	Watchet	Watchet		21/7	
<i>Eagle</i>	Lewis	Cardigan		30/7		
<i>Lovely</i>	Owens	Cardigan		30/7		
<i>Maria</i>	Owens	Cardigan		30/7		
<i>Speedwell</i>	Eyeon	Cardigan	Cardigan	30/7		
<i>Union</i>	Davis	Cardigan		30/7		

Ship cont.	Master	Arrived from	Sailed for	Date in	Date out	Days in
<i>Ann</i>	Jones	Carmarthan		30/7		
<i>Unity</i>	Atwill	Minehead	Minehead		30/7	
<i>Neath Trader</i>	Walters	Neath	Neath		30/7	
<i>Liberty</i>	Whittow	Haverford W.	Haverford W.	30/7	4/8	5
<i>Morning Star</i>	Horsington	Aberthaw	Aberthaw		13/8	
<i>Nancy</i>	Lewis	Newton	Newton		13/8	

* There is a lack of data due to the newspapers providing the dates inwards only.
Sources. *FFBJ*, 1792; *Bristol Mercury and Universal Advertiser*, 1792.

Appendix 4.046. Vessels registered to trade between Bristol and Bath,1795-1802.

Category	Name	Tons	Master + crew
(1)	Brass Merchant	23	4
(1)	No name	23	4
(1)	Betty	21	3
(1)	Industry	59	3
(1)	Samuel	69	4
(1)	William and Henry	53	4
(1)	Maria	48	5
(1)	Prudence	62	4
(2)	Betty	71	4
(2)	Active	52	4
(2)	Rosatta	50	3

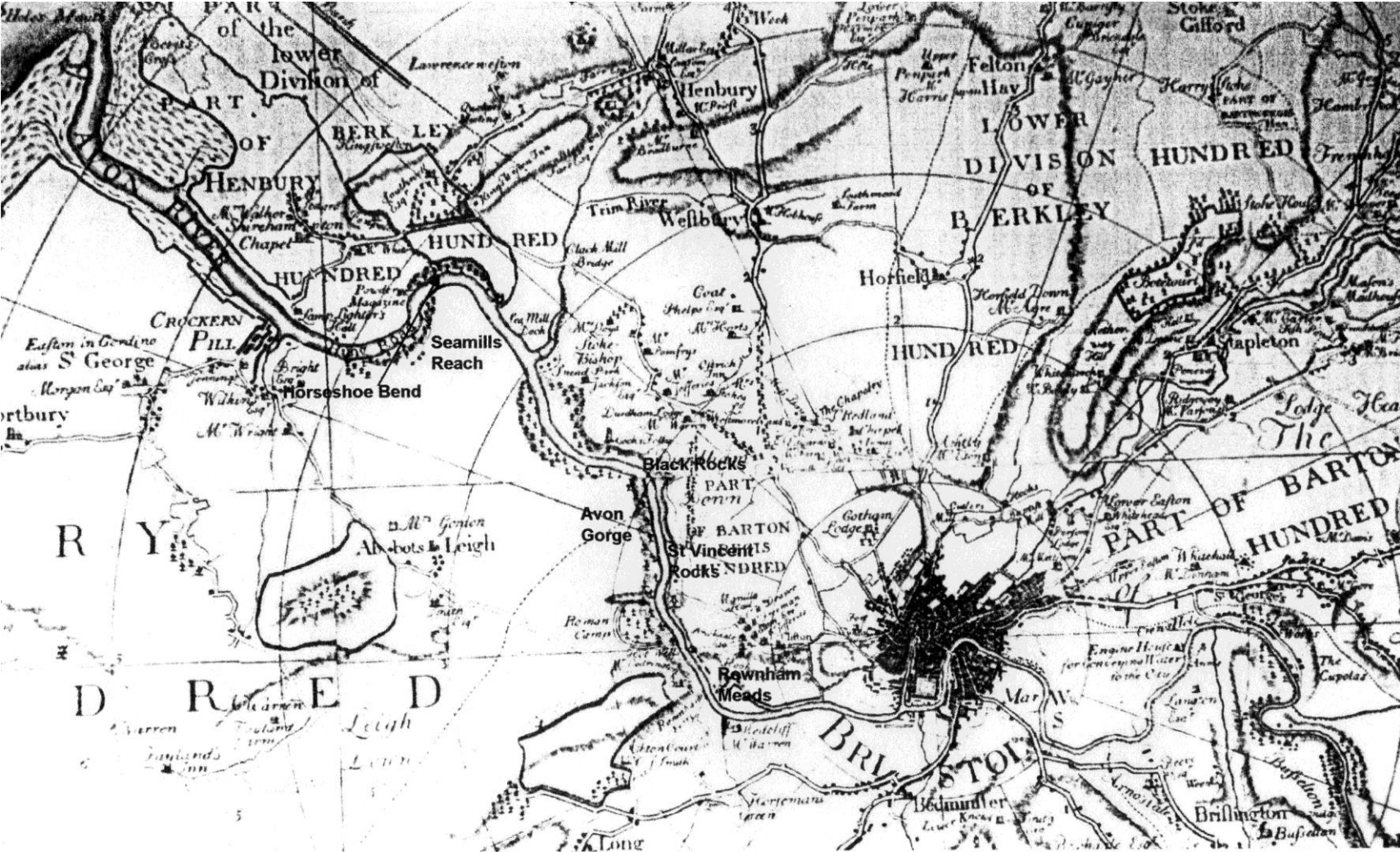
Source. BRO: 05077 Register of ships navigating within the City of Bristol exceeding 13 ton, 1795-1802.

Illustration 1.001. Bristol Channel from Holmes to King Road including River Avon.



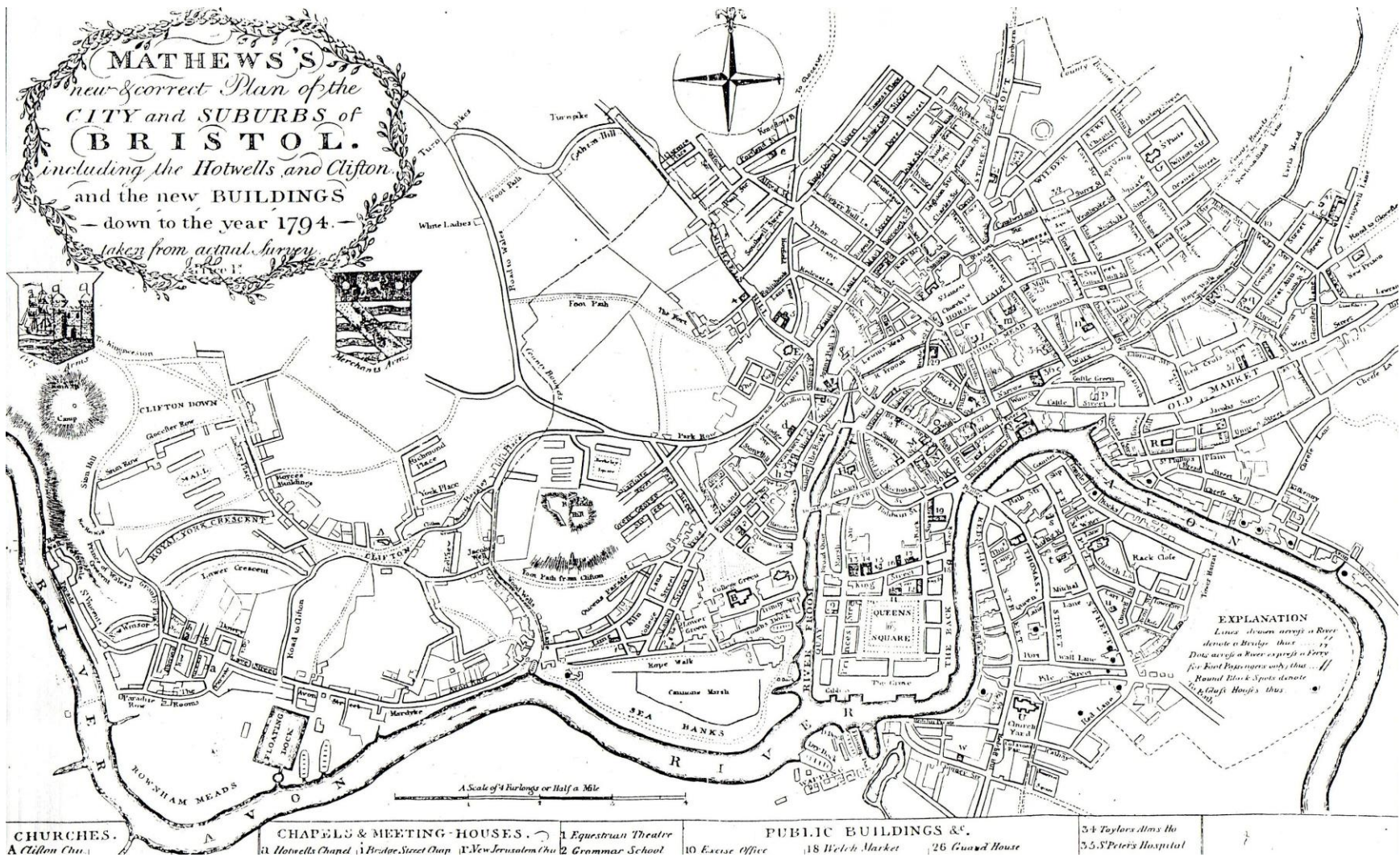
Source. An extract from MacKenzie senior's chart of the St. George's and Bristol Channels, 1775, in Adrian James Webb, *Maritime Surveys, Charts and Sailing Directions of the Somerset Coast, circa 1350-1824* (Somerset Record Society, 97, 2014) p. 145.

Illustration. 1.002. The River Avon.



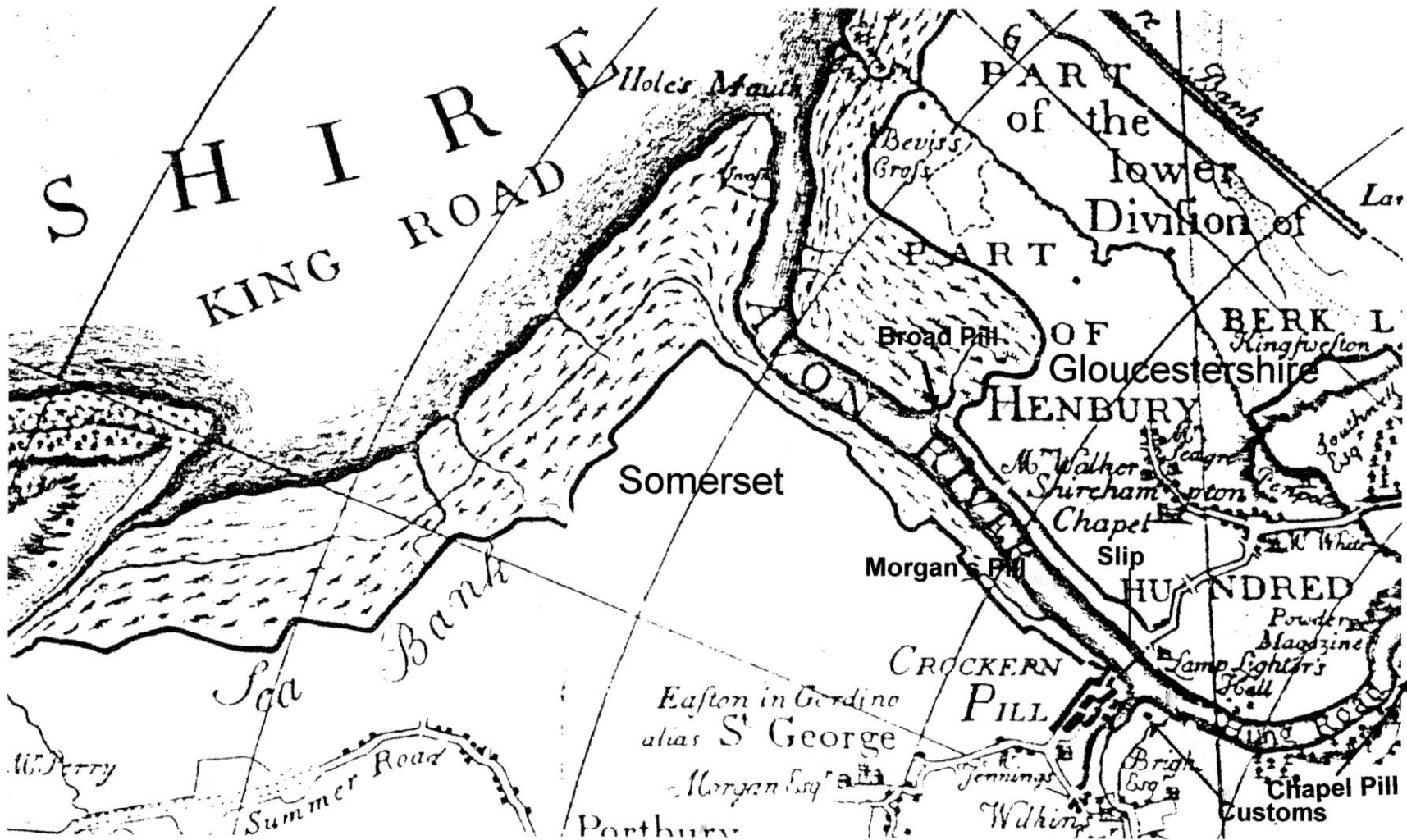
Source. A Plan of Somerset. B. Donne, 1769. Bristol Museum and Art Gallery, 769.

Illustration 1.003. *Matthews new and correct plan of the city and suburbs of Bristol, 1794.*



Source. Matthews's new and correct plan of the city and suburbs of Bristol including the Hotwells and Clifton and the new buildings down to the year 1794 in Matthews, *Bristol Directory*, 1794.

Illustration 1.004. The Port of Hungroad.



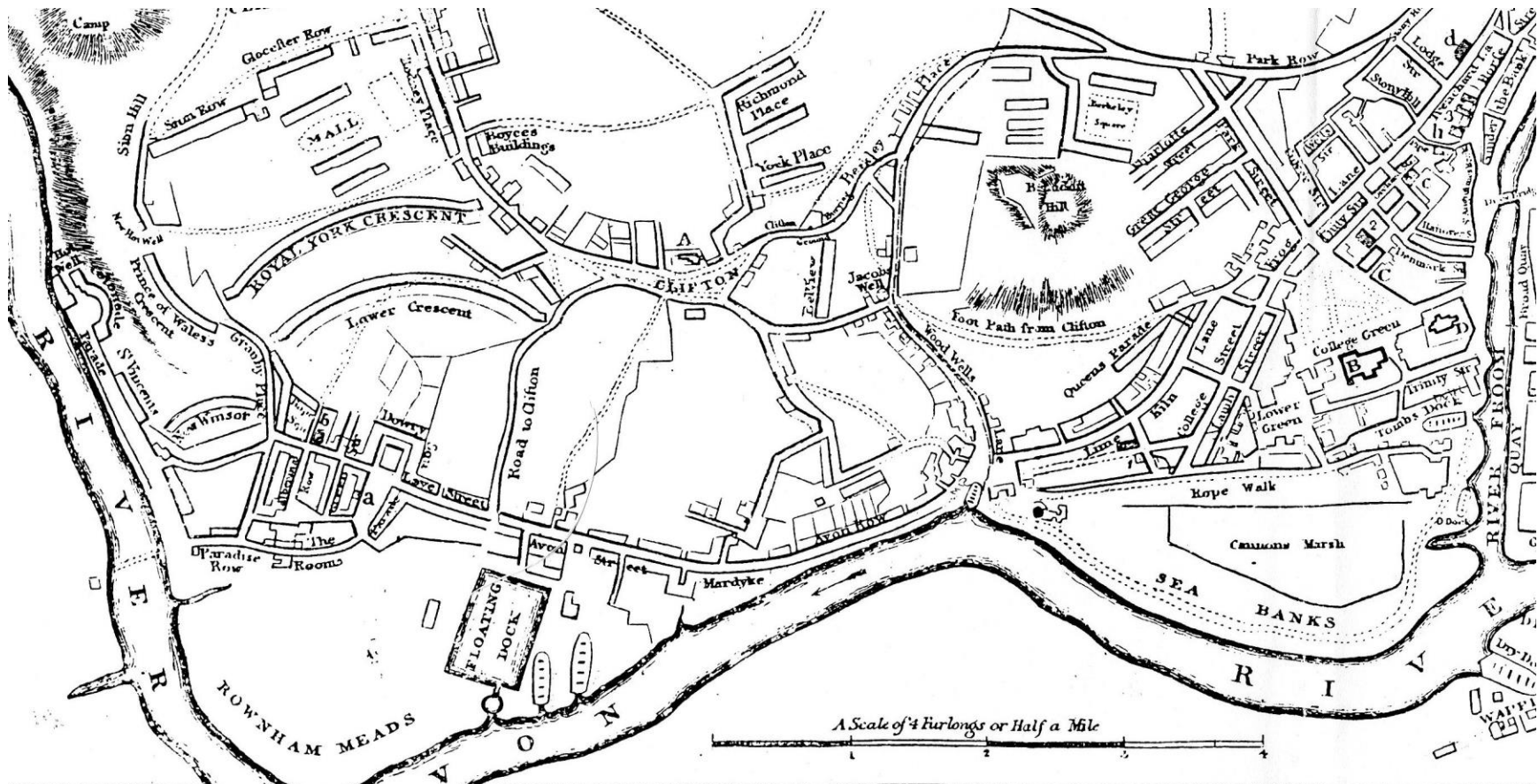
Source. From, A plan of Somerset. B. Donn, 1769. Bristol Museum and Art Gallery Map, 769.

Illustration 1.005. The Powder House.



Source. Photographed by the author at low tide.

Illustration 1.006. Rownham Meads to Sea Banks.



CHURCHES.

Clifton Church
Cathedral. | I St. Werburgh's | Q St. Peter's

CHAPELS & MEETING-HOUSES.

a Hotwells Chapel | i Bridge Street Chap. | r New Jerusalem Chu
b Lady Hope's Chap. | k Pithay Meeting | s Temple Chapel

1 Equestrian Theatre

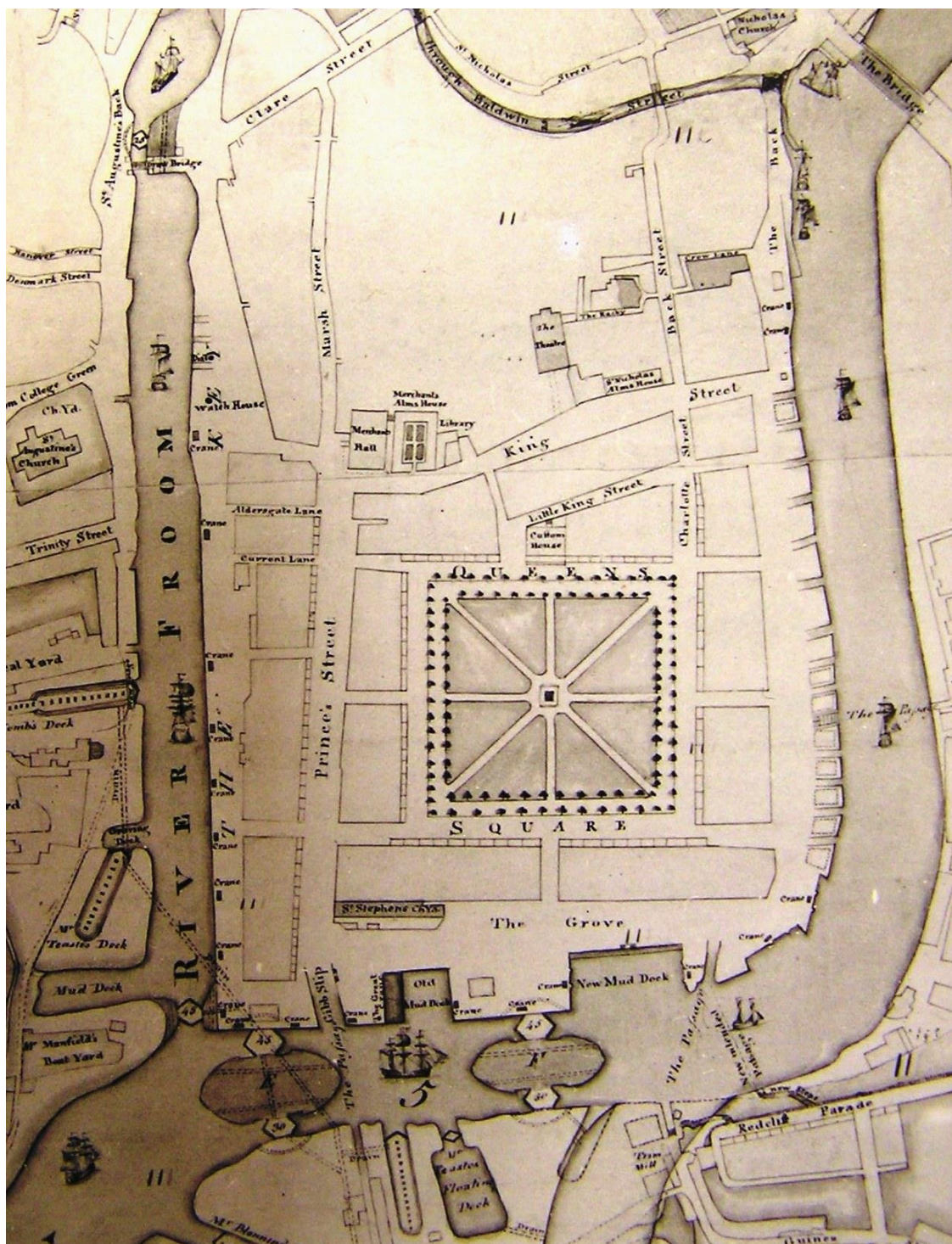
2 Grammar School
3 Colston's School

PUBLIC

10 Excise Office | 18 I
11 Custom House | 19 I

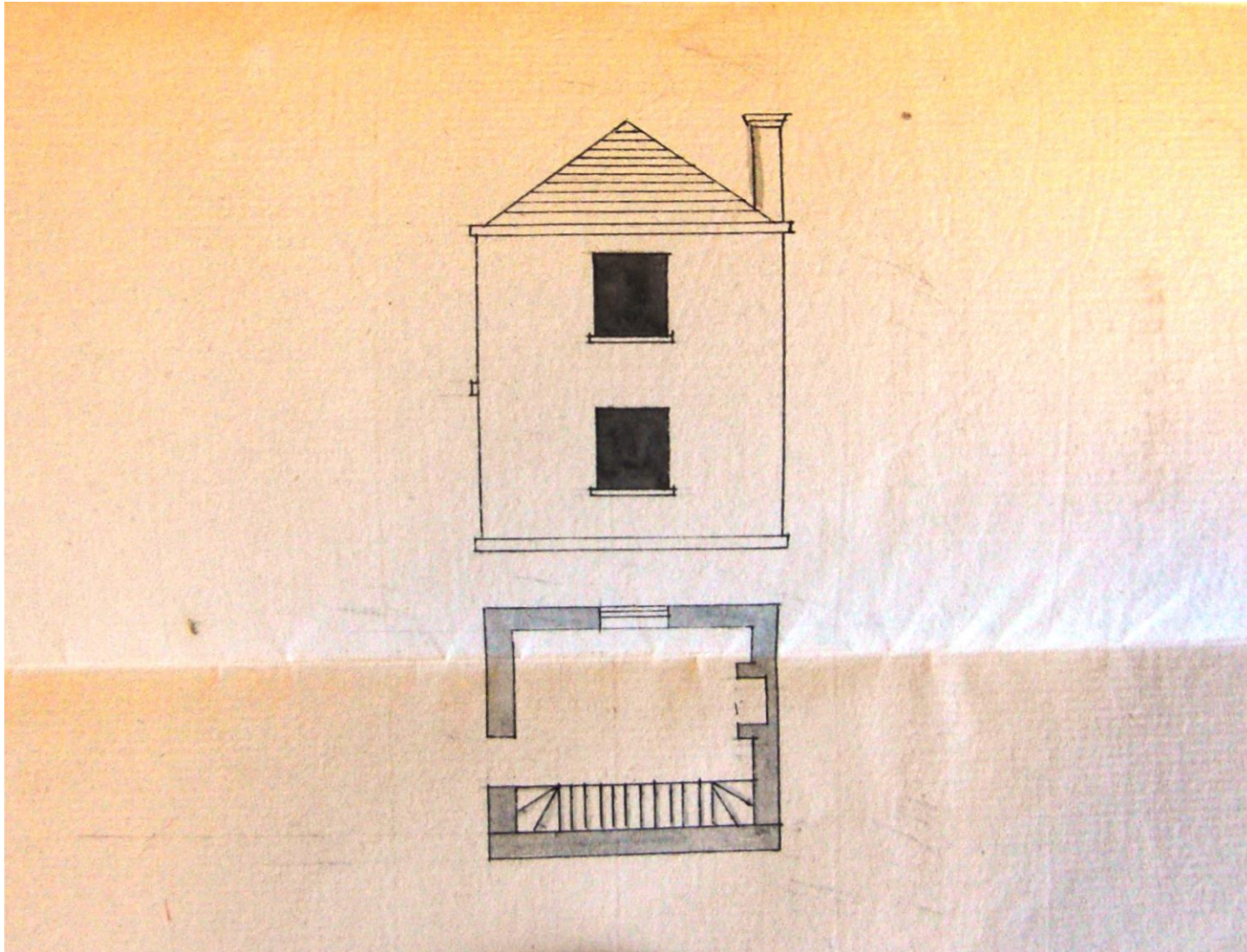
Source. Adapted from Matthew's new and correct plan of the city and suburbs of Bristol including the Hotwells and Clifton and the new buildings down to the year 1794 in Matthews, *Bristol Directory*, 1794.

Illustration 1.007. Richard Tombs plan of April 1792.



Source. Adapted from BRO: 41561/57 Minchinton papers. A plan of two designs for keeping the ships afloat in the harbour of Bristol', Richard Tombs, April 1792.

Illustration 1.008. The Customs House at Merchants' Dock.



Source. SMV/7/1/3/11 Problems attending the use of the floating dock, 1784-91.

Illustration 1.010. A plan of the Bristol Keys by Fernando Stafford, 11 August 1762.

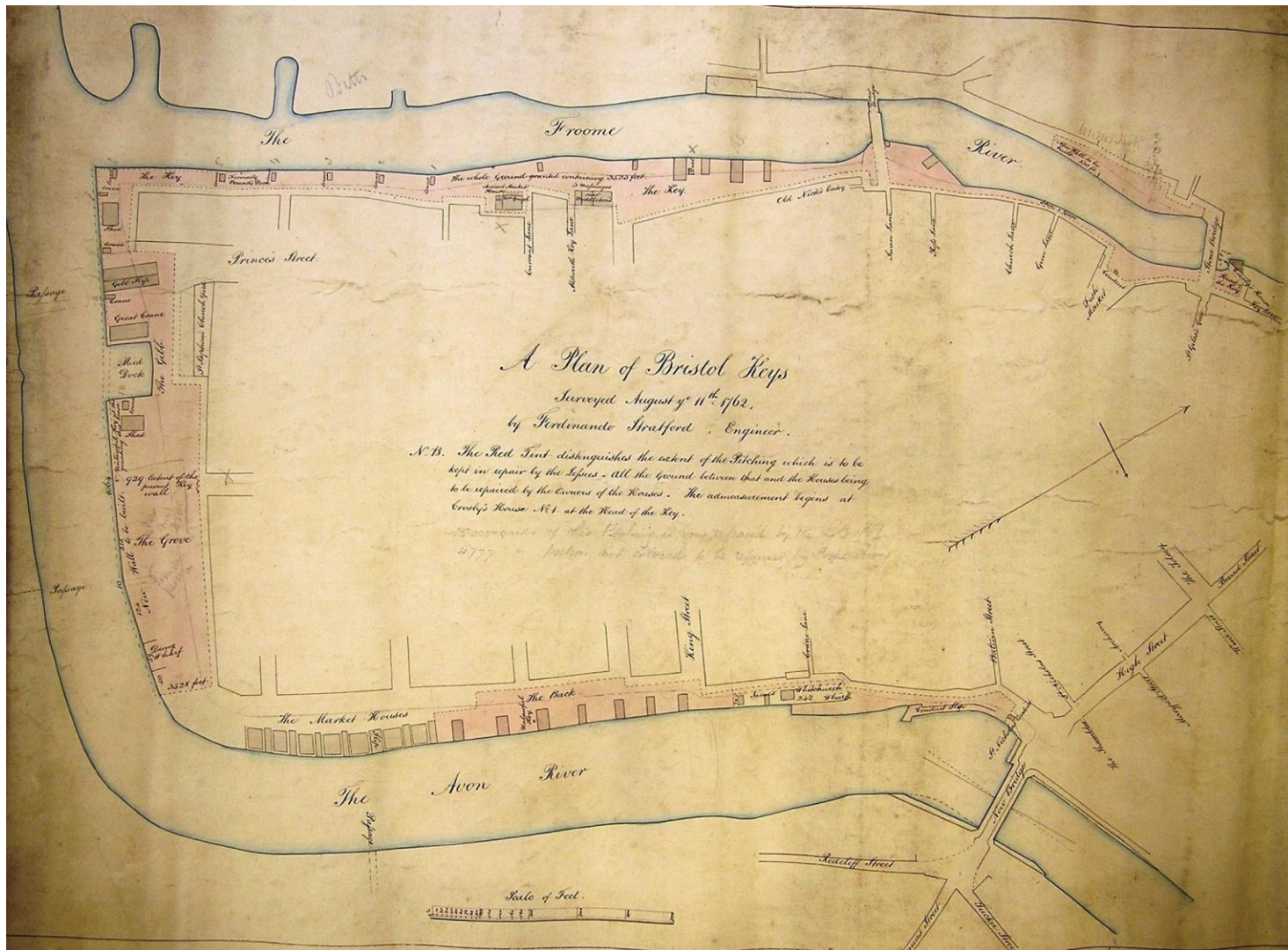
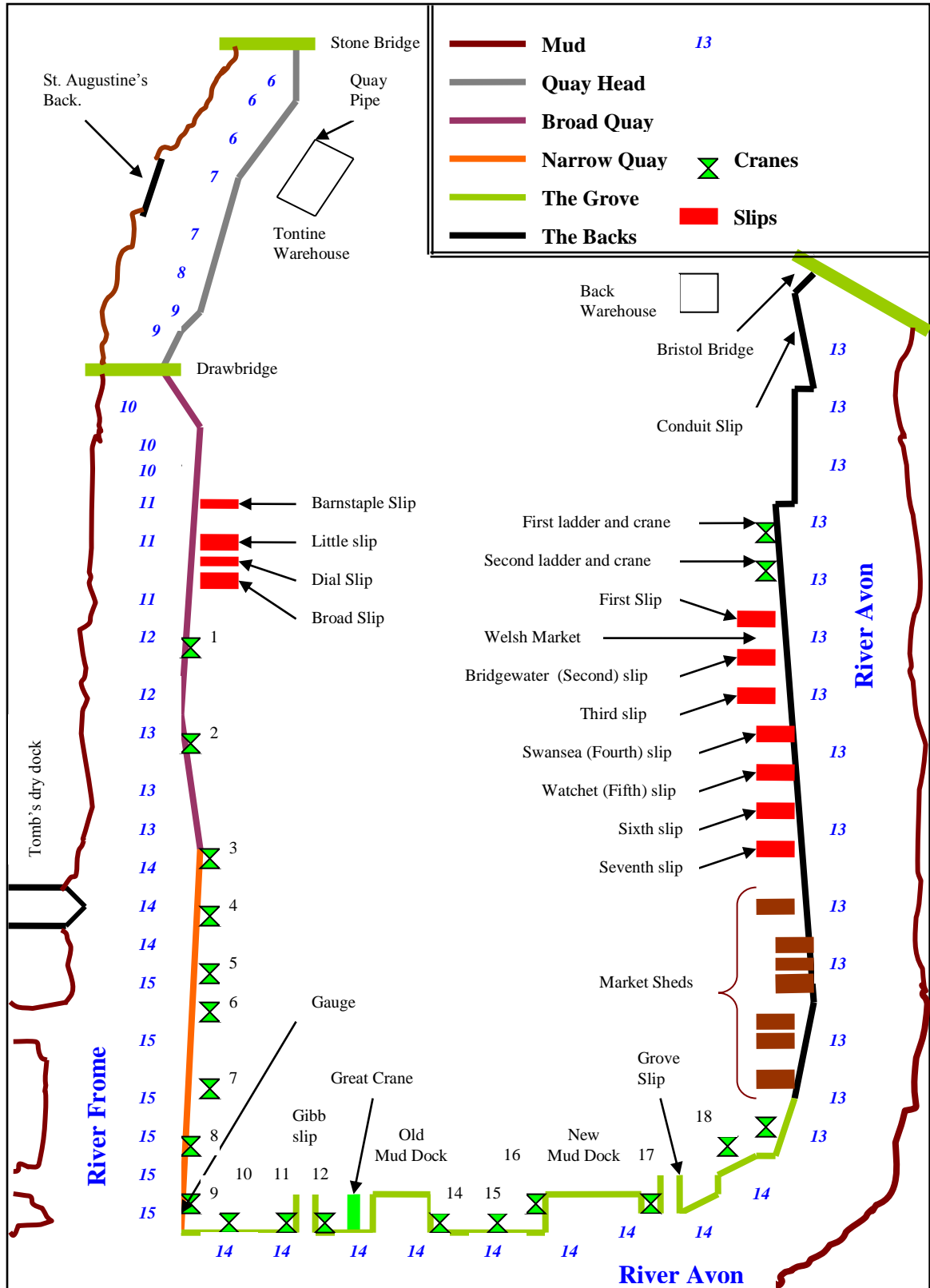


Illustration 1.011. Cranes, slips and water depths, 1792.



Source. Plan showing the depth of water at the Quays and Backs when at a level of 15 feet at the gauge. See discussion Thesis Volume 1, p. 58

Illustration 1.012. *Broad Quay. Version 1.*



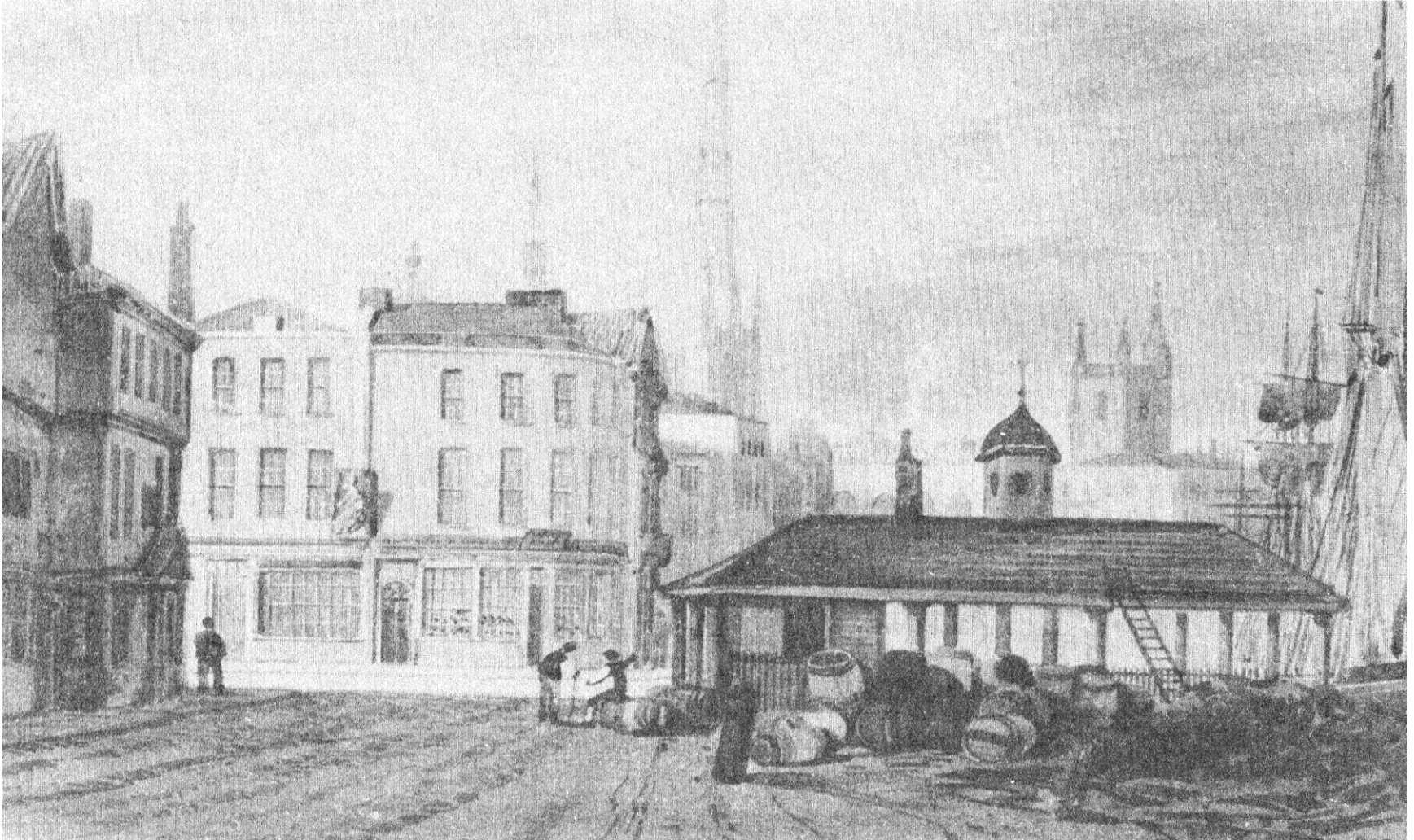
Source. There are two versions of this picture. *Broad Quay* Version 1 is owned by the Bristol Museum and Art Gallery and displayed at Mshed, Bristol.. *Broad Quay* Version 2 is hung at the Society of Merchant Venturers, Bristol. Attributed tentatively to Philip Vandyke.

Illustration 1.013. *Broad Quay. Version 2.*



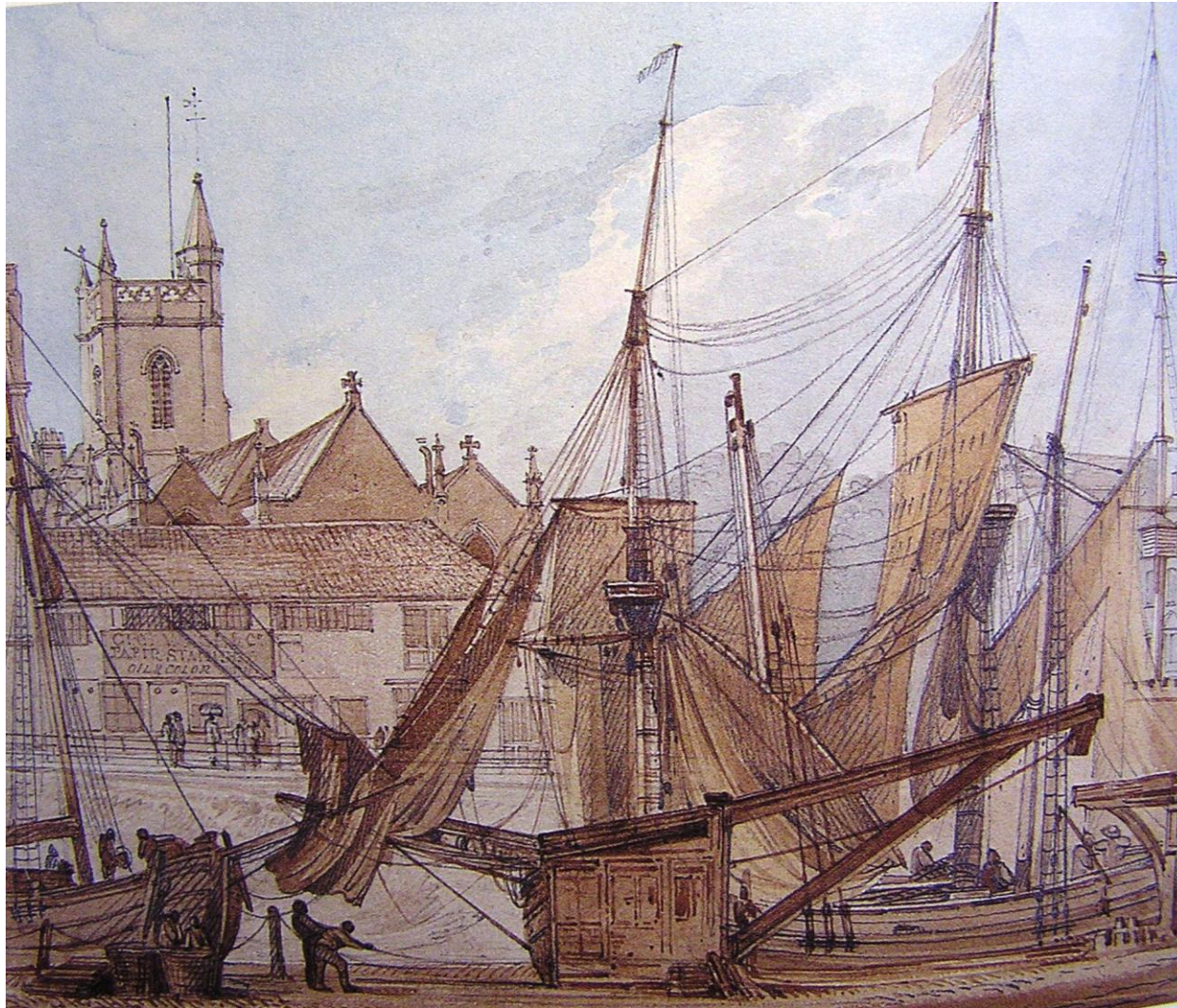
Source. There are two versions of this picture. *Broad Quay Version 1* is owned by the Bristol Museum and Art Gallery and displayed at Mshed, Bristol.. *Broad Quay Version 2* is hung at the Society of Merchant Venturers, Bristol. Attributed tentatively to Philip Vandyke.

Illustration. 1.014. The Welsh or Goose Market, 1825.



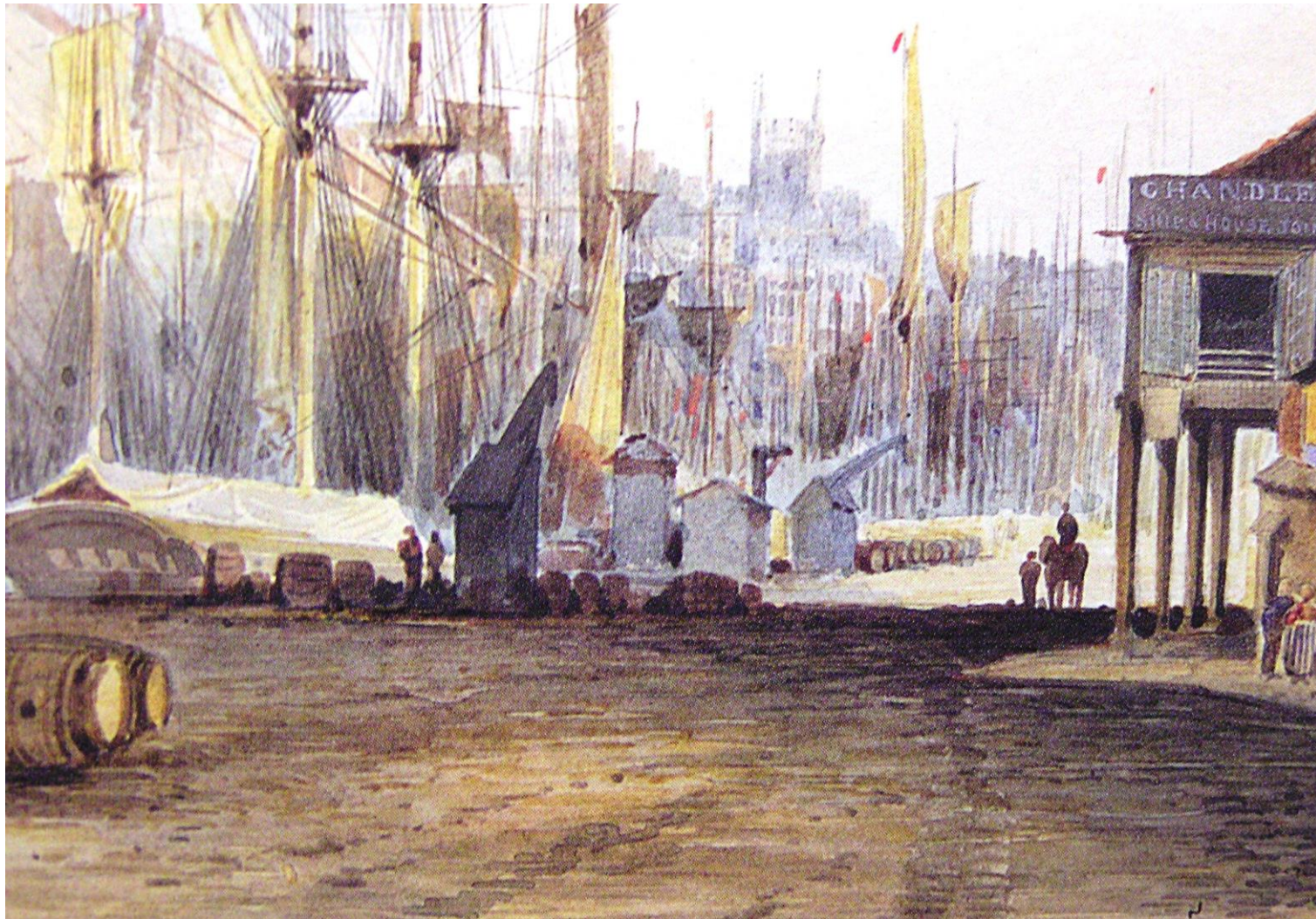
Source. Thomas Rowbotham, 1782-1853. *The Welsh or Goose Market, 1825*. Source Jennifer Gill, *The Bristol Scene: Views of Bristol by Bristol Artists from the collection of the City Art Gallery* (Bristol: Bristol and West Building Society, ND). p. 12.

Illustration 1.015. *St. Augustine's Back*, 1824.



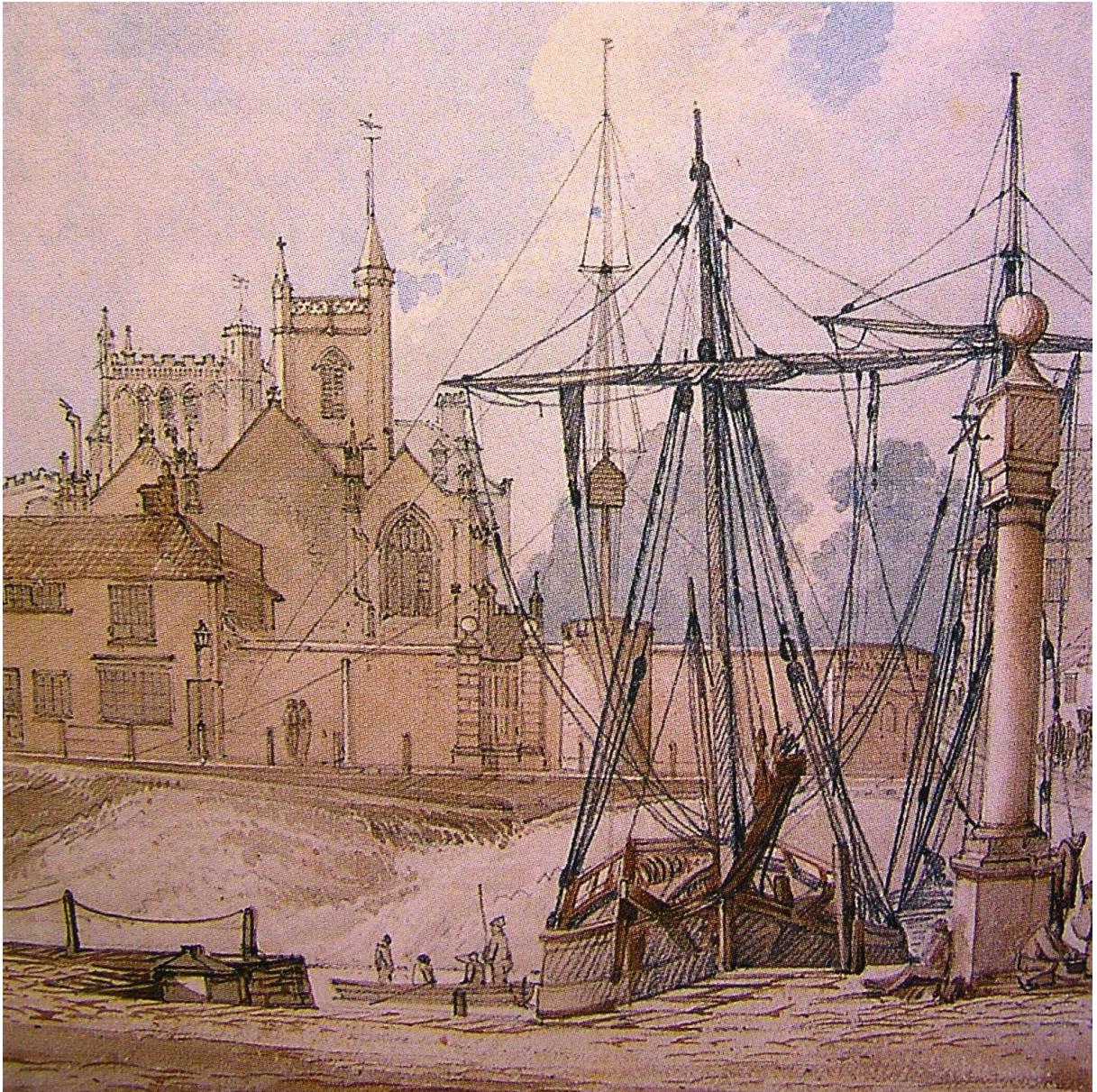
Source. Hugh O'Neil 1774-1824. *St. Augustine's Back*, 1824. Sheena Stoddart. *Bristol before the Camera* (Bristol: Redcliffe Press Ltd., 2001) p. 56.

Illustration 1.016. *The Quay looking north, with the Old Corn Exchange, 1825.*



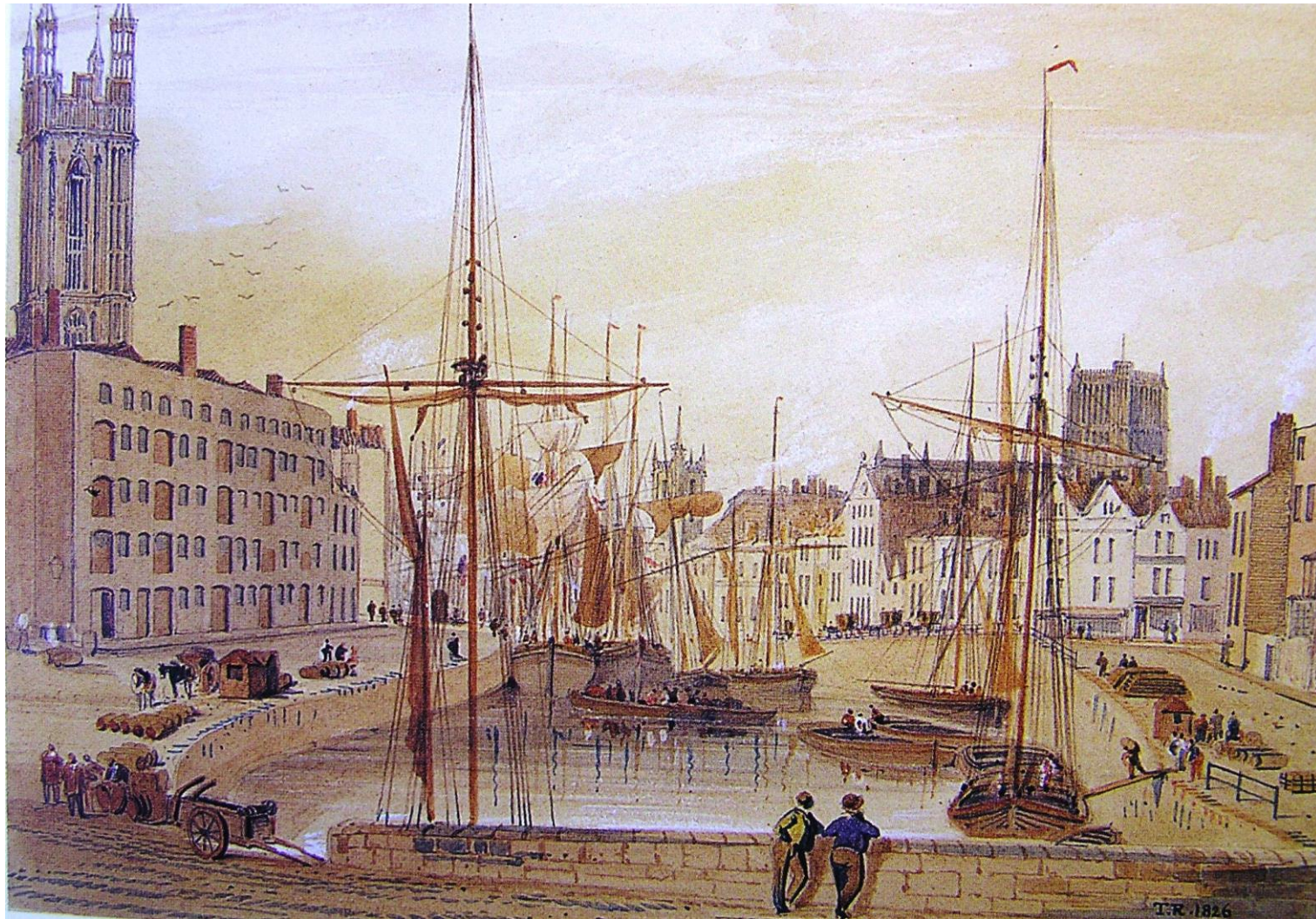
Source. Thomas Rowbotham, 1782-1853. *The Quay, looking north, with the Old Corn Exchange, 1825.* Sheena Stoddart. *Bristol before the Camera* (Bristol: Redcliffe Press Ltd., 2001) p101.

Illustration 1.017. *St. Augustine's Back from Broad Quay, 1824,*



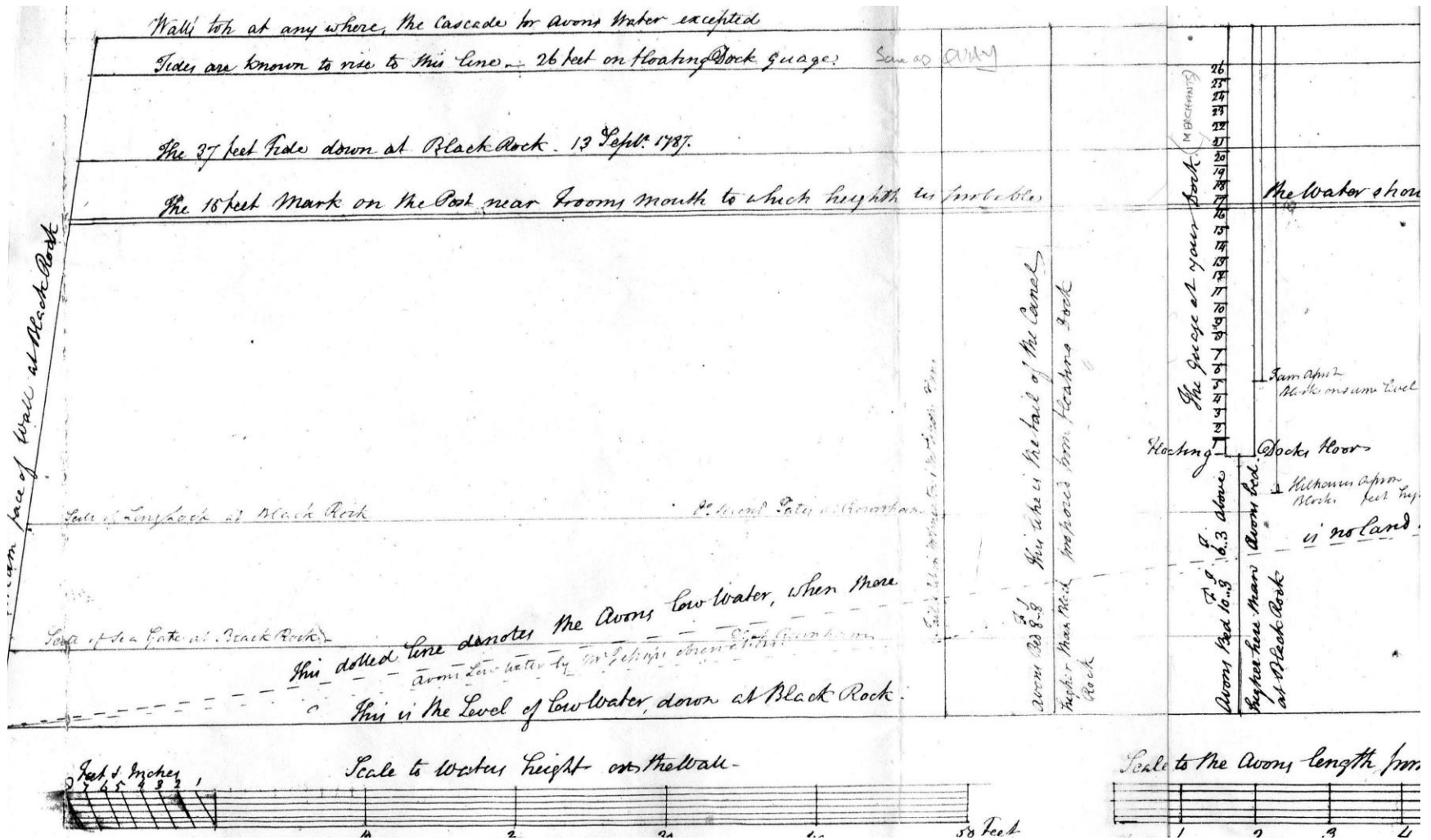
Source. Hugh O'Neil, 1784-1824. *St. Augustine's Back from Broad Quay, 1824.* Source. Francis Greenacre, *From Bristol to the Sea: Artists, the Avon Gorge and Bristol Harbour* (Bristol: Redcliffe Press, 2005) p. 86. Bristol Museum and Art Gallery. M2917.

Illustration 1.018. *St. Augustine's Reach from the Stone Bridge, 1826*



Source. Thomas Rowbotham. 1782-1853. *St Augustine's Reach from the Stone Bridge*. 1826. Source. Francis Greenacre. *From Bristol to the Sea: Artists, the Avon Gorge and Bristol Harbour* (Bristol: Redcliffe Press, 2005) p. 88. M2922.

Illustration 4.001. Section of the river at Black Rock showing level of high and low water.



Source. BRO: 11168/2e Section of the river at Black Rock showing level of high and low water.

Illustration 4.002. Extract from Admiralty Chart.

DEPTHS IN METRES

Depths are in metres and are reduced to Chart Datum, which is approximately the level of Lowest Astronomical Tide.

Heights are in metres. Underlined figures are drying heights above Chart Datum; all other heights are above Mean High Water Springs.

Positions are referred to Ordnance Survey of Great Britain (1936) Datum.

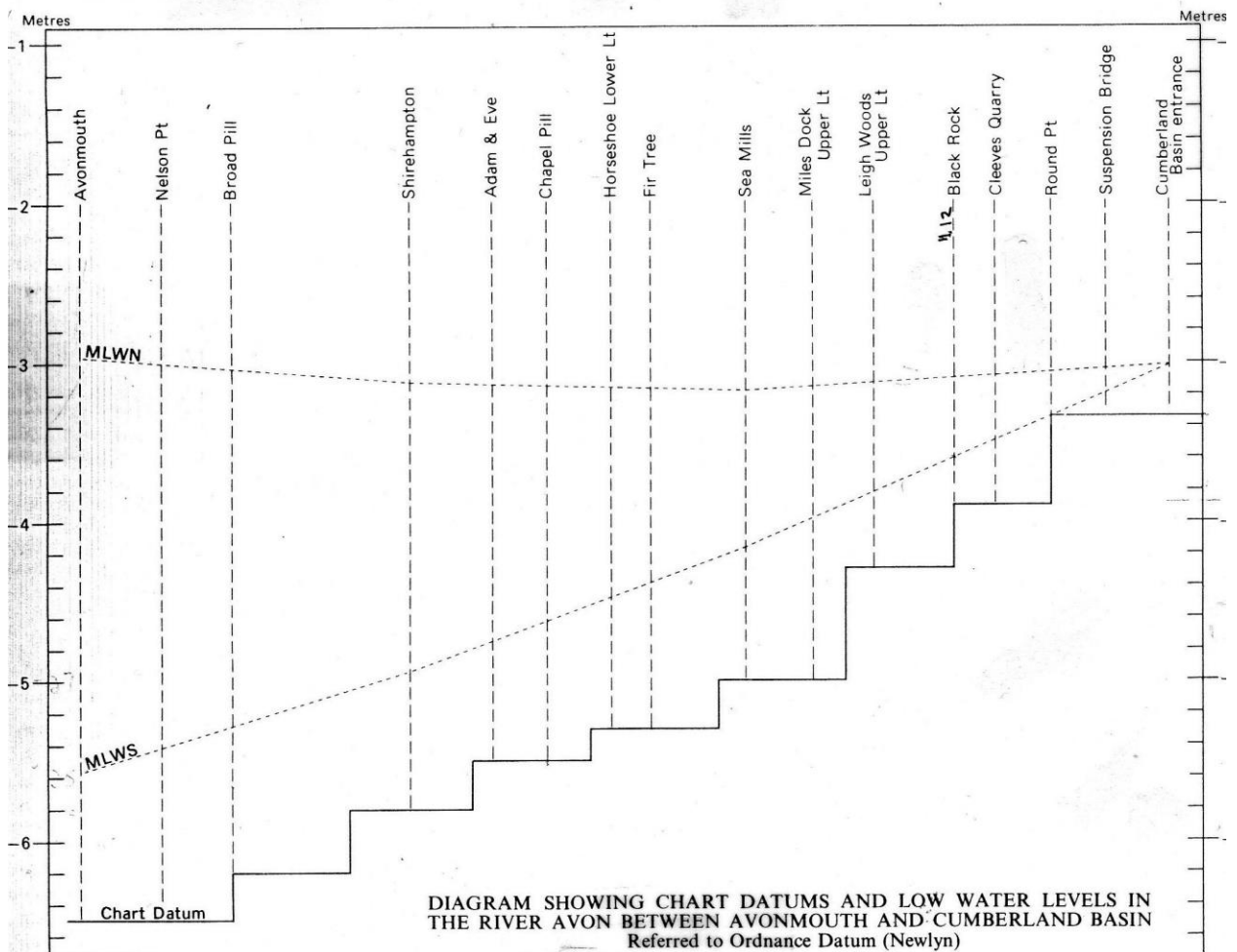
Navigational marks: IALA Maritime Buoyage System — Region A (Red to port).

Projection: Gnomonic.

Sources: The hydrography is derived from surveys by the Port of Bristol Authority, 1963-85. The topography is derived chiefly from Ordnance Survey maps.

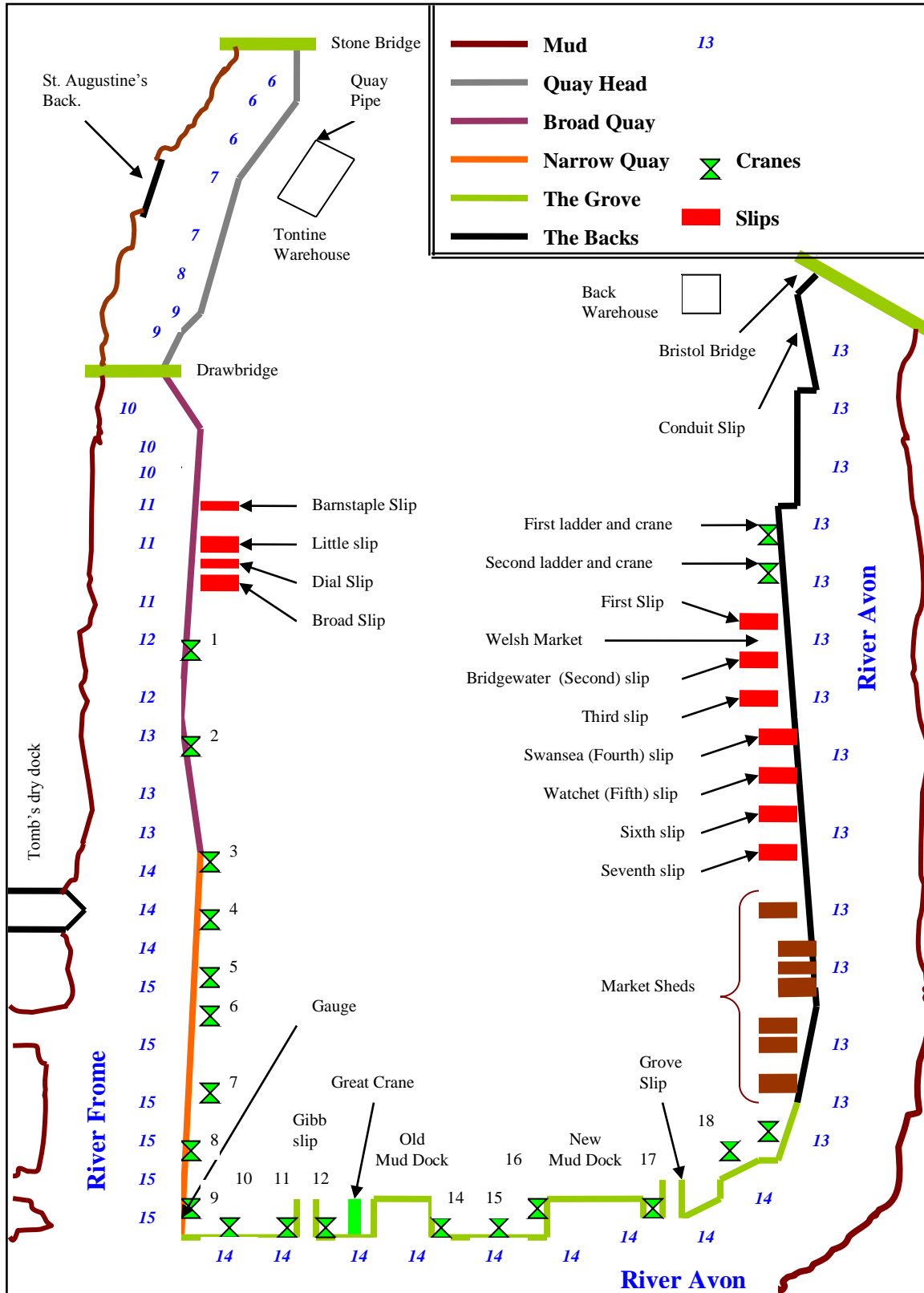
Tidal levels referred to Datum of Soundings

Place	Lat N	Long W	Heights in metres above datum				Datum and remarks
			MHWS	MHWN	MLWN	MLWS	
Portishead	51°30'	2°45'	13.1	9.9	-	-	6.50m below Ordnance Datum (Newlyn)
Avonmouth	51 30	2 43	13.2	10.0	3.5	0.9	5.50m below Ordnance Datum (Newlyn)
R Avon—Shirehampton	51 29	2 41	12.5	9.3	2.7	0.9	5.80m below Ordnance Datum (Newlyn)
Sea Mills	51 29	2 39	11.8	8.5	1.8	0.8	5.00m below Ordnance Datum (Newlyn)
Bristol (Cumberland Basin)	51 27	2 37	10.3	7.0	-	-	3.35m below Ordnance Datum (Newlyn)



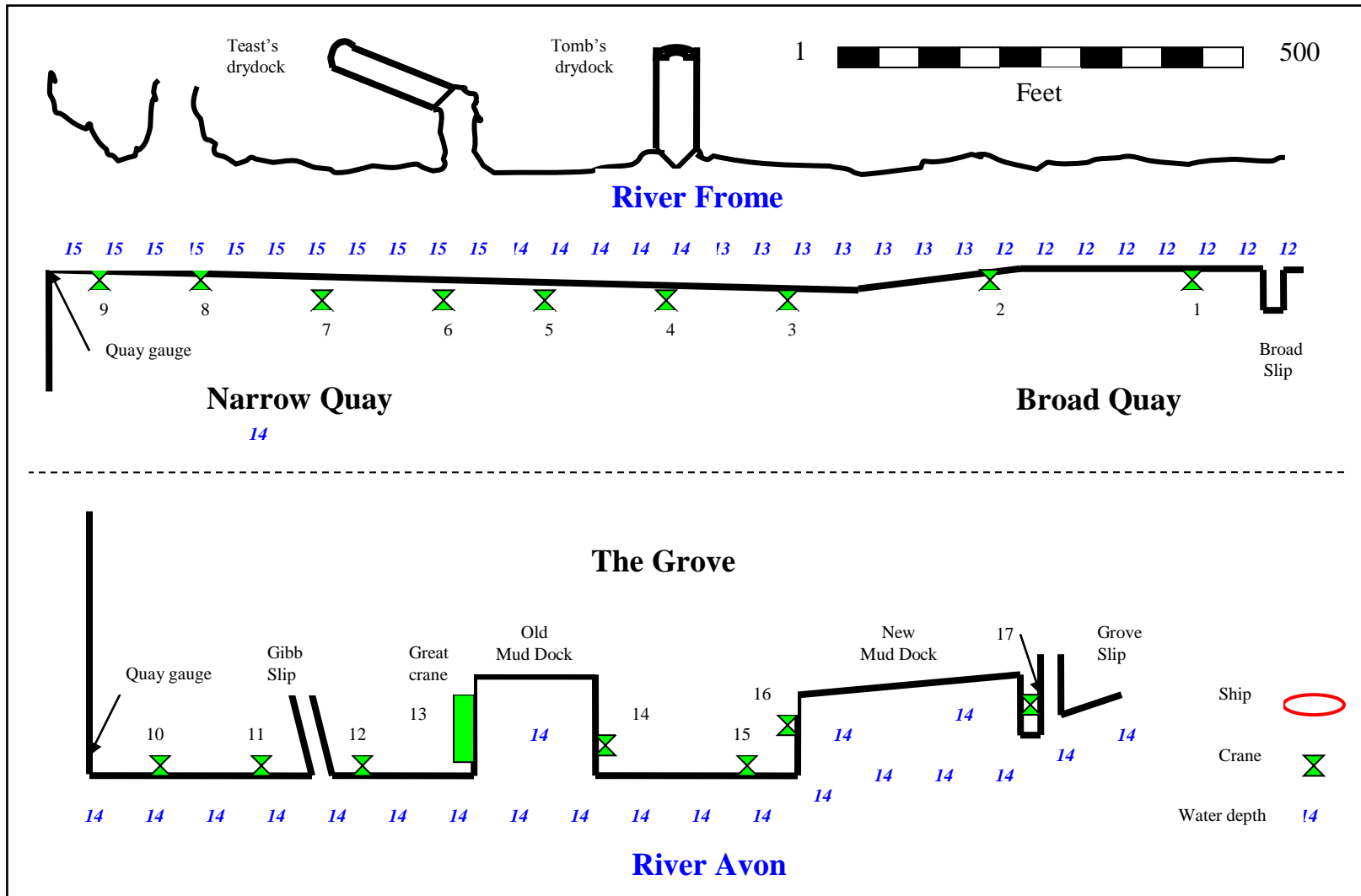
Source. Extract from Admiralty Chart International Series. The Port of Bristol, 1973, reprinted 1986.

Illustration. 4.003. Cranes slips and water depths.



Source. See discussion in Thesis Volume 1. on pp. 58, 182-184.

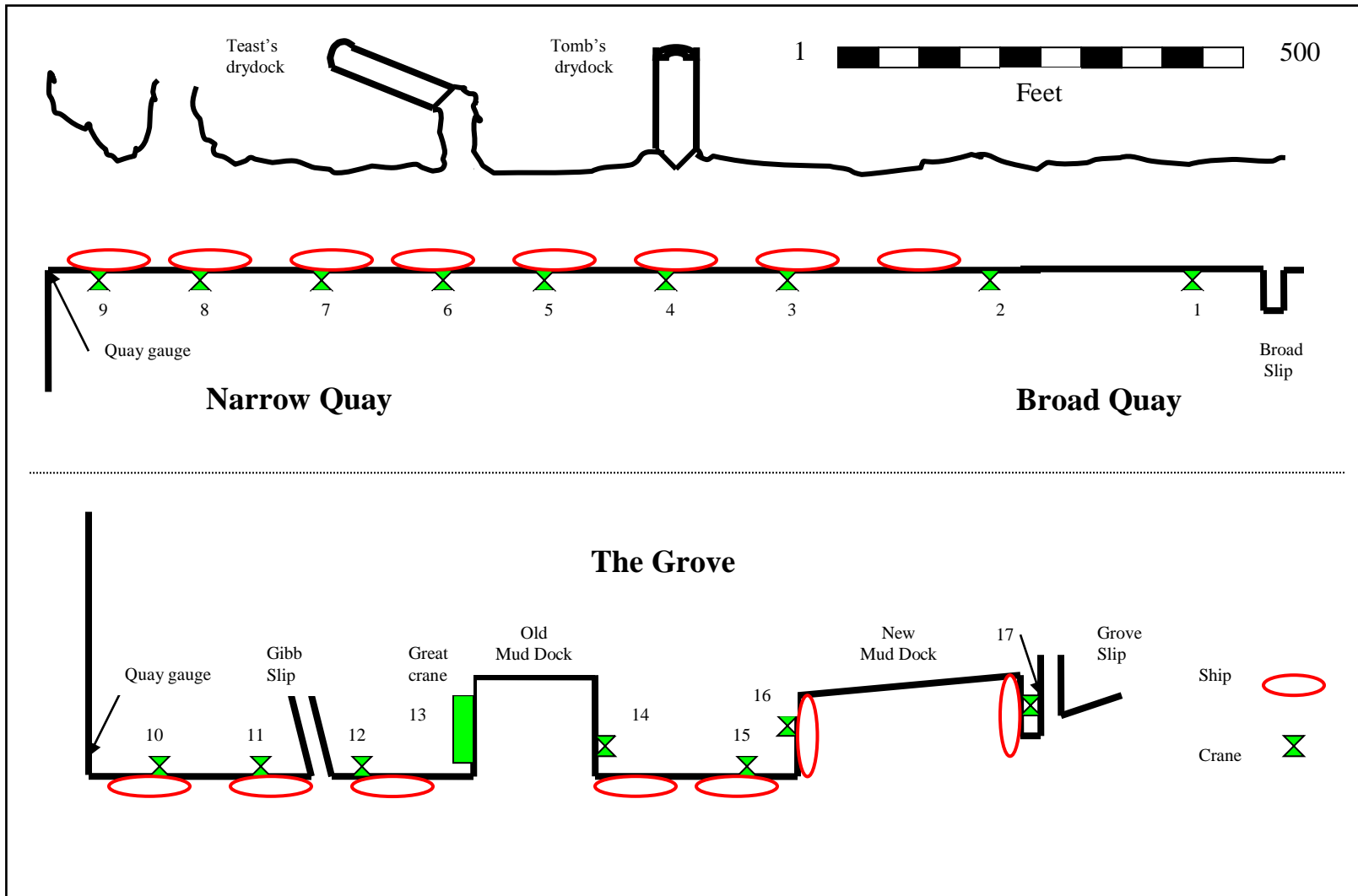
Illustration 4.004. Water depths at the Quays and Grove with relation to the gauge, 1792.



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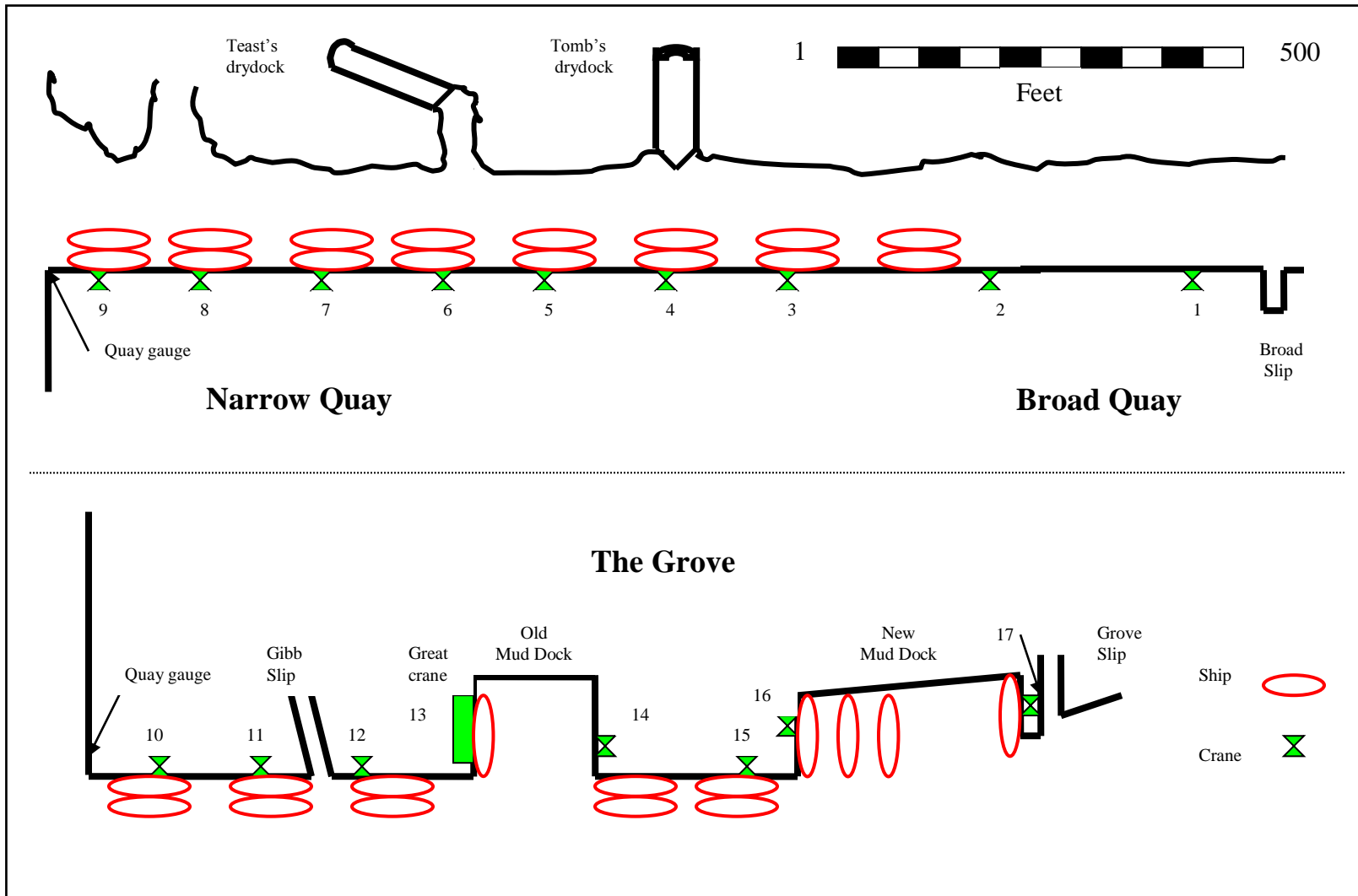
Source. See discussion in Thesis Volume 1. on pp. 182-184.

Illustration 4.005. Shipping at the Quays and Grove at the end of June, 1792.



Source. See discussion in Thesis Volume 1. on pp. 182-184.

Illustration 4.006. Shipping at the Quay and Grove at the end of July, 1792.



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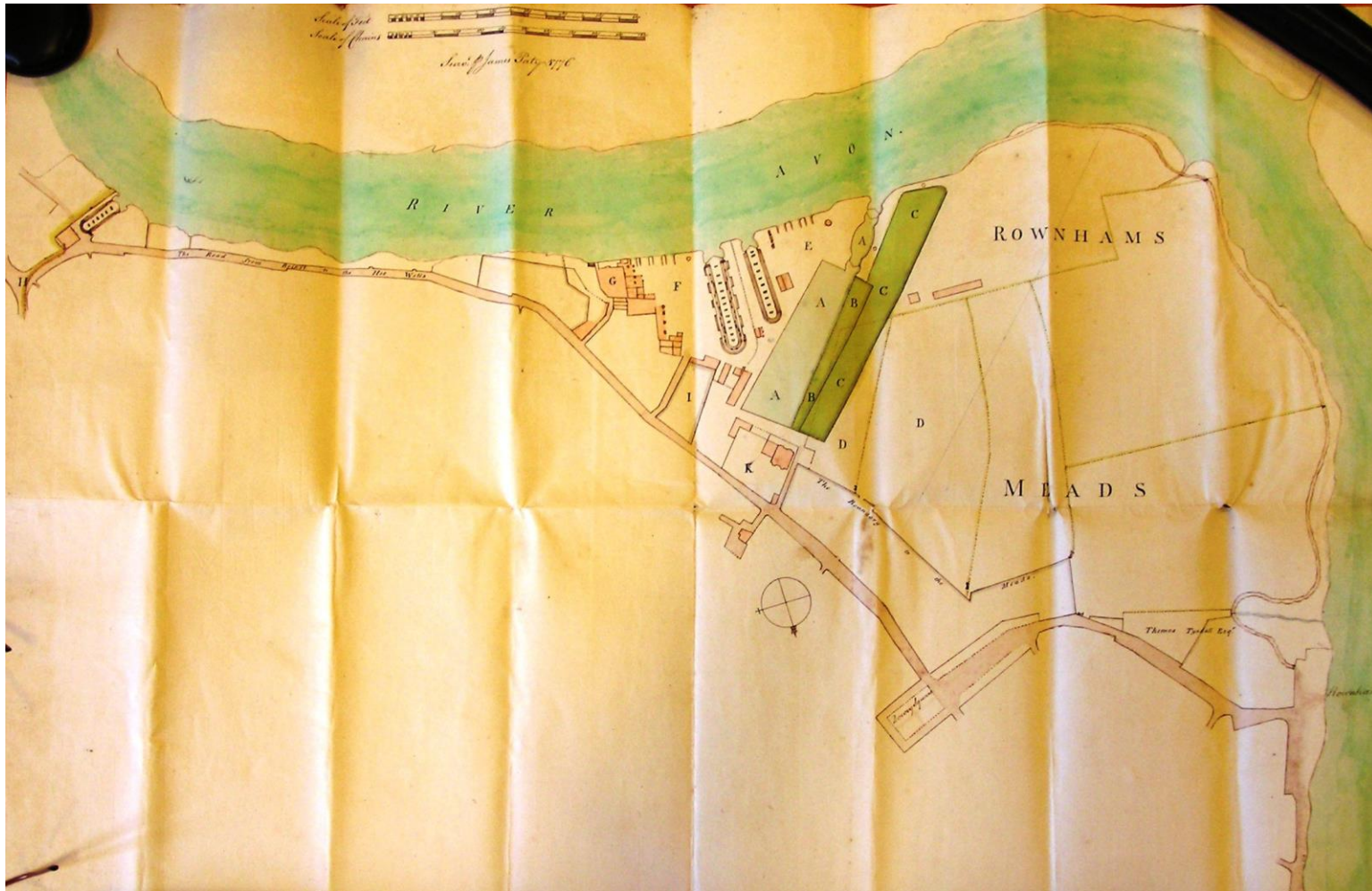
Source. See discussion in Thesis Volume 1. on pp. 182-184.

Illustration 4.007. *Welsh Back from Bristol Bridge, 1895-1900.*



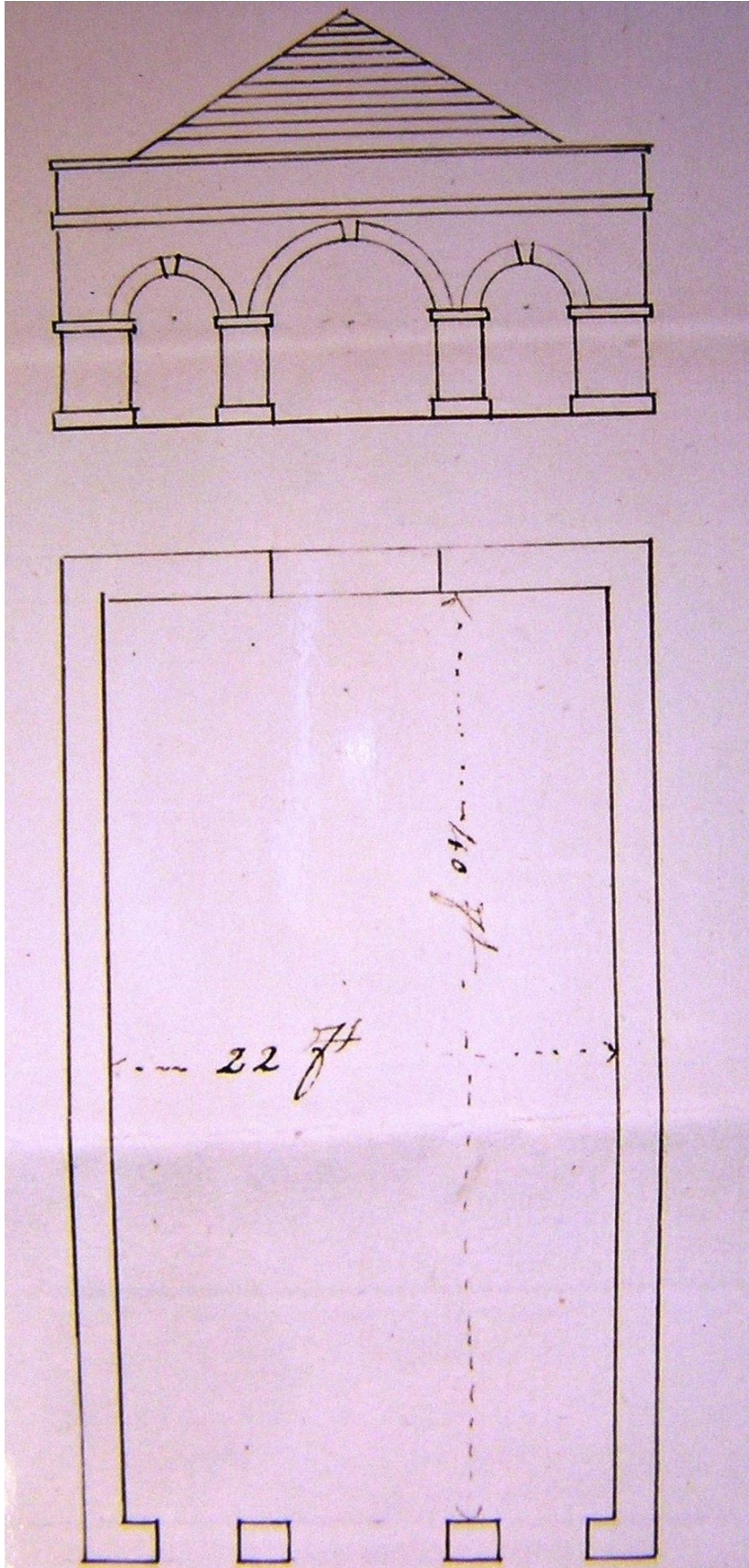
Source. *Welsh Back from Bristol Bridge, 1895-1900.* Port of Bristol Authority, No. 2304

Appendix Illustration 1. Survey by James Paty, 1776.



Source. BRO: SMV/7/1/3/5 (8a) Floating Dock, 1764-1781. Survey by James Paty, 1776.

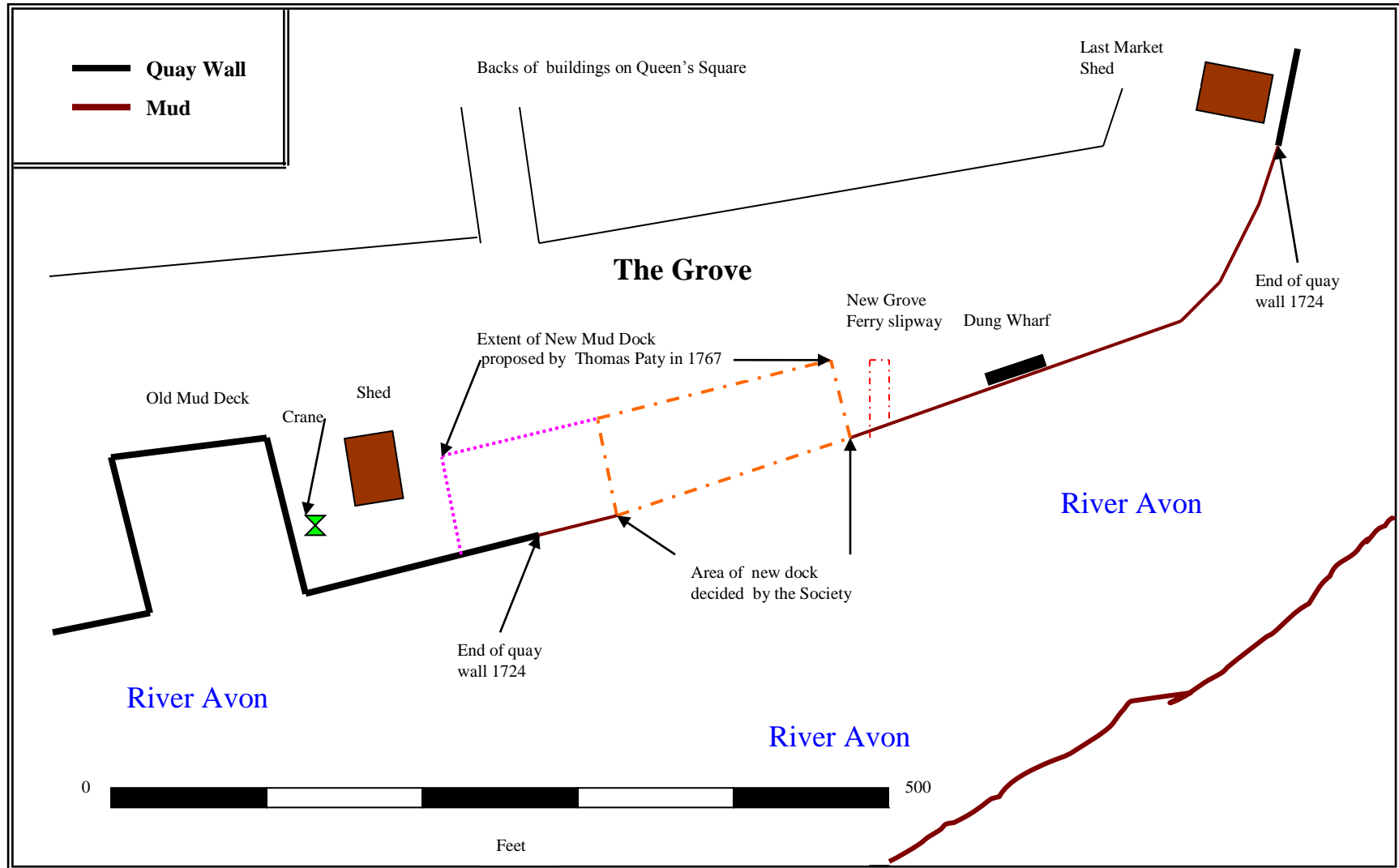
Appendix Illustration 2. The Tar House at Merchants' Dock.



Source. BRO: SMV/7/1/3/10. Estimates for building Tar Houses in Merchants' Dock.

Appendix Illustration 3. The building of the new dock and walls at the Grove

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Source. Hand drawn plan by the author adapted from BRO: SMV/7/1/4/29 A Plan of the Bristol Keys by Ferdinando Stafford, 11 August 1762.

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AC/MU/2/22a-b *Fanny* of Bristol, Master I.P. Devonish. Cork to Barbados. Butter. 29 December 1786.

AC/MU/3/7a-c Voucher for pilotage *Blaze Castle*, 1773.

AC/MU/3/8c Promissory note Capt Richards for seaman's wages on board the *Fanny*, 19 December 1786.

AC/MU/3/8b, 1780. Account, Thomas Richards, Captain of the ship *Fanny* with Samuel Munckley & Co., owners, for costs of disembarkation and other charges. (Master's disbursements *Fanny* 4th Voyage).

11168. Records of the Bright Family.

11168/2e. Section of the river at Black Rock showing level of high and low water.

11168/3y. Letter from Dr Falconer to Richard White saying he had sent his opinion

11168/6a(i-iii) Diary of wind and tide taken at Bristol from 25 March 1792 to 14 March, 1793 by Captain James Jolly at the request of Richard Bright. Only 7 days were recorded in March 1792 and 14 in March 1793.

11168/59 A plan of part of the River Avon and Frome and also sections of the same with proposed dams, locks for the improving of the harbour of Bristol.

11168/27 An Untitled Broadsheet. Plans for improving the Harbour of Bristol. 22nd March, 1796.

11168/47 A Reply to the Answer to the Objections usually raised against the Embankment of the River Avon, 1791.

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04399 Richard Neal Daybook, 1761-64.

04272 Ordinances of the Common Council 1505-1667. Ordinance for Hungrood; A proclamation devised and made for the preservation and maintenance and also for the good order of the Port of Hungrood, 1551.

05077 Register of ships navigating within the City of Bristol exceeding 13 ton. 1795-1802.

6787 Book of the Porters Company, 1671-1799.
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 39654/1 Voyage Accounts for the *Ruby*, 1758-1763.
 39654/2 Voyage Accounts for the Swift, 1759-60; *Sally*, 1767-72; *Nevis Planter* 1770-75.
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 SMV/2/1/1/10. Merchants' Hall Book of Proceedings. Vol. 10. 1772-1782.
 SMV/2/1/1/11. Merchants' Hall Book of Proceedings. Vol. 11. 1782-1789.
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10 Anne. Cap 8. An Act for making the River Avon in the Counties of Avon and Somerset, navigable from the City of Bath to or near Hanham Mills.

2 Geo II c. 36. An Act for the better regulation and government of seamen in merchants service: Made perpetual by 2 Geo. III c. 31: Desertion of Seamen Act, 37 Geo III, c 73, sect 1.

22 Geo II cap. 20. An Act for making more effectual an Act [11 and 12 William III c. 23] for the better preserving the navigation of rivers Avon and Frome; and for cleansing, paving, and enlightening the streets of the City of Bristol, so far as the same act relates to the paving and enlightening of the said streets; and for regulating hackney coachmen, halliers, draymen and carters and the markets, sellers of hay and straw within the said city and liberties thereof.

16. Geo III c.33. An Act to remove the danger of fire amongst the ships in the port of Bristol by preventing the landing of certain commodities on the present quays; and for providing a convenient quay and proper places for landing and storing the same; and for regulating the said quay, and the lighters, boats and other vessels carrying goods for hire within the said Port of Bristol and for other purposes therein mentioned.

26 Geo. III c.60. An Act for the further increase and encouragement of Shipping and Navigation.

28 Geo. III c. 65. To the hazard, hindrance, and obstruction of the navigation of ships and vessels trading to the said city [Bristol].

29 Geo. III c. 68. As part of this Act, the Commissioners of Customs were allowed to fix the berths where tobacco might be unloaded in any port.

35 Geo III c.35. An Act for requiring all boats, barges and other vessels of certain descriptions used in inland navigations in Great Britain to be registered.

35 Geo III c.90. An Act for regulating the shipping and carrying of slaves in British vessels from the coast of Africa: Before this act was passed, a series of continuation acts giving the same quantities were passed following 29 Geo III. An Act to regulate for a limited time the shipping and carrying of slaves in British vessels from the Coast of Africa.

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<http://www.transportation-dictionary.org/Shipping-Dictionary/>

[<http://www.oxforddnb.com/view/article/27751>, accessed 7 April 2016]

Glossary.

Anchor stock - a wooden bar at the upper end of an anchor shank.

W.H. Smyth, *Sailor's Word Book: An Alphabetical Digest of Nautical Terms* (London 1867, republished Conway, 1991), p. 39.

Average - the law of general average is a legal principle of maritime law according to which all parties in a sea venture proportionally share any losses resulting from a voluntary sacrifice of part of the ship or cargo to save the whole in an emergency. http://en.wikipedia.org/wiki/General_aver ; See also *Falconer's Dictionary*, p.26.

Beams - strong thick pieces of timber stretching across the ship from side to side to support the decks and retain the sides at their proper distance.

Burney, William, ed., *Falconer's New Universal Dictionary of the Marine* (London 1815, republished, 2006), p. 36.

Binnacle - a wooden case or box that contains the compasses, log glasses, watch glasses and lights to show the compass at night.

Falconer, p. 40.

Blocks, Elm - solid pieces of timber placed under the keel of a ship, the upper pieces are generally free from knots, especially the foremost one being the splitting ones for launching a ship.

Falconer, p. 45-46.

Board - all timber sawn to less thickness than plank such as under one inch and may be distinguished thus. Beach, elm, fir, oak, sheathing and wainscot.

Falconer, p. 46.

Bolt-rope - rope to which the edges or skirts of sails are sewn to prevent them from rending.

Falconer, p. 50.

Boom-irons - two iron rings formed into one piece so as to resemble a figure of eight. Used to connect two cylindrical pieces of wood together when one is used as a continuation of the other.

Falconer, p. 51.

Branch pilot - one possessing a licence, commission, or certificate of competency issued by the proper authority.

<http://thelawdictionary.org/branchpilot/>

Breaming - burning off filth such as grass, ooze, shells or seaweed from a ship's bottom that has gathered to it in a voyage or by lying long in harbour.

Falconer, p. 56.

Bright-smith - a person who works with polished or plated metalwork especially the exposed and often decorative metal parts of ships.

Bung cloth - bung cloth is a square piece of cloth that is put over the hole of a cask and then the bung inserted. It ensures a good seal.

Cable - a thick, strong rope or chain which serves to keep a ship at anchor.
Smyth, p. 150.

Caboose - the cook-room or kitchen of merchantmen on deck: a diminutive alternative for the galley of a man-of-war. It is generally furnished with cast-iron apparatus for cooking.
Smyth, pp. 152-153.

Calk - to drive a quantity of oakum or old ropes untwisted and pulled asunder into the seams of the planks in the ship's decks or sides in order to prevent the entrance of water, After the oakum it is covered with hot melted pitch or rosin, to keep it from rotting.
Falconer, p. 65.

Can hook - an instrument used to sling a cask by its staves.
Falconer, p. 66.

Careening - the operation of heaving the ship down on one side, by the application of strong purchase to her masts which are properly supported for the occasion, to prevent their breaking with such great strain: by which means one side of the bottom being elevated above the surface of the water.
Falconer p, 75.

Clayeds, clayed sugar - to improve the whiteness of the sugar, repeated applications of a solution of white clay dissolved in warm water was applied to the broad end of the loaf.
<http://en.wikipedia.org/wiki/Sugarloaf>

Comb pilot - noted in the accounts and Hall Books as the term for an Ilfracomb pilot.

Cord (of firewood) - a statute stack is 8 feet long, 4 foot broad and 4 foot high.
Smyth, p. 213.

Cringle - small hole formed in the bolt-rope of a sail.
Falconer, p. 111.

Crutches - support for the main boom of a sloop, brig or cutter when sails are furled.
Falconer, p. 112.

Cutwater - the foremost part of a ship's prow.
Falconer, p. 116.

Deal - plank 14ft long by 8 or 9 inches wide; Pieces of timber in form and thickness exactly similar to plank, but the term is applied to fir timber only.
Falconer, p. 118; Smyth, p. 532.

Deal-ends - planks less than 6ft long.
Smyth, p. 237.

False keel - fitted under the keel of a ship to preserve it from friction. Usually made of elm; A kind of supplemental or additional keel secured under the main one, to protect it should the ship happen to strike the ground.

Falconer, p. 114; Smyth, p. 288.

Forelocks - little flat pointed wedge of iron used to drive through a hole in the end of a bolt to hold it firmly in place and prevent it drawing.

Falconer, p. 157.

Furze - another name for *Gorse*. A shrub used as kindling to burn off old paying composition from the bottom of wooden ships.

See Falconer, p. 56, under Breaming.

Gaff - a sort of boom used to extend the upper part of the mizzen sail.

Falconer, p. 162.

Gorse - species of evergreen European shrub of the pea family. See *Furze*.

Robert Allen, ed., *The New Penguin English Dictionary* (London, 2001) p. 602.

Halling - modern spelling haulage being the carrying of goods by land or towing of ships from place to place in the port.

Hand-screws - a box of elm containing cogged iron wheels of increasing powers, the outer one which moves the rest is put in motion by a winch on the outside and is either single or double according to its increasing force.

Falconer, p. 436.

Harness tub (cask) - a large conical tub for containing the salt provisions intended for present consumption; Harness casks were made in various sizes to hold from 1 to three cwt. They were straight sided with the larger head at the bottom. The top head was hinged with a hasp and staple so it could be locked keeping contents safe from rats and thieves.

Smyth, p. 368; Kilby, Ken, *Coopers and Coopering* (Buckinghamshire: Shire Publications, 2004). p. 34.

Knees - crooked pieces of timber having two branches or arms and generally used to connect the beams of a ship with her sides.

Falconer, p. 210.

Marline - particular form of small line, composed of two strands twisted very little. Here it is both tarred and white marline.

Falconer, p. 261.

Mess beef - From seventeenth to the nineteenth century beef was graded according to the weight of cattle, the best being 'mess' followed by cargo and then small beef. Bertie Mandelblatt, 'A Transatlantic Commodity: Irish Salt Beef in the French Atlantic World' *History Workshop Journal*, 63 (2007), pp. 18-47.

Musco, - a dark raw sugar produced on the plantations by initial boiling of the fresh cane juice.

<http://en.wikipedia.org/wiki/Sugarloaf>.

Oakum - rope picked to pieces for caulking.
Falconer, p. 322.

Pay a ship's bottom. - to cover it with a combination of materials, such as tallow, sulphur or resin or tar mixed with hair, or brown paper dipped in tar and oil.
Falconer, p. 340.

Pitch, black - tar and coarse resin boiled to a fluid yet tenacious consistence. It is used in a hot state with oakum in caulking the ship to fill the chinks or intervals between her planks.
Smyth, p. 530.

Pitch, stone - mineral pitch from the ground.
Falconer, p. 345.

Plank - thick boards 18ft long at least, from 1½ to 4 inches thick, and 9 or 10 inches broad; Strong boards from 1-4 inches thick cut from various wood especially oak, pine and fir.
Smyth, p. 532. Falconer, p. 347.

Plantain - a green-skinned fruit, resembling a banana but more angular in form, that is a staple food in many tropical regions.
New Penguin English Dictionary, p. 1065.

Plate - a small piece of iron or tin used on various occasions in a ship to strengthen the part to which it is fastened.
Falconer, p. 347.

Primage - a small allowance paid by the shipper or consignee of goods to the master of a merchant vessel for loading the same.
Falconer, p. 352.

Pursership - a payment to the ship's husband for administering a ship.

Quarter - a term given to any piece of oak or fir timber that is 2 ½ inches by 3, or 3 inches by 4 and from 10 to 40 ft in length. It is used for various purposes in a ship.
Falconer, p. 375.

Quarter gallery - small balcony on the quarter of a ship.
Falconer, p. 376.

Quarter-piece - pieces of timber at the after-part of the quarter gallery near the taffrail.
Falconer, p. 376.

Riggers - men employed on board ships to fit the standing and running rigging or to dismantle them.
Smyth, p. 573.

Rope - composed of hemp, hide, wire, or other stuff spun into strands, which twisted together forms the desired cordage.
Smyth, p. 579.

Rummage - a search by customs officers for smuggled goods.
Smyth, p. 585.

Taffrail - the carved work at the upper part of a ship's stern.
Falconer, p. 529.

Sheathing - a sort of casing or covering nailed all over the outside of a ship's bottom to protect the planks from the pernicious effects of worms, particularly in hot climates.
Falconer, p. 451.

Shores - props or stanchions fixed under a ship's side or bottom, to support her on the stocks or when laid on the blocks in the slip.
Falconer, p. 467.

Small stuff - the term for spun-yarn, marline and the smallest kinds of rope, even for yarns.
Smyth, p. 634.

Spar - large round pieces of timber fit for making top masts.
Falconer, p. 491.

Spile - a stake or piece of wood formed like the frustum of a cone. A vent-peg in a cask of liquor. Small wooden pins which are driven into nail holes to prevent leaking.
Smyth, p. 642.

Spun-yarn - made of two or three old rope-yarns twisted together on a winch. General purpose small rope.
Falconer, p. 496.

Stage - a machine composed of plank let over the sides of a ship by ropes whereupon the people may stand when repairing, caulking or paying the sides.
Falconer, p. 497.

Stanchions - small pillars of wood or iron used for various purposes in a ship.
Falconer, p. 497.

Supertare - an allowance for the pulley and rope used when weighing containers.

Tar - liquid gum of blackish hue procured from pine or fir trees. Difficult to put in barrels as expands in heat and can leak or crack open the barrel.
Falconer, p. 531.

Tare - a deduction from the gross weight of a substance and its container made in allowance for the weight of the container.
New Penguin English Dictionary, p. 1441.

Tarpaulin - a broad piece of canvas payed over with tar.
Falconer, p. 530.

Teredo worm - *Teredo Navalis*. A particular kind of boring mollusk which abounds in the tropics.

Smyth, p. 677.

Thimbles - iron rings whose outer surface is hollowed throughout its whole circumference in order to contain a rope spliced about it.

Falconer, p. 555.

Timber - a general name for felled and seasoned wood.

Falconer, p. 561.

Tree-nails - long cylindrical oak or other hard wood pins driven through planks and timbers of a vessel to connect her various parts.

Smyth, p. 696.

Twine - strong twisted thread. Measured in fathoms to the pound.

Falconer, p. 586.

Wedge - a wedge driven into the inner end of a tree-nail to secure it.

Smyth, p. 696.