

## X

# Underwater Demolition of Wrecks, Tynemouth, 1673

*Robin Plackett*

### SUMMARY

*Severe weather conditions in 1672 caused the streams that fed the River Tyne to overflow, with flooding so great that ships were wrecked and the coal trade dislocated. The Newcastle magistrates obtained advice from a source authorised by Charles II on the use of gunpowder to blow up wrecks, and Edmond Custis undertook to remove two that blocked the main channel. Wenceslaus Hollar drew and engraved a view of the River Tyne that illustrates one such explosion. A dispute between the Town of Newcastle and Edmond Custis about payment came before the Court in Whitehall Palace, when the Masters and Brethren of Trinity House were told to report on the cost and success of the operation. They were denied details of how much the workmen were paid, but found that the wrecks were at least as dangerous after demolition as before.*

### INTRODUCTION

**T**HE DUTCH ATTACK ON THE MEDWAY in 1667 gave rise to national concern, expressed by Samuel Pepys in his Diary<sup>1</sup> for 23 June in that year.

The great misery the City and kingdom is like to suffer for want of coals in a little time is very visible, and it is feared will breed a mutiny; for we are not in any prospect to command the sea for our colliers to come; but rather it is feared the Dutch may go and burn all our Colliers at Newcastle; though others do say that they are safe enough there.

The need to defend the Tyne led to reinforcements being sent under the Earl of Carlisle as Lieutenant General of all military forces in the four northern counties. A volunteer force of over a hundred horse was sent to Tynemouth under Henry Cavendish, Earl of Ogle, then governor of Newcastle, and Lord Widdrington, governor of Berwick. Ogle was once again governor of Newcastle in 1673, when again the Dutch and the English were at war.<sup>2</sup>

There were, however, other problems for colliers at Newcastle, as the Clerk to Trinity House explained in his notice to Gentlemen and Most Honoured Friends, here translated by Richardson<sup>3</sup> from the entry for 10 January 1672 in the Masters and Mariner's books.<sup>4</sup>

This is to give notice to all persons who are concerned in the coal trade in Newcastle upon Tyne, that the late storms and land floods have occasioned such ship wrecks in the aforesaid river, that in the night notwithstanding the lights, the said river is altogether unavigable for ships to enter by the aforesaid lights, some of the wrecks lying in the middle of the channel. Therefore we do certify that it is judged by the Trinity house and others that it is not safe the lights should be lighted in the night until these wrecks in the channel can be removed or otherwise disposed of, lest those ships coming in may prejudice themselves and beget more wrecks which may in a short time make the river altogether unavigable: this is thought fit to signify to your worships by order of our Trinity house.

The removal of these obstructions, and subsequent disputes, is the subject of this paper.

## THE 'HARBOUR OF NEWCASTLE'

Pennington's catalogue<sup>5</sup> of the etched work of Wenceslaus Hollar records two maps of the River Tyne separated by an interval of almost twenty years. They are listed as items 670 and 1284. The first, in 1654, is entitled 'The River of Tyne, / from the Sea on the east to Newcastle on the West ...', and is one of three maps that accompany Ralph Gardiner's book *England's Grievance Discover'd in Relation to the Coal-Trade*.<sup>6</sup> The book has been extensively discussed,<sup>7</sup> and Hollar's map most carefully described.<sup>8</sup>

Hollar's second map of the Tyne is indexed under 'Harbour of Newcastle', and is the more relevant for our immediate purpose. It is mentioned in the following extract from the catalogue of the British Library.<sup>9</sup>

A Brief Relation, and Exact Map [engraved by Wenceslaus Hollar] of the Harbour of New-Castle, near Tinmouth-Barre, since December 1672. When eight ships were overwhelmed by the freshes &c. [Imperfect, wanting the map].  
Printed for the author, Edmond Custis, London 1673.'

According to Pennington, three places held copies of this map in 1982, viz. the British Museum, the Royal Collection at Windsor, and the Hollar Collection in Prague. The copy in the British Museum is still there, having presumably been separated from the 'Brief Relation' when material was transferred to the new British Library in 1997.

In his account of Clifford's Fort, Kear remarked that the fort was 'given that title in an illustration of the mouth of the Tyne drawn by Edmund Custis and engraved by Wenceslaus Hollar in 1673'.<sup>10</sup> Kear's note 15 locates this illustration in the Laing Art Gallery, Newcastle upon Tyne, but the pages listed in that note have not been traced. The details of item 1284 in Pennington's catalogue make clear that this print in the Laing constitutes a fourth copy of the 1673 map. There is no title and, in the absence of any supporting document, the Laing has given its print the title 'Underwater Demolition of Wrecks, Tynemouth, Northumberland'. The description that follows shows that this title is appropriate, also that the contents invite further enquiries.

Size of image: 317 × 413 mm. On the top left, the Royal coat of arms. On the top right, a coat of arms above a cartouche with the following dedication:

To the Right Honourable/HENRY EARLE OF OGLE/ onely Son to the Duke of Newcastle, Gent/  
leman of his Maj: <sup>ties</sup> Bedchamber, one of the Lords/ of his Maj: <sup>ties</sup> Most honourable Privy Councill,  
L:<sup>rd</sup> Liev/ tenant of the County of Northumberland, & of the/ Town & County of Newcastle  
Gouvourner of the Town/ and Port of Newcastle/ is this humbly dedicated by y<sup>e</sup> Author/Edmund Custis.  
Half an English Mile on the scale measures 33 mm [1:24000]. W. Hollar fecit 1673.

The map is a bird's-eye view from above South Shields, looking across the Tyne in a direction 13 degrees West of North according to the compass rose. On the left are South Shields (with *South Salt pannels*) and North Shields, each a mass of small houses, and between them a forest of masts covering the river. Along the crest of the hill behind North Shields are shown *Chirton*, a windmill, *y<sup>e</sup> New Church*, *y<sup>e</sup> Upper Light house*. East of the hill is a gap that contains *y<sup>e</sup> Low Light house* and *Clifford's Fort* (flying the Union Jack). Along the crest of the hill behind the mouth of the Tyne are a windmill, *y<sup>e</sup> Spanish Works*, *Tinmouth Castle* (flying the Union Jack) and *Towne*, *Tinmouth high light house*. In the river below are *y<sup>e</sup> Mussell Scalpe*, *y<sup>e</sup> Pryer Stone*, *Blacke Midens*, *y<sup>e</sup> Rock heade*. *Tinmouth Barr* marks the river mouth, and ships wait outside in *The German Ocean*. Inside the bar are numerous soundings (feet at low water). *Cap<sup>t</sup>*

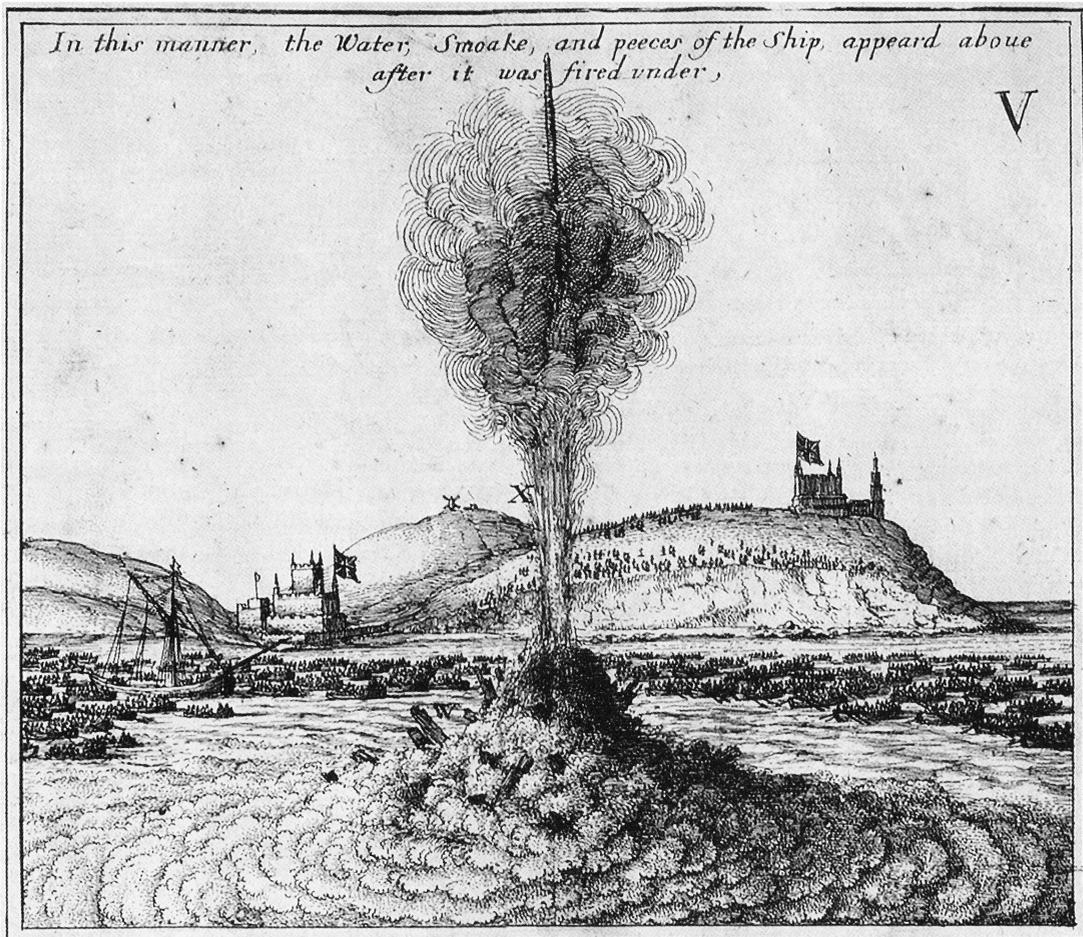


Fig. 1 An underwater wreck is blown up, watched by spectators in boats and at North Shields. Clifford's Fort, and buildings at Tynemouth, are shown.

*Vicars wreck* and *Grays wreck* lie at about one third of the way across from *y<sup>e</sup> Hurd Sand* east of South Shields to the north bank below Tynemouth. Forthcoming events are awaited by large crowds of spectators on both banks. The principal activity is shown inset (letter V). A huge spout of water and pieces of timber rise from the surface of the river, surrounded by a flotilla comprising a sailing ship, presumably a base for operations, and many rowing boats with yet more spectators, who can be seen as individuals with the aid of a magnifying glass (fig. 1). 'In this manner, the Water, Smoake, and peeces of the Ship, appeared above after it was fired under'.

The dedication by 'y<sup>e</sup> Author Edmund Custis' seems to have led Kear to suppose that Custis was the draughtsman, but the ships, houses, and mills that appear in the maps of 1654 and 1673 are evidently by the same hand. Hollar was both the delineator and the engraver. As we shall see, Custis was responsible for the explosions, and he gave an account of what took place. In that sense only, he was the 'author'. Hollar was a great artist who was often dependent on jobbing work for London publishers.<sup>12</sup>

The landscape recorded on Hollar's map of 1673 is viewed from a point much nearer the ground than in 1654. As a result, the land north of the line of hills from Tynemouth to Chirton, containing a dozen villages, cannot now be seen. The mill to the west of the 'New Church' (i.e. Christ Church) must represent Billy Mill, marked in 1654, although it seems too close to the church. The mill between Tynemouth Castle and the Low Light House, also marked previously, must be the origin of the name of Milton, a site somewhere along Mariners Lane but long-forgotten. It preceded the mill at the end of Edith Street, demolished about 1945. The valley of the Pow Burn is prominent, effectively bisecting the panorama. The course of the burn is now obliterated. It runs underneath part of Tynemouth golf course, and supplied water for the ponds in Northumberland Park. The Spanish Works is far less prominent than before, and neither map has any record of Tynemouth Priory. Prior's Stone is wrongly placed northwest of Black Middens, instead of southwest.

### DEMOLITION OF WRECKS

Since the reign of Edward II, the mayor and burgesses of Newcastle upon Tyne were conservators of the river Tyne between 'Hedwin Streams and Sparrow Hawk'; the first was a section of the river immediately above the Tidal Stone,<sup>13</sup> and the second was a long gone shoal or sandbank<sup>14</sup> just off Priors Haven. They took action to remove the wrecks in the channel, as appears from the 'Brief Relation' of Edmond Custis in 1673. A summary follows, and the full text is reproduced in Appendix 1.

Eight ships were overwhelmed by rivers in flood, of which six were easily removed. The other two, namely *Capt Vicars wreck* [K] and *Grayes wreck* [L], fully laden with coal, lead, and stones, sank in the main channel, and the rush of water scoured another channel between and around them. This would have removed them from harms way had they not settled on an outcrop of coal. No other ships could then steer into the harbour by the lights without the risk of colliding with the wrecks. A plan of demolishing the wrecks by exploding a powder-chest placed outside them met with serious difficulties. There were constant changes in tides and wind directions, also whirlpools, storms, and further floods. Too many chests would be required, and the fuses might not burn to the bottom. At this stage, the Magistrates of Newcastle reported their difficulties to the King, and were provided with a new way whereby a fireball conveyed within a hollow mast could explode a chest on the riverbed. The account ends with speculations consonant with the scientific activities of the period about the appearance of water, smoke, and timber after the explosion.

### COST AND SUCCESS OF THE OPERATION

A dispute about payment for the work of demolishing wrecks subsequently arose between the Town of Newcastle and Edmond Custis. The case came before two meetings of the Court at Whitehall Palace, when the King was joined by the principal officers of state. They included the Lord Treasurer, Lord Privy Seal, Duke of Lauderdale, Chancellor of the Duchy, and Master of the Ordnance. The first meeting was on 20 September 1674, and the proceedings are here reproduced in full.

Alderman Henry Brabant & Alderman Ralph Jenison of Newcastle being deputed by the said Town to attend his Majesty's in Council about the difference depending between the said Town and Mr Edmond Custis being this day again called in, the said Aldermen did there make their humble

proposal in writing, for accommodating the said matter, which being read at the Board & both parties fully heard, it was thereupon agreed unto by both parties & accordingly: Ordered by his Majesty in Council that it be And hereby it is referred to the masters & brethren of the Trinity House of Newcastle to Examine what Expenses the said Town have been at since Mr Custis undertaking to remove the wrecks & what further Charges the said Mr Custis has been at in Expenses about the removing the said wrecks & to whom the same has been paid or is yet due. As also of the Condition of the said wrecks as the same were about June 1673 or at present are in Referring to the River & Navigation. And what yet remains to be done of all which the said Masters & Brethren are to Make their Report upon Oath unto his Majesty & Council how they find the same.

The second meeting took place on 26 October 1674. A summary follows, and the full report is reproduced as Appendix 2. Richardson also summarised this meeting.<sup>3</sup>

The Deputy Master of Trinity House, accompanied by thirteen Brethren, reported that the Mayor and Burgesses had disbursed £840 9½d. They asked Thomas Custis to tell them the costs incurred by his brother Edmond. He produced an account of £128 15s. 1d. paid or due to several people, but refused to disclose who they were, having given his brother a full account for £906. The wrecks had been viewed and plumbed. Timbers of both wrecks were only five feet below water at low water, and they are still a danger to shipping.

Nothing has been found concerning any relevant events after this meeting.

### ACKNOWLEDGEMENTS

The help kindly given by the following is much appreciated. Tyne and Wear Museums Service advised on the content of their archives, supplied the dimensions of the etching, a scan and a disc, and gave permission to reproduce; Frank Addison in Print Services at the Robinson Library, Newcastle University, made a print of the relevant part of the etching at the same size as the original; Constance Fraser made a topographic analysis of the perceived surroundings of Tynemouth, summarised local military activities in response to the Medway raid, and gave useful criticism; Martin Plackett visited the British Library to transcribe the 'Brief Relation'; Sheila O'Connell at the British Museum confirmed that they retained the 'Harbour of Newcastle'. The Editor revised the text to improve readability. I am responsible for all the mistakes and omissions.

### APPENDIX 1

#### *Edmond Custis: Brief Relation*

'When Eight Ships were overwhelmed by the Freshes, of which Six were (as not lying difficult) removed and cleared the first month; the other Two being great and deep laden, sunk in the best of the Harbour, were blown up with Gun-powder a few months after, with some particulars of what Change happened that Harbour thereupon to this present August following.

The two Wrecks called Mr *Vicars*, and Mr *Grayes* Ships, sunk where before was not above 10, 12, to 14 foot at low water, the one L [*Grayes* wreck] lying on her broad side, the other K [*Cap<sup>t</sup> Vicars* wreck] back-broken, sate right up, fast dockt, the Freshes running with such violence from Westward above, betwixt both Ships; and almost round about them such a whirle Neddee of water, as may be compared to an Oriocano of wind, had the first Month scoured a Channel on the West side of, and neer both these Wrecks, deep as they are marked 28, 30, to 33 foot also at low water, which Channel would have run lower, and so settled the Ships out of harms way, had they not at that depth met with a hard Cole-mine; whereas at the East-side towards the Barre the old depth of

10, 12 to 14 foot at low water continued notwithstanding the greatest Storms, Surfs and Spring-Tides that happened out the Sea over the Barre, so neer the Wrecks for two months together after the Wrecks were so settled.

For it was the Freshes that overwhelmed these eight Ships in *December, 1672*, which no Storms ever did, whereof these two L, K sunk in the best of the Harbour, as appears by the two Light-houses C [*y<sup>e</sup> Low Light house*], D [*y<sup>e</sup> Upper Light house*] and the Barre M, for no Ships could steer into the Harbour by the lights, but must run hazard of being spoild, if not quite split upon the Wrecks, they being beset in such a manner as the Wreck L, depended K, from the Sea, East, and K the like for L from the Freshes West, that they were absolutely fixt for Ages for continue, and that Harbour like to be lost for ever.

But since the Powder-blasts upon these two Wrecks L, K, a few alterations hath appeared near the Barre to the better, viz. the Wrecks lying so near the Hurd Sands N, caused such a strong Sluce betwixt that and the Wrecks, that it hath thrown the Hurd up further Southward, and consequently the River and the Barre broader than it was before at that place, which is the cause of this in publick. Some small alterations also it hath caused on sundry Sands up the River, of which every Wherryman can inform, although by what course it hath taken since the blasts. All those places are like in a year or two's time, to return to its old station; for after the Ship L, that had Lead in, was blown away, where at first it sunk was but 10, 12 to 14 foot, after thirty dayes were 28, 30 to 33 foot, and after the blast one third part of four hundred peeces Lead being taken up at about 28 foot deep, within twenty daies after it shallowed to 17 and 20 foot, and daily more, till all the rest of the Lead became buried.

These two Wrecks, one very near, and the other above 400 Ton full, laden with Coals &c. weighed about eight hundred thousand pound apiece, beside the empty Ships, which by the Ship-Carpenters Rule of proportion ought with all her Masts, Anchors, Tackle, Rigging, &c. to weigh near as much as her Lading in weighty Commodities, if she be designed long-liv'd; to these add so many hundred Ton of Water or Sea atop of them. The difficulty of conveying a Powder-chest to execute under Water at them on the out-side of the Ships, many, viz. their lying so near to the Barre, that what by one constant course or other happening every year, in three quarters thereof it could not be performed; for three dayes before, and three dayes after every Spring-tyde, reckoning the day of the Moons change, there's half of the year gone, how often the Wind is East, North, or N. E. in a year, either of those, with a reasonable gale, makes too great a swell thereabouts to spend Powder-chests below; how many stormy days are there usually in a year? when, and two dayes after every storm, no dealing thereabouts in that business; and worse than all this, rainy-weather sometimes three or four dayes, after one dayes showres, the Freshes will bring down so swift a Current, that over against Cliffords Fort, and the Figure 30, makes for a matter of a hundred and fifty fathom length, a gulf, swifter than that of Florida. To all these, one difficulty more as bad as the worst, the Neddee, or Whirle of Water, would without great pains and care overturn the Engine from its designed place, which sundry particular difficulties I mention, because some unskilful pretenders to this part of the Mathematicks, expected that so great a weight and bulk before-mentioned, besides Lead and Stones, in one of them, should with one Chest containing seven barrels of Powder, be blown up from that depth, so easie and so high above Water, as the Boyes send up Kites, which could not have been hoped from seven thousand barrels, the Ships not being to be undermined, and the Powder-chests being fired at the sides of the Ships; but, were such a business to be done in the Waters of Thames, as many Chests might be spent, and Ships blown up in twenty dayes, as could be done at this Barre in a year at such weather as was there six months together, and every day one could be done to an empty Ship in such streams as the Thames, and where the Chest could be conveyed in the hold.

At any of which Weathers, or at the nearest of a Slack (if any ever be there) all former known waies would have failed, as divers (to any other purpose but vain expences) were endeavoured before my coming there; for no flying Fusee would burn to the bottom, but either bend or beak, which must needs choak or drown the Wild-fire by the way; so that possibility it self became to be questioned, whether ever the Harbour were like to be cleared, or at the best to the cost of many thousands; thereupon the Magistrates sent up a Relation of the dangerous conditions His Majesties port of New-Castle was in; His Majestie was pleased to send unto them a new way to convey a Fire-Ball through a hollow Mast fastened to the Chest at the bottom of the Sea, the Chest shaped and

ordered within and without in such a figure, as the designed place could be executed upon, as true under Water, as Guns can send out Bullets above, which hitherto was never known, or at least not known to be practised in any Country by any Nation whatsoever before; by virtue whereof the Author can destroy and remove all such Sinckers, as was this and the last year, or at any time hereafter may be designed by the enemy, as certain (without undermining) as Rocks (which cannot be done but with undermining) can be blown up above ground, whether the Sinckers are fill'd with Sand, Coals, Stones, Bricks, Morter, in a mass, or loose, the like of any other matter of weight whatsoever.

And in regard the appearance of Smoak above Water after the blast so far under, hath startled the inquisitive Chimist in point of nature, that the Sea-water being salt, and Gun-powder likewise salt, its Smoak also salt, must therefore certainly incorporate together, and none of that Smoak ever be seen above-water.

I have purposely placed this figure V to shew how the Water and Smoak, with pieces of the Ship did appear for a moment or two above water, a matter of a quarter of a minute after the Powder took fire below, without any contradiction to that rule of nature; for these six or seven barrels of Powder spent together under Water, produced no more Smoak or report above, than is usual from one Ordnance (although those that stood a mile off upon the Hills, felt the ground shake under them at the blow) and doubtless therefore by that natural rule, the Smoak must all have dissolved into the Salt-water, had the blast been deeper, or the quantity of Powder less, which being so much, and the motion so swift through such a shallow as twenty eight foot, some Smoak appeared above, by the same rule, as a Gnat passing through a small flame, must dissolve in the flame; but by reason of its swift passage, part of him appears scorcht on th'other side. And for another Gentlemans opinion, to confirm the foregoing, that this lower Smoak W having not so swift a way as the uppermost X before it; where the report began was therefore the sadder colour, as if it had been dyed in the passage, is not so probable, but palpable to the contrary in my opinion; rather that the sadness of the Smoak about the Water W passing through the Ship, and up with the Coals, became blackish by the Coals; and nothing more certain, but that almost all the Smoak was mingled with the Sea; else had but half of it broke out above at X, it must consequently have shaken both South and North Shields'.

## APPENDIX 2

*Court of Whitehall Palace 26 October 1674*

The Report or Certificate to his Majesty in Council. We Edward Nixon deputy Master & Cuthbert Atkinson, Henry Kirkehouse, . . . , Tho: Blakston [14 names in all] Brethren of your Majesty's Trinity House of Newcastle upon Tyne do in obedience to your Majesty's order in Council having date the 10th day of September last: in most humble manner certify to your most Excellent majesty in Council that we have with Care & diligence Examined the particulars offered to us by your Majesty's order and do find that the Mayor & Burgesses of the Town of Newcastle upon Tyne have since Mr Edmond Custis undertook the wrecks mentioned in your majesty's said Order disbursed the sum of Eight hundred Forty pounds Nine pence halfpenny in removing the said wrecks: which was made apparent to us by the several persons who worded the same: we do likewise Certify to your most Excellent Majesty in Council that we did summon Mr Tho: Custis to acquaint us what Expenses the said Mr Edmond Custis had been at in undertaking to remove the wrecks & to whom the same had been paid or is yet due who produced to us an account of one hundred Twenty Eight pounds fifteen shillings and one penny paid or due to several persons but refused to produce the persons to whom the same is paid or due though we did desire the same: the said mr Tho Custis alleging with all that he would give us no other account nor further satisfaction, he having given his Brother Mr Edmond Custis at London a full account amounting to Nine hundred & six pounds, so that we Cannot report to your Majesty any payments made by the said Edmond Custis or any sum of Money due from him to any persons Employed by him in removing or in his Endeavours to remove the said wrecks: And we do further humbly Report to your Most Excellent Majesty That we have lately viewed & plumbed the said wrecks mentioned in your Majesty's order And do find

that Grayes wreck lies across the Channel in your Majesty's River of Tyne in the fair way of ships passing in and out, of your Majesty's said River & that there remains over the Top of the stern post of the said wreck no more than five foot & one half foot water at Low water, and upon several timbers in the middle of the said Grays wreck eight foot water at Low water, & upon the Top of her stern four foot & one half foot at Low water and upon several Timbers in the Middle of the said Grayes wreck we do find that the said river running Close by those Timbers stem and stern post there is not less that sixteen foot water at Low water And we do further humbly report to your most Excellent Majesty in Council that upon the said wreck called Vickers wreck we find several fixed Timbers which have not above five foot water at low water and we do find the said wrecks to be in the same Condition that they were in the second of July one Thousand six hundred seventy & three some six of us whose names here and under subscribed having sounded the said river where the said wrecks lie upon the said second day of July 1673 and that there is no difference betwixt the Condition of the said wrecks then & now but what the Tides make one Tide Ebbing Lower than another & we do further Report that the said wrecks are very dangerous to ships passing in and out of your Majesty's said port And we humbly Conceive the said Grayes wreck is more dangerous than before the said Custis first undertook to remove the same. All which we humbly submit to your Majesty's wisdom and Princely Consideration All which we do Certify to be just & true & do declare it under our hands this Six and Twenty day of October in the Six & Twenty year of the reign of our sovereign Lord King Charles the Second that now is Anno domini 1674.

Sworn before/ Sr Robt Shafto/ Sr Richard Stote October 26th, 1674

Ed Nixon Dept Master/ Cuthbt Atkinson/ Hen: Kirkehouse/ Abra: Redhead/ Rich: Righe/ James Brankston/ Jno Parker/ Anto: Hodshon/ Jno: Reed/ Mathew: Bates/ John Wilson/Robt: Bulman/ Edward: Curr/ Thomas Blakeston'

## NOTES

- <sup>1</sup> Robert Latham & William Matthews (eds.), *The Diary of Samuel Pepys*, London (1970–76).
- <sup>2</sup> NCH, 8, 199–200.
- <sup>3</sup> M. A. Richardson (ed.), *The Conservatorship of the River Tyne*, Newcastle upon Tyne, (1849).
- <sup>4</sup> TWAS, GU/TH/14/1.
- <sup>5</sup> Richard Pennington, *A Descriptive Catalogue of the Etched Work of Wenceslaus Hollar 1607–1677*, Cambridge (1982).
- <sup>6</sup> British Library, G.3136.
- <sup>7</sup> Roger Howell, Jr., *Monopoly on the Tyne, 1650–58*, Newcastle upon Tyne (1978).
- <sup>8</sup> C. J. Spence, 'Notes on the plates and maps of the River Tyne in GARDNER'S ENGLAND'S GRIEVANCE DISCOVER'D of 1655', *AA*<sup>2</sup>, 13 (1889), 285.
- <sup>9</sup> British Library, 816.m.8(67.).
- <sup>10</sup> David Kear, 'Clifford's Fort and the defence of the Tyne', *AA*<sup>5</sup>, 14(1986), 102.
- <sup>11</sup> Laing, TWCMS, J3094.
- <sup>12</sup> Gillian Tindall, *The Man who Drew London*, London (2003).
- <sup>13</sup> William Fordyce (1846), Chart of the River Tyne from the Spar Hawk to Hedwin Streams, being the jurisdiction of the Right Worshipful the Mayor, Aldermen, and Burgesses of Newcastle. TWAS, D/NCP/5/4.
- <sup>14</sup> Albert G. Latham, *Old Tyneside from Hedwin Streams to Sparrow Hawk*, Newcastle upon Tyne (1913).