

### XIII.—THE WEAR NAVIGATION AND THE CITY OF DURHAM IN THE EIGHTEENTH CENTURY

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The idea of making the river Wear navigable above its tidal estuary ran before the Northern mind for a century and a half. Yet very little ever came of the idea, and equally little has been known of the various schemes that were projected. It is our object to trace the various interests that were active on the subject during the eighteenth century, an intriguing exercise which lays bare both the cupidity and the ineptitude of certain Durham interests in pursuing what were thought to be profitable ends.

As Nef has effectively chronicled,<sup>1</sup> in the first half of the seventeenth century the near monopoly of the London market enjoyed by the coal entrepreneurs of Newcastle began to be seriously threatened by the developing coal trade of the river Wear. The coal pits at Lumley, near the head of the navigable stretch of the river were famed as being amongst the best in the North, trade was so vigorous that Sunderland obtained municipal status in 1643, and the rise of the coal trade stimulated salt boiling and keel building. By the spring of 1724, Lord Harley noted that the coal traders of Newcastle "seem at present a little jealous of Sunderland which has of late showed pretty considerably in this trade and as I am told is likely to gain more and more upon it every day".<sup>2</sup> Although the Tyne retained its supremacy over the Wear, the Sunderland share of the coal trade increased from being a quarter of Newcastle's in the mid seventeenth century, to over half in 1750, Newcastle

<sup>1</sup> Nef, J. U., *The Rise of the British Coal Industry*, London, 1932.

<sup>2</sup> H.M.C., *Portland*, VI, 106.

exporting 288,000 chaldrons to Sunderland's 162,000 chaldrons.

As on the Tyne, it was necessary to carry the coal in keel boats from the inland collieries to the coasters at the harbour mouth, but the Wear offered many hazards to navigation, both artificial and geomorphological. A charter had been granted to Edward Andrew in 1669 to build a pier, erect a lighthouse, and cleanse the harbour, which was "very much gorged up stopped up and checked by the many shoals, sand beds and much rubbish . . . almost rendering the river unnavigable",<sup>3</sup> but fifty years later it was still in much the same condition. On their return from London, the coasters were obliged to carry ballast which they tipped out on reaching Sunderland. The resulting haphazard ballast heaps, which could have been used for the building of wharfs were allowed to obstruct the harbour entrance and produce yet more difficult currents for both coaster and keel boat to navigate. Moreover the river occasionally changed its course through the undredged sands of the harbour mouth in times of heavy land flood or strong tide, making the tide crucial to the passage of keels throughout the estuary. At Forsters Sands the river was only nine inches deep at periods of low tide in dry weather, and neap tides only swelled the depth to twenty inches, so that keels sometimes had to wait five or six days for sufficient draught. At the head of the estuary where the high tide was most needed, it did not last long, and its ebb was particularly capricious. The keelmen often found themselves in danger of running aground, or trapped in an unmanoeuvrable channel, unable to use their sail.

These physical hazards were exacerbated by the attitudes of some riparian owners. When the keelmen were unable to use their sail they were obliged to walk along the bank, towing their boat behind them. Several landowners objected strongly to the trespass of the rude boatmen, and even used

<sup>3</sup> Surtees, R., *The History of the County Palatine of Durham*, London, 1834, 259.

violence, when, at periods of low water, the keelmen moored their boats and went in search of refreshment. Thefts of coals and even keels were a commonplace at such times, but much more offensive was the ford at Biddick, where the landowners "though they have no manor nor charter to enable them, have set up a ferry boat for carrying over passengers, and have placed and hung a rope over the water which is to the great prejudice of the keels passing and re-passing upon that river."<sup>4</sup>

However, by the first decade of the eighteenth century, some three hundred craft were penetrating twelve or so miles upstream to the lowest bridge over the river at New-bridge, near Chester le Street. Consequent upon this volume of traffic some regulation of both the river and the trade became necessary, and the hope of extending the navigation to Durham began to be seriously entertained. In 1698, Celia Fiennes had noted that "they talk much of making it [the Wear] navigable, but I fancy the many rocks all along will make it a difficult work",<sup>5</sup> and it was not until 1705 that any positive action was taken, when the mayor and aldermen of Durham, the dean and chapter, and the inhabitants of the township and borough of Sunderland petitioned parliament for leave to bring in a bill to erect piers, clean the estuary mouth and extend the navigation to Durham City. Leave to bring in a bill was eventually given,<sup>6</sup> but the session ended before anything further was accomplished. Eager to develop Durham's nodal position at the heart of the county, the city corporation wished to make Durham an inland port, with coal, lead, lime, building stone and wool being brought to Durham by road, and then shipped down the river to Sunderland for export. The dean and chapter had more realistic aims. Holding extensive tracts of land between Chester le Street, Houghton le Spring and Durham,

<sup>4</sup> River Wear Commissioners, Sunderland. Commissioners' MSS, miscellanea. Documents belonging to the River Wear Commissioners are subsequently cited as "Commissioners' MS." with the appropriate reference.

<sup>5</sup> *The Journeys of Celia Fiennes*, ed. C. Morris, London, 1947, 216.

<sup>6</sup> *C.J.*, XV, 106.

they saw a navigable Wear opening up the area for coal mining, which could at that time only be developed at relatively great expense. An indication of the potential of the estate can be gained from the fact that John Tempest was obliged to pay £17,000 for the grand lease of the Rainton Mines in 1771.<sup>7</sup>

The making of the river navigable all the way to Durham, however, would have meant the surmounting of several obstacles, at considerable expense. It was subsequently estimated that the river could be made passable for keels of around 20 tons for the eight miles between Biddick and Cocken Ford for £7,000 but for the six miles between Cocken and Durham, the cost would be nearer to £20,000.<sup>8</sup> This difference in cost can be attributed to the geomorphology of the river valley. Between Biddick and Cocken the river flows across soft fluvio-glacial material that lies in the much deeper pre-glacial valley of the Wear, but between Cocken and Durham the river leaves the confines of its pre-glacial valley, and has cut a deep gorge in the solid rock outside. Consequently, excavation of the bed here would be expensive, and necessitate many locks.

In 1716 another bill was successfully promoted despite the misgivings of many local interests. The Tyne merchants, led by the now famous Cotesworth petitioned that the scheme would mean

‘... oppression to those of least acclaim and be only beneficial to a few great coal owners, who notwithstanding their zeal to promote the said bill and thereby as they pretend to open and enlarge the trade of the said river have for several years past by farming and purchasing lands and contracting with the owners of adjacent premises for stopping all coal carriages from other collieries to the river Wear very near engrossed the coal

<sup>7</sup> University of Durham, Department of Paleography and Diplomatic, Dean and Chapter post-dissolution loose papers, Box 28. Subsequent references to Dean and Chapter MSS. will be cited as “D. & C.”

<sup>8</sup> *C.J.*, XXVIII, 488.

trade to themselves alone and in a short time have the prices and quantities of coals to be tended in their power."<sup>9</sup>

This allegation was certainly partly true. Thomas Bewick petitioned the Lords in May, 1717 "That he is possessed of a very great colliery situate near the river Wear . . . and that by unjust contracts made by some who prosecute the bill for preserving and improving the river and port of Sunderland he will be debarred from bringing his coals to the river".<sup>10</sup> A petition from some of the gentry inland from the estuary ran in the same vein. They were well aware of the crafty schemes of the great owners along the river, and suggested that the bill ought to extend up to Durham "and that the receipt of duties for perfecting the said work may be lodged with the County Treasurer . . . and not in the hands of the coal owners upon the Wear".<sup>11</sup> The bishop of Durham, also, was anxious that his ancient prerogative as conservator of the Wear should not be taken away from him without his permission.<sup>12</sup>

Although the Act included the extending of the navigation to Durham, it was hardly satisfactory to the inland petitioners. Although the river was ultimately to be made navigable up to Durham, work was to start at the mouth of the river. Although the bishop and the dean and chapter were appointed commissioners for carrying out the scheme, the majority of the commissioners were in the pocket of the great magnates along the estuary. Duties above Newbridge were to be applied to making the river navigable from there up to Durham, but as little traffic could use the river above the bridge, no duties could be raised.

However, the commissioners set to work with something like vigour. A survey was made, and in accordance with

<sup>9</sup> Gateshead Borough Library, Carr-Ellison MSS., B2/1/60.

<sup>10</sup> *L.J.*, XX, 460.

<sup>11</sup> *Ibid.*

<sup>12</sup> Hughes, E., *North Country Life in the Eighteenth Century*, I, Oxford, 1952, 293.

the Act, work was begun at the harbour mouth. By February 1726, the southern of a pair of piers had been carried 270 yards into the sea. But the duties being raised upon the river were not sufficient to pay back the capital and the interest on the money that had been borrowed. Further credit was sanctioned, but the commissioners were already on the slippery slope towards the non-fulfilment of their statutory duties. Work at the harbour mouth continued, but it was apparent to those inland that by proceeding according to the act of 1717, and gradually improving the river upstream, the commissioners would never reach New-bridge, never mind Durham before the time limit of twenty-one years placed upon the act expired. Both dean and chapter and city corporation were anxious, for as the chapter's agent noted,

“... it was against the interest of much the major part of the then acting commissioners that the river should be made navigable higher, for that they and their friends and confederators were possessed of or interested in the present collieries upon the said river and if the said river should be made navigable higher, other considerable collieries would be wrought and perhaps at an easier rate than their own, and the coals brought down to the river which would interfere with them in point of trade and reduce the price of coals.”<sup>13</sup>

John Shirley was employed by the city to make a survey of the river from Biddick Ford to Durham, and his subsequent report stimulated the city to petition the commons in February 1731 that the revenues of the commissioners were not sufficient to carry the navigation to Durham, and that the city should be allowed to bring in a bill to complete the navigation themselves. The commissioners, though, quickly filed a successful counter petition to the effect that the Durham proposals would prejudice the rights given them

<sup>13</sup> D. & C., Box 29.

by the 1717 act. They offered to give up their rights above Newbridge, but insisted that as they had already mortgaged the duties arising from below Newbridge they must be allowed to keep that stretch of river. A further attempt by Durham in the next Session was also unsuccessful, for it was pointed out that the commissioners were obliged to complete the northern pier at the harbour mouth before proceeding upstream. However, as the city and the chapter were well aware, there was little chance of even this being accomplished, for the duties levied were not being paid

“by reason that the power given to the commissioners to direct their warrants only to the constable of the place where the offence is committed ... the distress upon goods for offences committed is frequently evaded by the offenders removing their goods into such different parts where the constable cannot exercise the same.”<sup>14</sup>

At Christmas 1736, for example, nine of the greatest coal owners owed between them over £1,400 in duties for the previous year.<sup>15</sup> Having secured sufficient improvements below their staithes, notably the removal of Forsters Sands and the erection of the southern pier, the greater owners were thus reducing the risk of competition from further upstream.

Despite repeated representations by both the corporation and the dean and chapter, little further work was completed. The Durham interests now had the support of the earl of Scarborough, but to no effect. The building of the pier and the erection of quays along both sides of the river had reduced the size of the estuary so that tides could not penetrate the river with such effect as they had before. It was claimed that since the construction of the Southwick and Pallion quays the river had lost two feet at Newbridge.<sup>16</sup> The

<sup>14</sup> *C.J.*, XXII, 795.

<sup>15</sup> Commissioners' MSS., Account Book.

<sup>16</sup> Commissioners' MSS., miscellanea.

shipment of coals from above Biddick, therefore had declined, and it was given out that duties arising from there did not amount to more than £10 per annum. The earl of Scarborough, holding estates at Lumley, immediately above Newbridge, was therefore obliged to favour the Durham party and a general navigation. The chapter's correspondent at Westminster was able to report that

“that noble lord hath acted with great justice and honour to the County having declared himself several times for a General Bill of Navigation, whereby all proprietors on the river might receive benefit for their several collieries in due time.”<sup>17</sup>

No further bill was ever introduced, however, the act of 1717 was extinguished, and the river, a little improved, began to fall back into its old condition.

After eight years of neglect it was obvious that the river ought once again to be brought under some sort of regulation, and the two parties representing the estuary and the city of Durham again re-formed. The city burgesses, well aware of the chapter's contacts in London again joined common cause with the prebendaries, although the latter had no illusions on the corporation's alliance, knowing that “if the river can only be made navigable in part . . . they will no longer be concerned for our interests . . . as they are now when they happen to coincide with their own”.<sup>18</sup> By this time the chapter were reconciled to the fact that it might not be possible to bring the navigation all the way to Durham, but rather than prejudice the scheme entirely, they would have been satisfied if the river was simply made navigable as high as possible. Certainly it would have served the chapter's interests if it had been made navigable as far as Cocken and their collieries at Rainton. The mayor and corporation, though, wanted the navigation brought all

<sup>17</sup> D. & C., Box 29.

<sup>18</sup> *Ibid.*



the way to Durham or not at all extended.

In 1746 the old commissioners, acting as individuals, were successful in introducing a bill into the Commons. The rest of the county were dismayed at their lack of interest in opening the river above Newbridge. James Lumley of Lumley, sought to have the river made navigable to two hundred yards above Newbridge "because thereby other coal owners will have an opportunity of bringing their coals to the river . . . and it will not cost more than £400".<sup>19</sup> In fact, in order to secure a convenient and efficient despatch for his own coal he was willing to pay the cost of it himself, but alive to the former procrastination of the old commission he urged a time limit should be set on completing the navigation to Newbridge "or that in default their power be transferred to new commissioners".<sup>20</sup> At Durham, the chapter and the corporation disputed the wording of a petition they should send to Westminster, but at last, tired of the chapter's vacillations, the corporation took the exercise into their own hands and urged that

"men of great skill and experience judged that the river might be made navigable from Newbridge to Durham by the expense of a sum for which the duties of tunnage proposed to be laid on coals and other commodities conveyed upon that part of the river would raise an interest sufficiently high to encourage undertakers",<sup>21</sup>

and that there should be no doubt, as there had been none in previous acts that the ultimate aim of the commissioners was to make the river navigable as far as the city itself, it being "well placed for an extensive and profitable commerce" despite what may be said by "adversaries so rich and powerful".<sup>22</sup> Although Lumley's amendment was allowed, the city was defeated in committee. The commis-

<sup>19</sup> *C.J.*, XXV, 309.

<sup>20</sup> *Ibid.*

<sup>21</sup> *C.J.*, XXV, 312.

<sup>22</sup> *Ibid.*

sioners were resuscitated, and were to make the river navigable as far as Newbridge not later than 24 June 1759.

The commissioners were kept busy over the following decade, restoring the damage caused by eight years of neglect. In 1752, two abnormal floods had "made surprising changes in the mouth of the harbour"<sup>23</sup> which necessitated cutting a new channel. This made the pier end fall down, and so a new pier was constructed, work that took the commissioners to within a year of losing their powers under the act of 1746, and still nothing had been done to make the river navigable to Newbridge. They hurriedly asked their engineer, Robson, to prepare plans for the necessary work, and he suggested lowering the bed of the river between Biddick and Newbridge at a cost of a little over £19,000. This was beyond the commissioners' means and they asked John Smith of Sheffield to draw up alternative plans. Smith suggested deepening the bed from Biddick to Harraton, and there erecting a dam and flight of locks to give the river a depth of seven feet above the shallows and three and a half feet of water upstream at Newbridge, at an estimated cost of £6,694.<sup>24</sup>

In Durham, however, the old agitation was resumed. In December 1758, the commissioners were visited by a delegation from Durham and were informed that the city intended to bring in a bill to continue the navigation to Durham. The commissioners evidently did not fully understand the city's proposals, for they offered no objection until two months later when it was made clear that the city wanted to take over the river from Biddick and not just from Newbridge. The commissioners were moved to make their position quite clear, and entered in their order book

"The commissioners ... will oppose the gentlemen of the city of Durham in fixing the limits of the bill ... but that the said commissioners have no objection to the

<sup>23</sup> Commissioners' MSS., miscellanea.

<sup>24</sup> *Ibid.*

gentlemen of the city of Durham taking upon them the navigation of the river from the first shallow or shoal above the high staithes belonging to Henry Lambton up to the city of Durham, and that they the said commissioners will make or cause to be made and maintain the said river navigable up to the said shallow or shoal for vessels of burthen of twenty two tons."<sup>25</sup>

The Commissioners subsequently had several meetings with the Durham men but did not persuade them to change their mind, and their petition was submitted in its original form on 26 January 1759. The commissioners counter-petitioned for leave to erect dams and locks at Biddick. Meanwhile the municipal grapevine had been carefully tended, and petitions came rolling in from the coastal ports which received coal from the Wear. London, Gainsborough, Boston, Norwich, Exeter and Plymouth all supported the general navigation in the hope that the price of coal might be reduced. John Smeaton, the celebrated engineer, gave evidence that

"It is practicable to make the river navigable for keels of twenty tons and one quarter burthen, that these keels draw less water than ever I saw, and that there is water enough to carry any number of them, forty eight may pass a lock in twelve hours. From Biddick to Cocking Ford would cost £8,000, but beyond this point it would be necessary to cut through the rock and the cost was uncertain, perhaps £20,000 would be appropriate."<sup>26</sup>

John Shirley, who drew up the plan of 1731 agreed with Smeaton, but added that the "rocks might be of advantage by furnishing large blocks of stone for the locks".<sup>27</sup>

In the end, Durham won the day. It was decided that

<sup>25</sup> Commissioners' MSS., Order Book, 9 Jan. 1759.

<sup>26</sup> *C.J.*, XXVII, 488.

<sup>27</sup> *Ibid.*

there should be two authorities: the existing commissioners should have kept of the river below Biddick, whilst a new body should maintain the river from Biddick up to Durham. The burgesses had at last achieved their corporate heart's desire. For their services, the bishop, the earl of Scarborough and George Bowes were elected freemen of the city and were appointed, among others, commissioners of the new navigation. But alas! In May 1761 John Smeaton was again induced to inspect the river, and his subsequent report must have filled the Durham commissioners with dismay. The lock of the new navigation was to be at the point suggested by Smith three years previously. Immediately adjacent stood Henry Lambton's Harraton Colliery. Should the river be dammed there, and a cut made, his workings would be flooded. 'From this circumstance and the opposition then made, the act was not further proceeded with.'<sup>28</sup> The scheme was twice raised again, but never taken up. In 1796 it was proposed to cut a canal along the Team valley to join up with the Wear above Harraton at Picketree, but the scheme attracted little support. In 1825, noting that the Harraton workings were abandoned, the city of Durham again inquired into the scheme, and took counsel's opinion as to whether it would be possible to revive the powers of the 1759 act. They were assured that it was not advisable, and so the scheme was finally dropped.

The idea of a navigable river floated before the eyes of the county for a hundred and fifty years. In view of the considerable physical hazards to be overcome the sceptical view of Celia Fiennes does not seem misplaced, nor does that of bishops Chandler and Crewe.<sup>29</sup> Yet the scheme was pursued with remarkable persistence, and with equal persistence opposed by men who were more familiar with local conditions than travellers and temporary holders of the see, and so, perhaps, the scheme was not so "chimerical and

<sup>28</sup> University of Durham, Department of Paleography and Diplomatic, Durham Corporation MSS., Box 54/11.

<sup>29</sup> Hughes, *op. cit.*, 262.

impracticable” as Bishop Chandler apparently thought. By the mid eighteenth century, though, waggonways of several miles were a commonplace, and immediate access to a waterway although desirable, was not as important as it had been fifty years before. In the same year that the city of Durham last raised the scheme, the *Durham County Advertiser* was proudly able to report that on the 27 September 1825 .

“About eight o clock, thirteen waggons, twelve of them laden with two tons of coal each, and the other with sacks of flour, the whole of them covered with people, were drawn up the inclined plane at Brusselton in admirable style, amidst the cheers of assembled thousands.”

The concept of a canalised Wear was thus made irrelevant and this episode of northern life passed into oblivion, a ghostly quadrille between the Tynemen, the Wearmen, the chapter and the mayor.

