# A map and its meaning

# Eric Clavering and Alan Rounding

## SUMMARY

In volume 9 of the Northumberland County History 'A Map of Castle Ward, circa 1600' was reproduced. Analysis of it sheds new light on the history of the Tyne coal trade at the end of the sixteenth century; it may also incidentally depict an unrecorded Armada battle.

## THE MAP (Figs. 1 to 3)

**I** N VOLUME 9 OF THE NORTHUMBERLAND COUNTY HISTORY, H. H. E. Craster devoted a section to coal-mining in Horton chapelry, prefacing this on page 224 with two reproductions of extracts from a map which he labelled simply as 'A map of Castle Ward, circa 1600'. For clarification, he produced a line drawing on the following page, based on the photograph, with printed renderings of the place-names. He did not refer directly to the map in the text, and neither his caption, nor his list of illustrations, provided any clue as to the location of the map that he was using.

The original map proved to be difficult to trace but was eventually identified in the Archives of the Duke of Northumberland at Alnwick Castle, catalogue number AC: O.XXII.1. It covers the area from Wearmouth in the south and east to 'Woodhornshire' in the north, and 'Wyllam' in the west. The provenance, purpose and date of the map are not wholly clear, for it has no formal title, or dedication, or any direct evidence as to who commissioned it, or when. Christopher Hunwick, Archivist to the Northumberland Estates, notes that the map is labelled on the verso 'Mappe of Tinemouthshire', and that the yellow border on the parchment is similar to some in the Alnwick Castle archives that date from *circa* 1615. There is no mark of ownership on the map under discussion, whereas the maps from about 1615 carry the Percy badge. The involvement of the Percys with the manor of Tynemouth was as wardens of the castle and as Stewards on behalf of the Crown which had held the manor after the dissolution of the Priory. It was not until 1637 that the 10th Earl of Northumberland became the Lord of the Manor. The implication would seem to be that the map dates from 1637 or after, but close examination suggests an earlier date.

The vignette in the lower right-hand corner (see fig. 3) depicts a sea fight off the mouth of the Tyne, a battle unknown to naval records. A Queen's ship, proudly displaying the cross of St George, beating in a strong westerly wind, takes centre stage. She is engaged with two ships, which, by their size, are probably Armada stragglers; we are greatly indebted to the archivists at the National Maritime Museum at Greenwich for their opinion that the enemy ships are too large for them to be Scottish raiders, and that they are more likely to be Spanish. The English ship heels to leeward, while the enemy vessels are held up stiffly to the recoil by the breeze. One merchantman has got into the river mouth, safe under the guns of the Spanish Battery above the Black Midden Rocks. Another follows, all sails set. Three miles to the south,





a collier returning from the Thames, perhaps seeing the action, is running before the wind for the open sea, while a second rounding Souter Point, plainly in light ballast, heels dramatically as it hastily changes course.

There is no good reason not to accept that the action was indeed one fought between Spaniards and Englishmen, as the Armada survivors made their laborious way round the British Isles. If the cartographer was recording what happened in 1588 this would provide a *terminus post quem* for the map. If it does date to about 1590, it must have been adapted, with details of the coal trade added as it was in the late 1590s, a witness to the negotiations that preceded Elizabeth I's general settlement of both town and trade, culminating in the incorporation of the Company of Hostmen in 1600.<sup>1</sup>

The reason for the compilation of the map is not known. The area depicted — with considerable accuracy for the time — is Castle Ward, the south-eastern administrative quarter of Northumberland, but to this has been added a great part of the Chester Ward, the northerly division of the bishopric of Durham, and this has allowed the inclusion of much detail of the coal industry on both sides of the Tyne. Whilst several officials might have needed maps of the wards of Northumberland, none of them would have needed details of coal staiths in Stella and Winlaton. If the map had been drawn specifically to show the coal industry of the Tyne, then why would it have included Morpeth and the Wansbeck? No collieries are depicted in the Blyth area, nor on the Wear, so the prime purpose cannot have been to show the north-eastern coalfield, unless there was no sufficiently large colliery in the 'blank areas' at that time. It would seem most likely that an existing map of Castle Ward was adapted for an official overview of the Tyne coal trade with, as we shall see, the collieries marked as well as the quays and staiths.

In Elizabeth's father's day, more than two-thirds of accessible Tyne coal had been in the hands of the Church: north of the river controlled by religious houses, south of it mainly by the Bishop of Durham. The rest lay in estates of the Neville feudal connection. The dissolution of the monasteries had given a great part to the Crown, while the forfeitures following the failure of the Rising of the North in 1569 had increased the Crown holdings. Much of this was sold or leased to a Newcastle oligarchy, hitherto dependent upon the coal of the Town Moor, which had evidently been cleared by the time of the map.

Elizabeth had followed up by taking control in 1582 of the bishopric coal in the parishes of Gateshead and Whickham, a transaction which became known as the Grand Lease. This was acquired the next year by the Newcastle Town Council, the negotiations being conducted by two leading coal-owners, William Selby and Henry Anderson.<sup>2</sup> Most of the coal resources which the map shows as under exploitation had been, or still were, in the Crown's hands. The privatised conventual lands in Gateshead, at Bensham, belonging to the Riddell family, were to give rise to a considerable colliery in the early 1600s. William Riddell was fourth in the list of founder members of the Company of the Hostmen in 1599, while his son Thomas was admitted free of the company in 1602; but, despite this, neither was given a quota in the vend of 1603, so the colliery at Bensham must date after this. Its absence from the map is an indication that the map was amended in the late 1590s.<sup>3</sup> The most important coal estate to escape this thorough Tudor reshuffle was Winlaton, the biggest producer of the time, saved from the Crown's grasp by transfer to a Protestant-Catholic consortium, headed by Anglicans, on the eve of the Neville rebellion of 1569.<sup>4</sup> The main member was William Selby, one of the negotiators of the Grand Lease, and he can have been no stranger to this map, since his colliery of the 1590s is portrayed on it in great detail.









While the first cartographer produced the map with considerable accuracy, apparently triangulating from church steeples (although some of his triangulation points are known not to have had churches at that time, for example Winlaton, Heaton and Byker), there is a serious foreshortening of east-west distances, especially at the western edge. Also, the courses of the Tyne, Derwent and Ouseburn, all crucial to our interpretation of the evidence, are only approximate. Other streams, the Blaydon and Denton Burns in particular, are not marked, since they would have been of no interest to the first cartographer. Representation on the map is largely pictorial, but sometimes diagrammatic. Towns and villages are depicted by a focus of buildings topped by a steeple, whether or not the village had a church at the time. Quays and pits are also pictured. Whilst the terms quay and staith are often treated synonymously, there is a clear distinction between them. Strictly speaking, staiths were vast low compounds on the quay used for storage of the coal, which had to be kept under cover, for the qualityconscious London customer would not pay for it if it was weathered. They were not necessarily on quays, and might be anywhere handy to keep stocks held in reserve, thereby minimising price fluctuations.<sup>5</sup> But the last stage before shipboard entailed passage through a waterside staith, used for security, protection from the weather, accountancy, taxation and, it was alleged, adulteration of good coal by mixing in bad. Often, each major partner in a colliery received his share of the output in his own staith and, if he were a hostman, sold it on from there himself. From the staith, coal was shot into a keel for transport to the ship, where it was shovelled into the hold through low ports.

The map gives us an unparalleled overview of these Tyne staiths, and much of the information is new. What it shows are the quays, although each, of course, would have had its own staith. The quays, like the villages, are represented pictorially and, where the staith is situated on the north or west bank of a river, it is drawn face-on to the viewer, with the quay supported by stout wooden timbers. For those on the south and east banks, quay and corner posts alone are shown. Pits, on the other hand, are shown diagrammatically, as filled-in circles. They are similarly shown on a map of Benwell of 1637: solid circles for active pits and empty ones for those wrought out.<sup>6</sup> So, what might the pit symbol on our map represent? We are lucky to have detailed production figures for two of the collieries in the 1580s. At Denton, as far back as 1538, the pits were limited to an output of 20 chaldrons per pit per working day.<sup>7</sup> If we presume the number of working days in the year to be 200, this would give an allowed yearly output of around 400T. At Winlaton, from 1551 onwards, there was not the same stringency. There were usually four pits in production at any one time, but the output varied from one day to another: on Mondays and Tuesdays, 22 chaldrons per pit was the norm, benefiting from the enforced rest of the Sabbath, but this tailed off towards the end of the week to 20 chaldrons per pit. On exceptional occasions as much as 28 to 30 chaldrons might be wrought. This gives a possible annual output per pit of rather more than 400T, but, certainly at Winlaton, these figures were not met. The total production in 1582 was 23602 fothers and, at three fothers to the chaldron, this means an output of about 200T per pit.<sup>8</sup> Perhaps we should say the symbol represents a pit with a potential of 400T, but with a realistic output of 200T.

#### GEOLOGY AND THE IMPERATIVES OF MINING COAL (Fig. 4)

Once he had acquired his coal, the entrepreneur sought ease of access and cheapness of transport. The latter, ensured by the use of keels capable of carrying 20 tons, at this time tied collieries to navigable waterways, for the invention of the wooden railway lay a decade





ahead. Ease of access was offered by the miles of outcropping seam edges along the heughs of the Tyne and its affluents, and early mining began there. How far the coal could be followed depended on its angle. If, from the edge, it sloped upwards it would be self-draining. If downwards, a burden of water would accumulate and drown it. In this case, provided it lay above the level of a nearby valley floor, the coal could be cleared by investment in an adit, a slightly sloping passage driven from a lower point until it intersected the seam, the second stage of a developing technology. Once it lay below that level, it was necessary to undertake the constant expense of some form of pumping, the industry's third stage.

All the coal dipped towards the north-east, so outcrops on hillsides facing north and east were self-draining, whereas those looking to the south or west would require adits. This appears on the map as two zones, south-west and north-east. In the former, the two prominent hills of Winlaton and Whickham, layers of outcropping seams of good quality coal, close to the navigable waters of the Tyne and Derwent, had attracted the early export trade. The fourteenth-century builders of Windsor Castle seem to have requisitioned the Tyne's entire fleet of keels to carry the Winlaton coal they needed to burn their lime.<sup>9</sup> Such intensive working of the upper coal soon brought shafts sunk to deeper coal and, with them, pumping engines to drain it: already, in 1492, a Whickham colliery had installed two bucket chains for bringing up both coal and water.<sup>10</sup> The outcome of early intensive mining was that by the time of the map the two parishes of Ryton and Whickham were in large measure industrialised, and were to become completely so by the early seventeenth century.

In the 1570s, those two parishes could not easily meet the ever rising demand for fuel of timber-starved London, and a boom in industrial development is visible on the map in the north-east zone, in three distinct areas: on the Ouseburn; in Gateshead; and to the south of the Carlisle road. Sea-going ships could reach the first two, giving them a great cost advantage over the older collieries, which lay above the Tyne bridge. The future seemed to belong to these three areas, but in all of them the coal lay on a reverse slope, so that the amount that could be extracted without pumping was limited. In the event, the development of the industry in the next century saw upstream collieries of the south-west zone use rail transport, in the form of the wooden railway, to reach new deposits of self-draining coal. Those of the north-east were then to decline until saved in their turn, in the early eighteenth century, by cheaper and more efficient pumping systems using steam engines.

At the time of the map's compilation, except on the western and eastern fringes, the coal that was being exploited lay in the five or six seams within the geological sequence running from the High to the Low Main. In most places, (but not everywhere: both coal and seam names were variable), the sequence ran: High Main, Metal, Five-Quarter, Main, Maudlin and Low Main. The three Mains were in general thicker, of better quality, and most sought after. The north-east and south-west zones were quite distinct geologically, the former dominated by the High Main, the latter by the Low Main. South of Newcastle, the High Main cropped all along the ridge overlooking the Team valley; it then followed the Ouseburn to curl round the north of the town, continuing along the edge of the Tyne valley until interrupted by the Denton Burn. Its exploitation was therefore linear. West of the town and south of the river, erosion had left the Main coal as the top seam until it was worked out, but its reputation remained; deep-mined Tyne Main was a selling brand in London until the 1960s.

The coal most sought after by Elizabethan producers and buyers alike was the High Main, technically undemanding in its extraction, but restricted in exploitable area by its adverse slope, so the distance over which the coal remains above the level of a river or burn may be

quite short. This was generally true of the three High Main groups of pits and, on the map, two of them — the Ouseburn on the north bank of the Tyne, and Gateshead Grand Lease on its south shore — appear visibly cramped.

The principal constraint on the trade was the enormous cost of land transport, whilst water transport was cheap. Mediaeval boatmen had performed miracles of navigation on non-tidal rivers, and it remained axiomatic that keels should be brought as close to a colliery as possible. The two-wheeled cart, or cowp, pulled by one horse, carried one-sixth of a chaldron, while the four-wheeled wain carried twice this amount, one third chaldron, or one fother. The wain needed a team of two young bullocks headed by two horses (dearer and less powerful, they kept the oxen moving) and often by two men, an expensive motive power which was needed because the wainways (individual pathways set out from the pithead) were green lanes, often unusable before June or after October. Quagmires after rain, they were bypassed illegally, destroying the grazing of the commoners. In village streets the new traffic produced growing congestion, leading to complaints and legal action, the most contentious outcome of the expansion of the trade. Two such wainways are marked on the map, one on each side of the Ouseburn. In contrast, keels loading 20 tons, crewed by five men at most, were allweather, inoffensive and, ton-for-ton, were 30 times cheaper to run. Carried by ebb and flow, they could reach the limit of spring tides, but this was possible only for a few days each month and, as demand grew, they were beginning to retreat to ordinary high-tide marks. Keels, however, were bulky, requiring 15 yards of expensive wharfage, whilst shallows, reedbanks, heughs and marshes made long stretches of river-bank inaccessible to them.

## THE COLLIERIES

#### North Shields and Tynemouth

Of the many estates belonging to the priory of Tynemouth, Tynemouth itself was the first to be exploited, coal being mined there in the second half of the thirteenth century. The Low Main seam cropped to the south of Cullercoats Bay, and the Bensham in the middle of the Long Sands. The map shows three pits being worked in this area which, after the dissolution of the monasteries, belonged to the Earl of Northumberland. North of North Shields, six pits are shown, evidently in Preston, working the Bensham seam; one is known there in 1584. In 1590, the Preston colliery was owned by Peter Delaval, a scion of that family, who had been apprenticed to a London merchant. He was obviously a capable man, because he was persuaded to return to the north to manage the Earl's estates in Tynemouth. He bought property there and, as 'farmer of the Queen's mines in Preston', developed the colliery both for himself and on behalf of the earl.<sup>11</sup>

The map shows no quay at North Shields. The prior, as early as 1268 or 1269, had built a wharf there to ship his coal, but this aroused the fury of the Newcastle burgesses, who claimed that they alone had the right to export from the Tyne. Headed by the mayor, Nicholas Scott, a party of them raided the wharf and took possession of a ship laden with coal and other goods. The dispute smouldered on, flaring up again in 1290. On this occasion the town council resorted to the law, charging the prior with obtaining money which in law belonged to the king, because he had taken market dues which should have been paid to Newcastle. He had also taken market dues from merchandise unloaded and sold there. The outcome was that the prior had to remove his wharf, and ships were banned from unloading at Shields. The

dispute continued through the fourteenth and fifteenth centuries into the sixteenth. In the reign of Henry VIII the burgesses again took the law into their own hands. Led by some of the aldermen and other principal men of the town, they attempted to murder the prior when he was visiting property belonging to the priory in Jesmond. Much of the coal in the 1590s is likely to have been sold locally, and largely used in the manufacture of salt. Delaval is known to have had salt pans at North Shields,<sup>12</sup> and these are shown on the map up-river from the village.

Further west, at Flatworth, the situation was reversed; there a quay is marked, but no working colliery. It is possible that there were pits in Flatworth, but not producing the requisite amount for them to be marked; however, it is more likely that, by carrying their coal from the collieries at Tynemouth and Preston to Willington Quay, cooperating with rather than resisting the Town Council, Delaval and the earl had found a way round Newcastle's embargo. The extra cost of the carriage would have increased the price to the customer, but this would not have been prohibitive.

#### Jesmond

Navigation of the Ouseburn can never have been easy, although even as late as the early twentieth century wherries still plied their trade on it.<sup>13</sup> The burn is narrow, and the limit of ordinary spring tides is just to the south of Byker bridge. The map shows six quays, three on each bank, spaced out so as not to interfere with those on the opposite side. They were situated on the S-bend and, on the west bank, there still remain patches of old stone work, now impossible to date, which might be their remnants. The cartographer shows five pits, three of them in Jesmond, although he has placed the village too far to the south and east, and the distance on the map is but a half of the actual mile from colliery to staith.

The first record of mining in Jesmond is in the year 1595, when Marmaduke Thirkeld conveyed his coalpit there to trustees for the benefit of his natural daughter Dorothy, married to Walter Grimston. But this cannot really have been the first colliery in Jesmond. Henry Anderson, one of the town's old oligarchy and grandfather of the Henry Anderson who helped to negotiate the Grand Lease, had acquired a share of the manor from George Orde in 1559 and, twenty years later another, Richard Hodgson, purchased a further share on behalf of his eldest son, from his maternal relatives the Sayers.<sup>14</sup> We shall meet these families again, the Andersons in Benwell and the Hodgsons in Winlaton, and it is inconceivable that the acquisitions were made for any reason other than to exploit the coal, which was of top quality in the easily worked High Main seam. The early workings were shallow, and this allowed working by adit which facilitated drainage, despite the adverse slope of the seam. But even in those early days water accumulated, making it necessary to use watermills to power a bucket and chain mechanism.<sup>15</sup> In this respect, Hodgson's inclusion of a watermill in his purchase is perhaps significant.

#### Heaton

Two pits are shown in Heaton manor on the east bank of the Ouseburn. Mining there proved even more difficult than on the west bank. Water, aggravated by the slope of the seam to the east, was a greater problem, one that was not satisfactorily solved until the first half of the eighteenth century with the introduction of the Newcomen engine. Although we have not found any reference to early mining in the manor, the map shows that the Ryhope Five Quarter seam, the next but one above the High Main, was probably being worked in the 1590s. This seam cropped parallel to the burn, about a quarter of a mile to the east. The owners of the colliery are likely to have been the owners of the manor, the Lawsons of Cramlington, and the Mitfords, the latter much intermarried with the Andersons.

## Byker

The remaining five pits alongside the Ouseburn, two on the west side and three on the east, lay in Byker, which was the biggest colliery of the three. The seams being worked were the High Main on the east, and the Metal or Five Quarter on the west. The colliery was run by Robert Dent, 31st in the list of founders of the Hostmen. His father was George Dent, merchant and hostman, and Robert seems to have been a hostman by patrimony, since his name is not to be found in the list of Merchant Adventurers.<sup>16</sup> Robert was married to the daughter of Robert Widdrington of Monkwearmouth, to whom her father left £100 and, more importantly, the lease of his coalmines on Byker Moor.<sup>17</sup> The family name is perpetuated in Dent's Hole on the Tyne. The quays used by the colliery at Byker were the southernmost on either bank of the Ouseburn.

## Elswick

After Newcastle itself, Elswick, its western neighbour, is one of the places on Tyneside where coal was worked earliest: in the 1330s, the Prior of Tynemouth was already leasing three pits.<sup>18</sup> In 1539, after the dissolution of the monasteries, the King leased the mines to Bartram Anderson, son of the Henry Anderson we have met at Jesmond, a leading merchant who is known to have acted as 'host.'<sup>19</sup> The family continued to work the pits in Elswick until 1627. A pair of pits, marked on the map not far from the town wall, must have been exploited for landsale rather than for export. They lie on the crop of the Main coal, at this point fairly level, and presenting no drainage problem. The other two workings in Elswick were for export, the quay continuing in use for almost four centuries. As they lay on the outcrop of the High Main, they are likely to have been grove workings, or opencast, but possibly with either adits or shallow shafts.

## Benwell

Bartram Anderson also leased the royalty of Benwell from the Crown. The coal does not seem to have been heavily worked; the map shows just one pit, working the High Main, and as late as 1611 there were only two.<sup>20</sup> Quay and staith are shown where they were to remain throughout the seventeenth, eighteenth and nineteenth centuries. Anderson died in 1571, leaving his colliery in Benwell to his daughter Barbara, second wife of William Riddell of Gateshead. Barbara Riddell was a remarkable woman. Whilst it was the accepted custom on Tyneside for the widow of a hostman to take over the running of his affairs on his death, during the minority of the heir, she uniquely was made hostman during her husband's lifetime.<sup>21</sup> The Riddell collieries were treated separately from hers, being managed by her stepson, Thomas. She ran Benwell and, more importantly, a share in the Grand Lease, which were intended as the inheritance of her favourite son, Peter. In 1603, her vend quota was 700T, a measure of her

importance in the trade.<sup>22</sup> It must have been her guidance, and her son's ready acceptance of her tuition, that allowed Benwell, with the advent of the waggonway in *c*. 1627, to become one of the three principal collieries of the Tyne.

#### Denton

The westernmost pit, north of the Tyne, is shown lying one-third of the way from the mouth of the Derwent to Newburn, and therefore must represent Denton. Even before the Dissolution, the Erringtons had been mining coal here, working the Low Main accessible from the burn, and paying to the convent at Tynemouth £20 p.a. for one pit.<sup>23</sup> After the Dissolution, the Crown renewed the lease but, by 1590, the colliery had gone into decline. Anthony Errington was then working only one pit, and the rent had been halved to just £10.<sup>24</sup> No quay is shown at Denton and presumably the coal, in large part, was sold locally, any for export being taken over the burn to Benwell.

## Gateshead

The first hurdle that the would-be investor had to clear in this, the third of the High Main areas, was different. He needed one of the twelve shares, or at least a fraction of one, in the Grand Lease of the bishop's commons: highly desirable because of the coal's far more promising future, but consequently harder to get. It is the number of these shares which explains the cramming of eight pits into the narrow area of Gateshead Park. It has no equivalent elsewhere. The northerly row of pits is at the dip, the point where the High Main, about to pass under the Tyne, became unworkable. They are hemmed in by the Felling boundary to the east, but to the south and west there stretches a good square mile before the ending of the seam near Saltwellside. The coal would last for many decades, but not in the hands of the Grand Lessees, for the greater part of it lay in the Bensham estate of William Riddell and its exploitation was not to take place until the early 1600s. The second, southerly, line of pits bears witness to this; from the distance between them, the second row must have been sunk to the next seam down, the Metal. The South Shore had but a single staith serving all of these pits. The advantage of being 'below bridge' was dissipated by the shelving of the river-bank. The sea-going ship, shown on the map loading off the mouth of the Ouseburn opposite, could not have loaded directly from the staith, and the coal needed to be shipped across the river by keel.

The pits in Gateshead were soon to become exhausted but, unlike lesser owners, the Grand Lessees had other resources and, certainly by the second decade of the seventeenth century (if not before) they were to transfer their mining to Allerdeans in Whickham parish, where they worked alongside Thomas Liddell and his partners in what can only be described as an uneasy association. Later, they were to open a Grand Lease colliery on a scale previously unthought of, with an output equal to all of the pits of the late sixteenth century put together.<sup>25</sup>

#### Whickham

This area, the homeland of the industry, shows (as does Winlaton) the mark of its age in a ring of pits around the outcropping Low Main seam crowning the hill; this had been worked as early as 1346. With the passage of time, shafts were sunk to successive lower seams, the Main and Yard. Depth demanded the solution of growing problems — of drainage, support,

ventilation and underground haulage — unknown or much less pressing in the north-eastern area, but the source of all serious mining technology. Within 20 years of the map, the 'rare engines' of Huntingdon Beaumont were to transform the history of Tyneside. The three highest of the Whickham pits, which must be the oldest, lie along the 120 m contour, and the outcrop of the Low Main. Below them are six other seams before river level is reached, and it might be one of these that was already being drained by the two bucket chains of 1492, mentioned above. The others, lower down in the Morrisfield, are known to have had adits to the Derwent.

The eleven pits shown in Whickham and Swalwell are arranged on either side of a known wainway, which led from Whagg Gate, via Whaggs and Coalway Lanes, to Swalwell, crossing over the main street in Whickham at 'the Cross.' In 1570, Bishop Pilkington had granted a 21-year lease to Bartram Anderson, Edward Leven and Andrew Crofton, of the coalmines 'within the Cross Moor in Whickham, adjoining the Whaggs and Newfield on the North, Gellesfield on the South, the Cross Moor on the West, and the road from Newcastle to the Street Gate on the East.' The rent was £30 p.a., and only three pits were allowed to be open at any one time. Five years later, in 1575, Henry Smith obtained another lease of 21 years of mines in the South Field, with wayleave to the Tyne, where he was to have a staith. And in 1578 William Blaxton of Gibside leased all of his pits in Gellesfield to Cuthbert Hunter, with a convenient way to the Derwent.<sup>26</sup> The staiths on the Derwent will be considered when dealing with the next colliery, Winlaton.

#### Winlaton

Mining in Winlaton was well established by the fourteenth century, with leases granted by the Nevilles to various Newcastle merchants. The hey-day of the colliery came in 1551, when a partnership headed by Cuthbert Blunt and Richard Hodgson was responsible for its development.<sup>27</sup> In 1569, Charles Neville, 6th Earl of Westmorland, sold the manor to a group of merchants, including Hodgson. The others were Humphrey Scrivener (who had by that time married Blunt's widow), William Selby, husband of Hodgson's step-daughter, and Robert Anderson, Selby's uncle (of a different family from the Andersons we have already met). When the lease ran out in 1582 the new lords were determined to work the coal themselves, and to oust those who were 'not one of us.'28 Scrivener had died and his widow had sold the share in the lordship to Selby and Hodgson before this could happen; when the lease was coming to an end there were two lawsuits between the existing partners and the new lords, the records of which give great detail of the colliery and its working. There were only four pits working at any one time; in 1582, these were situated in the Westfield Gate (i.e. alongside West Lane), in the Land (to the south of the present church), Snookhill and the Horsecrofts (a strip of land alongside the Blaydon Burn, stretching from Winlaton to Blaydon). The seams being worked would be the Harvey and Tilley. Drainage was achieved by constructing a long adit, the Watergate, running roughly parallel to Garesfield Lane and emptying into the Huntley Burn near to the old Norman's Riding Hospital.

The coal from the pits was taken by wain to staiths at either Blaydon, for 4d a fother, or on the Derwent for 5d a fother.<sup>29</sup> In the 1550s, when the colliery was developed, it was normal practice to bring the keels up river to the upper limit of navigation, so the staiths on the Derwent are likely to have been at Swalwell; here, on the east side of the river, there was an isolated part of the Winlaton lordship, evidently at one time an island, with the Danish name Holme, which means island. Was it perhaps here that, in 875, the Danes under Halfdan

over-wintered on the Tyne?<sup>30</sup> The eastern channel of the river, now silted up, was made to serve as a millrace for a series of mills used by Crowley in the early 1700s, one of which still bore the name Holme Mill. The tailrace re-entered the Derwent between the two sets of staiths shown on the map, so that the pair upstream served Winlaton colliery, and the three downstream served Whickham.<sup>31</sup> The coal from Winlaton got there over Selby's Ford, on the site of the present bridge, which effectively limited navigation upstream.

None of the pits named in the 1582 legal documents is shown on the map, and they were evidently wrought out when the map was drawn. Selby and his partners had new pits sunk to the next seam down, the Busty: one to the west of the village (the cartographer has unfortunately placed the village too far to the east), one to the south-west, and three on the slope to the north of the Derwent. The appropriately named Black Path was the wainway for the two western pits. No quay at Blaydon is marked on the map. The staiths here were evidently moth-balled, as it was not practical to haul the coal over the crown of the hill. It was all taken to either Swalwell or Derwenthaugh, and the map gives the first indication of staiths at the latter, a group of five (joined up into one block on the map), making Derwenthaugh with Swalwell by far the largest port on the river.

#### Stella

We know that the freehold of Stella had been worked before the Dissolution by James Lawson, father of Barbara Blunt/Scrivener and of Isabella Hodgson, and justly deemed the 'Father of the Newcastle Coal Trade'; he had been granted a lease by his sister, the prioress of the small convent there.<sup>32</sup> He was presumably able to continue after the Crown seized the lands, and may have been able to renew his lease, but we have found no evidence to either support or refute this. By the late 1570s, Nicholas Tempest was living at Stella, although he did not acquire the estate until 1600.<sup>33</sup> Taylor, writing in 1852, quoted a document in his possession which said that Tempest was granted a lease by Elizabeth I, 'with sufficient wayleave and staythleave,' but he gave no date and anachronistically referred to Tempest as Sir Nicholas.<sup>34</sup> In 1603, Tempest was given a vend quota of 250T, but, as at this time he was also a Grand Lessee, a large part of the quota must refer to his working in Gateshead.<sup>35</sup>

The geology at Stella is complex, but favourable to the collier. The great fault called the Ninety Fathom Dyke crosses the Tyne at the tip of the estate, and runs south-west through it, preventing the extension of mining for, beyond it, the seams lie far lower. But a ridge of the Top Busty seam runs parallel to the Tyne, and then turns to follow the fault. Through the ridge, the Blaydon Burn has carved its way, giving access to the coal. A double attack on the outcrop south of the old Hexham Road, and in the burn valley, is depicted on the map: five pits in all. Two staiths are shown serving the colliery, sited between Stella Hall and the mouth of the burn, these continuing in use until the twentieth century.

## CONCLUSION

In short, we have in the map a planner's document — an indication of what was thought important, and what was not — by those who worked on the Elizabethan settlement that was to give specific orientations to both town and trade. In trade organisation, they would hold good for over a century, in town administration for over two, and in matters of land-use for more than two and a half.

# NOTE BY ALAN ROUNDING

Eric Clavering died in 2004. Although he was then living not far from Toulouse, where he had been to university, he maintained a keen interest in the history of both Tyneside and his native Wearside. He was greatly intrigued by this map in *NCH* and, some time after his death, an uncompleted draft of this article was found on his computer. I have completed the paper, as I hope he would have wished and, of course, I accept that any errors are mine.

## NOTES

<sup>1</sup> F. W. Dendy (ed.), *Extracts from the Records of the Company of Hostmen of Newcastle upon Tyne, SS*, 105, 1.

- <sup>2</sup> J. U. Nef, *The Rise of the British Coal Industry*, 1, London (1932), 151–4.
- <sup>3</sup> Dendy, SS, 105, 266–7.
- <sup>4</sup> Durham Record Office, D/CG 19/8.

<sup>5</sup> TWAM, 3415 CK/5/183: a map of 1712–4 showing inland staiths.

<sup>6</sup> National Archives, MR 228; copy in NCH, 13, 230.

<sup>7</sup> W. W. Tomlinson, *Denton Hall and its Associations*, London (1894), 9. Although coal was measured by volume and not by weight, in 1600 the tenn, or ten (usually written T) was almost equal to 21 tons. The ten was made up of ten chaldrons, hence its name, each of three fothers and the fother or wainload of seven bolls comprising 22½ gallons, Winchester measure. *See* T. J. Taylor, *The Winchester Generation of the Coal Trade Deviation of the Coal Trade Deviation of the Coal Trade Deviation*.

Archaeology of the Coal Trade, Newcastle upon Tyne, (1858; 1971 reprint), 21ff.

<sup>8</sup> National Archives, E134/29 Eliz; many details can be found in Nef, passim.

<sup>9</sup> Taylor, 61ff.

<sup>10</sup> W. Bourn, Whickham Parish, Carlisle, (1893), 25.

<sup>11</sup> J. B. Blake, 'The medieval coal trade of North-east England: some fourteenth-century evidence', *Northern History*, 2, 24–5; W. S. Gibson *A History of the Monastery of Tynemouth*, London (1866), 2, 104–8; *NCH*, 8, 286–8.

- <sup>12</sup> W. P. Hedley, Northumberland Families, 1, Newcastle upon Tyne, (1968), 158.
- <sup>13</sup> Ouseburn Heritage, 6, 20.
- <sup>14</sup> F. W. Dendy, 'An Account of Jesmond', AA<sup>3</sup>, 1 (1904), 158, 67, 86–7.
- <sup>15</sup> M. Dunn, A View of the Coal Trade in North-east England, Newcastle upon Tyne, (1844), 40.

<sup>16</sup> F. W. Dendy (ed.), *Extracts from the Records of the Merchant Adventurers of Newcastle upon Tyne*, 2, *SS*, 101, *passim*.

<sup>17</sup> W. Greenwell, Wills and Inventories from the Registry at Durham, 2, SS, 38, 286.

- <sup>18</sup> J. Sykes, *Local Records*, Newcastle, (1866; reprint 1973), 41.
- <sup>19</sup> NCH, 13, 33.
- <sup>20</sup> Nef, 1, 146.
- <sup>21</sup> Dendy, SS, 105, 267.
- <sup>22</sup> *Ibid.* 44; Barbara Riddell held this quota with her son, Peter.
- <sup>23</sup> Tomlinson, 9ff.
- <sup>24</sup> NCH, 13,193.

<sup>25</sup> Vend quotas for 1603: *see* Dendy, *SS*, 105, 44–5, and, for 1622, *see* Taylor, 67. For Allerdeans, *see* National Archives STAC 8/245/6. The history of the Grand Lease colliery in Gateshead and Whickham can be found in G. Bennett *et al.*, *A Fighting Trade*, 1, Gateshead, (1990), 37–44.

- <sup>26</sup> Bourn, 53, 24.
- <sup>27</sup> W. W. Gibson, 'The manor of Winlaton', *AA*<sup>4</sup>, 23 (1945), 12.
- <sup>28</sup> National Archives, E134/29 Eliz.
- <sup>29</sup> Ibid.
- <sup>30</sup> Anglo-Saxon Chronicle sub anno 875.
- <sup>31</sup> *TWAM*, 3415 CK/5/183.

<sup>32</sup> Durham Record Office, D/CG 15/1; lease dated 12 August 1528.

<sup>33</sup> Ryton and Whickham parish registers; Sheffield City Library, Bagshaw 3287.

<sup>34</sup> Taylor, 20.

<sup>35</sup> Dendy, SS, 105, 44; E. Clavering and A. Rounding, 'Early Tyne industrialism: the lower Derwent and Blaydon Burn valleys, 1550–1700', *AA*<sup>5</sup>, 23 (1995) 249–58, at 252.