

## THE IRONWORKS AT ALDERWASLEY AND MORLEY PARK

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Early in 1987 the Derbyshire Archaeological Society took responsibility for one of the county's best known industrial monuments when it acquired the freehold of the two blast furnaces at Morley Park, between Heage and Belper. Abandoned in the 1870s, protected from demolition by the intervention of Sir Frederick Scopes of Stanton Ironworks in the 1950s, frequently illustrated in industrial archaeology guidebooks, the furnaces narrowly escaped destruction when the A38 Ripley–Little Eaton trunk road was built in the 1970s. In fact, the realignment of the main road made the furnaces more obvious to the casual passer-by (if less accessible to the prospective visitor) than they had been previously. Their deteriorating condition also became more apparent and the society renewed its efforts to have the structures consolidated and the surrounding area, which has been subject to extensive opencast coalworking, tidied up. These efforts are now bearing fruit and so it is an appropriate moment to consider afresh the history of Morley Park. The main outline has been well known since Frank Nixon drew attention to the site and its importance in 1951 but, as family, estate and solicitors' papers have accumulated in the Derbyshire Record Office, it has gradually become possible to amplify and correct some features of the traditional story.

### I

That the ironworks at Morley Park were established by the Hurt family of Alderwasley has long been known, even if the exact date remains in some doubt; what is now clear is that the construction of the first furnace there did not mark their initial entry into the industry. By the middle of the eighteenth century the Hurts were well established among the wealthier Low Peak gentry. Originally from Castern, just over the border in Staffordshire, the family were living at Ashbourne in 1569, when they exhibited arms and a pedigree of five descents at the heralds' first visitation of the county.<sup>1</sup> Like virtually all gentry families in Wirksworth Wapentake, they augmented their income by engaging in the lead trade, although they did not, as S.D. Chapman suggested some years ago, 'come to wealth as lead merchants'.<sup>2</sup> On the contrary, the major turning-point in their fortunes came in 1670 when Nicholas Hurt of Castern married the sister and heiress of John Lowe of Alderwasley, at whose death in 1690 a mansion and substantial estates on the west bank of the Derwent towards the southern end of Wirksworth parish passed to the Hurt family. Nicholas's son Charles Hurt (1678–1763) transferred his main home from Castern to Alderwasley, where the family remained until 1929.<sup>3</sup> Here they continued their involvement in the lead trade and also exploited the considerable timber resources of the estate. An account book recording wood sales between the 1740s and 1760s shows that timber in various forms was cut and sold annually, but by far the largest source of income was from sales of cordwood for charcoal making. During the 1750s the local ironmaster Walter Mather was regularly taking 1,200 cords a year at 9s. a cord under a long-term agreement, presumably to

supply his forge and mill at Makeney, a few miles down the Derwent.<sup>4</sup>

Charles Hurt died in 1763, to be succeeded for a few years by his eldest surviving son Nicholas Hurt (1710–67). After Nicholas's death the estate passed to his brother Francis Hurt, who appears to have been responsible for the family's entry into the iron industry. According to a statement drawn up for counsel in 1818, in 1764 Francis Hurt built 'a large Iron forge upon his own land' on the Derwent at Alderwasley, together with a weir across the river and head and tail races.<sup>5</sup> Neither this document, nor any other family papers so far examined, describes what precisely the forge consisted of in its early years, although in 1794 the works had three fineries, two chaferies and a rolling and slitting mill, plus a rolling mill for lead.<sup>6</sup> This is the usual range of plant found in a well equipped mid-eighteenth-century forge, which would have refined pig iron into bar by heating and reheating in finery and chaferies hearths using charcoal as fuel and water-power to blow the bellows. The resulting bar iron would then have been rolled and slit, again using water-power. This much can be inferred from the description of 1794 and our general knowledge of the industry; it is not clear how Dr Chapman was able to deduce that Hurt supplied Belper nailmakers with rod and iron and 'rural smithies' with bar iron and share moulds for plough shares, much less the castings for cotton mill machinery which he is said to have made after Richard Arkwright's arrival at Cromford in 1771.<sup>7</sup> The site of the forge is marked on a plan drawn up in 1818 and is also shown on P.P. Burdett's one-inch map of Derbyshire of 1762–7.<sup>8</sup> It is, of course, that still occupied by the firm of R. Johnson & Nephew on the A6 north of Ambergate.

Hurt's decision to enter the forge branch of the industry in the 1760s can possibly best be explained by the ready availability of charcoal and water-power on his own estate, although in a wider perspective the site was not a good one. Since the mid-seventeenth century the East Midlands iron industry, especially the forge and mill branches, had been edging away from the Derbyshire coalfield towards Sherwood, where better supplies of cordwood could be guaranteed closer to the region's major navigable river. Similarly, new rolling and slitting mills were established on the Derwent below Derby, whereas Hurt's forge was several miles upstream from Mather's longer established works at Makeney and more than ten miles from the head of navigation at Derby.<sup>9</sup> More fundamentally, by the mid-1760s the traditional iron industry, based on charcoal fuel and water-power, was clearly in decline. Coke-smelted pig had gained acceptance from forgemasters for the first time in the 1750s: by 1764 there were a dozen new coke furnaces in use, mainly in Shropshire and South Wales, and the number of charcoal furnaces was, for the first time for a century, beginning to fall.<sup>10</sup> Much less progress had been made in the transition to mineral fuel in the forge branch of the industry but it would have been clear to the more perceptive ironmasters that the future lay with new works on the coalfields, rather than those, such as Alderwasley, located some distance from the nearest coal and ironstone. The venture is also remarkable in that, as far as one can judge from the limited evidence, there was no earlier mill on the site. Typically, ironmasters took over existing mills for forges or rolling and slitting mills, so as to reduce the capital expenditure on weirs and races. Hurt's investment must therefore have been relatively substantial by the standards of the mid-eighteenth century, as well as curiously timed and badly located. Indeed, it may have been the last traditional finery-chaferie forge and mill established anywhere in England and Wales.

According to the case-paper of 1818, Hurt's next step, taken in 1776, was to build what the document describes as a second forge about a quarter of a mile downstream from the first, where he erected another weir and mill-race. Again, no further description of the plant is given either there or elsewhere, although we are told that the lower works did not operate after 1794. The

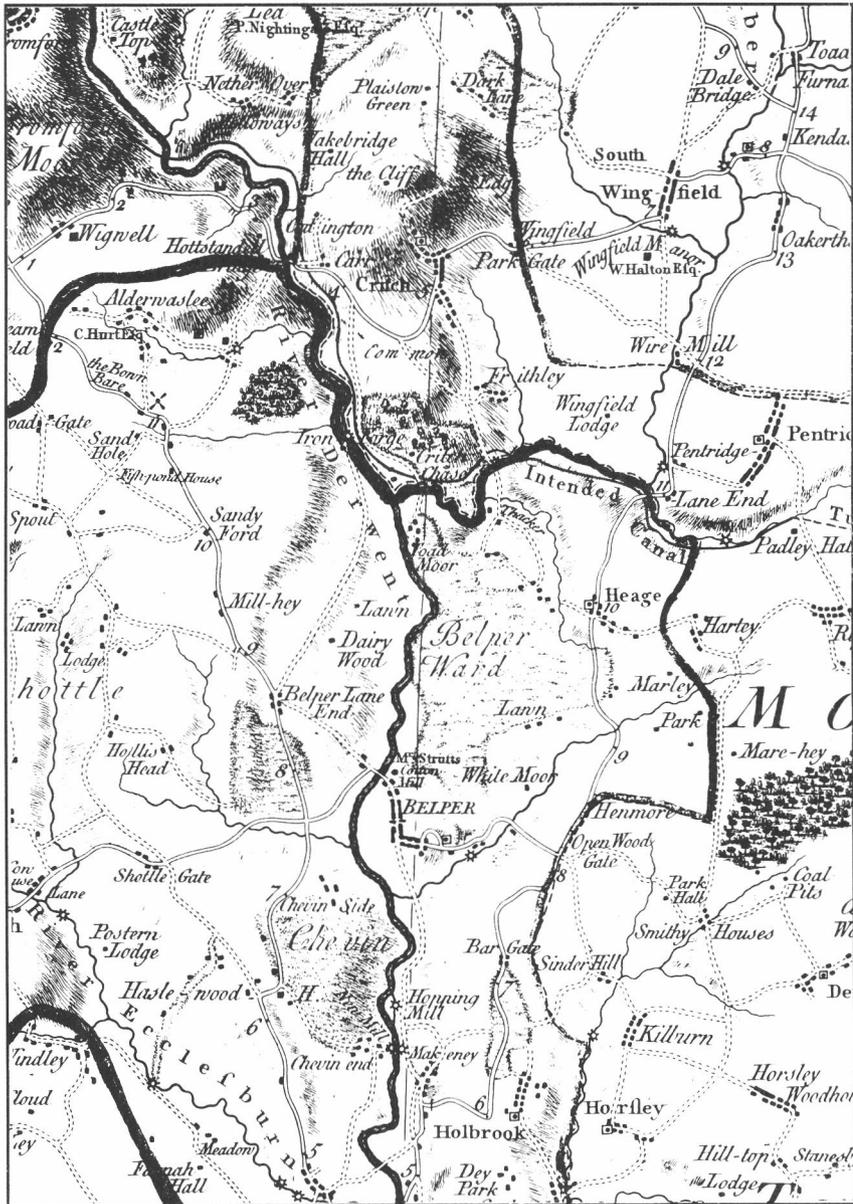


Fig 1 An extract from P. P. Burdett's one-inch map of Derbyshire of 1791, showing the forge on the Derwent near Alderwasley Hall (marked with a small asterisk-like symbol) and Morley Park, the site of the recently constructed coke-fired blast furnace north-east of Belper and south of Heage. Note the extensive woodland shown on the west bank of the Derwent around Alderwasley.

nationally compiled list of that year describes only a single site at Alderwasley and there seems no reason to doubt the accuracy of the date. The plan accompanying the case-paper locates the site immediately downstream from the bridge which carries Holly Lane across the Derwent near Ambergate and shows a weir and building on the west bank.<sup>11</sup>

Although in 1818 both the upper and lower mills on the Derwent were described as forges, there was also a blast furnace at Alderwasley, remains of which survived until 1964. In the very early days of the Historical Metallurgy Group, W.H. Bailey and R.F. Tylecote located the furnace, near the northern end of the existing forge buildings at Johnson & Nephew's works, and reported in 1962 that the shaft survived to full height, together with three-quarters of the lining. The site was included in the group's first list of early blast furnaces, described as being at Ambergate, but in January 1965 the HMG *Bulletin* reported that the remains had been demolished.<sup>12</sup> No National Grid reference was published for the site but at least two photographs exist of the structure, one taken as early as 1950 by Frank Nixon when he first became interested in both the Alderwasley and Morley Park furnaces.<sup>13</sup> The other is now in Derby Industrial Museum and shows W.H. Bailey holding a 3ft staff in front of overgrown remains which, although indistinct in the surviving print, are clearly those of a furnace stack standing to a height of nearly 20ft. Notes on the back of the photograph record the stack angle above the boshes as 82 degrees and the inward angle of the boshes as 70 degrees. The furnace was said to measure about 9ft across the top of the boshes and 4ft at the throat; the overall height was estimated at 20ft.<sup>14</sup> The furnace stood against a natural bank which runs along the western side of the present wireworks to the north of the later buildings. After the furnace was demolished a concrete floor was laid, sealing any surviving foundations, but nothing has been erected on the site since 1964.

The investigators of the early 1960s were able to discover only one published reference to a furnace on the Alderwasley estate, which appeared, somewhat improbably, in a county directory of 1895. According to this, 'Near the works [of R. Johnson & Nephew] are the ruins of a blast furnace, erected in 1764, for the manufacture of iron for nails and sheets. Charcoal was exclusively used, and the ore was brought by packhorses'.<sup>15</sup> Bulmer's directory, compiled by a local firm, contains considerably more historical information than, say, Kelly's national series, and this passage appears to contain a confused kernel of truth. Ironstone must certainly have been brought to the site from further afield, since there is none in the Derwent valley; packhorses (or mules) may well have been used, given the limitations of the road network in the area before turnpiking. The date 1764 was presumably supplied by the Hurt estate and must ultimately derive from the document of 1818.

At first sight, the establishment of a new charcoal furnace as late as 1764 seems unlikely, especially in a river valley some miles from the nearest ironstone, even given the ample fuel and power supplies available at Alderwasley. Although there were still about fifty charcoal furnaces in use in different parts of Britain in the mid-1760s, it was some years since the last new furnaces of this kind had been built at Conwy in North Wales (1755) or Hirwaun in South Wales (1757).<sup>16</sup> By 1764 it would have been fairly clear that the future lay with the new fuel.

Further light is shed on this little known site by an analysis of samples of slag recovered in 1964, which were said, in a brief report published the following year, to show that the furnace had definitely used coke with a low ash and low sulphur content.<sup>17</sup> This adds a further twist to the story. The compiler of Bulmer's directory may simply have assumed that the furnace would have used charcoal or he may have been relating local tradition. If the metallurgical evidence can be relied upon, then Hurt's furnace at Alderwasley, far from being an anachronism, can claim to be among the first, if not the first, to have smelted iron with coke anywhere in Derbyshire. Ironically, this accolade has traditionally, since John Farey's day, been awarded to Hurt's later works at Morley Park.<sup>18</sup> No more detailed report appeared on the slag from Alderwasley, nor does anything survive unpublished at the Northern Carbon Research Laboratories at the University of Newcastle-upon-Tyne, where the work was done. More recently,

however, Prof. Harry Marsh, who undertook the analysis, has kindly offered the following comments from memory:

The purpose of the examination was to attempt to decide if charcoal or coal-coke was the fuel-reductant of the operation. Scanning and transmission electron microscopy were used in an attempt positively to identify any wood anatomical features characteristic of charcoals. In this respect, no positive evidence was found. On the other hand, the carbonaceous samples had the appearance of used particle and fitted generally into the morphology we find of cokes from fusible coals. Surface morphology associated with gasification could be identified. In my report to Prof. Tylecote I felt that, from the evidence available, the use of coal/coke as a reductant was the most probable. I use the words 'coal/coke' because coal, as distinct from coke, may have been added to the blast furnace. This was an early technology which seen disappeared as bee-hive coking was developed. It would be impossible from the evidence to distinguish between the use of coal and coke. A possible follow-up would be to identify the site of the Ambergate furnace to see if coal was mined nearby.<sup>19</sup>

As we have seen, the first of Prof. Marsh's suggestions has been pursued successfully but what of the second, the source of coal (and indeed ironstone) for the furnace? Here, the recently deposited papers of the Hurt family supply the answer. In the summer of 1764 Francis Hurt was in correspondence with Godfrey Wentworth of Hickleton, near Kirklee in the West Riding, about an estate at Morley Park, near Heage in the north-western corner of Duffield parish, which Wentworth's father, also called Godfrey, had inherited from his uncle, Sir John Stanhope of Elvaston, under a will of 1703. The property, consisting of the freehold of Morley Park and the manor of Heage, had originally been granted to an earlier John Stanhope by the crown in 1576. Wentworth agreed with Hurt that there probably was ironstone beneath his land there and mentioned that he had already been approached by others about it. No immediate action followed this exchange but in April 1766 Wentworth was once again in touch with Hurt, who now also expressed interest in the coal at Morley Park, which had been mined in the past and was explicitly mentioned in Stanhope's will of 1703. By the end of 1766 the parties were close to agreeing terms, although Hurt seems to have anticipated a lease by setting ironstone getters to work, who were served with writs at the instance of aggrieved commoners of the manor. The lease was to be for 21 years, or until all the minerals had been got, with Hurt paying 2s. a load for coal and 5s. a stack for ironstone. The former is not defined, except that it was to be the same as that used at Eastwood colliery in the Erewash valley, while a stack of ironstone was to be 9ft in length, 6ft wide and 22in high. The lessee was to take a minimum of 1,000 tons of coal annually, except in the first year, and 400 stacks of ironstone. He was to start mining at the lowest dip of the coal measures and to make good surface damage.<sup>20</sup>

In a separate note, presumably made about the same time, Hurt recorded similar dimensions for ironstone but called the measure a dozen. In addition to the 5s. royalty due to the owner, he would have to pay 13s. 6d. a dozen for mining and 6s. for carriage by road a distance of two miles.<sup>21</sup> This points to a scheme to supply a blast furnace near Ambergate with ironstone from Morley Park, which about two miles (or a little more) from the forge at Alderwasley. What is not clear is whether coal (or coke) was to be used or whether the coal was simply to be mined for landsale. The costings emphasise the rather precarious economics of the venture: the cost of carrying a heavy, low value raw material was actually greater than the royalty, even over a journey of only a couple of miles. Instead of abandoning the project, however, Hurt changed tack and now proposed to Wentworth that he buy the estate outright, a plan to which the owner agreed, presumably because Morley Park represented an outlying appendage to which he was not strongly attached. An abstract of title was drawn up in January 1767, which was still being

queried by Hurt's attorney two months later; the final conveyance was executed in April 1767, when Hurt paid £16,000 for the manor of Heage, the Morley Park estate therein and other property belonging to Wentworth in Duffield parish.<sup>22</sup> The acquisition of a large freehold estate, including the lordship of Heage, at the end of negotiations begun with a view of obtaining a mineral lease emphasises that here was gentry investment in industry on a fairly grand scale. A typical ironmaster of this period, aiming to secure minerals at minimal cost, would merely have leased the coal and ironstone, together with the right to erect buildings needed to carry on the works. Hurt, by contrast, chose to make a further substantial addition to his estate, although he may also have felt the acquisition of the lordship would be a protection from further interference from the commoners.

Morley Park was thus acquired some three years after the ironworks at Alderwasley were established. Was the furnace of 1764 built with the intention of using charcoal on traditional lines, a plan abandoned almost at once when Hurt realised that he could obtain suitable coal from the same estate as his ironstone? Or was the furnace built to smelt with coal or coke from the start and it is for this reason that the date 1764 recalled in 1818 coincides exactly with the start of negotiations for coal and ironstone at Morley Park? Did the furnace use supplies of ironstone from elsewhere until the purchase of Morley Park was completed in 1767? By inference from Wentworth's earliest letter to Hurt, the ironstone at Morley Park had not been mined previously, but there was other ironstone available only slightly further afield. In short, a number of imponderables remain concerning the history of what may have been the last charcoal furnace in England or the first coke furnace in the East Midlands or both. It is therefore particularly regrettable that all trace of the furnace itself has disappeared.

The unsuitability of Alderwasley as an ironsmelting site off the coalfield and remote from navigable water must have become obvious within a short time. Once his experiments with coke-smelting, presumably using coal from Morley Park, had proved successful, there would no longer be any reason to cling to a site whose main recommendation was proximity to cordwood. He may also have discovered the limitations of water-powered blowing at a furnace using mineral fuel: in general traditional bellows blown by a water-wheel provided insufficient power to raise the furnace temperature high enough to smelt successfully with coke. By the 1770s the use of steam engines was well established and thus Hurt may have realised that his problems could be considerably eased by abandoning smelting at Alderwasley and transferring the operation to Morley Park. He would thereby save 6s. a dozen in carriage costs on his ironstone and could use slack coal mined on the spot to supply a steam engine which would in turn free him from the constraints imposed by water-powered bellows. He would also save the cost of transporting coal or coke from Morley Park to a site in the Derwent valley.

The scene was thus set for the construction of what John Farey believed was the first furnace in Derbyshire to smelt ironstone with mineral fuel and steam power.<sup>23</sup> Farey's comments on the local iron industry can generally be regarded as authoritative and it is therefore unfortunate that he did not, on this occasion, support his assertion with a precise date. Bulmer's directory of 1895, presumably again drawing on information collected locally, possibly from the Hurt estate, thought that the earlier of the two furnaces at Morley Park was built in 1780 and that 'a few years later he [Francis Hurt] introduced the steam engine in working the blast'.<sup>24</sup> The second statement is clearly wrong: there is no possible source of water-power at Morley Park, where the furnace must have been steam-blown from the start. On the other hand, even if the furnace was built by 1780, it would not have been the earliest coke furnace in Derbyshire: those at Chesterfield operated by the Smith family and by David Barnes would have preceded it by about three years

in each case.<sup>25</sup> Ultimately, the exact date is not crucial, since the general picture is clear. Hurt, having experimented at Alderwasley with mineral fuel, decided to move to a new furnace, with a steam blowing engine, close to his coal and ironstone pits, retaining the higher of the two Alderwasley sites as a forge and mill. This transfer probably took place sometime between 1780, the earliest date suggested anywhere for the building of the Morley Park furnace, and February 1782, when Francis Hurt's will describes the extent of his ironmaking activities.

In his will, Hurt clearly intended to divide his industrial enterprises between his two eldest sons, Francis and Charles.<sup>26</sup> The latter, who settled at Wirksworth and married a daughter of Sir Richard Arkwright, was to have the lead smelting cupolas, rolling mill and two red lead mills; use of as much of the millrace at Alderwasley as the leadworks there required; and use of the new bridge over the Derwent at Alderwasley built to provide access to the forge on the west bank of the river. Francis Hurt, then aged 29, was left 'The Iron furnaces Iron works and forges' at Alderwasley (a phrase which clearly establishes that both a furnace and forge had been built there), plus a share of the dams and streams by which they were powered, and also houses at Alderwasley occupied by Matthew Bacon, who appears to have been the Hurts' ironworks clerk, and the workmen. If required, Francis was to allow Charles to occupy these premises as well, paying a rent of £100 p.a. for a term of 21 years.

What gives the will particular interest is the provision that, if Charles Hurt should take the ironworks at £100 p.a., his brother was to raise out of his estate at Heage and Morley Park sufficient coal and iron to supply the Alderwasley works, including at least 300 long tons of pig a year, for which Charles was to pay £65s. a ton, plus 8s. a stack (48 cwt) for coal. If Francis refused to supply materials on these terms, Charles was to have liberty to work the minerals himself for 21 years, paying his brother 10s. a dozen for ironstone and 4s. a stack for coal. In practice, none of these contingencies took effect, since Francis Hurt chose to retain the ironworks at both Alderwasley and Morley Park himself and thus remain (until his comparatively early death in 1801) the only gentry ironmaster in Derbyshire and one of the few in this period anywhere in the country. The main point, however, is that by the beginning of 1782 a blast furnace, steam blown, had been built at Morley Park and was described as 'new'. The pattern was thus set for the following two generations, during which the Hurts or their lessees would mine coal and ironstone at Morley Park, smelt the iron on the spot and then send it a few miles up the Derwent valley to Alderwasley for refining and manufacture. It is possible that some rebuilding or improvement took place at Alderwasley around this time also, since the list of ironworks of 1794 among the Boulton & Watt papers gives a date of construction for the forge of 1782, which is obviously wrong but may point to some changes at about the time the furnace at Morley Park was built.<sup>27</sup> We also know from the case-paper of 1818 that in 1794 the lower of the two water-powered sites at Alderwasley was abandoned.<sup>28</sup>

Beyond this outline, we know little about the furnace at Morley Park and its associated forge during the period when it was operated directly by Francis Hurt, who succeeded his father in 1783, and his own son, also called Francis, who was born in 1781 and inherited in 1801.<sup>29</sup> No business papers have come to light and we can only assume that, alongside the furnace, a foundry was established to produce a similar range of general castings as, say, the Butterley Company made in these years.<sup>30</sup> Certainly by 1811, when an inventory was compiled, Morley Park had a furnace and foundry and the stock included both forge and melting pigs.<sup>31</sup> When the plant at Alderwasley was listed in 1794 refining was still being done by the traditional, all-charcoal, finery-chafery method but by 1811 a coke-fired puddling forge had been substituted.<sup>32</sup> It seems unlikely, if three fineries were in use as late as 1794, that Hurt ever tried the coke-fired potting

process which, at some works, including in Derbyshire Walter Mather's at Makeney and David Barnes's at Chesterfield, was employed during the transitional period from charcoal to coke.<sup>33</sup>

Also by 1811, Alderwasley had a boring mill as well as a rolling and slitting mill, which suggests that Hurt had entered the ordnance trade, probably after the outbreak of war with France in 1793. Otherwise, the forge would have produced bar, sheet and rod iron for sale locally and further afield.

During the years up to 1811, when the works were first leased, the local iron industry was substantially remodelled as the last charcoal furnaces closed and a number of new sites established, where coke was the fuel from the start. With the conspicuous exception of Morley Park, all were close to the canals which penetrated the two halves of the Derbyshire coalfield from the 1770s. The completion of the Chesterfield Canal in 1777 stimulated the establishment of new furnaces in that town itself and the rebuilding of old charcoal-smelting sites at Wingerworth and Staveley. A new coke furnace was also built lower down the Rother valley at Renishaw. In mid-Derbyshire there was an early, not very successful, attempt to establish a coke furnace on the Stanhope estate at Stanton, close to the Erewash Canal, and, when the Cromford Canal was built higher up the Erewash valley in 1789-93, two much larger works were started at Butterley and Riddings.<sup>34</sup> The Cromford Canal, as well as penetrating the coalfield as far north as Pinxton, also ran up the Derwent valley to Cromford itself, thus passing just over a mile to the north of Morley Park furnace and within a couple of hundred yards of Alderwasley forge. Rather oddly, the Hurst chose not to use powers available under the Cromford Canal Act to build a tramroad from Morley Park to the canal at Hartshay. They may have used boats from there to Alderwasley in preference to relying entirely on land carriage but it was only in later years that their lessees tried to link Morley Park more effectively by rail with the canal.

Even after the Cromford Canal was opened, Morley Park and Alderwasley were arguably the worst sited ironworks in Derbyshire. Admittedly, Wingerworth furnace was further from a canal than Morley Park, although its operator, Joseph Butler, made extensive use of both tramroads and the Chesterfield Canal to integrate his activities in the Rother valley,<sup>35</sup> but the Hurts also suffered from retaining a forge on a site originally chosen for its closeness to cordwood and water-power. The former consideration was obsolete by 1800, as puddling furnaces replaced fineries, and the latter, although important in ensuring the survival of forging at Alderwasley until late in the nineteenth century, was probably outweighed by the inconvenience of shipping pig for finishing up, rather than down, the Derwent valley. The Hurts' iron thus moved further away, rather than nearer, the distributive network of the Midland canals, as it was refined from pig to bar. Costs would have been increased by the double journey up and down the Cromford Canal, since most iron would presumably have been dispatched ultimately down the canals to the Trent and beyond. By contrast, other local ironmasters who operated on more than one site generally contrived to have their forge downstream from the blast furnace which supplied the pig: Butler's forge was at Killamarsh, some miles down the Rother valley from Wingerworth, while the Butterley Company erected their puddling plant at Codnor Park, two miles east of their main furnaces, with the works links by both canal and tramroad.<sup>36</sup>

Despite these handicaps, the Hurts' ironworks evidently prospered, if on a modest scale, in the years after the eldest Francis Hurt's death. Admittedly, this was a time of rapid expansion in the industry, as coke replaced charcoal first in the furnace and then in the forge, and few new entrants to the trade seem to have failed. Morley Park remained among the smaller furnaces in Derbyshire, where most of the works were small compared with those in South Wales, Shropshire or even the Black Country. When output statistics were collected for 1796, as part

of the ironmasters' campaign against an excise duty on pig, Morley Park returned a figure of 692 tons for a season lasting from January to the beginning of December. In the published list this was inflated to 728 tons by using a weekly figure of 14 tons. When a similar survey was conducted in 1806, Morley Park's output for 1805 appears as 340 tons in the earliest version of the return, later increased to 700 tons, probably once again assuming a weekly output of 14 tons over a fifty-week year, whereas the furnace may have operated for only about six months.<sup>37</sup> One reason why output remained so low was, of course, that there was only a single furnace at Morley Park. By 1810, the peak of the war-time boom in output, most other local works had two or more furnaces on a single site, or, as in the case of the Smiths of Chesterfield, furnaces at more than one location. In the absence of detailed accounts, any explanation of this comparatively low level of activity is speculative, but the reason may lie partly with the social status of the Hurts compared with neighbouring ironmasters. The family were major Derwent valley landowners and established county gentry, for whom the operation of ironworks may have been regarded as one, fairly minor, facet of estate administration as a whole. This outlook was more characteristic of the eighteenth, if not the seventeenth, century, than the early nineteenth but may help to explain why the works appear not to have been developed to their full potential.

## II

The Hurts' direct involvement with the works ended in 1811, when both furnace and forge were leased to professional ironmasters. From this date until the abandonment of Morley Park in the 1870s and the sale of Alderwasley to sitting tenants in 1940, the family merely drew rent from industrial enterprises which their ancestors had both built and operated. Their first tenants, who took both sites on the basis of a valuation of stock and tools at £4,871, were two brothers, John and Charles Mold, whose family had risen to wealth over the previous two generations in the iron trade of the Midlands.<sup>38</sup> John Mold was 35 in 1811, the eldest surviving son of Benjamin and Ann Mold of Barton under Needwood, Staffs. His brother Charles was 29. Their father was the son of a Walsall bucklemaker named Thomas Mold, who was unable to sign his will in 1765 but bequeathed a modest estate in the town to his son Benjamin, who had married the previous year, consisting mainly of a freehold property on Rushall Street acquired in 1728. Benjamin and Ann Mold had ten children in all, of whom the four sons were all involved in the iron trade. William Mold stayed in Walsall, where he inherited the family's property in Rushall Street under his father's will and carried on business as a saddler's ironmonger – like bucklemaking a characteristic Walsall trade – until he became bankrupt in the 1820s. His younger brother Henry became a nail merchant in Belper, where the trade had originally grown up because of proximity to an early slitting mill on the Derwent at Makeney. That site had been abandoned by Walter Mather in about 1780, when it was bought by the Strutts, who erected a cotton mill there, but nailmaking remained a widespread local craft.<sup>39</sup>

More important than either of these enterprises was Benjamin Mold's lease of the forge and slitting mill at Wychnor, near Barton, which may have been one of the sources of rod iron for Henry's business in Belper. Two of Benjamin's sons, John and Charles, joined their father in a partnership to run the forge and, under his will of 1810, inherited his half-share, subject to the payment of substantial bequests to other members of the family. Benjamin Mold's will was proved in September 1811 (he died the previous March), with the value of his estate sworn at £12,500.<sup>40</sup>

The family's progress in one generation from working bucklemaker to forgemaster was impressive and is reflected in their acquisition of a large house (but no land to speak of) in Barton

under Needwood, a village favoured in this period (as since) by those who had made money in business and sought a house in the country, rather than a country house. The Molds' home at Barton, which still stands, lies close to the centre of the village next to Barton Park, and its appearance points to a date of construction at the beginning of the nineteenth century. Described as newly built in 1804, when it was already owned by Benjamin Mold, the house may well have been built by him a few years before, since he was still living in Walsall (where he was elected a capital burgess in 1783) as late as 1795. The house at Barton has some fine ironwork, supporting a lead-clad verandah on the south front, which was quite possibly forged at Wychnor, while all the other principal features – brick walls with smooth rendering, a slate roof, pedimented bays and Tuscan columns to the porch – suggest a date of construction around 1800. The house, now known as the Dower House from its occupation during the second half of the nineteenth century by Georgina, widow of Sir William Gresley of nearby Drakelow Hall, is an attractive monument to Benjamin Mold's successful transition from bucklemaker to forger-master.<sup>41</sup>

Of Benjamin's sons, Henry and John appear to have remained single, but Charles further cemented the family's rise in status by marrying a daughter of John Webb of Barton Park, a local family of middling landowners. Similarly, he described himself as a 'gentleman' when his youngest son was baptised at Barton in 1826, instead of the term 'ironmaster' he had used on previous occasions, which was also the title his father used in his will.<sup>42</sup>

Their timely inheritance in 1811 may well have provided the springboard for John and Charles Mold's entry into ironsmelting at Morley Park and the acquisition of a second forge at Alderwasley. For the Hurts, the timing was certainly opportune. War-time pig output probably peaked in 1810 and by 1812 the beginning of the post-war slump could already be discerned.<sup>43</sup> Had Francis Hurt waited only another couple of years, Morley Park, small and poorly sited, might well have proved impossible to let and the furnace would have joined several others in Derbyshire in being abandoned at the end of the Napoleonic War in 1815. As it turned out, he was able to withdraw from the industry just as nearly twenty years of uninterrupted growth were about to be followed by a period in which output in Derbyshire shrank considerably with the closure of several works. Morley Park survived the slump but the early years of their tenancy were probably more difficult than John and Charles Mold imagined when they took out their lease in 1811.

Since none of the Molds' business papers appear to have survived, it is only possible to reconstruct their activities in outline. Among their first steps appears to have been an attempt to improve tramroad access to Morley Park. As early as 1808 a local colliery agent, James Fletcher of Ripley, suggested to the Derby Canal committee that they should extend their Little Eaton tramway from Smithy Houses to Ripley, Hartshay and the Cromford Canal. Among those who would benefit from such a line, which would have been about  $2\frac{1}{4}$  miles long and cost some £4,000 to build, would have been Francis Hurt, suggested Fletcher, since it would pass through his estate, adding 'inconceivable convenience' to the mines and ironworks at Morley Park, when then relied entirely on road transport. The committee felt that they lacked statutory powers to build such a railway but saw no reason why Fletcher should not do so himself, starting from the Hartshay end.<sup>44</sup> In the event, nothing was done. Shortly after the Molds leased the works, Farey reported that a railway had been laid between Belper and Morley Park, mainly to supply coal to the town from the collieries, rather than for the direct benefit of the iron trade, but it seems rather unlikely that this scheme was in fact executed.<sup>45</sup> Similarly, even by the 1830s, when the first edition of the one-inch Ordnance Survey map was published, Morley Park still lacked a tramroad

connection to the Cromford Canal, although one was built fairly shortly afterwards.<sup>46</sup>

Where the Molds did take action was in the refurbishment of the furnace at Morley Park and, a few years later, the construction of a second furnace and the installation of an improved blowing engine. Both surviving structures on the site today bear datestones. Anything once inscribed on the more southerly furnace has long been illegible but the other is clearly dated 1818. This led Frank Nixon (quite reasonably, in view of the evidence then available) to deduce that the undated furnace was built in 1780 and the other added in 1818.<sup>47</sup> In fact, the generally reliable list of ironworks compiled in 1830, which gives the number of furnaces in that year and 1823, states that there was one at Morley Park in 1823 and two in 1830, with the addition being made in 1825, a year of unprecedented prosperity for the iron trade which encouraged new building throughout the industry.<sup>48</sup> This is broadly confirmed by a case prepared for counsel's opinion when the Molds were in dispute with their landlord towards the end of their tenancy in 1859 as to compensation for improvements, when they claimed that they replaced the original furnace with a better structure, added a second furnace and installed a new engine capable of blowing both.<sup>49</sup> The furnace now bearing the date 1818 must therefore be the original furnace refurbished: the date is quite consistent with the general history of the industry, since that was the first reasonably good year after the slump of 1815–17 and this may have encouraged the lessees to spend money for the first time. It is even possible that the furnace had been out of blast for part of the time since 1811 and refurbishment was needed before it could be blown-in again. The more southerly furnace must be the structure erected in 1825. This deduction also fits in with the position of the blowing engine house, which was to the north of the more northerly furnace. One would expect the original furnace to be next to the blowing engine and for a later addition to be further away: the Molds' submission of 1859 specifically refers to pipes installed to carry the blast from the new engine to both furnaces.

The same case-paper outlines improvements by the lessees at Alderwasley, which included a new and better sheet rolling mill in place of that previously erected by Hurt, and the installation of circular saws and a bar rolling machine, both of which were additions rather than replacements. The Molds also excavated new head and tail races at the forge, apparently about the same time as the furnace at Morley Park was rebuilt, since a keystone in the bridge carrying Holly Lane over the tail-race is dated 1819.<sup>50</sup>

Although neither the lease of 1811 nor the Molds' partnership agreement of the same year appears to have survived, the terms of both were probably similar to the renewals executed in 1839.<sup>51</sup> The Alderwasley works were described then as a forge with rolling and slitting mill, plus workshops and warehouses. There were also 13 dwelling houses, of which the largest, Forge House, was the home of John Mold. The lease included free passage over two privately built bridges over the Derwent, one of which led to a wharf and warehouse on the Cromford Canal opposite the forge. At Morley Park there was a furnace and foundry, plus six dwellings, all occupied by workmen. There was no partner's house near the furnace, Charles Mold preferring instead to make his home at Makeney House, on the banks of the Derwent between Belper and Duffield. The basic rent for the buildings at both sites was £300 p.a., plus £100 per acre for soft coal mined at Morley Park. A royalty of 2d. a ton was payable on coal not used at the ironworks and 3s. a dozen for ironstone. The latter measure was now defined as a stack 9ft by 6ft by 2ft, making 4 cu.yd. and supposed to weight 4½ tons. The ironstone royalty was fixed at this figure as long as the price of Shropshire forge pig at Stourport remained below £5; if it touched this level or rose above a further royalty of 2s. a dozen became payable. The lessees undertook to work at least three acres of coal annually and to get 1,250 dozen (i.e. 5,000 tons) of ironstone, which

would have made about 1,500 tons of pig a year. The lease of 1839 was to run for 21 years; there had presumably been some intermediate renewal between the original lease of 1811 (28 years earlier) and that of 1839. The most likely sequence of events was probably an initial lease of seven years from 1811 and then, once the business was established, a new lease of 21 years from 1818, on the basis of which the Molds rebuilt the furnace at Morley Park and improved the forge.

The output statistics collected nationally in the 1820s confirm the rough calculation in the previous paragraph. In 1823 the single furnace at Morley Park was said to have made 544 tons of pig, presumably a return of actual output.<sup>52</sup> In 1830 the two furnaces there made 1,428 tons and for 1825 the figures were 35 tons a week or 1,500 tons a year.<sup>53</sup> Statistics collected for 1848 include the remarkably high weekly output at Morley Park of 90 tons, more from each furnace than the works as a whole was said to produce twenty years earlier, and the figure becomes even less credible when published as an annual total of 4,680 tons.<sup>54</sup>

The Hurt estate was not the Molds' only source of coal and ironstone in this period. As their business grew, they took a lease for 42 years from 1837 of minerals beneath land owned by the Peach family of Brampton at Marehay, to the east of Morley Park, where again a royalty of 3s. a dozen was specified for ironstone and a combination of dead rent and royalty for various types of coal.<sup>55</sup> The pits at Marehay were linked with the works by a tramroad and, probably also in the later 1830s, the Molds finally acquired railway access to the Cromford Canal, with a line running virtually due north from the furnaces to a wharf at Hartshay, also built on land leased from the Peach family.<sup>56</sup> By contrast with these signs of expansion, the actual ironmaking side of the business seems to have changed little. In particular, Morley Park did not switch to hot-blast smelting, as several of the larger Derbyshire works did at a fairly early date. Codnor Park and Butterley, for example, were among the first in the country to be equipped with the new process.<sup>57</sup> Possibly the Molds lacked sufficient capital to invest further or were disinclined to do so at premises which they held on a comparatively short lease. They were evidently content to continue producing forge and foundry pig by the traditional process in what were now rather old fashioned furnaces. When the annual series of *Mineral Statistics* began to record details of individual furnaces in the mid-1850s, Morley Park was sufficiently unusual for the compiler to note that they were now the only cold blast furnaces in Derbyshire.<sup>58</sup>

The partnership deed of 1839, as summarised in later Chancery proceedings, appears to have been straightforward and similar to those under which dozens of ironworks operated at this period. It was itself no doubt based on earlier agreements dating back to 1811 and possibly others before that between John and Charles Mold and their father. The two brothers held equal shares in the business of John & Charles Mold, ironmasters and coalmasters of Alderwasley and Morley Park, and all profits were to be divided equally on the basis of an annual balance of accounts. The partners' capital was to be credited with 5 per cent interest annually. If either died, the surviving partner had first option (for two months) to buy the other's share; after this it could be disposed of elsewhere.<sup>59</sup> It was in fact this eventuality, the death of one of the partners, that led to the collapse of the Molds' business.

John Mold, the older of the two by six years, died on 30th November 1846 at Forge House, Alderwasley, aged 70.<sup>60</sup> He had signed a will three days before, under which a number of nephews and nieces (and in some cases their children) were left generous legacies. Mold himself appears either never to have married or (possibly) to have died a childless widower. The bequests were all charged on his half-share in the partnership, which was regarded as his only estate. Subject to these payments, his share was left to the two sons of his brother Charles, Charles John and William Henry Mold, then aged 27 and 20, although this was in turn subject

to Charles Mold's right under the 1839 partnership agreement to buy the share within two months of his death.<sup>61</sup> In fact, he did not take up the option and the moiety passed to his sons, thus exactly reproducing the situation a generation earlier at Wychnor forge, when Charles's own father had brought him and his brother John into that business. The new partnership, however, did not run as smoothly as that of 1811.

The initial problem was that John Mold's bequests considerably exceeded the value of his estate: according to the settlement eventually reached in 1852, the legacies totalled £22,500, whereas a half-share of the partnership was found by valuation to be worth only £15,208.<sup>62</sup> During subsequent litigation, C.J. Mold claimed the discrepancy was greater still and that the beneficiaries of his uncle's will received only 9s. in the pound.<sup>63</sup> Presumably because of this shortfall, John Mold's trustees, the Wirksworth solicitor Philip Hubbersty and Robert Creswell, an Idridgehay land agent, were unable to obtain probate until March 1849 and were only able to come to an agreement with the beneficiaries in December 1852, when, in return for a payment of £15,208, they released to C.J. and W.H. Mold their late uncle's share of the partnership. The money was then divided between the legatees, apart from those who had already been paid small amounts in full.<sup>64</sup>

This, however, was not the end of the matter. For reasons that are not clear, differences arose between C.J. Mold and his brother and father. These may have started before the settlement of 1852; by the following year they were sufficiently serious for C.J. Mold to suggest arbitration. This was resisted by the other two and, after further negotiations had failed, Charles junior initiated a Chancery action in September 1855 against his partners, claiming that it was impossible to produce proper accounts for the business. He asked for the partnership to be wound up; for all money due to the business to be got in and for the assets to be realised; for him to be paid money he claimed was due from the other two; and for a receiver to be appointed.<sup>65</sup> W.H. Mold's reply to these claims was initially an offer to his brother to dissolve the partnership without recourse to litigation, which would have seemed, on the face of it, the most sensible solution and the one which gave the best chance for the business to survive. According to William, negotiations on these lines were broken off by Charles in January 1856, whereupon the younger brother filed a bill of his own in Chancery, naming both his partners as defendants. His immediate motive was fear that his brother, unless restrained by the court, would collect in and remove money due to the partnership, a charge also brought by Charles against the other two. William, however, was particularly aggrieved by an incident which allegedly occurred a fortnight before he began proceedings in Chancery, when his brother took £488 18s. 10½d. in cash from the works immediately before the money was needed to pay wages one Saturday.<sup>66</sup>

Relations between the partners had obviously deteriorated beyond repair and the court intervened to dissolve the partnership in January 1856. A receiver-manager was appointed the entire business offered for sale by auction in October that year.<sup>67</sup> The catalogue provides a good description of the Molds' activities at, probably, their greatest extent, with a furnace and foundry at Morley Park; collieries and ironstone pits nearby linked by tramroad with the works; a forge at Alderwasley and a wharf on the Cromford Canal; and a limestone quarry at Crich.<sup>68</sup> The assets were bought by Charles Mold and his younger son and it was they who formed a new partnership, although whether Charles Mold senior remained actively concerned for much longer is doubtful. The entries for Morley Park in *Mineral Statistics* for 1858, 1859 and 1860 name W.H. Mold as sole owner,<sup>69</sup> which probably reflects the outcome of further difficulties, again resulting in Chancery action.

Early in 1856, solicitors acting for the holder of a first mortgage over Charles Mold's home

at Makeney noticed that the house was empty and the former occupier's affairs in Chancery.<sup>70</sup> This was sufficient for them to force a sale to secure the £2,000 which had been lent on the property. In June 1856 Makeney House and grounds were bought at auction by Anthony Sturt, who ignored warnings from his own attorney that he 'should be buying a law suit'.<sup>71</sup> This, however, proved an accurate prediction, since the sale was not completed for another two years. Besides the difficulty of establishing whether parts of the estate were freehold or copyhold of the manor of Belper (the whole property was eventually found to be copyhold), Mold's title was encumbered by a second mortgage, also for £2,000, originally borrowed from James Wass, who had demanded repayment in 1848, the worst possible time for Mold, whose capital was then entirely tied up in the ironworks and whose brother's probate was still not settled. He was only able to repay the loan by persuading the trustees of his wife's marriage settlement to advance the money in return for the transfer of the mortgage to them. Worse was to follow, since the sale of 1856 failed to realise sufficient to discharge both mortgages, so that Mold, whose wife died in January 1850, lost his home but remained indebted to his late wife's trustees, who were now acting on behalf of his children, since they, rather than Charles Mold, were the next beneficiaries under the settlement. One of the children was, of course, Charles John Mold who, for over two years, delayed completion of the sale by demanding part of the proceeds. He eventually gave way and in October 1858 the balance, after the discharge of the first mortgage, was paid to Mrs. Mold's trustees. In April the following year, however, C.J. Mold began proceedings in court of Queen's Bench to recover money which he claimed was his, forcing his father, who was now living at Cheetam Hill, Manchester, to file a Chancery bill praying that he be restrained. Lengthy statements were taken from both sides, which illustrate the problems that could arise when family disputes could only be settled in court, but by the time the matter was settled in 1861 the Molds' tenancy of the ironworks had come to an end for other reasons.<sup>72</sup>

The partnership of 1839 would, had it not been interrupted by the Chancery order of January 1856, have expired in 1860 and, although no details of the new arrangements entered into by William Mold and his father have survived, it seems that this terminal date was incorporated into a new agreement. In December 1859 they determined their lease of minerals on the Peach estate<sup>73</sup> but by this time were embroiled in difficulties with Francis Hurt at both Alderwasley and Morley Park as to whether they were entitled, at the end of their lease, to remove (and presumably sell) certain pieces of plant. As described earlier, the Molds had in happier days made substantial additions to both works which they were reluctant to leave without compensation, especially where the items were completely new, rather than replacements. The advice from counsel engaged by their own attorney was discouraging but, despite this, Charles Mold and his younger son became involved in yet another Chancery action, this time as defendants to a bill brought by Francis Hurt in 1859.<sup>74</sup> A separate dispute arose over their tramroad from Morley Park to the Cromford Canal, where they began a suit against a local landowner whom, they alleged, had ripped up part of the railway.<sup>75</sup>

Under this weight of litigation, involving no fewer than five separate Chancery actions, a sixth in Queen's Bench and quite possibly others which have not been traced, all compressed into barely five years (1855–9), it is not altogether surprising that the Molds' business collapsed. It seems unlikely, in any case, that they would have secured a renewal of their lease from Hurt after the expiry of that of 1839. In fact, the company last paid rent for Morley Park and the quarry at Crich at Lady Day 1859.<sup>76</sup> The forge appears to have been kept on for another twelve months, with the last payment being made at Lady Day 1860.<sup>77</sup> Charles Mold was by this time living in Manchester; his elder son, wife and children were at her family's home at Wingfield Park in the

Amber valley; and W.H. Mold presumably quit Forge House, Alderwasley, where he had been living since 1855, if not earlier, as soon as he gave up the forge.<sup>78</sup> By 1881 he was farming at Bethersden, near Ashford, Kent, where he died in 1904.<sup>79</sup> Interestingly, he named his home in Kent 'Oakhurst', the same as that chosen for what had previously been Forge House, Alderwasley, until it was enlarged by Mold himself in the 1850s. A further link with the past was preserved by another member of the family, Alice Stubbs, William's niece, who appears as the informant on his death certificate: she lived at 22 Sunny Gardens, Hendon, in a house called 'Needwood'.<sup>80</sup>

Thus ended, rather ignominiously, the family's tenure of the two ironworks on the Hurt estate. Looking at the period 1811–60 as whole, the turning-point clearly came with the death of John Mold in 1846, from which virtually all the family's subsequent problems stemmed, with the possible exception of the argument with Hurt over compensation for improvements. Disputes of this sort are common enough in the nineteenth-century iron industry, as are difficulties arising from the death of a member of a small firm constituted as a partnership. If, despite careful drawing of the partnership deed and proper provision in the partners' wills, a smooth transition from one generation to the next proved impossible, the intervention of the court of Chancery would almost certainly spell doom for the business.<sup>81</sup> The history of John & Charles Mold is no exception. The 1850s were not difficult years for the iron industry and, although the plant at Morley Park and possibly Alderwasley may have been old fashioned, there is no obvious commercial reason for the collapse of the company: their demise is clearly attributable to internal rather than external factors.

Looking at the history of the partnership from the family's standpoint, one can see that, while for a time the business gave the two brothers an assured social status in mid-Derbyshire, in the longer term it failed to establish them securely as upper middle class manufacturers, much less enable them to progress to minor landowners as they possibly wished. John Mold chose to live close to the forge at Alderwasley in a comfortable but hardly grand house; in this respect he shared the outlook of many ironmasters of his day, who remained in close daily contact with their works and workers. Possibly also, since he appears to have been a bachelor, he was disinclined to live anywhere bigger. His brother Charles, on the other hand, following the example of his father but on a larger scale, set up home in some style at Makeney, several miles from either works, in a house with fairly extensive grounds on the banks of the Derwent, in a part of Derbyshire traditionally favoured by merchants and manufacturers who wished to retire to the country. The fact that Makeney was encumbered with two mortgages which together totalled more than the value of the property when it came to be sold may reflect some extravagance in Charles Mold's lifestyle, not shared by his brother; alternatively, the money may have been raised to further the business. Charles Mold's children married into the professional middle classes: William his attorney's daughter and Charles junior the daughter of a minor local landowner, David Wheatcroft of Wingfield Park.<sup>82</sup> The establishment at Makeney was a victim of the family's problems after 1846 but they do not seem to have been completely ruined either by the sale of the house or the end of the ironmaking business. On the other hand, the Molds failed to make the transition in the traditional three generations from manufacturers to landed gentry. The partnership, based as it was on a comparatively short lease of works which neither landlord nor tenant seems to have been inclined to modernise, failed to generate sufficient income to enable Charles Mold's sons to retire to a country estate and forget their origins as the great-grandchildren of an illiterate Walsall bucklemaker.

## III

The history of the two ironworks after 1860 has not been traced in detail. In any case, they did not remain a single business. From Michaelmas 1862 until Lady Day 1874 Alderwasley forge was let to William Smith Longridge, of whom nothing is at present known, at an annual rent of £300. This is considerably more than the £88 14s. which the Molds were paying in the 1850s and may simply reflect a better bargain obtained by the estate when the tenancy fell in; more likely, it implies substantial rebuilding and improvement. The limestone quarry at Crich was let separately to the Clay Cross Company, who had limeworks at Bullbridge a couple of miles lower down the canal.<sup>84</sup> Longridge was succeeded in 1874 by a Manchester firm of wire-drawers, Richard Johnson & Nephew, who operated the works as a branch of their main establishment.<sup>85</sup> The attraction of the site remained the availability of water-power, since although there was now a main road, canal and the Derby to Manchester railway line up the valley, the forge had no direct rail connection since it lay some way below the level of the track. Goods had still to be carried over the bridge across the road to reach either the canal wharf or a railway goods shed. Johnson rebuilt the works on a much larger scale between 1874 and a re-opening in 1876, so that in 1895 Bulmer's directory could report that they comprised a large block of buildings, stretching more than 300 yards along the bank of the river, driven by two water-turbines which were said to be among the largest in England.<sup>86</sup> Most of these buildings are still to be seen at Alderwasley on the west bank of the Derwent; today the company operate mainly from more modern premises on the opposite side of the river. On the other side of the A6 the wharfinger's house still stands alongside the unnavigable Cromford Canal, while on the hillside above the works the mansion known first as Forge House and later as Oakhurst (which was used for a time as a youth hostel earlier this century) is currently (1988) derelict and its future uncertain.

The furnaces at Morley Park were not let immediately after the Molds' departure, which is hardly surprising, since the plant must have seemed very old fashioned as well as badly located. A locomotive-operated branch railway had partially superseded the old Derby Canal tramroad as a means of access for the collieries around Marehay and Denby, but this did not extend as far as the ironworks.<sup>87</sup> Similarly, the Buckland Hollow branch of the Midland Railway from Ambergate to Codnor Park, which passed within a mile of the furnaces to the north, was not built until after the ironworks were abandoned, which thus never had a railway connection. In addition, the works were small, with only two furnaces, still operating on cold-blast, and what was probably a rather limited foundry. Despite these disadvantages, Hurt succeeded in letting the works from Michaelmas 1863 to Charles Cathrow Disney (of whom nothing has so far been discovered) at an annual rent of £139 4s., virtually the same as the £140 10s. the Molds had been paying.<sup>88</sup> Twelve months later Disney's rent rose to £168 18s., although it is not clear whether this included a larger area. In addition to his surface tenancy, which in the Molds' time had extended to 87 acres, Disney no doubt also leased minerals from Hurt and possibly other local owners. He remained the occupier at Morley Park until 1869 when, according to *Mineral Statistics*, he was succeeded by Henry Cathrow Disney, presumably a relative, although the details have not been established.<sup>89</sup>

H.C. Disney appears to have been a victim of the slump in the iron trade which followed the boom of 1871–3. His Michaelmas rent payment in the latter year was a week late and he paid nothing the following Lady Day. In the rental for Michaelmas 1874 arrears of £168 18s. were shown, with no payment at all and the comment, 'Mr. Disney became bankrupt'. Six months later arrears of £173 18s. were written off as irrecoverable.<sup>90</sup> Although, according to *Mineral Statistics*, the two furnaces were said to be in blast in 1875, this seems unlikely and they probably

worked for the last time the previous year, which was the date suggested by Frank Nixon, possibly on the basis of information collected locally in 1951.<sup>91</sup> The large-scale Ordnance Survey plan published a few years later shows the buildings, including the two furnaces, engine-house and foundry, plus a gatehouse and some cottages, still standing, with the abandoned trackbeds of tramroads running north to the canal and east to collieries at Marehay.<sup>92</sup> With the onset of twenty years of slump in the iron trade after 1873 it is hardly surprising that the Morley Park furnaces were abandoned for good. By 1895 the local council was employing men to quarry slag from the works to repair the roads.<sup>93</sup>

After closure the site, surrounded as it was by land heavily scarred by mining operations, reverted to agricultural use. After the Second World War residual coal deposits were extensively worked by opencast, with the result that the landscape was changed completely. The two furnaces were first protected by inclusion in the provisional list of buildings of special architectural or historical interest compiled under the Town & Country Planning Act of 1947 and were not scheduled as an ancient monument for another twenty years.<sup>94</sup> The site was one of a small number of industrial structures included in Nikolaus Pevsner's original survey of Derbyshire (1953) and, about the same time, Frank Nixon, a Rolls Royce engineer who was amongst the first to take an interest in the county's industrial heritage, published a short account of what was then known of their history.<sup>95</sup> The furnaces survived destruction during this period thanks to Nixon's efforts and to their acquisition in 1955 from the Hurt family trust by Stanton Ironworks Co. at the initiative of Sir Frederick Scopes, Stanton's chairman. The company erected a fence around their property and made some attempt to prevent further decay and damage.<sup>96</sup> It was on this basis that Nixon was able to report that, after some years' neglect, action was being taken to protect the furnaces.<sup>97</sup> In fact, nothing was done to secure their long-term future, apart from scheduling as an ancient monument in 1967, and in 1969 Nixon once again drew attention to the need for conservation work, as did others around the same time.<sup>98</sup>

After lengthy negotiations between the owners, the British Steel Corporation (as successors to Stanton & Staveley Ltd.), the Historic Buildings and Monuments Commission for England and various voluntary organisations interested in their welfare, the furnaces and a small surrounding area originally fenced off when the site was bought by Stanton, was conveyed first to the Derbyshire Historic Buildings Trust and then, in 1987, to the Derbyshire Archaeological Society. Following the acquisition of the site by the DHBT, an extensive programme of conservation has been undertaken and completed. This was funded principally by grants from the HBMCE and the Derbyshire County Council, with contributions from the Amber Valley District Council, the Historical Metallurgy Society and the DAS. The stacks themselves are now well consolidated but considerable work remains to be done within the perimeter fence. The Archaeological Society is committed to regular maintenance of the site and it is hoped that improvements in its appearance will gradually result.<sup>99</sup> On the other hand, it seems unlikely that any major restoration work will be carried out at Morley Park in the foreseeable future, on lines comparable to that undertaken by the North West Leicestershire District Council at Moira furnace, a site of similar date on the South Derbyshire coalfield.<sup>100</sup> Although neither as complete nor as extensive as Moira, Morley Park is the only site of the early coke era in Derbyshire with substantial surface remains and represents a works which operated commercially for nearly a century, by contrast with Moira, which was an experiment that failed. Having survived so many chances of destruction, Morley Park is now undoubtedly worth fully conserving for the future.

## REFERENCES

- 1 S. Glover, *The history and gazetteer of the county of Derby*, II (1) (1833), pp. 7-9.
- 2 See Appendix 1.
- 3 Glover, *History*, loc.cit.; sale catalogue (1930) in Derbyshire Record Office (DRO), D302Z/ES 17.
- 4 DRO, D2535M/D334; cf. Glover, *History*, II, p. 6.
- 5 DRO, D2535M/D323.
- 6 The original list is in Birmingham Reference Library, Boulton & Watt Collection, Muirhead II; cf. P. Riden, 'The output of the British iron industry before 1870', *Economic History Review*, 2nd series, XXX (1977), p. 447, for the document and its context. I am working on a new analysis of output statistics for the U.K. blast furnace sector between 1790 and 1850 based on the lists referred to in this article.
- 7 See Appendix 1.
- 8 DRO, D2535M/D323; P.P. Burdett, *Map of Derbyshire ... 1791* (facsimile ed., Derbyshire Archaeological Society, 1975).
- 9 The only connected account of the iron industry in the region during the early modern period is an unpublished paper of my own, 'The charcoal iron industry in the East Midlands, 1580-1780' (forthcoming).
- 10 Charcoal furnace statistics calculated from P. Riden, *A gazetteer of charcoal-fired blast furnaces in Great Britain in use since 1660* (Cardiff, 1987); data for coke furnaces from research in progress (cf. note 6).
- 11 DRO, D2535M/D323.
- 12 Riden, *Gazetteer*, p. 22, an account of Alderwasley written before research for this article was begun and therefore now superseded by what appears here.
- 13 Kindly drawn to my attention by the Historic Buildings & Monuments Commission for England (their ref. AA 30767/1) and included in one of their files on Morley Park. At the time of writing (August 1988) it has just been announced that Nixon's historical collections are to go to Derby Industrial Museum; it is just possible that other photographs of Alderwasley or Morley Park not previously noted may turn up in this material when it is sorted.
- 14 Derby Industrial Museum, DBYIM, p. 44/7. The surviving print is of poor quality and unsuitable for publication.
- 15 T. Bulmer & Co., *History, topography and directory of Derbyshire* (Derby, 1895), p. 607; cf. Riden, *Gazetteer*, p. 22.
- 16 Riden, *Gazetteer*, pp. 3-4, 16.
- 17 *Bulletin of the Historical Metallurgy Group*, No 4 (Jan. 1965).
- 18 J. Farey, *A General view of the agriculture and minerals of Derbyshire*, I (1911), p. 397.
- 19 Pers. comm. 2 June 1987, from Prof. Harry Marsh, Northern Carbon Research Laboratories, University of Newcastle upon Tyne.
- 20 DRO, D2535M/C215-C224, C226.
- 21 DRO, D2535M/C225.
- 22 DRO, D2535M/C213 (abstract), C214 (queries); the absence of the purchaser's copy of the conveyance is supplied by a copy among the vendor's papers in Leeds University, Brotherton Library, Wentworth-Woolley Papers.
- 23 Farey, *General view*, I, p. 397.
- 24 Bulmer, *Directory*, p. 661.
- 25 Riden, 'The charcoal iron industry in the East Midlands, 1580-1780' (cf. note 9).
- 26 DRO, D2535M/C226.
- 27 As note 6.
- 28 DRO, D2535M/D323. Both forges were still in use in 1789, when they were marked on the plan drawn up by E.G. Fletcher to show the line of the intended Cromford Canal (DRO, D1954Z/Z2): I am indebted to Mr. S.L. Garlic for drawing this map to my attention.
- 29 Glover, *History*, II, p. 8.

- 30 P. Riden, *The Butterley Company 1790-1830* (Chesterfield, 1973), pp. 42-6, which draws on exceptionally well preserved sales ledgers.
- 31 DRO, D326Z/BT1, printed here as Appendix 2.
- 32 Farey, *General view*, I, p. 402.
- 33 P. Riden, 'The growth of the British iron industry, 1700-1870' (unpublished Oxford M.Litt. thesis, 1979), pp. 163-74; table, p. 169.
- 34 As note 9; cf. also Riden, *Butterley Company*, pp. 1-7.
- 35 P. Riden, 'Joseph Butler, coal and iron master, 1763-1837', *Derbyshire Archaeological Journal*, CIV (1984), pp. 87-95.
- 36 Ibid. and Riden, *Butterley Company*, pp. 20-1
- 37 Riden, 'Output of the British iron industry', pp. 449-50, and cf. note 6.
- 38 Genealogical material on the Mold family has been gathered together in Appendix 4.
- 39 For the Makeney mill see Riden, 'The charcoal iron industry of the East Midlands, 1580-1780' (cf. note 9); the date 1780 derives from a sale announced in *Derby Mercury*, 6/13 Oct. 1780, which demonstrates that the forge continued in use after an earlier announcement of 1777, which other writers have assumed marks the closure of the ironworks. The forge was also assessed to land tax in 1780.
- 40 Lichfield Joint Record Office, B/C/II, 30 Sept. 1811.
- 41 I am indebted to the present owners of the Dower House, Mr and Mrs D. Shuck, for permission to inspect the property and for sight of a conveyance of 1864 which refers to 'Lady Gresley' as occupier. For descriptions see the statutory list and N. Pevsner, *Buildings of England: Staffordshire* (1975), p. 66. The reference of 1804 is from Staffs. Record Office, QRDC58. See also Appendix 4.
- 42 See Appendix 4.
- 43 Riden, 'Output of the British iron industry', p. 455.
- 44 Derby Local Studies Library, Derby Canal Co. minutes.
- 45 Farey, *General view*, III, p. 313. It requires courage to differ from Farey on this subject but the 'stop press' character of his comments, plus the complete absence of any later references to this tramroad, either in documents or on maps, suggests that this was a project which did not go ahead.
- 46 Ordnance Survey, 1:63,360 Old Series, sheet 71.
- 47 F. Nixon, 'Morley Park iron furnaces', *Derbyshire Countryside*, April-June 1951, pp. 115-17.
- 48 Riden, 'Output of the British iron industry', pp. 451, 455, and cf. note 6.
- 49 DRO, D77OC/EZ30, EZ31.
- 50 Ibid.
- 51 DRO, D326Z/BT2.
- 52 Riden, 'Output of the British iron industry', pp. 450-1.
- 53 Ibid.
- 54 As in S.D. Chapman, *Stanton & Staveley. A business history* (Cambridge, 1981), p. 58.
- 55 DRO, D77OC/EZ28.
- 56 This tramroad was evidently built after the publication of the first edition of the Ordnance Survey (cf. note 46) and was abandoned before the second edition was surveyed, on which (1:2500 scale, Derbyshire, sheets XL.6 and 10) its course is clearly discernible. It was the line involved in the disputes of the 1850s (cf. note 75).
- 57 M. Dufrenoy, 'Rapport à Monsieur le directeur général des ponts et chaussées et des mines, sur l'emploi de l'air chaud dans les usines à fer de l'Écosse et de l'Angleterre', *Annales des mines*, 3rd series, IV (1833), p. 460.
- 58 *Mineral Statistics* (Geological Survey, annually from 1854); the comment was included in the tables for 1858.
- 59 Public Record Office, C 15/219, 1855 M 98.
- 60 I am indebted to the Superintendent Registrar, Belper, for a copy of the entry made on 3 December 1846 in Wirksworth sub-district recording this event; I have failed to locate a burial registration at Wirksworth, Duffield, Belper or Barton under Needwood.

- 61 Lichfield JRO, B/C/II, 5 March 1849.
- 62 DRO, D326Z/BT4.
- 63 PRO, C 15/676, 1859 M 87.
- 64 DRO, D326Z/BT4.
- 65 PRO, C 15/219, 1855 M 98.
- 66 PRO, C 15/312, 1856 M 21.
- 67 DRO, D326Z/BT5, partly printed here as Appendix 3.
- 68 Ibid.
- 69 *Mineral Statistics, sub annis*; cf. DRO, D326Z/BT3 (endorsement 1859).
- 70 DRO, D770C/EZ33.
- 71 Ibid.
- 72 PRO, C 15/676, 1859 M 87.
- 73 DRO, D326Z/BT3.
- 74 DRO, D770C/EZ30, EZ31.
- 75 DRO, D326Z/BT7.
- 76 DRO, D2535, Box 1, No 1.
- 77 Ibid.
- 78 DRO, D326Z/ET1 establishes that Mold was at Forge House in 1855.
- 79 I am indebted to the Superintendent Registrar, Ashford (Kent), for a copy of an entry dated 29 Feb. 1904 of an event registered in Ashford sub-district of West Ashford registration district.
- 80 Ibid.
- 81 For interesting (if somewhat earlier) parallels in the two other local ironworks I have investigated cf. *Butterley Company*, pp. 12-15 and 'Joseph Butler', pp. 92-3.
- 82 See Appendix 4.
- 83 DRO, D2535, Box 1, No 1.
- 84 Ibid.
- 85 M. Seth-Smith, *200 years of Richard Johnson & Nephew* (Manchester, 1973), pp. 70-73; Bulmer, *Directory*, p. 607.
- 86 Ibid.
- 87 Ordnance Survey, 1:2500, Derbyshire, sheet XL.10.
- 88 DRO, D2535M, Box 1, No 1.
- 89 *Mineral Statistics*, 1869, 1870; there is no probate grant for C.C. Disney between 1869 and 1874 (inclusive) and I have not pursued the family in other directions.
- 90 DRO, D2535M, Box 1, No 1.
- 91 F. Nixon, 'Morley Park iron furnaces', *Derbyshire Countryside*, April-June 1951, pp. 115-17.
- 92 Ordnance Survey, 1:2500, Derbyshire, sheet XL.10.
- 93 Bulmer, *Directory*, p. 661.
- 94 Information kindly supplied by HBMCE (cf. note 13).
- 95 Nixon, 'Morley Park iron furnaces'; N. Pevsner, *Buildings of England: Derbyshire* (1953), p. 60.
- 96 Information kindly supplied by HBMCE (cf. note 13); the Public Trust Office (which acted for the Hurt family trust); Mr. J.W. Moss of Jackson & Moss, Ilkeston (who acted for Stanton); Mr. Vernon Scopes (Sir Frederick's son, then Stanton's estates manager); and Mr. Michael Mallender of Taylor, Simpson and Mosley (who acted for the Derbyshire Archaeological Society in 1987).
- 97 Nixon, 'Morley Park iron furnaces'.
- 98 F. Nixon, *The industrial archaeology of Derbyshire* (Newton Abbot, 1969), pp. 56, 116, 261; information from HBMCE (cf. note 13).
- 99 Information from Keith Reedman, the DAS member most closely involved with the recent attempts to secure the future of Morley Park.
- 100 Cf. D. Cranstone (ed.), *The Moira furnace. A Napoleonic blast furnace in Leicestershire* (N.W. Leics. District Council, 1985).

## APPENDIX 1

## DR S.D. CHAPMAN AND THE HURTS

The only previous writer to have discussed the Hurt family's involvement in the iron industry is Dr S.D. Chapman (Nottingham University). In his well known work on *The Early Factory Masters* (Newton Abbot, 1969) he wrote (p. 148):

The Hurt family came to wealth as lead merchants at Ashbourne, but the eighteenth-century heir to the family business, Francis Hurt, followed the movement of trade to Wirksworth. He became a lead merchant there and an iron manufacturer and merchant at Alderwasley on the Derwent, ten miles north of Derby. His earlier trade consisted of supplying the Belper nailers with rod-iron and the rural smithies with bar-iron and share-moulds for plough-shares. When Arkwright came to Cromford he seems to have made a close connection with Hurt, for his daughter Susanna was shortly married to Hurt's son. Under the stimulus of the growing cotton industry, Hurt turned to the regular production of castings for cotton-mill machinery.

Three sources are cited for this passage: *Derby Mercury*, 2 Feb. 1799; 'Bailey' and 'Glover'. The two latter are not glossed in the apparatus accompanying the references but evidently refer to William Bailey's *Western & Midland Directory* (1784) and Stephen Glover's *History etc* of Derbyshire (1829–33). The page numbers cited from Glover by Chapman (II, pp. 5-6) merely refer to the general history of the Hurt family and in fact refute his suggestion that the Hurts were, either in the sixteenth century or later, primarily merchants rather than landowners. Bailey's directory, of which the Derbyshire pages were published in facsimile by the Derbyshire Archaeological Society in 1972, lists (under Chesterfield) both Francis and Charles Hurt as, respectively, iron manufacturer and merchant and lead merchant of Alderwasley, as one would expect, in the light of the bequests made in their father's will of 1782. There is no issue of the *Derby Mercury* dated 2 February 1799.

In view of this, I fail to see how Dr Chapman was able to state with such precision what products the Hurts made at either their Alderwasley or Morley Park ironworks; in particular, the suggestion that share-moulds were produced (apparently at Alderwasley) implies the existence of a foundry, for which Dr Chapman adduces no evidence, nor have I found any. As far as is known, no business records (e.g. sales ledgers) have survived for either of the Hurts' ironworks; it is also well known that Sir Richard Arkwright's early activities (from 1771) are equally poorly documented.

More recently, in his study of *Stanton & Staveley. A business history* (Cambridge, 1981), Dr Chapman has again written of connections between the Hurts and the Arkwrights, and also of links with Walter Mather, who made the transition from charcoal to coke ironmaking c. 1780. He thus states:

The earliest coke furnace built in Derbyshire is believed to be that of Francis Hurt at Morley Park ... but this was evidently an isolated development, more dependent on the patronage of Sir Richard Arkwright and his cotton mill projects than on regional or national markets. (Loc.cit., p. 13)

and:

The Hurts ... were the earliest people to smelt iron with coke in south Derbyshire. In the eighteenth century new technology was characteristically dispersed through family and social connections of this kind, and it seems fair to infer that Mather benefited from the Hurts' pioneer work. (Loc.cit., pp. 17-18)

No authority is cited to support the suggestion that the building of Morley Park furnace was somehow connected with the 'patronage' of Sir Richard Arkwright, which seems inherently unlikely, since Francis Hurt was the head of a long-established major gentry family and Arkwright a newly rich manufacturer of modest social origins. Nor is any source cited which might enable the reader to judge the relative importance of Arkwright's cotton mill projects, regional markets and national markets in Hurt's decision to build a blast furnace at Morley Park.

As regards the second passage quoted above, the first sentence is imprecise: only one member of the Hurt family built Morley Park furnace. More seriously, I find it difficult to believe that a family of professional ironmasters such as the Mathers, who had been in the industry in the East Midlands since at least the 1670s, would have relied for technical advice on a landowner such as Francis Hurt, whose father had only entered the industry in 1764, when deciding to adopt a smelting technique which (by 1780) had been in widespread use in other ironmaking districts since the 1750s. Once again, Dr Chapman appears to misunderstand the relative social position of the families he discusses and draws general conclusions in statements not supported by detailed references.

## APPENDIX 2

### VALUATION OF ALDERWASLEY FORGE AND MORLEY PARK IRONWORKS, 1811

The following inventory is transcribed from a copy made in 1857 for the *Mold v. Mold* Chancery actions (Derbyshire Record Office, D326 Z/BT1). It is written on blue law paper watermarked 1857 and endorsed on the wrapper: 'Mold v. Mold. Copy Mr. Woodhouse's Valuation of Fixtures, Tools, Minerals, Stock &c 1811'.

Valuation (on behalf of Francis Hurt Esqre of Alderwasley Hall in the County of Derby) Of his Stocks, Tools Utensils and movables at Alderwasley Forge and Mill Also of his Stock, Tools, Utensils and Movables at Morley Park Furnace foundry Coal Pits Stone Pits and Mine Enging amounting to Four thousand eight hundred and seventy one pounds thirteen shillings and one panny (See) the particulars annexed.

Taken at Alderwasley and Morley Park, arranged and made out at Burton on Trent this twenty third day of January in the year of our Lord One Thousand eight hundred and eleven.

Mr. John U. Rastrick (Civil Engineer) of Bridgnorth in the County of Salop being appointed and employed to value the aforesaid Stock by Messrs. Molds of Barton under Needwood in the County of Stafford on their behalf.

Jonathan Woodhouse  
of Overseal Cottage

.....

Alderwasley January 11 1811

	£	s	d
<i>Blacksmiths Shop</i>			
Tools, Utensils, Stock and Movables Iron, Castings, Iron work, four pair of Cutters, Cutter Plates, Spindles, and Guages, Tilt helve, and Sundry other Articles in the said Shop and on the Bank	103	12	2
<i>In Loam house and Carpenters Shop</i>			
New fire bricks, Cast Iron Plate and Pan, Bucket and other Utensils and movables. Grindstone and frame, Carpenters tools, Timber and Iron work Castings Stock, Utensils and movables	22	6	7

*In Forges, Boring Mill, Rolling Mill, Slitting Shop,  
Warehouses, Store rooms Yard or Bank*

Tongs, ringers, rakes, Shovels, Puddling tools, old pillar, Scales, Beams, gearing and weights, Cutters and Spindles &c &c benches, boxes, Barrows, Timber, Ladders, Scaffold, Poles, New fire Bricks and Tiles, Tools utensils, Stock movables and Sundry other Articles in the Warehouses and Store rooms 131 15 8

*Stock of Manufactured Iron in Forges*

Mills, Warehouses &c &c consisting of rods, bars, Fire Share Molds, press plates, Single, Latten Iron &c &c 516 18 9

Stock of Iron, part prepared consisting of bars, stamped Iron, Scrap Iron, Plate parings, pigs, refined Iron, Scul blooms, common bars &c 987 14 4

Stock of various plates, bars, old Iron, Iron cramps, tools, Utensils and movables old and new castings, with Sundry other Articles 161 16 7

Stock in the Storerooms, consisting of Tools, Utensils, movables, Steel brass, Tin, Oil Grease, Lead, Tar &c &c 22 4 11

Total at Alderwasley £1946 9 0

.....

Alderwasley and Morley Park, January 1811

*Furnace and Foundry*

Tools, Utensils, movables, cast Iron and Wood flasks, boxes, Core bars, Loam and Core Plates, two Water barrels, Scales, beams, gearings and weights, triangles, ropes, laying-down boards, timber Patterns &c 151 10 9

Stock on Furnace bank, consisting of Melting and Forge pigs, old and new castings, old Iron, new fire bricks Old Boiler bottom and one bottom at Mine Engine and various Articles 1742 6 8

*In Blacksmiths and Carpenters Shops*

Tool stock, utensils, movable, iron work, Iron & Castings in dressing Shop and Loam house, benches, shelves, vices, castings, utensils & movables, Lead, brass, ropes, casters, oil, utensils, moveables and patterns in the Store room in Counting House and Pattern rooms, Desks, table, Stools, Closets, Patterns, brass cock, tools, utensils, stock and movables 95 17 8

Coals, Stone, and at the Engine pits, Wards, Planks, Poles, ropes, boxes, chains, Picks, rakes, Waggons, Trunks, Ladders, Corves, garlands, Shovels, ringers, wedges, rails, and Sleepers, rail roads with sundry other utensils, tools and movables 238 13 2

Stock of Coals, Coals, Limestone, Ironstone, raw and calcined on the furnace bank and at the pits 696 15 10  
£4871 13 1

Burton on Trent  
23rd January 1811

Jonathan Woodhouse  
Overseal Cottage

Memorandum — the Timbers at the Saw Pit at Alderwasley also the 100 feet of Ask at the Hall is not noticed in this Estimate, every other tool, utensil & movable is included.

Jonathan Woodhouse

## APPENDIX 3

Part of the sale catalogue for the property of the Mold Partnership 7 October 1856 (Derbyshire Record Office, D326Z/BT5).

**In Chancery.**

Between CHARLES JOHN MOLD . . . . . Plaintiff.  
 CHARLES MOLD and WILLIAM HENRY MOLD . . Defendants.  
 And Between WILLIAM HENRY MOLD . . . . . Plaintiff.  
 CHARLES JOHN MOLD and CHARLES MOLD . . Defendants.

---

Particulars and Conditions of Sale  
OF  
**FREEHOLD & LEASEHOLD**  
**PROPERTY,**  
**MINES and COLLIERIES**  
IN THE  
**COUNTY of DERBY;**

Situate in the several Places, Parishes, and Liberties of  
**Belper-Bent, Crich, Heage, Marehay, Hartshay, in the Township of Ripley,**  
**Morley Park (in Heage aforesaid), and Alderwasley,**

AND FORMING THE  
**PARTNERSHIP PROPERTY & EFFECTS**

OF AND BELONGING TO  
*Messrs. Charles, Charles John, and William Henry Mold,*  
 Carrying on business as Iron Masters, Coal Owners, &c., under the Firm of JOHN & CHARLES MOLD;

TOGETHER WITH THE  
**Stock in Trade, Steam Engines,**  
**WATER WHEELS, MACHINERY, AND EFFECTS,**

Of and belonging to the said Partnership and the Business thereof (now being carried on by a Manager appointed by the Court of Chancery), the whole to be Sold as a going Concern and now in active operation:

**Which will be Sold by Auction,**  
 Pursuant to an Order of the High Court of Chancery made in the above Causes, and with the approbation of the Judge to whose Court the said Causes are attached, by

---

**MR. JOHN MOODY**

---

(THE PERSON APPOINTED TO SELL THE SAME),

**At the King's Head Hotel, in the Town of Derby,**  
**On TUESDAY, the 7th day of OCTOBER, 1856,**  
**At 4 o'Clock, p.m., in the following Lots.**

N.B.—As to Lots One and Two, they will be offered for Sale in One Lot; and if not sold in One Lot, will be offered for Sale in Two Lots.

---

## Particulars.

---

LOT ONE.

# THE MORLEY PARK COLLIERIES

AND

## IRONSTONE WORKS AND MINES,

*Veins, Delphs, Pits, and Beds of Coal, Ironstone, and Fire Clay, or any other Clay, within or under the Farms, Lands, or Grounds,*

Forming the settled Estates of Francis Hurt, Esq., deceased, situated in the  
TOWNSHIP OF HIGHEDGE, OTHERWISE HEAGE.

ALSO THE

## IRON FURNACES and FOUNDRY,

Belonging to or used with the said Collieries and Mines, and

## SIX DWELLING HOUSES, IN MORLEY PARK AFORESAID,

*Near to the said Works.*

# The Alderwasley Forge and Works,

STORE ROOMS, OFFICES, AND BUILDINGS,

AND THE

## ROLLING AND SLITTING MILL,

Occupied therewith,

*Situate near to the River Derwent, in the Liberty of Alderwasley,*

WITH THE

**Water Wheels, Works, and Machinery belonging to the said Forge, and other Works,**

*As now carried on by Messrs. Charles Mold, Charles John Mold, and William Henry Mold;*

ALSO A

NEWLY-ERECTED MESSUAGE OR DWELLING HOUSE,

*Near to the said Works, in the occupation of the said William Henry Mold,*

WITH THE STABLES, COACH-HOUSE, AND GARDEN, BELONGING THERETO,

AND ALSO

## FIFTEEN DWELLING HOUSES,

*Near to the said Forge, in the occupation of the said Messrs. Mold, or their under-tenants.*

The above premises are held by the said Messrs. Mold under a lease dated 30th May, 1839, granted by Francis Hurt, Esq., deceased, to Messrs. John and Charles Mold for 21 years, commencing 1st January, 1839, at the annual rents thereby reserved, and subject to the covenants and conditions therein contained;—and under a lease also dated 30th May, 1839, granted by Messrs. William and Charles Milnes and the said Francis Hurt for two terms of 8 years and 13 years, the first term commencing 1st January, 1839, at the annual rents thereby reserved, and subject to the covenants and conditions therein contained.

The first mentioned lease contains a clause reserving to the lessor, his tenants and friends, a right of way through and across the yards, ways, and premises thereby demised. The rent reserved by the same lease has been increased by a verbal arrangement, by an addition of a per centage upon the expenditure incurred by the said Francis Hurt a few years ago, in rebuilding and improving the messuage or dwelling-house and premises now occupied by the said William Henry Mold, and the purchaser will be required to pay such additional rent.

There is also a clause in the lease enabling the lessees during the term to take down, and rebuild or alter all and any of the Forges, Furnaces, or Buildings thereby demised, and also to take away and remove all or any of the Water Wheels, Horse Engines, Steam Engines, heavy Machinery, and Fixtures attached or belonging to the said demised Forges, Furnaces, Foundries, Buildings, Mines, or Works, or any of them, and to replace the same with such new Water Wheels, Engines, Machinery, and Fixtures as they shall think proper, they the said lessees maintaining the same in good repair, and leaving the same at the expiration of the said term for the use and benefit of the lessor, without demanding or claiming any satisfaction or compensation for the same.

## THE WORKS AND MACHINERY

Comprise the following Particulars, *viz.*—

Two Cold Blast Furnaces, with one Condensing Blowing Engine (60-horse power), with four good Boilers attached; and one High-pressure Blowing Engine (46-horse power), with three new Boilers attached, together with receivers and blast pipes;—Refinery, with water boxes, pillars, blast box, two-irons and race plates complete, with blast pipes;—Air Furnace, cupola, covered-in pig beds;—large and small Foundries, with cranes and moulding boxes;—Drying Stove, with iron carriage and railway models and patterns;—Blacksmiths' Tools, with bellows, anvils, vices, tongs, bores, drifts, wedges;—Boiler-makers' Tools;—Furnace for heating Plates, with powerful shears and punching machine;—Machine for bending and shaping Boiler Plates;—Valuable Collection of Tools for turning and shaping Wood and Iron, consisting of rounds, levels and squares, models and patterns, and all other tools; and 3,074 yards of tramways, and moveables requisite at Blast Furnaces;—One 3-valved Pumping Engine, by *Thompson* (136-horse power), at work, with cast-iron beam and 3 boilers; and 170 yards of 16-inch pump trees, and excellent powerful capstans, shear legs, pulleys, and gearing;—One Winding or Drawing Engine (35-horse power), with flat and round rope drums, and pit ropes, chains and gearing with indicator and signal bells complete, with head gearing and slides to pit, together with 2,455 yards of underground Edge Railways, with 67 trolleys at work, and 1,469 yards of jig chain, iron sleepers, iron props, and all other underground tools, appertaining to a modern-worked Colliery;—One Atmospheric Winding and Pumping Engine (10-horse power), with bell crank and slide rods and plates;—Two Running Lime Kilns, and one stand Lime Kiln;—Four Weighing Machines, winds, planks, poles, ropes and boxes;—One Balance Waggon;—common stand Weighing Machines, hand pumps and gins, at the Ironstone Pits; together with the planks, wheelbarrows, poles, and pins at the Ironstone Open Works, saw pit, shed, cranes, turn tables stages for loading and unloading, &c.;—Chills for making Castings, cast iron patterns and models, turned pipes models;—One valuable Boring Rod, of large size turned and fitted complete, new flat wire pit rope, 250 yards in length;—Stocks of Coal, Coke, Limestone, Ironstone, (raw and calcined) Lime, Timber, Fire Bricks, Fire-stone, Sand-stone, Common Bricks, Stock of Pig and Refined Iron, about 50 Tons of old anvils, hammers, broken rolls, &c.

Brick Yard at work; new Clay Mill, sheds, planks, mats and roofing;—2,849 yards of Edge Railways, from Straight-lane to the Langley Mill and Cromford Turnpike-road at Hartshay Wharf, with sleepers, chairs, spikes and guider pulleys;—1,150 yards of round Wire Rope;—30 Coal and Ironstone Waggon, working upon the same by a SPLENDID NEW HIGH-PRESSURE ENGINE (of 12-horse power) by *Thornevell* and *Warham*, of Burton-upon-Trent, with large drum for wire rope;—

## ALDERWASLEY FORGE AND WORKS,

*Standing upon the River Derwent,*

AND WORKED BY FIVE POWERFUL WATER WHEELS,

And consisting of bar mill, with one furnace, three puddle furnaces, bar shears, iron saws for cutting rails and bars, with a long line of shafting wheels, brasses and pulleys complete;—Cutters and a set of Rolls, for puddled and finished Iron, consisting of sheet rolls, roughing rolls, bar rolls, chilled rolls, angle rolls, rail rolls at work and in stock, with bed plates and standards;—Several valuable Cranes, at the said Works, one drawing-out and one shingling helve, with stock of new spare hammers and anvils, belonging thereto, standards, bed plates and blocks, one hollow fire, one charcoal fire, blowing cylinders with shammel beams, one ball furnace, sheet iron mill, and 2 sheet iron furnaces, 2 lathes for turning rolls;—stock of Working Tools and Utensils in the Forge, Bar Mill, Furnace Yard, Blacksmith's Shop, Lathe Shop, Carpenter's Shop, and other places, consisting of benches, barrows, paddles, tongs, bars, rakes, shovels, puddling tools, scales, beam and weights, anvils, vices, bellows, &c. &c.;—Carts, Carriages, Cranes, 2 wood and 2 iron Canal Boats, and 91 yards of Siding Railway upon the Matlock Line of Railway;—About 100 tons of loose iron Plates on floors, corner castings, tire rods, housings, standards, boxes, quantity of well-seasoned timber, including new oak Water-wheel Shaft, of large dimensions, new pinions, spur wheels and shafts, two new driving wheels ready for work, and three sets of three legs with power crabs.

ALSO A

## WHARF AND BUILDINGS,

Adjoining to the last-mentioned Railway, and abutting on the Cromford Canal.

ALSO

## THE FARM STOCK ON A FARM,

Situate at Heage aforesaid.

Held by the said Messrs. Charles Mold, Charles John Mold, and William Henry Mold, as tenants thereof from year to year.

The live and dead Farming Stock upon the said Farm, comprising 10 working Cart Horses, 2 Ponies, 2 Mules, 4 Drays, 8 Carts, 15 sets of Horse Tackle, Plough, Harrows, Drills, Tiller, Straw Chopper, Bean Mill, Thrashing Machine and Steam Engine, half-share of Horse hoe, and half-share in Patent Drill.

## THE HARTSHAY LINE OF RAILWAY,

Leading from the Morley Park Works to the Cromford Canal, at Hartshay.

This Line runs through land now or lately belonging to Francis Hurt, Esq., and to Mrs. Cleavers, the trustees of Heage School, Mr. Hepworth, Mrs. Mousley, C. V. Hunter, Esq., Mr. Fletcher, and Mrs. Oates. The Line was formed under the Cromford Canal Act, the landowners receiving by agreement yearly rents for the lands used for the purposes of the Line. On the expiration of the lease of 30th May, 1839, granted by the said Francis Hurt, the Line of Railway will become the property of the lessor, he paying for the then value of the materials forming the same at a valuation to be made for that purpose, pursuant to an agreement made between Messrs. Mold and Mr. Hurt, dated 20th July, 1843.

ALSO

## A WHARF AND BUILDINGS,

Called the *Hartshay Wharf*,

SITUATE IN

## HARTSHAY, IN THE SAID TOWNSHIP OF RIPLEY,

Adjoining to the Cromford Canal,

And containing by admeasurement One Rood or thereabouts.

Held under a lease from Thomas Peach, Esq., to the said John Mold and Charles Mold for 34 years, from 25th December 1844, at the annual rent thereby reserved, and subject to the covenants and conditions therein contained. The lease contains a clause determining the said term of 34 years, at the termination of the demise of the Marchay Colliery and Premises comprised in Lot Two, made by the lease thereof dated the 25th December, 1835, if such demise should cease before the expiration of the term thereby granted.

ALSO

## THE RIGHT, TITLE, AND INTEREST

(If any) of the said Messrs. Mold, of and in a

## COAL WHARF AND PREMISES,

Situate at or near Whatstandwell Bridge,

And now in their use and occupation in conjunction with their said other Works.

*But the Purchaser shall not require any evidence or proof whatever of the Vendor's right, title, or interest therein.*

The enumeration of the Fixtures and Effects contained in this and the following lots is believed to be accurate at the time of the preparation of these Particulars; but the Property being put up for sale as a going concern, the purchaser must, of course, take them, subject to such variation as may have taken place at the time of sale, whether such variation be in the shape of diminution or increase.

N.B.—*The Stock of Pig and Manufactured Iron ready for Sale on Lots One and Two, shall be taken by the Purchasers of those respective Lots at the market price, on the day fixed for paying in the purchase-moneys, allowing an abatement therefrom of £5 per cent, and shall be taken to be and form part of the purchase-moneys for the said Lots.*

LOT TWO.  
**THE MAREHAY COLLIERY**  
 AND  
**IRONSTONE PITS,**

*Including that portion of the Beds, Veins, and Seams of Coal,*

KNOWN AS

**THE ELL COAL, THE MAIN SOFT, AND THE DENBY MAIN HARD  
 COAL BEDS,**

And now unwrought under the several closes or pieces of Land, situate at Marehay, in the Township of Ripley, in the County of Derby, called by the names of the

	A.	R.	P.
Homestead Croft, containing ... ..	1	3	30
Nether Coates Close ... ..	3	1	25
Middle Coates Close ... ..	5	3	25
Far Coates Close ... ..	5	2	15
Far Meadow ... ..	8	3	20
Far Gossey Bank ... ..	4	2	12
Home Close ... ..	9	2	17
Calf Close ... ..	5	2	28
Street Close ... ..	10	1	12
Spring Close ... ..	7	1	20
Stage Close ... ..	9	2	10
Near Gossey Bank ... ..	6	0	30
Annable Pringle ... ..	3	2	13
And Near Meadow ... ..	8	2	32
TOTAL ... ..	91	1	9

With all Ironstone now unwrought in or underneath the same closes and pieces of Land, and liberty to dig and work for, and get Coals and Ironstone.

Held under a lease from the Rev. William Peach to the said John and Charles Mold for 42 years, from the 25th December, 1835, at the annual rent and rents thereby reserved, and subject to the covenants and conditions therein contained.

In the said lease is contained a proviso, that if the beds of Coal and Ironstone shall be exhausted, that the Term shall then cease.

**THE WORKS AND MACHINERY**

Comprise the following Particulars :—

**Workshops and Buildings necessary at a Colliery,**

Pumping Engine, Pump Trees, Gearing, &c., consisting of one oscillatory 2-valve Pumping Engine, 40-inch cylinder, working a 6-foot stroke, cast iron beam, with feed and steam pipes, attached to a 32-foot Boiler;—One condensing vertical Winding Engine, working to a 30-horse power, with cast iron beam, fly wheel 16 feet, with cast-iron shaft, nut and spur wheels, and flat rope drum, with indicator and signal bells, and other gearing complete, head gear to each pit, and flat rope, pulleys, and gearing to the same, 155 yards of cast iron pump trees, 8½ inches diameter, with buckets, clacks, windbores, &c. at work;—Also all underground tools, 5,007 yards of edge railway sleepers, iron props, trolleys, waggons, boxes, plates, and all other requisites for a modern-worked Colliery and Ironstone Pits, Blacksmiths' and Carpenters' shops, with bellows, anvils, vices, tongs, bores, drifts, swages, drills, and tools of every description;—1,848 yards of edge Railway, from the Pits to Straight-lane Road, with pulleys, round wire rope, and 24 railway waggons and garlands, together with 162 tons of cast iron tubing in the Pits.

By the terms of the lease of 25th December, 1835, the lessor has the option of purchasing the Works, Machinery, &c., at the expiration of the term.

N.B.—*The Stock of Pig and Manufactured Iron ready for Sale on Lots One and Two, shall be taken by the Purchasers of those respective Lots at the market price, on the day fixed for paying in the purchase-moneys, allowing an abatement therefrom of £5 per cent., and shall be taken to be and form part of the purchase-moneys for the said Lots.*

The leases under which Lots One and Two are held, may be seen at any time before the Sale, at the Office of Messrs. MILNES & NEWBOLD, Solicitors, Matlock, Derbyshire, and copies of such leases may be seen in London, at the Office of Messrs. BOYS & TWEEDIE, No. 6, Ely Place, Holborn, and at the Office of Messrs. DIBB, ATKINSON, & PIPER, Solicitors, Leeds.

## LOT THREE.

## SIX FREEHOLD DWELLING HOUSES

WITH THE

Yards, Gardens, and Appurtenances thereto belonging,

Situate at a place called

*Baker's Hill, in the Township of Highedge, otherwise Heage,*

IN THE COUNTY OF DERBY,

AND NEAR TO THE MORLEY PARK WORKS,

And now in the occupation of Isaac Hargreaves and others.

This Lot was purchased by Messrs. Mold, for the convenience of and as an accommodation to their Morley Park Works. The premises will be sold subject to the right of using the Well belonging thereto reserved to George Bridges, during his life, by an indenture dated 13th January, 1816.

## LOT FOUR

TWO UNDIVIDED THIRD PARTS OR SHARES

OF AND IN A

## Limestone Quarry, Coal and Lime Wharf

STACK YARD, AND GARDEN,

SITUATE IN THE PARISH OF CRICH,

IN THE

COUNTY OF DERBY,

(The other third part being held by Lord Scarsdale), now in the occupation of Thomas Taylor, and others,

CONTAINING TOGETHER

*One Acre, Two Roods, Twenty-one Perches, or thereabouts,*

AND ALSO

## THE RENT-CHARGE

In lieu of the Tithes of the entirety of the said Premises.

## LOT FIVE.

## TWO FREEHOLD MESSUAGES

OR

DWELLING HOUSES,

WITH THE

GARDENS, FIG COTE, AND APPURTENANCES THERETO BELONGING,

Situate at a Place called

BELPER-BENT, IN THE PARISH OF DUFFIELD, IN THE COUNTY OF DERBY,

*Containing together One Rood or thereabouts,*

And now in the occupation of Thomas Cooper, and Joseph Fletcher,

These premises are near to the Morley Park Works, and were also purchased by Messrs Mold, for the convenience of those Works.

## APPENDIX 4

## THE MOLD FAMILY

The genealogical table opposite has been compiled from the usual range of standard sources at the Derby Diocesan Record Office, Matlock, and the Lichfield Joint Record Office, together with a few items located at the Walsall Local History Centre.

Both the marriages of Thomas Mold of Walsall (d.1767) are included in *Walsall parish register. Baptisms 1646-1675. Marriages 1662-1754* (Staffs Parish Register Soc., 1974-5), where the groom appears on both occasions as 'Thomas Mole'. His children's baptisms were located in the unpublished bishops' transcripts at Lichfield; the children also appear in Thomas Mold's will, proved at Lichfield 29 May 1767. Thomas's acquisition of the Rushall Street property is recorded in a conveyance of 2 October 1728 (Walsall LHC, MS Collection 381, No 1) and its later history in the hands of his grandson William Mold, who became bankrupt sometime before 1833, can be traced through other pieces in the same bundle (381/2-10).

Benjamin Mold's marriage to Ann Lander and their children's baptisms can be traced through the Walsall register; his will was proved at Lichfield, 23 September 1811; and his burial is noted in the Barton under Needwood register. Most of his children are mentioned in the will.

Of Benjamin's children, John Mold's death, as noted in the text, has been located from the civil register for Wirksworth sub-district of Belper registration district, while that of his brother Henry Mold, who appears also to have remained single, can be inferred from his burial at Belper in 1839. Charles Mold and Alice Webb were married at Barton under Needwood in May 1813 by his brother-in-law Humphrey Price; the baptisms of their children duly appear in the following years at Barton.

For the final generation the invaluable index of personal names compiled by Derby Local Studies Library locates the death of John Mold at Forge House (*Derby Mercury*, 2 Dec. 1846); the death of Mrs Charles Mold at Makeney (Ibid., 9 Jan. 1850); the marriage of William Henry Mold to Lucy Atkinson at Measham (Ibid., 4 June 1851); and the marriage of Charles John Mold to Mary Elizabeth Wheatcroft (Ibid., 22 Sept. 1852). Miss Atkinson was the daughter of the late John Atkinson of Leeds, whose firm's name appears on several of the case-papers from the Chancery actions of the 1850s; Miss Wheatcroft was the daughter of David Wheatcroft of Wingfield Park, South Wingfield. The newspaper also records the birth of a son, Charles Trevor, to Mr and Mrs Charles John Mold at Wingfield Park (10 Aug. 1853), who is described as her eldest son in Mrs Mold's will, proved at Derby, 24 Sept. 1872. Her husband was apparently dead by this date, although I have not traced him beyond the break-up of the ironworks business in 1860. His brother, William Henry Mold, as described in the text, lived on until 1904, dying at Bethersden, Kent. He evidently remarried at some date, since his will, made at Bethersden 24 Feb. 1879 and proved at London 15 April 1904 with probate to his wife as sole executrix, names that lady as Mary Emily Ellen Mold.

Of the usual sources, only the census enumerators' books have proved generally unfruitful—Forge House, Alderwasley, was empty in 1851 and in other years it has proved difficult to locate the family precisely enough to make a search worth the time involved. Charles Mold senior, however, appears in the enumeration of Makeney in 1851 at Makeney Hall, described as an ironmaster. His wife was dead by this date, but the household also included his daughter Ann Eliza, sons Charles John and William Henry, and a 'Visitor/Sister' named Emily Wyatt, presumably a sister or sister-in-law of Mrs Mold's (PRO, HO 107/2144/180v.).

With a family of this status in the period covered by this article it would not be difficult to amplify the information presented here; I have merely sought to clarify the history of the ironworks through some simple genealogical reconstruction.

