

ART. XII – *Millom: An industrial colony 1860-1875*

BY RUTH HUGHES

IN 1966 Alan Harris contributed an article to *Transactions* on the growth of Millom as a Victorian New Town.¹ Millom town's development (as Harris rightly argued) was intimately interwoven with the development of the area's iron ore industry and its two main employers, the Hodbarrow Mining Company and the Cumberland Iron Ore Mining and Smelting Company Ltd. However, recent research has shown that, in fact, the Hodbarrow Mining Company had little influence on the physical development of the town in the first instance.² Millom town was planned and constructed, from 1866, to house the growing number of workers and their families employed by the two iron ore companies. However, it was only after 1875, and the establishment of a Local Government Board for Millom, that the Hodbarrow Mining Company actively become involved with the new town's development. After 1875 the town developed along a new alignment that reflected, more closely, the Mining Company's interests.

This paper argues that the physical alignment of the town laid down in 1866, and its realignment from 1875, reflects a struggle for economic and political power and dominance as played out between the two iron ore industries.

The locality before 1866

In 1841 the parish of Millom Below had a population of 356, and included the area of Holborn Hill which was described as "a large village . . . said to have been so called from its resemblance to the well known locality of that name in London".³ The areas known as Rottington and Borwick Rails were also part of the township, Borwick Rails having a natural harbour which had been used to export slate and corn for market and to import coal. Chapel Sucken included the hamlets of Haverigg and Kirksanton and in 1841 contained 214 inhabitants who, according to the *Mannex Directory* resided in "a few scattered dwellings".⁴ The area was thus mainly agricultural, and lightly populated. Indeed, *Kelly's Cumberland Directory* of 1884 could quote poetically: "Twenty five years ago this spot, now the scene of extensive business operations and commercial activity, was smiling under its weight of golden grain, or forming luxuriant pastures on which the cattle lazily browsed".⁵ Thus up to 1859 it would appear that the locality retained its bucolic and agricultural background, notwithstanding the fact that at that date the Furness railway line passed through the area.

There is no sign of mining activity on the Ordnance Survey map of 1860, yet activity was certainly taking place, albeit on a very small scale (see Figure 1). The Hodbarrow Mining Company's first Cost Book, the book in which all payments including wages and materials were recorded, covers the initial period of operations, between 1855 and 1864, when the mines went from being a hypothetical possibility to one of iron ore production. The cost book shows that between 1857 and 1860 an increased number of men were taken on to work the drifts and dig the levels, though

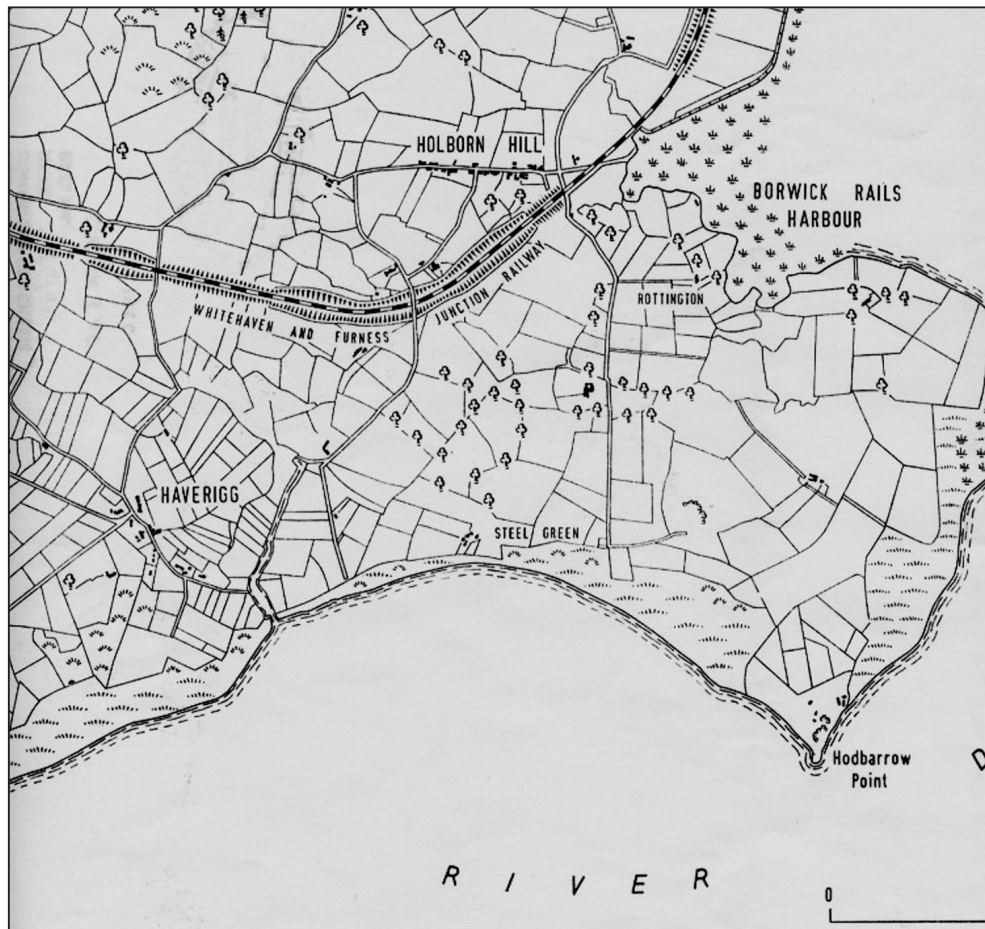


FIG. 1. Detail of OS map of Millom Parish, south Cumberland, 1860.

admittedly the increase did not amount to very many.⁶ From a starting point of just three men in 1855 the mine employed a total of 12 in 1860/61.

The 1861 census enumerators' books support this picture of the small-scale nature of mining activity. The area of Holborn Hill accommodated a handful of miners, with most residents noted as being farmers, agricultural labourers, and railway workers. The area out towards Hodbarrow, including the Rottington estate on which Millom was eventually built, contained just four farms and three further dwellings.⁷ Haverigg was almost fully given over to farming.

However, whilst few men were actually employed at the mine it is clear from the evidence provided in the cost book that, by 1860, the main deposit had been located and the men employed were driving levels through to reach it, although no ore from the deposit had at that time been raised. The Ordnance Survey map therefore somewhat belies the scale and amount of underground activity taking place around Hodbarrow Point, and gives no indication of the total change to the landscape and local economy which was about to take place.

TABLE 1: Population of Millom Parish 1841-1861.

Year	Population
1841	1979
1851	2115
1861	2015

Source: Kelly's *Cumberland Directory*, 1848; 1858; 1869; 1884.

Table 1 shows that the overall population of Millom parish changed very little between 1841 and 1861. The rise in population numbers in 1851 can most likely be attributed to railway navvies employed in constructing the new line for the Furness Railway Company. However, between 1861 and 1881 the population more than quadrupled. Most of the increased population was centred around the area of Millom and Haverigg and was a result of the increased activity within its burgeoning iron ore industry. From a position where Hodbarrow mine produced virtually no ore in 1860, *Bulmer's West Cumberland Directory* for 1883 noted that iron ore output from the Hodbarrow mines in 1865 had represented 117,330 tons valued at £70,397, whilst by 1880 ore obtained that year weighed "the enormous amount of 343,194 tons, representing £240,236".⁸ The mining company had therefore turned the mines around from their position of virtually no output in 1860 to raising ore valued at almost quarter of a million pounds in 1880. Such vastly increased production obviously required more workers than the handfuls of men the company had in their employment in 1860.

Employees and accommodation

In 1864, as the mine started to produce iron ore in quantity, and the mining company found it necessary to employ more men, the problem of how to accommodate them became a rather pressing matter. In 1860 the villages of Holborn Hill and Haverigg had been able to provide accommodation for the handful

Table 2: Men employed at Hodbarrow Mine

Men employed 1860-1875	
1860	12
end 1863	81
May 1864	120
Aug 1864	166
Feb 1865	193
Sept 1865	258
Apr 1866	240
Aug 1866	288
Oct 1867	330
Jan 1871	400
Jan 1872	479
Dec 1875	513

Source: BRO/BDB/21/1&2/Hodbarrow Company Minute Books 1863-1875; BRO/BDB/21/2/1/Hodbarrow Mining Company Cost Book 1855-1864; A. Harris, *Cumberland Iron: The Story of Hodbarrow Mine 1855-1968* (Truro: Bradford Barton, 1970), *passim*.

of workers that the mining company had then employed, as evidenced by the census returns. By 1864 it was no longer possible for the villages to absorb the sheer number of men which the mine by that time required. In an effort to address the problem the mining company put out tenders to various building companies concerning the construction of temporary wood and corrugated iron buildings measuring 64 ft long by 36 ft wide. William Gradwell, a builder from Barrow responded to this request writing, "Brasseys people are building a lot of temporary places here for their men which it will be well for you to see. I am doing the woodwork of them. I think something of the same sort might suit you . . . I have not done anything in corrugated iron. I shall be glad to meet you down here, any day you may name, when I have no doubt we can arrange something to our mutual advantage".⁹ Thomas Brassey was a civil engineer who had won the contract to create the massive docks in Barrow.¹⁰ The men employed in his service were housed in the temporary brick sheds described in Gradwell's letter to the mining company. Gradwell won the contract to provide temporary shelters. In 1866 temporary huts were still accommodating the mining company's men and the *Soulby Advertiser* reported, "there is so great a want of accommodation that temporary huts are thrown up, in which men are stowed away as on shipboard".¹¹

In 1865, in an attempt to gain a slice of what looked likely to prove a lucrative industry, an iron ore smelting works was also established in the area bringing with it a demand for yet more workers. In order to ensure the smelting works' future success, Thomas Massicks, the managing director of the iron works attempted to negotiate the purchase of all the ore that the mining company could raise. This was met with outright refusal from the mining company who by that time were entering into contracts to supply ore to smelting works throughout the country and did not see any need to tie themselves into a rigid contract with the iron works on their doorstep.¹² Unfortunately, neither company appear to have been able to negotiate any other mutually acceptable deal. This inability to communicate and cooperate raised further problems from 1868 when the iron ore works attempted to construct a pier from which to load their pig iron. The site of the pier and its construction works threatened to interfere with the mining company's own "lying ground".¹³ The whole situation escalated into a legal wrangle eventually settled in court. The poor working relationship between the two companies was carried through into, and influenced the original layout of, Millom town as will be argued.

In the early 1860s signs that the Cornish tin and lead mines were in danger of being worked out encouraged thousands of miners and their families to find alternative work elsewhere.¹⁴ The skills they had amassed whilst working the Cornish mines were highly transferable to the iron ore industry. Throughout the 1860s miners migrated from both Cornwall and Devon to other mining areas in Britain and to America. Many ended up in Millom as the new mine grew in size and the smelting works was established. John Barratt, the main founder of Hodbarrow Mining Company was originally from Devon and no doubt had contacts throughout Devon and Cornwall. In 1891, of the 235 miners who were tenants of the mining company, 125 claimed their birthplace as either Devon or Cornwall, whilst 50 claimed their birthplace as Millom, which underlines the stability of the town as a settlement within just 26 years.¹⁵ It is likely that many other families in Millom could trace their routes back to Devon and Cornwall.

Once the smelting works was fully operative, from around 1867, it appears to have employed roughly one-third the number of Hodbarrow underground employees. It does not appear to have employed more than 600 men at the height of its operations in the early twentieth century, whilst Hodbarrow employed over 1,300 men in 1905.¹⁶ More usually the smelting company employed around 350 men to Hodbarrow's 1,000. However, all this was far into the future – in 1866 both companies probably employed a roughly equal number of men at their works. Almost all these men had migrated into the area bringing their families with them – and all of them demanded accommodation.

The housing problem and solutions

From 1865 neither Holborn Hill nor Haverigg could possibly absorb the number of workers who moved into the area in search of work. The sheds, which the mining company had built, could not support the needs of a permanent and rapidly growing workforce and their families. With the appearance of the new smelting works, and that company's demands for labour, quite clearly something had to be done. The question was what, and who was to take responsibility? And why had the mining company resorted to constructing temporary sheds instead of permanent stone and brick built accommodation?

The company's minutes contain numerous references from May 1864 of the need for "suitable Dwellings" for the workmen.¹⁷ In December of the same year a Directors' Minute Book entry notes: "That the Manager having reported more than six months ago that the erection of twenty cottages was then necessary for the purposes of effectually working the mine, it is hereby resolved that unless the twenty first promised to be built by Mr John Barratt be at once contracted for, this company shall at the next meeting order estimates for at least forty upon such site or sites as may be hereafter determined".¹⁸ Thus the mining company were well aware that a housing problem existed. Seemingly builders were available and willing to build dwellings to order, yet the mining company failed to enter into any contract for workers' dwellings that may have helped to alleviate their problem. Their workers were apparently expected to make do with the corrugated iron and timber sheds built by Gradwell. A sense of frustration with John Barratt, the founder of the company, comes across clearly in the minutes. Barratt with 52% of the company's shares, held the controlling interest. Without his agreement no housing scheme could be entered into. Effectively the directors' hands were tied, but even so, no sense of commitment or of proactive planning can be discerned from the mining company's approach to the housing problem – a problem that was directly related to that company's activities.

The local authority, Bootle Board of Guardians, could not take responsibility for the creation of a whole new town: its area of competence was mainly concerned with Bootle and its workhouse, and other existing villages. Whilst some builders, such as William Gradwell, for instance, accepted contracts to build to order there was no actual building industry located in the area: Gradwell was from Barrow. The insecure nature of the enterprise during these early years, and an inability to state definitely that the mine would prove to be lucrative could not have inspired much confidence amongst speculative investors. Neither could the fact that the mining

company appeared unwilling to invest their own capital to build workers' housing. Therefore, in 1864, there was no alternative agency to which the company could turn in order to have workers' housing built to meet their needs.

In contrast, the iron ore smelting company, within a few months of their arriving in the area had built 12 houses at Borwick Rails and a handful of cottages to the south of the Rottington Estate (the eventual Devonshire Road). The smelting company were part of a much larger group based in Whitehaven, which owned smelting works throughout Cumberland, and no doubt understood the necessity of providing accommodation for their workers in areas where alternative housing providers were absent. Contracts with iron ore mines round Barrow, Lindal and Askam meant that the smelting works were not dependent on Hodbarrow's iron ore output, which, in theory, enhanced their chances of success, and enhanced the overall prospects of greater prosperity for the area.¹⁹ Thomas Massicks, as the managing director of the Millom company, was able to push forward plans to have the smelting works up and running as soon as possible. This included not just the construction of blast furnaces, but also the construction of houses for the expected and necessary workforce. Thus, in contrast to the mining company, the iron ore smelting works were prepared to address the problem presented by lack of workers' accommodation, which gained the interest of speculative developers, some of whom had previous experience in planning the establishment of new towns.

The development of the new town

The Rottington Estate formed a large plot of land to the east of the railway line, extending in all to about 40 acres and, moreover, was in the perfect position for a workers' colony that would serve the new iron works, as it was basically on the doorstep. There was in 1861 only one farmer on this estate, John Kitchen aged 47 who farmed, according to the census, 35 acres.²⁰ The *Barrow Herald* of 27 August 1866 noted that the site lay "on a dead level with the sea . . . rendering drainage utterly impossible". It is not surprising then that the site was sold. What is not known as yet is how negotiations to purchase the land were undertaken, nor what price was paid for the land. It is highly likely that Kitchen was a tenant farmer of the Earl of Lonsdale who owned most of the land in the area.

However, the name of the company that purchased the land, and the names of many of the men involved in the company, is known. The Holborn Hill Building Society was in fact a speculative venture created with the purpose of purchasing the land for the new town, laying out and preparing the building plots, and selling the plots to builders. Its members comprised Mr Satterthwaite, a banker from Ulverston, John Poole a solicitor and land agent living in Ulverston but working in Barrow, Mr W. Turner, Civil Engineer, Mr Matthews the managing director of the new Millom Brick Company Ltd., and Thomas Massicks the managing director of the iron works. John Poole, in 1866 aged 25 years, already had some experience of this type of venture having been involved with Barrow's development.²¹ Years later, in 1900, Poole was to play the same role in the development of Vickerstown on Walney Island.²² W. Turner was a partner in the firm of Wadham and Turner who had been responsible for Barrow's town plans, and his partner Edward Wadham drew up the original plans for Millom.²³ Matthews along with Massicks originated

from Whitehaven. On the official opening of the Millom brickworks in July 1866, Massicks invited Matthews to visit the iron ore works. At a meeting held afterwards, and reported in the *Whitehaven Herald*, Matthews proposed “success to the Cumberland Iron Mining and Smelting Company”, and to Mr Massicks, the smelting company’s managing director, who replied, stating that “the demand for cottages, as well as for the extensive works in progress, rendered a large and immediate supply of bricks necessary”.²⁴

That the new town was principally directed towards iron ore smelting workers was explicitly stated in reports from the *Whitehaven News* during 1866. In these reports it is made clear that Massicks and the iron company approached Satterthwaite with the plan of forming a company to “make a new town near the proposed works”.²⁵ Moreover, the success of the new town was deemed to be closely bound up with the success of the iron works because, “if the iron works succeeded, houses would be sure to be required in large numbers, and trade generally would almost be certain to prosper”, as “when the works were in operation they would employ 250 hands at least; and as it was calculated that each working man represented five of a family, they could thus obtain a very fair population to begin with”.²⁶ As mentioned earlier, the mining company employed around the same number of men and were shortly to require more. However, the acute lack of adequate accommodation within the area meant that workers were unlikely to flood into the vicinity in sufficient numbers to service both iron ore industries. Moreover, without family accommodation workers were unlikely to stay. Therefore both the mining company and the iron ore works were in effect in competition to win what workers could be attracted to the area. The solid inducement of stone built housing and its proximity to the iron ore works appears to have been a blatant attempt by the smelting works to ensure that they would have sufficient workers to call upon.

The naming of the town was also down to Massicks and the iron works. At some time between the iron works’ establishment in 1865 and May 1866 the Cumberland Iron Ore Mining and Smelting Works appears to have been renamed the Millom Iron Works, although it still traded under its original name in July of that same year. The new town’s tentative name was originally to be Newhaven but at a meeting of the Holborn Hill Building Society in May when the town’s name was to be decided, Massicks put forward the proposition that as the iron works had renamed itself the Millom Iron Works (after the parish in which it was situated) it might be an idea if the town were to be known as Millom, as the town “when erected might in some measure to be said to have sprung out of the iron works at present in course of building”.²⁷

Therefore Massicks and the iron works, not the Hodbarrow Mining Company, were the company providing the impetus to build a new town. The iron works had an investment in the Holborn Hill Building Society whose purpose was to purchase land, have plans drawn up, lay out building plots and sell them to speculators and builders. By encouraging the interest and involvement of men already experienced in this type of activity the town could not fail but go ahead, and with Massicks’ continued interest and presence it could not fail to reflect the iron smelting company’s influence. Nowhere is there any mention of the mining company’s importance to the area, nor its own ability to bring workers into the area, nor their need for accommodation. Neither is there any mention in the mining company’s

minutes of the plans for the new town. Indeed the mining company refused the lease on some cottages built in the new town reporting, in January 1867, that, “they could not entertain the question at present”.²⁸ It is almost as though the mining company’s directors preferred to cut off their noses to spite their faces rather than enter into constructive dialogue with the promoters of the new town.

Plate 1, taken in the early 1960s, demonstrates very clearly the town’s early reliance on the iron ore smelting works. These streets, which were among the first to be built, are aligned to funnel the workers towards the iron works, rather than the mining company, which is away to the far right. The slag bank, the waste product left by the iron works, has crept forward to the very edge of the town, threatening to engulf the houses.

“A model town for an iron ore locality” or a vacuum of responsibility

In early 1866, when the town’s construction was still mainly at the planning stage, the *Whitehaven Herald* felt able to claim, “when completed, Newhaven, or whatever other name the embryo town may acquire, will be the little capital of a little mining kingdom”.²⁹ The *Ulverston Soulby Advertiser* hailed its birth as a “model town for an iron ore locality”.³⁰ However, by 1874 it was clear that whatever good intentions the Holborn Hill Building Society and the Iron Works may have had, Millom was very far from being a model town. The *Whitehaven Herald* reported, “the general condition of Newtown, Millom is a reproach and antithesis to even a remotely approximate sanitary state – the drainage in many places consisting of sweltering, stagnant puddle-holes in which may be seen floating the decomposing carcasses of drowned cats and puppies – some of the streets almost impassable with ruts, mud, filth and rubbish – the back yard receptacles for house refuse, night soil, and ash, unroofed and some filled to overflowing”.³¹

The main problem was the lack of an efficient local authority that could oversee and control development in the new town. Bootle Board of Guardians, the authority responsible for the sanitary regulation of the district, had no experience of overseeing the development of a new town and in any case did not have the manpower to do so. Therefore Millom, like many other new towns, was developed independently of any regulatory control. By 1871 many of the Hodbarrow Mining Company’s men were living in Millom town, as well as in Holborn Hill and Haverigg, none of which had escaped the difficulties of poor sanitation, blocked drains and poor building standards which were a result of the area’s rapid population increase. This in reality added up to a vacuum of responsibility – but was something that could be exploited.

During 1870 the mining company acquired the freehold of some land and cottages on the Steel Green and Pepper Hall Estates, adjoining Haverigg. The freehold land had originally belonged to John Barratt and Nathaniel Caine. Barratt’s land was inherited by the company (after his death in 1866) and Caine’s land purchased.³² The ownership of this land enabled the Hodbarrow Mining Company to put into motion a housing scheme of their own which was intended to provide a model for speculators in Millom to emulate. Between 1872 and 1874 the mining company had built for them 58 houses, 52 in a quadrangle called Concrete Square in Haverigg intended for bargain company workers, the other six were built on Steel



PLATE 1. Aerial photograph of Millom looking towards the iron works c.1960.

Source: North West Evening News, Photographic Archive.

Green and were intended for the company's management staff.³³ Concrete Square was designed by an architect, Louis Hornblower of Liverpool, constructed using his patented fireproof concrete, and was flat-roofed.³⁴ In July of 1872 the mining company pulled out of an agreement made with Mr Satterthwaite to lease 32 new cottages from him in the process of being built in Millom calling them, "scamped work" and "miserable trash".³⁵ They also pulled out of an agreement to take cottages from a Mr Hunter, at that time constructing dwellings in Millom.

Concrete Square was well within walking distance of the iron ore mine and formed no part of the construction of Millom. The square's placement and its design, suggests that this separation was a deliberate statement by the mining company that they were not to be equated with Millom's development to that date, and indeed that they preferred to have at least some of their workers living well away from the influence of the town and with an alternative access route to the mine. Standing to the side of where Concrete Square once stood, all that can be seen of Millom town today is the top of St. George's church spire. When the company's houses were first constructed the steeple on the church was not visible, the church not being finished until sometime after 1877.³⁶ Concrete Square was thus completely separated from the iron ore town. In effect the mining company were distancing themselves from any involvement in the existing town.

A change of focus and the re-alignment of the town

In 1872, a serious smallpox outbreak in Millom stimulated both Millom Iron Works, and the Hodbarrow Mining Company, to provide an isolation hospital into which infected individuals could be removed from their home environment, thus hopefully containing the disease.³⁷ This development signified that at last the two iron ore companies had reached a level at which they could cooperate. The Bootle Board of Guardians, on their part, had failed to do anything to help check the disease, with Millom's Revd George Brown commenting, "it is to be deplored that the only authority that can act in this matter has shown a dilatoriness and a cold-heartedness which is, in my opinion, most reprehensible in not instituting the necessary steps that are required for the isolation of this most infectious disease".³⁸ In 1874, in response to the charge of unsanitary conditions in Millom, the mining company's manager Cedric Vaughan responded by saying that they could not interfere "until they had the urban powers for which they had applied".³⁹ These "urban powers" were what had motivated the mining company into building houses in the first place.

By presenting what were supposed to be new modern housing units the company was laying claim to holding a position on what was to be the new Local Board of Health, which was formed in 1875. Over the period 1872-1874 the town's most influential bodies, the two companies and the church, had made strenuous efforts to have the Bootle Board of Guardians replaced by a local authority. The Local Board effectively held corporation powers to oversee such areas as Highways and Buildings, Gas, Water and Fire and Finance, and therefore, and possibly more importantly, over where the town's rates were spent; the mining company being by far the largest ratepayer. Harris has claimed that by 1894 Hodbarrow accounted for £62,000 out of a total rateable value for the district of £84,300.⁴⁰

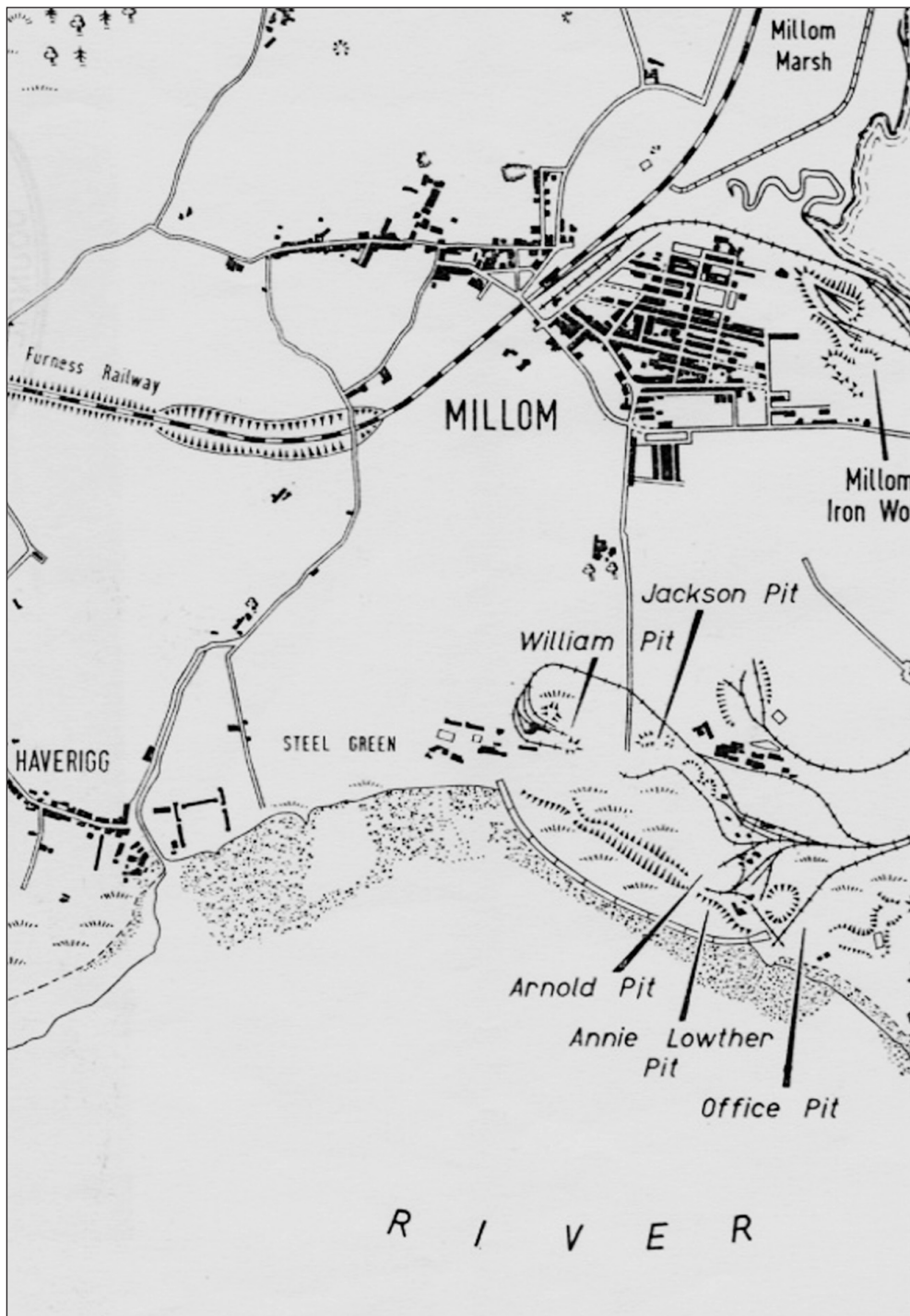


FIG. 2. Detail of OS map of Millom 1897

By the early 1870s both the iron works company and the mining company were therefore prepared to work together to achieve the urban powers necessary to gain control of Millom's future development. However, once those powers were granted, the mining company was able to influence Millom's further development to suit their own interests and reflect their own importance in the community.

In the late 1870s a new railway bridge and street were constructed, linking up with Mainsgate, the road leading down to the iron ore mine (see Fig. 2). Before that date the railway crossing was situated opposite Lonsdale Road, the town's original main street located to the rear of the town and which was one of the first streets to be constructed. The crossing linked Holborn Hill with Millom. From 1876 plans for a town hall and offices were put to the new Local Board, and land at Lapstone and belonging to the iron smelting works was sold for the purpose.⁴¹ The town's centre, the market square, was also moved from its original position at the bottom of Market Street, just underneath the ever-encroaching slag bank, to its present situation outside the town hall. The town's new alignment, along with the new street connecting to Mainsgate, reflected the mining company's position as the town's main employer and largest ratepayer, and thus its power within, and importance to, the local economy. For the first time the Mining Company can be seen to have had some real influence in Millom's development. The minutes of the Local Board Highways and Buildings Committee reported in December 1875, "As to Lapstone Road from Lapstone to Mainsgate Road your Committee recommend that if the Hodbarrow Mining Company will put the parapet or footway which they have made in proper repair by covering it with ashes or slag that the Board will take the road over as a highway".⁴²

Conclusions

Millom's early development was a symbol of the poor initial relationship and changing balance of power between its two dominating industries. From 1866 the iron ore smelting company had been the dominating factor influencing the town's layout and alignment, with the mining company seemingly unable or unwilling to play any role in Millom's development. By the 1870s, however, the mining company's growing contribution to the locality's rates made it incumbent upon its directors to try to identify some way in which that contribution could be utilised to the company's best advantage. The political vacuum, created by the lack of an effective governing body as the new town grew, enabled the mining company to identify a role for itself, which also allowed them to protect and forward the company's economic interests. The town's realignment and further development from the late 1870s, thus reflected the needs and interests, as well as the importance, of the Hodbarrow Mining Company.

Notes and References

¹ Harris, A., "Millom: A Victorian New Town", *CW2*, lxvi, 449-467.

² Hughes, R., "Housing the Workers: Company Housing Provision in South Cumbria ca.1850-1939" (unpublished doctoral thesis, University of Lancaster, 2004).

³ *Mannex Directory for Cumberland*, 1847, 344.

⁴ *Mannex Directory for Cumberland*, 1847, 344.

- ⁵ Kelly's *Cumberland Directory*, 1884.
- ⁶ CRO (B)/BDB/21/12/1/Hodbarrow Mining Company, Cost Book 1855-1864.
- ⁷ 1861 Census Enumerators' Books for Millom, Cumberland.
- ⁸ Bulmer's *West Cumberland Directory*, 1883.
- ⁹ CRO (B)/BDB/21/40/39/3/Wm Gradwell to Hodbarrow Mining Company discussing size and cost of erecting corrugated iron and timber huts for workmen dated 7 May 1864.
- ¹⁰ Marshall, J. D., *Furness and the Industrial Revolution: an economic history of Furness (1711-1900) and the town of Barrow (1757-1897) with an epilogue* (Beckermet: Michael Moon, first edition 1958, reprint 1981), 266.
- ¹¹ *Ulverston Soulby Advertiser*, 22 February 1866.
- ¹² Harris, A., *Cumberland Iron. The story of Hodbarrow Mine, 1855-1968* (1970), 51.
- ¹³ CRO (B)/BDB/21/40/60/Miscellaneous Correspondence, Letter from Nathaniel Caine to John Coade, 28 March 1871. Caine wrote: "I look with great alarm upon having any work of any kind in the hands exclusively of such a mischievous man as Massicks".
- ¹⁴ <http://www.cornwall.gov.uk/history/ab-hi01c.htm>.
- ¹⁵ 1891 Census Enumerators' Books for Millom, Cumberland.
- ¹⁶ Kelly's *Cumberland Directory*, 1906.
- ¹⁷ CRO (B)/BDB/21/1/1/Hodbarrow Mining Company, Directors' Minute Book, 1863-1867, for example 27 May 1864, 5 August 1864.
- ¹⁸ CRO (B)/BDB/21/1/1/Hodbarrow Mining Company, Directors' Minute Book, 1863-1867, 30 December 1864.
- ¹⁹ Kelly, D., *The Red Earth* (Barrow-in-Furness: Trinity Press, 1998); McFadzean, D., *The Iron Moor* (Ulverston: Red Earth Publications, 1989).
- ²⁰ 1861 Census Enumerators' Books for Millom, Cumberland.
- ²¹ *Whitehaven News*, 3 May 1866.
- ²² Hughes, R., "Housing the workers: Company housing provision in south Cumbria c.1850-1939", (unpublished doctoral thesis, University of Lancaster, 2004).
- ²³ These plans are no longer extant.
- ²⁴ *Whitehaven Herald*, 10 March 1866.
- ²⁵ *Whitehaven News*, 3 May 1866.
- ²⁶ *Whitehaven News*, 3 May 1866.
- ²⁷ *Whitehaven News*, 3 May 1866.
- ²⁸ CRO (B)/BDB/21/1/1/Hodbarrow Mining Company, Directors' Minute Book 1863-1867, 24 January 1867.
- ²⁹ *Whitehaven Herald*, 10 March 1866.
- ³⁰ *Ulverston Soulby Advertiser*, 22 February 1866.
- ³¹ *Whitehaven Herald*, 7 March 1874.
- ³² CRO (K)/WD/AG/Box38/Letters etc. dating from 1870 between Arthur Greenwood (Solicitor) and the Hodbarrow Mining Company.
- ³³ Bargain company workers comprised of groups of men contracted for specific tasks including digging out new levels and slicing the ore for raising to the surface. They were the company's most important employees in terms of their logistical role. Bargain company men tended to move between companies depending on what work was available, but were almost always kept employed. During the early 20th century as the mines found it difficult to sell their ore, bargain company men who were also tenants of the company's houses tended to be retained by the company. Therefore tenancy offered protection of employment as well as of living space.
- ³⁴ CRO (B)/BDB/21/40/43/Correspondence between Nathaniel Caine and Louis Hornblower concerning the cost and progress of building Concrete Square and clerks' houses at Steel Green, 1872-1874.
- ³⁵ CRO (B)/BDB/21/40/43/Correspondence between Nathaniel Caine and Louis Hornblower concerning the cost and progress of building Concrete Square and clerks' houses at Steel Green, 1872-1874.
- ³⁶ Price, J., *Sharpe, Paley and Austin: A Lancaster Architectural Practice 1836-1942* (Lancaster: Centre for North West Regional Studies, 1998), Appendix A, 85.
- ³⁷ CRO (B)/BDB/1/2/Hodbarrow Mining Company, Directors' Minute Book 1868-1873, 12 July 1872. It would appear that Massicks had provided isolated accommodation for anyone living in the township

of Millom Below who had contracted smallpox and that Hodbarrow's directors agreed to support the policy and to pay half the expenses – yet again the impetus actually came from Massicks and therefore the iron works.

³⁸ *Barrow, Furness and North Western Daily Times*, 10 July 1872.

³⁹ *Whitehaven Herald*, 7 March 1874.

⁴⁰ Harris, *Cumberland Iron*, footnote 1, 87.

⁴¹ CRO (B)/BSRD/M/1/3/2/Millom Local Board Committee Report Book, 3 September 1875-17 February 1879, 15 May 1876.

⁴² CRO (B)/BSRD/M/1/3/2/Millom Local Board Committee Report Book, 3 September 1875-17 February 1897, 3 December 1875.