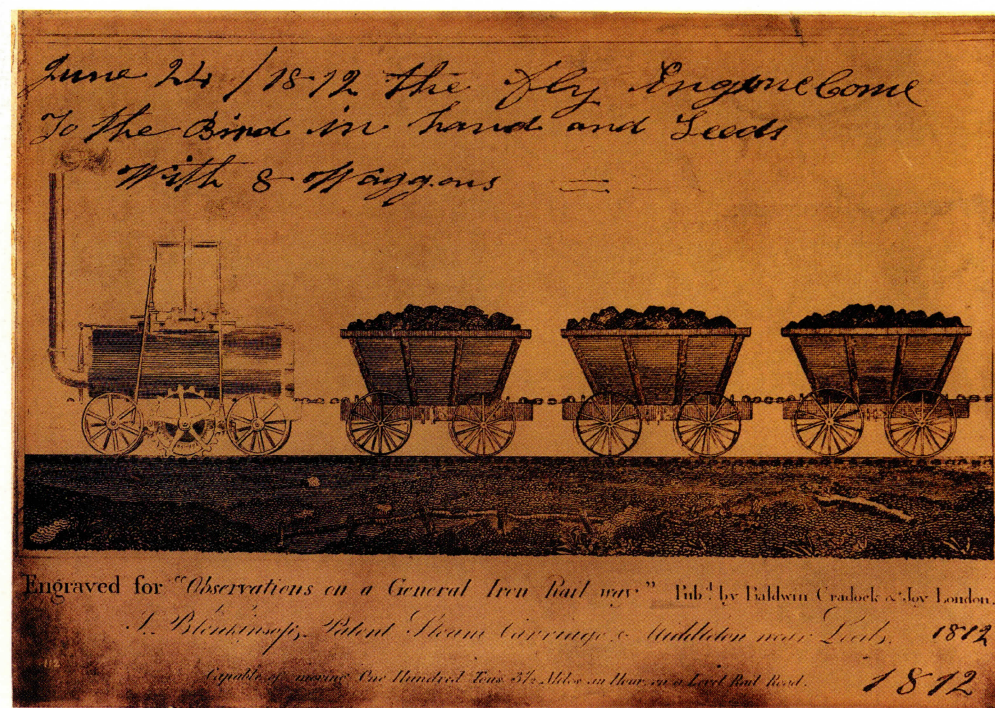
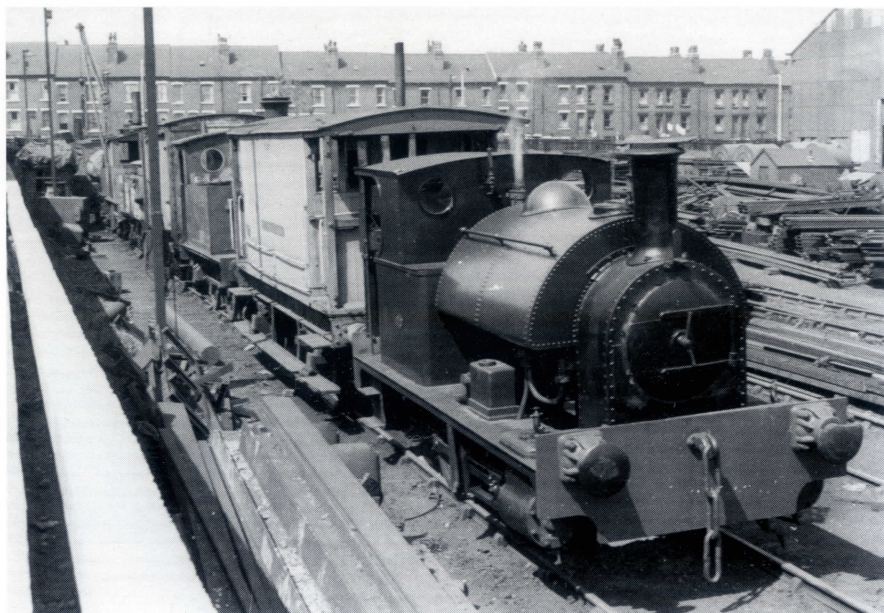


A HISTORY OF THE MIDDLETON RAILWAY LEEDS



EIGHTH EDITION



Dartmouth Yard in the 1960s

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At its fullest extent, the Middleton waggonway/railway network had three levels, linked by inclines: the upper level (the Middleton plateau at the southern end); the middle level (site of the Broom Pit and the present Park Halt); and the lower level (from Hunslet Carr to Leeds). In the text, these levels are used to indicate the sites of various developments (see also map on Page 4). Original spellings etc. have been used in all quotations.

Cover: an old photograph of unknown origin, of a print made in the early 1820s by Topham of Leeds, showing a Murray/Blenkinsop locomotive with train

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FOREWORD

In its early days, the Middleton Railway gave vital impetus to the growth of Leeds and of Leeds industries. It made possible an ample supply of cheap coal, which benefitted both the developing use of steam engines in textile and other factories, and also the growth of those industries whose processes used its heat directly: brewing, iron and brass founding, and glass, pottery and brick making. Its successful pioneer use of steam locomotives proved to the world that they were commercially viable, and led to the development of the extensive Leeds locomotive-building industry.

Our railway survived the decline and demise of the heavy industry it served during its first two centuries. It is now a registered Museum, serving Leeds' cultural, educational, leisure and tourism interests, by providing an interesting and worthwhile hobby for some, and an enjoyable and informative afternoon out for others. It also gives an exciting experience of 'living history' to hundreds of schoolchildren each year.

It is now over forty years since the start of volunteer working of the line, and during that time much has been achieved by a small group of dedicated enthusiasts. In 1758, when the citizens of Leeds watched the first coal waggons rolling into Casson Close, *The Leeds Intelligencer* reported that "a general Joy appear'd in every Face"; two and a half centuries later, the oldest firm in the business still has this aim.

Sheila Bye, Middleton Railway Trust Historian/Archivist



Moor Road Station Yard in 1998

1. MIDDLETON PITS AND WAGGONWAYS - to 1808

Coal-working in the Middleton area dates back at least eight hundred years, to 1202 when William Grammar, Lord of Middleton, was described as a "coal owner". In 1401, Simon Symeon of Pontefract's will mentioned his "cole pits" at Middleton, and in 1646, Sir Ferdinando Legh was the owner of a "cole myne" there, probably a day hole or adit: a tunnel driven into an outcrop. In 1669, "FRANCES CONYERS OF MIDLTON IN YORKE SHIRE" issued a halfpenny token "FOR THE VSE OF YE COLE PITS", which must have been substantial to warrant this.

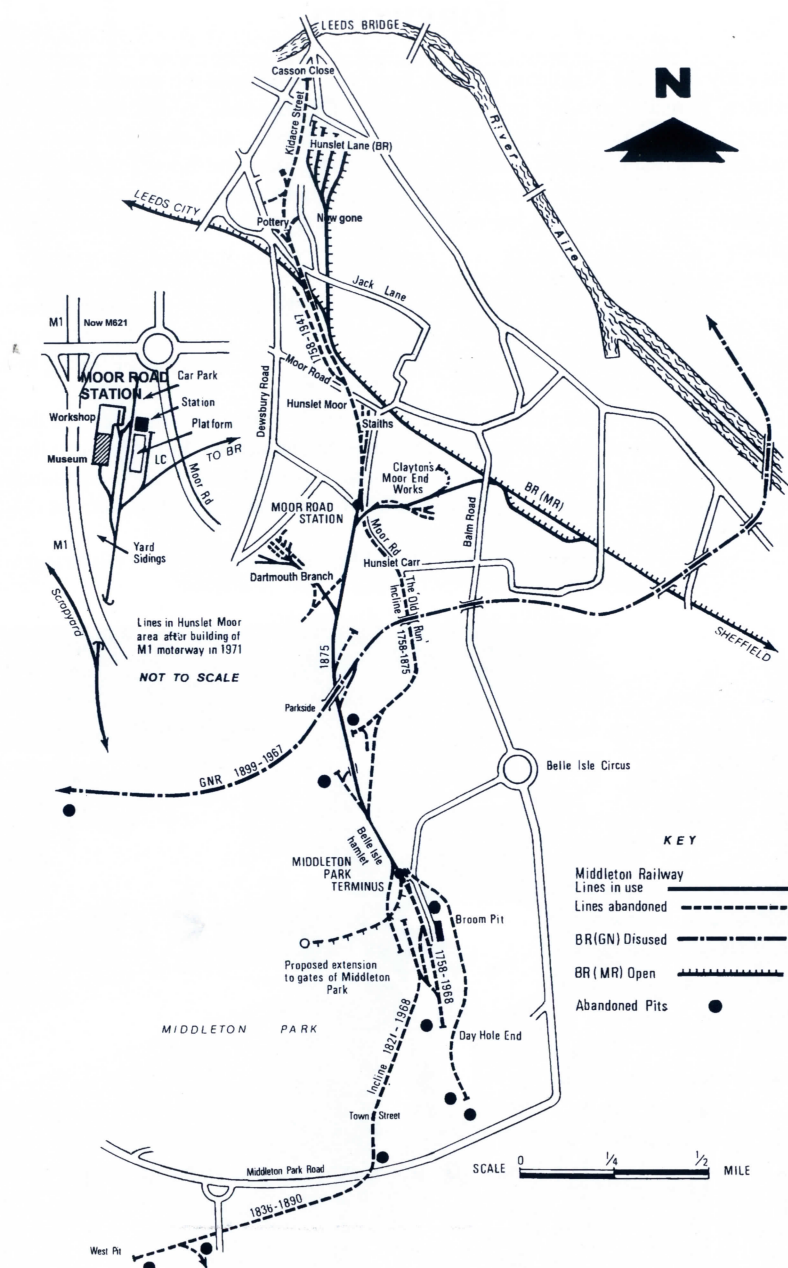
In 1697, Ralph Brandling, member of a Tyneside coal-owning family of Felling, County Durham, married Anne, the Legh heiress, and in due course amalgamated the property of the two families. Although he and his wife did not succeed to the Middleton estate until 1706, Ralph Brandling appears to have taken charge of at least the mining interests before then, and he is mentioned in the 1701/2 diary of Ralph Thoresby as having lately erected "an ingenious engine . . . to drain his coalmines". In 1717, it was further recorded that he was the owner of "A Wrought Colliery or Coal Mine with a Water Engine and Smithy" at Middleton. Brandling had brought to Middleton the mining innovations of his native Tyneside, the business expanded, and by 1728 he had two coal-loading staiths established on the banks of the River Aire at Thwaite Gate, some 2½ miles downstream from Leeds, reputedly handling around 650 boatloads a year.

Ralph Brandling died in June 1749, and was succeeded by his nephew, also Ralph, who died a few weeks later. Ralph the younger's 16 years old son, Charles, succeeded him. He was abroad at the time and did not return to England until early 1751, meanwhile leaving agents to run his estates. When he returned, he took up residence on the family's Tyneside estates, first at Felling and later at Gosforth, and consequently agents continued to oversee his other possessions. By 1754 a fellow-Tynesider, Richard Humble, was agent in charge of Charles Brandling's Middleton estate.

For some centuries, there had been steady depletion of English woodlands, for building ships and houses, for domestic and industrial fuel, to make charcoal for iron-smelting, and by clearances to create new agricultural land. By the 18th century, coal was being used increasingly as a replacement for domestic firewood, and as industrial fuel, latterly including use in steam-engines and to provide coke for iron-smelting. In the mid 18th century, Leeds had three main sources of coal supplies: Brandling's Middleton pits, Joshua Wilkes' Beeston pits, nearer to Leeds, and the Fenton family's Rothwell pits, recently deepened, which were closer to the Aire and Calder Navigation for transporting coal into Leeds. Waggonways were already a familiar sight in the Shropshire and Tyneside coalfields, and Ralph Brandling the elder had them built for at least two of his Tyneside



The remains of an early pit shaft in Middleton Park



collieries in the late 1690s; a waggonway was an obvious means of cutting Middleton's transport costs.

The distance from Middleton to Leeds was greater than the distance from Middleton to Thwaite Gate, and would involve more wayleave agreements, so it was logical that the first waggonway should go to the well-established Thwaite Gate river staiths. However, this plan was not without problems. Brandling owned most of the route, but there was an intervening piece of Fenton estate, which could only be avoided by running along a section of public highway.

Objections to this were raised by the Duke of Norfolk, James Fenton, and Samuel Armitage, and a writ of *Ad Quod Damnum* ("to what damage"), dated 29th March 1755, was copied into the Quarter Sessions records on 31st July. The Sheriff of York was ordered to inquire:

whether or not it be to the Damage or Prejudice of us or any other if we should grant to Charles Brandling Esquire License that he the said Charles Brandling may make and lay down with Timber Wood and other Materials a Waggon Way of the length of three hundred and twenty yards or thereabouts leading from a Close or field called Gamstock Close to a field or Close called Upper two Lands belonging to the sd Charles Brandling in upon & along a certain Lane & publick Highway leading from the Village of Middleton to the Town of Leeds called by the Name of Woodhouse hill Lane...

providing that Brandling "do make good and keep in Repair" the portion used for the waggonway "to the end that all Passengers and Travellers & all Carts & other Carriages may safely commodiously & conveniently travel & pass along the same". The "Inquisition" took place on 28th April, before the Sheriff and nineteen merchants and gentlemen of Leeds and Hunslet. They found that to grant the requested licence to Charles Brandling would cause no "Damage or Prejudice" to the King or to any other, and the Woodhouse Hill Lane section - "nine hundred and sixty feet of Land in length and four feet and eight Inches in breadth" - was duly sanctioned.

The river staiths waggonway particularly improved the colliery's trade with other areas, and during the period 1753-7 fifteen pits were sunk, mainly along the lower part of the Middleton Woods escarpment and the level area immediately north of there. Coal sent out via the river staiths would incur river and wharfage tolls, but the alternative route to Leeds was by road, little more than a bridle path for much of the way. Moreover, the upkeep of road surfaces was causing concern, because of growing volumes of traffic, and tolls were being imposed to raise money for repairs. In November 1757, *The Leeds Intelligencer* weekly paper printed a letter suggesting that a toll bar be placed on the Leeds-Hunslet road, so that the passage of coal carts could be charged for.

Clearly, a waggonway to Leeds was also needed, to keep Brandling coal competitively priced, and on 6th December 1757, *The Leeds Intelligencer* printed a notice that "PROPOSALS HAVING been made for reducing the Price of COALS", a meeting would be held the following Friday. Nothing more appeared until 10th January 1758, when Richard Humble advertised:

To all Gentlemen, and other Inhabitants of the Town of LEEDES,

AS the Scheme for reducing the Price of COALS, proposed by CHARLES BRANDLING, Esq; has met with all proper Encouragement at two Meetings held for that Purpose by the Gentlemen and principal Inhabitants of the said Town, and a most generous Subscription set on Foot for establishing the same: *It is therefore desired*, (as it is hoped the intended Waggon-Way will be completed about *Lammas* next,) That the Inhabitants of the said Town will all unanimously concur to encourage the said Scheme, and decline giving Ear to any Insinuation that may be offer'd to the Prejudice of so laudable an

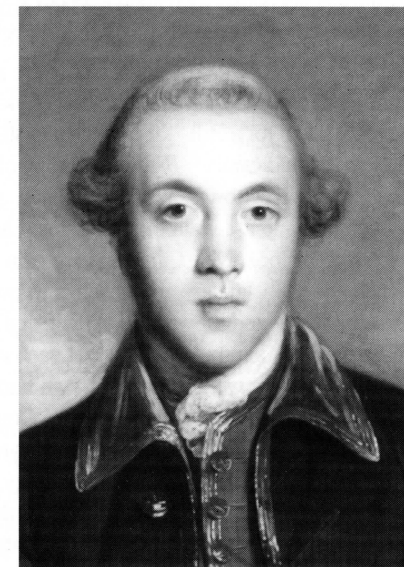
Undertaking, which once completed, Mr. BRANDLING will stand oblig'd to serve the Inhabitants of the said Town with Coals of as good Quality as any other Coal, and much cheaper than they can be supplied with elsewhere: *And for the Benefit of the said Town, this is to give Notice*, That Attendance is this Day given, and will be continued, at the *Three-Leggs*, by the Agents of the said Mr. BRANDLING, to contract with Gentlemen and Others, to serve them with Coals of the best Quality from *Middleton Colliery*, at Six-pence per Corf; at their respective Dwelling-Houses, and the Corf to contain 7680 cubical Inches, which by a late Experiment is found to weigh Sixteen Stone and upwards.

It is interesting to note that some Leeds citizens were so eager for the scheme to go ahead that they had started a subscription towards its costs. Naturally, Brandling's rivals were alarmed, and an adjoining advertisement declared that the Fentons would deliver coal at six pence per corf (a basketwork measure), **and** would contract to do so for a term of eleven years. Wilks advertised coal to be delivered at the same price, adding that it was on sale at his Beeston Colliery for only three pence a corf.

The results of this 'cut-throat' competition obviously delighted the local populace, and the following week's paper had a letter from "A TOWNSMAN", mentioning "the three charitable Advertisements for reducing the Price of COALS this cold Winter" and asking "Which of the three Gentlemen are the Inhabitants of the Town most oblig'd to for the present Reduction in the Price of Coals?" That week, Wilks advertised exactly as before, but the Fentons claimed that their corves contained 8830 cubical inches (more than Brandling corves). Provoked by the Fentons' offer of an eleven year contract, the Middleton advertisement offered a contract term of **sixty** years. It also stated that coal would be sold at Mr. Brandling's "Coal-Yard in Leedes" at four pence three farthings a corf. On 31st January, the Fentons offered **seventy** year contracts, and Joshua Wilks discontinued his advertisement. A week later, the Fentons did likewise, and the 7th February *Intelligencer* reported that "The Bill for reducing the Price of Coals in this Town, proposed by Charles Brandling, Esq: was laid before the Hon. House of Commons last Wednesday."

On Saturday 28th January, a draft agreement had been drawn up for the lease of some of the land over which the new waggonway would pass. Hans Busk, a Leeds merchant, would "farm lett" to Charles Brandling two and one part closes of land in Hunslet, near to the township's boundaries with Holbeck and Leeds, for 60 years at a yearly rent of £52. The draft refers to the proposed Act of Parliament in the same manner as had *The Leeds Intelligencer*, as being "to bind & oblige the said Cha. Brandling his heirs Extors Admors & Assigns to the performance of the said proposal":

to furnish the Inhabitants of the Town of Leeds in the County of York with Coals to be delivered at a Coal yard on the south side of the Great Bridge in Leeds aforesaid at all times of the year from his Collieries at



Charles Brandling 1733-1802

Middleton and Beeston in the said County of York during the Term of 60 years to comence from Ladyday next at four pence three farthings per Corf each Corf to be of the same Content & Measure as the Corves now used at his Colliery at Middleton.

The establishing of advantageous coal prices and term of supply were given far greater importance than the building of a waggonway, which was mentioned only briefly:

& it will be convenient in order to carry the said proposal into Execution for the said Cha. Brandling his Extors & Admors for the more comodious Carriage of Coals from his said Collieries to Leeds aforesaid to lay & place a Newcastle or Coal Waggon Road from a place called Hunslet Moor in the said Co. of York to the Townsp of Leeds.

However, the waggonway would be an expensive undertaking, and it would be vital to ensure that lease and wayleave agreements made for its route would continue to be legally binding for the next sixty years, no matter how often the land changed ownership.

The *Commons Journal* for 1758 tells a more complicated story. On Wednesday 1st February, three Petitions, not a Bill, were presented before the House of Commons. The first was from Charles Brandling and the land owners with whom he had made agreements, and asked that leave be given for a Bill "for establishing such Agreements, and vesting the Right to the said Waggon Way in the said *Charles Brandling*". The officials and leading inhabitants of Leeds and Hunslet, and those of several towns north of Leeds, petitioned separately for a Bill "to establish the said Agreements and ascertain the Weight and Measure of the said Coals". The latter gave genuine cause for concern since, whilst the capacity of a Middleton corf was always stated as being 7680 cubic inches, the 10th January advertisement vowed that a corf "by a late Experiment is found to weigh Sixteen Stone and upwards"; Articles of Agreement produced as evidence to the subsequent Parliamentary Committee stated that each corf held "14 Stone and a Half", and the resulting Act of Parliament set the weight at "about Two hundred and Ten Pounds", i.e. about fifteen stone.

The Petitions were referred to a Committee, which reported on Friday 24th February that the Articles of Agreement promised deliveries of coal at a yard "on the South Side of the great Bridge, at all Times of the Year, for the Term of Sixty Years, at the Rate of $4\frac{3}{4}d$. a Corf" . . . "provided the said *Charles Brandling* may be allowed to lay down and use a Waggon Way . . . for the said Term of 60 Years". Joshua Green had told the Committee that, for the past five years, coal had sold for $c.7\frac{1}{2}d$. a corf, and that the annual consumption of coal in Leeds was $c.30,000$ dozen corves, brought from different local collieries. The Committee was satisfied that agreements had been made with all the landowners affected, as well as with Mr. Joseph Bilton and Mr. Cooper, for traversing "a Common called *Hunslett Moor*", they and Charles Brandling being joint Lords of the Manor of Hunslet. Leave was now given for a Bill to be prepared and brought into the House; on Monday 13th March, Lord Downe presented the Bill and it received its First Reading.

The Second Reading was on 17th March, and *The Leeds Intelligencer* confidently reported that "we hope, in a few Days, to have the Pleasure to inform our Readers in this Neighbourhood, of its passing into a Law"; in fact, it did not become law for another three months. On Tuesday 11th April, the Bill had its Third Reading, and the Amendments were proposed and agreed, these mainly being the insertion in various places of the word "Wastes" to cover use of parts of Hunslet Moor. The Moor was the manor's common or waste land, and was then considerably larger than its modern remains. It stretched from Balm Road on the east to Hunslet Hall on the west, beyond the modern

Dewsbury Road, and to skirt around it would add considerably to construction and operation costs.

Charles Brandling owned shares in the Lordship of the Manor of Hunslet, and the Lordship was usually deemed to include control of the manor's waste or common land. Brandling made an early agreement with his remaining fellow shareholder, Joseph Bilton, for the necessary wayleave, but Bilton died and a second agreement, registered at Wakefield on 27th March, had to be made with his heir. Uncertainty about this agreement perhaps was the reason for the Busk draft lease stating that the waggonway would start at Hunslet Moor. The right to traverse the Moor was not obtained cheaply, and Brandling was to pay Joseph Bilton the younger £8 an acre annually for land utilised, far more than he contracted to pay for most other parts of the route.

On Friday 21st April, a message was sent from the House of Lords stating that they had agreed to the Bill without further amendments, and seven weeks later, on Friday 9th June, the Act became law. At some stage in its passage through Parliament, its main purpose had been changed and, designated '31 Geo. 2, c.xxii, 9th June 1758', it had become the first Act of Parliament predominantly concerned with the construction of a waggonway or railway, and was entitled:

An ACT for Establishing Agreements made between Charles Brandling, Esquire, and other Persons, Proprietors of Lands, for laying down a Waggon-Way, in order for the better supplying the Town and Neighbourhood of Leeds, in the County of York, with Coals.

The agreements were ratified, and were to take the form of Leases or "Privileges", "Indentures" of which must be "inrolled in the publick Register-Office" at Wakefield, to prevent disputes arising. His leases were confirmed for sixty years, or as long as he continued to deliver at "a certain field or open space called Casson Close near the Great Bridge of Leeds" not less than 240,000 corves (22,500 tons) of coal a year at $4\frac{3}{4}d$ per corf, $c.21p$ per ton in modern terms. (The annual tonnage and price per ton are calculated from the Act's declaration that a corf held about 210 pounds of coal, and 24 corves filled a waggon.) If Joshua Green's evidence to Parliament was correct, this represented a massive decrease of almost 37% in the price of Middleton coal sold in Leeds.

The Act mentions "Iron Rails", but also says "a Waggon-Way (such as is used for and about the Coal-works and Coal-mines in the Counties of Durham and Northumberland)". These usually had oak rails, topped with a renewable strip of beech, and were cross-sleepered at about every three feet, the sleepers being covered with gravel or cinders to protect them from the horses' hooves. Wheels were usually of beech, small in diameter and thick, with a circular metal plate nailed to the rim of the inner face, as a flange.

The first agreement to be registered at Wakefield was that with Joseph Bilton, giving Brandling rights to build "a Waggon Way or Newcastle Road" across "the wastes or common grounds" of Hunslet. Though they were jointly Lords of the Manor, there were also numerous 'commoners' who usually had rights to the use of waste lands. The 1235 Statute of Merton (20 Hen.III c.iv) governed use of waste lands by Lords of the Manor, allowing them to enclose or encroach on areas which were not needed by their 'free tenants'. However, a deed of 2nd March 1713, which conveyed six acres of common land to Hunslet church trustees to endow the Hunslet clergy, was signed by over a hundred freeholders, and stated that **they** had a right and title to the Commons of Hunslet. The relevant Act (12 Anne c.i) stated that Lords of West Riding Manors who wished to so endow their clergy had to have the consent of three quarters of the freeholders and others with rights of common. This perhaps was thought to have set a new legal precedent, and the

preamble of the 1758 Act states that "some of the Owners and Proprietors of the Lands . . . may happen to have only a limited and not an absolute Interest and Property therein". A hundred and twenty years later, rights of way across the Moor were to cause a considerable amount of trouble.

Between 29th June 1758 and 12th December 1759, thirteen other Indentures were signed and later registered at Wakefield. The first of these was with John Suttell for the lease of the land and buildings at Casson Close, together with an adjoining woodyard. According to the Busk draft lease, Brandling originally had intended to establish his coal yard south of there, in closes of land belonging to Jeremiah Barstow, but obviously had changed his plans when Casson Close, nearer to Leeds centre and the river, became available. He had occupied the Close since 1st May, and agreed to maintain all the buildings and to pay Suttell an annual rent of £33.10s. In October, a revised agreement with Hans Busk replaced the January draft, this time quoting the new Act and setting an annual rent of only £32. Further south, Jeremiah Dixon leased to him five acres of land and a stable at Rushy Pasture, Hunslet, perhaps for use as a 'staging post' for changing and resting horses, since Brandling promised to attend carefully to the disposal of all waste hay, straw and horse dung from the premises. Haulage on the river staiths waggonway had been sub-contracted out, but the Leeds waggonway was to be worked directly, and involved a substantial number of horses.

Initially it had been hoped to have the waggonway in use by 1st August, but it did not open until seven weeks later. *The Leeds Intelligencer* of Tuesday, 26th September 1758 reported that:

On Wednesday last, the first Waggon Load of Coals was brought from the Pits of Charles Brandling, Esq; down the new Road to his Staith near the Bridge in this Town, agreeable to the Act of Parliament passed last Sessions.- A Scheme of such general Utility, as to comprehend within it, not only our Trade and Poor, (which ought to be the grand Objects of our Concern) but also beneficial to every Individual within this Town and Neighbourhood: On this occasion the Bells were set a ringing, the *Cannons* of our FORT fired, and a general Joy appear'd in every Face.

The massive 37% price-cut gave Brandling's coal an immediate advantage over that of his

competitors, and the output of his colliery doubled within a decade. Charles Brandling began to enlarge his Middleton estate by purchasing adjacent plots as they came on to the market, and eventually he installed his eldest son, Charles John, in a fine modern house, Middleton Lodge, which incorporated a cock-fighting pit beneath the hall floor. He also bought the 'living' of the



Middleton Lodge, awaiting demolition in the 1990s

local parish, Rothwell, and c.1796 his son, Ralph Henry, became vicar there. Around 1761/2, a hamlet of miners' cottages was established north of Middleton Woods, near the modern Park Halt; it was called Belle Isle, no doubt honouring the 1761 British naval victory over the French near Belle Île, off the Breton coast.

During the twenty years following the Act, the demand for coal increased. By 1778, the annual allocation was totally inadequate, and once the fixed-price quota was finished, coal could be sold at any price it would fetch. The Town Clerk placed an advertisement in *The Leeds Mercury* of 23rd June 1778, stating that as the Leeds area had not been sufficiently well supplied with coal in recent years, a meeting would be held to discuss this on 2nd July, at the Moot-hall. However, discussion was forestalled by Charles Brandling, and on 30th June he advertised that the remaining allocation would be delivered at the Staith by 1st September:

. . . after which Time no more Coals will be delivered at the said Staith till the Commencement of the next Year, unless in the mean Time an Agreement should be entered into for obtaining an Amendment of the said Act, for the supplying the Inhabitants of the Town and Neighbourhood of Leeds with a larger Quantity of Coals than stipulated in the said Act, at an advanced Price.

Charles Brandling had the inhabitants almost completely at his mercy, and a second Act (19 Geo. 3, c.xi) became law early in 1779. The price of coal increased to 5½d per corf (c.24.4p per ton), but Brandling undertook to deliver double the previous amount. The 480,000 corves (45,000 tons) were to be divided into equal quarterly instalments, so that any extra requirements would not all be needed in winter when higher prices could be demanded than in other seasons. Some of Brandling's advertisements mentioned that "Complaint has been made that the Agents employed in the Coal-Yard of Leeds have not loaded the Carts according to their Turns", and the new Act stipulated that a person appointed by the Quarter Sessions was to superintend activities at the Staith, including regular checking of the capacity of waggons, corves, etc. used as coal measures. The complaints led also to Charles Brandling and his employees no longer being allowed to take any part in the 'leading' of coal from Casson Close, and a scale of charges was laid down for deliveries to various districts by independent carters. By April 1781, however, the colliery's loss of control over trade beyond the Staith had led to some vendors selling other pits' inferior coal deceitfully described as "New Brandlings".

Other terms of the new Act included loss of the waggonway rights if Brandling should "permit or suffer any Coals which shall be got or dug out of any Mine or Seam of Coal lying within or under any Lands or Grounds in the said Townships of Beeston or Hunslet, or either of them, to be brought to the said Repository or Coal Yard for Sale there", Beeston and Hunslet coal being of inferior quality. Part of the daily quota could now be delivered "at any convenient Place or Places near or adjoining to the said Waggon Way, within the said Borough of Leeds, between the said Coal Mines and the said Repository in Casson Close". There actually are records of sales at Hunslet Moor from 1771, which may have been via one of the branches listed below, or to the Leeds Pottery at Jack Lane, near the northern edge of the Moor. In 1770, Richard Humble had purchased Rushy Pasture - land leased twelve years previously by Charles Brandling, and in partnership with the Green brothers, he established the famous Leeds Pottery there. The waggonway continued to pass through the site, and by 1787 a branch went into the pottery yard. As well as receiving a way-leave fee, the pottery reputedly was supplied with coal at a reduced price.

The owners of other premises likewise saw the advantages of being linked to the waggonway, and Jonathan Teal's plan of the Middleton network as it was in August 1787 shows several such branches:

35 yards long, into the "Foundary" at Hunslet Carr (now Denison's),

35 yards long, into "Armitage Staith", perhaps a little north of the modern Moor Road Depot, but not quite as far north as the site of Hunslet Moor Staith,
52 yards long, into "Workhouse Staith", a little north of the Hunslet Moor Staith,
154 yards long, into the Leeds Pottery, just north of Jack Lane.

Johnson & Sedgwick's 1791 map of Hunslet shows a short branch, running N.N.W. from about the modern Moor Road Station site and ending at a building (perhaps Armitage Staith). By 1802, there was also a branch into "Fullage Close", adjoining the north east edge of Hunslet Moor, perhaps to supply fuel for the Boulton & Watt steam engine in the scribbling mill there, which was advertised for sale that year. Nearer to Leeds in 1802, "Building Lots" were for sale "to communicate with Meadow or Jack Lane, and the Coal Rail Road from Mr. Brandling's Pits at Middleton to Leeds". The waggonway also quickly became established as an unofficial footpath, being much better surfaced than most contemporary roads, and in March 1775 James Walker was fined for riding his horse along it in order to avoid paying tolls at the Hunslet Turnpike Bar.

New pits apparently were required to meet the doubled coal quota allowed by the second Act, and in 1779 several were opened in the Middleton Park area, a little further up the escarpment from the earlier pits. During the next decade, more pits were opened in the areas previously worked, and operations extended further south also, to the Town Street area at the top of the escarpment. Most of the pits had only a short lifetime, though some were closed up and later re-opened, as trade dictated. Teal's maps of Middleton in the 1780s show a large network of 'bye-ways', extending for more than a mile from the southern end of the main waggonway, to pits on the hillside and the upper level. A few of these routes still exist as footpaths in Middleton Park.

In 1790, John Curr, patentee of the L-shaped iron tram-plate, was paid "a Gratuity for his Trouble &c respecting the Hurrying & Drawing the Coals agreeable to his Patent £10.0.0", and a year later, he was paid a further £17.6.7d "for sundry Castings". "Hurrying" was the transporting of coal from the face to the shaft bottom. Curr's system also involved the use of vertical rails within the shaft, to prevent damage to the corves, by guiding them as they were 'drawn' up.

The plentiful supply of coal from Middleton fuelled further expansion and development of Leeds' industries, and also served the homes of the influx of new workers; in little more than a decade, the legal quota again was insufficient to meet demands. On 28th July 1792, the Mayor proclaimed in *The Leeds Mercury* that, in answer to a petition signed by ten prominent citizens, he would hold a meeting of inhabitants the following Thursday, to discuss "the best Means to ensure a suitable Supply at all Seasons . . . bearing in Mind the Distress which was occasioned in this Town and Vicinity last Winter, by the WANT of a Proper SUPPLY of COALS". A committee was formed, and advertised another meeting to be held on 12th November, this time "having received Proposals from CHARLES BRANDLING, Esq; to supply the Town with an additional Quantity". On Tuesday 19th November, *The Leeds Intelligencer* announced with obvious relish that the committee's agents had "found a bed of coal four feet thick, . . . situated at Churwell, near this town".

However, the alternative source of supply apparently proved unlikely to rival Mr. Brandling's, and once again he had the townsfolk almost completely at his mercy. *The Leeds Intelligencer* of Tuesday 13th May 1793 briefly mentioned that a third Act of Parliament had been given royal assent "on Wednesday se'ennight" (30th April).

The new Act (33 Geo. 3, c.lxxxvi) referred to "the advanced Price of Labour, and of the

Materials used in and about the said Coal Works", and also to "a very great Expense in making fresh Winnings in the said Coal Working, and in making additional Waggon Ways therefrom", the earliest of these "Winnings" being around the top end of the Park, with a few later pits also being sunk both south-west and south-east of there. Since 1779, improvements had been made at Casson Close also, references now being made to "the Spouts or Places for shooting and delivering the said Coals", implying a raised staith.

The 1793 Act authorised an increase in price to 13s1d per waggon (6½d per corf, or c.28.8p per ton), in case "on Account of the present inadequate Price or Rate of the said Coals, the said Charles Brandling should discontinue and give up the said Waggon Way or Repository". The annual quota remained at 20,000 waggons, but was to be divided into daily quotas of sixty four waggons, six days a week, with no less than ten waggonloads a day being sold in small amounts.

Though a portion of the quota could be sold at any place *en route*, the increased demands of Leeds were to be met by ruling that the entire amount of coal brought to Casson Close would be sold only to inhabitants of the "Town and Parish of Leeds", whereas previously, according to the Act, "the greatest part of the Coals" were "purchased and taken away by persons residing at a great distance from . . . Leeds". As under the second Act, a Superintendent was to be appointed, to keep a record book of sales, to write out "tickets" for purchasers, drivers, etc., and to label each cart, in white paint, with its official capacity. Two weeks later, the Justices of the Peace advertised for "A Steady, Active MAN, who writes a good Hand, to superintend the DELIVERY of COALS at the LEEDS COAL STAITH. The Salary will be upwards of Forty Pounds per Annum."

The new Act legalised the sale of Beeston or Hunslet coal, but only when Middleton coal was not available for sufficiently good reasons. (Despite the restrictions of the 1779 Act, Brandling, formerly a partner in the Beeston New Colliery, had acquired his retiring partner's share in 1789, and reputedly had connected the colliery with his waggonway, offering Beeston coal for sale at the Leeds Staith.)

The concentration of waggonway building in 1787, preceding the third Act, had been done by "Wrights" brought from Newcastle, at the colliery's expence, "for keeping in Repair the Leeds & Hunslet Staiths Waggons & Waggonways". During the next decade, local men acquired the skill, and by the late 1790s, when Middleton's waggonways began being laid with iron rails and stone sleepers, the work was being done by local partnerships. In 1802, extensive building work was being done by Ben Hixon (preparation) and Nelson's ("getting Stone Sleepers" and "laying Iron way").

On 29th June 1802, Charles Brandling died at Gosforth House, near Newcastle, and was succeeded by his eldest son, who left Middleton to take up residence at Gosforth. Almost immediately, Charles John Brandling sought a new Act of Parliament, proposing a price increase to 16s a waggon (8d a corf, or 35.5p a ton), and a quota increase to eighty waggons a day (56,250 tons a year). *The Leeds Mercury* of Saturday 25th December 1802 commented that, with the added expence of "leading", a waggonload of coal would actually cost the inhabitants 18s4d, and it was noted that a committee had been appointed to "treat with Mr. Brandling". However, Leeds' rapidly expanding industries needed the promised extra coal, and the Act (43 Geo. 3, c.xii) received Royal Assent on the 24th March 1803, the new quotas and prices, those originally proposed, coming into use on the 1st April. It was stipulated that coal was to be delivered to "the said Repository at Casson

Close aforesaid, or at any other Place near thereto, to be used as a Repository for Coals instead thereof"; Casson Close perhaps was considered too small for the increased amount of coal about to be delivered to and dispersed from there. The Act referred once more to the "great expense in making fresh winnings" and in laying "additional Waggon Ways therefrom", four pits having been sunk or re-opened during 1802, again around the top end of the Park. Exploration beyond Middleton Town Street had continued also, with a pit being sunk nearly half a mile south of there.



Charles John Brandling 1769-1826

demands for horses and fodder during the Napoleonic Wars, and economies were obviously necessary. In 1807, use of the river staith waggonway appears to have ceased, but the estate was still in financial trouble.

In *The Leeds Mercury* of 22nd August 1807 there was offered for sale by auction the Lordship of the Manor of Middleton, "Two desirable Residences", farms, and "the inexhaustible Coal Works", together with "Two Powerful Steam Engines, and Five smaller Raising Engines, with complete Machinery: a Water Corn-Mill, a Brewery, Malting, and numerous Warehouses, Stabling, Tenements, and Other suitable Buildings". The property lay "nearly within a Ring Fence, and is capable of the greatest Improvement, so as to render it one of the most productive Estates in the West Riding". The advertisement continued to appear for more than four months, at times including a share of the Manor of Hunslet. Due notice of the Day of Sale was always promised, but never given.

Some time during the same period, C.J. Brandling appears to have commissioned two Tyneside mining experts, Thomas Fenwick and John Watson, to make a detailed survey and valuation of the Middleton Colliery, and this was sent to him on 28th January 1808. Prepared for the information of prospective purchasers, it valued the colliery at £24,951, with an annual profit of £3,500 and coal reserves estimated to last a further sixty six years. Since 1801 there had been an

During the next few years, more pits were sunk, but the 1803 Act's price and quota increases did not prevent C.J. Brandling's colliery business from remaining in recession, where it had been since at least 1800 when, despite sales of 73,773 tons, the colliery had lost £1,883. For some years, sales and profits fluctuated widely, not always in unison. In 1803, the annual tonnage shot up to 75,488, but then declined, until in 1808 a mere 59,216 tons were sold. The importance of the Thwaite Gate river staith had survived the building of the Leeds waggonway, and it usually handled about one third of the total amount of coal dispatched from the colliery. However, between 1799 and 1807, this proportion fell drastically, perhaps as pits opened nearer to the river trade customers or, alternatively, as a larger proportion of the output was needed in Leeds. Meanwhile, transport costs were escalating because of military

average annual 'winning' of 78,750 tons (35,000 waggons), of which an average of 8,464 tons had been for the workmen and engines. Two pumping engines and "5 gins and 6 machines for drawing coals" were mentioned, but no steam winding engines. There were 4½ miles of waggonways, including main-way and bye-way, one half being of iron. "2 machines on the inclined plane", were valued at £120, having cost £145 when new. This would be the incline from Belle Isle to Hunslet, known as Todd's Run, after the owner of part of its route.

On 18th April 1808, Edward Steel also supplied a report, valuing the colliery at £26,611, with £4,000 yearly profits forecast for forty three years. However, by the time the Fenwick/Watson report was in Brandling's hands the sale notices had ceased. Though C.J. Brandling seemed reluctant to sell his former home estate, he was prepared to mortgage it if necessary: during his regime, a number of documents were registered at Wakefield for loans, raised with the Middleton manor and estates as collateral. The 1807 advertisements had described the "Coal Works" as being "inexhaustible", but most of the around sixty pits sunk during the last fifty years had only a short productive life. The 1803 Act bound C.J. Brandling to a fixed charge, but costly new sinkings were regularly needed and, clearly, some new means of reducing expenditure was urgently required.

2. THE BLENKINSOP ERA - 1808 TO 1831

Eight months after the Fenwick/Watson report was presented, John Blenkinsop arrived at Middleton. Born in 1783 at Felling, County Durham, John Blenkinsop had been apprenticed to John Straker, the 'viewer' at the Brandlings' Felling Colliery, and is thought to have worked subsequently at Walker Colliery near Newcastle. Blenkinsop began work at Middleton on the 1st October. The estate had been described as being "capable of the greatest Improvement", and that appeared to be the task assigned to the new agent.

C.J. Brandling obviously had confidence in the young Blenkinsop: he was going to pay him a substantial £400 a year 'agency fee', when the most skilled of the colliery surface workers earned c.£80. John Blenkinsop set up home in the estate's older residence, Middleton Hall, and purchased £15.12.6d worth of furniture from Middleton Lodge, the modern residence, which was currently between tenancies. The debt was offset against his salary, the payment (and non-payment) of which was a recurring theme in the colliery accounts for the next four years.

The £400 seems initially to have been payable annually by Brandling himself, but he was frequently 'strapped for cash', and payments were irregular and usually in arrears. In February 1812, the last arrears were paid, and henceforth Blenkinsop's 'agency' fee was paid via the colliery accounts, though even this system failed occasionally. However, Blenkinsop's contract seemingly allowed him to use his rank as a qualified colliery viewer to privately carry out surveys for other coal owners, and by 1813 he was wealthy enough to make a £500 loan to his employer, at 5% interest per annum.

In 1808, Blenkinsop quickly embarked on his own survey of the Middleton pits, detailing the working methods and potential of each, and coming to the general conclusion that many

improvements could be made, especially in the method of bringing coal to the surface. Regarding transport, he noted that a new "Wagon Road" was to pass on the north side of Middleton Lodge, and go through the Woods to join the "present Wagon Road" a little east of Belle Isle hamlet.

Blenkinsop considered that it would be much better for it run further to the west, to join the main route at Hunslet Common, which probably would have brought it along much the same route as the 20th century electric tram track, avoiding the lower incline and using part of the railway's present route. Apparently, almost seven decades before the railway actually was re-routed, the perceptive Blenkinsop realised the advantages of the modern alignment. However, Blenkinsop's alignment was obviously longer and more expensive, and the eventual use of 5,606 stone sleepers, at two per yard of track, would have been about right for the waggonway as previously planned. The route still exists as a footpath in Middleton Park, with discernible embankments and cuttings to maintain an even downhill 'run' for the waggons.

The new waggonway cost £116 15s 10d for stone sleepers alone, but though it no doubt improved the transporting of coal, it did little to increase the flagging sales, and moves were made to regain the colliery's former river trade. The 1803 Act had allowed for coal to be delivered "at any Place near" to Casson Close, and did not clarify whether this was exclusively or additionally "instead thereof". Despite the Act's reassertion of the exclusive rights of Leeds to coal brought down to Casson Close, it was now planned to take some coal across from there to the river bank near Leeds Bridge, where there were wharfs for public use, as well as many private wharfs. Ideally, the waggonway would be extended, and in the spring of 1809, John Blenkinsop began to seek advice as to whether this, or even the passage of heavy traffic without the laying of rails would be allowed, since two important highways into Leeds would have to be crossed. These were Meadow Lane and Water Lane, which together with Hunslet Lane converged on the southern end of Leeds Bridge, then the only access into Leeds from south of the river. As well as crossing two highways, the waggonway would also cross the "flagged causeway" which bordered them for the use of pedestrians, and this would violate an Act of Parliament which forbade "encroachments and obstructions" on the streets of Leeds, and listed a large variety of wheeled vehicles which must not be placed or moved upon the town's footpaths.

John Hardy, a partner in the Low Moor Ironworks near Bradford, which had its own extensive network of waggonways, was of opinion that if the rails were laid quickly enough, there would be no problem caused by the construction, though once in use the waggonway perhaps would cause obstructions deemed to be a nuisance. The opinion of a Carlisle solicitor, G.S. Holroyd, was that Mr. Brandling might not have the right even to "break open" roads or footpaths laid on his own land, for the purpose of laying a waggonway. A few weeks after Holroyd's opinion was sent, Brandling and Blenkinsop received a firm rebuff from the Mayor of Leeds, dated 28th August 1809. They were informed that:

At a Meeting of the Magistrates of Leeds to take into consideration the propriety of allowing Mr. Brandling to extend his Rail Road across Meadow lane -

It was unanimously resolved,

"That in their opinion such Rail Road would be most dangerous to individuals and a great public nuisance and therefore they think it their duty to refuse their assent to such Railroad being made"

However, C.J. Brandling was determined to resume his river trade, and *The Leeds Mercury* of 4th November 1809 contained a defiant advertisement:

**COALS TO BE DISPOSED OF,
On the most advantageous Terms.**

NOTICE is hereby given, That CHARLES JOHN BRANDLING, Esq. the Proprietor of the extensive and valuable Coal Mines, at Middleton, near Leeds, is ready to deliver any QUANTITY of COALS on Board any Vessel or Vessels to be placed in the River Aire for the Purpose, either immediately above or below the Bridge, in Leeds, at Eighteen Shillings per Waggon, containing Twenty Coal Bolls, Winchester Measure, weighing Forty-five Cwts. and upwards.

For further Particulars apply to Mr. John Blenkinsop, of Middleton.

Even this curtailed plan apparently was not accepted calmly, and the same edition printed a letter complaining that "some persons or other" constantly occupied the two public wharfs near the Bridge with "stones &c.", when these wharfs were meant for the free use of the general public. The advertisements continued throughout November, but then ceased. *The Leeds Mercury* of 27th January 1810 noted that the problem of encroachment on the public wharfs had been put to the town magistrates, and there was every hope that the property would be secured again for public use.

Blenkinsop's letter of enquiry to Mr. Holroyd contained the curiously discouraging comment that "the passage of foot people and carriages and Horses will be greatly impeded and rendered very dangerous from the number of Coal Wagons that will be continually crossing Water Lane and Meadow Lane" and it is tempting to speculate that he already may have been considering the use of locomotive steam engines, and wished to conserve the estate's finances to pay for them. During the preceding few years, locomotives had been tried out at a small number of places by Richard Trevithick, whose latest experiment, *Catch Me Who Can*, had made highly publicised exhibition runs in London during 1808. In 1804, when Blenkinsop was still in the Tyneside area, a Trevithick locomotive was speculatively constructed and demonstrated in neighbouring Gateshead, and it is more than likely that he would see that demonstration.

However, demonstration use was not the same as long-term commercial use, and the cast iron rails of that era were broken easily and often by any locomotive heavy enough to pull a commercially viable load. Having decided to try steam-driven transport, the inventive Blenkinsop devised a rack and pinion method of propulsion, by which a cogged wheel, attached to the engine, pulled it along by engaging in cogs cast into the sides of the rails. On 10th April 1811, "aided by the advice and suggestions of . . . Mr. John Straker", Blenkinsop's invention was secured by Patent No.3431, which covered the rack rail and wheel, but not the locomotive design, the specification saying only that a steam engine was to be greatly preferred as the "first mover". The principle was already employed in some types of machinery, notably in the mechanical stokers and boring machines devised by Matthew Murray, and it was naturally to Murray, the most prominent local engineer, that Blenkinsop entrusted the building of a 'steam carriage' to incorporate his patent.

Matthew Murray was born in the Tyneside area in 1765, and in due course was apprenticed to blacksmith and millwright work. He migrated to Stockton-on-Tees, and when trade declined there, he walked to Leeds in 1788. Here he found work with John Marshall, a flax mill owner interested in the improvement of flax-working, and Murray devised for him some revolutionary machinery. At Marshall's he met David Wood, and they decided to set up in business together. Their first venture, at

Mill Green, Holbeck, probably opened about August 1795, when they advertised for a number of whitesmiths, joiners, wood-turners, and iron-turners. It was so successful that, in February 1796, they advertised for two green sand moulders, to extend their processes.



Matthew Murray 1765-1826
from a portrait painted c.1809

At about the same time, they acquired a plot of land in Water Lane, near to Marshall's Holbeck mills, and began building larger premises. On 9th July 1796, "Murray & Wood" advertised in *The Leeds Mercury* that they had "erected and Opened a FOUNDRY, in Water-Lane, Leeds, for the Purpose of CASTING IRON".

Further plots of ground were acquired to extend the works, and two new partners were taken, to provide extra capital. James Fenton, a former partner of John Marshall, joined Murray & Wood in August 1799, and the firm became Fenton, Murray & Wood. William Lister became a 'sleeping partner' in 1804. David Wood's interest was the design and making of machinery, and he supervised the day-to-day running of the works; Murray developed stationary steam engines, and sought orders for the firm; Fenton attended to their accounts. In 1802, they built the circular fitting-up shop, from which the works came to be known as the 'Round Foundry'. Murray's home was locally

known as 'Steam Hall' because of its pioneer steam heating.

There is some evidence that early experiments were made at Middleton with a single-cylinder condensing engine: according to Rees' *Cyclopædia*, of 1819, Blenkinsop first:

... employed a small condensing engine, but finding the water to grow so hot that he gained but little by the condensation, he applied a high-pressure engine with a wrought-iron boiler, and two cylinders in it.

The high-pressure, two cylinder locomotive was first tried out on a test track at the Round Foundry. Then, as was recorded in the fortnightly Pay list ending Wednesday 24 June 1812, 3s9d was paid to "Jas Hartley expences for Self Prince Wormald Nuns & Hewit When Loading Machine at Murrah Foundry". The "Machine" was immediately put into active service, *The Leeds Mercury* of Saturday 27th June 1812 recording that:

On Wednesday last a highly interesting experiment was made with a Machine constructed by Messrs. Fenton, Murray & Wood, of this place, under the direction of Mr. John BLENKINSOP, the Patentee, for the purpose of substituting the agency of steam for the use of horses in the conveyance of coals on the Iron-rail-way from the mines of J.C. Brandling, Esq. at Middleton, to Leeds. This machine is, in fact, a steam-engine of four horses' power, which, with the assistance of cranks turning a cog-wheel, and iron cogs placed at one side of the rail-way, is capable of moving, when lightly loaded, at the speed of ten miles an hour. At four o'clock in the afternoon, the machine ran from the Coal-staith to the top of Hunslet-Moor, where six, and afterwards eight waggons of coal, each weighing 3 tons, were hooked to the back part. With this immense weight, to which, as it approached the town, was super-added about 50

of the spectators mounted upon the waggons, it set off on its return to the Coal-staith, and performed the journey, a distance of about a mile and a half, principally on a dead level, in 23 minutes, without the slightest accident. The experiment, which was witnessed by thousands of spectators, was crowned with complete success; and when it is considered that this invention is applicable to all rail-roads, and that upon the works of Mr. Brandling alone, the use of 50 horses will be dispensed with, and the corn necessary for the consumption of, at least, 200 men saved, we cannot forbear to hail the invention as of vast public utility, and to rank the inventor amongst the benefactors of his country.

The eight waggons of coals brought to Leeds at the launching of the machine, was by order of Mr. Blenkinsop, presented to the General Infirmary.

The issue for 18th July 1812 carried a small wood-cut illustration, and an abstract of the Patent Specification. Two weeks later, the paper reported that:

Mr. Blenkinsop's Machine is now in full activity. On Thursday it made seven journeys each way from Hunslet-Moor to the Coal Staith and back again, and in those journeys brought down 102 waggons of coals, each weighing about three tons. The journey both ways is a distance of about two miles and a half, and one of these journeys was performed in fifty minutes, taking up twenty empty and bringing down twenty full waggons. - Owing to a deficiency in the rail-way some of the waggons yesterday got a wrong direction, but no serious accident occurred.

The "deficiency" may have been caused by the problem hinted at in a letter from Matthew Murray to John Watson, dated 8th March 1813:

... Mr. Blenkinsop has found it his interest to attend to his iron rails - I have improved the mode of joining them together which has made them both simple and perfect and the engines themselves answer much beyond our expectation which I have no doubt in saying is the most valuable improvement to the Colliery Business that has been made these 50 years.

The first Machine soon acquired the name *Salamanca*, after a recent British victory there. *The Leeds Mercury's* wood-cut, thought to be the first newspaper depiction of a steam locomotive

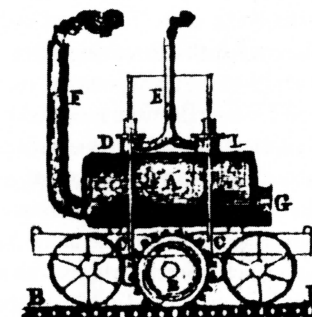
Six or seven locomotives in all were built by Fenton, Murray & Wood to the same general design, though each one might incorporate variations, and this was in essence the first 'class' of locomotives to be built. The earliest of them had a cast iron boiler of oval section, about 37 inch high x 32 inch wide x 9½ foot long, made in two halves bolted together. By April 1813, however, Murray was considering making the boilers of wrought iron, and in a letter of 1st June 1813, Blenkinsop wrote that "You must have a wrought iron boiler with a double iron tube".

The choice of an oval boiler is curious and must have caused problems with uneven pressures bearing on the ironwork. It did allow Murray to provide a boiler of substantial capacity, whilst keeping it short enough to easily negotiate tight curves, and narrow enough to fit within the

DESCRIPTION OF THE PLATE.

- A. Boiler.
- B. B. B. Mr. Blenkinsop's Patent Road Rack and Wheel.
- C. C. Crank Rods.
- D. D. Steam Cylinder.
- E. Discharging Pipe.
- F. Smoke Chimney.
- G. Fire Door.

Scale, 1-eighth of an Inch.



original gauge of the track whilst leaving room for the movement of the connecting rods. Also, Blenkinsop seemingly intended to use the Machines on Todd's Run, and wrote in 1813 that "when the diameter of the boiler is little the length of it must be larger and in going up hill the rise end of the fire tube is apt to be dry when their is little water in the boiler". Later depictions of the Machines appear to show a longer, cylindrical boiler, which would have become feasible after the idea of regular working on the incline, like the narrow approaches to Casson Close, had been abandoned.

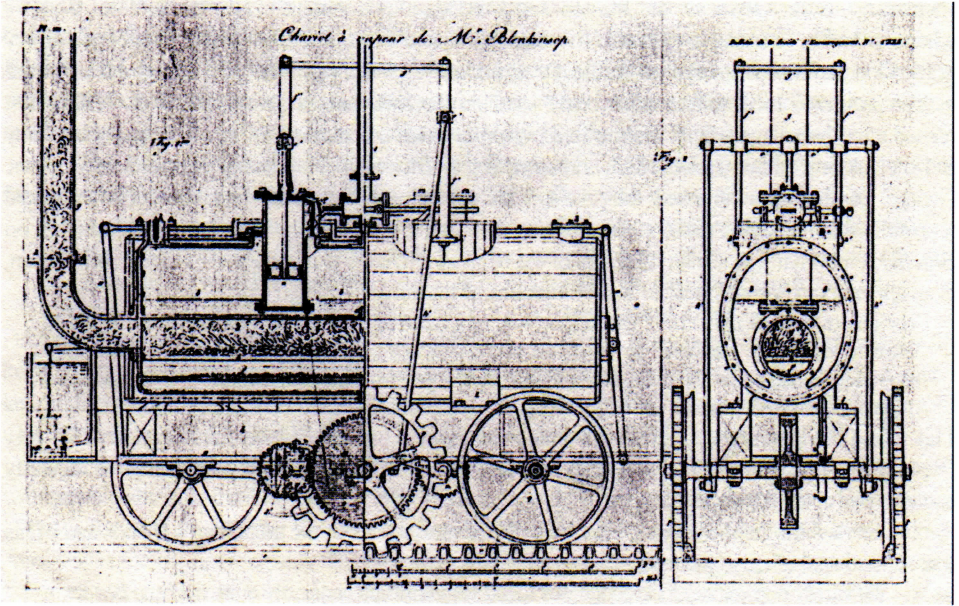
In the early locomotives, at least, a single flue tube 14 inch in diameter, passed through the boiler to a chimney of reduced diameter, about 9 foot high. Two cylinders of 8 inch diameter by 24 inch stroke were sunk into the boiler for half their length, exhausting into the atmosphere. Two small plug-cocks, coupled by a rod, controlled the steam supply from the boiler. Each piston-rod was controlled by two vertical guides, and by a pair of return connecting rods it drove parallel outside cranks on a crankshaft below it. The two crankshafts were connected through gearing with an intermediate shaft, upon one end of which was the rack wheel, gearing with the rack rail.

In the *Leeds Mercury* drawing, and in technical drawings published in 1815 in the French *Bulletin de la Société d'Encouragement pour l'Industrie Nationale*, the cranks appear to be set at 180°, implying that the cylinders were single-acting at that time. However, a letter from Blenkinsop published in *The Monthly Magazine* of June 1814, says that the cranks were then fixed at right angles, implying that the advantages of double-acting cylinders had since been considered necessary. The steam distributing valves were large 4-way plug cocks, fitted with wrist plates. These were connected, by horizontal rods above the boiler, to vertical rods at each end of the boiler, pivoted near the centre of the boiler ends. The lower ends of the vertical rods were connected with eccentrics mounted on the crankshafts. Reversing was achieved by attaching the valve rods to points in the wrist plates at right angles to the usual points, to oscillate the cocks by 90°. Short levers, with the valve rods attached to their lower ends, were mounted loosely on the valve stems, and pins in their upper ends engaged with either of two holes in the wrist plates. Forked hand-levers, engaging with collars on the valve lever bosses, slid them into or out of gear. A direct loaded spring safety valve was fitted near each end of the boiler top, and the maximum working pressure of the boiler was 55lbs to the square inch, though it was tested to 60 p.s.i. at the foundry. The engine was supported on a wooden frame, carried on four 35 inch diameter wheels with a wheelbase of 7 foot 4 inch; the rack wheel was of c.43 inch overall diameter, and turned at half the speed of the crankshafts.

Boiler and cylinders were said to be lagged with wood, which may be connected with the one and a half days overtime worked on the first Machine in late October 1812 by William Clean, one of the most senior joiners employed at the colliery and therefore not likely to be assigned to other work. There appears to have been a problem with the steam exhaust condensing on the cast iron boiler, and the National Railway Museum owns a letter written by Mr. Leighton Dalrymple in July 1812, on which he sketched the locomotive complete with a canvas awning over the boiler "to keep the Iron dry from the Steam". By August 1817 another method was being used to protect the ironwork from rain and steam exhaust, over £6 being paid for "Black Lead &c for travelling Engines." Seemingly, at least two Machines remained unlagged and were black-leaded to keep them rustfree, much like an old-fashioned kitchen stove.

Early in October 1813, Blenkinsop mentioned in a letter that he had now "got the noise of the

steam taken completely off by fixing a wooden cistern between the cylinders as a receiver and a discharging pipe fixed on top of it". The drawings and detailed account supplied by the French engineer Andrieux to the *Bulletin* did not include this improvement, but did show a small water feed tank with a pump activated by the valve gear, on the front end of the locomotive. M. Andrieux was said to have collected his information on the spot, but it is not clear how recently before publication he had collected it; Napoleon Bonaparte greatly encouraged the invention and development of new machinery within France, and offered rewards for details of new foreign inventions. The feed tank could have been an unused idea or an optional extra offered to prospective buyers. According to a letter written by Murray in April 1813, he calculated the locomotives' boiler size according to the length of the railway, presumably expecting a water supply to be available at both termini. In 1812, John Ackroyd was paid £3 8s for "leading Water for Steam Carriage". However, in practice Blenkinsop found that he lost steam when filling frequently with cold water, and as early as August 1812 was planning to raise a cistern from which he could fill the boiler with hot water. Many Trevithick stationary engines already had feed pumps, and the Middleton locomotives perhaps may have had them at some time, though no other known contemporary image shows one. When an American traveller, Zachariah Allen, visited the railway in 1825, he noted that "The boiler is replenished with water from a pump placed midway of the rail road, where the engineer, at every trip, stops a few moments."



The technical drawings reproduced in the *Bulletin*, 1815

Each Machine weighed about 5 tons fully charged, and according to Blenkinsop did the work of 16 horses in 12 hours. The average coal consumption was 21.3lbs per train mile, and each

pound of coal evaporated 6.7lbs of water. In 1812, a horse cost £50 to buy and £55-£60 per annum in upkeep, exclusive of the driver. In a letter of January 1813, Blenkinsop detailed the annual upkeep of 16 horses and 8 men as £1,360, compared to £160 for an engine and man; a saving of £1,200p.a. A Machine normally drew 27 waggons, representing a load of 94 tons, at 3½ miles per hour on the level. On 16th January 1829, during a demonstration for representatives of the Liverpool & Manchester Railway Company, one of the then increasingly aged and decrepit Machines managed to haul a train of c.140 tons (38 loaded waggons) at 2-3½ m.p.h!

Mechanisation was not universally popular. On Thursday evening, 31st December 1812, large blocks of stone and loose iron rails were placed on the railway near to Leeds Pottery and on Hunslet Moor, and "Part of the Machinery about the said Carriages was . . . Broken and otherwise materially injured". Blenkinsop's advertisement in *The Leeds Mercury* of 9th January 1813, offered fifty guineas reward for information leading to a conviction. The attack seems more ambitious than children's tricks, and obviously was considered serious by Blenkinsop, whose coal deliveries must have been badly disrupted: fifty guineas was more than many a man's annual pay. Luddite activity had been rife in the area throughout 1812, and each Machine allegedly dispensed with the work of at least six men. The railway may well have been visited by machine breakers that New Year's Eve.

At the time of the attack, the second locomotive had only recently been delivered and commenced work. In March 1813, the third Machine being made for Middleton, was offered by Blenkinsop to the viewer of the Kenton and Coxlodge Collieries near Newcastle, John Watson, whom he had been trying to persuade to adopt the system there. The Kenton and Coxlodge colliery railway conveyed coal to staiths on the Tyne, about five miles from the pits, though an awkward incline prevented locomotives from being used on the half mile nearest to the river. *Willington*, named after the village where Watson lived, appears to have begun work there with great ceremony at 1 o'clock on 2nd September 1813, and according to *The Leeds Intelligencer* replaced forty horses. George Stephenson witnessed the event with several other Killingworth men. He remarked scornfully that he could "make a better engine than that to go upon legs", and soon started work on *Blücher*, embodying in it many features of the Murray/Blenkinsop locomotives. Robert Stephenson, in an appendix to Samuel Smiles' 1862 biography of his father, admitted that:

The construction of my father's first engine was very much after the same plan as that made by Mr. Blenkinsop; but the combined power of the two cylinders was communicated to the wheels which supported the engine on the rail instead of to the cog-wheel, which, in Mr. Blenkinsop's engine, acted on a cogged-rail independently of the four supporting wheels.

This led to the locomotives differing in another important aspect: *Blücher*, first tried on 25th July 1814, could draw a 30 ton load at 4 miles an hour, whilst the Murray/Blenkinsop Machines regularly hauled more than **90 tons** at that speed!

Smiles' biography, relying heavily on the reminiscences of the great man's friends and of his son, states disparagingly, and somewhat erroneously, that:

. . . the Blenkinsop engine at Coxlodge was found very unsteady and costly in its working; besides, it pulled the rails to pieces, the entire strain being upon the rack-rail on one side of the road. The boiler, however, having shortly blown up, there was an end of that engine; and the colliery owners did not feel encouraged to try any further experiment.

However, Watson had been so impressed by *Willington* that, within a few weeks of it

starting work, he had ordered two more locomotives from Fenton, Murray & Wood, and his report of 9th May 1815, stated that "The method of leading coals by the aid of the steam engine lately adopted we certainly think preferable to the former plan of leading by Horses". This was despite a rumour that the Coxlodge managers had decided to adopt "the Killingworth plan of conveying their coals", mentioned in a letter from Blenkinsop to Watson in November 1814. Blenkinsop was obviously perturbed by the prospect of losing a source of patent royalties, and demanded rhetorically "Do you think the Killingworth engine will travel up hill or on a level during wet or frost". Recently, he had told Sir John Sinclair that "The steam Carriage was at work last winter at Middleton night and Day and was not impeded during the great falls of snow". Unfortunately, in May 1815 there began a dispute with the part owner of the Fawdon Colliery, which used the same line, but with horses. Watson later claimed £2,100 from him for the "loss in laying off the travelling engines from May, 1815 to Lady Day, 1817".

The system had already been adopted at the Orrell Colliery, near Wigan; Robert Daglish, manager at Orrell, wrote that his first locomotive started work at the beginning of 1813, and that, by arrangement with Blenkinsop, he had built it at the Haigh Iron Works, which he also managed. Three locomotives were built for Orrell, each weighing 6½ tons. One was said to be an adhesion principle engine, but it may have been converted to such. Two locomotives each worked their own section of the line, exchanging waggons at the summit of a 1 in 36 incline, which one of the locomotives worked. The third remained as spare engine. Writing in 1856, Daglish declared that his locomotives had worked for over thirty six years, until the colliery closed. Various local accounts called them *The Yorkshire Horse* or *The Walking Horse*. One account stated that the latter was because of the loud snorting effect of the exhaust steam. Zachariah Allen wrote that the earliest Middleton locomotive had been known to the pit workers as the *Stalking Horse*, for the same reason.

The Middleton Machines' impact on their largely rural surroundings can be guessed at from the account by the King of Prussia's Librarian, Dr. S.H. Spiker, who visited in summer 1816:

It is a curious spectacle, to see a number of columns of smoke winding their way through the countryside. As they approach we see them more and more distinctly, till at length along with the column of smoke, we also perceive the waggon from which it ascends, dragging a long train of similar waggons hooked to it, which gives it the appearance of a monstrous serpent.

Dr. Spiker was most impressed that he "was obliged to move at a sharp pace, indeed almost a trot, to keep up with" the Machine. David Joy, who first saw one when he was a small boy in 1832, much later in their working life, was not at all impressed when the vehicle he and his nurse had been told would "come up like a flash of lightning . . . only came lumbering on like a cart."

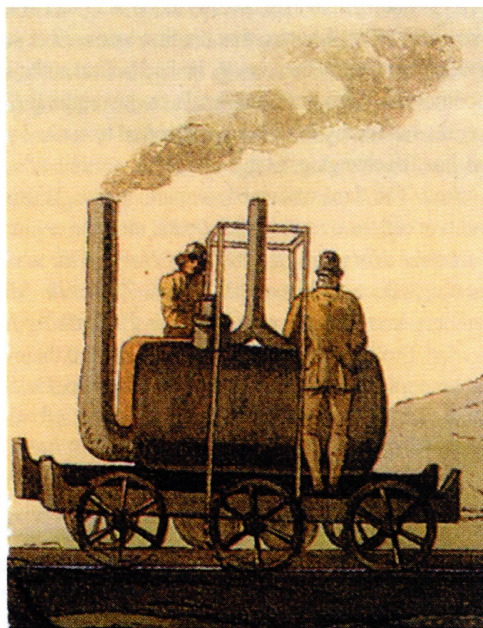
Though Middleton's pioneer commercial application of steam power to rail transport began with surprisingly little trouble, its sheer novelty raised a wide variety of minor problems. The expence of providing only the Hunslet to Leeds track with rack rail cost over £1000 for "Cast Iron Goods". Also, whilst the mediocre quality stone sleepers supplied ten years previously by Nelson's, c.15 inch x 17 inch x 20 inch deep, were adequate for supporting 3 ton horse-drawn waggons, they were no use for the weight and impact of locomotive-hauled trains, and they had to be replaced by good quality Bramley Falls stones, c.21 inch cubes, at a cost of over £234. The first locomotive cost £350, plus £30 paid to W. West, owner of the Trevithick Patent, "for the use of the high pressure steam". The capital cost of the revolutionary system was enough to warrant C.J. Brandling raising a loan once

again, with the estate as collateral.

Also, for the first time in history, a regular locomotive driver would be required: a Fenton, Murray & Wood mechanic, Joseph Speed, test-drove the Machine for the first month whilst training a former pit surface labourer to take his place. Middleton's first regular locomotive driver was James Hewitt, who had helped load the Machine for transporting from the Foundry; he was also possibly the world's first identifiable professional engine driver! Rates and methods of pay for the new occupations of driver (usually called the 'engineman', just as with stationary engines) and fireman, were the subjects of much experimentation until July 1821, when they finally settled at daily rates of 3s for drivers, 2s4d for firemen, and 5s for a Machine-dedicated engineer, part of the team from August 1817 onwards.

The first locomotive in service soon proved to be too strong for its train, and the 7lb 13oz per link 'Coupling Cheans' produced by the colliery smiths in August 1812, were replaced four months later by 9lbs per link chains for use within the new trains of up to thirty waggons. The existing wooden waggons were quickly replaced by iron-framed waggons, and in 1817, when 110 iron hopper waggons were built, coupling chains weighing 15lbs were fitted. The lengthy trains also soon caused problems in the narrow, twisting approaches to the staiths at Casson Close, and on 26th February 1813 C.J. Brandling assigned to Mr. George Banks the remaining 5 years of the 60 years lease of the Close. Land was leased further south at Kidd Acre Lane (later called Kidacre Street), to the west of the original waggonway, and a large yard with sidings was formed, possibly with a raised wooden staith, as described by Dr. Spiker (see Page 27).

The *Repertory of Arts, Manufactures and Agriculture* of 1818, printed Mr. Blenkinsop's *Answers to Sir John Sinclair's Queries respecting the conveyance of coals on Railways by Steam Engines*, compiled in 1814, in which Blenkinsop declared that the engines could transport "15 tons up a hill rising two inches in a yard", roughly the rise of the Todd's Run incline, between Hunslet Carr and Belle Isle. As previously mentioned, it seems to have been intended originally that the Machines should negotiate the rise, and this was also implied in a letter written in April 1813 by Murray, who strongly advocated a central rack for the system. He wrote that "beginning over again" with the engines "will be the case here I believe before they can expect to run to the pits as the oblique action or side pull is very determinial in going up a moderate rise or turning".



Machine and Enginemen, as depicted by George Walker in *Costumes of Yorkshire*, 1814

He added that "The side rack did very well as a cheap method for trying the scheme, but certainly is not calculated for practice." However, the side rack was retained, and by 1817 the incline was self-acting, though it is likely that locomotives occasionally changed levels via the incline, or took short trains up it if, for instance, the brake-drum mechanism was under repair. A central rack would have interfered with the use of horses in emergencies, but in his Patent Specification Blenkinsop mentioned the possible use of a rack wheel at both sides. The *Bulletin* drawings show such an arrangement, but as well as being more expensive, it would have caused considerable difficulty in negotiating even the slightest curve, and though the accompanying details state that there **was** a rack wheel at each side, this might have been an early design changed during production, or was done merely to show that the rack wheel could be fixed at either side.

Together, the two Machines worked the lower level of the railway, from Hunslet Carr to the Leeds Staith. Horses still worked the middle, Belle Isle, level, but on 10th March 1813, Blenkinsop wrote: "I intend this summer to make a complete Rail Road", and work on this began as scheduled, ready for the expected arrival of the second pair of Machines. The lower level had probably been relaid with rack rail a short section at a time, being in almost constant use. It was also relaid on the same alignment, as much of it was on leased land and not easily realigned. On the Brandling-owned middle level, an entirely new track was built, probably alongside the earlier track, with embankmenting and a stone retaining wall.

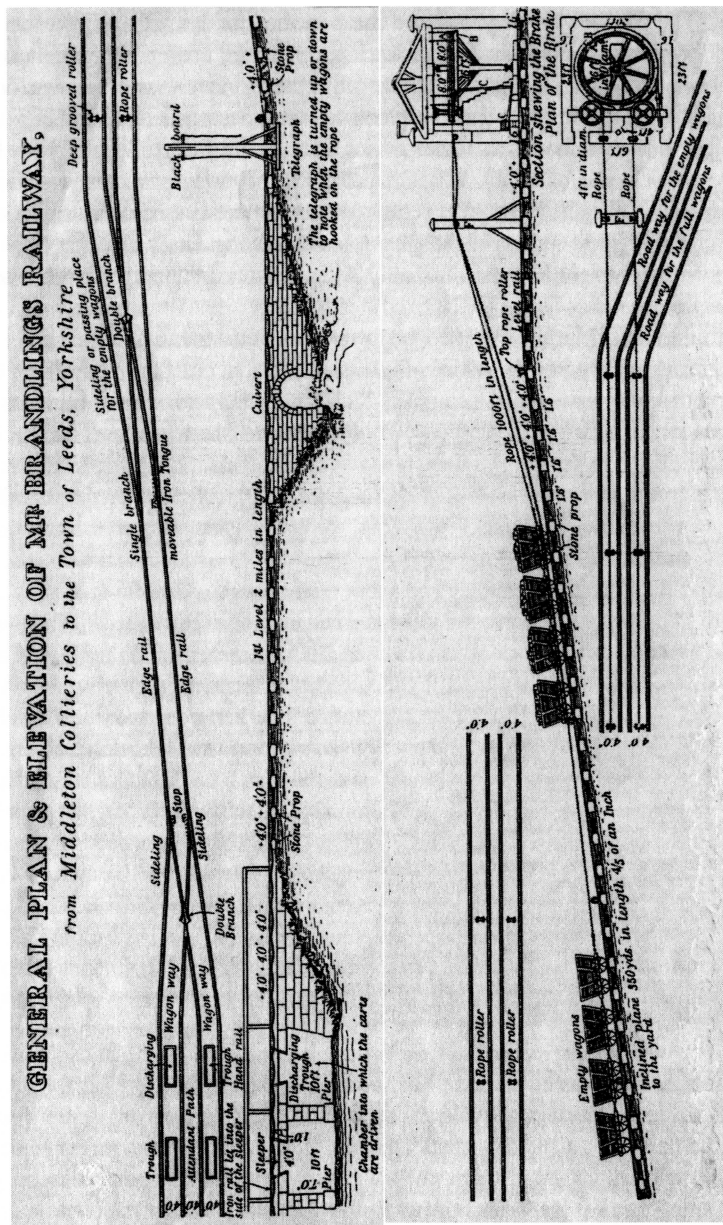
However, the Foundry seemingly had more than enough orders for stationary engines so, though the third Middleton locomotive was delivered late in 1813, it had to be kept in reserve for two years, until the fourth Machine finally arrived late in 1815. (Another reason for its late arrival may have been some amounts of money owed by the colliery to Fenton, Murray & Wood, which the foundry was offsetting against the cost of larger amounts of coal being ordered from Middleton!)

The Machines, and Blenkinsop's other efforts to improve the Middleton Colliery, must have been highly successful: an all time record output of slightly over 100,000 tons was achieved in the year 1814. However, the colliery and estate were almost sold at the beginning of that year. In January, there was a serious explosion at C.J. Brandling's Felling Pit, in which 9 men, 13 boys, and 12 horses were killed. A month later, the important Fawdon Colliery, across the Tyne from Felling, was advertised for sale. It was a close neighbour of the Kenton and Coxlodge Collieries, and prominence was given in the sale notice to the fact that:

The Whole of the Waggon-Way from the Pit to the River is laid with Cast-Metal, a great Part of which is on the new-discovered Principle of Carriage by locomotive Engines, which gives great Facility to the Leading of Coals, and a material Saving in the Expence.

Fawdon would be an excellent replacement for Felling, but was likely to be an expensive purchase, and a week later the sale was advertised of the entire Middleton estate, presumably to supply the necessary cash. However, Fawdon was sold elsewhere, and Middleton was withdrawn from sale.

Once the decision was made to retain the Middleton estate, a new period of development began. The first new pits for seven years were sunk, away to the south-west, in the modern West Woods area. During the next few years others followed in various parts of the estate, culminating in 1819 when fifteen new pits were sunk, mainly to the south and south-east – now, respectively, the Middleton Park Avenue and Sharp Lane areas. It would be almost fifty years before the sinking of the next new pits at Middleton.



Plans and elevations of the Leeds Staith viaduct and lower level (above) and the Todd's Run incline (below) from William Strickland's book

In 1815, the Machines acquired their own “Patent Steam-carriage’s House”, which cost £24.13.3d and was a very early, possibly the first, instance of a purpose-built engine shed. Various improvements were made to the railway, including the replacement of Todd’s Run by a self-acting incline, built alongside so that the Run could still be used during construction. During 1816 “Incline Plane Rolley,” “Plane Ropes” and “2 Cast Iron Gins” were purchased, and in 1817, Levi Wales was paid almost £80 for “Drawing 7295 Waggons up Tods Run with Horses at 2½ per Waggon from 1 Jany to the 15th March, at which time the Inclined Plane commenced”. Wales’ bill for horse-working represents a cost of over £1 a day. In 1831, the daily wages relating to the incline were a mere 5s2d!

The American, William Strickland, who visited on 30th April 1825, described the system in the notes jotted down on his beautiful watercolours of the railway, now owned by Beamish Museum, and later used in the published book of his observations and sketches. About the railway in general, and the lower incline in particular, his publication says:

This railway is formed of two levels and an inclined plane. The first level is about two miles in length, one half [one half Mile in his original notes] of which is embanked from four to twelve feet in height: the other level extends to the colliery, being about a mile in length, half of which consists of heavy embankment. On each of these, a locomotive engine, attended by a man and a boy, propels twenty-six loaded wagons, carrying upwards of two tons each, at the rate of four miles an hour.

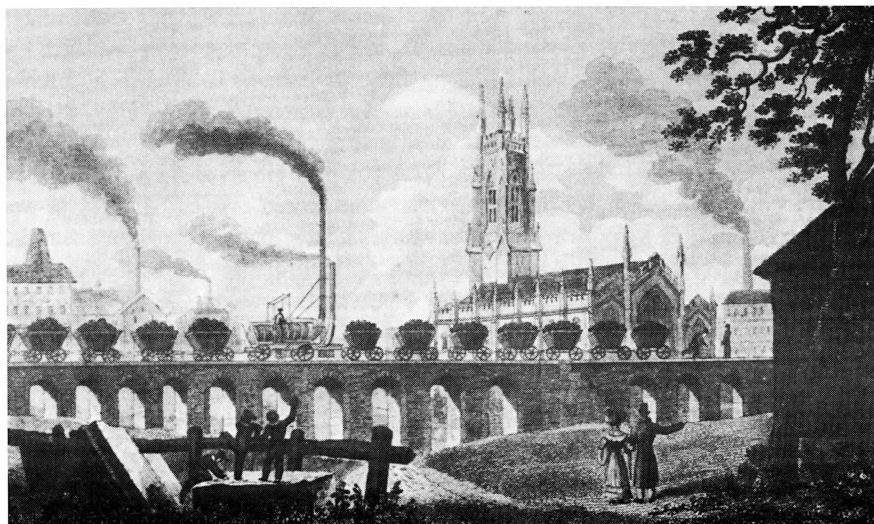
The inclined plane between the levels is three hundred and fifty yards long, and has an inclination of about half an inch to the foot, rising in all forty-four feet. A brake is placed at the summit of it, which carries up four empty wagons by the descent of four loaded ones. *A* is a horizontal wheel, sixteen feet in diameter, the rim of which is made of wood, about nine inches broad, with a groove in it to receive the rope, and the lower edge hooped with iron. *B* is a flexible rim, made of several thicknesses of lath, lined or hooped on the inside with iron: this rim surrounds the rope wheel, and is suspended by chains just so as to clear it. It is made to collapse on the rope wheel by the lever *C*, so as to check the velocity of the loaded wagons at any time during their descent, and ultimately to stop them at the head and foot of the inclined plane, by the pressure of the suspended rim against the revolving rope wheel. The roller over which the ropes pass, on the gallows *F*, should be so placed as to be in the line of the plane continued. The time required for the transit of the set of wagons over the brake, is less than a minute: it is attended by one man.

Concurrently with the incline, work also started on improving some of the small staiths in the Hunslet area, and on large scale development of the Leeds terminus, with a short escarpment being utilised to run the track out on to a fine stone and brick viaduct, 594 feet long, with coalchutes constructed through the top of each arch.

Dr. Spiker, in 1815, observed that in the staith yard “the force of the machine is so great as to impel the waggon up a kind of terrace, where it is overturned, when the load runs down into the wharf over a wooden scaffolding”. Just over a decade later, in 1826/7, his fellow Prussians, the mines and foundries officials von Oeynhausen and von Dechen, wrote of the viaduct staith that:

The wagons have doors in the bottom; the railway runs over masonry-vaulted arches, and in the middle of each vault there is an iron shoot, by means of which the coal is emptied into the separate compartments. Alternatively, the line runs on to a wooden frame; the space under this is made into separate compartments by several partition walls, and likewise by a middle wall, the upper part of which is formed as a flap, so that coal can be tipped into either side of the compartment.

In 1835, Sir George Head wrote that “any part of a waggon-load may also be delivered by means of a regulating bar, by which the bottom of the wagon is closed or opened at will”.



The Leeds Coal Staith, by Whittock and Owen, published 1829

In the late 1810s, work also started on a self-acting incline from Middleton Town Street down to the middle level, to convey coal from the new pits on the upper level down to the main railway. This incline was locally known as Rope Hill.

Work on the unusual Gosforth Pit was initiated in 1818. The coal seam aimed at was not accessible by a conventional shaft, as the land above the seam did not belong to the Brandlings. Instead, an adit was driven into the hillside, mining an inferior, downwards sloping coal seam. About 1,400 yards from the entrance, the adit was opened out into a large cavern, from which a shaft was sunk to the main coal seam. The adit was laid with rails, becoming an inclined plane.

Zachariah Allen's account of his visit to the railway and colliery in 1825, reveals the full extent of John Blenkinsop's grand plan for the mechanisation of coal transport at Middleton. The system started in the Gosforth Pit with small waggons of coal being pushed on light track from the coal face to the shaft bottom, placed on platforms, and raised by a steam winding and pumping engine to the cavern. Here, four waggons at a time were transferred on to one larger wagon, attached to a rope, and drawn almost a mile up the incline to the surface. At the incline entrance, the waggons were tilted to tip their load over sloping sorting screens, with the small coal falling through to be sold at the pit or used by the estate, and the larger coal rolling down into the Machine's waggons. The train of waggons was taken to the top of the lower incline, detached from the locomotive, and sent down in sections on the rope, to be attached to the Machine working the Hunslet Carr to Leeds section. At the Leeds Staith, the train was taken out along the viaduct, to discharge its coal as already described, into the waiting road carts. As Mr. Allen noted:

... from the time the coals are first broken from their beds in the veins and thrown into the small waggons, to the time they are discharged at the doors of the furnaces or dwelling-houses, they are not once subjected to the expense of being lifted by manual labor, by means of the shovel.

The mechanised transport system had many inherent dangers. During the locomotives' lifetime at least six members of the public were killed when using the track as a footpath without due care, or in trying to cross the line at the last moment before a train blocked their way, (nearly thirty waggons moving at walking pace obviously took some time to pass by). The Machines' first victim was one of their own drivers, George Butler, who fell from the footplate whilst stoking the fire, early in December 1812. Before he could be extricated, the machinery had claimed his right hand. Two months later came the first fatality, a boy of about 13 years, John Bruce, who, "notwithstanding repeated cautions to the contrary, persisted in running on the iron-rail-way" and was fatally wounded by one of the Machines. *The Leeds Mercury* piously trusted that "This catastrophe . . . will operate as a warning to others". John Bruce is thought to have been the first member of the public to be killed by a locomotive.

On the 28th February 1818, *Salamanca's* boiler exploded, killing the engineman. *The Leeds Mercury's* 7th March 1818 report of the inquest provides interesting details of the working of trains at the Todd's Run incline. James Hewitt, the first witness, stated that:

... he worked the Engine called the *Lord Wellington*: the deceased, *George Hutchinson*, had the care of the Engine which exploded, called the *Salamanca*. He stated that all the Engine-men had directions from Mr. Blenkinsop, never to have the steam at a higher pressure than fifty-five pounds the square inch, but that the deceased had several times had the steam raised to a much higher pressure. On Saturday, the 28th of February, in the afternoon, witness was at the break-house at the top of the inclined plain, when the deceased arrived there with the *Salamanca Engine* and a number of loaded waggons. The Engine having been separated from the loaded waggons, was placed, by the deceased, in the usual place for returning with empty waggons, that he then increased the fire under the boiler, and came into the break-house, and remained until the empty waggons came up, which was upwards of an hour. Witness could see the steam issue through the cocks of the boiler, and through the joints of the Engine; and witness is quite sure that the two safety-valves were made fast down with the spring which is used for keeping the safety-valves steady and right when the Engine is going on the road, and which ought to be at liberty when the Engine is not in motion, to permit the steam to escape when it reaches the proper pressure, and which it would do without danger. Witness, on seeing the Engine so high charged, said it was a shame to see it so. The deceased, when the empty waggons came up, moved the Engine to them, to take them out of the way: he then got from the place where he stood to work the Engine, and went to the end of it to mend the fire, when the Engine-boiler burst at the end next the fire, and the deceased was carried, with great violence, into an adjoining field, the distance of one hundred yards.

John Spink corroborated all this, and "also stated that he told the deceased to be sharp, as he had the steam too strong, but that instead of reducing the pressure, he turned the cocks, so as to prevent any steam from escaping". Joseph Speed, the former Fenton, Murray & Wood mechanic who had test-driven the first of the Machines, and was now their Engineer, and Richard Jackson, Murray's son-in-law, then manager at the Round Foundry and later a partner, both testified as to the boiler being sound and good before the accident. Jackson added that it appeared "to have been burst by negligence, in keeping the spring upon the safety-valve, at a time when the Engine was not in motion. The Engine was tried at a pressure of 60lb. on the square-inch, and at that pressure it was perfectly safe". The Jury found a verdict of "*Accidental Death*, occasioned by the bursting of the boiler, in consequence of the deceased not having taken the precaution of removing the pressure from the safety-valves". *The Leeds Intelligencer* of 9th March noted that "The Bill for regulating *Steam*

Engines, now before the House of Commons, contains a clause to compel the adoption of boilers for Steam Engines, made of *wrought iron* only." *Salamanca*'s boiler was of cast iron.

In a strange sequel to the accident, *The Times* of Wednesday 30th March 1825 mentioned in a column of small news items that "On Saturday afternoon last, George Hutchinson, one of the men employed in conducting the steam-engines used in conveying coals from Middleton to Leeds, was blown to pieces by the bursting of the boiler." The first Bill promoting the Liverpool and Manchester Railway had entered the Committee stage in Parliament nine days previously. The Company proposed to use locomotives, and the seven years old 'news' item undoubtedly was sent to *The Times* in an attempt to discredit locomotives as being unsafe.

Many people came to see the world's first commercially viable steam locomotives. In 1815, Prussian engineers, Krigar and Eckhard, observed them and took the design back to Berlin, where two locomotives were built, but for various reasons not used: these were the first steam locomotives to be built on mainland Europe. In 1816, Grand-Duke Nicholas of Russia, later Czar, visited the Round Foundry and the railway, and Matthew Murray subsequently sent a model locomotive to Russia. The Blenkinsop system was tried unsuccessfully at the Horlot Colliery, at Liège in Belgium, perhaps at the instigation of John Cockerill, of the Seraing ironworks near Liège, who had been consulted by the Prussians regarding one of their locomotives.

A Newcastle land agent and surveyor, Mr. James, was so enthusiastic about the Blenkinsop system that, according to Sir John Rennie:

... he wrote a long letter, addressed to the Prince Regent, on the subject, in 1815, pointing out the value of this new mode of transport, the saving which it would effect in manual and horse labour, the ease and expedition with which goods and passengers would be conveyed, and the vast benefits which would be conferred upon the country by the general introduction of the railway system.

In an age when George Stephenson's work is far more widely known than that of Murray and Blenkinsop, it is strange to discover that Stephenson felt great frustration at the comparative lack of public interest in his own first locomotive. His biographer, Smiles, wrote waspishly that:

Blenkinsop's clumsier and less successful engine ... excited far more interest; partly, perhaps, because it was close to the large town of Leeds, and used to be visited by strangers as one of the few objects of interest in that place. Blenkinsop was also an educated man, and was in communication with some of the most distinguished personages of his day upon the subject of his locomotive, which thus obtained considerable notoriety.

Indeed, Blenkinsop's enthusiastic promotion of the rack locomotive has made some observers and historians overlook Murray's crucial role in their design and manufacture, and his innovations of the second cylinder and the spring-loaded safety valve introduced on them.

In 1826, one of the most important periods of the Middleton Railway's history was coming to an end. Charles John Brandling, M.P. for Northumberland, died at Gosforth House on 1st February 1826, aged 56. He was succeeded by his brother, the Reverend Ralph Henry Brandling, Vicar of Rothwell from c.1796 to 1829. Ralph Henry took up residence at Gosforth House, and installed his son, Charles John the younger, in Middleton Lodge.

Matthew Murray died on 20th February 1826, at the age of 60. *The Leeds Mercury* said that he was:

A man whose mechanical abilities were perhaps inferior to none; his great improvements in the steam-engine, flax-spinning, and other machinery, will be a lasting testimony of his unceasing labours.

He is buried in Holbeck Cemetery, his grave marked by a cast iron monument made as a labour of love by the men of the Round Foundry.

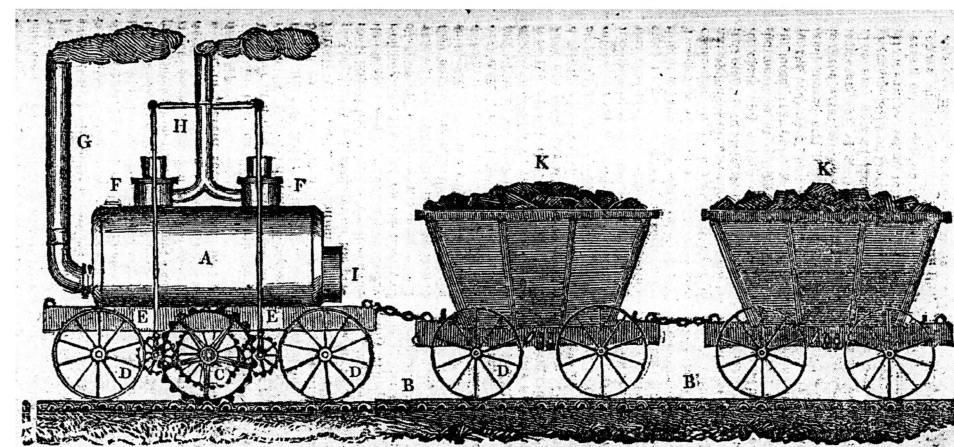
John Blenkinsop died on 22nd January 1831, after a "tedious illness" – said to be a result of him being one of the first rescuers to enter Gosforth Pit after a devastating explosion there in January 1825. His obituary in the *Mercury* said that:

As a generous and disinterested friend, his memory will be long cherished by a numerous circle of acquaintance: in his station as agent he commanded the entire confidence and esteem of his employers, and also lived highly respected among the working classes, and died sincerely lamented by all who were in any way connected with him.

He lies buried at Rothwell, aged only 47. There is no known portrait of him, but the property disposed of in his Will denotes a man with a fondness for books, paintings, and good furniture.

The influence of these men lived on in many ways. The Middleton Railway is itself a surviving tribute to the willingness of successive members of the Brandling family to finance technical advances on their property.

John Blenkinsop's mechanised mine transport system was much ahead of its time. Though his rack and pinion drive was later mistakenly dismissed as an unnecessary experiment, it actually enabled a tiny locomotive to haul more than twenty times its own weight without breaking its cast iron rails, and until the discovery of a method of mass-producing wrought or malleable iron rails, the few adhesion-only locomotives did not nearly approach such an impressive tractive effort.



Engraving from *The Monthly Magazine*, based on Blenkinsop's own sketch

John Blenkinsop's chief legacy was in proving to the world that steam locomotives could be successful and commercially viable. He wrote copiously about them to colliery owners and viewers, and newspaper and magazine proprietors, and the fame of the Middleton Machines spread far enough to make them an attraction for visitors, some of whom were industrial spies, from the U.K. and many other countries. Some visitors took descriptions of the Machines back to their own countries and tried to develop steam railways there, as did Krigar and Eckhard in Prussia, William Strickland in Pennsylvania, and the Grand-duke Nicholas after he became Czar of Russia.

Though few locomotives were built at the Round Foundry in Matthew Murray's lifetime, during the 1830s and early 1840s, as Fenton, Murray & Jackson, it supplied them to many early European lines, and also built twenty 'Firefly' class locomotives for the G.W.R., their quality being highly praised by Daniel Gooch; the renowned Leeds locomotive-building industry had its origins here.

Amongst many famous men of the engineering world trained at the Round Foundry during and after Murray's lifetime were David Joy, inventor of the Joy valve-gear, Richard Peacock, of Beyer Peacock & Co., Matthew Murray junior, who set up an engineering works in Moscow, his nephew Murray Jackson, chief engineer of the Imperial & Royal Danube Steam Navigation Co., John Chester Craven, locomotive superintendent of the London, Brighton & South Coast Railway, Luke Longbottom, locomotive superintendent of the North Staffordshire Railway, the brothers Krupp, of the mighty German armaments firm, Samuel Owen, who pioneered engineering in Sweden, Benjamin Hick, of Hick, Hargreaves & Co. - builders of mill engines, and Charles Todd, who helped found both Kitson & Co. and E.B. Wilson's Railway Foundry, from the latter of which stemmed Manning Wardle, Hudswell Clarke and the Hunslet Engine Company. Through these men, Murray's standards of excellence spread across the world.

3. DECLINE AND REVIVAL - 1831 TO 1900

At the time of Blenkinsop's death, the state of the railway and its locomotives was fast deteriorating, but for a few weeks in early 1831, there was a chance that the railway might acquire a set of new locomotives.

In autumn 1830, in the wake of the Liverpool & Manchester Railway's instant success, surveys were made for a railway linking Leeds and Bradford. The route decided upon would skirt round the southern edge of Leeds to join the Leeds & Selby Railway at its intended terminus, east of the town. With junctions to proposed cross-Pennine lines at its Bradford end, the railway would form part of a future coast-to-coast route.

However, several main highways into Leeds from the south would have to be crossed, as too would the colliery railway, and for this reason it was decided to raise on arches a long section of the proposed line. In February 1831 George Hill wrote from Newcastle, on behalf of the Reverend Ralph Henry Brandling, to Mr. Brandling's Leeds solicitors, Hemingway & Nelson:

Mr. Brandling desires me to say that he wishes you to inform the Directors of the Bradford rail road that, he has no intention of opposing any part of their plan, provided they do not interfere with his own arrangements for leading Coals along his own line of Way. According however to the levels adopted, as they appear in their Sections, such an interference would undoubtedly take place, in as much as the top of the proposed rail road would be elevated only 14 feet from the top of Mr. Brandling's railroad, which the whole height required to clear the Chimney of his (Mr. Brandling's) loco-motive Engines would be at least 28 feet from the surface of his own rails. To obviate this objection Mr. Brandling proposes, and he requests you so to inform them, that the Directors shall engage to supply him at the expence of the Company with three loco-motive Engines, in place of those he now employs, properly adapted to their

own levels, of at least equal power and strength of material with his present Engines, and of as simple a construction as the circumstances will admit of. His proposition agreed to, I repeat that Mr. Brandling has no objection whatever to offer to the proceedings of the Company in the execution of their plans; and, moreover, the present Engines, after the new ones are provided, will be entirely at the Company's disposal.

Unfortunately, the Reverend Brandling's cheeky attempt to exchange his aging and decrepit locomotives for three new ones, at the Bradford & Leeds Railway Company's expense, failed. Two months later, George Hill wrote to his nephew Thomas Embleton, Blenkinsop's successor, to ask for information about the locomotives for George Stephenson, whose advice had been sought as to "the best mode of altering the Travelling Engines so as to adapt them to the Railway Arch of the Bradford and Leeds Company".

By July, there was so much powerful opposition to the Holbeck and south Leeds sections of the route, that the company's Bill to Parliament failed almost immediately. It was another fifteen years before the first Leeds and Bradford rail link was opened.

At the time of the Bradford and Leeds affair, West Pit was being developed on the plateau, south of the modern Middleton Park Road, and the waggonway was to be extended to there, from the Venture Pit. Continuing his family's *penchant* for innovation, R.H. Brandling arranged for the new way to be laid with Losh's Patent Malleable Iron Rails. A sample length had been laid at Gosforth, and on 3rd March 1831 George Hill wrote to tell his nephew that "the Rails are so keyed down to the Chairs that they cannot rise . . . it looks well".

He was intending to lay the "Brandling Inclined plane" with them, but he understood that at Middleton they were for "the new piece of Way to the West pits, where the loco motive Engine is not to be used". These rails could "have no Cogs upon them", so could be of no use for the sections worked by the existing locomotives. William Losh, the patentee, was enquiring at Hull about the purchase of old ships' planks for sleepers, but Hill thought that stone sleepers could be used.

Hill's next letter to Embleton, written at Kenton on 27th March, implies that they actually were considering the possibility of using locomotives at the southern limits of the Middleton network, and he supplied details of a Killingworth locomotive-worked branch which he thought had a worse "acclivity", or rise, than the section between Venture and West pits. As he already knew that the rails could not be made with cogs, he apparently was envisaging that the new locomotives the Reverend Brandling was hoping to gain from the Bradford & Leeds Company at that time would be adhesion type, and that they might work even more of the network than had their predecessors.

On 18th June, Hill wrote that he had "agreed with Losh & Co for the supply of Malleable Iron Rails for extending the Railway to the West pits". Chairs also were to be made by Losh's, as the patent "joinings" had to be cast precisely. "The price for the Rails £11-5-0 a Ton, weight 32 lbs to the running yard - for the Chairs 9d a Cwt. & for the Wedges 4d a lib". The first half of the order would be ready in two or three weeks, and Hill would send a workman from Coxlodge to lay the track, as he had previous experience of this. Stone "keepers", or sleepers, had been decided on. On 19th July, dispatch of the rails was imminent, and with them would be sent "The points and Crossings . . . and also a few short plates to carry you round the turning at the Venture pit".

Just over a year later, Hill wrote on Losh's behalf asking Embleton for a written testimonial, as Losh was hoping to supply his patent rails to the proposed Newcastle & Carlisle line. Embleton

stated that they had fully answered their expectations:

The only objection I entertained with regard to them was that the upper surface of the Rails might separate into thin laminae by the friction of the wheels but however there is not as yet the slightest sign of such an appearance - We are satisfied with the efficiency of the joints and the mode of fastening the Rail to the Pedestal: and as far as my observation goes your Malleable Iron Rails form a very superior Road to any that I have seen -

His testimonial also revealed the extent of track relaid with the new rails:

We have 1600 yards laid when the ascent is one in 158 and part of an inclined plane (300 yds) where the rise equals one in 9 or ten and find the overlap point and the method of wedging the Rail to the pedestal to suit equally well in both situations . . . We intend at some future period to relay the inclined plane entirely with these Rails -.

New track was being laid elsewhere on the plateau, and by 1832 there appears to have been a connection between Fanny Pit (later Colliery Farm), New Lane (O.S. ref. SE 29862818), and the top of the upper incline.

On Wednesday 12th February 1834, there was a second boiler explosion. The accident happened at Hunslet Carr, and the shock was felt throughout Hunslet, causing many inhabitants to think there had been an earthquake. The engine-man was killed instantly: he was James Hewitt, Middleton's first regular locomotive driver. The newspaper reports mentioned no suspected cause for the explosion, but a number of in-house repairs had been carried out on the Machines' boilers. In May 1831, a repair had accounted for a total of 34 days' work shared by three of the Blacksmiths. Since the *Salamanca* explosion in 1818, an undiminished workload had been handled by only two Machines, the third surviving Machine being held in reserve. In 1831, Embleton had sent the Machine-dedicated Engineer, Jabez Hodgson, to join the general 'pool' of smiths, and the three smiths who made the major boiler repair that year did not include the experienced Mr. Hodgson.

Sir George Head's *A Home Tour through the Manufacturing Districts of England in the summer of 1835* provides a glimpse of the last of the Murray/Blenkinsop locomotives at work:

The rail-road and locomotive steam-engines are curious and worthy of observation, being of the earliest manufacture in the country; the latter especially as different in appearance from the engines in present use, as a stage-coach in the days of Queen Anne from Mr. Leader's modern vehicles. A wheel on one side of the engine works upon a line of cogs, with which the rails on the same side are furnished, so that, though her motion is slow, her purchase is that of the rack and pinion. This crazy, rickety, old engine continues to trundle along day after day at the rate of about five miles an hour, and affords an extraordinary instance, by comparison, of the improvements in machinery that have taken place within the last fifteen or sixteen years.

Shortly after Sir George's visit, steam traction was abandoned completely, and horses came into use again at Middleton. During 1835, a stationary engine was erected at the middle level, and when Nicholas Wood viewed the colliery in 1836 he noted that:

The Deep coals are led by Horses from the West Pit to the top of the Middleton Plane, thence by a self acting plane to the Day Hole at which place the coals from the Forty Yard and Little, join. The whole of the coal are then led from thence, about 1 mile by a fixed Engine to the top of another self acting plane by which they are let down to Hunslet and they are then taken to Leeds by horses, taking 6 waggons at a time.

In a very early attempt to preserve a steam locomotive, the only remaining Murray/Blenkinsop Machine was displayed in a shed at Belle Isle until about 1860, when, tragically, it was scrapped.

The general financial climate continued to deteriorate throughout the 1830s. A large local customer went bankrupt, owing money to the colliery. The coal trade on Tyneside was as depressed as that in Yorkshire, and the Reverend Brandling wrote to his son, prophesying the collapse of the entire trade. Some coal owners cut their prices to the bare minimum, to retain a share of the market. Demand for coal was still growing, but transport improvements had enabled the opening of new coalfields and many new pits. Charles John cut back his Middleton Lodge establishment, selling his large carriage, paying off his chief butler, and stopping his book subscriptions. Periodically, Thomas Embleton wrote to his employer with excuses for the continuing absence of profits to send him. By 1835, production at Middleton had dropped to about 75% of the peak figures and the average price per ton of coal had been forced down from 7s 4.3d (c.37p) in 1811/12 to 5s (25p). At the end of 1835, the Reverend R.H. Brandling and his son assigned the heavily mortgaged Middleton estate into the hands of trustees, a legal ploy which was often done to place an estate beyond the reach of creditors, whilst the owner continued to enjoy the use of it.

The Brandlings continued to run the colliery, with Charles John remaining in residence at the Lodge. West Pit eventually was sunk to a depth of 116 yards, but Middleton had never been very profitable at the best of times, and the gradual erosion of receipts discouraged further investment in either the colliery or its waggonways.

A few new branches were made, and the first edition 6 inch Ordnance Survey map of 1848-51 shows the 'feeder' system in its complete form, extending via "Venter" Pit to West Pit (reference SE 295277), with a tramway running from Henrietta Pit (SE 29812783) via Glasshouse Colliery (SE 29922749) to Bleachground Engines. This pit was situated at the junction of New Lane and Thorpe Lane, now respectively Middleton Park Avenue, slightly re-aligned, and Middleton Lane (reference SE 29982705). At the other end of the main line, Wilson's Street, later Great Wilson Street, was built c.1838, necessitating the loss of about 150 feet from the northern end of the Kidacre Street (Leeds) Staith viaduct.

A few hundred yards further south, two sidings had been built by 1847, when the 5ft:1 mile O.S. map was surveyed. One ran N.N.W. into the yard and tenterground of Potter Dale Mill; the other curved eastwards into the Leeds Iron Works. By this time, the Leeds Pottery branch, a little further south, had disappeared. The same map shows a long passing loop between Moor Road and Hillidge Place, north of Hunslet Moor Staith. The staith there had one line, diverted at each end from the main track, and elevated over 12 coal drops. Kidacre Street Staith had two tracks elevated over c.20 coal drops each, with an elevated passing line between, for returning empty waggons.

Dwindling profits and insufficient investment caused decreasing efficiency and increasing financial embarrassment, in addition to which Chancery proceedings had been initiated by the Brandlings against one of the trustees. On 3rd October 1850, the estate was advertised for sale by auction, and a large-scale map of the property was prepared, but no sale was made. Sale by auction was again advertised to take place on 11th and 12th September 1851, and yet again on 19th and 20th October 1853. Each sale was ordered by the High Court of Chancery, as a result of Brandling v. Plummer proceedings, but no sale took place. Robert Plummer was by then a trustee, and the Brandlings may have been attempting to reclaim the estate from the trustees' hands before the allotted time, in order to sell it (as well as for evading creditors, assignment to trustees was often used

to ensure that property stayed entailed to the family). The sale map prepared in 1853 showed only five pits: Day Hole Colliery, Henrietta Coal Pit, West Pit, New Lane Colliery (i.e. Glasshouse) and Bleachground Pit. The latter two were connected by bye-way to a main-way running from West Pit to Great Wilson Street.

In 1854, an Act of Parliament was passed for the building of a Bradford, Wakefield and Leeds Railway, branching at Wortley, west of Leeds, from the Leeds, Bradford & Halifax's line, and going via Ardsley to the Great Northern-Lancashire & Yorkshire station at Wakefield. The company advertised in October 1853 that they proposed to make the most extensive and valuable Yorkshire coalfields easily accessible by rail, "giving an abundant supply of every description of coal for manufacturing and domestic purposes - inexhaustible for centuries to come"! The Brandlings obtained rights to make a branch from the line to their colliery, and possibly this might have been seen as a way of re-mechanising their 'leading' without bearing the expense of new locomotives themselves, and enabling them to abandon the 1758 line. The Leeds, Bradford & Halifax's Bradford to Leeds section opened on 1st August 1854, and the Bradford, Wakefield & Leeds's line on 3rd October 1857. However, the Middleton branch was not built as planned. In 1865, both the L.B. & H. and the B.W. & L. were absorbed by the Great Northern Railway Company, and Middleton's link was only achieved via the G.N.'s Beeston to Hunslet line, opened on 3rd July 1899. Failure to do so forty years earlier may have been due to the fact that at Middleton, once more, an era was coming to an end. The Reverend Ralph Henry Brandling died in 1853. On 5th May 1856, his son, Charles John, apparently transferred his rights in the estate to Robert Plummer and two others. Less than two months later, Charles John also died.

Litigation continued, but the Brandling Trustees clung on until 14th August 1865, when the entire estates, collieries etc. were purchased for £100,000 by Francis William Tetley, a partner in the Tetley brewery, sited some 200 yards north of Kidacre Street Staith.

At about this time, Tetley and his brewery partner also bought the freehold of their original premises, and embarked on an ambitious programme of expansion and rebuilding. The purchase of the Middleton estate, and the necessary redevelopment there, may have stretched his resources too far, and within a few months he had mortgaged a substantial amount of the estate, though he retained the right to work the minerals; most of this property was not redeemed until 1880. Tetley also took three partners, John Rhodes, sharebroker, Joseph Ogden March, machine maker, and Edmund Maude, timber merchant. After a short time as Messrs. Rhodes, Tetley, March and Maude, the partnership became the Middleton Colliery Company, and then, on 8th June 1867, it was incorporated as the Middleton Estate and Colliery Company.

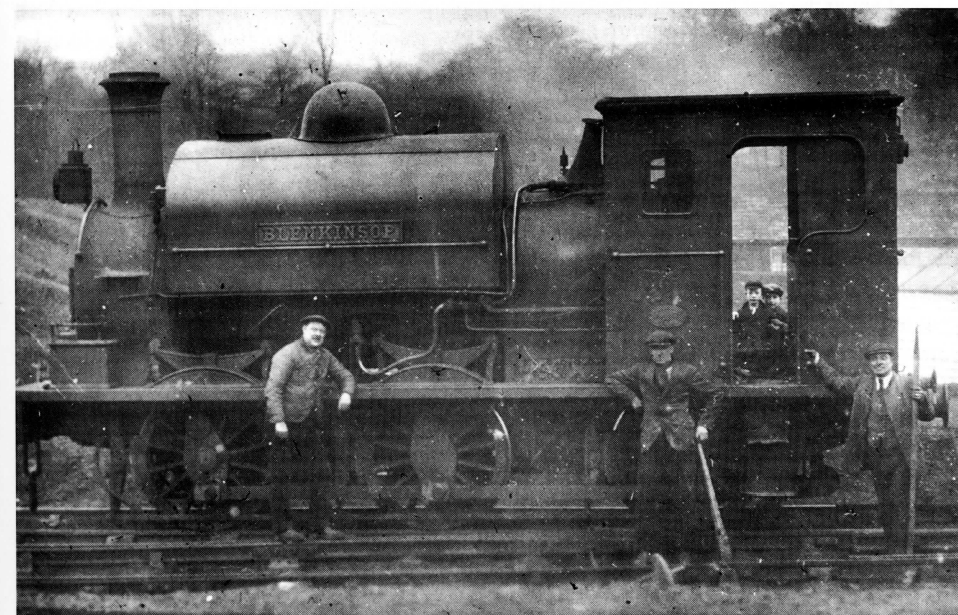
During 1865/6, Marshall Nicholson, mining engineer, moved into Middleton Hall and was soon described in directories as "colliery viewer and manager", both residence and position having once been occupied by John Blenkinsop. Nicholson, a relative of Edmund Maude, later became Company Secretary, and then Managing Director. Charles Ryder, Tetley's brewery partner, and the other colliery partners' sons, Fairfax Rhodes, George March and William Henry Maude, also became directors of the Company, and on 4th April 1868, the estate was officially transferred from the partners to the Company.

It is interesting to note that Joseph and George March were, respectively, the son-in-law and

grandson of Matthew Murray. They were partners in the Union Foundry, a short distance from the Kidacre Street Staith, and it is likely that both they and Tetley were attracted by the prospect of their own regular supplies of coal being delivered near to their other business interests.

In 1865, only the Dayhole and the Henrietta and West Pits were being worked, but the Company quickly set about the task of making the colliery profitable again. They re-introduced steam traction, the first locomotive being built by Manning Wardle in 1866, of 4 foot 1 inch gauge and called *Blenkinsop*; *Matthew Murray* followed in 1869.

In 1868, the Company sunk three new pits, Doggy Pit and New Pit, near Parkside and, near the present Park Halt, the 810 foot deep Broom Pit. During the same year, they redeemed the seven eighths of the Manor of Hunslet mortgaged in 1865, and in 1874 they bought the remaining eighth.



Blenkinsop No.2 poses with its crew, and some local children, near the modern Railway's Park Halt

Also in 1874, the Company bought the Leeds Pottery, which had surrounded a short section of track north of Jack Lane since 1770. The purchase presumably was to safeguard the wayleave through the yard there, but the Company perhaps turned their new acquisition to practical as well as strategic use: when the route for the M621 was being plotted in the late 1960s, a bore-hole on the site of the main track beside the Hunslet Moor Staiths revealed a layer of 19th century pottery waste, apparently laid down as ballast. In the mid 1990s, an archaeological dig on the site of Kidacre Street Staith revealed a similar layer of pottery ballast immediately south of the viaduct site.

At some time during 1875, part of the main line was diverted to its present alignment to avoid the lower incline, enabling locomotives to travel unimpeded between the main colliery and Kidacre Street. Also in 1875, the Company bought two strips of land, from Riley Briggs, flax-spinner, and

Leonard and Lawrence Clayton and James Smith, boilermakers. These plots were bordered by the Midland Railway's Sheffield to Leeds track to the north-east, and Hunslet Moor to the south-west. Shortly afterwards, the M.E.C.C. laid a branch from their main line towards the Midland, but only as far as the edge of the Moor.

Whilst it would be of considerable advantage to make a link with the Midland, and the land undoubtedly had been purchased for that reason, there was no way of connecting a 4 foot 1 inch gauge branch line to the 4 foot 8½ inch gauge Midland line. As the Company did not bother to continue the branch on to their newly-purchased land, it may well have been a measure of legal subterfuge, to establish the branch in anticipation of the passing of the 1876 Commons Act, which would soon forbid further enclosure of common land, except for the benefit of the neighbourhood.

During the next two years, the local inhabitants with commoners' rights to use of the Moor became increasingly angry that the Lords of the Manor were infringing those rights. They found a champion in the editor of the *Woolwich Gazette*, John De Morgan, who had been leading campaigns in other places against encroachment of commoners' rights.

In addition, William Emsley, a Leeds solicitor, published a booklet containing copies of the four Middleton Acts and details of the commoners' grievances. The Company appears to have behaved in a most cavalier fashion in proving their own rights to the Moor, selling off some portions of it, tearing up a new paved footpath laid adjoining it by the Corporation, and even charging 2s6d a year to anyone whose house door opened directly on to the Moor. On 26th October 1877, De Morgan addressed a meeting at the Hunslet Mechanics' Institute, which resulted in an ultimatum being sent to the Company, ordering them to remove the "siding" or the commoners would do so themselves. The Company replied that any valid objections to the new line could be taken to court.

Further meetings were held on 24th November, at which De Morgan advised the commoners that their rights were being violated according to the very Acts of Parliament under which the Company claimed its powers: horsedrawn waggons only were envisaged, not the steam locomotives now in use; the coal was to be reserved for the people of Leeds, when now it was being "sent along the whole Midland system"; best coal was to be priced 7s a ton, but now was being sold at 15s5d a ton; the Acts authorised only "a" waggonway, when three actually were laid. In fact, though the title of the 1758 Act did mention "a Waggon-Way", the preamble said "Waggon-Way or Ways", and the body of the Act said "Waggon-Way or Ways, and Branches": Tetley's purchase deed included rights to use the existing waggonways and to "make others whenever required in addition to or in lieu thereof".

On Saturday 8th December, according to the following Monday's *Yorkshire Post*, over 30,000 people gathered near the branch to hear De Morgan speak. He then "carried out his threat to pull up a portion of one of the lines" assisted by "a working man" named Jukes, who was paid 5s. The situation could not be allowed to deteriorate further. On 22nd February 1878, the Company asked the Master of the Rolls, for an injunction against any further tampering with the new branch by the commoners. The defence filed affidavits attempting to prove the illegality of the line, but were told that this should be contested separately. They also complained that the line interfered with an important public highway, and that two accidents had happened already because of this.

The M.E.C.C.'s solicitors filed affidavits stating that the Company had pulled up the

abandoned section of 1758 route, giving c.396 square yards of additional land to the commoners, and that they had diverted a highway at their own cost to avoid it being crossed repeatedly by the "tramway". The case was left pending, and the commoners held more meetings, though attendance dwindled after a subscription was started to pay defence costs. De Morgan battled on, and on 11th May, his support began to increase again. That morning, 75 years old Sarah Hollis was approaching the line on a footpath when a train came, presumably travelling southwards to the pits, as the waggons were said to be empty. The driver blew the engine whistle and called out several times, but by the time he realised Mrs. Hollis was deaf it was too late to stop the train. She was hit, and later had her left leg amputated. At his meeting that evening, De Morgan further fuelled the revival of the cause by announcing that the Company were negotiating to sell the Moor to the Corporation. He believed that by law the commoners should have fifteen sixteenths of any money paid, and he promised to enter a case in the Leeds Summer Assizes if a sale went ahead.

On the following Saturday, 18th May, the Hunslet Moor Case was resumed before the Master of the Rolls, but De Morgan somehow had neglected to file his "defence and affidavits of merit" for the hearing. The Master said there was no excuse for this lapse, since Mr. De Morgan knew the law well enough (he had been in Holloway Gaol several times in connection with similar cases, and later related that the Governor had written to him threatening to put him in solitary confinement if he ever appeared there again!). The Master also said that though De Morgan styled himself 'Commoners' Agent', he was not a Hunslet commoner, and that those who were could not delegate their rights to him. He granted an injunction to the M.E.C.C., with costs for the case to be paid by the defendants. On 20th May, the local M.P., Mr. Barran, stood up in the House of Commons and asked if the Secretary of State for the Home Department knew of the Hunslet Moor accident, and whether he was:

... aware that the tramway in question is traversed by locomotives without parliamentary sanction, and is so unguarded and uncontrolled as to be dangerous to the numerous persons crossing the moor; and whether he would direct an official inquiry to be made with a view to protecting the public against similar accidents.

Mr. Cross, the Minister, replied that he understood that the poor old woman was in a hopeless state, and in a few days a coroner's inquest would be required, and that he could not anticipate that inquiry. But Mrs. Hollis lingered on.

Meanwhile, the Company seemed near to completing their sale of the Moor. *The Yorkshire Post* of Wednesday 29th May reported that the Company wished to:

... reserve to themselves the minerals, about eight acres of the moor, and the tramways running across the moor, belonging to the Middleton Colliery Company, and the width of which is to be extended. The lords also reserve the manorial rights and the copyhold tenements.

The asking price had come down to £4,000, and the Company had agreed to "contribute £250 towards the cost of fencing off the tramways". On Saturday 1st June, De Morgan announced to a meeting of 600 people, that he had entered an action for the Summer Assizes, and had a promise from the Board of Trade that an inspector would attend the inquest if Mrs. Hollis died. Against all expectations, Mrs. Hollis seems to have survived.

A case was taken to the local Winter Assizes, complaining that the inhabitants of Hunslet for a long time had had right of usage of the Moor for recreation, and that the Company had "broken into

the land", laying down tramways and roadways, had broken the terms of the fourth Act by planning to send coal out of Leeds and, therefore, had forfeited their rights to operate even the first "tramway". However, the judge directed that the question to be considered was "whether the usage of the Moor could be established as a legal custom", or whether the commoners had used it "as anybody else might have used it", which was not legal custom.

The defence counsel cited a recent decision by the Master of the Rolls, that inhabitants wishing to establish exclusive right of use to a place had to prove that it had been so used since the time of Richard I. He also mentioned the 1712 Act which had enabled common land to be given to the local clergy, and said if commoners' rights had been in existence this would have been illegal; unfortunately, the plaintiffs' counsel seemed not to know of the existence of the Hunslet parish deed regarding the permission of three quarters of the commoners being necessary there. After consideration, a verdict was reached that "The jury are unanimously of the opinion that the plaintiffs have failed to prove their exclusive right to the moor, as distinguished from other parties".

An appeal was heard, but the sale of the Moor was still being pursued. The Leeds Corporation Act of 23rd May 1879 empowered the Corporation to buy Hunslet Moor from the Commoners and the Lords of the Manor, and they purchased it that same year for £6,360. A Commissioner was to be appointed to discover who had rights to the Moor, and the Corporation was to recompense such persons as appropriate, for loss of their rights. The Act also stipulated that "for the avoidance of accidents, and for the more safe and convenient use of the moor" the Corporation should "make and erect a good and substantial fence . . . along and on either side of the several waggon-ways . . . together with any necessary gates or stiles".

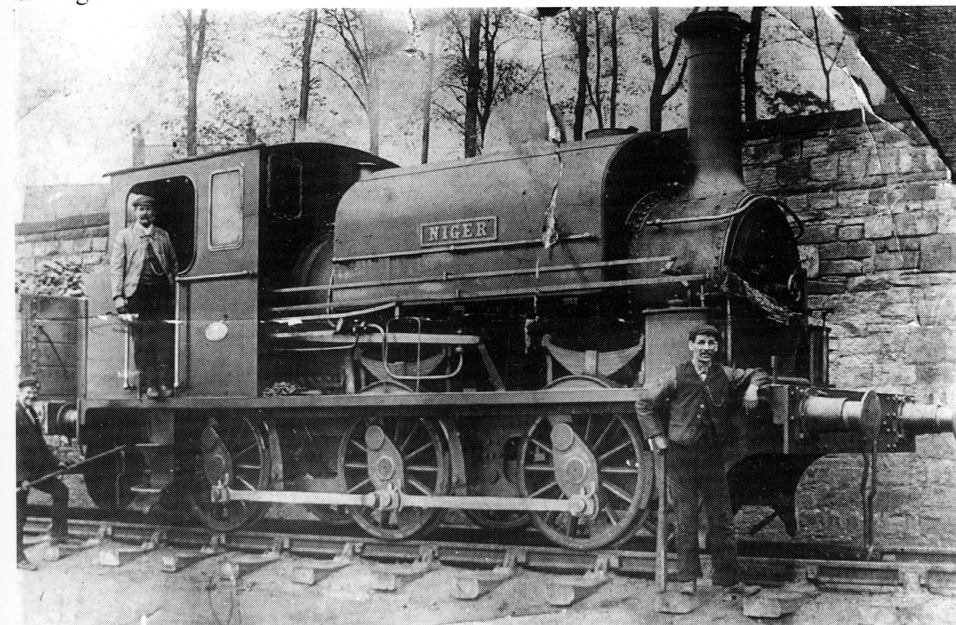
A great iron fence eventually separated the line from the Moor: Saxby and Farmer's gate posts and mechanisms variously bore the dates 1901 or 1903, and each enormous crossing gate was surmounted by a fearsome *cheval de frise*. The controversial branch remained unconnected for more than ten years. The Act protected the rights of the Company, and forbade all unavoidable interference by the Corporation with their waggonways and the traffic thereon. There is a story that, around 1900, the Company maintained a free coal-pile for the commoners, in return for the right to run across the Moor.

In 1881, the gauge was changed to 4 foot 8½ inch and **Matthew Murray** was returned to its makers for conversion. **Blenkinsop** had already been scrapped, but two new standard gauge locomotives were supplied at about this time by the same local firm, Manning Wardle: **Blenkinsop No.2** in 1881 and **Niger** in 1892. Changing gauge at the time of the 1875 re-alignment might have been a better option, but perhaps would have strained manpower and finances too far. It is likely that the connection with the Midland Railway's Hunslet Lane Goods Depot, formerly the North Midland terminus, via a level crossing in Kidacre Street and reversal in the neighbouring Gas Works, was put in at the time of the gauge conversion. It is shown on the 1889/90 Ordnance Survey maps.

Bacon's plan of Leeds, c.1889, shows the new alignment of the colliery line, with the old alignment dotted. Presumably because of its uselessness, the branch at Hunslet Moor is not shown; the connection was completed in time for inclusion in the *1895 Handbook of Stations*.

On 2nd August 1883, an Act of Parliament was passed authorising the construction of the East & West Yorkshire Union Railway. The ultimate object was to form a main line from the Great

Northern Railway at Ardsley, through Rothwell, to meet the proposed Hull, Barnsley & West Riding Junction Railway at Drax. From Rothwell, a branch would go west to join the Middleton Railway, with a "proper and sufficient station for passengers and goods near Broom Pit", and then would use the Middleton Railway's route to gain access into Leeds. The E. & W.Y.U. company had great difficulty raising capital, and the idea of a Leeds branch was abandoned eventually, leaving the E. & W. as a link from the G.N. at Ardsley to Rothwell, and then onwards via the South Leeds Junction Railway to the Midland line at Stourton. Both E. & W. and S.L.J. were closed in 1966, but the difference the 1883 proposals would have made to the future of the Middleton Railway is almost unimaginable.



Niger on the 1875 alignment, c.100 metres from the modern Park Halt, beside the stone retaining wall of the 1813 rack rail track's embankment

In 1893, the Hunslet Railway Company was incorporated to build a line from the Great Northern at Beeston to Hunslet, or more specifically to Knowsthorpe, in Hunslet but across the river. This was taken over by the Great Northern under its Act of 1894 and duly opened on 3rd July 1899, including a connection with the Middleton Colliery line near New Pit. Among the promoters of the Hunslet line was Lawrence Clayton, who had sold land to the M.E.C.C. for the building of the Balm Road branchline. Clayton, Son & Company, was to play an important part in the twentieth century development of the railway.

When the Ordnance Survey explored the area in detail a second time, in 1890, all shafts on the plateau had been closed, except for ventilation, the pits being linked underground. The line was cut back to a dead end, near to the eastern boundary of the later Middleton housing estate. Coal was

no longer sent down the incline; instead, a steam winding engine brought coal up from the middle level. There was a return sheave near the defunct Venture Pit, whereby the coal waggons were cable-hauled across Town Street to a staith on the south side of the road. They also could be dropped back into the yard for supplying the engine.

4. A DOWNHILL RUN - 1900 TO 1959



Combined staff of the Middleton Estate & Colliery Company and the Middleton Fireclay Company, at the Broom Pit in 1916, grouped around a model Murray/Blenkinsop loco made a hundred years earlier

The M.E.C.C. appeared for the first time as Brick & Tile Manufacturers in the 1900 Leeds Directory, utilising the abundant fireclay near the Broom Pit site. The title 'Leeds Old Pottery' was often used in their correspondence at this time, together with the company's name.

The 1905 Ordnance Survey map revision shows the southern end of the line cut back a little further, to a site just short of the present Middleton Park Road. The steam winding engine at the top of the upper incline was replaced by an electric motor about 1930, and the driving pinion was moved to the opposite side of the winding sheave. A turntable was installed as a last phase, to enable waggons of coal to be turned into the yard for bagging. The incline and coal staith were in use until 1948, after which an explosives store was built on the incline, near its lower end, and the rails were

removed. During the next twenty years, the sleepers gradually disappeared and the store was demolished. One wall of the winding house survived until at least 1964. The upper part of the incline's alignment is now a steps and footpath access to the Manor Farm housing estate, built across the site, and all traces south of Town Street have gone. The intricate development of track and sidings around Broom Pit and New Pit, and the coke ovens, brickworks, clay pits and quarries thereabouts, can be seen on older large scale O.S. maps and plans, though nothing can be traced on site.

The twentieth century saw the gradual depletion of the M.E.C.C.'s property. On 31st January 1920, land was sold to the City for the building of the electric tramway known as the Middleton Light Railway, the sale document being signed by George March and Fairfax Rhodes, Directors of the M.E.C.C., and C.J. Dixon, the Company's Secretary.

The park and woods, together with Middleton Lodge, the Brandlings' Middleton residence, were bought by a local charity, Wade's Trustees, on 1st July 1920, and ceremonially transferred to the public of Leeds on 23rd July, though the Lodge's last resident, Miss Maude, was allowed to remain there until her death in 1933. The list of Trustees was headed by the Vicar of Leeds, and included a Tetley and a Maude. The property, 316 acres in all, was leased to the city for 999 years, for an annual rent of £1, and it still forms one of Leeds' largest public parks. South of the park, land was sold off gradually in small lots for private housing development. Further south than that, land had already been sold for the huge corporation housing estate. The number of sales probably echoed the Company's finances, and the greatest concentration of transactions occurred during the 'depression' of the 1930s.

However, some new development was achieved. The 1908 large scale O.S. map shows a long passing loop near the Midland Railway end of the Balm Road branchline. Three sidings were constructed near Hunslet Moor, giving neighbouring firms access to and from the Midland Railway via the colliery line, and the Company dealt with quite a vast amount of traffic for these 'customers' over their line. The oldest siding was a pair of tracks into Wagon Repairs Ltd., later the Acme Engineering Co., on the south side of the Balm Road branchline. This dated back to 1913, and was in regular use until 1959. The second served three premises on the west side of the line which, until June 1971, were reached via a 'headshunt' connected with the main colliery line by a north facing curve.



The Rope Hill winding mechanism, seen from the Middleton Town Street staith yard c.1950

This was laid during 1919/20, and served Clayton, Son & Co. Ltd., the first to receive a train (6th August 1920); Robinson & Birdsell, metal merchants; and John King & Co., ironfounders. The third connection, first used on 5th March 1921, was via a similar 'headshunt' into the Hunslet Foundry of Samuel Denison & Son Ltd. which, under Gothard & Salt, had cast replacement rack rails to Blenkinsop's patent design. In those early days, of course, the line came down the site of Old Run Road and then turned along the front of the foundry. (As mentioned previously, a branch ran into the foundry yard from the old alignment c.1787.) Though seldom used, the Denison siding from the new alignment was still intact in 1959, and our society obtained rails from it for repairing the curve to Dartmouth Yard.

By 1932, there was a branch into a Leeds Corporation yard, south of the bridge over the Midland, and also a branch into the asphalt works then occupying the site of the Leeds Pottery field. The 1908 and 1921 O.S. 1:2500 maps show a short branch west of the line, just north of the G.N.R. bridge at Parkside, and a long siding nearby, parallel to the line's eastern side. An M.E.C.C. siding also appears on 1932 and 1949 O.S. maps, starting in a similar place but proceeding for a quarter of a



Matthew Murray No.2, posed in the colliery yard with a colliery worker's family c.1950

mile in a N.N.E. direction upon substantially flat ground, formerly a spoil heap for the New Pit. It is understood to have served a stock yard.

During the first part of the twentieth century, work on the line was shared at various times by five locomotives: *Matthew Murray No.2* was usually deployed as colliery yard shunter, venturing as far as the clay pit near the Great Northern line on behalf of the Fireclay Works, and occasionally joining *Niger* on spoil train duty to 'the Alps' pithead; *No.6* worked trains down to Hunslet Moor Staiths, and also dealt with traffic to and from the nearby firms; *Blenkinsop No.2*, working from a shed in Kidacre Street with *Gladstone* as spare engine, took trains over the entire route. The connected firms further varied the goods carried on what once had been purely a coal railway. Scrap metal travelled to and from Robinson & Birdsell's, and Clayton's traffic included special loads such as boilers and gasholder sections. Other non-coal traffic on the line included, during the 1920s, bricks from the Fireclay Works for building the Middleton housing estate, and pit spoil for the Middleton Light Railway's trackbed.

The Middleton Light Railway was a Leeds Corporation electric tramway, opened on 12th November 1925. Much of its route from Leeds to Middleton was on reserved track, running

alongside the colliery line from Hunslet Moor Staiths to a point just north of the G.N.R. viaduct, and then going south into the woods. Various extensions resulted in the opening, on 28th August 1949, of a circular route to Middleton via Dewsbury Road/Moor Road in one direction and Balm Road/Belle Isle Road in the other direction. The line was abandoned on 28th March 1959.

Original plans for the Belle Isle portion of the circular route brought the tramway from Balm Road via the eastern end of Moor Road, then up Old Run Road and alongside the middle level of the railway, past Belle Isle miners' hamlet and the Broom Pit, where a physical connection of 242 yards length was intended to be made with the railway. Until 1930, Leeds City Tramways handled mineral traffic over its system, between the Gipton Pit at Harehills and the Leeds Fireclay Company at Wortley. Waggons cannot normally transfer between railway and tramway because of flange differences, but a slight modification of the flanges could have made the Middleton project possible. However, the situation never arose there, as the Belle Isle route finally chosen continued on up Balm Road, probably to gain a more uniform gradient. Regarding the route via Dewsbury Road, the original plan was for it to leave Dewsbury Road at a point north of Jack Lane, and to run beside the colliery line from about the Pottery Yard. This would have served the industrial premises in the area and avoided the problem of making sharp turns at each end of the western section of Moor Road, the route eventually chosen. Much later, in the 1950s, it was suggested that the tramway route be diverted on to the then abandoned northern section of the railway, to avoid the increasing traffic congestion on Dewsbury Road, but the scheme had drawbacks, especially the narrowness of the colliery line's bridge over the Midland line.

At what is now the south end of Moor Road station yard, the old Dartmouth Branch left the main route and crossed the tram route via a special railtrack/tramtrack crossing, part of which is now displayed beside our station building. This crossing was the scene of a crash on the foggy autumn morning of Monday 12th October 1931. The M.E.C.C. employed a watchman to guard the crossing, but presumably the noise of *Niger* coming from the headshunt masked the far quieter approach of a tram travelling southwards through the fog. He saw the tram too late to stop it or the train, and *Niger* and Car 127 inflicted mutual damage, also injuring six tram passengers.

The building of the private sidings had come at a fortuitous time, and their traffic provided much-needed income during the colliery lock-outs and strikes of the 1920s. In 1921, three of the five pits closed down permanently. Times were hard for the British coal industry: a long and bitter engineering works strike severely affected coal sales, and exports to France dwindled as the Germans made post-war reparation 'payments' with Ruhr coal. The two remaining pits were stopped intermittently by disputes centring on the miners' understandable reluctance to accept wage cuts, and during one strike in February 1922, the Company threatened to abandon the colliery. Eventually it reopened, but in 1926 closed again for almost a year during the General Strike, production also being reduced at the Fireclay Works. The miners eventually returned to work a three-day week, a situation which continued until 1928; New Pit never reopened for coal production, though the shafts were used for pumping and ventilation until 1968. Despite selling off much of the estate during the 1920s and 30s, the Company was rumoured to have debts of around £60,000 when increased demand for coal during the Second World War brought temporary relief.

The M.E.C.C. seemingly anticipated post-war nationalisation by separating their various

interests. The Middleton Fireclay Company Limited took control of most of the remaining non-colliery property, including the railway's trackbed. From its apparent inauguration as a separate limited company, in January 1946, it continued selling off superfluous estate in and around Middleton village, the older property being compulsorily purchased as substandard housing.

Despite most of its sources of income being removed, the M.F.C. lasted until 1960. Whilst closing down his offices, the last Managing Director, Mr. Dixon, made an inspired decision to donate the pre-M.E.C.C. records to Leeds Reference Library. Now in the care of Leeds Archives, the collection contains most of the Brandlings' business records from the mid 1700s to the mid 1800s, and is a truly invaluable source of information on the development of the pits and the railway.



Middleton Broom Pit yard, in the mid 20th century

On 13th September 1947, nine months after the National Coal Board took over, traffic north of Hunslet Moor Staith, then known as Whitaker's Staith, ceased, and that part of the route was sold by the M.F.C. The Kidacre Street viaduct lingered until 1956, but the Holmes Street bridge, headroom only 7 foot 6 inch, was demolished on 1st February 1948.

Post-nationalisation, the N.C.B. set about reorganising the locomotive stock held by its various rail-linked collieries. Middleton, whose most recent arrival had been the secondhand *Gladstone* in 1916, gained a variety of 'hand-me-downs' from other collieries, before the arrival of *Blenkinsop No.2* in 1954 (the first brand-new locomotive to arrive at Middleton since *Matthew Murray No.2* in 1909).

Diesels also made occasional appearances when, by arrangement with the N.C.B., John Fowler & Co. used the colliery line for test purposes. Due to the generally anarchic character of the line's operation, this led on one occasion to a collision at the sharp bend near the G.N.R. bridge, when a northbound Fowler diesel met *Blenkinsop No.2* taking a train of empty waggons to the pit. Despite the diesel having the advantage of downhill impetus, the outcome was a decisive victory for steam! When the northern section of the line was closed in 1958, the testing arrangement terminated,

but after its reopening by the preservation group, Hudswell Clarke, Greenwood & Batley and Hunslet Engine Company used the line for testing purposes.

The railway's bicentenary year began with a stunning blow: *The Yorkshire Evening Post* of Saturday 1st February 1958 announced with a front-page banner headline "COAL BOARD IS TO ABANDON PRE-STEPHENSON RAILWAY IN LEEDS - IT'S TOO COSTLY". An N.C.B. spokesman had told the reporter that the line was kept open only by heavy maintenance, and really needed complete renewal. For a colliery which was "a losing concern" this would be too expensive, besides which, the "Middleton Estates Company" owned the land on which the line stood, and the lease was due to expire very shortly. It would be much cheaper to load coal into lorries at the pit, rather than at "the Middleton depot" (i.e. Hunslet Moor Staiths), as currently happened.

However, the colliery had no real road outlet: the railway was its lifeline. Broom Pit was isolated from local roads by distance or by steep gradients, and the only feasible way to take out coal directly by lorry was to build a road over the low south-east end of the pit heap, to link up with the roads through the Belle Isle housing estate. Naturally, those Belle Isle residents likely to be affected strongly objected to the scheme, but their suggestion that the railway should be converted into a road was declared by the N.C.B. Area General Manager, Mr. Saul, to be too expensive. The City Council joined their protesting Belle Isle tenants, but the N.C.B. warned that successful opposition to the road haulage plans might force the closure of the colliery, which employed 800 men.



Blenkinsop Nineteen Fifty Three's bicentenary train in the Broom Pit yard, with HE1482 *Edith* and an unidentified HC locomotive as added attractions

Though the railway's future seemed bleak, its past was not forgotten, and on Saturday 7th June 1958 a 'Salute to Steam' exhibition opened at the City Museum. It was arranged jointly by the Libraries and Arts Committee and members of the Railway & Canal Historical Society and the

Railway Correspondence & Travel Society West Riding Branch.

On the same day, about 300 members of these societies embarked on a bicentenary journey from Hunslet Moor Staiths in a train of six open goods waggons, loaned by British Railways. A spruced-up *Blenkinsop 1953* was driven by Mr. George Buckle, a driver for 47 years. He was said by *The Yorkshire Evening Post* to do all his own firing, shovelling 1½ cwt. of coal on each trip. For safety reasons, the train was followed at a discreet distance by a new Fowler diesel, on test at the line, and Fowler's Locomotive Manager remarked ruefully to the reporter that "If it can stand this line then it can stand anything in the world".

Not even Mr. Saul's ill-timed announcement that plans were now complete for the changeover to road haulage could dampen the society members' enthusiasm. Whilst some enjoyed tea and sandwiches in the colliery canteen, more intrepid members walked the 'Rope Hill' upper incline or swarmed around searching for traces of long-abandoned branches and sidings.

The confident announcement that road haulage would start in August 1959 also failed to daunt the City Council or the Belle Isle residents. They battled on, until the N.C.B. were forced to amend their plans. Some coal would leave by road, but some would still go by rail, using the section of line between the colliery and the G.N.R. link at Parkside Junction. British Railways was to operate the entire rail traffic, and the reprieved section of track was relaid to their requirements whilst the colliery was closed for the August 1959 holiday fortnight. At the same time, the yard layout was altered so that B.R. locomotives could run round their trains.

For the first time in two hundred and one years, a substantial amount of coal began to leave by road: 55% of the 3,000 tons weekly average in 1960. It was the 'thin end of the wedge', and by 1967 a mere 3% of the 5,400 tons weekly average left by rail.



B.R. working on Middleton's link to the former G.N.R. line near Parkside Bend

At first, up to three trains a day left via the G.N. link, sometimes headed by giant WD 2-8-0

tender locomotives. However, tank locomotives normally were used, at first ex-G.N.R. J50 0-6-0Ts, then Thompson L1 2-6-4Ts of late L.N.E.R. origin, followed in turn by Stanier and Fairburn ex-L.M.S. 2-6-4Ts. When Ardsley Shed closed, Wakefield took on the Middleton work, using similar locomotives from the old L. & Y. Depot. When this also closed, Healey Mills diesels worked the last few weeks of rail coal traffic in 1967.

However, much was to happen before then

5. PIONEER PRESERVATION - 1959 ONWARDS

In September 1959, some Leeds University Union Railway Society members had the idea of acquiring or building a short stretch of line for the preservation of railborne museum pieces. Sites on the university sports ground at West Park were surveyed, but the Leeds University Union consultative panel made it clear that they definitely did not approve of a union society running a railway - it must be admitted that in 1959 this did seem rather an outrageous thing to do! Mr. Chris Thornburn, a student, was the first to suggest the Middleton Railway as a suitable site. Apart from the section relaid for B.R.'s colliery traffic, the railway was disused and likely to remain so.

The Middleton Fireclay Company was then in process of liquidating its assets, and informed the L.U.U.R.S. that the section of line from the colliery to Parkside was now a B.R. and Coal Board matter, but that the remainder of the line had been sold to Clayton, Son & Co. Ltd., who, like the other firms, had been left without a rail goods service. It was heard later that Clayton's had hoped B.R. would continue traffic to and from their works, but that B.R. would not agree to this unless the line was relaid at Clayton's expense. An approach to Clayton's by the society received the reply that they could try out their scheme, but without any formal purchase, rent or take-over.

With its outstanding history and current disuse, this section of the Middleton Railway was an ideal choice for the students' project, and they gratefully accepted the offer. At a meeting in the university in December 1959, chaired by Dr. R.F. Youell - then Staff President of the society, the L.U.U.R.S. unanimously decided to found the Middleton Railway Preservation Society. The societies were different virtually only in name, but that difference meant that the Middleton project would not be subject to university control, even though carried out by university members. Eventually, of course, it was an advantage to include interested people from outside the university. Nevertheless, the L.U.U.R.S. remained very active, and their major contribution, particularly to the civil engineering side, continued for a long time.

Negotiations for the use of the line were difficult, due to its antiquity and its accompanying statutes and rights. Though the major owner of the disused section of line was Clayton, Son & Company Ltd., Leeds City Highways Department owned the level crossing sections, and Leeds City Parks Department owned the section where the tram route crossed the line, with the unusual liability of maintaining the crossing and giving way to our trains. Robinson & Birdsell Ltd., John King & Co. (Leeds) Ltd., Acme Engineering, and Parkfield Metals - at the former Hunslet Moor Staith, all owned their own sidings, and a short section at the Balm Road end of the Midland branch line had been sold

in 1881 and was now British Railways' property. None of the owners of the lines north of Parkside placed any restriction on the use of the line, and the preservation society was the only common denominator with a prospect of restoring and re-opening the line irrespective of ownership.

Regular operation of the line was not envisaged when the society was founded, but usable relics were acquired for restoration and display, including several trams from Leeds and other towns, whose tramway systems were being closed down at that time. Hunslet Engine Company loaned, and later sold to us, their 1932 diesel 0-6-0 No.1697, the first to run for a main line company in this country.

The closure of the Swansea and Mumbles Railway (built in 1804 as the first passenger railway) made it possible to acquire one of their double deck coaches, which looked like a large electric tramcar. These vehicles ran in trains of up to four units, and it was found that though unwieldy, they had been transported by rail from Brush of Loughborough to Swansea. A Mumbles

coach came to Leeds by train, the upper deck, the lower deck, and the motor bogies travelling on three separate bogie waggons. On 18th June, the Hunslet diesel, polished up for the occasion, hauled these sections on to the Middleton Railway, and the coach was reassembled by slinging the decks under a convenient footbridge, and lowering them in turn on to the bogies.

At 4.45p.m. on Monday 20th June, as noted in the next day's *Yorkshire Post*, "Dr. F. Youell . . . wearing academic dress, took over the controls of a light engine and gently pulled away a train full of eager children." The Middleton Railway had become the first standard gauge line with services operated by unpaid volunteers. The temporary passenger service was part of the University Rag Week charity events. Offering 'Free rides at your own risk', the 106-seat vehicle altogether carried 7,700 passengers between Burton Road level crossing and Parkside G.N.R. bridge, and even earned a small amount in donations. By running slowly and carefully, they stayed on the rails: looking back on the conditions at the time, this was a major achievement. At the end of the week,



Dr. R.F. (Fred) Youell, c.1970

work began on repairing and relaying the track.

What started as a temporary service gave rise to another idea - why not run the line as it had always been run, for goods traffic? At a meeting with the connected firms, two of them - Robinson & Birdsell's and Clayton's - agreed to take rail traffic of, respectively, scrap metal and heavy steel raw materials. A daily goods service was a tougher task than short exhibition runs, but the customers laid down no conditions other than that the line should be insured, and a reliable daily service provided.



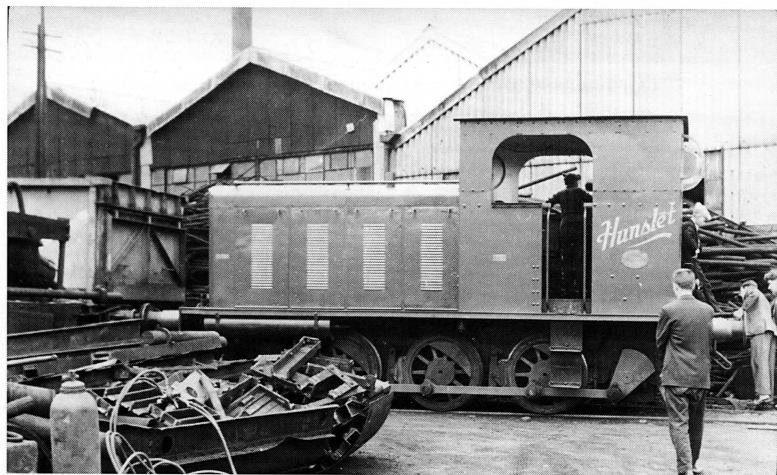
Our first train, and some of its happy passengers, June 1960



The Fireclay Company had run down track maintenance in the expectation of complete

closure, and the line was in very bad condition: sleepers were rotten, the chairs on them were a miscellany - Midland from the 1881 relaying, G.N.R., S.E.&C.R., L.N.E.R., L.M.S.R. The prize specimens were stamped Met.&L.N.E., from the short Watford to Rickmansworth line, the only one built by this joint railway. A far-from-home pair was a G.W.R. and a G.E.R. on the same sleeper. Repairs at that stage could only be described as a patching up operation. By running on one of the two tracks from Moor Road to Balm Road, and using the other track for spare parts and later for a short exchange loop at the B.R. end, we were able to give ourselves running conditions with some chance of successful operation.

On 1st September 1960, our first goods train ran. It was three empty 4-wheel waggons to Robinson & Birdsell's, two of which went out the same day loaded with scrap for the steelworks. Clayton's Dartmouth Works traffic started a month later. As our's was the first 4 foot 8½ inch gauge railway to be re-opened in this way, the Ministry of Transport descended on us in our first week, but no offence was being committed, and we had good advice from the inspector sent to investigate our activities.



The first goods train being marshalled in Robinson & Birdsell's yard, 1st September 1960

As B.R. had an integral part in the operation, good contact had to be kept with them. Mr. Edward Cowell, N.E. Region's West Riding Traffic Manager, and Mr. Harold Ormiston, Leeds Area Permanent Way Supervisor, gave much useful support and advice, as did the Balm Road Yardmaster. At the other end of the line, the friendly helpfulness of Messrs. Catchpole – father and son, at Robinson & Birdsell's, deserves particular comment.

On the society's side, the late Dr. R.F. Youell and the late Dr. R.C. Lawrence must also be mentioned. Reggie Lawrence became the society's permanent way expert, drew up its first Rule Book, and was instrumental in acquiring the Sentinel – our first steam locomotive. Fred Youell, our first Chairman, was the guiding influence for many years; later a Vice-President, he still took an active interest in the railway's life until not long before his death in 1998. It is impossible to name here all the people who have given time, effort and money, in order to keep running the world's

oldest railway enterprise, but their contributions to the task have been, and still are, invaluable.

Over the years, the level of traffic varied due to unpredictable industrial needs; we might have only one or two waggons on the line, or, after a bulk order, thirty or more waggons might await unloading. Our traffic relieved the local roads, which were not suited to such giant loads as fabricated steelwork, or 10-ton steel plates. The largest single loads were a three waggon bogie train with a tare weight of nearly 240 tons from B.R. Doncaster to Clayton's works, and export orders for a New Zealand gas works, which produced a twenty-one waggon train bound for Birkenhead docks.

Generally, two trains a day were run, the first leaving Clayton's at 08.00, returning at 08.47, and the second leaving Clayton's at 13.00 and, following shunting of the exchange sidings, returning at 14.45. The timetable was fairly flexible, due to lecture commitments, etc., but it worked well, and by the end of 1960, 2,881 tons of freight had been moved. Average annual tonnage was around 7,000, but in 1964 12,000 tons were handled, a quite remarkable achievement for volunteer workers. During University vacations, trains were run by a growing number of non-student members with daytime jobs. At these times, and later regularly – as student participation declined, trains were run in the evening, usually taking about fifty minutes if all went smoothly.

Quite early, a clash of interests began to develop. Many early members were tram enthusiasts, and much of the society's meagre finances had been spent on purchasing trams and transporting them to the railway. It had been hoped that, with wheel flanges suitably adapted, they could run on the railway. However, the lure of a tram museum then being developed in Derbyshire was too often irresistible to the tram enthusiasts. The Middleton collection was increasingly neglected by them, but not by the local vandals; it soon became obvious that an easily-entered yard on the edge of town was not the best place in which to keep a collection of largely glass-sided vehicles. Eventually, most of the trams were moved to other sites, and Middleton became a working railway museum. Pleas for a more suitable home for the Swansea and Mumbles coach brought no serious offers, and, reduced to a dangerous state by vandalism and easily accessible to local children, it had to be scrapped.

Parkfield Metals at Hunslet Moor Staiths did not take advantage of our services, and the last train using this siding ran on 28th January 1961, conveying visitors in open waggons. A short section was used for waggon storage, but was lifted by the firm about 1969, the staiths themselves being demolished in late 1970. A new curved siding was built at Dartmouth Works in 1961, to avoid using King's siding, and an interchange loop with B.R. was built at Balm Road in 1962. Also in 1962, a branch was laid into Clayton's Moor End Works, which had never before had a connection, though it had an internal rail network. The connection was for inter-works traffic, but a change of policy resulted in only rare usage.

A three-waggon Midland hand crane and a G.W.R. steam crane were acquired early on, and were invaluable for heavier jobs, but steady effort by manual labour dealt with normal relaying work. The locomotive situation gradually improved. When our Hunslet diesel was being overhauled by its makers in July 1962, we had the loan of a B.R. Drewry diesel, D2323, but when our Sentinel L.N.E.R. Y1 *No.54* from Darlington had been put into working order, we had a useful reserve. On 27th January 1961, the Hunslet diesel had been named *John Alcock* by and in honour of her designer, and L.M.S. brakevan M158760 was handed over to the society by B.R.

During the last four decades, the Society/Trust has acquired a collection of locomotives and rolling stock appropriate to its industrial origins; many of these vehicles were built by local firms and now form the Middleton Railway Museum's 'Leeds Collection'.



M.R.P.S. members hard at work in Dartmouth Yard in the early 1960s

With the gradual increase of stock, we at last had the luxury of being able to choose which locomotive to use. In general during the week, the Hunslet, Fowler or Hudswell Clarke diesel locomotives were suitable, as they could start within a matter of minutes. If steam was used for goods traffic, the Sentinel, with its ability to steam within an hour of lighting up, came into its own. At weekends, when we were on display to the public, steam locomotives were in their element, hauling both goods and visitors' trains. Unlike most of the later preserved lines, some of our busiest traffic was in the winter months, August being the slackest for goods traffic. We provided a daily service, on demand, throughout the year.

Operating and motive power problems were more manageable than the unforeseen crises. A minority of the half million inhabitants of Leeds caused constant headaches. Vandals and drunken intruders smashed the brakevan windows; men with horses and carts stole rails and chairs; wooden keys vanished for firewood; small children endangered their safety and our's by playing with the switches at junctions, or by putting bricks and bottles to jam the points; rugby football supporters from the old Hunslet ground threw bricks at our train crew; gas, electricity, water, and telephone authorities dug under the line and failed to properly reinstate the foundations, bringing trains off the rails; 'travellers', camping nearby, stole sleepers for firewood and strung washing across the track. On one occasion, our steam crane stopped for water to find that the standpipe had been stolen, leaving a muddy puddle, and local residents with buckets and bowls helped fill up the tank in a real-life

'Titfield Thunderbolt' effort. Sometimes, in heavy snow, we had to use a shovel to find whether the track was still there, or hard ice had to be chipped away from the level crossings. The obligation to run a 'Daily service in all weathers' took a lot of maintaining.

In 1965, our existence was threatened by a B.R. scheme to close the G.N.R. line and run all colliery traffic via the Balm Road link, leaving the society there only on sufferance. However, work at the current coalface had caused subsidence beneath a Rothwell hospital, and no other seams were economically workable. Rail traffic from the pit ceased completely in July 1967, and the Broom Colliery's last shift was worked on 16th May 1968. The nightmare threat to the society ended, but so did Middleton's at least eight centuries as a pit village community.

The society, by then entitled the Middleton Railway Trust, had applied for the rest of the line and usable Broom Pit buildings in 1967. The disposal of old mining property is a complicated matter, often with long negotiations being necessary between the N.C.B. and the local authority. A historic railway entering the derelict area caused complications, with even more delay in reaching a decision. The final agreement for the future of the area was that the City of Leeds should take over and, as a long term scheme, clear away the pit refuse and landscape the area as a public open space, extending to Middleton Park. Some colliery buildings were to become our offices, museum and rolling stock depots, but the winding gear and unadaptable buildings were demolished, and the shafts were filled to ground level. The N.C.B. wanted £4,000 for the rest of the line and a £100 annual rent for the buildings, with the property being transferred eventually to Leeds City Council. The Trust would be tenants with a desire to purchase when the future of the area had been settled.

Throughout 1969, the Trust worked very hard to raise the purchase price of the southern end of the line; at £20 per member this was not easy, but other preservation societies had surmounted similar problems and failure was not anticipated. The N.C.B. finally left the Broom Pit on 20th February 1970, and on Saturday 21st March 1970 their Chief Engineer, Mr. McAllister, handed over the key to the Rt. Hon. Merlyn Rees, M.P. for the area, acting for the Trust. At once, the task began of repairing the buildings, providing electricity and water supplies, caretaker's accommodation, storage and exhibition space, and generally tidying up. Vandalism cut short the project; later in 1970 the Coal Board demolished the remaining buildings for safety reasons, and the Trust had to wait more than a decade longer before it had the kind of depot facilities which many preservation societies acquired with their track.

Meanwhile, changes in traffic had taken place. The society had spent its first nine years of existence running goods trains for the firms along the northern part of the railway, the disconnected southern end still being used by the N.C.B. for much of that time. By 1969, however, goods traffic was becoming increasingly expensive to operate, because of B.R. starting to make demurrage charges (penalties for waggons remaining unattended on sidings) as soon as waggons arrived at the interchange, instead of when they arrived in the firms' sidings. Clayton's refused to pay this extra charge, and in future had their goods delivered from Balm Road by lorry, which cost B.R. much more time, effort and money than did merely delivering consignments by rail to our interchange siding. Traffic continued for Robinson & Birdsell's, but rising costs caused a gradual decline of this also, and our goods service died away completely in 1983.

In 1969, when the chance came to acquire the southern part of the line, the serious loss of

income from Clayton's goods traffic led to a rethinking of the railway's operations. It was decided to run a weekend passenger service between Moor Road and Middleton Park, and with this in mind, the whole of that stretch of track was overhauled and brought up to passenger standards. Two gaps in the track were re-railed also: one of these was left from the 1958/9 adaptation of the route by B.R. and the other was the result of the theft of nearly 100 yards of track. Work started on 17th June 1969, the first through train ran on 30th June, and at the end of July, during the annual Hunslet 'Feast' week, *Henry de Lacy II* hauled its first regular passenger service: a new era had begun. The service operated every weekend throughout the first year, but it became obvious that winter traffic was not enough to justify steam trains. The service was soon pruned to being seasonal, at first from March to October, then Easter to the end of September. In 1990, an August only Wednesday afternoon steam service was tried, and from 1993 steam trains were run on Sundays in October and November.

Originally, visitors were carried in the L.M.S. 20 ton brake van plus an open waggon, without any form of continuous brake. Legislative changes brought about the introduction of an air brake system, which coincided with the introduction of a lighter van than previously used, this one being of L.N.E.R. origin. Passenger facilities were rudimentary – visitors needed help to climb on to the train in the first year! A sleeper platform was soon erected at Moor Road, and a small ex-B.R. wooden container was subsequently adapted as a station building. A stone platform frontage, containing many stone sleepers from the old waggonway, was built in the mid-1970s, and a further container was added to the original one to make a reasonably-sized shop, which served the railway well for a number of years.

Though the diesel locomotives owned by the Trust, or by individual members, are a no less interesting collection than the steam locomotives, the Saturday diesel service has never reached the same level of public popularity as the Sunday steam service. In the early days, the number of Saturday visitors occasionally could be counted on the fingers of one hand. The annual totals improved gradually, and peaked in the mid to late 1980s, but then declined as the recession worsened. Despite periodic recession and increasing competition, however, the weekend service remains popular, and special events such as Santa trains and our annual Steam Gala Weekend still attract large numbers of visitors, as do the annual Schooltrain Days, when hundreds of children of all ages take a ride and a guided tour with explanatory talks. On a more exotic note, Middleton has played host at various times to radio and television personalities and recording teams, subsequently appearing in such wildly diverse programmes as *Savile's Travels*, a commercial starring 'Mr. Pastry', the B.B.C.'s *Money Programme*, *Fred the Steam Fugitive* – pilot episode of a proposed children's series, Yorkshire Television's *How We Used To Live* education series, and perhaps most notably as the sinister railway depot in the B.B.C.'s *Edge of Darkness* serial.

A handicap of our first ten years was that very industrial 'scenery' which made the railway so historically interesting. When compared to other preserved lines with olde worlde stations and beautiful scenery, this lost us esteem and public support which would have brought higher membership and more visitors. The South East Leeds Urban Motorway (now the M621) brought about some fundamental changes. Good lighting and protective fences lowered the risk of vandalism and theft, and landscaping made our environment more attractive to visitors, though at the cost of much of the industrial surroundings developed during more than two centuries. Since 1960, a

National Trust Covenant had protected the line as being of historical interest: however, a railway used at least once a year cannot be compulsorily purchased and removed without an Act of Parliament, to which the railway company can object. A railway tunnel was duly added to the motorway plans, allegedly after the irrepressible Dr. Youell suggested a level-crossing as being the only alternative!



The pedestrian and railway tunnel shells await the building of the motorway embankment, 1971

In March 1971, a section of line south of the old Dartmouth turnout was lifted, and visitors' trains ran on the only usable route, between Moor Road and Dartmouth Yard. For months, the massive paraphernalia of motorway construction lumbered around as the Trust endeavoured to carry on its services. Retention of the old turnout would have necessitated a second tunnel, but the problem was solved by the construction of a new turnout, c.200 yards south of the original one, and at the other end of the tunnel, so that the re-aligned and better graded branchline ran parallel to the motorway, and both passenger and goods traffic passed through one tunnel. A sectional 'Armco' tunnel was set up over the main line south of the old turnout, and Trust members took advantage of the disruption to full-line service to regrade the stretch between the tunnel and the G.N.R. bridge to an average 1 in 47 (originally it varied between 1 in 27 and 1 in 65). The new Dartmouth Branch was laid in by the motorway construction firm's contractors, and on 4th October 1971 the railway link-ups were completed. For only fifteen days, in June, had traffic totally ceased. Even then, the sidings on the Dartmouth Branch had been packed with empty waggons, which our customers gradually loaded ready to be shipped out once the line re-opened.

Also during the 1970s, two other schemes were announced which might have substantially changed the railway's lifestyle. Leeds unsuccessfully applied to host the 1978 Commonwealth Games, incorporating in their plan sports halls, a 2,000-seat velodrome, and a 30,000-seat sports

stadium at Parkside, and a lake at Park Halt, all with the railway as a major means of access.

During 1977, when it was planned to open-cast mine the remaining coal around the New Pit site, it was suggested that the railway should revert to its original trade, but again the idea came to nothing. The open-cast work went ahead, as had the earlier excavation of shale from the other side of the track, for use as motorway surfacing aggregate, and as did the later removal of the impressive bulk of the main pit-heap, north of Park Halt. The shale excavation site was refilled with refuse, and the Broom Colliery site also was levelled, using baled compacted refuse. All these sites were finally earthed over and landscaped, though the shale excavation site was later occupied by the South Leeds sports facilities.



N.E.R.1310 hauls a visitors' train past the site of New Pit towards Parkside Bend, c.1971

Whilst these changes to the railway's environment were taking place, the society also was undergoing change. Since 1962, it had been a charitable trust; now it became a registered charity in October 1971, and a limited liability company in March 1974. In 1978, 220 years after the passing of the first Act of Parliament solely concerning the building of a railway, all the Middleton Acts were repealed in the comprehensive statute law revision which took place that year, being now considered irrelevant as the colliery had closed.

The 1980s brought other fundamental changes. Since 1960, Clayton, Son & Co. Ltd. had generously provided a home for the Trust, but in 1983 they decided to sell Dartmouth Works, and we had to move out of the works yard. In the short space of ten weeks, everything was transferred to our new home at Moor Road. For years, this had been a 'green field' site, apart from the main line and a

small platform.

The Trust's volunteers spent many hours laying sidings to receive the locomotives and rolling stock. A big bonus for the new site was the erection of a workshop and a station building with the help of a Community Grant made to the M.R.T. that year. At last, we had station and workshop facilities as good as most preserved lines, and better than some.

Further changes to our passenger working came in 1984, introduced earlier than originally planned as a result of the completion of the workshop. Coach No.2084 was converted from a Southern Railway P.M.V., with a guard's compartment, 32-seat covered saloon and a verandah at its northern end. At the same time as this vehicle entered traffic, a run-round loop was completed at Middleton Park, enabling trains to be hauled in both directions for the first time (previously, trains had been propelled to Middleton Park). A second P.M.V./coach conversion entered service at the end of 1989.



Clearing the Moor Road site, 1983

In 1990, the 30th anniversary of preservation at Middleton was celebrated in fine style, with guest locomotives from the National Railway Museum and neighbouring preserved lines perhaps rather overshadowing another important event: the arrival of a Manning Wardle locomotive, *Arthur*. It had long been an ambition of the Trust to acquire an engine built by this firm, once the Middleton Railway's near neighbour and builder of half its 19th century locomotives. Twelve years later, the restored locomotive was given the venerable name *Matthew Murray*, formerly borne by two of the M.E.C.C.'s Manning Wardles. The restoration of the locomotive gained the Middleton Railway a national award, the 'John Coiley Award for Locomotive restoration' awarded by the Heritage Railway Association because the work had been done without external funding and was in keeping with its historic nature.

In 1996, a new workshop was finally commissioned, following two years' hard work by our volunteers. Once its shell had been completed, late in 1994, a 'topping-out' celebration had been held at which the new workshop was christened the 'Fred Youell Building' in honour of the society's first Chairman, who had done so much to ensure the survival of our historic railway. After 1996, the former workshop was used to store two locomotives awaiting overhaul, and to house small display boards, until plans for its conversion to a museum building could be carried out.

A sad event occurred in 1998 with the death of Dr. R. F. Youell, our founder. His ashes were buried beneath the track at Moor Road, and a plaque to his memory was erected on site. The Middleton Railway is a lasting memorial to this remarkable man, who would never take "No" for an answer when fighting to keep the Middleton Railway open.

Locomotives and stock continued to arrive, perhaps the most significant arrival being *Picton*, a massive Hunslet Engine Company locomotive imported from Trinidad. This machine had been 'discovered' in a sugar plantation by one of the national railway magazines. A Middleton member saw the article and immediately contacted the owners and asked to buy it! His request was successful, and *Picton* arrived shortly afterwards. The locomotive is remarkable in that it is a very large 2-6-2T with outside Walschaerts valve gear, complete with 'long travel' valves – this at a time when the famous *Flying Scotsman* and its classmates were being built with the much less efficient 'short travel' versions. This magnificent machine, when fully restored, will help to tell the story of the Leeds locomotive-building industry's successes in the export trade.

Other recent arrivals include the last coke oven locomotive to be built by the Leeds firm of Greenwood & Batley, and a Wickham vehicle originally built as the 'Elliott Track Recording Coach', which is now in use as a 'railbus', as is the former Woodhead route's 'Overhead Line Inspection Vehicle', which arrived several years earlier.

In 2003, the railway became a fully 'Registered Museum', which recognised its efforts to develop a more educational role as a heritage railway. This stringent process took nearly six months, but established the railway's credibility with a new audience and, it is hoped, will help the Trust obtain funding for the next stage of its plans. The society is still entirely operated by volunteers, and is one of the very few preserved railways which have no paid officials or employees.

Also in 2003, the Leeds Civic Trust honoured the Museum with a 'Blue Plaque', commemorating the site's unique historical interest. The plaque was ceremonially unveiled early in 2004 by the Lord Mayor of Leeds.

At the time of writing, the Middleton Railway Trust Museum is formulating a Lottery Bid to provide increased access for all to our historic collection of rolling stock, and also to our extensive archive material. When complete, the new building will house up to eight locomotives under cover at any one time, will provide exhibition space for many of our smaller artefacts, and also will provide an archive room at Moor Road, for the first time allowing scholars to come to the railway to research early railway history and the Leeds locomotive-building industry.

A longer term plan is to extend the line to a new terminus near the lake in Middleton Park, 're-colonising' the hillside which, two hundred years ago, was covered with waggonways. Halfway through its third century of service, the world's oldest continuing railway enterprise still has plans for the future

THE CHANGING SCENE AT MOOR ROAD



Above: Moor Road Station yard, with the first shed nearing completion, 1984
Below: the second shed taking shape in 1994





M.R.T. members worked engineering wonders in the cramped conditions of the Dartmouth Yard hut (above), but much more can be achieved when an entire locomotive can be taken under cover (below)



Restored at Moor Road: the NRM's 16 ton mineral wagon and the award-winning *Matthew Murray*





The Moor Road Station site in 1967 (above) and 1999 (below)



SOURCES, FURTHER READING & STUDY MATERIAL

A History of the Middleton Railway, Leeds, past editions published by the M.R.P.S./M.R.T., 1960-1994

Articles and reports published in the M.R.T. members' magazine, *The Old Run*, 1960 to present date

Early Wooden Railways, M.J.T. Lewis, 1970

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The Brandlings at Middleton, & The Middleton Railway, S.P. Newbould (typescripts in Leeds Loc. Hist. Library)

Hunslet Moor - Four Acts of Parliament, W. Emsley, 1877

The Commons Question, John De Morgan, 1878 - the Hunslet Moor Chancery Proceedings

The Commons Journal, 1758

Documents: the four Middleton Acts of Parliament, the Leeds Corporation Act, 1879, copies of agreements for the 1758 waggonway, the Middleton Colliery account books, copies of sale and mortgage documents for the estate and for Messrs. Fenton, Murray & Wood, Quarter Sessions records, John Blenkinsop's colliery reports, Thomas Embleton's letter book, and the Fenwick & Watson Report and letters from Murray and Blenkinsop (the Watson Papers collection).

Newspapers: *The Leeds Intelligencer*, *The Leeds Mercury*, *The Times*, *The Yorkshire Evening News*, *The Yorkshire Evening Post*, and *The Yorkshire Post*

The Yorkshire Post Leeds Tercentenary Supplement, 1926

Photographs: the Middleton Railway Museum Archive.

Leeds Reference/Local History Library and West Yorkshire Archives, Leeds, have many maps showing the railway at various stages of its history. West Yorkshire Archives, Leeds, houses the superb collection of Middleton business records, and Blenkinsop, Murray and Embleton material. Leeds Reference/Local History Library has microfilm files of the above-named newspapers and of some of the colliery accounts, and also has many of the books. West Yorkshire Archives, Wakefield have the Quarter Sessions records (QS 10/22), and the registered copies of Charles Brandling's lease agreements (Vol. B3), and of the various mortgage, lease and sale contracts referred to. West Yorkshire Archives, Bradford has the Busk/Brandling draft agreement (16D86/1401). Bradford Reference Library has microfilm copies of *The Leeds Mercury*, *The Yorkshire Post*, and *The Times*. The North of England Institute of Mining and Mechanical Engineers, Newcastle upon Tyne, owns the Watson Papers, now housed by the Northumberland Record Office. The Record Office, House of Lords, has the *Commons Journal*. Beamish Museum owns William Strickland's original annotated watercolours.

The M.R.T. Historian wishes to thank all of these establishments and their helpful members of staff. Very many thanks also to the M.R.T.'s members, friends and supporters, who at some time in the past have provided the illustrations used in this book.

LOCOMOTIVES AT MIDDLETON - 1812 TO 1960

4 foot 1 inch Gauge

Name	Type/Builder/Works No./Date
<i>Salamanca</i>	2-1-2 rack loco built Fenton, Murray & Wood (1812) **
<i>Prince Regent</i>	ditto, (1812) *, +
<i>Lord Wellington</i>	ditto, (1813)*
<i>Marquis Wellesley</i>	ditto, (1815)*, +
<i>Blenkinsop</i>	0-4-0ST built Manning Wardle 220 of 1866 IC ++
<i>Matthew Murray</i>	0-4-0ST built Manning Wardle 284 of 1869 +++

NOTES

- * 1 loco withdrawn 1831-5, 1 exploded 1834, 1 withdrawn 1835 - scrapped c.1860.
 ** Exploded 1818.
 + There is still some doubt as to the veracity of this name.
 ++ Scrapped by 1881.
 +++ Rebuilt to standard gauge in 1881.

4 foot 8½ inch Gauge

Name/Number	Type	Builder/Works No.	Date	Came	Withdrawn
<i>Blenkinsop No.2</i>	0-6-0ST IC	Manning Wardle 797	1881	1881 (a)	Nov. 1953 (b)
<i>Niger</i>	0-6-0ST IC	Manning Wardle 1262	1892	1892	Scrapped by 1947
<i>No. 6</i>	0-6-0 IC	N.E.R.?/?	c.1900?	(c)	Scrapped by 1947
<i>Matthew Murray No.2</i>	0-4-0ST	Manning Wardle 1752	1909	1909	Nov. 1953. (b)
<i>Gladstone</i>	0-6-0ST IC	Hudswell Clarke 491	1898	1916 (d)	Aug. 1950
<i>Jean/L.N.E.R.407</i>	0-6-0ST IC	N.E.R. Gateshead/?	1897	1947(e)	
<i>69</i>	0-6-0ST	Hudswell Clarke 1175	1916	1950 (f)	1959
<i>St. Johns No. 1</i>	0-4-0ST	Peckett 1597?	1921	1952 (g)	Before 1960
<i>St. Johns No. 2</i>	0-4-0ST	Peckett 1763	1922	1952 (g)	Before 1960
<i>Edith</i>	0-6-0ST IC	Hunslet 1482	1925	1953 (h)	1960
<i>Nostell No. 2</i>	0-6-0ST IC	Hudswell Clarke 328	1889	1953? (i)	Before 1960
<i>Nostell No. 4</i>	0-4-0ST	Peckett 1789	1929	1953 (j)	1960
<i>Blenkinsop 1953</i>	0-6-0ST	Hudswell Clarke 1871	1953	1954 new	1960 (k)

NOTES

- (a) Rebuilt 1910.
 (b) Scrapped by G. Cohen's.
 (c) Rebuilt as an 0-6-0ST in 1912.
 (d) From Price, Wills & Reeves, Workington. Scrapped by Robinson & Birdsell.
 (e) Ex-L.N.E.R. No.407, June 1937; ex-Whitwood Chemical Company, 1943; ex-Briggs Collieries Company, Saville Colliery, October 1947. Scrapped by 1949
 (f) From Appelby Frodingham Steel Company (No.69).
 (g) From N.C.B. St. Johns, Normanton. To N.C.B. Lofthouse.
 (h) From N.C.B. Charlesworth, Rothwell. To N.C.B. Lofthouse after repair at Hunslet's.
 (i) Rebuilt 1934 and 1951. ex Nostell Colliery. Went to N.C.B. Lofthouse.
 (j) Originally Shawcross No.1. Ex-N.C.B.Shawcross,1952; ex-N.C.B.Old Roundwood, 1952; ex-N.C.B. Nostell, 1953. To N.C.B. Lofthouse.
 (k) To N.C.B. Lofthouse. Scrapped 1971 at N.C.B. St. Johns.

ST saddle tank locomotive

IC inside cylinder locomotive

LOCOMOTIVES AT MIDDLETON - 1960 ONWARDS

Name/No.	Type	Builder/Works No.	Built	Came	Owners (non MRT)	Left/to
<i>John Alcock</i>	0-6-0DM	Hunslet 1697	1932	1960		
<i>No.54</i>	4wTGVB	Sentinel 8839	1933	1961		
<i>Windle</i>	0-4-0WT	Borrows 53	1909	1961		
<i>Swansea</i>	0-6-0ST	Avonside 1569	1909	1962		1973(l)
<i>1310</i>	0-4-0T	N.E.R. Gateshead 38	1891	1965	S.P.T. '65	
<i>Matthew Murray</i>	0-4-0ST	Bagnall 2702	1943	1966		
<i>21</i>	0-6-0ST	Avonside 1671	1913	1966		1969(m)
	0-4-0DM	Fowler 3900002	1945	1967		
<i>Henry de Lacy II</i>	0-4-0ST	Hudswell Clarke 1309	1917	1968		
<i>Courage</i>	4wDM	Hudson-Hunslet 1786	1935	1968		
<i>Carroll</i>	0-4-0DM	Hudswell Clarke D631	1946	1969		
<i>Chairman</i>	0-4-0ST	Hudswell Clarke 1717	1940	1969		1972(m)
<i>No. 6</i>	0-4-0ST	Hawthorn Leslie 3860	1935	1971		
<i>385</i>	0-4-0WT	Hartmann, Chemnitz 2110	1895	1972	S.P.T. '65	
<i>John Blenkinsop</i>	0-4-0ST	Peckett 2003	1941	1972	M.R.T./S. Bye	
	0-4-0ST	Peckett 2103	1948/50	1981	A.&J. Bell	
<i>Mary</i>	0-4-0DM	Hudswell Clarke D577	1932	1980	G. Parkin	
	4wDH	Thomas Hill 138C	1964	1982	P. Nettleton	
	0-4-0DH	Fowler 4220038	1966	1983	J.Lee/V.Smith	1993(n)
	0-4-0DH	Fowler 4220029	1965	1983	" "	1985(m)
<i>Mirvale</i>	0-4-0ST	Hudswell Clarke 1882	1955	1986	M.R.T. Group	
<i>91</i>	0-4-0DE	Brush/Beyer P. 91/7856	1958	1987	British Steel	
<i>Rowntree No.3</i>	4wDM	Ruston/Hornsby 441934	1960	1988	N.Y.M.R.	
<i>Harry</i>	0-4-0ST	Andrew Barclay 1823	1924	1989	Crossley	1992(o)
<i>Matthew Murray</i>	0-6-0ST	Manning Wardle 1601	1903	1990		
<i>Brookes No.1</i>	0-6-0ST	Hunslet 2387	1941	1991	D. Monckton	
<i>Lucie</i>	0-4-0T	Cockerill 1625	1890	1995		
<i>MSC67</i>	0-6-0T	Hudswell Clarke 1369	1919	1995	Dr. G. Blears	
<i>Sir Berkeley</i>	0-6-0ST	Manning Wardle 1210	1891	1995	V.C.T.	
<i>DB998901 'Olive'</i>	4w	Drewry Car Co. 2268	1950	1997	EM2LS	
	0-4-0T	Cockerill 3083	1925	1999		
<i>Austin No.1</i>	0-4-0DM	Peckett 5003	1961	2001	Austin Truman	
<i>No.11</i>	0-4-0ST	Hunslet 1493	1925	2001	S.J. Roberts	
<i>Picton</i>	2-6-2T	Hunslet 1540	1927	2002	D. Monckton	
<i>DB999507</i>	4w	Wickham 8025	1958	2003	G. Parkin	
	4w	Greenwood&Batley420452	1979	2003		

(l) Sold for private preservation

(m) Dismantled for spares

(n) Sold back into industrial use

(o) Went to Pontypool & Blaenavon Railway

DE	diesel electric	G	geared drive	T	locomotive with side tanks
DM	diesel mechanical	OC	outside cylinder	VB	vertical boiler
DH	diesel hydraulic	ST	locomotive with saddle tank	WT	locomotive with well tank

For further details of the Middleton Railway Trust Museum's locomotives, and its other rolling stock, including the 'Leeds Collection' vehicles, please see our *Locomotive Stockbook*, which gives full details of each locomotive's origins, working history, technical details etc.

THE MIDDLETON RAILWAY MUSEUM

Visit our website for the latest information: www.middletonrailway.org.uk

ACCESS (to Moor Road Station)

a) **By car**, via M621 motorway from the south to Junction 5, turn right across Tunstall Road bridge, then take the 3rd exit from the roundabout. The Station is immediately on the right. (There is no *southbound* exit at Junction 5, and visitors coming on the M621 from the direction of Leeds centre should exit at Junction 4, and go forward alongside the M621 as far as the roundabout.)

OR via the A653 to Tunstall Road traffic lights, approximately one mile from the City Centre or approximately two miles from the southern City boundary, turn down Tunstall Road to the roundabout. Take the 3rd exit from the roundabout. The Station is immediately on the right.

b) **By bus** from Leeds city centre. Bus routes, numbers, and timetables change regularly, and it is best to telephone Metro for information (0113 245 7676) or find it on-line at www.wymetro.co/plan/index.shtml

SERVICES:

Visitors' trains run afternoon services every Saturday (diesel), Sunday (steam), and Bank Holiday Monday (steam) from Easter to the end of September. Additionally, Sunday steam services run in October and November, Santa Special trains run in December, and there are special events during the year for enthusiasts, families, schools and playgroups. Birthday Parties and special trains for groups can be arranged. For details of services please send a stamped addressed envelope to The Marketing Manager at the Trust's address (see below), ask at the Station, or - for the 'Talking Timetable' of regular services - ring 0113 271 0320.

MEMBERSHIP:

The railway is still maintained and operated by the voluntary labour of the Trust's own membership. If you would like to help the world's oldest railway in its third century of service (training given where appropriate), or wish to support it by your membership, please send a stamped addressed envelope to The Membership Secretary at the Trust's address (see below), or ask at Moor Road Station for a Membership Form. New members are always very welcome.



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