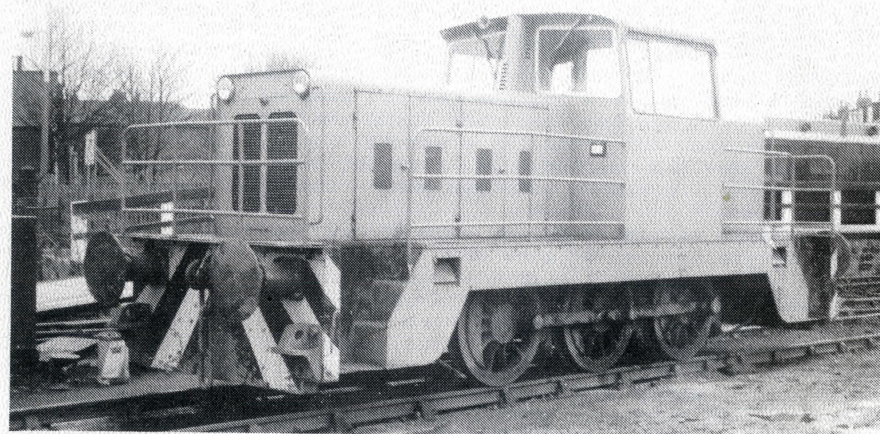


THE OLD RUN



JOURNAL OF
THE 1758 MIDDLETON RAILWAY
LEEDS

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The Editor invites all readers to contribute articles, news items, letters, photographs and drawings on subjects of interest! All contributions should include the reader's name and address. Opinions expressed in the magazine do not necessarily reflect those of the Middleton Railway Trust Ltd, the Middleton Railway Association, or the Editor.

All articles for the next issue should reach the Editor by 1st June 1988.

Details of rates and conditions for advertisements in The Old Run may be obtained from the Editor.

Editorial

In the words of a 1970's pop star, "Hello Hello, I'm back again!"

Following Geoff Dinsdale's unfortunate resignation due to personal circumstances, I am once again in the Editorial chair. This is, I hope, only a temporary state of affairs, so if there is anyone out there wanting a job assisting the Railway, please get in touch - the Editorship of the Old Run awaits you!

An interesting development over the past few years has been the number of regular members joining other railway societies and spending the occasional day working there instead of at Middleton. As one Middleton regular puts it "You don't have any responsibility at other railways - it's just a job which we can enjoy without having to worry about who's responsible for crewing the trains, shop or whatever". There is the other side of the coin of course, that Middleton is desperately short of working members and the few members who go to other lines simply deplete the workforce here. That is, I believe, a rather isolationist and even blinkered view. There are considerable advantages in working for other societies in addition to it being a form of relaxation. For one thing, a useful exchange of ideas can be had, with both societies benefitting. Our latest diesel loco was acquired as a result of co-operation with the Yorkshire Dales Railway, whilst the same railway swapped a vacuum brake handle for DSB385 for some items which they required and we had no use for. All in all, these 'Busman's Holidays' for working members can do nothing but good for both the Middleton Railway and the other societies involved. Long may they continue.

Once again, Operating Time is upon us and vacancies exist in all departments. In particular, the shop is desperately short of staff. The shop is our major source of revenue, and it is rather worrying that no-one appears to want to sell this season. If anyone is willing to do this vital job, please contact John Chaplin, whose address and 'phone number are given at the end of the magazine. There are other vacancies too, such as footplate staff and guards, for which training will be given if anyone is interested in trying their hand. So why not spend your weekends helping the Railway this year - you don't have to be a workaholic (although we won't discourage you if you are!), just one day each month will greatly assist us this year.

Ian Smith

Fifty-Four

The Sentinel Waggon Works Ltd., Shrewsbury, was well known for its designs of steam lorries. In the 1920's it developed a design of steam locomotive which utilised the same type of vertical boiler and high speed engine as was used in the road vehicles. Following trials with one of these locomotives on the Derwent Valley Light Railway at York, the L.N.E.R. purchased its first Sentinel for Departmental duties in September, 1925.

Eventually, the L.N.E.R. purchased 56 Sentinel locomotives of two basic types - C.E. and C.E.D.G. (C.E. stood for centre engine and D.G. meant double gear). Under the L.N.E.R. classification scheme the type C.E. was class Y1 and the type C.E.D.G. was class Y3. The class Y1 engines (24 in total) were further divided into four sub-classifications to cater for variations in boiler size and weight.

All the locomotives had a vertical engine, mounted centrally in the cab, with 2 six and three quarter inch by nine inch cylinders driving a crankshaft which ran in a totally enclosed oil bath. The engine drove the rail wheels by means of sprockets and 2 two and a quarter inch pitch roller chains, one to each axle. The Y3's had two speed gearboxes utilising sliding pinions located on the crankshaft. There was some variation in the sprocket ratio between the various types. Classes Y1/1, Y1/3 and Y1/4 had somewhat smaller boilers than the Y1/2 and Y3 locomotives, but all were pressed to 275 lbf per square inch and had a double row coiled superheater fitted inside the firebox. Wheel diameter was standard at 2'6" on all the locomotives as were all other major dimensions. The Middleton Railway's Sentinel, Works No. 8837 was the last Sentinel steam locomotive to be purchased by the L.N.E.R. It was ordered on the 15th June 1933, and was a standard C.E. type locomotive, L.N.E.R. class Y1/2. Delivery was quoted as 12-14 weeks, but the loco was in fact not taken into stock until December 1933. Paint finish was specified as standard L.N.E.R. black with red line, and it was given the number 59. The locomotive was despatched to Darlington Locomotive Works for acceptance, and was required for service at the Geneva Permanent Way Depot, Darlington.

No. 59 spent its entire working life allocated to Geneva Yard and was always in Departmental stock. It was renumbered 8153 in October 1946 under the Thompson renumbering scheme and, like all but one of the class, became part of British Railways in 1948. 60000 was added to its number in June 1951 and, following the creation of a separate number series for E. & N.E. Departmental Locomotives, it was renumbered yet again in October 1954, when it became Departmental Locomotive No.54.

As No.54 it received its last overhaul in September 1957, and continued to work at Geneva Yard until May 1961, being officially withdrawn from stock the following month. At about this time, the Middleton Railway was seeking another locomotive to assist its ex L.M.S. diesel locomotive 'John Alcock' in the operation of the busy freight service. A prominent member of the Middleton committee was a great believer of the virtues of Sentinel locomotives, and persuaded the other members that such an engine would be ideal for the line. Arrangements were made to inspect the locomotive on the 29th July 1961 and, following a very favourable report, it was purchased for the sum of £250 shortly after. The locomotive was in generally good condition, but it is amusing to think now that B.R. were asked to make good some patches on the bunker sides, replace missing windows, railguards, engine cover and replace the missing worksplates! A considerable amount of spares was also offered by B.R., including a brand new firebox (cost new £2011) and these were purchased for £23. Those were the days. The Sentinel did not enter service immediately upon arrival as several problems became apparent when it was first steamed, generally as a result of its period in open storage. After these teething troubles had been overcome it took up the role as standby to 'John Alcock', a task it performed satisfactorily until the arrival of further working locomotives in 1966. It continued to be used on goods and then passenger trains on the Middleton Railway until September 1977, when a burst boiler tube brought about its withdrawal from service. Previous to this it had reverted to its original number, 59, when it was specially repainted for the Shildon celebrations in 1975, where it appeared as a static exhibit.

By the time of its withdrawal in 1977, it was obvious that much work was becoming necessary. Those patches put on the bottom of the bunker by B.R. in 1961 had reached the end of their days, and corrosion was evident in large areas of the body plating. Because of pressure of work on other jobs, little was done with the locomotive. However, in 1982 two members expressed an interest in working on the Sentinel and duly started the steady process of dismantling it. Before long, the locomotive had been reduced to a basic shell. It was at this time that the biggest upheaval ever to hit the Middleton Railway happened when we were told to quit our headquarters within six weeks as it was being sold. The next two years were spent in building and establishing the new depot at Moor Road, and there was no time to work on any job that was not necessary.

At last, in 1985, work was again able to be started on the full restoration of No.54. As previously mentioned, much of the body plating was corroded through and in need of replacement. The bunker was renewed in its entirety, as was the floor at the rear of the locomotive. Repairs to the cab were confined to cutting out corroded plate and welding in replacement sections. Much of the plating has rivetted strengthening angle, and some four hundred rivets were put in to give an authentic finish. The ventilation grilles were badly corroded in places, and new ones were generously provided by a local engineering firm. Removal

of the bunker floor had exposed the rear of the frames, and some remedial work was found to be necessary on them. After repairs they were needle gunned before applying several coats of bitumastic paint.

Once the platework was completed, attention was turned to the boiler. Sentinel boilers consist essentially of two flanged cylinders, an outer (shell) and an inner (firebox), between which is the water and steam space. The two cylinders are fastened together at their ends by the flanges, and the firebox additionally has water tubes arranged in a criss cross pattern to increase the heating surface. A big advantage of this type of boiler is the total accessibility for inspection purposes. The spare firebox had been put to use in the 1960's and, apart from the tubes, was in excellent condition. The shell, however, dated from 1941, and was starting to show signs of its age although still with plenty of life left. The Boiler Inspector requested that some wastage on the outside of the shell be built up by electric welding, a job that was duly carried out by a local firm of boiler smiths. The tubes in the firebox are of two types, the outer plain tubes and inner stay tubes which are screwed into the firebox. Application of a hydraulic test showed that several of the plain tubes were holed. Our Boiler Inspector advised that the stay tubes, which are much thicker than the plain tubes, were suitable for a further period of use and consequently only the plain tubes were renewed. Apart from almost complete re-studding, little other work was necessary on the boiler, and it successfully passed a full hydraulic test in August 1987.

Assembly of the locomotive now proceeded apace, with the boiler being lifted back into the frames and the various fittings being overhauled or replaced by spares as necessary. One large problem that arose was the fact that the two people who had dismantled the locomotive were no longer members of the Trust, and with few drawings available to guide us much head scratching was necessary, especially with the pipe runs. The copper pipes were generally satisfactory and were annealed for further use. The union nuts were, unusually, steel, and many were found to have corroded threads and required replacement. A new main steam pipe was made up to replace the badly corroded original. The boiler cladding was wasted beyond repair, as was the ashpan, and many hours were spent in manufacturing replacements. It was ironic that, having spent much time in manufacturing a new ashpan, a spare was found hidden away in one of our stores only days after the new one had been fitted!

The engine unit was known to be in reasonable condition, and a decision was made to confine work on this unit to freeing, grinding in and setting the valves. Driven from the engine crankshaft was a water feed pump. The drive to this had failed many years ago and it had been removed. It was decided that the pump should be restored, and new drive gears were manufactured and fitted.

At last the locomotive was sufficiently assembled to permit a steam test, and a fire was lit for the first time in a decade on the 12th September. Although several minor problems were apparent, the test was satisfactorily concluded and the locomotive moved under its own power the following day.

The L.N.E.R. Sentinels were, with a few exceptions, only fitted with steam and handbrakes. Operation of passenger trains necessitated the fitting of a vacuum brake system. That used at Middleton is of our own design, consisting of a 'Penberthy' ejector and other industrial fittings. Because of the high boiler pressure, it has been deemed necessary to fit a pressure reducing valve to the steam supply.

Work continued with the many small ancillary jobs. New hardwood window frames have been produced as has a coal bunker, a conscious decision being made to fit only one instead of the two originally fitted. Unfortunately, steam tests in March revealed that all was not well with the engine unit and further investigation revealed that the valve guides were corroded and needed replacement. This work is in hand at the time of writing. Repainting is now almost the last item on the list of outstanding jobs, and the locomotive will appear, hopefully, in May or June, as B.R. Departmental Locomotive No.54, the livery it carried when withdrawn from service in 1961.

Steve Roberts

Membership Secretary

As from 1st April 1988, we have a new Membership Secretary. He is Michael Scargill, and he replaces Anne Roberts who has held the post for several years. I am sure that all members will wish Old Run firstly to thank Anne very much for her efficient work in the past, not always easy with a young family, and secondly to welcome Mike as her replacement.

All membership correspondence, renewals etc. should now be sent to him at 31, Victoria Walk, Horsforth, Leeds LS18 4PP. His telephone number is Leeds 585068 and, please note, it appears ONLY in the Old Run: the M.Scargill in the Phone Book, at a different number of the same street, is not Mike and cannot help you, so if you need to contact him look only in the Old Run address list!

Carriage & Wagon News

Following the finish of the 1987 passenger services, the coach (ex P.M.V. 1074) came into the workshops for painting and other minor work. A further coat of epoxy resin has been applied to the roof, and the body has been rubbed down and received two coats of paint, the top coat being our normal maroon livery. This has been complemented by lining out in cream and, together with the newly applied lettering it looks very smart.

The ex L.N.E.R. van has had the northern end partition restored to give more protection to those hardy souls who choose to travel in it! However, 1988 is likely to be its last year in regular passenger service as the decision has been made to commence work on the conversion of P.M.V. No.1867 to a coach. This vehicle was bought with the aid of a grant from the Queen's Silver Jubilee Trust, and is to be fitted out as a Children's Coach with suitable embellishments.

No.1867 has, since its arrival on the line, been used as a stores vehicle, along with the other P.M.V. No.2085 which is privately owned. In order to release No.1867 for conversion, its contents have had to be transferred to No.2085, and this vehicle has been fitted out with some of the shelving obtained from Savile Colliery a couple of years ago.

Signal & Telegraph News

Good progress has been made this winter, with the installation of a ground frame to control the running line turnouts at Moor Road. The five lever frame recovered from Norfolk last year has been overhauled and installed on a concrete base. The interlocking has been modified to provide a king lever, two point levers and two locking levers. This will eventually be released by Annetts key attached to the single line token. The various bellcranks and compensators had been sited, and only required the rodding to complete the job. Progress, however, had come to a halt because of a lack of 'A' frames which support the point rodding.

'A' frames are very hard to come by, as they are very liable to damage and general practice on B.R. is to smash them when recovering S. & T. equipment. Mechanical signalling equipment is generally difficult to obtain in small quantities as well, as B.R. tend to recover it for re-use elsewhere. However, the discovery of a disused two lever frame and about 200ft of rodding and associated equipment at Normanton, and its subsequent purchase and removal, has enabled us to re-commence the installation of the rodding at Moor Road. It is anticipated that this work will be complete by the start of the season.

Middleton in the 1960's - Part II

demolished building had stood at the side of Casson Close, our original 1758 terminus. Could it have been part of Brandling's staithes - the office most likely? Perhaps the brickwork was more blackened than that of the chapel because, over the years, thousands of waggons of coal had been tipped near it. It is very tempting to speculate, but needs a lot more checking up on. Meanwhileas the Railway never went further north than Casson's Close, I must finish here too!

Sheila Bye

Santa Specials

Notwithstanding a slight increase in prices this year, (the first for several), numbers travelling on our Santa Specials were up yet again. Daily ticket revenue broke the £1000 barrier for the first time on two occasions, and the total ticket sales for the four days of operations was £3455 - a very creditable performance indeed. It is probably true to say that we reach saturation point on these occasions, and it would be virtually impossible to carry any more!

One interesting statistic that repeats itself each year is that more adults than children ride on these trains. There must be something in that!

We are, of course, aiming to operate Santa trains again in 1988, and one possibility that is being explored is the provision of lighting on the trains. This would enable us to operate over a longer day than at present, and at least spread the load even if we don't beat last year's record.

Hangover Specials

An innovation this year was the operation of what were termed "Hangover Specials" on New Year's Day. Passenger figures could certainly not be described as heavy, but we covered our costs and will almost certainly be repeating the event on New Year's Day 1989.

EDITOR'S NOTE:- I can answer one of Steve's questions! In 1982, the M.R.T. was allowed access to Walton Colliery to recover usable items, the agreement being that all items recovered would be inspected by N.C.B. officials, and a 'job lot' price agreed. Two of the three stretchers were acquired by our First Aid Officer (me!), for use in the then proposed shed and the toolvan, but they were misplaced during our move. Now I know where they were - in the P.M.V.!

Permanent Way News

The availability of suitable good quality timber sleepers at reasonable price is virtually nil at present. Because we need to maintain a continuous programme of spot re-sleepering with the aid of the N.A.C.R.O. scheme, the shortage of sleepers was becoming critical. With the location of a satisfactory batch of concrete sleepers at Horbury Bridge, a decision was made to purchase some of these at a reasonable if by no means bargain price. This is a new departure for us, as we have hitherto only used timber. Altogether, 144 concrete sleepers have been purchased and were moved in two days at the end of January/beginning of February.

Because it is impractical to spot re-sleeper using concrete sleepers, it was decided to replace six panels of track completely. The stretch chosen for this relaying was just south of the motorway tunnel at a place commonly known as "the ramp", this being where the old and new alignments came together when that part of the line was relaid by Henry Boots during the motorway construction. Whilst not in need of relaying because of the condition of the track, it did need some re-alignment and offered the further advantage that space was available by the side of the line for offloading the concrete sleepers which, at a quarter of a ton apiece, are not ideally suited to being carried!

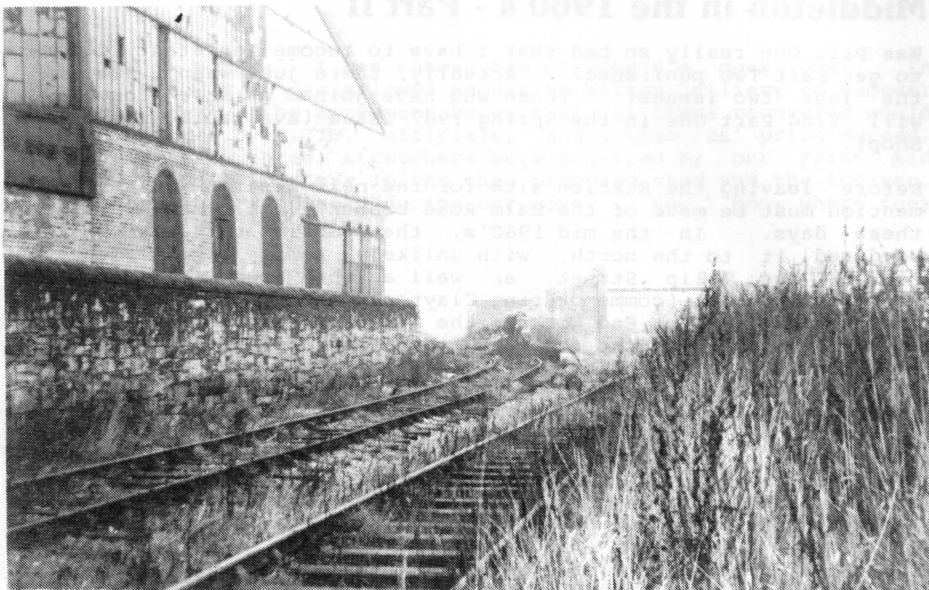
The timber sleepers released by this re-laying will be sorted to select those that are re-usable. These will then be used for spot re-sleepering on the top curve, a task that can be performed by N.A.C.R.O. during the summer season.

Middleton in the 1960's - Part II

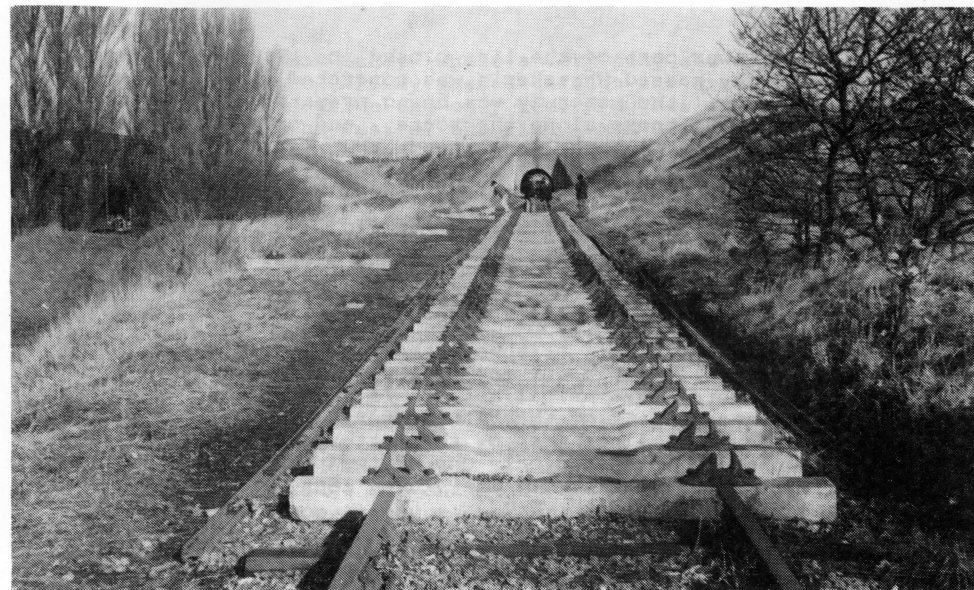
Was Part One really so bad that I have to become Assistant Editor to get Part Two published? Actually, there just wasn't room in the last two issues! Those who have joined us more recently will find Part One in the Spring 1987 issue (available from the Shop).

Before leaving the Station site for the next section of track, mention must be made of the Balm Road branch, again much changed these days. In the mid 1960's, the redbrick terraces still bordered it to the north, with unlikely names like Prospect Terrace and Tulip Street, as well as the less than poetic Gasholder Street (commemorating Clayton's most famous product). Just past their Moor End Works, the old footbridge still crossed the line, carrying the footpath from Balm Road and the big old flax mill (still standing) across the back of Henry Berry's to the spotters' paradise next to the signal box on the Midland line. In my childhood we called it 'the low wall' - because it was the only bit low enough for a child to sit on for a few comfortable hours spotting (the only other place was on the concrete fence-base above Hunslet Station, where the occasional missing railing gave room for a spotter to sit until cleared off by the station staff).

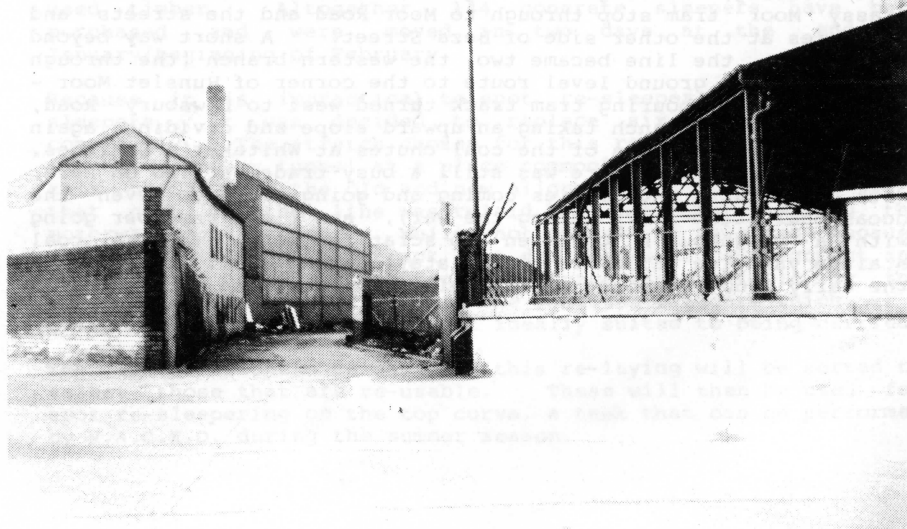
Meanwhile, back at our Station the section of track north of the car park as far as the Craven Gate pub is almost impossible to envisage now. No signs whatever remain, and if its ghostly image suddenly appeared it would be floating some twenty-odd feet above the S.E. Leeds Urban Motorway. Beyond Burton Road, more iron fencing cut off the Railway from the still adjacent tram track to the west and Moor Road to the east. About a third of the way to Whitaker's Staithes, a narrow level foot-crossing, railed and gated, allowed access from the Grassy Moor tram stop through to Moor Road and the streets and factories at the other side of Beza Street. A short way beyond this point, the line became two, the western branch (the through line) taking a ground level route to the corner of Hunslet Moor - where the neighbouring tram track turned west to Dewsbury Road, and the eastern branch taking an upward slope and dividing again to run along the tops of the coal chutes at Whitaker's Staithes. When I was a child, there was still a busy trade carried on here, with coal carts and lorries coming and going all day (even the occasional steam lorry during the war), and I can remember going with a neighbour's children to scrat for waste in the coal staithe yard (we called it t'coal stay) during a pit strike. In the early 1960's a scrap metal dealer was using the yard.



'Balm Road branch in January 1967, showing our Moor End Works connection (left) and the old footbridge'.



M.A.C.R.C. employees have recently relaid a section of track using concrete sleepers. Here the section awaits rail laying.
S.J. Roberts.



You can't keep a good line down! Traces of rail appear in the tarmac of Jack Lane, leading towards the Gas Works. February 1967.
Both photos by S. Bye



Brush 91/58, universally known as 'Alf' on the pit at Moor Road. The loco is currently undergoing overhaul.

After the lower part of the line closed in 1948, the western branch which by-passed Whitaker's was concreted over. When, in the late 1960's, the motorway was being prepared for, test holes were dug here and there along the route, and one of these was on the site of the through line, near the corner of Longroyd Terrace, where Hunslet Moor met Grassy Moor. Looking into this hole one day (and later climbing down into it with camera, trowel and plastic bag, much to the curiosity of the other local inhabitants), I discovered, some several inches below the concrete, a substantial layer of broken pottery and the little baked clay implements used for parting one plate etc. from another during kilning. Was this, I wondered, waste from the Leeds Pottery being used as ballast? Coal was supplied by the Colliery to its Railway's neighbour the old Leeds Pottery, so it was quite feasible that returning coal waggons might have brought away useless breakages as ballast. If so, it must have been during the second half of the 19th century when the Pottery was past its heyday, since most of the pottery fragments were of common household pots and only one or two pieces resembled the classic Leeds creamware of the late 18th and early 19th centuries.

At the side of the Staithes, the usual Saxby & Farmer gates barred access to the through line from Moor Road (which had taken a sharp turn left at Hunslet Station bridge and now crossed the line at a right angle). At the other side of Moor Road, the line ran past the end of a Works Department yard and then to the side of the Midland line. By the 1960's, this section had a row of rented garages built on it, but the old 'Cholera Stone' still stood against the yard wall at the south end, commemorating the fact that 55 Hunslet victims of the 1832 and 1834 cholera epidemics had been buried at the other side of the wall, and their remains subsequently removed to Woodhouse Hill Cemetery when the Works Department yard replaced the graveyard. When the new road network replaced them, the stone itself was taken to Woodhouse Hill.

At the other end of the line of garages, was the Chesney Road crossing (with less imposing gates now that the once disputed-access area of Hunslet Moor had been left), and at the north side of the road a used car dealer's yard bestrode the old railway track. Beyond here, the now deserted trackbed passed the Craven Gate pub and clung to the side of the Midland line until it came to the Jack Lane bridge: (it was along this section that the coal train pursued my mother and her friend, and it can still be walked along). The bridge crossed the Midland line, originally the North Midland and, as this line was opened in 1840, it must surely have been quite an early example of a railway bridging another railway. It was, perhaps, a nicely appropriate touch that when, in September 1973, the long disused bridge was being demolished, B.R. sent along a steam crane to perform the execution.

After crossing Jack Lane, where a very puny set of gates closed off the track, the Railway passed through the site of the Leeds Pottery Yard, alongside the only remaining building belonging to the Pottery (to the west of the line, and still there the last time I passed). J. and F. Kidson's 'Historical Notices of the Leeds Old Pottery', published in 1892, related how the Colliery paid £7 wayleave fee a year to the Pottery, and also gave them an allowance in the price of coal supplied. In return, the Colliery had the right to run their trains through to their own terminus staithes, and had a built-in customer with vast requirements of fuel. During the latter half of the 18th century, a former agent of the Brandling estate, Richard Humble, was a partner in the Pottery firm, and by the time the Kidsons were writing their book the Colliery Company actually owned the disused pottery buildings and yard.

However, by the mid 1960's, the trackbed was tarmaced over and gave entrance from Jack Lane through to the much-vaunted but short-lived Sahara gas works. Here, the track took an upward slope ready to bridge the end of Holmes Street and approach the elevated coal drop 'viaduct' at its Kidacre Street terminus. Holmes Street was then a fairly important link between Dewsbury Road and the industries and railway goods yard complex around Kidacre Street, the alternative routes being somewhat circuitous depending on where one's destination was. Therefore, it was hardly surprising that the railway bridge was quickly demolished once the Railway was cut back to Hunslet Moor Staithes, since it gave very little headroom for industrial traffic. The bridge was at the Kidacre Street end of Holmes Street, and its position was marked by stone blocks in the brick walls at both sides of the street. There were, in fact, 2 different levels, the lower being set closer together than the others - presumably dating back to the original narrower gauge. I have a clear memory from childhood of being on a tram going down Dewsbury Road, turning to look along Holmes Street, and seeing the colliery train start to cross the bridge towards the staithes. When I "walked the line" in the mid 1960's, the stone built coal staithes at Kidacre Street were already almost 10 years gone. Some years later, however, I took life in hands and ventured among the lonely dereliction on the small triangle of land even further north, bordered by Meadow Lane, Hunslet Lane and Great Wilson Street. I was attending an evening class on Leeds architecture and had decided to photograph the former White Chapel before it was demolished. Having a few shots left, I finished off the film on another rather interesting looking, single-storey brick building standing nearby. The brickwork was even more blackened than that of the chapel (built 1755), but its style was not really older - it bore a slight resemblance to part of the Leeds Coloured Cloth Hall opened in 1758(!), and could have been an attempt to ape the more grandiose public building by adding the large brickwork triangular pediment above the frontage. It was some time later that I looked at some old maps for traces of the Middleton Railway, and suddenly realised that the by then

Sorting the Stores

When we had to move out of Clayton's Yard in 1983, our vast collection of bits and pieces was crammed into the two P.M.V.'s Nos.1867 and 1074. Makeshift shelving was hurriedly erected in the vehicles, and containers of all shapes and sizes obtained to hold the million and one items that we had acquired over the years. For almost two years, we lived out of these two vans and a somewhat shortened version of the wooden hut that had served us well for over twenty years, until the workshop was finally complete and a more luxurious lifestyle became the norm.

A large amount of purpose built shelving was acquired from Savile Colliery in 1985, and this was used to form the basis of a stores in the new workshop. Gradually, the shelves filled up as regularly used items found their way into this more organised storage system. However, a vast amount of stores and equipment remained in the two P.M.V.'s and, over the years, much of the shelving has given way, especially during shunting operations. Total chaos reigned within the two vehicles. People avoided searching for things in these vehicles, and the dreaded cry "It's in a P.M.V." brought despair to those seeking items of equipment. The notorious 'collapse zone', where shelf upon shelf had given way, was avoided at all costs. There is a saying at Middleton that we are short of nothing - all you've got to do is find it - in the P.M.V.!

Now all this is changing. The old wooden hut has been re-erected at the south end of the yard, and the roof made waterproof. This has enabled us to store some of the larger items under cover, and also to clear a space in P.M.V.1074 large enough to erect some of the Savile shelving. A start has been made on sorting out the various items onto this shelving, so creating more space for more shelving. Gradually, some degree of organisation is emerging from the chaos. Organisation is not the only thing to emerge - one of the larger items to turn up was a spare ashpan for the Sentinel, only days after we had completed the manufacture of a new one! Sentinel spares abound, along with a multitude of nuts and bolts, pipe fittings, tools, cable, motors etc. Among the less logical items in our collection are three stretchers and a school crossing lollipop sign! Where these have come from is anybody's guess!

Some of the items are just plain junk, much more will probably never be used, but there is a vast amount of useful equipment, much of which we had long forgotten about. Sorting it out will obviously take time, but we are at last seeing light at the end of the tunnel. Before much longer the cry "It's in the P.M.V." will no longer cause people to cringe with fear at the thought.

Steve Roberts

Loco News

It is amazing how time flies when you are enjoying yourself! Or is it that the nearer Easter gets, the less time there seems to be to get all the jobs done? At the time of writing, Easter is just eight short weeks away and the amount of work we hope to achieve before then still appears formidable. It is very gratifying to note the amount of work being done on the motive power nowadays, and real strides are being made with our locos.

P2003 'John Blenkinsop' worked the Santa Specials with no problems, and has now been stored for the winter. The ashpan has been removed for repair before the season commences at Easter. It is due for the annual boiler inspection in March, but no problems are anticipated.

No.385 also worked the Santa Specials without incident and, apart from draining and frost protection, is being kept in a serviceable condition throughout the winter. The ashpan was removed for major surgery during October, as it had become badly warped and wasted through in places. Some repairs have been carried out to the drain cock operating linkage.

No.54 The Sentinel has been the subject of much intensive work since its trial steaming at the gala. A new ashpan has been fabricated, using the badly corroded original as a guide. All new boiler cladding has been manufactured and fitted - a task that appeared never-ending. At the back of the loco, new tank holding down straps and coal bunker have been provided. Vacuum brake gear has been fitted to enable the loco to be operated on passenger trains. New hardwood window frames have been made and will be fitted once painting is complete. The loco now sports a coat of gloss black paint, but a second coat will be applied once all the minor outstanding work is complete. Two B.R. "cycling lion" totems have been acquired, courtesy of Mr. Peter Zabek, and will be put on once painting is complete. All the inlet and outlet valves on the engine have been ground in, but the timing of the valves, which are operated by camshafts, remains to be done. A test steaming for insurance purposes is imminent and, assuming this is satisfactory, entry into service should be in April.

2702 'Matthew Murray' Following several years in a dismantled state, this loco was partially re-assembled to make it look more presentable. It is awaiting the necessary finance to replace its life-expired boiler barrel (approx. £10,000 at 1986 prices). Our insurance company have intimated that they would accept an all welded barrel, and this avenue is being considered as a much cheaper alternative. It is, however, not as straightforward as it would appear because of dimensional problems.

HC1882 'Mirvale' All the boiler tubes were removed over the Christmas holiday period, revealing a boiler in reasonable internal condition. The tubes were thought to be original, there being no record of a re-tube being carried out during its life. However, their condition upon removal was found to be virtually as new, and it would seem that this work was in fact done during its last years at the Mirvale Chemical Co. It is unfortunate that the tubes cannot realistically be re-used on Mirvale as, at £1000 a set, the outlay is a large chunk of the maintenance budget. (They are suitable for re-use in a shorter boiler, so if anybody wants to buy some 2" diameter x 8'0" long tubes, please let us know.) Some re-rivetting of the smokebox tubeplate will probably be necessary, but we await the Boiler Inspector's decision on this. The smokebox door has been skilfully repaired by cutting out wasted plate and welding in new material, a considerable saving on a new door, especially as the wastage was very localised. Some further patching is necessary on the smokebox wrapper and front. Mechanically, the eccentric straps have been removed for examination, and it is intended to lift the loco shortly, so that the axleboxes can be examined. The motion appears to be in reasonable condition and should require little work. The underneath of the saddletank has been descaled and painted, as have the boiler barrel and cladding sheets.

HC0631 'Carroll' Although this Hudswell diesel has been in regular use throughout the summer, it has been getting progressively more difficult to start, and some work is necessary on the engine. It is officially serviceable, but in practice has not been used since the end of the season.

TH138C has been provided with new batteries (and matching battery box) to replace ones damaged earlier in the year. Considerable progress has been made with the fitting of vacuum brakes to enable its use on passenger trains.

4220038 After lying out of use all season with life expired batteries, new ones have now been fitted, and the loco has been returned to service. It is intended to fit vacuum brakes when all the necessary equipment is to hand.

Brush 91 This Brush diesel electric has been run on several occasions, but is still not in traffic. A badly split gear case (caused by derailment damage at its previous location) has been successfully repaired and new felt seals have been fitted. It is now unlikely that this loco will be ready for passenger service before the middle of the season as many small jobs require to be done to bring it up to a suitable standard.

1786 'Courage' The ever-faithful 'Sweet Pea' has continued in daily use with the N.A.C.R.O. scheme. Some repairs were carried out to the brakegear, and the clutch has been re-lined. (Actually carried out some time ago, but not previously reported.)

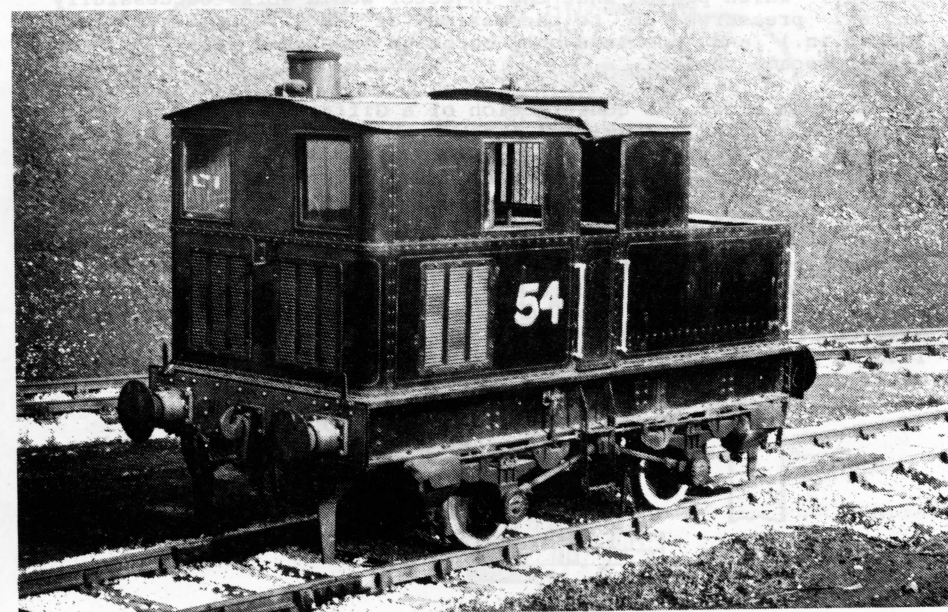
D577 'Mary' has been in use as required.

All other locos remain stored out of service pending repairs. Some thought has been given as to which loco will follow the Sentinel into the workshop, and it will almost certainly be 'Windle', followed by either the Y7 or HL3860.

Passenger Season '88

Normal passenger services re-commence on Easter Saturday, 2nd April 1988. Whilst the Saturday service (Easter Saturday excepted) remains as last year with a diesel service starting at 2.15p.m., some changes have been made to the regular Sunday service, with the train service now starting at 1.00p.m. and running at half hourly intervals throughout the afternoon. An innovation for Easter sees steam trains operating from 11.00a.m. each day from Saturday through till Tuesday. Bank Holiday weekends also have steam services from 11.00 on the Sundays and Mondays.

It is four years since we last increased our fares, but for 1988 the adult return fare has been increased from 60p to 80p and adult single from 30p to 40p. Child fares remain unchanged at 40p return, 20p single. Even with these increases, we consider that the ride is still very good value for money. A 1988 leaflet is enclosed with this Old Run. Please tell your friends about the railway and its services and help us improve on 1987.



54, many years ago! Soon expected to reappear looking as good if not better.

Photo: M.R.T. collection?

M. Giffords Creation

Ask any locomotive enthusiast to name a French engineer who had a significant impact on locomotive development, and they will probably respond with De Glen or Chapelon. Few will have heard of a Parisian by the name of Monsieur Giffard, but his invention was of fundamental importance in the development of the steam locomotive, and very few locomotives have been built since 1870 that did not incorporate his creation or some development of it.

It was on the 8th May 1858 that M. Giffard of Paris filed a patent for an "Automatic injector to feed steam boilers by a self acting apparatus employing the direct application of steam from the boiler without the intervention of machinery". The Giffard injector immediately attracted special attention, both from the importance of the object aimed at and for the success that was immediately achieved. Hitherto, pumps had been the sole means of supplying water to the boiler, generally driven from the locomotive axle. The immediate advantages of the injector were its compactness, lack of moving parts and thus wear and tear, and the ability to maintain the water level whether the loco was moving or not.

The first injector was brought over from France by a Mr. Stewart in 1859 and, after some trials on a stationary boiler, was put to work upon an engine on the St. Helens Railway. Such was the success of this that the driver almost immediately dispensed with the use of the pumps, and maintained water level by the injector alone. Further trials were carried out on other engines under the supervision of Mr. J. Cross, Engineer of the St. Helens Railway, which proved that the injector would work successfully at all pressures up to the maximum of the locomotives (110 lbf/sq.in.) and problems only occurred when the water in the tender became too hot.

The diagram shows the construction of a Giffard injector. Steam from the boiler is admitted through the pipe A and passes down through the perforated tube C, which is made conical at the bottom, the area of the aperture being regulated by the conical rod D, adjusted by the screw and handle E. The jet of steam issuing from the orifice of the tube C encounters the feed water (from the tender) in the chamber F, which enters the feed pipe G. The supply of feed water is regulated by raising or lowering the tube C by means of the handle H. The steam mixes with the feed water and condenses, issuing at great velocity from the upper orifice I, and passing into the mouth of the lower pipe K, leading into the boiler. A check valve N prevents the return of water from the boiler when the injector is not working.

BOILER INJECTOR

Fig. 1.

Vertical Section
of Injector.

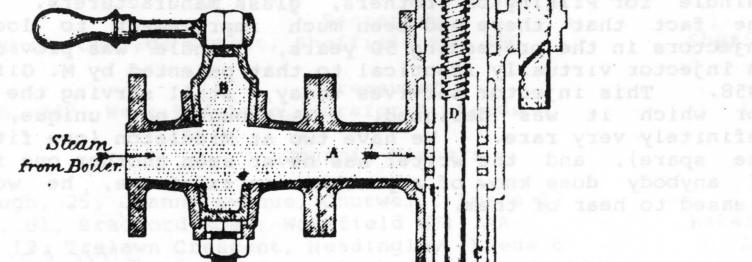


Fig. 2. Transverse Section
at Feed Water Chamber F.

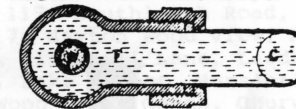
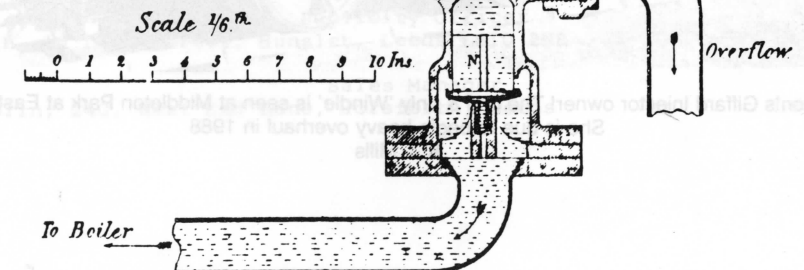


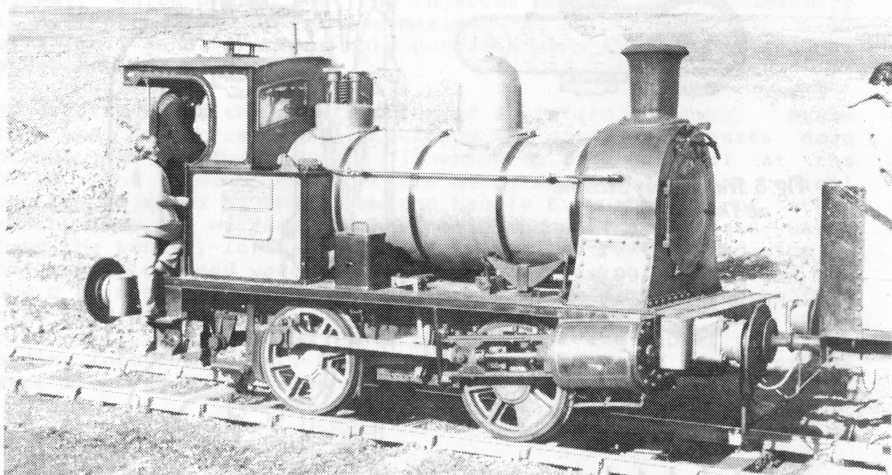
Fig. 3. Transverse Section
at Throat K.



Successful though the Giffard injector was, it was by today's standards unreliable and erratic in operation. Over the years, many improvements have been made in the design and the modern injector is a far more sophisticated and reliable piece of equipment. Its principle of operation is, however, fundamentally the same as that invented by M. Giffard one hundred and thirty years ago.

Now, astute readers may have realised that the name of James Cross and the St. Helens Railway have featured before in the Old Run. This same James Cross eventually set up in business building locomotives in St. Helens, and fitted the Giffard injector to his unique design of 0-4-0WT, a design that was perpetuated by Edward Borrows, who in 1909 built works No.53 'Windle' for Pilkington Brothers, glass manufacturers. Despite the fact that there had been much improvement to locomotive injectors in the preceeding 50 years, 'Windle' was provided with an injector virtually identical to that patented by M. Giffard in 1858. This injector survives today, still serving the purpose for which it was designed. Although not unique, it is definitely very rare. We have two at Middleton (one fitted and one spare), and the writer has never seen another one in use. If anybody does know of any others in existence, he would be pleased to hear of them.

Steve Roberts



Middleton's Giffard Injector owner! The one & only 'Windle' is seen at Middleton Park at Easter 1978. She is due to begin heavy overhaul in 1988
K.J. Mills

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