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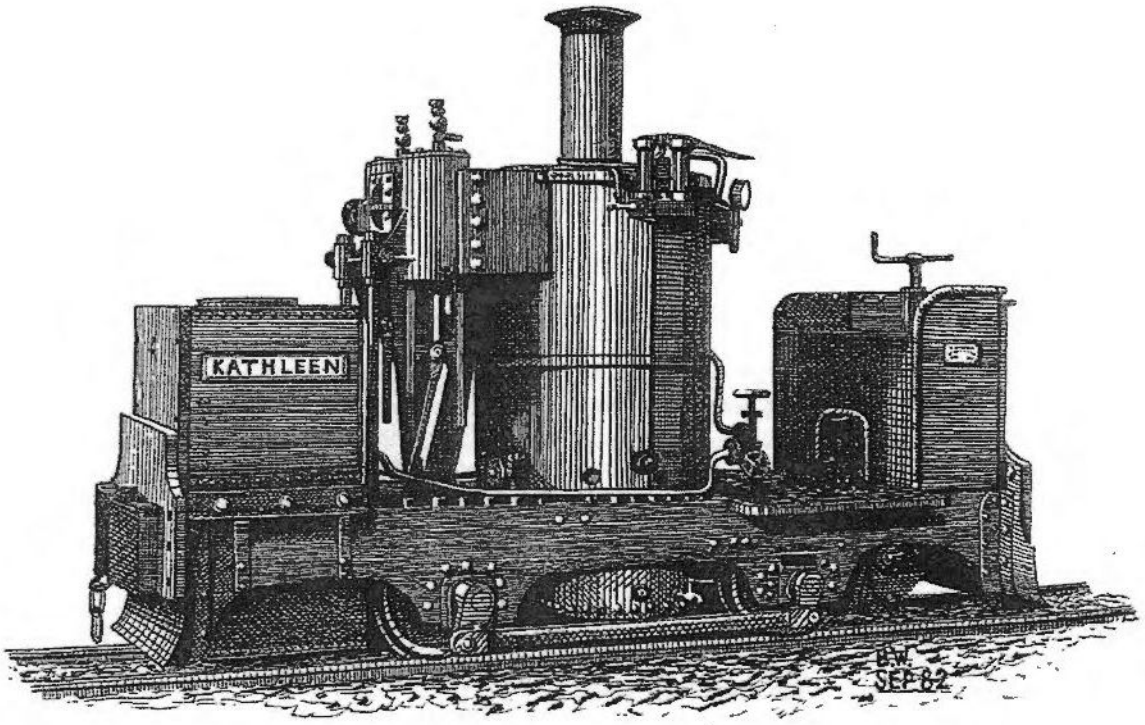
# Barrowmore Model Railway Journal




Number 11 June 2007

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Contributions are welcome:
(a) as e-mails or e-mail attachments;
(b) as a 3.5in floppy disk, formatted in any way (as long as you tell me if it's unusual!); disks can be provided on request;
(c) a typed manuscript;
(d) a hand-written manuscript, preferably with a contact telephone number so that any queries can be sorted out;
(e) a CD/DVD;
(f) a USB storage flash drive.
Any queries to the Editor, please.

The **NEXT ISSUE** will be dated September 2007, and contributions should get to the Editor as soon as possible, but at least before 1 August 2007.

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Copies of this magazine are also available to non-members: a cheque for £6 (payable to 'Barrowmore Model Railway Group') will provide the next four issues, posted direct to your home. Send your details and cheque to the Editor at the above address.

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The **cover illustration** for this issue is a drawing by Brian Williams from Bangor, and depicts vertical boilered narrow-gauge locomotive KATHLEEN (formerly KATIE) which was built in 1877 by DeWinton of Caernarfon. It worked in the Penrhyn slate quarries until February 1934.
In his account of the Penrhyn Railway, Charles E.Lee stated that the locomotive was dismantled in 1939. However a substantial part of the locomotive remained intact after that date and by the mid 1950s KATHLEEN was on the scrap line of redundant steam locos at Coed-y-Parc, Bethesda, minus cylinders, motion, coupling rods and boiler fittings. The detached cylinders still existed in the scrap pile in Coed-y-Parc yard.

In January 1965 KATHLEEN was acquired by R.P.Morris and moved to his home in Longfield, Kent. The cylinders were also recovered and later re-attached to the locomotive. In June 1965 the loco was resold to A.J.Keef at Aylesbury, Bucks, who carried out some minor restoration work then sold it to the Walcroft Brothers of Pershore, Worcs, in 1968. (Keef later set up in business as a locomotive builder and in 1994 constructed a replica 2ft gauge DeWinton locomotive). In March 1971 the loco was repurchased by R.P.Morris and moved to the Brockham Museum in Surrey, then in August 1973 moving again to Mr.Morris' home at Longfield, Kent.

In 1978 Mr.Morris along with others set up a display of narrow gauge equipment at the Oakeley Slate Quarry in Blaenau Ffestiniog, which was then operating partly as a working quarry and partly as the Gloddfa Ganol Tourist Centre. KATHLEEN was moved there and placed on display, still minus motion, rods and boiler fittings.
In 1997 Oakeley/Gloddfa Ganol was acquired by Alfred McAlpine Slate Ltd. who closed the tourist side of the business, and the collection of narrow gauge equipment was put up for sale. KATHLEEN was acquired by the Phyllis Rampton Narrow Gauge Railway Trust, owners of the Vale of Rheidol Railway, who have proposals to set up a narrow gauge railway museum at Aberystwyth. Since acquisition it was displayed with several other locos at Aberystwyth Station, but it is now stored in a secure shed at Capel Bangor Station on the Vale of Rheidol Railway, where it will probably remain until the proposed museum is established at some time in the future.
(Thanks to Philip Hindley of Old Colwyn for the lion's share of this information!)

## Forthcoming events

**(2007)**
**15 July 2007**: Gresford 7mm get-together.
**21/22 July 2007**: Welsh National Model Railway Exhibition (Colwyn club), Llandudno.
**26/27 Aug. 2007**: Chippenham show (Westinghouse). (with **"Johnstown Road"**)
**11 Sept. 2007**: "Colour light signalling" by Dave Larkin (HMRS meeting at 'The Stork Hotel' Birkenhead – see Editor for details).
**29/30 Sept. 2007**: Scaleforum, Leatherhead.
**5/7 Oct. 2007**: Manchester show.
**9 Oct. 2007**: "The deadly tablet: the Abermule disaster, 1921" by David Burkhill-Howarth (HMRS meeting at 'The Stork Hotel' Birkenhead – see Editor for details).
**13/14 Oct. 2007**: Aldershot show (**"Mostyn"** is appearing).
**20/21 Oct. 2007**: Blackburn show (**"Mostyn"** is appearing).
**26/28 Oct. 2007**: Merseyside show.
**13 Nov. 2007**: "Signalling for dummies" by Harry Leadbetter (HMRS meeting at 'The Stork Hotel' Birkenhead – see Editor for details).
**17/18 Nov. 2007**: Tyneside show, Gateshead.
**23/24/25 Nov. 2007**: Wakefield show.
**25 Nov. 2007**: Merseyside M.R.S. open day, Brassey Street.
**1/2 Dec. 2007**: Warley show, N.E.C.
**8/9 Dec. 2007**: Wigan show.
**11 Dec. 2007**: "Cambrian Coast Express, 1972, and other Stan Roberts slides" (HMRS meeting at 'The Stork Hotel' Birkenhead – see Editor for details).

**(2008)**
**12/13 Jan. 2008**: St.Albans show (**"Mostyn"** is appearing).
**3/4 May 2008**: Liverpool show.

*(The Editor welcomes details of other events of railway interest for this column)*

Our web-site address is: www.barrowmoremrg.org.uk

## Reviewing railway archive footage

I gain considerable pleasure from creating a reference library of/and watching good quality coverage of the railways of yesterday (1900-1985). My main criteria are: good picture quality, good depth of subject coverage, unobtrusive and relevant commentary and a good soundtrack (I am no great expert on steam loco sounds but can 'hold my own' on diesel and electric types), local/special interest. I try to buy only the best titles available for the particular subject area that interests me and offer the following observations of my own collection, in order of receipt/purchase. N.B. all programs are in colour unless otherwise stated –

**Ivo Peters: Somerset and Dorset Railway, Vol.1 Bath – Masbury; and Vol.2 Masbury summit – Broadstone.** VHS video cassette. Running time approx. 1 hour each.

These two programmes set the standard by which the rest are judged. 1959-1966 steam traffic over the Bath Green Park – Radstock – Evercreech Jnc – Broadstone (for Bournemouth line). The Somerset & Dorset (S&D) locos are filmed alongside various Southern, Great Western and standard types. Enthusiastic S&D employees staff take part in the films/commentary and add considerably to the already impressive 'in depth' coverage of the subject. I have watched these over and over again without finding fault in any respect and have to say that I consider them to be the best S&D material available.

**Cinerail: The railways of Scotland, Vol.5 The Western Highlands.** VHS video cassette. Running time 59mins.

This video was a gift from a grateful boat owner in Mallaig. I chose this particular program because it includes 1970s footage of Scottish type 2s, a rare commodity on film. The tape also includes 1960s steam and a few asides e.g. the steamship 'George the fifth', the Kinlochleven and Lochaber narrow gauge lines as well as some 1960s Glasgow street scenes. The main lines covered are Glasgow Queen St – Mallaig, Dunblane – Crianlarich - Oban and Inverness – Kyle of Lochalsh.

I think that Cinerail either failed to gather sufficient depth and breadth of material or else did their best to create a program despite limited material being available (there is a whole series of these Scottish films which suggests pressure to 'come up with something' for each area). Picture quality is patchy whilst the soundtrack is often muffled and in places downright inaccurate (e.g. class 37 or 40 sound with a Sulzer type 2 on screen). The commentary is acceptable but there is excessive use of Scottish music/folk singing accompanying some journeys. Many of these lines were in 'thrash central' due to their plethora of steep gradients, sharp curves and low horsepower locos, nothing short of a superb soundtrack would do them justice.

**Robert Cartwright Productions: The Leek & Manifold light railway (L&MLR), Part 2: Grand Opening to Closure.** VHS video cassette. Running time 1 hour (black and white).

This video falls squarely into my local interest category and is the only film footage that I have found of the L&MLR. This light, narrow gauge railway opened in 1904 and closed in 1934, it passed through the picturesque Manifold valley and the route is now a cycle/walk way. There are 3 tapes in the series covering this railway and I chose the Grand Opening to Closure part to hopefully inform me of the background to the line, as well as its operation.

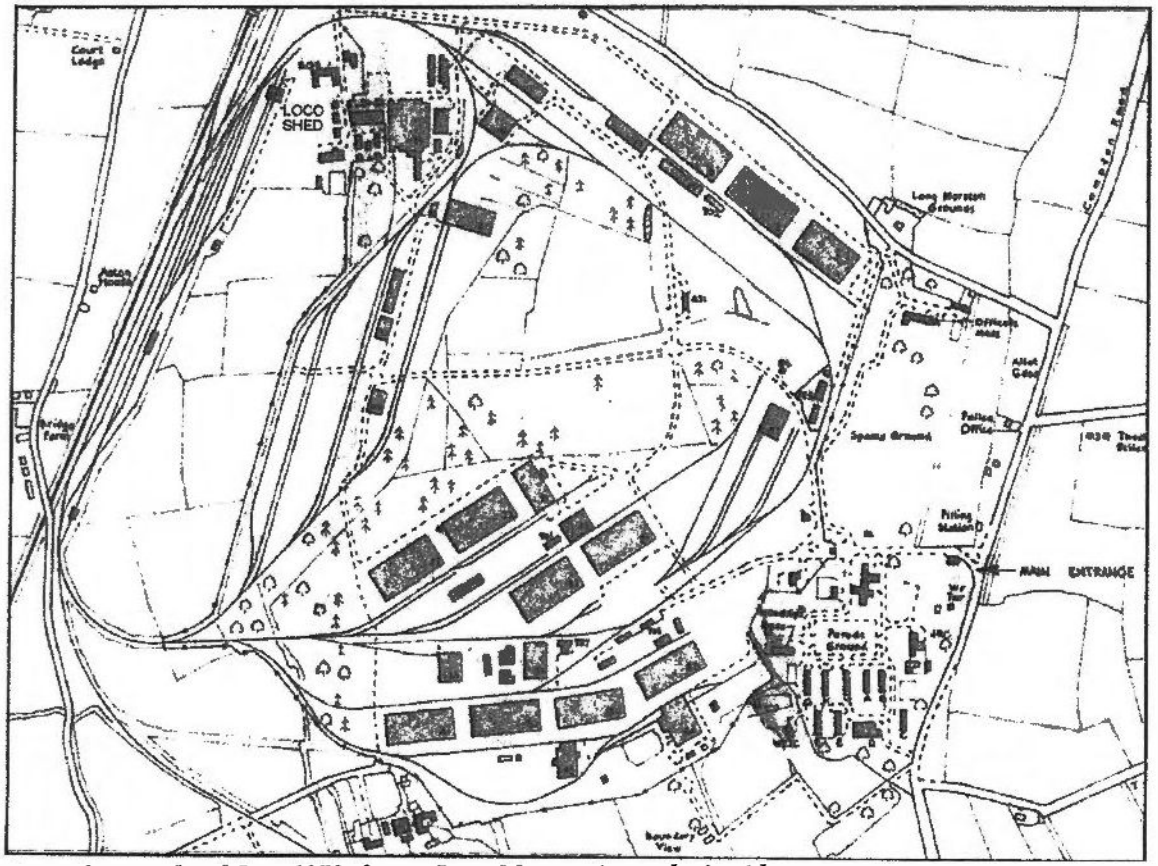
The program 'tells the story of a community and its railway' very well and is nicely presented by Ray Johnson. The range of archive material is extensive and includes black and white film, photographs and various documents. Film and photographs are of excellent quality. Present day remains of the line are visited by Ray, these complement the archive footage. There are period speeches and other little voiceovers that add to the 'feel of the subject' and its characters. The whole 'hangs together' well as a documentary and is very worthwhile viewing for the steam enthusiast. I found the only drawback to be the long winded account of the railways finances which were obviously recorded in detail at the time and constitute a large part of what is left of the railway today.

Dave Millward

## Letters to the Editor

From Philip Hindley of Old Colwyn:

**"LONG MARSTON DEPOT**: The item on the Stratford on Avon and Broadway Railway Society in Issue No.10 of BMRJ gave details of the present situation together with the early history of the Long Marston Depot. Some details of the depot in the intervening period may be of interest to readers, compiled from details obtained on two visits made in the 1970s and information from the Industrial Railway Society.




*Part of a map dated June 1972, from a Long Marston 'open day' guide.*

Officially titled "The Central Engineer Park", in July 1971 the 'real estate' was given as 455 acres, with 1,135,293 sq.ft. of covered accommodation and 22 miles of internal railway track. Total manpower strength of the Park and its supporting units was listed as 30 Officers, 370 Soldiers and 750 Civilians. Its stated purpose was to hold in readiness the Ministry of Defence reserves of bridging, plant and engineer stores, and to hold and administer the Engineer-in-Chief's pool of plant, also to repair and manufacture engineer material and to give continuation workshop practice to Royal Engineer tradesmen.

The exchange sidings with BR were situated on the east side of the Honeybourne to Stratford line. From the north end of the sidings the Ministry of Defence railway curved away from the BR line to enter the depot area, running around the perimeter of the site before leaving the depot area to join the south end of the exchange sidings. The layout therefore formed a complete circuit with sidings and loop lines leading off to the various store buildings and workshops. The original loco shed was situated approximately at the middle of the exchange sidings, with a wagon repair shop at the south end. However in 1972 a new shed was provided at the north end of the sidings with two roads for locomotives and two roads for wagon repairs.

To the south an area formerly part of the depot was leased to Bird's Commercial Motors Ltd. as a scrapyard and many main line and some industrial locomotives were disposed of here. Bird's employed their own shunting locomotive within the yard, but traffic to and from the main line was handled by Ministry of Defence locomotives.

Regular steam working at the depot finished in the 1960s, but one locomotive, Hunslet Austerity 0-6-0ST No.3798 of 1953, was retained. It had arrived at Long Marston in 1961 and was stored until November 1970, when it was put back into service, named ROYAL ENGINEER and steamed on open days and

special occasions. In February 1992 it was transferred to the Isle of Wight Steam Railway.
At an open day on 7th October 1972, ROYAL ENGINEER and similar locomotive WAGGONER were in use, the former on a 3 coach passenger train and the latter on a train of MoD well and flat wagons, travelling in turn around the depot 'main line'. WAGGONER was a short-term visitor to Long Marston, arriving in June 1972 and departing in June 1973. It was later a regular visitor to the Aldershot Military Tattoo on static display, before being transferred to the Museum of Army Transport at Beverley. Also on display at Long Marston was Ransomes and Rapier 45 ton steam breakdown crane No.62003, built in 1942 and formerly in service with the British Army in Germany. On a similar occasion in July 1977, ROYAL ENGINEER was again in use on a passenger train round the depot circuit, but this time with one coach only. Another Ransomes and Rapier 45 ton steam breakdown crane No.62006 was in use giving demonstration lifts of one of the diesel locomotives. Four diesel locomotives were noted, of which two were normally in use on weekdays.
Rail traffic to the depot declined over the years and in 1991 the new locomotive shed and yard were leased to the Yorkshire Engine Co. Ltd. for use as a workshop and storage site in connection with its business of repair and hire of industrial diesel locomotives. This company then performed any shunting required by the Ministry of Defence after regular military traffic ceased. After closure of the depot in 1999 much of the track within the depot was removed, the remaining sidings and the former exchange sidings outside the depot continue to be used for the storage of main line rolling stock after that date. The Yorkshire Engine Co. Ltd. ceased trading in 2001 and the new loco shed was taken over by Andrew Briddon who continued to use it as a workshop and storage base for his own locomotives. The Stratford on Avon and Broadway Railway Society occupy the original Ministry of Defence loco shed."
[Readers may also be interested in a web site with lots of pictures of railway activity at Long Marston: http://www.petertandy.co.uk/longmarston%20page.html ]

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E-mail from Richard Neale (RCTS) **Photographs Wanted.** A Mr. Tony Griffiths from Stoke near Chester is looking for photographs of 'Flying Scotsman', which worked a special train from Chester to Blackpool on the 9th of July 1967. He is particularly interested in photographs of the train at Helsby. If you have any photographs that may interest Mr. Griffiths then please give him a call. He will pay you for the photographs or reimburse you for any copying that you have to do.
Contact Mr. Griffiths on 01244 301932 or write to him at: Mr. TONY GRIFFITHS,
4 BUNBURY CLOSE, STOKE, CHESTER. CH2 4HL

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[**Austin Ratcliffe** who died recently was a former member of Manchester M.R.S. and the S4 Society, and their 18.83mm layout was for a while housed in the Merseyside clubrooms in Chester Street after it had to vacate its Manchester premises: this is where we really got to know Austin ... This e-mail was from Ralph Robertson of the Manchester club]
"Hi Dave, It was sad to see a long time friend finally go but Austin's last 7 or 8 years were not good ones. First he went blind and then he had to go into a home as his wife was also disabled and could not look after him. Then he went senile and I hadn't seen him for several years as he simply didn't know anyone. It was such a shame for such a likeable guy.
As I am the current Editor of The Link (amongst lots of other things too!) I wrote the obituary. It was only a simple and brief one but the words are attached below if you want to use them. I am sure there are a few of your group who remember the mad Mancunians that used to flock over to Birkenhead once a week to work on that damn layout that must now rest in the eternal layout grave, wherever that place might be. Maybe Austin is back there right now building a new batch of his beloved Rectanks for the layout. I will miss Scalefour North this year as we are on holiday but I am sure I will see you sometime if only at our show in October. All the best Dave, Ralph"
(Obituary:)
"Austin Ratcliffe: Sadly I have to announce the passing of our past member Austin Ratcliffe. He was a good friend to me for much longer than his days at the MMRS as Austin and I started the Manchester Group of the Scalefour Society many, many years ago.
I first met Austin in the old Railway Sidings shop in Stockport and a casual comment about him wanting to go EM became a long conversation and I encouraged him to go to P4 instead. Over the years we visited many exhibitions together and Austin always had his own little route learned from his days as a commercial vehicle driver. He was never short of little anecdotes about his driving days when a journey really was a journey!

A few years ago Austin lost his sight and I helped him to arrange for the dispersal of a lifetimes model railway collection. It is something that must have been so sad for him to have to do knowing that he would never be able to see his lifelong creations ever again. Soon after that he had to move into a nursing home and sadly his health then deteriorated. It was about this time that Austin's membership lapsed although some of our members remained in touch.
Our sincere condolences go to Madge and the family. Ralph Robertson."

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# "Mostyn Mutual Improvement Class (MIC)"

## by Dave Millward

**The Carriage and Wagon department (C&W)**

The C&W is another vital part of railway operations on BR, freight yards and other strategic locations will have their cabin, often an old timber hut or grounded railway carriage, present. Lesser locations such as the Mostyn sidings will be tended by one of the local C&W in a van, e.g. from Mold Jct or Llandudno Jct. He would be required to check all wagons that had been loaded or unloaded on the docks before they once again joined the network. He would be looking for loose sheets, broken springs, insecure or open doors etc. Once he was satisfied he would leave his signed 'C&W examined' ticket in the clip of the leading wagon.

The C&W lads are responsible for the periodic maintenance checks on each of the railways many items of rolling stock – 'PPM' or 'pre planned maintenance' is the six monthly check on the condition of each vehicle, whilst 'VIBT' is the annual 'vehicle inspection and brake test'. They will also be responsible for all of the minor repairs that crop up on a regular basis - greasing or oiling axle boxes, changing a 'dead' buffer, replacing worn brake blocks, putting a new vacuum hose on to replace an old leaking one, the list is long. C&W will be advised by the AFC of problem vehicles or sometimes by a guard, they will also be in regular contact with their control. In turn the C&W will ask the AFC to release vehicles on TOPS once pre-planned maintenance or repairs have been carried out.

*(to be continued)*

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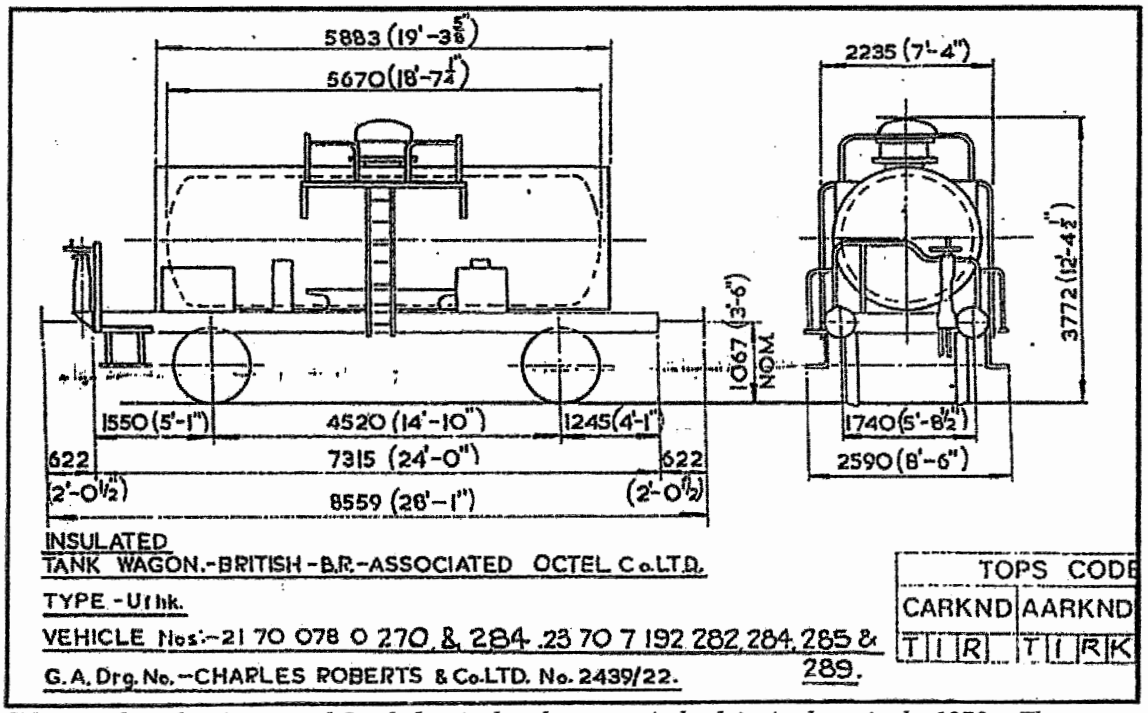



*[These and similar Associated Octel chemical tanks ran to Amlwch in Anglesey in the 1970s. They were painted white and the distinctive designs means that any models will have to be scratch-built!]*

# "Lineside cameraman, 1950-1990"

**by Sydney Dryland Wainwright**

When photography was popular as a hobby years ago it was said that it was best to couple it with another interest i.e. botany, architecture or local history etc. so that there was, hopefully, no problem in finding a subject to photograph. With me having had a lifetime's interest in railways and the steam locomotive in particular there was no problem at all deciding what to take pictures of.

I have memories of riding in a Great Western steam railcar from Balderton to Chester with my parents in about the year 1932; being taken to see the exhibits at Manchester Victoria station at the time of the Liverpool & Manchester Railway centenary celebrations in 1930; and riding from Balderton to Eaton Hall on the 15in gauge Eaton Railway, in the 1930s. My mother was distantly related to Harry Morgan who was the guard and later the driver on the Eaton Railway, so a ride was always on the agenda when holidaying at my grandparents' home at Dodleston.

However, my railway photography did not begin until about 1950. My family was back living in Chester and I was already one of a small group who spent time on summer evenings at Saltney Junction watching all the comings and goings. I can remember seeing the last L.&N.W.R. 'Claughton' no.600A passing towards Mold Junction with a fitted freight train. There were also one or two 'Dean goods' 0-6-0 about, together with a few 'Bulldogs' including 3399 "Ottawa", all of which I regret went un-photographed.

Anyhow one afternoon in the summer of 1949 I was down by the golf course at Curzon Park with my friend Dennis Wilde who I first met at the start of the second world war

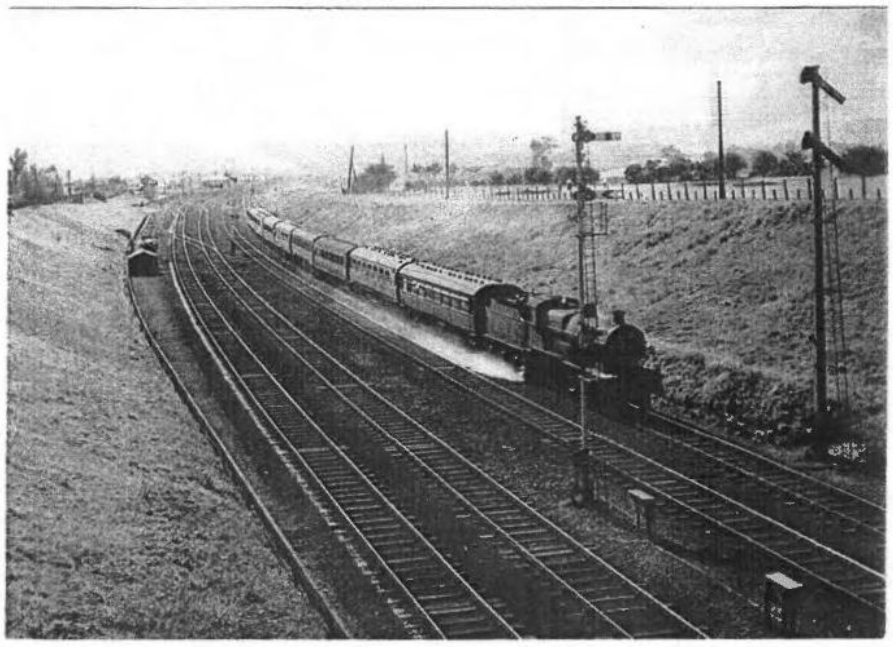


*Photo courtesy of Dennis F.Wilde.*

*The picture that triggered it all off: a Llandudno-Derby train passing Saltney Jcn. in August 1949. The loco is a 4-4-0 Midland 'Compound', the signal on the right is of L.N.W.R. design, and the first coach is of L.&Y. origin. Note the lack of vegetation, unlike now, in those days the embankments were scythed in summer, the grass turned into hay and used in railway stables.*

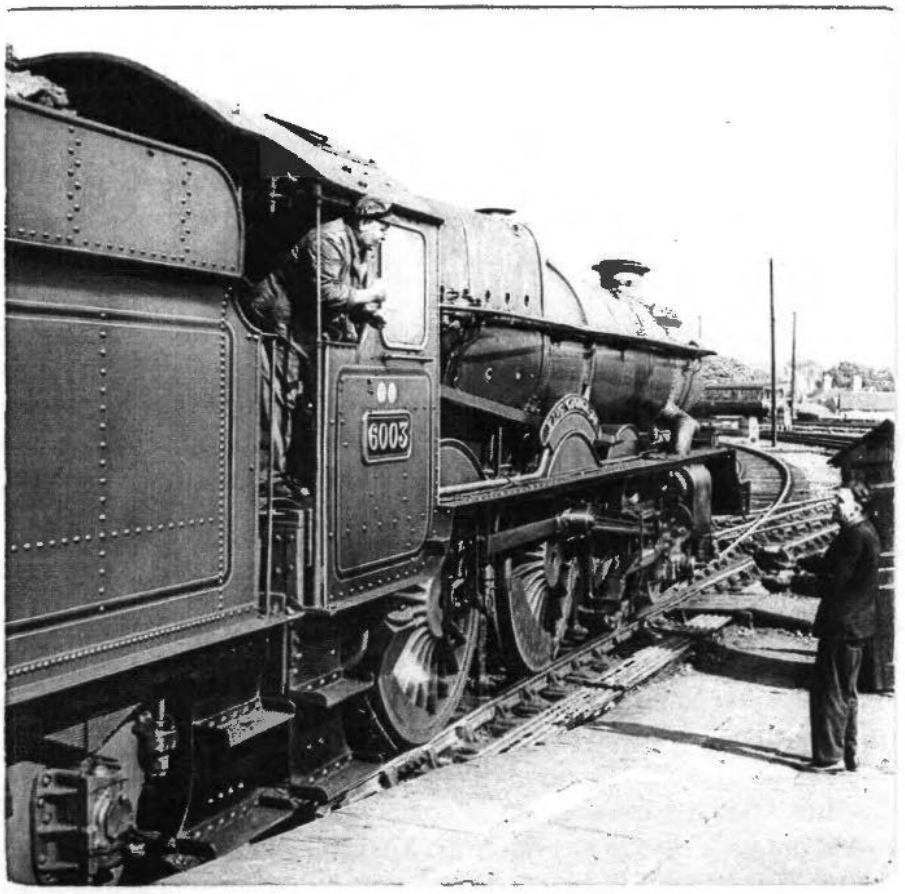
when he came from London to live for a time with his grandparents at Guide Bridge. We are still in touch after sixty seven years. Dennis was in Chester for a week or so on holiday and he had with him a Zeiss Super Ikonta camera which took sixteen pictures on a 620 roll film. This camera had an f3.5 Tessar lens and a shutter speed of 1/500 second. I said to my friend "can you photograph a moving train with it?" and he replied "there's one coming, let's see". A week or two later I received a letter containing a print of the train and the negative and I was hooked.

Cameras with a reasonable lens and shutter were hard to obtain in those days, it was still a time of austerity. Nevertheless I managed to obtain an Ensign Selfix 16/20 camera which the optical firm of Ross Ensign were just starting to put on the market. This camera had an f3.5 Ross Xpress lens which was reputed to be the equal of the Tessar but the shutter was a bit slower at 1/300 second. [Editor's note: a Selfix was my first 'proper' camera, which I mostly used to photograph nautical subjects – I was 'into' ship modelling in those days].

With this camera I got cracking photographing the local railway scene. Limitations were the amount of spare time available and also suitable fast film was hard to obtain. The best film you could get in 1951 was Ilford HP3 which was panchromatic (i.e. sensitive to all colours) and had a speed of 200ASA.

By this time I had mastered the art of contact printing with gaslight paper which could be carried out with ease in any domestic kitchen and had started doing my own enlarging. Hitherto this had been done for me by the local developing and printing merchants and a lot of it was of poor quality. The enlarger was a very simple one: a good lens, a mast square to the base and a negative holder. I made a lot of masking devices myself, and developing dishes etc. could be obtained a lot cheaper from Woolworths as kitchen equipment than from the photographic dealers (I still have the enlarger but I don't use it). With this I could compose the picture better, over-print parts usually to enhance the smoke effect and generally produce the sort of print I wanted.

I had also acquired a Lineside walking permit covering Crane Street Signal Box to Mold Junction No.4. This, believe it or not, included the viaduct by the gas works but I never went there needless to say. I was friendly at that time with Douglas Cartmel from Handbridge, later to become a G.P. and Hon. Medical Officer to the Severn Valley Railway. Doug had a permit for this length before I did and he clued me up how to go about getting one. It only involved making a request to the public relations people at Euston by letter, enclosing some prints which had to be of publishing standard. If accepted the applicant was required to complete an indemnity form which included signing legally over a sixpenny stamp to absolve the Midland Region of any blame if you got wiped up. This permit was later extended to include Saltney to Llandudno Junction excluding Rhyl Station, Hartford to Preston Brook on the West Coast main line and Christleton to Tattenhall Road. I also got a Western Region one which gave me Saltney to Shrewsbury.




*6003 'King George IV' at the head of the 2.45pm Birkenhead to London Paddington, 4 June 1960, south end of platform 7 at Shrewsbury. The engine had worked down from London earlier in the day with the Cambrian Coast Express.*

None of these permits were used to their full extent, there were many places where I was allowed to go on the track that I didn't consider safe. It was always a risk in steam days that the grass embankment could catch fire on dry days in summer, so it was always wise to be able to get away without going on to the track. In any case, the pass was 'lineside' – you were not supposed to cross tracks.

When photographing on loco sheds care had to be taken not to walk on hot ash which had just been thrown out of a firebox, otherwise you could find your shoes on fire.

I did eventually find a bit of a snag with the 16/20 negative shape. When photographing at ground level you tended to get too much foreground and not enough sky. For this reason I went over to using a 12-on-120 camera which gave a square negative. This gave a bit more latitude at the enlarging stage regarding the picture shape. The camera, a Zeiss Ikonta, had a slightly faster shutter speed which was useful also.

I went on photographing until about the end of 1963 by which time we had reached what I call the 'soot and rust' era. Nameplates etc. were going missing and a clean loco was becoming a rarity. As an engineer (retired!) I cannot stand the sight of dirty neglected machinery so I gradually moved on to photographing a few diesels and electric locos for posterity as well as the odd clean steam loco if one came along, plus the steam specials.


*No. D1002 passing Saltney Junction on 7.7.62 with the 2.35pm Shrewsbury to Chester express.*

I had also by this time added a 35mm camera, a Kodak Retina IIIC, to the equipment. This was used mainly for colour transparencies, though I did put some monochrome through it as well. With this camera I photographed the Welsh narrow gauge lines and the more presentable remains of B.R. steam. I also recorded ships, buses and vintage

*Great Orme Railway tramcar no.5*

vehicles of various kinds, but that is another story. All colour film was processed commercially as it is more of a laboratory job than monochrome. Temperatures are more critical and some of the solutions used are very toxic and better kept away from domestic premises.

Materials improved a lot over the years. Panchromatic film was used with a yellow filter to give a better sky if possible. I also used Agfa Brovira printing paper. This paper was resin coated which gave a much shorter washing time for the prints than the old fibre based printing papers. My wife, who had worked in photo printing, often helped with this part of the process. Brovira paper was also self-glazing which also cut down production times.

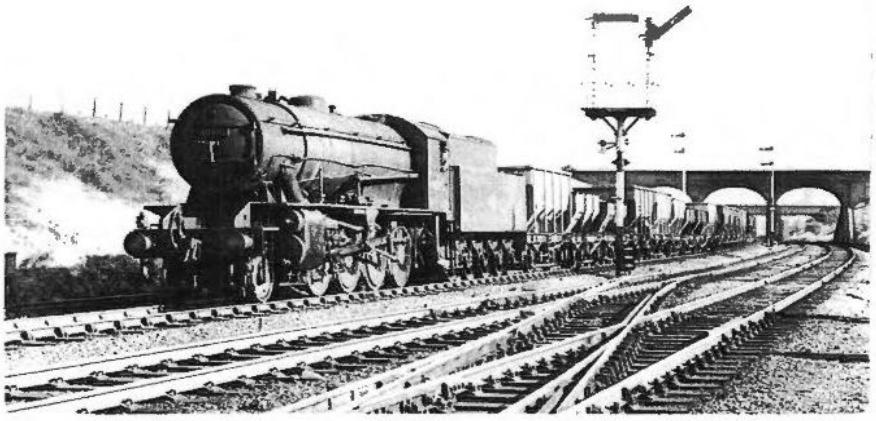
Photographing a moving train or vehicle of any sort does need a bit of practice. A train travelling at 60mph covers 88ft in one second. Fire the shutter too soon and you get too small an image on the negative. Too late and the shot is ruined. Also it is best to photograph a moving object more 'head-on' than sideways to arrest the movement; not too head on though for obvious reasons. It is not usual to 'pan' the camera (i.e. move the camera with the object) when photographing trains. This practice is more suited to car racing etc., as it gives a blurred background.

Most of my photography took place in the Chester, Crewe, Shrewsbury and North Wales area. Branch lines I didn't bother with much, there was not enough action to justify wasting a fine day. One of my favourite spots was Acton Bridge on the West

*40398 piloting a 'Jubilee' 4-6-0 climbs from Weaver Junction to Acton Bridge on a Saturday afternoon in 1956.*

Coast main line. The North footbridge at Crewe station was also a good venue but only when the children were at school or otherwise occupied. By the water pickup troughs at Prestatyn you could photograph and listen to Mantovani music from the nearby holiday camp on Saturday afternoons. By the Chester-Crewe line at Christleton on weekdays there was often a military band on parade at Saighton Camp a couple of fields away.

The variations in motive power in the Chester area were enormous and you never knew



*No.90392 passing Saltney Junction on 4.10.57 with a 'down' goods train en route to Mold Junction yard.*

what was going to turn up. I enjoyed my photography very much but never let railways become an obsession like some folks did, I had other interests as well. If you showed a genuine interest in the railway and its working, took care and didn't do anything daft, you were always welcome. Unlike today where you get a hostile reception and escorted off the premises. I made many friends through railways, had a couple of books published (see notes) and it got me around a bit. Happy days!

**Notes:**

(1) *Breath of steam,* by R.Keeley, N.E.Preedy and S.D.Wainwright. O.P.C., 1974. ISBN 0 902888 37 4.
(2) *Rails to North Wales,* by S.D.Wainwright. Ian Allan, 1978. ISBN 0 7110 0874 4.
(3) *Steam in West Cheshire,* by S.D.Wainwright. Ian Allan, 1981. ISBN 0 7110 1141 9.
All three volumes have been out-of-print for years, but second-hand copies may be available from Harry Wilson (01829 740693; hwrailwaybooks@aol.com ), or for loan through your local public library.

## "BEFORE THE COMING OF THE CHESTER & HOLYHEAD: Last years of the Holyhead mail coach"

Extracted by Tony Robinson from some notes by the late Norman Jones

The Mail Coach timetable in 1797 showed total journey time of just under 45 hours. Down coach left Charing Cross at 8pm, breakfast at Northampton, dinner at Lichfield and tea at Stafford. Arrival at Chester was at midnight with a stop of one hour for supper. By 5.30am St Asaph and breakfast. Ferry side on Conway Estuary reached at 9am, and at 9.30am coach passed through Conway. Reached Bangor Ferry House at 12.20pm, allowed one hour for dinner and crossing. Arrival at Holyhead was about 4.50pm. Return departure from Holyhead 7am. Following improvements to Holyhead

Road, new schedule was introduced from 5th April 1819, reducing the time to 36 hours. By 1832, the time was down to 28 hours 6 minutes, including stops at Birmingham, Shrewsbury, Corwen and Bangor. Arrival at Holyhead was at 12 noon. By 1836 London-Holyhead timing was driven down to 26 hours 55 minutes. With the opening of London & Birmingham Railway in 1838, and connections by way of Grand Junction, Liverpool and Manchester Railways, the Post Office transferred the Irish and other mails to rail. By Act 14, August 1838, the Postmaster General was empowered to call on railway companies to take mails. An important component of the works, supervised by Thomas Telford, between 1815 and 1819 was the construction of the now famous Waterloo Bridge at Betws-y-Coed, whilst two famous 'coaching inns' in that delectable village are the Royal Oak Hotel on the Holyhead Road and the Ty Gwyn Hotel (White House Hotel).

[Norman Jones of Warrington (1918-2003) was a well known enthusiast for the transport history of the North West of England and North Wales.]

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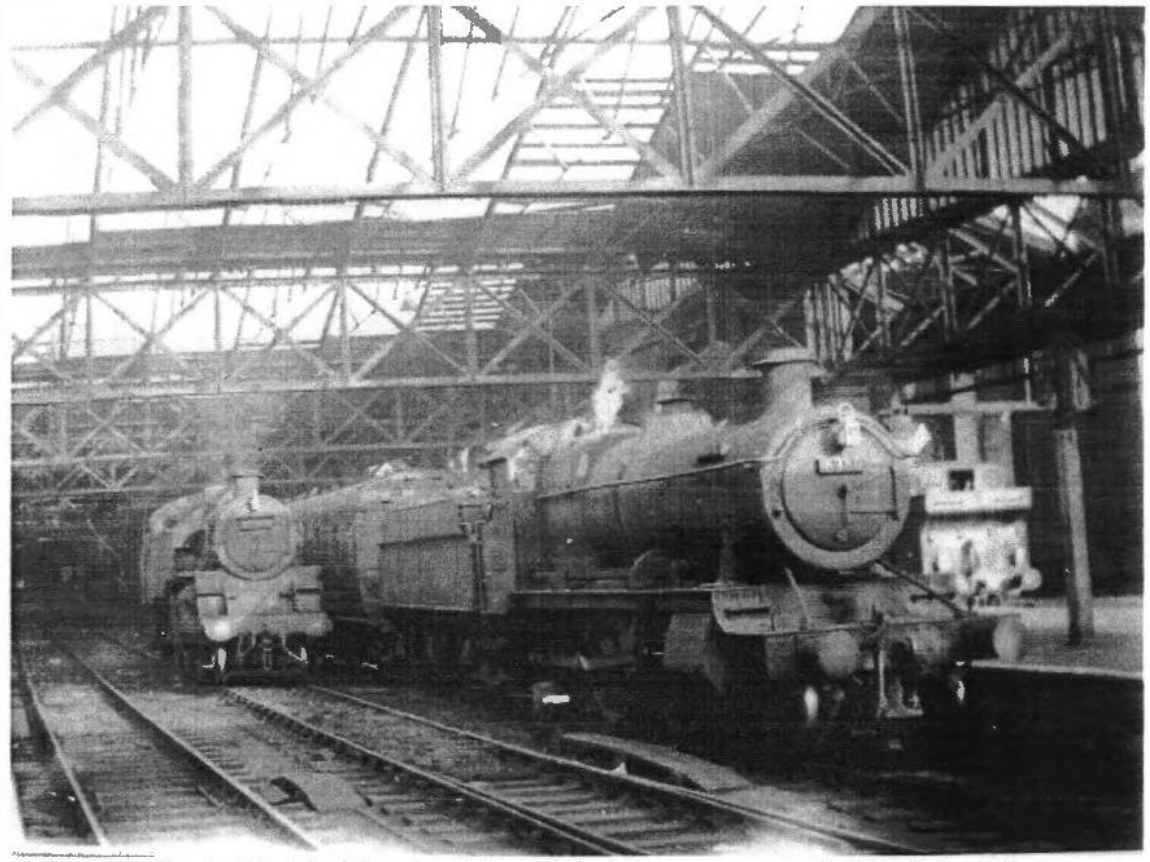
## "THOSE BLASTED LITTLE GREAT WESTERN 2-6-0s!"

Life at 6B [Mold Junction shed] became more and more hectic in the late fifties but nothing was to prepare the shed staff for the onslaught that was to come early in 1960. A couple of years previously the G.W shed at Chester had been assigned over from the Western Region of B.R. to the London Midland Region, this was unfortunately the precursor to its closure in April 1960 and subsequent conversion to a major diesel servicing depot for North Wales. The responsibility for servicing and 'turning around' the many ex-G.W. engines that came to Chester then became the responsibility of both Chester (6A) and Mold Junction (6B) sheds, the latter handling the bulk of the Salop-bound freight work. Chester shed being predominantly a 'passenger' shed handled the much lower volume of that traffic. Pressure was exerted on my father to take an allocation of Chester's G.W. motive power, this as I recall was not well received by him who saw at first hand the parlous state that a lot of the freight locos had been allowed to get into. Also at a time when 6B's allocation of ex-LMS locos was nearing fifty locomotives it made the whole matter untenable. So after much resistance the 'powers that be' conceded to my dad's reasoning and the culprits were sent off down the Western Region to various other freight sheds, Oxley being one of the main recipients. His reward for taking on this extra burden was elevation to the status of a 'Special B' Shed Master, one step down from Divisional Motive Power Superintendent that carried a pay rise and upgraded the family travel status to First Class passes (6 per annum).

Now to a young 'whippersnapper' like me it was great news that G.W. engines could be found on 'our shed', the first Sunday morning that I visited after they arrived I distinctly recall 'crowning' myself on the tender brake handle of a 28xx 2-8-0! You don't forget



*6380 of 84K Chester West shed (but showing a 6E which was a temporary shed number used between 1958 and 1960 when 84K came under London Midland control), awaits the green light with a Barmouth stopper on 29 May 1959; the colour light signal on Platform 2 always intrigued me as it was the first of its genre to be installed at Chester! B.R. 2-6-4T 80092 stands in the relief road, possibly awaiting a Woodside working. Interesting to note the overall roof, shortly to disappear and the 57xx Pannier in the Mold bay. Photo: R.S.Carpenter collection.*

things like that in a hurry and it taught me to always look up when climbing aboard a G.W. tender engine! After that time for a period of about three years the place was a veritable 'spotter's paradise', with locos as diverse as Moguls and Castles to be found on shed on a Sunday morning when most of my visits were made. King's were never seen at Chester due to the roof restriction in Balderton tunnel. (This of course was rectified in preservation days when KGV made many visits from its base in Hereford). Problems became endless, one of the recurring nightmares was the use of hard Yorkshire coal in long G.W. fireboxes designed to burn soft long flame South Wales coal. If G.W. locos were allowed to leave the shed without having had their grates and ash-pans properly cleaned it was a recipe for disaster; one of the main protagonists being the 43xx Moguls that had a relatively short and narrow firebox, the Mold Junction coal inevitably formed a hard clinker with the remnants of the S.Wales ash resulting in a 'green fire', this of course would make itself known on that first hurdle out of Saltney Yard, namely the dreaded Gresford Bank! The number of times my dad came home from work cursing "One of those blasted little Great Western 2-6-0s has stopped the place up again!" no doubt with the unforgiving tones of 'control' still ringing in his ears. I have fairly reliable tales of 6B fire droppers actually getting pricker bars jammed between the ash pan and the cab roof in desperate efforts to break up the clinker after being reprimanded by Mr Robinson following such main line 'catastrophes'.

This problem didn't originate at Mold Junction as it was generally deemed that the locos were coming on shed in a parlous state having set out from sheds such as Oxley and Pontypool Road. So one Saturday morning in March 1963, there arose the opportunity to meet up with one of these '2-6-0 culprits' at Coton Hill yard, Salop. The engine had worked up on a Class C freight from Pontypool Road that morning, so my dad hitched a lift on a Salop 5X Jubilee diagrammed on a fast freight (Class C) out of Saltney yard that morning, having shedded overnight at 6B. They arrived at Coton Hill just in time to see the crews changing over after the train's arrival in the down sidings. The young fireman was ex-Chester West (84K), by now regularly working out of Mold Junction so he obviously knew the problems, and as they had a layover of about an hour before setting off, he quietly started to "prick out" almost the entire contents of the firebox! That done with a minimum of the old fire remaining he then started to build a new fire carefully (and expertly) placing the coal all around the sides and back of the box. By the time they got the 'right away' the engine was blowing off and continued to do so all the way up the bank through Baschurch! The scariest moment was approaching Cefn Viaduct near Ruabon, when my dad recalled that "we were going so fast we were pitching and rolling all over the place I thought we'd be going over the side!" History doesn't recall but I suspect having an ex-L.M.S. Shed Master on board somewhat influenced the ex-G.W. men's approach to things, but that engine ran like a dream all the way back to Saltney! So proving, that it wasn't the 'song' but the way you 'sang it'.

Some time afterwards I asked him what he thought of the 5X Jubilee, his answer came in two words "Miners Friend"!

(An excerpt from an as-yet unpublished manuscript entitled "Dad Had an Engine Shed" by Tony Robinson).

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## Radio Electronic Token Block

**by Eddie Knorn**

Twenty one or so years ago, I was waiting for a train one snowy afternoon at Nuneaton Station. The particular train was a Birmingham to Norwich service that was usually formed of DMUs based in East Anglia, so I kept watch on the spot just beyond the flyover where the line from Birmingham joined the WCML, to see what would appear. The familiar face of a Metro Cammell Class 101 unit appeared in the distance, but something was different; for starters, there was a high intensity headlight on the driver's side of the cab, just inboard of the normal marker light, and as the 101 got nearer I became aware of a strange antenna protruding from alongside the destination box. What I had here was one of the DMUs dedicated (supposedly!) for use on the Ipswich – Lowestoft East Suffolk line and fitted with "RETB" equipment.
In this article, I will endeavour to explain the principles of how the "Radio Electronic Token Block" system works and how it was introduced on selected BR lines in the 1980s. Please be aware that my railway background is over twenty years of mechanical

engineering, so the electronics and railway operational knowledge is based on what I have learned over the years…

I am sure that everyone reading this has seen pictures of train drivers exchanging single line tokens with signalmen. In short, the token is a means of ensuring that there is only one train on any stretch of single line between passing loops; it is usually some form of brass key that can be released from a token machine in the signal boxes at either end of the single line, and it bears the names of these signal boxes. A form of interlocking between the signal boxes ensures that once one token has been released from either token machine, all other tokens are locked within their respective machines. A train is permitted to enter the single line section only if the driver is in possession of the relevant token.

Upon arrival at the far end of the single line section, the driver surrenders the token to the signal box there and it is inserted into the token machine. This then unlocks the token machines such that another token may be released from either signal box as necessary.


*Attached photo shows Norwich set "104" at Lowestoft, date unknown. The RETB antenna can be seen adjacent to the destination box. The high intensity headlamp is noteworthy; this predates the fitting of this sort of light to anything that moves and the installation on the RETB units was more "robust" than on other trains. The lamp was mounted on a substantial wooden (?) base-plate and there was a metal protection grid over the front. The position offset to the driver's side is also of note - on the 101s that remained in use until 2003, the lamp was mounted in the middle; I suspect that the RETB units relied on the lamp more as a means of seeing lineside signals than as a means of the train being visible. There would normally be an orange warning line across the cab front at side gutter level, to warn staff of overhead live wires, but this seems absent.*
*(Picture provided by Stuart Mackay.)*

As you can tell, there is a lot of equipment required, along with manpower to operate the signal boxes; hence, the development of RETB as a cost saver for secondary lines.

The principles of operation are exactly the same, but there is no need for the train driver to carry a lump of brass around with him! There still needs to be one signalman and the trains themselves need to be fitted with RETB equipment, hence the antenna seen on that DMU. In addition, there is the need for radio antennae by the side of the track, for automatic points operating systems and for signage to take the place of fixed lineside signals.

To see the way in which RETB would work, consider a train wanting to travel along a single line section from A to B, sat in the loop at location A. The driver is prevented from leaving the loop, not by a traditional signal, but by a sign that says "STOP – Do not enter single line section until token has been obtained", or similar. In the cab of the train, the display on the RETB unit is blank.

The driver has to obtain the token from the one remote signalman in charge of the line, who may be several miles away, so he calls him on the radio:
"Driver of (whatever the train identity is) requesting the token for the section from location A to location B".
The remote signalman would then instruct the driver to press the "receive" button on the RETB unit in the train cab. Through the magic of technology, a radio data signal is sent from the remote signalman to the train cab RETB unit, which receives it and the display screen then lights up to show the name of the loop at location A and the name of the loop at location B. This is the equivalent of being handed the brass "token". The driver confirms successful receipt to the remote signalman.

The driver is now permitted to pass the "STOP" board as he is possession of the token, and some interlocking in the electronics at the remote signalman's control panel prevent him issuing a radio data signal to any other train giving it permission to be in the same single line section. This is the equivalent of the electro-mechanical interlocking that only permits one token to be available to a driver.

The driver of the train will leave the loop when ready to do so (for example a green flag from the guard if at a station stop), and proceed through the trailing point onto the single line. The trailing point would be set against him, however it would be spring loaded so that he could run through it without causing damage. A short way after leaving the loop, he would pass another sign to tell him that the train is clear of the loop, at which time he would again radio the remote signalman to confirm that he has passed that sign. The remote signalman would then know that the loop at location A is clear for trains in that direction, so a following train could be given permission to enter the loop.

The train travels the length of the single line section until it arrives at loop B; the facing points here are also spring loaded to always put trains in that direction on the same side of the loop. There would be a "points indicator" to confirm that the facing point are correctly set.

Once the train has stopped, the driver would again call the remote signalman on the radio and inform him:
"Driver of (whatever the identity of the train is) requesting to surrender the token for the section from location A to location B". The signalman would then instruct him to press the "transmit" button on the RETB unit in the cab. Again, through the magic of

technology, an electronic data signal is sent from the RETB unit in the cab back to the remote signal box. The RETB unit would revert to a blank display, i.e. implying that it did not have a "token", while the remote signalman would "receive" the "token" back into his master control unit, effectively releasing the interlocking so that a different train could obtain a token for the single line from A to B, for travel in either direction.

If there was another train following the first, I believe there would be some form of discipline that a further token from A to B could not be issued until the first train had confirmed that it was clear of the loop at location B.

For our example train to be able to proceed along the next single line section, the driver repeats the procedure to obtain the token from location B to location C. I think you should have the idea!

The system is also useful on stretches of double track, of which there were some on the East Suffolk Line. With traditional "Absolute Block" working, there is normally only one train permitted on the section of line between two signal boxes – if double track runs between these boxes then you can have a train "in section" on both lines at the same time. A similar principle can be applied to each line, where a fixed "stop" board is positioned at the commencement of the section, that the driver shall not pass unless in possession of the appropriate "token", but where there is double track, the system will be able to issue an electronic "token" for both directions of travel concurrently, but not for two trains in the same direction, of course!

The use of signage in place of signals has been mentioned above – traditional signals are lit at night, but the signage on RETB lines was not; when I began, I mentioned the high intensity headlight on the front of the DMU, (in those days, unlike more recent times, very few trains had such headlights fitted). By using reflective signage, similar to road signs, the driver would be able to read the sign by the light of his own train. The East Suffolk Line had many road level crossings and another cost saving measure was to automate them. The crossing would detect the presence of an approaching train (which would be obliged to slow to 5 mph – see below), and this detection would trigger the warning to road traffic not to cross, typically flashing red lights and a warning klaxon. Once the control system of the crossing had confirmed that the warning to road users was working correctly, a flashing white light would be displayed to the train driver. He would then be permitted to drive his train over the crossing at 5 mph while maintaining a lookout for road users who might try to ignore the warnings. Typically, there were no physical barriers on such crossings. The headlight on the front of the train was an additional safeguard in making the train more visible.

In addition to the East Suffolk Line, other RETB schemes at that time included the West Highland and Far North lines of the Scottish Region. Instead of Class 101 DMUs, these lines were equipped with Class 37/4 locomotives that had RETB units. As part of my railway training, I had one or two cab rides, where I was able to observe the system in use, even being permitted to exchange radio tokens! One complication of these Scottish routes was the presence of mountains, giving the train driver as little as three feet tolerance on stopping position; if he was outside of that position, radio contact with the lineside equipment became impossible!

In the last twenty or so years, further RETB schemes have been introduced, for instance on the Cambrian Coast line.

Returning to my East Anglian encounters, Norwich Crown Point depot maintained a dedicated (although see above!) fleet of Class 101 DMUs for use on the East Suffolk Line, although I suspect the availability of surplus units within that fleet saw them venture to other parts of East Anglia. The majority of units were triple sets, with a "TBSL" (Trailer Brake Second with Lavatory) as the centre car sandwiched between a pair of former "MCL" (Motor Composite with Lavatory) cars. Blue/Grey livery was carried by all vehicles and all had been through the BR refurbishment programme, with fluorescent interior lighting and orange vestibule panelling being the obvious indications of this. The "MCL" cars had been downgraded to second class only, but this meant that the seats behind the driver, those with the best view ahead, were the comfortable former First Class design! Crown Point did not keep the RETB-fitted triple sets in any permanent set formations, so trips to the area usually found some change since the previous visit.

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I list below some samples of the fleet formations of the "RETB"-fitted triple sets maintained at Norwich Crown Point depot for use on the East Suffolk line:

| **RETB Triple sets at Norwich Crown Point – February 1986** | | | |
|---|---|---|---|
| Set Number | MCL | TBSL | MCL |
| 94 | 53266 | 59095 | 53267 |
| 95 | 53168 | 59079 | 53177 |
| 100* | 53305* | 59536* | 53150 |
| 101* | 53315* | 59118* | 53330 |
| 102 | 53193 | 59055 | 53180 |
| 103 | 53170 | 59077 | 53149 |
| 104 | 51506 | 59084 | 51508 |
| 105 | 53181 | 59085 | 53321 |

Notes:

- All MCL cars declassified to "MSL" (Motor Second with Lavatory)
- 53305 and 53315 were Motor Brake Second cars
- 59118 and 59536 were TCL cars (Trailer Composite with Lavatory) declassified to "TSL" (Trailer Second with Lavatory)
- Vehicles 53305, 53315, 53321, 53330, 59118 and 59536 had been on London Midland Region at Tyseley depot before transfer to Norwich. The other vehicles had been on the Eastern Region prior to RETB fitting.
- Set 94 was the one I found at Nuneaton in February 1986!

| **RETB Triple sets at Norwich Crown Point – May 1989** | | | |
|---|---|---|---|
| Set Number | MCL | TBSL | MCL |
| 100 | 51506 | 59095 | 53181 |
| 101 | 51508 | 59055 | 53266 |
| 102 | 53168 | 59084 | 53193 |
| 103* | 53305 | 59536 | 53321 |
| 104 | 53150 | 59085 | 53180 |

| | | | |
|---|---|---|---|
| 106 | 53139 | 59092 | 53238 |
| 107 | 53177 | 59079 | 53267 |
| 108 | 53149 | 59077 | 53170 |

Notes:

- In the early 1990s, a few of the MCL cars from the above fleet received the "Regional Railways" refurbishment and retained traces of the RETB antennae on the cab front

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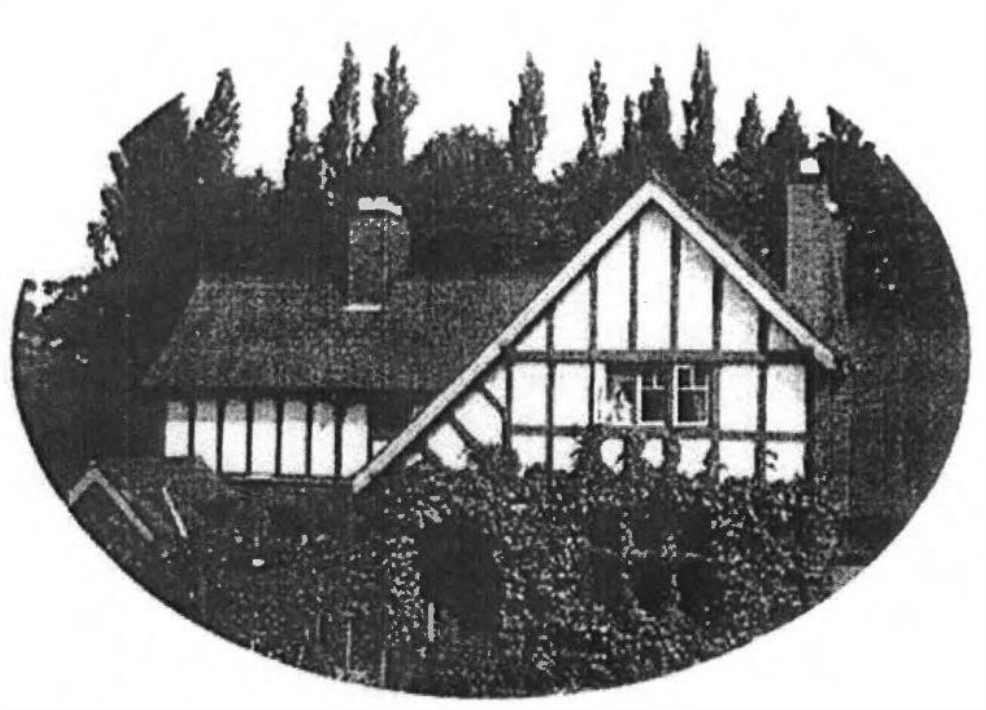
## Some 4mm and 7mm equivalents

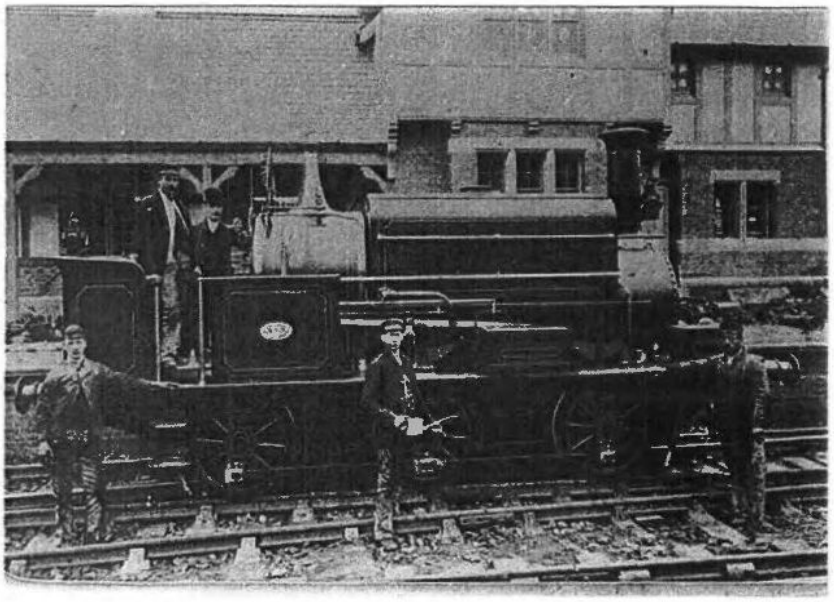
| Dec.in. | mm. | fract. | drill | SWG | 4mm scale proto. | 7mm scale proto. | description |
|---|---|---|---|---|---|---|---|
| 0.00287 | 0.0729 | | | | | 1/8" | |
| 0.0032 | 0.061 | | | 44 | ¼" | | |
| 0.0043 | 0.109 | | | | | 3/16" | |
| 0.00574 | 0.1458 | | | | | ¼" | |
| 0.0065 | 0.165 | | | | ½" | | |
| 0.00718 | 0.182 | | | | | 5/16" | |
| 0.0086 | 0.2187 | | | | | 3/8" | |
| 0.01005 | 0.2552 | | | | | 7/16" | |
| 0.01148 | 0.2917 | | | | | ½" | |
| 0.0131 | | | | | 1" | | |
| 0.0135 | | | 80 | | | | |
| 0.0138 | 0.35 | | | | | | |
| 0.01435 | 0.3646 | | | | | 5/8" | |
| 0.0145 | | | 79 | | | | |
| 0.0156 | 0.3968 | 1/64" | | | | | |
| 0.016 | | | 78 | | | | |
| 0.0164 | 0.416 | | | 27 | 1¼" | | |
| 0.018 | 0.4572 | | 77 | 26 | 1.38" | | |
| 0.0197 | 0.5 | | | | 1½" | | |
| 0.02 | 0.508 | 1/50" | 76 | 25 | | | |
| 0.0201 | 0.5104 | | | | | 7/8" | |
| 0.021 | | | 75 | | | | |
| 0.0225 | | | 74 | | | | |
| 0.0229 | | | | | 1¾" | | |
| 0.02296 | 0.583 | | | | | 1" | |
| 0.024 | 0.609 | | 73 | 23 | | | Tap 16BA |
| 0.025 | | 1/40" | 72 | | | | |
| 0.026 | | | 71 | | | | |
| 0.028 | 0.711 | | 70 | 22 | 2.14" | | Tap 14BA |
| 0.0292 | | | 69 | | | | |
| 0.0295 | 0.75 | | | | 2¼" | | |
| 0.031 | | | 68 | | | | |
| 0.03125 | 0.79375 | 1/32" | | | | | |
| 0.0315 | 0.8 | | | | | | |
| 0.032 | 0.812 | | 67 | 21 | | | Clear 16BA |
| 0.0328 | | | | | 2½" | | |
| 0.033 | | | 66 | | | | |
| 0.0335 | 0.85 | | | | | | |
| 0.035 | | | 65 | | | | |

| Dec.in. | mm. | fract. | drill | SWG | 4mm scale proto. | 7mm scale proto. | description |
|---|---|---|---|---|---|---|---|
| 0.0354 | 0.9 | | | | | | |
| 0.036 | 0.914 | | 64 | 20 | 2¾" | | |
| 0.037 | | | 63 | | | | |
| 0.0374 | 0.95 | | | | | | |
| 0.038 | | | 62 | | | | Tap 12BA |
| 0.039 | | | 61 | | | | |
| 0.0394 | 1 | | | | 3" | | |
| 0.04 | 1.02 | | 60 | 19 | | | Clear 14BA |
| 0.041 | | | 59 | | | | |
| 0.042 | | | 58 | | | | |
| 0.0426 | | | | | 3¼" | | |
| 0.043 | | | 57 | | | | |
| 0.0433 | 1.1 | | | | | | |
| 0.0459 | | | | | 3½" | | |
| 0.04593 | 1.1666 | | | | | 2" | |
| 0.0465 | | | 56 | | | | |
| 0.0469 | 1.1906 | 3/64" | | | | | |
| 0.0472 | 1.2 | | | | | | |
| 0.048 | 1.22 | | | 18 | | | |
| 0.0492 | 1.25 | | | | 3¾" | | |
| 0.0512 | 1.3 | | | | | | |
| 0.052 | | | 55 | | | | Clear 12BA, tap 10BA |
| 0.0525 | | | | | 4" | | |
| 0.055 | | | 54 | | | | |
| 0.0551 | 1.4 | | | | | | |
| 0.0557 | | | | | 4¼" | | |
| 0.059 | 1.5 | | | | 4½" | | |
| 0.0595 | | | 53 | | | | |
| 0.0623 | | | | | 4¾" | | |
| 0.0656 | | | | | 5" | | |
| 0.067 | | | 51 | | | | tap 8BA |
| 0.06889 | 1.75 | | | | 5¼" | 3" | clear 10BA |
| 0.07 | | | 50 | | | | |
| 0.0721 | | | | | 5½" | | |
| 0.073 | | | 49 | | | | |
| 0.076 | | | 48 | | | | |
| 0.0781 | 1.984 | 5/64" | | | | | |
| 0.0787 | 2 | | | | 6" | | |
| 0.0827 | 2.1 | | | | | | |
| 0.0853 | | | | | 6½" | | |
| 0.086 | | | 44 | | | | tap 6BA |
| 0.0886 | 2.25 | | | | | | clear 8BA |
| 0.09186 | 2.333 | | | | | 4" | |
| 0.09375 | 2.3812 | 3/32" | | | | | |
| 0.0984 | 2.5 | | | | 7½" | | tap 5BA |
| 0.10937 | 2.778 | 7/64" | | | | | |
| 0.11483 | 2.9166 | | | | | 5" | |
| 0.1181 | 3 | | | | 9" | | |
| 0.125 | 3.175 | 1/8" | | | | | |
| 0.1279 | 3.25 | | | | 9¾" | | clear 5BA |
| 0.13779 | 3.5 | | | | | 6" | |
| 0.1406 | 3.5718 | 9/64" | | | | | |
| 0.15625 | 3.9687 | | | | | | |
| 0.1574 | 4 | | | | 12" | | |
| 0.16076 | 4.0833 | | | | | 7" | |

| Dec.in. | mm. | fract. | drill | SWG | 4mm scale proto. | 7mm scale proto. | description |
|---|---|---|---|---|---|---|---|
| 0.17187 | 4.3656 | 11/64" | | | | | |
| 0.18372 | 4.6666 | | | | | 8" | |
| 0.1875 | 4.7625 | 3/16" | | | | | |
| 0.20312 | 5.1593 | 13/64" | | | | | |
| 0.20669 | 5.25 | | | | | 9" | |
| 0.21875 | 5.5562 | 7/32" | | | | | |
| 0.22966 | 5.8333 | | | | | 10" | |
| 0.23437 | 5.9531 | 15/64" | | | | | |
| 0.2362 | 6 | | | | 18" | | clear 0BA |
| 0.25 | 6.35 | ¼" | | | | | |
| 0.25262 | 6.4166 | | | | | 11" | |
| 0.2656 | 6.7468 | 17/64" | | | | | |
| 0.27559 | 7 | | | | 21" | 12" | |
| 0.28125 | 7.14375 | 9/32" | | | | | |
| 0.29687 | 7.54 | 19/64" | | | | | |
| 0.29874 | 7.6 | | | | | 13" | |
| 0.3125 | 7.9375 | 5/16" | | | | | |
| 0.3152 | 8 | | | | 24" | | |
| 0.32172 | 8.2 | | | | | 14" | |
| 0.32812 | 8.33437 | 21/64" | | | | | |
| 0.34375 | 8.73125 | 11/32" | | | | | |
| 0.3447 | 8.7 | | | | | 15" | |
| 0.3543 | 9 | | | | 27" | | |
| 0.35937 | 9.12812 | 23/64" | | | | | |
| 0.36768 | 9.3 | | | | | 16" | |
| 0.375 | 9.525 | 3/8" | | | | | |
| 0.39062 | 9.9212 | 25/64" | | | | | |
| 0.3908 | | | | | | 17" | |
| 0.3937 | 10 | | | | 30" | | |
| 0.40625 | 10.3187 | 13/32" | | | | | |
| 0.4136 | 10.5 | | | | 31½" | 18" | |
| 0.42187 | 10.7156 | 27/64" | | | | | |
| 0.4366 | 11.1 | | | | | 19" | |
| 0.4375 | 11.1125 | 7/16" | | | | | |
| 0.4531 | 11.5094 | 29/64" | | | | | |
| 0.4596 | 11.7 | | | | | 20" | |
| 0.4687 | 11.9063 | 15/32" | | | | | |
| 0.4728 | 12 | | | | 36" | | |
| 0.4826 | 12.2 | | | | | 21" | |
| 0.4844 | 12.302 | 31/64" | | | | | |
| 0.5 | 12.7 | ½" | | | | | |
| 0.5056 | 12.8 | | | | | 22" | |
| 0.5285 | 13.4 | | | | | 23" | |
| 0.5447 | 13.833 | | | | 41½" | | buffer height |
| 0.5515 | 14 | | | | 42" | 24" | |
| 0.7038 | 11.875 | | | | 53.625" | | P4 back to back |
| 0.7415 | 18.83 | | | | 56½" | | P4 track gauge |
| 0.8269 | 21 | | | | 5'3" | | Irish standard track gauge |
| 0.886 | 22.5 | | | | 67½" | | buffer centres |
| 1.0 | 25.4 | | | | | | |
| 1.141 | 29 | | | | | | 7mmFS back to back |
| 1.167 | 29.6 | | | | | | b-to-b for S7 wheels on 32mm |
| 1.263 | 31.3 | | | | | | S7 b-to-b on 33mm track |
| 1.2598 | 32 | | | | | | 7mm FS track gauge |
| 63360 | 1609344 | | | | 1 mile | | |



***Blacon station on the Chester-Dee Marsh Junction line, in the 1920s. This view is from the road side and the lady at the bedroom window was Lucy Loft (b.1897); she was the sister of the station master, John Goodwin Loft (he was in charge there from 1892 to 1920). The trees in the background are on the far side of the track from the station building which dates from the building of the line by the Manchester Sheffield & Lincolnshire Railway in the late 1880s.***



***A photograph of one of the contractor's locomotives (Manning Wardle 'L' class, works no.1078 of 1888) outside the new station at Blacon, probably in late 1889. This 0-6-0 saddle tank was No.7 in Logan & Hemingway's fleet (Picture courtesy of Chris Dawson).***

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There is no "**Editor's page**" this quarter, since the copy to hand conveniently totals a multiple of four pages, which is important when our printer uses A3 paper and we pay according to the number of sheets used: a blank page costs the same as one printed on both sides!

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## Workshop notes, no.12

A few weeks ago, Dave Faulkner was investigating potential problems which might occur in making working ground signals for "Mostyn" (the ones we have now are purely cosmetic white-metal castings). One of the possible snags he identified was getting hold of small-bore brass tubing, to act as working bearings. One of the suggestions made by group members was having a look at a firm called Finney and Smith who, as well as specialising in 3mm scale kits etc., also sell a wide range of brass bits. Iain Kirk, who came up with the website name (**http://finneyandsmith.co.uk**), had previously had dealings with them at work. Of course I had a look, and yes, they look a very promising source of small brass sections! I was particularly impressed by their range of brass 'L' angle which we use for footsteps/footboards on our rolling stock.

**MICROBORE BRASS TUBING - 400mm lengths, £2.50 each**

0.3mm diameter 0.10mm hole
0.33mm diameter 0.11mm hole
0.4mm diameter 0.13mm hole
0.45mm diameter 0.15mm hole
0.5mm diameter 0.17mm hole
0.6mm diameter 0.20mm hole
0.7mm diameter 0.24mm hole
0.8mm diameter 0.27mm hole
0.9mm diameter 0.31mm hole
1.0mm diameter 0.34mm hole
1.1mm diameter 0.38mm hole
1.2mm diameter 0.41mm hole
1.3mm diameter 0.44mm hole
1.4mm diameter 0.48mm hole
1.5mm diameter 0.51mm hole
1.6mm diameter 0.53mm hole
1.7mm diameter 0.56mm hole
1.8mm diameter 0.59mm hole
1.9mm diameter 0.63mm hole
2.0mm diameter 0.66mm hole
2.4mm diameter 0.79mm hole
2.5mm diameter 0.83mm hole
3.0mm diameter 1.00mm hole

**BRASS SECTIONS**

**The profiles are all milled - all are in 330mm lengths, sizes are in millimetres and prices are per length**

**Round**

| Size | |
|---|---|
| 0.50 | £0.20 |
| 0.60 | £0.20 |
| 0.70 | £0.20 |
| 0.80 | £0.20 |
| 1.00 | £0.20 |
| 1.10 | £0.30 |
| 1.20 | £0.30 |
| 1.50 | £0.30 |
| 1.80 | £0.40 |
| 2.00 | £0.40 |
| 2.10 | £0.60 |
| 2.20 | £0.60 |
| 2.50 | £0.60 |
| 3.00 | £0.70 |
| 3.50 | £0.90 |
| 4.00 | £1.00 |
| 4.50 | £1.40 |
| 5.00 | £1.70 |
| 5.50 | £1.90 |
| 6.00 | £2.00 |
| 6.50 | £2.40 |
| 7.00 | £2.50 |
| 7.50 | £3.10 |
| 8.00 | £3.30 |
| 8.50 | £3.80 |
| 9.00 | £3.80 |
| 9.50 | £4.10 |
| 10.00 | £4.10 |
| 11.00 | £5.20 |
| 12.00 | £5.90 |

## T Profile

| Size | Price |
|---|---|
| 1 X 1 | £1.70 |
| 1.5 X 1 | £1.90 |
| 1.5 X 1.5 | £1.90 |
| 2 X 1 | £1.90 |
| 2 X 2 | £1.90 |
| 2.5 X 1 | £2.00 |
| 2.5 X 1.5 | £2.00 |
| 2.5 X 2.5 | £2.00 |
| 3 X 1 | £2.10 |
| 3 X 1.5 | £2.10 |
| 3 X 2 | £2.10 |
| 3 X 3 | £2.20 |
| 3.5 X 3.5 | £2.60 |
| 4 X 2 | £2.30 |
| 4 X 4 | £3.30 |
| 4.5 X 4.5 | £3.90 |
| 5 X 3 | £2.80 |
| 5 X 5 | £3.90 |
| 6 X 4 | £3.70 |
| 7 X 3 | £4.10 |
| 7 X 5 | £4.30 |

## I Profile

| Size | Price |
|---|---|
| 1.5 X 1 | £2.20 |
| 2 X 1 | £2.20 |
| 2 X 1.5 | £2.30 |
| 2.5 X 1 | £2.30 |
| 2.5 X 1.5 | £2.30 |
| 3 X 1 | £2.30 |
| 3 X 1.5 | £2.30 |
| 3 X 2 | £2.40 |
| 4 X 1.5 | £2.40 |
| 4 X 2 | £2.40 |
| 4 X 3 | £2.50 |
| 5 X 2 | £2.60 |
| 5 X 2.5 | £2.90 |
| 5 X 3 | £3.00 |
| 5 X 4 | £3.20 |
| 6 X 2 | £3.10 |
| 6 X 3 | £3.60 |
| 6 X 5 | £4.20 |
| 7 X 4 | £4.20 |
| 8 X 3 | £4.30 |
| 8 X 4 | £4.50 |

## Flat

| Size | Price |
|---|---|
| 3 x 1 | £1.30 |
| 3 x 1.5 | £1.30 |
| 3 x 2 | £1.40 |
| 4 x 1.5 | £1.40 |
| 4 x 2 | £1.40 |
| 4 x 3 | £1.40 |
| 5 x 2 | £1.50 |
| 5 x 2.5 | £1.70 |
| 5 x 3 | £1.70 |
| 5 x 4 | £2.20 |
| 6 x 2 | £1.70 |
| 6 x 2.5 | £1.80 |
| 6 x 3 | £1.80 |
| 6 x 4 | £2.20 |
| 7 x 2 | £2.20 |
| 7 x 3 | £2.60 |
| 7 x 4 | £3.00 |
| 7 x 5 | £3.50 |
| 8 x 2 | £2.30 |
| 8 x 3 | £2.80 |
| 8 x 4 | £3.00 |
| 8 x 5 | £3.30 |
| 8 x 6 | £3.60 |
| 10 x 1.5 | £3.60 |
| 10 x 2 | £3.00 |
| 10 x 3 | £3.60 |
| 10 x 4 | £3.70 |
| 10 x 5 | £4.00 |
| 10 x 6 | £5.40 |
| 10 x 8 | £5.80 |
| 12 x 2 | £3.80 |
| 12 x 3 | £4.20 |
| 12 x 4 | £4.90 |
| 12 x 5 | £5.10 |
| 15 x 2 | £4.30 |
| 15 x 3 | £4.60 |
| 15 x 4 | £5.10 |

## Square

| Size | Price |
|---|---|
| 1 x 1 | £0.80 |
| 1.5 x 1.5 | £0.90 |
| 2 x 2 | £0.90 |
| 2.5 x 2.5 | £1.00 |
| 3 x 3 | £1.10 |
| 3.5 x 3.5 | £1.40 |
| 4 x 4 | £1.60 |
| 4.5 x 4.5 | £2.20 |
| 5 x 5 | £2.00 |
| 5.5 x 5.5 | £2.30 |
| 6 x 6 | £2.40 |
| 7 x 7 | £3.90 |
| 8 x 8 | £3.90 |
| 9 x 9 | £5.40 |

## Half Round

| Size | Price |
|---|---|
| 4 x 2 | £2.20 |
| 5 x 2.5 | £2.90 |
| 6 x 3 | £3.60 |
| 8 x 4 | £5.30 |

## Hexagon

| Size | Price |
|---|---|
| 1.0 | £0.80 |
| 1.5 | £1.10 |
| 2.0 | £1.20 |
| 2.5 | £1.20 |
| 3.0 | £1.30 |
| 4.0 | £1.40 |
| 4.5 | £1.70 |
| 5.0 | £1.80 |
| 5.5 | £2.00 |
| 6.0 | £2.40 |
| 7.0 | £3.00 |
| 8.0 | £3.50 |
| 9.0 | £4.50 |
| 10.0 | £5.10 |
| 11.0 | £5.90 |

## L Profile

| Size | |
|---|---|
| 1 x 1 | £1.60 |
| 1.5 x 1 | £1.70 |
| 1.5 x 1.5 | £1.80 |
| 2 x 1 | £1.80 |
| 2 x 1.5 | £1.80 |
| 2 x 2 | £1.80 |
| 2.5 x 1 | £1.80 |
| 2.5 x 2.5 | £1.80 |
| 3 x 1 | £1.90 |
| 3 x 1.5 | £1.90 |
| 3 x 2 | £1.90 |
| 3 x 3 | £1.90 |
| 3.5 x 3.5 | £2.20 |
| 4 x 2 | £2.00 |
| 4 x 3 | £2.10 |
| 4 x 4 | £2.80 |
| 4.5 x 4.5 | £3.30 |
| 5 x 3 | £2.20 |
| 5 x 5 | £3.50 |
| 6 x 3 | £2.70 |
| 6 x 6 | £3.80 |
| 8 x 3 | £3.20 |

## H Profile

| Size | Price |
|---|---|
| 1 X 1 | £2.00 |
| 1.5 X 1.5 | £2.20 |
| 2 X 2 | £2.30 |
| 2.5 X 2.5 | £2.40 |
| 3 X 3 | £2.40 |
| 3.5 X 3.5 | £2.70 |
| 4 X 4 | £3.00 |
| 4.5 X 4.5 | £3.50 |
| 5 X 5 | £3.80 |
| 5.5 X 5.5 | £4.30 |
| 6 X 6 | £4.50 |

## X Profile

| Size | Price |
|---|---|
| 3 x 3 | £3.00 |
| 4 x 4 | £3.60 |
| 5 x 5 | £4.70 |
| 6 x 6 | £5.10 |

## U Profile

| Size | Price |
|---|---|
| 1 x 1 | £1.60 |
| 1.5 x 1.5 | £1.70 |
| 2 x 1 | £1.90 |
| 2 x 1.5 | £1.90 |
| 2 x 2 | £1.70 |
| 2.5 x 1 | £1.90 |
| 2.5 x 1.5 | £2.00 |
| 2.5 x 2 | £2.00 |
| 2.5 x 2.5 | £1.80 |
| 3 x 1 | £2.00 |
| 3 x 1.5 | £2.00 |
| 3 x 2 | £2.10 |
| 3 x 3 | £1.90 |
| 3.5 x 3.5 | £2.10 |
| 4 x 1.5 | £2.10 |
| 4 x 2 | £2.10 |
| 4 x 3 | £2.10 |
| 4 x 4 | £2.80 |
| 4.5 x 4.5 | £3.30 |
| 5 x 2 | £2.30 |
| 5 x 2.5 | £2.80 |
| 5 x 3 | £2.80 |
| 5 x 5 | £3.30 |
| 5.5 x 5.5 | £4.00 |
| 6 x 2 | £2.80 |
| 6 x 3 | £3.00 |
| 6 x 4 | £3.20 |
| 6 x 5 | £3.60 |
| 6 x 6 | £4.20 |
| 7 x 3 | £3.70 |
| 8 x 2 | £3.70 |
| 8 x 3 | £3.80 |
| 8 x 4 | £4.20 |

## Flange Profile

| Size | Price |
|---|---|
| 4 x 2 | £2.70 |
| 5 x 3 | £3.20 |
| 6 x 3 | £3.80 |
| 8 x 3 | £4.50 |

## Round Tube

| External Dia, | Wall Thickness, | Price |
|---|---|---|
| 1.00 | 0.10 | £0.40 |
| 1.00 | 0.20 | £0.40 |
| 1.30 | 0.20 | £0.40 |
| 1.50 | 0.20 | £0.40 |
| 2.00 | 0.30 | £0.40 |
| 2.00 | 0.45 | £0.40 |
| 2.50 | 0.45 | £0.50 |
| 3.00 | 0.30 | £0.50 |
| 3.00 | 0.45 | £0.50 |
| 3.00 | 0.70 | £0.90 |
| 3.00 | 1.00 | £1.10 |
| 4.00 | 0.30 | £0.60 |
| 4.00 | 0.45 | £0.70 |
| 4.00 | 0.50 | £0.70 |
| 4.00 | 1.00 | £1.20 |
| 4.50 | 0.45 | £0.80 |
| 5.00 | 0.30 | £0.70 |
| 5.00 | 0.45 | £0.90 |
| 5.00 | 0.50 | £0.90 |
| 5.00 | 1.00 | £1.80 |
| 5.00 | 1.50 | £2.00 |
| 5.00 | 1.75 | £2.30 |
| 6.00 | 0.30 | £0.90 |
| 6.00 | 0.45 | £1.00 |
| 6.00 | 0.50 | £1.00 |
| 6.00 | 1.00 | £2.00 |
| 6.00 | 1.50 | £2.40 |
| 6.00 | 2.00 | £3.00 |
| 7.00 | 0.30 | £1.00 |
| 7.00 | 0.45 | £1.00 |
| 7.00 | 1.00 | £2.10 |
| 7.00 | 2.00 | £3.80 |
| 8.00 | 0.30 | £1.10 |
| 8.00 | 0.45 | £1.30 |
| 8.00 | 1.00 | £2.40 |
| 8.00 | 1.50 | £3.30 |
| 8.00 | 2.00 | £4.30 |
| 9.00 | 0.30 | £1.30 |
| 9.00 | 0.45 | £1.30 |
| 9.00 | 1.00 | £2.60 |
| 9.00 | 1.50 | £3.90 |
| 10.00 | 0.50 | £2.00 |
| 10.00 | 1.00 | £3.00 |
| 10.00 | 1.50 | £4.00 |
| 10.00 | 2.00 | £5.10 |
| 11.00 | 0.50 | £2.40 |
| 11.00 | 1.00 | £3.30 |
| 12.00 | 0.50 | £2.40 |
| 12.00 | 1.00 | £3.30 |
| 12.00 | 1.50 | £4.30 |
| 12.00 | 2.00 | £5.70 |
| 13.00 | 1.00 | £3.30 |
| 14.00 | 1.00 | £4.20 |
| 14.00 | 2.00 | £6.80 |
| 15.00 | 1.00 | £4.00 |
| 15.00 | 1.50 | £5.00 |
| 15.00 | 2.00 | £6.60 |
| 18.00 | 1.50 | £7.10 |
| 18.00 | 2.00 | £7.80 |
| 20.00 | 1.50 | £7.40 |
| 20.00 | 2.00 | £7.80 |

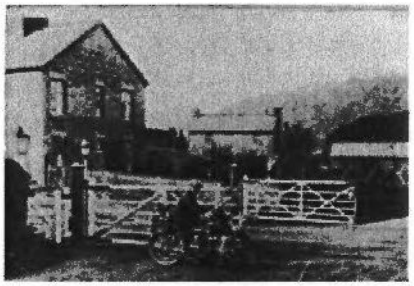
## Square Tube

| External Size, | Wall Thickness, | Price |
|---|---|---|
| 1.5 x 1.5 | 0.30 | £1.20 |
| 2 x 1 | 0.20 | £1.40 |
| 2 x 2 | 0.30 | £1.30 |
| 3 x 1.5 | 0.20 | £1.70 |
| 3 x 3 | 0.30 | £1.50 |
| 4 x 2 | 0.30 | £1.90 |
| 4 x 4 | 0.30 | £1.80 |
| 5 x 5 | 0.30 | £2.00 |
| 5 x 5 | 0.45 | £2.20 |
| 6 x 3 | 0.30 | £2.30 |
| 6 x 6 | 0.30 | £2.70 |
| 6 x 6 | 1.00 | £2.80 |
| 8 x 8 | 0.30 | £3.00 |
| 8 x 8 | 1.00 | £3.70 |
| 10 x 10 | 0.50 | £3.50 |

**Plastic storage tubes for above:**
8mm diameter £0.50, 12mm diameter £0.70

**Contact details:** the web-site address is given above; the postal address is: Finney and Smith
21 Bellott Drive
CORSHAM
Wiltshire SN13 9UQ;

Tel. 01249 714085.




# Abermule Disaster 1921

**David Burkhill-Howarth** is writing a book about the rail disaster which occurred at Abermule in 1921 when seventeen people were killed. In April 2007 he wrote an article outlining the background to the crash:

"The Cambrian Railways was the largest, though not the busiest, of the Welsh independent railway companies which opened up the Principality in Victorian days. It came into being on the 25th July 1864 when four small companies amalgamated.

The lines stretched from the English border at Whitchurch to the coast of Cardigan Bay between Pwllheli and Aberystwyth, and through mid-Wales and the Wye valley to Brecon. The connections to the North-west of England were via the London and North Western Railway, whilst the Great Western Railway provided links for stations between London and North Wales.

For a high proportion of the Cambrian's mileage trains ran in both directions over the same set of rails; this was potentially dangerous, but a very safe operating system had been developed over the years.

Each single line section, or block, of a few miles in length had a token which the engine Driver had to have in his possession before he drove along it. This was in addition to him obeying the signals.

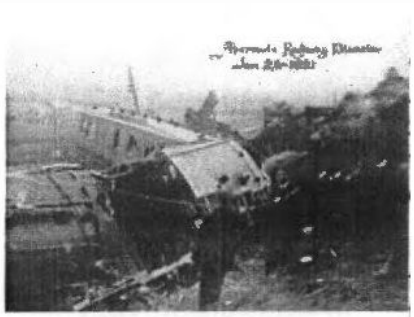
Each block had an instrument at each end, and these were electrically connected in such a way that only one token could be obtained from either instrument at a time, no matter which way the train was running.

To appreciate the circumstances which led to the terrible accident on January 26th, 1921, the station working at Abermule in the upper Severn valley needs to be considered.

One of the single track sections in question started at Welshpool, then continued in the 'down' direction towards Montgomery station, which was situated two miles from the town of Montgomery. After 3½ miles, the line reached the crossing loop between the platforms at Abermule. The route then aimed westwards, four miles up hill towards Newtown, the next block station.

The staff at Abermule station on that fateful day was as follows. Relief-Stationmaster Frank Lewis from Montgomery was deputising for the regular Stationmaster, John Parry, who was on leave.

Lewis was well acquainted with the routine at Abermule, having previously acted there on two or three other occasions as relief Stationmaster and a similar number of times as Signalman. Although well known to the other members of staff, he was without doubt an outsider and considerably junior in service to the Signalman, who was a possible choice to take charge in the regular Stationmaster's absence.



Signalman William Thomas Jones (Bill) was 60 years old, and had spent all his 32 years service at Abermule. Starting as a Porter in 1888, he became a Signalman-Porter in 1896; there was insufficient traffic to warrant a Signalman who had no other duties.

Bill had been on duty since 3 a.m. with a break taken from 8.20-9.20; this crossover was the last train movement of his shift.

It is interesting to surmise that Bill Jones felt some hostility towards Lewis. Bill as the 'old hand' on his home ground, probably felt that he was quite capable of looking after the station without the assistance of upstart ex-goods guards. No doubt the extra pay would have come in handy as well.

Also working at the station that day were: Booking Clerk, Francis William Thompson of Llandyssil; he was a 15-year-old with two years service. He was described at the Inquest as 'being a very intelligent lad and very sharp at school'.

Porter, Ernie Percy Rogers of Garthmyl, who was a 17-year-old with four years' service.

Neither of these youngsters was officially trained, nor permitted, to take part in the operation of the signalling system. We must assume that Thompson and Rogers were both ordinary country lads who fancied a life with a modicum of excitement, a bit of a uniform, and a small but steady wage instead of being a farm hand. They might have made it to Signalman or Stationmaster in the course of time.

We may take it as certain that the errors committed at Abermule station on the 26th January 1921 were by no means unique on the Cambrian, or any other railway. At many another single line crossing station, unauthorized staff had worked the tablet instruments designed to protect the trains from disaster, or had passed the safety tokens from hand to hand, bypassing those instruments.

Other Stationmasters had, for one reason or another, failed to be present at the arrival of a train and then authorized the 'right away' without proper assurance that all was as it should be.

Many a Driver had received a 'tablet' authorising him to proceed, and had not examined it.

However, at Abermule on that disastrous day, those errors joined one another until the outcome was certain. Ironically, it did not help that the system was well-tried and apparently fool-proof.

Rail travel had become a lot safer around the turn of the century. The last passenger train collision on a single track in the UK to result in fatalities had been at Radstock on 7th August 1876, over 44 years previously.

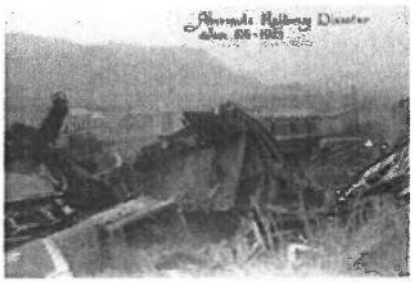
In view of the Company's explicit instructions to Stationmasters to give personal attention to the crossing of the two trains, the first mistake Relief Stationmaster Lewis made on this particular day was in taking his dinner later than usual, although this was caused by attending to Company business.

As a result, he did not return to the station building until ten minutes after the usual time, and uncomfortably close to the expected arrival of the local that was to halt at Abermule to let the express pass.

His second mistake was immediately to leave the office on another Company errand without first finding out where the express was, and without arranging to be called as soon as it was 'belled'.

The accident would never have occurred if he had been told on his return from lunch that the express was already well past Moat Lane Junction.

Lewis acknowledged full responsibility for his failure to examine the tablet. He also agreed that he had made no alteration in the station's working practices when he took over, although he could see that they did not conform to Company practice.



For instance, it was common for the young Booking Clerk, Thompson, to be unlawfully involved in the 'tablet' changing, but he, Lewis, had merely cautioned him to be careful.

It can be supposed that this lack of 'pulling the staff up by their boot-laces' might, in part, have been because of a strained relationship with Signalman Jones, the 'old hand' on the station. Knowing that he was only there for a short period, it was presumably easier for Lewis to work with the Abermule system of operating a railway, than the Cambrian's. Jones, from what can be deduced from this incident, made no attempt to assist or coordinate his knowledge of a situation with the Stationmaster.

Jones appeared to consider himself entirely free from blame in the event. Yet, it was his duty, in the absence of the Stationmaster, to receive the tablet from the 'down' train, and, if he had performed that duty, the accident would not have happened.

He knew well in advance that the express had passed Moat Lane Junction 'on time', but made no attempt to pass on the information to Lewis. Jones did not subsequently take any action to find out what had happened to the express when the crossing plans were changed, though he knew that unless a breakdown had occurred, it should pass the local train at Abermule as planned.

The crew of the local train from Whitchurch, through lack of attention at the station and on the track, for whatever reason, held at least half the responsibility for the crash. Between them all, they were responsible for a significant number of deaths and injuries of Cambrian passengers and employees through their slap-happy working and, perhaps, a little bit of resentment or an uneasy working relationship.

The only operating staff immediately involved who came well out of the event were the Driver and Fireman of the Aberystwyth express who did everything they could to mitigate the disaster; they only had a few brief moments after sighting the local steaming hard towards them on the same line.

The inevitable collision occurred at a point one mile south-west of Abermule Station, close to a place called Red House crossing. The railway from Abermule leading to this point was on a low rising embankment, and there was nothing to obstruct the local crew's view of the line. Newtown is four miles from Abermule, and the express had accelerated in good style. It was running at about 45-50 m.p.h. when it reached the usual point for shutting off steam prior to slowing down for the tablet exchange at Abermule.

The express passed under the bridge on a short length of right-hand curve; this lay in a cutting whose slopes fell in height from about 16 feet at the over-bridge to three feet at the site of the accident.

It was possibly the only place on the whole main line where the view was so restricted. The combined impact speed of the two trains would have been about 60 m.p.h., approximately 30 yards per second, so, depending on the efficiency of the braking there would have been only 10-12 seconds before they crashed.

The crew of the 'local' train did not appear to see the express because the column of smoke continued to pillar skywards as their engine laboured hard against the rising grade.

The Driver of the express claimed that he never whistled, his priority was to reduce his train's speed; however witnesses, including his Fireman, heard a whistle just before the collision. Did the Driver of the local catch sight of the express bearing down on him at the last minute, and take some belated action?

There might have been a small chance of averting the disaster if both trains had braked immediately; certainly the impact would have been greatly lessened if either member of the local's crew had been keeping a look-out.

Driver Pritchard Jones and Fireman Owen had stepped outside of their cab and were riding on the footsteps knowing that they had done all they could.

The brakes of the express train had bit hard against the wheels, but not hard enough to save the situation; the 254 tons express was running on a falling gradient of 1 in 123, still making about 25-30 miles per hour when it rammed head-on into the 217 tons of stopping train, labouring hard at about the same speed

The crash occurred at approximately 12.06."

Article by David Burkhill-Howarth.

The book, published by Tempus, is expected to be out in November 2007 but the copy has to be with the editor by the end of May. If anyone has information which they think could be of use to David he would be grateful if they would email him on dbhwriter@hotmail.co.uk

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*[David has kindly promised to give a talk about Abermule to the H.M.R.S. meeting at The Stork, Price Street, Birkenhead, on Tuesday 9 October 2007.]*

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