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Barrowmore Model Railway Journal



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Contributions are welcome:

- (a) as e-mails or e-mail attachments;
- (b) a hard copy of a computer file;
- (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 June 2013, and contributions should get to the Editor as soon as possible, but at least before 1 May 2013.

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Copies of this magazine are also available to non-members: a cheque for £9 (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 (possibly from the 1920s?) for this issue is a view of **Dinas Junction**, looking to Afonwen: this was the first station south of Carnarvon and was the junction for the 2ft gauge Welsh Highland Railway – you can see a rake of narrow gauge coaches on the left. The station name-board shows 'Change here for Snowdon, Beddgelert, Portmadoc, Blaenau Festiniog'. The standard gauge LNWR line had a passing loop and ran under the bridge and on to Afonwen, until the line was closed in the 1960s. Nowadays the Welsh Highland occupies the LNWR formation from Carnarvon (through Dinas) and swings left – eastwards - once it has passed under the bridge. Thanks to the L.N.W.R. Society for the photograph (Ref Sites 266), for the caption, and for the article later in this issue.

Forthcoming events

(2013)

6 Apr. 2013: 7mm running track, Llanbedr (see Editor for details).

20/21 Apr. 2013: Scalefour North, Wakefield.

11/12 May 2013: Chester M.R.C. open day, at Royal British Legion, 20 Heath Road, Upton, Chester CH2 1HX.

18 May 2013: 7mm running track, Llanbedr (see Editor for details).

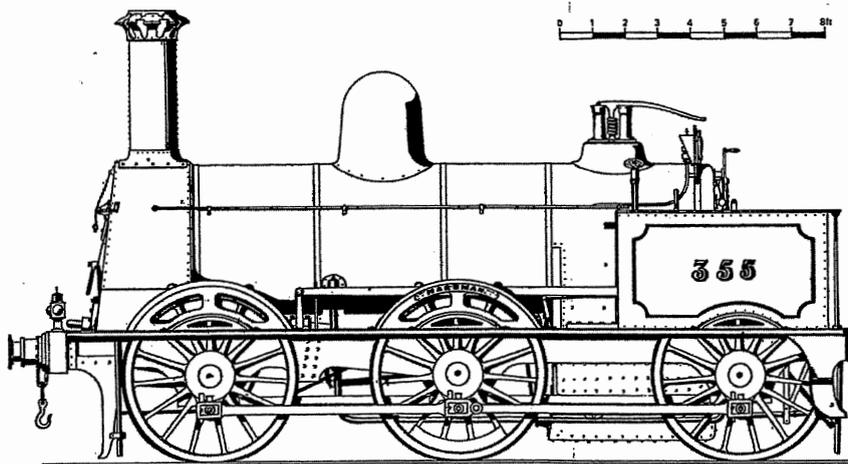
15/16 June 2013: Chatham show ("Mostyn" is appearing).

14/15 Sep. 2013: Woking show ("Mostyn" is appearing).

26/27 Oct. 2013: Merseyside show ("Johnstown Road" is appearing).

9/10 Nov. 2013: Newcastle show ("Mostyn" is appearing).

Notes of other railway-related events for this column are welcome



Although this is not Russian Railways no.14, it is an L.N.W.R. 0-6-0 DX goods engine, built 1858, with a similar size boiler and wheels. I can't imagine the Russian locomotive would have been much different; but I hope there would have been more weather protection for the crew! (Reproduced from "Locomotive magazine", 1941).

See also page 13.

(From *The Manchester Guardian* of Saturday, 3 July 1858, when it was just a provincial newspaper; this was drawn to my attention by John Dixon of Saltney who came across it while he was looking for something else — as so often happens! Knowing of my predilection for stories of railway disasters, he felt he should share it with us....)

FATAL BOILER EXPLOSION AT THE ATLAS WORKS.

SEVEN PERSONS KILLED AND FIVE INJURED.

The accident which occurred yesterday, about half-past eleven o'clock, at the Atlas Works of Messrs. Sharp, Stewart, and Co. Great Bridgewater-street, [Manchester]—of which we published a brief account in our evening edition,—resulted in the deaths of seven persons, and the injury, more or less serious, of five others. A locomotive goods engine, which had been constructed for the Russian Railways Company [Grand Society Chemins de Fer Russe - the forerunner of the present day Russian railways], was being tested, when one of the plates of the boiler, from some cause, gave way, and the fragments were hurled about with fearful force. Mr. Forsyth, the manager of the works; Mr. Gustav Cohn, the representative of the Russian Company, and two apprentices were watching the process of testing, when the explosion occurred, and they all suffered from its results. The following is a list of the killed and wounded:—

KILLED.

Mr. THOMAS FORSYTH, of Wright-street. Chorlton-upon-Medlock, manager of the works.
 Mr. WILLIAM DAWSON, of Dunham-street, Hulme, foreman of boiler makers.
 Mr. THOMAS GRINSELL NICHOLL, gentleman-apprentice.
 Mr. EDWARD STOCKS, gentleman-apprentice.
 JAMES CARMICHAEL, of Bonsall-street, Hulme, boiler maker.
 THOMAS ADAMSON, boiler maker.
 WILLIAM CONDUIT (a boy), rivet carrier.

WOUNDED.

James Mawson, engineer, 72, York-street, Hulme.
 Gustav Cohn [or, Kohn], engineer, Strangeways.
 John Gajewsky, engineer, 4, Osbourne Terrace, Moss Side.
 Michael Kelly, plate maker, 39, York-street, Chorlton-upon-Medlock.
 William Sands, plate maker, 52, Bradford Road.

These five are all at the Infirmary.

Of the killed, three were taken to the Concert Inn and three to the Oxford Road Inn, both in the immediate neighbourhood of the works. Mr. Nicholl lived a short time after the accident, and was taken to the Royal Infirmary; but his injuries were of a fatal nature, and he expired very short after his arrival in that Institution. Mr. Forsyth appears to have been struck on the head by a portion of the boiler plate, by which his skull was fractured. Mr. Dawson's body was frightfully torn by the fragments of the plate, as were also those of two of the other men. The lad, who for some time could not be identified, had his head and one of his arms carried off, and the head has not been discovered. It has since been ascertained that he was a rivet carrier, named William Conduit. The force with which the explosion occurred must have been terrific. Portions of the mangled bodies of those who were around and upon the engine were carried a distance of between 50 and 60 yards. The works are skirted on the southern side by the canal, on the opposite banks of which are the saw mill of Messrs. Hay and Cochrane, the walls of which were bespattered with blood and brains, and portions of flesh, presenting a horrible sight. The scene in the immediate neighbourhood of the engine was still more frightful. The bodies of those who were killed were dreadfully mutilated. Two of them were literally torn into pieces by the explosion, and scattered about in various directions. The report caused by the explosion instantly brought together a large number of the men engaged at the works; and the wounded were removed to the Royal Infirmary, the remains of those who had been killed being taken to the above-mentioned inns.

The cause of the explosion has not yet been ascertained. The engine was the last of a series of 40, which have been constructed for the Russian Railways Company, and was being tested in the usual way prior to its despatch to that country. All the others had been completed and delivered without an accident. The boiler was composed of five circular plates, riveted together, and the one which gave way was the fourth from the fire-box. It has been completely torn from the rivets, and, as far as we could see, none of the other plates has been affected. Some of the under portions of the engine were slightly damaged, and the door of an erecting shed in the rear of it was injured; but the destruction of property is very much less than usually accompanies explosions of this nature. The unfortunate men who have been the victims of the accident were necessarily in close proximity to the engine, and upon them the violence of the explosion was spent. The bodies of those who were not badly mutilated were blown away several yards, while portions of the others were carried, as we have stated, a distance of 50 or 60 yards across the canal.

The utmost consternation was produced by the accident. The works were at once stopped, and the hands, numbering about 1,400, will not resume work till Monday. The proprietor almost immediately after the occurrence took steps to have the boiler examined by several eminent engineers, whose evidence will probably be given at the inquest, which will be opened this day (Saturday).

Late last night we made inquiry at the Royal Infirmary, and although we could not ascertain the nature of the injuries sustained by the sufferers, we were informed that they were all still alive, and going on as favourably as could be expected.

(From *The Manchester Guardian* of Saturday, 10 July 1858 ...)

THE LOCOMOTIVE BOILER EXPLOSION AT THE ATLAS WORKS

THE ADJOURNED INQUEST

Since the enquiry into this accident was opened on Saturday last, two more of the sufferers have died at the infirmary, making a total of nine deaths by the explosion. The adjourned inquest was held yesterday morning, before Mr. E. Herford, city coroner, at his court in Ridgefield. Mr. John Robinson, a member of the firm of Sharp, Stewart, and Co; Mr. J.C. Forsyth, brother of the deceased manager of the works; Mr. William Fairbairn, C.E., Mr. T. Fairbairn, Mr. B. Fothergill, C.E.; Mr. J. Hick, C.E.; and Mr. Ramsbottom, engineer, were present; and Mr. S. Heelis again watched the proceedings on behalf of the proprietors of the works.

The jury having been sworn, they proceeded to the Infirmary to view the bodies of Kohn and Gajewsky. In the meantime the Coroner remained, and proceeded with some of the evidence, which was read over to the Jury upon their return. The following witnesses were examined:-

Richard Smith saw the deceased Gajewsky immediately after the explosion; he appeared to be much scalded, and was taken to the Infirmary.

William Todd, clerk at the Atlas Works, saw the deceased Gustav Kohn near the firebox end of the engine, just after the explosion. Kohn was able to walk, but was much scalded. He had been engaged as an improver.

Mr. John Dowling, house surgeon at the Infirmary, stated that Gajewsky died from congestion of the lungs and brain, produced by scalds; and that Kohn's death too resulted from scalds.

Mr. John Robinson, one of the proprietors of the Atlas Works, stated that Mr. Forsyth, who was killed, had the entire management of the locomotive and tool departments, for which he was well qualified. The engine, the boiler of which exploded, was the last of 40 which had been ordered by the French *Crédit Mobilier* for the Russian railways. The *Crédit Mobilier* sent Mr. Gajewsky as their inspector to watch the construction and see the trial of each engine. Witness believed Gajewsky was well acquainted with general engineering, but not so much with the details of locomotive engines. 39 of the engines had been constructed and sent off; 38 had left before the explosion, and the 39th, which had been tried before, had been despatched since; the latter was tried in the presence of Gajewsky or the inspector who preceded him. [Mr. Fairbairn here handed to the Jury an excellent photograph, taken by Mr. Mudd, of the engine and fragments of the boiler plate.] Gajewsky came as inspector at the beginning of the present year; and about 24 or 25 engines had been tried under his inspection. Nothing occurred during the trial of those engines to indicate that they were not sound; and the signature of the inspector was given for each before they were despatched. All the dimensions of the engines were given to the firm by the French engineers. [Mr. C. Stewart, a partner of the firm, was here sworn, but as he was absent when the explosion occurred, he was not examined, it being understood that he should be sent for if his evidence was required hereafter.] The details as to the thickness of the iron were also sent, and the instructions in writing could be produced. The firm received the written instructions as to the dimensions in the first place, and they then made drawings, filling in details, which were submitted to the French engineers, by whom they were approved. The plates for the boilers were not to be by any particular maker, but the quality was to be the best which, in their judgment, they could use. The plates used were thoroughly good, and there was nothing in the terms of the contract to induce the firm to put others of a lower description. The engine, of which the boiler ex-

ploded, was not finally completed, as it is usual to finish them off after the trial; it was the 1,067th constructed by the firm. It was tried with steam on the evening before the explosion, but Mr. Forsyth then reported to witness that it did not work very well, and that was the cause of its being tried a second time on the Friday morning. The words Mr. Forsyth used were, "We have had steam up in the engine, but the slide valves do not work evenly." He also added that one of the safety-valves "blew"—meaning that the steam escaped at the safety-valve seating, a large piece bolted upon the fire-box of the engine, and that it would be necessary to remake the joint, the valve seating had not been affected by the explosion; and, as far as witness could tell, the state of the safety-valve had not influenced the explosion. Witness saw the steam up about nine o'clock on the morning of the explosion. The engine was supported on blocks, the wheels revolving in the air. Witness could not recollect if Mr. Forsyth was near it then, but he saw Mawson, the foreman of one of the erecting shops, and Mr. Stocks there. Witness had the engine reversed to see that she worked well in both directions, and then told Mawson to stop her. Mawson said he could not do so as there was not enough water in the boiler to keep steam on until Mr Gajewsky, the inspector, arrived. Witness left about ten minutes afterwards but previously ascertained that the engine was pumping water into the boiler. Shortly afterwards Mr. Forsyth came to him in his office, and informed him that he had instructed the men attending the engine to send for him (witness) when Mr Gajewsky arrived. Witness remained in his office until he heard the explosion, which was about an hour after Mr. Forsyth last spoke to him; he could not account for his not having been informed when Mr. Gajewsky came. He (witness) was usually present when the trials were made, but his attendance was not a matter of much importance. Witness went down to the engine as soon as he had ascertained where the explosion had occurred. The usual pressure at which boilers were tried was 126lb per square inch. That was the pressure at which it would work on the railway, and it was not generally the custom in the trials to exceed it. In this instance the Crédit Mobilier Company required that as many of the boilers as were required by the inspector should be tried by hydraulic pressure. Two of the 38 boilers only had been tested in this way. The order was divided into two classes, one consisting of engines with the wheels coupled, and the others with only the centre and hind wheels coupled. There had never been an explosion at these works before, and no danger was apprehended as to the safety of the boilers. Witness believed that no locomotive maker in this country tested all his boilers by hydraulic pressure. In most cases in trials by steam pressure the actual pressure was increased to the extent of 20lb to 23lb by the rapid blowing off of the steam. They relied upon all the boiler plates being of the same material, and on their being put together in the same way; and assumed that if one boiler stood a certain pressure all the others would bear the same. That inference would not apply in the case of a defective plate; but a defective plate would in all human probability be discovered in the workmanship. Still it was possible that a flaw in the iron might escape the most accurate examination. After this explosion, the firm would probably, upon further consultation with engineers, test every boiler by hydraulic pressure. As soon as he went down to the engine, after the explosion, he saw the wounded removed, and the remains of the killed carried away. He then examined the boiler, and found that one entire plate had been blown out and broken into several fragments, leaving only a strip on each side attached to the rivets. He ordered everything to be left, and the fragments to be covered over, so as to prevent oxidation by rain. Nothing was disturbed till after the inspection by the Jury and Mr. Fairbairn. Messrs. Hick, Ramsbottom, Roberts, and Fothergill, engineers, had also made an examination.—By a Juryman: Witness did not hear that the boiler had been caulked on the day before the explosion; caulking was required in cases where there was a slight escape of steam. He had been told that the boiler was being caulked at the time it exploded.—Mr. William Fairbairn here said that the slight leakage which required caulking at the time of the explosion would have nothing to do with the explosion.— In answer to Mr. J.C.Forsyth

the witness said that the deceased manager (Mr. Forsyth) had nothing to do with the design of this boiler, or the materials of which it was constructed. The boiler plates of this and 13 of the other engines were obtained from Messrs. Rushton and Eckersley, of Bolton. They were 13 millimetres, or half an inch full in thickness, which is thicker than those usually used in this country. The French law required that a certain thickness of plate should be used for certain diameters, to work at a certain pressure. The diameter of the inside of the exploded plate was 4ft. 3½in. -- By Mr. Fairbairn: In the contract with the Crédit Mobilier no mention was made of a bursting plate of fusible metal. [Mr. Fairbairn said that in France the government required a bursting plate to be attached to the boiler, and that plate gave way to temperature and not to pressure.] There was a fusible plug attached to the boiler. The iron used for the plates was known as Bolton Iron, and was considered well adapted for boilers. —By Mr. Fairbairn: According to the practice in this country, the thickness of the plates of a boiler of the diameter of that which exploded would be 7/16in. in the barrel, and ½in. in the fire-box. The firm had always used one large plate, to go completely round the boiler. It was possible that smaller plates would be stronger, as the larger ones might be more liable to flaws at the edges. The cost of larger plates was 50 per cent more than that of the smaller ones. It had hitherto been considered by engineers advisable to use large plates, but that opinion now seemed to be changed. Within the last few weeks the firm had obtained small ones; but they had not hitherto had any reason to apprehend danger from the use of the large ones. The rivets were made by Garforth's steam machine. It was customary to make boilers both with lap and welt joints, and witness was not aware that either mode was preferable to the other. There was no danger in caulking a boiler at 120lb pressure, if it was not done too violently or constantly: but if the latter were required it would indicate a leakage too great to be safe, and the vibration to the plates would tend to cause an explosion.—After his evidence had been concluded, Mr. Robinson said he had been informed that Mr. Gajewsky was sent over as inspector by the Paris Committee of the Russian Railway, and not by the Crédit Mobilier, although he had always understood differently.

M. Zoeller {??-illegible} stated that the Great Russian Railways Company had a Committee of its proprietors at Paris, and it was by that Committee that the order was given to Messrs. Sharp, Stewart, and Co.

Robert Howarth, mechanic's labourer at the Atlas Works, was present on the Thursday afternoon when the boiler was first tested. Besides those who are dead who were then present were M'Murdo and Moss. The pressure on that afternoon did not exceed 70 or 80lb; he saw the steam gauge. There was a slight caulking required at the fire-box end of the engine: it might be that a dozen of the rivets "sweated" a little and required caulking. None of the rivets on the exploded plate had to be caulked on that day. The caulking did not occupy many minutes, but there might have been two or three dozen or more blows struck. All the caulked rivets were within a space of 1ft. or 18inches; and witness saw no sweating or leaking in other parts of the boiler: if there had been any he believed he should have noticed it. He remained during the whole of the time the steam was up on Thursday. The reason why a higher pressure was not got up was because Mr. Forsyth came down and said the slide valves were not right: and he ordered the steam to be let down and the valves to be set afresh. Witness got up the steam between twelve and one o'clock, and when he had let it down, in compliance with Mr. Forsyth's request, it was nearly four o'clock. Nothing was said to Mr. Forsyth in witness's hearing as to there being any danger with the engine. It was arranged that the trial should be continued the next morning, and witness had to get the steam up by seven o'clock. This he did, and Mr. Forsyth came about nine o'clock. Witness remained until the explosion, and he was at the fire-box end of the engine, having just got down from the foot-step, when the explosion occurred; he was thrown to the ground by the force of it. At the time of the explosion, Dawson, one of the deceased, was on the left side of the engine,

caulking the plate which was blown out: and Carmichael, another of the deceased, was caulking the rivet, on the right side, near the smoke-box end. Mr. Forsyth, and the two gentlemen apprentices, were standing a little on the left side. A few minutes before the explosion Mawson and Mr. Gajewsky had been to him, and they then went towards the smoke-box end. While witness was on the footboard, just before the explosion, he looked at the steam gauge and saw that the pressure was at from 115lb to 118lb: he noticed it because he was putting some water through the glass gauge in order to clear it. At that time the steam was blowing off very rapidly, and the pressure could not have been increased. The defect in the safety valve seating, noticed by Mr. Forsyth on the previous day, had been corrected. He had no reason to believe that the valve was not in good condition.— By the Foreman of the Jury: The caulking to the exploded plate was done to the seam that went across it. Mr. Forsyth asked the witness if he understood figures, and he replied that he did, though he could not read writing. He was sure the pressure was at 115lb. He was then questioned by Mr. Fairbairn, and a steam gauge having been sent for, he satisfactorily pointed out the pressure at which it was prior to the explosion.

A Juryman here stated that he had been informed that a man employed at the Atlas Works had, since the explosion, left, and gone to Scotland.—Mr. Heelis protested against such a statement, and said that Messrs. Sharp, Stewart, and Co had evinced the utmost desire that every circumstance connected with the accident should be laid before the Jury —Mr. J. Robinson, one of the partners, said that this was the first time he had heard of such a statement— At the request of the Coroner, Mr. Robinson went to the works to make inquiries, and on his return he stated that nothing was known of a person having left.—The Juryman said he had no idea of casting any imputation upon Messrs. Sharp, Stewart, and Co.

Mr. William Fairbairn, C.E. who had been requested by the Coroner to examine the boiler and the fragments of the exploded plate, presented a report, of which the following is a summary:—

Mr. Fairbairn first enters into the inquiry whether an excessive pressure of steam in the boiler occasioned the rupture. After noticing that when the spring balance was screwed down to seven atmospheres = 1051b per square inch, as indicated by the balance, the actual weight upon the valve was really 9lb per square inch more, or 114lb, which discrepancy he explains by stating that it is due to the weight of the valve and lever not having been allowed for in the scale graduated on the balance, Mr. Fairbairn states that the greatest pressure at which the engine was intended to work was 8 atmospheres - 1201b on the square inch, and the balance itself was graduated to indicate that pressure and no more. He is of opinion that the area of outlet for steam ($5\frac{1}{2}$ square inches for 12 valves) was amply sufficient, and consequently that the accident did not arise from excessive pressure of steam in the boiler.—His next inquiry is whether the material of the ruptured boiler plate was defective in its manufacture, or had been accidentally injured in its subsequent working. By a technical formula, Mr. Fairbairn shows that 4801b per square inch is the pressure requisite to burst a boiler of these dimensions. But the crossing of the joints in a locomotive boiler increases to some extent its powers of resistance. If [illegible] tons per square inch (the lowest result arrived at in the experiments) be taken for the tenacity of the plate, the result for the bursting pressure of the boiler is 1131b,—a very remarkable approximation to the alleged pressure in the boiler. The report then continues:—" The strength of boiler plates varies from 20 to $25\frac{1}{2}$ tons per square inch. The plates in the exploded boiler being properly proportioned to its size, and the workmanship being everywhere excellent, there remains, in my opinion, but one other alternative to account for the explosion; the presence somewhere or other,—in all probability unseen and not discoverable,—of weakness in the plate itself. The following experiments upon pieces cut from the exploded plate appear to strengthen this opinion, and enable us to compare its powers of resistance with the above standard of quality. The experiments were care-

fully made, and it will be found that although one of the recorded experiments gives a full average tensile strength, and leads me to infer that the iron of the body of the plate was good, yet the weak powers of resistance exhibited by the other experiments, especially No 1, indicate the presence here and there of what I may call patches of inferior iron, and show that the plate was not of uniform strength throughout. * * [sic] It is impossible to state with certainty what part of the joint first gave way to the force of internal pressure; but I am inclined to think that the first rupture occurred in the line of rivets next the smoke box, and close to the corner of the longitudinal joint, as it was at this point of the plate that the weak part was found which yielded to the comparatively small force of 4½tons to the square inch. Assuming this part to have contained from the first such an element of weakness, it will at once account for the fracture at a comparatively low pressure. Moreover, it is stated that the shock of the explosion forced back the whole mass of the engine, in the direction of its length, upwards of 30 feet: showing that the first rush of steam out of the boiler must have been in the direction of the smoke box, and that the longitudinal movement of the engine was due to the recoil. In conclusion, I have to state that I cannot attach blame of any kind either to the manufacturers of the plates or to the makers of the engine. A similar accident might have taken place in my own or any other works. We are subject to such casualties at all times, and although I do not say it would be *impossible* to discover certain elements of weakness in the materials of which the locomotive engine and other constructions are composed, yet with all the ordinary precautions, such as are used at the Atlas Works and all other well-conducted establishments, it may happen that a hidden source of mischief may escape detection, and that we may have to deplore such an event as has occasioned this inquiry."

In reply to Mr. J C Forsyth, Mr. Fairbairn said he had noticed that the edges of the fragments of the exploded plate varied in colour - portions being very dark, while others were somewhat brilliant; that effect might have been produced by steam and water having been thrown over some portions of the plate and not the whole. As far as he could judge the whole of the fracture was produced on the occasion of the explosion. At the request of Mr. Forsyth, a fragment of the plate was produced, and he pointed out the various colours of the edges. A long conversation ensued, it being stated that the piece produced was the corner of the plate, and as such was always more liable to be defective than any other portion. Mr Fairbairn stated, in answer to further questions, that boilers hitherto had not generally been tested with water pressure, but he should recommend that plan to be adopted, the pressure not to exceed one-third more than that at which the engine was to be worked.

Mr John Hick, engineer, Bolton, said he had made an examination, and he agreed generally with the report of Mr Fairbairn. He had no doubt that there was no crack in the plate prior to the explosion. He was also strongly of opinion that large plates were very objectionable for the reasons mentioned by Mr. Fairbairn.

Mr. B. Fothergill, consulting engineer, also stated that he concurred in the report of Mr. Fairbairn; and in answer to Mr Heelis, he stated that new boilers always leaked a little so as to require caulking.

Mr Thomas Lever Rushton, of the firm of Rushton and Eckersley, iron manufacturers, Bolton, stated that his firm had supplied a large number of plates for Messrs. Sharp, Stewart, and Co. At first they were 4ft. 2in. but they were afterwards reduced to 3ft. 4in. Mr. Rushton then described at some length the process which the metal passes through in its manufacture, and stated that the utmost care was employed at every stage to produce it free from imperfections. He considered small plates less liable to defects [illegible]... whole of the evidence, the Coroner briefly addressed the Jury. He said it did not appear that there had been any neglect on the part of the persons who manufactured the iron, or of those who constructed the boiler; nor was there any imputation of carelessness against those whose duty it was to tested the engine. According to the evidence of Mr. Fairbairn, the explosion must have been produced by some

defect in the boiler plate—a defect which might easily have escaped observation. There was not a shadow of blame against anyone; and, under these circumstances, he would leave them at once to consider their verdict.

The Jury then retired, and, after an absence of ten minutes, returned with a verdict of "Accidental death."

Mr Heelis, on the part of the proprietors of the works, expressed their deep regret at the accident, and added that they had always endeavoured to obtain the best workmanship and the best materials, the question of cost having no consideration with them where the safety of those whom they employed was at issue.

We understand that Mr. Fairbairn and Mr. Fothergill have handed over their fees for the benefit of the sufferers by the accident.

One of the injured men, William Sands, has so far recovered that he left the Royal Infirmary yesterday, and was made an out patient. The other two remain in the house, and are progressing very favourably.

The Editor's first thought after transcribing these press reports was to identify the locomotive involved, and this has so far proved difficult. A request for help to the Librarian of the H.M.R.S. did produce a result (even though foreign railways are outside their remit!) as the following e-mail demonstrates:

"Hi David, John Williams, our Industrial specialist, has done some research for you Yesterday he came in with a print out of Sharp Stewart loco construction from 1843, The salient points we picked out were:-

Works order	Purchaser	Wheel arr.	Loco.nos.	Date	
1018-25	Grand Society	C F	Russe	2-4-0	1-8
1027-34	do.			2-4-0	9-12/13-16
1042-51	do.			2-4-0	17-26
1054-67	do.			0-6-0	1-14

wheels). 1858 (1300cm

There is no reference to any explosion or which loco it could have been. John thinks it could be the last of the order ie 14 or 26.

He also has another book on boiler explosions in the 1850s, but they only seem to be locos in traffic - no mention of Sharp Stewarts.

He has a 92 year old friend who is looking for further information, so maybe a bit more to come. Cheers for now, Eric [Gent]."

Their passenger and goods locomotives appear to have had separate sequences of numbers; the fact that this engine was described as "a locomotive goods engine" suggests that the running number was probably 14. Presumably it was repaired and delivered to Russia.

missioned by the directors of the Chester & Crewe Railway from George Stephenson, and preferred the Chester to Holyhead route.]

Chester & Holyhead

The Chester & Holyhead Railway opened in stages - as is well known to readers of the BMRJ, the first section ran from Chester to Saltney Junction and included the infamous Dee Bridge which collapsed in 1847 under a train belonging to the Shrewsbury & Chester Railway. Unfortunately, the C&H seems to have been under-capitalised from the start. In particular, the Britannia Bridge across to Anglesey cost considerably more than the original estimate and took longer to build than hoped - trains were not able to run through to Holyhead until 1850. Ireland was enduring the pangs of the potato famine whilst the railway was under construction and Irish trade was not booming when the railway opened. The overall result was that the C&H could never afford develop its facilities as much as it ought and it could not even persuade the Government to award it the valuable contract for carrying mails across to Dublin. From the early days of C&H operations, the Company engaged the LNWR to run its services as it was unable to invest in its own locomotives and stock.

The Bangor & Carnarvon Railway

Although the C&H was always short of resources, it nevertheless made a huge difference to the economy of north Wales - travel for passengers and goods became much easier, faster and less expensive. Schemes to build other railways to meet the C&H were proposed and one of particular interest was the Bangor & Carnarvon. The C&H had reached Bangor in 1848 and the independent line from Carnarvon opened in 1852 - it met the C&H at Menai Bridge station, to the west of Bangor. It too was impecunious and was immediately absorbed by the C&H.

Hard Times - Rescue by the LNWR

The C&H did not prosper and in 1856 the C&H board reached an agreement with the LNWR that the latter would run the railway as part of the LNWR system and pay an annual fee to the C&H. More capital was needed to develop the C&H and eventually, in 1859, the LNWR effectively took over the C&H and the board no longer met, although it took an act of Parliament in 1879 to formally dissolve the C&H.

West Wales Developments and the Cambrian Railways

With good management and adequate finance, the route to Holyhead was bound to be successful and there were other schemes which sought to reach north Wales independently of the LNWR. In 1864 the Cambrian Railways were formed as an amalgamation of smaller railways across mid Wales. Subsequently a separate company - the Aberystwyth & Welsh Coast Railway - built its line north from the Cambrian and on to Porthmadoc. It then proposed to continue to Pwllheli and from there a further extension of around ten miles to Porth Dinllaen, on the north coast of the Lleyn peninsular near Porth Nefyn, was mooted. The terminus was to be the same place as that favoured by the rival to the Holyhead railway in the 1830s although this new scheme was at a much lower key.

South from Carnarvon

At the same time, a further company - the Carnarvonshire Railway - was formed to build a line south from Carnarvon (where it used the track bed of the 3ft 6in gauge Nantlle railway) to join the A&WC at Afonwen, a little to the east of Pwllheli. The Carnarvonshire Railway



Penygroes was an important station on the line south of Carnarvon. It had a passing loop - it had not been put in place at the time of the photograph - and was the junction for the branch to Nantlle. The engine in the photograph is one of Mr John Ramsbottom's famous 'DX' 0-6-0s - No. 938. Nearly 1,000 of them were built at Crewe between 1858 and 1872 - more than a few were passed on to the LMS in 1923. Up to 1872, early in Mr Webb's time in charge at Crewe, none of the engines had cab roofs. The ones built in that year (like the one

pictured) had both a cab roof and Mr Webb's style of chimney - the older ones were altered subsequently. The occasion of the photograph is not known but the engine was built in 1872, five years after the line was opened. However, the part of the Carnarvonshire Railway between south Carnarvon and Penygroes ran over the track bed of the narrow gauge Nantlle Tramway. The latter then ran up the valley to Nantlle and the section from Penygroes to Talysarn was converted to standard gauge in around 1872 - perhaps the opening of the railway to there was the cause of the gathering and the engine was brand new out of Crewe Works. Ref SOCA 248

opened in September 1867 and the A&WC reached Pwllheli in the next month. The Carnarvonshire Railway had running powers over the A&WC to Porthmadoc and Pwllheli whilst the A&WC could run to Carnarvon. The two companies fared reasonably well - they had built their lines and ran their trains but neither really prospered. The A&WC amalgamated with the Cambrian and its extension to Porth Dinllaen was never built. The Carnarvonshire Railway sold out to the LNWR in 1869, giving the latter a line through from Bangor to Afonwen - the LNWR had to tunnel beneath Carnarvon to link the two railways. The LNWR gained the Carnarvonshire's running powers over the Cambrian to Porthmadoc and Pwllheli too - doubtless it would have inherited running powers to Porth Dinllaen (i.e. Porth Nefyn) had the A&WC ever continued on to there.



Carnarvon: Looking towards Afonwen through a very busy station - the occasion was the investiture of the Prince of Wales on 13th July 1911. The engine on the right is one of Mr Whale's 'Experiment' 4-6-0s, No.1471 WORCESTERSHIRE. Ref SOC 168

BANGOR, CARNARVON, PENYGRŌES, and AFONWEN.—London & North Western.																												
Down.														Week Days only.														
Miles	464	London (Euston) dep.	9 43	11 50	5 0	11 50	5 0	11 50	5 0	11 50	5 0	11 50	5 0	11 50	5 0	11 50	5 0	11 50	5 0	11 50	5 0	11 50	5 0	11 50	5 0	11 50	5 0	
1	Bangor	dep.	4 46	8 46	11 17	12 15	1 10	1 56	3 11	3 36	3 35	4 13	5 0	5 35	7 0	8 50	9 10	10 40	11 14	11 55	12 54	1 14	1 44	2 14	2 44	3 14	3 44	4 14
1 1/2	Menai Bridge	dep.	4 46	8 46	11 17	12 15	1 10	1 56	3 11	3 36	3 35	4 13	5 0	5 35	7 0	8 50	9 10	10 40	11 14	11 55	12 54	1 14	1 44	2 14	2 44	3 14	3 44	4 14
2 1/2	Treborth	dep.	4 46	8 46	11 17	12 15	1 10	1 56	3 11	3 36	3 35	4 13	5 0	5 35	7 0	8 50	9 10	10 40	11 14	11 55	12 54	1 14	1 44	2 14	2 44	3 14	3 44	4 14
3 1/2	Port Dinorwic	dep.	4 46	8 46	11 17	12 15	1 10	1 56	3 11	3 36	3 35	4 13	5 0	5 35	7 0	8 50	9 10	10 40	11 14	11 55	12 54	1 14	1 44	2 14	2 44	3 14	3 44	4 14
4 1/2	Griffith's Crossing	dep.	4 46	8 46	11 17	12 15	1 10	1 56	3 11	3 36	3 35	4 13	5 0	5 35	7 0	8 50	9 10	10 40	11 14	11 55	12 54	1 14	1 44	2 14	2 44	3 14	3 44	4 14
5 1/2	Carnarvon 472	arr.	5 4	9 5	11 44	12 36	1 37	2 11	3 26	3 51	4 29	5 16	6 0	6 35	8 0	9 15	10 20	11 30	12 45	1 10	1 45	2 15	2 45	3 15	3 45	4 15	4 45	5 15
6 1/2	472 LLANBERIS	arr.	7 25	11 45	1 20	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0	12 0
7 1/2	Carnarvon	dep.	5 11 8 48	9 10	11 48	12 40	1 41	2 15	3 30	3 55	4 33	5 20	6 0	6 35	8 0	9 15	10 20	11 30	12 45	1 10	1 45	2 15	2 45	3 15	3 45	4 15	4 45	5 15
8 1/2	Dinas Junction	dep.	5 11 8 48	9 10	11 48	12 40	1 41	2 15	3 30	3 55	4 33	5 20	6 0	6 35	8 0	9 15	10 20	11 30	12 45	1 10	1 45	2 15	2 45	3 15	3 45	4 15	4 45	5 15
9 1/2	Llanwnda	dep.	5 29	9 25	11 22	12 55	1 56	2 30	3 45	4 10	4 45	5 30	6 15	7 0	7 35	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0
10 1/2	Groeslon	dep.	5 29	9 25	11 22	12 55	1 56	2 30	3 45	4 10	4 45	5 30	6 15	7 0	7 35	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0
11 1/2	Penygroes 472	arr.	5 36 9 10	9 37	12 14	1 13	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0
12 1/2	Pant Glas	dep.	5 38	9 47	12 24	1 24	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0
13 1/2	Brynkir	dep.	5 38	9 47	12 24	1 24	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0
14 1/2	Ynys	dep.	5 38	9 47	12 24	1 24	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0
15 1/2	Llangybi	dep.	5 38	9 47	12 24	1 24	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0
16 1/2	Chwillog	dep.	5 38	9 47	12 24	1 24	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0
17 1/2	Afonwen 583	arr.	6 8	10 13	12 50	1 40	2 15	3 30	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0
18 1/2	583 P WLLHELHI	arr.	6 35	10 58	1 20	1 55	2 30	3 45	4 10	4 45	5 30	6 15	7 0	7 35	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0
19 1/2	583 CRICCIETH	arr.	6 28	10 51	1 22	1 52	2 27	3 42	4 07	4 42	5 27	6 12	7 0	7 35	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0
20 1/2	583 PORTMADOC	arr.	6 39	11 3	1 35	2 10	2 45	3 50	4 15	4 50	5 35	6 20	7 0	7 35	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0
21 1/2	583 BARMOUTH	arr.	7 30	11 50	2 23	3 0	3 35	4 40	5 05	5 40	6 25	7 10	8 0	8 35	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0

GAERWEN and AMLWCH.—London and North Western.																													
Down.														Week Days only.															
Miles	1	Gaerwen <th>dep.</th> <th>5 20</th> <th>8 50</th> <th>9 18</th> <th>11 5 <th>11 30 <th>12 55</th> <th>1 10 <th>1 25</th> <th>2 40</th> <th>3 12</th> <th>4 0 <th>5 50</th> <th>6 15</th> <th>7 25</th> <th>8 5 <th>9 10 <th>10 40 <th>11 14 <th>11 55 <th>12 54 <th>1 14 <th>1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th></th></th></th></th></th></th></th></th></th></th></th></th>	dep.	5 20	8 50	9 18	11 5 <th>11 30 <th>12 55</th> <th>1 10 <th>1 25</th> <th>2 40</th> <th>3 12</th> <th>4 0 <th>5 50</th> <th>6 15</th> <th>7 25</th> <th>8 5 <th>9 10 <th>10 40 <th>11 14 <th>11 55 <th>12 54 <th>1 14 <th>1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th></th></th></th></th></th></th></th></th></th></th></th>	11 30 <th>12 55</th> <th>1 10 <th>1 25</th> <th>2 40</th> <th>3 12</th> <th>4 0 <th>5 50</th> <th>6 15</th> <th>7 25</th> <th>8 5 <th>9 10 <th>10 40 <th>11 14 <th>11 55 <th>12 54 <th>1 14 <th>1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th></th></th></th></th></th></th></th></th></th></th>	12 55	1 10 <th>1 25</th> <th>2 40</th> <th>3 12</th> <th>4 0 <th>5 50</th> <th>6 15</th> <th>7 25</th> <th>8 5 <th>9 10 <th>10 40 <th>11 14 <th>11 55 <th>12 54 <th>1 14 <th>1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th></th></th></th></th></th></th></th></th></th>	1 25	2 40	3 12	4 0 <th>5 50</th> <th>6 15</th> <th>7 25</th> <th>8 5 <th>9 10 <th>10 40 <th>11 14 <th>11 55 <th>12 54 <th>1 14 <th>1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th></th></th></th></th></th></th></th></th>	5 50	6 15	7 25	8 5 <th>9 10 <th>10 40 <th>11 14 <th>11 55 <th>12 54 <th>1 14 <th>1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th></th></th></th></th></th></th></th>	9 10 <th>10 40 <th>11 14 <th>11 55 <th>12 54 <th>1 14 <th>1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th></th></th></th></th></th></th>	10 40 <th>11 14 <th>11 55 <th>12 54 <th>1 14 <th>1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th></th></th></th></th></th>	11 14 <th>11 55 <th>12 54 <th>1 14 <th>1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th></th></th></th></th>	11 55 <th>12 54 <th>1 14 <th>1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th></th></th></th>	12 54 <th>1 14 <th>1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th></th></th>	1 14 <th>1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th></th>	1 44 <th>2 14 <th>2 44 <th>3 14 </th></th></th>	2 14 <th>2 44 <th>3 14 </th></th>	2 44 <th>3 14 </th>	3 14	
1	Gaerwen	dep.	5 20	8 50	9 18	11 5	11 30	12 55	1 10	1 25	2 40	3 12	4 0	5 50	6 15	7 25	8 5	9 10	10 40	11 14	11 55	12 54	1 14	1 44	2 14	2 44	3 14	3 44	4 14
2 1/2	Holland Arms 472	dep.	5 20	8 50	9 18	11 5	11 30	12 55	1 10	1 25	2 40	3 12	4 0	5 50	6 15	7 25	8 5	9 10	10 40	11 14	11 55	12 54	1 14	1 44	2 14	2 44	3 14	3 44	4 14
3 1/2	Llangefni	dep.	5 37 9	9 19	27	10 25	11 16	12 41	1 31	2 0	3 15	3 47	4 30	5 15	6 0	6 35	7 45	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0
4 1/2	Llangwyllog	dep.	5 37 9	9 19	27	10 25	11 16	12 41	1 31	2 0	3 15	3 47	4 30	5 15	6 0	6 35	7 45	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0
5 1/2	Llanerchymedd	dep.	5 37 9	9 19	27	10 25	11 16	12 41	1 31	2 0	3 15	3 47	4 30	5 15	6 0	6 35	7 45	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0
6 1/2	Rhosgoch	dep.	5 37 9	9 19	27	10 25	11 16	12 41	1 31	2 0	3 15	3 47	4 30	5 15	6 0	6 35	7 45	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0
7 1/2	Amlwch	arr.	6 38	10 6	33	11 0	11 45	1 22	2 0	3 15	3 47	4 30	5 15	6 0	6 35	7 45	9 0	10 0	11 0	12 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	

B Runs 5 minutes later on Tuesdays. F Fridays and Saturdays. H Except Fridays and Saturdays. T Thursdays only. V Except Thursdays.

'Bradshaw' for July 1922. A page from the timetable showing passenger services between Bangor and Afonwen. Through carriages are listed to Porthmadoc and Pwllheli from Liverpool, Manchester and Euston. Oddly, there is a through carriage from Birmingham to Pwllheli but not vice versa. Doubtless the Pwllheli carriages would have continued to Porth Nefyn had the extension been built. The timetable doesn't show whose carriages were used but other LNWR trains over 'foreign' lines

used LNWR carriages in some trains and the other company's stock in others - Cambrian vehicles are seen in a few photographs on the main line to Euston. Ref TTB 78

Dr Beeching All these routes around Carnarvon remained intact until Beeching days but then the line from Carnarvon to Afonwen closed at the end of 1964. The line north from Carnarvon lingered on, perhaps because of the impending investiture of the Prince of Wales at Carnarvon castle in July 1969, until closure in May 1970. In practice, the line lingered on still longer - it was reopened and used by container traffic after the Britannia Bridge caught fire, until repairs could be made.

The Chester & Holyhead main line is still in use, as is the Cambrian Railways line through Porthmadoc to Pwllheli. Afonwen station existed because of the junction with the Carnarvon



The LNWR met the Cambrian at Afonwen - there was little there other than the junction and the station. The photograph was taken by Max Dunn, the shedmaster at Bangor, in British Railways days and shows the station looking towards Porthmadoc. According to the photographer's notes, he is standing on the bridge over the River Wen. The DMU on the left is in the loop platform which seems to be the one mostly used by the LNWR. The actual junction, which faced Porthmadoc, is some way behind the camera. Ref JMD 143

When the P4 Group in Merseyside Model Railway Society was considering a successor project to an earlier P4 layout, Afonwen was one of many prototypes considered; attractive from the point of view of rolling stock (perhaps in the immediate post-grouping era), the big drawback was that there was not a lot there apart from the small station and boggy fields. So it got the 'thumbs down'.

line - Afonwen was barely a village - and it closed when the junction closed in 1964.

Services between the Cambrian and the LNWR

The Cambrian and the LNWR worked quite closely together. They had three points of contact - at Whitchurch on the LNWR's Crewe to Shrewsbury line, at Buttington where the LNWR/GWR joint line from Shrewsbury met the Cambrian main line from Oswestry to Welshpool and at Afonwen. Through carriages ran between the two networks and at one time it appeared likely that the LNWR would take over the smaller railway. That never happened, of course, and the Cambrian became part of the GWR shortly before the 1923 grouping. In pre-grouping days, the Bangor to Afonwen line was used for through carriages be-

tween Euston, Birmingham, Liverpool and Manchester on the LNWR and, on the Cambrian, Porthmadoc and Pwllheli. The LNWR and its successor, the LMS, do not appear to have run regular trains through Afonwen onto the Cambrian, nor do the Cambrian and the GWR seem to have run to Carnarvon. However, there were through carriages from Pwllheli and Porthmadoc via Carnarvon to north west England (e.g. Manchester) and excursion traffic ran between the two systems. In British Railways days, trains ran to the Butlin's holiday camp near Pwllheli over the Carnarvon line. In the 1950s and 60s, frequent summer excursions and mystery tours ran from the north Wales resorts and along various LNWR branches onto Cambrian and GWR lines.



After the closure of the former Cambrian Railways works at Oswestry, several ex-GWR engines were moved to sheds on the Chester & Holyhead. The photograph - another by Max Dunn, the Bangor shedmaster - shows the first GWR engine (Collet 0-6-0 No. 3202) to run on one of the 'Land Cruise' trains from Bangor. Such excursions toured the neighbourhood and often ran on the LNWR from Bangor to Afonwen, along the Cambrian through Porthmadoc, Barmouth and Barmouth Junction to Dolgellau. Then they used the GWR line eastwards to Corwen where they headed off north over the LNWR again through Denbigh and on to Rhyl where they had to reverse to run along the Chester & Holyhead through Llandudno Junction back to Bangor. Ref JMD 210A

The Welsh Highland

A small part of the Carnarvonshire Railway line has come back into use in modern times - the 2ft gauge Welsh Highland Railway uses the track bed from the south side of Carnarvon down to Dinas Junction where it picks up its original route on to Waunfawr, Beddgelert and Porthmadoc.

Johnstown Road, Porth Nefyn and the LNWR

BMRG's gauge '0' layout 'Johnstown Road' is based on the Cambrian and its extension runs to Porth Nefyn, the terminus which neither the Aberystwyth & Welsh Coast nor the Cambrian ever reached. If the line to Porth Dinllaen (which was the A&WC's name for the terminus) had been built, it seems certain that there would have been through carriages over the LNWR through Carnarvon and so the 'Plum and Spilt Milk' livery would have been seen there. The LNWR never ran a goods train to Pwllheli - there was not enough business there to attract it

- but if the extension had been built, the LNWR would have inherited running powers and could well have extended its pick-up goods from Carnarvon to Afonwen right through Pwllheli and on to Porth Nefyn.



'Johnstown Road' at the Woking model railway exhibition in September 2012. The first LNWR goods train is seen leaving Porth Nefyn, pulled by 'Coal Tank' 0-6-2 No. 578. Ref SOCMDL 13

The photographs are taken from the LNWR Society's archive and the author wishes to thank the Society for permission to use them.

[excerpt from *The Chester Chronicle* dated Saturday, 5 April 1890].

GREAT SAUGHALL LOCAL NOTES

Of course the great event of this week has been the opening of the new railway. A good number of our villagers wended their way to the new station, and booked seats by the first train for the ancient citie. The unanimous verdict was that the carriages were most comfortable. They are evidently constructed on a plan which obviates that unpleasant jogging movement to which travellers by rail are so much accustomed.

Many blessings have been heaped upon the hands of Sir Edward Watkin and his *confreres*, who have conferred so great a boon on this neighbourhood. The Saughallite can LOW be seated at his dinner table in a quarter of an hour after leaving Chester. This will be especially interesting news to the many distant readers of the *Chronicle* who are natives of "these parts".

Now that we have railway communication with Chester the postal authorities will surely see their way to giving us the advantage of a later hour for the clearance of the box at the post office. The box is at present closed at 4-25p.m., but as a train now leaves Saughall station at 7-23 there is no earthly reason why the box should not be kept open till 6-45 or 7p.m. what a boon this arrangement would be, especially to the working classes of the district. We feel sure the

Chester postmaster will do what he can towards granting us the much needed reform in our local postal service.

We had a wedding in our little community last week, and in honour of the event the usual "salvo of artillery" had been arranged at the village smithy. Unfortunately there was a mishap, and the explosion of gunpowder blew out some windows, and did further damage to the brickwork, but luckily no one was injured seriously, although some of the bystanders had a somewhat narrow escape.

On Thursday evening the Sunday school teachers at Grove Chapel, together with several of their friends, met for their usual quarterly tea and social meeting. A good number sat down to a substantial tea, the caterer, as on former occasions, being Mr.J.T.Whaley, who as usual gave the utmost satisfaction. At the subsequent meeting Messrs.P.Stephen, jun., and J.Mason gave appropriate addresses to those assembled. Anthems and hymns were sung at intervals, the vocal part of the proceedings forming a very pleasant variation. Our friends at the other chapels would do well to inaugurate a plan of periodical social gatherings, when they could meet together to exchange ideas and compare notes.

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Letters to the Editor

E-mail from **Richard Oldfield**:

"Just a quick note to let you know that Mike [Rapson] has taken out and paid for a subscription [for their magazine] with the Merseyside Railway Society on behalf of our group. The MRS produce a nice A5 magazine covering a wide range of railway topics written by their members including enthusiasts such as Edgar Richards, Bob Casselden, Dave Rapson, John Feild etc. The latest issue of the magazine is at the club on my workbench."

Extract from an E-mail from **Tony Robinson**:

"... I meant to mention, but forgot, that in the last *BMRJ* a very nice tribute was paid to that renowned Manchester Modeller/Engineer the late **Sid Stubbs**. In it he was given as being a member of the Civils when actually he was "one of us" a member of the Mechanicals. For possible interest of readers I have attached "a not very good" photo of the etched glass "Past Presidents" display panel that I took on a previous visit to the Birdcage Walk H.Q. of the Institution and no doubt you will recognise some famous steam loco Engineers amongst them. One name missing was Francis Webb who was actually a Vice President in 1877, he later "resigned in disgust" in 1885 after having the design of his Compound Locomotives heavily criticised on their fuel consumption in a paper given to the Institution by George Marie*, a case of him "throwing the toys out of the pram" I think, as he had a lot to offer on locomotive developments in the late 19th century!

* F.W.WEBB 1836 - 1906, a Bibliography by John E. Spink. (LNWR Soc 2011)."

[the photo is not easily copiable, but does include the names of Gresley, Stanier, Bulleid, etc.]

I can't remember whether I have put this old e-mail (forwarded by **John Stockton-Wood**) in *BMRJ* previously; I have just come across a copy, and laughed anew. So, just in case ...

"I have two dogs and I was buying a large bag of Winalot in Tesco and was standing in the queue at the till. A woman behind me asked if I had a dog.

On impulse, I told her that no, I was starting **The Winalot Diet** again, although I probably shouldn't because I'd ended up in the hospital last time. However, not before I'd lost 50 pounds and then awakened in an intensive care ward with tubes coming out of most of my orifices and IVs in both arms.

I told her that it was essentially a perfect diet and the way that it works is to load your trouser pockets with Winalot nuggets and simply eat one or two every time you feel hungry. The food is nutritionally complete so I was going to try it again.

I have to mention here that practically everyone in the queue was by now enthralled with my story, particularly a guy who was behind her.

Horrified, she asked if I'd ended up in the hospital in that condition because I had been poisoned. I told her no, it was because I'd been sitting in the road licking my balls and a car hit me.

I thought one guy was going to have a heart attack he was laughing so hard as he staggered out the door.

Stupid woman why else would I buy dog food??"

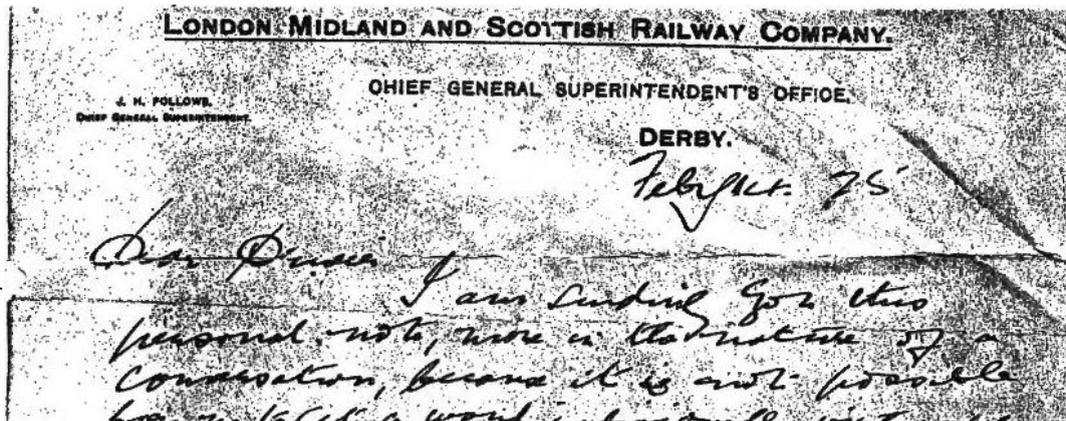
J.H.Follows letter

(Not to the Editor!)

Group member Alisdair Macdonald came across, in his collection of railway memorabilia, a photocopy of this early L.M.S. document, and thought it would make an interesting contribution to our magazine.

The writer was not the world's best calligrapher, and the tattered document (on foolscap size paper) did not copy well – so the Editor thought that his interpretation of the original handwriting would be preferable to a scan!

So here it is



John Henry Follows (1869-1938) started his railway career with the Midland Railway and went on in the L.M.S. When this letter was written (1925) he was Chief General Superintendent at Derby; he later became a Vice President of the L.M.S. between 1927 and 1932. Here is a transcript of the letter which is dated 1 February 1925:

“Dear Driver

I am sending you this personal note, more in the nature of a conversation, because it is not possible for me to get a word, individually, with all the drivers on the LMS.

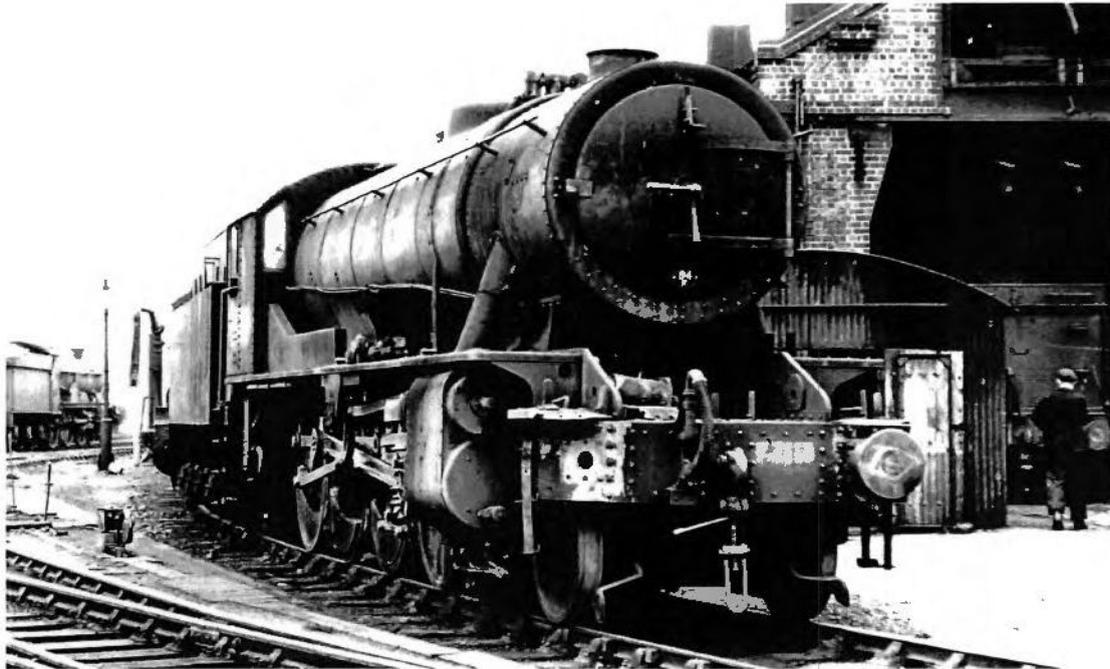
I have a lot of sympathy with drivers, knowing something of the difficulties in connection with their duties, but I do feel concerned about the number of accidents we have had recently by reason of trains being allowed to come into contact with buffer stops at terminal stations.

Such buffer stops at stations are provided as a precautionary measure, & what I wish is for every driver to so regulate the application of his brake that he will bring his train to a stand clear of the buffer stops.

When a passenger train is entering a terminal station, the passengers naturally assume that they have completed their journey in safety, & I cannot help but think that it is within the powers of so able & trustworthy a body of men as engine drivers to so regulate the stopping of trains as to justify this confidence.

Yours faithfully
J.H.Follows

[addressed to Mr. C.Worthington]”



"From: Stan Yates
Sent: 07 March 2013 10:44
To: David Goodwin
Subject: 77115

77115 was allocated to Oxley in May 1947 but had been transferred to Chester GWR Shed by 1st January 1948.

The locomotive underwent a general repair at Vickers Armstrongs, Scotswood Works, Newcastle upon Tyne between 11/12/48 and 11/2/49 and emerged as 90572.

90572 remained at Chester WR Shed until 1952 when it was transferred to Banbury in the four week period ending 14/6/52.

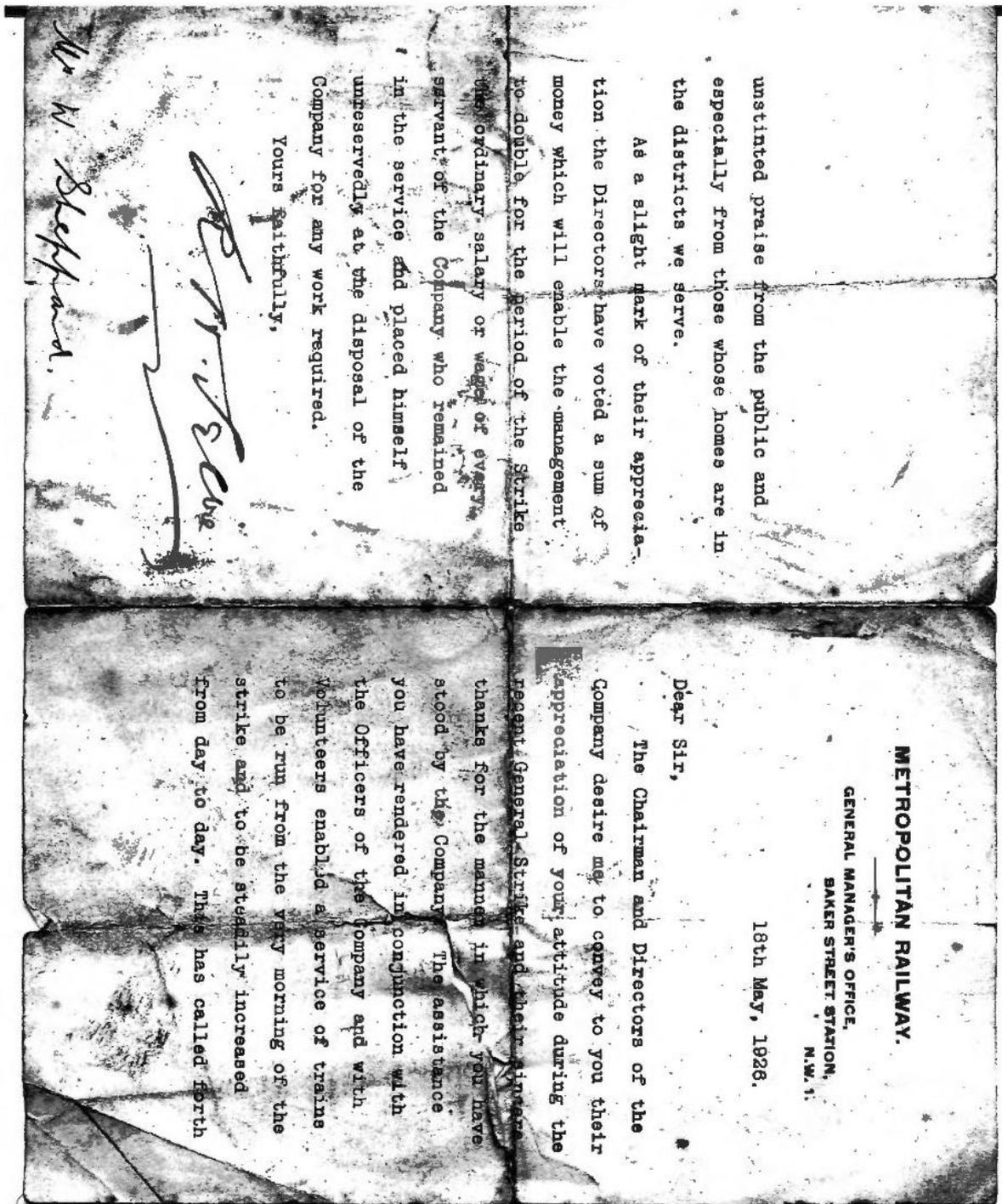
The print was obtained from Colin Stacey, proprietor of Initial Photographics, and forms part of the BKB Green collection held by Initial Photographics. The print is undated but we may guess that the photograph was taken in the late Summer / early Autumn of 1948 and the collision damage was the reason for the locomotive being sent to Vickers Armstrongs for repair."

The Metropolitan Railway and the General Strike, 1926

On the next page is another contribution from Alisdair Macdonald. As a committed trade unionist and former Unison (Nalgo) Shop Steward, the Editor frowns on the behaviour portrayed, but it is an interesting social document. It also emphasises the half-forgotten fact that not all railways were grouped in 1922; the Metropolitan lasted until amalgamated into London Passenger Transport Board in 1933. Our local example was even longer-lasting, in that the Cheshire Lines railway didn't disappear until Nationalisation in 1947.

In 1926 the General Manager of the Metropolitan Railway was Robert Hope Selbie (1868-1930) who had started his railway career with the Lancashire & Yorkshire Railway. He was eventually to become Secretary of the Metropolitan in 1903 and General Manager from 1908 until his death in 1930.

The General Strike, which lasted from 4 May 1926 to 13 May 1926, was called by the Trades Union Congress at the request of mining unions who had seen their wages reduced by nearly a half over the previous seven years. Nearly two million workers went on strike, and it ended when the miners were forced back to work by dire lack of funds. As is so often the case following industrial disputes, no party 'won': although the miners were forced back to work, many mine owners never recovered after the strike and soon after, went out of business (Neston's Wirral Colliery is a local example).



This definitive account of the industrial railway infrastructure of Widnes was first published in 'The Industrial Locomotive' (journal of the Industrial Locomotive Society), vol.14 nos.1,2,4 and 5; 2011-2012. Bob thought it might be of local interest – and here it is:

INDUSTRIAL WIDNES - Part 1

by Bob Miller

A town on the Lancashire bank of the Mersey between Liverpool and Warrington, Widnes became a major centre for the alkali industry and associated metal works with more than twenty individual sites operating their own locomotives. By 1872 there were thirty-five factories (including twenty-four devoted to chemicals) in production. All the largest alkali manufacturers in Britain using the Leblanc process, including thirteen with plants in Widnes, banded together in 1890 to form the United Alkali Co Ltd; for the year 1901 production in Widnes alone by this combine amounted to 30,000 tons of bleaching powder, 22,000 tons of caustic soda, 15,000 tons of soda crystals, 92,000 tons of sodium sulphate and no less than 130,000 tons of sulphuric acid, directly employing over 4,000 men in their factories.

All this was only achieved at the cost of considerable pollution. In 1883 *The Engineer* called Widnes "the smoky and somewhat odorous alkali metropolis"; the *Daily News* in 1888 went further by calling it "the dirtiest, ugliest, most depressing town in England", whilst *Pearson's Magazine* of July 1896 said that "when the south wind is blowing, its obnoxious presence makes itself felt many miles away.....for miles round the poisonous air kills and kills.....trees cannot live here, but men must and do". [In the Local History section of Widnes Public Library there are collections of photographs taken as evidence for the periodic public inquiries into air pollution: leafless trees in the height of summer] There was also a considerable amount of rather smelly waste material produced, much of it known as galligu (calcium sulphide), and by 1889 some eight million tons of it had been dumped over 450 acres of marsh land to the west of the town to form what was locally called "The Ditton Alps". This was liable to suffer from spontaneous combustion, which in some cases could continue smouldering for as long as twelve or so months.

There was no town of Widnes existing when the canal and railway from St Helens and the dock both arrived in 1833 at what was then called Runcorn Gap. The principal villages in the area were Appleton and Farnworth and the population in 1841 was only 2,209, rising to 3,217 in 1851. The stretch of marshy land between the canal and the Mersey became known as Spike Island (or more familiarly as "Spikey") and it was here that the first chemical works was erected; curiously it could only be reached over the railway swing bridge (the 'Iron Bridge') or the foot crossing over the pair of canal locks at the Mersey connection. The rocky outcrop to the west of these locks, which caused the Mersey estuary to narrow at this point, had the ancient Viking name of vidnes, meaning wide nose, and this gave rise to the name adopted by the new town. By 1853 there were four alkali works in production and the population now soared, more than doubling to 6,905 in 1861, doubling again in 1871 to 14,359 and reaching 30,011 in 1891. Many of the new inhabitants came from Ireland and Wales but there were also significant numbers from Poland and Lithuania. The town became a separate parish in 1859; Runcorn Gap railway station changed its name to Widnes in September 1864 and in the following year the Widnes Local Board was created. Municipal Borough status

was achieved in 1892 (the Town Hall was opened in 1896) and this lasted until 1974 when Widnes and Runcorn were merged into a single new borough called Halton. This was due to the strong local opposition to the original proposal to include Widnes in the new county of Merseyside. Despite Stockport having co-existed in the two counties of Lancashire and Cheshire for more than a hundred years, it was decided that Halton needed to be administered in just one county and that would in future be Cheshire.

The Leblanc process referred to used sulphur and pyrites, mainly imported through Garston from Spain, salt brought by boat into Widnes Dock via the Weaver, and coal for fuel from the St Helens area which arrived both by rail and canal. However by 1890 the chemical industry in Widnes was starting to decline as more efficient methods of producing alkali were developed elsewhere, notably by Brunner, Mond & Co in Northwich which used the Solvay process, and also due to restrictive tariffs introduced by the USA. With insufficient finance to compete individually, nearly all the companies using the Leblanc process (mostly in St Helens, Runcorn, Fleetwood and County Durham besides Widnes) decided in protection to combine. They formed the United Alkali Co Ltd, registered on 1 November 1890 with headquarters in Liverpool. The following 14 Widnes concerns were acquired at that time:

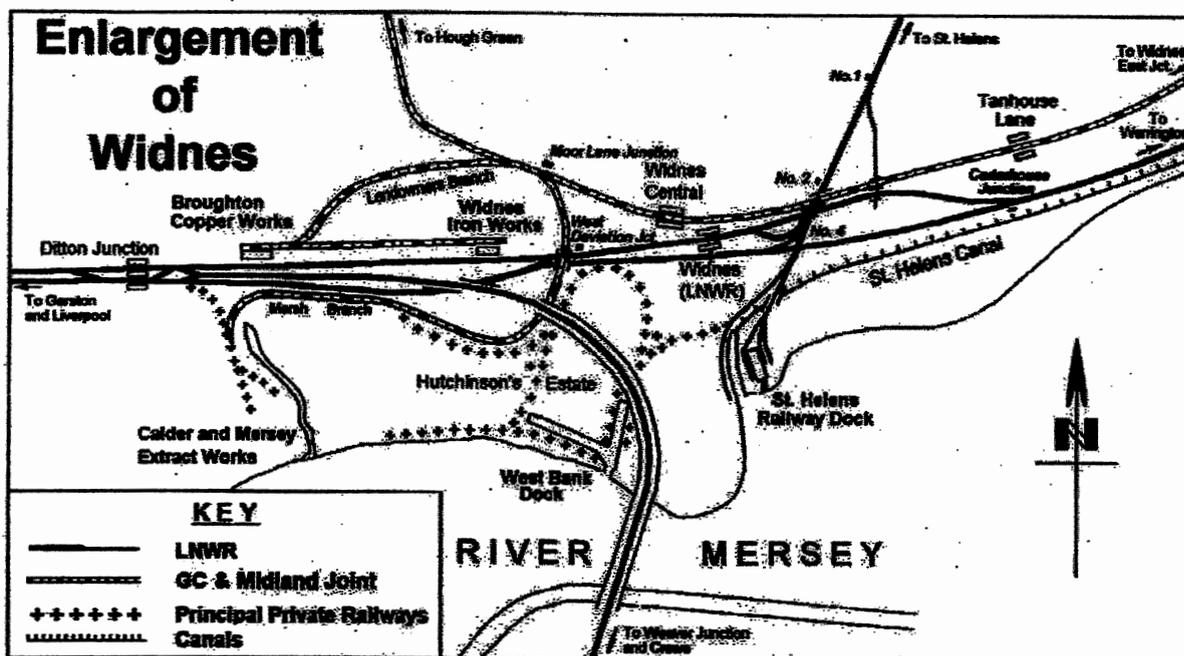
- Gaskell, Deacon & Co
- Golding, Davis & Co Ltd
- Hall Brothers & Shaw
- Hay Gordon & Co
- John Hutchinson & Co
- The Liver Alkali Co Ltd
- Neil Mathieson & Co
- Mort, Liddell & Co
- James Muspratt & Sons
- W Pilkington & Son
- Runcorn Soap & Alkali Co Ltd (Rosin Works)
- Thomas Snape
- E Sullivan & Co Ltd
- The Widnes Alkali Co Ltd

In addition the Widnes plant of the Tharsis Sulphur & Copper Co Ltd was acquired in 1894 and also the works of J B Aitkin in 1916. With some restructuring, the closure of the smaller and less efficient plants and the introduction of new products, the decline in the industry was reversed. In 1926 the four major British chemical companies merged to form Imperial Chemical Industries Ltd by the amalgamation of the British Dyestuffs Corporation, Brunner Mond & Co, Nobel Industries and United Alkali Co. The population of Widnes actually dropped after 1891 to 28,579 in 1901. Thereafter there was steady growth, reaching 40,619 in 1931 and 55,708 in 1991.

The St Helens and Runcorn Gap Railway and the dock (owned by the railway) were opened in 1833 with a single track main line except for the inclines. These were replaced by a more easily graded route and the whole line doubled in 1849.

Previously, in 1845, the railway had amalgamated with the Sankey Brook Navigation to form the St Helens Canal & Railway Co and a short branch (496 yards long) was opened in 1851-52 to Muspratt's Works, later known as the Gas Works branch. Another branch, from a point about 667 yards north of the dock terminus which ran to Ditton Mill, was opened in 1851. A new Runcorn Gap station was opened on this branch next to the Waterloo Road lev-

el 1851. A new Runcorn Gap station was opened on this branch next to the Waterloo Road level crossing in July 1852, replacing the original station which was immediately north of the canal swing bridge. The stations at Appleton and at Farnworth seem to have opened at about the same time. The Ditton line was extended west to Garston, where a new dock was opened, and east to Warrington (crossing the original line on the level) in 1853, together with a curve from the Warrington line to the Runcorn Gap Dock line. The curve at the commencement of the Ditton Mill line was very sharp having only 10 chains radius and the alignment was altered in 1856.



This map, drawn by Michael Pain, shows the principal lines in the Widnes area referred to in this article. (From 'Industrial railways of St Helens, Widnes and Warrington, part 1' by C.H.A. Townley and J.A. Peden, courtesy Industrial Railway Society).

The St Helens Canal & Railway Co was partially leased to the L&NWR in 1860 (and fully absorbed in 1864) and a deviation line at a high level to avoid the level crossings with the dock branch and Waterloo Road was built on the north side of the original line, opened for goods in 1865 and for passengers (with a new Widnes station) in March 1866. The old line, between Carter House Junction and West Deviation Junction, ceased to be used by through trains. To connect Liverpool more directly with Crewe, the Runcorn Bridge and the line from Ditton was opened for goods in 1868 and for passengers in 1869; it included a toll footpath on the east side known (unofficially) as the Ethelfleda Bridge, opened in 1868; it became toll free in 1962 but closed to the public in 1965. It had been well frequented even after the completion of the transporter bridge in 1905 but became little used when the modern road bridge (with no tolls) opened in 1961.

The Cheshire Lines had opened its main line from Manchester to Liverpool through Farnworth in 1873. A loop line to the south, to serve the Widnes industries, was opened in two sections, but without the involvement of the GNR (one of the Cheshire Lines' partners) so was owned by the Sheffield and Midland Joint Committee. The eastern portion, to Tanhouse Lane, was opened to goods in 1877; the western half, which included a passenger station at Widnes Central, followed in 1879, as did the Marsh branch (goods only) which ran through to the Ditton Iron Works. Another line, known as the Landowners Branch, followed

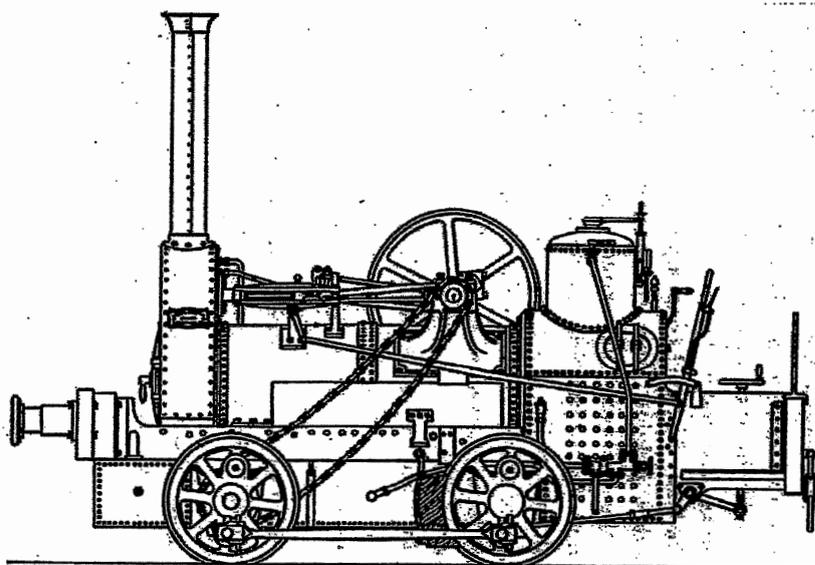
a year or so later; this served the Broughton Copper Works and the Liver Alkali Works. A passenger station at Tanhouse Lane was opened in September 1890.

The contract for the dock at Runcorn Gap was awarded to Nowell & Sons of Dewsbury whilst that for building the original line from The Horns (Farnworth) to Runcorn Gap went to J & J Thornton. They are believed to have used the Braithwaite & Ericsson locomotive NOVELTY and possibly two other vertical boiler engines KING WILLIAM IV and QUEEN ADELAIDE on construction. One of these may be the loco depicted on the bridge over the Liverpool & Manchester Railway in the Ackermann print of St Helens Junction. Perhaps someone with a knowledge of early locomotives could kindly supply further details. The contract for the doubling of the line and replacement of the incline south of Farnworth was originally let to Daglish & McCormick but was re-assigned to John Smith in 1849; any locomotives used were probably hired from the St Helens Canal & Railway.

Messrs Brassey & Ogilvie were the contractors for the Runcorn Bridge and the line from Ditton, completed in 1869. Locomotives used are known to include:-

CHESHIRE No.3 0-6-0ST Manning Wardle 193 of 1866, class 'K', inside cylinders 12" x 17", wheels 3' 1½", new in March 1866 and delivered to Brassey & Ogilvie at Runcorn (presumably by boat). Sold to the contractor John Mackay about 1872 (ex Brassey & Field) and used on the part doubling of the Central Wales line, then to C F R Romania as 05, possibly ex the Czernovada - Constanta Rly.

ETHELFREDA (or **ETHELFLEDA**) details not known but reported as the contractors' locomotive that hauled 500 people in open wagons over the newly completed Runcorn Bridge on 21 May 1868. Ethelfleda was the daughter of King Alfred and became Queen of Mercia; she is said to have had connections with Runcorn, which is at the northern tip of Mercia. The footbridge attached to the east side of the railway bridge is locally called the Ethelfleda Bridge. No locomotive of this name is known to me but it could be one of Brassey's engines (such as MW 193) temporarily re-named.



A.R.Bennett's drawing of the I.W.Boulton locomotive RATTLESNAKE used by Brassey & Ogilvie during the building of the Runcorn [railway] Bridge and approach lines in 1866-67. [see next page].

RATTLESNAKE 0-4-0WT, I W Boulton c.1864, 8" x 12" cylinders, 3' 0" wheels, geared. Ex IW Boulton October 1866. Re-sold to IW Boulton 1867. Re-sold again 1/1884 to Trehowel Colliery, Chirk. May have been on hire from Boulton but A R Bennett in

"The Chronicles" says sold by Boulton and then re-purchased. The horizontal cylinders were mounted inside the top of the smokebox and drove an intermediate crankshaft above the boiler. The final drive to the coupled wheels was by chain effecting a 1 to 2 gearing.

The contractors for the western half of the Sheffield & Midland's Widnes Loop Line, from Ann Street to Hough Green (and possibly the eastern portion as well) were Logan & Hemingway. Unfortunately it is not known which of their engines was or were used on this contract. A note in the *Sheffield Daily Telegraph* on 28 February 1880 placed by A T Crowe informed that there would be a sale of Logan & Hemingway's plant on 12 March 1880 at the contractors' yard in Widnes on the completion of the contract for the Widnes Extension Railway. James Cross of St Helens is believed to have built the Marsh Branch; no locomotives known. The quadrupling of the LNWR line from Widnes West Deviation Junction to Ditton and on to Speke during 1882-85 was performed by James Evans & Co of Walsall. One locomotive is known on this work:

NIPPER 0-4-0WT Fox Walker 260 of 1875, outside cylinders 8" x 14". New to C Tottenham of Liverpool who was then building the Alexandra Dock; to James Evans about 1882. Disposal not known. D Cole and F D Smith in *Contractors' Locomotives Part VI* show this engine as narrow gauge but I have her as standard gauge. Perhaps she had been converted.

Holme & King of Wigan were the contractors involved with alterations to the West Bank Dock for the Hutchinson Estate & Dock Co around 1907 and one engine has been associated with this work:

BANNER 0-6-0ST Manning Wardle 1287 of 1894. Class 'Special', outside cylinders 15" x 20", 3' 3" wheels, new in August 1894 to Birmingham Corporation as CLAERWEN for their Elan Valley waterworks. Sold 1906-07 via T W Ward to Holme & King and re-named. Sir John Banner (1847-1927) was an accountant, auditor for the L&YR and became Lord Mayor of Liverpool in 1912. The loco was used on spoil trains over the LNWR Garston line, possibly to and from the site of the Ditton Iron Works which had closed in 1880. The loco had been sold by February 1909 to Greenway Bros Ltd who had rolling mills on Hutchinson Street in Widnes, whom we will deal with later.

One further contractor that needs to be mentioned for completeness, although strictly working just outside Widnes, is Higgs & Hill Ltd who built the Fiddlers Ferry generating station for the CEGB around 1965-1970. Besides a diesel locomotive, they are known to have employed one steam engine, namely:

STEPHENSON 0-4-0ST Andrew Barclay 2254 of 1948 with outside cylinders 16" x 24", new in September 1948 to Imperial Chemical Industries Ltd at their Winnington Works (Alkali Division), sold in May 1957 to the Skinningrove Iron Co Ltd, North Yorks., before coming to Higgs & Hill Ltd.

The first alkali works was opened in Widnes in 1847 on Spike Island by John Hutchinson (1825-1865). Born in Liverpool, although his parents came from Durham, he was a student in Paris when he befriended Andrew George Kurtz, the son of Andrew Kurtz, subsequently going to work at the Kurtz alkali factory in St Helens. He left in 1847 and built his own works on land leased between the dock and the canal and by 1851 was employing over 100 men. One of these was Henry Deacon, the works' manager, who left in 1853 to start his own business. It was about this time that Oswald Earle became a partner and the firm traded for a while as Hutchinson & Earle. A second works, further to the west, was opened in 1859. In 1861 a young John Brunner joined the firm and soon became office manager; he was followed the next year by another new employee - Ludwig Mond. By 1865 the firm em-

ployed more than 600 men. The LNWR siding agreement for the No.1 Works was dated 20 April 1864 so it was evidently rail connected by then. No agreement is known regarding the No.2 Works.

Hutchinson became known as the 'Father of Widnes'; he lived at Appleton Lodge and in 1862 he purchased 215 acres of marsh land to the west from the Crown. This was to be developed into a new industrial estate and dock served by his private railway on the west bank; the West Bank Dock opened in 1864. His early death aged 40 on 14 March 1865 made no difference as his Trustees (one of whom was James Cross) continued with his plans. After both his alkali works from 1890 were now included in the formation of United Alkali Co Ltd, the Trustees turned the rest of the business, previously referred to as the Widnes Harbour Trust, into a limited company to become The Hutchinson Estate & Dock Company (Widnes) Ltd (although it continued to be generally referred to as the Widnes Harbour Trust).

A network of lines was developed to serve the factories built on land leased from the Estate & Dock Co and 12½ miles of railway were being operated in 1948. The main route ran from a junction with the LNWR canal side line just south of Golding, Davis & Co's Woodend Works to run west, crossing both the Waterloo Road and West Bank Street on the level and make a triangular junction with a line north from the dock and under the viaduct carrying the LNWR to Runcorn. This continued on to make the principal connection with the Widnes to Garston line at West Deviation Junction. Here the LNWR had built sidings for the exchange of traffic and the Hutchinson lines carried on to curve round to the west, then south alongside the Marsh Branch of the S&M Joint line to serve more factories on Widnes Marsh as well as the western arm of the dock. The LNWR's first siding agreement with the estate lines was dated 20 April 1864 (the same date as for No. 1 Works but they seem to be separate agreements).

There was a two-road brick locomotive shed within the triangle mentioned above (grid ref 350970-384400) which normally held three engines; demolished about 1973. Three of the fleet were named after Hutchinson's daughters - Mary born 1851, Lucy born 1857 and Gertrude born 1858. Among the early locomotives were four 0-4-0T of which MERSEY, disposed of before 1929, was the last in service. The first privately-owned engine in Widnes, reputedly named LUCY, may possibly have been one of these 0-4-0Ts and was supposedly built in St Helens in the late 1850s; both the St Helens Foundry of Robert Dalglish & Co and the Atlas Foundry of Robinson & Cook have been suggested as builders and as the latter company opened a second foundry in Widnes in 1861 it might be considered the more likely candidate; she will not have been built before 1857 if named when new. It seems probable that two of the other early locos could have been named GERTRUDE and MARY before the later engines with the same names appeared in 1906 and 1913. It is presumed that one or two of these early locos will have operated at Hutchinson's Alkali Works before these works passed to the United Alkali Co in 1890. An engine named LUCY and numbered 3, reputed to be an 0-4-0WT built in St Helens, did operate at Hutchinson's Alkali Works until it became a part of the neighbouring Gaskell Deacon Works in 1916 and was scrapped in 1920; a plate suggested she had possibly been rebuilt in St Helens in 1908. Whether or not this engine is the same as the earlier LUCY is open to debate. Rather more information is available about the remaining known engines operated by the Trustees and subsequently by the Estate & Dock Co:

OSWALD 0-6-0ST St Helens Rly c.1853, inside cylinders 11", wheels 4' 0". Originally St Helens Railway 18 LAPWING (as an 0-6-0T), became LNWR 1384 in August 1864 and

the sale to James Cross was minuted on 15 February 1865. This was but a month before Cross became a Trustee and it was probably he who added the saddle tank. There must be a serious doubt about the quoted name as later a second-hand engine named OSWALD was purchased by the Harbour Trust (see below). This former SHR loco was sold about 1914 to the Calder & Mersey Extract Co Ltd and given the name CAMESCO so will be mentioned again. She was sold for scrap around 1941.

LIVINGSTON 0-4-0ST Hunslet 60 of 1871, outside cylinders 12" x 18", 3' 1" wheels, new in August 1871 to Thomas Richardson & Sons, Hartlepool Iron Works as No.3. Date purchased by the Trustees unknown but was possibly in the 1880s and certainly by October 1897. Sold in 1908 to the Calder & Mersey Extract Co Ltd and became EXTRACTOR.

VICTORIA 0-6-0ST Hunslet 484 of 1889, outside cylinders 13" x 18", 3' 1" wheels, new in October 1889 to the Trustees. Sold via J F Wake to Sir B Samuelson, Lady Durham (later Sherburn Hill) Colliery by 14 July 1916 as 4 VICTORIA.

GERTRUDE 0-6-0ST Avonside 1516 of 1906, class 'B3', 3' 3" wheels, outside cylinders 14" x 20", new to the Hutchinson Estate & Dock Co. Noted working in July 1950 but out of use by February 1956 and not used again. Scrapped in February 1962.

LUCY 0-6-0ST Avonside 1568 of 1909, class 'B3', 3' 3" wheels, outside cylinders 14" x 20", new to the Harbour Trust (Hutchinson Estate & Dock Co). Repaired by Hunslet (noted there by Bernard Roberts on 12 April 1953) and returned by July 1953 which is probably when GERTRUDE finished working. By 1968 was only working once every three weeks whilst the diesel loco was being serviced. This will have continued until the second diesel arrived in August 1970. Sold to the Liverpool Locomotive Preservation Group on 25 February 1972 and subsequently preserved at Steamport Museum, Southport, later Ribble Steam Railway, Preston.

OSWALD 0-6-0ST Hunslet 120 of 1874, inside cylinders 12" x 18", 3' 1" wheels, new in April 1874 to the White Moss Coal Co Ltd, Skelmersdale (last spares ordered in October 1902). Sold to the Hutchinson Estate & Dock Co about 1910. Disposal not known but believed scrapped before 1929.

MARY 0-6-0ST Avonside 1656 of 1913, class 'B3', 3' 3" wheels, outside cylinders 14" x 20", new to the Hutchinson Estate & Dock Co. Repaired by Hunslet in 1955 and noted working in March 1957. Probably ceased work when the first diesel arrived in 1962 and scrapped in August 1963.

NINA 0-4-0DH Yorkshire Engine 2862 of 1962. A Diesel hydraulic of 140hp which came new to the Estate & Dock Co. Disused on 29 February 1972.

0-4-0DH (unnamed) Yorkshire Engine 2817 of 1960. This also was a diesel hydraulic purchased second-hand from British Railways (No. D2858) in August 1970. Both these diesels were noted intact in February 1972 but I don't have a scrapping date for them. [This Class 02 shunter and was later bought privately and operates on the Midland Railway at Butterley].

The West Bank Dock closed on 7 November 1970 but the estate lines continued to be operated by the two diesel locomotives. Rail traffic is believed to have finally ceased some time before 1982. It should be mentioned that the engines of Thomas Bolton & Sons, Fison's Ltd (and possibly Thomas Vickers & Sons, their predecessors) and ICI Ltd (previously United Alkali Co) all worked over the Estate system, as did LMS and BR locos between Dock Junction and the West Bank Dock. Ex-LNWR 'Cauliflower' 0-6-0s, followed by ex-LNER 'J10' 0-6-0s, were used on sand trains from the dock to Pilkingtons at St Helens.

(The second part of this article will cover the various works served by the Huskisson Estate Railway and their locomotives).

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From *The Railway Magazine*, vol.79, July 1936 (see also page 17 in our last issue):

THE paragraph on page 228 of the March issue of THE RAILWAY MAGAZINE respecting the through service **between Birkenhead and Knutsford** is not altogether accurate, and the following facts may be of interest. The service was inaugurated on May 3, 1934, and for the duration of the spring and summer timetables of that year was operated on Thursdays and Sundays, there being one train each way on Thursdays, at 2.33 p.m. ex-Birkenhead and 7.40 p.m. ex-Knutsford, and two on Sundays, at 10.40 a.m. and 2.33 p.m. from Birkenhead and 2.40 and 7.40 p.m. ex-Knutsford. During the winter of 1934-5 the service was suspended, but recommenced on Sundays only in the spring of 1935, with a similar service of two trains each way, which left Birkenhead at the same times as in the previous year, while the departures from Knutsford were altered to 12.56 and 8.0 p.m. No weekday trains were run in 1935, and the Sunday trips were again withdrawn for the winter. The route followed by these trains is over the L.M.S. and G.W. Joint line, passing off the main Chester line on to the Helsby branch at Hooton. At West Cheshire Junction, ½-mile west of Helsby (Joint) station, the trains diverge on to the single line branch of the Cheshire Lines, 3 miles 73 chains in length, and stop at Helsby (C.L.C.) station, 67 chains from West Cheshire Junction, which is the only station to be specially opened for the purpose of this service. There are no further stops until the Chester-Manchester section of the Cheshire Lines is reached at Mouldsworth Junction. Ince and Elton station, to which Mr. Button referred, is not on the Cheshire Lines, but is the last station on the Helsby branch of the Joint Line before reaching West Cheshire Junction. The trains, which have always been formed of G.W. stock and an L.M.S. engine (either an ex-L. & N.W.R. 4-6-2 tank or an L.M.S. standard freight), have run through to and from Knutsford since the inception of the service, and are in no way connected with the other L.M.S. services working into Northwich, from Sandbach and Acton Bridge. — [G.J.Aston].

The North Staffordshire 'D' class locomotives at Birkenhead

by Stan Yates

This brief article focuses on the allocation of the North Staffordshire Railway (NSR) "D" class 0-6-0 tanks to Birkenhead (Mollington Street) Shed between 1926 and 1934.

The "D" class engines were designed by Luke Longbottom for the NSR and altogether thirty-nine engines were built between 1883 and 1899. The engines were classified 2F by the LMS. With a wheelbase of 14' 8" they were quite suitable for shunting work on sharply curved lines. The class as a whole was withdrawn from service by the end of 1937.

Six locomotives were sent to Birkenhead shed but not at the same time. The engines involved were nos. 1550, 1566, 1572, 1578, 1583 and 1589. Usually, only one or two of these engines were stationed at Birkenhead.

From the evidence available, it can be deduced that these engines were employed on dock shunting work, as the locomotives which replaced them were so employed and there is also evidence from a photograph showing one of the engines at work locally.



North Staffordshire Railway-built 1566, shunting at Duke Street, Birkenhead, in 1931. (Stan Yates collection).

The first to arrive was no. 1550 in January 1926, transferred from Stoke shed. This engine was the sole representative of its class at Birkenhead until March 1928 when it was joined by no. 1572, also from Stoke. While no. 1550 was undergoing an overhaul at Crewe works in late 1927, no. 1578 was loaned to Birkenhead from Stoke, returning to its home shed in January 1928.

Nos. 1550 and 1572 were together at Birkenhead until 1930. Both engines were recorded on shed at Mollington Street by the late Bill Boyden on 19th May 1929.

In June 1930 Birkenhead received the further allocation of no. 1566 on loan from Stoke, making a total of three engines. This loan was made permanent in July 1930. It is doubtful if Mollington St. had more than two working locomotives of the class available at this time since no. 1550 was condemned in the period ending 27th August 1930 and no. 1572 had been in Barrow shops until the August undergoing repair.

Nos. 1566 and 1572 were present at Birkenhead together until the beginning of 1932. No. 1566 was condemned in the period ending 6th January 1932 and replaced by no. 1583, again from Stoke. No. 1572 did not survive much longer for it too was condemned in the period ending 10th February 1932.

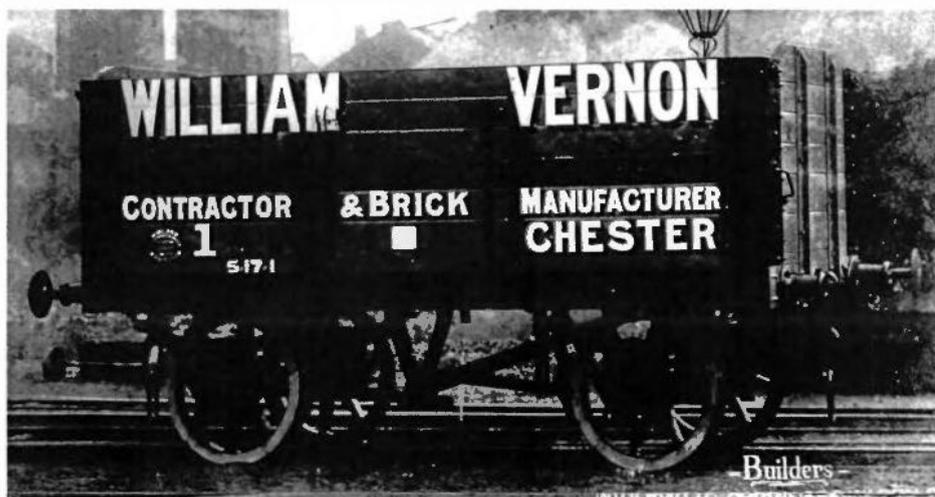
No. 1583 was then left as the single example of its class at Birkenhead until June 1933 when it was joined by no. 1589 on loan from Stoke, thus restoring the allocation to two engines. The loan of no. 1589 was made permanent in the following month. No. 1583 was recorded on shed at Birkenhead by W.T. Phillips on 27th August 1933.

In 1934, both nos. 1583 and 1589 returned to Stoke, no. 1589 in April 1934 and no. 1583 in June 1934. They were replaced by two Johnson designed Midland Railway 1F 0-6-0Ts, nos.

1695 and 1830.

I have only come across one photograph (origin unknown) of the NSR engines at work on the Wirral. This was taken in 1931 and depicts no. 1566 at Duke Street with a G.W.R. match truck attached.

Can anyone supply further information about the allocation of these engines to Birkenhead?



Local Private Owner wagons update: **William Vernon, Chester**

William Vernon is listed in the 1901 Census Returns as a 'builder, aged 58, born in Chester; his wife was Alicia Vernon, 59, born in Malpas. Daughters Edith A., Alice M., and Lizzie H., together with two sons – Walter J. and Alfred J., lived with them at 57 Upper Northgate Street, Chester. The William Vernon firm was established in about 1870; they are still in business as building contractors, but a change of name occurred in about 1973 to Vernon Pritchard Ltd.

I came upon the advertisement (reproduced below) in the 1909-1910 edition of Phillipson & Golder's *Directory for Chester* which is in Chester Library: this throws more light on the firm than the lettering on the wagon side. But first we repeat the original article, which readers will have forgotten about by now:

' ... this photo came to light some years ago in the offices of a local builder. It is thought to date from about 1890 and shows a rather unusual wagon: both the underframe and end stanchions are of steel section (not all that common in P.O. wagons of that era), and the tarpaulin-securing rings on the third plank suggest that it was used for carrying loads other than coal - though of course brick manufacture does imply the burning of a lot of fuel. The builders were the Birmingham works of the Midland Railway Carriage & Wagon Co. Ltd., and the ownership plate on the side suggests that the wagon has been leased or hired to William Vernon.

As far as livery is concerned, I would think a pale to mid-grey (including solebars and headstocks) with one red plank on the sides, black ironwork (except end stanchions), and black-shaded white lettering,

A railway company registration plate had not yet been fitted when the photograph was

taken, so there is no clue as to the routes the wagon would have run on. One can just guess that it would not normally travel more than 20 or 30 miles at the most from Chester, I would estimate the running period for this wagon to be from the 1890s to perhaps the 1930s.'

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WILLIAM VERNON & SON,

Builders & Contractors,

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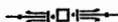
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SANITARY WORK.**

(Acknowledgements:
Mary and Peter Higson
(who brought this to my
attention), Bob Cockcroft
for photography, Val
Green (formerly of Ches-
ter Library) for back-
ground information),

Local Private Owner wagons update, no.2: **Ernest Griffith, Chester**

News of the introduction of an N gauge model of an Ernest Griffith coal wagon, appeared on page 10 of the last issue of *BMRJ* (Dec. 2012). Since this was printed, I have had the opportunity to look at Mr Griffith's entry in the 1901 Census returns: he is listed as a "coal merchant, 33 years old, born in Chester in 1868; living at 2 Burges Street Hoole, with his wife Ada, baby daughter Phyllis M., and servant Lucy Jones." Burges Street is just off Hoole Road, and just a short walk from Chester General station and Black Diamond Street coal

depot. By 1911 the family (with a different servant – Annie Hignett) had moved to a much larger house at 14 Vicarage Road, but only a short distance from Burges Street; things were looking up!



This is a copy of the original makers' photograph of the wagon: built by the Gloucester Railway Carriage & Wagon Co. Ltd. in 1898. Livery was black with red-shaded white lettering (the shading is just about visible in the photograph – red registered as very similar to black on early film emulsions). (HMRS collection).

Editor's page

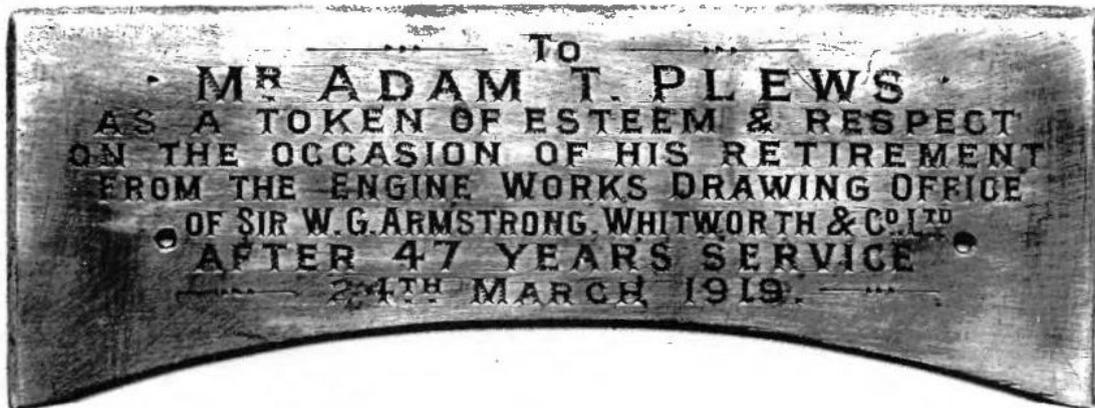
I do not normally read the 'newspapers' emanating from Rupert Murdoch's organisation, but when a thoughtful acquaintance directed my attention to *The Times* of 8 February 2013, I was amused by the column written by Richard Morrison. I quote: "... we who bear the ancient moniker of Richard seem doomed to struggle against the assumption that we are power-hungry egomaniacs who stop at nothing to get our own way. I have no idea how this misunderstanding arose, when the list of Clever Dicks includes such charming figures as Richard Wagner, Richard Nixon and Richard Branson. But I have made it my life's work to prove that Richards can be harmless nonentities too. So far, it must be said, I am well on track."

Recent books: the only one this quarter is a booklet donated by retired signal engineer Graham Jones –

A brief history of Chester Station by John Whittingham. Whittingham, 1994. An A4 size booklet comprising seven pages of text and a further seven pages of illustrations.

Readers will be aware that my wife, Lorna, died recently. Among the masses of stuff she left (like all of us, she was a hoarder!) I found an engraved brass plaque which I guess would have originally been attached to a clock. Further inspection and research revealed that the 'Adam T. Plews' mentioned was Lorna's paternal grandfather. This prompted an interest in the genealogy of both sides of our family. Adam was born in Gateshead in 1857, and indentured to Sir W.G. Armstrong & Co. in 1872. His retirement date is noted on the plaque.

The firm had been active in locomotive building on a small scale before 1919, but the rebuilding of their Scotswood works proved to be the impetus for a large increase in the firm's output of both steam and diesel engines. Adam died in 1934; Lorna's father, John



Plews, born in 1885, is listed in the 1911 Census return as an 'engineers clerk', age 26; he rose through the ranks of the company (and its successors). By the time he retired, he was Managing Director of Pearson Knowles works in Warrington (by then a subsidiary of the East Lancashire company); I can remember Lorna showing me a photo of her when a young girl 'driving' one of the locomotives at the Warrington works.

On my mother's side, there is also a railway industry connection; not surprising since the industry was, directly or indirectly, a very big employer. Mother's father, William Tibbott was born in Llanbrynmair, ten miles from Machynlleth in Montgomeryshire, in 1868; his occupation at the time of the 1901 Census is given as 'tailor'. But by the time of the next census, in 1911, he is listed as a 'colliery platelayer' – presumably at one of the mines near Merthyr Tydfil.

On the 'down' side, I have been told that a Tibbott ancestor was the last person to be hung in Montgomery jail – for killing his wife and mother-in-law, so who knows what else I will find out!



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