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PROGRESS AT TRYFAN JUNCTION



The small editorial team who produce this 'quality quarterly' strive to provide a front page feature of current but historical interest. For several years the Group has regarded the rehabilitation of Tryfan Junction station building as its flagship project and, because of the substantial progress made since the *WHH No. 53*, we make no apology for featuring the project vet again!

The very obvious progress has stimulated volunteer interest and therefore involvement

(thank you members of the Tuesday gang for your contribution). Furthermore the weather has been most considerate and a target date was set for local builder, Dafydd Davies, to take over. His bricklayer has set the decorative fans of bricks above the doors and windows and rebuilt the chimney breast to roof level. In conjunction with this the stone work has been brought up to roof-plate level by the volunteers. Thus the scene is set to start roofing for which the timber has been ordered. The roofing



Above left - Lewis Esposito puts the finishing touch to roof-plate level; the chimney breast will be plastered. Above - Rear window detail with oak lintel. Lower left - festooned in scaffolding.

slates will of course be locally produced, and there is just a possibility, weather permitting, that the roof might be completed before the New Year. Drawings have been created for windows and doors and reclaimed yellow bricks have been sourced for rebuilding the chimney stack; a job which will be done professionally. The original estimate for restoring the building to a complete shell was £50,000, but it is anticipated that the eventual figure will be less, demonstrating 'best use' of members generously donated funds and volunteer's input. Budget surplus will be used in 'kitting out' the interior.

The consultants working up the railways' Stage II HLF application have identified Tryfan Junction as one of several focal points or 'hubs' between Caernarfon and Blaenau Ffestiniog and have pencilled in some £6000 for interpretation at this location. They suggest that this is the ideal place to explain the slate (& quarrying?) industry and its relationship particularly with the NWNGR.

So with hindsight there is no reason to seek an excuse for apparent front page repetition. The journal is a vehicle, not only for communicating historical information but also keeping members and readers up to date with historically orientated projects.

Accident at Bryngwyn

Brass Band

Playing in brass bands has its pleasures, but the prospect of being invited to join a 'new' group of musicians is sometimes daunting. Therefore it was with some trepidation, that I became a member of the bass section of the Menai Bridge Town Band in May 2010 and it was with some relief when my tuba colleague, Dr Gwilym Roberts, revealed an interest in slate quarries and railways!

He told me that his great-grandfather had received a fatal injury whilst in the service of the North Wales Narrow Gauge Railways Company. The following week, Gwilym provided photocopies of the relevant press reports and a full blessing to write the following story.

Tragedy

It was a gloomy Friday afternoon in December 1901 when driver Richard Cunnah with his loco '*Kathleen*' brought the last train of the day of loaded slate wagons down the spectacularly graded track from Alexandra Quarry to the drumhead at the top of the Bryngwyn incline. The light was fading fast when tragedy struck.

NWNGR guard and sometime Bryngwyn station master, Robert Hughes, no doubt anxious to get his waiting train away from Bryngwyn station below, was giving a helping hand with the shunting at the top of the incline when his foot became trapped between two rails - perhaps in a point. He was controlling a full slate wagon by walking in front of it with his back against it as a sort of a human brake when his foot became stuck and despite the successful efforts of a co-worker to prevent the truck



from running over him completely he sustained a crush injury to his leg.

Dr Gwynfor Pierce Jones looks at the circumstances of a fatal accident in 1901

The accident happened at clocking-off time, because quarrymen who were passing by a few minutes later, immediately formed a stretcher party (though ultimately in vain). The 'run' was to have been the last of the day, with winter darkness falling. Today, the victim's injury would have been survivable if medical help arrived promptly. He had a crush injury that had obviously punctured major blood vessels,

Moeltryfan quarry manager, H. Douglas Jones, stands at the site of the accident. Photo : Gwynfor Pierce Jones



and he succumbed to bleeding ('shock') over a protracted time scale.

Press Report

The initial press report on the accident stated that Robert Hughes was a guard, but the main inquest report stated he was both guard and Bryngwyn stationmaster. How this duality of a mobile and static duties worked in practice is unclear, but what is clear is that for reasons of economy, and bearing in mind that the railway was in receivership, the specific position of stationmaster at Bryngwyn was an early casualty. So by this time Robert Hughes was essentially the guard but as he give assistance to marshal the last train of the day (to Dinas); he might best be described as a 'travelling agent'.

Unintended Consequences

The contemporary reports on Hughes' unfortunate accident have the unintended consequences of casting a light on the otherwise unrecorded system of working the slate trains from the quarries to the NWNGR Bryngwyn Drumhead. Although only the train from one quarry (the 'Alexandra') was involved, it can be confidently assumed that the traffic from the other three private connecting quarry lines (from Moeltryfan, New Braich, and Fron/Old Braich) was dealt with in a similar manner.

Inquest witness Richard Cunnah was the long-standing driver of the Vulcan/Spooner locomotive '*Kathleen*' (of 1877) that operated the C. E. Spooner-designed private railway that connected the Bryngwyn Drumhouse sidings with the Alexandra Slate Quarry. This was the spectacular steeply graded route that climbed several hundred feet up the west and north flanks of the mini-mountain 'Moel Tryfan' by means of a series of long curves and embankments.

Cunnah said that two wagons were sent down from his train, which he had also been loading ('Kathleen' probably did not shunt in the quarry between 'runs' – unless a relief driver took over when Cunnah was acting as a loader). Two wagons up and down per 'pass' on the incline down to Bryngwyn Station must have been the standard practice, the weight of a brace of loaded trucks (4 ton plus tare weights) being probably needed to keep a momentum on this long and unevenly graded slope. Unfortunately, the press report of Cunnah's evidence did not record many details of the composition of his train, but there were at least eight loaded wagons in it, being a mixture of braked and unbraked stock that was owned by the NWNGR but were supplied for the use of its quarry customers. They were almost certainly iron, open-rail types, similar to the Penrhyn Quarry Railway stock made by De Winton & Co They were also engineers known to have been contracted by the NWNGR, and were also an important supplier of plant to Alexandra Quarry in the late nineteenth century.

The victim, Robert Hughes, had been assisting in manually handling the wagons

FATAL ACCIDENT TO A GUARD.

INQUEST OPENED.

An accident unfortunately attended by fatal results occurred on Friday afternoon on a siding attached to the North Wates Narrow Gauge Railway. Whilst attending to some wagons, Robert Hughes, a guard on the railway, was knocked down on the incline between Dinas and Bryngwyn, and run over. His legs were badly cut, and he bled profusely. Dr Williams, of Tryfan, was immediately sent for, and did all in his power, but the poor fellow died that night about eight o'clock at his home in Maen Coch, Llanwnda. He leaves a widow and several children.

Mr A. Bodvel-Roberts, the deputy-coroner, opened the inquest on Monday afternoon at the house. Mr H. Lloyd Carter (Messrs Carter, Vincent and Douglas Jones' appeared in the interests of the company, and Mr Aitchinson, the general manager, was also present. Mr Aitchinson, on behalf of the directors and himself, expressed the deep regret felt at the loss of so highly esteemed a scrvant as the deceased, who had been in the employ of the company for many years, and also their sympathy with the relatives.

Mrs Hughes, the widow, gave formal evidence of identification, and the inquest was adjourned for a week.

Decembers 1901



from the Alexandra Quarry train parked on the quarry's termination sidings at the boundary of the NWNGR metals at the top of the Bryngwyn incline. This was just a short distance from the drumhouse. The loaded wagons needed to be controlled on the slight gradient laid in the formation between the quarry terminal siding and the drumhouse. Here there would have been a rail-top, horizontal-sweep, timber buffer beam or arresting/derailing chains laid across the track, to stop runaways down the incline. Apart from loco driver, Richard Cunnah, the Alexandra quarry also had a labourer, Owen Jones, on the train crew. His job was to perform the shunting duty on the Drumhead approach track. Cunnah

> stated that the particular wagon involved in the fatal incident was an unbraked one, and labourer Jones testified that there was no brake 'scotch' (or 'spragg') being used on that wagon as the gradient was "...not enough", i.e. not steep enough for the wagon to move against the friction of a dragging wheel.

> Jones said that Hughes 'habitually' took charge of the operations from the terminal sidings to the drumhouse, but driver Cunnah stated that the victim only "sometimes" assisted in this work (possibly protecting the victim with regards to possible compensation for the widow, as it was outside the official boundary). This 'assistance' was probably outside his duties.

NWNGR general manager Aitcheson said it was "...a custom not duty" for the victim to do this working outside the NWNGR's boundary as a 'give and take' with the various quarries' labourers, who in return helped with the operations inside the railway company's boundary at the drumhead. Jones, the Alexandra labourer, confirmed this state of affairs in his statement when he indicated that it was impossible for the victim to bring the wagons alone to the drumhead, implying that the quid pro quo was the only pragmatic means of working the operation.

Implications

The labourer said that there were four braked wagons in the train which "...were to be in front." Does this imply that the intention was to couple the pairs (of a leading brake and an unbraked) in the outer sidings before the run down to the drumhead? Also, that the accident happened whilst shunting to achieve this combination? Consequently, it must be that the stock order of the run from the quarry was not in a mixed combination; perhaps they had all the braked stock in one mass (next to the loco?) to assist in controlling the quarry train down the long winding hill to the drumhead sidings.

The practice of walking in front of a (single) wagon to hold it back by pressing one's back against it was obviously a long tradition here, though bad news if one 'tripped' like the victim (got foot stuck in points, probably). Using that method to push wagons (to start them off) in default of any other motive power was the practice still seen up to the 1960s, and this could also be injurious if one slipped.

As usual more questions than answers. but playing a tuba in a brass band can also have 'unintended consequences'!

James Cleminson - Engineer

The name James Cleminson will mean one thing to most narrow gauge railway enthusiasts, that he invented a system of "flexible wheelbase" for six-wheeled coaches and wagons that was used on a number of British and Irish narrow gauge lines including the North Wales Narrow Gauge Railway, but also the Southwold, Manx Northern, Londonderry and Lough Swilly, West Clare and, of course, the Festiniog with its lone Cleminson wagon, which is probably the only Cleminson patent vehicle in running order today anywhere.

Less well known is that Cleminson was for six years engineer and locomotive superintendent to the NGWR, starting in 1878 when he succeeded Charles Easton Spooner. Little else has been published about Cleminson and he has proved to be a difficult man to trace in historical records. Most of what we know at the moment comes from obituaries published in the journals of professional bodies to which he belonged: the Institute of Civil Engineers, the Institution of Mechanical Engineers and the Iron and Steel Institute, following his death in 1896¹. These are similar enough to suggest a common source, although there are minor differences. The life described in them is as follows.

He was born in Leeds on 11 October 1840. the eldest son of John Cleminson, locomotive superintendent of the Iquique Railway in Chile, and a one time navel engineer who had fought "in the Baltic" and also under Garibaldi (presumably in the wars to unite Italy). James's early education was largely abroad, in Genoa and Marseilles, where I suppose his father's career had taken him. James gained some engineering experience with "Ballodier" (Is this a known engineering firm?) in Genoa and also the Railway Foundry of Leeds where his father worked at one time. James enters familiar historical territory when we learn he was apprenticed to George England of the Hatcham Iron Works, London, in 1857. This firm being, of course, the builders of the early Festiniog Railway locomotives. In 1861 he became chief draftsman to the Somerset and Dorset Railway where he is said to have displayed an aptitude for designing rolling stock. Most significantly from the NWNGR point of view, in 1864 he returned to London and became manager to Robert Fairlie and assisted in the development of the Fairlie articulated locomotive. We must remember that Fairlie himself was very closely connected with George England and took over the



Hatcham Iron Works. Cleminson's stay in London at this time cannot have been for very long, for in 1865 he became head of the drawing office at the Isca Foundry, Newport Monmouthshire. This firm made a great variety of railway equipment including rolling stock and bridgework. After this, in 1868, he set up on his own account as an engineering manufacturer in Watchet, Somerset,. This business did not last long, for he moved back to London in

Chris Padley provides an Insight

1870 and became chief assistant to James Livesey and, later, came to be in charge of the locomotive and rolling stock work of Clark, Punchard and Co.. Finally, in 1874, he set up as a consulting engineer with his offices in Westminster. He appears to have practiced successfully as a consultant for the rest of his career, although he died aged only 56 on 15 November 1896 after suffering for some years from "painful maladies".

The above information all comes from the obituaries and I have little corroboration for most of it, although it makes sense when considered with what is already known about the NWNG and Festiniog railways, particularly the close association of Cleminson with England, Fairlie and Livesey. I think I've identified Cleminson in some census records and if I have found the right one, his wife came from Somerset, which would also fit well with his spell on the S & D and his return to that part of the world when he tried setting up as a manufacturer.

The obituaries give him considerable importance for his work on South American and Chinese railways during his consultancy years, including claiming he was the "originator" of the Buenos Ayres

and Pacific Railway. While his work in China, it is claimed, was so important that he "frequently came into contact with Li Hung Chang, and was created a Chinese mandarin in recognition of his distinguished services" The name Li Hung Chang is no longer a familiar one, in this country at least, but he was one of the most important Chinese statesmen and diplomats of the time. Cleminson engaged with critics of his flexible wheelbase system in the press from time to time and judging by his letters he was an active and robust self-promoter. One wonders if some of the effect of his self-promotion have come through into the obituaries to exaggerate his position? I'm told it would be very remarkable indeed, implausibly so, for a foreign engineer to be given this honour in China. However, he certainly did work in China, including designing the ironwork for at least one major river bridge² which suggests an engineer who had indeed achieved high standing and competence in his profession. His brief connection with NWNGR coincided with his taking out his famous patent. He was not slow to make great claims for its

I would like to thank Peter Crush (Author of " the Woosung Road "- the history of China's first railway, and other histories of early Chinese railway development) for his help with information in this article.

success on the NWNGR as part of his

marketing efforts.

¹ Proceedings of the Institute of Mechanical Engineers, April 1897 p.256. Proceedings of the Institution of Civil Engineers, Vol. 127. 1897 pp 379-380. Proceedings of the Institute of Iron and Steel, date and issue not known.

2 The Tientsin (Tianjin) bridge of 1887 built to connect the railway across the Pei Ho river. See Paper presented to ICE in 1891 by Claude Kinder.

Gladstone's Visit to the NWNGR on 12th September 1892

n the 12th September 1892 Prime Minister and Mrs Gladstone travelled by train from their home in Hawarden to Rhyd Ddu en route to visiting Sir Edward Watkin at Cwm llan in Nantgwynant. The journey necessitated changing trains at Dinas Junction where the inevitable crowds awaited. This report of the scene at Dinas on that day has been translated from a contemporary Welsh account in a local newspaper by Brian Paul.

"The enthusiasm of the country folk was no less than that of the towns people at Dinas station.Mr Tanner, supervisor of the North Wales Narrow Gauge Railway had provided a saloon carriage to convey Mr Gladstone to Rhyd Ddu. About five to six hundred inhabitants had gathered round the station including a deputation from the Liberal Societies of Waunfawr and Bontnewydd being led by Mr R Bevan Ellis, the Rev L Williams, Vicechairman, R.J. Hughes, J.T. Williams and others. As she arrived Mrs Gladstone was presented with a beautiful floral bouquet by Miss Mary Rosana O'Callaghan, and Mrs Gladstone accepted it graciously. By crossing the narrow platform at the station, Mr Gladstone and his party went into the carriage awaiting him on the 'small railway'. Shortly afterwards Mr Bevan Ellis was presented to Mr Gladstone by



Mr Lloyd George, the Member of Parliament, and Mr Ellis read a message of welcome and greetings on behalf of the Liberal Societies. Amongst other things mentioned in the speech was that the members hoped he would benefit much from this visit to the mountains of Wales, in which he would notice images of strength and stability of Wales, as the members would benefit by their support of Liberal principles.

Mr Gladstone, in response, stated that much work awaited the Liberal Party. Wales had done exceedingly well and certainly would be rewarded. (Loud applause).

As the train to Rhyd Ddu awaited departure, the crowd sang 'Land of My Fathers' and 'There will be Many a Miracle' - Bydd Myrdd O Ryfeddodau – a well-known Welsh hymn. Then Mr Gladstone asked them to sing 'Ywdaith George Harlech – the March of the Men of Harlech in Welsh. They responded and the Honourable Gentleman enjoyed it very much and nodded his head as if we was keeping beat to the tune".

NWNGR Uniform Button

ecently sold on eBay was what purported to be a NWNGR uniform button – illustrated. A similar button features in David Froggatt's book 'Railway Badges, Buttons & Uniforms' with the observation that it is similar to the buttons on uniforms of the 'Brecknockshire Volunteer Regiment'. The main difference apparently lies in the style of the dragon's tail! One would have thought that a railway company uniform button would bear its initials and give a more specific indication of its

provenance other than a dragon suggesting Wales.

Suggestions on how to verify the accuracy of this welcomed!



Apology

In *WHH 53* we published a photograph of a 1895 scene at Dinas Junction .

Member MRFS has reminded us that this was 'lifted' from his web site and published without his permission.

We should like to apologise to him for for not seeking permission in advance to use this image.

<u>Errata</u>

Richard Maund advises that in his letter on page 5 of *WHH* 52 he managed to give the wrong year for R T Griffith's year as chairman of the Caernarvonshire County Council: it was actually 1933/4.

Proposed Works at Portmadoc

erald Fox, Richard Maund and the original author, Richard Watson, have contributed to these followup notes about the article in *WHH* 50, page 2. It may be useful to remark (as it has a bearing – see below) that the site was to be acquired by the Festiniog (in whose ownership the new facilities would have been) from the local council, having previously been allotments.

Storage Grounds – Layout 1:

"Storage grounds" are marked lower centre of the plan, south of *both* the workshop complex and the standard gauge line.

1923 Station: Road vehicles would, presumably, have had access (including turning facilities) within the general area labelled "Station approach" in Layout 1; that general area has been reduced in Layout 2/2A to make room for the carriage works. It is also possible that Layout 1 envisaged that the whole area would be road surfaced (not necessarily sealed) - whereas Layout 2/2A limited the area to be surfaced, thus reducing costs. The station buildings shown in Layout 2/2A appear to be smaller than in Layout 1 and, indeed, smaller than was actually provided: another cost saving perhaps!

Route to High Street: What the published extracts of the plans do not make clear is that the thin piece of ground leading from "Roadway" (with a splayed entry from the south) off the left edge of the plans, along the south side of the standard gauge line, was - at this date - intended to be a 40ft wide roadway leading directly to High Street and the GWR station. The Cambrian News & Welsh Farmers Gazette of Friday 11 May 1923 reported on a Council meeting that Tuesday: "...the Clerk reported that he wrote to the Welsh Highland Railway Company that the Council understood a 40ft roadway would be made from the allotment field *[site of* new narrow-gauge station to the GWR and not an 8ft footpath as shown on amended plans *[i.e. later than those in the*



article].... The Company replied that they could not possibly carry through the entire scheme at present and that they did not suppose the Council desired to put the Company to unnecessary expense. The scheme must be developed gradually... proposed that the Council should insert in

A follow up to the article in WHH 50

the draft agreement *[for the sale of the land]* ... a clause to the effect that a 40ft roadway was to be made from the allotment field to the GWR station." Needless to say, this never happened.

Run-round facility at Auxiliary station: In that no run-round facility seems to have been provided for the "Auxiliary" station north of the crossing there are alternative suppositions:

1. that it was intended to use the loop at Beddgelert sidings for rounding;

2. that trains would effect any rounding or loco changing manoeuvres at the 1923 station, using the Auxiliary platform merely to "regulate" trains in the event of congestion on the GWR line;

3. that the auxiliary station was intended as a ticket platform.

Note that Layout 1 has it as an "Auxiliary Waiting Room and Platform", but Layout

Portmadoc 'New' 1923 station - 'difficult access'

2/2A has it as "Auxiliary Station and Platform" – did this subtle difference mean anything?

Snowdon Street crossing: The GWR crosses the minor road (Snowdon Street) at the northeast corner of the site by a level crossing (Edwards, later Traethmawr, Crossing), not a bridge. So there is no bridge to be "proposed" (Layout 1) or "extended" (Layout 2/2A). The plans show that they were drawn up at "Dolgarrog, N Wales", where Fox were working for the Aluminium Corporation. If the site had been properly surveyed by surveyors how did they fail to note the level crossing?

Aerial view of site: The yellow boundary line is misleading so far as the area west of the Welsh Highland line is concerned: it should run alongside "Roadway" (the roadway leading to the Cambrian Crossing), with the addition of the proposed road to High Street (mentioned above).

Cambrian Railways: On 3 March 1922 the Railways Amalgamation Tribunal approved the agreed amalgamation of the Cambrian (and four other railways) into the GWR; this took effect immediately, back-dated to 1 January 1922. So at the date the plans were drawn, "Cambrian Railway" (itself a solecism!) should have read "Great Western Railway".

Sept 1894 Signalling diagram at Waunfawr

18027 R North Wales Marrow Guage Ry. 60 BOARD IF TRADE Waenfaur Matin (. Me Kenzie's frame) MAIN E E Existing Station 48 Hi Look pland by latin & & 6 Spare Levers 1.3 Spare Lover to be fitted with an Annatt's Lock H. the kay of which will release the ground Levers which work points A. B & C. D. 1. 3 laver to be made to lock lovers 8.5.7 the Key to be capable of being removed when lover 3 is over so that hover 3 must be placed in reverse position lacking the signals at danger when key is removed to unlack points. As there is only One Key, only one set of points A.B or C.D can be worked at one time. SAXBY & FARME LOCKING RAILWAY SIGNAL WORKS Brain patch for hand plate for he3 Lever. 10. 189H

This drawing contains much of interest. Although it was produced by Saxby & Farmer on Sep 10 1894, the NWNGR didn't submit it to the Board of Trade until nearly a year later, on 21 Aug 1895. I surmised in my original article that this was because the NWNGR were haggling with Saxby & Farmer to get the costs down. You can clearly see the notes that were added saying that the Ry. Co. would be "fixing" (which I take to mean installing) the ground-levers themselves, rather than paying S&F to come and do it thus saving the NWNGR some hard-pressed cash.

You can also see where the sketch was amended to put ground-lever E next to the signal cabin, presumably for ease of use. And if the NWNGR were installing it themselves, the extra cost would be minimal! More obvious on the original sketch than the reproduction is that the "Station" was also an addition, added on in the same slightly bluer ink as used for the alteration to ground-lever E. Perhaps shown in anticipation of any questions as to why the ground-lever working points C and D wasn't likewise being put next to the signal cabin (it would have meant taking the point rodding through, or around, the station).

At the left-hand end of the sketch you can clearly see the "setting-out" lines that the draftsman drew in pencil before drawing the signals in ink. It was usual to rub these pencil marks out after the ink had dried, but sometimes some got overlooked, as in this case. The draftsman's knowledge of the spelling of even common Welsh place names also appears to be a bit dodgy, as evidenced by the "Bettios" on the left!

The hash markings on the points indicates

More from Peter Matthews

the normal lie of the points, in other words the way the points would be set when their lever was normal in the frame. This method of depicting the normal lie of points has largely died out now.

Each lever in the signal cabin would have had a brass plate to remind the signalman what that lever was for (the levers were also painted in different colours according to function: e.g. red for signal levers, black for point levers, blue for FPLs, white for spare levers, and so on). You can see from the text that previously levers 3 & 6 were both spare, but 3 has been crossed-out, meaning that it is no longer spare. So lever 3 will need a new brass plate to indicate what it is now being used for, and a sketch of the required plate accordingly appears bottomleft. The engineers would have been expected to know what colour the lever needed repainting, without being told!

But perhaps the most fascinating feature of the whole drawing is the pencil "doodles". I

presume that these were done after the drawing had been submitted to the BoT (you surely wouldn't submit a drawing in that state, with doodles all over it, to a government department, would you?). surmise that they were done by one of the Inspectors when Russell went for his subsequent "interview" with Marindin and Yorke at the BoT. You can see where the trap points B and D have been crossed out as unnecessary. You can see where starting signals were added in, next to points D and 5 - and then (in the case of the one next to point D, at least) crossed out again. You can see where it was suggested that signal 2 might need to be a junction signal - if the signalman had to go to the points to change them, he could check that they were correctly set and flag a train past the signal at danger into the loop from there, but now that the points were to be worked remotely from a lever next to the signal cabin then a signal would be needed for moves into the loop. Various possibilities seem to have been discussed, either a 2-arm bracket signal, or perhaps just an ordinary post with an off-set subsidiary arm, or perhaps a signal with two arms just mounted one above the other. You can see the original FPL with its depression-bar 4 drawn in next to point 5 on the main-line, and you can also see some pencil marks drawn next to points C and A, where I can well imagine one of the inspectors saying "and you'll need FPLs here and here too". But I wonder what the thing above points B and 5 is - might it be the result of one of the inspectors trying to explain to Russell what an FPL is!

Parentage of 'Beddgelert', 'Russell' & 'Gowrie'

The engineering drawings for a locomotive can give an indication of the extent to which its design is derived from earlier engines. Typically a locomotive built in the late

19th century might have as many as 60-100 drawings as its specification. If a significant fraction of them is common to an earlier engine, the former design probably has a parental relationship to the later one. In the case of Russell its design has been said to derive from two earlier Hunslet types. The first was the Sierra Leone Government Railway 2ft. 6in. gauge 2-6-2T, of which some 32 examples were eventually built. The second was the design for a 1ft. 11½in. gauge 0-6-2T for Leeds City Council waterworks at Masham. Only one example appears to have been built.

The Hunslet Drawings Books record the basic dimensions of each locomotive built by the company whilst the Drawings Register entry provides a list of the drawings used. This list is subdivided into those that had been newly created for the engine and those that had already been used in the building of others. Looking up these drawing numbers reveals the Order Number for which they were first created.

These books are among the many items preserved in the Hunslet Archive. Another is the collection of works photographs. In the case of Russell, unusually, the photograph is not a works photo (there appears to have been no works photo of *Russell*), but one showing the engine in service at Dinas on the WHR! Unfortunately it is not sharp, or a very good picture!

What do Russell's 81 drawings tell us about the engine's design parentage? Some 37 of them were new. Of the remainder 16 had been used to build the first two batches of SLGR engines and 14 had been used for Leeds No.1. The remaining 14 were mainly common Hunslet drawings used for specifying construction details. It seems therefore that the design does derive to some extent from the two earlier ones. The drawings borrowed from Leeds No.1 are essentially the firebox, boiler and dome. The drawings which had been used for the SLGR engines relate to the running gear of the engine including the pistons, crossheads, slide bars and valves as well as the cou-



pling and connecting rods, wheels and tyres.

The Hunslet Archive at Statfold Barn contains only this photograph of Russell, showing the locomotive in post-1923 cut down condition. Hunslet Archive

Some 30 of the 61 drawings for Leeds No.1, however, had also been used first for the SLGR design. They included much of the running gear as in the case of

David Payling on the Genealogy of NWNG Locos

Russell's borrowings from this source.

What then were the newly designed components of Russell? The 32 new drawings included key components such as the engine's frames and cylinders. There were also the axles, cranks and crank pins, together with the valve gear. The pony trucks and their wheels, axleboxes and axles were also all new. The smokebox and chimney and many of the details of the engine including boiler fittings and ashpan, the reversing gear and brake arrangements including the Westinghouse pump and reservoir were also special to this engine. So, although Russell owed a part to two earlier designs, it was very much a new and individual locomotive with its own character.

How does this parentage compare with that of *Beddgelert* and *Gowrie*, the other

two Hunslet locomotives built for the NWNGR and the PB&SSR? They too are documented in the Hunslet Drawings Books. *Beddgelert* (Works No. 206 of

1878) had been both steam tested and dispatched to North Wales on the same day, 26th July. Sixty six drawings had been used in its construction, 49 of them being new, the remaining 17 being miscellaneous details, such as the springs. Essentially the locomotive was an original design and, so far, no evidence has been found for a similar locomotive being ordered by other customers.

Much the same is true of *Gowrie*, works No.979 of 1908. The locomotive was

tested in steam on 1st September of that year and dispatched to Dinas two days later. It had been built with outside cylinders of $9\frac{1}{2} \times 14$ in. size, with 6 driving wheels of 2ft 4in. diameter, to 1ft. 11¹/₄in gauge. The only Fairlie to be constructed by Hunslet, it is perhaps not surprising that, of the 77 drawings used in its construction, 60 were new, the remainder being standard details in common use by Hunslet.

The author thanks Mr Roy Etherington of the Hunslet Archive for help and advice in this article.

Single Line Working over the NWNGR – a further update.

Oil can & spanner, but no lollipop!



Since articles on Staff Working over the NWNGR & WHR appeared in Journals 44, 45 & 51, further research at the National Archives, has revealed some more details.

When the NWNGR initially opened to Bryngwyn and Quellyn, Major Marindin reported on 31st July 1877 that "There are no means provided for carrying out the block system of working, and it is therefore intended to work the line with only one engine in steam, or two coupled, on the line at the same time; the slate trains which run down by their own impetus being considered in the same light as an engine in steam." The mention of gravity slate trains is intriguing, but there is no mention of a train staff.

The NWNGR were required to give a sealed undertaking that the line would be worked by "One Engine in Steam" (OES), which they duly did on 16th August 1877: "This is to certify that the mode of working this company's lines shall be that only one engine in steam, or two or more engines coupled together, shall be allowed to be upon the single line at one and the same time. Given under the common seal of the Company this day". When the line was extended to Snowdon Ranger in 1878, a similarly worded undertaking was given on 5th June. In both cases, there was again no mention of a train staff.

As mentioned in Journal 44, when the NWNGR first opened, the railway only possessed two engines - one for the main line to Bryngwyn and the other for the branch to Quellyn – so they would not have needed train staffs to regulate the OES working. The initial service appears to have consisted of a single train from Dinas that divided at Tryfan Junction on the way out, and likewise the two portions appear to have combined at

Derek Lystor & Peter Matthews

Tryfan on the return. There was likewise no need for a train staff with key to release intermediate sidings, as those at places such as Waenfawr, Rhostryfan, etc were protected by full signalling from signal boxes, provided by McKenzie & Holland. These intermediate boxes were not block posts, they were provided purely to protect the sidings at these stations. Nowadays this would be considered lavish, but the original NWNGR opening predated the availability of Annetts Keys on train staffs.

When the NWNGR extended to Rhyd Ddu early in 1881, the signalling for this section was provided by the Gloucester Wagon Co. (GWCo). This was just a couple of years after that self-same company had supplied three extra coaches to the railway – a situation unlikely to have been a complete coincidence! Marindin reported on 5th May that, "An undertaking of the usual form is required that the line shall be worked with one engine in steam and also with a train staff in order that the sidings at Glanrafon which has no signals may invariably be operated by means of the key attached to the staff". The following was duly given on 13th May -"We hereby undertake that the extension of the NWNGR from Snowdon station to Rhyd Ddu shall be worked on the same system as that in force on the rest of the Company's line namely

that one engine only, or two coupled together as one, are on the line at the same time, this portion of the line shall be worked with the staff". This is the first mention of a train staff being used, the wording suggesting that, at that time at least, they were NOT using staffs on the rest of the line.

Although the initial service appears to have consisted of a single train from Dinas that divided at Tryfan Junction, later timetables suggest that the NWNGR sometimes ran two separate trains to Tryfan, and sometimes with as little as ten minutes between the two trains. This has led to speculation that staff and ticket working was being used, but there are two problems with this. The first is that, if as noted above they weren't using staffs, then they inherently couldn't be using staff and ticket. The second is, how do you work staff and ticket when you have no way of knowing when the first train has reached the end of the section? Until 1892 the railway had neither telephone nor telegraph. Having let the first train into section with a ticket, how do you know when that train has left section? To let a second train into section with the staff, without any assurance that the first train has cleared the section would be in fragrant breach of the sealed undertakings. If Marindin had found the line being worked by staff and ticket when he inspected in 1881, for example, wouldn't he have had something to say about it? The evidence in the National Archives clearly points to the NWNGR being worked under OES regulations



without a train staff (except for the Snowdon Ranger to Rhyd Ddu section).

Of course, it is entirely conceivable that the NWNGR took a more "flexible" approach to One Engine in Steam working than the BoT intended, as they subsequently did when block telegraph working was introduced. The Nant Mill accident in 1906 (Journal 34) was down to slack working, where the railway staff had given up sending "Train Arrived". This was presumably because when they sent it there was often no-one at the other end to reply, the stationmaster by then being engaged on other duties. Over time, not sending "Train Arrived" would have become custom and practice, and the staff would have just sent a following train into section assuming that the first had arrived. This is perhaps even more likely if they were already used to this method of working prior to the block telegraph being introduced. However, this accident is also evidence of a remote management that were not over-interested in monitoring and enforcing correct signalling practice, and staff who would work around an impractical timetable.

One can well imagine a situation where NWNGR management could issue a timetable with two successive trains from say Dinas to Tryfan, under the impression that they were meeting the OES regulations because the timetable only allowed one train in section at a time. Likewise, if OES was worked without train staffs, the staff on the ground would not be breaking any rules by allowing trains into section without a train staff. They would simply be following the timetable as laid down by management. It has to be remembered that, once a Railway Inspector had passed a line as fit to open, there were no subsequent spot checks to ensure that the railway remained in a fit state, operated correctly. The only reason an Inspector would return is if the railway company informed the BoT that they were making changes, or if a significant accident occurred. Otherwise, the railway company could pretty much do as it felt fit.

Come 1889, the Railway Regulations Act required the NWNGR to adopt, amongst other things, the block working system. Livesey wrote at length on March 4th 1890 to the Board

of Trade in an effort to lessen the burden of the new regulations on the NWNGR. discussions carrying on for many years! Amongst the correspondence, he asked that "The Branch Line from Tryfan to Bryngwyn, 2 miles 50 chains in length, be exempted from the Order and be worked by means of a train staff only". The BoT noted "Ask for Train Staff for branch line", in the Draft Order minutes dated 5th March. Livesey also stated, "All points and signals on the railway are interlocked, except one of the siding points which are worked by means of an Annett's Key used as a Train Staff". Could it be that this is the Saxby & Farmer (S&F) Snowdon Ranger - Rhyd Ddu "Lollipop" staff, and that the siding referred to is Glanrafon Quarry siding? Sometime prior to mid 1892, the station run-round loop was added at Rhyd Ddu. The signalling equipment for this was provided by S&F, who also later supplied the signalling for the new loop at Waenfawr in 1894 and for the new siding at Bettws Garmon in 1901. The runround loop at Rhyd Ddu would have required a new ground frame to control the Dinas end points, which would need locking by the train staff. S&F would probably have been unable to provide a lock that could be operated by the existing GWCo supplied key, which would have been about ten years old by then. S&F would most likely have fitted their own lock, to match that already fitted at Glanrafon, and would then have used the existing "lollipop" staff with integral Annett's Key to work these locks, replacing the previous train staff supplied by the GWCo. In 1892, the block telegraph was brought into operation, along with the Wise's Patent Staff & Ticket system, and the S&F lollipop was retained as a simple point kev

Moving forward to 1894, Tanner, in his letter to the BoT on 11th May, confirmed that the block telegraph system had been implemented on the main line and that the branch was worked on "One Engine in Steam". The lack of any mention of a train staff was immediately seized upon by the BoT who were quick to reply ".it

is requisite that the Department should be furnished with a revised undertaking signed and sealed on behalf of the Company to the effect that a staff will be carried by the One Engine (or Two coupled together) in Steam". A further letter on 25th July complained that no revised undertaking had yet been furnished. In defence, Tanner wrote back the following month explaining that although Russell had the matter in hand, he was out of the country until the beginning of September and would reply on his return. Another month was to lapse before Tanner wrote again, telling the BoT that the revised undertaking would be sent after the next Board meeting on 18th October. The draft was finally sent out on 23rd October and was finally signed off by the BoT on 4th December 1894. Obviously, the NWNGR were not to be rushed into any hasty action – all in all, it had taken four years to finally pin them down to using a staff on the Bryngwyn branch!

It is presumed that the staff continued to be used by branch goods trains in the first year of the WHR regime, as Pringle's Report of 25th July 1922 stated that all points on the line, including the branch, were to be chained and padlocked by the key on the staff. He also recommended that provision be made for all padlocks to be operated by one and the same key. As there was no mention of a Bryngwyn staff in the Working Instructions issued in May 1923 or subsequently, it must be assumed that this recommendation was carried out, the branch train guard simply carrying a key to unlock points as & when necessary. There are a number of Driver's Reports for March 1928 amongst WHHG archives that give details of branch workings. From these it can be seen that whilst Bryngwyn itself saw the bulk of the traffic, with deliveries of coal and collection of slate, the intermediate siding at Rhostryfan did see some occasional use. On 2nd March, the down (Dinas) train collected an empty covered van, whilst loaded wagons of coal, presumably for household use, were detached at the station on 6th & 27th. A further flurry of activity took place on 28th with the delivery of a wagon load of casks, contents unknown!

Quotes from National Archives documents MT6/1351/1 and MT6/1108/1, with thanks to Michael Bishop for providing additional information with particular reference to the Bryngwyn Branch.

More on Four



n his article in WHH53 Jerry Oakey suggests that "the FR Festipedia appears to have confused its vans a bit", however, I would suggest that it's not Festipedia which is confused, but Jerry!

This is a result of allowing himself to be persuaded that the photograph of 'Prince' taking water at Snowdon Ranger (reproduced on page 11 of WHH38 and on page 84 of the 2nd edition of Peter Johnson's 'Illustrated History of the WHR') shows van 4 at the far end of the two carriage train. Although the angle and quality of the photograph do not make identification easy, it can be seen that the van in that train has only one side window, a short vertical grab rail at its far end and, most importantly, no reinforcement along its lower body side. So it cannot be WHR van 4 but is, as reading of the Festipedia entry might suggest, FR van 5.

The use of FR van 5 in this rake is confirmed by a little-known photograph which was reproduced on page 289 of British Railway Journal 72 *(see above photo by C.C. Green)* and which shows a train from Dinas entering Portmadog (New) during the summer of 1923, the only difference in formation being that the locomotive 'Prince' and the van have swapped places. Although the quality of this photograph is also poor, the end balcony and door on the van can clearly be seen, making FR van 5 the only possible candidate. If any further proof is needed that FR van 5 was called into service to replace Pickering brake 4, it should be remembered that the van survived (and still survives, heavily rebuilt) into preservation, by then bearing the no. 8. Although it was in very poor condition it

David Woodcock with a follow up to Jerry Oakey's article in WHH 53

still then retained both vacuum and Westinghouse brake equipment - and the only need for any FR van to have Westinghouse brakes fitted was if it were to work over the WHR section in 1923 or very early 1924. Incidentally, like some other FR vehicles, it was turned to work over the WHR.

It would seem that WHR van 4 was used in summer 1923 as a form of 'Thunderbird' brake, held at Beddgelert ready to be added in emergency to any WHR train, whether vacuum or Westinghouse braked. Doubtless it was used, briefly, until FR van 5 had its Westinghouse brake fitted, when Pickering brake 4 first became unserviceable.

Like Jerry, I have found no evidence to suggest that van 4 was used after 1926, moreover both photographs and driver's logs suggest that the WHR goods brake was used in this role, when required, in the summers of the early 1930s. FR van 5, for which a hire fee would have been paid, was doubtless returned to the FR promptly once the problems with the Pickering brake were resolved.

Although FR van 5 was to retain them until post-war, photographs suggest (they are not clear enough to be definitive) that WHR van 4 lost its Westinghouse fittings in the spring of 1924, at the same time as they were being removed from other WHR stock.

Finally, while it is impossible to be dogmatic about colours, it does seem that all WHR passenger stock was red in 1923, carriages only being repainted green (and lettered and numbered) as they were cut down in 1924. Thus it seems probable that the Gladstone car (which therefore remained unnumbered) and van 4 remained in red.

Keith Bradbury

It is with great sadness that we have to record the sudden death in September of group member Keith Bradbury.

Keith had looked after our web site since its inception three years ago. He was impressively adept at his job, often replying to an email within minutes of receiving it and keeping the site bang up to date. Nothing was too much trouble for Keith. He will be sorely missed.

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Dinas Station Window Restored



The front page of *WHH 46* (December 2009) carried a photograph showing the results of unauthorised work to replace a perished lintel and fit a 'fan' of new decorative bricks in front. This latter addition was the initiative of he who did the work. The net result was not a pretty sight and certainly did not comply to the discipline of the spirit level!

Thanks to funds and materials provided by the Welsh Highland Society and the Company on a 50/50 basis this feature –



Left - window at closure in 1937 Above - botched repair job Right - restored to 1937 condition

complete with a new window – has been most satisfactorily re-instated. Furthermore the whole gable end has been repointed. It is worth repeating that what heritage we have on the Welsh Highland is fragile and deserves both protection and respect. Having said that we are grateful to the company for understanding and responding to our concerns. The sequence of photographs shows the evolution of the situation.



The original 1870s building would have been built with a blank wall in this southern elevation. At some time a door was inserted, the outline of which can be clearly seen and at a later date this was reduced to a window. During the winter it is planned to replace

the 'rainwater goods' on half of the goods shed. The material will be cast-iron or equivalent and will be funded by the Society with a modest contribution from the WH Heritage Group

Poster

ttached to the 1933 timetable poster enclosed with this issue (a Christmas bonus!) is a very human story which has only just come to light after eighty years.

At the end of July 1933 a Mr Edwards living in Bedlinog in what is now South

Glamorgan, wrote a postcard to the railway requesting information about train times. D.O. Jones – the Dinas agent – replied on WHR notepaper which carried the information – 'R.T. Griffith Receiver & Manager'.

With his reply Jones included two copies of the poster (size 12" x 19" and a copy of the current handbill (size 10" x 6"). The latter proclaimed - 'Day Excursions; return journey for single fare', which

Minimum

order is one

detailed fares between all points on the line. Jones was also careful to point out that there is "only one train each way leaving Dinas 12.28pm arriving Portmadoc 2.37; leaving Portmadoc 3.10, arriving Dinas 6.10pm. Jones' letter, the handbill and both posters were returned to the railway by Mr Edwards' son and the good offices of Dafydd Thomas.

Col Stephens' Christmas Card

This year we have chosen a Welsh Highland Theme. The card shows a wintry scene at Beddgelert station on the WHR in 1923. The wellknown and respected transport artist, Jonathan Clay, has painted the original from which the cards are reproduced. The greeting inside is "Merry Christmas and a Happy New Year". Each card is 21cm x 15 cm, landscape. The cards are sold in packs of five for £6, complete with envelopes and inclusive of UK postage. pack of five cards.

Orders with name and address, stating the number required with a cheque or postal order payable to 'The Colonel Stephens Society' should be sent to: Nigel Bird, Bryn Hir, Llwynygroes, Tregaron, Ceredigion, SY25 6PY.

