

Reading Society of Model
Engineers
www.prospectpark
railway.co.uk
Charity Number 1163244



President

Les Dawson
0118 969 4654

Vice President

John Sargeant
01491 681520

Secretary

Peter Harrison

Editor

John Billard
0118 9340381
07834 998971
john@jegbillard.plus.co
m

Free to members

The Prospectus

April 2018



Peter Culham reported on 19 March, “It's very rare at the railway that we have to call off parties. But when the weather gives us no option, there is no option. We now work on re-scheduling the two parties when hopefully the sun will shine!” Photo Peter Culham

DAWSON'S DIARY
BUYING THAMESLINK
RESTORING A 50T CRANE
E IS FOR EXPERIMENTAL
BALDWIN WORKS UPDATES

DAWSON'S DIARY

kept by the President

It was nice to see our member Pete Harrison recovered from his spell in hospital having an operation on his neck. Good to see him at a Young Engineers Saturday having run with his loco, as you know rather cold thus time out but sunny. Karl's 3½" 2-6-2 "Bantam Cock" has passed its hydraulic test after repairs to boiler and superheater. He's busy getting it ready for the steam test. Another good thing to see on this Saturday our younger member Jamie having his steam driving test with Stuart Kidd and Jim Brown. Rob Denton let him use his L1 4-4-0 SR locomotive for the test. Jamie passed okay, he's a very keen young man, when he's sixteen he will be able to drive both types steam and electric locos. A good asset to have.

Jamie also is at this time overhauling a 7¼" 08 loco, with the help of Rob. It was built by the late Bill Fry a founder of the RSME after WW2, who used this engine at the Knowl Hill steam rallies.

Talking of steam rallies the RSME Has been invited to stage a small exhibition in the model tent at the Stoke Row rally this year, with little cost to the RSME this could give the club some good publicity every year! There is a list on the club's notice board. Please support this event this year by entering any type of model you would like to exhibit, anyway it will be a nice two days out for those who put something in the show.

Nigel Penford is progressing well with the club's Baldwin has made a very good jig to put keyways in the wheels and axles. So far the rear wheel set has been fitted as the three wheel sets need new roller bearings. It will be some time for the loco to run again. To make matters worse Nigel's own Baldwin has now got a leaking superheater, another job to do!

March public running did take place as the snow melted away the day before. We had a steady flow of visitors and once again the members did a fine job. Peter Culham's daughter in law did very well standing in for our tea ladies who were unable to attend this time. Many thanks from us all to "Hollie".

As the weather has improved of late a number of the members brought out their locos for steam and hydraulic tests to be carried out. The boiler testers had a busy time at this month's steam up. We had a surprise visit from Joe Challis's grandson Leigh who brought along Joe's 2" Fowler ploughing engine to see if we could give it a hydraulic and steam test. I have not seen this engine for a good many years. Joe used to run it at many steam rallies around the UK and abroad. When tested it will be nice to see it working again!

Surplus track available

The trustees wish to dispose of some surplus 5" and 3 1/2" track.
Any member interested should contact Mike Manners or Nigel Penford.

PONDERINGS

by 61249

Buying Thameslink

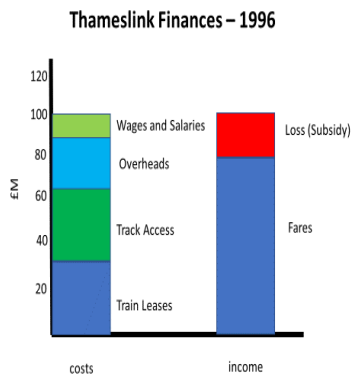
Those avid readers of prospectus will recognise the chart below from last month's article. I make no apologies for repeating it as it is key to understanding a lot of what has happened in railway franchising. Place yourself in our position – we had plans and knew from them that the service had to be turned from needing a subsidy to providing a surplus, and that it could be done. Selling the franchise was of course a competitive process and we knew that the nature of the service, the history of extraordinary growth, and the fact that we served two airports would generate a lot of interest, as it did. So how do you turn round the finances of a commuter railway and present that in a bid to buy it?

I believe that a study of the chart on the right provides the answer. The approach is to go for the big numbers that management can do something about. Just imagine going to the drivers trade union and saying that because of privatisation we were going to cut their wages by 10%. The impact on paper would be a saving of less than £2m, a small percentage of the wages and salaries slice. In practice we would not run a train for

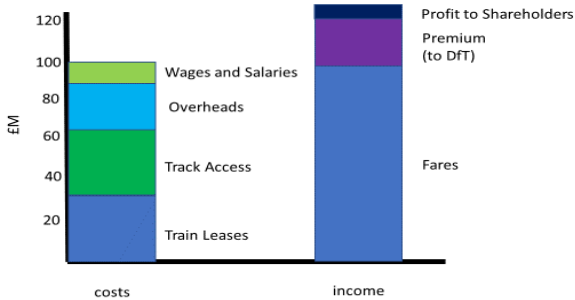
months and we would go bust long before they did. Train leases and track access charges were fixed for the fleet we had, and if anything we wanted to run more and longer trains, not fewer, because we knew our customers liked to sit down occasionally and just loved frequency. So basically forget the left hand column and saving money on expenses. BR had been doing that for years and it had gone as far as it could. (the efficiency of BR in this respect caught out a number of bidders, such as SWT who came in and thought they could cut the wage bill by having less drivers – mass cancellations resulted and a fine for poor performance.)

On the right hand column, the subsidy is going to disappear, so we are left with the blue fares column to attack. All of our plans were about growing this column by doing all the things that our customers love.

Our plans, added together meant that we aimed to deliver the figures in the new chart below:-



Thameslink Finances – 2004 – End Year of Franchise



Some comments on this picture are worthwhile since they figure in discussions today on the franchising system.

It must be a good deal for the taxpayer as instead of paying a £20m per annum subsidy, the DfT and the Treasury get a £20m per annum Premium payment – a sum paid for the privilege of running the railway. (And getting all the abuse for Network Rail’s signal failures et al. – but hey, business is business).

Once you have paid the premium, the bit left for the shareholders is the smallest slice on the whole chart – which somewhat undermines the “fat cat” description of TOC bosses. It also explains why First Group make more money out of school buses in the USA, than they do from running FGW.

There is an obvious temptation to win the bidding competition for the franchise by convincing yourself, and the DfT, that the blue column of income can in fact be a little bit higher. This is what the ECML bidders have done twice, and then failed to deliver. The bidding system rewards this error, and when failure beckons you are dependent on your ability to negotiate with the DfT. In general terms, however, government is not so good at these negotiations as the private sector, as it is constrained by all sorts of political considerations such as who gets the blame when all the trains are cancelled because the supplier has gone bust. This ability of private companies to outmanoeuvre the DfT in negotiations is partly why the IEP is the most expensive train ever built, - another story.

Perhaps the most important lesson for now is that if the state says, “we will take the revenue risk”, then the private supplier can only focus on reducing costs to get a profit. Staff salaries are constrained, lowering the quality of folk who will apply. Hours of cover – booking offices and stations, are reduced, further lowering the quality of service. In fact, pretty well all the benefits of privatisation are taken away, yet this is what TfL and other cities think is the way forward.

In the end it leads to nonsense, such as the refusal of TfL to put Thameslink on the London Underground map as it may encourage people to use it to cross

London and reduce the LUL revenue stream. This is what happens when political, not business decisions are made.

BR offered any management team that wished to try a modicum of support in terms of legal advice – as long as we did all the work to buy it outside of our normal working hours. As a team we saw this as an opportunity with several aspects to it.

We all needed a job and this seemed to be the best way of making sure we had one.

We were actually excited about putting our plans into action and felt that we could add more value to the service than other teams, because we knew the service, and the people.

We saw leadership of our bid as a way of smoothing the transition into the private sector for all our staff. They could support us, and hoping that we might win, would help alleviate some of the fear of the unknown.

We could offer them all shares so that they could share in any success we had.

Next month I will let you know how well we got on. (Clue, I am not a millionaire).

RESTORING A 50 TON CRANE

Peter Jennings

In May 1930, the London Midland and Scottish Railway (LMS) placed an order with Cowans Sheldon & Co Ltd of Carlisle an order for three breakdown cranes. A lifting capacity of 36 tons was required and, on 30 May, the order for Crane 1054/35 was placed under order number 5111-13. The whole assembly was to comprise the crane itself, two weight-relieving bogies (to take part of the crane's weight mechanically when travelling over lightweight rail or poor track), a jib-runner wagon (wagon on which the jib rests during transit), a match truck (containing the heavier wire slings, load-spreading girders and the like) and a water-tank wagon. The accompanying drawings, however, relate only to the first four items.

The crane was delivered later in 1930 and then returned to be uprated to a 50 ton capacity in 1938.

It was based at Motherwell initially, moving on to St Margaret's in 1961, before ending its operational days at Edinburgh Haymarket, arriving with the Great Western Society at Didcot in 1987.

In May 2015 its annual boiler exam revealed that one of the rivets on the lap seam needed replacing and at this point Sod's Law (SL), that feature beloved of engineers the world over, made its initial appearance because the rivet could not be accessed with the boiler in place. But no worries whip it out, replace it, bung the boiler back in and Robert's your mother's brother! Have in steam again by Easter!

So we removed the boiler. To achieve that we had to disconnect the steam pipes, both feed and exhaust; remove all the boiler fittings, the injectors, the steam feed for the generator, oh and the roof! Having done all that, SL stepped in again to reveal that not just one, but five rivets needed replacing.

I suppose that really, that's SL in reverse because had we simply replaced the one and then carried on steaming, lor' knows what might have happened!

Earlier this year, the insurance company's boiler inspector paid another visit and, having looked at the boiler again, decreed that, in order for him to establish the internal condition accurately, the boiler had to be taken apart into its major constituent parts - firebox, foundation ring and outer wrapper. Oh, and the chimney flue. So, so far as the boiler is concerned, that's where we were in mid-December 2017 - with the work scheduled to be carried out, in-house, earlyish 2018.

In the intervening period, another inspector took a squint at the jib, which is of riveted lattice construction, and said he wanted to test all the rivets for soundness and that revealed that some seven of the two hundred or so need to be replaced.

At some point, I remembered that someone had told me that he had noticed steam coming from underneath the insulating wrapping on one of the steam pipes, so, with time now on our side, we decided to remove and inspect all the pipes, both supply and exhaust. Lucky we did as all of them were in a pretty grim state. we've also replaced that brake linings on the hoist and luffing brakes. Luffing a sailing reference meaning raising and lowering the jib. No, I don't know why a sailing term has been applied to a steam crane, but there you go.

Of course, all this takes money, so it will come as no surprise to you, I hope, that I now give you the opportunity to part with some funds in the direction of the project and invite you to use this link:

http://www.didcotrailwaycentre.org.uk/forms_central/50t_crane_appealform.pdf

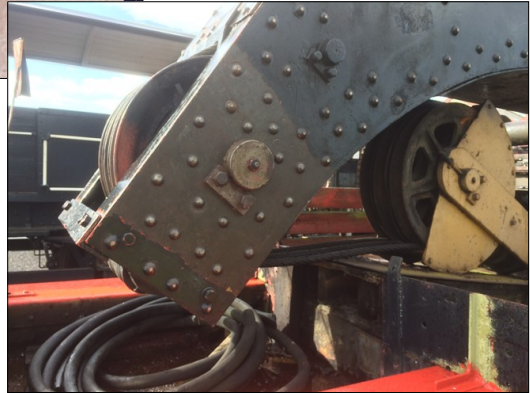
Thank you!

(to be continued)



All pictures
courtesy
Peter Jennings





'E' is for Experimental

John Spokes

Arguably one of the most illustrious model engineering clubs is the SMEE, which to give it its full title is the Society of Model and Experimental Engineers.

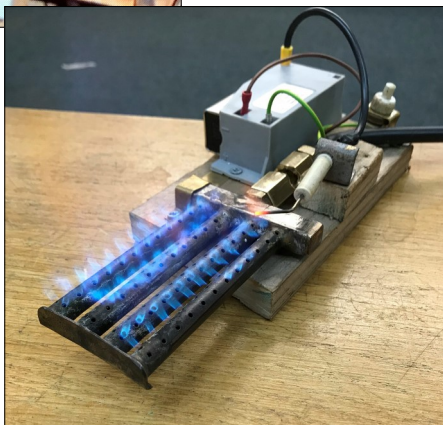
Although the RSME is not so pretentious it does possess a good number of Experimenters and this is particularly apparent, gathered around Bullshit Corner on a Thursday evening. In support of this talent I attach a photo of the latest version of the Gas Burner made by Denis Packman, which comes complete with piezo ignitor.

Denis's original plan was to make the burner from ceramic, but the multi-burner apparatus is the current evolution and will be used to fire his 3 1/2 inch 2-6-2. (Apologies for the low quality picture of this engine.) There was some discussion at a recent Wednesday Workday as to whether the burner would be man enough, but it certainly added to the air temperature in the Clubhouse.

It is pleasing to note that this has been achieved without any serious damage to Denis's immediate neighbours!



Photos courtesy John Spokes



CLUB BALDWIN UPDATE No 2

Mike Manners

Repairs to the club Baldwin are progressing. New bearings have been obtained and pressed into the axle boxes and oil seals fitted. A new rear axle has been manufactured, keyways broached in the wheels and milled into the new axles and the wheels pressed back onto the new axle.

One of the problems with the old axle concerned the lubrication of the roller bearings. There is an oilway in the centre of each axle that is meant to feed oil to the bearings. Unfortunately, when the old axle was disassembled, we discovered that the oilways terminated just outside of the bearing rather than in the centre of it. This resulted in bearings with inadequate lubrication and a likelihood of any oil reaching the bearings carrying dirt and ash into the bearings. We suspect the problem was caused by the builder of the locomotive not having a drill long enough to drill the deep holes necessary to reach the centre of the bearings. This fault has been rectified on the new axles. A little job not without difficulties and involving very careful work with small drills with not very much of the drill shank gripped in the chuck!

Another interesting discovery was that the Club Baldwin has a right hand leading motion and Nigel Penford's has a left hand leading motion. Well spotted by Nigel. That would have been difficult to correct once the wheels had been pressed onto a new axle!

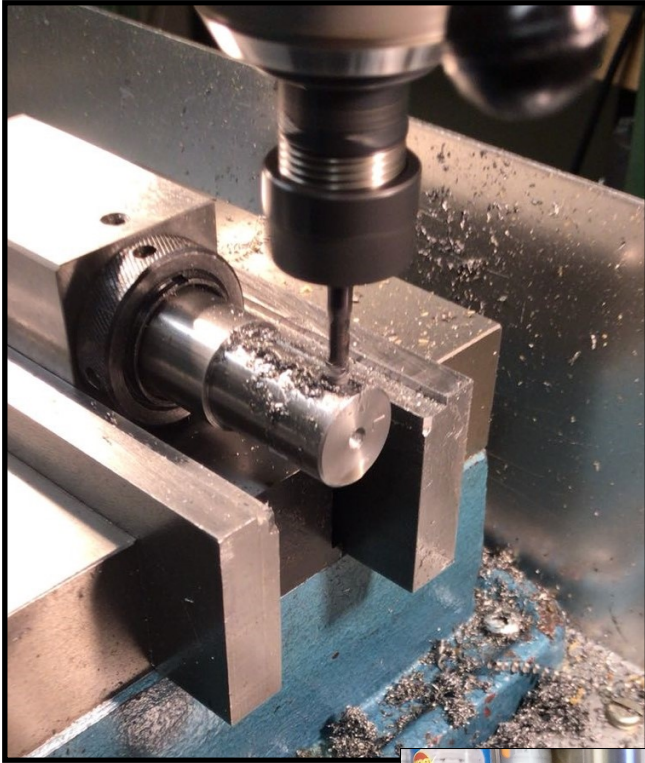
Broaching the keyways in the wheels turned out to be an easy job using a suitable jig and a 10 ton press. More careful work was needed milling the keyways in the axles and machining the keys to size. It was then just a case of making a support plate to support the wheels in the press, complicated by having the crank pins still fitted in the wheels, and pressing the wheels onto the new axle, not forgetting to refit the bearing blocks along the way. This was a job that would have been very difficult without the help of the 10 ton press. We had the load gauge on the press well off the end stop pressing the wheels home. Let's hope they stay there this time. The pictures show the keyways being cut in the wheels with the broach being pressed through the wheels. The press load gauge never moved off the end stop during this operation. The other pictures show the wheels being pressed onto the new axle. This did move the press load gauge off the end stop!

CLUB BALDWIN UPDATE No 3

Mike Manners

The rear axle is now back in the engine and the centre axle has been removed. Another interesting question. How do you press an axle out of wheels when the axle is full of bearing blocks and eccentrics preventing the wheels from being supported in the press? And the answer is you put the whole assembly in a band saw and cut it in half. This allows you to remove the eccentrics and bearing blocks so that the wheels can be supported from behind in the press. We thought the first axle was bad but this one was even worse. We were aware that the oil feed to the roller bearing on one side of the axle had been blocked for some time, but the extent of the damage was still surprising. The lack of lubrication had allowed the bearing to rust and had seriously damaged the bearing shell, the rollers and the axle. This is now going to be a repeat of the work carried out on the rear axle.

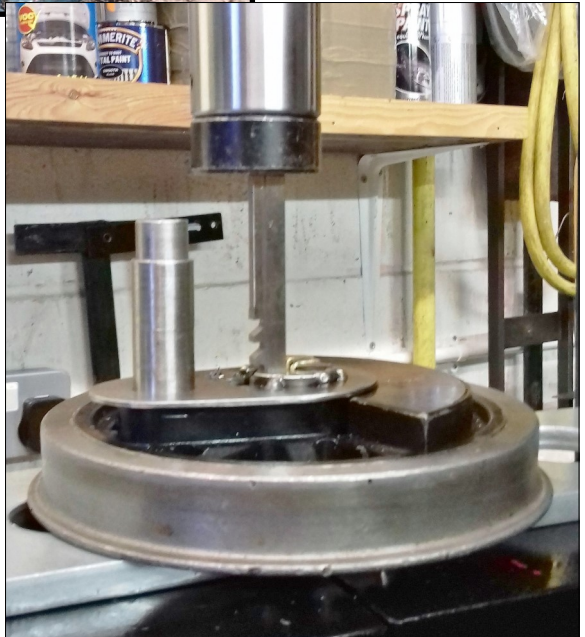
While we are on the subject of Baldwins, at the last public running session Nigel's Baldwin developed a significant leak in one of the superheaters. This did not prevent the loco from completing the public running session but did make for a lack of power and made pulling away from a stand still rather difficult. Once the superheaters were removed from the boiler and the significant leak repaired a number of other pin hole leaks became apparent. These have also been repaired.



The new axle
having the key
way milled.

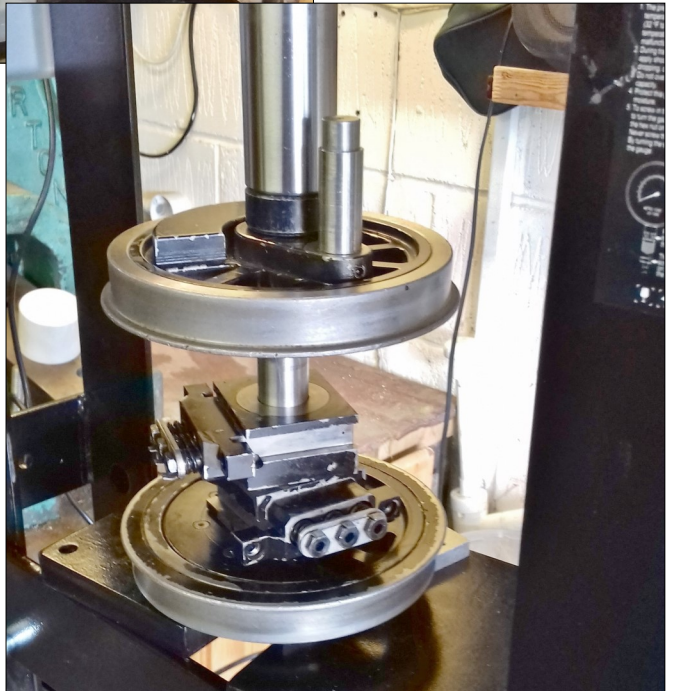
All pictures
Mike Manners

Broaching the key
way with the 10 ton
press

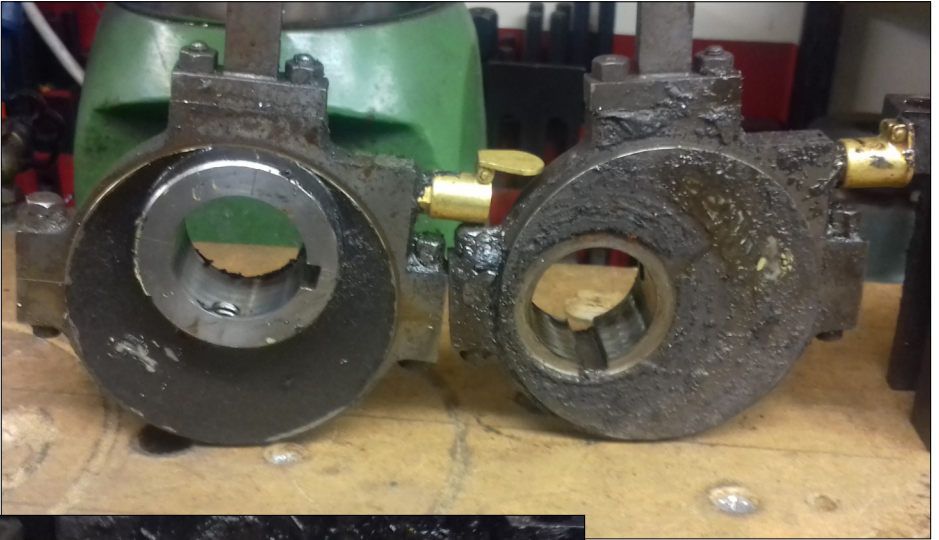




Broaching the key way with the 10 ton press.



The wheel being pressed on to the new axle.



Above
The axle pump eccentrics.
Very dirty but otherwise
quite serviceable.



Left
The rusty and disintegrating
bearing standing in front of
the good bearing from the
other end of the same axle.



The press load gauge.

The axle, now cut in half, and the wear on the axle.
This was the good end.
Unfortunately the picture of the really bad end of the axle was very poor and cannot be shown.



The leaking superheater from Nigel's engine.



Leigh Challis with a 2" scale model BB1 ploughing engine made by Leigh's grandfather Joe. Joe was a respected RSME member and was one of the last men alive to make his living at the steam plough.

The engine is being prepared for a hydraulic test at RSME and it is hoped that we will be able to see it in steam before long.

Photo John Billard

STOKE ROW RALLY 9-10 JUNE 2018

Members are invited to exhibit at this rally where there is a dedicated model tent. Security will be arranged for the Saturday night.

Opinions expressed in PROSPECTUS are the personal views of the contributor and cannot be taken as reflecting the views of the club committee or editor.

The deadline for the May PROSPECTUS is 18 April. This is the final date.

Contributions from all members are greatly welcomed by the editor

john@jegbillard.plus.com

07834 998971

DIARY

April 2018

Sunday	1st	Public running (Easter)	13.30
Tuesday	3rd	00gauge running	
Friday	6th	Special needs	13.30-16.00
Saturday	7th	Club running	11.00 onwards
Monday	9th	Trustees meeting	19.30
Saturday	14th	Birthday party	11.00-13.30
		Birthday party	14.30-17.00
Sunday	15th	Birthday party	11.00-13.30
		Birthday party	14.30-17.00
Tuesday	17th	00 gauge DCC	
Friday	20th	Young Engineers	
Saturday	21st	Young Engineers	11.00
		Club running	13.30 onwards
Sunday	22nd	Birthday party	11.00-13.30
		Birthday party	14.30-17.00
Tuesday	24th	Theale Beaver Group (1)	18.00-19.00
Thursday	26th	Theale Beaver Group (2)	18.00-19.00
Saturday	28th	Birthday party	11.00-13.30
		Birthday party	14.30-17.00
Sunday	29th	Birthday party	11.00-13.30
		Birthday party	14.30-17.00

May 2018

Saturday	5th	Birthday party	11.00-13.30
		Birthday party	14.30-17.00
Sunday	6th	Public running	13.30
Saturday	12th	Club running	11.00 onwards
Sunday	13th	and tanks weekend	11.00 onwards
Thursday	17th	AGM	19.30
Saturday	19th	Birthday party	11.00-13.30
		Birthday party	14.30-17.00
Sunday	20th	Birthday party	11.00-13.30
		Birthday party	13.30-17.00
Friday	25th	Young Engineers	
Saturday	26th	Young Engineers	11.00
		Club running	13.30 onwards
Sunday	27th	Birthday party	11.00-13.30
		Birthday party	14.30-17.00