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

The Prospectus

March 2019

Down in the woods… see page 6. Photo Mike Manners

VIRILITY SYMBOLS
A LONG HARD DAY
AYESHA LIVES ON
ANALYTICS

President
Les Dawson
0118 969 4654

Vice President
John Sargeant
01491 681520

Editor
John Billard
0118 9340381
07834 998971
john@jegbillard.plus.com

Free to members

JB154

DAWSON'S DIARY kept by the President

26 January 2019 Young Engineers and a few who were not were saying it was not so cold this time. Good progress on the Polly pipework by Stuart Higgins and Pete Harrison. The engine looks fine, not long before it gets up steam! Boiler testers were busy once again and we gained a new member too. A good sign for the RSME.

Last Wednesday working day of January the members did a large amount of groundwork on the raised track extension to fit the steel beam in place on the following Wednesday depending on the weather at that time.

Despite the snow the public running for the month of February was very busy with a lot of work being done beforehand removing snow and ice from points and making sure the signals worked, etc. The sun shone and helped thaw the ice. We had a good day. Also there was a good thing that happened , it was young Jamie's 16th birthday the day before, he was passed out to drive for the public. Even better now he's got a job which is very good news. Well Done James!

I wish to thank all the members who really put in a lot of effort to get the tracks ready by opening time. The public were not disappointed.

Wednesday 7 ¼ track gang did a very good job of cutting out the raised track concrete beam so that the steel swing beam fitted in place ready with the track and sleepers fitted with well organised team work and good weather it was fitted in one day. With just a few bits to finish off ready for the next working day A job well done.

This was not the only large job being carried out at the same time. The base of the outside service cupboard by the coach shed. This will have all the things like the electrics, airline, ash pans, point lever tools in one place with nothing but the 7 ¼ trollies in the storage shed.

Not forgetting the other members who were servicing the raised track trollies ready for the next month's running day. Parkas and Gardens were doing their bit too. Well done everyone!

Ponderings by 61249

AEA Technology Rail and Virility Symbols

As I write this the world's two largest egos are travelling to meet each other and discuss the denuclearisation of the Korean Peninsular. What the ****** has this to do with Prospectus you might ask? Firstly, it will give the reader a chance to reflect on who you think are the world's two biggest egos, and fill in the blanks where I have not given names, as for the stars these can also be filled in and if there is a shortage of imagination then come to Prospect Park on club running day (March 9th) and listen to the author having his "Jessie" 0-4-0 hydraulic tested by El Presidente. We are lucky in this club to have such a fine leader, even if he doesn't always pass the loco.

Ego	Virility Symbol	Show-Off opportunity	Key Attribute
Political Head of State	Aeroplane Missile	Summit War	Opulence Range/Power
Monarch	Royal Train Yacht	State Visit	Opulence Size, Opulence
Head of Navy	Aircraft Carrier	War	Size
Head of Army	Tank	War	Size, Power
Head of Air Force	Bomber Fighter	War, Air display War, Air display	Size, Load Agility
Railway Boss	Inspection Saloon	Visit (from or to)	Comfort, Kitchen
Railway Civil Engineer	Inspection Saloon Track Recording Car	Visit (from) Exhibition	Comfort, kitchen Sophistication
RailwayMechanical Engineer	Maintenance Depot Wheel lathe	Visit (to) Visit (to)	Berths, Cranes etc Newness
Railway Signal Engineer	Signal box Control Centre	Visit (to) Visit (to)	Area covered Traffic Management

Secondly, students of the news and history will know that this article is being written after the deadline – so apologies to the editor. It was going to be about track measurement, following up on the reference to UK expertise in this area last month. Then I realised that what we were engaged in in Derby Research (as AEA Technology Rail was previously known) was not just about technical expertise and solving the problems of running a railway, but that railways, businesses and countries are run by people, so what happens is not all about the engineering, but about how folk react and play out to each other. In AEA we had the best brains in the world applied to significant problems of track in a modern railway, which played in several areas and gave us the business strapline which described what we could help people do – Measure, Model, Manage. This starts with measurement because as every engineer knows, you

cannot manage anything unless you can measure it. And this is where the first set of egos comes in, that of the Chief Civil Engineer of the Railway. It is important to realise at this stage just who this man (not sure any woman has yet reached these dizzy heights so the sexist term is appropriate) rates himself against. And it is not his boss, who probably knows little or nothing about track and Civil Engineering.

No, the railway Civil Engineer knows that he is not trying to impress his boss, who will only look at the eye watering costs involved in anything to do with Railway Civil Engineering, but his peers. They, of course, work for other railways, often in other countries so they have to get together in order to parade their symbols of might and success. This they do at conferences and exhibitions, and Congresses in Railway Research. This line of thinking leads me to the table below. The point of which is to demonstrate that effectiveness in the stated role of an asset may not be what is really important to the ego of the person ordering the asset. An important point about customers!

You might think that this list is in order of importance from the top down but be not fooled. Kim Jon Un, so the newspapers tell us, does not like air travel and is travelling to meet the other world Ego on a train, and the trip to China is taking two days. The reason for this is that the train is very heavy, presumably built to withstand a nuclear attack, and "can only travel at 37 mph" according to the Times. This may well be the only accurate statement in the newspaper, and one is forced to ask why. The answer is of course that the Railway Civil Engineer in China tells the world's most powerful and hated dictator how fast he can go! Now that is real power and importance!

And has little to do with Civil Engineering, but about Ego. If it was really about Civil Engineering then the Civil Engineer in China would say "My railway can allow your train to go at 100 mph or faster because it is so much better than your railway". It is not about Civil Engineering but about making sure that Kim Jong Un realises he is a vassal state of China, just in case he thinks of himself as important as his ego suggests.

My nom de Plume is pretty well blown in the club now, and some of the readers will know that my 5" engine is a Tilbury Tank, 4-4-2. The London Tilbury and Southend Railway was of course, mainly a commuter railway with its terminus at Fenchurch St. close to the City, (Before Canary Wharf's influence). Unfortunately for the LT&S, in the early 1900s access to Fenchurch Street was over the metals of the Great Eastern Railway which happened to run a competing route to Southend from Liverpool Street. Not exactly a recipe for fruitful co-operation or the secure development of the LT&S business.

Nevertheless, to accommodate growth the Chief Mechanical Engineer of the LT&S (Whitelegg) designed a bigger 4-6-4 loco to help haul bigger trains in the peak – gaining capacity through train length at which the Japanese are very good at with their 16 car commuter trains. He submitted the design to the GER who told him to carry on. He then ordered 8 locos from Beyer Peacock, but during their delivery period the LT&S was sold to the Midland Railway, which the GER regarded as an unwarranted incursion into their geographic area of influence. The Civil Engineer of the GER then banned the new locos from their metals and Fenchurch Street, despite the fact that the axle loading was less than the 4-4-2s already operating, and the fixed wheelbase a mere 7% longer. Was this the Civil Engineer showing who was top dog? Or the businesses clashing? Or the technical silos in competition – if we let that loco here our world will stop? Who knows, probably a combination of all three, but the LT&S was reduced to changing locos in a trip of only 40 miles! Not good practice and the locos had a short life, they strayed on to the Midland but were nearly all gone in less than 20 years.

If Derby Research had been involved, we would have measured the forces, modelled the track impact and come up with a financial regime that compensated the GER so that both companies made money! None of that was, of course, possible in 1920.

61249 adds: The picture is of a 3½ " model sold by Steam Workshop in 2015. The loco in question was never painted in this livery, but it looks good!

Editor's note: 61249's father was a guard on the old LT&SR.

Club Projects update
by Mike Manners

You may recall late last year that we took delivery of the manufactured steel beam that will form the curved section of one of the raised track points for the track extension. The steel beam was painted late last year and has been waiting for the Christmas period and some better weather for further progress. Over the last month the steel beam has been moved over to the site of the new point and the existing track has been cut in preparation for the installation of the beam.

This last week we tackled the job of installing the beam. We knew what the job involved but had no idea how long it would take or what progress we would make. Removing the existing, previously cut track, was easy. Just a question of releasing all the clamp screws that held the track in place and lifting it out of the way. Quite a quick process. We then had the job of removing the concrete beams. This took a little longer. The beams were well fixed with some good strong cement and, as they were tight up together, shifting the first beam took some doing. The other four beams were a little easier. They were all loaded onto a raised track passenger trolley and removed from the site.

Then started the really hard work. We had to clean up and trim the existing concrete support posts ready to receive some packing to support the new steel beam. Removing the old cement and trimming the tops of the support posts level was really hard work and involved hammers, masonry chisels and a diamond tipped masonry cutter. A filthy dusty job. We eventually had the tops of the post levelled off and were ready for a trial fit of the beam.

It did not fit - but that was all part of the plan. We had purposely had the beam manufactured too long, and with square ends, so that

it could be trimmed to size and shape on site. Far better to be too big and trimmed down than too short. We did some careful work with a disc cutter and the beam slotted into place. Then came the fiddly bit. We had to get the beam at the right level and with the same slope to match up with the existing track at both ends. This took some time with fitting blocks under the beam and fixing them in place. More very careful work with masonry disc cutter. While this work was going on we were also cutting plastic sleepers to length ready to replace the track. We also had to drill the steel beam for the track clamp screws.

We had decided to use very sticky bitumastic paint to stick the sleepers to the beam and lay the track on this. This was a rather messy but quite quick process and the track was soon back in place and fixed down. We have a bit more work to do as some of the track clamps were very rusty and unusable and will have to be replaced and there is a bit of fettling needed to do to match up the replaced track at both ends with the existing track. The new steel beam is very flat and level but the existing track is not so there will need to be a bit of adjustment and shimming of the joints at both ends.

There is a lot more work needed to finish this part of the job. We have made the roller beams that will allow this track section to roll to one side but they need vertical post and bracing and then welding to the steel beam. We need to make a hinge arrangement and locking bolts to keep the track aligned and some locks to stop it being moved by the local wildlife. We will need to arrange some anti tip rails for the new beam and eventually remove the existing concrete support posts. We may even need to change the signals to show a red light when the new point is not locked in place.

It was a long hard day and many thanks are due to the usual hard working few who achieved much more in the day than we ever expected. Well done Nigel Penford, Roger Pattie, David Scott, Peter Culham and Mike Manners and the others who lent the occasional hand and made tea. Never in the field of model engineering have so many benefitted from the work of so few!

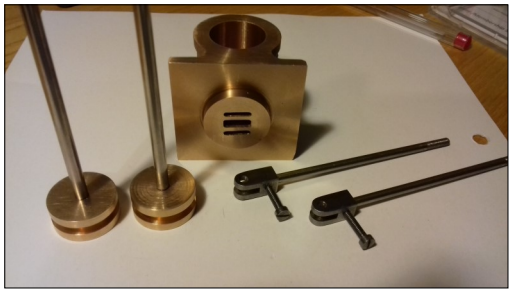
While all this was going on John Evans, Peter Culham and Andy Day were working away at sorting out the foundations and a duct for a new electrical and storage kiosk next to the ground level bunker. Another fine days work. Well done chaps. A good job. Concrete laying if the weather holds next week.

Finally…. The shuttering made for the base of the electrical and storage kiosk.

All photos Mike Manners

A Very Long Term Project
by Mike Manners

I started building Ayesha (a 2.5" gauge steam locomotive) in 2007. I have not got very far in the 12 years since. But I have had a recent burst of inspiration and tackle a few more parts. Some coupling rods are taking shape and some cylinders and pistons are making progress. Over the last couple of months I have made the two pistons and done a lot of machining of the cylinders. Several people have said that building a 2.5" gauge locomotive is more like watch making than building a locomotive. I am beginning to understand what they mean.

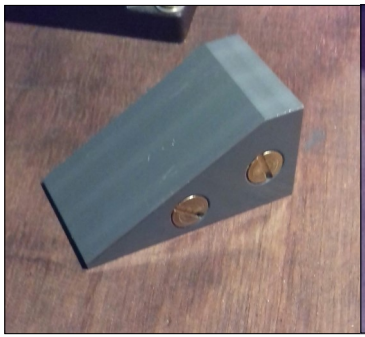


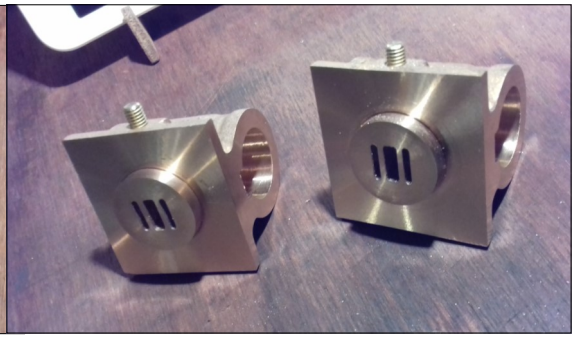
A lot of the machining of the cylinders is fairly straightforward but cutting the steam ports and passages was challenging to say the least. The write up of Ayesha in the Model Engineer simply say mill out the steam ports being careful to stick to the published dimensions.

They don't say just how difficult it is to do. I have managed it but in the process and despite some very careful work have broken two long series 1/16" end mills. Drilling the steam passages was similarly worrying work with very little margin for error. I decided that the best way to work out the angle of the steam passages was to do an accurate scale drawing of the cylinders in AutoCad and then get AutoCad to calculate the angles. I was

very surprised when the answer turned out to be exactly 30 degrees. I decided to make a 30 degree setting block so that I could easily set up the cylinders at the correct angle in the milling vice.

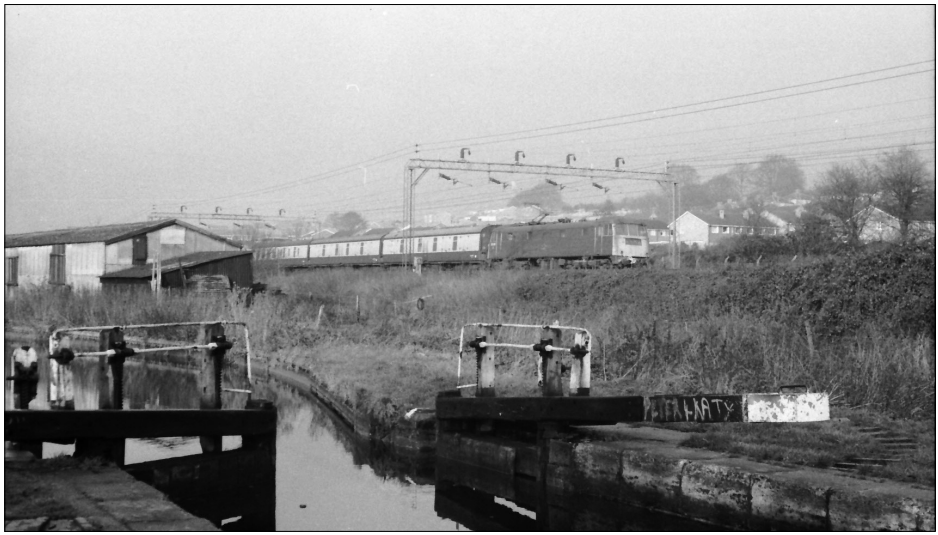
Making the setting block was a quick and easy job and made the set up of the cylinders similarly quick and easy. AutoCad had also calculated the depth of the steam passage so it was very pleasing when the first steam passage came out exactly where it was supposed to and at exactly the predicted drilled depth. The remaining 7 steam passages were drilled with much more confidence and all came out in the correct positions. Another bit of Ayesha done. Now back to the coupling rods while I wait for the delivery of the castings for the cylinder end caps and an adjustable hone to finish off the cylinders.





ANALYTICS

Where Wolverton Pug looks at some older pictures taken by the editor.



Berkhamsted 1977

Looking across the lock on the Grand Union Canal and we see a class 85, distinguished from the earlier classes 81 to 84 by the fact that it has four small windows on the bodyside rather than a series of louvres. That train consists of three brake vehicles visible leading, two full brakes (BGs) and a brake second (BSK) indicating the likelihood it is a parcels train. The loco carries the early small yellow panel on the front.

They were built at Doncaster between 1961 and 1964 as E3056 to E3095 and were 85001 to 85040 in 1973/74. One is preserved-85101 ex 85006 and E3061 at Barrow Hill. The rest were scrapped in 1992/93 at MC Metals Processing Glasgow, apart from 85019/25-at Vic Berry's Leicester in 1990 and 85027 and 85033 at Crewe Works in 1983. It is just possible to discern the white number on the rear cab side but not the detail. When renumbered the raised aluminium numbers and BR bodyside crests were removed.

Euston 1980

Here we have Class 87 no 87015 built February 1974. The fleet of 36 Class 87s were built for the Crewe to Glasgow electrification scheme, which released the Class 50s to go to the Western Region to eliminate the last diesel hydraulics. 87015 was named "Howard of Effingham" at Crewe in May 1978. It was withdrawn in October 2004, with the introduction of the Virgin Pendolinos and scrapped by J.T. Lanscapes at the MOD Caerwent between May and October 2005.

The train it is hauling consists of a 125 mph Mark 111a open second leading. It may well be a Glasgow train and would probably be all Mark 111a

passenger stock including the catering vehicle. But as there were then no 125 mph passenger brake vehicles it is likely that the rear vehicle is a full brake (BG) with 100mph bogies on special maintenance, i.e. every 6 months shopping instead of 12 months thus allowing the train to run at 110mph the maximum speed of the class 87. These days vehicles are shopped on hours in traffic not periodicities. In the background is another full brake (BG).

Maidenhead 1982

This is a Gloucester R.C.& W. Co. Driving Motor Parcels van in corporate blue livery, used on non passenger stock. Ten were built between January and April 1960. Two went to the London Midland Region, M55987 and M55988 to Newton Heath, Manchester M55989 and M55993, M55996 to Tyseley and M55990 to Chester. The remaining two went to the Western Region W55991, W55992 to Reading. Only the Western Region two had end gangway doors.

Cravens also built three, without gangway ends in July/August 1958, M55997 to Carlisle Upperby, M55998 to Walsall Rycroft, M55999 to Stoke on Trent.

The one in John's picture is either 55991 or 55992. They remained at Reading until they went to Cambridge in 1990. Both were withdrawn during 1991 and with several others went to Chester and were stored. From there they migrated with 55993/94/95 to Inverness, possibly for recovery of parts for other Gloucester units working in Scotland. They finished up being scrapped by M.C. Metals in Glasgow in April 1991.

DIARY

March 2019

Saturday	2nd	Birthday Party	11:00 to 13:30
Sunday	3rd	Public Running	13:00 onwards
Saturday	9th	Club Running	11:00 onwards
Sunday	10th	Birthday Party	11:00 to 13:30
		Birthday Party	14:30 to 17:00
Monday	11th	Trustees Meeting	19:30 onwards
Saturday	16th	Birthday Party	11:00 to 13:30
Friday	22nd	Young Engineers	18:00
Saturday	23rd	Young Engineers and and Club Running	11:00 onwards
Sunday	24th	Birthday Party	11:00 to 13:30
		Birthday Party	14:30 to 17:00
Saturday	30th	Birthday Party	11:00 to 13:30

Comments by RSME members on any subject appearing in Prospectus are always welcomed.

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 April issue is 18 March. This is the final date.

Contributions may be submitted in hard or soft copy to the editor.

John Billard Old Station House Twyford Reading RG10 9NA
01189 340381
john@jegbillard.plus.com