

Reading Society of Model  
Engineers  
www.prospectpark  
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Charity Number 1163244

# The Prospectus

March 2020



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**Free to members**



A tree that had to be removed prior to the February public running It all adds to the fun!

Picture Mike Manners

**BOILER TESTING  
OO LAYOUT REPORT  
A ONE SIZE SPANNER  
WARRIORS AT THEIR POST**

## THE VIEW FROM THE CHAIR

John Billard

I had the privilege of being track marshal at the February public running and what a day that was! Those present thought that it might have been the busiest ever and we were at one stage having to consider turning people away.

However a couple of issues did arise that I would like to discuss. On days like this we simply must have more volunteer members present to do all the jobs to keep us all safe and to maintain a good service. It is not right that “senior” members are having to do onerous roles in the open and cold all afternoon. Also if you are taking advantage of running your engine at these events, for which many thanks, please give a few minutes to help the few volunteers to clear up afterwards when your engine is put away. That would make all the difference and I hope you don't mind me asking! Please don't just drive off!

We are doing some essential work on the club house and this involves a complete rewiring. As result **the club house will be closed for all purposes and not available during the period 16—20 March.** It will be possible for the Warriors to continue in the grounds but to bear that in mind.

We should all know that our faithful member Peter Martin is approaching 90 and we should all give him our thanks for all the help he gives us, particularly running the Thomas layout during public events. Thank you Peter and Happy Birthday from all of us..

## TALES OF AN OLD BOILER ... but it's time for a test...

by Peter Harrison

Hi, I am a live steam boiler and my name is Cooper B Oiler and my owner, Loco D River, needs to have me certified to comply with the Pressure Systems Safety Regulations 2000 (PSSR), a requirement of the club I am used at and from the Health and Safety Executive. To obtain certification I am required to have a hydraulic test every 4 years and it's my owner's responsibility to prepare me for the test. To improve the chances of a successful test my owner needs to carry out some basic checks that would greatly increase the chances of a successful test.

The hydraulic test requires my shell being pressurised to 1½ times my working pressure. My owner can carry out a simple hydraulic test by using the locos hand water feed pump, or connect me to the water mains supply.

To prepare and test my shell all Loco D River needs to do is:

Remove the safety valve/valves completely fill my boiler with water, make sure there are no obvious water leaks from any boiler fittings, boiler stays and any boiler joints. Any leaks would need to be repaired before progressing.

Replace my safety valve/valves with suitable plugs.

Replace the pipe to my whistle with a suitably sized stainless steel ball and union nut to stop the whistle valve from leaking.

Ensure all control valves do not leak.

To pressurise my shell connect use the locos hand pump to my boiler using a clack valve. The actual pressure in my shell is monitored using my pressure gauge. Don't over pressurise me as this will damage my pressure gauge.

Should there be a leak, this will be obvious as the pressure indicated on my pressure gauge will decay and a pool of water would be seen on the work bench. The usual culprits for leaks are blow down valves, control valve, boiler stays, tube leaks, tube plate joints and the regulator. A passing regulator will be evident as water will be seen coming from the cylinder drain cocks, this not the end of the world as closing the drain cocks may stop the pressure drop. Most reasonable boiler inspectors would be able to recognise a passing regulator and would take this into account. Leaks from and boiler joints, tubes, stays etc. would be a failed test and would require remedial work to rectify, although leaks from blanking plugs of boiler fittings can be taken into account. Better to rectify these leaks before the clubs boiler inspector fail me as any pressure loss which cannot be accounted for or which is at an unacceptable level shall lead to the test being declared a failure.

The amount of water required to fill my shell needs to be determined as the boiler inspector will need to record this and if not already done. It's always a good idea to thoroughly clean the smokebox and combustion spaces. All tubes and flues will also need a good brushing.

When all the preparation work has been completed satisfactorily and there are no leaks it's my owner's responsibility to supply the means to connect me to the boiler inspectors test equipment. The test equipment used by the boiler inspectors at the RSME uses a 7/16" X 26 ME female thread and therefore an adaptor needs to be provided which reduces the safety valve thread to 7/16" X 26 male thread to a depth of no less than 1/2" deep. The adaptor replaces the safety valve

Whilst not comprehensive, the following checks should be undertaken by the Owner/User or operator before everyday operation:

Check that the safety valve(s) operate at the specified release pressure as indicated by the red line on the pressure gauge.

Check for any leaks or weeps from fittings, bushes and pipe work.

Check the water level gauge waterways are clear by blowing down the glass and confirm that the water level returns to its correct position without delay.

Check the correct operation of any pumps/injectors required to maintain or replenish the water level in a boiler.

Check that the hand pump (if fitted) operates correctly and can be used to put water into the boiler in an emergency.

Check that all clack valves seat properly.

Check the regulator operation that it operates smoothly and that it can be completely closed and opened.

For more details please refer to the boiler Test Code (Examination and Testing of Miniature Steam Boilers Revised 2012) which sets out the minimum requirements for the maintaining and operating a miniature boiler.

## 00 Layout Progress Updates

by Scott Rixon

Tuesday evening is always a hive of activity as our band of members continues to do lots of modelling. We try to have a running session on the first Tuesday of the month and are more than happy to have guests come and see the layout running, we have been working on the sections around the fiddle yard, we use this as it's quicker to setup. We do still, however, have the terminus setup when time and enthusiasm permits.



A few areas are under development and these pictures show some of the progress that we have made. Behind the station, a new row of factories rise up behind and do a nice job of framing the station area. These are more com-

plicated than the photographs make them appear as there are quite a few layers of factories. We have taken sheets of printed factories and instead of just sticking them flat onto the backboard, they have built up on foam board, given roofs, chimneys, and generally more relief to provide a significantly more convincing final effect.

Next we plan to develop the right and left sections, as it always with this hobby, you update one section and of course, it flows



into the next. You may start to see the boards appearing in the coming weeks and months as the development continues.

The fiddle yard entry had been a flat board into a very tired looking tunnel for quite a long time. The area is developing nicely and the whole section onto the main layout is really looking the part with trains passing through to the main part of the layout. We now have a fully populated row of houses,

a factory, and a few more houses and even some sky.

Left and right of the tunnel mouth are some small scenes of a yard and a small allotment, with cold frames and growing flowers.

The section behind the signal box started with the tin hut that was donated by someone. It's actually a resin model that we all thought was so nice we needed to find a use for it. The board had a layer of plaster added the takeaway the 'flat earth' feel from the section and the hut is bedded into this first layer. Then we built up the grass and path using standard techniques. There is also a frame for runner beans which was an interesting little project. The frame is the ubiquitous cocktail stick made up into the shape and painted to look like wooden poles. Then we acquired some thread to make up the runners and dressed with some small red bits for the flowers.



The yard area was built using similar techniques. The building is scratch built from odds and ends, the uprights were acquired from the garden, the back is nothing more than some greyboard wrapped in brick paper, while the boards around the top were from a recent cup of coffee. The whole building has then had some paint and some toning down with a little weathering.

This was one of the first areas to have the base layer use static grass. For those that don't know, static grass is applied with a charge from a dispenser, then when it lands in the glue it tends to try and stand up. This means it can stand up and climb around the bottom of the fence a little more. It also creates some depth when we add the general clutter around the yard as the clutter can sit into the grass and looks more overgrown. We are still trying to find who knocked over the large cable drum, as the yard workers have no idea how they are going to stand it up again.

The tunnel has sprouted a sky section which really helps to frame the exit from the layout. I won't share what version of the fence you can see in the pictures, but needless to say, it took a few attempts before we were happy with it.

The fiddle yard sections now need bedding into the surrounds, we have sections that plugin and out of the layout as it get's packed away. It can be a challenge to disguise the joins in the different sections. The advantage is, we can build them off the layout and don't have set everything up each week. With some



more grass, ballast and other odds and end to work on, some hedges to hide some joins we still have plenty to work on.

### **Captions**

- A. View over the main station to the new factory.
- B. Factory from the other side, while an LMS tank waits with a local train.
- C. Schools class engine bursting out of the tunnel passing the signal box.
- D. Looking back from the tunnel
- E. The yard is quiet while a train passes.

## **SHE ALL COMES APART WITH A ONE SIZED SPANNER**

### **Part 1 by David and Lily Scott**

#### **Jessie's progress in the Works**

They always look so lovely sitting on a bit of track and inviting you and others to have a little push up and down. Watch the wheels go round without binding. And the rods doing their stuff.

But, it had to be done, and several days of delay not due to leaves, or snow, or floods on the line. Was over in just under an hour. All bits carefully labelled and stored. Two packets of bolts as these were slightly different. The whole thing resembling an IKEA Flat-pack. Appropriate that I chose a white tray from their kitchen department to use for storage. Or was it that they are only a pound each and make superb modelling drawers. From now on, all the parts that attach have to line up with the pre drilled holes from the inside of the frames including cylinders and even the hook guides on each buffer-beam. Now with the three hooks made last time I can file the slots to size with ease. Lots to do in the run up to the better painting season

Now you will all see why I made sandboxes so early on, instead of pressing on with the bits that go round and get her on the track. She would run nicely and possibly several weeks earlier without them but impossible to attach later. Plus I found a suitable lump of steel for them and they look nice.

We and others sometimes get a part that forms a bolt on tray, or bracket and the bolts turn up to be far too close to the edge upon emerging. I like to begin with a slightly bigger piece, or pieces. Mark off round the holes that you have just drilled through the separated frames. Then machine or file down to your lines. OK if you must, make tiny filing buttons for the tiny corners. I fill two holes with the same sized rods or rivets or even drill bits and these rest down on the top lip of the \*vice. Set up to distance and mill. File burrs. Set down on the other three sides and we are central. I do try and get at least two machines used every day. Talking of corners? The sandboxes are covered in them and they are a good... 3/16" in radius. So select a strip of half inch by three millimetres steel and drill a 3/8 hole in each end. These will become your radius checkers once cut and filed... Yes you can get radius End mills but as there are several corners at 120 and 135 degrees where they will not work. Plus you have to hold these in

a vice securely and by now are a very difficult shape.

An internet search found a Jessie full size in Australia and there they are, the distinctive shaped boxes. New South Wales a bit far for a quick round of photos and measure up!

Taking of \*vices, I gained another while down in Plymouth during the summer repairing our flat. Then on a rainy day and with heavy heart as it was located beyond the road works... And there is only one road. We found the address triumphantly and he also had a smaller mill and a Boxford. We chatted briefly about beam engines, he had a lovely one on his bench. looked over the bike and admired its originality and made it back to our car past his sports car boxed into a small concreted front garden. Lily did the car door superbly and the car listed starboard.

With my little list, we went to hide in Tool Fix with the idea that the traffic my calm down. They are next door to each other at this location. Then Lidl as we pass it on the way out, but the traffic was still there. A six inch Abwood does weigh the car down! "I only need a square foot?" I asked in Wickes also on the way back. But the minimum roll of 3 metres of lead sheet counterbalanced the car nicely. I had to collect it under the counter as they had strangely had a load pinched. Try wrapping that round your middle and waking out normally? Do I look old enough to buy lead?

As the motion brackets are built up using slots, I am trying J. B. Weld to stick them together and the excess can be moulded into small fillets as it oozes out. Screws can follow and the cleaning up made much easier. Some have experimented with covering every surface with flux while silver soldering or brazing. Also I am hoping to avoid any distortion by not silver soldering them. Plus it is not quite the season on a windy day with 'Named' sideways rain to get the blow-torch out.

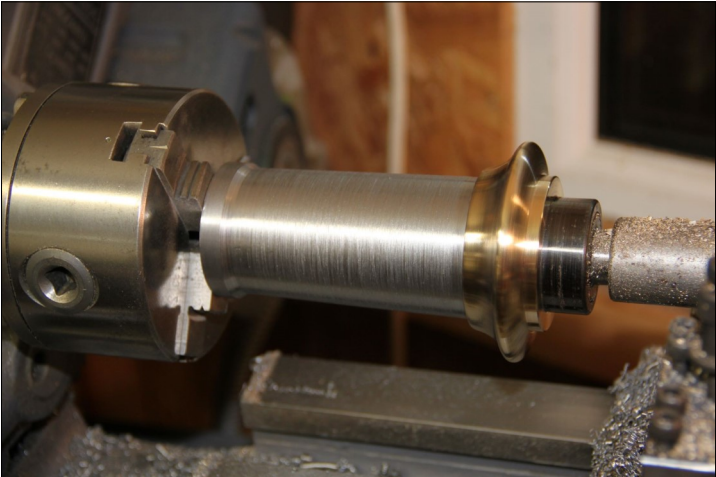
Yes, my older vice will now be listing 3 degrees for the machining and a note reminding me about it!

Next on the list is the reversing bracket and conveniently made from 1/8 steel left over from the sand box backs. I get out more white sticky labels and drop it down inside the right-hand frame to the squared line at one inch in, or up. Toolmakers clamp it in position and drill for 4 BA clearance. A ponder over drilling for two dowels or roll pins in the middle and its done. Then it joins the pile for the mill. Instead Lily gets to carry several lumps back to the house for marking out from nice clean drawings after dinner. So often you get on so well you then run out of day!

Alas the rotary table has not been wheeled over soggy garden to enable out curved top to be done. So a plan is to carefully cut this on the Emco. It currently has the 4-jaw self-centring chuck in place. I cut and then file almost to the lines. Drill and tap for two 6 BA bolts and trim down to radius. And what a lovely finish. We sneak in 2 spacers and go in between rainstorms.

*(to be continued)*

Pictures  
David Scott



More next  
month.





## Some recent activity at the club

## Mike Manners

Work on the new ground level storage and electrical kiosk is nearing completion. The compressor and hose reel has now been installed and all the junk that was cluttering up the front of the ground level carriage storage bunker has been moved into the kiosk. Moving and tidying up the electrical equipment has still to be done. Picture left shows Nigel Penford installing the last of the door hinges.



Installing the new flood lights has been a long and at times exhausting job but the end result has been well worth all the hard work and pain. Digging the trenches for the cable duct looked a daunting and at times an impossible task. For nearly the entire length of the trench there was a layer of old tarmac and concrete that took two road drills to break through. The last length of trench, up to the light at the ground level steaming bay, looked like it would take us many weeks but in the end the job was completed in just two Wednesdays. For a bit of light relief (pun!) we

took down the old floodlight pole. A question of precision felling just like taking down a tree. We managed to fell it neatly between the new lamp post and the end of the loading ramp. All of the new lamps are controlled from the existing switch and timer in the clubhouse.



*Above* Mike Manners wiring up the first light

*Below*, Mike Manners, John Evans, Dave Cole and Stuart Higgins clearing up the remains of the old floodlight.





*Left* Peter Culham, Charles Benham, George Saffrey, Dave Cole and Nigel Penford finishing off the trench to lamp post 3.

All photos  
Mike Manners

*Right* trench work heading towards the ground level track near the level crossing. Mike Furness, Nigel Penford and Dave Scott working on the trench with Lily Scott supervising. Les Dawson in the background doing maintenance on the hydraulic lift.



*Left* This is the final bit of trench work before the tarmac of the entry road. Charles Benham and Peter Culham finishing off the trench around the hydraulic loading ramp, Alf Cusworth supervising, Dave Scott on the road drill, Lily Scott supervising, Mike Furness and Dave Cole taking a break from swinging the pic and away in the distance Nigel Penford working on the trench across the tarmac driveway.

*Right* Nigel Penford doing the horribly messy and back breaking job of disc cutting the trench across the tarmac.



## ANALYTICS

### Where WP looks at some photographs taken by the editor

#### Up goods approaching Feltham on 7 March 1967

This picture taken by John shows one of the then fairly new English Electric 1,600 hp electro diesels (No. E6044) with a 600 b hp EE diesel engine. It was built at the Vulcan Foundry Newton le Willows and delivered to Stewarts Lane (75D) in September 1966. The class consisted of 49 locos. The first 6 were built at Eastleigh Works in 1962 and were outshopped in green livery with a grey band along the sole bar. The remaining 43 locos built between 1965 and 1966 were all outshopped in blue livery with small yellow warning panels.

This loco was renumbered 73137 in February 1974 when TOPS was introduced. It was further renumbered 73202 in February 1988 for the upgraded Inter-City Gatwick Express service working in push/pull mode with 5 Mk 2f coaches and Mk 1 driving luggage van (ex 2-HAP EMU). It ran with these sets until they were superseded by the class 460 GEC/ALSTHOM 8 car EMU's from 2000. They were known as 'Darth Vader' units on account of the sloping front ends. 73202 became a departmental rescue locomotive on the Southern franchise. It still performs that duty and is based at Selhurst.

The headcode 6A on the South Western Division stood for "Clapham Jn to Holborn Viaduct, or All stations to Feltham (except via Mortlake), Eastern Region and Feltham Yard." We can assume it is destined for Feltham Yard, with odd vehicles collected at various points along the Windsor lines.

The consist appears to be from the loco- Brake Van, Bogie Bolster (5 bolsters), 2 Conflats carrying containers, a Lomac (well wagon), covered plank wagon sheeted over, vanfit, an open (5 plank?), Vanfit, and 2 brake vans.

The editor was amazed that this engine was still in service 52 years later and asked WP for more details, Earlier in the week that the photo was taken in 1967 the same train appeared behind BR Class 4 No 76011; scrapped eight months later at 14 years old.



Left 1967, below, 2020. Photo Internet



## DIARY

### MARCH 2020

Sunday	1st	Public Running	13:00 to 16:30
Saturday	7th	Club Running	11.00 onwards
Monday	9th	Trustees Meeting	
Saturday	14th	Birthday party	14:30 to 17:00
Sunday	15th	Birthday Party	11:00 to 13:30
		Birthday Party	14:30 to 17:00
Saturday	21st	Young Engineers and Club Running	13.30 onwards
<b>Thursday</b>	<b>26th</b>	<b>Clubhouse talk*</b>	<b>20.00</b>
Saturday	28th	Birthday Party	11:00 to 13:30
		Birthday Party	14:30 to 17:00
Sunday	29th	Birthday party	11:00 to 17:00
		Birthday party	14:30 to 17:00

### APRIL 2020

Sunday	5th	Public Running	13:00 to 16:30
Saturday	11th	Club Running	11.00 onwards

**Please note that the club house will be closed 16-20 March for internal work to be undertaken. The RSME site will be open as usual but the club house will not be accessible.**

**Comments by RSME members on any subject appearing in Prospectus are welcomed by the editor.**

**\*The clubhouse talk on 26 March will be presented by John Billard**

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.

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