

**Reading Society  
of Model  
Engineers  
Charity Number  
1163244**



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**Free to members**

# The Prospectus

**July 2023**



Painting "Lion" for the Titfield Thunderbolt filming.  
See page 3

**TRUSTEE NEWS  
FILMING THE THUNDERBOLT  
SHEET METAL WORK  
MAKING CHEQUER BOARDS  
LARGE AND LARGER  
FRAME DRILLING  
NOTICES TO MEMBERS**

***SUBS DUE FOR 2023/4 ONLY £20***

## THE VIEW FROM THE CHAIR

John Billard

Our regular trustees meeting was held on 12th June. We were pleased to be welcoming new members but a final reminder will be sent this month to existing member non payers. We are looking at arranging for a proportion of financial savings to accrue a better interest rate and this is ongoing. On projects and maintenance we noted completion of the clubhouse cladding for which we should thank Nigel and his team for job well done. It came in under budget as well. On that theme two new lamp posts have been erected leaving trenches to be dug and cables installed. Planning has commenced on a refurbishment of the workshop including consideration over layout and the logistics of sorting and storing the existing contents.

Forthcoming public runnings are expected to be busy and it is better for trains on the raised track to consist of two carriages at those times to assist throughput of passengers and to maximise carrying capacity. The programme of private birthday parties is continuing. In particular we are seeking volunteers to assist running events on 24th and 30th July as holiday cover.

The club visit to the Berkshire Museum of Aviation regrettably was not well attended although those who did come had an interesting afternoon. In particular the quality of the engineering of various exhibits was vital and notable. There was much to learn and to be seen. It was agreed to continue to arrange future visits but to see how these go for the future.

The trustees are discussing with Reading Council a new lease which may run for seven or ten years. The latter would incur legal costs but provide a higher level of security of tenure. This is being explored with our appointed solicitors.



RSME visitors to the Berkshire Museum of Aviation on 3 June.

*Left to right,*  
Steven Millward, Nigel Penford, Val Coleman, Pete Martin, Richard Coleman and Terry Wood.

The aircraft is a Fleet Air Arm Fairey Gannet

Photo John Billard

## STOKE ROW RALLY 2023

Through the kindness of rally organiser Mike Furness RSME took up his invitation to exhibit our stand at the Stoke Row Rally on 10/11 June. Thanks must go to Mick Chalmers for putting it together and all members who played a part. It was a busy occasion and an opportunity to show to the public what we do and perhaps attract new members.

However there were problems and we have agreed with Mike Furness to adopt a changed approach for next year. This would include attendance at our stand throughout the rally and an improvement in how the club is presented.

This is all to be considered. The rally is a showcase for what we do and an opportunity not to be missed in future. We would be interested in any thoughts the members may have for our plans in the future.

### **Thunderbolt and Lighting                      Part 2                      by Alec Bray** **Filming the Titfield Thunderbolt**

Undoubtedly the star of the film is the locomotive that we know of as *Lion*, and, like all film stars, she wore make-up - she was specially painted in a bright red and green, to play up to the Technicolor. She had the equivalent of “lipstick”, too – embellishments to her chimney in the form of a starburst frieze around the middle and on the bell of the chimney top.

But what about her being brought out of the museum? This “Locomotive” was a full-size wooden mock-up of the real thing, which was considered to be too heavy for the villagers to man-handle down the ramp. There was another wooden mock-up, this one being of a GWR 0-4-2 14xx class tank locomotive (1461), and it was mounted on a lorry chassis. This lorry-based 1461 tank loco was driven “at night” through the village and countryside, as two of the local, drunken, villagers steal a steam engine. These shots were actually filmed in Woodstock and in Richmond Park during daylight hours, using a technique known as “day-for-night”. A combination of careful underexposure and use of blue filters give the impression of night-time (aided by the Technicolor printing process): Douglas Slocombe, the director of photography, worked out a day-for-night timing formula that’s quite successful. He put an extra-bright light in the engine, so the day-for-night illusion would work better.

It is much easier and cheaper to film in daylight. If you look carefully, you can see the lorry wheels inside the 14xx wheels – and you can also see the lorry driver looking out over the right hand splashers of the “loco”. One sequence which *was* shot at night was the theft of “Thunderbolt” from the Museum. A lot of light was needed to get the right exposure on those three strips of film.

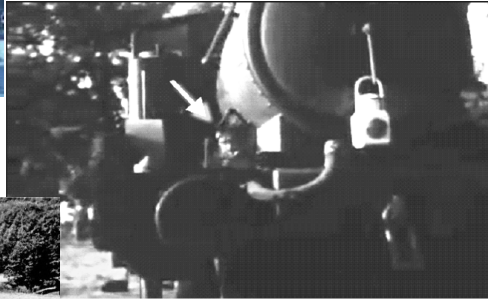
The reason for the theft of the 14xx and Thunderbolt was that the original

branch line engine – 1401 – had been wrecked by the opposition – they removed a rail and over the side of the embankment went the loco and its train. What crashed was a realistic scale model filmed on a set at Ealing Studios, and rather unfortunately it is readily apparent in the film that this is a model. However, many other effects worked well, especially the shots showing characters on the moving train. With three-strip Technicolor photography, this could have been done as “travelling matte” (bluescreen) but it is more likely to have been done using back-projection (the actors stand in front of a translucent screen and the moving background is projected onto the screen from the rear). Oh, and concerning “from the rear”, the star of the film sustained damage when her train was run into her tender behind, and the tender framing was broken (and the damage is still visible).

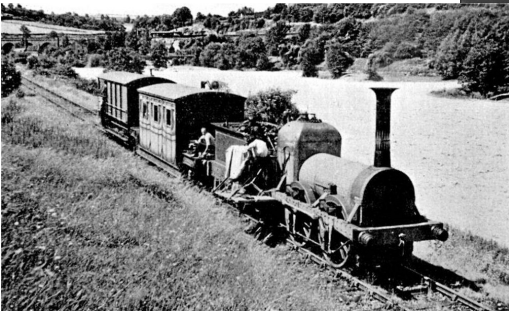
*To be continued*



*Left* No 1461 at Woodcote “at night”



*Right* Spot the driver!



*Left* The camera mounting

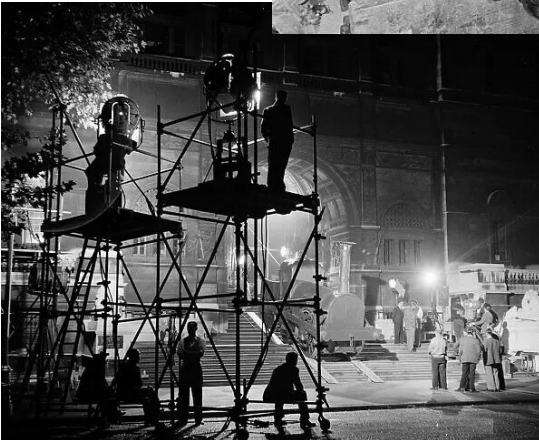
*Below* Lorry based 1461 thunders through Woodstock in daylight





Filming the Thunderbolt—in Technicolor

Model making at Ealing Studios.



Setting up for the theft of Thunderbolt.



## BUILDING A 7 ¼ " ELECTRIC LOCO continued by Terry Wood



After acquiring a Warco sheet metal folder/roller/guillotine from a friend who was clearing out his workshop I now have the ability to do some serious sheet metal work for the 7 ¼ loco, trying to bend sheets of metal using a vice, angle iron and mole grips doesn't produce a very good finish. The sheet metal folder is only a small one and is limited to only fold-

ing 1mm sheet about 11 inches wide although you can use it for thicker sheets if the width is much smaller.

Because of this machine I am now able to fold sheet metal to make a nice curve to produce a dummy boiler cover on a steam outline electric tank loco. The loco I decided to copy (very loosely) was a Hunslet tank loco. This is a very smart loco with its blue body and red wheels it looks far too smart for shunting duties so maybe it was designed to carry passengers along small branch lines in its day.

The boiler body was too wide to fit into the folder so I had to make it in two halves so it was a bit tricky bending them so they were exactly the same diameter but I managed it in the end after a bit of fiddling. I then made a thin strip to go inside the two halves in order to butt them up together so that I could pop rivet them which was equally tricky because I had to clamp them securely so that they were in line whilst I drilled the holes. I couldn't use a G clamp because I never had any deep enough and at first I couldn't think of anything else that would fit, I then remembered that I had a valve spring compressor that I had in my engine reconditioning toolkit and that was perfect for clamping the 2 halves while I drilled and pop rivet them along an even line of holes.

After that I built the front of the dummy boiler using another piece of 10 mm sheet that I marked out using a compass then drew a star like pattern Cutting out the gaps in order to allow cooling air through to the motor and control unit I then shaped the front assembly in a concave style and then pop rivet that to the rest of the boiler



The next problem was how to build the body between the dummy boiler and the control cab. I decided to build a box shape to accommodate the batteries and this would also enable me to sit on the loco and ride it if there were no trolleys available. In the future I will build a separate

tender/trolley so that I can sit on that. Because of the width of the box I decided not to use the sheet metal folder but instead use a workmate with two pieces of angle iron, I made the box in three parts and then pop riveted them together. I then folded the base to fit the assembly using M5 screws and threaded holes in the chassis.

After checking that everything fitted ok I painted the whole bodywork with etch primer and then painted the dummy boiler black and the rest of the loco blue except for the inside of the control cab which I painted black then painted all the tubing and pressure gauge and other controls of a steam engine in silver Humbrol paint copying a Hornby 0 gauge clockwork tank loco design. I hope Mr Hornby doesn't mind !

*To be continued*



Photos Terry Wood

## A Big Change from Metal Bashing by Mike Manners

Many years ago my family used to enjoy playing Chinese chequers in an evening. The board was made of cardboard and the chequers were coloured marbles. The board did not last long so I made a new one out of marine ply. That and the marbles were around for many years but eventually it was damaged and thrown out and one of the marbles lost.

Just recently the missing marble was rediscovered so the set was complete. My son was enthusiastic about resurrecting the game so I thought it was about time I had another go at making a new board. I would make one for him and one for Jan and myself.

My original attempt at making a board was simply a piece of half inch marine ply drilled with the usual Chinese chequers board pattern. I thought I could do better this time as I had the time and materials available. I have a vacuum veneer press and a large stack of wood veneer from previous projects so something a little more decorative was possible.

A suitable design was drawn up and the veneer cut and the panel assembled and all held together with veneer tape. This was then coated with Cascamite resin glue and popped in the veneer press together with a suitable ply base-board. The vacuum pump on the veneer press then ran for six hours (Jan had gone out for the day, the vacuum pump is rather noisy) and Cascamite has a rather long cure time. The following day the board was sanded and cut to shape. I was quite pleased with the results.

The next tricky part was drilling the 121 holes for the marbles to sit in. I had a number of ideas to try including ball nosed router cutters and spear point drills. The ball nosed router cutters were difficult to position accurately so I decided on the spear point drill option. It was a long and dusty job. I made just one mistake that I later had to patch with some tiny bits of inserted veneer but it is very hard to spot.

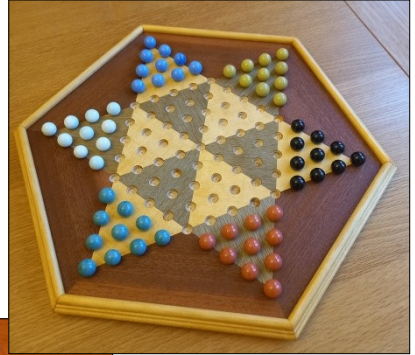
It was then on to framing the board with a suitable moulding and giving it all a coat of varnish. The moulding was made up from off the shelf sections from the local DIY and all cut to the required angle on a table saw. Another fiddly job but it did not take that long. Most of it was waiting for the glue to dry.

I am quite pleased with the end result of board number one and have now completed board number two. Slightly bigger with bigger marbles and a more complex veneer design. I will probably have to had to use a router cutter on this one if I can work out how to accurately position things. I am going to try a laser pointer. It may work. I am also planning to make my own mouldings. I have some old mahogany that I saved from a scrap bin many years ago. Maybe a picture of the finished item in next months Prospectus if I get it finished it time. *(He did! Photos next page. Ed)*



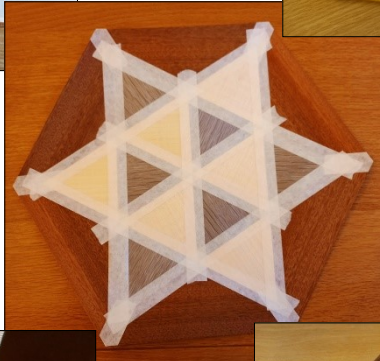


*Left*  
A choice of veneers

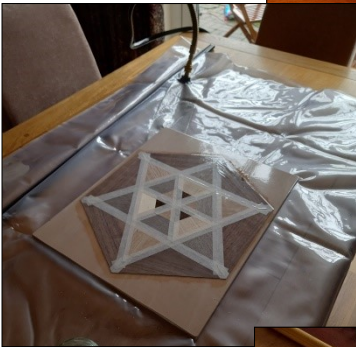


*Right*  
The first version complete

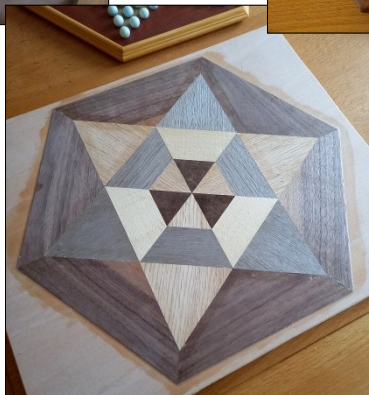
*Right*  
The first board with veneer tape still place after its six hours in the vacuum press.



*Below*  
The second board finished. A project Mike had been intending to do for over 40 years.



*Above*  
The second version still in its vacuum press bag



*Left*  
The second chequers board after gluing down the new veneer panel.

*Photos*  
Mike Manners

## A COMPARISON OF UK AND US LOCOMOTIVES



**Alec Bray writes.** Recently David Wilkinson and I were talking about the differences between the Union Pacific "Big Boy" and the various Beyer-Garrett style locomotives around the world, and David made a very valid point that the USA loading gauge was bigger than the UK (or European) one.

This was brought home to me with this photo - I have before never seen a direct comparison between a large UK locomotive and a large American locomotive - this is a snapshot of 4472 "Flying Scotsman" on its American tour face-to-face with a UP "Big Boy". What a difference! I wonder if there are better photos of this meeting?

Strange to imagine that they use the same rail gauge!

Please note that subscriptions are due from 1 April. These have been reduced to £20. We have had many renewals and a good number of new members but if you are not one of them please contact Mike Manners on [michael.manners2@ntlworld.com](mailto:michael.manners2@ntlworld.com) or 07817 271981.

**We regret that renewals not received by July will mean possible termination of membership.**

## BUILDING A CLAUD

### Back to frame drilling

John Billard

The next stage has been to complete the drilling of the frames. While this is quite late in the build this had been made easier by the removal of the horns as described a while ago. I have had to be imaginative as to where to locate the reversing stand which has to come further back in the cab from full size to ease operation.

I have also made some alterations to the frame profile. The front end had followed the original Martin Evans drawing which was not correct. At the rear I have had to cut away to allow for the boiler which came out slightly oversized at that point. This alteration will be invisible when the cab plate-work is in place.



The picture on the left shows the drilling jig being used for the holes for the cylinder fixing bolts. The one on the right shows further drilling of the frames. Photos John Billard

## NOTICES TO MEMBERS

We welcome the following new members to RSME; Keith Pauline, Ben Wait, Richard Mullard, Chris Mullard.

We are seeking assistance for private parties at the club house on 24th and 30th July. Please contact Peter Culham on [pete-culham@gmail.com](mailto:pete-culham@gmail.com).

There will be an illustrated talk by John Billard on Thursday 20 July at 8 pm on the end of steam on the BR Southern Region in July 1967.

Please note that access to the club house requires disarming the alarm system. Key holders should contact Mick Chalmers for details [machalmers60@gmail.com](mailto:machalmers60@gmail.com)

## DIARY

### JULY 2023

Sunday	2nd	Public running Setting up from 09.30	12.00-16.00
Saturday	8th	Club running	10.30 onwards
Monday	10th	Trustees meeting	19.30
Tuesday	11th	<b>On the Bench Night</b> Club House	20.00
Tuesday	18th	Club running	10.30 onwards
Thursday	20th	<b>Club Talk The End of BR(S) Steam by John Billard</b>	20.00
Monday	24th	Special Needs	11.30-16.00

### AUGUST 2023

Sunday	6th	Public running Setting up from 09.30	12.00-16.00
Thursday	10th	<b>On the Bench Night</b> Club House	19.30
Saturday	12th	Club running	10.30 onwards
Monday	21st	Special Needs	13.30– 16.00
Tuesday	22nd	Club running	10.30 onwards
Thursday	24th	<b>Club Talk</b> <b>Simon Bowditch</b> <b>The restoration of</b> <b>W &amp; L No 823</b>	20.00

**Note from the Editor. Please provide photographs as separate files and not embedded into the text. No pdf files please.**

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

**The deadline for the August issue is 20 July**

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

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