

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



**President
John Billard**

**Secretary
Stuart Kidd
07966 278968**

**Editor
John Billard
john@jegbillard
.plus.com
01189 340381
07834 998971**

Free to members

The Prospectus

December 2022



Apologies for using this picture again but it shows pannier tank 9420 marooned at Paddington station 60 years ago on 30th December 1962. This was the start of the great freeze up that lasted until March. I wonder if water for the boiler became a problem? Photo John Billard.

**TRUSTEE NEWS
WEDNESDAY WORK
A NORD TENDER
BIG ONES ON THE BLUEBELL
CLAUD CYLINDERS
MILL FOR SALE**

THE VIEW FROM THE CHAIR

John Billard

The trustees met on 14th November and its agenda included the outcome of the AGM held in October.

Existing appointments around the table were confirmed for 2022/3 and Miriam Farley was co opted once more to take account of her special knowledge. I am continuing as trustees chair, Stuart Kidd as trustees secretary, Jim Brown as treasurer, Mick Chalmers on health and safety, Peter Culham on parties and events and not least Nigel Penford as head of projects and maintenance and boiler tester. While Les Dawson is unable to undertake this latter role he is assisted by Mike Manners.

Arising from the AGM there was a comment about increasing opportunities for members to use club facilities for club running. Vice president Mike Sinclair has agreed to take responsibility for this and I am sure that the programme will be in his safe hands. Regarding the delays in completing the installation of the clubhouse security alarm this job has now been taken in house by the trustees and early completion.. A further issue raised referred to a fraud risk for RSME. It was agreed that it was necessary to review our process is on a regular basis, at least annually, because of the ongoing and developing nature of financial fraud.

Another development is that our member Ronald Pickett has offered to use his expertise to recreate the club website. This has been dormant for some time and good progress is now being made. This will include access to past issues of Prospectus something to gladden the editors heart! The website will be our window on the world. If you would like a preview go to rsme.uk We thank Donald for his willing help.

We are continuing on our work to strengthen our security and this includes the security alarm, steel cladding around the building, new lighting columns, and work on the safe, the fire door, and side gate.

At the time of writing we are close to our Santa weekends and as before we are indebted to Peter Culham and his helpers for setting this up. For the days themselves we would very much like as many members to assist as we will have hundreds of participants from the general public. These events really showcase RSME and, as I have said before for a Christmas event in Reading it can hardly be bettered.

Work continues on a new subscription system to be adopted from first of April next year. All I can say at this stage is that this will be based on a flat rate system as far as possible and is likely to represent a reduced cost for most members.

**With every good wish to members for Christmas and
the New Year**



WORDS FROM THE WEDNESDAY WORKERS

Mike Manners reports



Work progressing on preparation for cladding on the front of the club house and the maintenance train. Its amazing how much kit you need to just weld on a broken nut on a signal at the far end of the ground level track. It took most of the morning to get all the equipment together, load it on the trucks, do the job (about 10 minutes) and then pack it all away again.

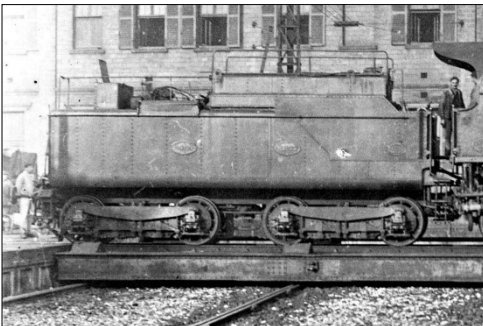
(Why not make it perfect and steam up a loco to pull the train? Ed)

NOT ONE FOR THE PURISTS!

by John Spokes

Readers are forgiven for not remembering that in a previous issue of Prospectus I announced I was building a 7 1/4" model of a NORD locomotive.

The construction proceeds apace - a snail's pace - and running tender-first, if you get my meaning; a choice advised by my friend Mr Milne, in the event that one is called to the Great Ticket Inspector (heaven forbid) or just get fed up, then, seemingly, not an over-waste of swarf production!



There are no known drawings of the tender and only one photograph of the complete side view exists. There are no known views of the tender rear or top. **Photo left** shows the side view from which, using known key dimensions, my detail drawings were developed.

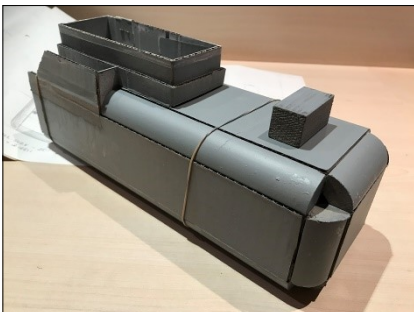
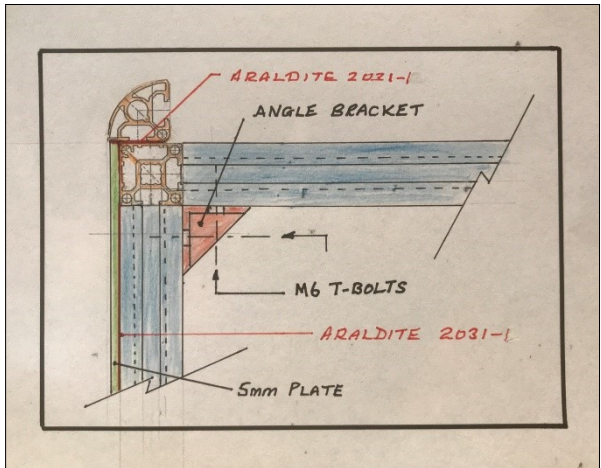
The big challenge of many Nord tenders is the multiplicity of round-ed joins (corners) where the tender

tank plates meet - eight in this prototype, plus four corners where 3 rounded joins meet simultaneously. I guess those with good metal bashing skills could attempt this from sheet brass. The rounded joins could be made by quartering tube, for instance. These, together with the side plates, needed to be built around a relatively complex framework, probably soldered for assembly, and made watertight. In total, a bit beyond me and so I looked for an 'easier' means.

I won't bore the reader with how I journeyed there, but I found a company, called Matara UK, based in Tewkesbury, who manufacture a large variety and sizes of aluminium extrusions (and actuator devices, etc), which are

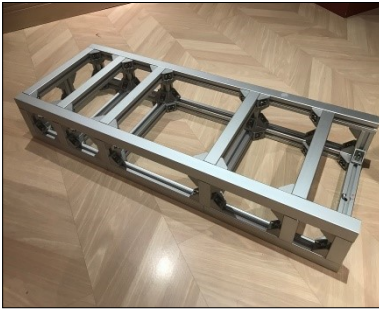
used in the design and assembly of automatic conveyor and handling systems, such as those in Amazon warehouses. For compatibility, I decided the whole tender tank body and internal framework should be made of aluminium and **photo above right** is a sketch of the section through part of the tender. The 90-degree quadrant sections were fortunately very close to scale.

The tender tank frame is made from 30mm square extrusion which is held together using angle brackets which fix using t-bolts in the grooves in the extrusion. These are all supplied by Matara but the M6 x 16 fixing screws I changed to stainless - when



tested, the Matara-supplied screws corroded quite quickly following submergence in water. Matara cut all sections to length (to a tolerance of +/-0.1mm) and to specify the lengths correctly, I produced from my 2D drawings, a wood and card mock-up as

a check. **Photos previous page.** This worked very well (some slight adjustments became apparent) and the 30mm square sectioned framework went



together perfectly, like a kit. It has tremendous strength and rigidity and is relatively light. **Photo left.**

The observant may notice in Photo 2 that the 30mm quadrant sections overhang the 30mm square sections by 5mm to allow for the insertion of the tender tank side panels, made from 5mm aluminium sheet. Because of this overhang the slots on the adjacent section cannot be aligned and connected using the t-nuts. So, I decided instead to bond

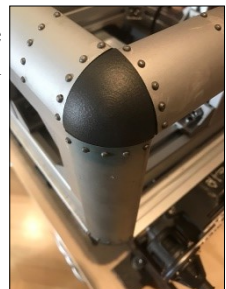
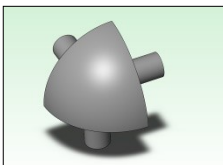
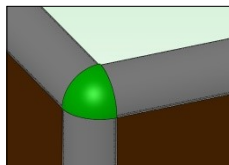
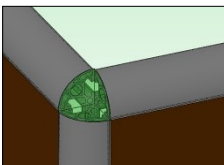
these surfaces, which present a relatively large surface area at the join.

I contacted Huntsman in Germany, who manufacture the range of Araldite adhesives, told them the application, in particular the exposure to water, and they recommended Araldite 2031-1, which has a longish pot life – 60 minutes. Buying the ‘gum’ was difficult. Most suppliers only sell to VAT registered companies and then only in quantities to put together the wings of an Airbus A380! RS online sell small quantities at an extortionate price, but not the application ‘gun’ and the mixing nozzles, which have a one-off use - hence the need for a long pot life, even if this comes with a long cure time. In the end I bought the whole bonding kit locally from Rubix in Rose Kiln Lane, a company previously known as Brammer Buck and Hickman, who were near Gillette Way. It wasn’t cheap, but at least all the parts of the bonding system are compatible. (Rubix is a conglomerate that appears to be buying-up the manufacturing world – they recently bought Matara).

Prior to bonding the corners, I milled the holes for and placed the rivets. The rivet holes only part penetrate, to avoid leakage, and were fixed using superglue. I bought the rivets from The Sapphire Rivet company in Ashby de La Zouche, who supply a phenomenal range of different sizes and types, including those for the 12” to 1 foot stuff. I used 2mm dia x 3mm domed head.

The four corners at the tender rear, where three round sections meet, are joined by a corner made, using additive manufacturing, by a company called 3D Print Direct located in Aylesbury. **Photos below.**

The tender plates, made from 5mm aluminium, will be fixed next. These will be laser cut to fit between and flush



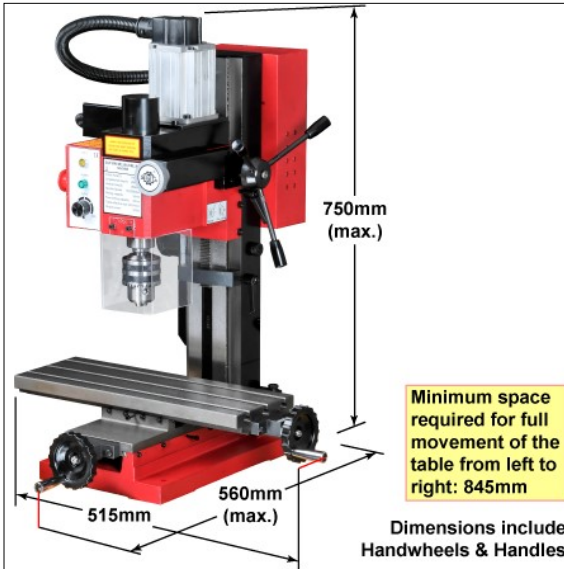
with the rounded corners. The two tender bogies. The tender sub-frame and buffing gear are essential complete and thus finalisation for painting is a relatively straightforward job.

The above is an approach that works, I think, but not necessarily one for the purists.

So, soon I will have completed my amble through the foothills and the mountain beckons - I start on the loco itself!

FOR SALE

£395 OR NEAR OFFER



**SIEG X2P
HI TORQUE MILL**

Not used much

Please contact

Jim Rumble

j.rumble626@btinternet.com

AND NOW FOR SOMETHING BIG by David and Lily Scott

The hobby is very weather dependant and many sources of predictions were consulted including The Weather Radar which is looked at almost three times a day normally when undertaking any gardening activities. I checked on tickets and left the booking alone this time as by now most of the modern electronics in the home and car were not working. Crank sensor and electrical fault in the dashboard had crept in. Also photos still in the phone! Plus the microwave constantly blowing even the cooker circuit. Come on easy cook thing this is rated for arc welding!

The car got us to the M23 and a battle began with the navigating device which wanted us to go down one of the smallest lanes in the area. Not this time. Lily held the alternate route embossed onto an unwanted envelope and we soon arrived in style at The Giants of Steam. Horsted Keynes again, and a space in an almost empty car park. Tickets £1.00 more than the internet not via the booking charge, just so easy.

First train of the day and all uphill to East Grinstead we could plan the timetable for the day. Slightly eavesdropping on a pair who must have spent hours on trying to catch a ride behind every one of the six in steam via a computer printout. The four wheel carriages had not improved since our last '3' Day Event so we defected to the more modern stock at the next stop back. I had dusted off the big camera and organised charging two batteries.

A break at Horsted as I had noted double headed and non-stop behind Standards next. I was lured by £1.00 stickers on even more books so made a stack. Then paid by card following the guy to a favoured spot on the very edge of the platform for a signal and the card machine waved. "The scaffolding on the canopy rebuilding does not help!" he said. BEEP. And time to visit the car.

At or should I say Near Sheffield Park, the train stopped so that locomotive movements could take place to get two locomotives at the front. This could become a superb shunting manoeuvre to be tried out during the next OO, DCC night at the club. Only two tracks, one full of carriages and locomotives conveniently up the other end of the station with no room for a passing loop. Double headed and non-stop was, by the bulging carriages a total success. Roll on Sunday.

First for tickets, five pounds in cash for honesty, and superbly in time for the first train. Upon reflection the four wheel carriages were more comfortable than the modern Hitachi sets! A stop at Kingscote to grab two teas and some nibbles before the rain hit and we sat under the shelter while our train did the East Grinstead and back. Too wet for a super Hall shot which always happens. It brightened up though for the Double headed run which was superb again.

Sadly this time there were no brake van rides due to technicalities so just a watch of goods train trundling through Horsted. Instead we were riding and chatting to a fan of the branch to Haywards Heath. "They have the bridge!" he reminded us. I pondered the possibility of getting Sausage and Chips easier via the last train. Fish & Chips all moved by a Pea. Almost rhymes with Fish Chips and mushy peas. We have a lovely P Class in OO. South East and Chatham Railway livery of course.

I get sidetracked into the bookshop at Sheffield Park and out of two massive sets of shelves I am guided to the new one containing photos of almost every S 15 ever built. I will look at the price next week some time. This time we make it to Beachy Head and admire close up with her boiler in place. "2023 Giants?" Someone asks. Just before the price of Midnight Oil goes up, and double ended candles I pondered.

We squeezed another two round trips in and we were back in the car. I looked suspiciously at the fuel gauge and asked the central console which did not match so went off in search. The rain started, we found a car park in a sort of nameless town, and got overpriced chips and a burger sat on a hard

bench, drenched in floodlights.

With thanks to the following for a faultless performance over two days.

Wightwick Hall 6989 Long term visitor from the Buckinghamshire Steam Centre.

Q Class 30541 Home Loco.

Standard 4MT 80151 Home Loco.

Standard 5MT 73082 Camelot Home Loco.

Standard 4MT Mogul 76017 Visiting from the Mid Hants Railway.

Standard 5MT 73156 Visiting from the Great Central Railway.

Also the Bluebell Railway personnel.

FOR SALE.

Anyone love to complete an S 15 part built rolling chassis and many castings in 3 1/2”?

A huge box arrived from Pembury buy one get one half price.

Also Bits. Described in the advert!



Two Standards at Horsted Keynes. The designs used the best practice of the old companies but had very short lives with the rush to eliminate steam even while they were being built. (Ed)

The new Brighton Atlantic under construction at the Bluebell Railway. My old friend Eric Best was part of the gang at Eastleigh in May 1958 told to cut up the original *Beachy Head*. They refused until they were ordered to get on with it. (Ed)





A selection of photos by David Scott to accompany his article.

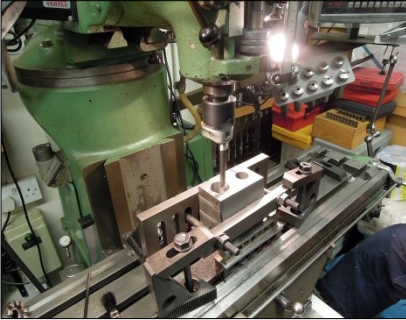


Middle left Southern Q class 30541. Introduced in 1938 Oliver Bulleid thought they were out of date and produced his own war version—the Q1. *Left* The Great Northern director's saloon creeps into David's picture. Carriages and wagons are so often overlooked and surely they were the whole purpose of the railway? (Ed.)

IN SHOPS THIS MONTH

Machining the cylinder bores

John Billard



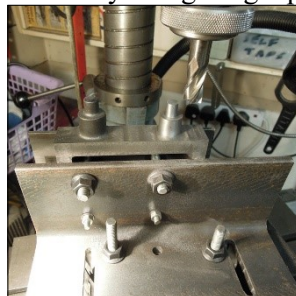
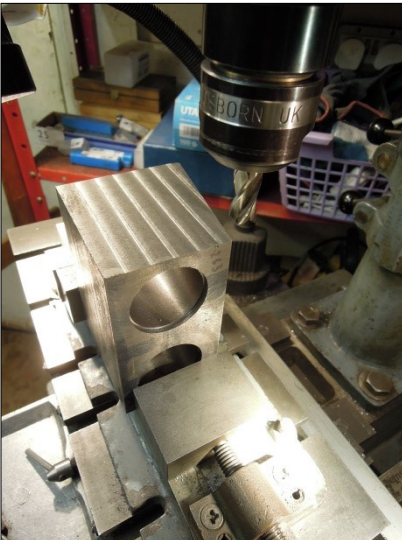
Having replaced the defective casting all outside surfaces were machined to size. Then Nigel Penford very kindly agreed to allow me to use his Bridgeport milling machine to complete the bores. **See the top photo.** This was quite a long job.

However upon checking on completion I discovered to some alarm that the bores were not central on the casting by about 20 thou. How this happened I will never know having taken every care in measurement including using a laser spot with the DRO.

Fortunately I found that the bores were correct in relation to each other so a solution was possible.

The **second photograph** shows a 1/16th plate screwed and glued to the short side. This was then machined back to the correct dimension. A similar amount was then taken from the other side thus correcting the error. **See photograph.** I was lucky to get away with this.

Other work has included machining the valve chest casting. On this occasion the casting was good but the pattern (not mine) not so much. But here it is on the rotary table having one of the bosses machined secured by a large angle plate.





SIXTY YEARS AGO

Photos by John Billard
November 1962

On the 11th I went on a rail-tour behind T9 120 and Schools 30926 *Repton*. The destination was Eastleigh works and shed and Southampton Docks. 82 mph was recorded on the return journey.

Above The T9 in its early preserved form in Eastleigh yard. *Right* A pair of pre grouping LBSCR K class 2-6-0s on the scrap line. The Bluebell wanted one of these and what a miss that was.



Left The one that got away. Beattie well tank 30586 scrapped in April 1964. Surely someone wanted it?

The Home Counties Railway Club special behind USA Tanks 30062 and 30072 at the old Ocean Terminal. Later demolished with the end of the original Cunard Queens the modern cruise terminal is not a patch on it. In those days I didn't care where I went to get a photo!



DIARY

December 2022

Sunday	4th	Club running	10 30 onwards
Saturday	10th	Santa Specials	Setting up from 0830
Sunday	11th	Santa Specials	Setting up from 0830
Thursday	15th	Quiz Night	19 30 Club house
Saturday	17th	Santa Specials	Setting up from 0830
Sunday	18th	Santa Specials	Setting up from 0830

January 2023

Sunday	1st	Public running	Setting up 0930 onwards
Saturday	7th	Club Running	10.30 onwards
Monday	9th	Trustees meeting	19.30
Tuesday	17th	Club running	10.30 onwards

For club running enquiries please contact mikesinclair118@yahoo.co.uk

QUIZ NIGHT 15 DECEMBER

Teams will be decided on the night and questions will cover the topics of railways, engineering and model engineering. No questions on sport, music or soaps!

**Quizmaster – Stephen Millward
1930 in the Club House**

Note from the Editor. Thank you to all contributors. Please remember that the copy deadline is now 20th of the month and material, unless previously notified, can be held over if received after that date.

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 January issue is 20 December

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

John Billard Old Station House Twyford Reading RG10 9NA
01189 340381 or 07834 998971 john@jegbillard.plus.com

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