Reading Society of Model Engineers Charity Number 1163244

The Prospectus

May 2025

Cockpit of the only surviving Comet 1 as seen at the de Havilland Aircraft Museum, London Colney, on 30 April 2025. The crew here included two pilots, a navigator and flight engineer. Photo John Billard

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THE VIEW FROM THE CHAIR — John Billard

At last Spring has arrived as I write for the latest Prospectus. In the meantime the trustees have met on the 14th April. The agenda remains much the same for continuity but tries to cover all relevant topics to be dealt with in the month.

It should be reminded that the duties of the trustees are primarily to ensure that the operation of the RSME Charitable Incorporated Organisation follow the rules set out by the Charities Commission and as reproduced in our constitution. As a side comment much of our agenda holds no interest to the Commission who is mainly concerned about what we do with our money. It is not quite so simple as that but there is an idea that in reality the number of trustees at the at the club could be reduced so as to deal with those particular matters. In other words the day-to-day running of RSME could be left to others without the responsibility of a trusteeship. Our constitution allows for such a change. This could mean for example that the number of elected trustees be reduced to a minimum of say three with the day-to-day stuff managed by what could be called an operations committee. All to be elected at the AGM. This is just an idea at this stage, and nothing is planned, but if members wish to comment or provide ideas or who would like further information it would be good to hear from them.

Any such change to the way we operate would be presented to an AGM in any case.

Back to the meeting. Matters held over from last month included how we manage funds that have been donated for specific purpose; the ordering of coal; club rules for drivers; the issue of the Federation newsletter to members; and the contract with SSE for our electricity supply.

On finances it was reported that the last financial year 2024/2025 produced a surplus of around £2.5k. We are modernising the way we handle our finances with the introduction of an online system for keeping the accounts in the 25/ 26 year. Members will be aware that the club holds reserved funds for the raised track extension which is now not being proceeded with. It was decided that this money should be transferred to a general expenditure account.

We are considering a suggestion that the club could raise money for charity whose interests align with our own. This could be achieved by allocating a specific public running day for example and this is being given further consideration.

This being the new club year about 50 members had so far renewed but the date of the meeting. Members should note that our insurance only applies when they paid up to date.

On projects the ground level steaming bay is being repainted and inspection and repairs are being undertaken to the raised and ground level tracks. This is essential work just to keep the club running as normal. Any further volun-

teers will be greatly welcomed. The club Class 58 locomotive is now back in working order repairs having been made to its traction motors.

There was a discussion regarding the rostering of club members and locomotives for the ground level track at public running. However there was a concern that a roster is perhaps a too formal an arrangement for a club whose members are simply pursuing their hobby. Perhaps it will be better for drivers to agree amongst themselves running arrangements on a particular day by prior arrangement? It was agreed to continue to engage with the interested parties to ensure that they are able to accept the outcome. In addition the question has arisen as to whether drivers (and others) should be qualified under the DBS (Disclosure and Disbarring Service). Whilst this is not mandatory it was decided to leave this again for further discussion.

Other matters arising included the provision of eye wash bottles, the development of the club website to include online payments and our proposed Open Day scheduled for 14 June where other clubs will be invited to run on our tracks. This is being arranged within our normal club running day and detailed arrangements will apply when we know what the response has been.

A suggestion has been made for introducing a club process for dealing with members grievances. A system has been drawn up in the past and this will be reviewed to see whether it might be given general application. It was noted that the club's safeguarding process has to be periodically reviewed and this will be dealt with at a future meeting.

We meet again on 12th May

BOOK KEEPER STILL WANTED

RSME wishes to appoint a book keeper to assist the treasurer in maintaining our accounts. This will involve recording monthly income and expenditure into a Club Treasurer program that we would like to introduce shortly and to assist the Treasurer generally in their duties. Keeping track of our monies is on of the most important things that we do. A volunteer does not have to be an RSME member but some book keeping experience would be useful.

If your are interested, or know someone who might be, please contact the Editor, Prospectus, details shown in this issue.

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 June issue is 20 May

Contributions may be submitted in had or soft copy to the editor.
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Bending an Arm? John Billard

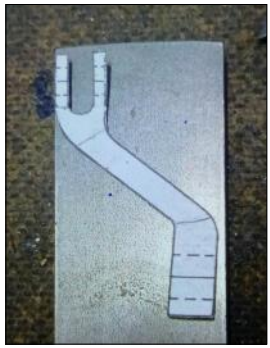
Further progress has been made on the Claud and this episode describes the making of the reversing arm but following a very poor start. This connects the reach rod from the cab to the weigh shaft and features a very large offset to clear the boiler.

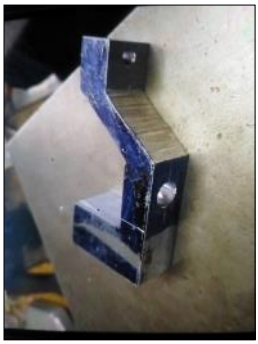
The original written instructions in Model Engineer recommend a bending process to achieve the correct shape. Try as I might the outcome was completely unacceptable despite my best efforts. Following some advice from club members I decided the only option what's to make it from the solid.

The picture sequence sets out the work necessary and I was pleased with the result. When set up the reversing arm is pinned to the weigh shaft and that is a job yet to come.

Left Frankly, a mess*!*

Right The desired shape

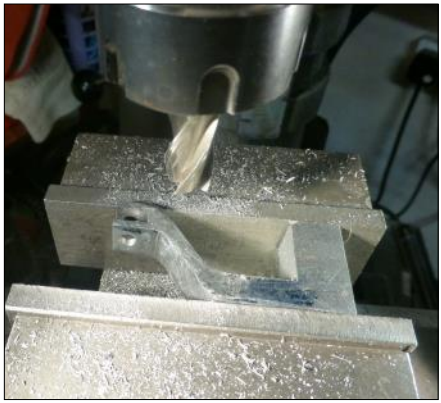




Left, the shape roughed out of 9/16th steel plate using my trusty Burgess bandsaw. I bought this in the early 1980s at Sarjeant's in Reading. Worn out several times over it will still get through anything I want it to, given a little patience. What has happened to the old tool shops? There's nothing like it in the town now and that's the place that pretends it wants to be a city.

Middle, using a slot drill to machine the recess for the reach rod.

Right, shaping up with the milling machine. The chunk on the right is a holding piece that will be removed at the last moment.



Stages to completion. The use of files was important The final shape is not exact to drawing but looks much better than attempt No 1! Even better still, it clears the boiler. It does the job.

The roundings were done using filing buttons duly hardened. Far quicker than setting up on the rotary table and probably safer too being much more controllable.

Mike Manners has been doing his magic on the signals and points on the ground level; the outcome is to be interlocking with the station loop ponts being motorised with controlling signal aspects. Vital work!

Photos Mick Strain

WORK UPDATE

This shows the resleepering being done to the raised track in April. This is being done by Nigel who set up the chop saw and provided the wood, Mick Strain, Rob, Michael and Alan having a rest from carriage work.

Nigel and Peter have been stabilising the ground level track with concrete cills packed with ballast. And David Scott is doing sterling work with the paint brush round the site and with the pressure washer with a result all to see.

Model Engineer Magazines

We have been contacted by Judith Church whose father's name was W L Wright . He taught in Bournemouth from 1947 until he retired .

He taught Metal Work and Technical Drawing. He was chief examiner for Cambridge O level papers. She remembers large brown envelopes delivered as all marked by hand ! He was President of the Institute of Craft Education in 1968. He was a teacher all his life and very involved in Model Engineering teaching men to build model engines at evening class The magazines I have date from the 1950 to 1970s. There are about 60 .

She doesn't want to throw them away and will give them to any interested party. No payment is required.

Her home phone no is 0118 3279530. She lives in Earley so if anyone can collect them that would be good as the box is heavy. Judith hopes they can find a new home. *(So do I, this period was the "Golden Age", Ed)*

WOLVERTON PUG GOES TO CZECHIA

13TH TO 23RD SEPTEMBER 2024

Part 2

The next bit of excitement involved wedging ourselves into vintage Austrian two car diesel railbus (OBB Dieseltriebwagon) introduced in 1952 and withdrawn in 1997. Known as Blue Lightning (Blauer Blitz) and built by Simmerling-Graz-Pauker AG. Max speed 115km/h, hydraulic transmission. It was so full we were wedged into the leading vestibule 5145.11. Fortunately, as it was less than an hour's run back to Prague, we decided to put up with Arriva Cross Country style of travel!

All went well until approaching the main station at Prague, where there is a 1.3km tunnel. The unit stopped some 200 yards from the tunnel mouth, not at a signal! At which point the engine cut out. After some spluttering it re-started and we ventured slowly towards the yawning tunnel entrance, still not sounding happy. We entered the tunnel and slowly crawled forward towards a red signal in the tunnel depths, where the engine cut out once again. The signal then cleared to yellow. Thoughts were turning to 'what happens if it fails completely in the tunnel with us enduring sardine conditions. Where is an assisting engine coming from? There certainly were no more of these Blue Lightnings to summon up. Would there be any form of power with a suitable coupling/brake system to get us moving, or would it be a detrain in the tunnel job? Needless to say, after about 10 minutes the engine was restarted and we moved at snail's pace, eventually emerging into daylight and the main station.

Big sigh of relief all round. Back to the hotel, then out for the obligatory food and Czech beer!

Sunday 15th Having travelled by service train to Cercarny, we joined a set of bogie suburban coaches hauled by Austrian 2-8-2 tank loco 431-032 (93.1360), built for the Austro-Hungarian state Railway Company in 1927. We went to Benesov by this means. At Bensov we boarded T478.1131 grumpy hauled special for a parallel departure with Kriegslok 52.100 in similar fashion to the previous day's extravaganza. The Kriegslok got ahead first and the grumpy slowly began to overhaul the steam, passing it at close quarters and continuing to draw ahead. After we were the full

train length ahead, we began slowing down to allow the steam to pass us. I did video this amazing manoeuvre but sadly due to the driving rain on the iphone it decided to go into slow motion. This was amazing stuff but not as I had planned it. Fortunately, there was no permanent damage to my 'phone. At least one other member of our gang had the same problem.

On arrival at Olbramovice, we then boarded a train for Tabor hauled by Czech 2-10-0 Kriegslok 555.0153 built 1944. At Tabor we found a very good restaurant -Nove Mesto, serving goulash and excellent beer.

In contrast with the last train, we now joined what looked like short distance diesel unit stock hauled by an incredibly decrepit Czech 2-8-0 no 434.2186 built in 1917, covered in pipework and other ephemera!

From Tabor we travelled to Sedlcany at the end of a branch line, where there was an out of use coal depot, with a derelict conveyer system up to the railway. Here we collected two dead vintage diesels and a carriage from a siding and shunted them onto the train. A locked shed contained a small railbus, which I guess would work the weekday service on the branch. A grain silo at the far end of the site appeared to have been disused for years.

When we returned to Benesov, where the shed appeared to be still open for the public to walk round. No restriction on where you could walk, even though a couple of engines were still moving about the site!

It was nearly 17.00 so there was not a lot there. The big Kriegslock 2-10-0 was being turned on the turntable and it only just fitted. Still simmering on one of the shed roads was the 1927 Austrian 2-8-2T 431.032 and standing outside was the other 2-10-0 Kriegslok, Czech 555. 0153. Inside the shed was a diminutive diesel shunter in green undercoat which resembled a prototype Yorkshire Engine machine. Next to which was a very sad and knackered Volvo estate, in deplorable condition, shot tyres and partly on a fork truck.

Somebody's long term pipe dream presumably!

Parked around the place were two or three diesel shunters, and bigger diesels including 742.627, which is part of a very numerous type of freight loco in Czechia (953 built originally between 1977 and 1986 including the very similar 740 class). To our eyes they very much resemble the short lived North British Class 16 with cabs offset from one end. This one was in black livery with a logistics company branding.

The one loco we had not seen or travelled behind so far had now arrived at the coaling road. The 1939 Deutsche Reichsbahn 2-8-2T 86.1333.

Then back to Prague for dinner and beer. *(To be continued)*

A VISIT TO THE BELL FOUNDRY IN LOUGHBOROUGH
by John Spokes

Possibly a case of self-deception, but I've developed a view that engineering today is more machine code than, what was commonly described as, manual skills. This notion was somewhat moderated by a visit I made to the Loughborough-based Bell Foundry of John Taylor and Co late last year; a trip organised by SMEE, the Society of Model and Experimental Engineers.

The origins of the company can be traced back to nearby Leicester, where, in the 14th century, the then mayor of Leicester, Johannes de Stafford, established a small bell foundry. In 1784 the Taylor family became involved. First, Robert Taylor (1759-1830) and then his son John Taylor (1797-1858). The foundations of the Loughborough works were laid in 1839. John Taylor had bid successfully for the recasting of the bells in Loughborough's Parish Church, but a condition

of the contract was that the work had to be executed in Loughborough.

Today the company operates as a Trust and the foundry in Freehold Street is Victorian Grade II listed. By means of various grants the Works have very recently been refurbished, especially the roof of the foundry and as part of a major revamp a museum has been created, together with educational facilities and access has been improved. It is now the largest bell foundry in the UK and Commonwealth. The subject of bell founding may immediately lead one to recall Whitechapel, but this company ceased trading in 2017, the premises since receiving some rather exotic schemes for redevelopment.

Since 1839 the Loughborough foundry has cast 25,000 bells, the most notable of which is Great Paul, cast in 1881 and which rings out from St Paul's Cathedral and weighs 16 tonnes. During its eleven-day journey to London many roads were damaged or destroyed with consequent complaints and claims against the company. For the pop aficionados, one of Taylors bells was taken by the Australian Rock band AC/DC on their Back to Black tour in 1980. There is a video of the relevant track, 'Hells Bells', on YouTube and small memorabilia of the occasion are exhibited in the company museum, together with mementoes for sale in the museum shop. The Taylor-cast bells in St Thomas's Church on New York's Fifth Avenue can be heard in The Pogues and Kirsty McColl's 'Fairy Tale of New York'.

The casting process begins with making the bells inner mould, the core, using foundry sand and this is given the required shaped inner profile of the bell using a 'strickle' or 'sweep', as it is called. The core is then kiln dried after which a special coating is applied and set alight. This coating protects and reinforces the core during casting. The outer mould, the cope, is constructed in a cast iron case, any inscriptions are added, and the outer mould lowered over the inner mould to create the complete casting assembly. In most instances the cast iron cope for bells of a particular size and tone are already available from earlier projects. Bells are cast (logically) from Bell Metal, which is a bronze containing 78% copper and 22% tin, by mass. The metal is heated to 1100C (2010F) and, before pouring, any slag is ladled-off and the metal stirred with a willow pole, evidence of the black arts still employed. The salicylic acid in the willow removes any final impurities. For

reasons of safety, the mould assembly is buried in a pit of sand and once the metal has been poured it is left for a few days to slowly cool before the mould is lifted and the core and cope separated to reveal the new bell. Now begins the challenge, that of tuning the bell.

In the 16th century bells were cast in different sizes to sound a particular note, an initiative driven by the desire for change-ringing and this process was refined by chipping pieces off the bell edge or from the inside surface and, even at this time, some bell makers were using a type of lathe. In the 17th century Holland, the renowned bell founding brothers, Pieter and Francois Hemony, together with the brilliant, but blind musician Jacob van Eyck, gained an understanding of and developed a tuning system for the five separate and distinct tones contained in each bell's ring – the nominal tone and four overtones, which sound in a similar way to a chord on a guitar or piano. This enabled bells to be made that rang in harmony and gave rise to carillons. By the 19th century, tuning had attracted the attention of science and became highly developed. It was realised that over the length of a bell the frequency of the note varied with the square of its thickness and inversely with its diameter. The Hemony's approach was rediscovered by Taylors in the late 19th century and was the catalyst for the now familiar harmonically-tuned English church bells. In 1876, Taylors manufactured a ring of twelve bells to fit inside Sir Christopher Wren's, then vacant, Northwest Tower in St Paul's Cathedral. Four of these bells were donated by The Turners Company, one of the oldest Livery Companies in the City of London, and which was already a guild in the 12th Century. Some 200 years later, Edward III decreed that 'wooden measures, as well for wine as for ale' should be made only by 'turnours' with marks of their own – and the medieval turners established the English 'pint' as an official measure. In 1604 the Company received its Royal Charter from James I.

To this day, the Company continues to celebrate and support the 'art or mysterie' of turning. Although for most of its existence the Turners were working in wood, and so the next opportunity you have to create swarf on your Myford, Colchester, etc, think on; someone had been at this craft long, long before it came to your attention! *(to be continued)*

DIARY

MAY 2025			
Sunday	4th	Public running	Setting up from 09.30 onwards
Saturday	10th	Club running	10.30 onwards
Monday	12th	Trustees meeting	19.30
Saturday	24th	Club running	10.30 onwards
JUNE 2025			
Sunday	1st	Public running	Setting up from 09.30 onwards
Saturday	**7th**	**Stoke Row Rally**	
Sunday	**8th**	**Stoke Row Rally**	
Monday	9th	Trustees meeting	19.30
Saturday	**14th**	**Club running and Open Day**	**10.30 onwards**
Saturday	28th	Club running	10.30 onwards

PLEASE NOTE THAT SUBSCRIPTIONS ARE DUE FROM 1 APRIL 2025

Just £20.00 for all members over 16.

Payments may be in cash, or cheque to a trustee, or electronically.

Payments in cash should accompany a payment slip available in the kitchen area in the club house.

Payments may also be made via a club card reader in the club house.

BACS payments should be made to the Barclays account in the name of RSME (or Reading Society of Model Engineers if your banks security rejects RSME) using the following account details:

Bank sort code 20-78-58. Account number 70796077

Please use your surname as a reference on any BACS payment

Membership application forms now apply to new members only

email michael.manners2@ntlworld.com or by post to *RSME Membership Secretary, 257 Loddon Bridge Road, Woodley, Reading, Berks, RG5 4BL*

Donations

If you wish to Gift Aid a donation to the club, in addition to your membership subscription, please contact Jim Brown, jmebrown655@gmail.com for a Gift Aid Declaration.

Club insurance only covers paid up members.