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

# The Prospectus

**September 2026**




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**Free to members**

**Trustees Meeting Summary**
**Wednesday Warriors**
**A Blast from the Past**
**WHR Low Water Incident**
**Club Running**
**Electric Tram Bodywork**
**Vist to Combe Mill**
**Vist to Moors Valley Railway**
**Visit to Rainsbrook Valley Railway**
**Summer Puzzle Solutions**

# Editorial

One theme of this issue: **No water where it is needed**! The current unprecedented spell of recurring heatwaves has left the RSME site - like most of the country - tinder dry. August public running had no steam locomotives, in case sparks set off fires around the site: the two subsequent club running Saturdays also did not permit the running of steam locomotives. These precautions anticipated the government's emergeny **Alert.**




One of the major wildfires - that in the New Forest - was not that far away from one of the Visits described in this issue (Moors Valley Railway). Extreme care and vigilance is needed round our site to keep it safe. There now has been some rain but so much is need for our site!

We are permitted to print a report prepared by the Welsh Highland Railway detailing an incident where there was insuffiient water in the locomotive boiler with the result that the fusible plugs melted. There has been some debate as to whether fusible plugs are needed in small scale steam locomotives. The WHR locomotive failure shows that even with good track, well-mainained locomotives, water treatments and experienced crews there will still be incidents.

RSME is still seeking a permanent editor for The Prospectus. Your application is awaited!

# DIARY

## SEPTEMBER 2026

| | | |
|---|---|---|
| 6 | Public Running | |
| | *Setting up from* | *09:30* |
| 12 | Club Running | *10:30* |
| 13 | Curly Memorial Bowl | |
| 14 | Trustees Meeting | *19:30* |
| 19 | Federation Annual Rally | |
| 26 | Club Running | *10:30* |

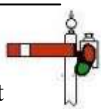
## OCTOBER 2026

| | | |
|---|---|---|
| 4 | Public Running | |
| | *Setting up from* | *09:30* |
| 9 | '0' Gauge Group | *19:30* |
| 10 | Club Running | *10:30* |
| 10 | '0' Gauge Group | *10:30* |
| 13 | Trustees Meeting | *19:30* |
| 24 | Club Running | *10:30* |

### Weekly Meetings

| | | |
|---|---|---|
| *Tuesdays* | '00' Gauge Group meeting - Club House | *19:30* |
| *Wednesdays* | Wednesday Warriors - club grounds (unless notified) | *09:30* |
| *Thursdays* | General Meeting- Club House | *19:30* |

**STOP for a SMILE**



What's the difference between a modern sports car and a vintage traction engine? One gets you arrested for speeding, and the other gets you a cup of lukewarm instant coffee from a tent while a man in an oil-stained waistcoat explains governor weights for forty minutes.

# Trustees' Meeting Overview

*Stephen Millward - Minuting Secretary, RSME Trustees*

There is always an interesting range of issues to be discussed at the monthly Trustees meeting and 10 August was no different. A club member also attended as an observer and occasional contributor. Members are reminded the meeting is open for those who want to spectate.

There was a discussion about the use of the SumUp card reader for small payments. It was agreed that in our increasingly cashless society this facility is very useful for members wanting to buy snacks from the club, however the downside is the increased workload for the club bookkeeper. At the moment the number of entries to be manually entered into the accounts package by our bookkeeper is not excessive. If this should change it might be necessary to look at alternative arrangements to avoid lots of small payments. One suggestion is on a club evening, members could take it in turns to buy a round of snacks, which could limit the SumUp payments to one per evening.

Members will be pleased to hear of progress on the new raised track loading ramp. Following the last Trustees meeting there was a site meeting to discuss the planned raised track loading ramp. This resulted in a proposed design and a project plan for construction:

- Raised track loading ramp design: A drawing was presented of the proposed concrete pad *(see also pages 19 - 20 )*. This showed a 3m x 4m reinforced concrete pad, with a level power float concrete surface. The intention is for vehicles to reverse up to the pad, but not onto it. Two sides of the concrete pad will be edged with a course of bricks to protect the concrete. The surface of the pad will be 50mm above ground level. The height difference will ensure drivers are aware they have reversed sufficiently far. The design details for the concrete and reinforcing will be left to the builder, who will be required to build a pad capable of taking the weight of vehicles.
- Lifting Trolley: Various options are available. The trolley has not been chosen yet.
- Lifting Trolley Store: The suggested site for the lifting trolley store is where the bicycle rack is currently located.

Revised quotes and possible dates will be obtained from potential builders. The plan is to construct the concrete pad in the autumn of 2026, after the Federation Rally. The new lifting trolley will be ordered after the Christmas Santa specials, or once the new storage shed is built, otherwise there will be nowhere to store it. The proposed design and project plan were *agreed* by the Trustees present.

There was a discussion about the current heightened fire risk and impact on events should the dry weather continue into September. It was agreed the risk should be assessed nearer the time. If there has been no rain and there is no rainfall forecast, the events might need to be cancelled or changed (electric locomotives pushing steam locomotives!). Since the meeting, we have contacted the organisers of both the FMES rally and the Curly Bowl rally to advise

that the events might need to be rescheduled or cancelled.

The reconvened '0' gauge group recently had a successful evening setting up one of the club's "0' gauge layouts. As a result, some members are looking at arranging a regular '0' gauge evening.

The next Trustees' meeting is on 14 September.

## Trustees

| | | | |
|---|---|---|---|
| John Billard | Nigel Penford | Peter Culham | Mick Chalmers |
| Jim Brown | Donald Pickett | Daniel Rees | Stuart Kidd |

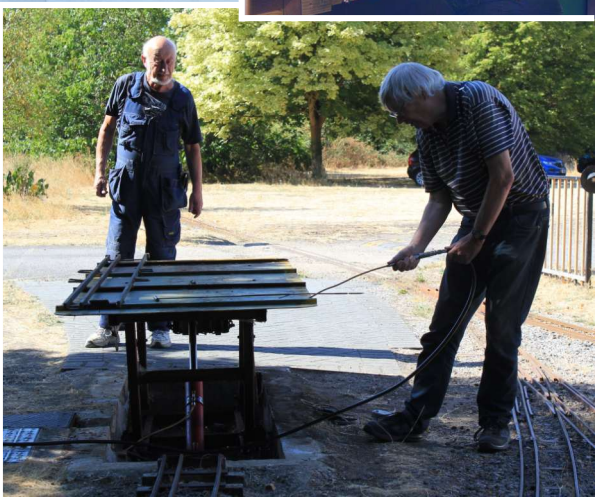
[*There is no "The View from the Chair" this month as John Billard has been away.*]

## Wednesday Warriors









The recent very hot weather has meant that little heavy physical work could be undertaken by our wonderful Wednesday Warriors, but that does not mean that there are no jobs to be done... Locomotive and rolling stock maintenance and repair... Equipment check and repair .. .

*Photos: Alec Bray*

# 12 August











*Top:* Track cleaning and preparation
*Middle:* Track painting.
*Above:* Sleeper replacement,

*Upper:* Track repair train
*Above:* Working on the repair of the 08 - this has now been completed with the locomotive available for running..

**Apologies that we can not see your faces!**

# A Blast from the Past

*Jim Brown - RSME Trustee*

It seems a lifetime ago when I last penned an article like this for The Prospectus. Various recent events have lead me to think it is time to return in writing (and photos, where available) to some of the past events in the history of the Society, especially as we now have a fair number of newer members who will not be aware of our history and the fact that the Society was originally formed over 100 years ago, in 1910 to be precise! I will return to the distant past another time, if the editor and the members wish to read more.

Meantime we will stick to the more recent past. I have been reminded in past weeks that I am the longest serving active member, having joined the Society in February 1971 - a few weeks before Mike Sinclair of 00 gauge and 0 gauge fame. Perhaps the time has come for some of us older members to put on record some of our memories of the club and make better use of the large amount of archive material, both text and photographs available to the club and to individual members like myself.

The trustees have agreed that a formal archive be created under the supervision of Donald, our website man and Dan our newest trustee. Please contact them before sending them any material you may have as we have already identified approximately 500 copies of The Prospectus and at least 3000 photographs from my own files.

You may or may not know that a project is currently well under way to replace all the wooden sleepers on the raised track under the leadership of Rob Ashfield and Mike Sinclair.



*Photo: Alec Bray*

(*see also "Wednesday Warriors" page 5* ).

This month's " Blast from the Past" is some photos of the final stages of the last major project on the raised track in April 2007! The project involved removing the track, several sections at a time. Then removing the old concrete beams, replacing them with new pre-cast concrete beams, laying a fresh cement scree to the required level, and finally relaying the track on top and replacing all the sleepers. The whole project took several months to complete.

Keith Taylor applies the finishing touches to the cement scree.





The final group photo: *left to right*, Keith Taylor and Les Dawson, *nearer the camera*, Pete Martin, Brian Hadnam and Tony Giles.



Finished - Les Dawson hammers home the golden spike!

# Rheilffyrdd Ffestiniog ac Eryri
# Ffestiniog & Welsh Highland Railways

## Low water Incident on Thursday 21 May 2026

With many thanks to Jo Toovey, The Prospectus is allowed to report, with permission via the Chinnor and Princes Risborough Railway, an internal investigation by the Ffestiniog and Welsh Highland Railways about an incident earlier this year with one of their Garratt steam locomotives which resulted in it dropping its fusible plugs.

### Events during the incident



The loco and train operated normally from Caernarfon to Dinas. The crew report that at Dinas the loco gauge glasses indicated that they had ¾ of a glass, and 160lbs/sq inch boiler pressure, which are within expected parameters at this point. The visible portion of the gauge glass is approximately 6 inches (150mm) high. Standing in the platform at Dinas the locomotive is on level track, the water level then rises in the glass as the loco moves onto the gradients leaving Dinas and the front of the boiler rises relative to the rear. The gradients at Dinas are level through the station and South yard (loco shed), dip under OB24.61 (the A4871 road bridge), rise steeply before levelling out under OB24.95 and then resuming at 1:40.

The fireman states that as the train stood at Dinas the pressure began to rise so he started his injector and let it run until the loco had gone under OB24.95 where he turned it off. The water was now in the “top nut” on the gradient. He then fired several shovels of coal across the fire once the loco was on the straight. As the loco passed a foot crossing at Bodaden (Km25.19), the loco was noted to be priming and the guest driver eased the regulator. The driver asked him to open the cylinder drain cocks, this would prevent damage to the cylinders by hydraulic locking. The boiler pressure rose to the point where it started blowing off, and, rather than start an injector to bring the pressure down, the crew allowed it to continue blowing off in the expectation that it would bring the water level down and stop the priming. The loco was still priming at Rhostryfan Road foot crossing (Km 25.91) with water visible on the outer rim of the chimney. The fireman tested the gauge glass to check the level which was showing full. He suggested to the driver they open the blowdown valve (which is operable from the cab) to drop a little more water, he agreed, and the valve was cracked open just past Dolau Gwyn UWC (Km26.09), remained open as the loco went through OB26.23 Pont Wernlas Ddu and was closed before Cae Wernlas Ddu

foot crossing (Km 26.35), which took about 15 seconds. At this point the priming stopped and the loco started to perform better as the steam supply to the cylinders became dry.

The cab had filled with steam under the bridge from the blowdown exhaust which points out sideways, steaming up the driver's glasses and temporarily leaving him unable to see clearly. On the straight going up towards Cae Hen crossing the driver and fireman tried to determine the water level, which was out of sight. After blowing the gauge glass through a couple of times they realised the glass was empty and the fireman's side injector was started. The driver's side injector wasn't started as the driver would have had to reach around the guest to trim the water flow and get the injector to pick up. The driver allowed the train to carry on in the hope the water level would rise with the injector running, the easing of the regulator for the easier gradient beyond Cae Hen and the upcoming 15 mph speed restriction but had the train brought to a stand in the platform at Tryfan Junction. He has since said that he was probably misled by confirmation bias as he still believed the water level was high. At this point it became apparent that a fusible plug had operated due to being uncovered, the second injector was started and the fire thrown out. Control was informed that the loco was a failure.

### Events following the incident

The failed train was propelled back to Dinas by the engineering train. After removing No 130 from its train it was later taken to the loco shed for inspection. Train P97 continued to Porthmadog behind the diesel loco from the engineering train. … The inspection and following investigation were delayed due to key members of staff being on leave over the Spring Bank Holiday and throughout half term week. On Tuesday 26 May the Chief Mechanical Engineer and the Company's boiler inspector made an initial inspection. This identified that all three fusible plugs had operated, there was some minor distortion of the inner firebox flange and a flue tube sealing weld was leaking. The water level in the boiler was just below the top row of side stays. Some remedial work was specified before the boiler could be returned to service, including reforming the distortion in the tubeplate flange, remaking the sealing weld on the flue tube, and carrying out magnetic particle and ultrasonic inspections prior to hydraulic and in-steam tests. Work to heat and straighten the flange took place on the 2 June but was initially unsuccessful as a secure base for the jack couldn't be found without removing the ashpan and grate. In order to carry out the work, which involved heating the plate with an oxy-acetylene torch, the boiler was drained of water by the fitters. Unfortunately, the opportunity to take a sample of the water for analysis was missed.



**Recommendations and learning points**

*Recommendations:*

- Crew must keep the water in sight at all times

*Learning Points:*

- Ensure that a sufficient level of understanding of the causes of priming and the correct actions to take are included in fireman and driver training and assessments
- Ensure that NGG16 footplate crew are aware of the firebox design and its effects on water coverage on steep gradients

## Club Running - 25 July – a delight

*John Billard*

The Club Running on 25 July was full of interest. As I arrived, John Blyth was unloading his impressive 7¼ in gauge petrol-hydraulic locomotive for a test drive in preparation for the next public running. Built by John, it incorporates the petrol engine driving a fluid flywheel and torque converter working an outside frame 0-6-0 via a jackshaft. The locomotive is very well made and a great credit to John. It was soon on the track and did several laps on the ground level, well loaded with three waggons and passengers. John must be very pleased with this result.



Moving on to the ground level steaming bay, I found Marcus and Laurance preparing the club Baldwin for a steam test and while I was there, they were checking the injectors for operation. It would be good to see this in regular service again as it has required some work including work on the motion and valve gear.



*Photos: John Billard*



Across at the raised track, Mike Sinclair was a familiar figure with his 4-4-0 LNER Shire again on test to check for injector operation. By this time the raised track included Terry Wood with his 5" tram still in an incomplete state (*see pages 13 - 14*) but running well.

He was joined by David Scott with his battery operated American loco profile





(minus body today); again that was running well and I was invited to do a lap with its very interesting belt slip clutch.

Moving into the club house, we were all invited to a treat consisting of the '0' gauge layout in operation across the room. As already reported, this had been in storage for a long time and it is provoking to realise that the majority of those who made it are no longer with us. It is full of detail and imagination and has to be seen to be fully appreciated *(to be described in the October edition of* The Prospectus). Its next club operating appearance is expected to be in October.

It was very good to see everything so well used today and all aspects of RSME being so widely enjoyed.

**STOP for a SMILE**

My wife said she wants to spend our savings on learning to drive a steamroller, and I told her I was not going to stand in her way.

'0' Gauge Layout: "Lydford Road"

Set out for a running session

(It is a large layout.)





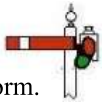

The resurgent '0' Gauge group meetings are set out in the Diary

Everyone is welcome.

(An article about this layout is to appear in the October issue of The Prospectus).

*Photos: John Billard*

## STOP for a SMILE



The driver of a train passing through Poland shortly after the end of World War 2 could not see any lights because the power had been knocked out by a severe ice storm.
The fireman said, "We're running out of coal!"
"Well," said the driver, "As far as I can tell, I think we're coming to Gdańsk or Danzig, or whatever they call it now!"
The fireman said, "We gave that porter chap at the last station a lift home. Let's stop here and ask him if he would go out to see if he can buy some more fuel!"
The porter was sitting in the corner of the cab, grateful for the ride home. He was happy to help. Accordingly, the porter obligingly stepped down out of the cab and looked around.
The driver and the fireman were both peering out of their respecrtive side cab windows. The driver asked, "Can you see a sign on that depot that says Gdańsk in this dim light?"
The fireman replied, "It appears to be Danzig in the dark."
And the driver shouted, "Buy coal, Porter!"

# Electric Tram Bodywork

*Terry Wood*



After running and modifying the electric tram's chassis and making sure that it would run OK on the club's track, it was now time to start building the bodywork to cover the motor, batteries and controller etc.

I got hold of some 1 mm sheet metal and began by folding it to the correct angles and then drilling lots of holes in order to assemble it

Seeing as I did not have a sheet metal folder/roller big enough, I took the whole project to Berkshire Metals and ask the proprietor if I could borrow his equipment to do the job, seeing as I had experience of using such equipment at home on a smaller machine.



The proprietor was very reluctant to let me do this due to Health and Safety and insurance reasons. Instead, he offered to do the job himself while I handed the various pieces of metal to him. Luckily, it was a quiet day, and he never had any other customers coming in. He also sold me a thicker strip of metal in order to make the brackets to attach the roof to the rest of the body which was in two halves. Once I got the parts home, I then proceeded to fix them together temporarily by drilling lots of 3 mm holes then using M3 nuts and bolts to hold the entire body together while I drilled a whole row of evenly spaced holes in order to place lots of pop rivets to hold the entire body together. Once that had been achieved, I proceeded to do the same thing to the roof.

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**STOP for a SMILE**



I've been reading about a fascinating new invention: a thought-controlled air freshener. It makes scents if you think about it.

I then began to paint: first an etch primer on the whole assembly inside and out. I then sprayed a topcoat of white for the base of the body and red for the top of the bodywork: this involved masking off the top part after I had sprayed the bottom. I left the roof off in order to paint that black which meant that the whole body was very floppy while I painted it until I riveted the roof on.



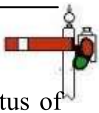


Once I had got the body all painted up, I then proceeded to take all the chassis apart in order to paint that with satin Hammerite, but before I did that I took some pictures of it so that I could remember how it all went together.

*To be continued.*

*Photos: Terry Wood*

**STOP for a SMILE**



Two elderly railway enthusiasts were reminiscing about steam and made a pact that whoever died first would come back from the afterlife and report on the status of operating steam. Joe died and a few days later, his ghostly figure reported back.

"'Well Bill, it's good news and bad news - the good news is that heaven is filled with steam locomotives, the bad news is you are on the roster to fire 35044 in the morning!"

# Visit to Combe Mill

*John Billard*

Hearing that it was open the following day, we paid a visit to the Combe Mill Industrial Museum (the original sawmill and workshop of the Blenheim Palace Estate) on 12 July. Here we were able to see engines in steam, talk to members of the society and learn more about the crafts and countryside skills that kept the Blenheim Estate functioning over the years. A mill at Combe was mentioned in the Domesday book, and it eventually became a vital part of the working of the Estate.



A Cornish boiler and beam engine were installed in the mill in the mid-1800s to provide an additional and more controllable source of power than the accompanying water wheel. After the beam engine developed a crack in 1912 it was left unrepaired and the engine and boiler were abandoned until rediscovered in 1969.

A long restoration followed but it can now be demonstrated on steam days although it now takes steam from a modern gas boiler pack.



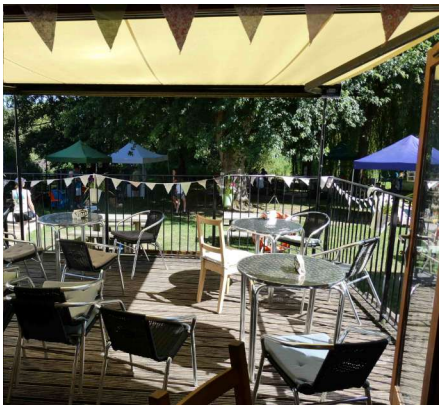
Water from the river Evenlode turned the mill's water wheel, powering the works machinery for centuries. The water ran right through the mill until electricity came to the area in the 1950s. The river was diverted and the old head race filled in to become what is now the car park. However, the water wheel still works, turned by water pumped into the remaining part of the head race.

*Photos: John Billard*



Apart from the sawmill the area included a pattern workshop. Its work included everyday items such as window frames, fireplaces, and machinery parts. The museum has a double forge where two smiths can work at the same time. It was a vital part of the estate yard, making metal tools and fittings needed on the Estate.



Today the pattern shop includes many items of interest such as vertical engines, historic workshop equipment and ancient tower clocks. A whole afternoon could be spent in this area alone.

A visit is highly recommended. Steaming days are held on the 3rd Sunday of each month between March and October. The museum can be found at Combe Mill, Blenheim Palace Sawmill, Witney, Oxfordshire OX29 8ET.

# Visit to Moors Valley Railway

*Alec Bray*

*Photo: Alec Bray*



On our way to a short holiday in the New Forest, we stopped off at the Moors Valley Country Park and Forest near Ringwood - BH24 2ET. This park has a wide variety of trails, including – for the younger children – a "Room on the Broom" trail and a "Gruffalo" trail. For the older children there are "Go Ape" activities and other activities such as mini-golf and electric off-road mini Land Rovers. Our first stop however was at the miniature steam railway. This 7¼ in line boasts some twenty steam locomotives and a couple of diesels – some are railway-owned and some are privately-owned engines.














The railway actually started life in 1980 at "Tucktonia" – an attraction on Stour Road, Christchurch, Dorset, which had started in 1976 by former British Formula Three motor racing champion Harry Stiller, who had bought the Tuckton Golf School site in 1961, converted its clubhouse into the Golfer's Arms pub then opened Tuckton Golf and Leisure Park. Had he got permission for the roller-coaster he had planned, that might have been the end of it, but the scheme was rejected and Harry's thoughts turned to displaying miniatures of the country's signature tourist attractions in 1:24 scale. It featured more than 200 models, among them Buckingham Palace, Stonehenge, the Houses of Parliament, a Cornish village, London's historic Prospect of Whitby pub, Tower Bridge, Westminster Abbey and Christchurch Priory. Perhaps less obviously, there were also models of a 'typical' British high street, an Elizabethan scene, Piccadilly Circus, a lighthouse, airport, motorway service station, nuclear power plant and oil refinery. "Tucktonia" was officially opened on 23 May 1976 by Arthur Askey. It originally occupied four acres (1.6 ha) of the 21-acre (8.5 ha) Tuckton Park Leisure Complex. In 1980, Jim Haylock, who had been interested in railways from a young age, and following a 20-year career in the carpet and upholstery business, decided the time was right to set up his own railway. He found a suitable site at the Tucktonia Leisure Park, Christchurch. The park was closed down in 1986, having become run-down and neglected. However, the railway had moved before this!

In 1985, Jim heard that the Council was creating a new Country Park at Moors Valley – which, until this time, had been a dairy farm – Kings Farm.

The original farm buildings were ideal to use for the main station. Cattle stalls were altered to accommodate a carriage shed, engine shed and shop, and the milking parlour was transformed into the workshop.

A skin of brickwork was laid across the front of the buildings in a traditional railway style. A station buffet, ticket office, waiting room and two signal boxes were later added.

Since then, the railway has grown and grown, now it is a double-track "main line" with balloon loops either end, the "country end" being a folded balloon loop with gradients and a bridge.



*"Tinkerbelle" showing seated driver - photo: Moors Valley Railway*

2018 was the 50th anniversary of "Tinkerbell", the oldest engine on the railway. "Tinkerbell" was the first 7¼ in gauge locomotive of narrow-gauge proportions where the driver sat inside the cab of the locomotive.

**Builder:** Roger Marsh, 1968

**Dimensions:** Length 66 ins
Width 26.66 ins
Height 46 ins

**Wheel diameters:** Driving 10 ins
Trailing 5 ins

**Number of tubes:** 16 x ¾ ins diam,
4 x 1 ins diam

**Grate area:** 72 $in^2$

**Coal capacity:** 20 lbs

**Water capacity:** 5 gallons

**Boiler diameter:** 12¾ ins

**Boiler pressure:** 100 $lbs/in^2$

**Valve gear:** Heywood

**Cylinder bore:** 2½ ins

**Cylinder stroke:** 4¼ ins

**Tractive effort:** 226 lbs

**Livery:** LBSC Improved Engine Green

This basic design approach has been used for all the locomotives on the Moors Valley Railway, and has been copied by railways around the world.

**STOP for a SMILE**

Did you hear about the man who took the 6 o'clock train home?
The police made him give it back.



# Visit to Rainsbrook Valley Railway

## (Rugby Model Engieering Society)

*David Scott*

*Photos: David Scott*

Other Clubs make it look ever-so easy. I moved the lift on rails with one finger.

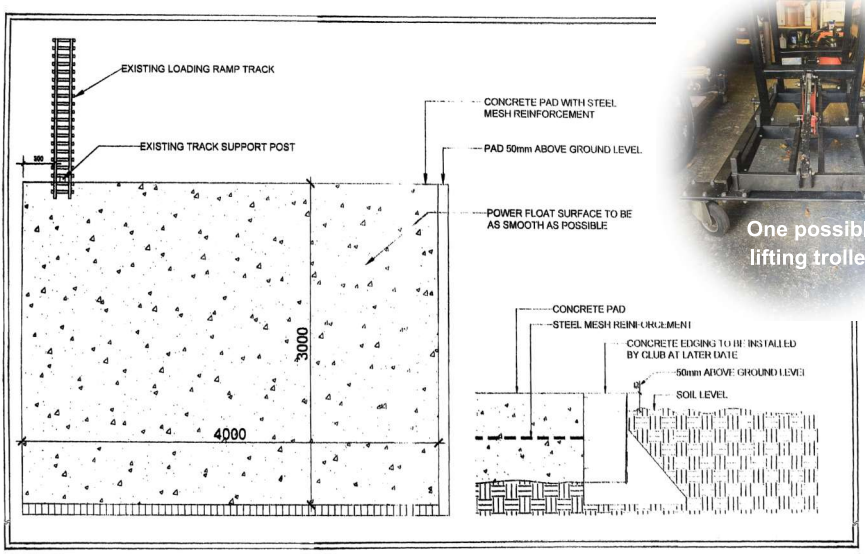


The top rotates and has sides that come up about 3/8 to stop anything going for a wander.The concrete is roughly finished as everything is on rails. Rugby Model Engineering Society at its finest. (Yes we are members.)





## Outline Plan - RSME Raised Track Loading Ramp



## Loading Ramp Proposal - *continued*

The basic proposal is for a concrete PAD with a very smooth top surface. On this pad would be a free-moving, adjustable height trolley running on castors. The position of the trollley would be adjusted easily by hand to butt up to the rear of the vehicle (or appropriate access point), and the height adjusted to match the loading platform of the vehicle. A raised brick edging is there to alert the driver that the vehicle rear wheels are at the edge of the concrete pad. The position of the vehicle is not critical, and the top table of the trolley is constructed to accommodate all lengths of locomotives expected to run on the raised track.

# Summer Puzzle Solutions

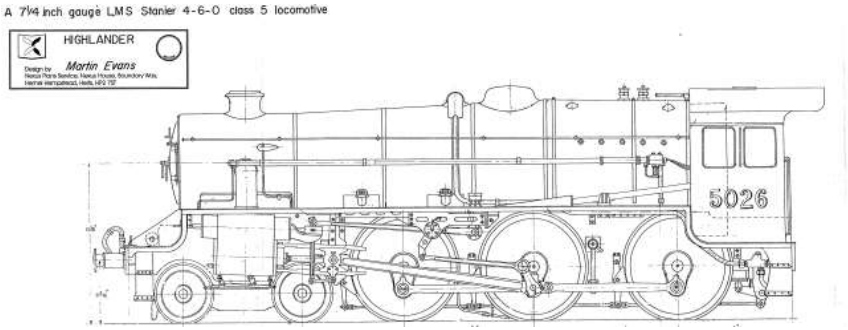
### Supermodel Engineer - Solution



Cindy Crawford graduated from DeKalb High School in 1984 as valedictorian (Valedictorian is an academic title for the highest-performing student of a graduating class of an academic institution in the United States). She earned an academic scholarship to study chemical engineering at Northwestern University, which she attended for only one quarter before dropping out to pursue a full-time modelling career.

### Stalled Locomotive - One Solution - There may be others!

It is a steaming problem with the steam locomotive on the loop line. Martin Evans' Black Five 'Highlander' is a 4-6-0 mixed-traffic locomotive serialized in *Model Engineer* from May 1984 to May 1985. And it is likely that the locomotive on the loop line was built at that time, so by now it is some 42 years old. It was designed to burn high-quality Welsh steam coal, nowadays difficult to source, and so many miniature steam locomotives now use anthracite beans, which need a little more draft.

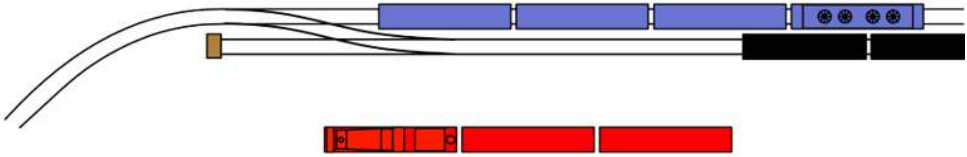



One possible (future) solution would be to consider making a blast nozzle about 15 thou smaller than the one shown on the plans. It is also likely that the smokebox is not effectively sealed – the smokebox door may have warped, or any sealing ring may have failed - or the first journey round the track may have loosened up something (sealing putty around pipework entry, for example) and permitted air entry. Any gaps around door, pipes, boiler joint, blast pipe and so on would prevent satisfactory steaming.

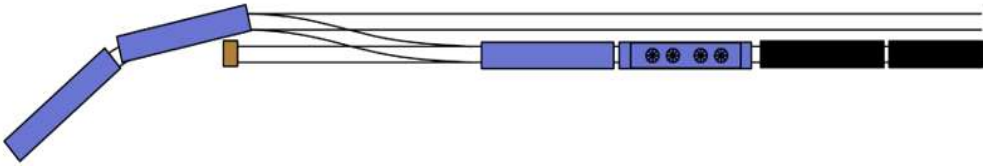
 *If you have an alternative solution, please email alec.bray@yahoo.com*

# Track Marshall Shunting Problem - Solution

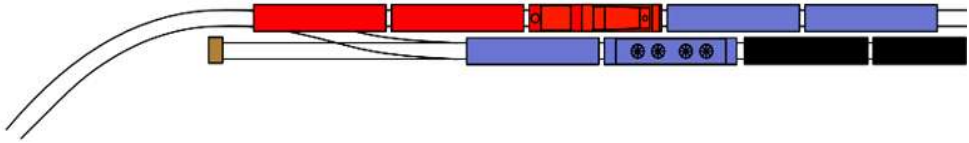
This is the situation at the start.



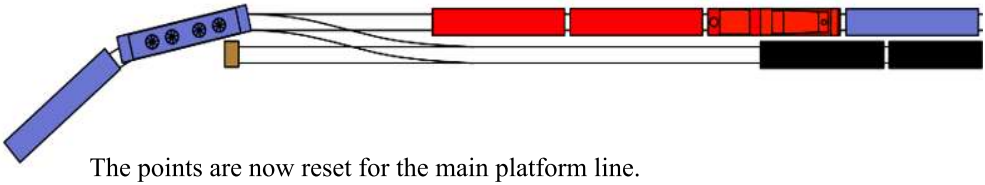
After all the passengers have got off the train in the station, the long train with the battery-powered diesel outline locomotive sets back along the main line until it is clear of the points to the loop line. The points are then set for the loop line, and the train (the “blue train”) pulls forward. Just before the second truck reaches the pointwork, the train stops, and the second truck is uncoupled from the leading truck. The locomotive and the first truck drive onto the loop line and stop behind the stationary train (shown in black). The points are reset for the main platform line.



The steam-hauled train (shown here as the “red train”) slowly approaches the two trucks left on the main line, couples up and gently pushes these in front as it makes its way to the station. When it stops at the station, all the passengers get off – but no one is allowed to get on.



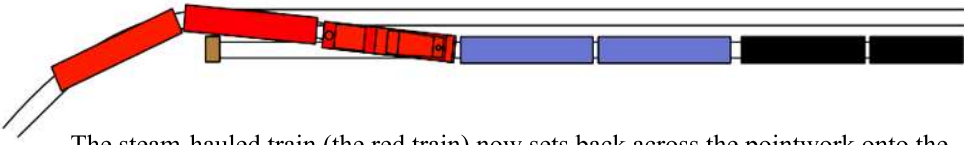
The red train (pushing trucks two and three of the blue train) pulls forward to clear the points to the loop line. These points are reset for the loop, and the blue train’s locomotive and truck one set back over the crossover and onto the main line. These then carry on in reverse back down the main line to leave some room for the red train.



The points are now reset for the main platform line.

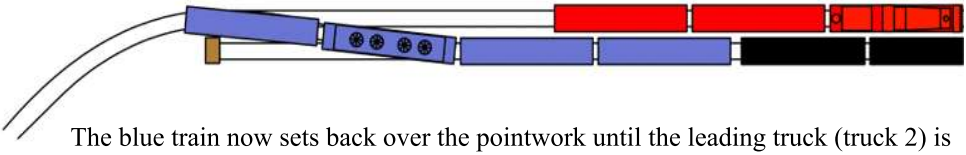
The red train, pulling the rear trucks of the blue train, sets back down the main line until the whole consist is clear of the points to the loop line. The points are then set for the loop line,

and the red train pushes the two trucks from the blue train across the point work and into the loop. The blue train trucks are uncoupled from the red train.



The steam-hauled train (the red train) now sets back across the pointwork onto the main line. The point operators set the points for the main platform line, and the red train drives round and pulls into the platform, but goes someway past the usual stopping position to allow for the next movement. As it is not in the correct position, passengers are still not allowed to board the train. The people in the various queues are watching with varying degrees of annoyance, amusement and astonishment at the traffic movements.

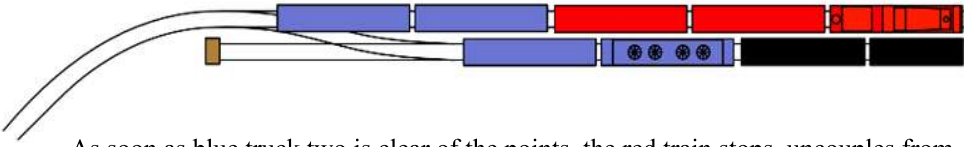
The point operators set the points for the loop line, and the blue train locomotive drives up and across the points to couple up with the two trucks in the loop line.



The blue train now sets back over the pointwork until the leading truck (truck 2) is clear of the points, which are reset for the main platform line. The blue train locomotive now pushes the trucks to couple up at the rear of the red train – and is uncoupled from them. It sets back down the platform line until clear of the points, which are now set for the loop line. The blue locomotive and its trucks now drive across the points onto the loop line to stop behind the stationary train.

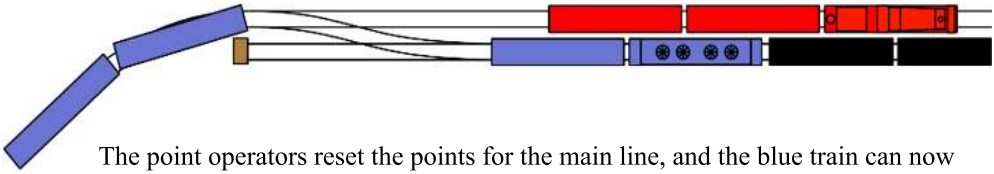
The points are reset once again for the main platform line, and the red train sets back down the main line.

The diagram shows the red train reversing across the points.

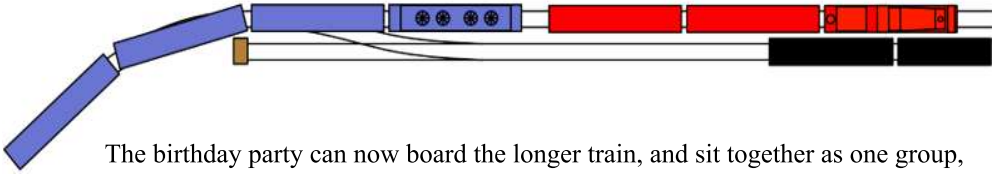


As soon as blue truck two is clear of the points, the red train stops, uncouples from the blue trucks, and then draws forward into the platform line, where now the first of the passengers are allowed to board.

Meanwhile, the point operators reset the points for the loop line, the blue locomotive sets back over the pointwork, couples up to its trucks waiting on the main line, and then continues reversing until it has cleared the pointwork.

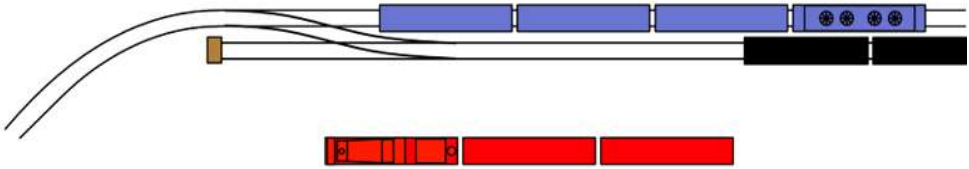


The point operators reset the points for the main line, and the blue train can now pull forward. As the red train leaves with its trainload of passengers, the blue train pulls into the platform.



The birthday party can now board the longer train, and sit together as one group, which is what they wanted,

The keen-eyed will have noticed that, given the track configuration at Prospect Park (a continuous loop), although the order of the trains loading at the station has been changed, the net result is the same as at the start – the blue train in the platform and the red train somewhere on the circuit. If this was a real-life situation and not a shunting puzzle, it would have been simpler to ask birthday party organisers to wait for a short while and send the blue train round with a load of regular passengers, followed by the red train – and then the blue train (the long train) would be in position for the birthday party guests!



Opinions expressed in **The Prospectus** are the personal views of the contributor and cannot be taken as reflecting the views of the club Trustees, club committees or the editor.

The deadline for the October Prospectus is 20 September. This is the final date.

Contributions from all members are greatly welcomed. They may be submitted in hard or soft copy to the acting editor.

*Like putting together pieces of a puzzle? You could be the editor of* The Prospectus.

# The World's Coldest Railway



The Obskaya to Bovanenkovo railway is one of the northernmost railways ever built. Much of the route crosses permanently frozen ground, requiring specialized engineering to stabilize the tracks on permafrost that can shift as temperatures change. Temperatures regularly fall below minus 40°C, blizzards can reduce visibility to just a few feet, and locomotives often emerge coated in thick layers of frost and ice.