



Ramblings From The Chair

Have you ever had that feeling of panic? You know the one - shall I jump or hang on in here, everything can only get better! I've had that feeling twice in recent weeks. The first was when I took a flight on the cable car across the Thames in London. Now, I've never been in a cable car before and I'm not sure there will be a second trip. My knuckles were white and stress levels went through the roof. Why would anyone want to jump in a glass bubble and be suspended at dizzying heights above a river. Apparently for fun,,,,,,,,,,,,,mmm! The second time my stress levels reached those dizzying heights I was anchored firmly to the ground and at Littledown Railway. One week in to my Chairmanship of our great Society and I was finding out the true reality of having my ear severely bent. Knuckles white and stress levels up there have been times when I would gladly jump back to that cable car! But now a few days on, the stress levels are back to normal, knuckles are no longer white and I'm looking ahead to helping the Society move forward.

I am honoured to have been asked to lead the Society as Chairman following on from David Martin, who will be a very hard act to follow. Now seems a good moment to thank David for his hard work on behalf of the Society over many years and I hope he will now have more time to come and play trains.

Fun Day in the Park seemed very popular with lots of people around, many of whom came for a ride on the railway. Sincere thanks to all those members that turned up to help on the day and a special thank you to Margery for the excellent lunch she provided for all the helpers. It was also very good to see the garden railway operating on such an important day for the Society, so thank you to all who made that happen. Please remember that for the Society to provide good facilities, some social events and plan for the future we need a steady income that has to come from membership fees or other sources. I'm sure that, like me, having an affordable membership fee is desirable so we need to make the most of our other source of regular income - the railway track. So, whether you have a locomotive or not, please make an effort to visit the track at least a few times a year to help all those nice people that man the station on Wednesdays and Sundays throughout the year collecting fares and raising much needed funds for our Society.

Over the next few months your Committee will be looking at projects that might enhance the Society, but I feel sure that you all have your own ideas about what needs to be done or what you would like done. I would also like to know what interests, other than railways, are alive and kicking in the Society. E-mail me please with your thoughts and interests - please use the following e-mail address to contact me on anything you like (good and bad) about the B&DSME - johnm@littledownrailway.co.uk

As some of you already know, I also supply the Society clothing so please continue to use my business e-mail for clothing orders - sales@bearbiz.co.uk

I look forward to gradually meeting you all.

John Roberts

Security At Littledown Miniature Railway

I have been made aware of some instances where the bollard we unlock at Littledown to get into our parking space has sometimes not been locked again after Members have entered the park, thereby allowing public access to our parking area. This is in addition to the not uncommon practice of not fully securing the track and equipment before leaving after Members have used the facilities on non public running days.

Would all Members please ensure that our facilities are left fully secure when leaving and that the bollard is locked again whenever it is used. It would be unfortunate if the privilege of having access to the facilities at any time for Members needs to be withdrawn from the majority because of the carelessness of a few.

On the subject of Society rules may I also remind Members that, if you propose running an engine on the Littledown track on a day other than Wednesday or Sunday when we give public rides, two Members are required to be present - in other words, one Member with a non member friend is **not** acceptable.

*John Roberts
Chairman*

Editor

Dick Ganderton

"Graskop"

76 Dewlands Road

Verwood, Dorset

BH31 6PN

editor@littledownrailway.co.uk

Tel: (01202) 822701

Secretary

George Wheatley

67, Moorlands Road

Verwood, Dorset

BH31 7PD

secretary@littledownrailway.co.uk

co.uk

Tel: (01202) 825307

Littledown Railway

Tel: 07879355399

© 2016 B&DSME. No part of this Newsletter may be reproduced without the permission of the Editor.

B&DSME is a Not For Profit Company Limited by Guarantee. It has no Employees and the Directors receive no remuneration. Registered in England. Number 03351832

Insurance & Membership Lists

A copy of the Society's Insurance Policy has been placed in the desk in the Engine Shed. The original documents are held by the Secretary and can be viewed by arrangement. For Members wanting to run their locomotives at locations requiring evidence of Public Liability cover there are copies of the Certificate at the back of the same folder as the copy of the policy. This needs to be signed by a Committee Member on an individual basis before becoming valid.

The new Application and Renewal Forms means we can keep our Membership List up-to-date. An abbreviated list, which omits addresses, can be obtained on application to the Secretary. A copy is kept in the desk in the Engine Shed.

George Wheatley, Secretary

Committee Matters

The next Committee Meeting will be held in Training Room 1, The Littledown Centre at 7.30pm on Wednesday 7th September 2016. There was no Committee Meeting in August so there are no Minutes in this *Newsletter*.

George Wheatley, Secretary

Direction of Running

The way in which we alternate the direction of running at the Littledown Miniature Railway has been changed. The direction of running will now be clockwise for even months and anticlockwise for odd months. So August 2016 will be clockwise and September 2016 will be anticlockwise.

The 16mm Narrow Gauge Garden Railway will still be running on the First and Third Sundays of each month, weather permitting. The next dates are 21st August 2016 and 4th & 18th September 2016.

Engine Shed Mobile Phone

A Mobile Phone has been installed in the Engine Shed at Littledown for the convenience of Members. It can be used for outgoing calls on Society business and in an emergency. Members who are at the track can also be contacted if required. The number, 07879355399, is on the 'Contacts' page of the Society's Website www.littledownrailway.co.uk

Boiler Testing

If you require a Boiler Test, please remember that you need to book it with one of the Boiler Testers. Also you should have all the paperwork with you - that's all the past Test Certificates and the *Written Scheme of Examination!* You have kept them, haven't you?

If you are presenting your loco for its 4-yearly Hydraulic Test please note that you cannot expect the Boiler Tester to provide the necessary blanking plugs. You should have a complete set of blanking plugs for each of your locos, one of which must have a **male** 1/4" x 40TPI fitting to allow the connection of the test pump and gauge. The threaded portion of this should be at least 3/8" long with a 60 degree countersink to take a standard nipple.

Please pump the boiler up at home to check that there are no leaks.

B&DSME Diary Dates

17th August 2016 Monthly Meeting; 7.00 pm. Littledown Miniature Railway.
Fish & Chip Supper.

1st September 2016 Tech-Chat (Informal Discussion Meeting); 7.00 for 7.30 pm.
John Hoyle. Please let John know.

21st September 2016 Monthly Meeting; 7.00 pm. Littledown Miniature Railway.
Topic to be advised.

Newsletter By E-mail

If you want to receive your copy of the Society's monthly *Newsletter* as a .pdf file, in full colour, you must let Dick know, by e-mail, sent from the computer you want to receive it on.

Typeset by Dick Ganderton in Helvetica using Adobe InDesign CS5 v7.0 on an Apple Mac mini 2.3GHz Intel Core i5 running Mac OS X v10.11.6 El Capitan.



www.littledownrailway.co.uk

IMPORTANT - PLEASE READ

The Committee would like to remind Members that it is a condition of our Lease that they must only park their cars or motorcycles in the designated parking area. **There is to be no parking in the area around or near the Engine Shed, on the driveway or turning circle. There are no exceptions to this rule.** As soon as you have unloaded your engine and/or equipment you **must** move your vehicle to the parking area by the entrance gate. As parking spaces are limited please use the main Littledown Centre Car Park if you are not bringing a locomotive to run.

B&DSME Model Engineer Magazine Library

Please use the library as it is a wonderful source of information and there are many fascinating articles within. Please remember when borrowing a magazine from the Society's library, to complete the sign out sheet, which is attached to the storage cupboard door.

The *Model Engineer* library is fully up to date, with some recent additions donated to the Society by a person unknown. A box of the magazines was left for my attention in the Engine Shed, and I do not know the person's identity. Anyway they were gratefully received and added to the library, with the duplicated copies donated to the Swanage Railway for their bookstall at Corfe Castle.

Please treat the magazines with care as many are fragile due to their age.

Peter Burton

For Sale

In preparation for Barry Linger's lathe classes the Society is replacing the old Myford ML4 lathe in the Engine Shed with a more modern one.

The lathe has the same spindle nose as later Myford Series 7 lathes and is equipped with a 4" dia. 3-jaw chuck, a 4" dia. 4-jaw chuck and a 7" dia. faceplate. It also has a couple of drill chucks and some Myford lathe tools. The leadscrew is fitted with a Myford Super7 graduated handwheel and has tumbler reverse. There are some change wheels. Single phase electrics with a Myford control switch and a no-volt switch. Mounted on raising blocks in a full-size steel drip tray.

Sensible offers are invited from Members. Further information is available from Dick Ganderton.



North Wilts Model Engineering Society
Coate Water Railway (Swindon, Wilts)

**You are invited to join us for the official
opening of our track extension on: -**

Saturday 17th September (no public running)
and
Sunday 18th September (public running)

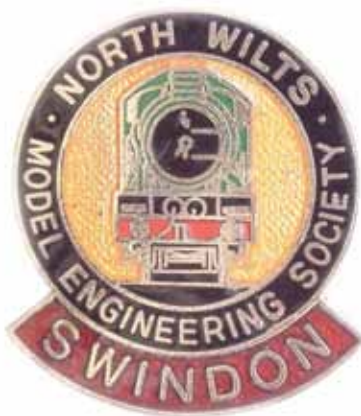
Please apply by the email below or by post to the Chairman -

Ken Parker, 26 Tyburn Close, Grange Park, Swindon, Wilts. SN5 6BY
with SAE to reserve a place.

Full details will be sent by return.

Closing Date Thursday 1st September 2016

Email: kennth.parker1@ntlworld.com or Tel: 07710 515 507



Riding the Khyber Rails

Kevin Patience

In 1982 I was based in Bahrain and had the opportunity to travel on the last British India Line passenger ship *Dwarka*, affectionately known as the *Queen of the Gulf*. She was one of four sister ships built for service to the Persian Gulf from the Indian sub continent in the late 1940s. By the early 1980s she was the last of the four as air travel had gradually seen an end to these unique icons of a previous era. We sailed from Bahrain to Doha and on to Dubai. It was a delightful voyage with a few first class passengers as well as hundreds of Indian and Pakistani deck passengers returning home at the end of their contracts. After calling at Muscat we docked at Karachi where I flew to Peshawar. I had always wanted to see the Khyber Pass and travel on the once a week train service from Peshawar to Landi Kotal some 2,500 feet higher up in the hills close to the Afghan border. The 32 mile railway was opened in 1925 to enable British troops to be moved to the border region in case of invasion and passes through 34 tunnels and crosses 92 bridges and culverts.



RMS Dwarka alongside at Bahrain

I arrived at Clark's Hotel in Peshawar where I discovered I was an alcoholic. In fact if I wasn't and did not sign a chit then I could not obtain a beer. The following day was Friday and the weekly train trip. Alongside the platform were two cream and green carriages and two goods wagons. Shortly after there were a couple of whistles and along came a pair of 0-6-0 SGS Class tender locomotives, Nos 2437 and 2471. SGS standing for Standard Goods Superheated. These two broad gauge locomotives had been built by Vulcan Foundry in Manchester, among others, for Indian Railways and part of a large consignment of around 1,500 locomotives introduced in 1905 as unsuperheated and later converted. In 1947 the class was split between India and Pakistan at Independence. Seventy years later many were still hard at work. The former 2437 was coupled to the goods wagons as the lead engine while the latter was coupled back to back as the trailing engine. While taking a photograph of the latter I was asked by the fireman to join him on the engine for a cuppa, actually it was an old beaten up tin mug of tea or chai, that tasted good even though it was made with boiler water and condensed milk.



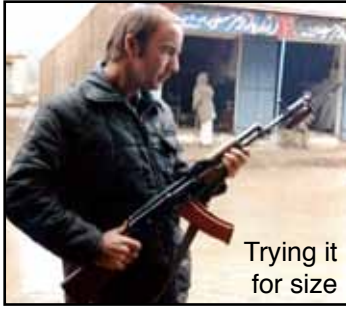
2471 about to leave Peshawar

We set off up the slope out of Peshawar with both locos working hard towards the hills in the distance. As the loco was oil fired there was no coal dust blowing around. We slowed to a halt at the edge of the international airport awaiting clearance from the tower. One of the few places in the world where a railway crosses the main runway. 2471 was showing its age as it rattled and jumped on the uneven track. Looking at the boiler pressure I said to the driver it seems a little low at 120 psi. I thought it should be around 180 psi. He laughed and said it had been like that for a while. Curiosity getting the better of me I indicated I was going out along the boiler running plate to have a look at the smoke box. One of the causes of lack of pressure was a problem with the smoke box vacuum. When riding Garratts in Kenya there was a similar problem with one loco due to a misalignment of the blast pipe with the petticoat on the funnel by about half an inch. Sorted out with a sledge hammer. Sure enough with the loco working hard I stood by the smoke box and could hear air whistling around the edge of the smoke box plate on to which the door was bolted. It was apparent that all the bolts around the plate were loose. Returning to the cab I explained the problem to the driver to which he said it will have to wait until we stopped. I told him we could fix it while running so taking the fireman with spanners, we tightened the nuts and by the time we got back to the footplate the pressure was up to 170 psi. It eventually got to 180 psi and the loco was doing its bit of backward pushing.



Shagai Fort

The track wound its way past the imposing Fort Jamrud and continued into the hills. Before long we had dozens of armed Pathan tribesmen hanging on to the train and riding shotgun on the loco. We watered at Shagai overlooked by another imposing fort built in the 20s before an endless crawl in and out of tunnels and across steel girder bridges and a number of reverses to gain height. This really was an incredible piece of railway engineering officially opened by Mrs Bayley driving the first train into Landi Kotal on 4 November 1925. Apparently it had been decided that Victor Bayley, the engineer in charge would drive the train but he died three months before completion so it fell to his wife to do the honours.



Trying it for size

Arriving in Landi Kotal the driver, fireman and I made our way into the square surrounded by small shops selling chai, goat meat samosas, chapatis and AK47 rifles. I was the only European in this extraordinary place and was left with the fireman to have a lunch of chai and samosas while given an AK47 to try for size. Everyone was carrying a rifle of some sort. There were shotguns and antiquated British .303s and the ubiquitous AK47 and for the grand sum of \$200 I could have an AK47 and two magazines of 7.62 mm ammunition. I declined as it could cause problems at home...

Twenty minutes later the driver returned accompanied by a wizened old man bent over carrying a small heavy wooden case on his back using a hessian sack. We returned to the loco where the box was dumped on the footplate. It was at this point while sitting in the drivers seat that Ahmed the driver indicated I could drive the loco back down the pass. He pointed out the steam brake for the loco and the train brake and accompanied by loud whistling we set off. The line drops away as it leaves the station and it's on with the train brake to keep the loco in control. While I was watching the track the driver and fireman set about opening the wooden box. Inside were dozens of Chinese made padlocks that



Exiting a tunnel on to a reverse



Riding shotgun



2437 at Landi Kotal

had come across the border to be sold in Peshawar for a profit. The spoils were divided into three, with two sacks being stowed in the tender while the third was hidden under the foot plate. All went well and we traversed our way down the pass back to Fort Jamrud and finally on to the plain leading to Peshawar. It was on this run I heard a clang followed by another and another at which point the driver slammed the regulator shut and applied the brakes and we ground to halt in a shower of sparks. The sack had split and the driver's padlocks were falling on to the track. In seconds he was off the footplate and scurrying around under the train looking for his precious padlocks, assisted by numerous tribesmen who were pocketing them as fast as they could. Some ten minutes later we resumed our journey back to town. He had recovered some which he added to a new sack. As we approached the outskirts of town we slowed down to see two men standing by the track. The three sacks were dropped off as we passed and they hurriedly collected the contraband and disappeared. We rolled slowly into Peshawar and I climbed down with the prime thought of an ice cold beer. It had been a hot extremely memorable day on a steam loco entirely unexpected as I had booked a ticket in one of the carriages, but they were so full of tribesmen and others that the invitation to ride the footplate turned out to be one of those great railway journeys.....

Society Baseball Hats

John Roberts now has some club baseball hats in stock, 2-tone navy and royal blue, embroidered with the Society logo. He also has a stock of thermally lined woolly hats, also embroidered. All hats are £10 each. He would also like to remind all Members that Society shirts, sweatshirts, hoodies and jackets can be supplied and can include your name under the logo.

See John at the track or contact him by e-mail sales@bearbiz.co.uk or telephone 023 8086 6002 or 07831 442250. There is a price list on the notice board in the Engine Shed.

B&DSME Clothing

John Roberts advises that his clothing suppliers are all raising their prices during August to counteract the poor currency exchange rate at present. Therefore, the B&DSME clothing that John supplies will need to increase in price - John thinks by around 10% - in line with his suppliers. He will maintain existing prices until 31st August and he will replace the price list in the Engine Shed as soon as possible. Any orders placed during August will be supplied at the existing prices.

See John at the track or contact him by e-mail sales@bearbiz.co.uk or telephone 023 8086 6002 or 07831 442250. There is a price list on the notice board in the Engine Shed.

16mm Update

Yes! The 16mm update has been missing for the last couple of months, but hopefully it's back on track now. To be fair we could not think of much to say other than the weather is not helping our running or track maintenance. The last few weeks, however, have been manic, the running days have been well attended and with open season for Members' Garden Railway Meets to attend there seemed to have been little time for essential track repairs.

Replacement of the delaminated anti-vandal track covers now being rather urgent. With a timely bit of luck thanks to Paul Jones and latterly Peter Watson we have been able to source some redundant laminated aluminium signs as replacement covers, once cut to size, with the Society being able to fund the remainder. There remains some tidying up and painting still to do but, they are in use doing their job and are visually a big improvement. Glyn Tandy has volunteered to spray paint them to blend them in to the existing covers (thanks Glyn).

So popular are our 16mm running days on the first and third Sundays each month that the steaming area and marshalling yard are barely adequate. This increasing interest in 16mm activities has us thinking on how we could increase the usable marshalling area or even using passing loops....Any ideas??

Carry on Steaming!

Gordon Miles & Dave White

Surplus Equipment For Sale

12V Blower- Blackgates - presently fitted for a 40mm dia. chimney; could be re-machined for a 35mm chimney.

12V Water Pump

Reilang Steam Oil Can 200ml

Sundry Oil Cans

Steam Oils, inc one full bottle

Long Flue Brush - 1/2" x 36"

Water Treatment Additives

All in reasonable / good condition - in use until a year ago.

Buyer collects from an address in West Parley, please.

£30 to a good home, - this will be donated to The Friends of Dolphin charity (our nominated charity this year)

Paul Martin 01202 577793 (If there is no reply, please leave your call back number.)

Basingstoke Visitors' Open Day

Basingstoke & District Model Engineering Society will be holding a Visitors' Open Day on Sunday 11th September 2016 at their track at Unit 5, Viables Craft Centre, The Harrow Way, Basingstoke RG22 4BJ, and they cordially invite any members of Bournemouth & District Society of Model Engineers who might like to attend.

Their raised track can accommodate 5" and 3 1/2" Gauge locos, and the Garden Railway will be open for running on 32mm and 45mm Gauge. Visitors will be requested to register and (if running) produce a current Boiler Certificate on arrival.

Refreshments will be available during the day.

They would appreciate it if you could advise them in advance of significant numbers of intending guests to assist them with their planning.

They look forward to seeing Bournemouth Members there and hope that they have an enjoyable day.



www.littledownrailway.co.uk

Water > Water Vapour > Steam > Power > Fun

Ron Barson

What is water?

In Britain water is easily taken for granted. It's all around us and as a nation we are known for it raining whenever we are having an event, a holiday or we want to run trains. We have taps with running hot and cold water, and also 'drinking' water. Some of us spend huge amounts on buying our water in bottles. A litre of bottled water is more expensive than a litre of fuel! So, what is water?

We asked 100 people and the top answer was H₂O. No *Pointless* answers there. A Nobel Laureate, Szent-György, has called water 'the matrix of life' as it is physically and chemically involved in the development and maintenance of living organisms, and steam engines!

But, hereby lies a problem! Water is a universal solvent. To remove dissolved substances, which among other things clog up boilers and feed systems such as injectors is not always easy. Getting rid of the suspended bits is easy and you can see that these have been removed by the improved clarity of the water.

Water – The Universal Solvent (1)

Water is corrosive. It will dissolve metals such as copper and zinc especially if it is given a helping hand from dissolved gases such as oxygen, carbon dioxide and sulphur dioxide. We all know about the triangle of fire. Well there is also the triangle of corrosion. That's why stainless steel was invented among other alloys. Both work the same – eliminate oxygen and the triangle is broken. Wet corrosion only needs a small amount of moisture – then we get rust or oxidation. Fortunately for us as model engineers we have a good chance to enjoy our hobby if we ignore Aluminium, Cadmium, Zinc, Magnesium and its alloys!

Stress Corrosion Cracking

Whilst this is predominantly found in stainless steels it can occur in other metals especially if there are ionic compounds present such as chloride ions. Raising the temperature in excess of 60°C (below the boiling point of water (100 °C) at normal atmospheric pressure.

Water – The Universal Solvent (2)

The quality of water varies tremendously with aggressive chloride ion ranging from between zero and several hundred parts per million. In this country it is normal to 'chlorinate' water to make it potable or drinkable. The residual chlorine level is normally below 1 part per million.

Hardness is another one of our problems. This is caused by calcium and magnesium carbonates and bicarbonates and also by calcium sulphate. These form scale and are a real nuisance. We can remove all these by chemical treatment. But chloride and pH are the most important for us.

Fortunately, by boiling water containing salts which form hardness we remove much of the corrosion from the dome and onwards. Unfortunately we are left with a need to regularly 'blow down' the boilers to remove the scale.

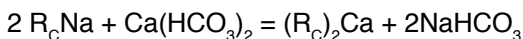
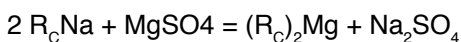
Water Treatment

Normal chemical water treatment is by the use of the principles of ion exchange. Basically, this involves the diffusion of water through materials (usually minerals or resins), and work well up to a level of about 700ppm. Different ion exchangers do different jobs. I will look at the one we use at the track, a strongly acidic cation resin.

Softening

This is the removal of total hardness (Calcium and Magnesium ions) in exchange for sodium ions. This uses strongly acidic cation exchange resin and a regenerant of common salt (sodium chloride). This is the process we use at the track and is shown below for those interested in the chemistry:

R_C = Cationic Resin; MgSO₄ is magnesium sulphate; Ca(HCO₃)₂ is calcium bicarbonate



The water will have a pH around 7 to 7.5 dependant on the amount of temporary hardness (bicarbonate) originally present. When heated, water containing bicarbonate ions will breakdown to form carbonates. Sodium carbonate is more alkaline and is also known as washing soda. Whilst you don't see the scale it is still good practice to blow-down the boiler periodically to remove a build-up of alkaline residue. In large scale high temperature heating operations a corrosion inhibitor is added to the water to minimise this potential hazard.

Recharging the resin is by the use of sodium chloride. Yes, chloride – the corrosion specialist!

It is very important to follow the manufactures instructions and not to short cut this important process if avoidance of corrosion is of paramount concern.

Finally, the softener must not be allowed to freeze during cold weather as the resin may fracture and cause flow rate issues.

So, just as we talk about good coal we can also talk about good water. Happy steaming.