

## Chairman's Thoughts

Our last meeting at the Muscliffe Community Centre was only a 'Bits & Pieces' evening, but it turned out to be an interesting one. We even had a practical demonstration by Brian Merrifield and Derek Higbee of the Lemonade Bottle Rocket Launcher that they had been making for the Imagineering Group they help to run at Ringwood School. Maybe we could come up with a competition using some very basic items similar to this idea?

We now have some keys available for Members to purchase for the Engine Shed and the Entrance Post. Large keys (Engine Shed) are £6.50 and small keys (Entrance Post) £4.50. If you are interested in obtaining keys please contact David White. You may have to jiggle the large keys in the locks, but they do work. If you are a new member and have not received a copy of the Society's Blue Book we do have a few copies still available, so please ask for one. The existing one is being updated; watch this space for further announcements.

This year our St George's Day Cream Tea Sunday is on 22<sup>nd</sup> April, the day before the actual day. As this year is the Queen's Diamond Jubilee, we are marking the occasion with Afternoon Tea on Monday 4<sup>th</sup> June, the day before the official Diamond Jubilee Holiday. We can get the bunting and flags out and maybe you could have a flag on your loco, so it would be nice to have a good turn out of locos of all sorts. The Garden Railway will also be running on that day.

Our Charity Day will be on the 5<sup>th</sup> August in aid of New Forest Nightstop, a charity that provides the only emergency overnight accommodation for young homeless people aged 16 - 24 in the New Forest in the homes of trained and approved volunteers. Go to [newforestnightstop.org.uk](http://newforestnightstop.org.uk) and have a look on their website. You would not think this would be a problem in the New Forest area, but it is.

Walking around our Steaming Bays and Platform, I noticed that we do need to give the Station Building a coat of green Sadolin this year and lift and relay some of the pathway slabs, as they are becoming a trip hazard. On the plus side the Carriage Sheds are now starting to merge into the surrounding hedge as the bushes have taken very well

The next Committee Meeting is at 7.30 pm on Wednesday 28<sup>th</sup> March at the Littledown Centre.

**David Martin**

## Editor's Ramblings

Littledown Castle, as the new petrol/electric locomotive is to be called, had its first trials on the track at Littledown. Well, the test rig did, even if it did look a bit like a Heath Robinson lash up!

Three of the group designing and building the new loco had another session with the new Kawasaki engine bolted to a plywood board and coupled to an old Lucas alternator from a BMC A Series engine via pulleys and a V belt. Having managed to prove that we could control a DC motor with the rig we decided to take advantage of the fine weather and decamped to Littledown.

The test rig was clamped to a riding trolley, John Hoyle's *General Weld* was taken apart to get to the motor connections and some heavy leads connected the test rig to *General Weld*. I mounted the trolley, Barry started the Kawasaki and off I set. The system worked! I could control the alternator output by twiddling the small knob on the regulator feeding the alternator's field winding. After several laps we hooked up a second trolley and did several more laps with all three of us on board. This made the temporary diode pack glow a bit, shutting it down. The next stage is to replace the Lucas alternator with a 100A one from a Land Rover.

I should emphasise that we are building a true petrol/electric loco, not a battery electric one with an on-board battery charger. The output of the alternator is controlled by varying the DC voltage applied to the alternator's rotor windings with a simple variable regulator fed from a small 12V battery. The alternator's output is 3-phase AC and this is rectified by a diode pack to provide the variable DC traction current for the locomotive's motor.

**Dick Ganderton**



Editor  
Dick Ganderton  
'Graskop'  
76 Dewlands Road  
Verwood, Dorset  
BH31 6PN  
[dick@graskop.demon.co.uk](mailto:dick@graskop.demon.co.uk)  
Tel: (01202) 822701

Hon. Secretary  
Dave Finn  
Tel: (01202) 474599  
(Out of work hours)

Littledown Railway  
Tel: 07879355399

© 2012 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 3351832

## 2012 Annual Subscriptions

**T**reasurer Phil Drake will be collecting Annual Subscriptions at the March Meeting. So bring your cheque book with you. Subscriptions are still £20 for just you, or £21 for you and your partner.

## Bullet Points from the February Committee Meeting

Barry Linger wishes to relinquish custodianship of the Society's Locomotive *Maid of Kent*.  
The Society's Charity Day will be held on 5<sup>th</sup> August for 'New Forest Nightstop.'  
Keys for the Bollard Lock are now available at £4.50 and the Engine Shed at £6.00.  
Dave Finn stated his intention not to stand for re-election at the next AGM.

## Merlin's Musings

**D**id you miss my musings last month? Oh well, never mind, I will do a little something for you this time. The Society's *Speedy* was given a hydraulic and steam test on Sunday, 19<sup>th</sup> February, carried out by Mike Mortimer and Barry Linger. Both gave the test the thumbs up. It doesn't seem one whole year since the first steam test. *Speedy* seems to be running quite well at the moment, so well done William for looking after it. Dare I say so but '*The Shed*' also seems to be behaving itself at the moment.

**Merlin**

## 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**

## Direction of Running

Sunday	18 <sup>th</sup> March	Anticlockwise	Wednesday	21 <sup>st</sup> March	Clockwise
Sunday	25 <sup>th</sup> March	Clockwise	Wednesday	28 <sup>th</sup> March	Anticlockwise
Sunday	1 <sup>st</sup> April	Clockwise	Wednesday	4 <sup>th</sup> April	Anticlockwise
Sunday	8 <sup>th</sup> April	Anticlockwise *	Wednesday	11 <sup>th</sup> April	Clockwise
Sunday	15 <sup>th</sup> April	Clockwise	Wednesday	18 <sup>th</sup> April	Anticlockwise
Sunday	22 <sup>nd</sup> April	Anticlockwise *	Wednesday	25 <sup>th</sup> April	Clockwise
Sunday	29 <sup>th</sup> April	Clockwise	Wednesday	2 <sup>nd</sup> May	Anticlockwise

\* denotes 16mm Garden Railway open - weather permitting.

## B&DSME Diary Dates

21 <sup>st</sup> March 2012	Monthly Meeting; 7.30 pm. Muscliffe Community Centre. <i>Richard Knott's Annual Video Evening.</i>
5 <sup>th</sup> April 2012	Tech-Chat (Informal Discussion Meeting); 7.00 for 7.30 pm. <i>Gordon Miles. Please let Gordon know if you are attending.</i>
18 <sup>th</sup> April 2012	Monthly Meeting; 7.30 pm. Muscliffe Community Centre. <i>Railways and Signalling, Paul Steedman.</i>
3 <sup>rd</sup> May 2012	Tech-Chat (Informal Discussion Meeting); 7.00 for 7.30 pm. <i>Venue to be arranged.</i>

## Luscombe Valley Happenings

**www.luscombevalleysteam.co**

Cobweb Run	April 21 <sup>st</sup> & 22 <sup>nd</sup>
Gala Weekend	July 28 <sup>th</sup> & 29 <sup>th</sup>
Autumn Run	September 8 <sup>th</sup> & 9 <sup>th</sup>
Humbug Day	December 22 <sup>nd</sup>

## 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 Gill Sans using Adobe InDesign CS5 v7 on an Apple Mac Mini 2.3GHz Intel Core i5 running Mac OS X v10.7.3 Lion.

## More Dates For Your Diary

April 14 - 15	Basingstoke Rally Taunton Exhibition Worthing Exhibition
May 11 - 13	Harrogate ME Exhibition
May 19	Southern Federation Spring Rally, Guildford
May 20	Host Society Open Day, Guildford
June 3	Worthing Open Day (NB Fully booked.)
June 9 - 10	Welsh National Rally Cardiff
June 16 - 17	Sweet Pea Rally Hereford
June 16	Bournemouth Open Day
June 23 - 24	Little LEC 2012 Swansea
July 7 - 8	Guildford Rally
July 14 - 15	IMLEC 2012 Nottingham SM&EE, Ruddington (GCR)
July 21 - 22	Dreaming Spires Rally, Oxford
July 28	GWR Pannier Tank Day, Bournemouth
August 17 - 19	Bristol ME Exhibition
September 8 - 9	National Loco & Martin Evans Rally, Birmingham
September 15	Southern Federation Autumn Rally, Chelmsford
September 16	Host Society Open Day, Chelmsford
October 17 - 21	Midlands Exhibition

## Thank You Letter

The Society received this letter from the Pokesdown Children's Centre thanking us for the toys we sent them after our Santa Run last December.

## For Sale

7<sup>1</sup>/<sub>4</sub>" Gauge GWR 1400 Dart by Martin Evans.  
Rolling chassis (wheels need requartering).

No platerwork. Smokebox rolled.

Copper Boiler which leaks in smokebox.

Superheater tubes formed to shape.

Chimney and Petticoat Pipe turned.

Including set of Drawings.

Price £1500

John Kiddell

Tel: 01929 481286

e-mail: [johnkid@talktalk.net](mailto:johnkid@talktalk.net)

## More Littledown Castle

These pictures show the stages in the development of *Littledown Castle*. Alan Hodgson's picture shows Barry, John and Dick pondering over the mounting of the alternator. The other picture shows the lash up hauling three of us.



Pokesdown Children's Centre  
Freesantle Hill, Somerset Road, Pokesdown, BH17 6JJ  
Tel: 01202 391500  
e-mail: [15.enquiries@hounslowtrustmca.org.uk](mailto:15.enquiries@hounslowtrustmca.org.uk)  
Manager: Clare McCarty-Brooker

3<sup>rd</sup> January 2012

**For the attention of:  
Irene Kent and the members of B.D.S.M.E.**

Dear Irene

We would like to say a very big thank you to all your members for the toys you provided via All Saints Church for our families. We have been able to support a number of families we had identified through our family support networks as being in particular need, ensuring your gifts have been appropriately shared with local families most in need.

We have noticed increased levels of anxiety in our families over money in the past year, and we know that your donations will make a real difference. Families have also been so touched to know there are people in their community who care about them.

We wish you all a very peaceful and healthy New Year.

Yours sincerely,

Clare McCarty-Brooker  
Centre Manager



## Swiss Mountain Railways

*Malcolm Batt*

**W**e have holidayed twice recently in Interlaken. The great thing about Switzerland is their railway system and Interlaken is a wonderful hub. Interlaken Ost Bahnhof is a terminus station where three separate systems commence. There is the standard gauge line to Bern, a metre gauge line to Lucerne and the Bernese Oberland Bahn known as the BOB, also a Metre Gauge line.

Travelling on the BOB one has to join the correct section of the train, which departs from Interlaken using normal adhesion and travels to Zweilütschinen, a distance of 8km, where the train divides. Today we are in the section travelling on to Grindelwald, which is at a distance of just under 20km. Having left Zweilütschinen we were soon be experiencing a slight vibration through the train as the power car engaged with the rack as the line raises more than 300m in the last 5km with gradients as steep as 10% (1 in 10). After a journey time of about 30 minutes we arrive at Grindelwald where the town including the station has a real Alpine feel. Photo 1 shows a BOB train at Lauterbrunnen.

The Bernese Oberland Bahn was originally constructed in 1890 and was originally steam operated. It was electrified in 1914 and operates from 1.5kV DC.

Technical note. Why 1.5kV DC? Well a classic prime mover for electric traction is the series wound DC motor. The highest practical operating voltage is around 750V before we get breakdown between windings. However due to the high currents associated with heavy traction, 750V distribution requires large conductor rails and frequent substations. To reduce the current two traction motors are connected in series to run from 1.5kV. This system was used in the UK on the trans-Pennine route, but lost favour for the 25kV AC system made practical by the developments in on board solid-state rectifiers.

Back to Switzerland and on arriving at Grindlewald we cross over to the waiting train in the Wengernalpbahn known as the WAB. This is a 800mm gauge totally rack system, in fact the longest continuous rack railway in the world, with a combined



length of over 19km. Once the train is underway we descend for about 1km at a 25% (1 in 4) gradient to Grindlewald Grund, a depot station in the valley. After departing Grindlewald Grund we start to climb very steeply and the scenery becomes more and more spectacular as we ascend to the summit station of Kleine Scheidegg at 2,061m which is in the shade of the 4,107m peak of the Jungfrau mountain. Photo 2 shows a WAB train entering Wengen station on the same system.

You will note the complexity of the point work on the rack railway. Photo 3 shows details of one of the points, how about having a go at making one in 5" Gauge?

The WAB was built in 1893 and converted to electric traction in 1909. It also uses 1.5kV DC. On a previous visit the trains all had resistor networks on their carriage roofs presumably as electric braking was used. On our last visit, we noted that most of the trains were of newer stock and the resistors were no longer in evidence. During this stay we were walking in the mountains and finished up at a remote alpine halt where we had to wait for a train back to Grindlewald. I saw that there was an electricity substation in the station building with a specification displayed, see Photo 4.

The substation was in two parts, one section containing rectifiers to produce the 1.5kV DC from 16kV 50Hz 3-phase while the second section consisted of an inverter to convert the 1.5kV DC back to the 16kV AC. Obviously the excess voltage from the braking effect was now being put back into the mains and not merely being turned into heat.

Back on the trains, another rail system sets off from Kleine Scheidegg, the famous Jungfraubahn, Photo 5. This is a Metre Gauge rack railway which tunnels into the mountain to reach a summit station at 3,454m. On leaving Kleine Scheidegg we



Unterstation  
Sousstation  
Substation

WENGERALPBAHN

Alpiglen

Technische Daten / Dates techniques / Technical data

Gleichrichter / redresseurs / rectifiers

3 x 16'000 VAC, 50 Hz + 1'500 VDC, 2 x 1'600 kW

Wechselrichter / onduleur / inverter

1'500 VDC + 3 x 16'000 VAC, 50 Hz, 1'000 kW

4



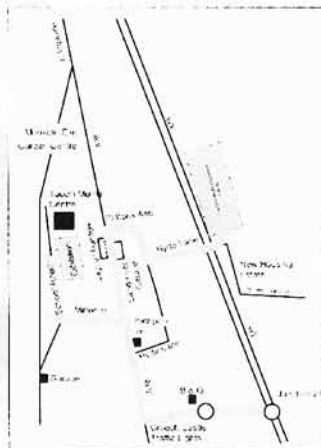
5

travel for about a kilometre before entering the tunnel. The journey takes about 45 minutes as the train winds its way up with gradients as steep as 25% (1 in 4). We stop twice where we can get out of the train and observe the Eiger and its glacier through large observation windows cut through the mountain. On arriving at the top station we have to climb several flights of stairs within the cavernous area within the mountain before exiting onto the snowy peak where, on a clear day, the views are tremendous. The temperature outside with the wind-chill, even for June, was freezing, so the bar serving Gluhwein was welcome before our journey back.

Construction of the Jungfrau railway was started in 1896, but the top station was not reached until 1921. The railway operates from a 1.125kV 3-phase supply, distributed from two overhead cables and the track. The two overhead cables can just about be seen in photo 5. Three-phase systems were popular in mountainous areas as electric braking would put power back into the supply. Disadvantages were large on board motor generators and a limited speed control. However, modern electronics overcome many of these drawbacks.

The mountain railway systems in the Jungfrau region south from Interlaken including most of the cable car rides are accessible using their multi-day Railpass. It makes an excellent holiday not only for railway buffs but anyone interested in walking, viewing scenery or just wanting to indulge in the Alpine way of life. The other rail systems and steamer trips out of Interlaken also provide excellent touring prospects but would need further articles to describe them in this Newsletter.

Following last year's popular addition to the exhibition we will again be opening our railway at Creech St Michael TA3 5QJ near Taunton (approx 2 miles from the show). Train rides will be FREE to persons visiting the exhibition. Take the short trip from the show and enjoy a ride! See map below for location.



The railway is around half a mile in length, passing through a cutting and returning through a wooded area



The station area at Creech St Michael on a regular summer running Sunday

Some miniature traction engines in steam at a previous exhibition



TAUNTON MODEL ENGINEERS, A COMPANY LIMITED BY GUARANTEE COMPANY NO 2042204  
REGISTERED OFFICE  
c/o WFR ENGINEERING, VETTOR HOUSE,  
CULMHEAD BUSINESS CENTRE, CULMHEAD, TAUNTON TA3 7DY

## Taunton Model Engineers MODEL ENGINEERING EXHIBITION

Heathfield Community School, Monkton Heathfield  
Taunton TA2 8PD

14th and 15th April 2012

Railway Locomotives  
Miniature Traction Engines on display  
and running in steam outside  
Stationary Engines, Toolmaking,  
Clockmaking, Precision Engineering  
Working Demonstrations  
Trade Stands

Visit our 5 and 7 1/4 inch gauge Railway  
at Creech St Michael, a short distance  
from the show and have a FREE ride  
(see reverse of leaflet for details)

Visiting Model Engineering Societies  
A great day out for all the family

HOT & COLD REFRESHMENTS  
AVAILABLE ALL DAY  
FREE AND DISABLED PARKING

Open 10 am - 5 pm Saturday, 10 am - 4 pm Sunday  
www.tauntonmc.org.uk or Telephone 01823 698765