

The monthly club  
newsletter for  
Bournemouth &  
District Society of  
Model Engineers

Secretary: Dave Finn  
Tel: (01202) 474599



## Chairman's Thoughts

Well, it's come round to that time of year again; all systems are go for our Santa Special on Sunday 17th December. Your help would be appreciated on the day, food will be provided for all those that help. The scenery has all been checked out and the presents wrapped. The new platform will be finished by then, subject to the weather.

I hope everybody enjoyed the Ladies Evening speaker, Pam Smith, with her talk on 'Trekking for Macmillan Cancer Support' - she certainly made the evening interesting with her excellent presentation and enthusiasm, so it was decided on the night that we would support her charity, The Macmillan Cancer Support, for our Charity Day for next year. This will be on 12th August 2007. Hopefully this date will also be the official opening of the new 16mm track.

A date for your diary. The Society's Open Days will be held at Littledown on Saturday 16th & Sunday 17th June 2007.

At our last meeting, Ted Rouse was drumming up interest for the Society Calendar that he had produced with pictures of locos belonging to Society members, two fine examples of Polly amongst them. Unfortunately the cost of the paper, ink and binding has made them

prohibitively expensive to produce, so I will put the calendar on our web site on Ted's behalf and you can download and print it off yourself if you want a copy to hang on your wall. Well, hopefully my son will put it on the web site.

By the way if you ever want the Newsletter in glorious colour, rather than the black and white version you get via Royal Mail, it can be downloaded from the club web site [www.littledownrailway.co.uk](http://www.littledownrailway.co.uk)

Just to remind those who will be going to the Society's Annual Dinner, please send your menu choices, with full payment by, 17th January 2007 to Dick. The menu is on the Society's web site if you have lost last month's Newsletter.

Hopefully we will see you all at the Christmas Party on 20th December. It's going to be a BBQ as well. We will cook the burgers in the oven at the hall, these being the ones that were not used when it rained at the Late Autumn Running BBQ. Please bring cakes, crisps, sandwiches, etc.. as per normal for the party. Prizes for the Christmas Raffle would also be gratefully appreciated.

I wish everybody a Happy Christmas and a healthy New Year.

**David Martin**

## Editor's Ramblings

The last Newsletter of 2006 is upon us. Doesn't time fly! I'm sure that it accelerates the older one gets. Remember how long it took to go from bedtime on Christmas Eve to waking up on Christmas Day when you were very young - now it seems that that's how long it takes to go the whole year!

In this issue I have tried to introduce some of the other interests of our members. So, you will find a piece about building, and flying, replica model diesel engines.

There is also a picture of one of my many ongoing projects - the complete restoration of my Honda 400/4 motor cycle. I know that other members are interested in motor cycles, so come on, let's see what you are doing.

Clock making is another area of interest to several members that I know about.

How about letting me have some details and pictures of your projects? Although a perfectly written article with fantastic pictures would be great, I am quite prepared to accept rough notes and arrange to take the pictures myself. Unfortunately, while I can transform the rough notes, it is impossible to make fuzzy, low quality pictures into useable works of art.

May I take this opportunity to wish you all a Happy Christmas and a prosperous New Year.

**Please note that the Copy Date for the January issue of the Newsletter is Tuesday 2<sup>nd</sup> January.**

**Dick Ganderton**

**B**rian Merrifield has been getting on with taking the Society's *Speedy* to bits to ascertain what needs putting right. "You've been spouting on about wheel profiles so here's *Speedy's* wheels - see what you can do with them" he said during a recent visit.

The first thing to do is to take some measurements to see what's what. Thinking hard about just how to measure railway wheels I thought that, rather than try to borrow a shadow graph or cut a section through the tyre, I would experiment with Plasticine.

The Plasticine, borrowed from Peg's craft box - she has as much 'useful' stuff as I do - was flattened and carefully moulded across the tyre, ensuring that it went into every nook and cranny. The Plasticine impression was then carefully removed and placed on a piece of plywood covered with Clingfilm. This was transferred to the glass platen of my scanner - the Clingfilm preventing the Plasticine sticking to the glass - and a piece of white paper laid on top as I didn't dare close the lid of the scanner.

The scanned image was then opened in Photoshop, blown up to four times full size and manipulated to give a nice contrasty outline of the tyre profile.

All the wheels were then measured with a digital vernier and the results tabulated. Fortunately, the axles had centres in the ends and when set up in the lathe between centres the wheels all ran without any wobble. Using the measurements for Back-Back and Wheel Width, the amount to be removed from the back of each wheel could be calculated to make all the widths and B-B dimensions the same. The wheelsets were run between centres and only the tyre at the headstock end was machined, the wheelset being turned end for end to machine the other end.

With all the tyres machined to the same width and the B-B dimensions now the same for all wheelsets, attention could be turned to the treads. Looking at the Plasticine impression confirmed that the tread was parallel. For safe, reliable running the tread must be coned at 2.5 - 3 degrees. Using the measurements, the smallest diameter wheel was chosen. With this wheel at the headstock end, the tread was machined at the required angle using a 5mm dia. button tool. The dials on the top and cross slides were zeroed and the carriage was locked in position. The cross slide was fed in to the required depth and again zeroed. Using the top slide moving away from the headstock the tread was machined to the desired width. The top slide was then wound back to its zero position, the wheelset turned end for end and the other wheel's tread machined. When all the wheel sets had been machined, the first one was replaced in the lathe and the front of the flange machined with the top slide set over at 20 degrees so that the button tool just fitted into the root radius formed by the first operation.

Note that all the turning operations are carried out without any direct measurements being made and that only one operation at a time is carried out on all the wheels before moving on to the next operation. The final operation is to turn all the flanges to the same diameter and then round off the tips. For this a large file - with a handle fitted, of course - can be pressed into service.

	Front	Centre	Rear
<b>Back - Back</b>	<b>4.660"</b>	<b>4.649"</b>	<b>4.650"</b>
<b>Tyre Width</b>			
Left	0.562"	0.564"	0.565"
Right	0.565"	0.561"	0.560"
<b>Diameter</b>			
Left	4.899"	4.897"	4.899"
Right	4.875"	4.880"	4.889"



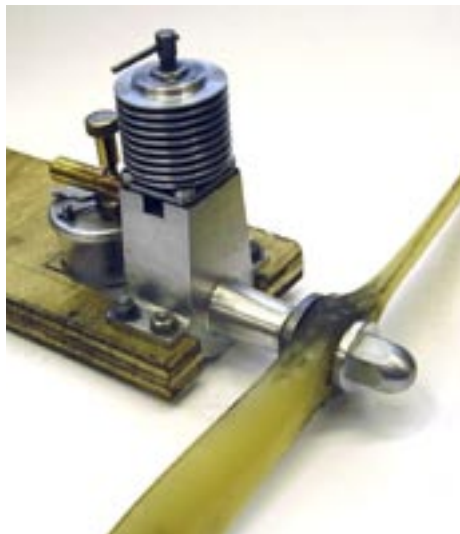
(Top right) Wheel profile at four times full size. (Top left) Wheel measurements. (Above) Plasticine impression of one of *Speedy's* wheels. (Right) Wheelset in lathe set to turn coned tread.



## B&DSME Diary Dates

17 <sup>th</sup> December	Santa Run; Littledown Miniature Railway. Santa will be in his Grotto to meet the children.
20 <sup>th</sup> December	Monthly Meeting; Muscliff Community Centre. Christmas Party.
8 <sup>th</sup> January 2007	Monthly Informal Technical Discussion Meeting; 7.00 for 7.30 pm. Note the date! Brian Merrifield's 12, Burngate Road, Hamworthy BH15 4HS.
24 <sup>th</sup> January 2007	Annual Dinner; Crooked Beams Restaurant. The Menu was in the November Newsletter. Further copies are available by download from the Society's website or from Dick.
17 <sup>th</sup> January 2007	Monthly Meeting; Muscliff Community Centre. Bits & Pieces Evening and Auction.
5 <sup>th</sup> February 2007	Monthly Informal Technical Discussion Meeting; 7.00 for 7.30 pm. John Hoyle's 4, Boscombe Cliff Road, Bournemouth BH5 1JL.
21 <sup>st</sup> February 2007	Monthly Meeting; Muscliff Community Centre. Richard Knott's Annual Video Show.

## The Tale of Two Replica Mills 1.3 Diesel Engines



While John has managed to finish and fly his Mills 1.3 replica, Dick's engine, seen above, is awaiting the manufacture of another contra-piston to finish it.

Both John's and Dick's interest in the Mills 1.3 diesel engine goes way back to the late 1940s as it was their introduction to the world of model aircraft engines.

Both replicas are built to a design by Ron Chernich published in *Model Engine Builder* magazine.

John Hoyle has finished his replica Mills 1.3 diesel engine and fitted it into his vintage Comet II radio controlled model aircraft. Dick's photograph, below, shows him starting it during a recent afternoon flying session at Martin Down. The engine runs beautifully and is fitted with a throttle for radio control, rather than the original spray bar and fuel tank, which he has lent to Dick in an effort to galvanise him into finishing his replica engine.

The model aircraft itself is of interest as it was originally designed in 1937 by A.E. Brooks. At 44" wing span, John's model is just over half the size of the original model and suits the Mills 1.3 perfectly with a 3-channel radio control system.

Photographs: Dick Ganderton



### B&DSME 2007 Calendar

Dear Friends and Society Members

I am sorry to say that after costing my 2007 Society Calendar project it has proved to be far too expensive to carry on. It would cost in the region of £10 for each calendar.

I have given the computer file to Dave Martin so that he can put it on our website. This means that anyone wishing to can download it.

But, who knows what will happen for 2008?

Once again - sorry.

Ted Rouse

### Annual Dinner

Don't forget to book your places at the Society's Annual Dinner. Once again it is being held at The Crooked Beams restaurant, Jumpers, Christchurch. Send your menu choices and cheque, payable to B&DSME, to Dick. Please don't leave it to the last minute.

### Honda 400/4 Restored

This is Dick's 1977 Honda 400/4 that he has owned from new and has just finished restoring to 'as new'. Dick keeps whispering "LE Velocette" into Brian Merrifield's ear hoping that something will happen.



Typeset by Dick Ganderton in Gill Sans using Adobe InDesign CS v3.0.1 on a Macintosh 350MHz PowerPC G3 running Mac OS X v10.3.9 Panther.

### For Sale

**Myford ML7** (Serial No. K13375) on Myford stand. Usual range of accessories, including 3-jaw chuck, 4-jaw chuck, faceplate, catchplate, four-way toolpost, rear toolpost, long cross-slide, fixed steady, vertical slide and machine vice, change-wheels, 3/4 HP Crompton motor. Can be viewed/ tested under power.

Sensible offers, please.

Contact David Delaney, 18 Morrison Avenue, Parkstone, Poole Dorset BH12 4AD.

Tel: (01202) 737199

e-mail: [dai.steam@btinternet.com](mailto:dai.steam@btinternet.com)

### Luscombe Valley Happenings

The annual 'Luscombe Valley Humbug Day' for those who want to try to escape the Christmas Shopping nightmare will be held on Saturday 23rd December.

Next year's dates are as follows:

Cobweb Run 14<sup>th</sup> & 15<sup>th</sup> April

Grand Charity Weekend 28<sup>th</sup> & 29<sup>th</sup> July

Autumn Running Weekend 8<sup>th</sup> & 9<sup>th</sup> September

Humbug Day December 22<sup>nd</sup>

### Other Events

The Model Engineer Exhibition 2006, which was to have been held at Olympia 2, London on 29<sup>th</sup> to 31<sup>st</sup> December, has been cancelled. No reasons have been given and no new date or venue has been announced, although any tickets bought will be honoured in the future.

The **London Model Engineering Exhibition** is at Alexandra Palace 19<sup>th</sup> - 21<sup>st</sup> January 2007. [www.londonmodelengineering.co.uk](http://www.londonmodelengineering.co.uk) for info and tickets.

A Model Engineering Show is being held at Milestones, Hampshire's living history museum, Basingstoke Saturday 21<sup>st</sup> and Sunday 22<sup>nd</sup> April 2007. [www.milestones-museum.com](http://www.milestones-museum.com)



## Les and Mike Mortimer

This Member Profile is of a father and son, Les and Mike Mortimer. Les was born in Bournemouth in 1911 and we catch up with him working for the Royal Blue Coaches servicing and maintaining their vehicles. In 1936 he and Gwen married and the same year he started working for the Army at Bovington, servicing and repairing their armoured vehicles, remaining there until after the war. His next move was in 1948 or 1949 to the Cordite factory at Holton Heath where he was engaged in experimental engineering work. Some time later Les decided to seek employment at Harwell Atomic Energy Research Establishment. He lodged close by during the week returning home at weekends; this only lasted for six months when he decided it was not working out as hoped. His next move was to Taylor's a local tool making company specialising in tools and jigs for Westland Helicopters. In 1975 Les retired and pursued his interest in model engineering.

He had three sons Mike, Phil and Alan, passing on to them his love of engineering that remains with them today. In his early days of model making he set to and built his own lathe it was quite small with a 3" centre height approximately 12" between centres and a round bed. Once that was built he started building his first steam locomotive, a freelance 0-4-0 started in 1938 and completed after the war. It has not been used for some time but remains in the family in Taunton with Mike's brother Phil, as does his homemade lathe.

The boys were encouraged to take an interest in the workshop and as Mike grew he found himself using dad's equipment including the lathe. He built a number of model aircraft including the compression ignition engines. Sadly he has not kept any of his aircraft due to the difficulty of finding places where he could fly them.

Les became a B&DSME member in 1946; for several years he took the Society's portable track to fetes and the like to earn money for various charities as well as the club. The equipment was kept at Edward Webster's works where Dick Mantle worked and their lorry was used to transport it about. When Webster sold out this very convenient arrangement had to come to an end and the track was disposed of.

Mike left school in 1953 and decided to seek employment as an apprentice pattern maker. This sort of work was not easily found in this area and apprenticeships were even harder to find. He was left with the choice either to change his mind or move to the Midlands to find work. This is what he did, going to Herbert Morris the crane maker in Loughborough, a big decision for a fifteen year old lad. After completing his apprenticeship in 1958, Mike received his call-up papers for National Service. However 30/- a week did not impress the newly qualified pattern maker, so he decided to sign on for six years and benefit from an elevated income. The Army trained him to be an aircraft mechanic where he worked on *Auster*, *Beaver* and *Chipmunk* fixed wing aircraft as well as small helicopters. In 1959 Mike was posted to Germany for two and a half years then, in 1962, to Burma and on to Borneo where he saw active service.

By the time Mike was demobbed Alan was in the Navy, but before leaving home had started to build a Don Young designed *Rail Motor*. This was left in an unfinished state so Les finished building it. It is in Mike's keeping now.

After returning home Mike needed employment but was having difficulty finding a job servicing aircraft and started to consider the Police Force. His application accepted, he spent the next twenty-seven years as a policeman. In that time he married Mary and brought up his family of three boys Simon, Kevin and Anthony. Most of the time he worked in the Poole area, although for eight years he was stationed in Sherbourne. Retiring from the police in 1992, he took employment with Securicor for a further six years and fully retired in 1998.

After his mother died, in 1995, Mike started to take his dad to Kings Park on Sunday afternoons and soon his (Mike's) interest in models was rekindled. He joined the B&DSME in 1996 and started to drive Les's *Simplex* at Kings Park. At the same time he set up his workshop at home and started building a *Metre Maid*, which took him six years to build.

By 1998 Mike Baker suggested that he would be just the person to serve on the Society's Committee, which he continues to do to this day currently as Treasurer. He is also one of the Society's Boiler Inspectors.

Mike's brother Phil lives in Taunton. After a career as an aircraft engineer he is also a model engineer and is an active member of the Taunton Society and has built a very nice five-inch gauge *Britannia*. Alan is a Chief Engineer in the Merchant Navy working for an American company and now lives in the Philippines.

Les passed away in 2000 at 87 years of age, leaving his sons to continue his love of engineering. I think Mike is a little disappointed that none of his sons has so far developed an interest in Model Engineering.

I am very grateful to Mike for allowing me to write this profile and to Mary for making me so welcome when I visited them last week.



## A New Member Introduces Himself

Just a few lines to say hello. For those of you who don't know me, my name is Gary Garrett. As many of you will be aware, over a period of about fourteen years I have been a frequent visitor to your track. Subsequent to unforeseen circumstances it is now expected that I will relocate to Bournemouth permanently. I have therefore paid my dues and joined the club. I have many friends among the membership and hope to make more now that I will be seeing you all more often. I am somewhat limited in my physical abilities nowadays, but I will be happy to assist the club in any way that I can.

I am a Cockney born and raised and have been an office worker for most of my life. I have been an enthusiastic modeller of aeroplanes and boats since before the war. My son and I have an extensive 00 gauge railway collection and a classic Scalextric collection, including many home built cars that are currently stored in my loft.

I took up model engineering after I retired. I attended courses at the Poplar College and was a founder member of the Dockland & East London Model Engineering Society. After moving to Essex I joined the Canvey Railway & Model Engineering Club and attended more courses at Havering Technical College.

To date I have four as yet uncompleted projects, including a 3 1/2" gauge *Conway* and a 5" gauge *Stirling Single*. I am experiencing difficulty with these as the workshop I equipped in my shed has proved to be inadequate. The lathe I purchased is too small for many of the required tasks. My lack of engineering background is probably the reason for this. I trusted advice from fellow club members whose own knowledge evidently did not match their confidence. I had made arrangements to circumvent these difficulties, but the previously mentioned unforeseen circumstances have now made those arrangements unworkable.

Last, but not least, I would like to say thank you to all of you for being so friendly and hospitable over the years, this has encouraged me to join and will greatly ease the transition to my new home.



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## Speedy News

I am sorry to have to say that I was wrong to suggest that *Speedy's* new boiler is to be built at Littledown. When I wrote that piece for last month's *Newsletter* it was my assumption we had full Committee approval. This is not the case and so I have to apologise for misleading you all. The Committee feel it is inappropriate and dangerous to do that sort of work in a public park. This is not a problem for me as I am able to carry out the work at home, but the idea of boiler making sessions for members is not now possible. If anyone would like to come and join me while I try to stick this boiler together they will be more than welcome.

The list of jobs needing to be done is starting to take shape. The two tasks I am currently most keen to find help with is the making of a new set of axle boxes and also a pair of axle pumps; yes it has two axle pumps. Volunteers can contact me on 01202 683701.

**Brian Merrifield**



## Santa Run

**R**equest from Peggy - please can we have some cakes for afternoon tea at Littledown during the Santa Run on Sunday, 17<sup>th</sup> December.  
Santa is also looking for a bevy of Elves and Helpers - so, if any lady members want to volunteer to be an Elf or Helper, please just turn up by about 10.30 am.

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## Christmas Party

**R**equest from Irene - please can we have some Prizes for the Raffle that she is organising during the December Meeting, at Musclif Community Centre on 20<sup>th</sup> December.

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## Annual Subscriptions

**O**ur Treasurer, Mike Mortimer, would like to remind all members that Annual Subscriptions are due on 1<sup>st</sup> January 2007. You don't have to wait until 1<sup>st</sup> January to renew and he will be more than willing to receive members' subscriptions anytime between now and the New Year. Subscriptions are the same as last year at £18, or £19 to include your partner.

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## Trolley Foot Rest Clearances

**T**he new concrete platform at Littledown has necessitated revised clearances for trolley footrests and leg irons. The platform surface is now 9" below rail top level at the end of the platform. To ensure adequate running clearance, Members with their own riding trolleys should ensure that the underside of foot rests are no lower than 8" below rail top level with the springs fully compressed.

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## 16mm Track Update – No. 2

**V**isitors to the Engine Shed at Littledown will have noticed the encouraging rate of progress of the 16mm track. For those members who are unable to see for themselves here is a quick up-date. The base structure and top planking from the steaming bay-cum-marshalling yard, straights, and upper bend have been completed. It is hoped that by the time you read this the top return loop by the main track gate will be completed. If time and weather allow we may even be able to cover the track base with roofing felt for extra weather protection and will represent track ballast when the track is laid.

This rapid progress has to be attributed to the method of construction, the unseasonable warm dry weather on our working Wednesdays, and the willing band of happy helpers.

The question has been asked as to why we did not choose to go along the ground level route, as surely it would have been cheaper? Well! Firstly, from commercial literature it would seem that the costs and work involvement are very similar for both ground level and elevated tracks. Secondly, with ground level tracks in order to get a natural view of the train and its operation, rather than an aerial view, one has to get ones eyes down to about 3" above ground level. Age and agility comes into play here for most of us (need I say more) an elevated track minimises back bending and allows a more civilised attention to steaming and operation of gas or coal fired locomotives. With the Editor's permission (*granted*) I will discuss various forms of propulsion in a later article. With our sloping site we have the best of both worlds, the steaming bay at waist height and the top loop at nearly ground level.

Providing the weather holds we plan to complete the felting and lay the track out to the top loop and back and fit a thief-proof cover before winter really sets in. The bottom loop will be portable and will take longer to construct, but we still plan for completion in time for next years running season.

**Gordon Miles & David White**

