

# **BEECH HURST NEWS**



**Cover picture: -**

*New For New Year's Day:* One of a few locomotives that traversed our track on New Year's Day was Phill's new 'Terrier' locomotive. Although not yet finished it ran for several successful laps during the afternoon. A short report on the day itself follows inside this edition.

**Joint Editors**

Mark Allen  
10 By Sunte  
Lindfield  
West Sussex  
RH16 2DF

Andrew Brock  
189 Ancaster Court  
The Welkin  
Lindfield  
RH16 2PW

[Mark.Allen@SJMG.net](mailto:Mark.Allen@SJMG.net)

[andy@andybrock.net](mailto:andy@andybrock.net)

SMLS Ltd, The Clubhouse, Bolnore Road, Haywards Heath,  
West Sussex, RH16 4BX.

Opinions expressed in the News are not necessarily those of the Society for which it cannot be held responsible  
Copyright is that of the author or the S.M.L.S

## **Editors Notes**

Welcome to 2006 and a belated Happy New Year to everyone. With this newsletter a couple of weeks later than usual we are now getting perilously close to the new running season that is now but a month away. We are in the 'home straight' as far as the winter work season is concerned and by the time the April edition is published in a couple of months time, we will be firmly back in the 'driving seat' so to speak and running will have begun in earnest.

Initial thanks go as always to the contributors to the December edition and also to those who have contributed to this edition: Chris, Fred, Alan Garner, Mike and 'Us'. Along with the usual columns and an updated diary of events, there is an important article on revised boiler test rules, a cautionary word about silver solder, a subscriptions reminder and several articles on events and work during the past two months or so, as well as the answers to the Christmas quiz, so as usual read on and enjoy...

**Andrew & Mark**

## **Forthcoming Events**

As you will see towards the end of this edition, there is an updated diary of events that goes as far as we currently have dates. Since the December edition, several dates for visits to and from SMLS have been added to the diary and there are likely to be 3 or 4 special running days to be added during the course of the season, plus a couple of BBQ's, probably in June and August as usual. Some events may appear on the blackboard in the clubhouse and not in the newsletter if they are arranged with less than a couple of months notice, otherwise the next newsletter in April should have a comprehensive list of dates for 2006.

**Andrew & Mark**

## **Subscriptions**

Many thanks to the majority of members who have paid their subscriptions promptly. If you have not already been given or collected your new membership card, it should be enclosed with this issue of the News. Those who have not yet paid should note that only paid up members are entitled to attend the AGM and to run their locomotives on the track. You can pay at the AGM, leave it at the club house or post it to me at 8, Finches Park Road, Lindfield, Haywards Heath, RH16 2DN. The subscription remains at £10 for adults or £5 for juniors (under 18's) and the over 65s.

**Alan Garner**

## **New Year's Day Run**

With a brief reference to the front cover picture, there was a track day on 1<sup>st</sup> January as usual that was very well attended by about two dozen members and with about 6 or 7 machines on the track during the course of the day. Apart from being a bit cold, the day went pretty well and was mostly dry, that made for good track conditions.

It is always nice to hold a track day like this during the closed season so members can take a break from the chores of winter work and have a run instead, we just need that year when there is lying snow too!

## **Chairman's Notes**

At last, the days are drawing out a little and spring is hopefully around the corner! We are busy planning the timetable for this year and hope to make a start running passenger trains at the beginning of April, (Easter coming in Mid-April this year!) Also coming soon is our Annual General Meeting on March 4<sup>th</sup>. After the formal meeting we have usual open discussion session, when it's your chance to comment on club issues. Please come along if you can, and have your say! It's no good complaining after, that something isn't being done to your liking! Winter work has progressed well (see editors' report later in this issue) and thanks are due for all the hard work done, by a great many members. If the rain stops, we can finish a few jobs, have a paint up around the station area and we're ready for the new running season. This year I think we start with more steam engines in good shape than for a few seasons past, so hopefully we'll have another good year. See you at the AGM.

**Mike**

## **Notes on the New Boiler Testing Procedure**

These new regulations came into effect on January 1<sup>st</sup>. this year. The first point to make is that from a boiler owner's point of view not a great deal has changed. From a boiler inspector's point of view there may be a little more paperwork involved. I will restrict my comments below to copper boilers, as these are all we have at present in the Society. The document covers both copper and steel boilers up to a capacity of 1100 bar/litres. If required I can give a method of calculating this boiler capacity (approximately) working from drawings, although in most cases with the boiler already in existence the easiest way to start is to fill it absolutely full of water, and then drain it out into a measuring jug. If possible work in cc's or ml's. Once one has the volume of water in either of these units divide by 1000 to arrive at litres. Then take the working pressure of the boiler and divide that in pounds per square inch by 14.504 to get the working pressure in bar. Then multiply this latter figure by the volume in litres and that is the bar/litre capacity of the boiler. If one assumes a working pressure on average as 90 psi (6.205 bar), then we can test boilers up to a volume of 177.27 litres – this is 38 gallons!! Even at a working pressure of 150 psi. (10.342 bar) the allowable volume is 106.36 litres or 23.4 gallons. This ought to cover most of our requirements. If boilers exceed 500 bar/litres then the insurance company has to be notified by the Society of the names of those inspectors deemed competent to look at the larger capacity boilers. For reference a 500 bar/litre boiler designed for 90 psi. working pressure would have a volume of 80.58 litres – 17.725 gallons.

The following are a few points regarding testing taken from the regulations.

1/ If a new boiler is to be built that is not to a published design, then the design should have drawings and if possible calculations available in order to check safety factors etc. The new design may also be checked against a published design to show the usage of sound historically proven good practice. If no working pressure is indicated on the drawings then calculations are required for validation.

2/ As before new boilers being built should be submitted to the boiler inspector at least twice during its construction to check for sound joints while the reverse sides are still accessible for inspection.

3/ As before it is the responsibility of the owner to prepare the boiler for test.

4/ New boilers are to be tested to 2 x working pressure. If construction of the model exceeds a further four years from the initial test then a hydraulic test at 1.5 times w.p. is to be conducted prior to the steam test.

5/ If a boiler is considered to be in good order and structurally sound then the period of hydraulic tests need only be every 4 years. The frequency of hydraulic tests is at the discretion of the boiler inspectors. Repeat tests as before are to 1.5 times w.p.

6/ A visual examination of the boiler whilst cold plus a steam test to w.p. are to be carried out at intervals not to exceed every 14 months. The steam test as before includes a safety valve accumulation test, checking that both methods of boiler feed are functioning correctly, that the water gauge blow-down works and that the level of water shown in the glass recovers quickly once the gauge cock is shut.

7/ Witnesses of tests are not to be the boiler's owner but may be any other club member with knowledge of the design and construction of such boilers.

8/ If an inspector refuses to test, or having tested a boiler feels unable to issue a certificate, then the details are to be recorded on the boiler record. (This is in fact is done like this at present). At the time of writing (3rd. January) we have not received the new certificates. It looks likely that you will need to have two. One for hydraulic tests and the other for visual examinations and steam tests.

9/ Providing a commercially built boiler is certified in accordance with The Pressure Equipment Regulations 1999 (PER) and is CE marked and the documentation is endorsed by the Notified Body then the certificate of hydraulic test is acceptable only a steam test being required later. Any modifications carried out to such a boiler after delivery will require a club full 2 x w.p. hydraulic test.

There should be a copy of the actual regulations hanging on the notice board for all to see by the time this is in print.

**Fred Bailey**

## **Silver Solder – A Cautionary Tale**

In the modern politically correct society we are supposed to live in there is a new regulation that will prevent our grand children dying in their beds!

'WEEE' - Waste electrical and electronic equipment.

This is part of the restriction of hazardous substances directive that is intended to ensure that pollution of the environment is minimised.

As a result of this directive traditional soft solder using Tin and Lead is to be outlawed (more of this later)

New lead free solder is being introduced on to the market that contains less than 0.1% lead.

Instead the solders contain mixtures of Silver, lead, gold, copper, and other trace metals.

The warning is that the solders are being sold as "Lead Free Solder" and "Lead Free Silver Solder"

We will have to take great care that this "Silver solder" is not mistaken for the high temperature Silver solder we expect. The melting point of these new soft solders ranges from 183 deg C up to 302 deg C. I don't expect that mixing up these during a boiler construction would go down well with our inspectors!

Unfortunately, these new solders as yet are unable to re-melt correctly for repair work, as there are problems with the fluxes.

This means that any failure on a printed circuit board will require the PCB to be scrapped and not repaired (so adding to the waste problem, not curing it).

Although the old Tin Lead solder is to be outlawed it will continue to be used in safety critical applications such as aircraft electronics.

So much for improved safety!

**Chris Saunders**

## **Jokes - PRISON v WORK**

Thanks to Enid Marten for following contribution.

Just in case you ever get these two environments mixed up, here's a handy reference:

IN PRISON: You spend the majority of your time in a 10x10 cell.

AT WORK: You spend the majority of your time in 8x8 cubicle.

IN PRISON: You get 3 meals a day.

AT WORK: You get 1 break a day and have to pay for it.

IN PRISON: You get time off for good behaviour.

AT WORK: You get more work for good behaviour.

IN PRISON: The guard locks and unlocks the doors for you.

AT WORK: You must often carry a security card and open all the doors yourself.

IN PRISON: You can watch TV and play games.

AT WORK: You get SACKED for the above!

IN PRISON: You get your own toilet.

AT WORK: You share a toilet with people who pee on the seat.

IN PRISON: They allow your friends and family to visit.

AT WORK: You aren't even supposed to speak to your family.

IN PRISON: All expenses are paid by the taxpayer with no work required.

AT WORK: You get to pay all your expenses to work and they deduct taxes from your salary to pay for prisoners.

IN PRISON: You spend most of your time behind bars wanting to get out.

AT WORK: You spend most of your time wanting to get out and go inside bars.

IN PRISON: You deal with sadistic wardens.

AT WORK: They are called managers.

**Enid Marten**

### **Christmas Quiz Answers**

Listed below are the answers to our Christmas Quiz from the December edition.

#### **Forth Rail Bridge:**

1. Answer (b) – Sir John Fowler and Benjamin Baker
2. Answer (f) – 6,500,000 rivets
3. Answer (e) – 20 years
4. Answers – 4,000 men, 54,000 tonnes of steel, 6, 500,000 rivets, £3,200,000 to construct & £235,000,000 today!

#### **Forth Road Bridge:**

1. Answers – A – Hanger Cables, B – Main Cables, C – Main Towers, D – Bridge Deck & E – Anchorage Points.
2. Answer (e) – 156m
3. Answer (d) – 91m
4. Answer (f) – 12,005,151 vehicles

## Bridge Questions:

1. Meldon
2. First all concrete viaduct
3. Maidenhead, across the Thames
4. Ouse Viaduct, Balcombe
5. The Tay bridge
6. Lions
7. Barmouth bridge
8. River Nidd
9. Prince Albert.
10. Conwy bridge
11. Welwyn
12. Swing bridge, at Norwich
13. Chirk
14. 1879
15. Valebridge viaduct, between Haywards Heath and Wivelsfield.

We hope that they were fairly suitable questions and that if you had a go then you enjoyed doing them. If anyone has any ideas for a quiz or something similar for this years' December edition, please let us know.

**Andrew & Mark**

## Winter Work

As we draw slowly towards the new running season the last of our winter projects are beginning to be completed if they haven't already been so.

Andrew and Mark have recently finished planting the last of the new signal posts that will eventually replace the life expired old ones. It is unlikely that they will be wired up in the next few months, but will probably be commissioned one at a time as the adjacent post is sawn off, within the next year or so as time permits.



The track through the long tunnel has been 'turned' and that should give enhanced grip for the last part of the climb before the summit is reached in the middle of the tunnel. No more track will be replaced this side of the new season, but Mike may 'turn' another section during the running season if time permits.

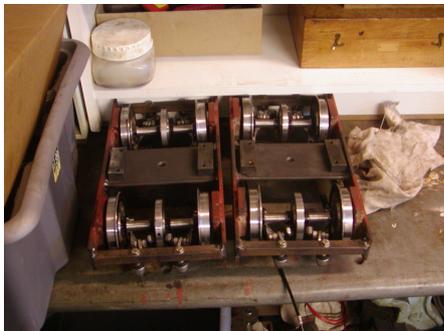
**(See picture left)**

The tunnel gates have been transformed from rotting metal to new shiny wire and heavy duty frames over the past few weeks. The North end of Parkfield Tunnel has now been completed and Vince and gang are now working on the South side gates in readiness for the new season.

Ray has been busy making new seats for the 'old' stock, the old seats are now life expired. At present 5 long and 2 short have been put together, with a view to another 5 long and 3 short seats possibly required if we decide to keep the 'old' stock for the foreseeable future, if the new bogies will fit the frames, which they look like they will.



Peter Chapman has been busy, making a new handrail for the steps to the North of Parkfield Tunnel, which have been there for years, but no one has yet got around to making the handrail for them. After that he has also re-made the doors on the cupboard nearest the loco shed in the clubhouse. They now open outwards, instead of sliding and new shelving (straight) has been installed to replace the old 'bowed' boarding. **(See picture left)**



John Midderigh has also been busy 'gardening', keeping the leaves at bay and also clearing dead and out of control shrubbery around the back meadow. It does look very smart out the back of clubhouse and it is only thanks to the hours of work that John has put in that we can keep the area in the tidy state it is.

Steve Turner has been busy designing and making a linked braking system for the new rolling stock.

**(See picture left)**

Andrew and Steve adapted the new end brake a few weeks ago and by adjusting the leverage made it a nice feeling brake with plenty of purchase without too much pull. The idea now is to link car 1 with car 2 and give through braking to at least the two front cars of any train with 3 or 4 cars. At present this is still being developed and through these pages we will keep you up to date with the progress on these new trucks.

Thanks also go to everyone else who has performed small tasks, cleaning and housekeeping etc... that most of the time goes unnoticed or is taken for granted if you are not there at the time. The last winter work pages will appear in the April edition, by which time we will be running and most of the major projects will be firmly behind us for another year.

**Andrew & Mark**

## **Diary Of Events**

2<sup>nd</sup> March 2006 – Club Night – Will start at approx 1900

4<sup>th</sup> March 2006 – AGM – Will start at 1900 hours

1<sup>st</sup> & 2<sup>nd</sup> April 2006 – 2006 Running season commences

6<sup>th</sup> April 2006 – Club Night – Will start at approx. 1900

23<sup>rd</sup> April 2006 – Visit to IoW track at Broadfields, Cowes, IoW, details TBC

4<sup>th</sup> May 2006 – Club Night – Will start at approx. 1900

20<sup>th</sup> May 2006 – Provisional visit of Pinewood, IoW and Maidstone to SMLS, TBC

4<sup>th</sup> June 2006 – Visit to Pinewood track, Nr. Wokingham, details TBC.

1<sup>st</sup> June 2006 – Club Night – Will start at approx. 1900

Mid-June 2006 – Bring your own BBQ evening – date and time TBC

6<sup>th</sup> July 2006 – Club Night – Will start at approx. 1900

3<sup>rd</sup> August 2006 – Club Night – Will start at approx. 1900

26<sup>th</sup> August 2006 – Provisional bring your own BBQ evening - TBC

7<sup>th</sup> & 8<sup>th</sup> October 2006 – Visit to Malden track, Nr Surbiton, details TBC

N.B. Other events are not always shown in the diary of events because they have been arranged at short notice; check black/notice board at the clubhouse for more details.

**Andrew & Mark**

## **SMLS Materials Store Stock list – 24/11/05 UFN – By Andrew**

A few weeks ago I set about trying to catalogue our entire materials store stock to find out what we have, what we need and what we don't! Over the next couple of news' I will be listing out our entire stock list of metals, ferrous and non-ferrous, screws, rivets etc... Since the December edition we have had authorisation to spend some money on ordering some materials and sundries and these will be added to the list for the April newsletter. Listed below this time are all the non-materials, i.e. bolts, nuts, rivets etc...

<u>Material/Size</u>	<u>2BA</u>	<u>4BA</u>	<u>5BA</u>	<u>6BA</u>	<u>7BA</u>	<u>8BA</u>	<u>10BA</u>
Brass CSK Head <b>Screws</b>			(1 1/2")				(1/2")
<b>Price</b>			TBC				TBC
Brass Cheese Head <b>Screws</b>			(1")	(1/2")			
<b>Price</b>			TBC	(20) TBC			
Brass Round Head <b>Screws</b>		(3/4")	(3/4" & 1")				(1/2")
<b>Price</b>		TBC	TBC				TBC

\*\*Also in Brass are 1/4" WHIT Round head screws x 3/4" long, **price TBC\*\***

Slotted CSK <b>Screws</b>							(1 1/4")
<b>Price</b>							TBC
Socket Cap <b>Screws</b> (CSK)		(3/4")		(3/4")			
<b>Price (each)</b>		10p		10p			
Socket Cap <b>Screws</b>		(1")		(3/4")			
<b>Price (each)</b>		6p		6p			
Socket Grub <b>Screws</b>		(3/8")	(3/8")	(1/4")			
<b>Price (each)</b>		<b>10p</b>	<b>15p</b>	<b>20p</b>			
Steel Hexagon Head		(1/2")	(1/2")	(1/2")			(1/2")
<b>Price (per 100)</b>		TBC	(300) 275p	(900) 150p			(100) 120p
Steel <b>Nuts</b>	Yes	Yes	Yes	Yes		Yes	Yes
<b>Price (per 100)</b>	(200) TBC	(1400) 115p	(200) 100p	(400) 150p		(300) 45p	

\*\*Also in Steel are 1/8" WHIT CSK screws x 1" long, **price TBC\*\***

<u>Material/Size</u>	<u>2BA</u>	<u>4BA</u>	<u>5BA</u>	<u>6BA</u>	<u>7BA</u>	<u>8BA</u>	<u>10BA</u>
Taps (Carbon) 1/4"					Yes		
5/16"		Yes					
3/8"						Yes	Yes
1/2"		Yes	Yes	Yes			
3/4"		Yes*	Yes				
7/8"			Yes				

\* = HSS Steel, all **prices** are TBC and offers are accepted.

<u>Material/Size</u>	<u>3/64</u>	<u>1/16</u>	<u>3/32</u>	<u>1/8</u>	<u>5/32</u>	<u>3/16</u>	<u>7/32</u>	<u>1/4</u>	<u>9/32</u>
Brass Rivets	(1/4")	(1/4")							
Price (per 100)	(1) TBC	(200) TBC							
Copper Rivets			(1/2")	(1/2")					
Price (per 100)			(1) TBC	(400) TBC					
Iron Rivets		(1/2")	(1/2")	(1/2")					
Price (per packet)		160p	TBC	200p					
Bronze Balls					Yes	Yes	Yes	Yes	Yes
Price (each)					(13) 10p	(2) 10p	(5) 10p	(9) 10p	
Nitrile Balls				Yes		Yes	Yes		
Price (each)				(5) 70p		(4) 125p	(6) 70p		
Viton Balls					Yes				
Price (each)					(1) 125p				
Brass Pipe Cones (incl. Nuts)			Yes	Yes	Yes	Yes			
Price (each)			TBC	55p	55p	60p			

\*\*Please note that we also have an assortment of Rustless/Stainless Steel balls, please enquire if you are interested\*\*

\*\*All items listed with a **bold** number underneath show the quantity we should currently have in the stores\*\*

