

# **BEECH HURST NEWS**



**Cover picture: -**

*Highly Decorated:* Following their marriage service at St Wilfred's Church, Haywards Heath, members Ian and Sharon then had a photo shoot at Beech Hurst and a ride on the train as part of their big day. A short piece appears inside this issue...

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## **Editor's Notes**

Given that this edition is out at the end of August, we are but a month from the closed season once again and despite some late daytime summer heat, the nights are steadily drawing in. As I write, it is sunny and warm; however the forecast for the upcoming Bank Holiday weekend has now turned mixed, so hopefully this will change in time for its arrival. The last 2 months since the June edition have been predominately dry and at times very hot, which is nice for a while but like those freezing cold winter days, can get very tiresome and it is good to return to something nearer average. From the Treasurer's point of view we are still well up on last year and unless September is particularly poor then we will record another very good season. If money is sparse then it doesn't seem to show at Beech Hurst, although having said that, an afternoon out at the park and rides on the train is still good value given how much some attractions cost.

From the June edition, I would like to thank, Andrew S, Roy P and Steve T for their respective articles.

In this edition there are articles by Adam, Andrew S, Roy P and Steve T, along with reports from the social events since the June edition, as well as all the usual writings and an updated Diary of Events, so please read on and enjoy...

**Andrew**

## **Chairman's Notes**

These will be the last notes before the end of the running season – so far, so good! We have had reasonable weather and a steady flow of passengers. Only our special 'double heading all steam' day was thwarted by a swarm of bees, which arrived and settled in the jungle hedge, next to the track! This event seems jinxed, as two or three similar attempts to do it a few years back were cancelled because of bad weather! We managed to run one huge train 'up and back' for the price of a normal fare. In the circumstances, I must say a thank you to all those involved during the day and to all the drivers and guards who made a difficult situation into an interesting and good humoured affair. Special thanks to John Harwood and Steve Steer for the fairground organ and masses of bunting, and to Mike W for providing a 'G' scale layout to entertain the young and old. Thanks too to Nick, TC for the day, who had to handle a lot of initial problems and uncertainties, and changes of plan, as we deliberated the effect of the bees! What happened to them? Adam and Andy B finally managed to contact a local beekeeper who came to deal with the swarm but too late to allow us to drive around the full circuit. Still, I think there was some impressive 'the show must go on' spirit, from everyone, and it's a long time since we ran a train (pushed) and pulled by 6 steam engines and carrying 50 or so passengers and guards!

Whilst on the subject of thanks..., I would like to take this opportunity to thank all the 'unsung heroes' who work hard for the benefit of all. To the gardeners, truck cleaners, kitchen 'washer-uppers', painters, track re-painters, station masters, guards and tea makers etc..., the workshop managers and clubhouse cleaners (and carpet-layers), and especially to all the 'youngsters' who have done the majority of the TC's this season – a big thank you is in order.

A hard-core of about a dozen members, with an 'extended family' making about 20 people in total, turn up regularly to keep the Club operating and in good order, and I must say the place is looking pretty good all round.

A major expenditure for this year has turned out to be getting our old sewer pipes re-lined. It's been the plan to get this done for a year or so but we were forced to do something about them when they blocked again recently and cameras showed the old original pitch fibre pipes to be severely blistered and collapsing. This work took a couple of days and required 40 metres of pipe to be 'lined'. The pipe runs from the kitchen and toilet, out underneath the carriage shed and on into a shared drain in the driveway. The firm who did the work have given us a 30 year guarantee, so most of us won't have to worry about that problem again!

One more BBQ, this weekend, to mark the end of summer and the next social event will be Bonfire Night. One more Wednesday, the last Bank Holiday and then September will be with us! Many regulars will be away in September, on holiday, so if you can help out on a 'turn' in the running book, please contact Dan or Nick who will be pleased to have your assistance. Enjoy the late season.

**Mike**

### **Club History**

Continuing the series, you will find my next 2 pages (9 & 10) stapled to the rear of your newsletter, which follow the last 2 published in the June edition.

**Steve T**

### **Peter Marten Collection**

Following the June edition, I am pleased to report that £142 was raised through donations in memory of Peter Marten. This amount was split between 2 charities, St Catherine's Hospice and Cancer Research UK, and will go towards funding their very valuable work. Thank you to everyone who contributed.

**Andrew**

### **For Sale**

Following our last Committee meeting it has been decided to sell 3 Club assets, which in the first instance will be offered to members through these pages. Prospective bidders may view these items at the Club, prior to confirming their intentions and all are on a 'buyer collects' basis:

- 5 inch gauge Dan Jeavons Metropolitan 'Growler' fibre glass body. Complete and in good used condition, all Offers To Exceed £75
- Petrol driven 'Belle' cement mixer with stand. Complete and in good used condition, if a little dirty, all Offers To Exceed £75
- 3-phase 'Rapidor' power saw. Complete with stand and coolant pump, has seen a reasonable amount of use. All offers considered...

All offers to be marked c/o SMLS Honorary Secretary and left at the clubhouse or via post to: John Baldwin, 1 Markfields Road, Caterham, CR3 0RP. Closing date for all offers is Sunday September 15<sup>th</sup> 2013.

**Andrew**

## **Hi-Vi Jacket**

Following a suggestion a couple of months ago, the Committee decided to purchase a high visibility jacket for use by the TC when visiting Clubs are at Beech Hurst. In addition, the jacket is also to be used if the designated TC for the afternoon needs to hand over the keys between 14:00 and 17:00. The jacket is then to be worn by his deputy until the designated TC resumes responsibility. Hopefully this will eliminate any confusion as to who has the keys and should you require the jacket, it is hung up in the toilet lobby.

**Andrew**

## **Summer Work**

Although our predominant activity during the summer is running the railway, there are always jobs which are required (or better) to be done during the longer, warmer days.

On the track, Roy P and several helpers have continued to paint the entire ½” mile of steel work and anti-tip irons. A mammoth task but worth doing well once and then it is good for several years, as well as making any winter track work much less because most of the painting has already been done. This will continue through into September and any assistance you can give to Roy will always be very much appreciated!

In addition, our station roof and windows, station railings, green clubhouse paint work and fence panels have been given a ‘birthday’ during the last couple of months, with thanks to Dave B, John G, Mike P, Roy P and Steve S for their efforts with these tasks.

Also, Mike W, Steve S and Steve T have continued the tidying and re-modelling of the workshop. With the Smart & Brown lathe now gone and the Colchester Student due to be moved on the Bank Holiday Saturday morning, things are starting to take shape and by the time of the October edition I hope to be able to publish an article by Mike W about the completion of this task and our new workshop plan.

Finally, as previously mentioned, there was the large job of re-lining our sewer pipes from the rear of the clubhouse to the man hole in the driveway opposite our side gates. Now completed, this should give us several decades of trouble free out flow and thanks to John B, John W and Mike P for arranging for this to be done.

By the time of the next edition, Winter Work will be back and I will report on the tasks in hand and those planned for our closed season.

**Andrew**

## **A Special Day at Beech Hurst**

Along with our special events, visitors and normal passenger days, we also had an extra special day in 2013 and one which has not occurred for a good few years previously – a wedding day. Ian Thompson and Sharon Bartlett, both regular Club attendees, arranged their big day for a Saturday and of course the railway had to be part of the celebrations!

It was hot as half a dozen of us walked the ½ mile or so, in our best finery of course, to St Wilfred's Church, which dominates the skyline in the centre of Haywards Heath. There we met with some more familiar faces and in all 10 Beech Hurst members were there to witness Ian and Sharon's marriage. The church was cool and refreshing compared to the outside world and we took our seats in anticipation of what lay ahead. Both Ian and Sharon looked at their very best for the big occasion and the service lasted for about 45 minutes. As we filed out there was little time to waste because after the church the plan was for a photo call and train ride at Beech Hurst. As preparations were made at the park for their arrival, 8 full size locomotive shovels were unloaded from my car to form an 'arch' at the station as the newly wed's passed under. The idea from Norman Payne is tradition when couples involved with the railway scene get married and we thought it would be a nice touch for their special train. After the customary photographs, the train, hauled by Graham's decorated Class 33 completed several laps of the track with various family, friends and photographer aboard (**see cover picture**). Thereafter, Ian and Sharon went to a local social club where they could wind down and enjoy their first evening together. Several Beech Hurst members dropped by the club at various times during the evening and it was great to support them during their big day, and of course the start of their new journey together...

**Andrew**

### **Recent Social Events**

Turning back time a couple of months and you will arrive at our June BBQ when the last edition of the newsletter was released. That day, members of the Basingstoke Club had been invited to visit but for various reasons they could not and therefore it was a normal operating day for us. It was a very pleasant, warm afternoon and that led nicely into the evening BBQ. Our refurbished BBQ grate and grill were christened, and John Baldwin also brought along a gas BBQ to give extra capacity and another cooking dimension. About 20 people attended and 2 trains ran, those being 'Wharfedale' and Dave Mattingley's 3 ½" 'Bantam



Cock' (**see picture left**), which unceremoniously failed due to a broken water gauge. A bit spectacular it was and a warning as to the potential fragility of the glass within the confines of any cab. Fortunately it happened adjacent to the steaming bays and no long term harm appears to have occurred.

As the evening went on, people chatted and enjoyed their food, as well as the tempting selection of puddings and 'Wharfedale' continued late into the evening, burning ever more smoky coal as she went!

It was another very good evening, helped of course by the dry and warm weather, and hopefully enjoyed by all. Thanks as ever to Val & John for the onion and pudding preparation, and of course to everybody else who helped out during the day and into the evening too.



Following our BBQ evening, we had then planned a special day on 20<sup>th</sup> July, followed by a return visit to the Lavender Line during the evening. With everything in place and a reasonable day ahead, the 20<sup>th</sup> July was set to be 3 double headed trains for £1 per ride or £3 to ride all afternoon. With a lot of the planned exhibits in place, such as a fairground organ and 'G' gauge track in the car park, a spanner was thrown in the works when Roy Preston discovered a bee's nest in the far end of the jungle hedge, nearest the Petanque. After some investigation and a number of phone calls we managed to find a local bee keeper who would come and collect them. A little after 13:30

he duly did so but recommended that we did not run past the area until the Sunday because of the risk of returning bees coming back to find the nest had gone! A quick re-arrange then took place and instead of 3 separate trains hauled by 2 locos, we had 1 train hauled by 6! Running Saturday direction, the train went as far as the Bowling Green straight adjacent to signal 3 and then back again to the station in the Sunday direction. By doing this, the passengers got more than the normal ½ mile and went through the long tunnel twice! Generally, people very much understood our predicament and were also fascinated by the bees so all in all it worked out well. **(Picture top: A general overview towards the clubhouse and picture bottom: The bee keeper at work...!)**



Thanks to everybody who helped out during the day in any way they could, especially to John H for the organ, Mike W for the 'G' Gauge railway and of course to Mike's wife Lorema for cooking numerous bacon rolls first thing to keep us fuelled for the day ahead! **(Picture left: One of the big trains, which maxed at 62 passengers!)**

After the eventfulness of the day, 19 members and family travelled the 10 miles or so east of Haywards Heath to the Lavender Line for an evening out. This trip was a return visit, with the Lavender Line having come to us on our June Club Night. We were lucky to have a steam locomotive available and guards van to ride in, and we all took it in turns to ride the footplate or travel as passengers behind. Thereafter, we were treated to a lovely 'Bangers and Mash' evening meal, followed by pie and custard. Finally, the loco crew took us the full distance



of the line to their new halt station at Worth, where there was time for a short stop and photo call **(see picture left)**. Overall, it was another very enjoyable evening and through these pages I would like to say a big thank you to the train crew for giving their time for our evening visit, also to John Padgham for cooking the really nice food and of course to

everyone from Beech Hurst who supported this trip.

Next up, there was a visit by Crowborough Club to Beech Hurst on Wednesday 24<sup>th</sup> July. The weather could not have been much better, perhaps a little hot but dry and sunny throughout. Our guests brought with them the following 5 locomotives: 5" 'Britannia', 2x 5" 'B1', 5" 'Glen' and a 5" 'Polly'. With the exception of the 'Britannia', the other 4 locomotives were all on the track before 11:00, with the 'Brit' following shortly afterwards. One of the 'B1's did retire to the siding for a short time, following the loss of the fire, thereafter however they all had long runs and I think the drivers were happy to retire shortly after 14:00, having had the best part of 3 hours on the track.



From a spectators point of view, it was nice to see a different group of visiting engines on the track, all of them nice locomotives and moreover a smashing bunch of people too. I know from speaking with many of our guests during the day how much they liked the track and everything we have to offer at Beech Hurst, and given that the Crowborough track is of approximate 500ft length, it also gives them the chance to

test their locomotives on a considerably longer circuit. Through these pages I would like to thank everyone who helped to make their visit possible and it was a very nice day all round. **(Picture above: The 'Glen' passes the 'Polly')**

**Andrew**

### **The Trials and Tribulations of Building a 9F – Part 1 of 2...**



As many of you know I have been constructing my 9F for about 3 years now, having purchasing it from Paul Tomlinson in 2010, just before starting University (**see picture left**). I have spent considerably more time on the loco than I ever imagined and Andrew B will be smiling as he reads this for the first time as he always said it would take me 3 times as long as I was expecting! Whilst trying to uphold the quality of work that

went into the loco by Paul, I have had to scrap 99% of what was an original Winson kit and start from scratch with what I had left to do. I sourced many 'Doug Hewson' items to get that 'scale look' and spent many hours studying the small amount of photos I have managed to collect to try and replicate a beautiful loco from something that started life as a box of bits – that is still a box of bits waiting to go to the scrap man! I was always adamant that I would finish the loco and paint it before the 'first steaming', making sure it looked just how I wanted it to before giving it, its first run, but then I realised it was still a Winson loco and what I wanted was never going to happen.

This reality hit home one peaceful Wednesday evening in July when I was visited by Andrew's B & S, armed with a compressor, paint brush and some soapy water. I knew previously there were problems with the piston valve liners on one cylinder so this was worked on. They were removed and a sleeve was inserted into the bore and then the liners replaced. I hoped this was the end of it but oh no, as we quickly found out on air, there was quite a nasty 'blow' and when removing the front end caps on the valves and carefully poking the paint brush into the outlet ports we soon saw that it was leaking around the liners. As you can imagine I wasn't best pleased but we powered through and spent a long time checking many of the fittings in the same way and ensuring everything sealed (most of them did). So at this point the words 'eBay' and 'dealers' cropped up a few times but I'm not the type to give up! In reality I had 3 options: steam it, take the cylinders off and make new liners in one solid piece, the way they should be (just how Mike W has now done for his Winson 'Black 5') or try penetrating Loctite (then steam it). The last thing I wanted to do was have the cylinders off and be making new liners, so I felt the Loctite method could be a good 'quick fix' and hopefully save a lot of work. I applied the Loctite and left it for 24hours before attempting to apply air again. The cylinder previously mentioned that was worked on was unsuccessful, this was due to the fact we had previously used a sealant (which clearly didn't work within the cylinder) and it stopped the penetrating Loctite finding its way in from the outer edges. Nonetheless, the decision was made to see what effect steam would have on the cylinders and see if it will make them expand enough to take up the last gap. They definitely expanded but not the way we wanted; but I'll get to that shortly! I finished sealing the last few items and prepared everything for steaming. I had just finished t-cutting the tender and adding the crest transfer so this was looking the part for the occasion. I set a date that Andrew's B & S could come over again and help me, which they were more than willing to do – to be continued...

**Adam**

### **Building a W&L Dougal**

I am pleased to say that the effort to re-make the three steam valves on the loco over the past month or so was well worth it. Although all three are still 'warm to the touch,' the risk posed to the driver of getting burned has gone! Unfortunately, the idea of using PTFE to seal the valves had to be dropped as it kept coming off the shaft with no way (or room) to keep it on.

**(Picture right: Dougal with our goods train)**



I therefore resorted to the traditional method of a stainless cone onto a bronze seating, which works well on the blower, but lets by a tiny bit on the injector steam and gauge glass blow down. With everything back together, the loco has been run 3 or 4 times in the last month, including a successful trip to Oxford.

In recent weeks, I have made a start on covering the running boards with brass diamond plate - as per the full size loco. Sourcing the diamond plate was hard enough, since all of the main supplier's only stock the aluminium variety! I did manage to find someone in south Wales who used to stock it and was prepared to have a few more sheets rolled. Beginning with the cab floor, I decided to cut the diamond plate into three sections, for ease of fitting. With these pieces in place, I could start erecting the cab back plate, the brass sheet for which had already been cut to size. Again, I had previously decided to make these in three separate sections, since the middle bit would need to be removable in order to drive the loco! I used the running plate bolts to attach the pieces of 5/16" brass angle to, which formed the base for my back plate. I was then able to soft solder the brass sheet



to the angle, with a couple of copper rivets in each plate to hold it in place while soldering. Now that all three plates are firmly secured to the loco I have fitted the rear number plate to the central section and have started to attach the brass channel section which supports the top.

If all goes to plan, Dougal will be on its travels again before the next article is written, with a trip to the Midlands Exhibition in mid October.

**(Picture above: Dougal's cab showing the diamond plate and the brass angle in place)**

**Andrew S**

## Beech Hurst Track Monitoring Vehicle – Article 3 of 3 – The Analysis

### Data File Selection

The first screen entered when the Analysis button is pressed is the 'Data File Selection' screen. This screen allows the user to select which data file or files are to be displayed. Prior to any files being selected, the screen is shown in Figure 6.

The screenshot shows a software window titled "Select Data Files for Display". It features a light blue background with several buttons at the top: "Return to Initial Screen", "Click for plotting in scroll screen", and "Click when files for plotting have been selected". Below these are two columns of empty text boxes for file names and descriptions. To the right of these boxes is a vertical list of checkboxes labeled "DataFile1" through "DataFile10". Further right, there are two input fields: "Enter Cant average (e.g. +/- 2 readings)" and "Enter Gradient average (e.g. +/- 3 readings)", both with a value of "3" entered. A note below these fields states: "After changing an average value, remove and re-load DataFiles". A small instruction box on the right says: "Click a DataFile box to select a file for plotting".

Figure 6: Data File Selection Screen prior to files being selected.

In order to select a file, one of the tick-boxes marked 'DataFile' is clicked. This takes the system to the list of data files that have been stored. The operator then selects the file to be viewed. Once a file is selected, the system returns to this screen. The boxes to the left of the tick-box now contain the file name and any other useful information about the data run that was entered when the data was acquired. Up to ten data files can be selected using this process. However, selecting more than about 4 makes the plotted data very difficult to follow. A typical screen for two files being selected would be as shown in Figure 7.

This screenshot shows the same "Select Data Files for Display" window, but now two files are selected. The first two rows of the file list are populated with data. The first row shows a file path "C:\TMV Programme\Data files stored\Test data\21-0", a date/time "21/07/2012 10:22:11", and a description "Second run with rubber bands on wheels (two acquires). Data corrected". The second row shows "C:\TMV Programme\Data files stored\Test data\28-0", "28/07/2012 10:19:32", and "Second full Run. Corrected for calibration error. Index 2145, integral -13". The checkboxes for "DataFile1" and "DataFile2" are checked, while the others are unchecked. The input fields for Cant and Gradient averages remain at "3". The instruction box on the right is still present.

Figure 7: Data File Selection Screen with two files selected.

Having selected the file(s) for display, one of the two buttons at the top right hand side of the screen can be pressed in order to move to displaying the data. Prior to leaving this screen, the operator has the option of increasing or decreasing the amount of averaging. This feature is useful if the data is noisy or if the intention is to show less fine structure in the plots. Finally, instead of plotting data there is the option to return to the 'Initial Screen'.

### Scroll Screen Plot

Clicking the button 'Click for plotting in scroll screen' brings up the screen shown in Figure 8.

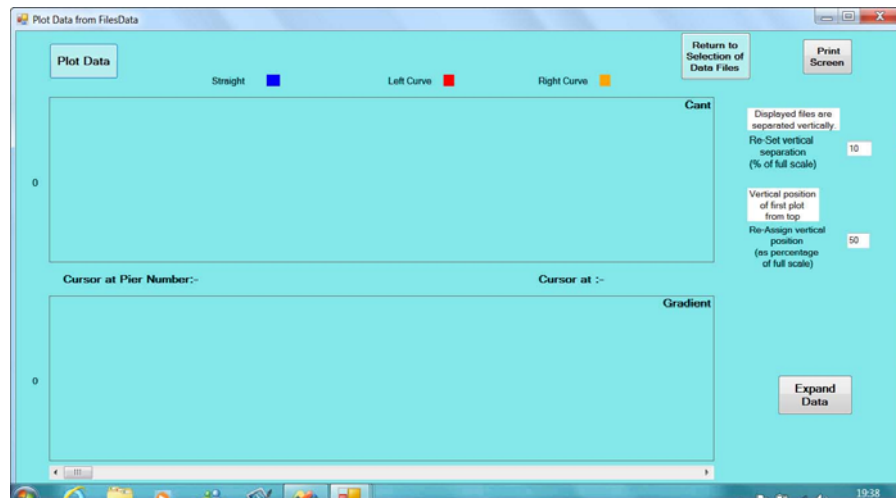


Figure 8: The Scroll Screen prior to data being displayed.

Clicking 'Plot Data' leads to the two rectangular windows being filled with the data. The top display shows the results for 'Cant' and the bottom for 'Gradient'. The scale for 'Cant' is in inches for a 5 inch gauge track with a full scale of  $\pm 0.4$  inches, whilst the scale for 'Gradient' is in degrees ( $^{\circ}$ ) with a full scale of  $\pm 2^{\circ}$ . A typical display of data is shown in Figure 9 in the case of one data file having been selected.

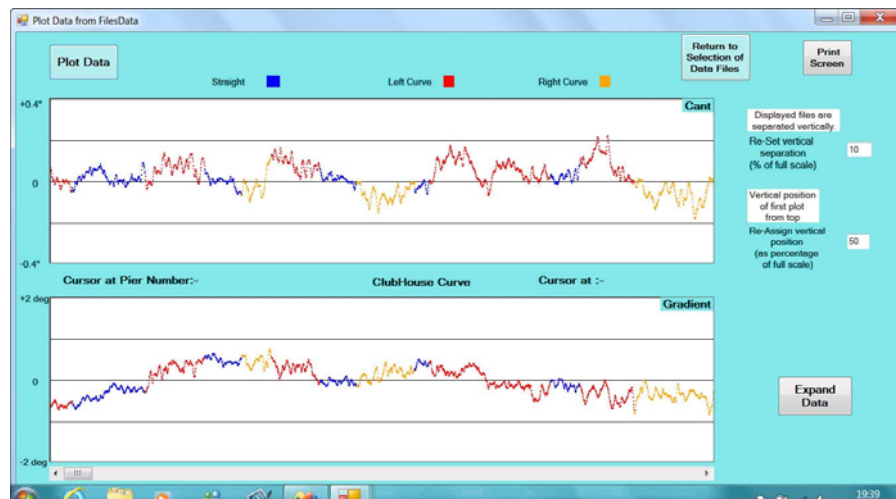


Figure 9: A single set of data plotted.

The colour coding is used to indicate the type of track as follows:

Blue	–	Straight Track
Red	–	Left Curved Track
Orange	–	Right Curved Track

This colour coding is most useful when looking at the 'Cant' data as this would indicate the amount of super-elevation on a curve. Changing from a left to right curve should change the 'sign' of the 'Cant'. Indeed, examining the data shows in the main the red dots are above the 'zero' line whilst the orange are below.

In the plot shown in Figure 9, the measurements refer to a complete circuit of the track which is of approximate length 2200 ft. As each reading is taken about every 1 ft, the total number of data points plotted is over 2000. In order to examine the data in greater detail, a display option is provided to expand the data by a factor of 5 by clicking the 'Expand Data' button. An example of the expanded screen is shown in Figure 10.



Figure 10: Expanded data plot.

Once expanded, the scroll bar below the 'Gradient' plot can be moved to scroll from one end of the full set of data to the other. In addition, the mouse cursor can be placed anywhere on the plot and the display between the two plots indicates where the cursor is in relationship to the track circuit. If the cursor is at a pier, the pier number will be shown on the display at 'Cursor at Pier Number:-'. If the cursor is at a feature such as a signal, this will be indicated in the space 'Cursor at:'. In the example shown in Figure 10, the particular feature is a special signal, hence the indication on the screen is 'Cursor at: - Repeater Signal in Tunnel'. Note: Unfortunately, in the screen displays shown, the cursor is not reproduced but it would have been at the point at which the gradient changes sign as the tunnel represents the highest point on the track circuit.

If more than one data file is selected the plots would initially be separated as shown in Figure 11 for the case of two data files.

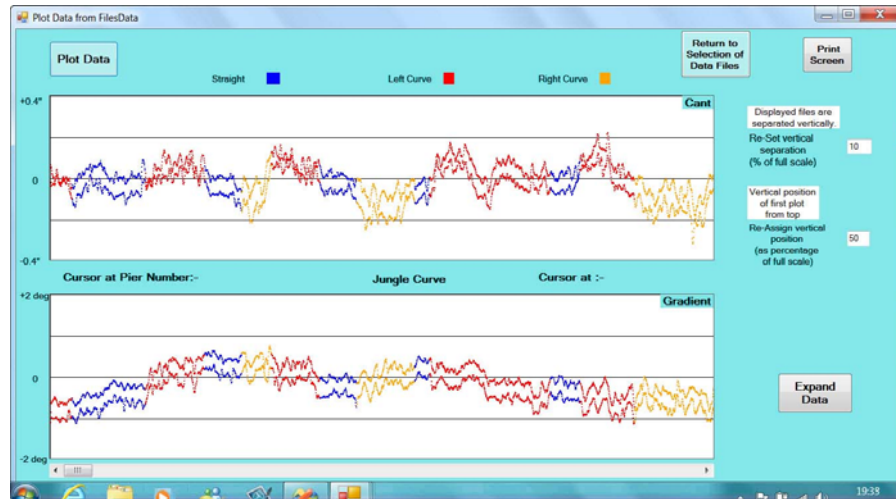


Figure 11: Plot of two data files.

As noted before, it can be appreciated that multiple plots would make the displays very confusing. Nevertheless, the main purpose of putting more than one plot on the screen is to compare results obtained at different times.

This screen also provides the ability to change the separation. For instance, by setting the separation to 0, plots are overlaid on each other. This immediately shows differences. Such differences may simply be associated with small variations in the acquired data caused by noise but they may represent changes that are a result of track movement.

## Accuracy

The inclinometer reading accuracy is specified as  $\pm 0.05^\circ$ . For a 5" gauge track this represents  $\pm 0.004"$  over the 5" distance, which is more than is needed for setting levels of super-elevation. For gradient, and on a track with say piers separated by about 6 ft, the inclinometer accuracy represents a vertical distance of  $\pm 0.063"$  over the 6 ft. Again, this is fine for setting track levels and gradients.

However, as already mentioned, the accuracy of the inclinometer is not the only contribution to the overall accuracy of measurements. A factor that is very important is the calibration of the inclinometer for the particular application. In the TMV, the inclinometer is calibrated by rotating the whole TMV through  $180^\circ$  when placed on rails. As already mentioned, if this calibration is in error, the summation ('Run Integral') of all the measurements of gradient over a whole track circuit should be zero. If there are 2000 readings over a track circuit, a reasonable estimate of the total inaccuracy of this summation would be  $0.05^\circ \times 2000 = 100^\circ$ . Experience at Beech Hurst so far indicates that the summation is usually about  $20^\circ$ , far less than might be expected from the estimate based on the accuracy of the inclinometer. This summation is therefore a very useful parameter to assess the quality of the measurements.

When a full track circuit yields a value for the 'Run Integral' that differs from zero, this clearly indicates that there is a small error in the gradient readings. It is possible to apply a correction to each measurement of gradient simply by dividing the 'Run Integral' by the number of readings taken.

Experience shows that this can be useful but it is not clear that the correction for positive and negative readings of gradient is the same. More research needs to be undertaken before a definitive conclusion can be made.

A further test of accuracy can be made by comparing the TMV results for gradient measurements with an independent method such as a spinning laser level. The laser was used to determine the gradient from pier to pier, their separation being approximately 6 ft, with an estimated accuracy of about  $\pm 0.1^\circ$ . The plot shown in Figure 12 is such a comparison. Whilst there are some significant differences in a few places, the two types of measurement were undertaken 3 months apart and some of the differences are caused by changes made to the track during this period, especially those over the first 60 ft. Furthermore, the laser measurements were made every 6ft compared with the TMV which were every 1ft. Overall, there is excellent agreement between the two types of measurement.

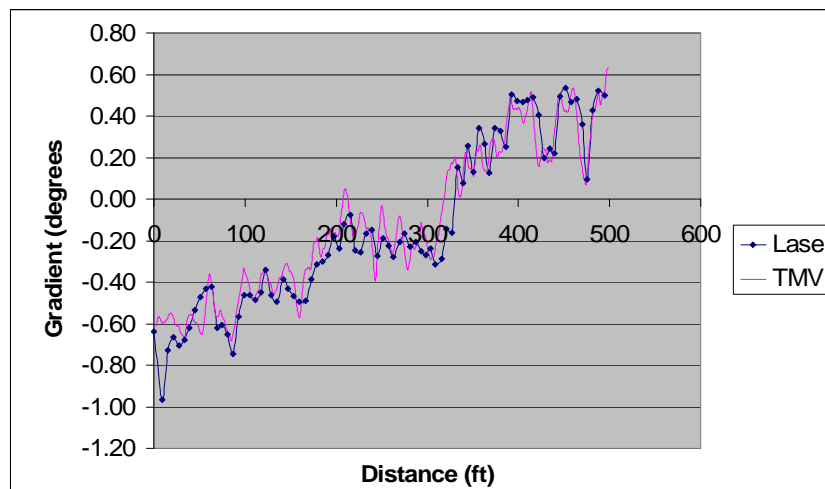


Figure 12: Comparison of TMV and laser measurements of gradient.

### Use of the Data

Care has to be taken when interpreting and using the data. Every measurement of Cant is a useful measurement which can be readily used to allow correct settings of track lateral flatness or super-elevation on curves.

Gradient data is a different matter and needs to be used with care. Most of the time, the primary interest in vertical measurements of track is the height of the track with reference to some datum. Gradient data can only be converted to height by integrating the measured values, which as described earlier is simply the summation of the readings as they are taken at equal distance increments. This means that any value for height will involve a large number of readings, each which could have a small bias due to systematic errors. As noted earlier, such errors can be quantified if a whole track circuit of measurements is made, and a correction can be made - a very useful process. Hence, unless care is taken to apply such a correction, gradient data is best used for looking at variations around a track. For instance, a smooth rising curve should have a constant value for gradient.

## Summary

The Track Monitoring Vehicle described here has been developed to provide a means of measuring the cant and gradient of the track for a miniature passenger carrying railway. Based on a two-axis digital inclinometer and with data transferred to a lap-top computer, the system allows rapid measurement and display of the results. By measuring the position along the track at which measurements are made, the system provides easy location and identification of regions of the track where there may be a need for improvement. Also, by comparing results with previously measured data, changes over time can be monitored.

**Roy Preston**

## Forthcoming Events

With September looming large, our next social event is Bonfire Night on November 2<sup>nd</sup>. A theme for 2013 is still to be decided, however a number of thoughts have come to mind and a stock pile of wood is already in place for the big day! Because this will be the last newsletter prior to this event, and to help with catering, a list will be created on the blackboard during September and closed later in October. If you would like to attend, and more importantly be fed and watered too, then please add your name to this list and it will make food provision much easier. The red tin will also be out by the signing in book if you would like to help donate towards our firework display...

Looking further forward, we have agreed to display at 3 exhibitions during the closed season, these being: Sandown Park in mid-December, Alexandra Palace in mid-January and Brighton Modelworld in late February. In due course, lists will also be placed on the blackboard for volunteers and models for these events if you would like to volunteer, yourself, a model or better still both!

Details of further events will be posted in the October edition, which I plan to have for collection on Bonfire Night...

**Andrew**

## Diary of Events

5<sup>th</sup> September 2013 – Club Night – Will start at approx. 1900

3<sup>rd</sup> October 2013 – Club Night – Will start at approx. 1900

2<sup>nd</sup> November 2013 – Bonfire Night – Will start at approx. 1800 – see above

7<sup>th</sup> November 2013 – Club Night – Will start at approx. 1900

5<sup>th</sup> December 2013 – Club Night – Will start at approx. 1900

12<sup>th</sup> – 15<sup>th</sup> December 2013 – SMLS to display at Sandown Park – see above

16<sup>th</sup> – 19<sup>th</sup> January 2014 – SMLS to display at Alexandra Palace – see above

20<sup>th</sup> – 23<sup>rd</sup> February 2014 – SMLS to display at Brighton Centre – see above

**NB.** Certain events may be organised at short notice and will not therefore appear in the newsletter. Please check black / notice boards in the clubhouse for details of such events.

**Andrew**

## History of The S.M.L.S.

Information Found			Names	Relevant Information	Notes
Place	No	Date			
SMLS Committee Minutes 1951-59 Bound	5	13 March 1954	7 In Attendance		Minutes of the previous meeting were not read as they had been left at home.
			Leonard Whittington	Chairman	The Council were to construct a tractor crossing by the steaming bay out of sleepers at a later date.
			Ron Bostel (S.R.)	Secretary & Treasurer - S.M.L.S.	The Council agreed to the construction of the station being 36ft long.
			Ernest Brown (Father)	Other	Dick Rawlins (R.C.) outlined what he had in mind for the signalling system.
			Jack Austen-Walton	Other	Esso agreed to supply the bodies for 10 cars all the lubricants & a lubrication station for the record attempt. Also they would make a payment of £100 followed by payments of £50 a year for 4 years in exchange for some advertising round the track.
			Alf Funnell	Other	Skefko Bearings promised to provide bearings for all the running cars free of charge.
			Dick Rawlins (R.C.)	Other	It was agreed that Mr Lovell be employed during the week to help finish the track building, as with working weekends only it will not be finished in time.
SMLS Committee Minutes 1951-59 Bound	6	27 March 1954	Les Clarke (A.L.)	Other	Lady Carmichael of the Deanery Pilgrims was given a price of 7 Guineas for the hire of the track (with loco & rolling stock) on the 15th May 1954.
			7 In Attendance		Minutes of the previous meeting were not read but not signed on an oversight.
			Leonard Whittington	Chairman	Esso were not able to proceed with the agreement with the advertising round the track.
			Ron Bostel (S.R.)	Secretary & Treasurer - S.M.L.S.	BR have been approached with a view to obtaining an old railway vehicle for storage purposes.
			Ernest Brown (Father)	Other	An automatic ticket machine is to be looked in to for the station.
			Jack Austen-Walton	Other	A meeting with the BBC & News people is to be arranged to cover the final arrangements for the Record Attempt.
			Alf Funnell	Other	A cup was to be presented at the Gala Day & will be known from then on as the Whittington Challenge Cup.
Newsletters 1954-62	1	03 March 1954	K.N.Harris	Other	
			Les Clarke (A.L.)	Other	
SMLS Committee Minutes 1951-59 Bound	7	11 April 1954	Ron Bostel (S.R.) Editor	Newsletter	The Official Opening day for the track has been set for 8th May 1954 Les Clarke breaking the tape with his 5in 4-6-0 (Photo Evening Argus)
			6 In Attendance		Jack Austen-Walton's attempt on the 100 mile record will take place on the 22nd May 1954
			Leonard Whittington	Chairman	Minutes of the previous 2 committee meetings were read & confirmed as correct then signed by the Chairman.
			Ron Bostel (S.R.)	Secretary & Treasurer - S.M.L.S.	Esso have pulled out of the Record Attempt negotiations
			Jack Austen-Walton	Other	Because Esso have pulled out Castrol have stepped in with a similar offer of help, they might be able to provide a personality to undertake the opening of the track.
			Alf Funnell	Other	16in was agreed for the track height above the platform in the station, a builders quote is to be sort.
			K.N.Harris	Other	BR said they could not help with any railway vehicle for storage purposes.
Track Completion		17 April 1954	Tom Snoxell	Other	Tom Snoxell was in discussion about his offer to do the catering for the Record Attempt event.
			Les Clarke (A.L.)	Other	
SMLS Committee Minutes 1951-59 Bound	8	24 April 1954			The last spike was driven in by L.Whittington.
			6 In Attendance	Apologies - Dick Rawlins (R.C.)	Minutes of the previous committee meeting were read & confirmed as correct then signed by the Chairman.
			Leonard Whittington	Chairman	Castrol's offer of £1.0.0 a year for advertising was turned down by the committee
			Ron Bostel (S.R.)	Secretary & Treasurer - S.M.L.S.	The committee agreed to take out the Club Insurance with Harding, Anderson & Game for £7.11.6d annually.
			Jack Austen-Walton	Other	A price of £0.0.06.d (2 1/2p) was set for 2 complete laps of the track on special occasions & a collection box with the driver for other running days.
			Alf Funnell	Other	A design for the Club trucks was in hand.
			K.N.Harris	Other	
21st Anniversary Issue		08 May 1954	Les Clarke (A.L.)	Other	
					Official Opening 8th May 1954 Les Clarke breaking the tape with his 5in 4-6-0 (Photo Evening Argus)

## History of The S.M.L.S.



Eric Rowland - 1960  
(IPB-0152)



Harold Lovell - 1960  
(IPB-0129)



Mushti (Frederick W.) Wilkins - 1955  
(IPB-1634)



Les Clarke with his winning 5in 4-6-0 - 1954  
(IPB-0280)



The Castrol sign over the old wooden sleeper  
Bridge - 1954  
(IPB-0003)



Les Clarke passing the Castrol sign on his Record  
Attempt - 1954  
(IPB-0131)