

EXPANSION LINK

NEWSLETTER OF THE B&DMES

EDITOR JOHN TAVINER-VOLUME Two-ISSUE TWO

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Editorial

By the time you read this the programme for 2008 will already be well under way with many of the planned events now history. Some of these will have a report prepared and submitted by those taking part for inclusion in this issue.

The first event since the last issue of "Expansion Link" turned out to be a non event. This was of course the April public run which should have taken place on 6th April but was abandoned due to a significant fall of snow. We had moved the



The back straight April 6th 2008.

first public run from March to April due to bad weather in March last year (2007). It seems you can't win. Also in April, the Model Engineering Show held at Milestones Museum was fairly well supported by members with a range of models including locomotives, traction engines, stationary engines and a working layout of the garden railway by The Garden Gang and hot air engines by Norman Peach.

Two portable tracks were set up outside giving rides on the Saturday and one inside on the Sunday.

The first outside event of the year was the

trip to Sir William Mc Alpine's railway and museum at Fawley Nr Henley on Thames. A report on the trip is included in this issue. Also in this issue is the first of a series of articles by club Treasurer Graham Blisset describing the building of a model, in 5 inch gauge, of Bullied's Q1. No drawings are available for the model so he has had to produce his own from photographs and measurements taken from the sole survivor of the class at the NRM. There is also an article giving brief details of the workings of The Westminster Clock. (Big Ben as it is better known by). Not strictly speaking a model engineering subject but of interest to all those mechanically minded.

John Taviner Editor

Forthcoming Events

July

1st Meeting Night

6th **Public Running**

12th **Members Running Day (Sat.)**

12/13th **Guildford Show**

15th Meeting Night

19th **Shunting Competition + BBQ (Sat.)**

29th Meeting Night

August

3rd **Public Running**

12th Bring and Buy Evening

16th **Members Running Day (Sat.)**

26th Meeting Night

September

7th **Lions Craft Fair & Fete**

9th Meeting Night.

14th **Cats Protection League**

20th **Members Running Day (Sat.)**

23rd Meeting Night

Chairman's Notes

To all members.

There are a few things that I would like to bring to the attention of all members.

1. Concerning club meeting nights with Bits and Pieces evenings in particular. I have been informed at committee that a certain member voiced his displeasure to committee members that he was unable to hear properly the talks given by those members, who had brought along bits and pieces and were telling those present about the articles they had on display because other members, who seem to have no interest in what was being said, were making so much noise in the background. It was suggested that as club Chairman I should have called the meeting to order but did not do so. Point taken. Therefore I ask all members to refrain from talking in the background when club notices, club business or any talks and discussions are taking place.

If weather conditions are favourable I suggest that those of us, myself included (as I often contribute to the background noise) take ourselves outside and sit on the station if we are not concerned in or not interested in what is going on in the club house.
NUFF SEDD.

2. To those members that are unaware, the 5" gauge single wheeler that was donated to the club is at present residing with Malcolm Duckett as there were signs that it was being damaged while it resided on the seats in the clubhouse. Malcolm offered to keep it safe in his workshop. I would add that if any club members are not happy with this arrangement they write to the committee with alternative suggestion and we will discuss it.

3. Visitors Day. Bracknell, Andover and

Harlington clubs were represented and all asked that that we inform all members that they had a great time and thanked us all very much for a super day.

I would like to thank those club members that turned up and helped on the day, especially Graham Blissett, who arranged the food at short notice, and Dave Blaza and Andy Hobbs for their sterling work with the mower and strimmer and my great friend John Hutson who kept everyone on their toes.

Terry Hobbs Chairman.

Class 66

This locomotive was bought in kit form from "Maxitrak" of Staplehurst in Kent using part of the proceeds from the disposal of the field which had been purchased in 2003 when it was feared that we would lose our present site at Viables. The kit arrived in a couple of large boxes and appeared to be fairly comprehensive in content. Initially it was suggested that it be assembled by a group of members each working on a separate section and then brought together for final assembly. Tom Burgess volunteered to prepare and paint the finished model. However, after some discussion it was decided that this may not be the best way forward and that it would be better built by one person with any assistance as required especially the electrics. After a little persuasion Tom agreed to carry out the complete assembly with the proviso that it would take second place to domestic and work commitments. Fair enough.

On commencement it was found that although the kit was quite good it still left room for improvement. During the assembly Tom carried out several bodily modifications and after some early problems

with the electrics, which are still being investigated, the result should be that we have a robust and powerful loco. for use at club events, mainly our monthly public running. Several suggestions were put forward for choices of livery and these were voted on at one of our normal meeting nights with the final outcome being in "Freightliner" colours.

I would like to propose a big "Thank You" to Tom for the main assembly and to those that gave constructive help.

John Taviner.

Secretary's Notes

Firstly, although it took place a little while ago, I should like to thank our outgoing Secretary, Malcolm, for all his efforts during a very busy personal period, and for his comprehensive handover to me, including electronic files and even a 'confuser' as our vice-chairman, quite rightly, calls a computer with which I have been struggling ever since. My brain is clearly just not wired for the Information Age. Still, 'nil carborundum illegitimi' as they say.

Here we are already nearly half way through the year. We have had a very successful visit to Sir William McAlpine's railway and museum near Henley. Even the weather was kind to us that day. The same cannot be said for our public running days the first of which was cancelled due to snow. (April).

Our recent Visitors Day did not attract as many visitors as we would all like, but all who attended seem to have had an enjoyable day and we received a number of

complimentary comments on the standard of our track.

Regrettably the low level vandalism continues, and the club is in contact with both the police and Basingstoke Council to discuss what measures we can and cannot take.

Successful club stands were exhibited at the Basingstoke Model Railway Show in March and at the Milestones Model Engineering Show in April (together with 5 inch ride on trains at the latter). Thanks to all those who gave up their time to man the stands and the trains.

Outside personal commitments have prevented the Garden Railway members from making much of a start on the new 'bullet proof' track, but it is hoped that things will begin to progress before too long.

Brian Hogg Secretary

Class 66 Update

As you may or may not be aware the Class 66 club loco ran its first fare paying passenger service at Viables on May 4th. Unfortunately, this service lasted just 6 laps, before being withdrawn on passenger safety grounds, as the electronic controller became non-responsive and then developed a mind of its own. After discussion with Maxitrak they agreed to look at the controller and sort out the problems. Maxitrak have now contacted me and explained the issues causing the problems we experienced. They have also offered, at no charge, to replace

controller with a more up to date version. Assuming it is delivered to me in time I hope to have the Class 66 back up and running for the July public running, assuming the weather is ok!!

Graham Blissett Treasurer

Apprentice Swarf Making Part 1

As my only formal Mechanical Engineering training lasted for six weeks during my apprenticeship, some 20 plus years ago, I decided it was time to improve my Model Engineering skills. I initially thought of building a 5" gauge live steam locomotive, but decided with my limited ME skills, the amount of swarf and scrap metal that would generate, out weighed the budget I was allowed to have. As I'm an "Electric" driver, I decided that would be a better route to take, but still wanted a steam outline rather than a diesel.

For a long time I have been a fan of the Bulleid class Q1 0-6-0 Austerity loco and tender, which was built during the war using the least amount of materials possible. Having seen the article in the *ME (Aug 2006)* on the B of B Class Loco, which at the time was available in a kit form, I decided the Q1, was an ideal candidate for "Electrification". Despite searching for suitable drawings and contacting the NRM in York, none were available, so I decided to create my own.



I eventually found a "Scale" line drawing in a copy of *Modelling Railways Illustrated*, which had various dimensions on it from which I could produce 5" scale drawings accurate to 25thou. From the outset of this project, I don't want to get bogged down into producing an accurate scale model down to the last rivet. My intention is to produce a semi scale model that looks like a Q1, is practical to make and can be made from standard bar stock and sheet materials, as castings are not available. By taking this approach I am hoping that the Q1 will provide me with new ME challenges, improved ME skills and also to give me an appreciation of how things should and should not be achieved.

Despite the line drawings, several Internet articles and a book on the Q1, I still had more questions than answers.

Consequently, I made several trips to the NRM in York, where they have the last surviving Q1. Although I had a few strange looks from visitors and questions from inquisitive NRM staff, I took over 150 photographs and measured various aspects of the Q1 to fill in the gaps.

With the frames on the outside of the tender wheels, giving an extra 1/2" clearance, it made the tender the obvious choice to install the electric motors, batteries and controller. So my initial set of drawings were based around this premise.

I started using a basic drawing package to get the proportions and positions of the individual parts correct, accurate to 25thou. By taking this approach I was able to create the basic design, which ensured that where I required space or clearance around a particular object, such as the batteries, it

could be designed in. When I finished I had a tender design capable of taking four or six 150 watt motors and four 17Mh sealed GEL batteries and a "Dummy" locomotive capable of housing another four batteries inside the boiler !!

I then progressed, using Turbo CAD, to produce dimensioned mechanical drawings accurate to 10thou. I decided to start with the tender design as this was going to provide the motive force. I split the design of the tender into four phases, these being the chassis, the suspension and axle/wheel arrangement, the body and electrical installation, and finally the braking arrangements.

From my tender CAD drawings I roughly estimated what bar and sheet materials I required to complete the first two phases and the electrical installation. Being pessimistic I also included sufficient surplus flat bar and rod material to allow for a few mistakes. I placed my order and collected a number of very heavy parcels from the Harrogate Model Engineering show in 2007.

I decided to make the chassis frames and stretchers from 3/16" flat bar. Unfortunately, I miss ordered the quantity I required, and ended up purchasing an additional 12ft length from a local steel supplier, which proved fortuitous.

To be continued...
Apprentice ME

Fleet Festivities, 9th August 2008

At the Milestones Model Engineering show I was approached by the chairman of the Fleet Business Partnership to see if we could support the "Fleet Festivities" on Saturday

9th August, where they close the high street and deck it out with stalls and various attractions. They are particularly interested in the ground level track setup we used at Milestones, being one of the attractions. Any public running fees B&DMES decide to charge on the day would be ours to keep. I have the ground level track and the rolling stock, but I would need help setting it up in the morning, running, selling tickets, and breaking down in the afternoon. If we have sufficient volunteers, we could possibly spread the load so individual member's commitment would only be only a few hours.

Some of you are no doubt asking "Why are we bothering to do this?". Apart from the free publicity this could give us, the simple answer is we need the income. This year is proving to be particularly challenging, as we are on target for a substantial deficit this year. The council has increased the service charge, 18% of our membership decided not to rejoin, and the income from public running is substantially down on where it has been in previous years (due to adverse weather, an early Easter and less public !!). If we want to do projects such as rebuild the Garden Railway and improve the workshop/shed/carriage store we need to raise the money from somewhere. If you are able to support this, could you please let me know as soon as you can. Many thanks.

Graham Blissett

An Afternoon with Sir William

The Club's day out this year was a visit to Sir William McAlpine's museum at Fawley. After being efficiently chauffeured by John H our car load, John C, Mick & self, arrived a little early and were directed to the car park and asked to wait until 12 noon. Having parked we were then treated to a cavalcade of 20 or so Model T Fords in various guises, one I noticed had a Surrey with a fringe on the top! On walking down to the site we found them all lined up but I noticed they had all gone by 2pm. The museum site is quite compact, comprising the museum building on one side and the station opposite. The approach by rail to the station is by way of a 1in13 incline and by way of introduction a whistle was soon



heard in the distance and a 0-6-0 saddle tank with a open wagon and a Toad brake van in tow made an ascent. The noise as the regulator was opened wide was incredible!! As the loco reached the crest some 50 yards from the station the regulator was slammed shut and the train drifted into the platform, still on a 1in33 incline. Back to the museum not only full, as one would expect, with engine models of different gauges, railway memorabilia such as loco names, King Charles was one that stood out, station signs, furniture, china and silver ware, cars and an 'O' gauge layout operated by a local club. A gallery showed pictures of items on the site with explanations where they came from, for instance a finial from Blackfriars

Bridge, which was perched on a hillside. the engine previously seen, was of 1913 vintage, bought new by McAlpine's and has been with the company ever since. One could have as many rides on the train as you liked. The layout was L shaped, approx 1 mile long, so starting backwards from the station



it passed under a footbridge (from Brading IOW) with a signalbox on the left. With brakes hard on down the slope, the line then curved round the rear of the house and continued backing across points to straighten up at Bourne Again junction, at the base of the L. Then with the points changed a trip was made along the bottom of the valley about half a mile or so. Then it was reverse to the junction and then the charge up to the station. Did anybody film it? By putting your name you could have a ride on the footplate, Fred P did so. I think he has now recovered!! Sir & Lady Bill and family joined the last train of the day and a most interesting afternoon came to a close and good weather too!!

Eric Widowson

Pictures by Graham Blissett

Can anyone suggest a caption for the second picture? (Ed).

The Westminster Clock

In August 2007, the Big Ben clock had to be stopped for maintenance and by coincidence I was sorting through some ME's and found an article dedicated to this great clock. This prompted me to do a bit more research on the subject and club members might be interested in my findings. The clock was built in 1854 but was run for 5 years in the workshops before it was installed in the tower in 1859. There had been considerable wrangling between the designers (Dent), the man put in charge of its construction (a certain Edmund Beckett Denison later Lord Grimethorpe) and the architect of the parliament buildings, Sir Charles Barry. There were 3 tenders and arguments were over the strength of the clock designs, but Dent's design was finally selected. There followed more problems with the main bell (weight 13.76 tonnes) which was cast twice and currently has a crack in it, the final weight of the hammer is 203.2kg and the bell has been rotated to ensure that the hammer does not hit it where it is cracked. The weight which drives the clock (going train) is 2540kg and has a potential fall of 51.8m. When wound by hand it took 2 men 5 hours to wind up the 3 weights, a task which they had to do 3 times a week, nowadays a 2.5 hp electric motor is used. This is apparently a very noisy process as there are many ratchets and pawls associated with the mechanism and it takes about 30 minutes to complete. When specifying the timing requirements one of the conditions is that the first strike in any hour should be within 1 second of the correct time. This dictated the choice of a gravity escapement, this method being less



affected by atmospheric problems associated with weights on the hands, snow, rain, wind, birds etc. The escapement wheel is in the form of two 3 legged star shaped spider assemblies, mounted one each side of a diamond shaped frame which is in turn mounted on the pendulum. The pendulum swings at a 2 second rate, is 3.9m long and carries a bob weight of 300Kg. Any adjustments to the timing of the clock is done by adding or removing pennies (old pennies) on a steel ring which is part of the pendulum shaft, this is apparently an ongoing practice as sometimes it is necessary to make fine adjustments to the clock, one penny changing the rate by 2/5ths of a second per day, the maintenance team consists of 3 men. One intriguing detail that I discovered was the procedure for adjusting the clock for British Summer time.

Apparently when they want to move the clock back an hour in the autumn they simply put a bar between two legs of the escapement wheel and let the pendulum swing on for an hour, removing the bar at just the right time, the pendulum retains enough energy to continue swinging and only needs a couple of nudges from the now free escapement to be back to normal. To accelerate the clock in the spring time the gravity arms are 'held open' allowing the movement to run on under manual control until the hands have moved forward the required hour (the chiming is held off) and at the precise moment the escapement is re-engaged and after a quick check with Greenwich the clock continues on.

Ken Jones Sept 2007.

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Email Addresses

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Graham Blissett

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Terry Hobbs

Vice Chairman

John Croker

Secretary

Brian Hogg

Treasurer

Graham Blissett

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Vacant

Track/Site/Ground Maint.

Dave Blaza/
Mick Lowe

Traction Engine Track

Vacant

Webmaster

Stephen Newell

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