

The News Sheet

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The Chairman's Notes

I expect by now many of you lucky ones will have had the opportunity of visiting that Model Engineering Exhibition on the Fosse Way. I believe that Fosse Way was an old Roman Road and should have been rather straighter than it is today. I don't think a group of engineers have had much of a hand at keeping it straight and it must have escaped Telford's crafty eye to get itself in such a twist. Anyway once we had arrived we were all most impressed at the event from the extensive and well laid out car parks with their ballasted driveways to the more than ample meals of steak and kidney pies and chips at the café which left us seeking somewhere to sleep it off rather than to romp around the exhibition!

As we all know well, we can't please all the folk all the time but I found the balance between club and trading outlets just about right. It was pleasant to see what clubs from the Midlands were doing especially with regard to their invitation pamphlets. Some had rather attractive and glossy 1/3 A4 pamphlets which gave a very welcoming message to folk that might be interested in model engineering within the friendly environment of a club. It was also interesting to see how the standards and quality of metal working machinery had improved over the past few years. None of the equipment seemed to be of that rough ragged finish which we had got used to a few years ago. Of course the other thing that impressed was how cheap everything had become. £9.99 for a digital calliper seemed to be in a different league from the £70 of not so long ago. And digital readouts were within the reach of the man in the street and not just the province of the aristocrats of the model engineering world.

One of the questions in Robert's recent super questionnaire that received a positive answer was with regard to the 'big' event. Donal ran an extremely successful 60th anniversary event last year and this

year Grahame held an event on his own that was out of this world. Both of these events involved young and old alike and were tremendously popular. We all enjoyed planning them and enjoyed even more running and supporting them, each according to our own abilities and availabilities. Rabbi Jonathan Sachs in his Sukkoth address said that a common activity or event bound his congregation as one by the virtue of working together. In the same vein a big event would bring the entire club together no matter what section they come from. We need an excuse to plan a big event next year in 2006. You know the sort of thing: beer tent, barbeque and exhibitions from all sections. Any ideas? Could we have a grand opening of a new stretch of ground level track or even just the "turning the first sod" ceremony by an executive of the Water Board? It could give a marvellous lift off, and not only could it weld the membership of the club together in a united effort but might attract new members who would be interested in pushing things forward. It would show the Water Board that their land is being husbanded with perspicuity. Or perhaps just a celebration of model engineering would be in order; but we need something to give us a transitional purpose, for us all to be able to strive together as a team.

So far I have had a response to the appeal for archive photographs but no spontaneous response from anyone willing to record the photographs by scanning. I do not as yet have the skills to scan and I wonder if there is any one out there who would be willing to help. I think it is important for us to have an archive. I found out on my visit North of Watford that some of the Clubs up there are doing just that. Many clubs are now in the sixty plus age group and feel (I think) that they should look back as well as forward.

Have a good month.

Ian Johnston

Secretary's Snippets

The Society has received thank you letters from MENCAP for their day at Colney Heath on 10 September, and from The Boot at Chipperfield for help at their charity day; the St Frances Hospice at Berkhamsted will receive a donation of £230.37 from this event. The Society has also received a donation of £50.00 from The Boot as a gesture of our support. The Society will be taking a stand at the 'Model Engineer' Exhibition at Sandown Park. The Society will also be taking a stand at The London Model En-

gineering Exhibition at Alexandra Palace. Maurice Cummins will be coordinating this event.

The Council thanks Nick Rudoe and contributors for the production of a new Society Information Sheet for use, particularly at these exhibitions. A Policy Statement and Codes of Practice relative to the Child Protection Act are being prepared by the Council.

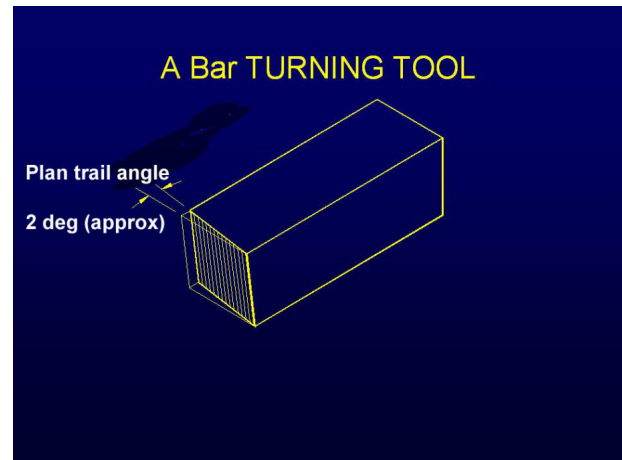
David Harris

The October General Meeting by OMAH

Our sartorially elegant Chairman, (wearing a REAL bow tie which he had tied himself), came out to introduce our guest speaker. Mike Chrisp was standing in for our original guest, Keith Catchpole who had been unwell, had lost track of his appointments and had inadvertently double-booked. He mentioned that Ron and Mary Tuck had a part-built 'Rob Roy' for sale. Frank Dell's eyes are now so bad that he has had to relinquish his tea-making duties. Any volunteers for this most essential task? (I think we should give a round of thanks to Frank who has done this job for so long, at both the General and the Loco Meetings. Thank you Frank.)

Adrian announced that the fence at Tyttenhanger had now been moved and that we had full access to get on with moving the old fence and making a start with whatever we intended to do with our newly acquired space.

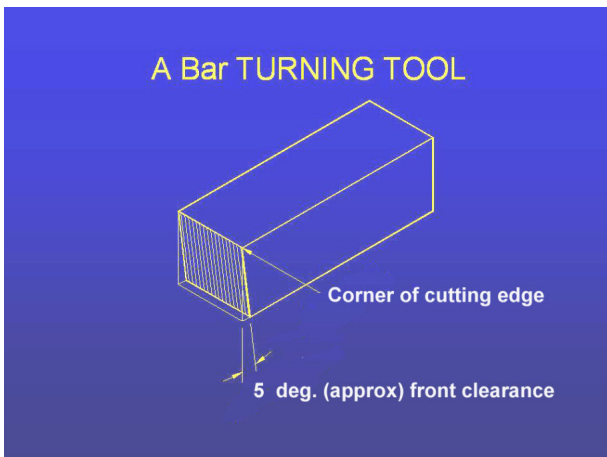
Mike then stepped up to the rostrum to give us a chat: "Small Tools, their preparation and maintenance." This was illustrated with photos and sketches generated by a 'Powerpoint' presentation which Mike had prepared on a CD-ROM. Having shown several snaps of excellent models Mike went on to say that, apart from ability, one of the most important requirements was sharp cutting tools, as without



the TCT tools do have their problems and it can be very satisfying to sharpen your own steel tools. The

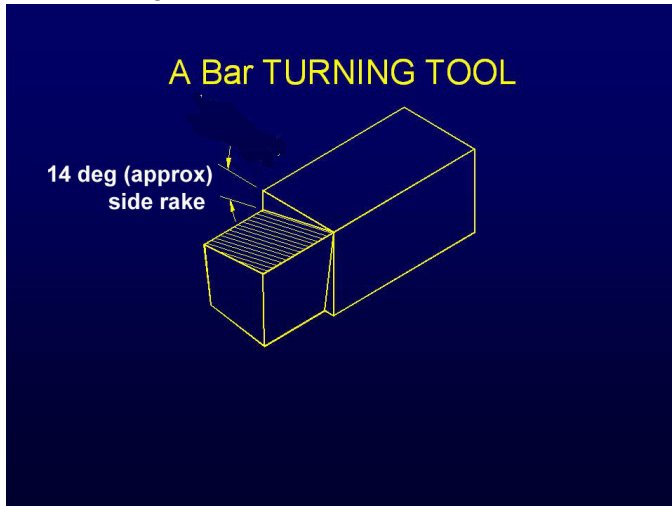


first example was that of grinding a bar-turning tool from a high-speed steel tool blank using an offhand grinder. Making use of the tool rest, set at centre height, the first action was to grind the 5° front clearance angle by offering up the tool end flat on the tool-rest and square to the outer periphery of the wheel; the curvature of the wheel will then give the required angle. The next job is to set the tool 2° over and grind the plan trail angle. Next turn the tool round with the side of the tool against the front edge of the wheel so that the side clearance angle of 5° is ground and then, having put a piece of flat 3/8 in. steel on the tool rest to bring the tool higher up the wheel, grind the top of the tool, again with the side

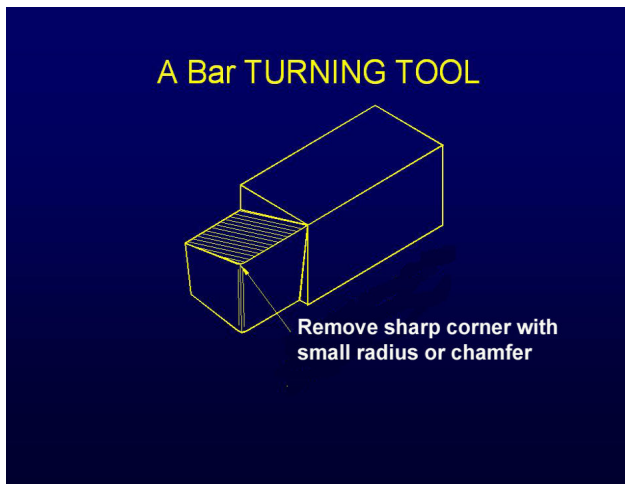


them you cannot obtain a fine finish to the work. Many folk these days buy tipped cutting tools because they cannot sharpen high-speed steel tools, but

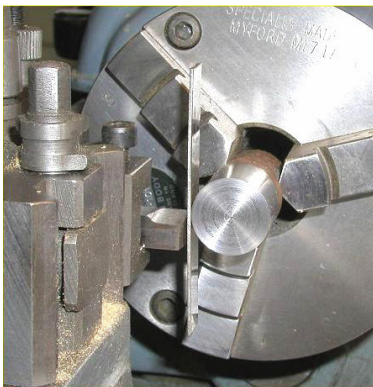
Cover picture: *Prince* (with Owen Chapman firing) and *Earl of Merioneth* drift gently past the station buildings at Porthmadog, Festiniog Railway, on the occasion of Owen's visit at the end of last year. See Owen's article later in this issue. **Photo:** Martin Ellis



against the wheel to approx. 14° side rake angle. All that now remains is to remove the sharp corner of the cutting edge with diamond lap leaving a small radius or chamfer to prevent 'digging in'.



I hope the diagrams show this clearer than I have described it. It was quite a simple exercise using the tool-rest, the wheel and the eye to achieve the desired angles. When starting to turn, a simple check for centre height can be made by slipping a piece of shim between two of the three chuck jaws and pushing the tool against the shim. (see photo on left).



When the tool is central the shim will be upright and all ready to take a 1/8in. cut in mild steel without a problem, with nice continuous swarf coming off. The profiles depend on the material being machined; the tool needs to be hard and tough. The rake angle again depends upon the material and whether or not

you want continuous swarf; that which we think looks so nice is not always appreciated in industry and an angle which deliberately makes a 'chip-breaker' is used. Steel has a tendency to long continuous coils of swarf whereas brass tends to small chips and aluminium has a nasty tendency to stick to the tool tip. We tend to think when watching our tools cut that it is all happening at the tip, whereas in reality the 'shear' point is in front of the tip which actually gets rid of the swarf and, hopefully, gives a nice finish to the cutting operation. Mike Hodgson had brought in a parting tool holder rather like a swan neck with a 'u' in it. The 'give' in the 'u' shape prevented the tool from digging in. This same shape was used for 'shaper' tool holders.

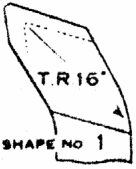



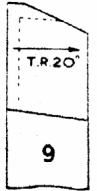
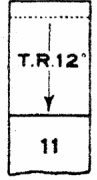

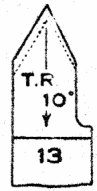
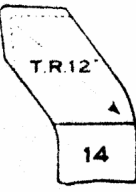
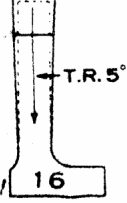
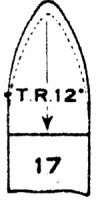
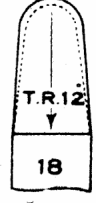
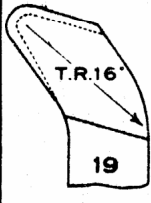
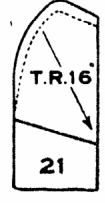
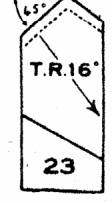
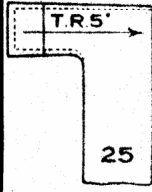
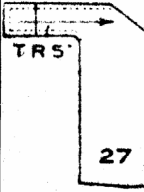
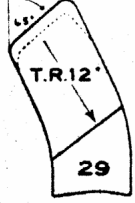
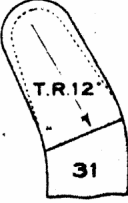
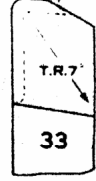
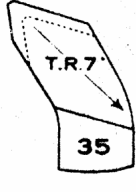
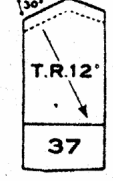
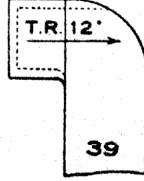
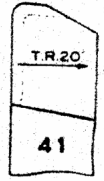
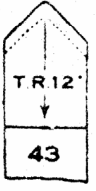
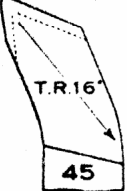
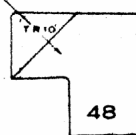
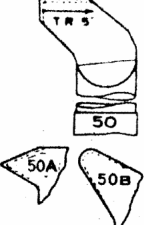
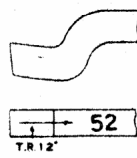
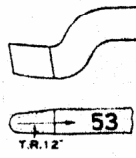



Mike C then continued on to point out that the cutting edges of milling cutters obeyed the same rules as a lathe tool apart from the fact that they moved into the work. They were a bit more of a 'black art' when it came to sharpening and need a specialised machine, such as a Quorn cutter, for accurate results.

Drills were pretty much of a fundamental shape with a helix depending again on the material to be drilled, typically coarse for stainless and fine for aluminium etc. Provided that you could achieve 119° included angle with the point at the centre you wouldn't go far wrong. Mike showed a photo of a piece of steel which had been drilled with drills of the same size but which had not all been sharpened correctly; the workpiece had been sliced down the centre line to show the effects of incorrect sharpening. Mike had great faith in the 'Reliance' type grinding attachment for the larger sizes and the 'Wishbone' type for the smaller ones. The latter has now become something of a collector's item. It having by now approached the magic hour of ten o'clock we showed our appreciation in the usual manner. Yet another excellent evening.

STANDARD HIGH SPEED LATHE TOOL SHAPES

(provided by Mike Chrisp)

<p>Light Turning and Facing</p>  <p>SHAPE NO 1</p> <p>Specify No. 2 if Left hand tool is required</p>	<p>Straight Nosed Rougher</p>  <p>3</p> <p>Opposite hand No. 4</p>	<p>Curved Nosed Rougher</p>  <p>5</p> <p>Opposite hand No. 6</p>	<p>Knife or Side Cutting</p>  <p>7</p> <p>Opposite hand No. 8</p>	<p>Bar Turning</p>  <p>9</p> <p>Opposite hand No. 10</p>	<p>Plain Form</p>  <p>11</p> <p>Cuts R.H. or L.H.</p>	<p>Finishing</p>  <p>12</p> <p>Cuts R.H. or L.H.</p>	<p>External Screw Cutting</p>  <p>13</p> <p>If required to cut L.H. threads, specify 13 L.H.</p>
<p>Down Cutting and Facing</p>  <p>14</p> <p>Opposite hand No. 15</p>	<p>Parting off</p>  <p>16</p> <p>If blade preferred off set on other side, Specify 16 L.H.</p>	<p>Round Nosed Planer or Shaper</p>  <p>17</p> <p>Cuts in either direction</p>	<p>Stub Nosed Planer or Shaper</p>  <p>18</p> <p>Cuts in either direction</p>	<p>Facing</p>  <p>19</p> <p>Opposite hand No. 20</p>	<p>Round Nosed Rougher</p>  <p>21</p> <p>Opposite hand No. 22</p>	<p>Heavy Duty Turning</p>  <p>23</p> <p>Opposite hand No. 24</p>	<p>Right Angle Recessing</p>  <p>25</p> <p>Opposite hand No. 26</p>
<p>Right Angle Parting off</p>  <p>27</p> <p>Opposite hand No. 28</p>	<p>Square Nosed Turning and Facing</p>  <p>29</p> <p>Opposite hand No. 30</p>	<p>Broad Nosed Facing</p>  <p>31</p> <p>Opposite hand No. 32</p>	<p>Turning and Facing for Boring Mills, Auto Combination and Capstan Lathes</p>  <p>33</p> <p>Opposite hand No. 34</p>	<p>Light Turning and Facing for Boring Mills, Auto Combination & Capstan Lathes</p>  <p>35</p> <p>Opposite hand No. 36</p>	<p>Straight Rougher for Manganese and other Hard Tough Steels</p>  <p>37</p> <p>Opposite hand No. 38</p>	<p>Crank Turning, Recessing, and Finish internal Boring</p>  <p>39</p> <p>Opposite hand No. 40</p>	<p>Mild Steel Turning and Facing for Boring Mills, Auto Combination and Capstan Lathes</p>  <p>41</p> <p>Opposite hand No. 42</p>
<p>Diamond Nose</p>  <p>43</p> <p>Cuts in either direction</p>	<p>Light Turning and Facing in awkward corners</p>  <p>45</p> <p>Opposite hand No. 46</p>	<p>Hardened Blank for grinding into form and radius tools at customer's works</p> <p>NO TOP RAKE</p> <p>47</p> <p>Also suitable for tools for work on brass and gunmetal</p>	<p>Bar Boring</p>  <p>48</p> <p>Opposite hand No. 49</p>	<p>Boring</p>  <p>50</p> <p>50A 50B</p> <p>Can also be supplied with top rake for internal screw cutting or with round nose</p>	<p>Swan-Necked Finisher</p>  <p>52</p> <p>Cuts in either direction</p>	<p>Swan Necked Rougher</p>  <p>53</p> <p>Cuts in either direction</p>	<p>HYDRA TOOLS</p> 

General Meetings Update By Mike Chrisp

Friday 4 November 2005 Our Section – The Video Group

Members of the Video Group group were originally involved with shooting and editing 8mm film stock but with the current availability and convenience of digital kit, material is now produced in electronic form. The presentation will include a review of their activities in the 'early days' as well as an outline of their current projects, and we may even get to see some examples of their work, and if time a demo of video editing software!

The meeting will be at our Headquarters in Legion Way, North Finchley, 8 - 10pm.

Friday 2 December 2005 Pre-Christmas Social Evening

I plan to kick off the Christmas Festivities with an opportunity for members, partners, other family members and friends to mingle and chat while enjoying a Finger Buffet (bring your own fingers!) with accompanying liquid refreshment of both alcoholic and non-alcoholic varieties.

To get us into an appropriate frame of mind, this informal evening will begin with a few anecdotes and reminiscences to amuse, entertain and educate all present.

The meeting will be at our Headquarters in Legion Way, North Finchley, 8 - 10pm.

General Meeting 6 January 2005 Auction Sale of Tools & Materials etc.

Following the success of last year's tool sale, this evening will be taken up by another club auction of tools and materials, etc. so now is the time to find a sturdy box and begin to collect together the tools and other useful odds and ends for sale at this meeting. I have already had the promise of a good selection of interesting items for disposal at this sale, so don't miss out, come and join in with a box full of more things for me to sell, and a wallet bulging with small change to finance your purchases.

We will be pleased to accept all proceeds from the sale of your items but will only retain a small percentage of the selling price if you require reimbursement for the sale.

General Meetings—a programme for 2006 By Mike Chrisp

I am pleased to present below what I hope is an interesting and varied schedule of General Meetings for the forthcoming year. Details of our Pre-Christmas Social Evening (5 December 2005) and Bring & Buy Auction (2 January 2006) have already been published and I have confirmed with Keith Catchpole that all being well, he will be available to present his talk in February. The evening entitled 'Down Memory Lane' is intended to be an opportunity for older members to enjoy recollections of days gone by, and for newer members to learn a little about the earlier days of our Society. All contributions will be most welcome, photographic material especially so!

Collectively, members of North London SME can boast a wealth of knowledge and expertise. The evening identified as 'Soldering, Brazing and Welding' is designed to tap into this fund of wisdom. The Three Wise Men to address the meeting in November have yet to be selected for this prestigious task – you never know, if your luck is in, one of them could be you!

I am always very pleased to hear from any member(s) who feel able to share some aspect of their knowledge or experience with fellow members at a General Meeting. If you have anything to offer, please don't be backward in coming forward; contact me to volunteer your services or, just as welcome, to suggest a topic or speaker for a future occasion.

- 2 December 2005 A Pre-Christmas Social Evening**
- 6 January 2006 Bring & Buy Auction: Tool and Materials, etc.**
- 3 February 2006 Keith Catchpole: Edwardian Phonographs.**

- 3 March 2006** Down Memory Lane: North London SME through the years.
7 April 2006 Mike Foreman: A Holiday on the Footplate.
5 May 2006 Annual General Meeting.
2 June 2006 Malcolm Stride: Brush Electrical Engineering Co. Ltd.
7 July 2006 Forum: Soldering, Brazing and Welding.
4 August 2006 The Marine Section Entertains at Colney Heath + Barbecue.
1 September 2006 On the Table: Work in Progress.
6 October 2006 Colin Gent: The Merlin Engine.
3 November 2006 Three Wise Men: A Triple Bill.
1 December 2006 A Pre-Christmas Social Evening.

I would like here to propose a really big vote of thanks to Frank Dell for his stalwart efforts in the kitchen at Headquarters for our General Meetings during recent years. Frank's tea and biscuits were always very welcome and much enjoyed; we are sad that he feels unable to continue in this vital role. Thank you Frank – enjoy your retirement! In view of Frank's decision, a vacancy now exists for General Meetings Tea Boy. The work is not onerous, and the successful applicant will earn the gratitude of all who attend these meetings.

News from the Loco Section of the Tyttenhanger Committee

Extension Project

Oh what a joy to walk around the new area. So unspoilt and beautiful watching the leaves turn at this time of year. I spotted a woodpecker and have heard it tapping. The wildlife is a joy to behold. I hope many of you have had the same opportunity to enjoy it as I have. The fence is now moved and it's open to fully explore the full potential of the land.

The first step was to discover what features and facilities the members want. This was successfully achieved in the form of sixteen submitted ideas that were presented at the September Loco Meeting. As was reported in last month's issue, a pattern emerged from both the questionnaire and the meeting, which revealed that there was much interest in extending both the Mainline and Ground level railways, as well as building a water feature.

With full access, members can now visualise more fully the potential of the site. I am producing a new blank plan with the contours from the survey made some years ago. With this, more detailed proposals can be made and presented to the membership. If you would like to take part in this process please contact me.

To assist me in this progress of the extension project I have appointed a small group of respected loco section members. This will enable us to move this project forward in line with what is best for the club as a whole.

I would urge all members to check with me and in

turn the Tyttenhanger committee before anything is done in the new section. Already someone has started to prune live trees without consultation and or agreement, unnecessarily spoiling the greenery. The only work in this area that can be done at this stage is:

- 1 Removing the barbed wire from the old fence.
- 2 Clearing **only** dead debris.
- 3 Clearing **only** dead trees leaning on or over the perimeter fence.
- 4 Repairing fences.
- 5 Clearing rubbish.

All work has to be agreed and organised in the proper manner.

All members are urged to follow the group and work as a team.

Winter Work Parties

Start of the winter working parties: **9.00am Sunday 30th October.**

YOUR CLUB NEEDS YOU

Let's make this the best yet! Come along and take part. This is **your** club and **your** chance to make it even better. We have lots to do, every little bit helps. Listed below are a few projects to be getting on with. Have a look; I am sure you can help. If you have any other projects you feel we need to do, let me know. The success of NLSME depends on all of us.

Mainline

- 1 Continue anti-tip rail installation.

- 2 Continue rail replacement
- 3 Sleeper 67/68 is in serious decay and must be replaced this winter.
- 4 Tunnel needs attention.
- 5 Additional whistle sign near last signal before station.
- 6 15mph sign moved after tunnel.
- 7 Assess position of signal just after tunnel
- 8 Paving in front of carriage shed is deemed to be a safety issue. To be taken up, roots to be dealt with, proper foundations and a concrete slab to be put down.
- 9 Carriage lifter maintenance, bigger wheels suggested.
- 10 All passenger cars to be inspected and necessary maintenance to be carried out.

Mainline steaming bays

- 11 Traverser adjustments.
- 12 Hydraulic bed maintenance
- 13 Blower sockets replacement where required.
- 14 Airline blower lines to be installed.
- 15 Surface maintenance.

Cuckoo Line

- 1 Bridge mound removal. Lift up section installation.
- 2 Foliage to be cleared back from line.

Ground Level Line

- 1 Ground level station steaming bays and station canopies to be completed.
- 2 Turntable stop fixings to be completed.
- 3 Wall finishing touches.
- 4 Power supply.
- 5 Install gate width restriction posts and relocate signs out of line of site of mirror.
- 6 General inspection of existing ground level track, checking gauge and clearances of points and track, correcting of any issues found.
- 7 Re-lay and edge loop around cuckoo line.
- 8 Proceed with extension from toilet block.

Extension Project

- 9 Survey additional land.
- 10 Remove barbed wire of old fence.
- 11 Remove old posts (only when measurements have been taken.)
- 12 Clear new area of **only** dead debris.
- 13 Clear **only** dead trees leaning on or over the perimeter fence.
- 14 Repair fences.

General Site (existing)

- 1 Car park, grass, drainage, holes.
- 2 Car park organisation, posts & dividing ropes.
- 3 Gutters cleaned on all buildings.
- 4 General tidy up, behind workshop, next to

- toilet, move old rail to behind tunnel.
- 5 Oil store roof replacement/ Make & locate Coal Bunker?
- 6 Tree pruning.
- 7 General painting.
- 8 Toilet, woodwork painting.
- 9 Decoration of coach.
- 10 Rabbit damage, fill in holes.
- 11 Power feed for the garden railway.
- 12 Driveway potholes.
- 13 Extra donation points/suggestions.

Thank you in anticipation for the hordes of members who have started coming to help with very important work that takes place during the winter months. I cannot emphasise enough how important this work is for the ongoing success of our club. So come along, take part, and get to know fellow members. Do your bit!

Notice

As agreed by the Tyttenhanger Committee:

ALL CARS ARE BANNED FROM THE SITE DURING THE WINTER!

This is for the good of the poor grass condition. Any necessary car visits need to be agreed beforehand.

All members are urged to honour this.

There has been an improvement over the last few weeks with regard to locking up and closing the gate. Thank you for your vigilance and let us all continue for the good of the club.

- 1 Don't leave it to someone else, **IF YOU OPEN IT, CLOSE IT and LOCK IT.** It is your responsibility.
- 2 **All stewards MUST sign the running book**

Events

Thanks go to those who helped with birthday parties on the 1st and 8th October.

Friday 18th November 8pm Loco Section meeting; Work in progress; at HQ.

Friday 16th December 8pm Loco Section meeting; talk by Robert Candish on RHDR at HQ.

Sunday mornings 9am

Get up and come to the **Sunday morning winter working parties.** Support your club!

Adrian

(Loco Section Leader)

A Mixed Bag - The Rematch

By Owen Chapman

You may remember the story I recounted of my unfortunate encounters as a trainee fireman with the Festiniog Railway's 1863-built Prince on the Welsh Highland Railway. Well just over a year later I managed an almost rematch – and this time got the better of both the railway and the locomotive.

After four years as a volunteer on the FR and nearly two years of actual training, sheep chasing, dog racing, locomotive swoops, Diesel breakages and sundry other moments of "JGF" (a long-standing Festiniog acronym for Jolly Good Fun) I passed out as a full Fireman in November 2004. In the following month I logged many hours on the railway as part of the Santa season. I had arranged with my good friend Chris – who I suspect was described by Ian Murray in his article in the March News Sheet – to return to Wales for five days following Christmas and shadow him on his rostered turns on the NGG16s on the Welsh Highland Railway (Caernarfon section), as I had not yet fired the Garratts nor been on the WHR since my argument with Prince.

I arrived on the Festiniog Railway on the Wednesday night to find all had been changed around again, as Chris was now only to have one turn on the WHR. This was to be on the following day. I did not appear anywhere on the roster except – joy of joys – I was to fire Prince – now back on the FR on two double-headed trains on New Years Eve. Much grumbling and moaning ensued as Chris and I let our feelings be felt – but sorry the roster had been changed and the roster clerk had gone on holiday and it could not possibly be changed. I could still accompany Chris on the Thursday however.

Chris and I left very early the following morning to reacquaint ourselves with 138. The Garratts are much larger beasts than the Festiniog engines and so I found that they react more slowly to the controls. You can fit your whole body through the firebox door for inspection, which is much more useful in the morning and only have to worry about taking fuel once a day. I was also surprised in the morning by not using the diesel to pull the engine out of the shed – but we filled the boiler to a low pressure with compressed air and drove the engine out under this power. We then had to be very careful to vent the boiler first though, before we lit the fire.

Ian Murray ably described a footplate trip on the Welsh Highland recently, but I shall say that, unlike before, I was able to properly appraise the route and handling of the loco before having to take over the engine and getting into trouble. The Garratts' firing controls are different in feeling and give no positive feeling that you have made your adjustment due to the having to use a more modern valve taken from a central heating system; this resulted in a few early blackouts of black smoke, but I did alright. In fact I can't have been too bad as from Dinas on the up trip Chris was shown how to drive the beat and I was left to supply him with steam unaided. His grin was very big, as was mine, despite our

girlfriends' and others' attempts to put us off (they were riding in the train). The day ended by driving back to Minffordd hostel with a supply of Pizza for everybody.

The following day was my turn for a rematch with Prince. Since my disastrous experience on the WHR I had fired the engine, now 140 years old, once more as a trainee, but had not gone far up the line with me in charge as my supervising fireman wanted to do the first and longest trip of the day. However, Prince still showed me his grumbling from his firebox and attempts to extinguish the fire. The riders of the slate train, including our own Clive Winter, all cheered at me in Minffordd station when I beat this grump.

Chris and our friend Martin came to help me prepare and clean Prince. He had been in use the previous day on an early special with a newly built replica US-style parlour car and was warm. I cleaned the tubes and we had the engine almost completely cleaned, despite a lack of Brasso, before I was finally allowed to light the fire. Earl of Merioneth, the double Fairlie we were to double-head with, was using the airline first, as it was cold and taking too much time. Once again I had to raise steam too quickly for comfort. Then my driver, Paul Ingam, decided he wanted to use the pit *INSIDE* the erecting shop to oil up the Allen straight link motion. This meant I had to drop the fire and relight it again once we were back outside!

Today was going to be a challenge. The Earl had gone over to Porthmadog to make up the train, so I had to quickly bring up the pressure, run across the cob and couple on then keep Prince's boiler hot for an immediate departure. Now with more experience and a keen ear I ignored the grumbles and we left right time with a full water glass (necessary on Prince) and 5psi below popping off.



Prince piloting Earl of Merioneth as train engine, as they head out of Porthmadog. Photo: Martin Ellis

We had a small load for the locomotives, 7 cars. The Earl should have managed this load by itself, but double engines are notorious for not steaming properly on small trains when they do not have a strong draught to draw the fire. Prince is usually limited to 5 cars on the FR, however! Once we were round Boston Lodge curve and on the ruling gradient, it was clear that we were having to do most of the work ourselves. Small engine – big train, - big grade – unhelpful train engine. We were working to the limit, very quickly.

Paul had us in the main valve of the regulator and the noise of the exhaust from the tiny 8 1/8 inch cylinders was incredible. This hard work seemed to bring Prince out of his sulk. The grumbles stopped, I sanded the tubes to clear them of soot and although I had my work cut out, he responded to everything I was asking of him. At Minffordd Paul jumped down and went to top off the saddle tank as insurance, instructing me to keep the blower on hard and the fire up. This was to keep the pressure near red line and keeping it short with frequent short applications of feed water. This was to give us full pressure and high water for when we left the station.



Prince, with Owen clearly visible on the footplate, and *Earl of Merioneth* approaching Bakehouse Crossing just prior to arrival at Penrhyn. **Photo:** Martin Ellis

I need to explain, at this point, that Prince has quite short water glasses, implying there is a small water space. However, the FR is uphill all the way and Prince has a tall steam dome. The strategy is to keep the water just out of sight – as on the Garratts. This is also necessary when working hard as the loco cannot quite keep up the water level all the way. We left Minffordd with a bit more help from the Earl and blasted into Penrhyn. We left there quickly and really opened up to cover the next few miles at full line speed.

This section is twisty through the woods and the gradient is unrelenting. To get back on time we needed to keep to 20 mph. The Earl was falling back again, so Paul dropped down a notch and opened main valve again – more than before. This was great. A 140-year old narrow gauge

steam locomotive working at full power at 20 mph with a heavy train. I was working hard. Prince was steaming very easily, but I was not able to hold the pressure in one place. I again needed short but frequent use of the injector to not drop the pressure too much and keep the boiler as full as possible. The fuel oil was at full flow and as I was raising the atomiser pressure to suck more oil through the fuel line and spray it in the firebox, I glanced at Paul's steam chest pressure gauge. It was incandescent at around 130psi. Prince's safety valves are set to 150psi! We were going some!

We approached the 15 mph restriction for Tyler's Curve; it is 15 from here to Tan Y Bwlch. Paul instructed me to keep the fire setting high and use a lot of blower, even with us still working hard, to keep the pressure up as, despite Prince steaming well we were losing water level as the need for steam was exceeding the capacity of the boiler. So I added to the noise of a hard working engine as the gradient eased and we curved through the woods. I did need to turn the fuel down slightly to stop the smoke becoming thick. (Working hard the chimney had been nearly clean).

At Tan Y Bwlch, again Paul filled the water tank whilst I brought the water back up and pressure high. There was still water left in the tank when we stopped so we would not have needed the refill at Minffordd after all. The Guard was being slow and a number of times Paul looked up at me from the water tank as the safeties were feathering a bit close, we could not afford to waste the water. We left without a slip as the steeper gradient returned.

Once again we were needing to work flat out. Today we had a clear run to Dduallt, with no sheep, dogs or walkers invading the track bed (another story). We blasted through Moelwyn Tunnel and once leaving it I used the blower once again to help raise the water level before going over the summit behind the hydroelectric power station.



The two locos blast their way uphill south of the power station on the approach to Tanygrisiau.

Photo: Tim Goodspeed

Prince's water glasses are so short that going over this

summit and shutting off to coast is enough to go from a full glass to an empty one and the possibility of a dropped plug, so it needed to be high out of sight. Keeping the blower on I let the injectors continue filling the boiler, cutting them off before the second level crossing, to allow the steam pressure to build quickly for the last climb into Blaenau Ffestiniog from Tanygrisiau station.

This section was still a challenge as we were working hard again, but I had to not fire too hard and have too high a water level to give some room at the station to keep Prince quiet and the return down hill. Prince decided he was going back into sulk mode now he wasn't working so hard. My attempt to bring the fire down to an idle resulted in lots of grumbling from the firebox. So I arrived at Blaenau with a bit too much water. Now came the time to fill the saddle tank again. The new bag from the water tank here is of a material that easily wraps itself into a knot; then the water pressure in the bag increases whilst I get very wet from the leaks and the tank takes ages to fill. With some help we got there.

Prince was getting grumpy as his boiler cooled down. Any attempts to turn the fire right down and shut off the blower resulted in bangs from the firebox. This was not good as I kept needing to add more water to keep the pops quiet. We were to be the train engine on the down trip, which meant we would need very little steam because we would not be needing to blow the brakes off. We left Blaenau with high water and I left everything set low in an attempt to lose some water. I arranged with Paul that he would not help the Earl entering the upgrade into Tanygrisiau as I would have to get off and change the token. Normally I would leave the fuel up a bit for this and the driver would use the steam then operate the injector whilst I saw to formalities, but the water situation needed dealing with.

We started the climb over the short distance to the summit of the deviation behind the power station. Paul was now using steam and since a low fire would have been sucked out, I fired a bit more but attempted not to use the injector at all. As we went over the summit I was determined to get Prince to co-operate and set up a light blower and turned the atomiser and fuel down in small steps, eventually getting to about 5psi on the atomiser. I then tried to cut off the blower. This time it worked. I then opened the inspection hole in the fire door and watching the burner turned the oil down till it was very fine. I did use the injector to keep the pops seated in Moelwyn Tunnel then said to Paul I would leave it all alone and if we blow off so be it.

Finally "the old gent" (long standing nickname of Prince) had been beaten and we headed down the line with the smallest fire we could. Prince was still making steam but very slowly, so slowly that when the redline was reached the feathering of the safeties was just enough to control the pressure – much to our surprise – and the valves never actually popped. The crew on the Earl, now leading, kept the train's speed in check and Paul and I discussed the 7 ¼ inch model of an Orenstein and Koppel narrow gauge well tank he has been building for the last few years. (It is progressing well but slowly). We woke up before Tan Y Bwlch and

I used the injector to drop the pressure enough to quieten the feathering safety valves for the station stop. The rest of the down trip rolled out in the same way – Prince just about blowing off and occasional use of the injector for passing through the built up areas.

At Porthmadog we fuelled the tender and then sat on the pit waiting for the crew of the Earl to catch us up. (Only one engine can fuel and water at once) As I ate my sandwiches the sun came out and highlighted the engines with the low-angle light only mid winter can produce. Looking across the bay to Harlech and across the other side of the cob to the Snowdonia Mountains I consider myself very lucky.

The second run of the day went much like the first as we blasted our way up to the source of the former empire's slate roofs. Only once did I get caught out and the pops actually blew, as we shut off for an unscheduled stop at Boston Lodge halt to collect the General Manager to take him home to Minffordd station house! I had to keep Prince hot and although I had started the injector the pressure just kept rising. We left the halt with both injectors on and the pops were still lifting as we went up the A487 road, but soon after this sense returned. I also managed not to have so much water at Blaenau.

At the end of the day we totted up our fuel and cleaned the engine down at Porthmadog. Despite our working to the



limit the little veteran engine had only used 400 litres of fuel the whole day – which is less than many other engines on similar difficult loads, and vastly different from the Garratt's 1000+ litres on the Welsh Highland the day before.

We ran across the Cob to Boston Lodge in the dark. As we had cleaned down at Port whilst waiting for the Earl to service we ran straight onto the pit and blew down the boiler sediment without turning out the fire – then headed straight into the shed – pausing outside long enough for me to fill the boiler with the injector (not possible with the fire out due to boiler stress) and finally extinguish the fire. Once inside I whipped the degreaser from the wheels and frames and Paul and I left Prince tucked up warm to help the crew of the Earl to finish up, all previous vendettas overcome.

I enjoy working with steam engines, working hard in some of the best surroundings to be found in these isles. I look forward to my next run on Prince and to sharing some more tales of life on the footplate as a fully qualified Fireman.

 **Letters Page**

ST.ALBANS & DISTRICT

Member of the Model Power Boat Association
Member of the Southern Federation of Model Engineering Societies

MODEL ENG. SOCIETY

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Tel: 01442 219024

28th September 2005

Dear Maurice,

Thank you very much for once again organising the NLSME stand at our recent exhibition at Francis Bacon School. Will you thank all your members who were involved with your exhibit and especially those in the gym with the slot car racing. This was a great idea and certainly enjoyed by the youngsters.

We are very pleased to play host to our neighbouring societies and I hope your members enjoyed the exhibition.

Again thank you very much

Kind regards

Yours sincerely

Michael Dyer

Chairman

The St Albans Exhibition

North London Society were out in force at this year's exhibition: besides the main stand the slot car boys were in attendance with their track; outside the main hall Brian Baker had his traction engine, and in the hallway Mike Franklin had a display of his locomotive paintings.

I would like to thank everybody who helped in this exhibition, whether supplying models or stewarding.

The next exhibition that I will be managing is the London Model Engineering exhibition at Alexandra Palace on 20 - 22 January, 2006.

Maurice Cummins

The October Loco Section Meeting

By Roger Bell

The topic for the evening was a talk by Chris Vousden about the new terminal 5 at Heathrow airport. Plans of the development were hung around the room and we were given a copy of 'The site', an award winning newspaper for the T5 site.

It is probably the biggest project in Europe. The total cost is £4.2 billion; they will spend £94 million next month, they are financially on target and half of the budget has been spent already. It is being financed by the British Airports Authority. All the figures are enormous: 67 million passengers use Heathrow in a year, of whom 33 million are passing through. Due to congestion, Heathrow is losing traffic to Frankfurt and Paris. T5 is designed to accommodate 30 - 40 million passengers per year, therefore relieving the congestion with the existing terminals. T5 will become the home base for British Airways; they are winning back the onward travel passengers and providing an exclusive facility with T5.

The T5 project consists of a number of sub projects, these being Concourse A, Satellite B, Ground works for Satellite C, Heathrow Express extension, Piccadilly Line extension, Tracked Transit System, Air Traffic Control Tower, Northern and Southern Airside Road Tunnels, Car Park, M25 Junction, Twin Rivers diversion and numerous ancillary buildings.

Chris described the Site layout and Concourse A (Main terminal) drawings, to instil a sense of scale; T5 main terminal is as long as the distance from Oxford Circus to Bond St. One checks in at the desks on the top level (departures; those that have booked by email put their own bags on the conveyor or join the queue. After three goes one gets the hang of it. The luggage goes down a hole and is zapped by rays a human could not stand. There are two passageways out to security controls and then into part of the shopping centre. The main shopping area on the next level down is as long as half the length of Oxford Street. On the arrivals side, passport control is flanked by the immigration search area, toilets that don't flush away so they can be searched and also prison cells, from immigration passengers descend to the baggage reclaim hall and out

through Customs onto the area for 'weepers and greeters' or the coach / rail stations.

In the basement a service road backs onto loading docks servicing the terminal; behind these is the baggage factory where 23km of baggage track runs, the outer circuits of which run at 4 metres a second - this is now under test. The luggage travels at 8 metres a second in the connecting tunnels to Satellite Concourse B and eventually C. Luggage lies on a steel plate on a pallet, which floats along on magnetic levitation driven by a linear induction motor. Baggage despatched to the airport from hotels and the like arrives at a baggage holding area until one checks in.

A new rail terminus takes a full-length train. A passenger transit system connects areas A, B and C of T5. An area is available for a hotel to be built.

Part of the project is a new control tower; due to a shortage of on site space the cab that sits on top of the control tower was built complete off-site, even with its internal staircases fitted. The top section of the tower was assembled with the cab in one area where there was room to manoeuvre and moved across the runways into its final position at night, hauled by an enormous tractor.

Two rivers were diverted and a road moved over; the road will join a new junction on the M25. A bailey bridge has been built to enable works traffic to convey soil away to a holding point from where it will eventually be moved back; there is a shortfall of soil overall. The new river will look nice visually and satisfy the conservation agency; fish and mussels were moved by hand to their new location. A mesh is spread over the water to deter birds from the area to minimise the risk of a bird strike with an aircraft.

The principle contractor is Laing O'Rourke; there are 3,500 people on site now and this is expected to grow to 5,000. So far 1 million cubic tons of concrete have been poured into T5. On a typical day 3,500 cubic metres of concrete are laid. The concrete is mixed off site; one exception is that for the tunnels which is made of a type that goes off quicker.



Charity No. 210073

Patrons: The Worshipful Mayor of St Albans
The Right Reverend The Lord Bishop of St. Albans.

17th September 2005

Dear David

I am writing on behalf of the members of St Alban's Mencap to thank you for providing our members and their families with such a wonderful day on the 10th September, we have received many wonderful comments about this day from our members!

Please can I ask you to pass on our thanks to all the train drivers and their families for providing us with such a memorable day.

Could I also ask if you could put us in your diary for next year, I am told that your society has provided St Alban's Mencap with this very special day since 1978. You can contact me on

Once again a huge thank you to you and all the members of the N.L.M.R.
Tytenhanger.

Kind regards

A handwritten signature in black ink, appearing to read "Rosemary Somerset". The signature is written in a cursive style with some loops and flourishes.

Rosemary Somerset
Committee Member



Dear Mike,

Just a note to say a very big Thank You, for your input to our Bank Holiday Funday and to ask you to convey our thanks to the other club members who so kindly gave their time towards it.

We feel it was a huge success and you all helped to make it that way.

We are enclosing a cheque for £50 which we'd like you to put to the club funds on our behalf.

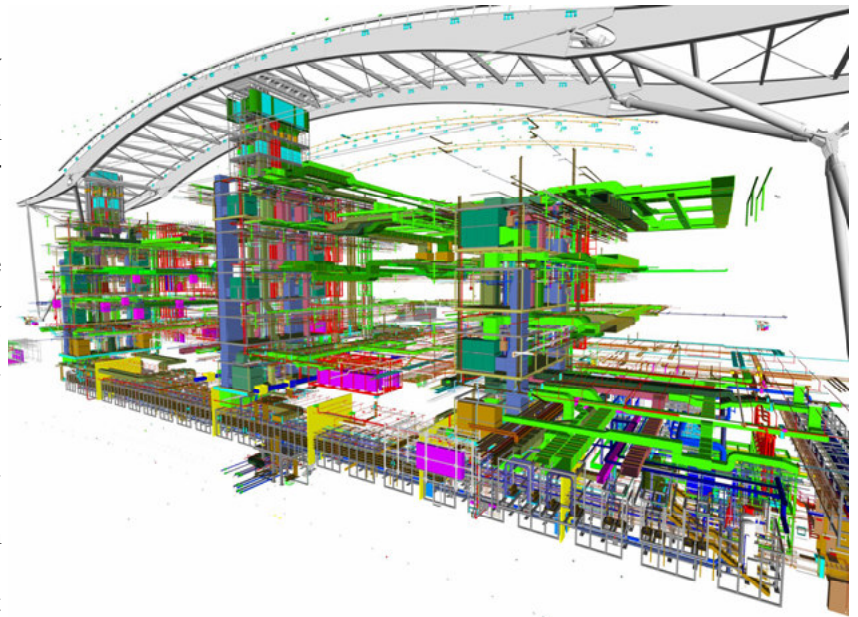
As well as this £50, we also raised another £230.37 from the Steam and Face Painting, which will be going to St. Francis Hospice in Berkhamstead.

Thank you again

Regards

Diane + Roger.

The roof and façade of T5 are completely separate from the internal structure, and they do not touch each other. There is an end section at each side and a centre section; this makes three bays in depth - there are many bays in the building. This centre section has a clear span of 180 metres. The reason for the separation is that there is a coefficient of expansion differential of +/- 300mm between the internal structure and the roof, so the worst case is 600mm. The roof is supported by a torso, a new design, where feet about 5 feet high are concreted to the base; a stainless steel tube connects it to the torso. The torso is made from 10in thick solid steel and looks like a big hinge; again tubes act as arms up to hands that secure to the roof. The hinge has a 12" diameter pin.



Above: One of Chris's slides, which shows in diagram format the interior layout of a bay, and the separate roof.

The 180 metre roof sections were fabricated and a trial assembly carried out to check that the curvature was correct; a 600mm deflection was designed in from fabrication to assembled position. Having established that it was to drawing, it was numbered up, taken apart and shipped to the U.K. It was built in Finland; there was not a fabricating shop big enough in the U.K. The sections have a walkway running down their centre.

We saw pictures of the erection of the roof that has been up for over a year now. The end structure was built, taken apart and rebuilt twenty times to prove the assembly technique and for the erecting crew to get the hang of it, before the main project got underway. The feet were enlarged as a result of this development work. Each 3-bay section of roof took 22 hours to lift into position.

There are at present 21 tower cranes plus mobiles on site. There is still much to do; thirteen miles of balustrade made of stainless and glass is yet to go up. The work should be finished in 2007 with one year to test the systems, so the opening date is 2008.

We thanked Chris for enlightening us with an interesting evening into this major national project, and probably for most of us, a project that until the meeting we had barely heard of.

📖 Dates for your Diary 📖

Tuesday 1 November	8.00pm Tyttenhanger Committee Meeting; Colney Heath (in the coach)
Friday 4 November	8.00pm General Meeting; spotlight on the Video Group; HQ, Legion Way, North Finchley
Monday 14 November	8.00pm Council Meeting; HQ, Legion Way, North Finchley
Friday 18 November	8.00pm Loco Section meeting; Work in progress; HQ, Legion Way, North Finchley
Friday 18 November	<i>Deadline for copy to Editor for December News Sheet</i>
Friday 25 November	8.00pm Workshop Evening; HQ, Legion Way, North Finchley
Friday 2 December	8.00pm General Meeting; Social Evening with wine and cheese; HQ, Legion Way, North Finchley
Tuesday 6 December	8.00pm Tyttenhanger Committee Meeting; Colney Heath (in the coach)
Monday 12 December	8.00pm Council Meeting; HQ, Legion Way, North Finchley
Wed 14 December	7.30pm Open House with the HO Group; HQ, Legion Way, North Finchley
Friday 16 December	8.00pm Loco Section meeting; talk by Robert Candish on the RHDR; HQ, Legion Way, North Finchley
Wed 28 December	HO Group afternoon; HQ, Legion Way, North Finchley
Wed 28 - Fri 30 Dec	The Model Engineer Exhibition, Sandown Park

☆☆☆

Every Wednesday	Miniature Railways, British and American and Video Group at HQ
Every Thursday	Slot Cars Section at HQ
Every Sunday	Morning work parties at Colney Heath (start 9.00am).

A Thank You to the Stewards, by Ian Johnston

Well Done! Phew, yet another running season is over at Tyttenhanger. And everyone in the Club must record a vote of thanks to all the stewards that have done sterling work at the track over the Sundays since Easter.

This year there seemed to be far more of the general public enjoying our facilities and we seemed to have served far more teas and cakes than in the past. Not only have we had more folk at the site but we have had more traffic on the track and the ground level line has really come into its own, making more demands on stewarding of course. One conscientious and industrious member said that he had carried in excess of three hundred children on his train. (Not all at once I hasten to add!)

I know there have been a couple of glitches in stewarding but by and large I think that the season has gone very well. Happily this year there were more locomotives on the tracks and of course that demanded more in the way of stewarding.

Now that the Child Protection Act is in place we all need to be sensible and also diligent. A copy of the Act as far as it concerns us, should be in the News Sheet soon. The Southern Federation have done a

grand job in making a sensible and workable fist of it.

By next season I will be seventy and as I have 'done' the rota for the past ten years I think it is time to hand over to someone that is a little younger.

I do notice that at the end of the 1996 season we were roistering and satisfactorily managing with just two stewards, one on the track and one on tea duty! My - how times have changed!

A grand survey has taken place which has addressed the demands on stewarding in more detail than I could ever imagine and with that in view I feel that it is time to bow out.

So a big thank you to you all and thank you for your forbearance and above all your good hearted cooperation over the past ten years.

Ian Johnston

PS:-

Don't forget the Loco Section Meeting on 18 November which will cover Work in Progress. This is your chance to show the club just what the Loco Section get up to. So don't be shy, show us yours and we will show you ours! Adrian will be in charge this evening so please give him your support.