



**Goodwin Park News**  
**Winter 2021/Spring 2022**

## Club Details

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The newsletter of Plymouth Miniature Steam. Published quarterly (normally March, June, September & December) and issued free to members. **Cut-off date for submissions is 24<sup>th</sup> of the preceding month (i.e. Feb, May, Aug & Nov).**

We operate a ground level track of approximately half a mile in length at our site at Pendeen Crescent, Southway, Plymouth, with facilities for 3½, 5 and 7¼ inch gauges. Public running occurs on the first and third Sundays of each month, from April until the end of October.

For further details and membership information, please contact Ian Jefferson (01752-788862) or Rob Hitchcock (01822-852479).

Current Membership Rates - Adult £28, Junior £10.

Workshop facilities available to members at 'Tor Bridge High', Plymouth, £30 per term (10 weeks) or £3.50 per session(eve).

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We also operate an email message service within the membership; if you wish to join, please contact 'the membership secretary'

Please note that contributions reflect the views of the writer and are not necessarily endorsed by the Company.

Members' advertisements for models and other related items are published free.

Non-members and Trade, by arrangement. All items for inclusion to be sent to the Editor.

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### Your committee for 2022

Ian Jefferson	Chairman
Nick Hill	Vice Chairman
Ursula Brown	Secretary
James Atkinson	Treasurer
Selwyn Brown	Track Marshal
Alan Smith	
Bob Sims	
Ti Daley	
Rob Hitchcock	
Phil Chant	

Please make sure that any change of address, email or mailing preference are notified to the membership secretary promptly in order that we can keep you informed. If you do not wish to receive communication by phone or email, please ask the membership secretary to delete that information.

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**Front Cover:** A recent acquisition by the National Railway Museum is the 'kinetic sculpture' by Rowland Emmet, called 'A Quiet Afternoon in the Cloud Cuckoo Valley'.

**Photo:** Ian Jefferson

### Editor's note:

After 10 years of editing this newsletter, I am handing over the reins to fellow member Phil Chant from this issue. Hopefully you have all enjoyed reading it & thanks for the contributions (please keep them coming for Phil!). I am sure you will see some changes and hopefully all for the better (Phil might actually be better than me with deadlines for a start ☺).

Enjoy,

*Dave Biss*

### From the Chair

As we move into 2022, it comes time to write another missive for our magazine. Alas, this one has to cover 6 months rather than the usual 3, as for various reasons, the issue scheduled for November did not appear. This issue, is therefore, a composite of the 2.

Looking back on the latter part of 2021, we did manage to take steps towards getting back to 'normal'. By changing our way of operating and limiting loading of our public trains, we were able to continue running and brought in some much-needed income, we therefore remained financially secure. Because of the restricted way in which we operated and the fact that we lost the first couple of public Sundays, we decided to include a couple of extra days on the 'fifth Sundays'; these added to our income and proved very popular, one of them yielding the highest numbers of rides for the year. The last of these was on 'Halloween', so we decided to 'decorate' the site in line with the theme and gave out pictures beforehand for the younger children to colour in and bring back; unfortunately only one came back, but the public certainly entered into the spirit of the day by dressing up and really having 'fun'. Some advanced publicity had been put out via Facebook, featuring a (driverless) 'ghost train' which put in another appearance on the day, giving rides on the shed road; the secret being a radio control set



## From the Chair

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## From the Chair

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## From the Chair

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The messages that we received after this, principally by way of facebook, were overwhelmingly positive, thanking us for getting back to operation and complimenting us on the way we managed the necessary controls demanded by the pandemic. This has proved to us that such themed days can be popular and yield additional revenue. Unfortunately, Halloween is not always the most appropriate opportunity, falling as it does after the clocks go back to GMT and that the weather can often be poor. It also falls after the autumn half term holiday which means that we lose a week or more of maintenance time. So we need to think about alternative themes at other times of the year and 2022 may well offer at least one such opportunity, we need to remain open to these opportunities.

As soon as it was possible, the 'vandals' descended on the areas of track that had been identified as requiring attention and started lifting the rail, prior to carrying out repairs to the foundations before relaying the track. And thankfully, we got a good turn out of help for the concrete pour at 'Little Rock'. The main aim for this winter's maintenance however, remains one of completing some of the jobs that are currently incomplete along with essential track repairs and the scheduled locomotive and stock maintenance.

As 2021, turned into 22, we once again held our



*Track base at S1*



## From the Chair

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*The big pour at Little Rock*



*Little Rock refreshed*

members' day on January 1st and thanks to the preceding hard work, the track was available for use by those who came 'prepared' and the feeling was that the track had been improved. It was good to get back to such a gathering and to seeing a wider range of members.

The next event in our calendar, was the AGM at the beginning of February. Having held a virtual AGM last year, we felt that it was highly desirable that we got back to meeting 'in person' but as an acknowledgement that there were those members for whom travelling would be awkward, this was run as a hybrid meeting with some attending by video link. Whilst we would continue to encourage members to attend such meetings in person, it is likely that we will continue to offer the link facility to help members to attend. The business of the meeting proceeded as normal, reviewing the past year and summarising the challenges for the future. With the existing committee re-elected, we welcomed Phil Chant as a new member to help us going forward. Phil has also agreed to take over from Dave Biss, as the editor of this magazine, the transition taking place over the next couple of issues. Authorisation was

## From the Chair

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also obtained from the membership to purchase new batteries for the electric locomotives, the last 2 years having done them no favours and to begin the process of obtaining a new boiler for fitment to one of the club wrens.

Because of the chaos around the last couple of years, we have not stayed with our normal pattern of charitable support. So having asked the membership for nominations at the AGM, the committee have decided that we will return to our normal pattern of supporting a small local charity, donating the rides takings from a single day. For the next 2 years that will be “Ellie’s Haven”, a charity providing support for families with children suffering from life limiting conditions. We hope that you will be able to help us support this charity and if you have a favourite, local, small charity that you would like us to support in the future, please let me know and it can be added to our list.

Of course, our public face is only one aspect of our club’s activities, the other major activities are our members’ days and our workshop evenings at Torbridge. Both have been impacted by the Covid pandemic, but thankfully have been getting back to action through the last year. So just to remind you that the second Sunday of each month is the members’ Sunday, when you can come and enjoy the site or learn how to drive one of the club trains. Thursday evenings during term time, is when we have access to the workshops at Torbridge. This is your opportunity to come and spend some time with other members, in a pleasant environment and either progress your current project or possibly get some help with any problems you may have. We are already part way through the Spring term of 2022 and will hopefully soon have the dates for the summer term. So why not come along and join us, it does not cost that much and it can be quite interesting to see what others get up to in the name of our hobby. Another activity is the ‘Tuesday gang’, not only is this a time for us to do some grounds maintenance and other work at Goodwin Park, but it is also another opportunity to meet other members and have the opportunity to talk about things in general, so if you are available, why not join us?

The fact that we have received so much positive feedback from the public recently, means that we must be doing things right and that we are appreciated by them. However, this does not just ‘happen’, it takes effort on our part to achieve it. The fact that we are achieving this, is a tribute to those members who turn up regularly to commit their time to the club in one way or another, but we could achieve more and

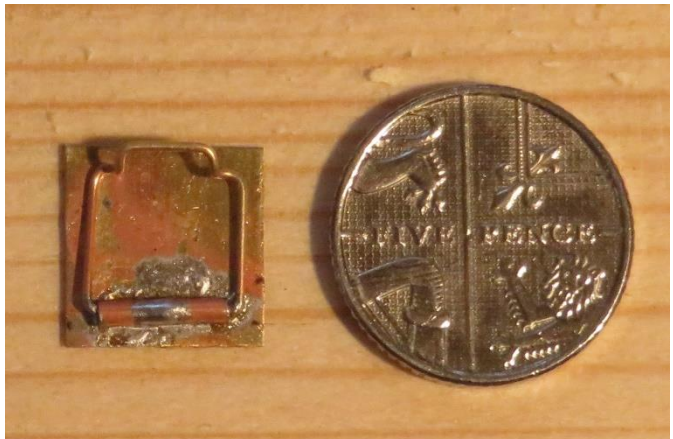
## From the Chair

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more easily, if we had help from a few more members. There are many ways in which members can help, not just running the trains for the public, but serving in the shop, helping with the maintenance, looking after the site (principally on a Tuesday) or helping with running the club by joining the committee; all these could benefit from your contribution to your club. So please think and consider whether you could spare even a few hours here and there to help out. Your help would be appreciated and you could find it enjoyable as well!

As we look at happenings in the wider world, more and more venues and activities are returning towards normal, but I wonder what the 'new normal' will be like. Then there are the challenges, coming from all the environmental regulations that are coming into effect and whilst we can claim some exemption under the 'heritage' banner, we are not immune, so we do have to be aware of happenings in the world. One change that you may have heard of, although not associated with either of the above, is that the workshop area at the NRM in York has been closed and emptied, to make way for 'Wonderlab'. Consequently, Sir Nigel Gresley will be recorded as the last locomotive to be overhauled there, she was recently moved to Crewe for completion, before a return to the main line later this year. I recently saw an artist's impression of this new venture, which is intended to be an educational facility for younger people, but as I understand, access is to be chargeable, I would not wish to venture an opinion on the change, other than we must feel it a loss to the movement.

Coming back closer to home, I often wonder where the time goes as I seem to go from one task to another without a break and the challenges are still piling up. I have thankfully managed to squeeze a little time



*The label clip*

## From the Chair

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*A project completed*

declared what the final thing would be. Well in the last few days I have dealt with the last little cosmetic component that just needs painting and fitting, to complete a project that has been almost 14 years in the making, although most of the work has been done in the last 2. But of course this is just one of a pair, so how long for number 2? Well, just a couple of weeks as I have been progressing them together! And finally, I did have a bit of luck the other day, as I found that the very small adjustable spanner that was until a few years ago so easily obtained, is still available, although at a higher price (what isn't?). These, along with a number of other small tools are available from Proops, who we were used to seeing at exhibitions and are now online at [www.proopsbrothers.com](http://www.proopsbrothers.com)

So, with that hint at a bit of 'retail therapy' I will close and wish you all well for the future and hope you stay safe, healthy and keep making models. Remember that the more you invest in the club, the more you are likely to be rewarded! Ian.



out for myself and one of my projects. I know I have teased you a little with some of the challenges I faced and included photographs of the progress, but have not

## The Early Years

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### A Model Engineer - The Early Years.

*Tom Pawley*

I would imagine that those of us of the Model Engineering fraternity had a similar start to our endeavours, namely, a playpen and a pile of wooden blocks, learning the basics of building stability, and the pleasure to be gained in knocking them down again.

As time went on I learned new skills and more tools were acquired, especially useful were a soldering iron and a pair of tin snips, these together with some empty food and coffee tins, plus some slivers of lead from the roof flashing of an outhouse provided me with many hours of tinplate boat building. Then came a time, I suppose I would have been around 9 or 10, when I thought about steam power and had the idea of making a steam turbine. I had made crude water turbines, making the wheels from coffee tin lids by making a series of cuts and twisting the resulting segments until they formed roughly the shape of a turbine. They worked well on water flow, so I went one stage further. The basis was a Nescafe 4oz. Coffee tin, with two strips soldered on to the lid and standing vertically. A hole punched through the strips at the top enabled the wheel to be mounted between them using a 4" nail as a shaft. The can was half filled with water, the lid pressed on and the contraption set over a small burner on my Mothers gas stove (she was out shopping!).

The result was most satisfying, my very first steam engine and it worked beautifully. Experiments with gas pressure soon showed that the more heat that was put in, the faster went the wheel. The next stage in my researches meant transferring the device from the small burner to a bigger one, and oh, didn't it just go then! Turning the gas tap full on sent the rotor really screaming around emitting a high pitched whistle.. Then I learned that the expansive power of steam is not to be trifled with, as the lid of the tin blew off, sending the still howling turbine assembly up to bury itself in the kitchen ceiling.

The tin still had some small quantity of coffee in it when I put the water in, and so the explosion distributed the sticky brown substance over the once pristine stove plus its surroundings.

## The Early Years/ESSMEE

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This was the moment that my mother chose to return, and entering her once immaculate kitchen looked on at a scene of devastation, plus, emerging from a cloud of condensing steam, a screaming coffee coloured child. We will draw a veil over the next few hours though they will be forever etched in my memory. I think that my father may have found it amusing, until he had to repair the ceiling.

None of this dimmed my passion for making things, and my model engineering endeavours got a major boost when some kindly person gave me a few copies of The Model Engineer magazine and I encountered the writings of that most excellent person LBSC. He must have launched many thousands of Model Engineers on their way into this most satisfying and rewarding of hobbies. I still have a morbid fear of steam turbines though!

## ESSMEE Open Weekend

*Mike and Anne Malleson*

Greetings from the East.

The East Somerset Society of Model Experimental Engineers Autumn gathering will take place on the last weekend in September. This year the emphasis will be on model engineering and is titled 'Model Engineers' Open Weekend'. Due to the difficulties of mixing public passenger carrying with lots of visitors running their own locomotives, it has been decided to dedicate the event to our visitors so that they have exclusive use of the railway without having to be fitted around public trains.

We think this will make for a relaxed time and will reduce manpower demands on our club members who will then be available to provide better support and backup. For more information on the Clubs activities and perhaps tempt PMS members to come for the weekend, visit our website [www.essmee.org.uk](http://www.essmee.org.uk) to see what has been happening recently and be enticed to experience our new tunnel !!

Further details will be circulated as preparations proceed.

Best wishes, Mike and Anne Malleson

## Fitting a new DRO

*Mike Malleson*

Greetings from the East.

In the course of my model engineering life I have accumulated three lathes and two milling machines. To say that I have a love of machine tools is not an understatement, and if I had the space I would be constantly be acquiring as many as I could afford, from the 80 ft. long ride-on



*Figure 1. First Emco FB-2 with 2-axis Newall DRO*

monster lathe I saw in a machinery dealers in Grantham whilst inspecting a 3cwt. forging hammer (that's the moving part!!), to the exquisite watchmakers lathes that

appear for sale from time to time, there would be no limit to what I would like to have!!

Some years ago I decided to fit a Newall 2-axis DRO to the first machine I bought, an Emco FB2, and this was a fairly straight forward job. The scale consists of a carbon fibre tube that is filled with precision steel balls and this runs



*Figure 2. Newall scale & reader head on x-axis*

## Fitting a new DRO

through the reader head. Various mounting brackets came with the set and by drilling some holes and using the T-slot along the front edge of the table it was not a lengthy job to set it all up and be able to machine to the nearest 0.0005". The read-out was instant and very precise as you would expect from an instrument of its quality and price.

Later on I regretted not buying the three axis version and so I bought a cheap single unit which, with once again some drilling and a made-up bracket or two has served quite well but not such that I can rely on it for good accuracy, and it responds quite slowly.

So recently I decided to fit my other machine with a 3-axis DRO and contacted the same company. It took a week and several supposedly un-received emails to finally get a quote, which as you can imagine had gone up considerably from the first one, even taking into account the extra for the Z-axis. I was annoyed by their lack of interest in a sale. So an internet search led to a unit from a reputable company,



Figure 4. Second FB-2 with 3-axis Machine-DRO



Figure 3. First Emco with retro-fitted z-axis

Machin-DRO, at less than half the cost. At this point I asked around my club and the opinion was that these units were a good buy and very reliable. They were of the magnetic type, the optical ones no longer being much favoured, so an early Christmas present in the form of a large box duly arrived. It was quickly clear that this type was going to take a lot more time and care to set up properly, and so it proved.



## Fitting a new DRO

The kit consisted of the readout unit with the cable to connect up with the power supply unit with its cable to the mains socket, three magnetic strips with self-adhesive backing, three very thin stainless steel cover strips for protecting the mag.strips and lengths of round section 2mm o/d rubber cord to hold them in place, three aluminium extrusions to which the strips were to be stuck, extruded cover plates for these scales, three reader heads and accompanying armoured cables for connection to the readout unit, and a selection of cast aluminium plates, brackets and screws for mounting everything to the machine. In the event most of the brackets were of no use and I made up my own from various bits of aluminium channel and angles and steel strip.



*Figure 5. Machine-DRO x-axis under its protective cover. (The notches were a mistake)*



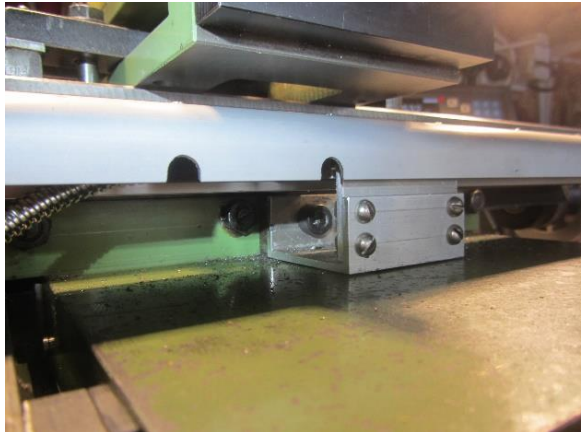
*Figure 6. Machine-DRO y-axis scale & reader head* and 1mm apart. I didn't take pictures of the assembly procedures but the photos give a fair idea of how it all went together. Having made and used a 0.5mm thick feeler strip for setting the gap the final acts were to peel off the mag.strip backings and stick them to the extrusions dead

## Fitting a new DRO

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straight ( there was no peeling off and resetting any misalignment !), remount and reset everything, plug in, hold my breath, and switch on.

For me these moments are always accompanied by a flash of panic, have I got it all as it should be. To my enormous relief and some surprise the readout sprang to life and three rows of zeros lit up! Final step was to try all three axes and I must admit to a spurt of joy, not only that the numbers added up and subtracted, but also I could work to a tolerance of 0.0002", better than the more costly unit on my first machine. 0.0002" = 5.08 microns, the level of tolerance applied to some jet engine parts!!



*Figure 7. Machine-DRO x-axis reader head under protective cover*

The joy for me in a DRO is threefold. Firstly it makes up for my lamentable mathematical abilities, counting backwards on a hand wheel scale is a real effort; secondly it eliminates the need to compensate for backlash ; thirdly centring on a bar or setting out drill holes is quick, easy and dead accurate. I have yet to explore all the functions that are on offer, other than to drill a circle of holes. The mental processes that comprise digital/computing thinking are, like my maths, hard to grasp – all rather sad I admit, but at least I have help at hand as my wonderful wife Anne is always at my elbow to guide me through.

Mike Malleson.  
Mere, Wiltshire.

## Updates from members

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### A message from Les O

I started my association with PMS when you first began with the late Bernard Webb. Through the years my family and I enjoyed what you had to offer.

Later when my family went their own way I joined as a member, and soon found I was able to help weekends, (weekend worriers) hospital limited my ability but with help, understanding and a chair to sit on, I did various task's.

I started building a loco, but family commitments have (momentarily), put a halt to this. The loco (not named yet) based on Cassy Jones's Engine.

Les O

## Updates

*John Briggs*

**ESSMEE** The East Somerset Society Of Model and Experimental Engineers is visited by The Model Engineer Magazine, in an article dated 11<sup>th</sup> - 24<sup>th</sup> February. Based at the Bath & West Show ground, several of our members have enjoyed their annual Open Days - the next one will be on the 24th /25<sup>th</sup> September. They have built a new tunnel since our last visit.

**Doncaster Exhibition** The National Model Engineering and Modelling Exhibition, planned for May at Doncaster Racecourse, is cancelled due to the ongoing Covid situation.

**JB**

## Coach Number 11 Please

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### Coach Number 11 Please

*Martin Elver*

Just before the world turned on its head Plymouth Miniature Steam was enjoying a year on year increase in passenger ride count with the associated income. This brings its own issues with it, at peak times our loyal and enthusiastic public have had to queue almost completely around the club house.

Our coaches as reflected in standard gauge have variants making up running sets. Typically a set will consist a driving and a guard unit with intermediates added as required. To date we have four running sets and two intermediates (there is no buffet on this service). Our two intermediates are probably our oldest rolling stock. A coach is nominally six feet in length with the intermediate coach offering the highest passenger carrying efficiency due to the driver and guard taking up a considerable portion fore and aft.

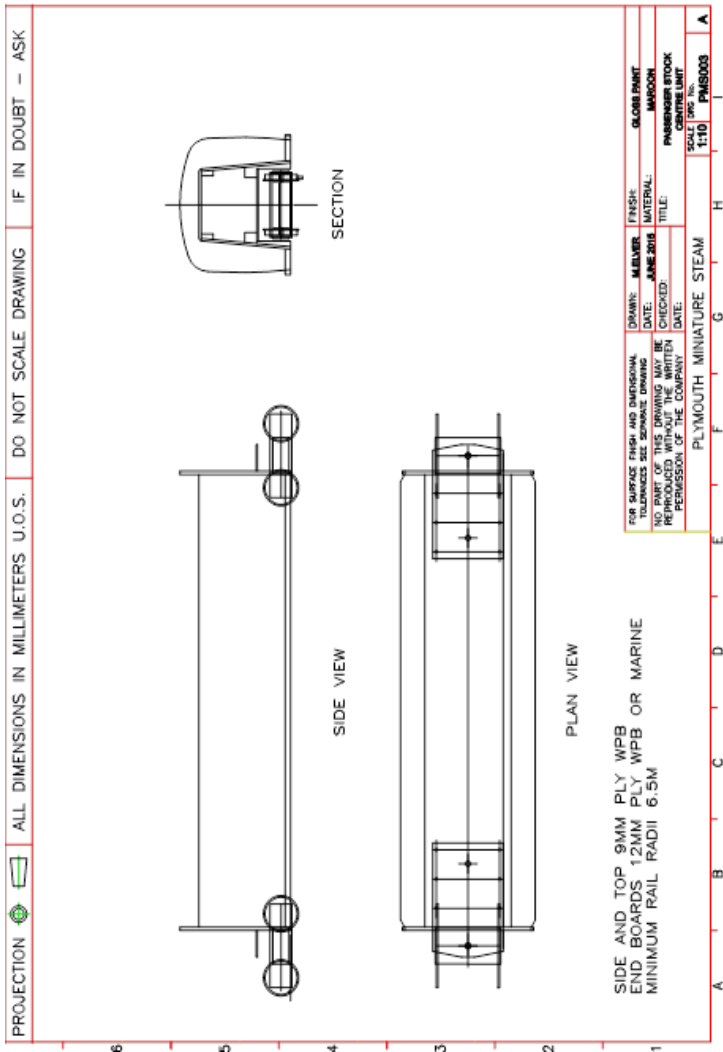
The obvious answer is, we need more intermediate coaches but there's a catch, storage is at a premium so we needed an assessment as to what space is available. Coaches are stored under the club house. This involved pressganging one of our younger members (or just someone fitter than I, you can picture a Dickensian fire place at this point) given a tape measure and sent in to assess what space we have available, the answer by a good foot is not six feet, so number 11 is a shorty!



*Laser cut MDF router templates*

# Coach Number 11 Please

An assessment of our existing stock was undertaken and noting of some failings, (mainly an easing of body width to allow smaller rail radii) to arrive at our current standard carriage.



## Coach Number 11 Please

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Father's garage - all components prepped and ready to be assembled.

Construction is quite simple using marine ply top and sides with softwood stringers and running boards.

Stringer's, sides and end sub frames.  
(Green bags – Potato crop!)



Screw stopping, one lesson we have learnt is to use brass or stainless screws, due to the storage conditions steel screws rust and push the filler back out.

## Coach Number 11 Please

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Underside two good coats of paint to cope with the less than ideal storage conditions I have to say at this stage I was quite pleased with the outcome, I have in the past handed over at this point, as you will appreciate the body is only part of the story but on this occasion I was greeted with “Ah Martin, I have something for you”, so I returned home with two pivot plates and bolts for painting and assembly prior to handing on for bogies and upholstery.

How did I end up with the carpentry hat of PMS carriage works, well a little mishap, having taken an engine and two carriages as a guest to Kensey Valley Miniature Railway, let's just say on return I should have taken the level crossing and not under the bridge.

Apparently I'm not the first and very likely not the last. The resulting damage although minor meant the carriage was left on the roof rack and returned home for repair, this gave me an unplanned insight into the construction of club carriages. A drawing and template was produced and it was a small step from there to making complete carriage sets.

We have some very active younger members forging ahead with modern tech bringing our club to the forefront of the local community. That, coupled with reduced travel and renewed appreciation of outdoor spaces we are likely to see further interest in our Sunday public running sessions. We have already made inroads into clearing the third gallery used for coal storage under the club house, so when storage allows there will be a demand for additional rolling stock.

If anyone is curious, or prepared to take up the mantle of coach builder, I am more than happy to pass on any knowledge and information you need to continue with this pivotal and rewarding task.

## Wren Projects update

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### The Wren Projects - A short update on progress

*John Briggs*

The four cylinders and their steam chests have been completed. The next stage is to drill and tap the fixings to marry each chest to its cylinder and to screw down the access covers to the chests. One pair of cylinders is destined to fit out a third Wren and the second pair to be available as spares. I expect to get back in the shed in March, when it should be warmer, and will know by the summer if the whole project can be completed this year.

JB





## An Enjoyable Weekend

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### An Enjoyable Weekend

*Ian Jefferson*

As life begins to get back to some sense of normality, a few more special events are beginning to take place; this means that I had the opportunity to get back to Darlington at the end of September last year to catch up on happenings in the North East. The weekend of September 25<sup>th</sup> and 26<sup>th</sup> was chosen as it represented the 196<sup>th</sup> anniversary of the opening of the Stockton and Darlington railway and as the 200<sup>th</sup> anniversary is approaching, big plans are being made for the next few years. So I headed north on the Friday, a journey that it appeared everyone was making, as from Taunton to Tamworth there were repeated delays with no apparent cause. In the end the journey took over 3 hours longer than anticipated.

On the Saturday morning, I was one of the 200 or so who attended the annual convention of the A1 trust. As many of you will know, I am a supporter of all things LNER and have long supported the trust. The convention started with the president, David Champion, looking back on the last 30 years, covering the formation of the trust, the building of Tornado and its operation since entering service in 2008. Throughout, the philosophy of the trust was to have a large number of supporters each contributing a small amount, in order to achieve something significant, essentially 'crowd funding', but before the phrase came into common usage. So, with the introductions made, we moved to the main part of the presentation, which included details of Tornado's recent activities, during which availability had reached over 60%, comparing very favourably with BR days and the fact that Tornado is no longer the shortest lived of the A1s, eventually she should become the 'longest lived'. Inevitably, having now been in service for 13 years, some significant maintenance is required; this is scheduled to start around the turn of the year and include the fitting of a new boiler (under construction in Germany), preparations for fitting ETCS (European Train Control System) and new tyres on the driving wheels and tender, these being required earlier than anticipated due to a shunting incident some time ago that required significant reprofiling and through over braking of the tender when not fully loaded. Whilst the overhaul is to take place at Loughborough, the wheels will make their way to Buckfastleigh for

## An Enjoyable Weekend

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attention. On completion, running in and proving is planned for the SVR, where 50mph is permitted on some of the line.

Looking further to the future, as Darlington is making plans to celebrate the 200<sup>th</sup> anniversary of the opening of the Stockton and Darlington line, other celebrations are also being planned for the coming years. 2023 marks the 100<sup>th</sup> anniversary of the grouping and hence the formation of the LNER, LMS and SR (but not the GWR). So it is hoped that in 2023, the trust will have completed their new P2 (Prince of Wales) and that they will move into new premises, just a few hundred yards away on the other side of the line from Darlington to Shildon (the old S&D route). Possibly the highlight of the celebrations planned for 2025 is that the replica of Locomotion (itself 50 years old by then) should haul a replica of the 1825 opening train.

With the morning presentations completed, we adjourned for a buffet lunch laid on by the hotel, before travelling the half mile or so, from the centre of town to the trust's locomotive works beside North Road station. Transport being provided in vintage

busses that had been beautifully restored and providing a reminder of transport of the past, but a distinct challenge to drive alongside current traffic. On this occasion the example available was a less common one, by Daimler from the 1960s. Having arrived at the works, stepping



*Arriving at Darlington Locomotive works*

## An Enjoyable Weekend

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*2007 - Prince of Wales*

through a plain door, we promptly went back another 100 years into the old S&D workshop, which is now home to the A1 trust and taking up most of the floor space stood the new P2, which from a frontal view, could easily be mistaken for being ready to go out onto the network.

With plenty of time available, we all had the opportunity to explore the now well advanced frames of Prince of Wales. As it was some 4 years since I had last seen her, the difference was noticeable and with all the wheels in place, albeit temporarily, the true size of a Mikado became clear; only the absence of the cylinders and the boiler made it clear how much is yet to be

completed. The most noticeable achievement in the past few days had been the fitting of the first set of coupling rods, just completed the evening before. The polished finish on these rods, the tyres and other components was largely the work of one of the workshop volunteers; a challenge for the crews of the future to maintain! (and for Ron to match). In order to help explain recent progress, David Elliott once again did a guided 'walk around', but in order to avoid crowding, this was filmed by Mandy Grant and relayed to a large screen at the end of the workshop.

## An Enjoyable Weekend

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*A Mikado in the flesh*



*David Elliott doing a guided tour*

## An Enjoyable Weekend

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*A high polish on the draw gear*

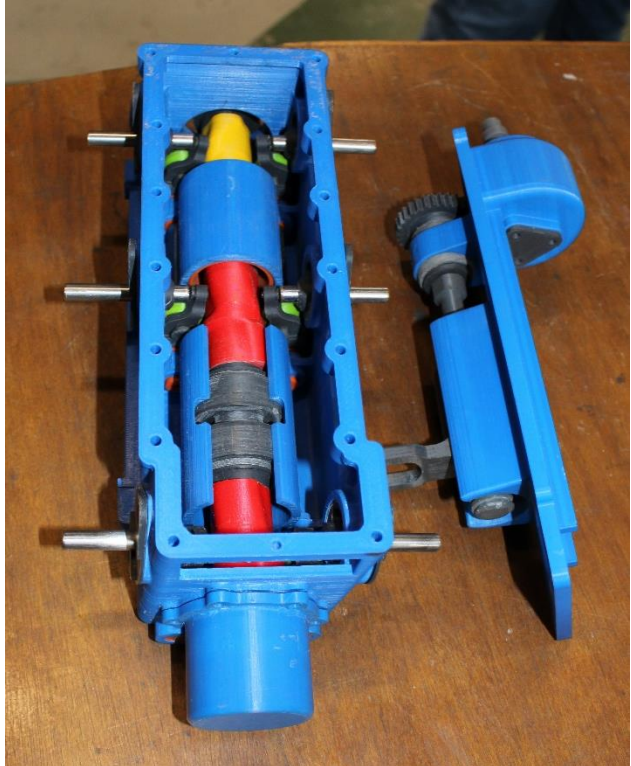
The boiler is the largest 'missing piece' at present, but 2 boilers are currently under construction, the second of which is destined to fill the gap by the middle of 2022, the cladding having already been made and trial fitted. The most complex component is however the cylinder block and saddle; in the original design, this was a single casting incorporating all 3 bores, valve chests and steam passages. The possibility of recreating this had been investigated, but was not found to be practicable nowadays, so fabrication has been resorted to and the work to manufacture this is now under way in the UK, by a company more usually dealing with oil industry fabrication; once again, it is scheduled to appear in 2022. Another area where extra work has been required is the valve gear, being poppet valves the design is somewhat different from the norm; this has been complicated by the fact that the original detail drawings have been lost and there were problems with the original implementation. After much research, drawings for a later variant of the gear were found and from these, the necessary

## An Enjoyable Weekend

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drawings have been created and in order to help visualise the finished gear, a 3D printed version of the cambox of has been created at one third scale and this was also on display on one of the benches.

One major feature of this new steam locomotive is the amount of electrical equipment that it will be carrying. Much of this is a requirement of being able to operate on the modern rail network, but some is for convenience, lighting areas of the frames and motion for times when ambient lighting is inadequate. Not only

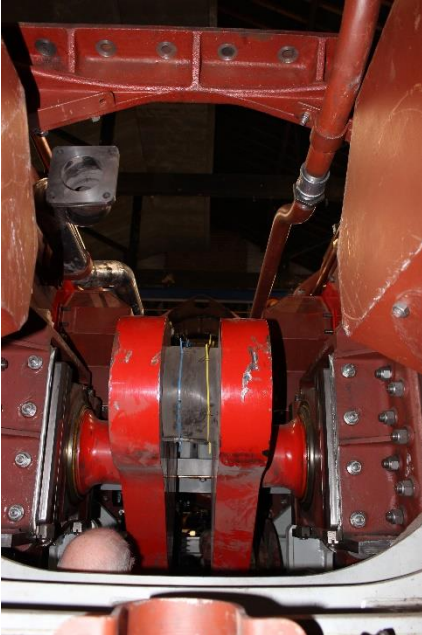


*3D printed cambox model*

does this require big batteries and generating sets, but a lot of cabling which has to be protected in conduits. Experience with Tornado, has revealed that these conduits are vulnerable to corrosion, so those on Prince of Wales are being made from stainless steel; however, this brings with it a new problem and that is electrolytic corrosion (dissimilar metals in contact in the presence of an electrolyte – in this case water with contaminants). The solution being that all mounting points have to include a non-metallic barrier, so many plastic blocks are to be found supporting the lengths of conduit tube, as well as sheet barriers under junction boxes. On this occasion, the underside of the locomotive was accessible by going down into the pit, not a place for

## An Enjoyable Weekend

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*Middle crank pin from below the front axle*

taller people and with plenty of hazards for the unwary. It was however fantastic to be able to wander under this creation and imagine what it will be like, once all the final components have been fitted remembering that they will make access even more restricted!

Before saying farewell to the P2 for now, a wander around the workshop revealed the stack of 6 brand new tyres for Tornado and stacked inside them, the tyres for the trust's next project, a V4; and the whole stack topped off with the chimney casting for the V4. Of course, you can never be sure what you will find in someone else's workshop, so lurking under a bench I found the bed from an old Myford lathe, hopefully the rest is there somewhere! Finally a check outside revealed the tender tank for Prince of Wales,



*Hopefully it will get hot around here!*

## An Enjoyable Weekend

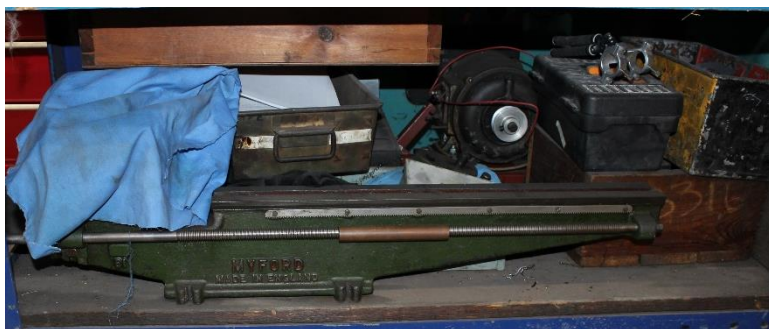
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*Tyres and chimney casting*

awaiting its frames and lurking around the corner a green class 37 bearing the number D6898, which I later found out, was the last locomotive to be built for BR in Darlington and now it has 'come home', having been donated to 'Head of Steam' by Network Rail.

*You never  
know what  
you may  
find in a  
workshop*





## An Enjoyable Weekend

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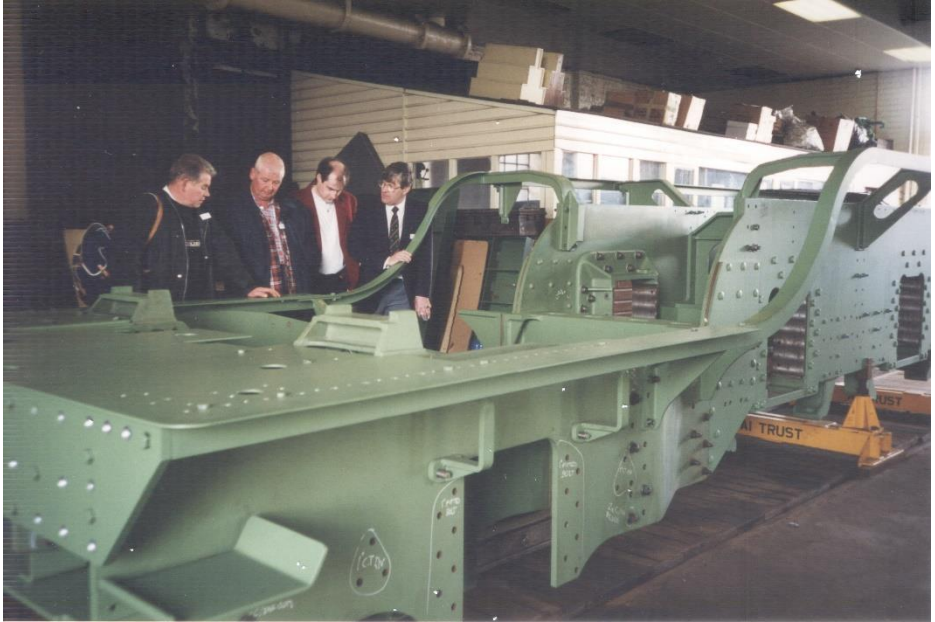


*Tender tank*

And so with a heavy heart I left Prince of Wales, to wander across the famed railway town of Darlington to my hotel. Then in the evening a short walk took me back to the 'Kings Hotel', for the evening dinner. A quick check of the seating plan revealed that just under 80 of us had come back for this treat and that I had been assigned to sit next to David Champion; was this total chance? As the meal proceeded, we all went through various topics of conversation, which revealed that David and I both lived within a few miles of each other in the late 50s and early 60s, so we were able to compare memories of the area including Whitburn colliery village and the 'Marsden Rattler' (the colliery railway, which ran along the clifftop). We also touched on memories of the trust and hence the first convention I attended, at Tysely in 1996, where Tornado was temporarily located. On this occasion, the big reveal was Tornado's cylinder castings, which had been sheeted over and David had had to ask people to remove their lunches from them in order that the tarpaulin could be pulled back!

## An Enjoyable Weekend

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*Flashback to 1996 - Tornado's frames*

The guest speaker for the evening was Chris Lloyd, the features writer from the local newspaper, the 'Northern Echo'; he regaled us with a few anecdotes from his past, but the main point of his talk was to cover some of the less well documented



*Flashback to 1996 – Tornado's cylinder castings revealed*

## An Enjoyable Weekend

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happenings during the creation of the Stockton and Darlington Railway. We are all well aware of the roles played by the Stephensons as builders and the Peases as promoters but inevitably the villain of the piece was one of the local landowners, who cared more for foxhunting than railways. Then there was the association that the hotel in which we were meeting had been used by the railway for its business meetings, although the building now bears little resemblance to the one of 200 years ago, having been totally rebuilt, save for the frontage. He also posed the possibility that William Huskisson was not actually the first death to occur on a railway, the outcome of an accident on the Stockton and Darlington being undocumented, could in fact have been the first. So ended the convention for 2021 and I made my way back across town to my bed for the night, taking care to avoid the local 'rowdies' and the waiting 'paddy wagon'.

On the Sunday, I had planned to visit nearby Shildon, but circumstances meant that the first priority was to ensure that I had enough fuel to get home on the Monday. This was the weekend of the mad fuel panic, so I did have concerns, thankfully I encountered no significant problem, so duly refuelled, I did head for Shildon, once the birthplace of thousands of railway wagons, now an old railway town undergoing regeneration.

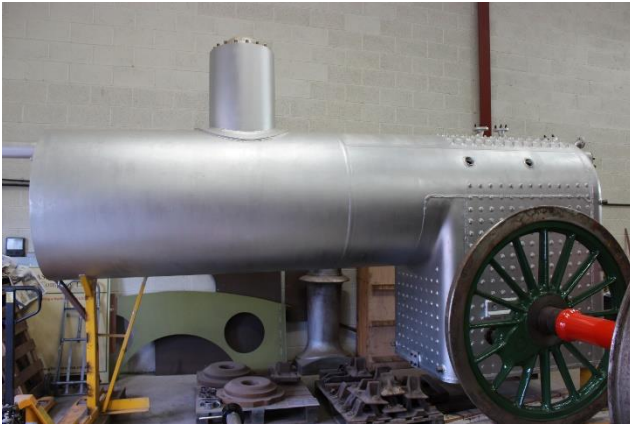
My first port of call was a small industrial 'lockup' where another new build locomotive is slowly taking shape. This project aims to build a new LNER 0-4-4 class G5, a design which originated in 1894 and eventually numbered 110 examples; they were used on branch lines and fast suburban services in the North



*A G5 begins to take shape*

## An Enjoyable Weekend

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*The boiler and leading axle*

now reached the point where the frames are complete, with cylinders and smokebox fitted, the trailing bogie is in place and the leading driving axle is available, with the crank axle and wheels awaiting completion at Buckfastleigh. Much of the platework has also been fabricated and was also on show. One very impressive item here was a 3½" gauge model of a G5, bearing the livery and number of the finished locomotive.

Interestingly this was located in a 'van vault' on the floor, but I felt it deserved to be either in a glass case or preferably on a length of elevated track giving rides.



*What the finished loco should look like*

## An Enjoyable Weekend

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Once completed it is expected that this G5 will be in demand for the various preserved railways of the area, as many of them would have seen G5s on regular services under the control of the NER, LNER and of course BR. Having spent a couple of hours with this group I wished them well, before moving on to my next and final visit, just across town. This was to 'Locomotion', the northern outpost of the National Railway Museum. For those of you who have not managed to get there, this is a 'simple' 6 road straight shed arrangement and allows you to wander around the various vehicles



*Cloud Cuckoo Valley*

on show; there are also a number of displays around the walls, often of items with a



*Locomotion in her new home*

local connection. The collection does change from time to time, but there are 2 recent changes that I had specifically come to see. A recent acquisition by the NRM is the 'kinetic sculpture' by Rowland Emmet, called 'A Quiet Afternoon

## An Enjoyable Weekend

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in the Cloud Cuckoo Valley'. The other item is the original locomotive, 'Locomotion'. There had been quite a bit of debate about whether the move from Darlington to Shildon should take place, but that is now all settled and Locomotion's home is now Locomotion! Despite this being a Sunday, there were relatively few people in the building, so getting around and photographing things should have been relatively easy. However, getting a photograph of the 'Cloud Cuckoo Valley' was not easy due to its location in the centre of the building as no clear background could be obtained.

This is another of those locations where you can lose several hours, just wandering around and getting absorbed in the ambience of everything around. One interesting comparison I came across this time was the remains of 'Sans Pareil' from 1829, alongside its 1970s replica. Another such comparison was the line up of 3 prototypes; the 'Deltic' from the 1950s flanked by the 1970s HST and APT units; although standing a few feet further forward the 'Deltic' was clearly the most impressive. So with closing time beckoning, a quick wander outside located another recent arrival, the leading HST power car, named 'The Journey Shrinker' which holds the speed record for diesel traction at 148.5mph. Even that production unit makes an interesting comparison with the prototype housed inside.



*3 prototypes*

## An Enjoyable Weekend

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*The Journey Shrinker*

And so as the day drew to a close, I headed back to the hotel for a night's rest before tackling the 400 mile return trip the next morning. I think even the weather shared my sadness as for the first part of my journey, approximately 80 miles to Doncaster, it rained all the way! Thankfully as I headed further South West, things improved and I could reflect on the memory of an enjoyable weekend.

As a footnote, 'Tornado' is now undergoing the planned maintenance at Loughborough and 'Prince of Wales' has now had both sets of coupling rods fitted and the wheels do turn in unison, so all is well there. The cylinder block fabrication is progressing well. The new boilers for Tornado and Prince of Wales have been delayed slightly by the pandemic restrictions in Germany, so Tornado's current boiler is being sent back for overhaul and will be refitted on its return. You can keep up to date with these projects via their websites [www.A1steam.com](http://www.A1steam.com); [www.P2steam.com](http://www.P2steam.com) and [www.g5locomotivelttd.co.uk](http://www.g5locomotivelttd.co.uk).

Ian

### Club Diary - 2022

3/3/2022	Torbridge High – start of second half of term
13/3/2022	Committee meeting
31/3/2022	End of Spring Term – TorBridge High
03/4/2022	Public Running Sunday
10/4/2022	Committee meeting and members' Sunday
17/4/2022	Public Running Sunday – Easter Sunday
28/4/2022 *	Start of Summer Term – TorBridge High
1/5/2022	Public Running Sunday
8/5/2022	Committee meeting and members' Sunday
15/5/2022	Public Running Sunday
24/5/2022	Summer Magazine press date
26/5/2022 *	Torbridge High – last of first half term
5/6/2022	Public Running Sunday
9/6/2022 *	Torbridge High – start of second half of term
12/6/2022	Committee meeting and members' Sunday
19/6/2022	Public Running Sunday
3/7/2022	Public Running Sunday
7/7/2022 *	End of Summer Term – TorBridge High
10/7/2022	Committee meeting and members' Sunday
10/7/2022 *	Summer Barbeque
17/7/2022	Public Running Sunday
7/8/2022	Public Running Sunday
14/8/2022	Members' Sunday
21/8/2022	Public Running Sunday
24/8/2022	Autumn Magazine press date

Dates marked \* are subject to confirmation

#### The "Tuesday Gang"

Meet weekly at the track from 9:30 to Midday. The jobs tackled include mowing, DIY on the building, maintenance of locos and rolling stock, painting bridges etc.

#### Workshop Evenings

Workshop facilities available to members at 'Tor Bridge High', Plymouth.  
£30 per term (10 weeks) or £3.50 per session. Thursday eves (6:30-8:30pm) during term time.