

# THE COMMUNICATION CORD



60163 TORNADO

New Steam for the Main Line

No. 36 Autumn 2014

## 2014 CONVENTION REPORT - TORNADO

by Graham Langer

Stephen Garratt



**Tornado stands by the water tower at Sheffield Park during her sojourn on the Bluebell Railway this summer.**

This year's convention, the 20th in the history of the Trust, was held once again in Chesterfield, convenient for Barrow Hill Roundhouse where *Tornado* was completing operations for 2014 before her intermediate overhaul. This time the meeting was held at the Casa Hotel, the only venue with a room big enough to hold the numbers attending. Mark Allatt opened proceedings by paying tribute to Mike Notley, the train timer, and remembering Mike's comment during one of *Tornado*'s epic initial runs, "AIs aren't supposed to climb hills like this!" Recapping on a busy year which included visits to the Mid Hants Railway, Nene Valley Railway, Didcot, the running of 'The White Rose' and 'The Border Raider', an open day at Derby, further visits to the Swanage Railway, Bluebell Railway, 'The Devon Belle' and a return to Barrow Hill, Mark concluded that although we hadn't accumulated as many main line miles as previous seasons it had been a good year.

David Burgess appraised the meeting of the current financial situation, assuring the assembled company that although covenanted income was down in the last twelve months the Trust had still retained net income of over £95,000 and that the Bearer Bond was now wholly repaid including the contributions of 71 bond holders who had asked for no repayment, an extremely generous move. David also said that the Trust now had 24 legacy pledges.

David Elliott then took the floor, reviewing the maintenance work completed at the start of 2014 including the renewal of 222 boiler stays, in an incredible eight days, by a team from Meiningen. It is likely that when the boiler is returned to Meiningen this winter the pattern of flexible stays will be increased to include some of the affected areas. Rob Morland continued

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## EDITORIAL by Graham Langer

By the time you read this, *Tornado's* frames will have joined those of *Prince of Wales* and *Darlington Locomotive Works* will be looking like an erecting shop again! Our on-going programme of maintenance during her years in traffic should ensure that this intermediate overhaul goes smoothly and we look forward to seeing *Tornado* back in traffic in the Spring. It was good to meet so many of you at this year's Convention and it is encouraging to see how many people are supporting both A1 and P2: This edition of *The Communication Cord* is packed with news of the latter including the launch of 'The Boiler Club', the casting of all the wheels and Timken's sponsorship. Finally I must record our sadness at the news of the death of Mike Notley, a tribute by Graeme Bunker appears later in this edition. **TCC**

the engineering briefing, expressing his satisfaction with the way in which the electrical system was holding up to the rigors of operations. He has recently added LED lighting to the boiler cabinet in the support coach and fitted analogue clocks to the locomotive cab and the coach. A data logger has been monitoring the temperature of the air pumps since their return from Meiningen, the results of which have been satisfactory; the logger may now be used to record for further data from the locomotive.

John Wilkinson dealt with operations, reporting that the support crew was being bolstered by more volunteers with improved skills, fewer main line outings permitting better preparation. The operating department had also had to take the gudgeon pins down following *Tangmere's* failure and these were subjected to NDT testing and found to be in good order. John then talked his audience through a fascinating slide show looking at components that have to be checked during a fitness to run

examination. David Elliott then resumed, moving on to cover the forthcoming intermediate overhaul, the return of the boiler to Meiningen for a full re-tube, re-staying as required and new foundation ring corners. With the boiler off the frames will be returned to Darlington for a bottom end overhaul including trueing up the hornguides and splitting the cannon boxes to inspect the roller bearings. The tender will be subject to a full external and internal inspection including preliminary work to install the ERTMS signaling equipment followed by rubbing down and repainting in apple green. It is hoped to have *Tornado* back in traffic in March.

In the absence of Graeme Bunker, Mark stepped up to cover operations on the main line. All three outings in 2014 had been successful. D.B. Schenker has been having a year of transition and hopefully this hiatus will be over for the 2015 season. With *Tornado* back on the main line in May there is the prospect of work on the British Pullman, The 'Torbay Express' and the first AISLT multi-day tour.



Rob Morland

**The conference room at the Casa Hotel was packed with covenantors.**

Of course New Year's Eve 2015 will be the 50<sup>th</sup> anniversary of *St. Mungo's* last train.

Gill Lord delivered a quick update on merchandising during the past year, noting that although fewer runs had reduced turnover the team had still generated a profit of £34,200 and run another successful training day for members. Gill mentioned the success of the storeroom included in the support coach which can hold an incredible volume of stock, leading to its nickname, 'The Tardis'. Alexa Stott took over to talk about the covenantors' reward scheme and 'The 163 Pacifics Club' and reminded her audience that we still need a number of volunteers to cover roles within the Trust. She concluded by thanking everyone for their generosity in raising £1,620 to cover the cost of moving *Tornado* to Barrow Hill for the convention.

Mark wrapped up the AISLT half of the meeting by introducing Gemma Braithwaite, the new P2 project administrator at Darlington Locomotive



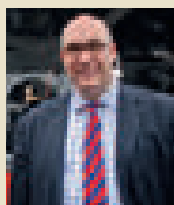
Rob Morland

### AI Covenantors with their locomotive at Barrow Hill.

Works before holding a question and answer session which included discussions about tender fundraising, tours starting in

the north, a wider spread of future tours and arrangements with D.B. Schenker for 2015. **TCC**

## From the chair by Mark Allatt



I'm writing this column a couple of weeks after what was yet another (our 20th!) successful annual convention with over 180 attendees during the day and thirty for the dinner in the evening.

I usually start my column having reviewed the other articles and by re-reading my previous contribution. On doing the latter this time I was very saddened to note that I was quoting from Mike Notley on that last occasion that I saw him which was on 'The Border Raider' from Crewe to Carlisle and back to Preston on 5th July - Mike said to me that it was "the best main line steam performance of the year to-date". As many of you will know, Mike - a great friend to the Trust and admirer of *Tornado* - died after a short illness on 28th August and we remember him on page 5. He will be greatly missed by all of those privileged enough to have known him.

Since I my last column *Tornado* successfully hauled 'The Devon Belle' on 25th August from London Paddington to Exeter and return which was her last main line train in British Railways Express Passenger Blue - see page 6 for more details. Thank you to all of you who supported this train.

As you know, this has been a challenging year for the Trust with regards to main line running. With *Tornado's* intermediate overhaul now underway we are very much focused on getting next year's programme together and although still in development, it is looking significantly better, with many more dates and routes - including a number starting in the north and the midlands. We need to make a success of running our own trains so please support next year's main line trains when they are confirmed.

Our fundraising focus for *Tornado* over the next few years will be to raise the funds to purchase her tender at the end of its 15 year lease from William Cook Cast Products, leaving the Trust debt free. 'The 163 Pacifics Club' is starting to gain traction with 24 of the 163 names now taken (up from 20 in the last TCC)

However, there is still a long way to go. Read more about how you can help the Trust to purchase *Tornado's* tender on page 13.

As I am sure you have read in the railway press, our project to build Gresley class P2 No. 2007 *Prince of Wales* continues to gain traction with all 20 wheels now cast by William Cook Cast Products. The Founders Club has signed up over 360 members since its launch at the AISLT convention in September last year - potentially worth up to £450,000 with Gift Aid added. We launched the 'P2 for a price of a pint' covenant scheme at the first of the P2 Roadshows in London on 8th March and 600 people have already signed up, worth around £830,000 over the duration of the project. If we add in the £70,000 pledged to the dedicated donation scheme since its launch in July our total pledged to-date has already passed £1.3m - but there is still a long way to go to reach the magic £5m.

The boiler is the beating heart of a steam locomotive and to keep the construction of No. 2007 *Prince of Wales* on schedule for completion in 2021 we need to place the order for the boiler in 2015 for delivery in 2018. It is our desire if possible to complete No. 2007 debt-free and at our annual convention we launched The Boiler Club to raise £600,000 to fund *Prince of Wales's* boiler - please see page 14 and the leaflet for more information. You can read more on about our P2 progress on page 15 and find out more about how to get involved with this exciting project at [www.p2steam.com](http://www.p2steam.com).

It is vital for our future success that we continue to grow our supporter base by recruiting more people as covenantors for both *Tornado* and *Prince of Wales* and, thinking further into the future, I especially urge you to encourage any children that you know who share our passion for *Tornado* to join the *Tornado* Team.

Thank you all for your continued support. Your kind and often witty letters and emails always help to keep the team motivated. I hope to see as many of you as possible at our planned events in Darlington with both *Tornado* and *Prince of Wales* in the New Year. **TCC**

## MERCHANDISE UPDATE *by Gill Lord*

Our merchandise teams have had a few outings since I last wrote. The first being a very successful trip from London Paddington to Exeter; merchandise sales were excellent as were the bids for the smoke box number plate, the on board raffle for the headboard (carried on the outward journey) and the sealed bid for the headboard carried by *Tornado* on the return.

We had a very enjoyable weekend at the Nene Valley Railway. We are always made very welcome at Wansford, sales were very good all weekend and the weather was kind to us, which is always a



Mandy Grant

60163

**FOR SALE**

**SEVEN TORNADO  
SMOKEBOX NUMBERPLATES**

- **22/23rd August 2010** Mid Hants Railway
- **3rd July 2011** 'Torbay Express'
- **17th July 2011** 'Torbay Express'
- **23rd March 2013** 'The Cathedrals Express' - London Paddington to Kingswear
- **21st June 2013** 'The Cathedrals Express' - Tonbridge to Ely
- **9th July 2013** 'The Cathedrals Express' - London Waterloo to Swanage
- **7th September 2013** 'The Cathedrals Express' - London Waterloo to Cardiff

**To secure your number plate (all profits to *Tornado*) email [shop@a1steam.com](mailto:shop@a1steam.com). Please allow 28 days for delivery.**

bonus point especially when working in a marquee on a draughty platform!

Finally we attended Barrow Hill Live and the following weekend we were present at our Annual Convention.

We are always on the look-out for more volunteers for merchandising, especially for logistics. Unfortunately we were unable to have a full merchandise stand at Swanage and The Bluebell Railway due to this problem. So if you feel that you can help in this area or indeed any other way, please do not hesitate to contact me. We will be holding our 3rd Annual Volunteers day in early 2015, no venue decided as yet but it will be in the centre of the country. If you have been thinking about volunteering with us why not come along to see what we get up to and once you meet us all I am sure that you will want to become involved.

In 2015 we will be re-vamping our products, I feel that some items have been around far too long. Sales of fridge magnets, pens and mugs will always be

the best sellers but time has come to sell something a bit different along with these favourites.

I have one new item, the Corgi 'Legends of Steam' *Tornado* (ST9701) in blue livery and available from our website at a price of £30 plus postage and package.

Not a new item as such but there are two new tea-towel designs, *Tornado* in BR Blue by Jonathan Clay and a montage of *Tornado* at various Heritage sites with artwork by Paul Cornish, both at a price of £5 plus postage and package.

I had to make the sad decision not to print a *Tornado* Calendar for 2015. Over the past three years sales have been falling and even with a price reduction in January they failed to sell in any significant numbers.

Finally I would like to thank all the volunteers who have helped with the merchandise over the last year; all excellent hard working people and a pleasure to work with. **TCC**

## EASYFUNDRAISING *by Chris Walker*

As the supermarkets already rearrange their shelves to display Christmas items, perhaps now is the time to remind those of you who are more organised than I that there are only a few weeks left to Christmas (frightening isn't it!). If you are doing your shopping on-line, please use Easyfundraising to buy your gifts where possible.

At the moment we have only 89 of our many supporters registered to support the Trust through Easyfundraising and Easysearch. So far, at no extra cost to themselves, they have raised almost £1,700 for *Tornado* by remembering to log into their favourite retailers via Easyfundraising or by using Easysearch to find information. The latter has the advantage that search results that involve a participating retailer in Easyfundraising are flagged so that you can see which ones to choose.

Most of the big names, such as Debenhams, John Lewis, Marks & Spencer, Currys, participate, as do the big on-line retailers such as Amazon, ASOS, Littlewoods, Isme, Next, Argos, iTunes, etc. The big supermarkets (ASDA, Tesco, Sainsbury, Waitrose) all participate so

if you do your grocery shopping on-line, you can even help *Tornado* when you buy your Christmas dinner.

On a less seasonal note, perhaps at work you have responsibility for purchasing irregular items on-line. If so, why not do so via Easyfundraising if your supplier is part of the scheme? Our leading Easyfundraiser is in a position where they often need to purchase ad hoc items on behalf of their employer. As the cheapest suppliers are usually in the scheme, they use Easyfundraising and help *Tornado* at the same time as getting the best deal for their organisation.

If you are not registered, go to <http://www.easyfundraising.org.uk/>. Search for "The A1 Steam Locomotive Trust" in the list of participating organisations and set it to be your supported organisation. Then just find your favourite retailer or use the Easysearch function to look for what you want and away you go, raising money for *Tornado*.

If you are already registered, please remember to do your shopping via your Easyfundraising login. **TCC**



## MIKE NOTLEY by Graeme Bunker



Mike (on the right) waits to meet The Prince of Wales at *Tornado's* naming.

It was with great sadness that news reached us that Mike Notley had passed away. Mike has been one of our most enthusiastic and fastidious supporters and he will be missed by ourselves and the whole of the main line scene alike.

Mike had been supporting us from behind the scenes since before *Tornado* was completed. Our very first railtour, 'The Talisman' from London King's Cross to Darlington, involved some scintillating running and some ambitious pathing. Mike reviewed the paths to ensure they weren't too ambitious and even then said it would be some challenge! He subsequently had the pleasure of reporting the good news of a triumphant run. He would review many of our rail tours ahead of the run and had a unique perspective of railwayman and enthusiast. His time in Derby Control made sure that we never took too many chances but he was always pleased to see steam timed properly and given a run. However, he was just as critical of timings that were too fast as those that were too slow. He reviewed every mile of the *Top Gear* train and confirmed how we needed to run to achieve an on time arrival in Edinburgh.

Mike travelled on every single significant tour that we have operated. He was presented to the Prince of Wales and The Duchess of Cornwall before timing our very first Royal Train. Before that he covered all our test runs including the now legendary runs on 17/18<sup>th</sup> November 2008. When *Tornado* set the record for the climb from Carnforth to Shap and when on the huge tour from Crewe to Glasgow and back she recorded over 3000hp on Beattock, Mike was there. He was also on board when *Tornado* proved the doubters (including himself) wrong; going to Inverness Mike felt the timings were robust and we would crest the summit of Drumochter at about

30mph. We actually topped the summit at 49mph and were 45 minutes early at our next stop. His comment? "Well what do I know?!" Typical Mike, always self-deprecating but revelling in the quality of the run.

As a true railwayman and controller he gained enormous pleasure from the sheer number of 'even time' runs *Tornado* completed. An 'even time' run is one that starts to stop at 60mph or more. As a percentage of mileage, *Tornado* has more than any other preserved engine - a fair bit more! It was this complete competence handling the duties it had to perform that brought a smile to Mike's face. When the locomotive was around 18 months old I took Mike on the footplate over Stoke Bank and we recreated the BR tests of the Peppercorn A1 and A2. Running a locomotive flat out at 50% cut off at around 70mph isn't the norm (we have only done it once) but this showed that *Tornado* was slightly ahead of the A1 tested back in the 1950s.

With his clipboard and stopwatches, Mike will be greatly missed at his usual place on the support coach asking for nothing more than a cup of tea for his troubles. Many a time folks would saunter down the corridor trying to look nonchalant but desperate to find out just how good a piece of running had been. Mike always knew and often the news was good. He also enjoyed a good laugh such as the time that *Tornado*, refilling from a 4100 gallon tanker, stopped, emptied the tanker and was underway again in five minutes. A 'formula one water stop' was the phrase coined.

Mike will be missed by many. For his friendly support, his expert judgement and the beautiful way with the written word in his 'Down Main' column, he brought a run to life for those who couldn't be there. He was a great friend of the Trust and a confidant and close friend of the author and we will continue to miss him every time we take the locomotive out or reminisce about past glories. **TCC**

## 'THE DEVON BELLE' by Huw Parker

The support crew worked their usual magic and turned *Tornado* out in magnificent condition for her last main line train in her blue livery. The weather the day before the run to Exeter was fine and allowed the team to lavish extra care for this final run. The day started early for some of the crew to prepare the locomotive for an 06.00hrs departure from Southall into Paddington.

Out of Paddington in the expert hands of Graham Ward and Tim Stedman, under the watchful eye of Geoff Ewans, to Westbury we had an uneventful run out to Newbury, where the real work began. After a good climb through Savernake, we paused at Westbury to gain Driver Wayne Thompson and TI Tommy Rees who would take us on to Taunton. A brief water stop at Chard Junction and then the climb over Honiton was most impressive with a steady speed of 28mph over the worst of the 1 in 80 bank.

After dropping most of the passengers at Exeter Central the train went forward

to service at Riverside Yard. The earlier rain of the morning gave way to some pleasant sunshine and the support crew serviced the engine in excellent time and enjoyed the warm sun for an hour or so before backing into Exeter St Davids for the return trip.

After some delays caused by a late running HST, the train headed off from Cogload Junction back over towards Somerton. Despite the climbs, by the time we reached Clink Road, we were running over a minute early. After a brief stop at Westbury, we hit torrential rain before the return climb over Savenake, despite the rain *Tornado* remained as sure-footed as ever bring the train into Newbury a full 12 minutes early. As expected, the run back to Paddington was uneventful under the control of Fred Lewis and Dave Proctor with TI Bob Cotterill. After a long delay at Paddington waiting for a class 67 Diesel, well after the last passengers had departed, we headed back to Southall where the engine was finally stabled around midnight.

Jack Beeston



The outward bound run is seen at Crofton by the Kennet & Avon Canal.

Jack Beeston



*Tornado* is seen heading the return run from Exeter.

## OPERATING 'THE

All photos by Peter Maynard unless stated otherwise.



Above: What would we do without mobile 'phones? John Wilkinson on the blower at Exeter.



**DEVON BELLE'** by Peter Maynard



**Left: Tornado - bulled up and ready for the 'off' at Southall.**

**Right: Traction Inspector Geoff Ewans signs the paperwork for Huw Paker (A1SLT).**

**Below: The train is watered by 'Bells & Two Tones' at Riverside Yard, Exeter.**



**Below: With servicing complete, Tornado is readied for the road again.**

**Right: Huw Parker, Traction Inspector Tommy Rees (DBS), Graeme Bunker, Terry Fergusson and Rob Morland.**



**Right: David Burgess and Rob Morland guard the hose at Taunton while Dave Proctor and Fred Lewis seek more tea from the support coach.**



Rob Morland

# TORNADO ON THE NENE VALLEY RAILWAY by Huw Parker

Paul Davies



**Tornado departs Wansford with Wagon Lits stock.**

*Tornado* made the 100mile run up to the Nene Valley Railway behind a pair of Class 1 English Electric class 20 locomotives, arriving on 10<sup>th</sup> September in time for the NVR gala the following weekend. The Friday of the Gala saw *Tornado* offering Driver Experience trips before hauling the Dining Train that evening. After running on the Saturday, a leaking mud door

prevented the locomotive from running on the Sunday, but prompt attention by John Wilkinson and the Support Crew meant that the engine was back in traffic to meet commitments on Monday. The following weekend saw *Tornado* hauling the NVR Travelling Post Office making demonstration runs dropping and collecting mailbags from the train. Despite

running tender first, this was a rare opportunity and created a good deal of interest amongst the weekend visitors.

The following Monday saw the crew prepare the locomotive for a fitness to run exam for the move from Wansford up to Barrow Hill. In addition to ensuring the engine is clean and well presented, the support crew present the locomotive to an independent engineer to certify that it is fit and safe to run over Network Rail metals once more. The routine inspections we conduct every day the locomotive is operating help to ensure all is well, but there is always a nervous wait whilst a fresh pair of eyes looks to ensure nothing has been missed!

Carrying the headboard "Top Link - End of an Era" in memory of Mike Notley, a great friend and supporter of *Tornado*, we left the NVR behind a class 56 for the short run to Barrow Hill. At a brief stop in the platform at Derby, *Tornado* and her crew spent a moment of reflection with Mike Notley's family who had come to see the engine that had given him so much pleasure.

A brief run north saw us through Chesterfield and arriving at Barrow Hill in time for the Convention at the start of October. The last outing on the main line for *Tornado* carrying her blue livery – for now! **TCC**

Paul Davies



**56312 pilots *Tornado* through Melton Mowbray on her way to Barrow Hill.**



## TORNADO AT BARROW HILL *by Huw Parker*

A small but determined support crew met at Barrow Hill on the Friday before the Convention. *Tornado* had been outside since arriving and had been in steam at Barrow Hill Live the weekend before, but despite all this Naomi Collett and Gareth Owens managed to turn the engine out well ahead of the Convention weekend. Driver Dave Court supervised a Driver Experience candidate throughout the afternoon and the winner of a footplate ride also enjoyed some time with *Tornado*.

The weather overnight and on the morning of the Convention was not kind, with some heavy rain. However, this began to clear just before the covenantors arrived to view the engine and for the traditional photograph alongside *Tornado*. Once this was complete, everyone moved into the Roundhouse for some lunch and *Tornado* was taken over to the platform to join the train in preparation for several trips on the Barrow Hill running



line. Several lucky covenantors won the opportunity to ride on the footplate following the competition drawn at the Convention hours earlier. Thus *Tornado* completed her final runs in the blue livery

that has proved so popular, sharing them with the covenantors whose support to the locomotive continues to be amazing and is so vital in helping to maintain her to the high standards demanded of her. **TCC**

## THE TORNADO TEAM AT BARROW HILL *by Huw Parker*

The final day in blue before the Intermediate Overhaul commenced was shared with the young members of the Tornado Team. Just before lunch, a group of around two dozen excited youngsters joined the loco manager John Wilkinson and support crew members Huw Parker, Naomi Collett and Jorge Gorman for some hands on assistance to prepare the locomotive for the overhaul.

After a welcome and safety brief in the Roundhouse Café, the youngsters were soon hard at work around at the platform. Split into three groups, the operation of the locomotive by her crew was explained by John in the cab, with searching questions from some young budding drivers and firemen! Down at ground level, Naomi led another group cleaning the wheels, frames and motion,



**Tornado Team members at Barrow Hill.**

Lisa Parker

**Team members clean Tornado's tender.**



whilst from the platform Huw and Jorge supervised washing several days grime from the side of the tender and support coach – from a safe distance! Each group changed over so that everyone had a chance to try their hand at a variety of tasks and see *Tornado* from different angles.

By the time lunchtime approached all were ready for a rest and something to eat, but before they headed off back into the Roundhouse there was one final task to undertake. The youngest and oldest members of the Tornado Team were

asked to formally start the Intermediate overhaul, so under Huw's supervision, Maisie Robinson and Cameron Wallace unfastened the first of many bolts that secure the cab to the locomotive frames. Later in the afternoon, the Tornado Team toured the rest of the site and discovered many of the other interesting locomotives in the museum.

Meanwhile, back on the platform, the support crew had tidied away all the tools and paraphernalia and the stage was set for the Intermediate Overhaul to commence in earnest the next day. **TCC**

Lisa Parker







**Tornado is seen at East Grinstead on the Bluebell Railway during her visit in August.**

# AI ENGINEERING UPDATE *by David Elliott*

## General

Since the last edition of TCC, *Tornado* has operated reliably and remarkably free from technical problems. (she must have known that we were about to dismantle her for the intermediate overhaul!)

## Intermediate Overhaul

When *Tornado* first entered service, the insurance company expressed a wish to for a thorough internal inspection of the boiler after five years of operation. Network Rail require this inspection at seven years, both durations from the hydraulic test which for *Tornado* was in December 2007 but thanks to the newness of the boiler and its condition, the Insurance Company has allowed an extension to seven years. To carry out this inspection, all the tubes have to come out. The small tubes are due for renewal at this time, however the superheater flues should be reusable with new ends welded on.

We have also had leaks from a small number of stays in the known problem areas of the back corners of the firebox in the recent past, so the opportunity will be taken to replace a number of stays, and with the agreement of the Meiningen designer, will increase the number of flexible stays in these areas. So far, this work could be carried out with the boiler on the frames, however we also wish to renew the foundation ring corners after the experience in 2011, and there are certain stays which cannot be accessed with the boiler on the frames as the frame plates are too close to the outer firebox to permit welding, removal of the boiler from the frames is the only practical option. Following a visit to Meiningen by Graeme Bunker and David Elliott in early August and with an initial promise to carry out the work in three months, the decision has been made to return the boiler to Meiningen.

In order to lengthen the life of the foundation ring corners, the practicality of making the corners from forgings rather than being cut and machined from thick plate is being investigated. Meiningen will also inspect and hydraulic test the superheater header and elements, and will overhaul the regulator.

During the first week of dismantling at Barrow Hill, the smokebox has been stripped and the chimney removed. The bolts in the smoke box are, as usual, corroded to an extent that several of them required attention from the oxy-acetylene gear. To give us storage space at Barrow Hill and subsequently at Darlington, an almost new 20ft container



John Wilkinson

**Above: Stripping the smokebox of its components.**



David Elliott

**Tornado's cab is removed at Barrow Hill.**

"...the P2 frames at Darlington have been skated to one side to make room for *Tornado's* frames...."

has been acquired. This will be moved to Darlington with the frames. On Monday 13th October the cab was removed with particular care being taken to avoid damage to pipework and electrics - this time nothing was broken!

In the meantime the P2 frames at Darlington have been skated to one side

to make room for *Tornado's* frames, the main task with the latter is to reset the hornblock liners to restore the correct clearances and axle geometry. Before this work is done, a detailed examination of the frames will be undertaken for loose or broken bolts and non-destructive testing will be undertaken on highly stressed areas of the frames to check that there is no cracking.

Eventually the boiler and tender will be taken to Darlington for reassembly and testing of the completed locomotive which we have planned for mid-April 2015, provided we do not find any problems that we are not already aware of. **TCC**



# Covenantors' Diary *by Alexa Stott*

This year's Convention saw a large number of Covenantors and Founders in attendance at a new venue, Casa Hotel, in Chesterfield. It is always a pleasure to catch up with familiar faces and also to meet new supporters for the first time. Everyone, myself included, enjoyed an entertaining and informative series of presentations on both the A1 and P2 projects which are detailed far more extensively elsewhere in this edition of TCC.

As is now traditional at Conventions, the rain stopped and the sun shone as we arrived at Barrow Hill Roundhouse! Following the group photograph and a lunch which could probably have fed another 200 people, everyone had the opportunity to travel behind *Tornado* in the popular BR Express Passenger Blue livery for the last time and a lucky dozen were able to ride on the footplate.

Don't forget that you can buy a copy of the Convention photograph as a permanent reminder of the day.

The Annual Dinner is now a popular and permanent addition to the Convention arrangements and this year's attendees enjoyed a very entertaining speech from Danny Hopkins, former editor of *Steam Railway Magazine* on the topic of his best top 10 memories as editor and his 10 worst. Needless to say *Tornado* featured several times in the former rather than the latter category!

In the informal Q&A session that followed, Danny made a point about the importance of passing on the knowledge and love of steam and heritage railways in general to a younger generation and so it was with some pride that we welcomed more than 20 of our *Tornado* Team youngsters to Barrow Hill the following day. The *Tornado* Team now

numbers 61 with more applications in the pipeline and it is so pleasing to see how the children, some of whom have been members since the beginning three years ago, are now really connected with *Tornado*. As Huw Parker's quiz at the start of the day demonstrated, they probably know more about the engine than many adults and their enthusiasm for more knowledge is exactly what we had hoped for.

So another Convention is over but I am already planning next year's Convention and, before that, a celebration of *Tornado*'s return to service after the Intermediate Overhaul in Spring 2015. So keep watching this space for more information on dates and venues. Finally, and most importantly, on behalf of the Trustees, my sincere thanks once again for your support of the Trust's work. **TCC**

## THE 163 PACIFICS CLUB – *Time to get on-board!*

As you know, we are now focusing our fundraising for *Tornado* on her tender. The tender is currently owned by William Cook Cast Products, the company owned by Andrew Cook and the Trust's Principal Sponsor. Andrew kindly offered to fund the construction of the tender in 2006, allowing funds being raised at the time to be spent on the locomotive herself.

The tender is leased to the Trust under a fifteen year loan agreement which will come to an end in 2021. *Tornado*'s tender is a development of those built for the original Peppercorn class A1s - mainly due to the different operating environment on the modern Network Rail main line. Due to the lack of surviving steam infrastructure, water capacity is at a premium and so *Tornado*'s tender carries 6,200 gallons, as opposed to 5,000 gallons, and seven tons of coal, rather than nine tons in the original A1s. The tender is also the home for many of *Tornado*'s other unique features including an alternator, Timken cartridge roller bearings (pre-greased sealed self-contained units which do not have to be fitted in enclosed axleboxes), Train Protection & Warning System (TPWS), National Radio Network (NRN) radio, Global System for Mobile Communications - Railway (GSM-R)

radio, GPS tracker and of course the mobile phone charger!

We need to raise £200,000 by 2021 to purchase *Tornado*'s tender – thereby making the Trust debt-free - and finally completing the project we embarked upon in 1990.

Following the success – thanks to your generosity – of our Regular and Dedicated Donation schemes for the construction of *Tornado* and the 'Use Your Loaf' appeal for the support coach, the Trustees have decided to follow a similar route for the purchase of *Tornado*'s tender.

However, instead of "an A1 for the price of a pint" and "use your loaf", we've decided to raise the funds in a different way, "The 163 Pacifics Club":

- We need to raise £200,000 to purchase *Tornado*'s tender.
- Although *Tornado* carries the number '60163' - the next in the Peppercorn class A1 series following 60162 *Saint Johnstoun* – her pre-nationalisation LNER number would have been '163'.
- If 163 people were to donate £10 per month over the eight years until we need to purchase the tender (or alternatively make a one-off donation of £960) with the addition of

Gift Aid (£2.50 per month or £240 one-off) this would raise £195,600.

As with the previous schemes, this initiative comes with benefits for those who generously take part:

- A numbered certificate (1-163) recording the details of the donation and the number/name of your favourite ex-LNER express passenger pacific from the Gresley class A3s/A4s, Thompson class A1/I and Peppercorn class A1s.
- Name inscribed on the official Roll of Honour in Darlington Locomotive Works which will detail the pacific sponsored.
- Entry into a draw for a main line footplate ride on *Tornado*.

Forms to join 'The 163 Club' can be found on the website in the 'How You Can Help' section. Membership of The 163 Pacifics Club has grown steadily since its announcement and 24 of the available 163 ex-LNER express passenger Pacifics have already received new 'shed allocations'. It really is that simple! Sponsor your favourite Pacific today and help make *Tornado* debt free with her paid-for tender behind by 2021. Thank you. **TCC**

## 2014 CONVENTION REPORT - PRINCE OF WALES by Graham Langer

Following a short break after the A1 Convention, supporters of the P2 build assembled in the meeting room at the Casa Hotel for an eagerly awaited update on the construction of No. 2007, *Prince of Wales*. In his opening comments, Mark Allatt expressed his astonishment and delight at the speed with which support had grown since the launch of The Founders Club at last year's convention. Recapping on the reasons why this was such an exciting and worthwhile new build with such rewarding prospects, he emphasized the advantages enjoyed by the project, the experience of the team, an existing track record, the facilities available and the large number of people already backing it.

Andy Hardy had been allocated just five minutes to cover the history of the original P2s and had elected to do this with a presentation of still and moving images from the archives – in 282 seconds! Founders and covenantors were enthralled by his rapid patter accompanying a tantalizing selection of pictures with a counter ticking down the seconds in a corner of the screen! As Andy paused to recover his breath, David Burgess took over to talk about financing the enterprise. Thus far income of nearly £415,000 has been raised and despite David Elliott's best efforts some £230,000 remains to be spent! There are a total of 362 Founders on board and 583 covenantors have already signed up.

David Elliott, with the help of some wonderful photos and video footage, now briefed the meeting about the engineering side. David assured his audience that

this was a construction and development project, not a major re-design, but that it made economic sense to use as many parts from *Tornado* as possible while incorporating modern sophistications such as air brakes, a hopper ashpan, self-cleaning smokebox and modern electronics. The P2 is benefitting from 3D CAD modelling which enables pipe and electrical runs to be better planned as well as adding changes to meet modern requirements such as the P2/V2 pony truck, roller bearings and better materials. David screened a video montage of the frames being rolled, profiled and machined, their delivery to Darlington, setting up and erection as well as some footage "hot off the press" from William Cook Cast Products of one of the driving wheels being cast. All the driving, carrying and tender wheels have now been cast and will now be subject to non-destructive testing. David then dealt with the question of valve gear, expressing an opinion that enough data has been obtained to convince him that the Franklin development of the Lentz gear will provide a solution for No. 2007. He concluded by explaining how *Tornado's* diagram 118A boiler can be used for the P2 and the advantages of both locomotives sharing this design.

Rob Morland took over to cover the electrical scheme for *Prince of Wales*, which in most respects will copy the pattern set by *Tornado*, with LED lighting and assorted methods of generation. The design will be much aided by the use of the CAD model and hopefully this will avoid the need to change it after installation! No. 2007 will have to be

fitted with ERTMS signaling equipment from new, a facility that will have to be retro-fitted to No. 60163. Rob concluded by making a plea for new volunteers to help the electrical team.

Mark resumed by talking about raising the money for *Prince of Wales*! The amazing success of The Founders Club in producing over £450,000 (the original target was £100,000) primed the pump and enabled a rapid start to be made on construction but a regular income stream is essential if progress is to be maintained at this rate; to this end the covenantor scheme, which worked so well for *Tornado*, is already proving invaluable, over 580 people have already joined which will eventually generate over £800,000 for the project, producing two thirds of the monthly income currently given to *Tornado*! Just as useful has been the uptake of sponsored components, ably managed by Mark and Mandy Grant, with £70,000 worth already spoken for. However, Mark pointed out, there is a great need to attract commercial sponsorship over and above that already offered by WCCP, Hornby, Timken and Craftmaster Paints (to name a few) and any leads would be much appreciated.

Mark concluded by launching 'The Boiler Club' (see panel) to raise at least £600,000 towards the cost of No. 2007's boiler; to enhance this scheme Chris Ludlow unveiled his glorious painting of *Prince of Wales* and *Tornado* together, limited edition prints of which will be given to 'Boiler Club' members. So far £1.34m has been pledged to build No. 2007, the target for 2015 is to increase this to £2m! **TCC**

### THE BOILER CLUB

Following the success of The Founders Club, which was designed to get the P2 Project to the point of cutting No. 2007's frames, we have decided to establish The Boiler Club to fund the construction of *Prince of Wales's* boiler. We set an initial target for The Founders Club of at least £100,000 from 100 'Founders' but due to the overwhelming generosity of our supporters we actually raised £450,000 from 360 donors. It is our desire to leave No. 2007 *Prince of Wales* debt free upon completion and therefore our aim is to raise at least £600,000 for The Boiler Club from 300 supporters each donating £2,000 to the project (in up to 40 payments of £50 by standing order).

Special benefits for members of The Boiler Club:

- Opportunity to buy a ticket (seat already reserved) on No. 2007's first main line train
- Reasonable access to No. 2007 at all times
- Opportunity to buy exclusive Boiler Club badge
- Opportunity to join one of the teams building No. 2007
- First choice of other components to sponsor



Chris Ludlow unveils his new painting.

- Special limited edition version (signed/numbered) of the first official painting of No. 2007 *Prince of Wales* with No. 60163 *Tornado*
- Special Boiler Club day with *Tornado*. **TCC**

Rob Morland



## P2 ENGINEERING UPDATE *by David Elliott*

### Design

Progress continues with the 3D model of the locomotive with work on the cladding to ensure that there are no clashes with the Diagram 118A boiler used on *Tornado*.

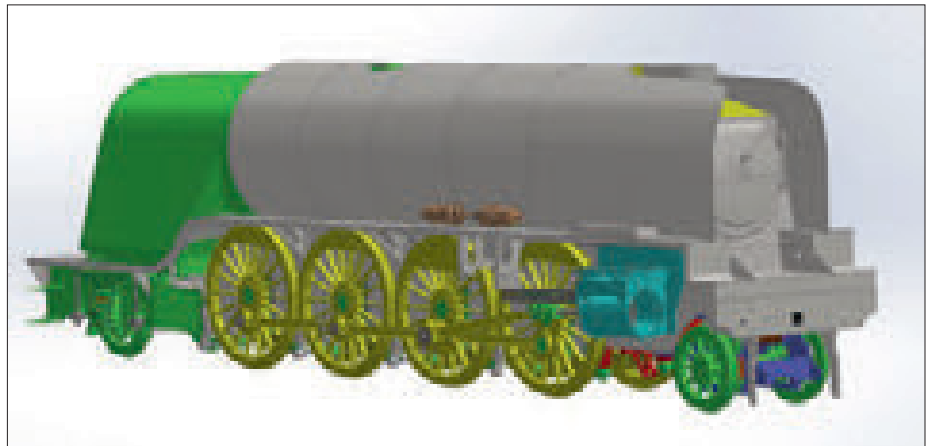
### Frames

Since the frame plates have been set up at Darlington in July, work has continued with riveting the frame doubler plates to the main frames. This is one of the few places where hot riveting is used on *Prince of Wales*. The doubler plates also share bolts with frame stays and brackets and are welded at on the top and bottom edges to prevent water entering between the plates which could cause rust to force the plates apart.

A spreadsheet has been prepared for the 1,054 driven and fitted bolts required to assemble the engine and tender frames - quotes are being sought for these fasteners. With *Tornado's* frames due to arrive at Darlington at the end of October for the intermediate overhaul, No. 2007's frames have skated along the works and across to one side.

William Cook Cast Products (WCCP) have cast a total of 24 frame stays and brackets which will be machined as soon as fettling and non-destructive testing is complete.

**Wheelsets** - Orders have been placed with WCCP for all 20 wheels and all the wheels have been cast. The first coupled wheel has successfully complete fettling and NDT and is ready for proof machining. All the engine wheels have now been cast. The tender wheels are not far behind. Timken have offered some useful sponsorship which has enabled the order for the roller bearings to be placed.



David Elliott

**Above: The latest CAD rendering showing the boiler cladding in place.**

**Right: Ian Matthews heats up a rivet.**



David Elliott

**Right: Mick Robinson inserts a rivet.**

**Below right: Reg Rossiter and Mick Robinson apply the riveting gun.**

**Below: *Prince of Wales's* frames are skated over at Darlington.**



David Elliott



David Elliott

David Elliott



## Valve gear

The search for the original drawings of the Lentz valve gear fitted to No. 2001 *Cock o' the North* has yet to turn up detailed drawings - the manufacturers Associated Locomotive Equipment Ltd (ALE) only supplied installation drawings to the LNER, and in whilst the ALE archive has been located and examined, there are virtually no P2 drawings in that collection. However further research has found detailed South African Railways drawings for the Lentz valve gear fitted to the SAR 15E and 16E locomotives which are of a size similar to the P2 and which were built in 1934/5 so are the correct period. This should enable production of detailed drawings for the Lentz gear fitted to No. 2001 for which will form the basis of the developed valve gear to be fitted to No. 2007.

A promising lead is being followed up in the USA for drawings of the Franklin type B poppet valve gear which was a 1940s development of the Lentz rotary cam gear



which appears to have resolved some of the problems experienced with the original equipment.

**Above: The wooden pattern in the sand mould with ceramic ducts to convey the molten steel.**



**Above: Sand with a resin bonding agent is poured into the mould.**

**Right: The sand is compacted and the pattern removed.**



Steel is poured from the crucible into the mould.

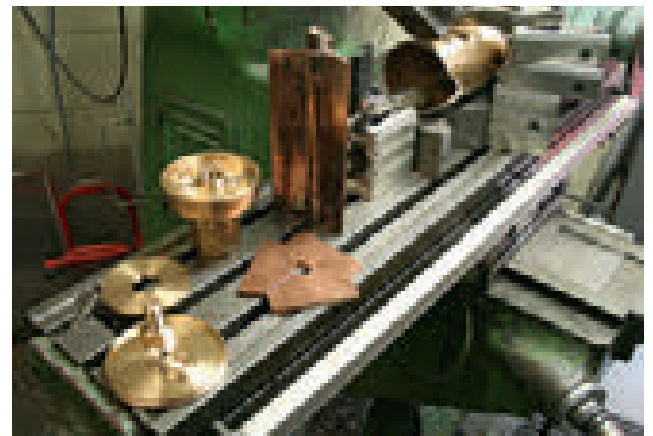


A driving wheel and two Cartazzi wheels ready for finishing.

## Whistle

The recently launched dedicated donation scheme where supporters are encouraged to fund the manufacture of specific components has been very successful with more than £70,000 pledged to date. One item which has been funded in full is the whistle.

No. 2001 *Cock o' the North* was the first LNER locomotive to be fitted with a Crosby three note chime whistle of the type subsequently fitted to the A4 class. The three notes produced by the whistle were tuned to C, F and A flat. Following the success of the pre-war whistle made for *Bittern's* 90 MPH runs last year, the same fabricated design will be used, except that the stops in the whistle bell chambers will initially be made adjustable so that the notes can be set precisely using 250 psi steam on *Tornado's* chime whistle valve. The stops will then be silver soldered into place. An order has been placed with M Machine in Darlington who made the *Bittern* whistle.



The components for a chime whistle, in this case a new one for *Bittern*.



## PROFILE – MARK ALLATT *by Graham Langer*

Nobody associated with The A1 Steam Locomotive Trust could fail to be aware of the organisation's larger than life chairman, Mark Allatt, a person who has been the 'front man' from the early days of the A1 to the launch of the locomotive ensuring *Tornado* was always 'front and centre' in the national and railway media. In addition to *Tornado*, Mark is now dedicating much of his time to the P2 project as well and *Prince of Wales'* rapid success owes much to his PR, marketing and fundraising skills.

Mark was born in 1965 in Sheffield but raised and educated in Dronfield in north Derbyshire and Bottesford in North Lincolnshire, just outside Scunthorpe. Family cine footage recorded Mark's first encounter with No. 4472 (with Dave Court firing!) in 1967. His interest in railways was further kindled by Triang-Hornby models but it was the arrival of a *Flying Scotsman* set for Christmas in 1970 that probably cemented his love of all things LNER. Holidays usually included at least one day dedicated to the pursuit of steam or railways and found the young Allatt attending preserved lines as diverse as the North Yorkshire Moors Railway (he remembers that Standard 4MT tank No. 80135 was in traffic), Carnforth when *Sir Nigel Gresley* was in steam and Barrow Hill when *Blue Peter* paid a visit in the early '70s.

Mark's first encounter with the preservation movement came through his association with his school teacher, Alan Turner, an accomplished EM Gauge modeller of LNER subjects who also ran a museum at Kirton in Lindsey. The museum had an 0-6-0ST which Mark spent some time cosmetically restoring with a group of friends. Diesel train spotting never really appealed to Mark (although he confesses a liking for 'Deltics'!), but he does recall a trip to explore the depots of the Woodhead route. In the early 1980s Mark gave a talk to the local railway society in Scunthorpe, naturally choosing the locomotives of Sir Nigel Gresley and illustrated with his own, growing, collection of 00 gauge models – one which has now got completely out of hand!

University education, initially at De Montfort, Leicester, saw Mark gain a degree in politics & economics while maintaining his interest in railways with membership of the Gresley and A4 Societies, even though he felt both needed a degree of modernising. After experience in the world of politics with a foreign policy 'think tank' and running an election campaign (in addition to standing for Parliament in 1997), Mark moved into P.R., initially with Hoskyns, before



A1SLT

**One of Mark's best moments with *Tornado*, the first steaming of the boiler in 2008.**

progressing to ever more senior and demanding roles at the likes of KPMG, GVA, Deloitte and Bird & Bird before branching out on his own as a company chairman, director, NED, consultant and campaigner.

Reading *Steam Railway* magazine in 1990, Mark got wind of the A1 project, attending the second meeting at King's Cross in March 1991; it was at this gathering that David Champion asked for volunteers and Mark put his hand up to help with the marketing, PR and fundraising – the rest, as they say, is history. During the roller-coaster ride that followed with the construction and commissioning of *Tornado*, Mark identified two particular highlights which will stay with him forever; the first being the initial steaming of the boiler at Darlington Locomotive Works in 2008 and the second celebrating his birthday aboard the support coach as No. 60163 roared through the night on her way from Newcastle to York with the final test run at the end of the same year.

Mark's busy life remains intertwined with the A1 Trust, keeping *Tornado* in the public eye and active on the main line as the organisation commences the construction of the seventh member of Gresley's master class in engineering and elegance; long may he remain involved. **TCC**

Mark Allatt



**A young Mark Allatt with *Blue Peter* at Barrow Hill.**



**In 1999 *Tornado* stood awaiting wheelsets and boiler in Darlington.**

● **Autumn 1994** – *Tornado*'s main frames were profiled at BSD Plate and Profile Products in Leeds, West Yorkshire. The CNC Plasma and Oxy fuel profile cutting system which cut the main frames from steel donated by British Steel was started by Mrs Dorothy Mather, the widow of the locomotive's 1940s designer, Arthur H Peppercorn. The machining of the main frame plates by T M Engineers Ltd of Kingswinford, West Midlands, was completed and all holes drilled. The one-piece frame plates had the bends in the trailing end formed and were delivered to the temporary frame erection site at Birmingham Railway Museum.

● **Autumn 1999** – *The Pioneer* No. 32 reported substantial progress in the assembly of No. 60163, the driving wheels were now all fitted to their axles and had been delivered to Bridgnorth for final machining prior to the fitting of the tyres. The smokebox was largely complete and most of the chimney and blastpipe castings had been delivered by Charles W Taylor Ltd. Work continued on machining motion components with more dedicated covenants being offered for further items of valve gear. The Trust held its sixth convention in Darlington and this was attended by 230 people who were greeted by a banner hung

between the cab and boiler proclaiming "£250,000 needed to fill this gap".

● **Autumn 2004** – The Trust started work on the fitting of the rest of the outside motion. The bushes for the connecting rods were machined at Ian Howitt Ltd, Wakefield and one side of the locomotive had now been fitted with a mock-up of parts of its valve gear. This was to enable accurate measurements to be taken to set the length of the eccentric rod as the traditional method of heating the rod to stretch/shrink it used when the original Peppercorn A1s were built in 1948/9 is no longer recommended as it can affect the rod's metallurgical properties. The six cast iron valve chest liners were cryogenically shrunk into the valve chests. The cab was returned from the North Yorkshire Moors Railway where it had been finally rivetted. The East Anglia Support Group provided the side windows and the bucket seats were made free of charge by the aircraft outfitters, Marshalls of Cambridge.

● **Autumn 2009** – The 2009 convention was held at the Ringwood Hotel in Chesterfield (convenient for seeing *Tornado* which was then at Barrow Hill) and attracted a very large audience. Mark Allatt was able

to review an incredible year since the last meeting, the "highlights of the Year" including the unveiling at York, the first 'Peppercorn Pioneer' runs along the ECML firstly York-Newcastle then Doncaster-Durham, 'The Talisman' which was said to have attracted 30,000 sightseers, Valentine's Day specials, The Royal naming, 'Auld Reekie', a visit to Barrow Hill to bring together two 'A4's and an 'A2' as well as our 'A1', the 'Yorkshire Pullman' from King's Cross was followed a week later by the *Top Gear* 'Great Race to the North'. A visit to the North York Moors Railway brought the site of *Tornado* pulling teak coaches then back to the main line with runs on 'The Coronation', 'Cathedrals Express' to York then trips to Gloucester, Wales, Minehead and a stint on the West Somerset Railway. A 'Cathedrals Express' took in Victoria and the Father's Day doubles (with a special word of thanks here for the locomotive support team who have to ready *Tornado* for two trips on these occasions). Then a visit 'home' in some sense of the word to Tyseley where the frames were cut. High Summer and the 'Torbay Express' (of course) then Towy and Tamar before some outings for Steam Dreams and a visit to Didcot. Not bad for her first year in traffic! **TCC**

The A1 Steam Locomotive Trust is pleased to display the logos of organisations giving us their ongoing support. Their contribution is gratefully acknowledged.



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Designed by Debbie Nolan

\* All information correct at the time of going to press on 10th November 2014. For up-to-date information and dates please check the website [www.a1steam.com](http://www.a1steam.com).

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Darlington Locomotive Works is normally open to the public on the third Saturday each month (11am – 4pm).

Access to the works is via Head of Steam: Darlington Railway Museum where covenantors are entitled to free entry. Charity registration No. 1022834.

The Trust respectfully requests that anyone wanting to see *Tornado's* main line passenger trains follows the rules of the railway and only goes where permitted.

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