

HAPPY  
5TH BIRTHDAY  
TORNADO!



## 60163 TORNADO

New Steam for the Main Line

# THE COMMUNICATION CORD

No. 31 Summer 2013



Ready to go, Tornado stands by No. 91110 Battle of Britain Memorial Flight.

## ‘THE ELIZABETHAN’ ANOTHER TRIUMPH FOR TORNADO

by Graeme Bunker

Early in the morning *Tornado* arrived in King's Cross on 11th June at 06:10hrs, once again ready to make her way north to the Scottish Capital. This would be the fourth time the loco had made the trip linking the English and Scottish capitals in its brief lifetime, the third one northbound.

After passengers have taken their photos and gathered around the locomotive, it falls to driver Don Clarke to get the train underway precisely on time at 06:40hrs. With no passenger stops before Peterborough *Tornado* is afforded the fast line through Finsbury Park but then takes the slow line on the approach

to Alexandra Palace. Then it is a gentle cruise north to make the pathway, passing commuters taking pictures on their mobile phones and looking astounded that this mobile time machine had disturbed their morning routine.

With more passengers on board at Peterborough the atmosphere on the train is building and as *Tornado* starts to climb Stoke Bank, windows are opened to listen to the performance. Although on the slow line the locomotive still manages to achieve 70mph on the bank and after dashing out of Stoke Tunnel it is then into the loop at Grantham for a well-

earned top up of water; and that's just the traincrew! *Tornado* also takes on-board 4000 gallons.

From Grantham the timings require fast running to keep in front of the many 125mph expresses and driver Clarke soon has the train wheeling along at or around our 75mph maximum; with the benefit of not requiring a crew change at Doncaster, *Tornado* roars through the centre roads much to the appreciation of the large number of photographers gathered at the station. On the train it is always exciting to rush through big stations, but being Doncaster, birthplace of so many ECLM

Paul Davies



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## Editorial by Graham Langer



What a difference a couple of months makes! Having resolved the problems with the air pumps, *Tornado* immediately went back to work and completed a great trip with ‘The Elizabethan’ and a tour of Scotland as soon as she was back in traffic. The new support coach is proving to be a revelation with the crews enjoying the un-heard of luxury of on-demand hot water and improved messing facilities. We haven’t really had the opportunity to test the heating however!

In this edition of *TCC* we are giving over space to Tom Ingall to raise the profile of the latest development at the Great Central Railway. Both Tom (‘Absolutely Chuffed’) and the GCR have been good friends of the AISLT and it is a pleasure to be able to help them in this way. If all goes well we may never have to take *Tornado* to the GCR by road again.

The next few months are somewhat less hectic in terms of main line work, which is probably just as well in view of recent ‘fire risk’ steam bans, but we have a number of visits to preserved lines arranged and, of course, we look forward to seeing you all at the AISLT Convention in September. **TCC**

pacifics, its always extra special to get a clear run.

At York more water is taken on from Ian Buxton and his large tanker, ensuring that *Tornado* has sufficient supplies for the journey onto Tyne Yard near Newcastle. Also at York we say farewell to Colin, Don and Mark and welcome on-board Inspector Bob Hart, and driver Brian Grierson and Steve Hanczar. They will be the crew to Edinburgh. In front of a huge gallery of photographers we are underway again, having only been stationary for twelve minutes, and soon we are heading out across the Vale of York and the famous racing stretch. *Tornado* has to cool her heels a little here as the congested network means no fast line path all the way north, but time keeping is what matters and once clear of Northallerton the locomotive can be set to work and arrives five minutes early into Tyne Yard for

coal and water. However, there is concern over the railway being closed due to an incident near Morpeth, and whilst the locomotive is rapidly coaled and watered, the fire cleaned and a good oiling round undertaken, the message is awaited as to whether we will get to leave on time.

All the hard work is not in vain and ‘The Elizabethan’ departs once again only five minutes down on schedule, and is shortly crossing the Tyne and heading north from the famous city. Speed is soon well into the seventies and *Tornado* is being restrained. With all the disruption in the area delays are at ten minutes as we pass Heaton depot, still to be visited by the new A1, but the road is clear and the signals green and soon time is being won back. *Tornado* is booked to take just 65 minutes for the 68 miles from Newcastle to Berwick-Upon-Tweed, and will need to run well to make that, when you add in ten



**‘The Elizabethan’ - Tornado keeps the pace up at Penmanshiel.**

minutes of deficit even more hard work will be required. After recent difficult times for the new pacific this run will tell if all is back in ‘A1’ order, and as we pass Morpeth with its heavy speed restriction, time is already being won back. Still the signals call the big engine on and the speed is having to be restrained to near 75mph as *Tornado* wants to emulate the Deltic booked for the return run. By Berwick the locomotive has made up more time and blown the booked allowance out of the water (water being the correct word as there is now a heavy mist of rain along the coast as the railway curves along the cliff tops).

Crossing into Scotland ‘The Elizabethan’ is making such progress to be ontime as the climb to Grantshouse is taken in the pouring rain. 27 minutes are allowed from Berwick to Grantshouse Loop where a pathing stop is due, and such is the progress *Tornado* is running early at this point. However, Edinburgh is not ready for us and so progress is halted as driver Grierson brings the train slowly to a stand in the loop. Time passes as we wait for the modern trains to pass us by, and then, a few minutes down, *Tornado* begins the final leg of the journey to Auld Reekie. Soon speed is back in the 70s but signal checks hinder progress nearer the Scottish capital and finally we are brought to a stand in the suburbs close to Waverley station. The road

“By Berwick the locomotive... has blown the booked allowance out of the water”

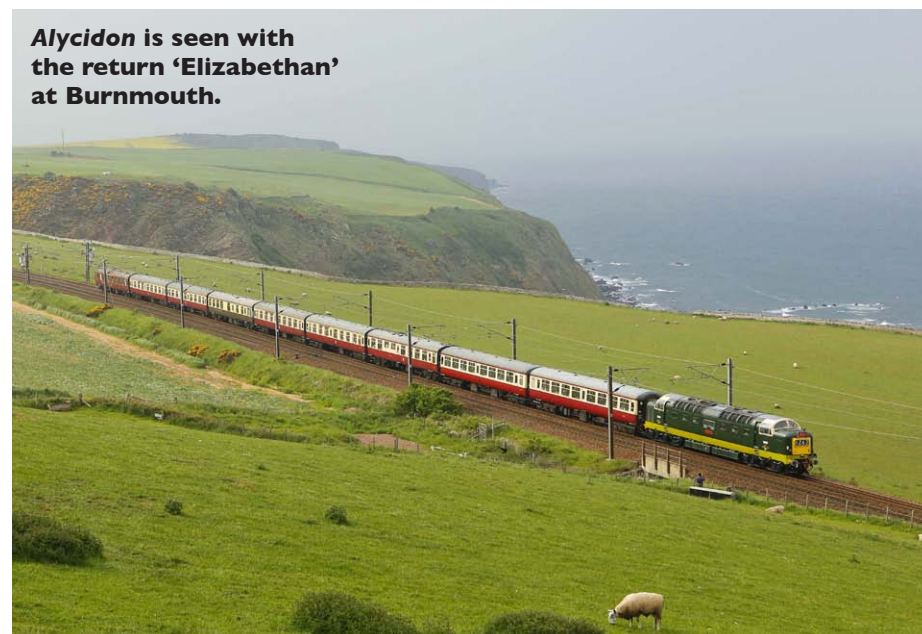
clears and, albeit a few minutes down, ‘The Elizabethan’ arrives under the magnificently restored roof of the Scottish capital’s principal station.

A short break is available to the passengers in Edinburgh and soon *Tornado* is heading away to Millerhill depot, its home for the next week as it works two tours north of the border. By 17:30 Deltic D9009 *Alycidon* is throbbing its way into the station ready for the return journey.

The trip is timed for 100mph, but often

it is difficult to achieve that speed on the congested modern network. However, our drivers have other ideas and after a looping near Drem to allow a late running service to pass, before Berwick we have already seen three figures for the first time. We are to witness many highlights on the way south, the start to stop run from Darlington to York in the setting sun will live long in the memory. The unique sound of Deltic No.9 making full-blooded departure from York set us on our way south, and perhaps best of all the smiles when the train arrived 45 minutes early at London King’s Cross, much to the delight of all onboard. More trips are planned from the Trust so look out for more details in the near future. **TCC**

**Alycidon is seen with the return ‘Elizabethan’ at Burnmouth.**



Jack Beeston

## EARLY REDEMPTION OF £500,000 BEARER BOND by Mark Allatt

On 30th June 2013 the Trustees of The A1 Steam Locomotive Trust gave formal notice of the intention to redeem the £500,000 Bearer Bond and make repayment. Individual bond holders have been written to at their last known address and adverts have been placed in *Steam Railway* and *Heritage Railway* magazines in accordance with the terms of the Prospectus issued in 2004 to help fund *Tornado*’s completion, especially the boiler purchase.

Although the Trust can wait until 31st March 2016 to redeem the Bond, the Trust has accumulated sufficient funds so Trustees have decided to make repayment on 31st December 2013. Repayment will only be made by surrendering the bond certificate(s) to the Trust by sending it to the Company

Secretary, The A1 Steam Locomotive Trust, Darlington Locomotive Works, Hopetown Lane, Darlington, Co. Durham, DL3 6RQ, to be received no later than 30th June 2014. Certificates received after that date will be null and void.

The Trustees have adopted a policy in recent years of ring fencing funds to provide for the repayment of the bonds but the recent receipt of a substantial legacy has enabled the repayment to be brought forward. On behalf of everyone involved with *Tornado* we would like to thank all of the bond holders for their support over the years and bringing *Tornado* onto the main line. We are proud in what we have all achieved together and are really pleased that so much enjoyment has been brought to so many supporters and friends.

### From Bond to Slice(s)

Chris Scott, one of *Tornado*’s long-term supporters (he was the Great Northern Hotel meeting in 1990) and a bond holder has written to the Trust, “Following receipt of your letter dated 30th June, I have decided to waive my £500 worth of Bearer Bonds and the interest due. It occurs to me that £500 + interest is equivalent to ten or more slices of Support Coach and that is what I would like the money to be used for. If such a “conversion” is possible and if it was to be publicised, perhaps it would encourage more people to follow suit. What do you think?” **TCC**



## LOCOMOTIVE MANAGER'S REPORT

by John Wilkinson



Graham Langer

This time it feels like picking up the baton from the previous report which ended with the Rhyl failure... I guess everyone would like to know what happened next? Upon arrival at Crewe *Tornado* was stabled at the Crewe Heritage Centre. The air pumps were removed from the locomotive and the decision taken to send all three of our air pumps back to the DB works in Meiningen for urgent repair. In the meantime we also took the opportunity to have some repairs carried out to the safety valves and a couple of small repairs to the boiler. The repairs were carried out and towards the end of May the pumps were refitted to the locomotive and ran a successful test weekend on the Heritage Centre demonstration line in the very capable hands of retired mainline crew Bill Andrew and Brian Wilson.

In the meantime, the new support coach appeared on the scene at Crewe and so we had another couple of days transferring our belongings between support coaches and I'm hopeful that will be the last of that for a long time. We are settling into the new support coach which is proving to be a good environment in which to live and work.

On 7th June we moved from Crewe to Southall courtesy of Devon & Cornwall Railways with driver Dave Court in charge. This move was completed without incident and left time for a good preparation for 'The Elizabethan', the cleaning effort from the support crew was exceptional and *Tornado* really looked the part as we left for Edinburgh on 11th June. A successful run to Edinburgh was followed by stabling at Millerhill depot where our friends there made us most welcome again and we were based there for the runs to Inverness and around the Forth Circle. Some spectacular running was seen on the Highland Banks and a great day was had by all. DBS fireman Dave Procter did confide that he was a little nervous about firing the 23 mile climb out of Inverness having experienced the climbs in the

**Above: John Haydon makes a running repair, silver soldering a joint on a lubrication pipe (which feeds oil to the cylinders on *Tornado*).**

**Below: With the repair completed, work could continue getting *Tornado* ready for the road.**



Graham Langer

northbound direction. A little while and 23 miles later, when he realised he was at the top, he was heard to say "where's the hills then"!

A successful run back to Southall from Millerhill was handled by Devon & Cornwall Railways and three days later we were back in action south of the border and a further run of trips which were all successfully completed with no real issues with the locomotive.

Thanks to the support crews, DBS and DCR locomotive crews and before that, all who worked so hard to get *Tornado* back on the mainline performing reliably again. **TCC**

## ENGINEERING UPDATE *by David Elliott*

### Air Pumps

With our efforts to make the existing pumps work properly being to no avail, the decision was made to send all three air pumps back to Dampfloswerk Meiningen for immediate overhaul/rectification. Meiningen responded quickly and two pumps, the original front pump and the "new" spare pump were dispatched from Meiningen on 17th May and refitted as soon as they arrived at Crewe. Following two days running at the Heritage Centre the pumps were pronounced satisfactory and have continued to run well. Since then the third pump has been overhauled and returned to stock to enable component exchange in future.

Meiningen has carried out some analysis of lubricants and concluded that the compressor oil that we have been using in the air side of the pumps does not have a sufficiently high temperature capability to cope with the 10 bar pressure the pumps produce. This has been evidenced by the formation of carbon on the air valves in the pump. The original choice of compressor oil was based on need to minimise contamination of rubber seals in brake equipment (and we have not experienced trouble to date in this area). We are now using a "straight" superheated steam oil on Meiningen's advice for the air side of the pump. Fortunately we have a relatively sophisticated oil and water separation system on the locomotive, but will need to monitor the air system closely over the coming months for oil contamination in the compressed air.

There is a suggestion from Meiningen that the air temperatures at the outlet of the pumps may be excessive (particularly the front pump) due to insufficient cooling air for the pump cylinders. In order to understand whether there is a problem, Rob Morland has acquired two thermocouples which are to be attached to each of the pump air delivery pipes which will be connected to a data logger so that we can see the temperatures achieved.

### Safety valves

Since the annual maintenance at Southall during which the safety valves were partially overhauled and new springs fitted, the valves have tended to stay open too long causing an excessive drop in pressure. Having followed the instructions in the Ross Pop safety valve manual to reduce the pressure drop to no avail, the opportunity was taken whilst at Crewe to have their safety valve specialist Andy Tranter examine the



David Elliott

**With the coach out of the way, Darlington Locomotive Works was rearranged to allow for maintenance of the building itself.**

valves closely. following further overhaul activity including replacement of some components, the valves were refitted but the problem persisted.

After more unsuccessful efforts to cure the problem the cause was eventually found. During the work at Darlington to fit the new springs, spring cups were used from our spare valve to accommodate the new springs which were slightly longer than the original springs. It was ultimately discovered that the profile of the replacement spring cups was slightly different than the originals which caused them to foul the cast spokes on the upper body of the valve instead of transferring the entire spring load through the centre spindle. The effect of this was to move the spring load on the valve slightly off centre which gave rise to the large pressure difference between opening and closing. New spring cups have cured the problem.

### Firebox Stays

The boiler is starting to show its age, in the form of three occasions over the last nine months of inner firebox stay welds leaking. All of these were located just to the Fireman's side of the fire hole. When the first one was repaired last July the stay was replaced as a precaution, but on extracting the old stay it was found to be in good condition, the problem being confined to the weld. The other two (in November 2012 and March of this year) were repaired by grinding out and replacing the stay welds leaving the stays in-situ.

When the third weld started leaking

in April, in collaboration with our boiler inspector it was felt that a more comprehensive examination of the area was required. Whilst the locomotive was stood down at Crewe, the two most recent stays with leaking welds were removed, the stay holes enabling limited examination of water side the inner and outer firehole plates. These were seen to be in good condition. Also the dry side of both inner and outer fire hole plates and the welds between them and the surrounding inner and outer firebox back plates were subjected to magnetic particle and ultrasonic inspection. The results of which were clear.

New stays were fitted and the boiler successfully steamed. Thanks are due to Steve Latham and the Crewe Heritage team who made their facilities available and assisted with the repairs during our stay.

### Intermediate Overhaul

Planning has started for the intermediate overhaul which is due in 2014. Our policy of keeping on top of routine maintenance of the "bottom end" of the locomotive means that the bulk of the work will be on the boiler which was first steamed over five and a half years ago. The work will involve removal of small boiler tubes a sample of the superheater flues to permit thorough examination of the inside of the boiler barrel. Decisions have to be made on how much more work should be done in order to give us the maximum duration of operation before the next boiler overhaul. **TCC**



# 'THE ELIZABETHAN' - TORNADO'S TOP TRIP IN JUNE!

London-Edinburgh, 11th June 2013



Geoff Griffiths

**Above: A1 60163 Tornado crosses the River Idle as she heads North.**

**Below: A1 60163 Tornado rounds the viaduct on her approach to the cathedral city of Durham.**



Alon Weiner

The six A4's attracted 140,000 visitors to the NRM.



Robin Jones/Heritage Railway

## TORNADO AT 'THE GREAT GATHERING' by Graham Nicholas

As a UK railway enthusiast, you'd have to be living down a pretty big hole not to realise that there has been something rather special going on at The National Railway Museum this summer, namely 'The Great Gathering', whereby all six remaining members of the LNER A4 class have been brought together for a fortnight on display (3rd – 17th July) to celebrate the 75th anniversary of *Mallard's* world steam speed record. This of course has involved the remarkable (but temporary!) repatriation of *Mallard's* two transatlantic sisters, 60008 and 60010, the latter given a glorious makeover into her original fully streamlined 'Coronation' guise as 4489.

The opening day of the festival, 3rd July, was of course the red letter day in any LNER enthusiast's diary, being the Sunday afternoon in 1938 when *Mallard* was hurled down Stoke Bank into immortality. By 'happy coincidence' (I think not!) *Tornado* was booked to work a London-York 'Cathedrals Express' railtour for Steam Dreams on the very date and hence we were able to join the party (whilst being careful not to upstage it).

An extra early 06:40hrs departure from London, allowed a pre-midday arrival in York so, instead of hiding away out of sight during her layover, *Tornado* made her way onto the NRM site and was on display in the outside car park area, where the team chatted to visitors

and recruited Covenantors. So, although the focus of attention was rightly inside the Great Hall, there was at least one (blue) East Coast pacific in steam on the day (those grouped round the turntable of necessity being lifeless). When you add the silent, suspended 4472 in the workshop into the mix, there were no less than eight LNER designed pacifics on the old 50A on 3rd July.

On the way home, there was one further opportunity to celebrate. During *Tornado's* restrained descent of Stoke Bank, as she passed the very spot between Little Bytham and Essendine

where the magic 126mph speed was attained, a sustained blast on the ex-A4 chime whistle echoed around the surrounding Lincolnshire countryside.

We live in a very different age now. The East Coast Class 91/MkIV set I'm travelling on as I type this has routinely cruised past the spot at 125mph and nobody bats an eyelid. But, on that balmy summer's afternoon 75 years ago, in the pre-computer, pre-jet engine age, it must have been an incredible sight for those few lucky enough to witness it. *Mallard* (and the A4s) – we salute you!

TCC



**Tornado is seen at Arksey with the down run.**

Geoff Griffiths



## TORNADO ON TOUR by Graham Nicholas

**'The Elizabethan', 11th June**  
London King's Cross to Edinburgh Waverley charter for The A1 Steam Locomotive Trust 400 miles run – see separate report.



John Beeston



Alex Napier

**'The Cathedrals Express', 15th June**  
Edinburgh to Inverness 1Z63 charter for Steam Dreams 391 miles run - see separate report.

## SRPS Fife Circle, 16th June

Edinburgh-Stirling-Dunfermline-Edinburgh 1Z64 charter for SRPS 124 miles run

Capitalising on her sojourn north of the border, *Tornado* was at the head of this circular trip for the Scottish Railway Preservation Society. Undertaking the run in the unusual clockwise direction makes it a much tougher proposition, added to which the coal was not of the same quality as the previous day's run to Inverness. In the circumstances therefore, to have been 'right time' or thereabouts nearly all the way round reflects great credit on all those involved with the operation. The crossing of the iconic Forth Bridge on the last leg was the perfect finale to a successful day.



Keith Sanders

**'The Cathedrals Express', 21st June**  
Tonbridge to Ely 1Z51 charter for Steam Dreams 295 miles run

After the thrills of the Scottish 'bash', now it was time for *Tornado* to start rebuilding her reliability reputation, with the first of a series of her more usual London-based runs for Steam Dreams. On a bright sunny day, this was an interesting run from 'south of the river' into the fenlands of East Anglia, including a stretch on her favourite ECML stamping ground (as far as Hitchin) with a performance to match. Any minor delays in running were generally recaptured during the day and the A1 duly detached from the train at Willesden on schedule. This trip was notable as being driver Paul Major's first trip on *Tornado* since being passed for steam driving; congratulations to Paul from us all.



Ian McDonald



## TORNADO ON TOUR *continued*

David Sheppard



### 'The Cathedrals Express', 25th June

Rainham to Ely IZ63 charter for Steam Dreams 215 miles run

Did we forget something and have to go back for it?! No, the reason for Tornado's second appearance in Ely within four days was that she was stepping into the breach for 'West Country' pacific Braunton, the latter's long rebuild and return to mainline running not yet being complete. On this occasion, 60163 joined the train at Battersea loop on the way out – thereafter it was a remarkably similar performance to the previous run, once again handing back to the diesel on time at Willesden on the return and with no problems to report on arrival back at Southall.

### 'The Cathedrals Express', 27th June

Norwich to Salisbury IZ90 charter for Steam Dreams 453 miles run

Linking two of Britain's great cathedrals, Tornado set out along the route where Britannia's and B12's once raced towards the capital, her exemplary timekeeping being maintained thereafter all the way to Salisbury. A 15 minutes delay soon after setting off back on the return only served as an incentive for an exciting dash along the classic 'racing stretch' that is the LSW main line. Apparently having no need for her booked operational stop in the outer suburbs, Tornado was able to hand over her train some 18mins early at Willesden on this occasion.



Ron Fisher

### 'The Cathedrals Express', 3th July

London (King's Cross) to York IZ20 charter for Steam Dreams 411 miles run

After three trouble-free runs, Tornado was entitled to go to a party! As reported elsewhere, this run had been planned to coincide with the opening day of 'The Great Gathering' event at the National Railway Museum to celebrate the 75th anniversary of Mallard's record run. An extra special effort by the support crew in the days leading up to the run saw to it that our own blue pacific was spotless for this very special occasion.



Alan Weaver

John Stevenson



### 'The Cathedrals Express', 5th July

Lewes to Salisbury IZ29 charter for Steam Dreams 443 miles run

After a seemingly model run outwards to Salisbury, upon arrival the support crew were greeted by a very dirty fire and insufficient time to clean it properly. The return run consequently began 30 minutes late, although over 20 minutes of that was recovered back to London. That was as good as it got however, a further problem with a split lubrication pipe adding to the difficulties and the tour disappointingly terminated back at Lewes over an hour late.

### 'The Cathedrals Express', 7th July

London (King's Cross) to York IZ25 charter for Steam Dreams 411 miles run

On a gloriously hot summer's day, when 77 years of hurt were finally ended by a Scotsman winning at Wimbledon, Tornado once again retracted her steps, this time to York. Prior to that though some urgent repair work was required to the lubrication pipe and we are grateful to John Haydon for coming to Southall at short notice to silver solder the repair. In an unusual (but much appreciated) operational arrangement, Tornado actually spent the night before the run in King's Cross station, attached to her train. This trip was also notable for the fact that it will probably have been our last trip with DB Schenker driver Don Clarke, who has been a stalwart in the mainline steam 'top link' for many years. Very appropriately, the man on the shovel on this occasion was none other than his son Jim, ensuring that the Clarke dynasty endures.



Geoff Griffiths



Left: Handing over the baton? Father and son Don and Jim Clarke handled the down run on 7th July.

Graham Langer



**'The Elizabethan' crosses the  
Royal Border Bridge at Berwick.**





## From the chair by Mark Allatt



“May you live in interesting times” is often quoted as a Chinese curse – but it probably sums up the past few months with *Tornado*. As you will read elsewhere in this issue of *TCC* our locomotive is certainly back on form and delivering some outstanding performances on the main line. Most significantly our prudent financial management – aided by a substantial legacy – has enabled us to announce the early redemption of the bearer bond at the end of this year (see article on page 3). This will leave the Trust debt free having paid back around £1m borrowed to complete *Tornado* – although we will still need to purchase the tender which is currently leased from our principle sponsor William Cook Cast Products.

However, our troubles earlier in the year have cost us dear and that, combined with our last push to complete E21249 have meant that the cupboard is looking pretty bare. Although ‘The Elizabethan’ was successful operationally and a great day out for those on board, passenger take-up was disappointing and therefore the Trust did not achieve any of its commercial goals for this train. In addition, operational problems at DB Schenker have meant that we have had to postpone the rest of our own railtours until next year and we hope to be able to announce our plans at the Annual Convention. It is therefore

all hands to the pump to bring in revenues and donations from all possible sources.

Our volunteers continue to have a busy year, with packed schedule of main line trains and heritage railway visits. As ever we are still looking for more volunteers. It takes a lot of people to keep our locomotive on the rails. There is always so much more that we could achieve with the right volunteers with the right skills and can-do attitude. At the moment we are especially seeking volunteers to help with book keeping, finance & accounting and we could do with an archivist. Please email [volunteer@alsteam.com](mailto:volunteer@alsteam.com) if you think you can help.

The secret of the Trust’s success remains the loyalty and support of our covenantors, and the professionalism and dedication of our volunteers – without whom none of this would be possible. It is vital for our future success that we continue to grow our supporter base by recruiting more people as covenantors 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 the Annual Convention on 21st September. It promises to be one of our most interesting yet! **TCC**

## TOURS DIARY

Below are the future operations *Tornado* is confirmed to be involved in. More details will be published on [www.alsteam.com](http://www.alsteam.com) as trains are finalised. Contact details for tour companies appear at the bottom of the page.

- **Friday 30th August to Thursday 5th September** - North Norfolk Railway, Sheringham
- **Saturday 7th September** - ‘The Cathedrals Express’ - London & Salisbury to Bath & Cardiff and return - promoted by Steam Dreams
- **Tuesday 10th September** - ‘The Cathedrals Express’ - London to Sheffield Park - promoted by Steam Dreams
- **Tuesday 17th September** - ‘The Cathedrals Express’ - Woking to Kingswear and return - promoted by Steam Dreams
- **Thursday 19th September** - ‘The Cathedrals Express’ - Canterbury to Salisbury and return - promoted by Steam Dreams
- **Saturday 28th & Sunday 29th September** - ‘Barrow Hill Live’ at Barrow Hill Roundhouse
- **Friday 4th - Sunday 6th October** - North Yorkshire Moors Railway
- **Wednesday 23rd - Sunday 27th October** - The Mid Hants Railway
- **Friday 1st - Sunday 10th November** - The Nene Valley Railway, Peterborough
- **Monday 11th November** - ‘The Cathedrals Express’ - Peterborough to Canterbury and return - promoted by Steam Dreams
- **Saturday 23rd November** - ‘The Cathedrals Express’ - Waterloo to Shrewsbury via Salisbury and return - Steam Dreams
- **Thursday 28th November** - ‘The Cathedrals Express’ - London to York and return - promoted by Steam Dreams

**The Trust respectfully requests that anyone wanting to see *Tornado* follows the rules of the railway and only goes where permitted.**

**The following tour operators and preserved lines are involved with the operations listed above:**

**Steam Dreams** Web: [www.steamdreams.com](http://www.steamdreams.com) Tel: 01483 209888 Email: [info@steamdreams.co.uk](mailto:info@steamdreams.co.uk)

**North Norfolk Railway** Web: [www.nnrailway.co.uk](http://www.nnrailway.co.uk) Tel: 01263 820800 Email: [enquiries@nnrailway.co.uk](mailto:enquiries@nnrailway.co.uk)

**Barrow Hill Roundhouse** Web: <http://www.barrowhill.org> Tel: 01246 472450 Email: [project\\_man@barrowhill.org.uk](mailto:project_man@barrowhill.org.uk)

**North Yorkshire Moors Railway** Web: [www.nymr.co.uk](http://www.nymr.co.uk) Tel: 01751 472508 Email: [info@nymr.co.uk](mailto:info@nymr.co.uk)

**Mid Hants Railway** Web: [www.watercressline.co.uk](http://www.watercressline.co.uk) Tel: 01962 733810

## TAKING THE HIGH ROAD by Graham Nicholas



Dwarfed by the landscape and the bridge itself, *Tornado* crosses Culloden Viaduct.

Having missed out on the excitement of last year’s Scottish ‘bash’, 15th June was an early date in the 2013 diary and I ended up ‘working my passage’ by volunteering to be chef for the day on our new Service Vehicle E21249 (well, as I fitted most of the kitchen then I might as well see if it all worked!).

The original plan for the day had been the same as last year, ie out via the Highland main line and back via the East Coast route from Aberdeen, taking in the Forth Bridge. Alas, the latter proved to be a logistic ‘bridge too far’ for the train planners and thus it was that *Tornado* was to return back to Edinburgh the way she’d come, destined to spend the day predominantly in former LMS territory.

But what a piece of railway! Not for nothing is Perth to Inverness the chosen route in the UK over which the braking of freight wagons is tested – if the brakes can survive the prolonged descents without overheating then they’re cleared to run anywhere in the country. As if to emphasise the point, as recently as 2010, a southbound freight train ran away out of control at Carrbridge, derailing at 50mph; truly, a railway to be reckoned with.

After her impressive exploits over the route last year, *Tornado* had been trusted with a 12 coach train unaided. On the ECML, this would be routine – but over the Highland line this represents a massive load for a single-handed locomotive. As

she drifted past the mortal remains of the engine shed on the approach into Perth station, the ghosts of the legendary 63A must have been wondering. For here was the LMS’s single largest allocation of Class 5MT engines and they routinely hunted in pairs when heading northwards – and no wonder: from the banks of the Tay, the line climbs remorselessly until Britain’s highest railway summit is reached at Druimuaichdar, some 1484ft above sea level.

But, aided by some superb enginemanship (I hardly heard her slip all day), *Tornado* was equal to the challenge as we forged onwards uphill through romantic-sounding names steeped in Scottish history – Pitlochry, Killiecrankie, Blair Atholl... higher still in the wild terrain of the Grampians there was a mounting mix of enjoyment and exhilaration, motorists on the accompanying A9 road becoming excited spectators as we crested the summit in fine style. Meanwhile, the busy merchandise team members were reporting ‘record’ sales during the run, sat amongst pre-ordered bags bursting with all manner of *Tornado* fare as we waited to be re-attached to the main train during the Inverness layover.

The ultimate challenge however was reserved for the start of the homeward run. Almost directly off the Inverness platform ends lies a fierce 1-in-60 incline, allowing a train no chance to build up any momentum whatsoever. This

could be tackled at no more than a steady ‘plod’ but tackle it *Tornado* did, superbly surefooted and once the gradient eased after a couple of miles to a ‘mere’ 1-in-70(!) she was away, leaving the Moray Firth far, far below and behind us.

A brief respite for the dip towards the spectacular Culloden viaduct was all 60163 needed to get her train up to a more appropriate mainline speed as we sailed across this magnificent structure, close to the site of the last battle on British soil. After that there would be only one winner in our own battle against gravity to ascend the Highlands. I was preparing the evening meal at the time but this was far too good a show to miss – the chilli was duly flavoured with specs of soot raining in through the open quarter light (good for the digestion!).

After somewhat indifferent weather earlier in the day, the sun was now shining and what a joy it was to be amongst this awesome scenery on such a perfect afternoon. Further highlights were an entertaining dash through Aviemore station (where we were saluted by the Strathspey’s LMS 2MT 46512), an ear-splitting assault on the gentler southbound grades to Druimuaichdar and the setting sun dancing off the side of the train on the long graceful curve beyond Gleneagles.

Arrival back at Edinburgh was a fully deserved five minutes early. Will ye no come back again? **TCC**



## MERCHANDISE UPDATE by Gill Lord

This season started well with *Tornado*, sales on the trains as good as last year, plenty of volunteers available and lots of fun! The first stand event was at Crewe Heritage Centre, 25th, 26th, and 27th May. The weather was inclement but luckily we were able to erect our sales stand inside the main hall. Sales were fairly steady. We are always given a very warm welcome at Crewe Heritage Centre which makes our visits there all the more enjoyable.

Our next run was 'The Elizabethan', an early start for volunteers and passengers alike. One way trips with *Tornado* are a little bit daunting for the merchandise teams as everything has to be finished – all sales handed to passengers, all cash collected and everything in the proper place in our store room before the final destination is reached as the support coach travels with *Tornado* and the sales teams return to London travelling behind *Alycidon* which hauled return leg.

'The Elizabethan' was the first time the team had used the new Merchandise Store for sales, much improved on how we worked before; the store is not quite as large as I would have liked but with lots of effort and perseverance by the teams, we have found that there are ways around everything and I am sure that once problems have been ironed out we will wonder how we managed before! The most exciting part is that we can actually charge our tills and card machines on the coach without having to decide who should take them home and return them to the coach after each trip, a very great plus.

I was away in holiday during this exciting period; I even missed the Scottish trips, not good planning really! The run from Edinburgh to Inverness was spectacular in more ways than one, not just the scenery and *Tornado's* magnificent performance but also the sales for the day were double a usual trip, line side photo sales reached ninety, forty of which have gone to a coach party from Germany. The following day the Alloa Circle, a short run but sales from the trolley were so brisk that the team could not manage to work the whole train, disappointing a few people I am sure.

I was lucky enough to be on the 3rd July 2013 run from King's Cross to York to attend 'The Great Gathering' at the National Railway Museum to



Gill Lord and the sales team with Sir William McAlpine at Fawley Hill.

"The run from Edinburgh to Inverness was spectacular in more ways than one"

commemorate *Mallard's* record breaking run by gathering together in the Great Hall, *Mallard* and her five surviving sister A4's.

*Tornado* arrived at York at 11:30hrs and from 14:30hrs until 17:00hrs *Tornado* was on display by the car park at the NRM. Our team left the support coach (after finishing packing the sales orders!) and worked through the crowds of visitors, which *Tornado* attracted, handing out leaflets and answering questions.

The 2013 Official *Tornado* Calendar is due out at the end of July and available on-line, on the trains and at events. We also have a tie for non-covenantors, and the pièce de résistance the new Hornby R3206 '00' gauge *Tornado* in BR Blue, available at all the usual places at a price of £120.00. I look forward to seeing some of you at the Heritage lines we are attending this year, please come along and say hello!

60163

## FOR SALE 9 TORNADO SMOKEBOX NUMBERPLATES

- 21st/22nd August 2010 Mid Hants Railway
- 9th October 2010 Barrow Hill Convention
- 3rd July 2011 'Torbay Express'
- 10th July 2011 'Torbay Express'
- 17th July 2011 'Torbay Express'
- 8th December 2012 Southend to Oxford
- 29th November 2012 London Victoria - Bath
- 23rd March 2013 London – Kingswear
- 21st June 2013 Tonbridge - Ely

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

## Covenantors' Diary by Alexa Stott

As I write this the sun is blazing in a deep azure blue sky which brings to mind that wonderful day in September 2008 when *Tornado* hauled her very first public passenger service at the Great Central Railway in Leicestershire especially for Covenantors, fulfilling a promise made many years earlier by the Trust. Even the most ardent supporters must have occasionally wondered if the day would ever come, but it did and now we can look back with great pride not only at the journey the Trust travelled to reach the Great Central Railway but also how far we have come in the five years since.

As there were so many significant events in 2008 which could be taken as *Tornado's* date of birth – the steam test, the first moves at Darlington, the first passenger service, the first main line test run, the unveiling in Apple Green – it is difficult to pinpoint a perfect day to celebrate the locomotive's fifth birthday. So, as "a starter for 10" – in the words of Bamber Gascoigne – I am delighted that the North Norfolk Railway have very kindly invited Covenantors to enjoy *Tornado* in action at their Grand Steam Gala on 30th August to 1st September.

And that is not all because, on 21st September 2013, exactly five years

after that wonderful day at Quorn Station on the Great Central Railway, we will be returning to one of our most popular Convention venues, Barrow Hill Roundhouse near Chesterfield in Derbyshire. The day will follow its traditional format. This will include a formal session in the morning at the Chesterfield Hotel, where Trustees will report on the previous year's activities, following which buses will be available to take Covenantors and their guests to the Roundhouse. Those travelling by car will of course be able to park at the Roundhouse. There will be an option to have lunch at the Roundhouse and the opportunity for everyone to travel behind *Tornado* and spend time with the locomotive away from the public gaze. This will be followed in the evening by our Annual Dinner, back at the Chesterfield Hotel, an increasingly popular event at which Covenantors will be entertained by an after-dinner speaker.

Further details on both these events will be posted out to Covenantors shortly.

So that's the forward diary...but what about what has happened since my last 'Diary'? Well there really is only one story – 'The Elizabethan'! A big thank you to all those who 'stuck with

it' despite date changes and "will she, won't she be running?" debates. We were rewarded with another incredible endurance performance from *Tornado* as she treated the 400 miles to Edinburgh with complete disdain. Not to be outdone, Deltic D9009 *Alycidon* provided us with an exciting high speed dash to London in the twilight of a long June day.

Hopefully the editor will allow me enough space to add a further paragraph about the *Tornado* Team. I am delighted to announce that we now have 50 Team members which is a wonderful achievement in such a short space of time. And we also have our first *Tornado* Team 'graduate' who is working his way into the *Tornado* support crew! The *Tornado* Team will of course have its own dedicated day on the weekend of the Annual Convention – on 22nd September – and Team members will be receiving their invitations shortly.

As always, may I thank those Covenantors old and new for their commitment to, and support of, the work of the Trust. I and the other Trustees look forward to seeing you at the North Norfolk Railway and at the Annual Convention.

And finally? There is only one thing left to say, "Happy 5th birthday *Tornado*!" TCC



Covenantors enjoyed *Tornado* making her debut at the GCR.



# SUPPORT COACH PROGRESS *by David Elliott*

Our Mk1 BCK 21249 is now in service! After several weeks of intense activity by our volunteers and contractors the coach left Darlington for Shildon on Tuesday 28th May. Graham Nicholas ensured that we had the necessary certification paperwork enabling the first outing on the main line in the form of a proving trip to Crewe via Derby on Thursday 30th May performed by Devon and Cornwall Railways (DCR). At Crewe the coach was united with *Tornado* for the first time, and worked behind 60163 on a second proving trip to Southall on 7th June in readiness for working The Elizabethan on 11th June. However arriving at this point involved a lot of work.

## Interior

Work continued right up to departure from Shildon to complete the interior including refitting the re-upholstered seats and completion of woodwork. There are still some minor completion tasks including fitting draught strips to some of the external doors and paneling in the kitchen and guard's compartment. These are being attended to as time permits.

## Bogies/ride height

As outlined in *TCC30*, we had a significant problem with achieving the correct buffer height and clearances on the bogies due in part to the increased empty weight of the vehicle and to the existing springs being a bit tired.

The springing on a Commonwealth bogie comprises two elements. The primary (or equaliser) springs are located between the bogie frame the equaliser beams which are supported on the axleboxes. The secondary (bolster) springs are incorporated in the bolster assembly which carries the weight of the coach body to the bogie frame via a set of four swing links (see photo). Each bolster spring unit comprises a large spring with a smaller spring inside it. For the heaviest

vehicles (some Pullman kitchen cars and sleepers), a third even smaller spring was added to achieve the required stiffness of the spring unit.

We hired a calibrated load cell and measured the spring rate of all the springs on the coach using our 10 tonne hydraulic press. The load cell was also used to weigh the coach body in its empty equipped condition (no payload but with water, fuel and gas tanks full). From the table of Commonwealth bogie spring combinations we were able to determine the correct combination of springs. However as none of the springs we had were strictly of the correct rating, this would have necessitated a complete new set which would be both expensive and time consuming.

A trawl round the major operators of coaches with Commonwealth bogies failed to produce any of the correct spares "off the shelf", however the West Somerset Railway several years ago had acquired a considerable quantity of equaliser springs when Railpart sold off surplus stock. These were not exactly the same as the specified springs being a batch made for RES parcels vans and SR EMUs. However they were a heavy duty specification which was near enough for our needs. Thanks to the assistance of Andy Forster, CME at the WSR we acquired eight springs at a price significantly cheaper than making new ones.

This left the problem of the bolster springs. By mixing and matching the pairs of small and large springs we had, it would be possible to achieve the required spring unit rating by adding the third small spring to the middle of the exiting assemblies. As these were going to have to be made, it was possible to choose diameters of spring wire which gave us two different degrees of stiffness which in turn made up the spring units to the total spring rate required. The Tested Spring company in the West Midlands duly made four of each

rate of spring in the exceptional time of two weeks and we had enough springs to do the job.

Use of shims and packers enabled us to achieve the correct ride height for the various components of the bogies, however the coach as whole was still below the target buffer height. It is a well-known problem that support coaches struggle for buffer height due to the heavy weight of tools and supplies carried on board, so it was felt sensible to set the coach up near the maximum buffer height when empty. With the approval of our VAB (Vehicle Acceptance Body), shims were inserted between the bogie pivot castings the bogie side bearers and the underside of the frame (see 3D drawing). The height was increased by 25mm at the luggage end and 20mm at the compartment end. The bogie pivot castings had to be modified to extend the spigot on each casting upwards so that that it remained located in the hole in the pedestal on the frame (see 3D drawing). This feature of the design is to ensure that in event of derailment, the bogies remain in the correct location under the coach.

With all this work done, the coach left Darlington with a buffer height at or just under the 4' 6" maximum above rail level.

## In operation

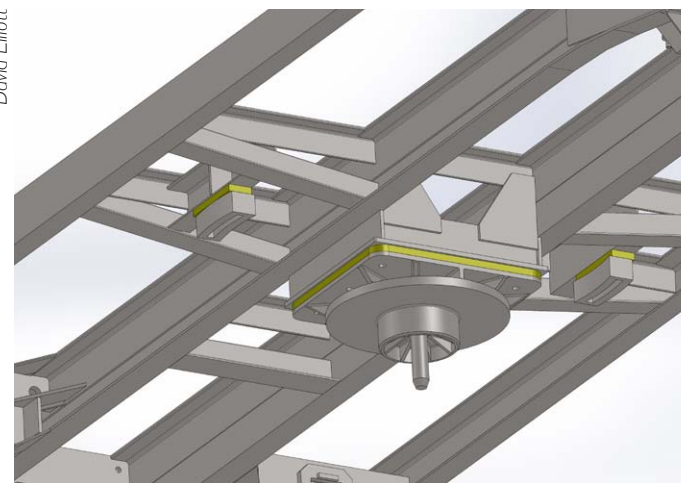
In general the coach is working well. The new systems all work and the availability of mains power at all times is very welcome. The tea boiler and water heaters in the kitchen and toilet are a major step forward.

A couple of problems have been experienced. The first time the locomotive was operated tender first with the front of the loco next to the coach, the smoke alarm system went off and could not be cancelled when the cylinder drain cocks enveloped the coach in steam. A modification is being worked on to reduce the problem and as a palliative, plastic shower caps can be fitted to certain smoke alarms to prevent them reacting to steam when operating tender first.

The other problem relates to power generation. On the return from York to King's Cross on 3rd July the axle driven alternator was not charging the batteries. In addition when the diesel generator was started, it dropped off line each time a significant load was applied such as a water heater. This has since been fixed by Rob Morland by adjusting the minimum voltage below which the Victron invertors disconnect an external supply.

The alternator and its regulator have

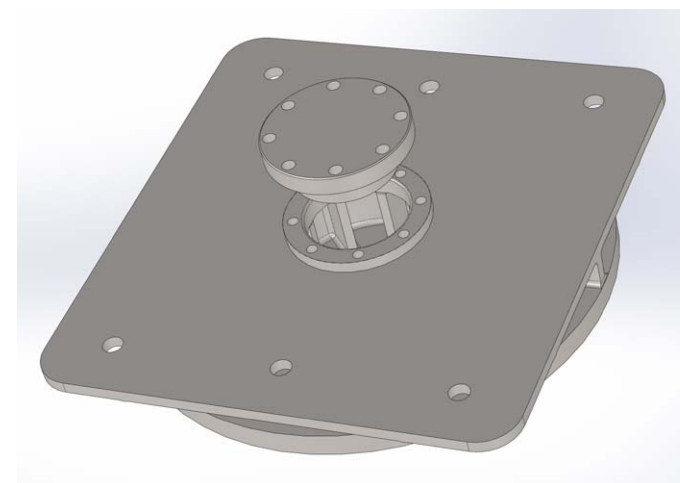
David Elliott



**Above: Frame assembly - bogie pivot and side bearer spacers.**

been checked out but no fault has been found. Thanks to Riviera Trains we now have a copy of the fault finding manual for this equipment and investigations continue. These problems have however

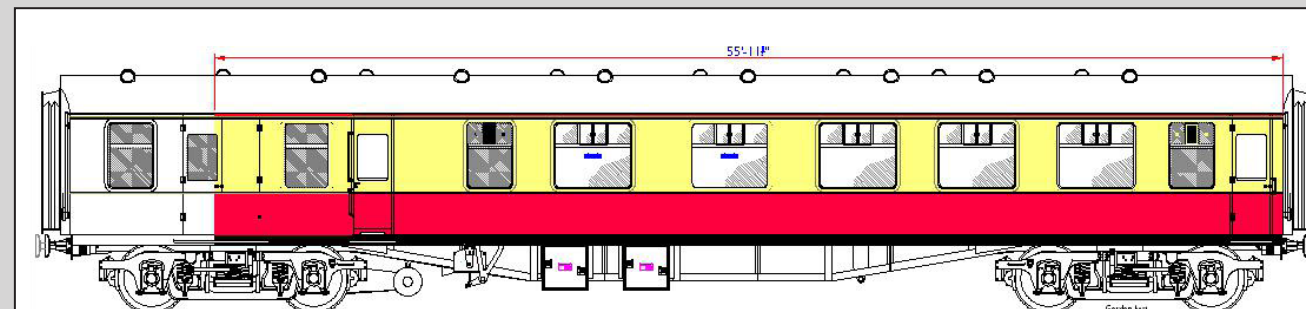
demonstrated the resilience of the system. Provided the 900 amp-hour battery we have fitted is fully charged before a trip, It will support a full 24hr day's operation without further charging.



**Above: Bogie pivot casting and spigot extender assembly.**

Many thanks for the efforts made by our donors, volunteers, contractors and suppliers who have all significantly contributed to the successful completion of 21249. **TCC**

# SUPPORT COACH FUNDRAISING



**Your support for 'Use your loaf' has now reached 55 feet 11 1/2 inches or £67,100. Your help is still urgently needed to help us complete the job.**

**The coach is now complete and fulfilling its purpose as a service vehicle to *Tornado* on the main line. However, we still need to raise the balance to pay for the work involved in restoring and equipping the vehicle.**

- Make a personal subscription to 'Use Your Loaf'
- Introduce Friends & Family to 'Use Your Loaf' and more people hooked on *Tornado*.

**Use Your Loaf:** Following the success of our dedicated donation scheme for the construction of *Tornado*, "an AI for the price of a pint" we decided to raise the bread for the support coach in a different way: 'Use Your Loaf':

- The coach is 63ft 6in in length – 762 inches – or 1524 'slices' at 1/2 inch each.
- Each 'slice' can be sponsored for £50; £100 for a 'doorstep'; £1,000 for 'half a loaf'; and £2,000 for a 'loaf';
- If all are sponsored, it would raise £76,200; if we assume 80% of the donations come with Gift Aid, this rises to over £93,000

And, as with the dedicated donation scheme, our 'Use Your Loaf' initiative comes with benefits for those generous enough to take part:

- A certificate recording the details of the sponsorship and a copy of a drawing of the coach noting which slice(s) have been sponsored
- Name inscribed on the official Role of Honour carried on the coach which will

- detail the slice(s) sponsored
- Entry into draw for main line footplate ride on *Tornado*
- Opportunity to purchase Bachmann model of E21249 (a perfect companion to the models of *Tornado*) with appropriate one of 1524 certificates produced for sponsors. The model costs £30.00 plus £3.00 postage & packing.

As of August 2013 the 'Use Your Loaf' campaign has raised £67,100 which translates to 55 feet 11 1/2 inches of the coach's length, an increase of £1,250 since the last TCC was published, as illustrated on the diagram. Steady progress but we still have a way to go. We look forward to reporting progress in future Trust communications as coloured section grows to the full length of E21249. **TCC**



**Bogie spring identification.**

David Elliott



# ‘BRIDGE TO THE FUTURE’ APPEAL *by Tom Ingall*



Standard 5 No. 73010 crosses the original G.C.R. bridge in 1963.

(c) T G Hepburn – Rail Archive Stephenson

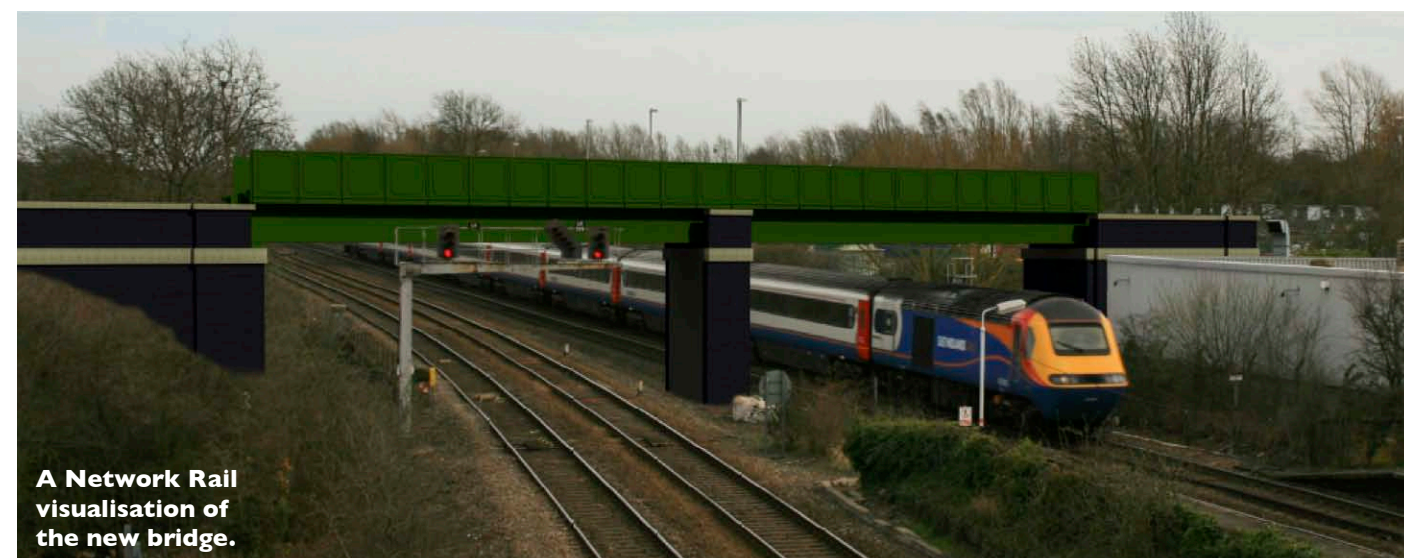
You might be wondering why you’re reading about the Great Central Railway again. It’s not as if you haven’t got your own pride and joy to admire, confidently waving the flag to all corners of the railway network; a demonstration of what can happen when likeminded people get together. Since we at the GCR first encountered the AISLT back in August 2008, we remain full of admiration for what you continue to achieve. Through the work of our machine shops we have

been able to continue to support your endeavours in a small way, and we look forward to a Peppercorn A1 confidently striding along our private main line again. But here comes my real motive in writing this piece.

Wouldn’t it be nice if, when *Tornado* next visited, it had further to run? What if you could come to and from the Great Central anytime via a connection to the national network? Wouldn’t *Tornado* (or a P2) look grand at the head of a packed

charter train, arriving right alongside the National Railway Museum’s latest annexe? If I can beg your indulgence for a few minutes, I’ll outline what we have in mind, and why we’re asking for your help.

Hopefully some of you will already be aware of the purple patch the railway is enjoying. In December, we announced our partnership with the National Railway Museum and Leicester City Council to create the latest NRM outstation at our southern terminus, Leicester North. The



A Network Rail visualisation of the new bridge.

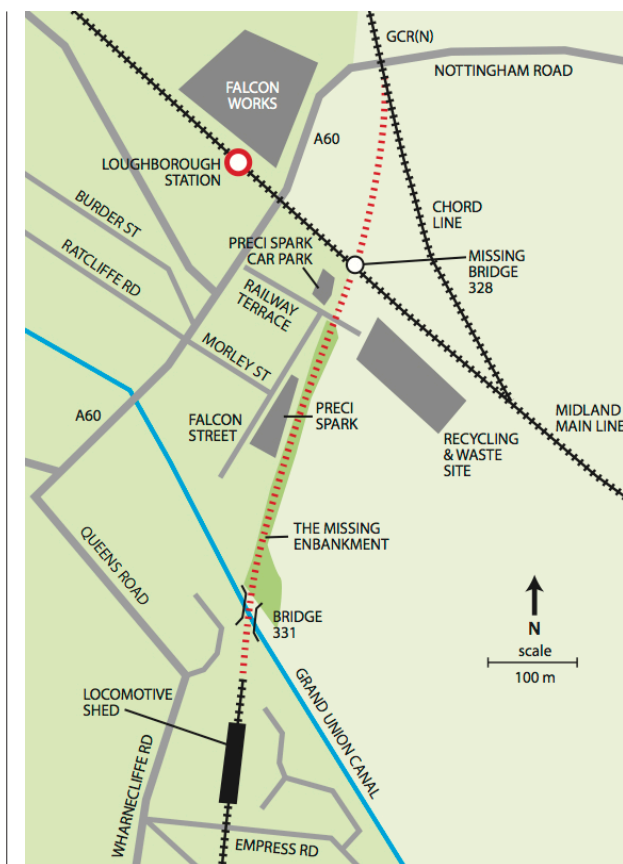
© Network Rail

vision is a quality exhibition space where locomotives and objects are not only displayed but also interpreted in context right the other side of the door. So you might see a pristine freight wagon inside, but then encounter the clanking, grimy reality outside. That announcement was exciting enough. In isolation it’s already a game changer for the GCR. Consultants are at work right now to bring forward a Heritage Lottery bid for submission before the end of the year.

Then, in May, came the big one. The dream we’ve chased down since our preservation adventure began in 1969; reuniting the two sections of the GCR in Leicestershire and Nottinghamshire to create an eighteen mile whole. A deal has been struck with Network Rail (the very best possible people!) to build a bridge over the Midland Main Line. It’s the fundamental obstacle dividing the two railways, but at the same time the key to unlocking the project. For a bargain price of one million pounds, it will be in place by 2015, replacing 500 metres of missing track, getting an eighteen mile railway, and with a connection to the national network. Compelling? You bet.

Of course, if it was just empty track bed we would have done it a long time ago. As pieces of missing formation go, it’s fairly complex. It breaks down into seven elements. Heading north from Loughborough the bridge over the Grand Union Canal is an original GCR structure dating from around 1897. To carry trains again, it requires significant repairs. Once across the canal, a brand new 300 metre embankment has to be constructed. Next we come to the bridge which crosses Railway Terrace, (the road to Loughborough’s refuse depot). This section is pivotal; the height of the bridge above the road is determined by the size of the lorries that need to pass underneath it. Meanwhile the angle it crosses the road at depends, in turn, on how the next section is tackled. That’s where the line runs behind a new factory built since the railway was removed. The old formation is used by the firm as a car park so some negotiations are taking place. The southern abutment of the new bridge will be built at the end of this section, so any outstanding issues will be resolved before Network Rail roll up their sleeves.

Next there is the Midland line itself. The bridge will be in two spans, using decks rescued from the re-modelling of Reading station – that (and the compromise of accepting single track) is what’s made the £1 million price tag possible. At the northern side, another abutment will connect the bridge to the surviving stub of the embankment which



Left: Map showing the position of the bridge relative to the GCR and NR connection.

“Wouldn’t *Tornado* look grand at the head of a packed charter train, arriving right alongside the NRM’s latest annexe?”

leads to the metals of the Great Central Railway Nottingham. In the future it is still the intention to create some sort of interchange station here (another cost saving achieved by single track, is that only one platform will be required) so passengers can walk to the adjacent Loughborough Midland station. Finally there is the road bridge over the A60, just a few yards onto the GCRN section. This is another original GCR structure which requires repairs to see it in good shape for the years ahead.

Before we get ahead of ourselves it’s important to be clear. This will be an incredible start but we’re not in a position to sell you a ticket for the first train along the eighteen mile railway yet. Put the bridge in and we still have the rest to do - the physical work and the fundraising. However, far from being a bridge to nowhere, our ‘Bridge To The Future’ is just that. We’re not going to let it stand there! What is certain though, without the bridge, there will never be a link. Furthermore, if we don’t build it now, when the Midland Line is electrified in a few years, it will be impossibly expensive to contemplate. It is a project whose time has come. We believe momentum towards a ‘golden spike’ will increase once this publicity grabbing element is complete. We’ve already held constructive discussions with other people who’d like to be involved. Furthermore this project is already active. A GCR stakeholder has very generously loaned £100,000 meaning

a design team is at work, right now. We expect a planning application will be made later this year, with shovels going into the ground early in 2015. All being well, the bridge will be in place just twenty four months from now.

It’s not just us who are believers in the cause. Phil Verster, Route Managing Director for Network Rail, says “our electrification teams are already making significant changes to the infrastructure in this area so it’s the ideal opportunity to get the bridge in place, with minimal disruption and cost. Once the full scheme is complete it will bring significant economic benefits to the region as well as reinstating a piece of our railway heritage”. Loughborough’s MP, Nicky Morgan has added her voice to the campaign too, “this is an incredibly exciting project for Loughborough, Leicestershire and beyond and I am delighted to give it my whole-hearted support. I am convinced that reunification will bring big benefits to our local economy and I do hope everyone locally will support this important first step”.

Now we need to raise £1m to put funds where our ambitions are. We have of course contacted over 6000 of our own shareholders and members already and been met with a warm, generous ‘I’ve been waiting for this for years!’ response. Making a donation is always a personal choice, particularly in the face of a harsh economic wind. Here I am, with the temerity to knock on your door and ask



you to give to a project that is not even your 'own'. It's always true that every pound we raise is a pound less we have to chase, and we are deeply grateful. What we need though is strength in numbers. If all of you reading this today gave £150, we'd leap forward by a couple of hundred thousand pounds. We're running this appeal through the David Clarke Railway Trust which is the supporting charity of the GCR. This means we can claim for gift aid on donations – so in the same example above, if everyone who donated was able

to make the gift aid declaration, we'd leap forward by almost three hundred thousand pounds! This is an achievable project. Anything we raise over the initial target will be spent on the other elements. For example, if we raise one and a quarter million, that's the main line bridge and the canal bridge sorted!

You can donate online using a credit / debit card at the GCR website. Head to [www.gcrailway.co.uk/unify](http://www.gcrailway.co.uk/unify) and click on the 'donate' button. Alternatively, if you prefer, on the same page you can

download an appeal form, print it out, fill it in and send a cheque (made payable to the David Clarke Railway Trust) to 'Bridge to the Future' appeal, Lovatt House, 3 Wharnccliffe Road, Loughborough, Leics, LE11 1SL. You can also use the form to set up a standing order, to give a regular small amount which builds up to an incredible contribution. Covenantors to the AI Trust of all people know how effective that is!

So, we're off and running. It's our turn to tick off a railway heritage Mission Impossible project. We'd be delighted

if you'd join us too. If you are still not convinced, can I offer one final thought? What's at stake here is the creation of an eighteen mile independent main line railway, one with a connection to the national rail network; a place with a growing reputation for careful custodianship of all sizes of locomotive, where the engineers have a countrywide reputation for excellence. It's a railway where steam locomotives can look right at home on double track, but perhaps more importantly can undergo shakedown

testing at speeds of sixty miles an hour. It's somewhere that can offer locomotives regular income generating turns to owning groups in-between duties on national excursions. We're located in the heart of the country; so the public can get here easily as can volunteers. At one end it will have an annexe of the NRM, at the other a growing transport heritage centre, and possibly one day a cross platform connection to a major city tram system. For good measure, it now even has a mile long branch line

(but I don't propose sending a 4-6-2 along it!).

Some might dismiss this vision as just 'a bigger train set'. Surely the wise will see it as a national resource, a lynchpin for the main line scene, an excellent family attraction, a world leading piece of railway heritage. Something you'll want to be involved in.

May there be always steam in your cylinders. If you can spare some for ours too, we'd be eternally grateful.

Thank you. **TCC**

## FROM THE ARCHIVES *by Graham Langer*

**Summer 1993** – Bob Meanley joined the engineering team. Bob agreed to oversee the redesigning the boiler of 60163 to an all-welded design with a steel firebox, in order to comply with modern safety and manufacturing standards as well as to reduce cost, weight and maintenance. In other news a packed conference heard about the proposed agreement between the AISLT and Doncaster Council to construct *Tornado* in the town.

**Summer 1998** – *The Pioneer No. 28* carried news of further construction progress with all the components needed to assemble the wheelsets delivered to Ian Riley for machining. The final cannon box patterns had arrived at William Cook's to allow casting to commence. Work on the smokebox door and its furniture continued, much of it executed by Ian Howitt at Crofton. Meanwhile, Fred Dibnah turned up at Darlington Locomotive Works with a film crew to record some footage for

**Right: During 2003 final preparations were made for fitting the cannon boxes to the wheelsets.**

**Below: *Tornado* makes her first moves on 1st August 2008 at Darlington Locomotive Works.**



AISLT



Chris Milner

"Fred Dibnah's Industrial Age" and some invaluable coverage of *Tornado* was gathered.

**Summer 2003** – The bond issue had attracted pledges of over £130,000, sufficient to ensure that bonds were issued. In the works the cylinder steamchest covers had been delivered and were being prepared for machining and work was progressing on the slide bars and cylinder drain cocks. *Top Link No. 7* reported that the AISLT website was attracting over 100 hits a day and that the prospectus was being downloaded at a rate of 200 a month.

**Summer 2008** – The culmination of eighteen year's hard work saw No. 60163 *Tornado* move under its own power for the first time at the beginning of August. Feted by the media and

local dignitaries the locomotive was all over the national press following its debut and the doubters who said it could never be done had to eat their words! With only a few components still to be fitted a move to the GCR was planned. By a strange

*"...eighteen year's hard work saw *Tornado* move under its own power for the first time...."*

coincidence *TCC No. 12* featured an article by Tom Ingall ahead of the annual convention at Loughborough anticipating *Tornado's* visit and extolling the virtues of the GCR!

**Below: Appropriately we are illustrating this page with an image of No. 60165 *Great Central* from the Jim Meads Collection, licensed to the Trust. We have a growing photo archive, many (such as this) have never been published, copies of which can be obtained from the Trust imaging service. **TCC****



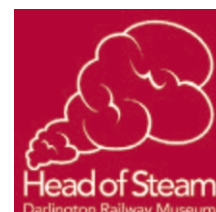
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Designed by Debbie Nolan

\* All information correct at the time of going to press on 5th August 2013. 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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