

# THE COMMUNICATION CORD



The AI Steam Locomotive Trust  
New Steam for the Main Line

No. 15 May 2009

## Tornado: By Royal Appointment



Neil Whitaker



Geoff Griffiths

On Thursday 19th February 2009 *Tornado* was officially named by TRH The Prince of Wales and The Duchess of Cornwall at York station. Their Royal Highnesses arrived on the Royal Train and after being received by York's civic dignitaries were greeted by Mark Allatt and Barry Wilson. As *Tornado* backed down onto the Royal Train they walked down platform 9 and the Trustees presented to the royal couple a representative number of covenantors, volunteers and contractors, all of whom had played their part in bringing *Tornado* to life over the past 19 years. To the sounds of an RAF band TRH chatted to members of the crowd before approaching the podium. Our Trustees presented Dorothy Mather, President of the Trust

and widow of Arthur Peppercorn and Graeme Bunker to Their Royal Highnesses before mounting the podium. After a few words from our Chairman, The Prince of Wales said, "I've nothing but admiration for the team of people who for the past 19 years [pausing, to great amusement, to clear smoke from his microphone] have been doing their utmost to produce this remarkable achievement – a tribute, I think, to all those incredible British engineering skills that made this country so famous. My wife and I would like to declare that this engine is named *Tornado* – and may God bless all those who are lucky enough to 'locomote' behind her." Their Royal Highnesses then removed the banner covering the nameplate and

*Tornado* was officially named. Moments later an RAF flypast of a Tornado F3 and two Hawks thundered across the station. After meeting the crew, The Prince went onto *Tornado's* footplate and The Duchess escorted Dorothy Mather and a number of other guests onto the Royal Train. To the cheers of thousands of well-wishers *Tornado* departed with the Royal Train for Leeds. The Prince joined the train at Church Fenton and the royal couple were presented with a model of *Tornado*. Upon arrival at Leeds the support crew and a number of other Trust supporters were presented to the TRH before they departed for other engagements and *Tornado* returned the Royal Train to York. What a day to remember!



## Editorial By Mark Allatt

When I wrote in TCCI4 about how hectic the previous few months had been I did so in the hope that things would have been a little steadier in 2009. How wrong I was! From our time on exhibition at the National Railway Museum during January, 2009 has been a whirlwind for those involved in putting (and keeping) our locomotive on the main line. - thank you to all our volunteers who are giving huge amounts of their time.

Those of you who were able to join us on the *Peppercorn Pioneer* runs will have witnessed at first hand the spine tingling sight of hundreds of people line side and at stations, waving Union Jacks and applauding as *Tornado* sped past. Then there was *The Talisman* and a reception at King's Cross that had to be seen to be believed. As we pulled into the station all I could see from our locomotive's cab was a sea of cheering faces.



And then there was the naming of *Tornado* by TRH The Prince of Wales and The Duchess of Cornwall on 19th February at York station. This event was several years in the planning and constrained by having to take place on an operational main line station and in this age of high security due to the on-going terrorist threat. Not everything went as smoothly as we hoped on the day because of these limitations but *Tornado* was certainly given a splendid start to her main line career – and I suspect this won't be the last time that Their Royal Highnesses will be paying us a visit!

It is thanks to your continued generosity that we have come this far. However, we still need to raise in excess of £800,000 to service the loans taken out and Bond issue taken up to ensure the locomotive's long term operations. Then there is the matter of at least £50,000 needed to put our own fully equipped and certified support coach behind the locomotive.

We are therefore more keen than

ever to encourage as many supporters as possible to join us by either becoming a Covenantor; making a donation, taking out a dedicated donation to sponsor a part of the locomotive (there are still many components left to support) and/or subscribing to our Bond issue. We have seen a huge growth in numbers of covenantors coming on board in the last few months, no doubt partly due to our locomotive's super-star profile reaching out to new audiences. So, if you know anyone who wants to become part of *Tornado* please encourage them to come on-board. Details on all of these can be found in the 'how you can help' section of [www.a1steam.com](http://www.a1steam.com).

Finally, on page 10/11 you will find *Tornado's* operational schedule. Please put these dates in your diary and help us to fill these trains. We will inform you of details of future events as soon as we can but please keep an eye on our website for the latest information. I look forward to seeing you on-board. **TCC**



Clive Hanley



# THE NORTH YORKSHIRE MOORS RAILWAY WELCOMES TORNADO

By Philip Benham, General Manager

The visit of *Tornado* to the North Yorkshire Moors Railway in May will undoubtedly be the highlight of our season. Over the years our Spring Gala has become a vital part of the NYMR calendar, with many of the Railway's members and other visitors fixing it as a regular date in their diaries.

In 2008 the highlight was the first gathering in over 40 years steam of three A4 Pacific's in steam, when home based 60007 *Sir Nigel Gresley* was joined by classmates *Union of South Africa* and *Bittern*. What could be more fitting, therefore, than to have a visit this year by *Tornado*? The Peppercorn A1s were, of course, the final development of the LNER Pacific design started by Gresley back in Great Northern Railway days, and to have 60163 as the ultimate expression of that progress is a particular honour.

There is another reason, however, why we believe this first visit by the locomotive to a heritage railway gala event is especially apt. For not only do we share a common LNER heritage, but we are

particularly proud of our North Eastern Railway roots. Today's NYMR started life as the horse drawn Whitby and Pickering Railway with George Stephenson as engineer. First opened in 1835, as one of the earliest passenger railways in the country, the Whitby and Pickering became through takeover and amalgamation a founding part of the North Eastern Railway. In later years, of course, the North Eastern established their locomotive works in *Tornado's* hometown of Darlington not so many miles away, over the North York Moors.

We hope *Tornado's* visit will give many of you, our own members and other visitors the chance to see the locomotive in operation "up close". For whilst we cannot compete with the high speed running already seen on the East Coast Main Line, the varied topography and dramatic

scenery of the NYMR route, as it carves its way through the North Yorkshire Moors National Park, will provide plenty of different experiences. The highlight will undoubtedly be the pairing of *Tornado* with

'The highlight will undoubtedly be the pairing of *Tornado* with our teak liveried LNER coaching stock'

our teak liveried LNER coaching stock, to recreate the express train image that would have been seen when *Tornado's* early sisters first emerged in 1948.

Our Spring

Gala takes place over the May Day Bank Holiday weekend from Friday 1st to Monday 4th May and again from Friday 8th to Sunday 10th May. As I write the detailed programme is still being finalised, however, we are hoping that as many covenanters as possible will be able to join the trains reserved for you with *Tornado* and the LNER stock on Saturday 2nd May. 60163 will, of course, be very much the star of the show, but we also hope to have at least ten other locomotives operating over the two weekends. These include from the LNER stable another Darlington product in the form of North Eastern Railway Q6 No. 63395, together with A4 4-6-2 No. 60007 *Sir Nigel Gresley*. For full details, including the many fares options, can be found on our website [www.nymr.co.uk](http://www.nymr.co.uk) or by telephoning NYMR Customer Services (01751 472508).

It is also planned to run three special trains for photographers on Tuesday, Wednesday and Thursday 5th to 8th May with *Tornado* hauling a different set of stock each day, including a freight train. Participants travel on the train to selected locations where photographic run bys take place. These trains will provide access to several photographic locations normally very difficult to reach. The trains will run both early morning and evening each day before and after NYMR's normal timetable. Cost will be £55 to include use of all normal services on the day, and the proceeds will be shared equally be the A1 Trust and NYMR. Numbers are of necessity limited so early booking is recommended. Details and a booking form can be obtained from, NYMR c/o John Hunt, 24 The Orchard, Snainton, Scarborough, North Yorkshire, YO13 9AU (John Hunt - email: [Johnny2cameras@aol.com](mailto:Johnny2cameras@aol.com))

We look forward to welcoming A1 Trust supporters to the NYMR and hope you have a very enjoyable and memorable visit. **TCC**



**Eastern Region superpower at the Barrow Hill Gala, Saturday 4th April 2009. (Left-right) 60007 *Sir Nigel Gresley*; 60532 *Blue Peter*; 60009 *Union of South Africa* and 60163 *Tornado*.**

# Covenantors' Diary By Alexa Stott

If the coverage of our locomotive is anything to go by *Tornado* is winning hearts and minds everywhere she goes.

Thank you to all our Covenantors and their families and friends who supported the Trust on these first trips and the ones that have followed since. *Tornado's* first run on the world-famous Settle Carlisle on 3rd October has already sold out so the Trust has decided to run a second tour the following day – 4th October – another Trust fund raiser that you might like to consider supporting.

A big thank you to our 'trolley dollies' - who I hope will forgive me for that description! They have helped the Trust raise much needed funds with our small range of merchandise on the trains hauled by *Tornado*. There are more trips planned so if you would like to volunteer to help please do contact me at [alexa.stott@alsteam.com](mailto:alexa.stott@alsteam.com)

● As I write this column the LNER II gala at Barrow Hill has just finished. There can't be many of you out there who weren't aware of the line up for this event – *Tornado* and *Blue Peter* (freshly painted in Apple Green), *Sir Nigel Gresley* and *Union of South Africa* were presented in a Top Shed picture that has not been seen for over 40 years. A huge thank you must go to the great team of people who helped at this incredible event.

We are now looking forward to *Tornado's* first visit to the North Yorkshire Moors Railway. You should already have received

details of the Covenantors Spring Day Out on Saturday 2nd May and the first chance to sit in the beautiful LNERCA teak set hauled by *Tornado* on this wonderful railway. Please may I encourage you to ring the NYMR booking office and reserve your seats for this trip as soon as possible as it will be first come, first served. *Tornado* will also haul the Pullman dining train on Friday 1st May and Friday 8th May so if you are planning to spend a few days in North Yorkshire you might like to consider booking a very special dining experience.

We need lots of volunteers for the days that *Tornado* is in operation on the NYMR so if you would like to help please email me at [alexa.stott@alsteam.com](mailto:alexa.stott@alsteam.com)

● Our visit to the West Somerset Railway has now also been confirmed – with *Tornado* in operation from 31st May to 15th June. This is a part of the country where we have very few volunteers so if there are any Covenantors living nearby who would like to give us a hand, please do not be shy! We don't bite and we do have great fun in the pub at the end of each day.

● Finally, don't forget that Darlington Locomotive Works is still open to the public on the second Saturday of every month. Please do continue to visit and support Head of Steam, Darlington Railway Museum and our workshop – it may not have quite the same atmosphere as this time a year ago but who knows when the hammering and drilling may start again... TCC

## ENGINEERING

by David Elliott

It is pleasant change that the engineering section of *The Communication Cord* is no longer the principal evidence of AI Trust activity! However engineering continues. The locomotive (definitely "she" now) has entered traffic on revenue earning trains and has generally performed well with limited faults developing. In the mean time further completion and modification work has been undertaken.

Peter Neesam has settled into the "keeper" job attending to the day to day preparation and maintenance activity, assisted from time to time by volunteers and by David Wright (formerly of the NRM and more recently with the Great Central Railway). In particular David brings experience of main line running and the Fitness To Run (FTR) examinations that are required each time we venture onto the main line. David is an approved FTR examiner with West Coast Railways and helps us to ensure that the engine is in a fit state to be examined by the DB Schenker (formerly EWS) FTR examiner. In the mean time other members of the engineering team (including me) are learning about the FTR examination process.

Back onto the hardware, a second pair of water fillers has been fitted to the tender enabling two hoses to be connected on each side, which with the attendance of the redoubtable 'Bells and Two Tones' organisation has resulted in some spectacularly quick watering operations

The lipless chimney has been fitted, and is possibly providing a new answer as to why they were changed on the original locomotives. The popular story is that it was changed to the lipped chimney on aesthetic grounds; however as photographic evidence clearly shows, when running under light steam, instead of a cloud forming in front of the chimney, we

## IN THE MEDIA, by Mark Allatt

If anyone has summarised the new phenomena that is *Tornado* it is Michael Binyon. On Saturday 4th April he wrote an article in *The Times*, "All aboard for the new age of steam: *Tornado*, the engine that has brought back the romance of rail travel, is a hit across the length and breadth of Britain." He continued, "in its six short months of life, *Tornado*, the first mainline steam engine built in Britain for almost 50 years, has been a film star, splashed across newspaper pages and filmed in action by the thousands who

contributed to its £3 million cost and waited 18 years to see an A1 Pacific locomotive running on Britain's main lines again."

This article was the culmination of a remarkable four months for *Tornado* in the world's press. Each appearance has resulted in many column inches of coverage in national (including the naming ceremony appearing on the front page of *The Daily Telegraph*) and many regional newspapers (the *Northern Echo* even produced a supplement for the naming

and literally dozens of pages in the railway press. National and regional TV and radio also followed our progress, with the highlight of *The Talisman* being Rob Morland's appearance on *BBC Breakfast News*. I continue to be amazed by the interest in *Tornado* being shown overseas, with Canada now added to the list of newspaper coverage and, remarkably, our appearance two weeks running on Russia's national news programme. Many links to this coverage can be found on [www.alsteam.com](http://www.alsteam.com) TCC



now have a small cloud hovering each side of the chimney below the top. It has also been noted that with strong cross winds the exhaust is not always being lifted effectively.

The temporary lash up of the chime whistle fitted during the trials at Darlington failed with one of the iron pipe fittings leaking with the steam threatening to burn the paint off the smoke deflector. A temporary repair has been made. In the mean time a new more robust permanent design has been prepared and a larger whistle valve ordered. The whistle pad will be moved downwards and rearwards to be over the top of the turbo-generator and it will hopefully be commissioned during our stay at Barrow Hill.

The modification to the tender alternator control circuit has resulted in it functioning properly.

Unipart Rail has kindly donated a set of NRN radio equipment. The aerial, power supply and other details have been supplied by Arrowvale, and I have designed a radio cubicle/safety equipment/sandwiches cabinet to fit on the front of the tender opposite the brake cubicle. Paul Depledge has already installed conduit and cable work for the power supply and aerial wiring, and details for mounting the aerial on the top of the tender tank immediately behind the coal space have been procured. Peter Neesam has finished assembly of a "flat pack" laser profiled kit for the cabinet and it has since been fitted to the tender. The radio worked first time and was commissioned over the recent Easter weekend.

After the modifications to the gravity lubrication system, it appears to have settled down reasonably well. Oil consumption of the rod bushes (particularly the middle big end) appears to be satisfactory. Peter Neesam has reduced the mechanical feeds to the cylinders to a more reasonable level now the engine is run in, however the lubricator with its smaller capacity than the original design will need watching to ensure that it does not run dry on long runs. We still have the option of making a second dummy lubricator box to act as an additional reservoir.

Prior to starting main line operation at the end of January the first "B" exam was undertaken and completed, the brake test had to be carried out against the locomotive's own pressure gauges – I am researching the acquisition of a Druck electronic pressure gauge for brake tests and checking the calibration of the various air gauges.

The period prior to the Royal Train was very busy with the engine running the two Valentine trains followed by a light engine

## AWARDS

On Friday 13th February Duncan & Jean Ross and Gordon & Joyce Best collected an award for 'Putting Darlington on the Map', with a cheque for £100, at a ceremony hosted by Darlington Borough Council.

On Tuesday 10th March Mark Allatt and David Elliott represented the Trust at yet another remarkable event in the life of *Tornado*. At a white tie dinner at the Mansion House in the City of London, Mark and David collected the prestigious The Sir Henry Royce Foundation Memorial Award, which honours achievement

and excellence, from The Worshipful Company of Carmen. The award, in the shape of a Spirit of Ecstasy, whose previous winners include The Ford Motor Company (for the design and development of the Ford/PSA V6 2.7 litre diesel engine), London & Continental Railways Ltd and Link Engineering (for Phase 1 Channel Tunnel Link) and Rolls-Royce plc (for the Trent Engine), was presented to Mark and David by The Lord Mayor of the City of London, Alderman Mr Ian Luder. The award is on exhibition at Head of Steam, Darlington Railway Museum.



run back to York on the Monday. Before the team had had a chance to examine the engine, the DBS FTR team (three people this time) turned up and started a two day FTR process which in addition to full brake tests involved removing and refitting several components. The main problem was the discovery of a blow from the steam cylinder on the front air pump. Tests indicated that it would still create air but was producing clouds of steam whilst pumping. With only two days to prepare the engine it was decided to run with the pump as it was. Uwe Leifheit, the Damflokwerk Meiningen Sales and Marketing Manager (who was over for the naming ceremony) arranged for Meiningen Works to send a set of gaskets. After the Royal Train, the pump was removed and a blown bottom cylinder cover gasket was confirmed. Unfortunately the gaskets arrived too late to strip and reassemble the pump before lighting up for the 28th February trip to Edinburgh, so the pump was refitted for the Scottish runs, these being operated in the rear pump with the front pump only for use in emergency. When the new gaskets arrived, the chance was taken to produce a CAD drawing of the cylinder cover gaskets and have specimens made from the superior Novafit SSTC graphite material with stainless steel mesh reinforcement.

After the return from Scotland, the pump was removed, dismantled and new gaskets fitted. The general condition of the pump is very good with no signs of wear on the moving parts confirming that the Meiningen overhaul was to a good standard and that the lubrication is working properly.

A new fire arch was fitted after the Royal Train following concerns from the DBS FTR team, however, given the struggle Peter had in removing the old one, there was little risk of it falling in prematurely! **TCC**

## TORNADO TESTING & CERTIFICATION

By Graham Nicholas

Well, what a delight to have been on some of *Tornado's* first mainline runs, to see so many excited faces, both on the trains and waving from the lineside. None of this would have been possible without the required certification to support these runs. To summarise on the work achieved, we pick up the story with the arrival of the locomotive at York NRM, fresh from two months of testing at the Great Central Railway...

On arrival at York in mid-October, with 1267 miles already 'on the clock', a first round of mainline certification paperwork was required prior to the

mainline test runs planned for November. The results from the GCR testing were a vital consideration in this regard; at the same time, engineers from Delta Rail VAB visited the loco at the NRM for a further inspection at this critical stage.

Fortunately, everything turned out to be either 'in order' or sufficiently advanced as could be covered by temporary certification to support testing and on Friday 31st October came the news we'd all been waiting for – *Tornado's* first Engineering Acceptance certificate had been signed and the requisite Network Rail Route Acceptance certificate came through on the following Monday. The planned test runs could take place!

This was the 'big one'  
– York-Newcastle  
and return, a repeat  
of 60145 *Saint  
Mungo's* infamous last  
ever run and a handy  
rehearsal for the  
*Peppercorn Pioneer*.'

Losing no time, the first run, light engine to Scarborough and back, occurred just a day later on the evening of 4th November. The locomotive made it comfortably to Scarborough and back with only a few minor niggles occurring.

Two days later, the loco roared away from York into the night on an altogether more formidable assignment: in excess of 500tons trailing behind on its first loaded trial run, to Barrow Hill, via Sheffield. In a memorable evening's running, she reached Sheffield without incident, successfully hauled its sizeable train tender-first up the tight, right-hander grade beyond Nunnery Lane junction without assistance, briefly posed with its A2 cousin in the roundhouse and had a first taste of high speed ECML running on the return via Doncaster.

However, a careful inspection at York the following morning revealed that the inside crosshead whitmetal had run and our loco had its first serious defect of note. As is now well-known, the industry responded magnificently in assisting getting this repair turned round in the following seven days; at the same time the 'root cause' was traced and modifications made to the lubrication system in this area.

Thanks to the above collective efforts, the loco was ready for her third and final test run, scheduled for Tuesday 18th November. This was the 'big one' – York-

Newcastle and return, a repeat of 60145 *Saint Mungo's* infamous last ever run and a handy rehearsal for the *Peppercorn Pioneer*. For this run, the vehicle dynamics engineers from Delta Rail returned for an extension of the track force testing that had been undertaken at the Great Central Railway.

Normally, such test runs take place without hardly a comment, but on this occasion it was publicised widely in conjunction with last minute arranged sponsorship from National Express so there were plenty of observers at stations along the route and a detailed log of the run appeared in *Steam Railway* magazine.

Of rather more importance to the certification process was 'how did she do'? Thanks to the presence of Delta Rail, we were able to say with a high degree of technical certainty. Here is the summary from the test report:

"There is nothing in the [report] findings that should prevent no. 60163 from continuing with high speed running on the main line. She has met (and actually exceeded) the requirements for the acceptance of new rail vehicles with no allowance being made for the fact that she is a steam locomotive." Very satisfying indeed.

With all test running thus completed, there remained one final push to get that vital mainline ticket in time for the *Peppercorn Pioneer* on 31st January 2009. Following over a year of painstaking effort by Joe Brown, the all-important maintenance plans, required to support ongoing mainline running, were completed and authorised at this time, as the final completion items from the inevitable snag list were being worked on at York. All the submitted paperwork and test results from over the previous 12 months were compiled into the NoBo Technical File, now required for approval under the Interoperability Regulations. Delta Rail's final sign off inspection of the locomotive was conducted at York on Thursday 22nd January 2009 and there then followed a final flurry of certification paperwork:

- Delta Rail full Engineering Acceptance certification issued on 23rd January;
- Network Rail Route Acceptance certification on 26th January;
- The Trust's own Declaration of Verification (required under the Regulations) on 26th January;
- Following that came the final seal of approval: the ORR Authorisation letter on 27th January stating that *Tornado* could legally be placed into service on the UK mainline network. And the rest, as they say, is already fast becoming history. **TCC**



## WHERE'S THE MONEY? By Barry Wilson

I'm delighted to report that our number of Covenantors continues to rise with over 250 new people coming on-board since the first moves last year. This is the very foundation of our financial success and it is even more essential that we continue to recruit new people now that our locomotive is finished and in service.

The level of donations over the last five months has fallen short of the corresponding period last year. It is unfortunate that the promising start to the year has not been maintained but we are receiving money from people through other means, such as covenants and merchandise sales. Given the current level of interest rates being received from banks the 4% interest which can be claimed on our bonds has become much more attractive and only £56,000 of the bond remains unissued.

As I stated in my last column, the funding gap to complete the locomotive

was filled by assistance in the form of loans from covenantors and the Charities Aid Foundation, to whom we are very grateful, over and above our regular covenanted income and donations. As to repayment, the bonds, presently totalling some £444,000 are due for repayment between 2012 and 2016 at the Trustees discretion, so are not of immediate concern; bond holders continue to donate their holding back to the Trust and thus the figure which will ultimately require repayment is uncertain.

However, the other loans fall due up to the end of 2010 and our current total level of debt will fall from £832,000 to £705,000 when the first tranche of repayments due to the Charities Aid Foundation are paid at the end of June. I am pleased to say that the bulk of the funds to make this repayment are in hand and barring, presently unforeseen, major demands, from elsewhere the

repayment will be made on time and in full.

With the continued support of our covenantors and donors and the earnings from operations of *Tornado* we are confident we can meet these liabilities if we all continue to work as hard as we have since we started operations in January.

Obviously it is still early days in *Tornado's* operational career and it is thus too early to be certain as to the maintenance costs of the locomotive going forward; thus far she has been very economical but a proper assessment cannot be made until an extended period of operations has been completed. The Trust has also to take a view on the best modus operandi for the future – do we promote our own tours or do we hire *Tornado* to other operators? We should have a much better understanding of these options at the end of the current financial year. **TCC**

## THE PEPPERCORN PIONEER - RETURN TO NEWCASTLE By Phil Champion

Lots of people were outside the NRM mid-morning 31st January to see and photograph 60163 in steam as the sun glistened off its boiler. Soon York station platform ends were filling up. After a Class 67 brought our train in *Tornado* with support coach backed down and coupled up. This was it! We boarded, the whistle sounded and the long-awaited trip began. History was being made. In one Second Class coach applause broke out. Curving left we could see the A1 picking up speed. We were watched by crowds on platforms, the bridge over Leeman Road and the jam-packed NRM viewing gallery. I had to see how the engine was doing so I lowered the end droplight a few inches and peered round cautiously. The apple green machine was steaming well and looked just great.

Back in the coach we settled to the journey with clouds of steam passing the windows. With my brother David (a past Chairman of the Trust) and his wife Lillian we had decided to go First Class to mark this memorable occasion. Very nice it was too with curtains, tablecloth, tea/coffee, champagne with Danish pastries, shortbread and on the way back cream scones served efficiently by the white-jacketed staff. David remarked that it was his late first wife Gill who thought up the 'Peppercorn Pioneers' term we used for supporters back in the very early days. David kept remarking on the crowds;

every overbridge had a line of cars nearby with men, women and children on the bridge, in fields or on paths. This wasn't just railway enthusiasts; this was the general public and family watching *Tornado*. Later I joined David to walk through several coaches and talk to people who have supported the A1 project for many years. David Elliott walked through the other way. When I said he must be proud he replied that he was rather nervous. Understandable with such a high profile for an inaugural train.

Nearing my home of Durham I was back at the droplight. Having seen 60163 race through on its test run I had to see it from the train. What a fine sight as we curved over the viaduct and sped through the station. Talk about feeling privileged! A quick look at the crowds and we were leaving the station. North of Newton Hall we started to slow down. Realisation that the journey was nearing the end was a let down; we could have happily gone on for another hour or two. Over King Edward Bridge and *Tornado* curved right as it entered Newcastle Central. To me this was an A1 coming home; this was where David and I had seen A1s and other steam classes from 1961-65. David said this was the image- an A1 in Platform 8 (as it used to be)- that he had wanted to recreate back in 1990 when the project started.

Such were the crowds of spectators plus passengers that it was hard to get close to

the locomotive. Like others I went round to the car park. It was amazing to believe we had an A1 back in Newcastle after over 43 years. I almost had to pinch myself to see if it was real. After the coaches were taken out 60163 reversed with its support coach for Tyne Yard. Left behind was Mark Allatt who was so busy with interviews. As part of the extensive media coverage he said that the A1 had been built almost entirely without public funds and was rejected three times by the Lottery as "not unique enough." (!!!) Mark was later seen talking to contented passengers as he got a coffee in the station.

Half an hour before departure the sight of steam across the bridge had passengers and spectators out in force. Though it was a while before the train came in we all put up with the bitterly cold gusts coming across the river. Then stood *Tornado* just as I remember 60127 *Wilson Worsdell* one day there over 40 years back. Just after we started 60163's wheels slipped -like the old days! The return to York was as memorable as the outward run. Lots of us swarmed to the front to see the star of the day. Uncoupling done, *Tornado* steamed off into the night.

David Elliott could breathe a sigh of relief that all went well. He must have felt proud of his work. In fact, I'm sure we all feel proud of *Tornado*. January 31st 2009 - what a perfect day. **TCC**





Photographed from the tower of Durham Cathedral, 60163 *Tornado* is captured high above the





Steve Taylor

city steaming northwards to Newcastle with the *Peppercorn Pioneer*, 31st January 2009.



## PIPING IN STEAM

By Chris Calver

In 2008, Nick Leeming telephoned me with an idea...wouldn't it be wonderful if Robson's Choice could pipe in the new A1 *Tornado*, which was now about to be tested on the main line. The publicity would be excellent for The A1 Steam Locomotive Trust, Northumbrian Pipes and Robson's Choice too... so we contacted the trust and the answer was a very welcoming yes.

Robson's Choice is a unique group of musicians featuring the Northumbrian Smallpipes, a small, bellows-blown sweet sounding bagpipe dating from the 18th century. The band specialises in playing traditional music in harmony, performing everything from lyrical slow airs to foot-tapping jigs and hornpipes. We play for the benefit of St Oswald's Hospice by playing traditional music at many events, such as weddings, agricultural fairs and corporate functions, not charging a fee, but requesting a donation to St Oswald's Hospice.

The hospice is situated in the north of Newcastle has cared for more than 10,000 North East adults with life threatening illnesses, and their families, in the last 20 years. It now also cares for children in a purpose built unit dating from 2003 and each year the hospice must raise over £5m to carry out its work. Both the St Oswald's Hospice and Robson's Choice can be contacted by telephoning 0191 2850063.



Graham Nicholas

In 1966 Jack Armstrong and Patricia Jennings piped out *The Wansbeck Piper* in October 1966 (just after the last A1 was scrapped) when the Wansbeck Valley line from Morpeth to Woodburn closed, a musical farewell. Piping in *Tornado* would be the welcoming of a new era of main line steam to Newcastle: the engine would be brand new, on her first official trip with fare paying passengers, and in beautiful apple green livery.

However, you can't just go onto a station platform and play, especially when 2000

people are expected to turn out, so the A1 trust smoothed the way for a meeting between myself, Louise Woodman and the duty station manager: he was most helpful and encouraging, an area would be barriered-off, a parking bay would be available, and we could collect money for St Oswald's Hospice too.

What would be played? There are many tunes with appropriate names such as *The Locomotive*, *The Tornado Two Step*, or *Welcome to the Town Again*. Oh but in addition to any chosen, she must have a new tune! Here Catherine Robson turned on her magical composition skills and *Tornado's Arrival* was written.. in 6/8 of course.. as *Tornado* has three cylinders: just to ice the cake the whistle is a three tone E-minor chord and Catherine incorporated this too!

On Saturday 31st January 2009, a semi bright but cold day, *Tornado's* arrival was greeted by seven pipers from Robson's Choice as she entered Newcastle at 13:21hrs to huge applause. Better was to follow, Alexa came from the front carriage and beckoned the pipers forward, Northumbrian Pipes played by Robson's Choice was on the, ITV, and local BBC with local press coverage too with *Tornado*. *Tornado's Arrival* was played and recorded next to *Tornado* as she stood resting at Platform 2. A fabulous occasion indeed, and a momentous day for everyone. **TCC**

## Tornado's Tours

At the time of going to press, below are *Tornado's* confirmed operations for the remainder of 2009. Please do travel behind her when you can. And if you can't travel, do come and wave but please help us to keep people the right side of the line. 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.

- **Friday 1st – Sunday 10th May** – *Tornado* at the North York Moors Spring Gala [www.nymr.co.uk](http://www.nymr.co.uk)
- **Monday 18th May** – The Coronation arranged by Steam Dreams, with the York to Kings Cross leg hauled by *Tornado* [www.steamdreams.com](http://www.steamdreams.com) Tel: 01483 209888
- **Saturday 23rd May** – Steam Dreams trip Kings

- Cross to York with *Tornado* and return with Sir Nigel Gresley (see contact details above)
- **Saturday 30th May** – *The Severn Coast Expresses* – Trip 1 diesel hauled from Bristol to Gloucester. Then *Tornado* to Cardiff and return to Bristol Temple Meads and diesel hauled back to Gloucester. Trip 2 diesel hauled from Gloucester to Bristol Temple Meads, with *Tornado* to Taunton and then along the West Somerset Railway to Minehead – arranged by Pathfinder Tours. Tel: 01453 835414, [www.pathfindertours.co.uk](http://www.pathfindertours.co.uk) or email: [office@pathfinder.co.uk](mailto:office@pathfinder.co.uk)
- **Saturday 25th July** – *The Towy Tornado* - diesel hauled from Eastleigh and pick up stations to Bristol Temple Meads. Then *Tornado* will then head into South Wales, travelling through the

- Severn Tunnel onto Newport, Cardiff, Bridgend, Port Talbot, and along the Towy Estuary to Camarthen and return – arranged by Pathfinder Tours (see contact details above)
- **Sunday 31st May – Sunday 14th June** – *Tornado* at the West Somerset Railway – [www.west-somerset-railway.co.uk](http://www.west-somerset-railway.co.uk)
- **Thursday 18th June** – Steam Dreams trip from London to Wells and Minehead and return with *Tornado* hauling the return leg (see contact details above)
- **Sunday 21st June** – Steam Dreams Fathers Day Hampshire and Kent Circulars hauled by *Tornado* (see contact details above).
- **Sunday 5th July** – *Tornado* hauls the Torbay Express from Bristol to Paignton and Kingswear (Paignton & Dartmouth Steam

- Railway) and return – Past-Time Rail Limited. Tel: 01543 411971, [www.past-timerail.co.uk](http://www.past-timerail.co.uk) or email: [contact@past-timerail.co.uk](mailto:contact@past-timerail.co.uk)
- **Saturday 11th July** – *Tornado* hauls the *The Golden Hind* from Bristol to Plymouth and return – the South Devon Banks - Past-Time Rail Limited (see contact details above)
- **Sunday 12th July** – *Tornado* hauls the *Torbay Express* from Bristol to Paignton and Kingswear (Paignton & Dartmouth Steam Railway) and return (see contact details above)
- **Sunday 19th July** – *Tornado* hauls the *Torbay Express* from Bristol to Paignton and Kingswear (Paignton & Dartmouth Steam Railway) and return (see contact details above)
- **Sunday 26th July** – *Tornado* hauls the *Torbay*





Chris Colver

Express from Bristol to Paignton and Kingswear (Paignton & Dartmouth Steam Railway) and return (see contact details above)

● **Sunday 2nd August** – *Tornado* hauls the *Torbay Express* from Bristol to Paignton and Kingswear (Paignton & Dartmouth Steam Railway) and return (see contact details above)

● **Sunday 9th August** – *Tornado* hauls the *Torbay Express* from Bristol to Paignton and Kingswear (Paignton & Dartmouth Steam Railway) and return (see contact details above)

● **Saturday 15th August** – *Tornado* on Hants/Sussex Circulars and return – Steam Dreams (see contact details above).

● **Saturday 19th September** – Kings Cross to York and return - Steam

Dreams (see contact details above)

● **Saturday 3rd and Sunday 4th October** – *The Waverley*, *Tornado's* first tour over the legendary Settle and Carlisle line will now, due to popular demand, run the Sunday as well. This Trust promoted tour will start from Doncaster around 08:15hrs the train travels to York via the East Coast Main Line where *Tornado* will be waiting to take the train forward. We depart York around 09:00hrs heading for Leeds where we pick up further passengers at approximately 09:30. We call at Skipton around 10:15hrs then our final pick up is at Hellifield around 10:45hrs. Shortly after departing Hellifield we join the famous Settle and Carlisle line, one of the greatest railway journeys in the world, with its magnificent scenery and

outstanding engineering. We will pause to water *Tornado* at Appleby (12:00hrs) where passengers may alight, before we continue on through the Eden Valley to arrive in Carlisle at approximately 13:15hrs. The return journey will follow the route as described above departing Carlisle around 16:40hrs and Appleby at approximately 17:50hrs. We set down at Hellifield around 19:30hrs, Skipton 20:10hrs, Leeds 21:00hrs and York 21:30hrs. Our train will then return diesel hauled to Doncaster arriving at approximately 22:15hrs.

Prices for the trip are Standard; £75.00, First Class; £115, and First Class Dining; £175.00. Booking agent for both of the above is Steam Dreams - [www.steamdreams.com](http://www.steamdreams.com) Tel: 01483 209888.

● **Saturday 10th October**

– Hellifield to Carlisle and return – arranged by Pathfinder Tours (see contact details above)

● **Saturday 14th November** – Worcester to London – Past-Time Rail Limited (see contact details above)

● **Thursday 26th November** – Kings Cross to York and return – arranged by Steam Dreams (see contact details above)

● **Monday 21st December** – Kent Circular – arranged by Steam Dreams (see contact details above)

Due to the fluid nature of our operations it is not possible to notify Covenantors of every change to this schedule. Please refer to our website – [www.a1steam.com](http://www.a1steam.com) – for further information and updates on trips as they are confirmed.



# TORNADO ON TOUR *By Graham Nicholas*

## 1st February – *Peppercorn Pioneer II* ▶▶▶

Particularly pleasing on the Sunday run to Durham was the welcome the Trust was able to give to the William Cook employees and their families who joined us for the trip – as many of you know William Cook Cast Products is principal sponsor of our project. Our thanks go to Andrew Cook, Chairman of William Cook Cast Projects, for his long-standing and continued support for *Tornado*. For some, this was the first time they had seen the parts they had made since they were dispatched from the factories in Burton-on-Trent, Sheffield and Leeds.



Ken Woods



Graham Nicholas

## 7th February – *The Talisman*

This was always going to be a momentous day. *Tornado's* first public main line train, her first foray over the ECML south of Doncaster and of course the first arrival in London King's Cross, the station once graced by so many of her sister locos. What we hadn't reckoned with was the fabulous sun 'n snow photographic conditions and the amazing turn out of enthusiasts and general public alike, each station on the final run-in to the capital seeming more and more crowded, reaching a crescendo at the terminus with literally thousands straining to get a view. We had truly arrived in the general public conscience.



## 14th February – Valentine's day ►►► Steam Dreams

Another 'first' with these trains: the first time that our loco was hired out to another tour promoter (Steam Dreams). Also a first time 'south of the river' in unfamiliar 3rd rail territory. The loco coped admirably with its sizeable load (13 coaches plus CI.67 attached at the rear for operational purposes). The fabulous weather continued, allowing many more to get their first sighting of our loco in glorious conditions.



Ian McDonald

## 28th February – The Auld Reekie

Now proudly sporting her new nameplates, *Tornado* completed her coverage of the ECML, heading north from Newcastle, over the border bridge at Berwick and on into Edinburgh, stirring more memories of the days when one of the famous Haymarket A1 quintet could invariably be seen around Waverley station. The day was graced with yet more lovely sunshine and some superb running north of Newcastle, breasting the summit at Granthouses at an impressive 66mph. Later, seen by relatively few, the loco headed north (light engine) 'over the Forth', striding across the UK's most famous bridge on the way to spend the week at Thornton Junction – now home to former 64B resident: 60009 *Union of South Africa*.



Geoff Griffiths

## 7th March – The North Briton ►►►

Prior to this run *Tornado* posed with the family of our late trustee Wreford Voge. 60163 *Tornado* storms towards Prestonpas with the North Briton. Edinburgh Waverley-York, 7th March 2009.



Rob Morland



Jack Pentrice



## 12th March – The Tyne Tornado ▶▶▶

A more straightforward assignment, the A1 nevertheless put in a model performance, recording a right time arrival at Newcastle on the way out and one minute early back at York. The loco will continue to win many friends putting in performances like that – but they don't just happen! So perhaps a timely word for all those who have already put in their own time as volunteers in the often less than glamorous role that is a support crew member. Thanks – you've got the loco off to the best possible start in its mainline career.



Ken Richardson



## 24th March – EMT Meridian naming at Sheffield station

(L-R) Tim Shoveller, Managing Director of East Midlands Trains, and Andrew Cook, Chairman of William Cook Cast Products, name Meridian vehicle No. 60163 Tornado in honour of our locomotive at Sheffield station.

## 18th April – Yorkshire Pullman

60163 Tornado drifts through Doncaster at the head of the prestigious Yorkshire Pullman on 18th April 2009. This historic occasion saw Tornado become the first A1 to depart London's Kings Cross station for over 40 years.



David Cooper



## LIGHTING THE WAY

By Rob Morland

With the successful completion of the A1's first series of commercial main line tours, it is time to say some more about the A1 lighting system, which we are pleased to report is meeting all our expectations as a system fit for intensive use on the national rail network.

The system has been designed, built and installed by the A1 electrical team of Rob Morland, Alan Green, John Beesley and Paul Depledge. It is one part of the new A1 that is very different from the original Peppercorn design.

*Tornado* is the first UK steam locomotive to feature headlamps which comply with the luminous intensity requirements of the latest Railway Group Standard for visibility of trains (GM/RT 2483), applying to trains travelling in excess of 60mph.

Steam locomotives currently have a derogation to use a portable headlamp up to 75mph, but as we were able to start from scratch on our design, we decided to go for the full standard, which requires a much brighter light than can be practically supplied from a portable battery-powered lamp. This might sound like a simple change, but it has significant implications for the system design. Firstly, the head and tail lamps are Essential Systems, linked to the safety of the railway. We therefore needed to satisfy our Vehicle Acceptance Body (VAB) that they meet the specifications laid down and are as reliable as reasonably practical. So, we needed duplicated power supplies, two battery systems, two means of generating power whilst on the move and sufficient battery storage to complete a duty even in the unlikely event of both generators failing. We also need sensors for each lamp wired to indicators in the cab so the crew can confirm that all the lamps selected are working. We decided to go for a "belt and braces" design that provides all this, and more.

The A1's head, tail and marker lamps have been designed from scratch using high power LEDs. These give a high light output and are very efficient in their use of power. Our LED headlamp consumes less than 25 watts. A conventional lamp with the same output would consume around 150 watts. They also have a very long operating lifetime – typically in excess of 40,000 hours (compared to around 1,000 hours for a conventional bulb). Alan Green, an experienced optical physicist at Sagentia in Cambridge, has designed and built the LED assemblies for all the A1's lamps in his spare time.



Neil Whitaker

*'A lighting system fit for the 21st century, but built in sympathy with the original A1 design.'*

The marker and tail lamps use the original Stones marker lamp housings and lenses donated by Covenantors, but feature a new optical system with electrical switching between white and red LEDs for head and tail displays. Interestingly, the new Group Standard specifies the use of three out of the four standard steam marker lamps, placed in the same positions on the front of the loco and the rear of the tender as they were on the original A1s. The lower centre marker is not specified in the standard, but we have provided it anyway for full authenticity. On the main line the engine may run with these three marker lamps in addition to one of the two headlamps lit. Due to the brightness of the Group Standard headlamps, it is usual to turn off the headlamp and just use the marker lamps when in yards, in order to avoid dazzling staff who may be on duty around the yard.

The headlamp is a rather different design. It consists of a cluster of seven high-power LEDs built into a new assembly and enclosed in a lamp housing designed and built specially for us under a generous sponsorship by John Beesley.

To meet the Group Standard, the A1 actually needs two different headlamps. On the fireman's side is the day time headlamp. This has full brightness for daytime running and is designed to be visible to staff and other trains at the maximum possible distance. The lamp

on the driver's side is the night time headlamp. This has a reduced brightness and a different shape of beam for running at night. It is designed to avoid disturbing the night vision of oncoming drivers or those working on stations and on the track. We also have a 'hazard warning' mode, where the driver can switch both headlamps to flash as a warning to other trains in case of emergency.

As we have rather more lights than is usual on a steam locomotive, we have thought carefully about the arrangement of switches to make the system easy for crews to use. The marker and headlamp switches are arranged on the Essential Services Control Panel above the driver's seat as they appear on the front of the locomotive or rear of the tender. The driver can select the lamps he wishes to illuminate and an LED indicator on the panel confirms that the lamp is working. A single switch changes the lower left and right marker lamps from white to red tail lamps. If the engine needs to reverse, for example when running round its train, the driver simply flicks one switch and the headcode he selected is swapped to the tender end and tail lamps are displayed on the front of the locomotive. The switching is designed to prevent both red and white lamps being displayed at the same end at the same time.

Together, these systems provide the lighting needed for the safe operation of the A1 during the day and at night. We've built in lots of flexibility for the future and you can expect to see further additions and enhancements to the system as we gain operating experience and gather feedback from everyone who works with the engine. We have already had approaches from other steam locomotive owning groups enquiring about possible use of lights to our design, which we will be considering following a review to be carried out after the first 12 months of operating the new lighting system.

The high speed run on 18th November last year was the first time in the UK that a steam locomotive has run with this lighting system. Since then the lights have worked without problems on all the engine's runs and crew feedback has been very positive. It seems that we have met our objective of a lighting system fit for the 21st century, but built in sympathy with the original A1 design.

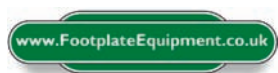
We are most grateful to both Alan Green for all his time designing the new LED lighting system and to John Beesley for sponsoring and constructing the headlamp housings. **TCC**



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



**PRINCIPAL SPONSOR**



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Designed by Debbie Nolan

\* All information correct at the time of going to press on 27th April 2009. For up-to-date information and dates please check the website [www.aisteam.com](http://www.aisteam.com).

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Darlington Locomotive Works is normally open to the public on the 2nd Saturday each month (11am – 4pm).

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

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