

# THE COMMUNICATION CORD



60163 TORNADO

New Steam for the Main Line

No. 34 Early summer 2014

A 'study in blue' -  
Tornado at Didcot



Mick Rogers

## MAINTENANCE UPDATE

by David Elliott

### General

*Tornado* has been put back together at the completion of the annual maintenance period and has performed well on its first main line train of 2014, 'The White Rose' from King's Cross to York and back on Saturday 12th April

### Completion of the annual maintenance

Since the last issue of *The Communication Cord*, a team of four from Meiningen Works including Achim Decker, their chief designer (who acted as interpreter) changed 222 stays in seven working days and, on hydraulic test, all 444 new welds were dry! Our team then successfully steam tested the boiler with the firebox exposed which was satisfactory then repaired, prepared, undercoated and

refitted the cladding, put all the fittings back, refitted the cab and remaining items to facilitate a full steam test which was also successful.

An unfortunate accident which put Jon Pridmore out of action towards the end of the reassembly caused a few problems as Jon is the main source of knowledge as to where everything goes. Some extra help was brought in, however Dan Howden, who had worked with Jon on dismantling the locomotive, proved to be a great asset as he remembered where most things went, and importantly, the order they came off in (and went back on).

With the relatively low mileage covered in 2013 and the lower usage expected in 2014, we were able to carry out a C Exam 'lite'. The motion which had had almost all the white metal renewed in early 2013

and which has settled down very well was not disturbed. The live steam injector was exchanged for the overhauled spare, the exhaust injector was taken off and along with the safety valves, sent to Crewe Heritage for overhaul. The blower valve and steam heat valves were taken back to Darlington as both were blowing through when closed. Thanks are due to Tom Jones at M Machine for re-machining and truing up the valves and seats.

Most of the pipework in the cab was annealed and where necessary repaired whilst off the loco. The 'hot' inspection of the locomotive by the insurance company boiler inspector and our Vehicle Acceptance Body was successfully achieved on 28th March resulting in a new Engineering Acceptance (EA) certificate being issued on 1st April. Since then



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**Editor:** Graham Langer -  
graham.langer@a1steam.com

*Tornado* has operated reliably during the Merchandise Team training event at Barrow Hill, engine-in-light-steam runs to Didcot and back to Southall, the 'Once on a Blue Moon' event at Didcot and 'The White Rose' to York.

Thanks are due to our team at Barrow Hill led by John Wilkinson and comprising Jon Pridmore and Dan Howden full time and assisted from time to time by Chris Smith, Andy Roberts, Ian Matthews ('Rembrandt' - our painter) and a significant number of our volunteers. Sincere thanks are also due to Mervyn Allcock and his team at Barrow Hill who went out of their way to help us and to work round the loco in the roundhouse.

#### Support Coach 21249

The coach has proven its usefulness as a place for the staff to stay at Barrow Hill with the LPG central heating system making the coach a pleasant refuge from the winter time cold of the shed at Barrow Hill.

The ongoing problems with the axle driven alternator have finally been cured thanks to Rob Morland carrying out a detailed examination of the regulator (which is a 1960s designed early electronic device). A broken wire wound resistor was found and, having been replaced, the alternator has been restored to full working order. Rob now has a good idea how it works which will make it easier the next time the regulator needs attention. Our gratitude goes to the Mid Hants Railway for lending us a serviceable

regulator whilst we sorted ours.

The water system suddenly stopped working during one of the events at Barrow Hill. Failure of the non-return valve which stops the pressurised reservoir cylinder emptying back into the tank when the pump is not running was diagnosed and a new valve fitted which restored operation. However after a short time the pump, whilst running, was not

producing much flow or pressure. A more robust non-return valve was then fitted, and on dismantling the pump, a piece of plastic from the old valve was found in the pump inlet, partially

blocking the water flow. Removal of this has restored the water system to normal.

One consequence of using a coach which was no longer on the national rolling stock register has been the need to fit a fire/smoke alarm system which complies with the latest requirements. However this has been found to be too efficient, as when *Tornado* is operating tender first (with the support coach at the smokebox end) opening the drain cocks allows steam to enter the coach and this sets off the alarms, and, in common with domestic smoke alarms, they continue to sound until the steam goes away! Rob Morland has since modified the system with a controller which enables temporary silencing of the alarms, he has also reduced the volume of the sirens in the compartments which, being designed for larger rooms, were much too loud. They now produce the correct sound pressure level. **TCC**

"Sincere thanks are also due to Mervyn Allcock and his team at Barrow Hill who went out of their way to help us"

## EDITORIAL by Graham Langer

With *Tornado* in rude good health we have already completed two highly successful operations since the completion of her winter maintenance schedule. The 'Once in a Blue Moon' event at Didcot Railway Centre was highly enjoyable and allowed Covenantors and supporters of the Trust to get close to No. 60163 in the unique environment of a working running shed. 'The White Rose' also proved to be a great outing and although the timings might have been relaxed the load, fourteen coaches, ensured that *Tornado* had plenty of work to do. All this would not be possible without the man hours provided by our volunteers who have worked all winter to keep the locomotive in top condition and have turned out to provide the manpower needed to run events and tours. Unfortunately one of our engineers, Jon Pridmore, lost an argument with some recalcitrant machinery and suffered a badly broken arm during the overhaul at Barrow Hill – we all wish him a speedy recovery and look forward to seeing him out with *Tornado* again soon.

In other news we are able to report that the frames for No. 2007 have now been rolled and profiled by TATA Steel in Scunthorpe. You will notice that there will be an increasing volume of P2 news in *The Communication Cord* as it metamorphoses into a multi-locomotive journal. These are exciting times for the Trust and for those helping to build *Prince of Wales* and keep *Tornado* running. **TCC**

## From the chair by Mark Allatt



As I write this column I recall that it is the 5th anniversary of the 'Great Race to the North' for BBC Top Gear which was filmed on 25th April 2009. *Tornado* played a starring role in the first episode of the 13th series first shown on BBC2 at 20:00hrs on Sunday 21st June 2009 and featured a race between a Jaguar XK120 sports car, a Vincent Black Shadow motorcycle and No. 60163 *Tornado* from London to Edinburgh with presenter Jeremy Clarkson on-board.

Describing *Tornado*'s appearance on 'Top Gear', the BBC said: "'Top Gear' skids, roars and explodes its way back onto the TV with a brand new series. It starts with an extraordinary race as Jeremy Clarkson, Richard Hammond and James May set out to discover what 'Top Gear' might have been like 60 years ago. To this end, James grabs himself a gorgeous old Jaguar XK120 sports car whilst Richard chooses to torture himself on the brutal but rather fantastically named Vincent Black Shadow motorcycle. Meanwhile, in an almost unprecedented move, Jeremy decides to take the train. But not just any old train because he's on the footplate of *Tornado*, a brand new steam locomotive built to the original design used to create some of Britain's finest locomotives back in the heyday of the railways. Despite being old and a bit fat, Jeremy has to feed the firebox with a constant supply of coal, without which the whole train will grind to a halt. The challenge behind this race was simple – the first one to get from London to Edinburgh would be the winner - but what happens along the way adds up to one of 'Top Gear's' most incredible and most epic races to date."

The Trust was thrilled to be asked to participate in the 'Great Race to the North' on the legendary BBC Top Gear programme. With Jeremy Clarkson coming from Doncaster where the original Peppercorn class A1s were designed, it was most appropriate that he should be the presenter on the footplate for this epic journey. We hoped that *Tornado*'s appearance on Top Gear would introduce a new generation to the sheer magnificence of a steam locomotive at speed and that they would seek out the experience for themselves on one of *Tornado*'s main line tours. And we certainly weren't disappointed. With seven million viewers on first showing and endless repeats this remains the best publicity for *Tornado* to date and the reason why, to many, *Tornado* is still the 'Top Gear Engine'.

Our fundraising focus for *Tornado* over the next few years will be to raise the funds to purchase her tender at the end of its 15 year lease from William Cook Cast Products, leaving the Trust debt free. 'The 163 Pacifics Club' has got off to a racing start with 18% of the £200,000 already donated or pledged – but there is still a long way to go. Read more about how you can help the Trust to purchase *Tornado*'s tender on page xx.

Our first train of this year's season was 'The White Rose' from London King's Cross to York on 12th April. This was both a great operational and commercial success thanks to the dedication of all of our volunteers beforehand and on the day of the run. Our next train is 'The Border Raider on 5th July from London Euston to Carlisle and return (*Tornado* from/to Crewe). We need to make a success of running our own trains so please support this and the other main line trains when they are confirmed. More details at **www.a1steam.com**.

Our project to build Gresley class P2 No. 2007 *Prince of Wales*, though a separate subsidiary The P2 Steam Locomotive

Company, continues to gain traction. The Founders Club has signed up over 300 members since its launch at the AISLT convention in September last year – potentially worth up to £375,000 with Gift Aid added. We launched the 'P2 for a price of a pint' covenant scheme at the first of the P2 Roadshows in London on 8th March and over 350 people have already signed up, worth over £300,000 over the duration of the project. With the frames now rolled and due to be profiled shortly, the fundraising for and construction of No. 2007 *Prince of Wales* has certainly got off to a racing start. You can read more on about our P2 progress on page 14 and find out more about how to get involved with this exciting new project at **www.p2steam.com**.

It is vital for our future success that we continue to grow our supporter base by recruiting more people as covenantors for both *Tornado* and *Prince of Wales* and, thinking further into the future, I especially urge you to encourage any children that you know who share our passion for *Tornado* to join the *Tornado* Team. Thank you all for your continued support. Your kind and often witty letters and emails always help to keep the team motivated. I hope to see as many of you as possible at one of our heritage railway visits or on one of our main line trains. **TCC**



**'Ben Godfrey on the footplate of No. 60007 Sir Nigel Gresley, named in honour of his grandfather. Ben and his brother, Tim, started the plasma cutter that profiled the frames for No. 2007 Prince of Wales at Tata Steel, Scunthorpe, on 21st May. Frank Dumbleton'**





The three locos outside the engine shed during the evening photo charter

Frank Dumbleton

## 'ONCE IN A BLUE MOON' by Tim Beere

Three mighty steam locomotives, the pride of the pre-nationalisation Great Western Railway (GWR) and London & North Eastern Railway (LNER), gathered at Didcot Railway Centre on 5th and 6th April 2014 in a unique display and spectacle not seen for over 60 years. All three locomotives are currently painted in the same short-lived historic British Railways express passenger blue livery that was applied in 1949 in an effort to improve the image of the recently nationalised British Railways (BR).

The three locomotives at this gathering consisted of some of the most iconic and instantly recognisable steam locomotives in history including A4 No. 60007 *Sir Nigel Gresley*, sister locomotive to *Mallard* who's world steam speed record of 126mph set on 3rd July 1938 remains unbroken to this day.

Streamlined A4 No. 60007 *Sir Nigel Gresley* was the flagship of the LNER in the 1930s, and named as a tribute to its designer who was knighted by King Edward VIII in 1936. Sir Nigel died on 5th April 1941.

King class No. 6023 *King Edward II*

was the flagship locomotive of Isambard Kingdom Brunel's legendary Great Western Railway and were the most powerful of their type to operate in Britain. No. 6023 has recently been fully restored at Didcot as a tribute to its designer, C B Collett, who died on 5th April 1952.

The third locomotive in this trio was of course our very own Peppercorn Class A1 No. 60163 *Tornado*, looking resplendent in her express blue livery alongside the others.

The event titled 'Once in a Blue Moon' offered the public a two day opportunity to see these magnificent locomotives up close, learn about their history as well as have the opportunity to ride behind them. A commemoration service for Sir Nigel Gresley and Charles Collett was held on the 5th April at 10.00hrs, with both No. 60007 and No. 6023 having wreaths placed on their smoke boxes. The service culminated with the locomotives simultaneously sounding their whistles for one minute.

For those present, it was an awesome, hair standing on the back of necks,

spectacle. Both Gresley and Collett would have been very proud to see their masterpieces present together in such finery, being enjoyed by so many both young and old. Given the significance of the date and event, we were very pleased to welcome Sir Nigel's Grandson, Ben Godfrey, who joined us with his family for the day.

Nigel Wilson, Chairman of the Charitable Trust that owns Sir Nigel Gresley and also a member of the Great Western Society said "it gave me great pride that we were able to pay tribute to these two great men of the steam age by bringing together these iconic steam locomotives in a unique celebration, Gresley and Collett left remarkable legacies in terms of the evolution of railway technology and both deserved commemoration."

Richard Croucher, Chairman of the Great Western Society, said "Charles Collett developed the Edwardian four-cylinder Star class locomotive design through the 1920s, firstly with the Castle class that set new standards of economy in coal consumption and then with the King class which were the Great Western's most powerful express passenger locomotives. Under Collett's management the GWR's Swindon Works had an unrivalled reputation for the quality of its products, and we seek to maintain this legacy with our collection at Didcot."

The event was certainly very well attended thanks to a joint publicity effort between The A1 Steam Locomotive Trust and Didcot Railway Centre that resulted in the locomotives appearing on ITV Meridian News the Friday evening prior. Our thanks to all those at Didcot Railway Centre and The Great Western Society for making us and *Tornado* feel so welcome. **TCC**



A side view of King Edward II, Tornado and Sir Nigel Gresley

## THE WHITE ROSE by Graeme Bunker and Richard Peck

After a period of winter maintenance the first main line trip is always eagerly anticipated. *Tornado* duly arrived at King's Cross at the head of a mammoth fourteen coach train a few minutes before booked time at 06.20hrs. Bathed in sunshine the locomotive took some water while passengers and enthusiasts stopped for photographs as the time ticked round to the departure.

Right on time, at 07.48hrs, with driver Paul Major on the regulator (under the watchful eye of Traction Inspector Colin Kerswell) the train departed from King's Cross and headed into Gas Works tunnel and the familiar route north. Despite a very easy schedule on the slow line and sensible running we arrived at Potters Bar station for our first pick up over eleven minutes early! Passengers boarded leisurely before an 08.28hrs departure and then a short wait at Digswell Junction preceded the crossing of Welwyn Viaduct and the booked stop at Stevenage. The whole schedule was fairly relaxed on this occasion with the run north occupying the down slow line all the way to Holme Junction; *Tornado* covered the 43 miles in around 41 minutes, an even time run despite the heavy train and no access to the fast line.

This was the manner in which the run would continue with water taken at Holme and Grantham (where Jim Clarke handed over the shovel to Vince Henderson), a pathing stop and a crew change at Doncaster (Gareth Jones took over from Colin, Mark Dale from Paul), leaving there at 12.35hrs, and accelerating steadily through Doncaster, up to 60mph at Shaftholme Junction, 71mph at Templehurst Junction, to a max of 76mph at Hambleton. Unusually, we did not get stopped by signals, running into York at 13.13hrs, and arrival bang on time into Platform 10.

Around four hours was available in the wonderful city to turn and service the engine, which also gave time to turn support vehicle No. 21249 (necessitated by the replacement of the cord line by the new turntable). This made life easier for our merchandising team to ensure everyone had the souvenirs they had ordered.

The return run left a few minutes late following delayed service trains but soon the engine was once again wheeling its train along, now in the hands of Tyne Yard driver Steve Hanczar, accelerating to 75mph just beyond Hambleton, and



Richard Brothwell



Gareth Griffiths

Above: 'The White Rose' approaches Grassthorne level crossing.

Left: In fading light, the return run is seen at Rossington.

keeping that up until a signal check near Arksey, which slowed us down to 35mph through Doncaster (passed in 32 mins 24 secs for 32.5 miles from York), before a signal stop at Loversall Carr. Arrival at Retford for water was at 18.22hrs (five minutes late).

Leaving Retford at 18.34hrs (three minutes late), we were treated to a wonderful crisp acceleration up the 1 in 200 of Gamston Bank, to enter Askham Tunnel at 45mph. Acceleration continued quickly up to 75mph down the bank from Tuxford but we were checked by signals at Crow Park, to pass Carlton at 35mph. Then we were off again, 66mph through Newark, we up to 71mph before Claypole, which was maintained on the 1 in 300 climb through Hougham. The 1 in 200 through Barkston to Peascliff Tunnel brought us down to 63mph, but, with the sun was setting, the locomotive made a magnificent climb out of the Trent Valley and stormed through Grantham at 68mph (making a fine sight on YouTube later that evening). We were still doing 63mph at Great Ponton, but the flashing double yellows then confirmed we

were to go onto the Slow Line at Stoke, so the effort was eased. We entered Stoke Tunnel at 61mph, and went over Stoke Summit at 57mph.

Down Stoke Bank, we were up to 75mph within two miles, and with a maximum of 78mph through Corby, we stayed in the mid 70s until a signal check brought us down to 28mph at Werrington Junction., from where we crawled forward to Eastfield for water (arrival at 19.43hrs, eight minutes late). After the water stop, we moved forward to Peterborough to say goodbye to some of our passengers and a crew change saw Geoff Ewans take over from Gareth and Graham Ward from Mark. With the light fading the train eased away from Peterborough at 20.10hrs (seven minutes early) and thoughts turned to negotiating the London suburbs. Despite congestion on this section of railway *Tornado* came to a stand six minutes early in Platform 1 at King's Cross.

It was a great day out with over 450 passengers enjoying 376 odd miles of the best in steam haulage. A splendid start to the operating year on the main line. **TCC**



# OPERATING 'THE WHITE ROSE'

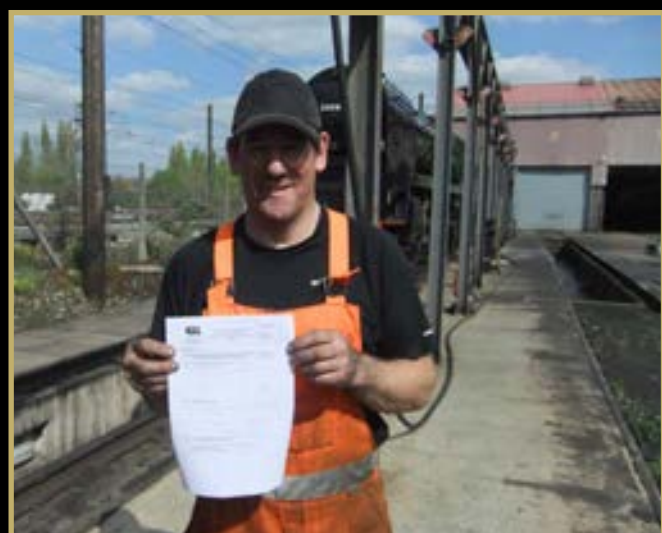
by Graham Langer

If you have ever wondered about what happens behind the scenes during the running of one of our tours we think you may find this gallery interesting. It takes days of careful preparation to ensure that *Tornado* appears, immaculate, at the head of a train, even before she turns a wheel towards her destination. Paths have to be planned, routes have to be gauged, stock has to be hired, caterers have to be arranged, tickets

have to be sold, crews have to be made available and the locomotive has to be cleaned and pass a fitness to run exam. On the day of the run water stops have to be booked, a water tanker provided, a support crew has to be fed, a sales team assembled and coal has to be supplied for the locomotive. While passengers amuse themselves at the destination (York in this case) the locomotive has to be serviced, coaled, watered, turned,

oiled round and be back on the train with the support coach in the right position for the home run. As those happy passengers alight at King's Cross or wherever, having enjoyed a relaxing day out, the support crew may be facing several hours of light engine movement to get them back to the depot where *Tornado* will still have to be disposed of, the fire cleaned or dropped as required, the boiler re-filled, and so on.

**Left:** *Tornado* and the support coach are shunted into position to permit coaling to take place the afternoon before 'The White Rose'.



**Right:** Following coaling, with the locomotive back in position, cleaning the tender can continue, removing traces of coal dust left by the delivery. Peter Maynard does the honours.

**Left:** 'Responsible Officer' Huw Parker sports the all-important 'fitness to run' paperwork following a thorough examination of the locomotive by DBS engineers. Without this document the train wouldn't run!



**Above:** Richard Peck is the Trust's Commercial Manager, arranging paths for tours with Network Rail and DB Schenker. Here he enjoys a little light relief cleaning *Tornado's* cylinder cover.

**Right:** Some idea of the standard of cleaning can be seen in this image. Cleanliness is not just a matter of appearance but, in the case of valve gear, essential to reduce the amount of dirt getting into bearings and onto wearing surfaces. Note that we still use corks in the oil pots!



**Above:** In addition to the eight members of the support crew, our tours always carry a full sales team and these were the 'lucky' ones who covered 'The White Rose'. They work extremely hard to raise additional funds to keep *Tornado* running.

**Below:** Graeme Bunker and Fraser Birrell put their backs into turning the coach at York. Since the removal of the triangle at York it is now necessary to turn both locomotive and coach separately.



**Right:** Mark Dale at the helm of *Tornado*. Mark works for DB Schenker and was just one of a dozen Schenker staff involved in running 'The White Rose'. Comfortable bucket seats and good ergonomics make *Tornado* one of the best steam locomotives to drive on Network Rail.







The tender is seen under construction at North View Engineering in 2008.

### Get on-board The 163 Pacifics Club!

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

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

We need to raise £200,000 by 2021 to purchase *Tornado's* tender - thereby making the Trust debt-free - and finally

completing the project we embarked upon in 1990.

Following the success - thanks to your generosity - of our Regular and Dedicated Donation schemes for the construction of *Tornado* and the 'Use Your Loaf' appeal for the support coach, the Trustees have decided to follow a similar route for the purchase of *Tornado's* tender. However, instead of "an A1 for the price of a pint" and "use your loaf", we've decided to raise the funds in a different way, "The 163 Pacifics Club":

- We need to raise £200,000 to purchase *Tornado's* tender.
- Although *Tornado* carries the number '60163' - the next in the Peppercorn class A1 series following 60162 *Saint Johnstoun* - her pre-nationalisation LNER number would have been '163'.
- If 163 people were to donate £10 per month over the eight years until we need to purchase the tender (or alternatively make a one-off donation of £960) with the addition of Gift Aid (£2.50 per month or £240 one-off) this would raise £195,600.

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

- A numbered certificate (1-163) recording the details of the donation and the number/name of your favourite ex-LNER express passenger pacific from the Gresley class A3s/A4s, Thompson class A1/I and Peppercorn class A1s.
- Name inscribed on the official Roll of Honour in

Darlington Locomotive Works which will detail the pacific sponsored.

- Entry into a draw for a main line footplate ride on *Tornado*.

Forms to join 'The 163 Club' can be found on the website in the 'How You Can Help' section. Membership of The 163 Pacifics Club has grown steadily since its announcement and 20 of the available 163 ex-LNER express passenger Pacifics have already received new 'shed allocations' with a further ten promised later in the year. It really is that simple! Sponsor your favourite Pacific today and help make *Tornado* debt free with her paid-for tender behind by 2021. Thank you.

- **P2 Frame Event** - Darlington Locomotive Works will be open to the general public to view No. 2007's frames for the first time from 11:00hrs to 15:00hrs on Sunday 20th July. Friday 18th July will be a preview day for Founders and Saturday 21st July will be the frames dedication for A1 covenantors and P2 founders & covenantors. Details will be announced in due course.

- **'THE BORDER RAIDER'** - This is the tour every true steam devotee has been waiting for, the chance to travel behind *Tornado* over Shap summit both ways, 282 steam miles in all! London to Crewe with a Class 90 electric locomotive, *Tornado* from Crewe to Carlisle and return, home from Crewe behind the Class 90 again.

STATION	DEPART	RETURN
London Euston	07:10hrs	22:05hrs
Watford Junction	07:30hrs	21:45hrs
Milton Keynes Central	07:55hrs	21:20hrs
Rugby	08:15hrs	20:55hrs
Lichfield Trent Valley	08:45hrs	20:25hrs
Crewe	10:00hrs	19:10hrs

### DIARY DATE

Covenantors with  
*Tornado* and Mallard at  
Barrow Hill last year



This year's Convention will be on  
Saturday 4th October 2014.  
More details in the next TCC

## DIARY 2014

Below are the future operations *Tornado* is confirmed to be involved in. More details will be published on [www.a1steam.com](http://www.a1steam.com) as trains are finalised. P2 events will also begin to appear in this section, further details on [www.p2steam.com](http://www.p2steam.com). Contact details for tour companies appear at the bottom of the page.

- **5th July** - 'The Border Raider' London King's Cross to York and return - UK Railtours
- **12th and 13th July** - Swanage Railway
- **18th - 20th July** - P2 Frames Event at Darlington Locomotive Works
- **28th July to 3rd August** - Bluebell Railway
- **25th August** - 'The Devon Belle' London to Exeter and return - UK Railtours
- **13th and 14th September** - Nene Valley Railway Gala
- **4th October** - Annual Convention - Barrow Hill Roundhouse

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

### Contact details

#### Swanage Railway

Tel: 01929 425800

web: [www.swanagerailway.co.uk](http://www.swanagerailway.co.uk)

#### Bluebell Railway

Tel: 01825 720800

web: [www.bluebell-railway.co.uk](http://www.bluebell-railway.co.uk)

#### Nene Valley Railway

Tel: 01780 784444

web: [www.nvr.org.uk](http://www.nvr.org.uk)

#### Barrow Hill Roundhouse

Tel: 01246 472450

web: [www.barrowhill.org](http://www.barrowhill.org)





A superbly evocative shed scene  
with Nos. 60007 and 60163



## DAVID CHAMPION – A PROFILE *by Graham Langer*

Late at night on the 18th November 2008, after a blistering run from York, *Tornado* eased her final test train over the King Edward Bridge and, chime whistle bellowing, into Newcastle station. The platforms, even in the small hours, were packed with well-wishers and astonished passengers, witnessing the first arrival of an A1 under that elegant canopy for over forty years. Standing quietly among the throng was a man and his dog, Buddy, whose coat provided the only clue that they might, in some way, be associated with the impressive grey locomotive panting at the platform end; the dog's coat bore the legend '60163' and the man was David Champion.

David was born 1948 in South Shields, County Durham, the middle of three sons, Dennis four years older, Phil four years younger. Both David's Father and Grandfather were mining surveyors in the tin mine at Geevor in Cornwall, moving on to the lead mine on Helvellyn on Lake Ullswater when the bottom fell out of the tin price in the mid 1930's. It was here that his parents met on the first day of the war when his mother had been sent from South Shields to Ullswater to look after her six youngest brothers and sisters evacuated with her. After the war they moved to South Shields where David was born.

David enjoyed a very happy childhood in the golden 1950s. One of his earliest memories was of sitting on the beach in summer and watching a green steam engine taking large blocks of stone from the Trow Rocks quarry to be used to strengthen the south pier of the Tyne. A Hornby Dublo train set in Christmas 1955 cemented David and Phil's life-long love of railways.

David and Phil were surrounded by a transport cornucopia in the 1950s and 60s. Several hundred yards away was the 'Marsden Rattler', the South Shields and Whitburn light railway. Trolleybuses took them into town where steam and electric traction was everywhere, on the main line railways, the colliery lines and dock railways. A trip across the Tyne on a 1920s steam boat facilitated a ride on the Gresley electric trains to Newcastle, while on the South side of the river were still some NER electric sets among the Eastleigh built Tyneside stock. Whichever route they took to Newcastle, the boys knew that when ensconced on platform 9 at Newcastle Central with an Ian Allan ABC, they would be treated to a feast of LNER motive power, particularly Pacifics,



David Champion

**Buddy sporting his apple green coat**

which still held sway for their last few years on the ECML. In due course they witnessed the depressing run down of steam and the change to diesel, aghast that so few of the Pacifics were being preserved.

Round about this time, in 1964, David read an editorial in *Railway Modeller* that said the best way of preserving locomotives for the future was to make

“No it bloody isn't, the best way is to start making new steam engines ”

models of them. It infuriated him and he shouted angrily at Phil that, “No it bloody isn't, the best way is to start making new steam engines and, mark my words, one day somebody will”. It seemed obvious that with the emergence of the heritage railway movement, all of the new lines using old motive power would eventually need to replace the engines. This idea lay dormant for a quarter of a century while David indulged his other passion of playing music in bands, alternating between rock n' roll lead guitar in pop bands or playing fiddle in the folk scene, and often moonlighting on bass guitar in staid Dinner Dance

bands to pay for holidays.

Having decided not to pursue a career in teaching, David married Gillian (the singer in the band), moved to rural Northumberland to work for the Port of Tyne Authority in 1970 in the Engineering, then Marketing and Operations Departments. David moved on to a northern building society in 1976, and by the early 1980s was running the estates side of things at their large Head Office. Because nobody else seemed to enjoy it David did most of the project management of large building and renovation projects. At the beginning of the 1990s he was 'head-hunted' to be one of the founder-partners in a new venture being set up by Lord Rothschild, together with elder brother Dennis, opening up the Newcastle office. At the same time a series of letters and articles appeared in *Steam Railway News* proposing build a brand new Peppercorn class A1.

A 'phone call to his brother, Phil, rekindled memories of that 1964 conversation and they both decided that the time had come to get busy. Enquiries revealed that the proposal was only very tentative, using a traditional type of railway club structure, and raising money by selling souvenirs such as pencils. David immediately sensed that this would never deliver a new A1 in a million years, and offered to come up with a workable

business and project plan. The next part has become AISLT lore, when one warm night after dinner David took the remainder of a bottle of particularly good red wine to his study and sat down with pen and a single sheet of paper; the method just seemed to flow, the kind of organisation, how it would operate, and most crucially, how to raise the money. In twenty minutes it was done and David instinctively knew it would work - it still is working today!

Sadly, in late 1999, Gillian was diagnosed as terminally ill with widespread cancer. David decided give up work and all other commitments to care for her during her remaining time, stepping down from his pivotal role as AISLT Chairman after nine year's steering the project forward. Ironically David says Gill's last five years were their happiest, travelling and doing all they had wanted to do. When Gillian died in November 2004, David had lost his soul mate, no longer had a career or income and his prospects were grim. Happily some friends ran Barter Books, the UK's biggest second hand bookshop in Alnwick Old Station and offered David a job. Ten years later he is a Director of this wonderful company, ranked as one of the most beautiful bookshops in the world.

Following Gill's death David was reunited with Lillian, a close friend of Gill's who had moved to Calgary in 1969 and was visiting the UK. This meeting acted as a trigger for David's long held ambition to travel across Canada, bringing Lillian back with him!

They were married the following year and one of the bonuses was Buddy, a Canadian Bearded Collie. Lillian had rescued Buddy when he was ten, full of personality and fun, Buddy became their greatest friend, dying at the incredible age of 19½ last year. Buddy was there at *Tornado*'s first steaming, at the Great Central inaugural train he was wearing his 60163 works' grey coat, and, when *Tornado* steamed into Newcastle on her very first passenger run, fulfilling those dreams going back to 1964, there on the platform a friend was standing with Buddy waiting to welcome David and *Tornado* in his new apple green 60163 coat.

David is once again heavily involved with the Trust, signing up as Covenantor No. 1 for the new P2 *Prince of Wales* and accepting the role of Vice President of The A1 Steam Locomotive Trust. He and Lillian now have another bearded collie, called 'Merlin'. He is being measured for a new apple green coat. Will it be numbered 60163 or 2007? **TCC**



AISLT

**Above: Gillian and David stand either side of Dorothy Mather with Bob Meanley at Tyseley Locomotive Works.**



Tim Beere

**Left: Still very involved, David Champion signs up as Covenantor No. 1 for the P2 Project and is seen giving the paperwork to Mark Allatt at the first P2 Roadshow.**



## P2 PROGRESS by Mark Allatt and David Elliott

We continue to be delighted with the level support that the project to build new Gresley class P2 No. 2007 *Prince of Wales* has received since the launch of The Founders Club in September 2013. Having set an initial target of raising £100,000 seed funding by the time the frames were laid, over 300 people are now on-board after just seven months. Due to the Trust's charitable status this could be worth around £375,000 to the project.

**The regular donation** – or covenant scheme – was launched on Saturday 8th March at the first of the P2 roadshows. Picking up on the same theme which worked so successfully for *Tornado*, the new P2 will be substantially funded by a lot of people giving a little on a regular basis... a P2 for the price of a pint of beer a week. The price of a pint in the North East is now £3.10 (up from £1.25 in 1990 when the project to build *Tornado* was launched) and so we are asking supporters to kindly donate a minimum of £10pm by standing order. Gift Aid by UK taxpayers makes every £10 worth £12.50 and we have set ourselves the target of signing up 2,000

£10 equivalents in order to raise £2m towards the estimated £5m cost of No. 2007. To date over 350 people have signed up which should be worth over £300,000 over the duration of the project.

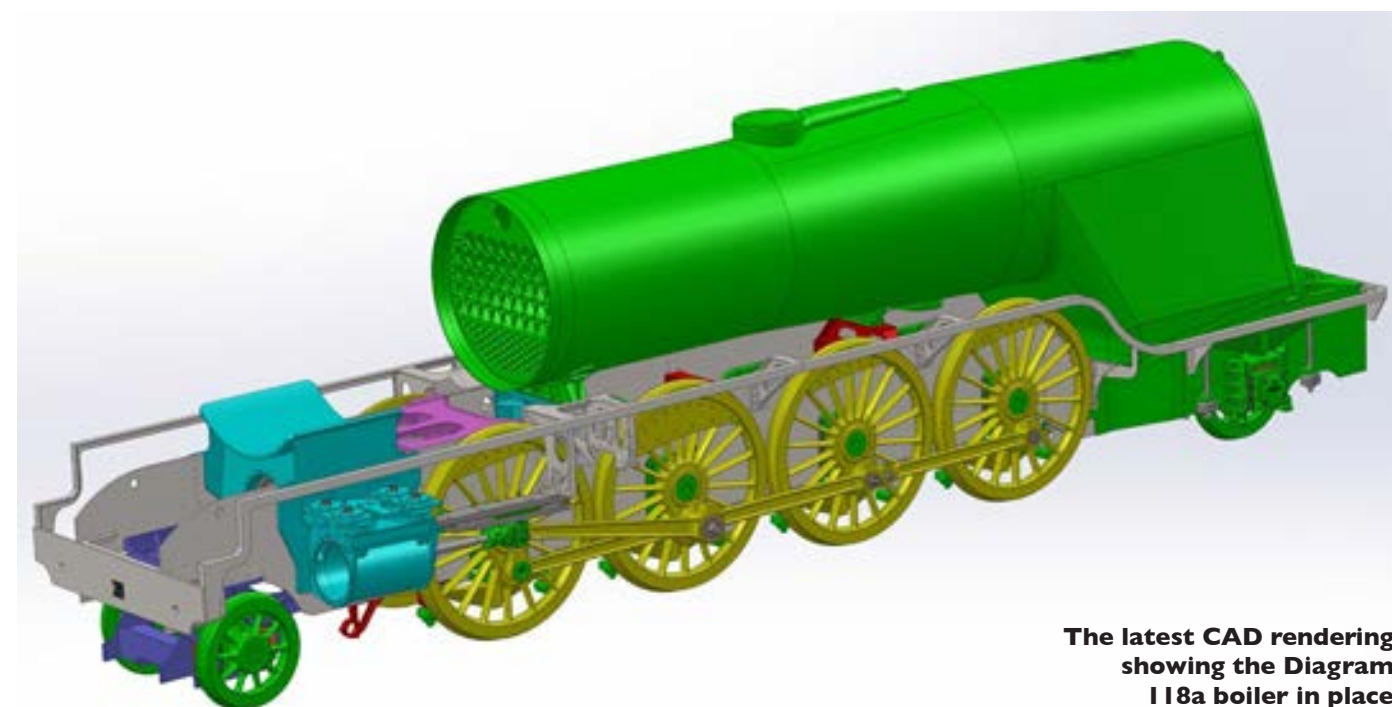
Work is continuing on several fronts:

**Frames** - the order covering manufacture of the main frame and tender plates, plasma cutting, grit blasting and priming has been processed by TATA and these were rolled at their Scunthorpe works 23rd April and were profiled on 21st May. Boro' Foundry at Stourbridge has been contracted to machine the edges and drill holes in the frame plates. An order has been placed with Bakers Patterns Limited of Telford for all of the existing design frame stay and Cartazzi horn

“William Cook Cast Products Ltd. has started work on the pattern for the 6ft 2in coupled wheels”

block polystyrene patterns, the castings from which will be needed as soon as the frames arrive at Darlington Locomotive Works. Volunteers at DLW have continued cleaning existing A1 wooden patterns required for No. 2007's frames and wheelsets. William Cook Cast Products Ltd (WCCP) has been asked to quote for all 25 of the locomotive frame stretcher and hornblock castings – 17 of which are from polystyrene patterns. Erection of the frames is due to start in DLW in July. The 3D CAD work has focused on creating a 3D model of *Tornado*'s diagram 118a boiler to check that mounting points on the frames are correct. Footplate brackets and running plate angles have also been added to the model in order to position the holes in the frames as this is required to confirm the drilling pattern for frames.

**Wheels, cylinders & motion** - WCCP has started work on the pattern for the 6ft 2in coupled wheels which will require six wheels from one design and two from the second. Preparations are underway to carry out Finite Element Analysis of the crank axle wheelset/axle



The latest CAD rendering showing the Diagram 118a boiler in place

interface to compare the original P2 design with a modified version applying modern design principles. We are still in the final stages of the examination of both the Lentz and British Caprotti options for No. 2007's valve gear. The investigation of the original Lentz gear and its development by The Franklin Railway Supply Company (a subsidiary of Lima Locomotive Works) of the USA continues and a number of promising leads are being followed up.

### Darlington Locomotive Works

- volunteers have made good progress in clearing and painting DLW and work continues to prepare the works for the arrival of the frames.

**Media** - interest in the project outside of the railway press continues to grow with considerable local interest in the project and two appearances on regional BBC TV within a week, first as part of the 'Inside Out' programme featuring both *Tornado* and *Prince of Wales* and second as a news item on 'Look North' covering James May's making of the first component. The project also made its first appearance in the national press with an extensive article on No. 2007 by Michael Binyon in *The Times* on Saturday 29th March.

**Fundraising** - the phenomenally successful Founders Club will be open to join until the frames are laid and an open day held at Darlington Locomotive Works during July 2014 and the monthly covenant scheme is now open to participate in.

**Events** - Darlington Locomotive Works will be open to the general public to view



Ben and Tim Godfrey with the P2SLC team at Tata Steel, Scunthorpe

No. 2007's frames for the first time from 11:00hrs to 15:00hrs on Sunday 20th July, with special events for Founders and Covenantors beforehand.- details to follow.

**Volunteers** - as ever we are looking for more volunteers. It takes a lot of people to both keep *Tornado* on the main line and also to build *Prince of Wales*. There is always so much more that we can achieve with the right volunteers with the right skills and can-do attitude. At the moment we are especially seeking volunteers to help with administration and as a Works Manager/Foreman in Darlington Locomotive Works. Please email [enquiries@p2steam.com](mailto:enquiries@p2steam.com) if you think you can help.

**Research** - as part of the design process we are researching the history of the original P2s and No. 2001 *Cock O'the North* in particular. We have already discovered a significant amount of unpublished material but are sure that there is a lot more out there. If you have any documents relating to or photographs of P2s we would be delighted to hear from you – even more so if you have first-hand experience of the P2s before they were rebuilt in 1943/44.

• For more information on the project to build Gresley class P2 No. 2007 *Prince of Wales* please visit [www.p2steam.com](http://www.p2steam.com), email [enquiries@p2steam.com](mailto:enquiries@p2steam.com) or follow us on Facebook, Twitter and LinkedIn. **TCC**



No. 2007 is born! The frame plates are rolled by TATA, Scunthorpe.



## MERCHANDISE UPDATE *by Gill Lord*

This time of year is always a bit quiet, we have managed to get through the Christmas rush in one piece, replenished stock as required, taken an interim stock take once all stock has been taken of the support coach, then it all starts again with getting ready for our first runs! Before we do so I like to have a training day for our merchandise volunteers, which seems to have turned into an annual occurrence. This year we went to Barrow Hill Roundhouse since *Tornado* was still in attendance after the completion of her winter maintenance.

The day started early for the set up team, moving tables and chairs, making sure the kettle is on, opening biscuits as the first people arrive at about 10.00hrs, followed quickly by more, some arriving by train at Chesterfield and being picked up by others passing by in cars by pre-arrangement. By 10.30hrs all 28 volunteers were

present and Mark Allatt opened the proceedings with a brief welcome talk. Next was my turn with a PowerPoint presentation beginning with a brief description of who we are, what we do and how *Tornado* Merchandising was started five years ago. After a short break we then discussed our procedures and how we may be able to make improvements on stock control, small differences in how we work the stand and finally on to security regarding our card sales both online and at heritage railways.

After a lovely lunch purchased from the café at Barrow Hill, the volunteers were then all taken on a ride on the footplate of *Tornado* in groups of two or three. Whilst waiting their turn some volunteers chatted on the platform, catching up and basically getting to know one another better as sometimes on the trips it is so busy you have little time to socialise! During this volunteers were invited on to the support coach to learn how to set up the sales trolley for when we work the train; this has to be really well thought out as we need to get as much on the trolley as possible to save walking backwards and forward down

the train and there is nothing worse than running out of one item which the very last person in the very last seat in the carriage furthest away from the stock wishes to purchase!

There was also a photo shooting session for the new teddies we are selling this year, resplendent on *Tornado*'s running board! At about 15.30hrs we returned to the classroom for a question and answer session and the meeting finished at 16.00hrs with all our participants departing to various points across the UK.

"there is nothing worse than running out of one item which the very last person in the very last seat in the carriage furthest away from the stock wishes to purchase!"

I think that this type of event is very beneficial to each and every one of us who volunteer with *Tornado*. Due to the fact that we have a short season this year, I have not purchased any different stock other than two new tea towel designs, one a watercolour by Jonathan Clay of *Tornado* and the other a montage by a volunteer

Paul Cornish, these will be available in June. The first run of the season is, as you will know, 12th April, and by the time this report goes to print it will have happened; I am sure that the on-board sales team will have done a sterling job!

TCC



Our hard-working sales team had a busy weekend at the East Coast Giants event at Barrow Hill

60163

## FOR SALE EIGHT *TORNADO* SMOKEBOX NUMBERPLATES

- **9th October 2010** Barrow Hill Convention
- **3rd July 2011** 'Torbay Express'
- **17th July 2011** 'Torbay Express'
- **9th March 2013** 'The Cathedrals Express' - London Paddington to Plymouth
- **19th March 2013** 'The Cathedrals Express' - Tonbridge to Worcester
- **23rd March 2013** 'The Cathedrals Express' - London Paddington to Kingswear
- **21st June 2013** 'The Cathedrals Express' - Tonbridge to Ely
- **14th September 2013** 'The Cathedrals Express' - London Euston to Worcester

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

## FROM THE ARCHIVES *by Graham Langer*

● **Spring 1994** - A red letter day was April 22nd when the frame plates were rolled at the Scunthorpe works of British Steel. The new locomotive's main frames were then profiled at BSD Plate and Profile Products' 38-acre site in Leeds, West Yorkshire. The CNC Plasma and Oxy fuel profile cutting system which cut the main frames from steel donated by British Steel was started by Mrs Dorothy Mather. The profiling of the main frames involved cutting 25mm and 30mm plate with consistent high quality finish. Twenty years later we once again find ourselves ordering steel from Scunthorpe to construct another iconic 20th century locomotive, *Prince of Wales*.

● **Spring 1999** - Dummy wheel centres and axle stubs had been used to calculate the best interference fit for the axles and work had proceeded to press the wheels onto them. The Wm. Cook Foundry had cast the cannon and crank axle boxes and Ian Howitt had finished the smokebox door assembly. In other news the dedicated covenant scheme was starting to raise significant sums for individual components yielding 40% of the required total for motion forgings. The Trust continued the process of fitting out Darlington Locomotive Works and was appealing for a set of Matterson jacks to lift the locomotive's frames. Rob Morland had devised a sophisticated computer programme to map the cash flow and construction and this was to become a significant tool in controlling the progress of the build.

● **Spring 2004** - *Top Link* No. 10 announced the launch of the £500,000 bond issue to finance the building of *Tornado*'s boiler, a process which had started with tenders being received for the work; by the time the magazine went to press 20% of the bonds had already been taken up. At the works further motion components had been delivered including the massive inside connecting rod; work setting up the valve gear would be helped by the newly finished wheel rotator which had already been in use under the newly replaced driving wheels (which had been off site for work on the crank pins). A huge effort was being made on machining components and it was noted that all the parts for the draincock operating mechanism were now fabricated and finished.



Essential, if not glamorous, work, installing machinery at DLW in 1999.

"the dedicated covenant scheme was starting to raise significant sums for individual components yielding 40% of the required total for motion forgings"

● **Spring 2009** - The May edition of *The Communication Cord* covered the extraordinary events surrounding the naming of *Tornado* at York station on 19th February by TRH The Prince of Wales and the Duchess of Cornwall and the locomotive's subsequent run to Leeds with the Royal Train. Following her initial runs in January, in the first quarter of 2009 *Tornado* ran to

Edinburgh, Newcastle (again), Barrow Hill and had an outing with the VSOE Pullmans. Mechanically the locomotive had performed well although minor adjustments had to be made including fettling an air pump and improving the lubrication to the middle cylinder (a works' modification that had not been found during initial research). TCC



Bearing The Prince of Wales' feathers and, for the first time since completion, her nameplates, *Tornado* is ready for the naming ceremony at York.



## THEN... AND NOW!



NRM/SSPL

Then....

'No. 2001's frames are cut at Doncaster Works in February 1934.



....and now

No. 2007's frames are profiled by the plasma cutter at Tata Steel, Scunthorpe

## THE GRESLEY SOUND *by Andy Hardy*

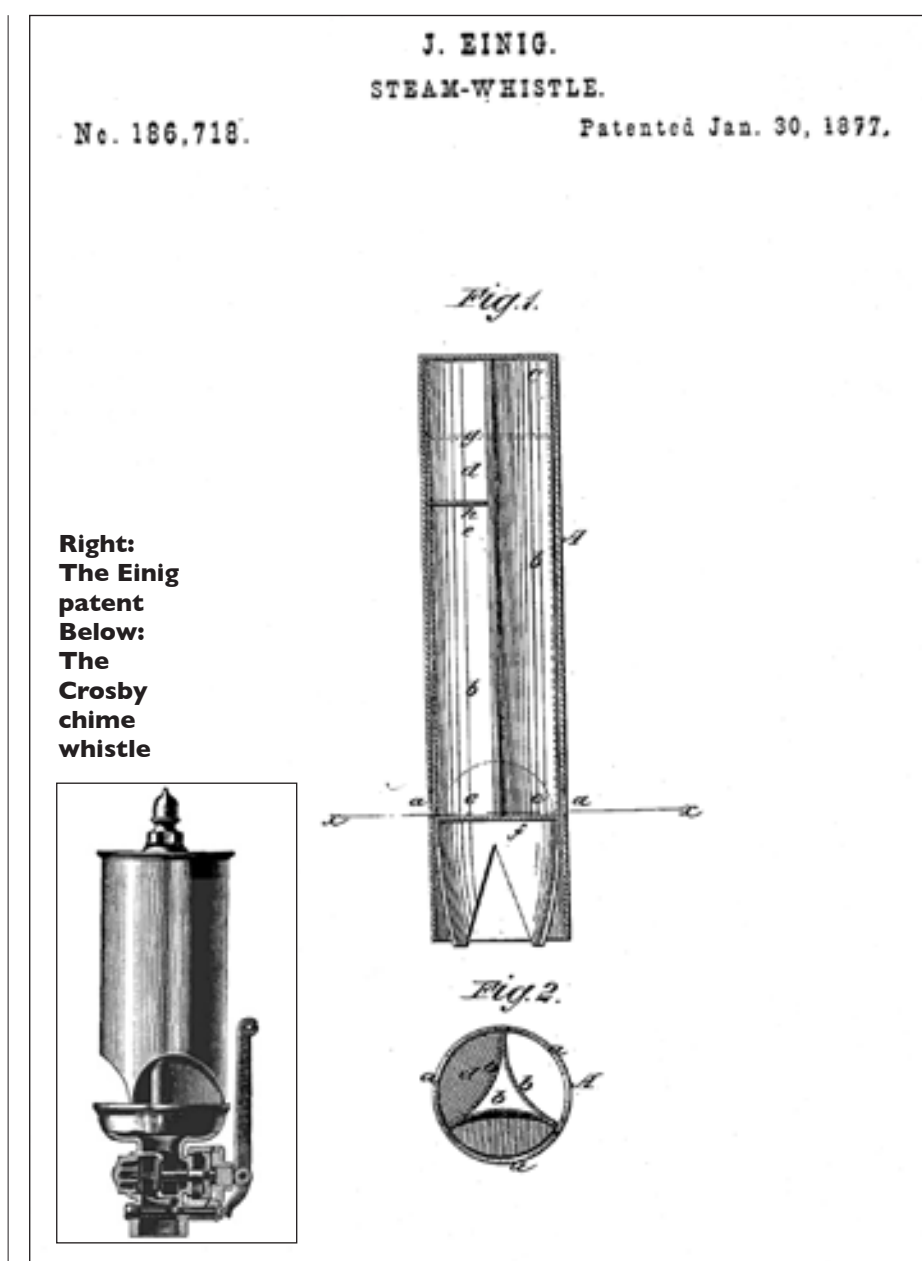
The Gresley beat is a phrase known to many railway enthusiasts across the country to describe the sound of the great engineer's locomotives at work. However there is another sound associated with those locomotives that we all know and love, the three tone chime whistle.

The chime whistle was first developed by John Einig of Jacksonville, Florida in 1877. The patent granted on the 30th January that year said that "the object of the invention is to produce simultaneously a whistle of three or more harmonious sounds". To do this the whistle housing was divided up into three compartments effectively creating three whistles within one casing operated by one valve. The Patent was bought by the Crosby Steam Gauge and Valve Co of Boston and becoming the cornerstone of their business until the Patent expired when other manufacturers started to make chime whistles.

The introduction of the chime whistle to the UK came not via the mainline railway companies, but via the privately owned Romney, Hythe and Dymchurch Railway. This 15 inch gauge mainline in miniature, owned by Captain J.E.P. Howey, had been honoured with a visit from the Duke of York, who, on 5th August 1926, drove engine No. 2 Northern Chief along the railway with Captain Howey squeezed onto the small footplate alongside him. Another guest was also present who, like the Duke, wished to see the locomotives in operation; that person was Mr (later Sir) Nigel Gresley. A friendship between Howey and Gresley developed with Howey later having miniature versions of Gresley's pacifics built to operate on the railway and Gresley arranging for locomotive No. 7 *Typhoon* to be displayed next to *Flying Scotsman* at King's Cross for publicity purposes.

Howey was also a fan of the Canadian Pacific Railway and regularly visited to ride on the locomotives. As a result he ordered two locomotives inspired by the Canadian Pacific fleet to become locomotives Nos. 9 and 10. Shortly after these were built, Captain Howey bought two Crosby Chime whistles for them, similar to those used on the full size locomotives. Soon after entering traffic Gresley saw No. 9 (at the time named *Doctor Syn*, now named *Winston Churchill*).

Gresley liked the sound of the whistle fitted to locomotive No. 9 so much that Captain Howey presented him with the whistle destined for No. 10. Gresley did not use the whistle at first and it seems to have kept it as an ornament. However with the construction of *Cock o' the*



Right:  
The Einig  
patent  
Below:  
The  
Crosby  
chime  
whistle

*North* Gresley decided to fit the whistle to the new locomotive, specifying it to be fitted at the front of the locomotive chimney. Its prominent position atop the locomotive smokebox in the dead centre of the locomotive helped to enhance and complete the 'face' of his iconic new locomotive and drew much attention in the railway press. Soon after No. 2001 was completed Gresley contacted the Crosby Chime Company and obtained quotes for whistles to equip more LNER locomotives including the A4's and the rest of the P2 class.

In 1934 Gresley returned the gesture and presented Captain Howey with a chromium-plated A4 whistle which is still in use today on the RHDR on locomotive No. 8 *Hurricane* a locomotive based on Gresley's three cylinder pacifics. With the outbreak of the Second World War the chime whistles were removed from most

of the locomotive fleet, allegedly due to possible confusion with air raid sirens. After the war however the LNER started producing its own chime whistles due to restrictions on imports imposed to try and recover the economy of the time. However there was one difference that could be heard if not seen. The original Crosby whistles were tuned to the notes C, F & Ab (A-Flat); however, the whistles produced post-war were a semitone higher (one step higher on a piano) and tuned to C#, (C-sharp) F# (F-sharp) and A, the change in tone being caused by different manufacturing and material specifications. Thanks to a kind offer from a Covenantor the Trust is already using a post-war chime whistle from A4 locomotive No. 60023 *Golden Eagle* on *Tornado* and once complete *Prince of Wales* will carry a chime whistle, hopefully of the correct lower pitch. **TCC**



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



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\* All information correct at the time of going to press on 2nd June 2014. For up-to-date information and dates please check the website [www.a1steam.com](http://www.a1steam.com).

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

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

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

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