



60163 TORNADO
New Western Locomotive Main Line



2007 PRINCE OF WALES
Building the world's most powerful steam locomotive



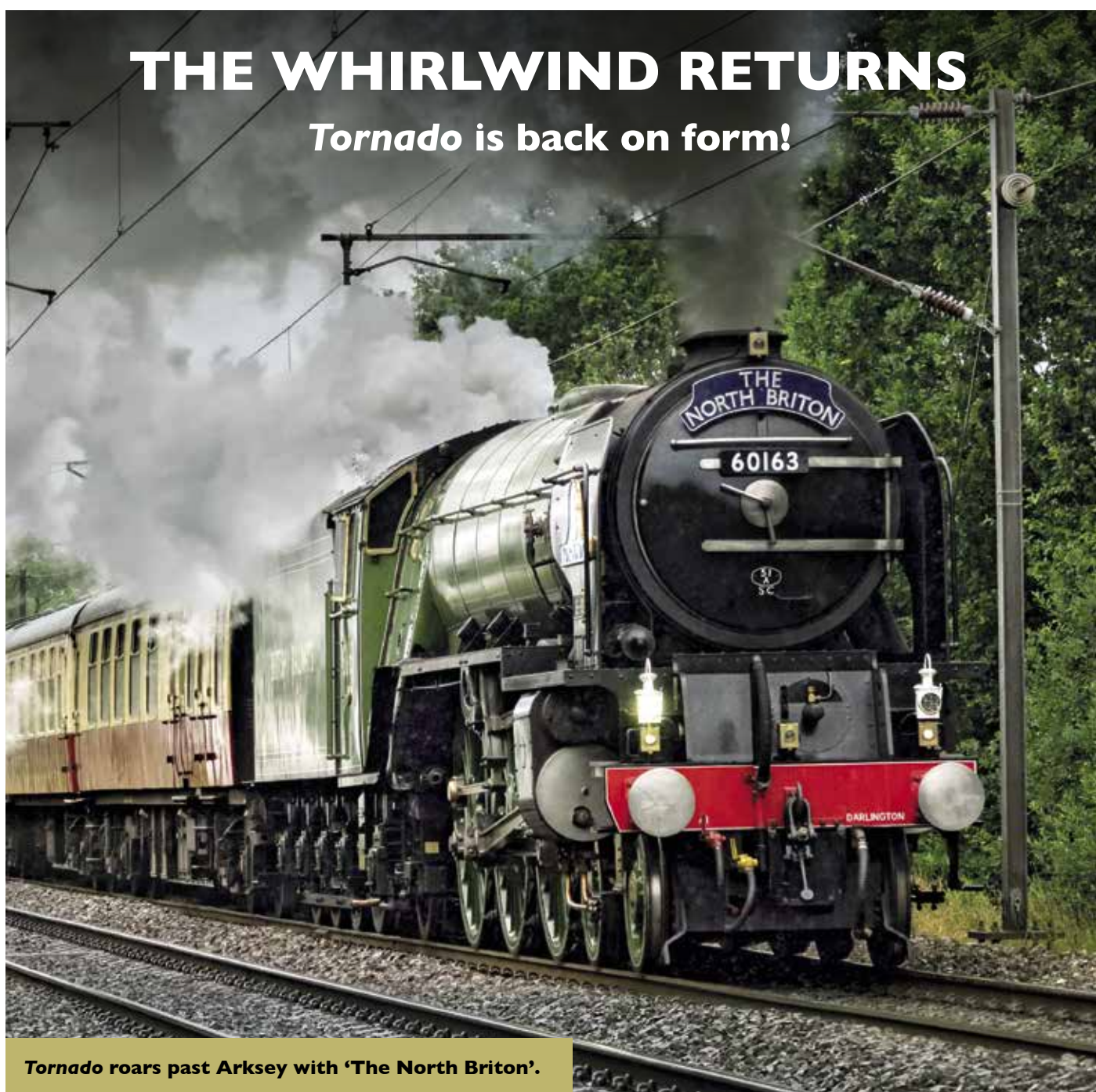
3403 ANON
Recreating Gresley's last design

THE COMMUNICATION CORD

No. 54 Summer 2019

THE WHIRLWIND RETURNS

Tornado is back on form!



Tornado roars past Arksey with 'The North Briton'.

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EDITORIAL by Graham Langer



With summer nearly over and autumn approaching, it is heartening to watch *Tornado* solidly working her way through the 2019 tour calendar and clocking up some impressive performances into the bargain; Huw Parker reviews these runs in the 'Tornado on Tour' section and it is again evident that our support crew has collectively put in considerable hours to ensure these trains ran smoothly. Now that the Trust is running the majority of its own trains now I would

exhort our supporters to travel on one of our trains to experience the pleasure of being hauled by your 'own' locomotive. In addition to tours mentioned in the last edition of *The Communication Cord*, we are now planning a couple of terrific festive specials, 'The Illuminati' on 2nd November, taking passengers to Blackpool from the West Midlands to enjoy The Illuminations and 'The Christmas Bath & Bristol Express' on 7th December, again from the West Midlands but this time heading for the Christmas markets in those named cities.

In other railtour news, for the first time *Tornado* is going to take part in Railway Touring Company's Great Britain tour. The 2020 tour travels from the south to the north of the United Kingdom and features a variety of locomotives and interesting routes. *Tornado* will be starting the tour off, on Friday 17th April, from London King's Cross, taking the train as far as York. In addition No. 60163 is back on the roster at Steam Dreams and the Railway Touring Company, hauling specials for both organisations in December.

The bringing of tour booking 'in house' is a much more efficient solution for the Trust and Siobhan Osborne is making her mark as our newly appointed Railtour Administrator and Lauren George has been recruited to support her in this department. We are looking for a further member of staff to join the office team to help Leigh with the rest of the burgeoning administration! You may have also noticed that the Trust is advertising for fitters to ensure that we have the capacity and capability to both look after our existing locomotive and to help with the construction work at Darlington Locomotive Works, saving the Trust the cost of contracting out services and supplies. The A1 Steam Locomotive Trust has invested a huge amount in British engineering, much of it in the North and North-East, and is now becoming a significant employer in its own right, a process that is likely to accelerate with the potential of a new base at Whessoe Road and the acquisition of our own train. None of this would be possible without our Covenantors and we thank you for your continued support in these exciting projects.

Talking of exciting projects, in TCC 53 we brought you news of the decision to purchase not one but two new boilers; no-one could ever accuse the Trust of lacking ambition; it is bold strategic thinking such as this that will ensure that we remain the premier new-build organisation in Britain, if not the world! To keep this momentum up, however, we need to continue to recruit new Covenantors and make sure that the various 'clubs' are well supported. To this end we are running a special section in this edition of TCC covering the rapid progress being made with the construction of the P2 tender. Ian Howitt's Crofton Works and North View Engineering have made giant strides in the assembly of this essential part of No. 2007 and by the end of the year the tank will be finished and final assembly should be on the cards – to achieve this, however, The Tender Club could use some impetus and we would encourage all of you who enjoy supporting the various 'clubs' to consider signing up to this one to give it a boost. Another club which needs pushing over the line is The Motion Club; when I last looked there were just 30 places left to fill in this vital area of finance and with motion components now being forged and machined it is urgent that we complete the funding package for this area. You all know what to do! Details of how to support The Motion Club can be found on page 34.

Since this is the summer edition of *The Communication Cord* I will, as ever, give a shameless plug for the forthcoming Convention on 12th October. Those who have attended in previous years will attest to the fact that it is always entertaining and the Trustees and Darlington team look forward to welcoming you (and your guests) to this year's event; don't forget the dinner either, a chance to socialise and get to know like-minded folk better with the bonus of an after-dinner speaker who is usually guaranteed to be indiscrete! **TCC**

WHERE DID THE PAST 25 YEARS DISAPPEAR TO? by David Champion

It's hard to believe that it's 25 years since the construction of No. 60163 *Tornado* was officially started by Dorothy Mather, our late President and widow of Arthur Peppercorn, at the then British Steel facility in Leeds. The 'impossible' project took rather longer than we initially anticipated but *Tornado* was finally unveiled to the world's press outside Darlington Locomotive Works on 1st August 2008 – the first new main line steam locomotive to be built in Britain for over 50 years and the first by public subscription.

As many of you will recall, the A1s were designed by Arthur Peppercorn for the London & North Eastern Railway and 49 were built in 1948/49 by British Railways. However, following dieselisation, all were scrapped by 1966. The A1 Steam Locomotive Trust was formed in 1990 to right that wrong and build a brand-new Peppercorn class A1.

And what a 25 years it has been! After 18 years of construction and fundraising (principal sponsor William Cook Cast Products Limited) the new £3 million locomotive was completed in August 2008. *Tornado* was named in honour of the now retired Gulf War veteran RAF aircraft by TRH The Prince of Wales and The Duchess of Cornwall at York station on 19th February 2009.

Frequently headlined in the press and on TV, *Tornado* was the subject of the 2008 BBC documentary 'Absolutely Chuffed: The Men Who Built a Steam Engine' and was undoubtedly the real star of BBC Top Gear's 'Race to the North' which first aired in 2009. Our locomotive went on to receive publicity world-wide for the 'I ♥ S&C' Plandampf-style trains to mark the reopening of the Settle & Carlisle Railway in February 2017 and her 100mph test run on the East Coast Main Line in April 2017 – the first British steam locomotive to reach 100mph for 50 years and the subject of a second BBC documentary 'Tornado – the 100mph Steam Engine'. To the delight of her younger fans, *Tornado* had a starring



Tornado is presented with a 25th birthday cake at Tenby after her arrival with 'The Pembroke Coast Express'.

role in PADDINGTON 2 the movie which was released globally in 2017.

Tornado is now fulfilling the dream of those who helped to build her, hauling main line steam excursions, visiting heritage railways and giving joy to thousands of passengers and linesiders who want to witness the legend in action. You can be part of this by travelling with us, becoming a covenantor or by donation to the 'I ♥ 60163' appeal - helping us to raise the funds to keep the dream alive.

It only remains to thank you in advance for your support. You can find further information on the ways in which you can help support No. 60163 *Tornado* by visiting www.a1steam.com, emailing enquiries@a1steam.com or calling 01325 460163. **TCC**

AI ENGINEERING UPDATE by David Elliott

After the series of boiler repairs required during April and May, the locomotive appears to have settled down and is producing some outstanding performances, having arrived on time or early for the last five trips.

A problem on recent trips has been the injectors wasting water. We have had the exhaust injector off the engine and cleaned and overhauled at DLV, whilst a replacement delivery/combining cone has been fitted to the live injector: this did not completely rectify the situation but since the wasting has been intermittent it has not affected operations. Given that the wasting may have been caused by a partial obstruction in the delivery pipework downstream of the injector, a special set of drain rods has been procured and modified to enable the long delivery pipes from the firebox backhead to the delivery troughs in the front of the barrel to be rodded through. This did result in the removal of a lot of precipitated water treatment, particularly on the exhaust injector side.

It is recognised that heavy dosing of the tender with water treatment can affect the

performance of the injectors. Due to the operating pattern in recent weeks, for the last Bristol job, the engine and coach move to Doncaster; the North Briton and the engine and coach move to Bo'ness, it has been possible to apply all water treatment directly into the boiler by slightly lowering

the water level and inserting the liquid chemicals with the water used to top up the boiler. This can only be done safely if the boiler is allowed to cool between operations. However, the effect has been marked, as both injectors have started behaving properly in the recent past. **TCC**



Routine examinations have to be conducted continuously.

TORNADO ON TOUR by Huw Parker

'THE YORKSHIRE PULLMAN'



Back on the East Coast Main Line and making up time, *Tornado* tears past Claypole.

Tornado enjoyed a very successful period of operation at the Wensleydale Railway during May; the locomotive clocked up over 800 miles in 10 days of operation including hosting the *Tornado Team*, a *Covenanters Train* and saluting the final flying days of the RAF GR4 Tornados as a flight of three jets flew overhead on their farewell tour of UK bases.

The first tour of the summer was 'The Yorkshire Pullman'. The train was successful despite the hold-up at Scarborough caused by an empty water tower and the turntable jamming resulting in a 40 minute late departure which, serendipitously, resulted in the train arriving late enough at York to be able to avoid the chaos on the East Coast Main Line caused by a signalling failure (due to cable theft!), by running via Castleford. Some lively running meant that the train arrived back at the 'Cross in time for passengers still to be able to catch trains home.



'The Yorkshire Pullman' at Peterborough.

Simon Lathlane

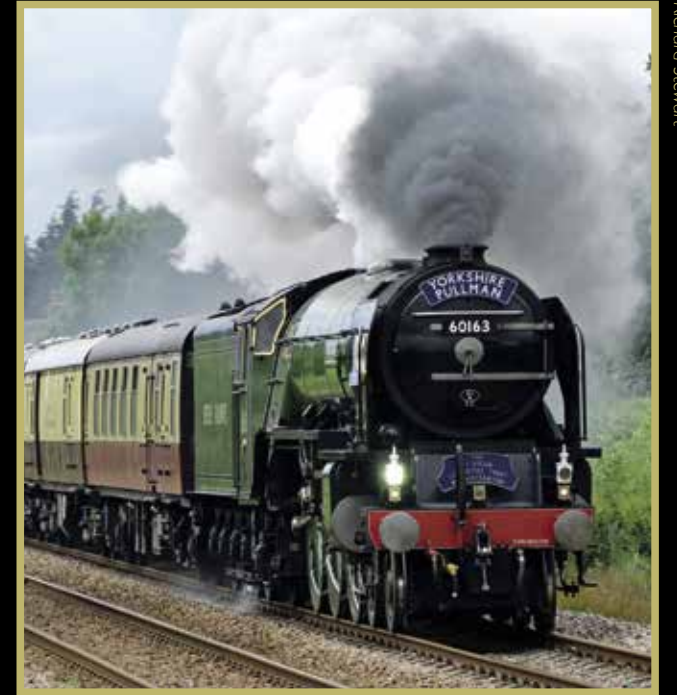
Ben Scott

Alan Weaver



Above: Running under clear signals if not clear skies, the train passes Retford.

Right: The fireman is clearly at work at Weaverthorpe.



Richard Stewart



Above: The crew struggle with the recalcitrant turntable at Scarborough.



Mandy Grant



Steve Hanczar sees the locomotive back at Scarborough.

Mandy Grant



Tornado is ready for the return run.

Mandy Grant

TORNADO ON TOUR by Huw Parker

‘THE SUMMER CORNISHMAN’

Three trips from Bristol followed, with the locomotive presenting several little challenges during her stay. After the first, ‘The Summer Cornishman’, the exhaust injector was removed, taken to DLW for cleaning, inspection and overhaul before being returned to Bristol. After the second train, ‘The Dart & Torbay Express’, injector performance was little better and further investigations and cleaning of the delivery pipes appear to have solved the problem. Performance on the train to Tenby with ‘The Pembroke Coast Express’ and recent ‘North Briton’ the injectors were spot on!



Stephen Clark

Above: ‘The Summer Cornishman’ on the 23rd June was run in anything but summery weather, on a day with overcast skies and occasional heavy rain. With the sea lashing the beach at Dawlish, *Tornado* forges west.

Left: Despite the weather, *Tornado* posted the fastest point to point time between Exeter and Plymouth for or steam to date, completing the section including the Devon banks in under an hour! She is seen here ascending Rattery Bank.



Alan Perryman



Joseph Barnard

Journey’s end, ‘The Summer Cornishman’ arrives in Par.



Stephen Clark

The train is seen again at Dawlish on the return run.

‘THE DART & TORBAY EXPRESS’



Stephen Clark

‘The Dart & Torbay Express’ was run on behalf of Pathfinder Tours from Bristol to Kingswear and back – in considerably better weather than ‘The Summer Cornishman’, *Tornado* runs along the sea wall at Dawlish.



Alan Perryman

Above: Having collected passengers at Kingswear and Paignton, *Tornado* tackles the bank out of the latter station with the return run.

Right: In the glow of evening sunshine, the train retraces its route along the coast at Dawlish.



Stephen Clark

'THE PEMBROKE COAST EXPRESS'



Steve Weston

'The Pembroke Coast Express' on 14th July took *Tornado* back to west Wales. She is seen here after arrival at Tenby, still looking immaculate even after the run from Bristol.



Chris Walters

Above: The DB Cargo crew, Conductor Chris Walters, Fireman Tony Jones, Driver Vince Henderson, TI Tom Rees.

Right: The evening draws in as *Tornado* passes Cogan, Cardiff on her way back to Bristol.



Steve Weston

Above: The train pauses at Carmarthen on the return.



Chris Walters

I ♥ 60163: TORNADO'S 10TH BIRTHDAY APPEAL by Mark Allatt

It's hard to believe that No. 60163 *Tornado* has now been in traffic for over 10 years – and what a decade it has been! Throughout these years we have had many highs and a few unfortunate lows; we have travelled the length and breadth of Great Britain, hauling main line charters and Royal Trains, visiting dozens of heritage railways & centres and making countless appearances in the press, on TV and even in a movie! The nation – and indeed people way beyond our shores – seem to have taken *Tornado* to their heart.

As we all know, *Tornado*'s 10th Birthday year didn't quite work out as planned and although much of the repair costs to our locomotive and loss of earnings were covered by our insurance, unfortunately not all of these costs could be recovered. In response to the many offers of help we received, we decided to establish the 'I ♥ 60163' appeal to help close the funding gap and raise £60,163 from 100 people each donating £601.63 in up to six payments. We have already reached nearly 50% of this initial target. By donating £601.63 to our 'I ♥ 60163' appeal, you will receive:

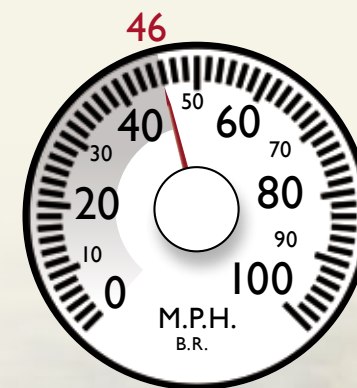
- An exclusive 'I ♥ 60163' car sticker
- Access to view *Tornado* at all reasonable times
- The Trust's newsletters on a regular basis
- The opportunity to attend the Trust's Annual Convention
- A special 'I ♥ 60163' day with No. 60163 *Tornado*
- Your name inscribed on the Roll of Honour at Darlington Locomotive Works.

As you will read in the last issue of *TCC*, in June 2019 The A1 Steam Locomotive Trust placed a £1m order for two new diagram 118a boilers – "an heir and a spare" – for its new Gresley class P2 No. 2007 *Prince of Wales* and a spare for both it and No. 60163 *Tornado*. This will reduce the time out of traffic for each locomotive by around four months, increase the potential revenue earned during each operational cycle and reduce the cost of their overhauls. And by ordering both boilers at once, the Trust has saved a six-figure sum. The first new boiler, to be fitted to *Tornado* during her next overhaul, will be delivered in September 2020 with the second, to be fitted to *Prince of Wales*, scheduled to be delivered from DB Meiningen in July 2021. We have therefore decided to extend the 'I ♥ 60163' appeal to fund *Tornado*'s share of the spare boiler acquisition costs.

Below you can find the form required to donate towards the 'I ♥ 60163' appeal.

Since our 'I ♥ 60163' appeal was launched at our 25th Annual Convention on Saturday 13th October 2018, 45 supporters have generously donated to the fund. With the recent 10th anniversary of *Tornado*'s legendary appearance on *BBC Top Gear*'s 'Race to the North', we would encourage those who have yet to support this appeal to consider coming on board.

For more information, please visit www.a1steam.com, email enquiries@a1steam.com or call 01325 460163.



Let's shift the speed from a sedate 46mph to *Tornado*'s historic 100mph!



Jack Boskett

TORNADO ON TOUR by Huw Parker

‘THE NORTH BRITON’

Alister Moulstone



‘The North Briton’ was our second operation using WCRC and the locomotive performed admirably. It was a pleasure to notice increased confidence in the handling of the locomotive by both drivers and fireman, a very positive experience from both sides.

Above: With the Cumbrian Fells brooding behind her, *Tornado* lifts the train over Lunds Viaduct.

Right: Battling the usual side-wind, No. 60163 forges past Helwith.



Liam Barnes

Top right: Under a lowering sky, the train passes the lonely outpost of Blea Moor Signalbox.

Centre right: ‘The North Briton’ of 20th July found *Tornado* once again pitched against the ‘Long Drag’ of the Settle & Carlisle Railway, another run which demonstrated the locomotive’s disdain for hills with another fine performance. Battered by a side wind, the train crosses Ribbleshead Viaduct.



Maurice Burns



Tom Marshall



Brian Sherrington

Tornado brings the train into Carlisle Station.

TORNADO ON TOUR by Graeme Bunker-James

'THE ABERDONIAN'

With two of our new 'Aberdonian' summer trains already completed these new tours are working out very well. The first tour on 1st August didn't get off to the best of starts as it was caught up in severe delays at Edinburgh Waverley caused by an errant Caledonian Sleeper train. These things can't be helped! Once underway *Tornado* was in complete control of the operation and driver Steve Chipperfield was soon making inroads into the late start. At one point we were over twenty minutes late but this had been reduced to single figures on the approach to Perth. The running was excellent via Linlithgow and Stirling, including a record climb north of Gleneagles. This was an unexpected diversion away from Fife caused by a test train using the planned route.

The rest of the run went to plan but with all the earlier disruption affecting services across Scotland our arrival at Aberdeen was slightly delayed at around 15 minutes. Special arrangements have been made with Network Rail and WCRC to allow the locomotive and support coach to run from the station directly to the former Ferryhill Depot and turn and service there, using the newly restored turntable. This allows the train to be serviced before being drawn out to the sidings to await the return journey.

Our return journey got underway punctually and *Tornado* stormed out of Aberdeen with Peter Walker in the driver's seat. The climb was on course to be something special until adverse signals were spotted near Newtonhill. The cause was a signaller having gone home unwell and closed the signal box. This meant we couldn't travel as closely behind the train in front so everything preceding Dundee was delayed. Once clear of the proceeding train at Montrose Peter set the loco for Dundee and it was a pleasure to run along this staggeringly scenic route. Never far from the sea, as *Tornado* reeled off the miles, Dundee came into view and the railway is almost running in the streets before plunging into a tunnel and arriving at Dundee for water.

Beyond Dundee our running was a little bit hit and miss due to other late running services but once on the Fife Coast the locomotive began to eat into the late running at a prodigious rate. We caught up a local service but Network Rail helpfully popped that in a loop near Inverkeithing allowing *Tornado* to storm up the stiff climb onto the Forth Bridge into the last of the setting sun. A fast run into Haymarket to set down passengers and then on into Waverley for a 20 minute late arrival. A little frustrating but none of it down to the locomotive.



Piper Ross Inglis heralded *Tornado's* arrival in Dundee.



'The Aberdonian' of 1st August runs into Carnoustie.

Our second trip started with more challenges, with a flooded tunnel just west of Edinburgh. Great efforts by our WCRC crew and Network Rail meant only a 10 minute late start and once clear of the Haymarket pick up green signals beckoned us on and we were back to time by Thornton. The rest of the second trip went pretty well to plan throughout, some sparkling running in true ECML express style with arrival into Aberdeen and back into Edinburgh that evening on schedule.

There are two more 'Aberdonian' trips to run before the end of the year. Do try and get on board if you can, or perhaps in 2020 when they will run again. **TCC**

Angus Thompson



Some of the crew from HMS Prince of Wales joined the train.

Michel Denholm



No. 60163 brings the empty stock into Edinburgh Waverley for the start of the run on 8th August.

Right: Running well, *Tornado* is seen near Dundee.



Michel Denholm

Drew Adam



Among fields of golden grain, *Tornado* passes Redcastle.

Craig Doogan



Bathed in evening light, the train heads back to Edinburgh.

THE A1 STEAM LOCOMOTIVE TRUST IS YOUR LEGACY

You can ensure that Peppercorn class A1 No. 60163 *Tornado*, Gresley class P2 No. 2007 *Prince of Wales*, our yet-to-be-named Gresley class V4 No. 3403 or any other on-going project at the Trust, has a secure future for generations to come by leaving a legacy to The A1 Steam Locomotive Trust in your Will. When writing your Will, if your wish is for the legacy to go to a specific initiative of the Trust, please specify this and we will of course respect your wishes.

Donations via legacies during the almost 30 years that The A1 Steam Locomotive Trust has been in existence have been relatively limited when compared to other types of donation – although the Trust has always been extremely grateful for any gifts received. If legacy donations to the Trust were to reach the same level as those for the top UK based charities – where it represents around 40% of fundraising income – the Trust would raise an additional £80,000 per year. This would go a long way towards funding a five-year overhaul for *Tornado* or *Prince of Wales*.

Many have the Trustees have already made provision for No. 60163 *Tornado* and No. 2007 *Prince of Wales* in our Wills by leaving a legacy to The A1 Steam Locomotive Trust. If you would also like to support the Trust through a legacy, then please take a look at www.a1steam.com or contact our Legacy Coordinator who will talk you through the process on legacy.coordinator@a1steam.com or 01325 460163.

How has Legacy funding been used by the Trust?

Legacies helped the Trust during the construction of No. 60163 *Tornado* by funding specific components and equipment in Darlington Locomotive Works. Since completion, generous gifts have helped fund the conversion of BR Mk I E21249 into *Tornado's* support coach and contributed towards the repayment of loans and the £500,000 bearer bond.

What will my Legacy go towards?

A bequest left in your Will, will not be used for the general day to day expenses of running No. 60163 *Tornado* or No. 2007 *Prince of Wales* on the Network Rail main line and heritage railways. If you do not state a specific



Bob Hughes

Newly painted in apple green, *Tornado* outside Darlington Locomotive Works, 2015.

use, we will devote your gift towards the funding of *Tornado's* next major overhaul. If, however you would like your legacy to be used for something more specific, you will need to talk to our Legacy Coordinator in order to realise your contribution and by doing this we will be certain that your gift will be used for a specific purpose.

To whom do I make my bequest?

If the value of your estate is above a nil rate band threshold value, then it will be liable for inheritance tax (IHT). Any gifts made to UK registered charities are exempt from IHT and further tax savings can be made if you gift more than 10% of your net estate to charity as the IHT tax rate reduces to 36%. A gift to The A1 Steam Locomotive Trust would be classed as a charitable gift and therefore, attracts the favourable tax rules. If your estate is chargeable to IHT, specialist advice should be sought. The A1 Steam Locomotive Trust is the organisation that holds the funds for fundraising projects and has trustees that can accept bequests for any purpose linked to it. The Trust is governed by a Council and its Trustees will ensure your wish is fulfilled.

How do I make a Will?

You could simply fill out a form from a major stationer or online but if your

affairs are a little more complex it would be much better to take advice from a solicitor. It costs between £150 and £200 to make a Will.

Can I update my existing Will?

Yes, you will need to produce a document called a codicil; it is not that complicated and suitable forms are available from www.a1steam.com or from our Legacy Coordinator.

What wording do I use?

It depends on how you wish to divide up your estate. Details are available on www.a1steam.com or from our Legacy Coordinator.

So, please remember The A1 Steam Locomotive Trust in your Will and you too can help to ensure that No. 60163 *Tornado*, No. 2007 *Prince of Wales*, No. 3403 and our subsequent locomotives have a secure future on the main line for generations to come. **TCC**



Mandy Grant

TORNADO TOUR DIARY - 2019

Below are the future operations *Tornado* is confirmed to be involved in. More details will be published on www.a1steam.com as trains are finalised. Contact details for tour companies are below.

- **Saturday 31st August** – 'The Aberdonian' – Edinburgh to Aberdeen and return – bookings through Tornado Railtours
- **Saturday 7th September** – 'The Aberdonian' Edinburgh to Aberdeen and return, bookings through Tornado Railtours
- **Saturday 28th September** – 'The North Briton' – London and East Coast stations to Carlisle via the Settle and Carlisle Railway and return (re-scheduled from 17th August) – bookings through Tornado Railtours
- **Saturday 5th October** – 'The Pennine Explorer' – Leicester to Carlisle via the Settle and Carlisle Railway and return with pick ups at Loughborough, Derby, Chesterfield and Sheffield – bookings through Tornado Railtours
- **Saturday 2nd November** – 'The Illuminati' – West Midlands to Blackpool Illuminations – bookings through Tornado Railtours
- **Saturday 7th December** – 'The Christmas Bath and Bristol Express' – West Midlands to Bath and Bristol Christmas Markets – bookings through Tornado Railtours
- **Sunday 8th December** – London to Lincoln Christmas Market – bookings through Steam Dreams
- **Saturday 14th December** 'The Christmas White Rose' – London to York and return (*Tornado* from London to York, Union of South Africa from York to London) – bookings through The Railway Touring Company

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

Tornado Railtours
01325 488215
www.a1steam.com/railtours

Pathfinder Tours
01453 835414
www.pathfindertours.co.uk

The Railway Touring Company
01553 661 500
www.railwaytouring.net

RAILTOURS by Siobhan Osborne

'The Christmas Bath and Bristol Express' - Saturday 7th December - We are pleased to announce a festive train for December running from Wolverhampton, Tame Bridge Parkway, Birmingham New Street, Solihull, Dorridge, Leamington Spa and offering a choice of either spending a couple of hours in either Bath or Bristol. There has been great interest around this train which gives passengers the opportunity to enjoy Bath's Christmas market or shop till they drop in Bristol. First Class passengers can enjoy a four course Christmas Dinner and seasonal favourites will be available in the buffet car.

The Illuminati - Saturday 2nd November - Join *Tornado* from the Black Country to Blackpool Illuminations, famed as the greatest free light show on Earth! Picking up passengers in Stafford and the Potteries,



Robin Coombes

this will be the engine's first trip to Blackpool. Steam hauled from the start, *Tornado* will leave the train at Preston on the outward journey because there is nowhere to turn and service the locomotive at the seaside resort. But

fear not - No. 60103 will be gleaming at the front of the train in Blackpool station for the return journey! We are delighted to offer a very special Champagne Afternoon Tea on this tour. **TCC**

DONATE WHILE YOU SHOP - EASYFUNDRAISING by Chris Walker

Users of Easyfundraising to support the Trust should please note that the relationship with Amazon is changing. Rather than Amazon donating via Easyfundraising, they will now do so via their own Amazon Smile process. The A1 Steam Locomotive Trust is registered as a charity with Amazon Smile so please ensure that next time you use Amazon, you opt to join Amazon Smile and select the Trust to benefit from anything that you buy.

For anyone who doesn't use Easyfundraising but does use Amazon, please help by selecting the Trust. Just type 'The A1 Steam Locomotive Trust' into the search box then click to select when it is displayed as the result.

Please contact us at enquiries@a1steam.com if you have any problems.



Graham poses with Big Boy No. 4023 and 'Centennial' diesel No. 6900 on permanent display at Omaha, Nebraska, 1st May.

27th September 1825. A day etched in railway history. Some would go further and argue it to be the dawn of the modern world. Any self-respecting railway enthusiast, particularly one living in the North East of England, would readily recognise it to be the opening day of the Stockton and Darlington railway.

How about 10th May 1869? Er ... struggling a bit with that one perhaps? Yet in terms of modern history, arguably an equally significant event on the world stage. On that date, on a remote, windswept plain in north west Utah, USA, construction crews met and ceremoniously drove in the final, golden spike to signify completion of the 1,776 mile long first Transcontinental Railroad. At a stroke, east and west was united and the Union of the American continent, still recovering from the horrors of civil war, was cemented.

As we here look forward a mere six years hence for Darlington's big 200th anniversary date, over there America has just finished celebrating their own special 150th anniversary – and I took on the onerous role of being TCC's roving reporter to witness it!

Although the so called 'Spike 150' was the main focus of attention, by the very fact of its incorporation in order to bring the trans-continental railroad into being, the modern day Union Pacific railroad was also marking its own 150th birthday – and it chose to celebrate in a most spectacular way by putting back into working order an example of one of the most iconic steam locomotives the world has ever seen: the 4-8-8-4 Mallett heavy freight hauler, known to all by the simple sobriquet, 'Big Boy'.

Remarkably, despite no less than eight Big Boys surviving out of a relatively modest production build of 25, none has ever steamed since the fires were dropped on the last working examples in 1959. 2019 was therefore going to be an extra special celebration (and the REAL reason for my western adventure!).

Thus it was that, with a like-minded railroad trip buddy, we

landed at Chicago on 27th April, picked up our hire car and headed west – taking in Big Boy No.4006 at the National Museum of Transportation in St Louis and Big Boy No.4023 in Omaha, Nebraska along the way. But the real excitement lay ahead at Cheyenne, Wyoming on the afternoon of a lovely, sunny 2nd May.

A classic frontier town, Cheyenne is at the eastern end of Union Pacific's crossing of the American Rockies and the challenge of surmounting the famous Sherman Hill. This is the section of the route that the Big Boys were built for, to take the gargantuan war time freight consists over the mountains to Ogden, Utah where the Wasatch mountain range forms the equally precipitous descent at the western end.

It is highly serendipitous therefore that Cheyenne is where the Union Pacific heritage fleet is based, indeed occupying a surviving relic of the steam operations of old in the form of a cheese wedge section of the old steam roundhouse at Cheyenne that the Big Boys called 'home' in the 1940s & 1950s. Across the way, in nearby Holiday Park, Big Boy No.4004 has been the town's official



No. 4014 basking in the evening sun at Cheyenne, 2nd May.



Above: Golden Spike celebrations at Promontory summit, Utah, 10th May.



Above: Replica Central Pacific locomotive No.60 Jupiter, 10th May.

Left: Union Pacific's celebrations at Ogden, Utah, 9th May.

reminder of its famous past for over 50 years.

Yet it was another member of the class, fetched back from Los Angeles in 2014, that was now the centre of attention. Our temporary membership of the Union Pacific 'fan club' informed us that, despite the five years' timescale for the overhaul, it was all going down to the wire and the first tentative moves in the yard had only just been undertaken (sound familiar?). We duly found ourselves gazing out at glistening Big Boy No. 4014, gentling exuding steam in the low evening sunshine, as she prepared to undertake her only proving run prior the main event.

Two days later, she set off over familiar territory, accompanied by long time Union Pacific heritage flag bearer, 'Living Legend' 4-8-4 No.844. We were joined by literally thousands of railfans to follow the so called 'Great Race to Ogden' (more of a gentle stroll, if truth be told). Imagine the sort of interest levels generated by *Tornado's* first runs – and then multiply it be ten ... or maybe twenty?

Having undertaken suitable reconnaissance the day before, we made sure we were in position to capture the train closing in on Sherman Hill summit itself. If truth be told, it was a breeze for the locomotives with such a small train but it rates highly on the iconic scale and I'd travelled over 5,000 miles to see it. For effort and personal fulfilment alone, it's a candidate for 'shot of a lifetime'.

We took some time out after that to explore Wyoming's other scenic delights and so were next reunited with the Big Boy at Ogden on 9th May for Union Pacific's own celebrations. Sensibly avoiding the actual 150th date itself, the centrepiece of the event was the symbolic face-to-face meeting up of Nos. 4014 and 844, in a homage to the classic photographic image of the 1869 Golden Spike moment.

Having come so far, it would have been churlish not to join the celebrations on 10th May itself at the 'golden spike' spot at Promontory Summit. These days it's a recreated railway, being

bypassed as a working rail route over 100 years ago. With a mile of track re-laid, two replica locomotives – Central Pacific No.60 'Jupiter' (wood burner) and Union Pacific No.119 (coal burner) – regularly meet up for the tourists, cow catcher to cow catcher, just as in 1869.

Two hours of formal speeches, re-enactments and song & dance culminated in a firework display (in broad daylight!), through the smoke of which appeared a flight of four USAF F-35 'Lightning' aircraft as the last note sounded, to set a spine-tingling seal on an historic day.


America had truly celebrated its railway heritage with aplomb. And railfans the world over now have an operational Big Boy to celebrate into the bargain. Long may she (he?) give pleasure to generations of steam lovers the world over. I think we can all relate to that. **TCC**



Local crowds greet the train at Medicine Bow, Wyoming, 4th May.

Featuring new
100mph steam locomotive
No. 60163 Tornado
Star of Top Gear and Paddington 2

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Stephen Millership

• SHED NOTICES •

P2 FUNDRAISING FOR MASON IS... A PIECE OF CAKE!

Mason Ritchie (featured in TCC 53) has been raising funds for the Trust during the holidays for the P2.

So far he has baked biscuits with mum and sold them at jiu jitsu and his dad's work. He also made some cakes last week and asked for donations towards the construction of the P2. Following a catch up with David Elliott when *Tornado* was in Paignton (where David



told Mason about the RHDR where his love of steam began) the family has booked a trip there to ride on the miniature railway in August which Mason is really looking forward to.

Mason prepares to head off to sell his wares!



Graham and his fellow team members.

Steve Flint

THE GREAT MODEL RAILWAY CHALLENGE 2019

Our Quality and Certification Advisor to the Board, Graham Nicholas, has indulged in his 'other' passion of model railways by getting together a team of fellow modellers to compete in this year's 'Great Model Railway Challenge' programme on Channel 5. Graham and his four colleagues competed under the name 'Team Grantham', a reference to Graham's extensive exhibition model of Grantham railway station as it was in the golden age of the 1930s streamliner trains.

Filming for the series is complete and the transmission dates have now been announced. Graham is of course not at liberty to say how Team Grantham got on in the competition(!) but you can find out yourself by tuning into the episode that airs on Friday 11th October at 20:00hrs on Channel 5. Graham can advise that he did manage to work a model of *Tornado* in at one point so look out for that! Go Team Grantham!

KEEPING *TORNADO* ON THE TRACKS *by Mark Allatt*

Keeping No. 60163 *Tornado* in tip-top working order is an expensive business as we are constantly being reminded! Whilst the profit from operating our programme of main line tours and *Tornado's* hire fees from heritage railways and working for other rail tour promoters currently covers her day-to-day and year-to-year maintenance costs, they do not at present generate a sufficient surplus to fund her five and ten year overhauls, conservatively estimated at around £500,000 each. Therefore, it is vital for us to continue to maintain (and hopefully grow) *Tornado's* on-going Covenant income.

The last few months have seen our net number of Covenantors continue to grow a little. Hopefully the positive profile generated by the 'I ♥ S&C' Plandampf, 100mph test run, PADDINGTON 2 movie and our excellent 2019 railtours programme will continue to help to grow this number.

I would therefore urge all our existing AI Covenantors to help us to recruit new supporters and for P2 Covenantors (around two-thirds of whom are not also

AI covenantors) to come on-board if they are able to. And perhaps each of our existing Covenantors could pledge to recruit a friend or colleague? **TCC**



Rob Morland

How it all started for *Tornado* and The AI Steam Locomotive Trust - David Champion presents Mark Allatt with his original hand-written notes detailing how the construction of a new main line locomotive could be financed, for the price of a pint a week!

For more information on how you can help to keep Britain's only new-build main line steam locomotive on the tracks visit www.a1steam.com, email enquiries@a1steam.com or call **01325 460163**.



A superb study of *Tornado* hauling 'The Aberdonian' on 8th August, crossing the Forth Bridge on her way north.

AI PROFILE - No. 60125 SCOTTISH UNION by Phil Champion



Mike Mountford

Sporting a Diagram 117 boiler, No. 60125 is seen at King's Cross on 9th April 1962.

Although numerically quite early in the AI listing, No. 60125 came after well over half the class was introduced. Twenty-eight were in use already and, as Doncaster works No. 2043, it was one of four to enter traffic in April 1949. Initially allocated to Doncaster shed, it proved to be one of a number of AIs which were frequently reallocated. Its appearance was the now customary apple green with black and white lining plus a plain chimney. The first recorded trains were goods on 18th February 1950. A sighting at West Hartlepool on 12th January gives no details of the train.

After just over a year at Doncaster, No. 60125 was transferred to Copley Hill. It covered most of the length of the east coast main line; noted at King's Cross on 16th August 1950 and at Edinburgh Waverley on 10th August 1951. Several changes to the engine took place. The Flaman speed recorder was removed and a lipped chimney replaced the plain original. Repainting into BR blue occurred in January 1951, one of four that month. Well over half the class had been dealt with – 30 by the end of the previous year. At the same time it was given a name in the LNER tradition of racehorse names; *Scottish Union* was the winner of the 1938 St. Leger race – an appropriate choice for a Doncaster-built locomotive. Again No. 60125 was one of the later ones to be dealt with as two-thirds of the class had been named. Towards the end of 1952 *Scottish Union* was one of a trio fitted experimentally with a modified inside connecting rod. A repaint of two AIs into BR green in October included No. 60125

and these were the 40th and 41st so treated. A short-lived move to Grantham took effect on Friday 15th May 1953 but on 6th June No. 60125 was back at Copley Hill. Records from July show it passing Doncaster on the 21st with the 12:05hrs King's Cross-Glasgow and hauling the

13:18hrs King's Cross-Leeds the next day. However, an entry for 21st August says it failed at Doncaster with the up 'Queen of Scots'. 2nd May 1954 saw a move back to Grantham. At the end of 1954 and up to next summer we have a number of records of *Scottish Union* on the down



Peter Townend

No. 60125 on the Up 'Queen of Scots' passing Ellers Crossing in August 1953.

'Flying Scotsman' entering Newcastle. Also, on 5th February it hauled up 'Flying Scotsman' from Edinburgh to Newcastle while on 6th August it brought the down train into Newcastle and returned on another namer, 'The Heart of Midlothian'. Around 1956 the smokebox number plate and handrail were transposed.

An examination of detailed records from September that year until January 1957 shows a number of East Coast trains hauled quite regularly, 05:50hrs and 06:45hrs King's Cross-Grantham, 10:20hrs King's Cross-Leeds, 15:10hrs and 17:25hrs King's Cross-Newcastle, 20:20hrs King's Cross-Edinburgh and 23:45hrs King's Cross-Newcastle. In fact, on 16th June 1957 No. 60125 was transferred to 'Top Shed'. As well as working as far as Newcastle it also worked off the main line, as evidenced by the 16:21hrs King's Cross-Cambridge on 26th October. It was during 1957 that *Scottish Union* became the first of three AIs to reach the 'ton' and have this backed up by a detailed log; on a date unpublished, driver Carling of Copley Hill shed took it to 102mph on an 08:30hrs 'extra'.

Reallocation back to Doncaster came on 6th January 1958. Four months afterwards the later BR crest was applied to the tender. Workings are characterised by the 13:12hrs Leeds-King's Cross on 12th April 1959 and the 13:40hrs King's Cross-Edinburgh on 20th July the following year. A Smith-Stone speedometer was fitted onto one of the rear driving wheels. In January 1962 a Thompson diagram 117 boiler was fitted, this being characterised by the (non-banjo) dome being moved further forward. Trains that year were mostly passenger with trains to and from Leeds, a train for Hull from the capital on 17th February, and a number of references to servicing on Gateshead shed indicating runs to Newcastle. A contrast in working was shown on 7th November with the hauling of a brake van in the down direction from Newcastle at 09:30hrs followed by the 18:50hrs arrival back with the important up seed potatoes run. A local train worked was the 17:39hrs Grantham-Peterborough on 22nd November. Important passenger trains included the up 'Yorkshire Pullman' from Doncaster to the capital on 18th March plus the 12:10hrs King's Cross-Newcastle for the Tyne Commission Quay on at least five occasions. Goods featured too, perhaps more so with increasing dieselisation. A class 7 goods was worked from Tyne yard to Tweedmouth on 3rd October while eight days later an up light engine working to King's Cross was followed by down class 4 goods.

After a life working along the main line



Bill Reed

No. 60125 waits to be called into the works for a general repair in September 1958.



Cedric Clayson

Scottish Union is seen at Grantham on New Year's Day, 1962.



GN Railwayana

In 2016 *Scottish Union's* smokebox numberplate came up for auction at Great Northern Railwayana.

and to West Yorkshire No. 60125 was withdrawn on 4th July 1964. It was the 18th to be condemned. It had been fitted with eight different boilers. The following month *Scottish Union* was sold for scrap to Cox & Danks of Wadsley Bridge and it was last noted on the 23rd lying withdrawn at Doncaster shed.

This history was compiled by Phil Champion based on a database compiled by Tommy Knox and with reference to the RCTS book "Locomotives of the LNER Part 2A" as background **TCC**



Cedric Clayson

Scottish Union at Grantham again, this time on 18th April 1963.

P2 ENGINEERING UPDATE *by David Elliott*

General

It has been a very busy period for No. 2007 *Prince of Wales* as the cladding and its jig have been removed so that the motion brackets and leading boiler support can be fitted and to provide access for pipework to be fitted. Work on the tender is progressing at a good pace with the frames and base plate at I D Howitt, at Crofton, and the wheelsets at South Devon Railway.

Frames

The left-hand motion bracket has been delivered by North View Engineering Solutions, however two non-conformances have been identified in Daniela Filová's inspection. The bracket has been returned for rectification but should return soon. North View have also made good progress with the ten spring brackets.

Pony truck

Daniela has completed the FEA on the pony truck and all appears to be well. Her report will be reviewed and sent to Ricardo Rail for approval before we order manufacture. However, I am sufficiently confident that we can request fabrication quotations now.

Wheelsets

Work is continuing at Timsons with the pony truck machining. The final tender axle and wheels have been sent to South Devon Railway Engineering for assembly, kindly delivered by Hunts in our dedicated, curtain-sided trailer!

Boiler

On 13th June we signed a contract for Meiningen to supply two boilers. The P2 boiler is due for delivery in early July 2021 which fits well with the project plan.

Major boiler fittings

The boiler prices included two sets of superheater elements and machining and fitting of regulators to both of them. Arrangements will be made to send Meiningen the regulator castings in due course.

Cylinders

The cylinder assembly model has been rebuilt so that it works more reliably and I have started detailing it including welds so that we can seek quotes for construction. We are on the cusp of ordering steam chest cover patterns. We are currently seeking best and final offers for the cast steel steam passages for the cylinder block. David Elliott is continuing with detailing the welds on the cylinder block so that we can seek quotes. The cylinder steam chest cover patterns are being manufactured by pattern maker John Hazlehurst of Swineshead, Lincolnshire.



Daniela Filová

Progress on the frames and pipework runs.



David Elliott

The team at Darlington polished the driving wheel rims to a mirror finish.



David Elliott

Superheater elements at Darlington Locomotive Works.



Motion photos Robert Stephenson



Stages in forging the first coupling rod at Robert Stephenson's works.

Motion

Forging of the first coupling rod has just started at Stephenson Engineering at Atherton and the equipment and their new staff appear to be working satisfactorily. Daniela Filová has completed a drawing of the return cranks which drive the valve gear and will be requesting forging and machining quotes shortly.

Pipework

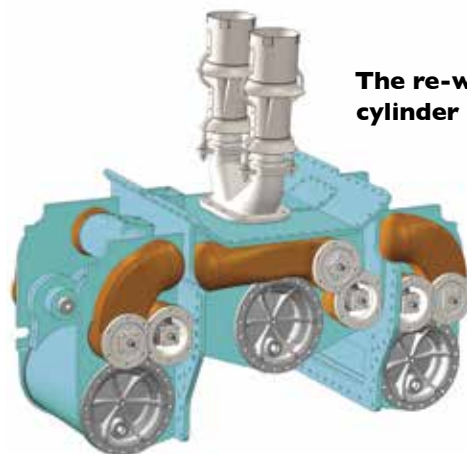
Ian has continued with vacuum pipework and is presently installing the DV2 air/vacuum proportional valve and its associated isolating valve. Alan Parkin has been instructed to model the remaining air and steam pipework through the frames having demonstrated previous skill in this with the electrical trunking situated between the frames.

Right: Vacuum pipe brackets.



Ian Matthews

David Elliott



The re-worked cylinder CAD.

Brake rigging

All the small brake rigging parts for the locomotive are complete and the bearing castings for the brake cross shafts have been ordered. We have all the pull rods, and the brake blocks are due for delivery. Apart from a few cotters and the air brake cylinders, we have all the engine brake rigging delivered or nearing completion.



Brake rod sequence: Bob Hughes



Above: Stages in machining one of the brake rod unions.

Below: Brake shaft bushes.



David Elliott

Cab

Ian Matthews has made good progress and almost completed the cab seat cubicles. Alan Parkin has completed the 3D modelling to fit the latest version of OTMR (On Train Monitoring and Recording) into the firemen's side seat cubicle and extending under the fireman's footstep, which much to the delight of Rob Morland will allow for a significantly larger input/output auxiliary electrical panel.

Tender

The tender base plate has been advanced to the point where it has been delivered to Crofton for Ian Howitt to pre-fit to the frames. It should be there for a fortnight after which it will return to North View to have the tank built up on it (see the separate tender special for details about its progress)

Electrical

We expect to be in receipt of the final externally sourced parts for the belt driven alternator shortly which will permit assembly and testing. Alan has produced manufacturing drawings for both vee and flat belt pulleys and these have also been ordered - the two types of pulley are required to enable the alternator to be fitted to the tender or the support coach). Alan has also completed design on the upsized battery boxes and associated trunking which Ian is presently fabricating out of laser profile stainless steel kits.



Battery boxes fabricated by Ian Matthews.



Daniela Flood

David Elliott



Handrails

With the receipt of the handrail knobs from Ian Howitt, Ian Matthews is making good progress in fitting them to the cab and cladding. The stainless pipe used needs polishing and we have hired a specialised pipe polishing machine to perform this task.

Above: The newly fitted boiler handrails.

Left: Cab handrails polished and in position.



Above: Superheater header T bolt.

David Elliott

David Elliott



Air pumps fitted between the frames by Ian Matthews.



David Elliott

"You don't have to be nuts to work here but it helps..." TCC

P2 TENDER PROGRESS UPDATE



The tender frames start to come together at Ian Howitt's Crofton Works.



Brake components ready for fitting to the tender chassis.



The tender tank base plate at North View Engineering.



One of the splashers built-in to the base plate.

Left: Although conditions are cramped Ian Howitt managed to build Tornado's tender in the same space.

Far left: Details of the spring hangers and tender tank brackets.

All photos this page Nigel Facer except where marked



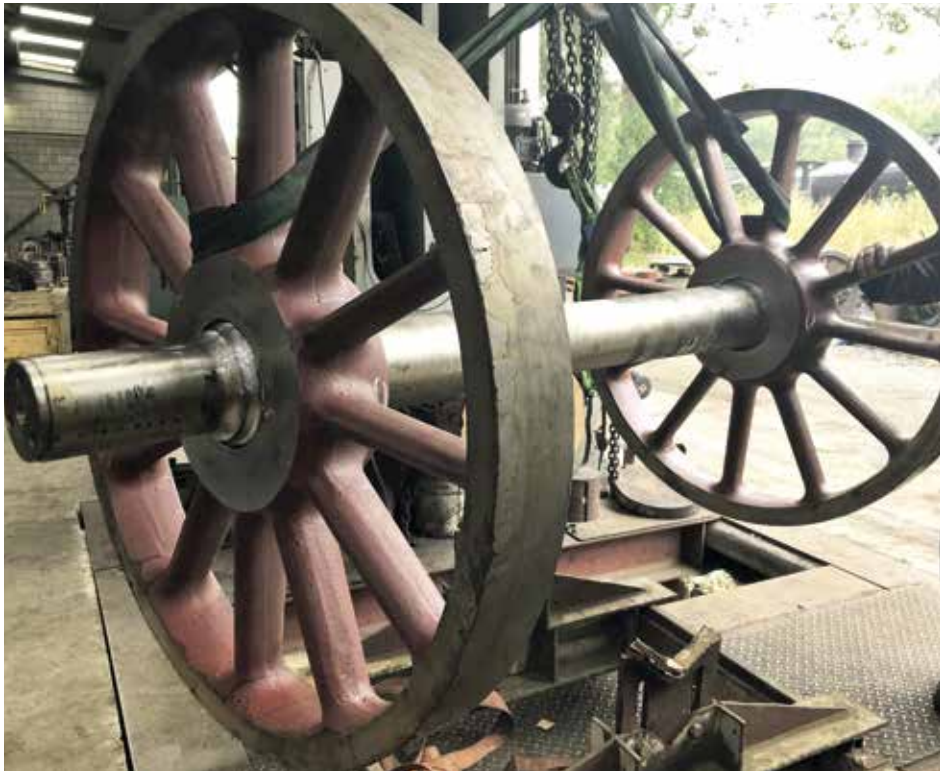
With the sump fabricated (in the space occupied by the water-scoop on No. 2001's tender) the base plate was delivered to Crofton for trial-fitting to the frames at Ian Howitt's works.



Above: The tender axles.

Left: The complete 'kit of parts' for all four tender wheelsets including the pulley for the alternator, ready to be sent to South Devon Railway Engineering.

Above right: Our friends at Hunts Transport sent our dedicated branded trailer to Darlington to move the components to SDR(E).



Once delivered, SDR(E) wasted no time in starting to assemble the wheelsets.

Daniela Flowd

Richard Pearson

Daniela Flowd

FUNDRAISING FOR No. 2007 PRINCE OF WALES by Mark Allatt

Over £3.3m pledged, £2.6m donated and £2m spent of £5m target

Bob Hughes



Gresley class P2 No. 2007 Prince of Wales at Darlington Locomotive Works under construction.

Our project to build Gresley class P2 No. 2007 Prince of Wales continues to make solid progress on all fronts and we are still on target to complete the new locomotive within three years provided we can keep up the current pace of income growth. A huge thank you to all our supporters who continue to give most generously to the project.

Pledges towards building No. 2007 Prince of Wales have passed £3.3m just over five years after assembly officially started at Darlington Locomotive Works. Public interest in seeing a new Gresley class P2 become a reality sooner rather than later remains high and 940 people have already signed up to the 'P2 for the price of a pint of beer per week' (£2.50 per week or more) Covenant scheme since its launch in March 2014. The average monthly donation is now over £17 per Covenantor (including Gift Aid) and the projected monthly income for our P2 project from the monthly Covenant scheme is now running at around 120% of that of *Tornado* – a remarkable achievement in such a short period of time and all thanks to the generosity of our supporters. What is even more striking is that only around 30% of A1 Covenantors (36% of P2 Covenantors) are regular donors to both locomotives,

meaning that the overwhelming majority of the funds are being given by new supporters of the Trust.

In addition to this core scheme, funds have been raised through The Founders Club with over 360 members donated £1,000 each plus Gift Aid – target 100 people, now closed; The Mikado Club, launched in March 2016 with an initial target of 160 members to wheel the engine and extended in May 2017 to 200 members to also wheel the tender - now fully subscribed with 200 supporters pledging £1,000 each plus Gift Aid and therefore potentially raising £250,000; and The Cylinder Club, only launched at our Convention in October 2017, is now also fully subscribed with 100 people having already pledged £1,000 each plus Gift Aid and therefore potentially raising £125,000. The Gresley Society Trust has also sponsored the locomotive's distinctive front-end for which we are most grateful. You can

read in the engineering update where these funds have already been put to good use.

Our order in June 2019 for two new boilers – an heir and a spare – from DB Meiningen makes it more important than even that we reach our 300 members target for The Boiler Club as soon as possible. We have already recruited 180 people to The Boiler Club, each of whom have pledged £2,000 each to fund the boiler meaning 60% of the £600,000 target is now pledged. With the delivery of the boiler for No. 2007 scheduled for July 2021 we need five new members a month – please do consider becoming a member of The Boiler Club if you are able.

April 2018 saw the launch of The Motion Club, established to fund the manufacture of the heavy motion for No. 2007, where we have set ourselves the challenge of raising £210,000 from 175 supporters each donating

£1,000 plus Gift Aid. In just ten days we had already signed up 24 members of The Motion Club, potentially worth £30,000 including Gift Aid – a remarkable achievement thanks to the generosity of our supporters. As of the end of August 2019, we had recruited over 145 members to The Motion Club, with over £175,000 pledged. Although somewhat delayed through no fault of our supplier, you can read on page 25 in *TCC* where work is about to commence in earnest on the heavy motion and we hope to have the first pieces ready for inspection by supporters at this year's convention in October. Let's get this Club over the line by the same time!

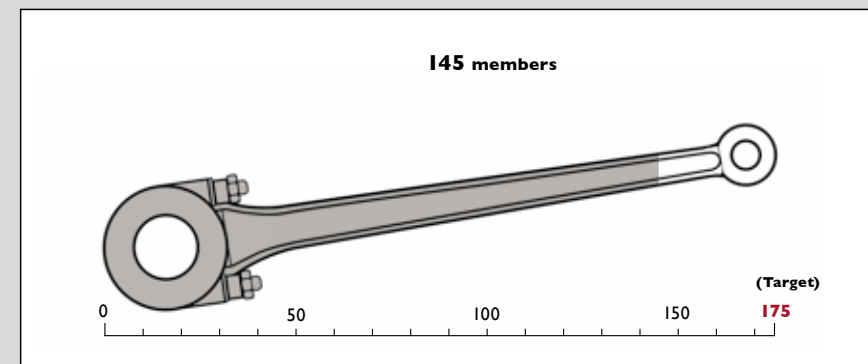
We launched The Tender Club on 8th April 2019 to raise the funds to manufacture No. 2007's tender. We set ourselves the challenge of raising £450,000 through The Tender Club from 250 supporters each donating £1,500 (plus Gift Aid) to the project in up to 15 payments of £100 by standing order. The Tender Club got off to a rather slow start but has now recruited 33 people which is in stark contrast to speed of the tender's construction! As you can read in David Elliott's engineering update, work is progressing rapidly on the tender tank, frames and wheelsets. With a fair wind we should have an almost complete tender behind the engine in DLW just in time for the convention. However, to make this happen we need many more people to get on board The Tender Club, (read more on pages 28, 29 and 37).

Our Dedicated Donations initiative continues to generate substantial income for the project, with around £350,000 to-date from existing supporters sponsoring a variety of components. Our most recent initiative was linked to Father's Day and this brought in a considerable number of enquiries for unusual presents and generated valuable publicity for the project. There are still a considerable number of wheeling-related Dedicated Donations still available for sponsorship, ranging from a driving wheel spoke at £600 (or from £25 per month for 24 months) to a Cartazzi axlebox casting at £1,300 (or from £50 per month for 26 months) to and driving wheel casting & proof machining at £12,000 (or from £200 per month for 60 months) See page 33 for more information about Dedicated Donations.

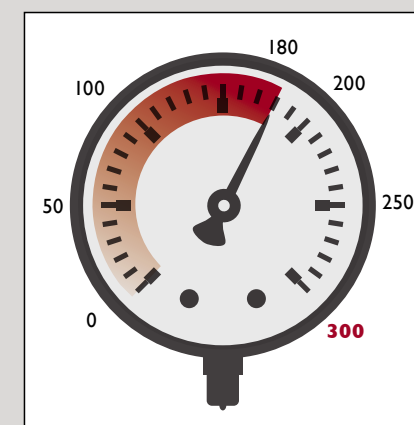
We are delighted with the level of support that the project to build Britain's most powerful steam locomotive has received since its launch. This means over



No. 2007 stands outside Darlington Locomotive Works.



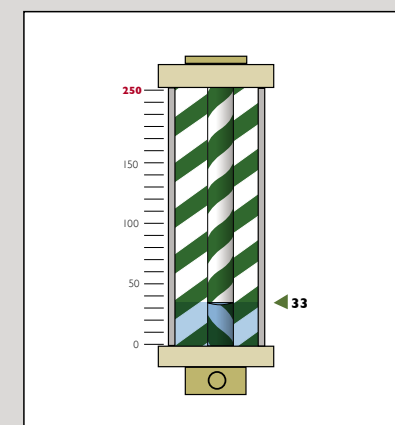
Motion Club gauge - 145 Members.



Boiler Club gauge - 180 Members.

£2m (over 40% of the total required) converted into metal, over £2.6m (over 50%) raised and £3.3m (over two-thirds) pledged.

We now have a rolling chassis and we remain on-track for completion of the new locomotive within three years. However, to maintain this rate of progress we need to raise more than £700,000 per year, which given the nature of the regular donation scheme becomes more challenging as each year passes. Last financial year we didn't quite achieve our budget of £500,000 and so we will have to work harder this year to maintain our momentum.



Tender Club Gauge - 33 Members.

We would encourage all our supporters who haven't yet contributed to this exciting project to help us to meet these deadlines by becoming a monthly 'P2 for the price of a pint of beer a week' Covenantor, joining The Boiler Club, subscribing to The Motion Club, becoming a member of The Tender Club or taking out a Dedicated Donation. It's time to get on-board!

For more information on how you can help to build Britain's most powerful steam locomotive visit www.p2steam.com, email enquiries@p2steam.com or call 01325 460163. **TCC**

David Elliott/SLT

Help Britain's most powerful steam locomotive to build a head of steam

**Join The Boiler Club today and help us to complete
No. 2007 Prince of Wales in record time!**

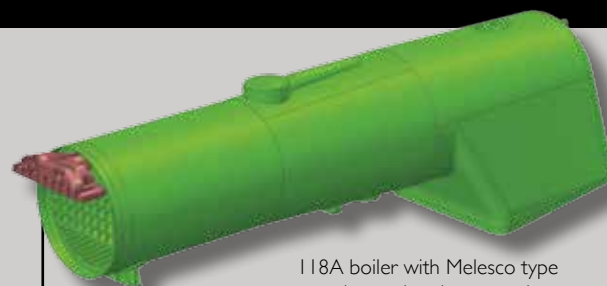


The boiler is the beating heart of a steam locomotive and to keep the construction of No. 2007 *Prince of Wales* on schedule for completion in 2021, we need to place the order for the boiler in 2019 for delivery in January 2021. We have established The Boiler Club to fund the construction of *Prince of Wales*' boiler. It is our desire to leave No. 2007 *Prince of Wales* debt free upon completion and therefore our aim is to raise at least £600,000 for The Boiler Club from 300 supporters each donating £2,000 to the project (in up to 40 payments of £50 by standing order) – we are over half way there, having raised £440,000 so far!

Special benefits for members of The Boiler Club:

- Opportunity to buy ticket (seat already reserved) on one of No. 2007's first main line trips
- Reasonable access to No. 2007 at all times
- Opportunity to buy exclusive Boiler Club badge
- Opportunity to join one of the teams building No. 2007
- First choice of other components to sponsor
- Special limited edition version (signed/numbered) of the first official painting of No. 2007 *Prince of Wales* with No. 60163 *Tornado*
- Special Boiler Club day with *Tornado*.

**Together we can build this remarkable
locomotive - join The Boiler Club today!**



118A boiler with Melesco type
superheater header as used on
Tornado

No. 2007's boiler in detail

- Use of diagram 118A *Tornado* boiler with detailed modifications to improve overhaul life
- Interchangeable with *Tornado* boiler
- *Tornado* boiler is 17in shorter than P2 boiler – No. 2007's smoke box will be extended within the cladding
- 250psi of No. 60163's boiler will be retained to improve economy and increase maximum power.



2007 PRINCE OF WALES
Building Britain's Most Powerful Steam Locomotive

For further information please visit www.p2steam.com email enquiries@p2steam.com call 01325 460163 or write to The Boiler Club, P2 Construction Fund, Darlington Locomotive Works, FREEPOST RTJS-XECR-XARL, The A1 Steam Locomotive Trust, Hoptown Lane, Darlington DL3 6RQ

VOLUNTEERS! by Mark Grant

As you may be aware, the vast majority of The A1 Steam Locomotive Trust is made up of volunteers. We cover most areas of the Trust's operations - Trustees, Advisors, Support Crew, On-board Stewards/Merchandisers, DLW Open Day Staff, Social Media Moderators etc, etc. We cannot possibly run this type of organisation without our dedicated volunteers - long hours, staying away from home, even working from home into the small hours!

However, we generally have great fun and have made many friends who all share the same passion.

We've been involved with several main line trips - 'The Border Raider' in April, 'The Ynys Mon' in May, 'The Mad Hatter' also in May, 'The North Briton' in July and of course our summer 'Aberdonian' tours. The latter are providing a challenge as we have very few people north of the border.

If you fancy helping out when we're up there, please let me know.

Some of our team were at the Wensleydale Railway in May/June promoting our merchandise (I think we utilised most of the stations along the line!) along with some PR work and Support Crew duties. We were made most welcome there and the weather was fairly kind to us (an odd shower every now and then meant a quick cover up of our goods!)

A few of our established volunteers have now had to cut back (in some cases to zero) the time they can spend with us - for various reasons. However, we have taken one or two new people on and I hope they will get into the swing of things shortly.

I would like to encourage anyone who would be interested in helping out - particularly on the trains, to let me know. We struggle in certain areas, as mentioned

above, to staff the trains. You will be fed and watered and enjoy good company with like-minded folk. You'll never know what you are missing until you've given it a go! **TCC**



**Mark Grant, Volunteer
Coordinator - contact:**
mark.grant@a1steam.com

P2 DEDICATED DONATIONS UPDATE by Mandy Grant

Mid-June 2019 to early August 2019 has seen a steady increase in component sponsorship, with nine individual components being sponsored, raising a further £1,320.00 before gift aid. This brings the total number of components sponsored to 540!

Components sponsored include;

- 3x Brake Lever Pins
- Drag box wing plate RH machining and drilling
- 3x 1" BSW driven bolts and nuts
- Driving LH coupled wheel casting and proof machining - Spoke 18
- Lubricator heating valve body casting on steam stand

We are most grateful to all of our supporters who have responded to the Dedicated Donations campaign so far! If you haven't yet sponsored a component, now is the perfect time, with prices ranging from one of over 1,000 driven bolts & nuts for £25, to the complete exhaust steam injector for £15,000. Why not treat yourself or a loved one to something different and help us to complete this iconic locomotive by 2021!

*****HOT OFF THE PRESS***** We have just released over 200 Brand New Components which are available to sponsor now! These include the Vacuum Brake components, Air Brake Items including Hoses, Super Heater Header components, Brake Shaft Items, Engine and Tender Draw Hooks, Crosshead Oil Boxes, Exhaust Injector Pipework, Vacuum Ejector Pipework, Speedometer and associated components, Alternator and associated components, Cylinder Drain Cock components. Please email Mandy at dedicated.donations@p2steam.com for more information.

If you know of a business owner or company who may be interested in sponsoring an item on No. 2007 *Prince of Wales*, please contact dedicated.donations@p2steam.com



Speedometer.



Alternator.



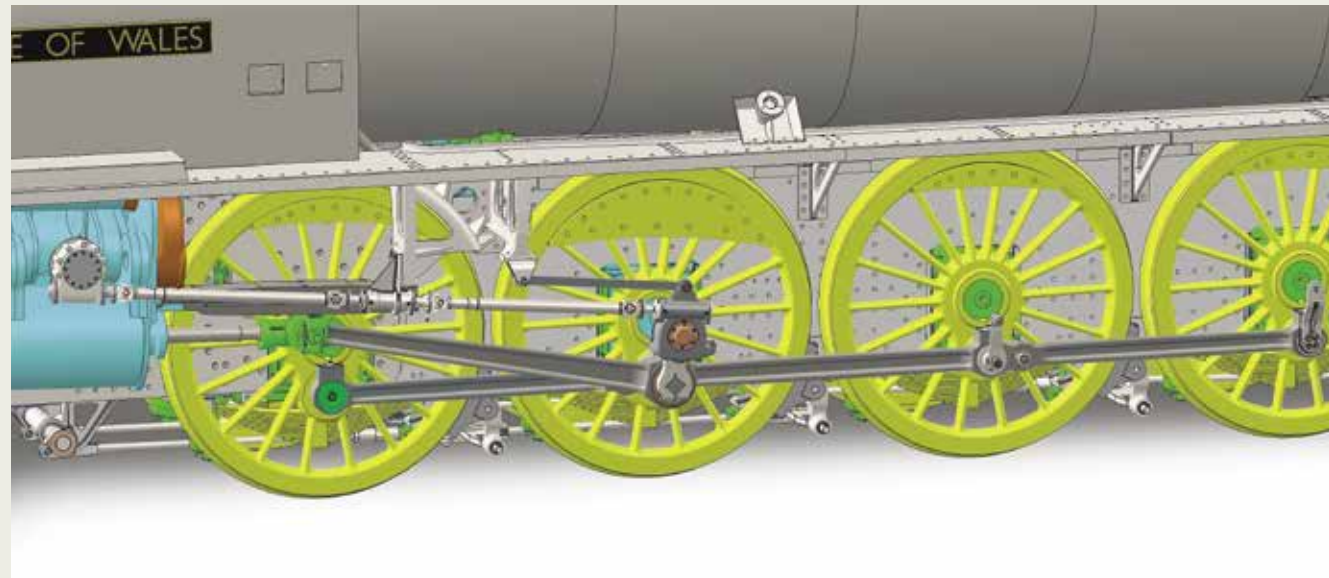
Brake stays.



Speedometer return crank.

COME ON, COME ON, DO THE LOCO-MOTION WITH ME!

by Mark Allatt



3D diagram of No. 2007's outside motion.

In April 2018, The A1 Steam Locomotive Trust launched a new appeal to raise the funds to manufacture the motion for new Gresley class P2 No. 2007 *Prince of Wales*. The Motion Club was established with the aim of raising £210,000 from 175 supporters each donating £1,000 (plus Gift Aid) to the project in up to eight payments of £125 by standing order. In just seven weeks the appeal had already reached over a quarter of its £210,000 target and by the end of May 2019 we had recruited over 135 members to The Motion Club, with over £168,000 pledged.

In May 2018 we were delighted to announce that we had placed a £181,000 order with Stephenson Engineering Ltd of Atherton, Manchester for the heavy motion No. 2007 *Prince of Wales*. The order included the forging, machining and heat treatment of the nine heavy motion rods - intermediate coupling rod LH/RH, trailing coupling rod LH/RH, leading couple rod LH/RH, outside connecting rod LH/RH and the inside connecting rod assembly (including strap, gluts and strap nuts and washers) - to be delivered in batches towards the end of the year, with the combined piston and rod. Following a delay due to lack of resources our supplier, the motion is expected to be delivered in batches between July and December 2019, with the first item, the intermediate coupling rods, expected to be delivered towards the end of October. Orders are to follow for the motion include rod bushes, oil box covers and miscellaneous components.

In return for supporting this appeal, special benefits for members of The Motion Club include:

- Opportunity to buy ticket (seat already reserved) on one of the first trains hauled by No. 2007 *Prince of Wales*
- Reasonable access to No. 2007 at all times
- Opportunity to buy exclusive Motion Club badge
- Opportunity to join one of the teams building No. 2007
- First choice of other components to sponsor
- Special Motion Club day with *Tornado*
- Special limited-edition version (signed/numbered) of Stuart Black's drawing of No. 2007 *Prince of Wales*.

The work involved in designing and manufacturing the motion includes:

- Redesign of coupling and connecting rods to use modern material (pre-war nickel chrome steel alloy proved prone to fracture)
- Incorporation of late-pattern BR-type continuous white metal lined crank pin bearing bushes
- Use of the late-A1 design of inside connecting rod which overcame the tendency for the original design of inside connecting rods on LNER 'Pacifics' to big-end failure
- Open die forging of six coupling rods, two outside connecting rods and the inside connecting rod and strap
- CNC machining of all rods
- Manufacture of oil box lids, coupling rod knuckle pins, nuts and washers and bearing bush keys
- Casting of leaded gunmetal and phosphor bronze castings of crank pin bearing bushes
- Machining and white metalling of bearing bushes
- Fitting oil box tops
- Assembly of bearing bushes to rods
- Polishing rods.

We are delighted with the level of support that the project to build Britain's most powerful steam locomotive has received since its launch. Thanks to our supporters' continued generosity, over £3.3m has now been donated or pledged. We now need to turn our attention to the motion which is our next major manufacturing challenge. Given the level of support The Motion Club has received in just 15 months, we are confident we can raise the additional £35,000 needed to pay for the heavy motion, and remain on-track for completion of new Gresley class P2 locomotive, No. 2007 *Prince of Wales* within three years.

To become a member of The Motion Club, email enquiries@p2steam.com, call 01325 460163 or visit www.p2steam.com for more information. **TCC**

P2 ROADSHOWS by Mark Allatt

Following on from the success of our 2018 Roadshow programme, we will be continuing the Roadshows in 2019. We will be holding a series of presentations on the project to build new Gresley class P2 No. 2007 *Prince of Wales*.

Each presentation will feature key team members including Mark Allatt and/or David Elliott and will cover the background to the project, progress to-date, future plans and details of how to get involved. We would encourage you to attend one of these Roadshows and bring along some friends and family members who would be interested in hearing about the project. The two-hour presentation will start promptly at 11:00hrs and run until 13:00hrs on each of the days listed below and are open to existing supporters and interested members of the public:

NEW 2019 ROADSHOW PROGRAMME:

- **Saturday 14th September 2019** – Hilton Hotel, Leeds
- **Saturday 2nd November 2019** – Darlington Locomotive Works, Darlington
- **Saturday 7th December 2019** – Pendulum Hotel (Manchester Conference Centre), Manchester.

For more information on the P2 roadshows visit www.p2steam.com, email enquiries@p2steam.com or call 01325 460163. **TCC**

ORIGINAL ANNOUNCEMENT OF P2 PROJECT... 25 YEARS AGO by Mark Allatt

The A1 Steam Locomotive Trust announced today (24th June 1994) that it was opening a register for those interested in helping to build a Gresley P2 class locomotive once the new A1 is completed.

The class P2s were the most powerful passenger locomotives to run on Britain's railways. They were designed by the legendary Sir Nigel Gresley, Chief Mechanical Engineer of the London and North Eastern Railway (LNER) from 1923 until his death in 1941, who was also the designer of *Flying Scotsman*, arguably the world's most famous locomotive and the first to reach 100 mph and *Mallard*, the holder of the world speed record for steam traction of 126 mph since 1938.

The class P2s were of a 2-8-2, or Mikado, wheel arrangement, in itself unique for a main line express passenger locomotive in the UK. The original six class P2s were built in Doncaster between 1934 and 1936 for use on the main line between Edinburgh and Aberdeen where their enormous power and adhesion was used to haul the heaviest trains over this line of twisting curves and severe gradients. The original locomotives were given evocative names associated with the route over which they worked: No. 2001 *Cock o' the North*, No. 2002 *Earl Marischal*, No. 2003 *Lord President*, No. 2004 *Mons Meg*, No. 2005 *Thane of Fife* and No. 2006 *Wolf of Badenoch*.

Although undoubtedly a success in the role they were designed for, they fell victim to internal LNER politics and were rebuilt to become class A2/2 Pacifics in 1943/4 by Gresley's successor, Edward Thompson. In their final form they were not particularly successful and were scrapped between 1959 and 1961.

David Champion, Chairman (now President), The A1 Steam Locomotive Trust, commented, "It has always been the Trust's intention that No. 60163 *Tornado* would be the first in a series of lost but not forgotten ex-LNER steam locomotives to be built by the Trust. Now that work is well underway on constructing the first of these, the 50th class A1, we have decided to make our next objective clear and set up a register of those interested in and who might have information on the class P2s.

"There are three main reasons for making this announcement now. First, as with No. 60163, the new P2 will require several years of careful research before we can start to cut metal - by starting this work now with the research team who have almost completed their work on the A1, we can ensure that we keep our volunteer teams together; build upon skills already learnt and be ready to start construction of the P2 immediately following the completion of the A1.

"Second, there are many common parts between A1s and P2s, including the boiler; and so it is only sensible to make use of this economy of scale. Finally, it is only by successfully completing *Tornado* that we can go on to build more ex-LNER steam locomotives. I would urge all of those interested in building a new P2, and others, to come forward and covenant towards the completion of No. 60163 *Tornado*."

25 years later we are well on the way to making this dream a reality... TCC

Attention all Club Members! - Exclusive badges are available to purchase -

- The Mikado Club (£5),**
- The Boiler Club (£5),**
- The Cylinder Club (£5)**
- The Motion Club (£6).**



To purchase your badge please send a cheque for the relevant amount made payable to 'The P2 Steam Locomotive Company' and send to The A1 Steam Locomotive Trust, Darlington Locomotive Works, Hopetown Lane, Darlington DL3 6RQ.

PLAN TO BUILD NEW GRESLEY CLASS V4 STEAMS AHEAD

by Mark Allatt

The London and North Eastern Railway (LNER) class V4 was a class of 2-6-2 steam locomotive designed by Sir Nigel Gresley for mixed-traffic use. It was Gresley's last design for the LNER before he died in 1941. The class V4s had similarities in their appearance and mechanical layout to the class V2s of which pioneer No. 4771 *Green Arrow* is preserved as a part of the National Collection. The class V2s, introduced in 1936, had limited route availability and the class V4 was a lightweight alternative, suitable for use over the whole of the LNER network.

Two locomotives were built at the LNER's Doncaster Works in 1941. The first locomotive, No. 3401 *Bantam Cock*, had a scaled-down version of the Gresley Pacific boiler with a grate area of 27½ sq. ft. Its tractive effort of 27,000 lbs was produced by boiler pressure of 250 psi and three cylinders of 15in diameter. The second locomotive, No. 3402, incorporated a fully welded steel firebox and a single thermic syphon for water circulation. It was not named but was known unofficially as *Bantam Hen*. The class was tried on the Great Eastern section of the LNER, and was well received, with more power than the existing Gresley class B17 4-6-0s and better riding qualities. It was anticipated that many more would be produced, but after the sudden death of Gresley in April 1941 and his succession by Edward Thompson, no more were built. Instead, the simpler two-cylinder Thompson class B1 4-6-0 was adopted as the LNER's standard mixed-traffic locomotive and 410 were built between 1942 and 1952. The two locomotives were sent to Scotland for use on the West Highland Line, although their wheel arrangement was not particularly suitable for the line's steep gradients. The two class V4s were renumbered Nos. 1700/1 in 1946 and later became British Railways Nos. 61700/1. Both locomotives were scrapped in 1957 when their boilers became due for renewal.

First new components delivered!

The Trust has recently taken delivery of the first new components for No. 3403 having placed a £4,320 order with Unilathe of Stoke-on-Trent for 12 tender spring hooks from a closed die forging to an original LNER drawing. This order is part of a much larger order placed by Network Rail for replacement components for its LNER 4,200 gallon tender-based snowploughs which has been piggybacked on by AISLT for its new Gresley class V4 and the project building a new Gresley class B17, therefore considerably reducing the unit costs.

The AI Steam Locomotive Trust continues to work with The Gresley Society Trust - which funded the smokebox for No. 2007 *Prince of Wales* as part of the fulfilment of legacy request - to manufacture the shared 5ft8in driving wheel pattern for the new Gresley class V4 No. 3403 and the Gresley Society's Great Northern Railway Gresley class N2 No. 1744. The class N2, which is 100 years old in 2021, is currently under overhaul and requires two replacement driving wheels. The production of the pattern will be project managed by AISLT and funded by the Gresley Society, with its first use being for No. 1744. Alan Parkin, on behalf of AISLT, is expected to visit No. 1744 in August to compare the wheel drawing for the class V4 with the wheels on the class N2.

Colin Vickridge, a long-standing supporter and volunteer with The AI Steam Locomotive Trust, is organising to have a third set of cab side window frames made for use on Gresley class V4 No. 3403, as he did for both No. 60163 *Tornado* and No. 2007 *Prince of Wales*. The next steps will be to scan the 366 acquired class V4 drawings into the Trust's CAD system and this is expected to take place in Darlington Locomotive Works over the next couple of months.



Stuart Black's images of No. 3401 and No. 3403 showing the latter with an LNER group standard 4,200 gallon tender compared to the 3,500 gallon version the original V4s were equipped with.

Although there is no specific fundraising appeal open for No. 3403 yet, any donations made towards it will be ring-fenced for the project. It is currently anticipated that the formal launch of the V4 Project will be in Spring 2020 when The Founder's Club will be established to raise the first £350,000. This will be used to acquire all of the components needed to assemble the engine's frames so that when No. 2007 *Prince of Wales* leaves Darlington Locomotive Works in around three years' time, everything will be in place to rapidly assemble the frames. This will then be followed by the launch of the 'V4 for the price of a pint of beer a week' covenant scheme and other specific clubs familiar to those who have supported the building of No. 60163 *Tornado* and No. 2007 *Prince of Wales*. In this way, the V4 Project can capitalise on the momentum built up to complete the new class P2 with sufficient funding to keep staff and contractors busy. It is hoped that the new locomotive will take 5-7 years to build depending on the rate at which the funds are raised.

For more information on how to help, visit www.v4steam.com, email enquiries@v4steam.com or call **01325 460163**. **tcc**



The newly-delivered tender spring hooks for No. 3403.

David Elliott

THE TENDER CLUB MAKES STEADY PROGRESS by Mark Allatt

On 8th April 2019, The Trust announced a new £450,000 appeal to fund the manufacture the tender for new Gresley class P2 No. 2007 *Prince of Wales*. The AI Steam Locomotive Trust has set itself the challenge of raising £450,000 through The Tender Club from 250 supporters each donating £1,500 (plus Gift Aid) to the project in up to 15 payments of £100 by standing order. At the same time, the Trust was also pleased to announce that the order to manufacture the tender tank has been placed with North View Engineering Solutions of Darlington. The tender frames are already under construction by I D Howitt of Crofton, Wakefield and the wheelset components have at last just been dispatched to South Devon Railway Engineering for assembly.

If the project is to remain on schedule to complete No. 2007 within three years, the Trust needs to take delivery of the tender frames and tank in autumn 2019. Following the success of The Founders Club (to get the project to the point of cutting the frames), The Boiler Club (to fund the construction of the boiler), The Mikado Club (to wheel the locomotive), The Cylinder Club (to make the cylinder block), The Motion Club (to fund the heavy motion) and the Dedicated Donations scheme the Trust has decided to establish The Tender Club to raise an estimated £450,000 required to manufacture No. 2007's tender.

In return for supporting this appeal, special benefits for members of The Tender Club include:

- Opportunity to buy ticket (seat already reserved) on one of the first trains hauled by No. 2007 *Prince of Wales*
- Reasonable access to No. 2007 at all times

- Opportunity to buy exclusive Tender Club badge
- Opportunity to join one of the teams building No. 2007
- First choice of other components to sponsor
- Special Tender Club day with *Tornado*
- Special limited-edition print of Stephen Bainbridge's 'Locomotives of the future' painting.

The tender for No. 2007 *Prince of Wales* is based closely on the tender built for AI class No. 60163 *Tornado*. The original P2 tenders were to the 1930s non-corridor design built for the new A3 'Pacifics' being built at that time.

The water capacity of the original design was 5,000 gallons, which at a typical consumption of 45 gallons per mile would provide a range between water stops of 80 miles (with as safety margin). The tender for *Tornado* was re-designed to increase the water capacity to 6,250 gallons which increases the range to about 110 miles. The additional water capacity is at the expense of a reduction in coal capacity from 9 tons to 7½ tons.

The tender tank will be a fully welded structure made from weathering steel (as used on motorway bridges and the Angel of the North) to provide improved resistance to corrosion. The main visible differences with the new tender when compared to that of *Tornado* will be the curving inwards of the side sheets at the front to match the shape of the cab sides, and the extensive use of half round beading along the front and top of the sides and the top of the back of the tank. To become a member of The Tender Club, email enquiries@p2steam.com, call **01325 460163** or visit www.p2steam.com for more information. **tcc**

Covenantors' Diary by Leigh Taylor



Our Annual Convention is Saturday 12th October 2019. This year's Convention will be split between morning and afternoon sessions. The first, at the Mercure Kings Hotel, Darlington, will look at the Trust's achievements since the last Convention before covering *Tornado*'s operations and take a look forward

into the 2020 programme. There will also be the first half of the progress update on the construction of Gresley class P2 No. 2007 *Prince of Wales*. Lunch will then be served (optional) in the Mercure Kings Hotel. Following this, buses will transport guests to Darlington Locomotive Works. There will then be a second presentation on the project to build *Prince of Wales* and the opportunity to view the current progress on the locomotive at the Works. All Covenantors, Club members and guests are welcome to attend both presentations.

We will also be holding our Annual Dinner on the evening of Saturday 12th October at Mercure Kings Hotel, Darlington. This has always been a very enjoyable part of the Convention, and we do hope those of you who have not been able to attend the dinner in previous years will join us.

Please note that the deadline for applying for tickets is Friday 27th September 2019 in order to ensure that the necessary bookings can be made. Please do respond in good time should you wish to attend.

The Board of Trustees look forward to seeing you and your guests at Mercure Kings Hotel, Darlington and Darlington Locomotive Works on Saturday 12th October 2019. **tcc**



Covenantors at Darlington Locomotive Works in the company of *Prince of Wales*.

Mandy Grant

PROFILE – MANDY GRANT by Graham Langer

Mark Grant



Mandy Grant in Tornado's cab at Crewe.

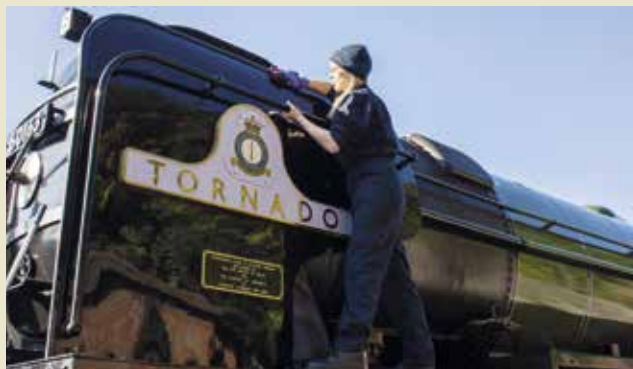
Born in Leeds in the late 60s, for as long as she can remember Mandy has been interested in the railways, hardly surprising as her father had more than a passing interest in steam and railway modelling. Her Dad was brought up in Castleford, in the 40s and remembers going out and waiting for the named LNER steam locomotive to pass through Castleford each evening. He used to sneak out to Normanton Sheds on a school lunchtime, regularly getting told off for trespassing but some of the drivers used to turn a blind eye and let him into the sheds to cab the engines. During his working life, he was an active member of the Yorkshire Bank Model Railway Society based in the Yorkshire Bank building in Infirmary Street, Leeds. Mandy and her brother used to go along with him each week and sit under the layout playing, whilst the men worked on it above. Back at home, Mandy's Dad built an impressive layout, running round the full length of the music room, and under the grand piano. Mandy and her brother spent many happy hours playing with the train set. Mandy's Grandfather had railway connections, working for the LMS, as a clerk in the offices at Preston Station.

Mandy remembers many weekends as a child spent trainspotting with her Dad at Leeds, Crewe, Didcot and Doncaster and chasing main line steam around Yorkshire. In the 1970s, she saw some of the first HST's at Neville Hill Depot and these still hold a special place in her heart; in 2016 she was lucky enough to capture a photograph of *Tornado* and 43002, re-numbered 253 001 and painted in original Intercity 125 livery. She saw the APT undergoing trial runs at Crewe and remembers attending open days at Carnforth, Derby, Crewe and Doncaster Works. The Yorkshire Bank Railway Society organised several main line trips through a company called Merrymaker, she loved travelling with the family by rail in Mk I carriages, the highlight was getting a 1st class compartment all to themselves! Her first real memory of steam was whilst on a trip behind *Sir Nigel Gresley*, when she and her brother waited by the corridor tender and one of the crew allowed her to have a look through into the cab, she was smitten, little did she know that many years later she would have the chance to do exactly the same again whilst travelling behind *Bittern* on a 90mph main line run and also that she'd be working on main line steam trips with The AISLT in a voluntary capacity!

Mandy left college in 1987 and went to work at a local veterinary practice as a nurse/receptionist, a career which she loved and successfully pursued for 23 years. In the beginning she worked in mixed practice with farm and small

animal clients, it was very much as the 'James Heriott' stories portrayed, the last 15 years she spent working in small animal practice. Advances in veterinary medicine and surgery throughout those years were phenomenal and she enjoyed all aspects of the job. In 2010 she moved to the field of human medicine and currently works part time in a clinical research unit. Mandy met Mark in 1985 and the rest as they say is history, they married in 1989 and soon afterwards had their first son, followed three and a half years later by their second son. Family holidays always involved a steam trip. Their usual haunt was Torbay, so the Paignton and Dartmouth Steam Railway was a firm favourite, with many visits to the South Devon Railway as well. Mandy caught her first sight of *Tornado* in Paignton in 2009 whilst hauling 'The Torbay Express'. Mandy was absolutely amazed that the locomotive had been built from scratch! The steam interest was always there, but their boys didn't really share Mark and Mandy's passion so it was kept on the back burner for a few more years until in 2013, with some time on their hands, they decided to go to Crewe Heritage Centre to see *Tornado* again. As Mark mentioned in his previous article, they got talking to Janet Hill and that was it, they were drawn in hook, line and sinker! When asked what it was that she liked about steam locomotives she replied "It's the nostalgia, the smells, the engineering, the sounds, the power, and in particular I just love the sheer elegance of LNER locomotives, although those who know me will also know that there is a certain Battle of Britain Class locomotive that I'm rather fond of too!"

Mandy is responsible for our Dedicated Donations Scheme, whereby supporters can sponsor a component on No. 2007. She is also one of the admins for our various social media accounts and has adopted the 'honorary' role of photographer at many of our events, heritage visits and main line trips. She was instrumental, along with Mark, in taking the original P2 Roadshows around the country and increasing public awareness of the P2 project, bringing in a considerable amount of funding since the project was first publicly announced. And, last but not least, Mandy also volunteers in other areas such as the role of carriage host and selling merchandise on our trains, helping on the stand at events, creating some designs for merchandise whilst she's also a member of the support crew, mainly helping out with *Tornado* on heritage railways during periods of annual leave from work and on occasional weekends. Now that Mandy is a Grandma, and work hours have recently increased, it's becoming more difficult for her to find the "spare time" to juggle all the things that she enjoys doing, including walking, cycling, photography and playing the flute! **TCC**



Mandy hard at work cleaning No. 60163.

Mark Grant

FROM THE ARCHIVES by Graham Langer



Phil Champion

The Hunt & Sons trailer with its P2 curtain-side.

Summer 1999 – By August The Trust was able to announce that it was spending nearly a £¼ million per annum on the construction of *Tornado*, at that time reckoned to be enough to completely restore a Barry wreck! The project had also featured on the BBC's 'One foot in the past' series. In terms of construction the upper slide bars and the right-hand reversing arm had been sent to Ufone for machining and the patterns have been ordered for the piston crossheads, three spindle crosshead guides and the cylinder covers. The most complicated pattern, the superheater header, had been ordered from Kingsheath Patterns of Kingswinford, costing around £9,000.

Summer 2004 – It was announced that The Trust had chosen Dampfloerwerk Meiningen, a workshop of the Deutsche Bahn and through its subsidiary DB Fahrzeuginstandhaltung GmbH, as the supplier for the boiler and associated equipment for the new locomotive. Meanwhile in Darlington the six cast-iron valve chest liners were successfully shrunk into the valve chests on 8th June; each liner had been machined to be slightly larger than the bore in the valve chest, then cooled in liquid nitrogen to shrink it and slid quickly into position in the chest. A major milestone was reached on 25th August when Ian Howitt fitted all the coupling rods and the wheels rotated smoothly. Graeme Bunker, Operations Director, used his column in *Top Link* to discuss the relative merits of oil versus coal firing, arguing that with the way oil prices had risen there were good reasons to opt for coal firing.

Summer 2009 – *Tornado* continued to make the headlines after her entry into traffic, starring in the first episode of the new series of the BBC's 'Top Gear' programme on Sunday 21st June racing a Jaguar XK120 car and Vincent Black Shadow motorcycle from London to Edinburgh, with presenter Jeremy Clarkson on-board. The programme was watched by over seven million people. The locomotive also extended her



A/SLT

Ian Howitt (still very much involved with the Trust and the construction of No. 2007's tender) had assembled Tornado's smokebox during the early part of 1999.

range, visiting west Wales and showing that the Devon Banks were no barrier to an East Coast Pacific, running to Plymouth and operating some of that year's 'Torbay Express' trains to Kingswear.

Summer 2014 – The Trust secured the services of a 40ft mobile billboard to help not only spread the message and drive funding, but secure a mutually beneficial relationship with one of the country's longest serving road hauliers as haulage partner, namely L Hunt & Sons of Basingstoke (the same trailer that recently moved the P2's wheelsets to Devon). *Tornado* was busy visiting the Nene Valley Railway, the Swanage Railway, the Bluebell Railway and Barrow Hill Roundhouse between tours to the North and the West. In Darlington No. 2007's frames had been erected and 'christened' and the first driving wheel had been delivered by William Cook Cast Products. **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.



The Gresley Society Trust

THE A I STEAM LOCOMOTIVE TRUST CONTACTS

President **David Champion** (david.champion@alsteam.com)
Vice Presidents **Peter Townend** (peter.townend@alsteam.com),
Ben Godfrey (ben.godfrey@alsteam.com)

Board of Trustees

Mark Allatt P2 Project Director, Head of PR, Marketing and Fundraising (mark.allatt@alsteam.com)
Paul Bruce Property Director (paul.bruce@alsteam.com)
Graeme Bunker-James Commercial Director (graeme.bunker-james@alsteam.com)
David Elliott Director of Engineering (david.elliott@alsteam.com)
Graham Langer Publications (graham.langer@alsteam.com)
Huw Parker Operations Director (huw.parker@alsteam.com)
Chris Walker Finance (chris.walker@alsteam.com)

Advisers to the Board

David Breakell Legal (david.breakell@alsteam.com)
Mandy Grant Dedicated Donations and Social Media Team (mandy.grant@alsteam.com)
Mark Grant Volunteer Coordinator (mark.grant@alsteam.com)
Andy Hardy Archivist (andy.hardy@alsteam.com)
Rob Morland Electrical (rob.morland@alsteam.com)
Graham Nicholas Professional Head of Engineering (graham.nicholas@alsteam.com)
Richard Peck Commercial (richard.peck@alsteam.com)

Engineering

Daniela Filová Assistant Mechanical Engineer (daniela.filova@alsteam.com)
Alan Parkin Electrical Design (alan.parkin@alsteam.com)
Richard Pearson Engineering & Works Manager (richard.pearson@alsteam.com)

Administration

Leigh Taylor Office Manager (leigh.taylor@alsteam.com)

Railtours

Sophie Bunker-James Railtour Marketing Manager (sophie.bunker-james@alsteam.com)
Siobhan Osborne Railtour Administrator (siobhan.osborne@alsteam.com)
Lauren George Railtour Administration Assisitant (lauren.george@alsteam.com)

Editor

Graham Langer (graham.langer@alsteam.com)

Picture Editor

Tony Watson (tony.watson@alsteam.com)

Design

Kevin Lumb (kevin@limegroveprintanddesign.co.uk)

* All information correct at the time of going to press late August 2019. For up-to-date information and dates please check the website www.alsteam.com.

- The A I Steam Locomotive Trust, Darlington Locomotive Works, Hopetown Lane, Darlington DL3 6RQ
- e-mail: enquiries@alsteam.com ● website: www.alsteam.com ● tel: 01325 460163

Darlington Locomotive Works is normally open to the public on the first and 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 (with Covenantor card). 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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