

THE COMMUNICATION CORD



60163 TORNADO

New Steam for the Main Line

No. 19 August 2010

Record Breaker! All 60163 Tornado tackles Shap with 'The Border Raider', 24 June 2010.



Roy Meiers

Under repair at Hither Green.

Alan Weaver

IN THE WORKS *By David Elliott and Graham Nicholas*

The first indication of what has become our on-going boiler issue occurred on 20th May whilst preparing the locomotive for its 22nd May (Chester) train. Peter Neesam discovered a damp patch in the ash, with water coming out of a 'tell tale' stay hole in the rear corner of the firebox. Consultation with our colleagues at DB Meiningen allowed an approved repair to be applied to an isolated stay fault such as this, pending a full repair (for which arrangements were put in hand

for the end of June).

However, following trouble-free trips to Norwich (28th May) and Bristol (29th May), at Canterbury (on 31st May) further firebox leaks were detected and the immediate decision was taken to remove *Tornado* from her train.

Back at Hither Green depot, with the loco fully cooled down, it was discovered that there were further defects with two other stays in the rear of the firebox. Events had therefore forced us to

undertake the full repairs a little earlier than planned.

Representatives of DB Meiningen travelled to the UK and, after a meeting with other interested parties (VAB, DB Schenker, insurance company and HMRI), a repair process was agreed which involved replacing the defective stays and those adjacent. Due to the fantastic response of DB Meiningen and grateful co-operation of Balfour Beatty who made their shed facilities instantly available, by the following

Editorial by Mark Allatt

The lead news item in the July edition of *The Tornado Telegraph* was entitled 'Triumph & Tragedy' and I would say that this still sums up the Trust's position over the past few weeks. As you will read elsewhere in this edition of *TCC* we have the triumph of our record breaking run northbound over Shap and the sad news of *Tornado's* second withdrawal from service in as many months with boiler stay issues. We have done our utmost during this time to keep our covenants, customers and other supporters informed as the current situation, primarily through *TTT* and our website, and I would like to take this opportunity to thank you all for your support and understanding.

I would also like to put on record our thanks to a number of people and organisations who have gone way beyond the call of duty in helping us to get *Tornado* back onto the main line, in particular Steve Ayton, Graeme Bunker, David Elliott, Tony Lord, Peter Neesam, Graham Pearce, Jon Pridmore, Mick Robinson, and Chris Walker as well as Balfour Beatty (especially Chris McNaughton, manager at Hither Green depot, for the use of covered facilities at short notice), William Cook Cast Products (David Baxter and Chris Hoyland for the NDT of stay materials and of course Andrew Cook for his unstinting support for *Tornado*) and DB Meiningen (for coming over to the UK so quickly).

It's not all good news with our new support coach either. The vehicle has proved to be in a much worse condition than originally thought and therefore a lot more work is required to bring it up to the requisite standard. Getting *Tornado* back onto the main line is our number one priority at the moment and so work on the coach has been de-prioritised whilst we focus on our locomotive and reassess the support coach project plan and cash-flow.

Finally, I would like to thank Stephen Slack, who has had to step down for personal reasons, for his time as editor of *Top Link* and *The Communication Cord*. **TCC**



Thursday evening (11th June), the repairs were complete, hydraulic and steam tests undertaken and engine re-assembled. DB Meiningen meanwhile took the broken stays back to Germany for metallurgical examination.

The locomotive then resumed its booked programme, with the run to Swanage on 16th June. This and subsequent trains culminating in the Trust's own train, 'The Border Raider', on the 24th June were undertaken without incident. However following the engine and coach run back to Stewarts Lane, two further leaking stays were discovered, once again in the rear of the firebox.

It was now clear that we were dealing with a wider spread problem than first thought and following further consultation with industry renowned boiler inspector John Glaze and DB Meiningen, a more comprehensive stay replacement programme was agreed.

Since then, the engine has been at Hither Green once more, where a systematic programme of stay removal and examination has been undertaken. There is no reliable Non Destructive Test (NDT) procedure to identify stays with incipient cracks so the method used involved removing fixed stays up to where the flexible stays start, progressively working out from the bottom back corners column by column until an area of 'good' stays was established.

Thanks to a kind offer from Andrew Cook (of William Cook Cast Products), Chris Hoyland from William Cook NDT visited the locomotive on Thursday 8th July and carried out state-of-the-art Magnetic Particle Inspection (MPI) and Ultrasonic scanning of the inner and outer firebox

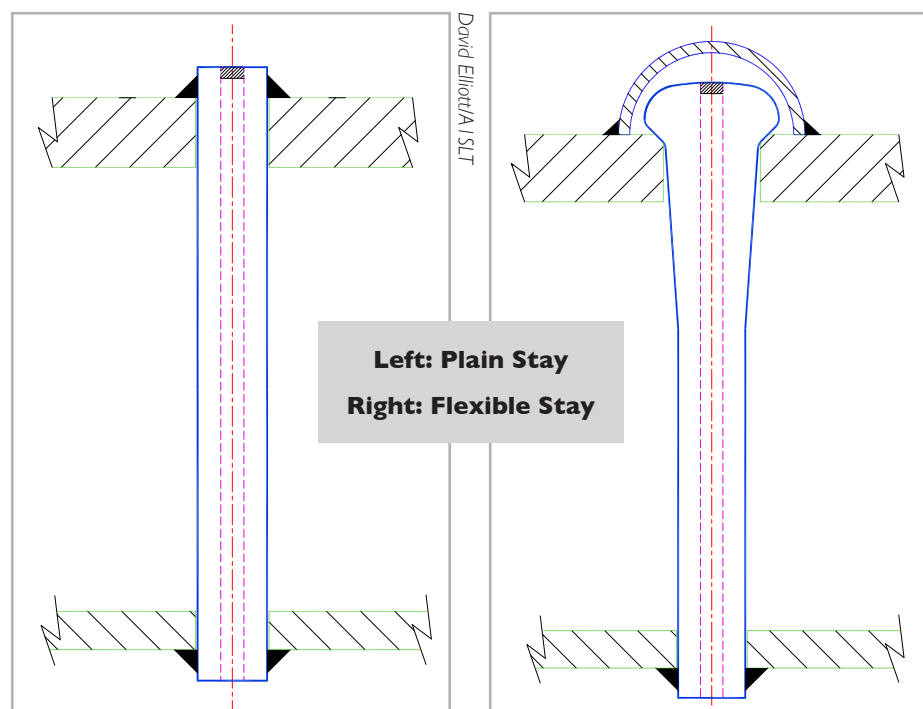
back corners, welds and adjacent plates. This has shown the platerwork to be in good condition. Not only is this a relief, but it provides further pointers to this being exclusively a stay problem.

William Cook has also been providing invaluable support in cleaning up and examining the removed stays to allow a detailed picture of the overall condition to be built up.

At about the same time, the results of the metallurgical examination of the original failed stays was received back from Meiningen. This has concluded that the stays have been failing after a prolonged period of fatigue and stress caused by expansion and thermal cycling. Several of the subsequently removed stays have evidence of fatigue damage building up in much the same manner.

Ultimately, 184 stays were removed before all were happy that the affected area had been dealt with and then the process of replacement could begin. Once again, we called in the DB Meiningen and over a concentrated three day period Monday 26th – Wednesday 28th July the new stays were welded in, concluding with a successful hydraulic test. All the new welds were proved watertight at first time of asking, which is a pretty impressive performance!

The next step was to conduct a steam test and so *Tornado* was lit up and the boiler was allowed to warm through gently for 60 hours with no pressure raised. In the following 12 hours pressure was brought around and on Sunday 1st August the boiler successfully passed its steam test. This was followed by a successful FTR on Sunday 8th August and test run the following day.





Peter Neesam and Trust volunteers re-assemble *Tornado* after her boiler repairs.

So where does this leave us? The nature of the defects and the extent of the repairs might sound alarming at first but in fact periodic stay replacement is nothing out of the ordinary and is to be expected with steam locomotive boilers. A quick glance at the locomotive's usage records shows that the boiler has been taken through over 60 cold-hot-cold cycles since its first steaming in 2008. And, as we all know, metal expands when it is heated up, with the inner firebox metal in particular getting very hot when the locomotive is in steam with a good fire established - so the source of thermal expansion and contraction is obvious. In some respects, this amount of use puts *Tornado* ahead of AIs in service days, when of course locomotives were kept in constant steam for much greater periods

of time, positively affecting wear patterns. There is a significant difference between operational patterns today as compared to the 1950s.

Therefore the most likely scenario therefore is that we are simply using the locomotive at a rate significantly greater than comparable locomotives in preservation - and like all mechanical things, the more you use it, the quicker it wears out and consequently the more frequent repair work required. A typical 10 year overhaul of a boiler would see a significant number of stays replaced by way of routine; it's just that in our case, the usage/wear rate is more akin to service days where locomotives visited main works every 12-18 months for remedial attention. This was followed by a successful

FTR on Sunday 8th August and test run the following day.

It should be stressed that we have not suffered a single broken stay - modern boiler design using tell-tale holes in the stays means that the problem has been detected at the stage where a small crack has worked its way through from the surface of the stay to the hole allowing a visible leak of water.

But clearly we don't want to be faced with another out-of-course significant repair in 12-18 months time. Therefore minds are currently focused on an engineering study to help us predict the areas of the firebox where future stay problems may occur and see if minor changes could be made to improve fatigue life. **TCC**

FINANCIAL IMPLICATIONS

It was all going so well until we experienced our first boiler stay problem at Canterbury on 31st May. The subsequent repairs resulted in the loss of seven days of main line operations and 14 days of operations on heritage railways (the West Somerset Railway and the Bluebell Railway) in addition to the two tours already cancelled by Torbay Express Limited. This was followed by a further seven cancellations from Pathfinder Tours and Torbay Express Limited. In terms of lost contribution to our debt repayment, this has put a £75,000 hole in our finances even before we add in the £50,000 total cost of the boiler

repairs. Although the Trust has sufficient immediate financial reserves to deal with such a situation thanks to our prudent financial management and the generosity of our supporters, those reserves are now significantly depleted and we now need to re-double our efforts to rebuild them - all donations gratefully received. As a consequence we have taken the decision to review the project plan and cash-flow requirements for the support coach and are more dependent than ever for new money to complete this important project. Please contribute to this through our 'use your loaf' scheme if you are able to.

SUPPORT COACH PROGRESS *By David Elliott*

Overall progress has been substantial, however a number of significant problems have arisen which are causing delays and affecting costs.

The bogies are at Rampart at Derby for overhaul and where during ultrasonic and magnetic particle testing on the wheelsets (an essential precursor to overhaul) one of the wheels has been found to have small cracks radiating from a lifting hole. This effectively prohibits the wheelset for main line use, however there is a possibility of negotiating a swap with a wheelset on a heritage railway, as the defect is not sufficiently serious to prevent use at up to 25mph and this is in-hand.

With the bodyside/underframe welded repairs completed, the floor installation has taken place. However this has proved to be a more expensive and extensive process than envisaged, mainly due to the essential decision to remove the whole floor to enable full repairs to the lower bodyside and the brackets between the underframe and lower bodyside.

Ian Matthews has almost completed the filling, priming and undercoating of the body prior to window fitting. It already looks very fetching in blood and custard undercoat. The coach ends have had four combined LED tail/marker light housings fitted. These have traditional lamp brackets welded to them to carry our locomotive type headlamps. Rampart has completed the overhaul of the doors and windows they are now back at Darlington.

Tom Snowball has completed the new vacuum and air pipework as far as he can go at present. Railway Brake Services has supplied most of the air brake equipment; however we have had to source a brake reservoir and passenger communication valve from elsewhere.

Paul Depledge has continued with wiring the coach and has fitted large amounts of ducting and conduit, plus a number of backing boxes for switches and sockets throughout the coach. The Victron Quattro invertors have been delivered and the diesel generator expected shortly. Much effort has gone into sourcing a



David Elliott



David Elliott



David Elliott

Ian Matthews at work.

diesel fuel tank for the generator which meets current regulations. A design complete with UIC (European) approval has been found via Andrew Cook who has had to fit similar tanks to his Swiss Classic Train. The spare 200A alternator which we obtained for the loco has been sent away to NTS at Leyland for assessment, and a quote has been received. Unfortunately it is in poor condition so repairs are going to be very expensive, unless you know of a Stones Altonum 200A alternator going spare anywhere!

Progress on the interior.

The one water tank which came with the coach was deemed beyond reasonable repair being leaky and of traditional copper/rivets/solder construction which renders it unsuitable for drinking water. We have had to commission new tanks from by M Machine made from stainless steel meet the drinking water regulations.

Railway approval Limited, a subsidiary of DB Schenker, has been retained to undertake the certification work. Two visits have been made and they are satisfied with the work done so far. **TCC**



The coloured portion illustrates how much of E21249 has been sponsored to-date.

SUPPORT COACH FUNDING

There is still an awful lot of work to be done to complete the coach, and there are a number of ways that you can help.

- Volunteers to help with the work are always welcome, but you need to be available at the works during normal working hours. Please email volunteer@alsteam.com for more information.
- Make a personal subscription to 'Use Your Loaf'
- Introduce Friends & Family to 'Use Your Loaf' and more people hooked on *Tornado*.

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

- The coach is 63ft 6in in length – 762 inches – or 1524 'slices' at ½ inch each.
- Each 'slice' can be sponsored for £50; £100 for a 'doorstep'; £1,000 for 'half a loaf'; and £2,000 for a 'loaf';
- If all are sponsored, it would raise £76,200; if we assume 80% of the donations come with Gift Aid, this rises to over £93,000

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

- A certificate recording the details of the sponsorship and a copy of a drawing of the coach noting which slice(s) have been sponsored
- Name inscribed on the official Role of Honour carried on the coach which will detail the slice(s) sponsored
- Entry into draw for main line footplate ride on *Tornado*
- Exclusive opportunity to order Bachmann model of E21249 (a perfect companion to the new model of *Tornado*) with appropriate one of 1524 certificates produced for sponsors. The model is expected to cost about £25.

As of 29th July the 'Use Your Loaf' campaign has funded 364 slices raising £18,200 which translates to 15' 1" of the coach's length, an increase of 5'5" since the last TCC was published, as illustrated on the diagram. Good progress but we still have a very long way to go. We look forward to reporting progress in future Trust communications as coloured section grows to the full length of E21249.



Railway Herald/Richard Tuplin

As a self-confessed Midland man, Graham Nicholas gives a personal account of the day our East Coast thoroughbred came up against the ultimate West Coast challenge.

"The lonely lost call of the curlew; the harsh syncopated cackle of a north-bound Patriot being thrashed; the eerie bleatings of mountain sheep in a dawn mist..." So wrote Derek Cross in the opening lines of his introduction to Bradford Barton's *London Midland Steam Over Shap*, the first railway book I ever got and still a much treasured, dog-eared possession.

Shap. The very onomatopoeic sound of the name conjures up images of a harsh, unforgiving place. Dating from some of the earliest days of main line railway construction in this country, and the first through true mountain terrain, the route of the original Lancaster to Carlisle railway sought minimal earthworks in its construction (remarkably, there are no tunnels to speak of on the entire route) – the penalty was a sinuous path through the northern hills of England, with the fearsome 1-in-75 Shap bank itself being the culmination of a relentless 35 miles climb from sea level at Carnforth.

For over 120 years, the heaviest trains required assistance up this great climb, the micro railway centre of Tebay establishing itself largely around the locomotive depot, purpose-built to house the banking engines that were based there.

And then, in 1968, it was all over. A few years later the wires went up and the legendary Shap bank had finally been tamed. Never again, so it was thought, would steam be put through its paces on this ultimate test of train versus gravity.

And yet (as we all know!), impossibles can come true. Ironically, it was the much-

maligned privatisation and open access that cleared the route once again to steam. And since 1995 preservation's finest have been put through their paces over the big northern hill – some recalling halcyon days of yore; others acclimatising themselves to the route for the very first time. Inevitably, performance league tables have sprung up and proponents of all the Big Four plus BR standards have been able to study the form book in an effort to answer that vexed question – just who is the best?

It was against this backdrop that *Tornado* entered the fray as a new and eagerly anticipated contender with the running of 'The Border Raider' on 24th June. We always like to give our loyal supporters something special, and as one of steam's golden routes, Shap northbound had deliberately been held back until such time as we could run it as a Trust tour.

Rain was steadily falling from a leaden sky as the AI took up position at the head of her now customary 13-coach load – not the ideal conditions for a classic run. But she was clearly raring to go and at least the tour train had appeared from the south on time. As I said to David Elliott at that moment, if we're to have a good run we now need three things to go in our favour: the loco to perform well, other trains around us to behave themselves – and a good slice of luck!

Exactly on time, *Tornado* got the road and eased her way out of Crewe station, the West Coast mainline stretching out invitingly before her, Carlisle 141 miles distant. But it wasn't long before the first of many operational delays that were to beset us throughout the day reared its head. We were brought to a dead stand on the approach to Warrington, then invited

to examine the line, as the train ahead had reported a bump. Despite a spirited run onwards through Wigan, there wasn't much that engine and crew could do to avoid a 20 minute late arrival in Preston, our principal watering point on the northbound run.

More operational problems (we were brought into the wrong platform!) caused delays with the watering and the loco was only ready to rejoin her train after her booked departure time had come and gone. "That's it", said David Elliott with a somewhat resigned air, "we're an hour late now" (referring to the paucity of mid-week paths along this busy mainline).

Yet, it seemed that fate was smiling on us at this point as, not only had the weather distinctly improved, but the preceding Voyager that should have been well out of sight beyond Lancaster was in fact right alongside us, just setting out from Preston itself. A couple of minutes later, and now only 20 minutes late, our departure light flicked green and we were away in hot pursuit, hoping and praying not to see the dreaded signal feather that would otherwise herald a detour into one of the numerous loops on this section.

In many respects, a Voyager stopping at all stations is about the perfect thing to follow along the northern stretch of the West Coast mainline and so it proved as we were able to cruise along at our maximum 75mph for mile after mile in its wake. Barton and Bay Horse loops (south of Lancaster) shot by and we were allowed an unchecked dash through Lancaster; better still, the signals on the approach to Carnforth were invitingly set to green for the mainline. It was the best possible start for what was to come.

The next opportunity to loop us was at Oxenholme (half way up Grayrigg bank) but no – with the locomotive starting to

warm to its task in earnest we in fact shot past the tamper machine that we'd seen earlier at Preston – it had been sidelined to make way for us! Onwards we forged through the station where the diverging Windermere branch removed another possible obstacle to our progress. Now the full force of Grayrigg's bruising 1-in-104 gradient was set against *Tornado* and her train, still motoring along at a mighty impressive 62mph. The countryside truly starts to open up at this point to reveal the full splendour of the northern uplands and the fells began to echo to a strange new sound.

Was that a slip at this moment? If so, it was quickly arrested and *Tornado* resumed her attack, the whispering safety valves testimony to the splendid firing effort that was obviously accompanying this mighty power output. There are more loops at the top of Grayrigg but again these seemed not to be required and we crested the summit of this first stage at an eyebrow-raising 48mph.

Good news reached me via text at this point: the next train behind us was a Pendolino – and it was only just leaving Preston! Lady luck was staying with us and we had Shap to ourselves.

The next three miles can often be the most critical to a successful assault of Shap itself. For here lies a stretch of near level track through the achingly beautiful Lune gorge, giving the chance to build up momentum once again. An engine worked too hard up Grayrigg can have winded itself and need to take a real breather at this point; but not it seemed our apple green machine, as speed was soon back up to 75mph. And as we approached the 'ghost town' that was once Tebay and clattered past the site of the old engine shed, *Tornado* started blowing off – furiously! No banker required today; Shap

was being rushed in splendid style.

The incline begins with more than a mile and a half of relatively gentle 1-in-146, before the 1-in-75 proper starts on the approach to the well-known vantage point of Greenholme bridge which we swept past at 66mph. For me the next mile was the most exhilarating, swinging out onto the open fell in an intoxicating cacophony of sound, sight and sheer sense of movement as *Tornado* urged her 13 coaches on further up the hill. It was a poignant moment – we were here at last and thundering forward. A huge gallery at Scout Green (half way point) were waiting for us and were treated to a truly awesome spectacle as we roared past at almost 55mph – this was turning into something really special.

Suddenly we slipped! It was as if the fell could speak – the young pretender wasn't going to have it all her own way! The slip and the expert recovery lasted only a few seconds, maybe just a few hundred yards yet Shap's uncompromising gradient had taken its toll, sapping the vital momentum away. In a blink of an eye, speed was below the 50mph mark and it was a distinctly different exhaust sound that could be heard on the resumption, more of a slog now.

But our locomotive dug in well and now we were at Shap Wells, less than a mile away from the summit. 47...46...45 – c'mon, c'mon! More crowds waved us on, willing us to the top and as we entered the final cutting the all important 37¼ milepost slid by, the official timing point for the end of the climb. The GPS I was watching showed 44mph and the official log shows an absolute minimum of 42½ mph as we imperiously chattered past that famous summit board.

And she was still whispering at the safety valves! To 'show the white feather' at Shap summit after an effort like that is exceptional. A moment therefore to reflect on the firing skills of those on the footplate, who could now enjoy a well-earned rest.

By now we were free-wheeling down towards Carlisle. We were booked a pathing stop at Penrith but no! So well was the train running at this point and with obviously no concerns about water capacity that we stayed on the down main through the station and were instantly 20 minutes early!

Thoughts immediately turned to the approach to Carlisle – could we actually register a complete non-stop run from Preston (preservation's first, I believe)? Surely not, given the operational constraints at the Border city station? And yet - mirabile dictu - despite a cautious last couple of miles, the wheels kept turning



The winning team: (l-r) Keith Murfin, Bob Hart, Graeme Bunker and Chris Woolwark.

A1 60163 *Tornado* crosses Ais Gill Viaduct with the southbound 'The Border Raider'.



and we paraded into the station, whistle crowing in triumph for a thoroughly deserved end to the run. I made it 87 minutes for the 90 miles run; a remarkable start-to-stop average of 61.3mph for this most gruelling of routes – and all this with a 13-coach load.

But, as we tumbled onto the platform, even better news was to come from a now beaming David Elliott. "We've beaten the record by 19 seconds!" he exclaimed as soon as he saw me. Record, what record? "Bottom of Grayrigg to the top of Shap" he continued excitedly, like a proud father on the touchline having just watched his son score a hat-trick.

Ah, of course. My thoughts had been on the 5¾ miles that constitutes the climb of Shap itself and presumed that the slip had cost us any chance of a record. But David was right and in some ways the time for the overall climb is the more impressive one as it requires the locomotive to steam continuously against the grade for a full half hour – and *Tornado* had certainly done just that.

The return run was, let's be honest, not the best from an operating point of view. Delay compounded on delay to make a mockery of the schedule. The climb up to Ais Gill was certainly impressive with that wonderful three cylinder rhythmic sound echoing across the remote moorlands, the evening sun shone brightly south of

Hellifield and there was an entertaining sprint finale on the last leg back to Crewe, which rattled the windows as we flew through my home town station of Warrington – but for me the memory that will linger will be the sound and sight of our lean, green, mean machine forging on up towards the West Coast Main Line's legendary summit.

Despite the incessant drone of the M6, there are times when the curlew still calls and the sheep still eerily bleat on Shap Fell – but the syncopated cackle was a rather different one on this occasion!

Performance

So just how good was that climb of Shap? Well, the 'official' stretch for the climb as a whole starts at Milepost 13 (bottom of Grayrigg) and ends at Milepost 37¼ (top of Shap), a distance of 24¼ miles. *Tornado* covered that distance in 23 minutes and 37 seconds at an average speed of 61.6mph. This performance has placed *Tornado* 3rd in the preservation era league table. So where's the record?

Ahead of *Tornado* in the table are 60007 Sir Nigel Gresley (2nd) and 60532 Blue Peter (1st) – but both of these runs were with 'mere' 10 coach loads. On 24th June, the A1 posted her time with an extra three coaches and 100 tons in tow. It's the now 4th place in the table that is the significant one – BR 8P 71000 *Duke of Gloucester*,

also with a 13 coach load and a time of 23 minutes 56 seconds, hence the "beating by 19 seconds".

In actual fact, 71000's train was 30 tons heavier so it's pretty much 'honours even' if truth be told. And the fact that no other 13-coach train features in the top 10 just goes to show how outstanding these two runs are.

Meanwhile, where are my beloved Stanier pacifics?! Well, 6233 *Duchess of Sutherland* does occupy three of the remaining six places but the inescapable fact is that LNER pacifics now cover the top three spots. At least I can console myself with the fact I was on 6233's 2002 run when she set the still-to-be-beaten record on the 5¾ mile climb of Shap itself – 60163 was some 30 seconds adrift of that record.

Oh, and the official reason for the slip at Scout Green was a flange lubricator. But let's not spoil a good story shall we? **TCC**

Apology

In TCC18 we wrongly credited a photograph of 60120 *Kittiwake* on page three. This was taken by the late Mr Cedric Clayson and kindly donated to the Trust by his family. The Trust apologises for this error and is happy to set the record straight.





A1 60163 *Tornado* passes spectacular Ely Cathedral with 'The Great Eastern Explorer'. 28th May 2010.

Covenantors' Diary by Alexa Stott

This issue of *The Communication Cord* has – quite rightly – had many column inches devoted to the engineering issues we have encountered over the last few months. I have left the detailed explanations to the experts but I am sure we all share the same frustration and disappointment at this unexpected turn of events. I hope that what has been said will allay any concerns you may have had. As ever the health, both physically and financially, of *Tornado* remains the Trustees' highest priority and we are hugely grateful for your support through these challenging times.

As I write, *Tornado* has just had a successful steam test and we hope to see her out in all her glory on the main line again very soon. This gives me an opportunity to mention our last main line trip – the Trust-organised 'The Border Raider' – on 24th June. Thank you to all those Covenantors and their families and friends who travelled with us on a magnificent first north bound run over Shap (more details of that record breaking run appear elsewhere in this issue of TCC) with the unexpected bonus of another spectacular run south bound over the world-famous Settle & Carlisle Railway. I think that all passengers would agree that the Trust's own tours

have something that little bit special about them and long may we continue to run them with your support. Thank you to everyone who contributed by buying merchandise or a raffle ticket for 'The Border Raider' headboard and congratulations to Mr Jones of Waltham Cross who won it. My thanks also go to all the stewards, the merchandising team and other helpers, many of whom worked a near 24-hour day thanks to the vagaries of the local water utility at Carlisle (who "forgot" to tell anyone, let alone the railway authorities, that they had turned the water hydrant off in the yard where *Tornado* was serviced) and the consequential impact this had on the timings for our journey back south. Thank you to all passengers for their understanding of this situation as I know some of you also had very long days.

Although we will not be running another Trust tour in 2010 I am delighted to tell you that, thanks to the generosity of the tour operator Steam Dreams, the Trust has negotiated a special one-off discount for Covenantors on 'The Christmas Coronation' hauled by *Tornado* in November. This very special pre-Christmas treat of *Tornado* reprising

her *Top Gear* run from King's Cross to Edinburgh with a return two days later south bound over the West Coast Main Line to London Euston is not to be missed. The enclosed leaflet gives further information on how you can take advantage of this special Covenantor-only discount.

Another date which I would urge you to put in your diary if you haven't already is 9th October 2010 – our Annual Convention at The Chesterfield Hotel in Chesterfield, Derbyshire and Barrow Hill Roundhouse. I gave some outline details of this in my last Covenantors Diary. However, I am now delighted to announce that we will also be celebrating the 20th anniversary of the Trust with a very special dinner on the same night. As the final details of this are yet to be confirmed, please do look out for a letter from me in the next few weeks which will include a booking form for both the Convention and the 20th Anniversary Dinner.

Finally, but by no means least, as some of you may be aware, we encountered some postage problems with the last edition of TCC. This was due to a miscommunication between the Trust and Royal Mail. We have put measures in place to ensure that this will not happen again but on behalf of the Trust may I apologise once again to all those who were affected by this mistake. Enclosed with this mailing you will find a voucher to the value of £1.50 which can be redeemed for official *Tornado* merchandise in one of the following ways:

- Complete the enclosed merchandise order form, attach the voucher to the form and deduct £1.50 from the total you have spent.
- Use the voucher at our stand at one of our preserved railway visits.
- Use the voucher to buy merchandise on one of *Tornado's* main line tours.

Please note that we cannot accept photocopied vouchers and that the voucher is valid until 1st January 2011.

Once again may I thank all our Covenantors for your support of the Trust over the last few months. We are confident that the rest of 2010 will be a successful one for *Tornado* and the team and look forward to seeing you on tours and at preserved railways over the next few months. Please do visit the website for up-to-date details of *Tornado's* revised schedule for the rest of the year. **TCC**

Right: Public launch of the Trust at Railway Institute, York, 17th November 1990.
Below: AI Trust Chairman Mark Allatt addresses the 2009 convention.

Phil Champion



Neil Whitaker



TORNADO AND MALLARD ON THE MAIN LINE: WHAT A PAIR! By Howard Johnston

Has this been *Tornado's* most prestigious day job so far? Apart from the two Royal Trains, towing record-breaking A4 4468 *Mallard* to Shildon from its home at the National Railway Museum at York on 23rd June is certainly one of the high spots of our engine's two-year main career.

The gentle, effortless, run over the East Coast Main Line's racing stretch clashed with a crucial England World Cup football qualifying match. However, this did not stop people flocking to the lineside, and 1,500 turning out to see the pair arrive at their destination, by far the largest local crowd since Shildon hosted the 1975 Stockton & Darlington 150 celebrations.

Shildon will be *Mallard's* home while the NRM carries out a £20 million rebuilding of the Great Hall, and the journey, conducted with such precision, was significant in so many ways. The decision to employ *Tornado* could not have better for publicising our locomotive.

The run was special because a pair of Pacifics on any ECML working is still virtually unheard of, and was actively discouraged in both LNER and BR days. Although of course *Mallard* was not in steam on 23rd June, it helped make up a stirring and colourful four-vehicle combination, running immediately behind No. 60163, followed by a maroon support coach, and class 47 diesel No. 47798 *Prince William* bringing up the rear.

As can be imagined, it wasn't simply a case of hooking up everything and moving off. *Mallard* is justly regarded as the nation's most precious railway asset, and a lot has changed on the modern railway since it was retired from BR service as 60022 in 1963.

NRM staff spent two days checking over *Mallard* to ensure that it was fit to run at speed on a busy express passenger route. Apart from being exhibited outside the main hall a couple of times it has not budged from its position since 2003 (when it was tripped to Doncaster for the works open weekend).

4468 is known to be in fine fettle however. While the will and finance may not be there to do it, it has been said that simply organising a boiler re-tube and fitment of modern cab equipment would allow it to repeat the memorable runs of 1986-88. Many of us recall how the late and beloved museum curator John Bellwood persuaded his peers to let *Mallard* haul excursions to commemorate the 50th anniversary of its 126mph record run in June 1938.

On 23rd June, there was a major operational issue to resolve. The 'Streak' does not have dual/air brakes, so a through



A1 60163 Tornado and A4 4468 Mallard stand outside the NRM at York.



Tornado powers Mallard up the ECML to Shildon.

pipe had to be rigged up from *Tornado*, through 4468's left side handrail, to the support coach.

York station is now a familiar venue for *Tornado*, but platform enders were noticeably taken aback by the sight of two 4-6-2s in Platform 10. A surprising number had turned out despite the journey's timing clashing with England's World Cup group stage match against Slovakia.

A gentle and east mid-40s speed was maintained over the flat racing stretch to Darlington, and a brief stop was made under the classic overall roof to check whether there was unwelcome warmth in *Mallard's* axleboxes. There wasn't.

Arrival at Shildon was special for all of us because it provided the sight of two Peppercorn engines together – both apple green, and both in steam. After *Tornado* was uncoupled, the North Eastern Locomotive Preservation Group's newly-restored J72 0-6-0T No. 69023 *Joem* ran up to shunt *Mallard* into its new resting place. It will be recalled that No. 69023 was completed at Darlington Works in 1951 to a Worsdell design that

had first appeared 53 years earlier. It had been ordered in 1949, the same year of Peppercorn's retirement as the Eastern Region's Chief Mechanical Engineer.

Mallard is in good company at Shildon, because fellow Green Arrow and the prototype of its East Coast successor, the 3,300hp Deltic, are also there.

The Trust pays tribute to the all-round teamwork that made the outing so trouble-free and enjoyable for both the participants and lineside onlookers; NRM staff, DB Schenker crew members, and NELPG.

Trust Chairman Mark Allatt said afterwards, "It was another wonderful day for *Tornado*, attracting valuable publicity and demonstrating once again that our engine has a role both as a reminder of our glorious railway engineering history, but also quite capable of doing a decent day's work.

"*Mallard* will be heading back to York in around two years time, and we certainly hope that *Tornado* will be considered again for the return trip." **TCC**

TORNADO ON TOUR *by Graham Nicholas*

'The Cathedrals Express', 8th May 2010

King's Cross-York: 1Z22 charter for Steam Dreams

York-King's Cross: 1Z25 charter for Steam Dreams 414 miles

We kick off this review with a model day out on the southern half of the ECML that Tornado already knows so well – four minutes early in York and just two minutes late back in King's Cross. Once again, Tornado put in a good show on the northbound climb of Stoke, making up nine minutes on schedule between Tallington and Stoke Tunnel.

Ian McDonald



KJC Jackson

'The Canterbury Tornado', 15th May 2010

Willesden-Tonbridge -Canterbury West: 1Z27 charter for Pathfinder Tours
Canterbury West-Dover-Victoria: 1Z28 charter 246 miles

A day characterised by early running, the loco ran effortlessly all day, uphill and down dale. The most exciting running was reserved for the return journey, getting off to a great start on the climb away from the white cliffs – the noise through Shakespeare Tunnel was simply awesome!! Once on the level grades the loco ran at a far more typical and efficient setting of full regulator and 15% cut off, with little firing needed, resulting in a 24 minute early arrival at Paddock Wood. She was still 20 minutes early on the approach to Petts Wood Junction when the South East signallers stepped in to spoil the fun and a string of yellows heralded a tame run into Victoria thereafter. But, on a lovely warm evening, Tornado and her train still made a fine sight parading past the gardens and roof tops of South London, attracting many an admiring glance!

Craig Stetten



'The Cathedrals Express', 22nd May 2010

London (Euston)-Chester: 1Z61 charter for Steam Dreams (via Northampton)

Chester-London (Euston): 1Z63 charter for Steam Dreams (via Northampton) 430 miles

A ground-breaking run beckoned with Tornado forging a new path for both herself and Steam Dreams with the inaugural visit of 'The Cathedrals Express' to Euston. Beautiful sunshine and some excellent running completed the recipe for another splendid day out. Once again, the journey home provided the highlights, with retiring mainline steam driver Bob Morrison encouraging 60163 to post an extremely rare even time run on the newly-rebuilt 'premier line', taking just 54 minutes to cover the 56 miles from Crewe to Atherstone (water stop). But there was more to come as the final 38 miles from gaining the fast lines at Ledburn Junction were covered in a highly creditable 42 minutes over one of the UK's busiest stretches of railway. With echo's of 6220 Coronation's famous 1937 press run, Tornado was still purring along at its maximum 75 mph three miles away from its destination at London Euston! And to round it all off, she became the first steam locomotive in the preservation era to be accorded the dignity of rolling right up to the buffer stops in the time-honoured fashion (inadequate ventilation at this particular station having been the previous barrier to steam).

Ian McDonald



'The Great Eastern Explorer', 28th May 2010

Liverpool Street-Norwich: 1Z42 charter for Amethyst Experience

Norwich-Ely-Ipswich-Liverpool Street: 1Z43 charter 378 miles

More new ground was broken on this trip, coincidentally the first for new operator Amethyst Experience. Norwich was the destination, the outward run being the classic sprint up the GE mainline direct from Liverpool Street, where once Sandringhams and Britannias had trod before. The return was an altogether more rambling route via Ely, on another spring day when the sun shone well into the evening.

'The Bath & Bristol Explorer', 29th May 2010

W'den-Reading-Swindon-Bath-Bristol: 1Z84 charter for Amethyst Experience

Bristol-Bath-Newbury-Reading-W'den: 1Z85 charter 286 miles
In utter contrast to the previous day, low cloud and damp conditions accompanied *Tornado* for the second of her back-to-back assignments for Amethyst. Routed out via Swindon then Bath, the return run picked the more direct route over Savernake summit (so called!) and on through Newbury. Whilst the loco was rarely allowed her head she coped competently enough with the schedule to complete a successful launch for the new tour operator.

Ian McDonald



Craig Stetten

'The Canterbury Tornado', 31st May 2010

Willesden-Canterbury: 1Z29 charter for Pathfinder Tours *taken out of service* 184 miles

Firebox stay repairs at Hither Green

Sadly this day was to be over-shadowed by *Tornado's* withdrawal from service following firebox leaks being discovered during the layover at Canterbury. Yet, prior to this, 60163 had put in a bright and breezy run, twice being up to 14 minutes early before being reined back in deference to more ordinary trains.

Andrew P.M. Wright



'The Purbeck Tornado', 16th June 2010

London (Victoria)-Swanage: 1Z82 charter for UK Railtours (via Staines).

Swanage-London (Waterloo): 1Z83 charter (in rear to Soton, then via Laverst'ck) 354 miles

Following her first round of firebox repairs, *Tornado* was straight back into the thick of it, breaking yet more new ground. After a cruise along the LSWR mainline to the Hampshire coast and on into Dorset, *Tornado* left Network Rail metals at Wareham for the run over the 'isle' of Purbeck to Swanage. She gave herself an unexpected little performance challenge having stalled on the awkward getaway along the branch from Worgret Junction but managed to restart her heavy train away onto the preserved Swanage Railway, apparently without assistance from the silver class 67 attached at the rear (that would later haul the complete train as back as far as Southampton). The AI then capped another thoroughly successful day out with an entertaining sprint along the classic Bulleid racing stretch from Salisbury to Woking.

TORNADO ON TOUR

by Graham Nicholas

Ian McDonald



'The British Pullman', 19th June 2010

London (Victoria)-Guildford/Shalford: 1Z82 'Surrey Hills' charter for VSOE (vice 35028)

Shalford-London (Victoria): 1Z83 charter 94 miles

Having missed two of her own trips whilst under repair, 60163 gained an extra working, happily able to respond to the 'international rescue' call to deputise as a last minute replacement for 35028 *Clan Line* on the prestigious VSOE duty. So, once again the classic combination of A1 plus Pullmans came together (albeit in the unfamiliar surroundings of the Surrey Hills). It is by its very essence a serene schedule, requiring a dilatory average speed of no more than 24½ mph(!) so it was no great surprise that *Tornado* arrived back in London Victoria bang on time.

Fathers' Day 'White Cliffs Luncheon' and 'Hampshire Coast Dinner', 20th June 2010

London (Victoria)-

Canterbury: 1Z82

Fathers' Day circular charter for Steam Dreams

Canterbury/Dover-

London (Victoria): 1Z82 charter

London (W'loo)-Basingstoke/Botley: 1Z92 Fathers' Day circular charter for Steam Dreams

Botley/Guildford-London (Waterloo): 1Z92 charter 376 miles

An altogether more arduous mission, compared to the previous day's trundle, *Tornado* undertook a repeat of her 2009 Fathers' Day double working for Steam Dreams. It was however a day of mixed fortunes with the schedule, the morning circuit providing the more satisfactory running, including clawing back a full 19 minutes of late running between Maidstone and Canterbury. Unfortunately, the A1 was unable to claim its rightful path out of Waterloo for the second half of the day and did well to contain the ensuing lateness to a little over a half hour. The fine evening sunshine was at least a welcome bonus.



Frank Price

TOUR DIARY

Due to *Tornado's* time out of traffic under repair the 'Tour Diary' has changed substantially and will be a bit of a 'moving feast' over the coming months as we seek additional work. Please therefore go to the 'Travel with *Tornado*' pages on www.a1steam.com for the latest information.

● **Saturday 14th August** - 'The Cathedrals Express' - London King's Cross to York and return - promoted by Steam Dreams

● **Monday 16th August** - 'The Cathedrals Express' - London King's Cross to York and return - promoted by Steam Dreams

● **Friday 20th August** - 'British Pullman' - from/to London Victoria - promoted by VSOE

● **Saturday 21st - Sunday 22nd August** - *Tornado* visits the Mid Hants Railway at Alton

● **Saturday 28th - Monday 30th August** - *Tornado* visits the Mid Hants Railway at Alton

● **Saturday 4th - Sunday 19th September** - *Tornado* visits the West Somerset Railway at Minehead. Please check with WSR for which days *Tornado* is operating

● **Saturday 25th September** - 'The Brunelian' - Hampshire (60163 *Tornado* and 6024 *King Edward I* from Bristol) to Plymouth and return - promoted by Pathfinder Tours

● **Wednesday 29th September** - 'The Purbeck *Tornado*' - London Waterloo-Swanage-Southampton and return - promoted by UK Railtours

● **Saturday 2nd October** - 'The Merseyside *Tornado*' - Liverpool South Parkway, Runcorn, Crewe, Stafford, Lichfield Trent Valley to London Euston and return hauled throughout by *Tornado*. This tour is *Tornado's* first visit to the city

of Liverpool - promoted by HF Railtours

● **Saturday 9th October** - AISLT Convention (private meeting), Barrow Hill Roundhouse, near Chesterfield

● **Sunday 10th October** - open day at Barrow Hill Roundhouse, near Chesterfield

● **Friday 22nd October** - 'The Royal Borderer' - Doncaster to Edinburgh & return (*Tornado* from/to York) - promoted by Pathfinder Tours

● **Saturday 23rd - Sunday 31st October** - *Tornado* visits the East Lancs Railway at Bury

● **Wednesday 3rd November** - Crewe to Glasgow & return (*Tornado* from/to Manchester Victoria) - promoted by HF Railtours

● **Thursday 11th November** - 'Armistice Day with *Tornado*' - London Waterloo-Ely for Duxford-Norwich and return - promoted by Steam Dreams

● **Thursday 18th - Saturday 20th November** - 'The Christmas Coronation' weekend shopping trip from London King's Cross to Edinburgh Waverley, departing on Thursday and returning on Saturday. Optional Edinburgh - Newcastle - Carlisle - Edinburgh circuit on Friday 19th November - promoted by Steam Dreams.

● **Saturday 4th December** - 'The Bath Christmas Market' - Bedford, Luton Airport Parkway and St Albans via Salisbury to Bath & Bristol and return - promoted by UK Railtours

● **Saturday 11th December** - 'The Cathedrals Express' - London Euston to Chester and return - promoted by Steam Dreams

● **Monday 13th December** - 'The Cathedrals Express' - London circular tours - promoted by Steam Dreams

The following tour operators are running the trains listed opposite

Steam Dreams

Web: www.steamdreams.com

Tel: 01483 209888

Email: info@steamdreams.co.uk

Pathfinder Tours

Tel: 01453 835414

Web: www.pathfindertours.co.uk

Email: office@pathfindertours.co.uk

HF Railtours

Telephone Pathfinder Tours:

01453 835414

Web: www.hf-railtours.co.uk

UK Railtours

Tel: 01438 715050

Web: www.ukrailtours.com

Mid Hants Railway

Web: www.watercressline.co.uk

Tel: 01962 733810

West Somerset Railway

Web:

www.west-somerset-railway.co.uk

Tel: 01643 704996

Email:

info@west-somerset-railway.co.uk

East Lancs Railway

Web: www.east-lancs-rly.co.uk

Tel: 0161 764 7790

VSOE 'British Pullman'

Tel: 0845 077 2222

Web: www.orient-express.com

Barrow Hill Roundhouse

Web: www.barrowhill.org

Tel: 01276 472450

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.

MERCHANDISE

By Gillian Lord

The visit to Shildon was excellent, we were made very welcome by the staff and visitors alike, and sales went well. Local school children visited *Tornado* whilst she was in the hall; they had the chance to visit the footplate, chat to the team and then went away happy that they had been able to have such close contact with *Tornado*.

The last month has been rather quiet on the merchandise front due to *Tornado* being out of service. Sales online have continued steady and with the web site being able to accept debit/credit cards shortly, sales should grow.

"What new products do we have this month?" I can hear you all asking!

Well, children's colouring sets have been introduced, five pictures of *Tornado* to colour in and a word search puzzle plus a popper crayon, nicely packaged price £2.50, a must for every child on a rail journey pulled by *Tornado*.

For the collectors we have pewter key rings 25 mm diameter, 2-D *Tornado* profile with an antique finish, bagged price £5.

Computer users have a mouse mats and coaster set for £6, just what is needed to enable you to drink your beverage of choice (from a *Tornado* mug of course) whilst surfing the net.

Finally our latest addition is the new revised 'The *Tornado* Story' book.

Updated and expanded to 60 pages telling the extraordinary story of *Tornado* from 1990 to present day, including the building, the Royal naming ceremony at York, the 'Top Gear' Race to the North, the evocative Winton Train, the Royal Train to Manchester with Prince Charles and the Duchess of Cornwall and much more. Priced at £10.

Coming soon is the 2011 Official *Tornado* Calendar, A4 size opening up to A3 with a year of *Tornado* in pictures, boxes large enough to put all your important dates, shrink wrapped, all for £10.

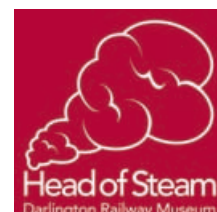
All these items are available on-line and also from our stand at events and on trains hauled by *Tornado*.



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



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* All information correct at the time of going to press on 15th August 2010. For up-to-date information and dates please check the website www.a1steam.com.

● The A1 Steam Locomotive Trust, Darlington Locomotive Works, Hopetown Lane, Darlington DL3 6RQ

● e-mail: enquiries@a1steam.com ● website: www.a1steam.com

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

Access to the works is via Head of Steam (the newly refurbished Darlington Railway Museum) where covenantors are entitled to free entry.

Charity registration No. 1022834.

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

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