

THE COMMUNICATION CORD



The A1 Steam Locomotive Trust
New Steam for the Main Line

No. 11 May 2008

Tornado has a tender behind! **Locomotive and tender together for the first time**



It's been a busy few months since the successful steam test for our team building *Tornado*. With up to eight contractors, three to four volunteers and a few Trustees around, there have been up to 15 people actually working on *Tornado* at any one time at Darlington Locomotive Works alone, without including the efforts of all of the suppliers up and down the UK and

beyond. Most days now see six to eight people working at our works on *Tornado*.

All of that effort has started to pay off: those attending our Spring Covenantors' Weekend on April 26/27 were able to see our locomotive and tender together for the first time and, although the bogie was yet to be finally fitted, *Tornado* looked – and is – substantially complete.

Over the course of the weekend, the Trust welcomed around 400 covenantors and supporters visit the works to see progress to-date. Although a few expressed their disappointment that the 'A1' was not in steam, the overwhelming majority were taken aback by the transformation of *Tornado* since our Convention in October last year. Both days were very

Editorial

This issue of *The Communication Cord* is again a last minute substitute for the planned *Top Link*, which will now be published shortly after our locomotive moves for the first time under her own steam in early June. I'd like to thank John Hartley for his hard work as our past editor and welcome Nick Brodrick, a journalist on *Steam Railway* magazine (familiar to many of you), as our new editor. Nick's hand will be on the regulator of the redesigned *Top Link* and *The Communication Cord* from their next editions. Do let us know what you think of the fresh look.



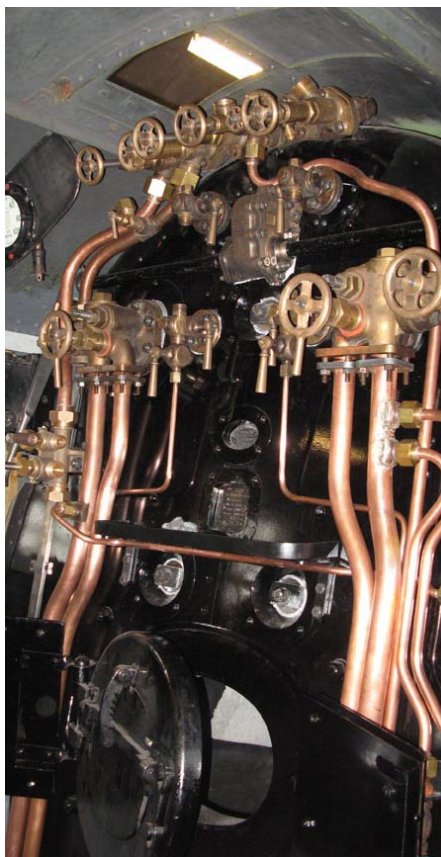
Mark Allatt

Acting Editor (for this issue only!)

informal, with guides on hand to answer any questions that people had and to encourage donations, purchases and promises of help. They were punctuated by presentations each day from the steps next to the cab by Mark Allatt, our chairman, and David Elliott, our director of engineering, who both took questions from the floor. You can read elsewhere in this newsletter about all of the hard work that has gone into getting *Tornado* into this condition and what remains to be done.

Faces old and new abounded over the weekend. There were covenantors who had been contributing since almost the start of the project who had never seen No. 60163 'in the flesh' before, others who hadn't seen her since the frames were first erected at Tyseley Locomotive Works in 1995 as well as a sea of regulars who seem to be at every Trust event. Our supporters and their guests came from far and wide - from Canada in one case - and included our President Dorothy Mather, the widow of Arthur Peppercorn, the designer of the AIs, and David Champion, one of the founders and a past chairman of the Trust, made his first visit for many years.

Some of the new faces also included a number of small children who stared in awe at the sheer bulk of *Tornado* towering over them. As many of them as possible were invited into its cab in an effort to encourage their interest in steam locomotives and hopefully some of them will turn into our covenantors and volunteers of the future.



FROM THE CHAIR

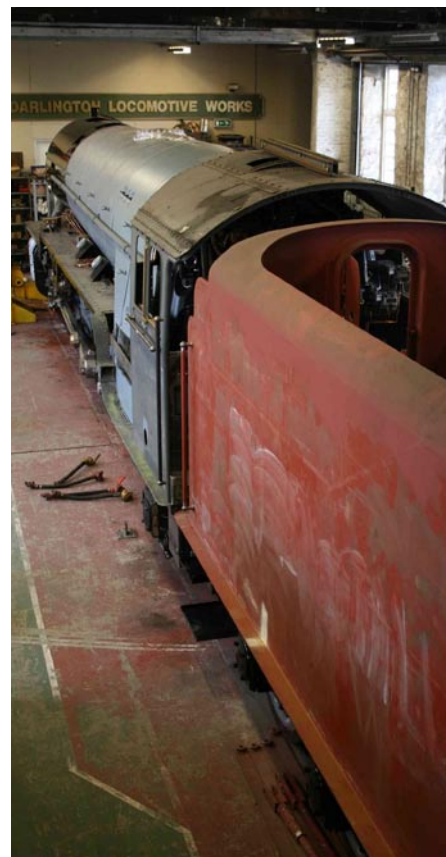
By Mark Allatt

I knew that this year would be busy for all of those involved in the Trust but I really hadn't appreciated quite how busy! I would like to express my gratitude on behalf of the Trust to all of those who burn the midnight oil for *Tornado* night after night. From the tireless work of our administration team without whom you wouldn't be receiving this newsletter through to our many works guides, volunteers & contract staff in the works and Trustees, all working "to build and operate a Peppercorn class 'AI' 'Pacific' steam locomotive for main line and preserved railway use".

What a year it has been so far, even though we are rather more behind our self-imposed deadlines than I would like. However, we now have a locomotive that



Mark Allatt looks on as David Elliott addresses the gathered Covenantors on the Sunday morning.



is so close to completion that we have had to give up measuring 'percentage complete' as it has become meaningless. We have though, taken the decision to put back the completion date in order to have a much higher degree of confidence that we can make the revised deadline - so many apologies for having moved dates around as I know many of us are planning our diaries around *Tornado* this year! All - but there is an awful lot of it - there is left to do is a large amount of detailed pipe work, painting and final assembly: although judging how long some of these tasks will take is taxing us rather a lot at the moment.

Yet again the atmosphere in the works has been transformed by this progress. From the moment you enter the building you can appreciate the sheer size - and beauty - of our locomotive. From the length of the combined locomotive and tender through to the gleaming brasswork on both the outside and inside of the cab, you can see that this is a machine close to being ready to do what it was designed to do....

Our packed works was a happy place during our Spring Covenantors' Weekend, with so many smiles from young and old at the progress that we have made. As is written elsewhere in this newsletter, the future of main line steam in the UK isn't just about new locomotives like No. 60163 but also about passing on our enthusiasm to those even whose parents (like me) aren't even old enough to remember



steam in everyday service. So please do encourage your children and grandchildren to take an interest in *Tornado*.

We are now clearly on the final stretch of the project to build *Tornado*, with just a few weeks until she moves under her own steam for the first time and departs Darlington for the Great Central Railway. All of this progress has, however, come at a cost. Recently the Trust has been spending in the order of £60,000 every month on construction. It is thanks to your continued generosity that our income continues to hold up and maintain its record breaking levels achieved since late last year. Although we have already raised £30,000 of the extra £50,000 that we made an appeal for in late March, now is not the time to be complacent. We still need to close this gap in order to get the 'AI' onto the main line in 2008 and once *Tornado* is on Network Rail we will need to raise in excess of £800,000 to service the loans taken out and Bond issue taken up to ensure the locomotive's long term operational future.

We are keen to encourage as many arm's-length supporters as possible to join us by either becoming a Covenantor, making a donation, taking out a dedicated donation to sponsor a part of the locomotive (there are still many components left to support), sponsoring the first turn of the wheel and/or subscribing to our Bond issue, so if you know anyone who wants to become part of our winning team please encourage them to come on board. And

when you look at the list of components now available as dedicated donations, I am sure that you will find one that grabs your interest and suits the size of your pocket, especially with Father's Day just around the corner. Details on all of these can be found in the 'how you can help' section of our new website www.a1steam.com. We still have a huge amount to do if *Tornado* is to enter main line service this year - but with your continued support I have every confidence that we can achieve this objective.

Finally, it is our intention to arrange one last opportunity to see *Tornado* - this time definitely in steam and capable of moving under her own power - in Darlington before she leaves. Owing to the delays outlined above this will now be on the weekend of August 2/3. Please complete and return the booking form enclosed with this mailing. We will inform you of details of future events and milestones as soon as we can be as confident as we can be about the arrangements - please keep an eye on the events section of our website for the latest information. I look forward to seeing you in Darlington. **TCC**

SEIZE THE MOMENT

By Duncan Ross

In addition to its covenanting, dedicated donation and bond issue the Trust launched a new fundraising initiative - first turn of the wheel - to coincide with the next issue of *The Communication Cord*.

The first turn of *Tornado's* wheels under

her own power will take place shortly. Why not be part of this most historic, and defining, moment in the history of our project? We are offering the opportunity to be part of the sponsorship for the first turn of the wheels. With a donation of £25 you can have your name - or the name of someone you care for - on a certificate that will record the moment when No. 60163 first moved under her own power. The sponsorship is available for each set of wheels.

As part of the celebration of the first movement of *Tornado* under her own steam, the Trust will present to one of our supporters an inexpensive, appropriate - and unrepeatable - memento of the occasion. All the forms that we receive will be put into the hat.

A similar memento will be produced and presented to someone who celebrates a special occasion on the day that the wheels first turn - this could be the birth of a child, grandchild or great grandchild, a wedding or a wedding anniversary, or a significant birthday. Details of how you can participate in this - free - draw will be published once we know the date of the 'First Turn of the Wheels'. It's not too late to take part in this exciting initiative - go to www.a1steam.com and look at the 'how you can help' section. **TCC**

ENGINEERING UPDATE

By David Elliott

Since Issue 10 of *The Communication Cord* was published in February 2008 considerable progress has been made in advancing *Tornado* towards completion.

Frames and superstructure

The cab front windscreens and side screens have been machined by an engineering company owned by a covenantor at a very reasonable price and fitted (minus glass) and are now awaiting fitting of catches which the Trust's Anglia Support Group delivered during the Covenantors' Spring Open Weekend. Glazing has been ordered from Romag at Consett, makers of bullet proof glass and windscreens for Class 170 DMUs. Further adjustment has been made to the front flange of the cab to make a better fit with the boiler cladding. The cab and floor plates have been grit blasted and the interior has been finish painted in apple green, on the sides, and cream on the inside of the roof. Andrew Daniel, the contract joiner who works for the LNER Carriages Association has made up and fitted the cab floor woodwork.

Wheels

The bogie and Cartazzi spring gear is now ➤

complete. Owen Springs at Rotherham has delivered the coupled wheel springs and the coupled wheel spring links have been fitted to the axle/cannonboxes. The springs will not be fitted until the remaining pipe and motion work is complete as they hamper access. The bogie coil springs were delivered in March. Ian Howitt has delivered all the bogie and side control spring details. The modified bogie crosshead and new phosphor bronze bearing strips have been delivered by MultiTech. The bogie has had the wheelsets removed to enable the grease ports to be drilled in the horn faces. With all the other suspension components on hand, all the springs have been fitted and the bogie reassembled and replaced under the locomotive.

Cylinders

The piston and valve rings were delivered in April, the valve rings fitted and the valve spindles inserted in the valve chests. Following a discussion with John Graham (CME of NELPG/The Sir Nigel Gresley Locomotive Preservation Trust) we omitted the ring stops on the pistons

as current practice is not to fit them. Steve Andrews of The Thompson B1 Locomotive Trust has produced the piston rod packings and Ian Howitt is completing spherical machining of the details. Packing springs have been delivered by The Tested Spring Company in Birmingham. The oil injection port in the middle of each cylinder has been drilled through the liner to meet the existing feeds from the lubricators. Peter Neesam has de-burred and cleaned out the steam and exhaust passages in the cylinders in anticipation of final assembly.

Valves and Motion

The connecting rod small end bushes are complete and outside motion has been re-fitted with felt pads in the bearings, the inside valve gear has been re-erected with the eccentric rod adjusted to provide the correct travel in both forward and reverse. The inside connecting rod torque setting has been completed and the rod is now ready for final fitting at the appropriate time. Ian Howitt has continued to assemble motion including fitting the last of the pins and has delivered some of

the stuffing box details. The reverser stand has been re-assembled in the cab and the reversing gear is now complete with the exception of the drive to, and indicator plate for, the cut off indicator which can only be completed after the valve setting which is expected to be done after the Spring Bank Holiday under the guidance of John Graham.

Boiler and Smokebox

The order for main steam pipe components was placed with Induction Pipe Bending Ltd in Sunderland and the components have been delivered. MultiTech of Featherstone has completed the main steam pipe flanges. Taylors of Leeds was contracted to fabricate and weld the steam pipe assemblies from the kit of parts. Having being welded at Leeds, the welds non-destructive tested and complete pipes hydraulic tested, the steam pipes were returned to Darlington finally fitted in the smokebox. A large number of gaskets have been procured for steam fittings and pipe joints. Peter Neesam has completed insulating the boiler and re-fitting the cladding, including manufacture of the trailing coupled wheel splashes. The drawing for the new banjo dome casing has been completed and is with the North Norfolk Railway for manufacture. The fire arch has been cast *in situ* which enabled the fire hole door mask to be fitted which in turn has permitted completion of the backhead cladding. GN Steam has manufactured the fire hole leg guards and these are now fitted to the backhead.

The chimney has been properly attached to the liner and set up in the correct position over the blastpipes and bolted to the smokebox – it has since been removed to facilitate access to the smokebox. The smokebox is being fitted out including the anti-vacuum valve and top cover and the blastpipe is being fitted for the last time. The regulator cross shaft and other back head fittings have been finally fitted.

The boiler hand rails have been made and fitted. The cladding is effectively complete as ceramic fibre insulation and aluminium foil were fitted to the boiler, followed by the cladding sheets themselves.

Brake and Safety Equipment

Ian Howitt has carried out final machining of the loco brake cross stays and they will be returned from Crofton shortly. He is also producing the remaining brake pins. GN Steam has welded the one set of end forks onto each pull rod to enable a trial assembly in the near future. The ex-diesel and electric locomotive brake equipment is with Railway Brake Services



Above: Ian Matthews applies Tectyl, a wax based anti-corrosion coating to the top of the tender frames.

Right: Paul Depledge carefully lowers the tank the last few inches.

Far right: Paul uses a podger to align the bolt between the frame and the tank.

Ltd for overhaul. Some air brake control equipment has been returned which will enable us to install bracketry and pipework on the tender. The electronic auto drain valves for the reservoirs and wet tank recommended by Keith Nicholson of the Interfleet VAB, and supplied by General Pneumatics in Australia are now on hand and will shortly be fitted to the locomotive and tender. This drain system will avoid the incessant 'ticking' sound that the traditional 'Brair' drain valves make whenever the air system is pressurised.

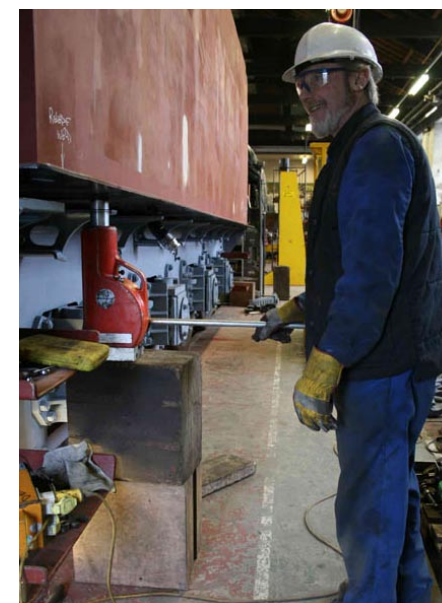
Pipework and fittings

A design has been completed to convert the air pump lubricators to remote air operation and they are now mounted them on the firebox backhead on the fireman's side.

Pipework has concentrated on installing and piping to the disconnect points between the engine and the tender, installation of the air pump lubricators and associated pipe runs. GN Steam has completed machining of the new whistle base – the final assembly will be completed now that the whistle has been trial fitted to the cab front.

The grease separator which is in the long 4in diameter pipe run that carries exhaust steam from the blastpipe to the exhaust steam injector has recently been delivered by Metcalfe Railway Products Limited of Sutton near Macclesfield. Metcalfe is the successors to the Davies and Metcalfe company which made the original injector equipment, and have the drawings and some patterns for this equipment. The presence of the grease separator will free a logjam of pipework between the frames which has been held up waiting for the separator.

Tom Snowball has recruited a further plumber, Brian Gunn, who has been



concentrating on insulating pipes between the frames and final fitting them with gaskets. Tom has continued with various sections of steam and air pipework, particularly to the hose disconnect points between the engine and tender. He has also hydraulic tested a large amount of air pipework, prior to refitting to the locomotive for the last time.

A pocket in the side of the smokebox has been designed and made to accommodate the vacuum ejector behind the left-hand smoke deflector

Other pipework has been made, fitted and hydraulic tested including air pipework from the pumps to the wet tank and on to the back dragbox, water from the exhaust injector to ashpan and tender sprinklers, the ejector control valve has been mounted on the backhead and piped from the manifold and to the ejector. The ejector exhaust has been routed to the smokebox and the ejector vacuum outlet to the train pipe.

Replacement lower water gauge castings have been made by South Lincs, and will be machined as soon as they are available. Pipework is being hydraulically tested as it is being made. About half the pipework has been internally cleaned using equipment brought and operated by our sponsor AB Hoses of Chesterfield. AB Hoses has made up most of the engine/tender hoses, and is overhauling the buffer beam air hoses and connectors free of charge.

All the gravity oil boxes have been completed by GN Steam, apart from closing springs (which are on order). John Haydon, assisted from time to time by David Hurd, is concentrating on completing connections to the gravity oil boxes, a task which is almost finished on the driver's (left-hand) side of the engine and well advanced on the other side.



Electrical System

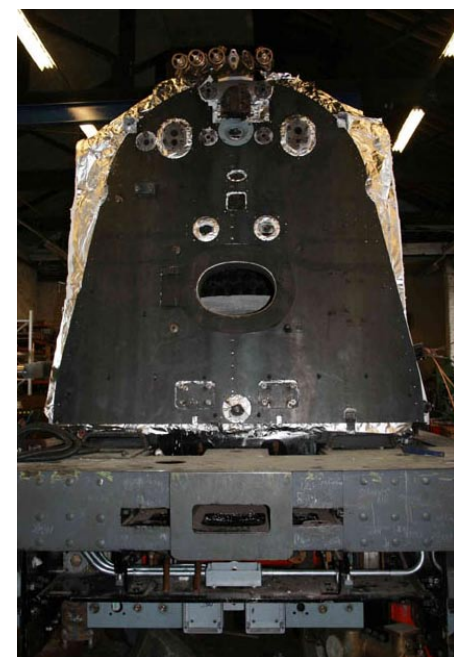
Paul Depledge has now completed the main conduit runs down the locomotive and tender and with the assistance of Mick Robinson has started loom making and pulling cables through the conduits. Paul has completed virtually all the boxes and other mechanical components of the electrical installation on loco and tender. Volunteer Rob Payne has assembled the essential and auxiliary Input/Output boxes which along with the GN Steam made under-cab routing boxes have been zinc plated and passivated. The Essential Services Cabinet is in the process of being fitted-out and the Auxiliary Services Cabinet (which is smaller and less complex) will be completed by our electrical designer, Rob Morland in his own workshop.

Additional work has been required to re-fit the alternator and its regulator following the reinforcement of the tender back dragbox. The front and back marker lamp boxes and associated conduit work have been fitted.

The electrical system design is now essentially complete. The only areas where more work is required are the marker and head lamps (where the LED system has to be finished and the units constructed). Thanks to our recent appeal the Trust now has all eight required plus spares.

The parts list now contains all the items known to be required for the build. A number of consumable items (connectors, conduit components, boxes, etc) will be added as these are procured for the installation. Rob Morland and I have completed the design of the two under-seat panels. I have committed the designs to CAD. These panels contain the majority of the circuitry for the Essential and Auxiliary Services Supplies.

The internal layout of the battery boxes ➤



Backhead cladding is fitted over insulation. Note the fire arch visible through the fire hole.



A fully machined cab front window is trial fitted – it opens to give access to a boiler wash-out door.



Paint now being applied to the firebox cladding.

WHERE'S THE MONEY? By Barry Wilson

Although the Trust's fundraising efforts are breaking all previous records there have been significant increases in costs around materials, labour and certification which meant that the Trust announced in late March that it needed to raise an additional £50,000 above that already pledged over the following three months to have *Tornado* certified and entering main line service in 2008. Since that announcement the generosity of our supporters means that £30,000 of the gap has been raised, leaving just another £20,000 to be found. I'd also like to take this opportunity of thanking all of those bond holders who have gifted their bonds to the Trust, thereby helping to reduce our future liabilities

is now complete and CAD drawings are being produced by your Head of Engineering. Each box will contain two batteries and a battery panel, to which will be fitted the DC-DC converter and associated protection components. The first power supply has been wired up to test the DC-DC converter charging a set of batteries. Using the shore supply this has been bench-tested through two complete battery charge-discharge cycles and performed without any problems.

The first item of circuitry to be carried on the locomotive has now been built and tested. This is the simple circuit that provides a health indication via LEDs on the Control Panels for each of the input and output supplies. Boards containing four of these circuits have been assembled and potted in flame-retardant silicone elastomer. Two units are required and four boards have been built, providing two spares.

On the locomotive itself, the key challenge has been to identify the best routing for the wiring between the cab, frames and battery boxes. This is a very congested area and it was important that we came up with an arrangement that is reliable and maintainable. Paul Depledge has managed to fit in enough conduit capacity which has allowed the circuit schematics and wiring lists to be finalised.

Rob Morland is in the process of assembling and testing the Input/Output and Battery Box panels and will deliver them to Darlington as complete units ready for fitting.

Tender (Sponsored by William Cook Cast Products Limited)

The Trust took delivery of the tender tank from North View Engineering on February 6 after which it was tried in place and found to fit. It was then lifted again and placed on wooden blocks to facilitate completion of work on the plumbing and electrical installation on the frames.

A problem had arisen with the rear dragbox. The original dragbox design on the A1 tenders was a steel casting. As the pattern work required would have been complex it was decided to use a welded fabrication and although we know the LNER had a fabricated design no drawing was found and so the Trust had to commission one. Despite modifications to increase strength they have been found to be insufficient and additional remedial work is now underway, scrutinised by our Vehicle Acceptance Body, DeltaRail. The dragbox as re-designed was stronger than the original design, but having altered the design (even to a small extent) the Trust is obliged to meet more onerous requirements than those in force in 1948.



The smokebox freshly painted – the recess in the side of the smokebox is to allow the vacuum ejector to concealed behind the smoke deflector.

The overall result of this event was to delay fitting of the tank to the frames as the modifications to the dragbox had to be completed before this is done.

The issue of the strength of the tender dragbox was resolved to the satisfaction of the VAB by partially filling in the obround holes in the bottom face of the dragbox and by adding a substantial stiffener plate to the inside of the front face of the dragbox where the coupling spring rests. This work was completed on April 15 which after a further two days for painting, modifying the mountings for the alternator and alternator regulator and refitting the pipe work, the tank to was lowered and bolted down to the frames on April 15. Since then the steel structure that supports the wooden floor in the cab area has been fitted and Andrew Daniel has since made up and fitted the Iroko floor boards. The handbrake screw assembly has been delivered by Ian Howitt and has been tried and fits.

A 1.1 ton balance weight made of three pieces of 60mm thick steel plate has been delivered and will be installed on the front of the tender under the wooden floor. This is required to even up the axle loads when the tender is full, as the bulk of the additional 1,000 gallons of water being carried is at the back of the tank.

A start has been made on installing tender brake control equipment to the right of the coal doors above the locker. Progress with this should be rapid now that the tank is on the frames. Ian Howitt has completed the brake cross stay and has made the final brake pins. The only outstanding items are some hand brake details and the buffers, all of which are being made.

Ian Howitt also delivered the tender handrail knobs and they have also been fitted to the tank. The reservoir carriers have now be completed and the reservoirs bolted on for the last time. This will enable Tom Snowball to complete the air and brake system plumbing.

The tender tank has been grit blasted to remove primer and mill scale and Great Northern Steam brought in to improve the flatness of the sides. Painter Ian Matthews is currently filling, flatting and priming the whole tank.

Following individual spring rate checks by the manufacturers, Owen Springs, the tender spring gear was fitted on May 9 by 'A1' Trustees Barry Wilson and Graeme Bunker.

The rear coupling hook has proved a problem to source. Brockhouse, the last UK manufacturer of forged coupling hooks no longer has the capacity to produce long stem hooks of the type required for LNER locomotive tenders. The process of making a long stem hook involves friction welding an extended stem onto the rear of a conventional forged coupling hook. Thanks to the intervention of our principal sponsor, Andrew Cook when the supply problem was discovered, William Cook Cast Products' Leeds plant which routinely carries out friction welding is making adaptors for its machine to do the necessary welding and NDT. The combined unit will then be returned to Brockhouse for finish machining and proof load testing.

In the meantime the Trust has been fortunate to be able to buy the redundant (if worn) rear hook from No. 60019 *Bittern* as a stand-in until our new hook is finished. **TCC**

GETTING CERTIFIED By Graham Nicholson

The Trust intends that *Tornado* will run on the main line at speeds compatible with today's traffic. It is vital therefore that full certification is obtained.

In 2006, the regulations covering the approval of new items of railway equipment in the UK were updated to comply with the European Railway Interoperability and Safety Directives. Clarification regarding this has been obtained from the Department for Transport and the Trust is required to comply with this new regime. However, there are no applicable European standards to be concerned with, hence the existing Railway Group Standards (now referred to as 'National Notified Technical Rules') are still applicable. The certification programme is being managed by Delta Rail, as the Trust's appointed Notified Body (NoBo) under the new regulations.

The derogation (No. 05/0150/DGN)

that was issued in 2006 exempting *Tornado* from the need to comply with a range of Railway Group Standard requirements remains valid. Many of these exemptions are similar to those granted for existing steam locomotives approved to run on the network and include such things as exemption from the need for a front end yellow warning panel or a crash-worthy 'crumple zone'. Issue of the derogation allows the process of design certification to be completed, confirming the locomotive complies by design with the remaining applicable Railway Group Standard requirements.

This, together with a full review of the manufacturing processes and records for locomotive, as well as scrutiny of the proposed maintenance regime, will result in the compilation of the Technical File and NoBo certificate for the locomotive. Concurrently, the Trust has been in discussions with Network Rail to agree a suitable route acceptance strategy to allow the locomotive to be tested and subsequently enter service on the UK main line network.

Overall approval for the locomotive to

enter service will be granted by the Office of the Rail Regulator (ORR, formerly HMRI – Her Majesty's Railway Inspectorate). This will be in two parts: acceptance under the existing ROTS regulations for use on preserved lines (this will cover use in passenger service at the Great Central Railway); and approval as an 'Interoperable' locomotive under the new Regulations for use on the UK main line network.

By being 'up front' and pro-active in discussions with the railway regulatory authorities, the Trust has found all parties to be encouraging and supportive towards the project, whilst maintaining a thoroughly professional service to ensure that the approval process supports the delivery of a safe and reliable locomotive to the UK preserved and main line railways.

So where are we now? Delta Rail is well underway with its review of changes made to the original Peppercorn design – where the design hasn't been changed, verification is on the basis of the 'A1's' previous service history. They have also audited the manufacturing processes against the quality management system in order to give them confidence that the locomotive

has been constructed in accordance with the agreed design. This audit was successful and no remedial work is required in this area. Frequent discussions have been held with the ORR, most recently on April 2, with a further visit on May 13 which has completed their 'cold' inspection on the locomotive. This coupled with an interim certification statement from Delta Rail and completion of the agreed testing plan will pave the way for testing and use of *Tornado* at the GCR. The Route Acceptance Strategy is subject to a number of activities being progressed to support the operation of the locomotive on the main line, the most significant being the now agreed track force testing programme which involves a mixture of testing at the GCR at 60mph, followed by main line testing at 75mph and ultimately 90mph to prove that the locomotive behaves as is expected in comparison with other steam locomotives. This will include instrumentation being placed on the locomotive to measure its dynamic behaviour, similar to the acceptance of modern rolling stock. We are the first steam locomotive to undergo this process. **TCC**

Covenantors' Diary *By Alexa Stott*

Since I wrote my last piece for *The Communication Cord*, much has happened as the *Tornado* project reaches its critical last stages at Darlington. Although everyone has been working flat out there has been an inevitable knock-on effect as delays in the construction phase have led to events planned for later this year being pushed back. The Trust sincerely hopes to honour the dates now in place, but please be aware we cannot guarantee them.

Events

Despite the disappointment of *Tornado* not being in steam, the Covenantors' Spring Weekend, which took place at the end of April, was a great success with around 400 Covenantors making the trip to Darlington. We raised more much needed

funds, persuaded some of your friends to become Covenantors and sold lots of cake! A big thank you must go to my team of helpers.

Although later than announced at the Spring Open Weekend, we would like to invite Covenantors to join us in Darlington for *Tornado's* first moves on the weekend of August 2/3. Please complete and return the enclosed booking form so that we have an idea as to how many people are attending and when. Within a few days of this momentous event, *Tornado* will be taken by road to the Great Central Railway in Loughborough. Consequently our previously announced Covenantors' Weekend will NOT now be taking place on the weekend of June 28/29 but at a later date to be announced in due course.

After a period of running in and trials in and around Loughborough, No. 60163 will be moved to York and you will

be able to see the locomotive at the National Railway Museum when it is not out on main line trials. Then *Tornado* will be moved into the paint shop at the NRM for final preparations for the launch.

It is planned that the launch of the 'A1' will take place at the NRM in York over a weekend later in the year. Covenantors should then have the opportunity to travel behind *Tornado* on the main line for the first time – with current thinking being return trips from York to Newcastle on both the Saturday and Sunday.

Details of all of these events will be sent to Covenantors as soon as we are as confident as we can be about them.

Appeal for Volunteers

You may recall my appeal for volunteers to help at various events throughout this year, which appeared in the last *The*

Communication Cord. Thank you very much to those who have already put their names forward, but please could I once again ask that if any of you could spare a day or two to help and would like to join the team, do get in touch with me at alexa.stott@alsteam.com.

In addition to the Covenantor events above, we are taking the *Tornado* exhibition stand on the road to:

- '1968 and all that' at the National Railway Museum from May 24 to June 1.
- The 'Coronation' Weekend at the National Railway Museum on July 5/6.
- The Steam Gala at Barrow Hill, Chesterfield from August 22-25.
- The Warley Model Railway exhibition at the NEC, Birmingham on November 22/23.

If you would like to help at any of these events, I am only an e-mail away!

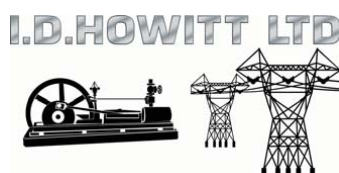
The A1 Steam Locomotive Trust is pleased to display the logos of organisations giving us their ongoing support. Their contribution is gratefully acknowledged.



PRINCIPAL SPONSOR



TOTAL



THE A1 STEAM LOCOMOTIVE TRUST CONTACTS

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Mr Peter Townend; **Mr Wreford Voge** (wreford.voge@a1steam.com)

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* All information correct at the time of going to press on May 21. For up-to-date information and dates please check the website www.a1steam.com.

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● Daytime hotline: 01325 4 60163 ● Works: 01325 4 60022 ● e-mail: enquiries@a1steam.com ● website: www.a1steam.com

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

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

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