

Top Link

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*Some said
we'd never
bridge the
gap*

*They
were
wrong !*



Journal of The AI Steam Locomotive Trust

Darlington Locomotive Works Openings and Visits in 2007

As mentioned elsewhere in this edition of *Top Link*, we now have activity in the Works five days a week. Frequently there are multiple activities going on at the same time with large and heavy pieces of metal being moved. This will increasingly be the case as we get to the stage of fitting the boiler and associated items.

Of course, this increase in work rate leads to a growing sense of excitement and interest in all our supporters who are thus encouraged, in much larger numbers, to come and ‘take a look for themselves’. Whilst we would want to accommodate visitors whenever possible, there are two problems with this: because of the activity level there are real Health and Safety issues with visitors *when work is in progress*. Secondly, escorting people round the works takes time – “just an hour or so” soon multiplies up to days taken away from completing the locomotive !

During 2007 we will continue to be open to visitors on the second Saturday of each month – for which day we clear walk-ways to render the working areas safe for people to walk around. Guides are also there to show people what is happening.

When the boiler is fitted, we plan to hold a “Covenantors only” day so that you will have the opportunity to view *Tornado* before the public at large – the date of this should be announced in the next *Communication Cord*.

In the meantime, might I paraphrase the old ‘credit’ sign that used to hang in many a small shop and pub: “please do not ask for a special visit as refusal may offend” !

David Bedding



Shortly before its withdrawal, the sun shines on 60145 in York mpd in 1966

Photo: © Alan Sharp (and see note at foot of p3)

The 2006 Convention

The introduction to the 2006 Convention, held at the Dolphin Centre, Darlington on Saturday 14 October, was made by the Chairman, Mark Allatt. Having set out the agenda, he reminded all present of the stated Mission of The Trust, the composition of The Board and other team members, the Technical Advisory Panel and our industrial sponsors. He gave a particular welcome to Andrew Cook, Chairman of William Cook Cast Products Limited, our principal sponsor, who was present as the Guest Speaker. In introducing Mr Cook to the Convention, the Chairman reminded those present of the great support we had received from both Mr Cook and his Company – the driving wheels, the bogie and Cartazzi wheels, virtually all the steel castings, the complete tender and a substantial contribution to the Bond issue. Without that support it would have taken The Trust until at least 2012 to complete *Tornado*.

Address by Andrew Cook

Mr Cook spoke of his lifetime interest and fascination with steam powered railway locomotives – admitting to having been a “trainspotter” in his youth! He told of how, when he first heard of The Trust, he felt that this was a project which HAD to be supported, and he particularly likened the work of those involved in the project to his own guiding principle of “persistence and determination”. He also explained how, over the years, he had never simply provided total funding but had always added an incentive to those involved to continue to strive for greater efforts – and recognised that The Trust had done so. He concluded by looking forwards to the completion of *Tornado* and its appearance on the main line.....

Highlights of the Year

Having thanked Andrew Cook for giving his time to come and address the Convention, the Chairman then outlined the highlights of The Trust’s year which had started with the locomotive 63% complete but with a funding gap of around £385,000. Huge progress had been made since then. The boiler had been completed, hydraulically tested, approved and delivered. The frames for the tender – sponsored by William Cook Cast Products Limited - had been completed and the design of its water tank had been finished. Erection of the outside motion was nearing completion and Darlington Locomotive Works was now working 5 days a week. Our Deviation Application had been approved by the Railway Safety & Standards Board. Happily, there had been a significant increase in covenantors and income, and the Bond issue had succeeded with £351,500 subscribed to date. The second year of running ‘The Talisman’ had been rated as a triumph by *Steam Railway* magazine, and we had benefitted from a full page article in the Daily Telegraph and two stories in its City Diary. Perhaps the most exciting highlight was the knowledge that *Tornado* was still on track for completion in 2007 and on the main line in 2008.

Financials

Barry Wilson, Finance Director, then briefed the Convention. Covenantor income was £133,585 (£126,532 in 2005) and total income was £176,368 (£154,130 in 2005). Expenses had remained constant at £47,000 in each year. Those expenses included, annually, depreciation of £9,500, Bond interest of £6,000, insurance of £7,000 and post, printing etc of £6,000. The final result was £21,000 more available to spend on construction than in the previous year. A short term borrowing facility had been obtained of up to £180,000 to facilitate accelerated construction, and take up of the Bond issue had passed £350,000. Significantly, the majority of bond holders had, so far, waived interest. The current trends showed that Covenantor income was 16% ahead of the previous year and donations (all types) were 5 times higher than at the same stage in 2005. Expenses were constant and the gap was reducing at the start of the year BUT the cost of planned completion of *Tornado* less the existing income stream and any savings which could be achieved on construction had been £385,000 at the start of the year. By July 2006 it was down to £195,000. Looking to the future, it was instructive to consider the overhaul of *Clan Line* which would take around 6 years. The target for *Tornado's* first overhaul was 6 to 9 months, and we needed to protect the locomotive's future by ensuring that there was a sinking fund to provide for the cost of overhauls. One way to achieve this was to continue existing covenants and supplement the income generated thereby by transfers from revenue profits.

Approvals and Operations

Graeme Bunker, Operations Director, told the Convention that the 'CE' mark we now had on our boiler was an important step on the road to certification and approval for mainline use of *Tornado*. The locomotive would be interoperable across Europe. Our Railway Group Standard Derogation – 05/150/DGN – had been obtained. Those present were shown the detail which could be viewed via the internet on www.rssb.co.uk. Our Route Acceptance Strategy had been accepted by Network Rail. Key activities in the acceptance were the effect on track forces and structures. The principles underlying testing to 60mph on the Great Central Railway and on the main line had been accepted. 90mph testing on the main line was part of the acceptance strategy subject to engineering assessment and human factors. The Convention was shown pictures from the recent run of 'The Talisman' to illustrate visually why *Tornado* was being built. The 2006 rail tour was a triumph. However, it was not a sell out, and a review was under way to establish how we might improve the product, its marketing and the loading. The views of those who had travelled would be canvassed. Options would be examined as part of developing a longer term rail tour strategy. Support Crew selection had begun with some people having already put their names forward. There would be tough criteria to meet including a medical for all.

Support Crew membership would be no easy job involving 20 hour days with several spent away from home. It was most definitely not about 'doing 'a little and riding on the engine'! 'The Talisman' locomotive support crew started work on the Monday before the run. The engine was lit on the Wednesday, and prepared and examined on Thursday. The Crew went with the locomotive to London on Friday finishing work at 8.00pm, started again at 4.00am on Saturday, had no rest on the Sunday and returned to the Severn Valley Railway on Monday! Anyone interested in joining *Tornado's* Support Crew should send details by email to supportcrew@a1steam.com or by letter to Darlington Locomotive Works (see page 2 for the address – Ed).

Engineering

David Elliott, Director of Engineering, gave a programme review for the year which had been affected by the impact of boiler procurement and manufacture. But the boiler is here!! To ensure that the necessary funding was available to pay for it, the work rate at Darlington had been reduced until June this year and few external orders had been placed. However, since the boiler's arrival, the work rate had been increased to an unprecedented level – 5 days a week with 2 to 4 contractors and volunteers. Additional work had been done. To use resources effectively, completion of the outside motion had been brought forward while the inside motion was being machined and fettling of the outside coupling and connecting rods had been completed. Detailed motion components had been made. The tender frame was now complete, and the tank and wheel-set design was almost complete. Quotations had been sought. An overhauled turbo-generator had been ordered from Meiningen. The past 12 month's targets included fitting brake gear and air pipe-work required between the frames. The air pumps had been delivered and the air cylinders were in the UK and ready for collection. In fitting steam and vacuum pipe-work between the frames, the steel pipe-work was almost complete while the copper pipe had been delivered and work was due to start soon on the installation. As to the task of fitting the inside connecting rod plus the machining, grinding and fitting of the inside valve gear, the machining of the inside valve gear was almost complete. The task of balancing the coupled wheels was scheduled for December 2006/January 2007. Completion of the inside reversing gear was progressing. The major outstanding item was the reverser clutch for which the design for air operation was almost complete. To meet the target of fitting the boiler to the engine required all the above work to be completed as well as finishing the ash-pan and the cladding. Following completion of the boiler in early July, it had undergone its hydraulic test and received its CE marking on 10 July, and had been delivered to Darlington on 15 July. Additional work ordered from Meiningen included making and machining the regulator valve, making and fitting the regulator operating linkage, and designing and fitting the regulator cross shaft brackets. The boiler had been



supplied **on time and on budget**. The Convention saw pictures of the boiler's progress from the rolling of the middle ring to delivery by crane into Darlington Locomotive Works (see pages 25, 26 and the rear cover). The frames of the tender, sponsored by William Cook Cast Products Limited, had been completed in July. Quotes had been sought for the new tank (the design for which was almost complete), axles, tyres and bearings. The patterns and castings of the spoked wheels were underway.

Tender frame complete, July 2006
Photo: © David Elliott

Conclusion

In winding up, the Chairman told Covenantors and visitors that, as at that day, *Tornado* was 80% complete and the funding gap was now down to £147,795. The only thing standing in the Trust's way was an additional £10,000 per month until the locomotive steamed! The Board of Trustees then took questions. Finally, all present were given **the date of next year's Convention, 20th October 2007**, for their diaries.

Latest Engineering News by David Elliott Since the Convention, reported earlier in this issue, we have ordered the hopper ash pan complete from Great Northern Steam Ltd in Darlington and most of the remaining non-ferrous fitting patterns and castings from three pattern makers and two foundries. They are Elsfield Patterns at Keighley, William Lane Ltd at Middlesbrough and South Lincs Patterns at Spalding (the latter two are making both patterns and castings). In addition, the new (lowered) chimney pattern has been ordered from Elsfield Patterns, and South Lincs Patterns has started making the moulds for the superheater header. We have ordered the tender tyres from Ringrollers in South Africa, and the tender axles from Firth Rixson Rings Ltd in Rotherham. Assembly of the tender wheelsets has been placed with Ian Riley at Bury. The tender tank has been ordered from North View Engineering Ltd at Darlington.

'Lot 2' by The Chairman, Mark Allatt

As the completion of *Tornado* really has now become a case of not IF but WHEN, some people's thoughts are inevitably turning to 'what next?' As you will have read elsewhere in this issue of *Top Link* there is still an enormous amount of work to do if *Tornado* is to enter mainline service in summer 2008 and a £136,975 funding gap to fill. In addition to meeting this target we have four immediate priorities:

- 1 acquisition/conversion of a support coach
- 2 address the 'range' issue through the provision of a water carrier
- 3 repay the £500,000 of debt in the bond and commercial loan
- 4 establish a sinking fund to pay for *Tornado's* first overhaul

All of the above will take considerable time, effort and money to achieve and you will be hearing more about each of them over the coming months. However, we are starting to think about what, if anything, the Trust should build after *Tornado* and the implications this decision will have on all aspects of our organisation. All of the other Trustees have their own ideas on this – as do I – but I would be very keen to hear what you have to say.

Please write to me at Darlington Locomotive Works (see page 2 for the address) or send an e-mail to mark.allatt@a1steam.com

A QUESTION OF LIVERY by Mark Allatt

Abraham Lincoln once said that you can please some of the people all of the time and all of the people some of the time, but you can't please all of the people all of the time.

Ever since our project was launched in 1990 we've known that it would have been very easy to have been distracted by the livery question, even before a single part had been manufactured. It has therefore been the habit of those involved in the management of the project to talk only about one colour – undercoat! However, such has been our progress over the past couple of years and our success – thanks to all of our covenantors, sponsors, donors and others – that we have found ourselves having to look at this potentially distracting issue and asking a number of questions:

1. What livery did the original A1s carry and when?
2. As a new locomotive, should we treat *Tornado* the next on the production line in Darlington in 1949 or as a completely new locomotive in 2008?
3. What other liveries are being worn by other mainline locomotives?
4. How do we balance the need to establish an identity for *Tornado* with the need for variety to keep enthusiasts interested?
5. How do we keep the maximum number of people happy?

The Peppercorn class A1s were designed in the dying days of the LNER and would have worn its full express passenger Apple Green livery with 'LNER' on the tender in Gill Sans had nationalisation not intervened. When the first appeared in August 1948 the newly formed British Railways hadn't decided on which liveries should be carried by its locomotives and so 36 of the new A1s were painted in the LNER livery but with 'British Railways' in Gill Sans on the tender. This included all of the Darlington built locomotives but 60127 to 60129 and 60153 to 60162 of the Doncaster built A1s were turned out in the new British Railways express passenger livery of BR Blue lined in black and white with the emblem of the lion straddling the wheel on the tender. All of the Apple Green A1s were subsequently repainted into this livery, often at the same time as being named, but it was found not to wear well. From August 1951 the A1s were repainted into British Railways Brunswick Green with orange and black lining, first with the emblem and then from April 1957 with the crest on the tender.

None of the above resulted in clear-cut answers and so we decided to take a different approach. Our President has often stated that she always preferred the original livery on the A1s. Our supporters range in age from those who remember A1s in all of their liveries to those, like myself, who's only sighting of an A1 is in undercoat in Darlington Locomotive Works. We have therefore decided that 60163 will appear in all four liveries during its first period of operation:

2008-11 Apple Green with 'British Railways' on the tender



2011-13 BR Blue with the emblem on the tender



2013-16 BR Green with emblem on the tender (after intermediate overhaul)



2016-18 BR Green with the crest on the tender



In this way we hope that we will have gone a little way to please everyone!

All pictures on pages 11 and 12 © Colour-Rail

Marketing News

2006 has been a momentous year for The Trust with fantastic progress towards completion and great activity on all fronts by all involved. 2007 promises to be even more exciting !

Spring Draw 2006 The Spring Draw (the first that The Trust has run) was a great success with some £3,000 being added to our funds as a result. The winners were:

1st Prize (weekend away):	Mr C. Barnard
2nd Prize (Driver experience at Great Central):	Mr R. Facey
3rd Prize (Driver day on 15" gauge engine):	Mr R. Webber
The 5 prizes of Cinerail DVD's:	Messrs Addenbrooke, Cave, Fitzsimmons, Jones and Ridge

It was a particularly nice surprise for Mr Barnard. Our letter arrived on the day he retired from teaching so added to his 'leaving gifts' ! Thanks to all those who took part, and especially to our Sponsors: Bannatynes Hotel, GNER, Great Central Railway, Sian Project Group and Cinerail. We plan another draw for Spring 2007.

We offer an apology to all who enquired about the results. The above note should have been included in the last edition of *The Communication Cord*, but was omitted through a slight 'senior moment' on the part of the stand-in editor !

Exhibitions and events In 2006, we have been at the Great Central Railway and Barrow Hill – thanks to Jon Pridmore for organising and to: Keith Drury, Robin Gibson, John Haratt, George May, Bob Parkinson, Norman Raine, John Rawlinson, Charles Tremeer and Tony Watson for doing "stand duty". We're currently looking at our plans for 2007, but nothing is yet finalised. We'll certainly be at the Great Central again and possibly other places as well. The next *Communication Cord* should include our 2007 schedule.

New print and card available As mentioned in the last *Communication Cord* and as featured in the 'centre spread' of this *Top Link*, we have now produced a new print and greetings cards of *St Mungo* – we again gratefully acknowledge the support of the artist, Prof Dugald Cameron. Prints are 16½" X 8¾" (42cm X 22cm), individually signed by Prof Cameron and available from The Trust at £13 + £1 p & p. Greeting Cards are A5 – approx 8" X 6" (20 X 15cm) and are £5 for 6 cards again + £1 p & p regardless of quantity ordered. (NOTE: we are happy to supply any 'mixture' of quantities of *St Mungo* and *Night Scotsman* cards)



Class A1 Pacific Steam Locomotive
60145 "Saint Mungo"
built Darlington March 1949 No. 2064

Chairman's Column by Mark Allatt

First I'd like to wish you all a happy Christmas and an early but prosperous New Year and thank you all for your support for *Tornado* during 2006.

This year has probably been the most momentous for the project to date. The highlight has to be to completion of our boiler in Germany and its delivery to Darlington in July. It was a real privilege to have been present when the boiler passed its hydraulic test in Meiningen – there wasn't a dry eye amongst The Trust's representatives. We have also seen enormous progress on all other aspects of *Tornado's* construction, and it is especially gratifying to see such rapid advances being made on the tender, thanks to its sponsorship by William Cook Cast Products Limited. I said in *Top Link* 13 that *The Talisman* would have a lot to live up to in 2006, having been rated by Mike Notley in *Steam Railway* as "arguably the finest steam railtour yet". Well, despite having to move the date due to planned industrial action, John Cameron's 60009 did us proud and delivered an outstanding performance despite having to cope with very poor quality coal. We have learnt a lot by running these two railtours and will be ploughing this experience back into our plans for 2007 and for when *Tornado* is on the mainline.

As you will read elsewhere in this issue of *Top Link*, progress on the 'bottom half' of *Tornado* is steady and if our income continues to grow at its current rate we will hit our targets of having *Tornado* in steam in 2007 and in mainline service in summer 2008. At the time of writing our funding gap stands at £136,975 and is falling steadily thanks to your generosity.

Although many supporters have subscribed to our Bond issue - and I thank you again for your support – the amount subscribed to is still well below the issue total of £500,000. I urge you to continue to give as much support to the project as you can – and to encourage interested family, friends and colleagues to do so as well.

We have a huge amount to do in 2007 if we are to steam *Tornado* by the end of the year – with your continued support I have every confidence that we can achieve this objective.

Previous page: Profile of 60145 Saint Mungo, built at Darlington (Works No 2064) and outshopped in March 1949 in LNER Apple Green with 'BRITISH RAILWAYS' on the tender. Seen here in its 2nd livery – British Rail experimental blue with black and white lining. No 60145 was the last A1, was withdrawn on 19th June 1966 and scrapped on 27 September of the same year in Hull. Profile: © Dugald Cameron

Editorial Publications Editor, John Hartley, writes:

Much has happened since the summer delivery of *Tornado's* boiler on Sunday 16th July as widely reported in the Railway Press. The very supportive coverage in a number of monthly magazines – notably in *Steam Railway* – will, I am sure, help us to raise the £136,975 still needed to complete the erection of the locomotive. Those able to attend the 2006 Convention, reported in this issue, had the pleasure of seeing the boiler – tangible proof that all the doubters really were wrong after all! The much improved financial position has led to 5-day working at Darlington Locomotive Works, but this, in turn, has implications for health and safety of visitors looking to view further progress. An important announcement about Works visits in 2007 appears on page 4, and I urge anyone contemplating such a trip to Darlington to read it carefully.

In the summer, we passed the 40th anniversary of the end of the original A1s. This issue looks back to events in late 1965 and in 1966 when 60145 *St Mungo* was looked at for preservation but missed out. I feel an close affinity with its withdrawal on 19 June 1966 as that was the day after my wedding! Did they really announce withdrawals on Sundays? Even more poignantly for me, *St Mungo* was finally scrapped on my then new wife's birthday on 26th September of the same year.

Dugald Cameron has very kindly given permission for us to reproduce his coloured profile of 60145 *Saint Mungo* as the centrefold in this issue, and his recent painting of 60161 *North British* will appear as the centrefold in TL15.

Elsewhere in this issue is an article about the future beyond the completion of *Tornado*. This is an important matter which deserves serious thought by us all, and I enjoy you to respond to the Chairman's invitation to have your say.



60145 at Red Bank with newspaper empties in 1966 © John Arnott-Brown.

LOCOMOTIVE PROFILE: 60145 *Saint Mungo* by Phil Champion

60145 was built midway in the construction of the A1s and in several ways was always 'in the middle' for events like repainting - but became notable as the final member of the British Railways-built class to survive. It was authorised on 2nd May 1946, in LNER days, as part of that year's programme. The Darlington Works Order to build 60130-52 was issued in January 1947. Two years later, under BR, 60145 was noted "nearly complete" on 28th February. As Darlington Works No. 2064 it was completed in March with 60144, making them the 15th and 16th of the 23-strong Darlington batch. With 60124 complete in Doncaster this made March's trio the 25/26/27th of the class - about midway. Like all Darlington A1s, plus 60114-26 of the Doncaster build, 60145 was turned out resplendent in LNER green with black and white lining but with BR's name spelt out in block capitals on the tender. Like all the previous 14 Darlington examples old gold was used (as in the post-war LNER livery) for the numbers and letters instead of the usual light cream. Other features in common with other Darlington A1s were the casings for the splashers over the rear coupled wheels dipping towards the rear and the cabsides and tender having the rivets countersunk to give a smooth finish. As with the rest of the class a 'plain' double chimney of sheet metal with beaded edge was fitted; one school of thought being that a lipped one would obscure the view by disturbing the airflow set up by the smoke deflectors.

Entry into service was from Gateshead (52A) on 23rd March 1949 as one of a dozen shedded there - soon to increase to 14. Our first sightings show it at Darlington on the 25th, on Darlington shed on April 3rd then hauling the 2.12 pm Darlington-Leeds train on April 16th. The A1s coped with all kinds of work on the ECML. As early as 14th May 60145 was hauling the most prestigious 'namer' - the "Flying Scotsman" - with 13 coaches from Edinburgh to Newcastle. The Durham coast route was worked too with the 10.25 pm from Newcastle to Kings Cross on 20th August. It took part in another typical A1 run of the time: the 9.20 am Delaval- Holloway ecs leaving Stockton as usual double-headed by a B1 (61065) to Thirsk with the 18 coaches. Before the year was out 60145 had travelled along much of the East Coast routes, being seen from Edinburgh Waverley (and Haymarket shed) to Neville Hill shed and Grantham.

On 19th April 1950 60145 returned to Darlington Works for weighing. However, it was to Doncaster Works where it went for its first general overhaul from 17th July to 23rd August. This was the occasion when locomotives were named and the green A1s were repainted blue with black and white lining but plain black cylinder covers. With 60124 and 60145 turned out in blue that August this made them the 22nd and 23rd so repainted and given more of an identity. *Saint Mungo* refers to the Celtic saint Kentigern who was born in Fife but later moved west. His nickname Mungo means 'dear one'. A community formed round him called 'Clasgu' ("dear family") hence he is regarded as the founder of Glasgow. In fact Glasgow Cathedral is built on the site of his 7th century wooden church. He is said to have performed four miracles in

Glasgow. Another named express was hauled when, on 22nd December, the down "West Riding" was worked. From this time lipped chimneys were fitted to all A1s - usually in the course of repairs at Doncaster. 1951 saw 60145 in Gateshead Works on 10th June. An uncommon working was the 5.17 pm Leith-Marylebone train which pulled into Newcastle on 21st July. The Up "North Briton" was worked into the Tyneside city on 15th September. Repainting into BR green with orange and black lining came in January 1952, one of four that month, making them the 19th-22nd ones so treated.

The 1950s have been said to be the A1s' heyday when they were able to produce power to haul big loads and keep time competently especially while the A3s were in poor condition. From 1952 *Saint Mungo* worked expresses like the "Flying Scotsman" many times for the next six years, more so than other named trains. Taking late 1954/early 1955 we find it entering Newcastle with the Up train on 25/26th Oct, 6/13th Nov, 2/18/29/31st Dec and 12/26th Feb. Other 'namers' include the Up (into KX) and Down "Tees-Tyne Pullman", Down "Northumbrian" and the Up train into Kings Cross, Down "North Briton" both into and from Newcastle, Up "Heart of Midlothian" and Down "Talisman" from Kings Cross. Not only were ordinary East Coast trains hauled but also specials like the additional Edinburgh-KX train of 3rd August 1956 which it brought into Newcastle and the Down X387 troop special leaving Tyneside at 1140 am. Parcels trains worked were usually the York-Edinburgh one. Goods were hauled too, the first noted being the Penzance-Aberdeen from Newcastle on 20th June 20th. A dozen times between October 1956 and January 1957 60145 hauled the Colwick-KX goods. Workings between Edinburgh-Newcastle via Carlisle were 20th March 1955's seed potatoes and 28th August 1956's "Flying Scotsman". The later BR crest was applied to the tender in October 1957. With the introduction of diesels in 1958 most A1s lost express duties though we have a 60145 sighting on the "Flying Scotsman", "North Briton" and "Northumbrian" in 1958/9. Both normal and special ordinary East Coast trains were still hauled.

The new decade dawned with an arrival at Kings Cross on 27th February on the "Tynesider", a diversion via Cambridge on 8th May, the "Flying Scotsman" from the Cross on 18th June and from Newcastle on the 24th then the Down "Anglo-Scottish Car Carrier" on 13th August. 20th November brought a transfer to Copley Hill after 11 years at 52A. Now named trains from West Yorkshire were rostered. The next two years brought the "Harrogate Sunday Pullman", "Queen of Scots", "Yorkshire Pullman", "West Riding" and "White Rose" - as well as the "Northumbrian". On 8th June 1961 *Saint Mungo* was on Royal train standby at Selby. Numerous runs were made on the 6.12 pm KX-Leeds passenger and the 6.28 pm KX-York parcels. A number of visits were made back to Newcastle in the first two months in 1963.

Reallocation to York was on 8th September. Some repairs were carried out at Darlington Works between 16th November and 14th December as such work had been transferred there. Between 20th February and 15th June 1964 60145 was stored at

Hull Dairycoates shed. Next day it was back in traffic. On the 27th it was hauling a goods past Ryhope on the Durham coast line. A sign of the times was working the Dagenham-Bathgate cars through Newcastle on 14th April 1965. Troop specials were the 1X95 Marylebone-Stirling into Newcastle on 27th June and the 12 coach Chippenham-Newcastle of 11th July. A light engine working to Saltley shed was made to be ready to work 5th September's Warwickshire Railway Society's tour between Birmingham and Banbury. Christmas Day saw more normal work with the 6.30 pm relief York-Newcastle and the 28th had 60145 from Darlington-York on the 7.30 am Newcastle-KX. *Saint Mungo's* most famous run was on New Year's Eve when the NER ran a special York-Newcastle and return to commemorate the ending of main line steam. Like others of the class it was bereft of nameplates but its performance still inspired magazine articles two and four decades later.

On 2nd January 1966 60145 was transferred to Darlington. It was often on standby at the station. It still did a variety of work: bringing the 8.40 am ex-Birmingham into its Newcastle destination on 13th January, taking the 4.00 pm Newcastle-York parcels three days later and bringing a goods into Healey Mills yard on 19th March. A number of times in March and April it set off from Newcastle with the 3M30 9.04 am newspaper empties to Manchester. From 27th March it lay withdrawn on Darlington shed then on 17th April it was reinstated, but from York shed. Next day it was on the early hours newspaper train from Manchester which it took forward from York to Newcastle, returning with the 3M30. Our final recorded working is on 19th April when it worked the 3.50 am York-Stockton passenger, hauled a parcels to Sunderland, ran light engine to Heaton and returned to York on the 3M30 newspaper empties. *Saint Mungo* was seen on York shed daily until 20th May; from the next day it was noted minus chimney but on 19th June it was finally withdrawn. It lay at York shed and by 1st August was minus its tender. Sale for scrap to A. Draper of Hull came that month though cutting up didn't start until 26th September. *Saint Mungo*, the last A1, had survived 60124 by three months. Its lifespan of 17 years 3 months was considerably longer than the A1 average of 15 years 2 months. It had seven boilers in its life.

However, all is not lost. A nameplate can be seen, fittingly, in Glasgow Transport Museum. Several years into the 1990s the photo, supplied by Drapers, of *Saint Mungo's* scrapping was used by The A1 Trust to inspire people to covenant to build the 50th A1, 60163.

Details of any A1 sightings would be welcomed by database compiler Tommy Knox at 22 Coverley, Great Lumley, DH3 4LS.

Editor's note: Having published profiles of all the first Doncaster batch of A1s, we now turn our attention to the 23 Darlington engines. However, to (belatedly) mark the demise of the last A1 in BR service just over 40 years ago, Phil Champion kindly agreed to profile Darlington-built 60145 Saint Mungo out of sequence for this issue.

EAST COAST PACIFIC FAREWELL by G L Pallister © Ian Allan Ltd
An article we published in Journal No 9 with the permission of Ian Allan Ltd which has generously allowed us to re-publish the piece in this edition of Top Link.

On the last day of 1965, BR ran a special train from York to Newcastle to mark the end of express passenger steam in the North East Region. Although there were further steam runs over this line by special trains at a later date, this trip was my farewell to East Coast Pacifics. 31 December 1965 was a grey, gloomy sort of day, with thick, low cloud and, in the distance, a thin mist. It was cheerless, cold and damp. In the last hours of the year, BR ran a special train which marked the end of main line steam passenger power on the East Coast main line. For over a year, the only LNER-design Pacifics based in the Region had been the slowly diminishing fleet of A1s and, by the year's end only two remained – 60124 *Kenilworth* at Darlington and 60145 *Saint Mungo* at York, both on stand-by duties.

The special was due to leave York at 6.60pm and, half an hour earlier, diesel shunter appeared with empty stock and pulled slowly into Platform 14. There was a mad dash for the first coach before the train had stopped but we boarded the second coach more sedately and found an empty seating bay on the down side. We had only been seated for about 5 minutes when there was the unmistakable sound of a steam engine and my companion, opening the window, announced that 'she was on'. Leaving him to guard the seats I went on to the platform: at the head of the train stood, majestic and magnificent, No 60145 *Saint Mungo* the last of those great LNER Pacifics whose handsome lines had graced the East Coast main line for so long. The A1 was polished to perfection, the boiler shone bright green, the number on the cabside was a glowing cream and the tender, piled high with coal, was resplendent in green paint. The smoke deflectors, though devoid of nameplates, shone black and wheels and motion were well-polished. The front number-plate had silver-painted numerals and the plate was edged in silver. Two dazzlingly white oil-lamps, adorned with Union Jacks, sat above the buffer beam, shining brightly. And all about the A1 was a great crowd of people. Flash bulbs flickered like continuous lightning and the cab was besieged with admiring visitors. It was a noble sight in those dark days for steam to see a really clean engine and the crowd of admirers demonstrated the extraordinary impression that the steam engine had made on its human makers in its 150 year history. The scene was moving: the great engine surrounded by a crowd of admirers who had come to bid farewell. To our amusement, the special was treated as an ordinary additional train by the station announcer and a few, unsuspecting ordinary passengers ventured onto it. Somewhat surprisingly,

departure was delayed for connection with a late-running train from the south. At 6.47, a loud whistle rang out and the station announcer informed us that 'the train is now ready to leave'. And so we looked at our watches, took out our notebooks and prepared for our last steam run on the East Coast main line.

At 6.49^{1/2}pm, the A1 gave a treat series of whistles and, seconds later, the north end of York station reverberated to a once-familiar sound, slipping driving wheels. Slowly, and with several more slips, *Saint Mungo* pulled out from the lights of York station into the dark night, and as it rumbled over the crossing, gave several long and mournful whistles. A B1 4-6-0 backing into York shed whistled in salute and, outside the shed, we passed a group of men who shouted and waved. More whistles rang out and a K1 2-6-0 on a goods train saluted us from the yards beyond.

Now came on the night air the most thrilling sound of all to take us back to past days on the East Coast as the regulator was opened wide. A crisp, rapid and powerful sound resulted and *Saint Mungo* began to accelerate vigorously. So often, in its last years, steam had disappointed and high hopes of spirited performance were rudely dashed, but from the start it was clear that the driver was determined to make the last run memorable. *Saint Mungo* accelerated furiously into the Vale of York as its predecessors had done so often before, steam beating down against the carriage windows, with occasional sparks starring the night's blackness. By 7pm we were up to 70mph and by 7.5pm the speed was 80. Shortly after, the regulator was opened wide again and we listened to that glorious sound once more! Then, at 7.12, a long, wavering whistle thrilled the night air and the special stormed through Thirsk at 80 – 22 miles in 22^{1/2} min. We were in the heart of the racing country and *Saint Mungo* was going like a rocket. The journey was proving far more impressive than we had dared to hope – we had averaged 58mph over the first stretch from York.

We were not far short of Northallerton when there was a sudden, full brake application and, in a few moments the 80mph race was over. A red signal barred our way, and, after a short crawl, the train came to a halt. All was not lost for, a minute later, the signal cleared, the driver opened the regulator and *Saint Mungo* accelerated away. Two minutes later, we passed Northallerton at 40 mph to the accompaniment of rapid exhaust-beats and a prolonged whistle. There followed an impressive acceleration, speed rising to 72 in three minutes. For the next eight minutes we enjoyed the thrills of high-speed steam and averaged 70mph to Croft Spa. Beyond, brakes heralded our approach to Darlington and signal checks enforced a slow entry past the yards. I leaned out of the window and watched the A1 swing round the curve into Darlington station. To more loud whistles we passed along a crowded platform, having taken 49^{1/2} min for the 44 miles from York.

Water was taken at Darlington and the station heard the familiar simmering from an A1 for almost the last time. Then a whistle blew on the platform, answered by a 'crow' from the engine, and a few people scurried back onto the train. Doors slammed, another whistle blew, and at 7.45pm *Saint Mungo* emitted another series of whistles and, to the accompaniment of noisy slipping, pulled out of Darlington. Almost at once, the A1 was going at full stretch, the air filled with a furious exhaust, and the sheds and sister A1 *Kenilworth* were greeted with a long whistle. Steam streamed past and, above a crescent moon, turning on its back, shone fitfully through the clouds.

The last steam run was too stirring and exciting to allow much time for sadness, though at the back of our minds was the knowledge the sights and sounds pouring in through the open window would not be repeated. Soon, *Saint Mungo's* fire would be out and the ashes scattered. For the moment, steam and 1965 lived with us. *Saint Mungo* was going as hard as ever and passed Ferryhill in great style, rolling and rattling over the crossings, and saluting the station with another tremendous whistle. Beyond, speed increased slightly to 85 and we achieved our fastest point to point time, of 73.9mph, from Ferryhill to Relly Mill. Soon, we were swinging downhill beyond the box and, although the brakes were applied, we descended the cutting to come across Durham viaduct at 40mph. Halfway across, the A1's whistle began to blow and was held until we were beyond the station. The regulator was again opened wide and the train must have made an impressive sight for the station staff who had assembled to watch us pass.

In this fine and furious manner we came on to the last 14 mile stretch of a memorable journey. As we swept round the curve at Newton Hall, passed the now uprooted junction of the Sunderland line, over Chester-le-Street viaduct and to Tyne Yard and Low Fell, we thought back to the many other times when we had stormed northwards to Tyneside behind East Coast Pacifics such as *Guillemot*, *Sir Hugo*, *Prince palatine*, *Silver Link*, *Sir Walter Scott*, *Guy Mannering*, *Bronzino*, *Ocean Swell* and many more.

Saint Mungo concluded its historic journey at speed. The train was slowed slightly for permanent way check before Chester-le-Street, but the A1 was soon going at full-blast again and came through with a lengthy whistle at just over 70mph. Soon we were sweeping below the lofty heights of Tyne Yard. Standing on top of the box at the south end of the yard was a small group of men and the engine its last whistle-salute of the journey. We were past the yard and racing through Low Fell where, nearly 10 years earlier, I had watched the passage of East Coast Pacifics. I climbed on to the table to smell the aroma of sulphur and hot oil as we roared through the cutting towards King Edward Bridge. Then came the most impressive view of all as the engine swept round the curve onto the bridge, to provide my last sight of an A1's profile from a train. We came to a halt

on the bridge but, almost at once, were away; then the lights of Newcastle were around us and we steamed into Platform 10, alongside a crowded platform and, at 8.25pm *Saint Mungo* braked to a halt. An era was at an end. Once more, the flash bulbs flickered and the engine was besieged. I walked towards the end of the platform.

Those last 10 minutes are hard to describe. I gazed at the front end of the engine and listened for the last time to the familiar, loud simmering. All too soon, the indicator board lit up and, beyond the crossing, signals changed. There was a short whistle from the engine, then roar as the driving wheels slipped. Slowly, and still simmering loudly, No 60145 drew down the platform. A boy



A forlorn 60145 stands among the flowers in Hull Dairycoates mpd in 1966 prior to its removal to Draper's yard for scrapping

Photo: © Alan Sharp (and see note at foot of page 3)

near me stepped forward and touched the engine below the smoke deflectors. Now the cab was alongside, the driver with his shining, peaked cap leant out and, as he passed, there was a great burst of applause and cheering with cries of 'goodbye', 'thank you' and good luck!' Everyone turned as the engine pulled away and, as it did, so the driver's hand appeared in acknowledgement, a final, farewell salute. The coaches rumbled past and the crowd stood, as though at attention, while the sound of the A1 died away. It was not until the last coach had cleared the platform that anyone moved. As the red tail-lamp on the last vehicle swung over the crossing and out by the grim soot-blackened edifice of the castle, a thin wall of steam evaporated slowly into the night.

A series of 12 photographs (all © David Elliott) illustrating the manufacture of Tornado's boiler between January and July 2006

January 2006



The middle boiler ring is rolled



The middle ring is formed into a cone



The ring for the front tube plate



The front tube plate

March 2006



Progress!

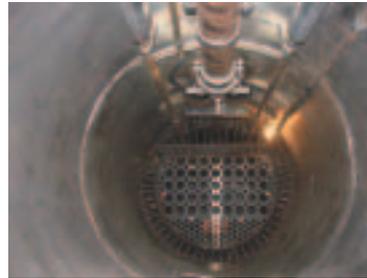


What an awfully big fire box!

June 2006



Inner firebox in the boiler



Regulator and internal pipes

July 2006



The shell is finished



The tubes go in...



...and are welded to the firebox tube plate



The 'CE' mark is applied

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