

Sandtoft Scene

October 2014
No. 95



News and Views from
The Trolleybus Museum at Sandtoft



Sandtoft Transport Centre Limited
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Contributions & comments (for publication or otherwise) are always welcomed by the Editor. We reserve the right to alter or amend text to suit the style of *Sandtoft Scene* or the content of a particular edition. The content of individual items and articles represent the opinions of the individual contributors: they are not necessarily the opinions or policies of The Trolleybus Museum at Sandtoft, the Company, its Directors or its members.

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FRONT COVER PICTURE: Three-axled 506 and two-axled 493 out and about during a wet weekend featuring Nottingham's trolleybuses *Photo: Bob Ashton*

Our Vision Statement is

**To be nationally acknowledged as the
Museum of the Trolleybus and to
entertain, educate and give excellent
value and service to our visitors.**

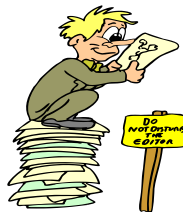
and portrays exactly why The Museum exists and how the Company and The Museum should be run. All considerations, decisions, directives, policies, processes and actions of the Directors and the Members must be focused to meet this end.

SANDTOFT SCENE

NUMBER 95

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FROM THE EDITOR



This year's 'Gathering set a new standard and proved to be a resounding success. With excellent weather and our grounds in perfect condition, everything came together to create one of the best 'Gatherings ever held. A total of 1366 visitors came through Reception during the two days - a 5% increase on last year's figure. The only down-side was that the very large number of visitors did put quite a strain on our facilities -

even the 'Gathering Programme was sold out !

With efforts both before and during the show from so many contributors, we are not mentioning anyone by name, but we do extend an enormous "Thank You" to everyone involved. Your assistance was invaluable and we never take for granted the active support of so many volunteers, working as a great team to create a marvellous experience for our visitors.

Many positive comments were received and you can read some of these on the Museum's Facebook page at www.facebook.com/trolleybusmuseum. In case you did not make it (or would just like to re-live some of the experience), three excellent video recordings of the event were made. You will find links to them on our Members' page at www.sandtoft.org/members, together with a link to some welcome publicity with a video clip entitled "Next stop the Trolleybus Museum" in the online version of Doncaster's local newspaper *The Star*.

Meanwhile, the process of acquiring the additional land to expand the Museum nudges slowly forward - see page 5 for the latest news.

NEW MEMBERS

We extend a warm welcome to:

Mr James Bainter (Cincinnati USA)	Mr Harry Eland (Doncaster)	Mr Matt Knights (Market Rasen)
Mr Andrew Bamford and Mrs. Eileen Bamford (Stoke-on-Trent)	Mrs Elva Evans (Scunthorpe)	Mr Robert McCaffery (Gloucester)
Ms Pam Besser (Doncaster)	Mr Keith Evans (Scunthorpe)	Mr Richard O'Leary (Spalding)
Mr Terence Breton (Peterborough)	Mr John Frewen-Lord (Grimsby)	Mr Peter Otway (Ilfracombe)
Mr Ian Brown (Luton)	Mr Paul Green (Chippenham)	Mr Keith Renshaw (Baildon)
Mrs Jane Caldwell (Doncaster)	Mrs Jill Green (Chippenham)	Mr Oliver Robinson (Worksop)
Mr Trevor Cole (Doncaster)	Mrs Angela Harrington (Penrhyndeudraeth)	Mr Toby Robinson (Worksop)
Miss Faye Cox (Worksop)	Mr Frank Hillier (Sheffield)	Mr Douglas Thomson (Renton, USA)
Miss Helen Cross (Luton)	Mrs Susan Hillier (Sheffield)	Ms Marlene Travis (Brighouse)
Mr Jeff Doppmann (Seattle USA)	Mr Andrew Kilmartin (Enfield)	Mr Paul Ward (Rotherham)
Mr Howard Eales (Sandbach)	Mr Phillip King (Newcastle)	Mr Neil White (Scarrington)
Ms Julia Eland (Doncaster)	Mr Clive Knights (Market Rasen)	Mr Gordon Whitfield (South Shields)
		Mr Simon Wood (Baildon)

Please note: News deadline for the next Sandtoft Scene is 3 January 2015

FROM THE CHAIRMAN

The Tea Trolley Café: Leading volunteers needed !

It is with very great regret that the Board has to announce the retirement, at the end of the 2014 season, of the three leading “Trolley Dollies” - Cherryll Crowther, Judy Martindale and Gill Ferris. These three have done magnificent work in gaining a five-star hygiene rating and building a fantastic reputation with our visitors for great food at fair prices - and with friendly, helpful service, too ! Of course, their hard work over the last ten years has also raised considerable funds for the Museum, for which we are most grateful. So, an enormous “THANK YOU, ladies”, from all of us !

Although they will be a hard act to follow, the Board is currently looking into various options as to how we carry on their good work. Clearly, the best would be to continue with an in-house team if new leaders can be found to oversee the operation and help keep the rest of the team together. **Could you help, or do you know somebody who might be prepared to help ?** Food handling training will be provided if needed, and we are sure that Cherryll, Judy and Gill will be happy to advise on how they have run it - including, I hope, how to make those superb egg custards ! Please apply in the first instance to Graham Bilbé (contact details on page 2). Be under no illusions - this will be no picnic ! It will involve a **lot of hard work**, though we are sure that those who have previously helped in *The Tea Trolley* will rally round to help get started. We are also hoping to recruit sufficient folk that there will **not** be an obligation to attend for practically every running day, but to share the workload, all coming together for the big events.

Other options being considered are to involve local Women’s Institute groups, or, if all else fails, to use a commercial catering contractor. By the time you read this, the post-AGM forum will have provided an opportunity for members to share ideas and offer help, as well as expressing their appreciation in person to our retiring ladies.

Graham Bilbé

DEAR 'SCENE

Dear 'Scene

I felt that I must write in appreciation of the wonderful day spent at Sandtoft taking part in the Trolleybus Driving Experience. It was a day of pure nostalgia in that I used to drive the trolleybuses in South Shields up until 1963, the year before their final withdrawal from service. It was 51 years since I had sat in the driving seat of 204, which you kindly brought out especially for my benefit. I have to say it was like riding a bike, as one says - it was like yesterday. The whole visit was a surprise sprung upon me by my three daughters, two of whom were there on the day. I joined South Shields Corporation Transport upon completion



of National Service in 1957 and was “on the road” until 1963, when I transferred to the office staff, where I remained until 1969 when I started Teacher Training at Durham University.

In conclusion I must pay tribute to the staff at the Museum, especially as they give so much of their time voluntarily. They could not have been kinder or more co-operative. Thank you all once again. *Gordon Whitfield, South Shields*

+++++

Dear 'Scene

Many thanks to all who took part in the 2014 St Leger Rally. It was a particularly difficult event to organise and staff this year due to the unavailability of our usual car parks and the need to use land on the opposite side of Belton Road. However with much coordinated effort and people pulling together the event worked and was successful. Thank you once again.

Jim Sambrooks, Event organiser - DO&LRS

UPDATE ON THE LAND PURCHASE

We are disappointed in still not being able to report a huge amount of progress, despite considerable effort on the part of the BTS (as the initial purchasers of the land) and ourselves to move things forward.

We had thought, in late September, that we were almost there when the land concerned was first mown (it has been full of growth and weeds for some time) and then surveyed, but this only served to show up a further boundary issue and a new set of boundary and area proposals were then put to us ! We have lost count of the number of boundary changes there have been, but with just about all “legal” matters resolved, remain hopeful that contracts will be exchanged shortly.

THE TROLLEYBUS DURING THE FIRST WORLD WAR

Dave Chick

The Museum's contribution to the many commemorations of the First World War is now open. The exhibition was launched on 23 August by Susan Hopkinson, Museums and Heritage Manager for North Lincolnshire Council, whose support has greatly contributed to the development of the displays.

There had been feverish activity during the previous week, with the Pelham building being thoroughly cleaned and the window surrounds repainted, the professionally-designed information panels being collected and attached to the purpose-built display boards, and reproductions of period magazine articles and manufacturers' brochures put in place on the three lecterns which have also been made for us. Time was also taken to set out the panels to allow enough space for visitors to circulate and to be able to view them properly.

Helen Nicholson delivered the replica period driver and conductor uniforms she had created, then set up the mannequins and dressed them. This wasn't as easy as it sounds as their height is adjustable and the driver's height reduced dramatically just as his clothing had been put on ! We have purchased a splendid glass case to house the dioramas, models, and original and reproduction period papers but it is extremely heavy and it took some exertion to put in place.

The exhibition is open to all visitors; there is no additional charge to view it. Great pains have been taken to ensure the historical accuracy of the information provided. We have also followed the York Museums Trust guidelines on presenting information to help visitors to get the most out of the displays.

A great many people have helped to bring this exhibition to fruition. I hope that everyone visiting the exhibition will take time to read the list of names because everyone's contribution deserves to be recognised. I would particularly like to thank Francis Whitehead for his support, without which the exhibition could not have happened.



Left: Some of the first visitors after the exhibition was launched. On the left is a table displaying the full-size reproduction "Spencer" trolley base, created as a spare for Rotherham 73. Alongside it is a century-old finial from Bradford, a short section of round wire from the same city, and a reproduction of a 1919 overhead catalogue

Photos: Dave Chick



Left: The glass case housing the dioramas complete with model infrastructure showing the Schiemann, Cédès-Stoll and Lloyd-Köhler current collection systems, providing the perfect showcase for Ken Allbon's model trolleybuses. The same case also has a display of genuine 1914 - 1918 documents, including a war newspaper and ration coupons

Right: The introductory information panels and beyond them the two uniformed mannequins

REACHING THE BLUNT END

Richard Jackson

The sequel to "Journey to the Blunt End" which appeared in 'Scene nos.92 and 93

For those who have read the previous article in *Sandtoft Scene*, I am pleased to report that on 25 May 2014 I managed to pass the driving examination to qualify as Trolleybus Driver no.133. In this article I will share that experience with you.

The day itself began as my weekends at Sandtoft always do, arriving at 9:00-ish and heading for the first of many mugs of coffee. On my way, I was captured by Graham Bilbé and the test began. Prior to that, Bruce Lake had asked if I would like a quick drive around to familiarise myself with the trolleybus. However, this didn't happen, so for my test we used a trolleybus that I'd only driven for about 40 minutes the day before - so no pressure, then ! The trolleybus used was Rotherham 37.

Taking the test

So, with Graham beside me, the test began with a few questions about the trolleybus and the overhead network, to ascertain if I understood the reasons for the circuit breakers, the dewirement light and so on. We also went through the "pre-drive checks" which all drivers should do. For example, you must check that the vehicle has been left in either "neutral" or "forwards" - especially important if it has just been reversed. You also have to check that the electrics are turned on (including the horn and compressor) and familiarise yourself with certain basics, such as the location of the switch for the indicators. Some of the trolleybuses have their switches in bizarre places. For example, the indicator switch on Glasgow TB78 is above the driver's head, on the off-side. There must be a reason why Crossley placed it there, but I can't think of one !

For the test itself, we commandeered Mike Johnson as a conductor and then set off, as a normal service run does, by departing from the *Regal* Cinema. This almost went smoothly. I'd like to blame either my inexperience of the 'bus or the lack of coffee in my system, but I very nearly went through a dead-section drawing power. I can admit that Graham noticed too ! Leaving from the *Regal* is a tricky manoeuvre to rehearse and the opportunity to practise it is limited because you only get to depart from there once per training session. It does require some extremely quick steering: one must first pull the 'bus away from the stop, and then immediately apply a left lock to get round the bend. This is complicated even more if another trolleybus is coming the other way. For this reason, we try to avoid "releasing" a trolleybus from the *Regal* until the previous one has begun its turn back into the loading bay.

Whilst on the "back straight", Graham had arranged a situation to test what I'd do if the dewirement buzzer came on whilst we were driving. In short, you must **STOP**. This was a test to see if I was paying attention to it. As some trolleybuses don't have an audible signal, only a visual one, keeping an eye on the dewirement lamp is also essential. This test was simply staged by some unknown accomplice switching off the main power by the depot as soon as they saw that we were on the back straight. An actual dewirement would have sounded quite different, as the sound of booms flailing around is quite distinctive.

We also did an emergency stop, which was simple enough. However, Mike the conductor might have experienced a bit of unexpected deceleration, apparently taken by surprise at that particular point in the test. Sorry, you can blame Graham !



Richard Jackson in the cab of Rotherham 37 for his test

Photo: Mike Johnson

There were additional manoeuvres to be done: Graham next tested my ability at reversing around a bend. This was a left-hand reverse turn and, fortunately for me, it was probably the best I've managed throughout my training. It was a bit jumpy, but better to be correct and slow, rather than belt around and cause a problem. This is where Rotherham 37 has its own peculiarities to contend with. The brake pedal has a habit of sticking in a position that isolates the power, and also prevents you from changing between forwards and reverse. The cure is simply to use your foot to pull the pedal up, or depress and release it, so it's not really a problem once you realise what's happening.

We also attempted to use the electric frog, which I managed successfully ! I would like to say it was skill but, truthfully, it was the trolleybus. Three-axle trolleybuses are more likely to succeed in firing the automatic frog than two-axle ones because they draw more power when passing under the overhead skate. You get a sense of accomplishment when you manage it ! I'm sure all drivers are

aware that the traffic staff who aren't on the network usually stand around outside the *Regal*. From here we have a perfect view of the frog, and always watch as a trolleybus approaches to see if the driver manages to activate it. Fortunately, during this season, the automatic frog has been much more reliable. I believe that over the winter closure Graham has been up to clean and adjust it to get it working better.

One of the test criteria is to ascertain how accurately the driver positions the trolleybus on the road. As part of this assessment, Graham asked me to stop at the lesser-used trolleybus stop outside the *Sunbeam Cycle Shop*. We did three tries at this. The first attempt wasn't brilliant: I had stopped in the right place but too far from the kerb, having coasted up to it rather than driving up to it. I seemed to hear the bell "ding" once to tell me to stop and immediately took my foot off the power and rolled to the stop. So we tried this a couple more times and, luckily for me, by the third go I had got it to an acceptable standard. Each time we practised this, I seemed to get closer to the kerb by 50%. So this is definitely a movement

needing further practice. Learning to judge distances relative to the width and length of the vehicle is all part of the continuous learning curve which drivers will always have to climb. With so many different trolleybuses in the Museum's collection, and all with their own peculiarities (such as limited turning circles, small mirrors and temperamental controls), it will always take time to familiarise oneself with the vehicle.

So, following this "ordeal", I was told I had passed. I gather that Bruce was also keeping a close eye on me as I was going round, and was possibly just as relieved as I was at the good news. Apparently he had been sitting on 37 at the start of the test looking "apprehensive".

Driving with a "buddy"

As is standard procedure after a new driver has been passed out, I underwent a series of supervised sessions driving with passengers. This "buddying" system is not a further assessment, but serves to give the new driver reassurance. Driver training is restricted to either before or after opening times, to ensure that we have the network free of members of the public and other operating vehicles. So, when you first take to the controls of a trolleybus full of passengers with a large number of visitors milling around, it can be a very different driving experience, so having a "buddy" with you provides both reassurance and comfort.

One of the more striking issues is how different a trolleybus feels when loaded with passengers. During all my practices I only had a conductor on board and occasionally one extra person. I believe the fullest trolleybus I drove on my first day had 45 passengers, adding extra weight and causing it to accelerate and brake differently. It is always one of the more experienced drivers who accompanies a newly-qualified driver, and my "buddy" for the first three service runs was Stewart David.

"Flying solo"

After completing three service runs with my "buddy", I was free to be let loose on Nottingham 493 on my own ! However, to avoid setting off unaccompanied in an unfamiliar trolleybus, I drove my first three trips in 493 with my "buddy" alongside. Fortunately, I had previously driven each of the other trolleybuses in service that day with someone next to me. By a rather pleasing coincidence, my first solo run was also 493's first operational run in service for several years.

As I was already prepared to expect, this is the point where the "Sandtoft Initiation Ceremony" commences, so I knew I would be in for a disjointed journey. I shall regale you with this tale, and impart fair blame on all my colleagues for the torture they put me through. The service run began reasonably smoothly with a fair load of passengers and a handful of staff too. One of them was Graham, who, as mentioned earlier, felt I needed further practice at stopping at the *Sunbeam Cycle Shop*. So, predictably, the bell rang once to let Graham off there, and Mike was waiting with his hand out requesting me to stop. So, I was truly being tested on this !

I fear I might have caused the next series of pranks myself. As mentioned in *Journey to the Blunt End*, I warned my colleagues that if they take more than a minute to cross the pedestrian crossing, I will just plough through anyway. This

might have inadvertently lain down a gauntlet, for I got stopped at **every** crossing to allow what felt like the entire staff of volunteers to cross the road at a snail's pace. I have to say that I didn't carry out my threat, but waited patiently for them to traverse before setting off: a moment of weakness on my part !

I shall now dedicate a few words to my conductor, David Hanchett. Thank you, sir, for resisting the temptation to wind me up for all of one trip ! I did notice that when we came to turn in Sandtoft Square after the second trip, you only pulled the first of two frogs. Still, it gave me a chance to play a tune on the horn until he went to pull the second one. I have to say that it's not customary for the driver to have to turn around and shout through the glass window: "Who's in charge of this 'bus ?" This was all part of the initiation routine, but I kept my cool and blamed my conductor ! Somehow I remained un-flummoxed by all this and embraced the experience !

I'd like to sing my own praises now. Considering that I'd never driven no.493 before, and that it is a two-axle rather than a three-axle trolleybus, I still managed to fire the automatic frog ! In hindsight, as recompense for David Hanchett's trick, I should not have fired the frog and instead made him work ! One day I shall find a way of inflicting revenge, so watch out, David...

During the course of the afternoon, I gathered experience driving each of the trolleybuses in service. As mentioned above, they all have their own idiosyncrasies, but the most obvious of these has to be 37's brake pedal. I've already said how this can remain slightly engaged, thus locking out the power pedal. However, due to its location on the cab floor and how the pedal mechanism itself protrudes into the floor-space, it is easy to accidentally have your foot resting on it. Therefore, as you have probably realised, the trolleybus won't move. This was particularly noticeable whilst turning in Sandtoft Square to re-join the waiting trolleybuses outside the *Regal*. The vehicle juddered around the Square whilst I tried to balance the act of frog-firing and right-foot-displacement to ensure that I didn't keep isolating the power ! This seems to be an issue specific to Daimler trolleybuses.

The end of the journey

At the Saturday morning staff briefing on 7 June, Bruce and Mike presented me with a cake to celebrate the success. This was a very substantial cake, which had been decorated in Newcastle Corporation colours, with an icing steering wheel and pedals, and a mini-trolleybus too ! Thanks to Cherryll for baking it, and to Mike for designing it.



This concludes my journey from the conductor's platform to the driver's seat. Many thanks need to be passed to Bruce Lake and Chas Allen, who have both provided their time to train me. In addition, thanks go to Stewart for allowing my training to progress at the rate it did, and for agreeing to my test taking place. And finally, thanks to driving examiner Graham Bilbé who granted me my licence.

NEWS ROUND-UP

Visitor Attraction Accreditation



In June we received a report from Visit England, following a review carried out by their assessor during the Spring Bank Holiday as part of the Visitor Attraction Quality Assurance Scheme (VAQAS). We were very pleased to learn that we had successfully met the overall criteria and that we can continue to use the “Quality Assured” logo. As is usual with this type of review, the focus is on continuous improvement and we did receive a number of recommendations on how the overall visitor experience could be made even better. We will continue to analyse and address the observations made as we gradually work towards increasing the Museum’s “score” next time we are assessed.

Museum Accreditation

A great deal of work has been going on behind the scenes to prepare the submission for renewing our Accredited Museum status. The requirements are more demanding than previously and the exercise has required us to create an up-to-date version of the Museum’s development plan for the next five years. In doing this it has been heartening to reflect on just how much has been achieved during the years since the previous plan was produced. We have jumped the first hurdle by submitting the voluminous return on time to Arts Council England. Progress through the assessment will now depend on any follow-on questions and answers, and these iterations could take quite a while.

Museum Fleet Handbook

The second edition of the handbook has now been published and was printed just in time for this year’s ‘Gathering’. The book has had a change of title since the 2010 edition of the *Museum Guide and Handbook*, but the content and layout follow the previous successful format, with a page and a photograph for each vehicle. Many new photographs have been used and some vehicles have come and some have gone since the previous edition. The text has been updated where necessary and the Hastings single-decker has now been correctly identified as no.46 ! The handbook is jointly published by Venture Publications and the Trolleybus Museum, and is available in *The Trolleyshop* or online from www.sandtoft.org/shop for £8.00 (p&p is £1.50).



Site Work

The programme of repainting traction poles is finally underway: four poles have been painted and look very smart. The fire alarm system is now fully installed in the depot, the workshop and *1950s Prefab*. John Whipham and Tony Ferris have continued with all the routine maintenance duties, together with a steady stream of improvements. The fence along the dyke behind the depot has been extended, making it safer to walk in that area. The cherry tree by the *Sunbeam Cycle Shop* has been felled for safety reasons after becoming rotten at the bottom, and the ground by the stacked traction poles has been cleared and levelled, ready to accommodate a container as soon as we can locate one at an affordable price.

Gerry Carroll has continued painting the *Regal Cinema* and the shop fronts of the *Axholme Stores*, and Jim Sambrooks has made good progress tidying-up the workshop and creating plenty of extra space inside. The benches along the back wall of the workshop have been moved to allow easier working on longer vehicles, and the floor area there has been newly painted. In addition, the old compressor and air reservoir have been removed.

In August an area was cleared behind the box van mess room to accommodate the newly-acquired BTS caravan. This has now arrived and the paving slabs for the caravan steps have since been laid. Meanwhile, the old caravan behind the depot has had its plumbing repaired after a water leak flooded the interior just before the 'Gathering'.



The "new" BTS caravan was delivered on 9 August after a long journey from Gloucestershire. It will provide BTS members with a much-needed replacement for the accommodation in the old Reading AEC Reliance, which has deteriorated badly in recent years

Photo: Stewart David

Throughout the season the maintenance of the grounds never ends. Grass cutting has continued into the autumn - it takes about eight hours every time! - and regular strimming gets done twice a week. All the shrubs have recently been cut back and, with the leaves now falling off the trees, clearing them all up is once again a regular task.

"On the Yorkshire Buses"

Over a year ago the team making Channel 5's "On the Yorkshire Buses" carried out some filming at the Museum. This series features the day-to-day operations

of East Yorkshire Motor Services and the episode broadcast on 5 August covered Hull's "Big Bus Day" in 2013, organised by EYMS. Many classic buses attended and amongst them was Doncaster 22, with highlights of its journey from Sandtoft to Hull being filmed and included in the programme. No.22's driver for this journey was long-serving Sandtoft trolleybus driver Miles Cartwright, who works for East Yorkshire. In the film he commented on the noise in the cab of traditional front-engined buses: "... no wonder the old drivers lost their hearing !"

The programme also showed Miles apparently struggling with directions in streets of Hull, but still managing to get 22 safely to its destination before the roads were closed for the event. A piece of Miles' "other life" at Sandtoft was also included, with footage of the Museum and film of him driving Glasgow TB78 - overall some excellent publicity for us.

Go to www.sandtoft.org/members for a link to view the programme online

RECENT RUNNING DAYS

Worldwide Weekend 21 - 22 June

Bruce Lake, Richard Jackson and Mike Johnson

We are indebted to the London Trolleybus Preservation Society for lending us their Russian-built Athens trolleybus no.5088, and its arrival at Sandtoft a few days before the Worldwide Weekend was very timely. However, when we took delivery of 5088 four days before the event, there were quite a few hiccups and minor hurdles to overcome. It was about 6:00pm when 5088 arrived at the end of its journey from East Anglia Transport Museum, and the next two hours were spent carefully removing it from the low loader - a process requiring the assistance of our tractor because of the trailer's up-and-down slopes. Fortunately this was achieved before the tractor ran out of fuel, by which time the daylight was failing. A couple of test circuits were managed under overhead power, but the job of putting 5088 indoors had to be abandoned when its traction batteries expired after only a short distance. After all that, a leak in the air system was discovered, requiring workshop attention before 5008 could run in service.

5088 differs technically from our other overseas trolleybuses, most significantly by having a right-foot power pedal and a left-foot brake. For these reasons, special



Tim Stubbs and Bruce Lake consider how best to unload 5088. The booms are on the wires to run the compressor to inflate the suspension and increase the clearance as 5088 comes down the ramp. It was reversed off under its own power

Photo: Mike Johnson

training was needed for those wishing to drive 5088 - on the Saturday there were only three drivers licensed to drive it, but by the start of Sunday that number had grown.

As always, the Worldwide Weekend attracts enthusiasts and families alike, and certainly offers everyone attending a chance to experience a trolleybus ride which most other museums can't offer. The array of overseas trolleybuses now at Sandtoft is developing these weekends into a rather unique package. From the point of view of our traffic staff, seated by the *Regal* Cinema and watching the vehicles in operation, we have perhaps become accustomed to the same few designs of British trolleybuses, so to see the more aesthetically-diverse designs is a rather pleasing change.

The overseas trolleybuses in operation on both days were Limoges 5, Edmonton 189, Marseille 202, Athens 5088 and Liège 425. With 202, switching from electric to diesel mode has now become a well-rehearsed routine. We always made an announcement when 202 came into service and, sure enough, it had a reasonably full load on most trips. Two conductors are required because when it changes back from diesel power to electric, the booms are returned to wires using the controls in the cab. This means that they both shoot skywards at the same time. Even the most competent conductor will struggle to rope-wire two trolley-heads simultaneously. When it was in operation in Marseille there would have been designated stopping places where the trolley-heads were guided by a funnel onto the wires. If only we could get a similar system in place at Sandtoft !

Conspicuous with orange livery and red booms, Athens 5088 joins the Sandtoft residents in a line-up of five remarkably-different trolleybus types
Photo: Andy Thornton



Even for an event with its main emphasis on trolleybuses from around the world, we always ensure that a British one is in service too. This is to offer a contrast to the visitors so they can compare the rides and the appearances. On the Saturday and Sunday there was a line-up of all our serviceable overseas trolleybuses across Sandtoft Square. The British one (Maidstone 72) did not take part and when it returned to service later on there was a definite rush of passengers to grab the top-deck seats ! This certainly demonstrates that the British vehicles have a certain enjoyable charm. From a driver's point of view, 72 definitely lurched on the corners with 25 passengers upstairs and none downstairs !

Sandtoft Gathering 2014: 26 - 27 July

Richard Jackson, Francis Whitehead, Stewart David et al.

Every year's 'Gathering preparations begin many months before the event and the job of organising the visiting vehicles is a very important part of them. This year, our volunteers started work in May on targeting the owners of classic cars, buses and commercial vehicles at a whole series of events, including the Hull-to-Bridlington East Coast Run and the Fuelled Society Classic Car Show at Nostell Priory. Over the course of many such events they handed out hundreds of entry forms, and on 'Gathering Day itself around 120 visiting vehicles (including over 40 buses) were on display - an even larger number than last year.

We were blessed with superb weather for the entire weekend, and on Preview Saturday trolleybus services started at 11:00am. During the day a total of 46 trips were made with 539 passenger journeys. Huddersfield 631 was re-launched into passenger service at 2:00pm and continued in service for the remainder of the day including the "twilight" running until 10:00pm. Athens 5008 was also in operation and ran in the evening with 631 and Bradford 792.

As is traditional with 'Gathering events, the main depot is cleared of the first two rows of trolleybuses to make space for all the trade stalls. Throughout both days these seemed to be well frequented by visitors and staff alike. One can only imagine the time spent moving all the trolleybuses out of the way, and then returning them afterwards !

London 1348 returned to service for the Gathering, running on both days and proving to be the star of the show with almost 500 passengers travelling on Sunday *Photo: John Stainforth*





Top: Graham Bilbé saying a few words to mark the re-launch of Huddersfield 631

Above: Athens 5088, Bradford 746 and Manchester 1344 ready for duties on Preview Saturday

Photos: John Stainforth

On Sunday morning, those on duty in Reception were kept busy with a big rush of arrivals between 10:00 and 12:00, followed by a continuous steady stream of visitors. This year we operated a much more efficient system for handling the Gift Aid, with another volunteer obtaining the details for Gift Aid separately from the process of selling the admission tickets.

With so many rally vehicles attending, we had to locate some of them in the central grass area to avoid crowding the rally field. Our *Tea Trolley Café* staff were run off their feet and virtually nothing was left at the end of the day - a magnificent achievement and worth noting that most of their offerings were either

home-made or individually prepared. With what seemed like an overwhelming influx of arrivals, the car parking presented new challenges. Our usual parking area was not available this year and the first 150-or-so cars were located in a nearby field. The long grass and uneven surfaces limited how much of the field could be used, and the remaining cars had to be carefully arranged in the space on the runway leading to Whites' sheds. This too was soon full to capacity, leaving barely enough room for the buses on the free Doncaster service to turn round. More space beyond it had to be opened up and, given the distance those parking there had to walk, we could really have done with a park-and-ride service.

Because of the intensive service required, the trolleybus operations on 'Gathering Day have to be very well-structured. We had a fleet of nine vehicles divided into four two-hour shifts, and a plethora of traffic staff to operate them. In service were London 1348, Manchester 1344, Huddersfield 631, Bradford 746 and 792, Maidstone 72, Nottingham 493, Rotherham 37 and South Shields 204 (which replaced 1344 after an electrical fault). We aimed to have approximately one trolleybus departure every five minutes, which means having two trolleybuses out on the network at any single time, and one in the loading bay ready to go. This *modus operandi* certainly makes the Museum appear much more alive in comparison with a normal operating day. Adding-in all the visiting road vehicles which frequently drove around, it was definitely a more "condensed" museum than usual.

Throughout the event the whole of the site was bathed in the soundtrack of a fairground organ and live musical entertainment, offering an atmosphere unlike any other event in the Sandtoft calendar. Coupled with the occasional roar of a classic bus, this was very pleasing to the ear ! The hot weather and high turnout meant that long queues built up at the ice-cream van and the real ale tent was very well patronised.

Overall, our passenger journeys were around 10% up on last year's 'Gathering, and on Sunday there were 105 trips with 2,012 passenger journeys made. Vehicle-wise, few problems were encountered, with no earth leakage failures over the weekend and only two dewirements on 'Gathering Sunday.

A personal postscript.....

Richard Jackson

This was the first 'Gathering I've experienced from the front-end of a trolleybus. Last year I spent the day on the platform and, with credit to the conductors, they certainly have a more hectic job, issuing tickets to a bus full of passengers whilst pulling frogs and keeping watch ! From a driving perspective, it definitely offers plenty of practice at passing other 'buses on the corners. On a normal operating weekend, we try to time the release of each trolleybus from the *Regal* to ensure that they pass on the straight. During the 'Gathering, this isn't possible, so it was without doubt a more intensive driving experience and all-in-all excellent fun. In the warm weather the cabs of the trolleybuses in service start to get a smidge warm by mid-afternoon, and the amount of "air-conditioning" depends on how fast you drive and how wide the window will open, whilst the ice-cream van provides the traffic crews with another means of keeping cool.



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SCENES AT SANDTOFT



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- 1 Visitors arriving at Reception form an orderly queue
- 2 Busy sales stalls inside the depot
- 3 A colourful array of flowers and trolleybuses awaiting service
- 4 Huddersfield 631 leading another orderly queue
- 5 Chesterfield Leyland 225 joins the fleet providing the Museum's free bus services

Photos:
 1 & 3 Jason Bowers
 2 John Stainforth
 4 & 5 Bob Ashton



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5



GATHERING 2014

- 6** The never-ending demand for ice cream
- 7** Relaxation in and around the beer tent
- 8** More smartly-presented trolleybuses
- 9** The low-floor bus kindly loaned by Stagecoach
- 10** Hornsby's Dennis Lancel, restored for their centenary, off on a "Mystery Tour" - Ian Wilson seems to know where !

Photos:

6 & 7 John Stainforth

8 Tim Stubbs

9 & 10 Graham Bilbé





A SMALL SELECTION OF



- 1 Tony Ferris welcomes a bright pink Reliant Rialto and matching trailer – “Sheila’s Wheels”
- 2 Rotherham Corporation’s 1939 AEC Matador tow truck
- 3 Classic cars lined-up in the rally field
- 4 Inside the Anglo-French bakery-cum-grocery van
- 5 Guide dogs and their dedicated team of fund-raisers
- 6 A driver’s-eye view of resident buses and trolleybuses

Photos:

- 1 Graham Bilbé, 2 & 4 John Stainforth,
3 Bob Ashton, 5 & 6 Jason Bowers





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THE GATHERING'S VISITORS



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- 7 American 1958 Dodge Royal Lancer
- 8 DAS Transport ERF B breakdown truck
- 9 A panorama of motorbuses from several decades
- 10 South Yorkshire PTE Leyland towing vehicle
- 11 East Yorkshire AEC Regent V with "Beverley Bar" roof
- 12 First South Yorkshire 2008 Volvo B9TL, Hull Corporation 1989 Leyland Atlantean and London Transport 1954 AEC RT
- 13 The driver of the Taylor's of Jesmond fishmonger's van seems to have fallen asleep at the wheel

Photos:

7 & 10 Janet Stainforth, 8, 9, 11 & 12 Bob Ashton
13 John Stainforth

10



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12



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And finally.... In the corner of the central grass area this year, 'Gathering visitors found an unusual display of road-mending equipment, reminding us how this type of work was done in 1950s/1960s.



Above left: Steve Harrison and Ian Metcalfe seemed to be kept busy for most of the weekend repairing the Aveling-Barford roller



A smart little asphalt tipper truck, another road roller and a row of red paraffin road lamps (remember those?) *Photos: John Stainforth*



Left: Graham Bilbé writes "... also on display were several vintage 'katumpahs', one of which looks a bit like an undressed Dalek. As a youngster, I always wanted to see the men using the 'katumpahs' !" *Photo: Graham Bilbé*

Below left: A classic 1955 Standard 8 saloon and a detachment of Bradford trolleybuses

Photo: Malcolm Wright

Below right: The motorbus stop in Sandtoft Square had a very professional display timetable showing which vehicle was scheduled to run each trip: useful both for photographers and for those needing a low-floor vehicle

Photo: Graham Bilbé



Nottingham Weekend: 9 - 10 August

Stewart David

Very heavy rainfall on the Friday afternoon and evening could well have written off the event, but Saturday's weather conditions were much improved and an impressive number of visitors turned up. 400 passenger journeys were made on our trolleybuses, with Nottingham 493 and 506 in service, supplemented by Bradford 834. At around 2:00pm a line-up of the Nottingham vehicles was assembled, with the service trolleybuses joined by resident motorbus 137 and trolleybus 466, which is still undergoing restoration. Sunday's weather was awful and visitor numbers were down accordingly, although more attended than we expected and 178 passenger journeys made on our service trolleybuses.



Above left: The aftermath of Friday's rainfall in the area by the front gate *Photo: Stewart David*

Above right: Nottingham 367 out of the depot on the Saturday enabling close inspection of the restoration work. Because of the heavy rain 367 was kept indoors on the Sunday

Photo: Andy Thornton

Below: Nottingham 506, 493, 137 and 466 on display in the afternoon line-up

Photo: Bob Ashton



Blues and Twos Weekend: 23-25 August

David Hanchett

"Sorry, we've only got chips left !"

The sky on the Saturday was clear, but there were clouds suggesting mischief. The grass was cut and beautifully green, contrasting with the big red giants lurking upon it just off Sandtoft Square. Awaiting their admiring fans there were the film stars in the form of police vehicles of yesteryear, and the comforting sight of modern rapid response (and elderly not-so-rapid response) vehicles of the ambulance kind.

The doors opened and - oh, what a lot of people ! Very soon a large queue built up at Reception and was rapidly and cheerfully cleared by Nick Broxholme. But people kept coming. There were casualty demonstrations and Sergeant Blaketon was always at hand to arrest any dodgy characters: over the three days a good number of Museum staff were arrested, but later released under caution.

There was a short rain shower but this did nothing to dampen spirits as nobody really noticed. Shortly afterwards the fire crews dispensed thousands of gallons of water over many of Sandtoft's cherished buildings. No self-respecting fire would dare to visit the site this weekend. Truly spectacular, unless you were watching the water meter.



Action all round = with fire crews everywhere and plenty of audience participation as the drama unfolds

Photo: David Hanchett

Also on that Saturday, it is rumoured that *The Tea Trolley Café* sold not just that day's stock, but Sunday's as well, so more supplies were required. But on Sunday the new stock - intended to last two days - also sold out. And the cry went out: "Sorry, we've only got chips left !" It was as well it did not rain on Sunday, as the grass was thronging with people enjoying the ever-dwindling refreshments. By the end of the second day, almost all the ice cream had gone as well. Later, a miscreant youth staged a jump from a moving trolleybus, falling and injuring his neck. He was soon carted away on a stretcher, but not before Sergeant Blaketon had given him a stern talking to !

The Monday proved to be as wet as the forecast had predicted, adding to the water distributed by the fire service, but still people wanted to see what we had



On duty was "Sergeant Oscar Blaketon", the owner of a police car used in the filming of *Heartbeat*. Seen in period uniform he is keeping a watchful eye on paramedics dealing with one of the day's casualties

Photo: David Hanchett

for them. Ticket sales were very good, but not as high as the previous day. One could still get a bacon roll at two o'clock ! People seemed pretty enthusiastic, staff and visitors alike.

Many people leaving the Museum told of their surprise at the standard of the operating vehicles and the sheer number of vehicles to be seen. Others thought the idea of the merging of emergency and public service vehicles - with entertaining activities included - was highly commendable.

Inches of water on the road surface again, reminiscent of the Nottingham weekend, but this time the result of (virtual) fire-fighters extinguishing (virtual) fires

Photo: Jason Bowers



So many highlights. My wife tells me she loved the idea of getting children involved with fire hoses, and outstanding as always were the Isle of Axholme tour and *The Tea Trolley* with its trusty teapot and trusty teapot pourers. Interspersed with all the emergency activities, Maidstone 72, Bradford 746 and London 1348 ran on all three days, and Manchester 1344 joined them on the Sunday and Monday. Lest we forget though, the trolleybuses, fire engines, ambulances and

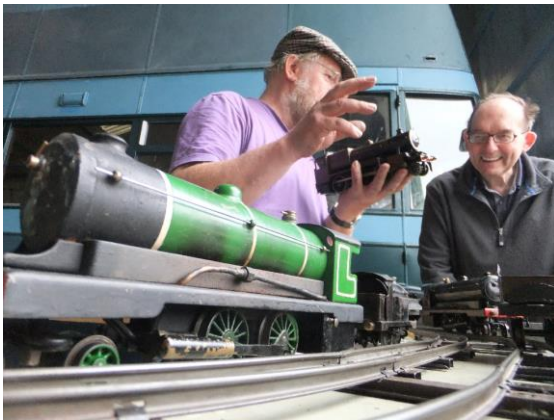
police vehicles were all shining lights, beckoning visitors to return and to bring their friends.

Now scheduled over a Bank Holiday weekend spanning three days, "Blues and Twos" has become one of our best-attended and busiest events of the year, and Francis Whitehead counted over a hundred cars parked in the field on the Sunday. On the Saturday the trolleybuses carried 404 people, with 604 on the Sunday and 380 on the Monday - figures that make an interesting comparison with 539 on 'Gathering Preview Saturday.

Visit www.sandtoft.org/members to see a short video of the "Blues and Twos" action, filmed using a head-cam by fireman Chris Howarth.

Model Weekend: 6 - 7 September

Once again the displays included an interesting variety of models and, for those preferring full-size vehicles, the event on Sunday coincided with the annual get-together of the TVR Car Club.



Above left: Graham Bilbé sharing his passion for small-scale steam locomotives

Photo: Jason Bowers

Above right: Mark Thornton's steam powered models

Photo Andy Thornton

Right: Andy Thornton displaying his collection of Minic Motorway, with some vehicles running and some (rarer and fragile ones) on static display

Photo: Jason Bowers





Left: Some of the TVR classic sports cars on show in the central grass area
Photo: Andy Thornton

Lack of space in this 'Scene means that the European Trolleybus Day and St Leger Historic Vehicle Rally reports have been held over to the next issue – ed.

VEHICLE REPORTS

Compiled from notes supplied by Graham Bilbé, Jim Sambrooks, Andy Thornton and Ian Wilson

Doncaster 375: With the exterior repainting now complete, work has steadily progressed with the interior. Upper deck seat frames are being repainted, and suitable tubing has been procured to replace missing handrails which will be fitted when insulation has been applied. Temporary repairs were made to the resistance bank and this has now been reassembled, pending a more permanent solution later on.

London 1348 has had a defective contactor repaired by Bruce Lake.

Nottingham 493: Following the major efforts to achieve 493's return to operation earlier this year, the only further work required has been the ongoing cleaning and preparation for service.

Walsall 872: Four new brake cylinders were specially made for 872's hydraulic braking system and these were fitted in July. However, despite the best efforts of our engineering team to complete the repairs in time for the 'Gathering, 872 is still not running in service, owing to a leak in the hydraulic fluid reservoir that was only discovered when the cylinders were replaced.

Wellington 82 has had the corroded steel coving panels on its nearside roof repaired professionally as part of its restoration by First South Yorkshire.

Doncaster 33 passed its MoT test in July following ten years off the road and a great deal of recent mechanical work. Since then a clutch problem discovered whilst 33 was running the Isle Tours during the 'Gathering has now been rectified, and during a heavy shower, rainwater was found to be leaking through the roof panels. Investigation revealed that the problem was due to the seals under the roof straps having deteriorated with age, causing the wooden inserts to the aluminium frame to rot. These are now in the process of being removed and re-sealed by Alex and Kieran Proctor.

Douglas 52: Following stitching of the block and with new bearings and seals fitted to the fluid flywheel, the engine is now back in place, but much more work remains before it can be run. New plates have been fitted to the water jacket and the fuel pump and injectors are away for servicing.

Felix 40 (also known as “Dinky Villa”) has been moved to accommodate the new BTS caravan. To achieve this the clutch hydraulic system had to be repaired and some leaking fuel pipes renewed.

Sheffield 1357’s dynamo had become noisy due to worn bearings and this has now been removed, new bearings fitted, overhauled and refitted. The opportunity was also taken to renew the drive (fan) belts.

VISITOR SURVEY RESULTS

Over three days during Easter 2014, visitors leaving the Museum were asked to participate in a survey. Obtaining visitor feedback is standard practice for professionally-run museums and the objectives of the survey were to get a better understanding of where our visitors come from and what they like (or dislike) about the experience. Survey responses were provided by 134 visitors and here is a summary of them:

Q1: How far did you travel to the Museum ?

- 65 (48%) had travelled up to 25 miles
- 46 (34%) had travelled between 25 and 50 miles
- 22 (16%) had travelled over 50 miles
- 1 had travelled in excess of 1500 miles - from Riga in Latvia !

Q2: Have you been before and would you come again ?

- 66 (49%) had visited the Museum before
- 132 (98.5%) said they would visit the Museum again
- 132 (98.5%) would recommend the Museum to others

Q3: How do you rate specific aspects of the Museum ?

	Excellent	Good	Average	Poor	Not applicable
Reception	74 (55%)	53 (39%)	7 (5%)	1	
Café service	91 (67%)	30 (22%)	1	0	13 (9%)
Food quality	89 (66%)	32 (23%)	0	0	13 (9%)
Food pricing	89 (66%)	31 (22%)	1	0	13 (9%)
Shop service	69 (51%)	48 (35%)	1	0	16 (12%)
Shop stock	44 (32%)	65 (48%)	8 (6%)	0	16 (12%)
Museum staff	110 (82%)	23 (17%)	1	0	
Attractions	72 (53%)	55 (41%)	7 (5%)	0	
Trolleybus rides	105 (78%)	28 (20%)	1	0	
Isle tour	68 (50%)	24 (17%)	1	0	41 (30%)

Q4: What improvements would you suggest ?

The most frequent comments made about improvements needed were:

- The café needs more space (47 comments)
- Paying to get into the Museum takes too long (42 comments)
- Reception needs a card reader (28 comments)
- There needs to be more up-to-date playground equipment(16 comments)
- Buses are parked too close together in the depot (12 comments)

Q5: What do we do well ?

The most frequent comments made about what we do well were:

- The Museum staff are all very helpful and friendly (63 comments)
- The Museum is a “good value day out”. The prices are realistic and affordable (56 comments)
- The café serves excellent food, especially the cakes ! (55 comments)
- There is a great atmosphere at the Museum (51 comments)
- The Museum site is very well maintained (41 comments)

Many thanks are due to Monika Szymula and Magdalena Gawrys for conducting the survey and to Nick Broxholme for collating and summarising the results. The information gathered will be very helpful in developing future plans, as well as making short-term adjustments to our open day operations and displays. Whilst the general impressions and specific messages serve as encouragement that we are getting most things right, our management team will be looking at how best to take on board the suggestions made for doing an even better job in future.

VOLUNTEERS' CORNER

Personal

Many congratulations to Kieran Proctor on his marriage to Bex Allen on 28 June. Best wishes also go to John Zebedee, who has been unwell this year. We have been glad to see John back at the Museum recently and wish him well for a continuing recovery.

Recruitment

The success of this year's visitor season has severely stretched our volunteer workforce, and this has once again highlighted the need for additional labour in certain areas. Whilst the Reception team and traffic staff are now at levels sufficient to cope with demands, we are still extremely short of workers to help with maintaining the grounds and (as explained on Page 4) *The Tea Trolley Café* badly needs an influx of new volunteers. If you can assist yourself - or if you know someone who can - please contact Nick Broxholme (see page 2).

A NEW WAY TO PAY MEMBERSHIP SUBSCRIPTIONS

Francis Whitehead, Financial & Development Director explains...

Mindful of how many people manage their banking these days, our administration time, postage costs, and for a number of other reasons, we have decided to introduce a new option for paying membership subscriptions and making donations.

With immediate effect, rather than sending us a cheque or making a payment at the Museum on an open day, members who do *not* renew via the Contributing Societies (BTS, BTA and DO&LRS) have the option of paying subscriptions and donations direct into the Museum's bank account, be it via internet or telephone banking, or over the counter at a bank. However, if you do choose to use this facility, we do need to be told (via email to membership@sandtoft.org) the following:

- The amount you have paid
- exactly what the payment is for (i.e. how much is subscription - and who for - and how much is a donation)
- where (i.e. which bank and branch) the payment has been paid into

We will then be able to trace payment, update the membership records and allocate the money to the correct "pot" in our accounts. Linked to this, wherever possible, we shall be sending membership renewal notices and reminders (again, *not* those administered by BTS, BTA and DO&LRS) via email. To that end we shall, of course, need to know (if we don't already) your email address if you have one. So, please send David Needham, our Membership Secretary, an email now at membership@sandtoft.org to confirm your email address. You should also remember to tell David if that address changes.

Renewal notices and reminders will include our bank account details (these are shown below to help members who currently have subscriptions due). Where we don't know email addresses (and if you don't have one), we will continue to send out paper notices and reminders - and, of course, if you so wish, you can continue, as now, to renew via post or in person. Your new membership card will continue to be sent to you with the next available issue of *Sandtoft Scene* as we need to minimise costs; if you provide a SAE or specifically include the price of a stamp, your new card will be mailed to you sooner.

Please note that as we need to have the signed membership application form, we cannot enrol *new* members using this facility, whilst renewals of Trolleybus Museum membership administered by BTS, BTA and DO&LRS will continue as now (although if you are looking for a simple way to make a donation, rather than writing a cheque, it can be paid this way - just let David Needham know by email what you have done).

We hope this arrangement, which will be rolled out over the next 12 months as subscriptions fall due, will suit most of you who pay us "direct" and provide a more streamlined and efficient way for us all to deal with our subscription renewals and donations. It should also help our international members. Thank you for your co-operation and for your continued support for our Museum.

The bank account details for direct payment of membership and donations are:

HSBC (Doncaster High Street branch)

Sort code: 40-19-20 Account number: 92457016

Account name: Sandtoft Transport Centre Limited

THE RESTORATION OF IPSWICH 105

Bruce Lake

Ipswich 105 is a Karrier W dating from 1948, with a Park Royal semi-utility body - indeed it was fitted with wooden slatted utility seating throughout. Whilst it did get second-hand leather seats after a time, it was withdrawn from operation on the Ipswich system in 1962, along with a number of others which were scrapped. No.105 survived because it was converted into a Civil Defence showroom for a while and then a temporary portable canteen used by bus crews in the town centre. It did, however, lose all the equipment of value like the traction motor, compressor, motor-generator set, contactors, copper air-pipes etc. It gained a stove in the lower deck to keep the crews warm in the winter, and this entailed a chimney which had to be cut through the offside of the vehicle. In 1971 it was again no longer needed by Ipswich Corporation and it was purchased for preservation.



Ipswich 105 in November 2008 stripped of panels and with most of the electrical equipment missing and trolley gear removed

Photo: ITM Collection

105 languished in one of the side bays at Ipswich Transport Museum (ITM) for many years, but the “noughties” saw a group formed to do its restoration, which was started in 2004. By 2008, they wanted someone to assess the electrical side and propose a plan to restore the equipment necessary for it to be run again. Their project leader, Alex Roddham, had done quite a bit of work in this area already and had reconditioned the resistances (the only bit of electrical equipment left on the vehicle) and sought out other items that may be needed. I agreed to visit to evaluate the situation and undertake the work if I thought it was possible. I duly went to Ipswich and discussed the project with Alex and Tony King - their Chairman and fund-raiser for the venture.

It turned out that they had various bits of equipment recovered from scrap Bradford and Teesside trolleybuses. They had two traction motors, two main contactor panels, circuit breakers, compressor, master controller and master switch. Unfortunately, none of these were the same as had been fitted to 105 originally, but it appeared that they were suitable to make up a working set of

electrical equipment. Some of the parts were missing, and others were in a poor state and would have to be refurbished before use. However, it all looked possible, so I agreed to undertake the work. One of the components missing was the motor-generator set, and Alex never managed to find one. It was decided that as this only really charged the batteries, it could be managed without by making sure they were put on charge when necessary. Alex built a small charger to fit in the cab to facilitate this.

I started by sending the traction motor in the best condition to the Bradford Armature Winding Company for reconditioning, and taking the contactor panels home to work on their reinstatement. Meanwhile, I had identified one of the more serious missing items, the small contactor panel holding the shunt field contactors, in stock at Sandtoft. As we had more than one, it was agreed to sell one to ITM. I took this home also, to refurbish that along with the main panels. I now had a room-full of contactor equipment, which didn't go down too well with the management ! Fortunately I have a spare room that I use as a workshop. The next task was to choose a wiring diagram that was the closest to the equipment I had to hand. This was pretty tricky as everything was different ! Anyway, I settled on one that would use the equipment I had, and found the relevant manual pages which contained resistance values and the like.



Starting-point: the salvaged contactor panels in the process of being stripped down and rebuilt
Photos: Bruce Lake



End-result: the refurbished sets of contactors now installed in the cab of 105, including the smaller ex-Sandtoft shunt field panel below

The two contactor panels were almost identical, so I set about making up a good one from the two, and aligning it with the diagram. This entailed removing all the contactors, testing them and then re-varnishing the nine necessary. It also required the various auxiliary contacts to be set up by using the ones available. Here was the first snag - there was no provision for auxiliary contacts on contactor F2 on either of the panels. I determined that this would only affect notch 10: 105 would not have one. The sort of operation expected for 105 meant that it would manage quite well with only 9 notches, so this wasn't seen as a detriment. The contactors were generally reassembled onto the best of the panels and wired in. I left some of them off to reduce the weight of the panel as this would ultimately have to be lifted into 105 through the cab door ! The

secondary panel was similarly treated. Link wires were arranged to join up the two panels after installation.

Back at ITM, I wired up the master controller, which was 90% right for the job. It was missing a normally closed contact on the scissor arm which could not be retro-fitted. I decided it



The renovated trolley gantry unit being carefully manoeuvred into place *Photo: ITM collection*

would have to remain missing, as all it would do is lose the notch 1 “soft-start” that some trolleybuses have, but many do not. It would have to remain to be seen whether this was noticeable when we got it running (in the event, it wasn’t). The remaining wiring was progressing well. Unlike a “normal” refurbishment of the high-tension wiring, where it was all buried behind panels and in trunking, 105 had the significant advantage that it had neither of these ! The restoration team had got to the point where all this had been removed and everything was accessible. This simplified the installation of the new wiring to a great degree. They had also refitted the trolley gantry and trolley bases, so the new boom cables could be threaded from the roof to the circuit breakers fairly easily.

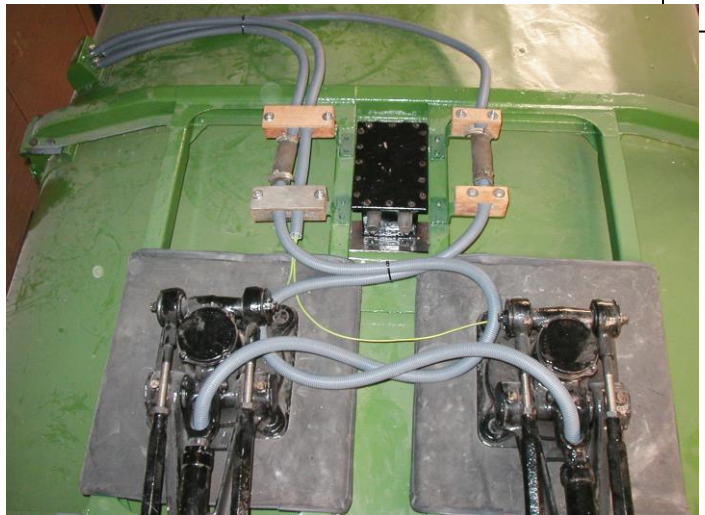
The next big problem was the resistors. These were original, but of course were different from those originally used by the rest of the equipment. It transpired that one resistance section had been omitted - a throw-back to the utility nature of the



Bruce in the process of re-threading the boom cables and making the necessary connections on the roof.

Photo: ITM collection

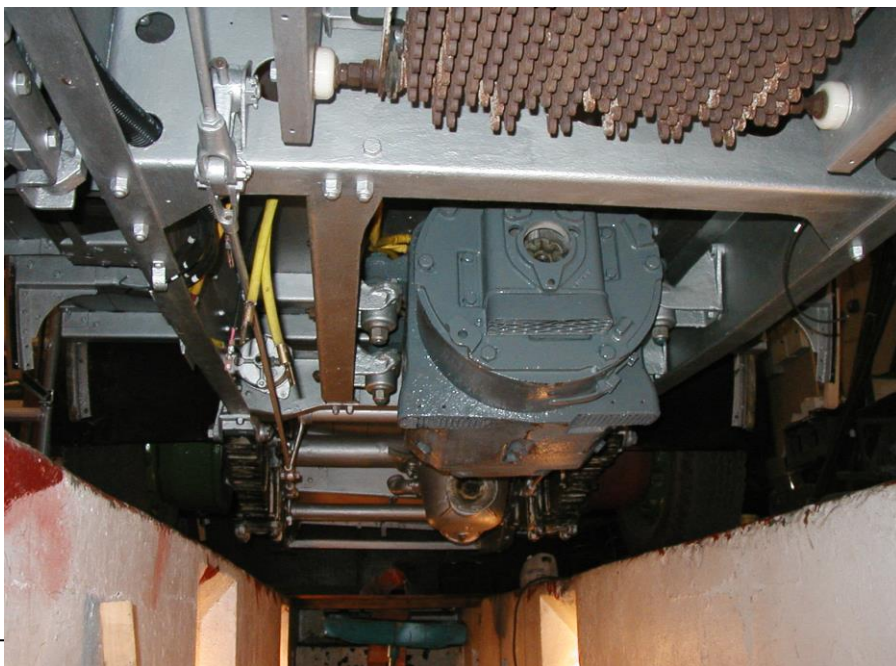
vehicle, I presumed. This was a problem until I worked out that the resistance of one other section was too high, so by a bit of clever reorganising, I was able to tap that one in the middle and make two resistors out of one. The resistance values of each section were not exactly right for the diagram, but, again, the result could only be established when the trolleybus was powered up: once again, in the event it was not a problem as the acceleration was very smooth and very acceptable.



March 2009 sees the cables connected and secured
Photo: Bruce Lake

Once wired up, I tested what I could with Sandtoft's low-current 400 volt supply. This was sufficient to test the compressor and contactors. They both performed well, and the contactor sequence was spot-on ! Insulation resistance was also checked with a "Megger" and found to be good or reasonable. Some improvements were made to this by cleaning off the silver paint splashed all over the insulators underneath by an over-keen chassis painting crew. It is worth noting that silver paint is highly conducting (even though it hasn't any silver in it !) and as such will destroy the insulation between any electrical component and the chassis. If you are going to paint your chassis, don't get any on the insulators !

I completed my work in 2009, but it took the restoration team another four years to get the rest of the vehicle up to scratch, and a very fine job they did too ! If this



The resistance bank and traction motor reinstalled and connected - and possibly the cleanest and most immaculate underfloor view of a trolleybus ever seen

*Photo
Bruce Lake*

Sandtoft Scene

sounds like a long time, bear in mind that it was basically a shell to start with, and had “modifications” like a stove and chimney to remove and these had warped a fair section of bodywork where they had been. They also wanted to restore it back to wooden slatted seating, and all the timber for this had to be cut and prepared from scratch. The exterior panels on Ipswich trolleybuses are, as some of you will know, bare aluminium with a swirl pattern machined into them. This was extremely difficult to replicate, but again, the result is great !

So, at the end of March this year, no.105 was collected from ITM and delivered to the East Anglia Transport Museum, who had agreed some time before to host the launching of 105 back into service. They had concocted a “Suffolk Made and Operated” event to be held on 10 - 11 May to be the foundation for the launch. LTPS members worked on 105 to make sure that it was mechanically satisfactory and bodywork-sound. I went to Carlton Colville a few weeks before the event to commission the electrics, as had been agreed for the end of the project. The leakage test, whilst passed previously, revealed a problem in the compressor so this was later removed and sent for refurbishment at a local firm. This cured the problem but it does sometimes recur, just as we sometimes have problems with this on particular vehicles and sometimes we don't.

After a final check of the wiring and control systems on 5 April, it was with great interest that a crowd accumulated at the door of their workshop and I sat in the cab wondering if it was going to work. It was with great relief on my part that, when I depressed the power pedal, 105 nicely set off forwards down the depot ! Now, I don't say “forwards” lightly, for it could just as easily have gone backwards with the controller in “forwards”, as all this equipment had been cobbled together from mis-matched parts, remember! Having shuffled the trolleybus forwards and backwards a few times within the depot, it was time to get it out onto the road. This



Ipswich 105 emerges from the depot on 5 April, moving under power for the first time since 1962 *Photo: Mark Smith*

Go to www.sandtoft.org/members for a link to the video

was done by the EATM team, as the depot wiring is not connected to the main circuit outside. 105 behaved faultlessly: the acceleration was smooth and positive, and the electric brake came in nicely. The air brakes also worked well - this was another area of doubt as all the piping and brakes had been fitted from scratch and had never been put to the test, of course - not my department, but a relief all the same.

The launch weekend was also a success, with great weather on the Saturday. Many people came up from Ipswich to witness the operation of an Ipswich trolleybus for the first time in many years. Several Ipswich buses also made the trip, as did Ipswich no.2, a 1923 Railless with Short bodywork. No.2 is the oldest restored British trolleybus, although it cannot currently be operated, having no



Ipswich no.105 on display at the launch event, at East Anglia Transport Museum on 10-11 May 2014, together with 1923 Railless single-decker no.2 and Ipswich Corporation's first motorbus, 1950 AEC Regent III no.1 (ADX 1)
Photo: Mark Smith

electrical equipment (a future project perhaps ?). However, the advertising for the event did make a slightly extravagant claim in saying that 105 was the first Suffolk trolleybus to operate in Suffolk since Ipswich closed in 1963, because Ipswich 44 did operate at EATM for a time before going into storage at the Science Museum.

So, this project came to fruition through the collaboration of three museums - Ipswich Transport Museum who did the bulk of the restoration over many years, East Anglia Transport Museum who fine-tuned the result and hosted the launch event, and The Trolleybus Museum at Sandtoft who supplied me and a number of essential parts for the electrical systems. It has long been planned that 105 would make a visit to Sandtoft when it was running again, and I have confirmed with ITM that this is still the plan. Maybe it could happen in 2015 ?

RUNNING DAYS IN 2015

At the time of going to press we have set the dates for our 2015 open days, but we have not yet finalised the content of all the events. Full details will be in the next *Sandtoft Scene* and, in due course, posted on our website, where information about the free and connecting bus services will also be available. Our first weekend of operation in 2015 will be:

Easter Weekend Trolleydays
with an Easter egg hunt for the children
Open 11.00am - 5.00pm

Saturday, 4 April 2015
 Sunday, 5 April 2015
 Monday, 6 April 2015

For full up-to-date details, visit www.sandtoft.org