

# AUTOCAR

1903 North Eastern Railway Electric Autocar Trust

Newsletter No.36 — Autumn 2018



*Launch Special*



# The North Eastern Railway 1903 Electric Autocar Trust

**Registered Charity No: 1105829**  
**Company Registration No: 05171008**  
**www.electricautocar.co.uk**

- Chairman** Stephen Middleton,  
Rose Lea House, 23 Brunswick Drive, Harrogate,  
North Yorkshire, HG1 2QW.  
**Tel** - 01423 561 965  
**E-mail** - middletonmarketing@btconnect.com
- Secretary** Dave Cullingworth,  
29 Beckett Close, Nawton, York, YO62 7SB.  
**Tel**: 01439 771 758  
**E-mail**: david.cullingworth@btinternet.com
- Treasurer** Peter Lund,  
41 Penfold Way, Dodleston, Chester, CH4 9NL.  
**Tel**: 01244 661070  
**E-mail**: plund97005@aol.com
- Press,  
Publicity  
& Editor** Simon Gott,  
**Tel**: 01943 863 440  
**E-mail**: autocar.newsletter@gmail.com
- Membership** Stuart Hiscock,  
2 Lairs Crescent, Snainton, Scarborough, YO13 9BQ.
- Project Engineer** Steve Hoather M.A., C. Eng., F.I. Mech. E., F.I.E.T.
- Front Cover:** *Friday 19th October 2018: the autocar and trailer autococh approaching Bow Bridge Loop, with Embsay partially visible in the background. (John Hunt)*

## November 2018

Welcome to the 36th issue of our newsletter, a special issue, reporting on the autocar's launch into service on Friday 19th October. This was the culmination of approximately eight years of planning and preparation and eight years of practical work. We'll not rest on our laurels too long though, there's still some finishing touches to apply to both vehicles. As ever, if you can help, your contribution will be welcome.

My thanks to all those who have sent us their photographs, it's been tough to select the best for this issue.

### Contents

Chairman's notes .....	4
Progress report .....	6
Launch Day .....	12
The autocar's first visit .....	16
Lining the autocar .....	17
Launch Day Landscapes .....	18

### New members

A warm welcome to Mr. R Deas of Retford, Mr. D Britten of Abbots Langley, Mr. Altham of Marston Green, Mr. D Travis of Skipton and Mr. A J Longworth of Windsor.

#### ***Provisional Easter running dates for 2019***

Subject to this winter's work, these dates are 17th, 18th, 24th & 25th of April on the Emsay & Bolton Abbey Railway. On the first two dates we plan to include a 'special package' to mark the start of public service. Other dates to follow. Please check <https://www.emsayboltonabbeyrailway.org.uk/aboutus/1903-electric-autocar> for details.

# Chairman's notes

*Stephen Middleton*

A great day!

Friday 19th October was a fantastic day. Not only did the sun shine but also 150 guests arrived to see the Autocar and Autocoach behave beautifully and shuttle from Embsay to Bow Bridge and finally to Bolton Abbey....three times!

Most of the guests were members, with suppliers, contractors and specialist railway press journalists. We were delighted to welcome Sir Ron Cooke, Chair of Yorkshire and Humber Heritage Lottery Fund Committee, who praised the efforts of the team that worked so hard over the years to make the 'Autocar dream' come true.

I was pleased to thank all involved and most importantly, the incredible generosity of you, our membership. I have been particularly humbled over the past few weeks at how many donations you have made. Thank you all. The HLF paid the remainder of the grant and we have sufficient to complete the jobs required to have a fully functioning two car DEMU (Diesel Electric Multiple Unit). However, we still have to fit heating. That's for next year. Let us take a little while to regain our breath and congratulate ourselves on a job well done.

Well done to all of us!

## **New autocar model announced**

Just as we went to press, Rails of Sheffield announced their plans to produce a 'OO' gauge model of the autocar, in red & ivory and in LNER brown:

<https://railsofsheffield.com/news/articles/2902-ner-electric-autocar>

## **Opposite:**

*The first train, a few yards into the inaugural run. (John Smart)*

*The autocar at Bolton Abbey (Alan Chandler)*



# Progress Report

*Steve Hoather, pictures Alan Chandler*

Phew! We made it, but it was a close run thing!

We had to agree a date for the HLF 'Completion' ceremony before the last issue went to press in June, in order to include the invitation to members. At that time the body was still lifted on the jacks, and the vehicle had not turned a wheel under power since the 'underframe only' tests at Loughborough over two years earlier.

The most critical piece of work was to ensure that the braking system was safe to use, and to do this early enough to allow time for driver training and de-bugging before October 19th. We had originally intended to do some more extensive brake testing whilst it was still at Loughborough, even though it then had only one cab desk, but our Brakes Engineer was at that time deeply involved with a certain steam loco with the number 60103, so it was obvious which project would get his attention!

The brake testing at Embsay was therefore in two parts. Firstly, we had a day where our Independent Engineer witnessed all the static tests, when we check that the cylinder pressures etc. are correct, all the safety systems such as DSD and Passenger Alarms work, and that the vehicle can be coupled to an air braked loco (the railway's class 37) and be rescued in the event of failure. This was done on 3rd August, and revealed a couple of design issues which are not safety critical – the need to fit some additional isolating cocks to enable each bogie to be isolated more quickly (which we have done) and a problem with the DSD circuit which means that air is lost too quickly when the vehicle is shut down.

Because of various holidays etc., the earliest we could do the running brake tests was on September 5. Before this we had to fit whistles at both ends (these are from London Underground Amersham stock) fit drivers' seats and step-boards, and try to cure a problem we had found with the no. 2 end controller, from which we could not obtain full power. The latter defeated us, so Dave Moore brought some replacement components with him to fit, but even this did not cure the problem, so by mid-afternoon, we decided to proceed with the tests anyway, knowing that if we could not get enough power from no. 2 cab to



Above: *Dave finishing painting the engine-room roof.* (Alan Chandler)

Below: *The cab desk at no. 2 end.* (Paul Abell)



climb the hill out of Bolton Abbey, we could drive from the rear cab (with the guard in the front cab able to apply the brake if necessary).

The brake testing went well – we selected a suitable site which was reasonably level, then applied the brake at an agreed marker at varying speeds up to the 25mph line speed limit before measuring the actual stopping distance. Our Independent Brakes Engineer declared that he was satisfied, and then to round off the day we went on to Bolton Abbey and on the return (uphill) journey found that we could achieve 13mph despite the controller fault. A YouTube video of some of the day's running is available at [https://youtu.be/rzC8K\\_GavSo](https://youtu.be/rzC8K_GavSo)

During this period, a lot of other work was going on as well. Alan completed the engine room roof, which (surprise, surprise) turned out to be a much bigger job than anticipated, but everything fitted well and he then went on to fit the light switches and buzzer pushes above the van area doors. We decided to use 24 volt LEDs for the lighting, and Geoff designed and built some inverters to power these from the 110 volt DC supply. The most visible work, however, was the external painting and lettering by John. It took him several weeks (and was not finished on the September 5th runs) and the photos on page 17 describe it better than words!

An unexpected problem found on September 5th (which was the first time we had been into a platform with the stepboards fitted) was that the steel strengthening plate on top of the solebar reduced the effective width of the stepboard so that it was difficult to place your foot on it when alighting. John Furness came to the rescue with a plasma cutter to cut a piece off the strengthener at each doorway (*see opposite bottom*) without damaging the adjacent woodwork, but there is still a small overhang which we will fill with a wood trimmer, as on Mark 1 coaches.

Before the event on October 19th, we also had to fit portable fire extinguishers, windscreen wipers, an emergency ladder (hopefully not needed), label various pieces of equipment as well as the passenger alarm, and fit fire bells in the cabs in case the automatic detectors in the engine room activate. There was also a lot of internal painting and varnishing by David and Colin, before a last minute tidy up before the big day.

The low power problem turned out to be some trapped wires in the controller which were shorting to earth, but we wanted to gain further experience both



*The transition of the roof between saloon and engine room. (Alan Chandler)*  
*John cutting a piece off the strengthener. (Alan Chandler)*



for us and the drivers, so we arranged test runs on most Thursdays at the end of the working day – and this is when the problems began. On the first week we had to isolate the Wheelslip Prevention System because we could not get power to leave the shed. This is an electronic system which compares the speed of the two powered wheels and reduces power if there is a difference. It is a slightly modified version of the system fitted to HSTs and many later BR vehicles from the early 1980s to the early 1990s, but we had an intermittent fault which has proved very elusive.

At one point we thought we were getting induced interference from other electrical systems which had recently been installed such as the lights and buzzers, so on our last working day before HLF day Roger and I disconnected all the new wiring, only to find that the fault persisted. We then isolated the WSP system again and reconnected the new wiring one step at a time, and Dave brought with him a replacement set of electronic WSP cards on HLF day. These were changed on an extra run to Bolton Abbey after the guests had departed, and seemed to cure the problem, but when the old cards were tested back at Loughborough they were OK at first, but further testing revealed an intermittent fault on one of the boards, which gave the same symptoms as we had seen on the vehicle!

If this all sounds a bit fraught, it was! However, everyone involved pulled together, so that, hopefully, guests on the day did not even know about the problems. I would like to thank everyone involved, both in our team and from the Embsay Railway, for their help and cooperation.

Looking forward, there is still a lot of work to do. On the power car, most of the outstanding work is internal, such as fitting the sliding doors to the van area, and various pieces of trim. On the trailer, we managed to fit the cab desk before HLF day (see Paul's photo page 12), but the braking system still needs piping up (it ran as an unfitted swinger on HLF day without passengers), and the electrical control and heating systems need installing. Plenty to keep us busy throughout the winter!

A video of the BBC Look North 18th October report is at:

[https://youtu.be/X\\_u-qUI8QYU](https://youtu.be/X_u-qUI8QYU)



*The autocar at Bolton Abbey on the first run there on launch day, with some engineering discussion taking place. (Paul Abell)*

*BBC Look North filming on the 18th October. (Alan Chandler)*



Friday 19th October 2018 — launch day



**Above:** *The saloon interior, showing the reversible seats. (John Smart)*

**Below:** *The autococh's cab desk. (Paul Abell)*





**Above:** *Sir Ron Cooke (Heritage Lottery Fund) speaking at the launch.*

**Below:** *Some of our 150 guests on the platform at Emsay. (Both: Alan Chandler)*



## Our first passengers

'Launch Day' saw many stories, reminiscences and tales told. One of these was from Martin Barker, a member from Hull and someone involved in railway preservation for many years.

Martin was waiting at Embsay station for the autocar to return from its first trip down to Bolton Abbey when he saw a couple looking very disappointed. They were visiting from Chorley and had dropped in 'on spec', expecting trains to be running and to be able to use a two for one travel voucher for the Railway, only to find there were no public services operating.

A little mollifying later, Martin persuaded them to wait for the autocar as it was worth a look and then suggested in return for a donation, they could take a trip to Bolton Abbey and back. Money was passed to our Treasurer and they were officially announced as our first fare-paying passengers in 88 years. Cheers and smiles all round.

The second trip to Bolton Abbey was less crowded than the first and the sun was showing the Dales in their best light. On returning to Embsay, our passengers said they were very glad to have come and to have a story they could dine out on for a few weeks.



*Brake testing 5-9-18 (Alan Chandler)*

## Behind the Scenes



**Above:** 80th birthday cake for Geoff Wilson, one of our regular volunteers. (Helen Wilson)

**Below:** The Skills Centre at Embস্য (Alan Chandler)



**The autococh's first visit: Elsecar Railway's Home from the Front event.**



Stephen Middleton

*The autococh's first public visit was to the Elsecar Railway, who held an event commemorating the 100th anniversary of the end of the First World War.*

A video of the BBC Look North report is at: [https://youtu.be/MxrY\\_LTRb9A](https://youtu.be/MxrY_LTRb9A)

## Lining the autocar

The signwriting on the autocar has attracted many favourable comments and is a credit to John Furness' skill, shown here in action. (Both: Alan Chandler)



**Friday 19th October 2018**

**This page:** 3170 propels 3453 out of Embsay station (John Hunt)

**Opposite:** 3170 passes Skibeden, returning from Bolton Abbey. (John Hunt)







*A quiet lunch-time shuttle. The autocar and coach in the Dales in autumn. (Mike Heath)*