

# AUTOCAR

No. 9

Autumn 2010



The Newsletter of the  
1903 North Eastern Railway  
Electric Autocar Trust

# The North Eastern Railway 1903 Electric Autocar Trust

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**Company Registration No: 05171008**  
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Please send all correspondence to the secretary, address as above.
- Front Cover:** Visible progress at last, our new bogie arrives at Embsay  
from Finmere.

Photo: Stephen Middleton

## **Chairman's notes**

Stephen Middleton

### **Getting interesting**

An old expression 'Careful what you wish for...it may come true' seems appropriate now. We have had a good reaction from PRISM, the grant body, and made a few adjustments to our initial bid and we await news. If we get a PRISM grant we have a year to repair the autocar body, refurbish the new underframe, put seats in, effectively making it a coach. This work and grant is balance activity to the HLF grant. We are to submit the second round application once balance funding is secured and engineering quotes are finalised. Then we have five years maximum to complete the two 'coaches' and make them stop and go safely.

Just imagine, getting these grants means that we then have to start getting our hands dirty and make our wish come true! For me that effectively means halting all but maintenance on my own carriages and I know others will be making similar sacrifices to contribute to this project.

Whatever your skill level, you have something to contribute. We need to organise work parties, record keeping and photography for the archives, education and interpretation work and continued fund raising. Please join our team. I am sure you will get a lot out of it. In the first instance could you e mail me, Stephen Middleton on [middletonmarketing@btconnect.com](mailto:middletonmarketing@btconnect.com) or phone me on 01423 561965 with skills and hours you could offer. Only then can we plan a running start once the funding falls in to place.

Thank you for your support

## Progress Report

At the beginning of July five firms were approached to quote for the mechanical work on the autocar and sent copies of our engineering specification. Two decided not to quote leaving Brush Traction of Loughborough, Nemesis at Barrow Hill and Rampart at Derby in the running. Rampart and Nemesis were visited by the two Steve's and myself later in the month and all three were asked to quote by the end of September, to date no quotes have been received and Rampart have withdrawn. We need to have firm quotes in order to submit our HLF application before the December deadline, Stephen M has spoken to our HLF mentor who suggests that an extension may be possible but this is a last resort. So we still expect a decision from Brush and Nemesis have been unable to find a suitable engine/alternator combination (these are hard to find due to the tight modern emission controls), however neither company have backed out and we await news with fingers crossed.



Chairman Stephen Middleton and Project Manager Steve Hoather pose in front of a class 47 during a visit to Nemesis rail in July. Steve H used the locomotive to demonstrate the finer points of engine room design to the two less knowledgeable trustees present! It is hoped that Nemesis will quote for work on the autocar.

Photo; M Woodcock

Our PRISM grant application has been submitted for a while now, it has been favourably received and we await a decision, fingers crossed here too!

Better news on the component front, the GW Macaw required as a swap, for “our” underframe on the NNR has now been purchased with a generous interest free loan from one of the trustees, it now only requires repainting in NNR departmental colours (yellow and black) and transport to Weybourne. You will read elsewhere the good progress made with our underframe appeal which will be used to repay the loan and fund the considerable transport costs, we also have to cover the labour cost of modifying the Macaw for use with the NNR’s breakdown crane. HLF rules do not allow the trust to purchase components or start work until an award has been granted, hence the use of a trustee’s loan.



All the complex negotiations done by Stephen M and Steve H have paid off and our motor bogie arrived at Embsay this month, again funded by a generous trustee’s loan. A Southern railway EMU trailer bogie found on the NYMR was purchased and sent to the site of Finmere station on the old GCR London extension, now owned by the Coulsden Old Vehicles and Engineering Society. The society own two de-icing units converted from 2EPB units, one is to be restored and the other used as a mess room, they were happy to part with a motor bogie if we replaced it with a suitable non-powered version, “COVES” kindly did the swap for us loaded it onto a wagon and dispatched it North to Embsay. The bogie looks to be in excellent condition and was on display to Committee and members at the AGM and is now sheeted over.

## 2010 Carriage Restorers Convention

The annual carriage restorer's convention was held on the E&BASR at the end of September, held at a different preserved railway every year the two day event drew carriage restorers from throughout the country to see the railway, view the rolling stock, inspect ongoing projects and attend practical demonstrations of restoration work. The autocar project was open for guided tours on both days with Stately Trains vintage carriages providing quality transport from Embsay, after the tour the delegates were invited to visit the trust's shop in the car park alongside and empty their pockets.

Over sixty restorer's attended the event, one of the high points was the opportunity to see progress on Stephen Middleton's latest project the 1882 Pullman car *Balmoral*, on Saturday night a special train consisting of L&Y directors saloon No1 and the LNWR twelve wheel directors saloon pulled by a green class 31 diesel loco (replicating the train that towed both the carriages into preservation at the Nth Norfolk Railway in 1966) took the delegates to Bolton Abbey for a barbeque.

Another highlight of the weekend caught on camera was trust chairman Stephen Middleton ensnaring new trust treasurer Peter Lund into purchasing some bargain spares from the shop! Both seen below peering into the bucket by the door.

Photo; T Warner



## **Underframe Appeal**

A big THANK YOU to all those members who have contributed to our underframe appeal, the total so far is £2309.70 a wonderful effort from a small group. Nearly 50% of members have contributed some more than once, a superb effort which is appreciated. We need £6000 for the underframe, modifications and transport, the money counts towards our match funding for the HLF and if we are successful will be needed at the end of the year, time is running out! So if you have not yet contributed please think about doing so no matter how small, remember your donations count towards our “rewards” scheme a reminder of which follows,

### **Rewards**

#### **Contributions of £20 or more**

Bronze certificate acknowledging the donor's gift.

#### **£50 or more**

Silver certificate

Free membership of the Trust for a year, with its associated benefits including

regular newsletters and invitation to 'meet the autocar' days, during which you will

have the chance to view progress on the restoration of No. 3170.

#### **£150 or more**

Gold certificate

Free membership of the Trust for a year

Ticket for two on a Stately Trains strawberry special at the Embsay and Bolton Abbey Steam Railway. Running on selected summer Saturday evenings you will be served strawberries and cream during a steam-hauled journey in award winning Victorian carriages

(please see [www.embsayboltonabbeyrailway.org.uk/vintaget.html](http://www.embsayboltonabbeyrailway.org.uk/vintaget.html) for further information).

## Rewards

### **£300 or more**

Gold certificate

Free membership of the Trust for a year

Ticket for two on a Stately Trains strawberry special

Invitation to be one of the first to ride behind the completed autocar\* during a special donators' day.

### **£500 or more**

Gold certificate

Life membership of the Trust

Ticket for two on a Stately Trains strawberry special

Invitation to be one of the first to ride behind the completed autocar\*

Behind the scenes guided tour of Beamish Museum for two people and free access to the Museum for the day; **or** a guided tour of Stately Trains restored Victorian carriages by the owner Stephen Middleton.

### **£1,000 or more**

Gold certificate

Life membership of the Trust

Ticket for two on a Stately Trains strawberry special

Invitation to be one of the first to ride behind the completed autocar\*

Behind the scenes guided tour of Beamish Museum for two people and free access to the Museum for the day; **or** a guided tour of Stately Trains restored Victorian carriages by the owner Stephen Middleton.

Exclusive use for you and up to five other people of one of Stately Trains' Vintage Directors' saloons, which will be attached to a normal service train at the Embsay and Bolton Abbey Steam Railway.



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Exclusive use for you and up to five other people of one of Stately Trains' Vintage Directors' saloons, which will be attached to a normal service train at the Embsay and Bolton Abbey Steam Railway. During the day two return journeys of the line will be completed, during which you will be served champagne and a light buffet.

A days experience on a replica of the oldest surviving railway locomotive in the world! Help prepare Beamish's stunning replica of Puffing Billy, the original dating from 1813, for a days work on the Beamish waggonway. Clean the tubes, light the fire and raise steam pressure before driving and firing the engine under tuition from Beamish's skilled staff. You can even wear authentic 1820s costume, which we will provide. At the end of the day you will dispose of the engine and return it to the shed, completing a unique 19th century shift in the 21st century! (Preparation and disposal activities and period costume are optional! Two guests will also get free access to the museum to witness your experience).

In addition your name (or a name of your choice, if a gift) will be recorded on a plaque to be placed in the autocar, in recognition of your contribution.

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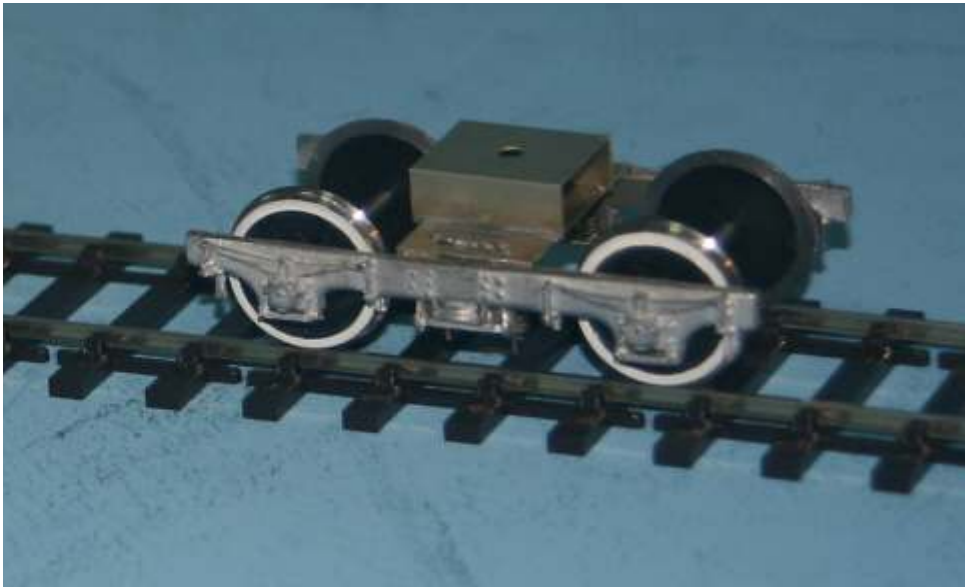
\* **Please note** that it is the intention of the trust to restore No. 3170 to operate as an autocar under it's own power. However, should funds not be sufficient or other circumstances occur which prevent this, it is our intention to restore the vehicle as a non-powered coach.

## **Building the Medley Petrol Electric Autocar: The Trailing Bogie**

Richard Marsden

The bogies appear late in the instructions, but I chose to build the trailing bogie at an early stage so that I had a reference when deciding how to motorise the powered bogie. Both bogies use the same design and only differ in the choice of wheels. The instructions recommend Slaters 7131 spoked wheels for the powered bogie, and 7124 Mansell wheels for the trailing bogie. since purchasing these wheels I discovered that the autocar used Kitson wheels rather than Mansell wheels. I do not think the difference is particularly noticeable in the finished bogie, but the "GWR Mansell" wheels (7124G) look like they have a profile that is more like the Kitson wheels.

I painted the rims of the Mansell wheels with white enamel (Humbrol - yes it is occasionally available here in the US!). My method was to mount bearings in the crocodile clips of a 'Helping Hands' so that they would hold the wheel in a vertical position. I then slowly turned the wheel whilst keeping the paint brush on the rim. A motorised approach (eg. electric drill) has also been suggested. It is almost inevitable that the paint will end up on the treads, but this is easily scraped off.



The bogie is compensated with four springs. These are created by stretching the supplied spring to make a compression spring and then cutting it into 8 pieces (4 per bogie). I had some problems getting the right length, and suspect it takes practice. The springs tended to be too long (giving too much compression), but cutting out a winding often resulted in a spring that was too short.

The central part of the bogie consists of two U-shaped pieces. The lower U-shaped piece has holes for the various pins and staples. The outer 'arms' of this lower U piece are outside of the bogie side frames. A pin holds them together so that the side frames can pitch. Staples (bent pieces of brass wire) hang down from the U-shaped piece into the bogie side frames. These stop the side frames coming off, and they also hold the springs - so supplying compression when weight is applied and/or the side frame pitches.

I have had some problems with the staples coming loose. I believe the problems are probably due to insufficient solder and possibly dirty metal. I would also recommend a stronger (ie. higher temperature) solder).

The side frames house the bearings for the wheels. The whitemetal side castings solder to the outside of the lower U-shape so that they hide the bogie side frames. Note that they are not attached to the bogie side frames as this would restrict the compensation. The insides of the castings have hollows to accommodate the bearings. I found I had to open these holes out quite a bit with an electric drill so that they would fit and allow some movement of the axles. Do this drilling carefully, because you do not want to drill through the casting.

I also found I had to fit a small amount of packing (strips of brass sheet) between the castings and the U-shaped piece to push the castings out slightly further and improve the clearances.

This description is probably confusing on its own, but it should help if you look at the photograph, parts, and instructions. The instructions include a very useful diagram showing how the pieces relate to each other and how the staples and pins hold it all together. All-in-all, I am pleased with how free running the resulting bogie is.



Delegates to the carriage restorers convention held on the E&BASR in September, gather outside the Autocar ready for a guided tour. Having been transported from Embস্য in style by Stephen Middleton's LNWR directors saloon, on its first passenger carrying duty since restoration seen at the back of the departing train.  
Photo; S Gott