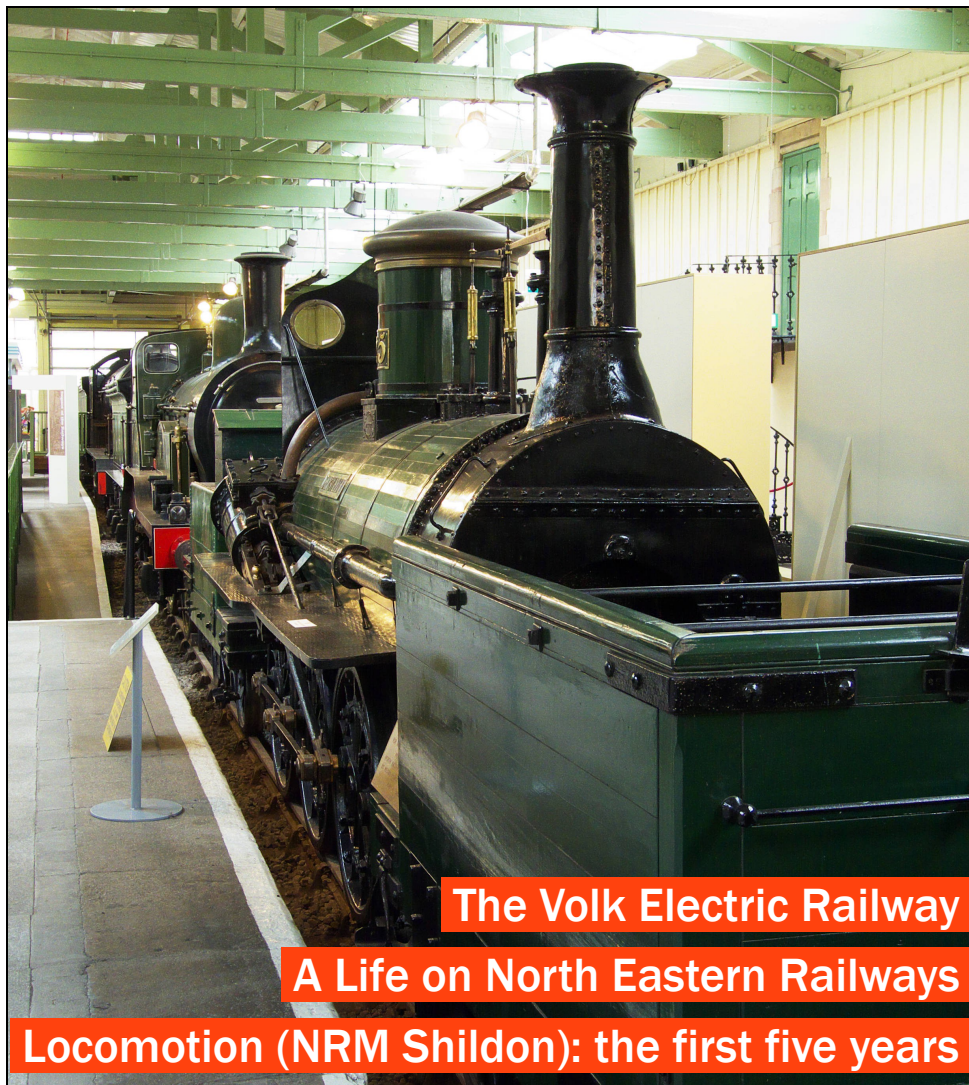


Friends of Darlington Railway Centre and Museum

# Newsletter

October - December 2010

Free to members



**The Volk Electric Railway**

**A Life on North Eastern Railways**

**Locomotion (NRM Shildon): the first five years**

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### Introduction

This is the second issue of the Newsletter that I have edited. I have had little reaction to the last issue but what I have heard has been positive which I shall take as a good sign.

The late cancellation of the talk about Tornado, scheduled for 2 September, came as a great disappointment. No little effort was expended to ensure that everyone was informed of the change and, in the end, only one attendee was caught out. If you can check the Friends website- the programme is kept as up to date as possible and changes can be made almost immediately.

Tim Ruffle, Editor

### Contacts

If you have material for the newsletter, be it an article, photo' or a short anecdote to fill the last few lines on a page, do send it- it might not get in but it will be considered. Information and announcements for members may well end up here and on the website, which I also look after, but such things should be sent to the Committee.

I much prefer to be contacted by e-mail, especially if it saves me some typing, but you can reach me by post. Note that, In a desperate attempt to be organized, the web-site has its own e-mail address. Material for both can go to either address as long as that is clear.

newsletter@friendsofdrcm.org  
webmaster@friendsofdrcm.org

38 Denebridge Row  
Chilton  
County Durham  
DL17 0HN.

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30 High Street  
Spennymoor  
County Durham  
DL16 6DB

# FEATURE:

## The Friends and the Data Protection Act

*Membership Secretary Vic Branfoot addresses a little considered but important piece of legislation which covers personal information.*

One of the provisions of the Data Protection Act requires us to bring the following information to the notice of our members. The Act seeks to protect the interests of named or identifiable individuals in respect of data which is held about them by electronic means- on a computer in other words. There is something of a grey area as to the extent to which the Act also affects data held on paper however, the data I hold on paper does not add to that which I hold on computer. There are exemptions which affect, for example, matters relating to national security and the Police. However, these exemptions are clearly irrelevant to us.

The areas of the Act which affect the Friends may briefly be summarised as- Information must be held securely, must not be kept for longer than necessary, must be kept up to date and must not be divulged to third parties without the subject's knowledge and permission. I am satisfied we fulfil all those criteria. But there is one more: we must inform our members as to what information about them is being held. It is that criterion which has led to the writing of this article.

The information about our members which I hold on computer (and on paper) comprises, quite simply, members' contact details and the date to which their current subscription payment takes them. Names and addresses are repeated in a second file in a format which enables me to print self-adhesive labels for the distribution of our Newsletters\*. A third file is virtually a repeat of the above first file except that in place of subscription details I record members' telephone numbers and/or e-mail addresses, when known. This is obviously to members' benefit should they need to be contacted urgently.

The above phrase that data "must not be kept for longer than is necessary" might, on the face of it, cause problems in respect of us meeting the provisions of the Act. I maintain in a fourth file a record of former members who may have resigned their memberships or allowed their subscriptions to lapse. I do so in case such former members wish to rejoin and ask how much they owe us in unpaid subscriptions. This rarely happens but it has happened and I therefore contend that such data is indeed necessary to our functioning.

Of course, all the above data is kept up to date- for example, when members inform us of changes of address- and we would not entertain any requests by third parties to have access to our records.

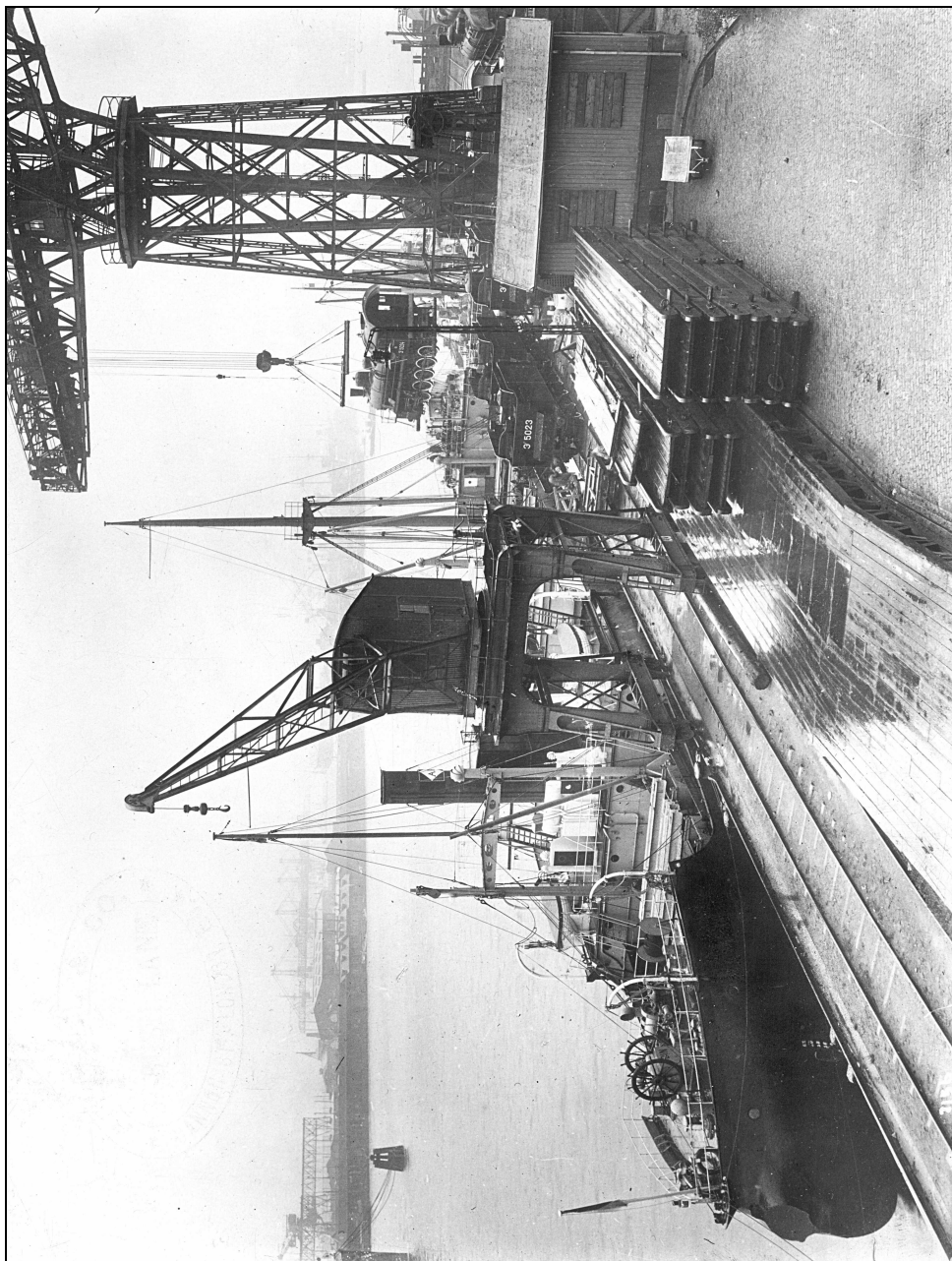
Individuals can demand a copy of data held about them for which a reasonable fee (no more than £10) may be charged however that is discretionary and anyone getting in touch simply to be sure information is up to date need not fear a bill.

Comprehensive information about the Act, including its complete text for insomniacs, can be found on the Information Commissioner's Office website at [www.ico.gov.uk](http://www.ico.gov.uk). Remember if you don't have internet access your library does.

\* It should be noted that Vic sends those labels to me so that I can post the Newsletter and that I also have a few addresses on computer to cover members who have joined or moved since the labels were printed. Editor.

# PHOTO' FEATURE:

Locomotives  
and Torpedoes



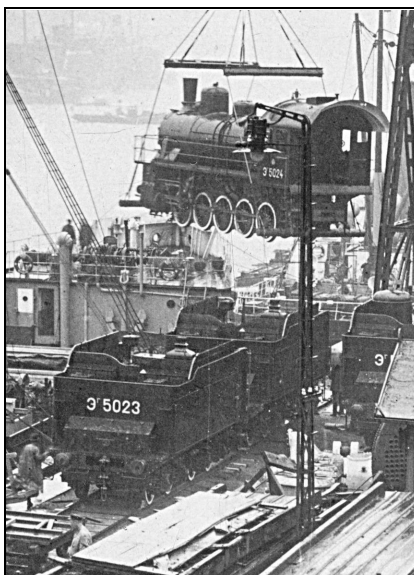


**Don Whitfield** discovered this photograph amongst items donated to the Friends and decided to look into the story behind it.

Whilst sorting through the books and documents that have been given to the Friends to dispose of, mainly to raise funds, a seemingly mildly interesting book about Russian locomotives was picked up. An old photograph, circa 1920s, fell out, then curiosity and interest grew. The photo' is of a large 0-10-0 locomotive, one of many being loaded onto or unloaded from an odd shaped ship in a large, well equipped harbour. To identify the ship, and possibly the harbour, I contacted a friend of mine who has a Merchant Navy background and regular staff and similarly interested men at The Discovery Museum, Newcastle upon Tyne. That source of information provided the information about the ship, the *Odin*, which was found in *Jane's Fighting Ships* 1919! (See overleaf.)

Back to the locomotives. The experts at the Museum correctly assumed a German Harbour, possibly Hamburg, with German built locomotives being shipped to Russia.

The book revealed that the 0-10-0 loco's were the Russian class E (what looks like an initial "3" in the loco' numbers is actually a Cyrillic "E"). In 1920 the USSR was desperately short of motive power so 700 such loco's were ordered from Germany and 500 from Sweden. The order to Germany was shared by 19 locomotive building works which indicates the German industrial strength in 1920.



Detail. The tenders appear to sit happily on the quayside track. The harbour has been identified confidently as Hamburg so it seems that the track is laid to the USSR's unique five foot gauge- presumably for the specific purpose of holding rolling stock built for, and awaiting export to, Russia.



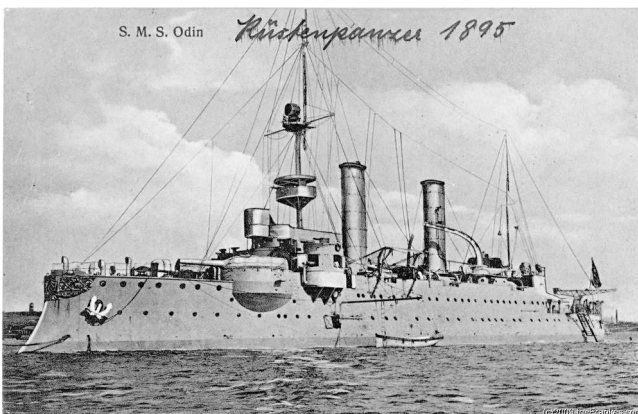
A preserved E-class locomotive in Moscow. Photo' from [Wikipedia.org](https://www.wikipedia.org) reproduced under the Creative Commons licence.

With thousands made in Russia and further batches imported from Czechoslovakia, Hungary and Poland these simple, robust, 86 ton work-horses made up easily the most numerous class of locomotive in the world. Counting various sub-classes around 10,670 E-classes ran on Soviet railways with series built for industry bringing the total up to around 11,000. The class was superseded by the SO-class 2-10-0s, developed from the E-class, but not replaced and it was widely used until the end of steam. Many survived in the Soviet Union's strategic reserve, oiled and ready to steam in event of war (all facing west reputedly). As a result examples live on in preservation where they continue to earn their keep on rail-tours.

## The Ship

*SMS Odin* was one of the German Navy's first class of capital ships the Siegfrieds, nicknamed "Meerschweinchen" (guinea-pigs) due to their rolling motion. Construction began in 1893 and she was launched in 1894. *SMS Odin* and *SMS Ägir* were the last two Siegfrieds but, modified from the basic design, are often put in a class of their own- the Odin class. They were armed with three 24cm guns (the front two innovatively mounted in the same turret), ten 8.8cm guns and three 45cm torpedo tubes- one in the bow below the waterline, the others to the sides.

Such was the pace of warship development all of the Siegfried class,



including the Odins, were rebuilt just after the turn of the 20th Century emerging much enlarged with two funnels and increased range. The Odins retained their guns, the side tubes were moved below the waterline, the front tube was replaced with a 35cm tube and a 45cm tube was mounted at the stern above the waterline. The blanking plate for the rear tube gives *Odin's* stern its distinctive profile in the main photograph.

In spite of the rebuild the Siegfried class were lightly armed and armoured by contemporary standards and were relegated to coastal defence duties in which capacity they served throughout WW1. In 1919 all were withdrawn from service with the Odins sold to the A. Bernstein Company of Hamburg. *Odin* began her civilian career in 1922 serving as a freighter until being scrapped in 1935. *Ägir* was similarly converted but ran aground in 1929 and could not be salvaged.

*The picture of SMS Odin in fighting trim is from a WW1 postcard- the hand written date is thought to be a best guess at the year she was launched. The card is in the collection of Alex Franke and reproduced with thanks. It may be viewed on-line at [www.thefrankes.com/wp/?page\\_id=527](http://www.thefrankes.com/wp/?page_id=527).*

# FEATURE:

## Life on the Railways in the North-Eastern Region: 1939–1984

*Derek Reeves continues his professional autobiography anticipating big changes with the introduction of the Newcastle Metro and HSTs on the main line. In the mean time he enjoyed a busman's holiday in Angola and dealt with more breakdown work and a rampaging Deltic.*

The early 1970s were a very busy time: apart from ensuring that all vehicles were properly maintained and that all timetabled and extra trains ran on time (or as near as we could manage), there were big changes afoot, and we had to prepare our facilities and depots for them. I am referring to the building of the Newcastle Metro which would take over Gosforth Car Sheds and the lines from Manors to the coast and the line to South Shields, and also in 1976, the introduction of the HST on the East Coast Main Line.

Taking the building of the Metro first: consultations with the staff who would be displaced took place at York and Newcastle, with the various LDCs and Sectional Councils. I was not involved in the actual meetings, but it was agreed that the staff would have three options: (1) to transfer to the Metro organisation; (2) to move to a BR job in the Newcastle area; (3) to take redundancy money.

Unfortunately, the work of actually building the Metro had been contracted out about four years earlier. Their Head Office Staff (including a Personnel Director) had not been appointed, and our staff repeatedly asked what the conditions and pay would be if they transferred to the Metro. Of course, we could not tell them and eventually our staff revolted and blacked all contact with the Metro until the conditions were known.

This made the development proposals for the takeover of the Gosforth Shed very difficult to prepare. The plan was to share Gosforth for six months at least, and the train services would be shared, as only half of the coastal circular would be taken over at first so that a service to the coast could be maintained during the construction period.

The blacking resulted in all the planning drawings having to be drawn without proper access to the depot. The result was that I had to spend time at Gosforth sheds checking various measurements etc. because we didn't dare let the contractor's designers into the depot!

Another factor that was taken into account was the wheel lathe. It was agreed that it should be left in situ and that the Metro would pay for a new one at one of our depots. It was first proposed to have the new one at Heaton Carriage Sidings, which was to be developed as the replacement depot for DMUs and ultimately the HSTs. I suggested to the DME that it would not be a good idea to locate it at Heaton or Gateshead, because the manning of the machine was two grade 4 men, and although the two men at Gosforth were paid grade 4, they were not apprentice-trained, and when there was no work for the lathe or when it was broken down, the unions would not let them do other grade 4 work, so sometimes they sat in the mess doing nothing for days on end. If the lathe were located in the Newcastle area, they would simply transfer this problem there.

I suggested putting it at Thornaby, assuming that the men would not want to go

there, and that we would be able to train shift fitters to work the lathe as part of their shift work. I was dispatched post-haste to Thornaby to devise a scheme with the Depot Manager. It fitted in on one of the shed roads quite nicely, and when installed, three fitters and one electrician were trained and operated it as required as part of their shift work.

At the end of 1972, I was asked whether I would consider a 6-week secondment to Angola in Africa as a consultant to look at the Benguela Railway with a view to increasing the traffic moved from Zaire, now that their Eastern route had been closed. After discussions with my wife and given that she would have to supervise the bungalow we were having built in Darlington at the time, she agreed that I should put my name forward. I was interviewed and offered the job of reviewing the locomotive maintenance with a view to increasing the output of the works and depot to cater for the increased traffic. I accepted... *Derek's account of his time in Angola will form the next instalment of this feature. Editor.*

The week before I returned, word arrived that there had been a big derailment near Washington in Weardale, where 28 loaded cement wagons had derailed on top of an embankment. "Ha ha!" thought I- "I shall not be involved and they will all be dealt with before I get back." How wrong I was!

Returning to the office at Newcastle on the Friday morning, I found that 24 of the cement wagons were still lying at the bottom of the embankment. Jack Wandless, who had been covering me 'on call' had had two cranes there the previous weekend and had recovered only four loaded wagons. They were so far from the track that the 75-ton crane could not lift them, so each wagon had to be lifted with two cranes and then taken along to the end of the embankment to be dumped for later recovery. He had arranged for the two cranes to be there again the next Sunday to try to recover some more. He was over 60 and a very experienced breakdown man, but I could see he was ill and should not be subjected to a day like that Sunday in all weathers, so I told him I would take charge on Sunday and that he should relax at home.

Sunday came, and sure enough, we recovered only another four, working on the job for eight hours. This would mean another five weekends at least, and some of the wagons were even further away than those we had already done.

On the Monday, I went to the Commercial Manager and asked him why he wanted them recovered loaded. He said he could sell the contents and save a bit of money. I asked how much he would get per wagon, and he said £200-£300. I asked him if he realised that it was costing me over £2,000 pounds each time we have to go out and told him he had had it: I was going to dump the cement to lighten the wagons so they could be lifted by one crane. He said that I couldn't do that. I said that I could, and walked out!

On Tuesday, I went up with a C&W gang and we undid all 42 bolts on the aeration pads at the bottom of each wagon so we could lift the wagon body off the pad and leave the cement behind. I told the local ganger to tip off the farmer whose field we were using that there might be a bit of free cement going.

Luckily, the next Sunday was dry and with little wind. We set up the 75-ton crane, hooked up the first wagon, and gently lifted, and my idea worked perfectly:

the aeration pad stayed put and all the cement ran out of the wagon. The wagon was lifted up and lowered onto the track in front of the crane. The second crane then took over and lifted the wagon just off the track, carried it along out of the way, and dumped it on the level at the end of the embankment. During the day, we recovered ten wagons. Between each lift, 20 or 30 people were allowed on the scene to fill their sacks and other containers with cement, so the site was kept reasonably clear as the work went on.

The following Sunday, the remaining ten wagons were recovered, but on this day, the weather was not so kind. It was quite windy, and with drizzle in the air, both cranes turned white, and all the crew, including me, ended up looking like snowmen! All the wagons were recovered together with all the aeration pads, and all that was left to do during the next week was to bring in the Thornaby crane, rerail the recovered wagons, and haul them out to Shildon Works.

And so back to the main job of maintaining the locos and stock in good repair and dealing with failures etc. To this end, I spent much of my time visiting the sheds and maintenance depots looking at problems and checking the quality of work being done. My policy was to get the Shed Manager out of his office and into the pit or engine room with me, as I was sure many of them rarely left their offices.

I was sitting in the Chief Mechanical Foreman's office at Gateshead and we were both eating our sandwiches when the phone rang, and Control said to me that the 11:50 express at Darlington had just run through the station at 60mph and was now stopped round the branch at North Road Station. I said: "Pull the other one!", but they said, no, it's true. It was not derailed and no-one was injured. I said that I would be on my way and would be there in about 45 minutes. I instructed them not to move anything and keep the train crew on site. I dashed over to the Central Station and got an express to Darlington, and walked quickly up to the site passing a DMU on its side at Platform 6.

On arrival, most of the passengers had been evacuated, and I saw it was a Deltic at the head of 10 coaches. The driver and a Running Inspector were in the cab. I introduced myself and enquired what had happened. The Inspector said that he had got on at Doncaster having had a look around the loco, including the connections with the coaches, and found everything in order. They had a normal run and stop at York, and a normal run as far as Croft (south of Darlington), when the driver shut off power and started to brake for the Darlington stop. The pressure on the brake gauge fell normally as he moved the control, but the speed of the train did not reduce normally. In fact, when the gauge showed zero, the speed had only reduced to 60mph. There was nothing more they could do, and they went through the station at about 55mph, knocked the empty DMU a glancing blow- which probably saved the Deltic from derailing at the curve on the North Road line- and then they quickly started slowing down, and stopped around the corner before North Road Station.

The inspector had immediately got down and looked at the pipes between the loco and coaches. He found that the red pipe, i.e. the brake pipe cock, was closed, and that the yellow pipe was uncoupled, hanging down. This, of course, meant that when the driver applied the brakes, only the loco brakes would apply, and the coach brakes would not, if there were no leaks down the train. It



transpired at the inquiry that the train was finally stopped by the restaurant staff pulling the emergency cord (the guard claimed he had been knocked over as the train went round the first curve into the station).

When I examined the disconnected pipe and held it up to the red cock handle, there was about  $\frac{1}{2}$ " (12.5mm) clearance. However, it was a rubber pipe, and whatever had hit it at 90mph (145km/h) may have had enough force to stretch the rubber sufficiently to hit the cock handle hard enough to shut it. A minute inspection of the handle revealed a tiny spot of yellow paint which would support this theory. An inspection of the track between York and Darlington did not reveal anything that might have come into contact with the pipe en route. The set of coaches were tested the next day and leaked only 1lb/in<sup>2</sup> (90g/cm<sup>2</sup>) over 30 minutes. This incident resulted in a modification to the train pipe cocks to provide a locking catch in the open and shut positions, so such an incident could not happen again.

Another incident that caused a problem was that the Gateshead crane itself derailed at Newcastle, and when rerailed, had to go to the works for repairs, which took 6 months to complete. Headquarters insisted that we transfer the Thornaby crane to Gateshead to cover the main line, leaving Thornaby with only jacking and packing facilities. The Thornaby crew were very angry about this decision, so I went to meet them. I agreed that they would be called out to every incident whether it required a crane or not, and this satisfied them. They did an excellent job with their jacking and packing equipment, and in all of the six months, only once was the crane called out as a back-up.

There was another incident where I had to make a difficult decision. We had a bogie bolster wagon with a collapsed bogie stopped on the main line at Dalton curve, which is in a cutting. It was in June, and I was called out at about 16:00. On arrival, the Darlington District Maintenance Engineer was there and he had ordered the Thornaby crane. When I looked, it was obvious that the wagon could not be moved, and there was nowhere to dump it in the cutting. I knew there were several empty bolster wagons in up-sidings at Darlington, so I contacted Control and diverted the crane to Darlington. I sent the District Maintenance Engineer to Darlington to remove a bogie from one there and bring it with the crane from Darlington on the jib wagon. In the meantime, I arranged with the Operations Inspector to re-open the down line with trains passing at 20mph.

All my men had orange jackets on, so I chastised him to get his on. About 18:00, I spied two figures walking along the line towards us, both not wearing orange jackets. As they came towards us, I could see that it was the Divisional Manager, and my boss, the Divisional Maintenance Engineer. What should I do? I set off towards them, and when I got to them, I said: "Good evening, gentlemen. I am afraid you are not properly dressed to be walking along a main line!". "Bxxxxx Hell", they said, and I have never seen two people dash over to the fence so quickly. They returned in orange vests shortly after, and inspected the work I was doing to clear the line. They seemed pleased and left me to it. Later in the night, we took possession of the down line, brought the crane in, fitted the new bogie packed with wood planks as it was not the same as originally fitted, and moved the wagon slowly to the refuge siding at Northallerton. The line was open again by about 08:30. Later that day, I apologised to Mr. Clothier, but he said that I did

the right thing and that it had been very remiss of them to set a bad example.

Still on the theme of derailments, we had one at West Hartlepool, where five or six wagons were derailed, blocking the main line. Unfortunately, we were in the middle of a dispute with the fitters at Thornaby at the time, and they were on strike. The crane diver, however, was a C&W man and was working, so we turned out a management crew, including me, to deal with the incident. I told the crane supervisor he was in sole charge, and he enjoyed the night telling all the managers what to do! It was hard work on soft hands, but we managed to clear the line.

## **FEATURE:**

## **Tees Valley Museums Review Press Release: September 2010**

*A review of museums in the Tees Valley is being conducted under the auspices of Stockton and Darlington's Chief Executives. This is a summary of a statement:*

The review was commissioned by the area's five local authorities with the aim of ensuring the service is best placed to deal with a changing economic climate by finding the best 'delivery model' amid heavy cuts to public sector funding. Options under consideration include shared services and governance and partnership working to improve services and identify savings. The local authorities overseeing the review are working with the Museums, Libraries and Archives Council, and trades unions are being kept up to date with any implications for staff.

There are six local authority-run museums in the Tees Valley including DRC&M: the Dorman Museum, Captain Cook Birthplace Museum, Hartlepool Museum and Gallery, Kirkleatham Old Hall Museum and Preston Hall Museum. Independent museums include the Cleveland Ironstone Mining Museum at Skinningrove, Hartlepool Heugh Battery and Winkies Castle at Marske. MIMA, the Middlesbrough Institute of Modern Art, is not part of the review. The work is being carried out by specialist consultants Egerian, and its findings will be considered early next year by the Tees Valley Chief Executives group and elected members.

Kate Brindley, Middlesbrough Council's Director of Museums and Galleries, said: "We are lucky to have in the Tees Valley a range of museums which rival anything in the rest of the country. Our museums- both those we run as local authorities and the ones we support- are hugely popular and rightly so. They are a vital part of the Tees Valley and the wider region both in terms of securing our culture and heritage and in attracting visitors to the area. They raise the profile of the area and help to promote its distinctive and authentic sense of place."

"But these are challenging times with all public spending under close scrutiny, and the museum service is no exception. This review will help to ensure the Tees Valley's great museums can look to the future with confidence."



### **Stewart Francis on Mock the Week**

What's the deal with train-spotters? I counted 27 of the losers today...

...My record's 41!

**George Muirhead**, Museum Manager at Locomotion, spoke to the Friends about the first five years of the Museum's operation. Report by Richard Wimbury, photo's: Tim Ruffle.

"Locomotion" at Shildon opened in September 2004; its appearance now is very different from the original conception. The early plan envisaged a high-tech shed with limited opening hours which would be energy efficient and environmentally friendly and closely linked with the Timothy Hackworth Museum. A new perspective was opened up when Sedgefield Borough Council offered money for an attraction which would be open all year and bring in high numbers of visitors. Thus the idea of "Locomotion- the NRM at Shildon" was born- initially aiming to get 60,000 visitors a year and offering a programme of special events.

In the first year of opening 212,000 visitors came; this figure has now settled to around 140,000-150,000pa. There were, of course, initial problems- not least with signposting, car parking and green technology. There was also the problem of lack of cash for the appropriate development of all the historic structures on the site. The museum also suffered from poor links with the local community, a poor educational programme and the lack of a guidebook. It became clear that there was the need to attract a family audience and to have access to a reliable,



August 2010's Model Mania event.

resident steam locomotive.

Between 2005 and 2009 many improvements took place- better car parks and access roads, improved public areas and an innovative learning programme. Further funds came on stream to enable the purchase of machinery from the defunct Post Office underground railway in London, enabling the conservation workshop to get under way. The museum now hosts on average some 45 special events a year and these are a major boost to visitor numbers. There is also a new website and the number of hits is on the increase.

A major aspiration is to make more use of the main line connection, in spite of the fact that Network Rail is not the easiest organisation to deal with. This will be a great benefit to the museum as people want to see steam locomotives at work under their own power.

"Locomotion" has brought with it many benefits - new jobs created both in the museum and in the surrounding area; £3.6m invested in the local economy pa; trade with numerous local firms; visitors coming in from outside the region; growth in pride in Shildon. For the future, it is hoped that links with the Weardale Railway can be developed, that the other historic structures on the site can be improved and that a new educational building can be constructed (the current difficult financial situation will influence progress here).

A question and answer session led by Mr Muirhead concluded a most interesting evening.



*Mallard* is currently at Locomotion during building work at York. Locomotion's Duncan Edwards relates her history to an appreciative audience.

*Vic Branfoot developed his presentation about the world's oldest operating electric railway at record speed producing a map of the line to be distributed and supplementing video footage with his own photographs including a complete record of the route. Somehow he also found time to mail members about the change of programme. Report by Don Whitfield and Tim Ruffle.*



Left: Opening day. Magnus Volk, dressed as a driver, and the Mayor pose on the VER's first vehicle. Right: a contemporary caricature of Volk.

Brighton native Magnus Volk (1851-1937) was the son of a German clock-maker. Apprenticed to a scientific instrument maker he returned to Brighton to help his mother run the family business on the death of his father in 1869. Fascinated by science and engineering he experimented with telecommunications and electricity making an electric car, inventing a fire alarm system (still in use some 60 years later) and fitting his house with electric lighting- a first in Brighton which earned him the contract to light the Royal Pavilion.

His next project proved to be his legacy. Volk's Electric Railway might have been inspired by the Gross Lichterfelde Tramway which opened in Berlin in 1881. The VER was intended to be a temporary Summer tourist attraction but had the good fortune to be denounced by a local church minister as "the latest invention of the Devil". From its opening in 1883 it proved hugely popular and ran constantly.

The two-foot gauge line ran for only a quarter of a mile at the top of the beach between stations by the Palace Pier (opposite the Aquarium and called the Aquarium Station) and the Chain Pier- Brighton's first pier but, at the time, decrepit and awaiting demolition. The first vehicle had a 1½hp motor with a top speed of about 6mph with power, fed through the running rails, coming from a 50v DC generator driven by a 2hp engine.

Volk's hopes to extend the railway west were dashed by the Council but there was no objection to it reaching eastwards. By April 1884 he had extended the

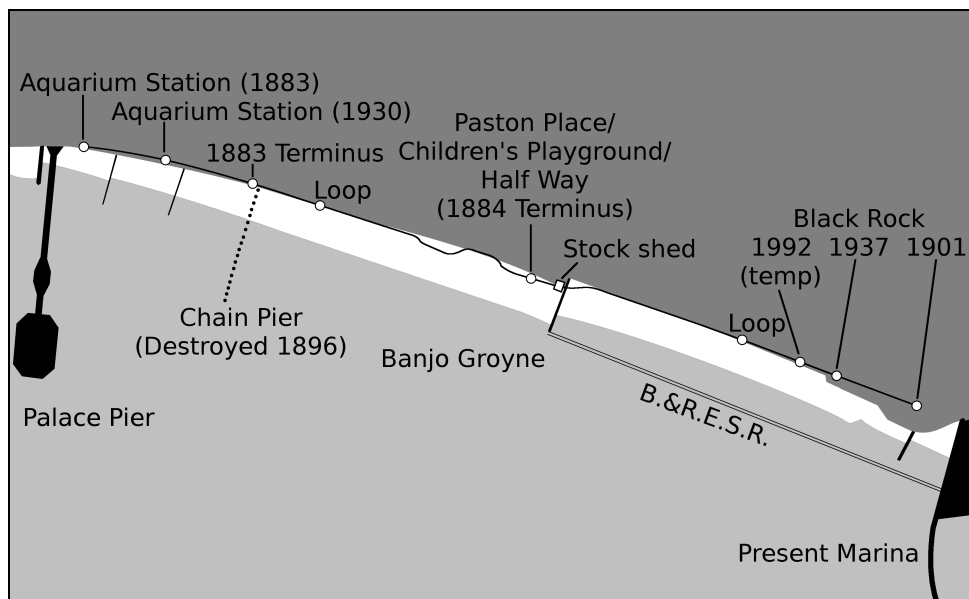




The viaduct east of Banjo Groyne from an undated postcard. Cars could be drenched by waves at high tide, indeed watching this seems to have been a source of entertainment. Sea defences have now allowed the beach here to build up almost to rail level affording the railway much better protection. *Picture: Postcards of the Past (see back cover)*

railway to Banjo Groyne at Paston Place, an overall route length of about  $\frac{3}{4}$  mile, rebuilding the whole line to 2'9" gauge in the process which allowed for larger more powerful vehicles (two were built immediately running on 160v) whilst still permitting the tight curves and steep gradients necessary for it to hug the top of the beach and duck around obstacles. With generators, workshop and running sheds installed Paston Place became, and remains, the hub of the line. In 1886 the gauge was tightened to 2'8½" and a third rail system adopted to carry power.

Volk's ultimate aim was to reach Rottingdean village east of cliffs and a rocky foreshore. Building through the rocks or up the cliff was impractical (the cliffs are crumbly so an expensive viaduct would probably have been required) so, in 1894, Volk began construction of The Brighton and Rottingdean Seashore Electric Railway (see next page). This ambitious/barking-mad (discuss) line got around the headland by... going around the headland- wading through the sea from Banjo



Groyne to a new Pier housing its generator at Rottingdean. After the B&RSEr's closure in 1901 the VER was extended eastwards again as far as it could go, to a station called Black Rock, reaching its greatest extent- about 1¼miles. At this point the railway started taking its power from the mains.

Construction in the '30s nibbled about 200 yards away from each end of the VER although this included a swimming pool at Black Rock which gave the, otherwise rather isolated station, some purpose. The termini retained their names. The Railway closed for the War suffering from the neglect but reopened in 1948. Winter running ended in 1954 and, in the late '90s, another 100 yards was lost at the Black Rock end to allow construction at the Marina but this was temporary.

Today the Railway runs on 110v DC. The station at Paston Place, renamed Children's Playground for a while, is now called Half Way. Package holidays and the closure of Black Rock Pool in 1978 caused concern but the VER's annual count of about 250,000 passengers, although a quarter of its heyday, is respectable. Even at 127 years old with enthusiastic support from VERA (the Volk's Electric Railway Association), there is life in it yet.

### The Brighton & Rottingdean Seashore Electric Railway

The VER is instantly recognizable as a narrow gauge railway and, although the means of propulsion was novel, electric railways and tramways following its example soon became common. By contrast Volk's next venture remained as outlandish as the day it opened.

Affectionately dubbed Daddy-long-legs (although what affection anyone could have for a daddy-long-legs is a mystery to your editor) the B&RSEr is sometimes cited as the broadest gauge railway ever with outer rails 18' apart. In fact the railway's only vehicle, built by the Gloucester Railway Carriage and Wagon Co. and officially named *Pioneer*, ran on two, concrete-sleepered, 2'8½"-gauge tracks with bogies on each 23' leg. The scheme was probably inspired by a similar looking system in Brittany pulled across a harbour by chains but *Pioneer* had one bogie on each side powered (via a shaft and worm-gear) with the others braked. Power for the 25hp motors was collected by trolley pole from a cable on the land side (a second pole was added as a back-up but there was only ever one cable). She could carry 160 passengers on two decks. Travelling over the sea the law required a life-boat, life belts and a sea captain at the "helm".

The B&RSEr opened, with typical Victorian brouhaha, on 28 November 1896 and ran into trouble almost immediately. A storm blew up on the night of 4 December which



Left: *Pioneer* at the Rottingdean Pier which also housed the powerplant for the line. Rudyard Kipling rented a holiday home near Rottingdean and would fish from here when the railway was not in service. Right: *Pioneer* running at low tide. Pictures: Wikipedia under the Creative Commons licence.

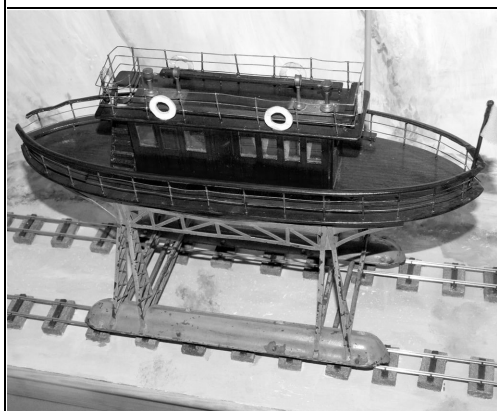


A train at Aquarium Station in 2007. *Photo': Vic Branfoot.*

destroyed the Chain Pier (saving the Palace Pier company the task of demolishing it) and broke *Pioneer* loose of her mooring at Rottingdean. She was found on her side having rolled down the 1:100 gradient and been ill-treated by the sea all night. The track, however, suffered only one break and the power supply was intact. Somehow *Pioneer* was rebuilt (with legs extended two feet) and the railway reopened on July 20, 1897.

Although the B&RSCR always popular the storm had dealt it a financial body blow from which it never recovered. Construction of a second vehicle was cancelled and *Pioneer* was never updated although Volk himself acknowledged she would benefit from more powerful motors- high tide slowed her to a crawl. In 1900 new groynes were found to

have caused scouring of the seabed damaging the track. The Railway closed throughout July and August (the height of the season) for repairs. Just as it reopened the Council announced new sea defences requiring a diversion the Railway simply could not afford. In 1901 track was removed to make way for their construction and the B&RSCR closed forever.



A proof-of-concept model of a BRSER vehicle made by Volk. *Photo': Wikipedia under the Creative Commons licence.*

Rail, structures and vehicle all went for scrap although *Pioneer* rotted away by Ovingdean pier until 1910 before being broken up. The route of the B&RSCR is still clearly visible at low tide with the remains of some of the catenary poles to be seen beside the sleepers and part of its platform may be found on the jetty at Banjo Groyne.

*Ray State has spoken to the Friends before on historical subjects. He has fifty years of service on the railways including as a railway accident investigator from 1979 until 1986 and is a leading authority on railway accidents in the United States. Report by Vic Branfoot.*

The annual Members' Meeting timed to commemorate the anniversary of the opening of the Stockton & Darlington Railway saw Mr. Ray State make a welcome return to the Friends.

Although Ray had provided a striking title to his presentation, he observed that a more accurate title would be The History of Train Accidents and Safety on the Railway. Ray's presentation embraced numerous photographs, diagrams and maps- accompanied, of course, by his expert commentary.

He began by observing that rail is now the safest mode of travel... but that that had not always been the case. Early accidents often involved boiler explosions, an example being the explosion which took place at Philadelphia, Co. Durham, on 31 July 1815 when eleven people died and fifteen were injured.

Unsafe practices in the use of stagecoaches died hard, examples being overcrowding, sitting on the roofs of the coaches, open coaches and freight waggons mixed with passenger coaches. Ray spoke about the phenomenon of the Parliamentary Train which emanated from the Railway Regulation Act of 1844. The Act attempted to make rail travel available- and safe- by setting minimum standards for passenger accommodation. It had been influenced by the railway accident at Sonning Cutting on Christmas Eve 1841 when nine stonemasons had been thrown from open waggons and killed. The use of open carriages on the North Eastern Railway ended in 1854. Nowadays, incidentally, the term Parliamentary Train- or Parly or ghost train- has a different meaning: it is a token service which maintains a 'legal fiction' that either a station or a whole line is open when, in fact, the train operating company in question has almost completely abandoned it.

Royal Engineers were the first inspectors of accidents and the actual inspections were under the auspices of the Board of Trade. Since 1991, the Inspectorate has been administered by the Health & Safety Executive. Ray spoke about early operating practices and followed their history through the decades until the present day. He explained such as Time Intervals and Absolute Block working and provided descriptions of numerous incidents, for example the Clayton Tunnel disaster of 1861 on the London to Brighton line. Ray discussed the change from 'local time' to 'standard railway time' when all railwaymen's watches were set to London time. He went on to describe how "Lock, Block and Brake" became the Inspectors' war-cry. Automatic brakes came about as a result of the 1889 Regulation of Railways Act and the consequent improvement in rail safety may be illustrated by the facts that, in 1902 and 1904, 'only' six people lost their lives on the railways and in 1901 and 1908 nobody was killed. However, stressed Ray, the railways then 'discovered' SPEED. Thus began the so-called Race to the North and the dangers that went with it.

At this point, Ray went back and discussed in more detail different types of disasters: boiler explosions... those involving bridges (for example, the Tay Bridge disaster of 28 December 1879 in which 75 people perished)... and those involving breakdowns (involving, for example, wheel fractures and tyres coming off).

After again stressing how safety records improved over the years, he observed that the problem of rail safety had certainly not been fully solved. Ray informed us that when accidents did occur they often came about as a result of human error, for example signalmen not meticulously obeying the rules. Inspectors called for track circuits in order that signalmen could see when sections of track became clear. Ray went on to explain how tablets (or tokens) work and he described the Tyler & Co. railway signalling instruments which assist in this.

Ray spoke about the UK's worst rail disaster- at Quintinshill, north of Gretna, on 22 May 1915 in which 227 people were killed and 245 injured. He went on to note that many accidents occurring after 1921 involved carelessness or the breaking of rules. However, he also pointed to fog sometimes being at the heart of accidents.

Ray went on to describe the Harrow disaster of 1952, in which 112 people died and 340 were injured, and the Lewisham disaster of 1957 in which 90 people died and 176 were injured. Both incidents were caused by driver error with signals being passed at danger. These horrific events led to improvements in cab-signalling instrumentation, examples being ATC, ATP and AWS.

Ray then proceeded to discuss an interesting phenomenon which has developed in the United States, viz. many people, because they live in remote places many miles from the nearest railway line, are unfamiliar with trains. They are therefore unfamiliar with, for example, how to behave at level crossings when they do encounter them.

Returning to the UK, Ray discussed such diverse but important matters as the testing of train drivers for drugs and alcohol, the potential for rail safety being compromised by the perceived need to make economies by cutting back on maintenance and repairs (Ray asserted that privatisation is a disaster for rail safety), safety validation systems, and the Old Dalby test crash when a nuclear flask was deliberately hit by a supposed runaway train.

Ray's splendid presentation closed with a most interesting and lengthy question and answer session which illustrated how fascinating the audience had found the presentation to have been. Emerging from the Q&A session was that Ray is in the process of compiling a comprehensive spreadsheet embracing the key facts associated with all rail accidents to have taken place in the UK. We look forward to its completion although it has to be said that the spreadsheet already embraces thousands of entries. Your correspondent spotted on the spreadsheet details of a rail crash on 27 June 1928 when a Scarborough excursion train ploughed into the back of a goods train at Darlington Bank Top station.

The good-sized audience had been treated to a presentation which had been substantial in quantity and quality and this was illustrated by the enthusiastic round of applause with which they thanked Mr. State.

*Ray's spreadsheets currently record over 4,600 incidents on British railways with at least 2,000 to be added. He has collated records of over 21,600 incidents world-wide with at least 4,000 to be added.*



# FEATURE:

Back on Track photo-call  
18 September 2010

Hitachi's plans to build a factory for its new generation of express passenger trains have attracted a great deal of local interest since the preferred site is in Newton Aycliffe. Naturally there needs to be a market for the trains- this depends on a commitment from the Government to the Intercity Express Programme (IEP) which, in turn, depends on the findings of a current spending review. Support for the plans, which would create up to 800 jobs directly and an estimated 8,000 indirectly over the next twenty years, runs from grass-roots to Parliamentary level and has found a voice in the Back on Track campaign led by the Northern Echo and supported by Durham County Council and County Durham Development Company.

Over a hundred people gathered in a field on Saturday 18 September for a group photograph in support of the Back on Track campaign in a week when Hitachi had revised its proposal. The field was the Amazon Business Park site in Newton Aycliffe, a stone's throw from Heighington Station. Among those present were Phil Wilson (MP for Sedgefield), Jenny Chapman (MP for Darlington), Lord Foster (former MP for Bishop Auckland Derek Foster) and the Northern Echo's Chris Lloyd. With TV and print journalists present and an item on the ITV local news that evening the organizers were pleased with the show of support and the attention it had attracted.

On Tuesday 21 September a delegation including Phil Wilson, Durham County Council Leader Simon Henig and Chris Lloyd travelled to see Secretary of State for Transport Philip Hammond and press the case for approving the IEP. Mr. Hammond was reported to have been positive and particularly noted estimates that every pound invested in the factory would inject £48 into the local economy.

You can find out more at the CDDC's website: [www.wherebusinessgrows.com](http://www.wherebusinessgrows.com) which has pages devoted to the Back on Track campaign including means of adding your own support. There's a link in the Friends website.



Stewart Watkins (Durham County Council), Lord Foster (Derek Foster former MP for Spennymoor), Jenny Chapman (MP for Darlington), Geoff Hutton (Director of Merchant Place Developments) and Phil Wilson (MP for Sedgefield) at the entrance to Amazon Park. *Photo': Tim Ruffle.*

### Friends Meetings

Meetings are at the Museum in the Conference Room usually on the first Thursday of the month at 7:15pm although there are exceptions- there is no meeting in August and a second afternoon meeting in mid-September for instance. All the dates noted below are Thursdays. Non-members are always welcome to meetings but we do ask for a donation.

This list is offered in good faith but misprints can occur and, as proven recently, plans can change. To check visit the Events page of the Friends web-site ([www.friendsofdrdm.org](http://www.friendsofdrdm.org)) which is kept as up-to-date as possible.

4 November **From 1825 to the Battle for the Tees**  
Charles McNab

2 December Christmas Get-together

2011

6 January **Museum Update**  
David Tetlow

3 February **A Journey Through China in Search of Steam**  
Dave Whitfield

3 March **The South Tynedale Railway**  
Dr. Tom Bell

7 April **A.G.M. and A Steam Miscellany**  
Ray Goad

5 May **The Future Direction of the National Railway Museum**  
Steve Davies

2 June **Nesham and Welsh of Portrack Lane Iron Works**  
Alan Bettaney

7 July **Teesdale Tracks and Derailing Dukes**  
Chris Lloyd

1 September **The Northumberland Railway: Brunel in Stephenson's Back Yard**, Michael Taylor

22 September (at 2:15) **The Art of Robert Stephenson: Images of the Man, Life and Works**, Michael Taylor

6 October **John (Paddy) Waddell, Railway Contractor**  
Charles. McNab

3 November **The Construction of Durham Viaduct**  
David Butler

1 December (at 2:30) **Christmas Get-Together**

The recent cancellation of the *Tornado* talk will have disappointed many although all present were grateful to Vic Branfoot for so ably filling the gap at such short notice with his presentation about Volk's Electric Railway. I have suggested to our Chairman that a DVD showcasing some of the best railway footage on YouTube and other such video sharing sites could be made as a stop-gap that would be readily available in the event of another cancellation. He agreed and put me in charge of the project. That'll learn me.

There is a variety of railway footage on the Internet but not everyone has broadband Internet access and, of those that do, not everyone will use it to watch video clips- which is part of the point. If you do though and if you have favourite railway clips to recommend, even your own, please let me know. I am quite confident that I can gather an evenings worth of footage but I am bound to have missed a great deal and, of course, some account holders may not want their footage used in this way.

To recommend a clip (or to tell me that you think this is a terrible idea) contact me at [newsletter@friendsofdrmc.org](mailto:newsletter@friendsofdrmc.org). Editor.

## Museum Programme

### Exhibitions

#### **Flushed- A Short History of Toilets**

Currently to Friday 31 December. Commemorating the 100<sup>th</sup> anniversary of Thomas Crapper's death.

#### **Lewis Carroll: Living in Wonderland**

Friday 1 October to Thursday 31 March 2011. Celebrating the life and work of Lewis Carroll who grew up in Croft-on-Tees.

### Curator's Lecture Lunches

The last of these events, **Preserving the Past**, will look at museum conservation techniques. It will take place on Saturday 6 November starting at 11am in the Ken Hoole Study Centre. Attendees will get soup, a sandwich and receive a gift. Places are limited, entrance is £10.

### Events and Activities

See the Museum website for details including costs (some activities taking place outside the Museum incur no entrance fee).

**Cool Habitats.** Saturday 16 October. Wildlife activities in the Museum's grounds and Activity Room.

**Kidzone- Autumn and Winter Arts and Crafts.** October to March, Fridays and Sundays during school holidays.

**Little Horrors Hallowe'en Fun-Day/Fright-Night.** Sunday 31 October 11am-3pm, 4pm-7pm. Spooky fun. Note the two opening times for younger and older children.

**Santa at the Station.** December Saturdays and Sundays before Christmas. Get a gift from Santa- booking essential.

The **Metro** free newspaper for 27 July, covering preparations for the London Olympics, predicted gutsy performance from the rail link:

"It will take seven minutes for the 140mph Javelin rail service to get passengers from St. Pancras to the Olympic Park for the Games."

# ***THE FRIENDS:*** Introducing the Friends and Darlington Railway Museum

I hope you have enjoyed this newsletter and, if you are not a member of The Friends of Darlington Railway Centre and Museum, that it has piqued your interest. Presumably your having read this far is a good sign.

Darlington Railway Museum is housed in the old North Road station building, dating from 1842, on the route of the world famous Stockton and Darlington Railway. The Museum tells the story of Darlington and its central role in railway history. George Stephenson's Locomotion N°1 takes pride of place at the head of a line of historic Darlington built locomotives surrounded by other exhibits. Much of the permanent exhibition will fascinate anyone with a general interest in Darlington and its history but visitors unfortunate enough not to have an interest in railways, perhaps accompanying those who do, will discover a varied programme of exhibitions on non-railway subjects and can enjoy refreshments in the café.

The Museum's facilities also include the Northern Rail Activity Room, a children's play room for younger visitors, a conference facility and the Ken Hoole Study Centre with its extensive archive.

The Friends is a non-profit organization which promotes and supports Darlington Railway Centre and Museum, "Head of Steam", as well as presenting regular talks for members. Whether your interest is focused on the history or future of railways, their engineering or operation, the Friends' programme has something for you. Benefits also include a newsletter (oh- you knew that) and free entry to the Museum. Although there is no obligation members can also help at the Museum- for example leading guided tours, contributing their I.T. or linguistic skills or even appearing in costume at special events adding to the atmosphere.

Space is limited here but you can find out more about both the Friends and the Museum at our web-site. It includes links to the Museum's site amongst many others, directions to the Museum, contacts, membership details and an application form should you wish to join. Remember- if you don't have Internet access your library does.

[www.friendsofdrcm.org](http://www.friendsofdrcm.org)


[www.head-of-steam.co.uk](http://www.head-of-steam.co.uk)

## **Friends of D.R.C.M.**

**Darlington Railway Centre and Museum**

[Home](#) | [Membership](#) | [Events](#) | [Links](#) | [FAQs etc.](#)

### **Introduction**




Join us  
Contact us

Welcome to the website for The Friends of Darlington Railway Centre and Museum.

Members will find an up-to-date programme of forthcoming talks and events but, if you are not a member, we hope you enjoy this site anyway. You'll find it a useful source of links to other sites that share our interests and, of course, an introduction to the Friends, the Museum and the Study Centre. You might even consider joining us.

The Friends is a non-profit organization which exists to help promote and support Darlington Railway Centre and Museum (currently marketed as "Head of Steam"). Whether your interest is focused on the history or future of railways, their engineering or operation, the Friends' programme of regular talks has something for everyone.

Further benefits, which include free entry to the museum, are detailed on the Membership page. There are also opportunities to volunteer to help at the Museum.



**Darlington Railway Museum**



A postcard, posted in 1909, of Brighton's Palace Pier with the Aquarium station of Volk's Electric Railway (page 14) to the left. *Courtesy of Postcards of the Past at [www.oldstratforduponavon.com](http://www.oldstratforduponavon.com). A link to this site, displaying thousands of vintage postcards many with railway subjects, has been added to the Friends' website.*



Field of Dreams. Over 100 people, to say nothing of the dog, gathered at Amazon Business Park in Newton Aycliffe in support of train building plans (page 20). Lord Foster and your editor arrived just after this picture was taken led astray by vague sign posting. *Photo': Furnished by County Durham Development Company.*