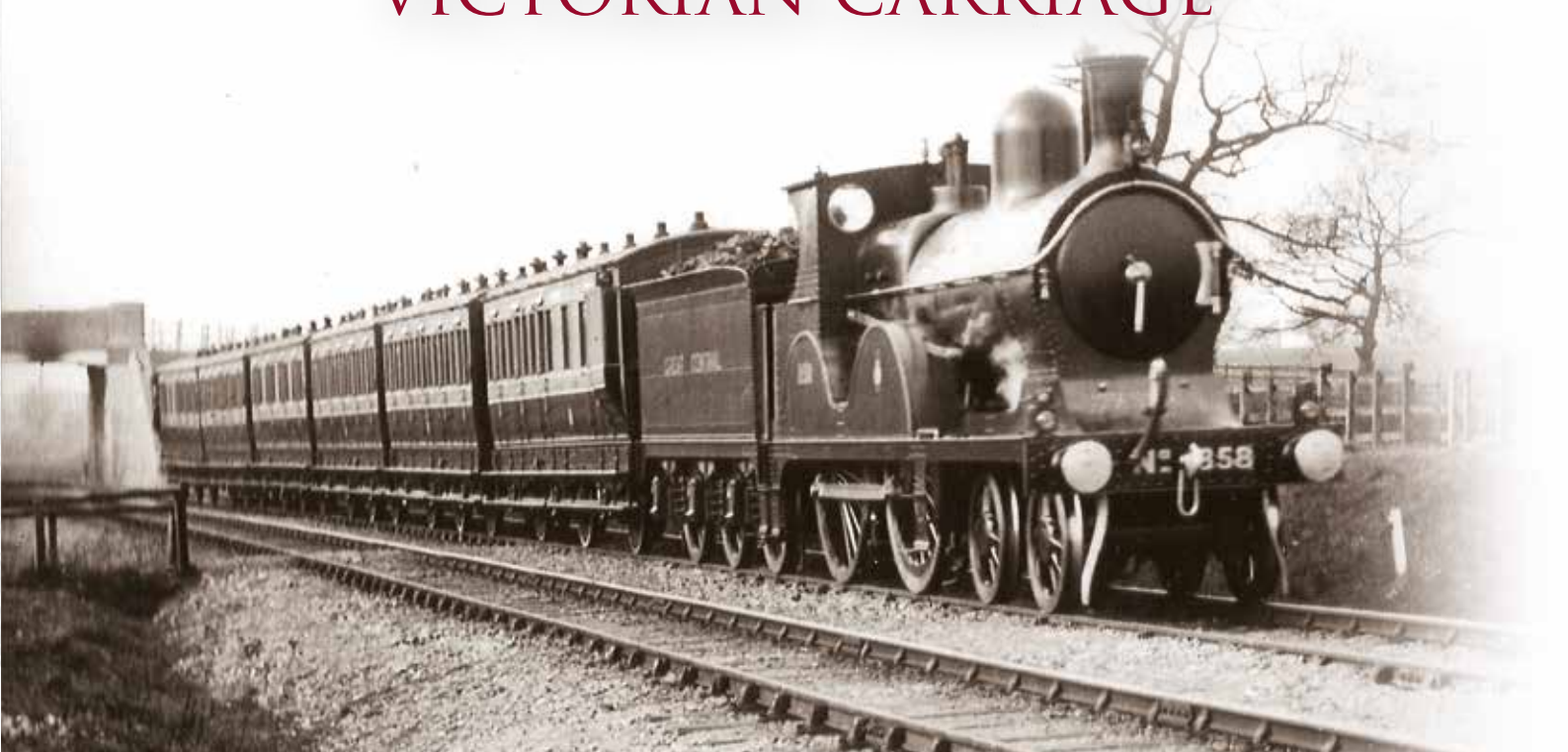




MS&LR No. 946

A SHORT HISTORY OF A FINE
VICTORIAN CARRIAGE



GCR ROLLING STOCK TRUST 2018



What an achievement...

FIFTEEN YEARS OF METICULOUS REBUILDING

This is a record of outstanding achievement by a small band of volunteer enthusiasts. After a painstaking fifteen-year rebuild, the first of the Victorian railway carriages owned by the GCR Rolling Stock Trust is now virtually complete. Our team has devoted thousands of hours of their invaluable time working on the restoration at the former Ministry of Defence Depot at Ruddington, now a flourishing Heritage Railway Centre, operated by the present-day enthusiast-run Great Central Railway (Nottingham).

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The history of this near-unique survivor may be obscure, but it has bettered all attempts to cut its life short. Our carriage has been dedicated to the fallen who lost their lives in the Great War of 1914-1918 from The Royal Scots Regiment who were caught up in the massive Quintinshill rail tragedy in 1915 and to those of the former Great Central Railway who joined the Colours.

Ruddington, Nottingham, is where the registered charity, GCR Rolling Stock Trust is based with its rescued eight original MS&LR and GCR pre-1923 Grouping carriages, with the intention of eventual restoration and operation for public benefit.

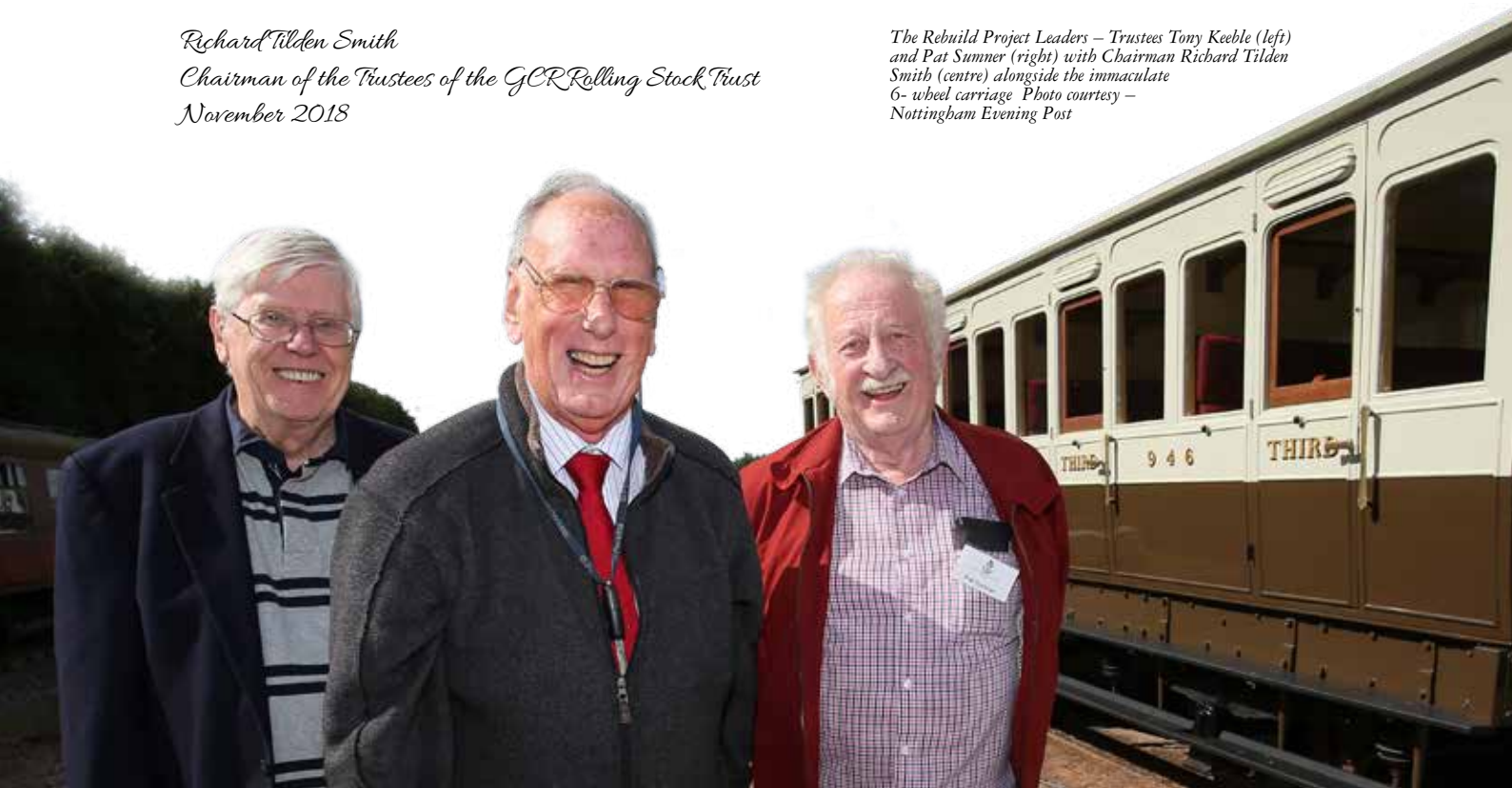
Well done the Restoration team – and thank you for giving so readily of your time, skills and dedication – and for your unflagging determination. This brochure is a mark of respect for the achievements of our determined team, past and present, and the high quality of work undertaken in restoring the first of those invaluable carriages.

Richard Tilden Smith

Chairman of the Trustees of the GCR Rolling Stock Trust

November 2018

The Rebuild Project Leaders – Trustees Tony Keeble (left) and Pat Sumner (right) with Chairman Richard Tilden Smith (centre) alongside the immaculate 6-wheel carriage. Photo courtesy – Nottingham Evening Post



The rebuilding of A MANCHESTER, SHEFFIELD & LINCOLNSHIRE RAILWAY 3RD CLASS, 6 WHEELED, FIVE COMPARTMENT CARRIAGE



Photos: Heritage Painting

DESCRIPTION OF VEHICLE

This is a rare survivor from the Victorian railway period, built by the Manchester, Sheffield and Lincolnshire Railway (MS&LR) - later the Great Central Railway - to the design of the Company's Locomotive, Carriage and Wagon Superintendent - Thomas Parker, at their Gorton Works. Carriages of this type or of a similar pattern were produced between the 1870s and 1902 and later converted for main line use with vacuum braking, and from gas to electric lighting. The four and six-wheeled vehicles built by the MS&LR were originated by Charles Sacré, the company's Locomotive and Rolling Stock Engineer.

The compartments of no.946 were first lit using compressed gas. The vehicle had room for ten persons per compartment, with an overall capacity for fifty seated. It was a versatile carriage having spent its first years in express and semi-fast train formations, as well as on local suburban services in the northern counties and conurbations.

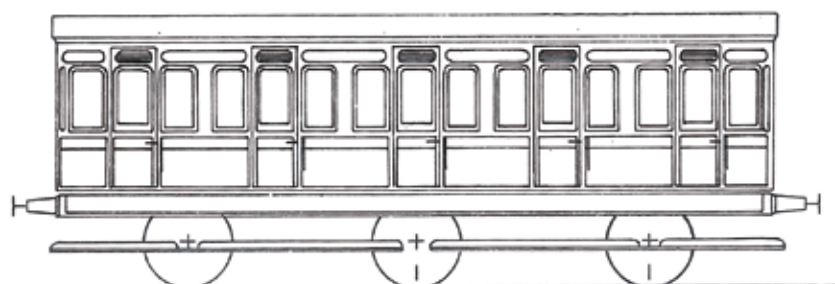
Mounted on a wooden framework with steel-plate side-reinforcement, the body is mainly teak on oak frames, using traditional coach building methods. The body is carried on three axles with six Mansell wheels (3ft 7½ inches diameter) that are leaf sprung. The buffers similarly react to two massive springs mounted transversely in the middle of the carriage.

The Trust took the decision to identify this carriage as no.946. The 'Historic Railway Carriage Survey' indicated that this vehicle was built in the late 1870s and was believed to be numbered 766. Later this was thought to have been no. 466. However, after much research by John Quick, of the Great Central Railway Society and historian to this Trust, it was determined that no.466 was one of the five similar carriages destroyed in Britain's worst railway disaster, at Quintinshill, near Gretna Green, on the West Coast Main Line, on 22nd May 1915. By careful analysis it was concluded that our carriage is most likely to be no.946.

We know from the aspects of the design and build that no.946 was built at the GCR's Gorton Works, Manchester, in 1888. The move from four-wheeled vehicles to this type of six-wheeled vehicle was well under way, to match the need for increased passenger capacity and comfort.

GENERAL DIMENSIONS

Overall, the vehicle is 34ft 8½ inches long by 8ft 7½ inches wide and 12ft 6½ inches high. The body is 31 ft long and 8ft wide. It weighs in the region of 12 tons.



MS&LR 50 seater - Courtesy George Dow - Great Central vol.2



Our completed Victorian gem.
Photo - Nottingham Evening Post



Time lines – (l to r) In passenger service into the 1930s – Engineers store until 1968 – Rescued for restoration - 1971

THE EARLY YEARS

Little is recorded of its early working history. However, we know that no.946 was withdrawn from passenger revenue service sometime before March 1934 by the London & North Eastern Railway and converted into a holiday 'Camping Coach'. To be a camping coach required substantial internal alteration, and the coach was repainted in Tourist Stock green and cream and renumbered C.C. 15. These vehicles were delivered to almost anywhere on the rail network where there was a platform for ease of access, including seaside holiday and remote country destinations, such as Royal Deeside, and then rented out. This practice continued until the commencement of World War Two.

Its LNER/BR home depot is unknown. However, we do know that no.946 survived into British Railways ownership as a locomotive boiler tube store at Stratford Locomotive Works, in east London, with the interior stripped out – hence early photographs showing missing panels at one end to ease boiler tube loading.

CONDEMNED – AND SAVED FOR REBUILD

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No.946 was condemned finally by British Railways in 1967. Fortunately, it was not broken up and burnt, the fate of so many others. However, it was used in the late 1960s in a Civil Defence exercise at Takeley, Hertfordshire, on the now-defunct Bishops Stortford to Braintree line, in a mock train crash where it suffered considerable damage to its bodywork and frames. Afterwards, it languished in the 'Up Side yard' siding at Manningtree station until purchased for preservation in 1971 for the sum of £50, on condition that it was removed promptly. A hint was dropped to a local Royal Engineers squadron that they might transport it as a training exercise to its new site. To this they enthusiastically agreed and thus it arrived late one summer afternoon at its new home, Robert Drage's New Buildings Farm, Great Chishill in Cambridgeshire - but only after blocking the main road at Halstead, fouling overhead wires at its new location, and falling through the floor of the trailer.

Following no. 946's arrival at Great Chishill, the missing body panels were replaced with marine ply and the roof weather-proofed. The intention was to apply a livery of French Grey upper and Brown lower panels, as adopted on completion of the GCR's London Extension. Unfortunately, enthusiasm for its restoration waned and it stood unattended for many years until being adapted to become a hunters' shooting lodge.

The carriage was originally lit by compressed-gas, and all but one of the lighting bases and associated roof ventilation fittings survived, with only part of this vent remaining in situ – the rest having been removed by the previous game shooter occupants, to install a coke stove. One of two compressed gas storage cylinders also remained, together with its pressure regulators and some pipework. Unfortunately, none of the 'Pope's Patent' gas lights had survived, nor had any of the door furniture. Most of the under frame was however intact.

No.946 has characteristic Mansell wheels - a type of wheel originally designed and patented in the 1840s by Richard Mansell, the Carriage and Wagon Superintendent of the South Eastern Railway. These wheels have wooden insets intended to dampen vibration and noise when running. The oldest axle is dated 24/12/1899 (Christmas Eve no less!) and was tested to seventy tons tyre pressure. Drastically, sometime during the carriage's later years in service, it had been 'hump shunted' and had passed through retarders, which grip the sides of the wheels to slow un-braked vehicles) - and this severely mangled the tyre retaining bolts on all wheels. These bolts have since been extracted and replaced - with great difficulty.



(l to r)- Trustee Tony Keeble 2001 – Clyde Pennington and Dave Epton scrap rotten floor timbers 2003 – Jeff Cox fettles brake gear 2005

WORK IN EARNEST

On arrival at Ruddington, in 2001, the body was stripped of all the external panelling and floor boards. The framework was repaired and, to add stability, it was braced with long steel bolts across each compartment. A replacement end panel was made up and fitted, followed similarly by four new compartment partition walls. Originally the exterior panelling was thin teak, but this is a difficult material to preserve and tends to warp and split, especially as BR commonly used steel nails which expanded as they rusted. Therefore, in the rebuild, marine ply and copper nails were employed. However, wherever possible we have retained the original materials and fittings throughout the restoration.

Due to the damage inflicted in the earlier Civil Defence exercise, new buffer beams were required, together with two newly cast iron buffer housings. Parts of the oak frame had to be cut out where split and new wood spliced in. All the body bolts were replaced after being machined from steel bar. Parts of the flitch plate timber frame (the wood/steel beams which form the outer members of the chassis) had also rotted and were replaced.

All the brake gear had to be renovated, and any defective parts replaced with substantial machining of new components.

One of the longer and most painstaking tasks of all was the rebuilding of all ten doors from scrap condition, each with drop light frames that had to be re-glazed to modern safety

standards. New seating was built and installed, designed and made traditionally with Victorian/Edwardian tools and techniques but using modern materials, to comply with current safety legislation.

Using a combination of original and new materials, a novel approach replicated the original gas lighting. Now the flame is simulated using a 1.5w LED bulb fed (via the gas pipework) from hidden 12-volt storage batteries in an end compartment.

After seventeen long years, with restoration virtually complete, an estimated ten thousand hours of skilled volunteer labour, and some £35,000 expenditure on materials and paint, no.946 is the Trust's proud flagship in its museum quality finish. This was revealed to the media and the wider world on 11th November 2015 when, with due solemn ceremony, the carriage was dedicated by HM Deputy Lord Lieutenant of Nottinghamshire, firstly, to the many talented and skilled members who have contributed their time, financial support, and materials to restoring this beautiful historic vehicle, and secondly - with a special commemoration service - to the memory of those caught so tragically in the accident at Quintinshill, over one hundred years previously, as described by Colonel Robert Watson CBE, of the former The Royal Scots Regiment, on the following page.



Stripped for re-cladding – Doug Atkins rebuilt all 10 doors – Complete body awaiting paint and finish 2014

THE FUTURE FOR MS&LR NO.946

There are still details to complete before no.946 is passed fit to traverse GCR metals with passengers on board once again. It may well be offered for period drama filming, special charters, or for photo-shoot occasions. However, as a mobile but rail-bourne Memorial, no.946 will be always available to support Armistice and other related commemorative events. The Trust's ultimate objective is to form a rake of fully-restored genuine MS&LR/GCR carriages, all Victorian or Edwardian in origin, hauled by an original or replica GCR engine of that era, running on part of their original main line route known as "the London Extension".



CENTENARY COMMEMORATION OF THE QUINTINSHILL RAIL DISASTER - 1915

TRIBUTE TO THE ROYAL SCOTS REGIMENT

Introduction by Colonel Robert Watson OBE



On 4 August 1914, as war was declared on Germany, the 7th (Leith) Battalion The Royal Scots (The Royal Regiment) (7RS), a Territorial battalion recently returned from two weeks' annual camp training, was mobilised at their Drill Hall in Dalmeny Street, Leith. From there they were deployed to positions on the south coast of the Firth of Forth as part of the Forth Defence Force. They remained there until April 1915 when, now known as the 1st/7th Battalion (1/7RS), they joined 52nd (Lowland) Division at Larbert, near Stirling for concentrated training before being deployed to France. At the last moment, as a result of the stalemate after the initial landings in Gallipoli, the Division was diverted there.



the type of Victorian carriages forming the majority of the troop-train Members have spent the period since then faithfully and meticulously restoring the carriage to the pristine state it is in today. The Trust most generously decided to dedicate the restored carriage to the memory of those who died at Quintinshill over one hundred years ago. The Regiment is greatly touched and honoured that there should be such a special Memorial to the 1st/7th Battalion and an event of unique importance in our history.

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At 3 am on Saturday 22nd May the first of three trains carrying 1/7RS to Liverpool to embark for Gallipoli left Larbert Station. At 6.49 am the last troop-train, which included wooden bodied GCR 6-wheeled carriages, carrying half (498 all ranks) of the Battalion, collided head on with a local passenger train which had been 'parked', facing north, on the south-bound main line at Quintinshill, just north of Gretna, to allow a following express to overtake it. Normally the local train would have been held in one of the loops at Quintinshill but both of these were already occupied by goods trains. The troop-train overturned, mostly onto the adjoining north-bound mainline track and, a minute later, a Glasgow-bound express ploughed into the wreckage, the locomotive overturned, the impact bursting gas tanks and pipes, causing the train to burst into flames.

The ferocity of the fire, and consequent difficulty of rescuing those trapped in the overturned and mangled carriages, was compounded by the fact that most of the carriages were of Victorian build, made of wood and lit by gas contained in tanks beneath them.

Between the crash and the fire a total of 216 all ranks of the Battalion and 12 others, mostly from the express but including the driver and fireman on the troop-train, died in, or as an immediate result of what was, and remains, Britain's worst railway disaster for numbers killed. A further 220 from the Battalion were injured, many very seriously with, for example, lost limbs, severe burns. Only 7 Officers and 55 soldiers of the 498 who had left Larbert earlier that morning survived unharmed.

Late last century enthusiasts of the former Great Central Railway (from the GCR Rolling Stock Trust) located the remains of one of

A notable member of The Royal Scots - Colonel (Ret'd) Robert S B Watson OBE

Robert Watson was born in January 1942 at Farnham, Surrey, then schooled at The Edinburgh Academy, and joined the Army from school at the end of 1959. After two years at Sandhurst, he was commissioned into The Royal Scots in December 1961, joining the 1st Battalion in Tripoli, Libya. Subsequent tours saw him serving in Tidworth, Aden, West Germany and Northern Ireland and instructing at the School of Infantry. He attended the Australian Army Staff College in 1975 and the US Armed Forces Staff College in 1980.

After a tour in Defence Operations in The Ministry of Defence, including over the Falklands Campaign, he commanded a Territorial Battalion in Glasgow, and served on the staff at Sandhurst before returning to Scotland as Divisional Colonel of The Scottish Division, responsible for the Scottish Infantry Regiments. His final post, before retiring in 1993, was as Chief of Staff at Army HQ Scotland.

On retirement he was appointed Secretary to the Lowland Reserve Forces and Cadets Association until retiring in 2004. He became a Regimental Trustee in 1993 and, in the same year, joined The Royal Scots Museum and Heritage Committee, which he chaired from 1996 until handing over in October 2015.

WITH ESPECIAL THANKS TO OUR DEDICATED RESTORATION TEAM

Age shall not weary them.....!

Tony Keeble
Pat Sumner
Robert Drage
Clyde Pennington
Doug Atkins

Bob Hanson
Andrew David
Peter Wilson
Dr Jeff Cox
Dave Epton

Dave Ablitt
Jim Kent
Melvyn Rowbotham
Wilf Ankers
Roger Penson

Francis Bailey
Tony Goodacre
Richard Potter
John Quick
John Hewitt



Finishings (l to r) Roger Penson leading re-upholstery – Francis Bailey adjusts seating – completed furnishing – Pat Sumner adjusts luggage rack

HOW THE UPHOLSTERY AND SEATING WAS RESTORED

It has been a great pleasure to be involved in the design and execution of the upholstery of this magnificent and historic carriage. While there was no documentary proof of the technical design of the seating, there was sufficient evidence – from marks on the floor and carriage sides - of the dimensions. Our researcher was able, very fortunately, to discover a memoir from a traveller of the time, which identified both the colour of the fabric, and the fact that the seating was 'deep-buttoned' – along the lines of the familiar 'Chesterfield' sofa.

Having spent many years restoring such Victorian and Edwardian domestic furniture, we were able, in close collaboration with the coach-building team, to re-create technical drawings for the replacement of the missing seating. With three sections per side – one seat, one back-rest, and a head-rest, we were faced with 30 individual items to manufacture. This required a minimum of 90 metres of Grade 5 fire-retardancy pile fabric in a small, neat, black and red pattern – judged to be the closest possible match to the likely original fabric.

In its original state, the upholstery would have been handmade, using steel coil springs of Victorian design, jute/linen webbing, hessian and horse-hair, over which would have been laid 'mungo' (re-claimed wool shoddy) and a wool pile on a cotton back top cover. There were no man-made fibres available during the whole period these carriages were manufactured.

Fortunately, wool has a tendency to resist fire, if only from a dropped cigarette, but, from a more severe fire, it produces heavy acrid smoke.

Today, regulations require fire-retardancy with certificates to prove this. We had thus to adopt modern materials, including foam in place of springs and hair. Despite these requirements, the separate pieces were upholstered using traditional tools – including foot-long buttoning needles to secure the 1,800 buttons needed to produce the original look. Each corner of each piece was hand-sewn, as my 'ancestor upholsterer' would have done. He would have been using techniques and processes first devised in Georgian times. The result would have amazed Third Class passengers of the day – more used to wooden seating. It deeply impresses us today that so much care and attention was given to railway seating and we hope that modern-day passengers will enjoy the experience, as much as their forebears did.

Our restoration team acknowledges, with heart-felt thanks, the assistance of Martin Flear, a specialist local upholsterer, who most generously gave us much material, support and advice, and access to sources without which we could not have achieved such attractive results.

Roger Penson and Francis Bailey.

17 September 2017 - HM The Deputy Lord Lieutenant of Nottinghamshire, Col. Roger Merryweather DL, supported by Lt Col. Darren Wood RE, unveils the commemorative plaque to the memory of employees of the Great Central Railway who died in the Great War 1914-1918



Three cast plaques record GCR history - the completion and the dedication of this 130-year old near-unique Victorian railway carriage

GCR ROLLING STOCK TRUST

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