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ISSUE 259
September 27 – October 24, 2019

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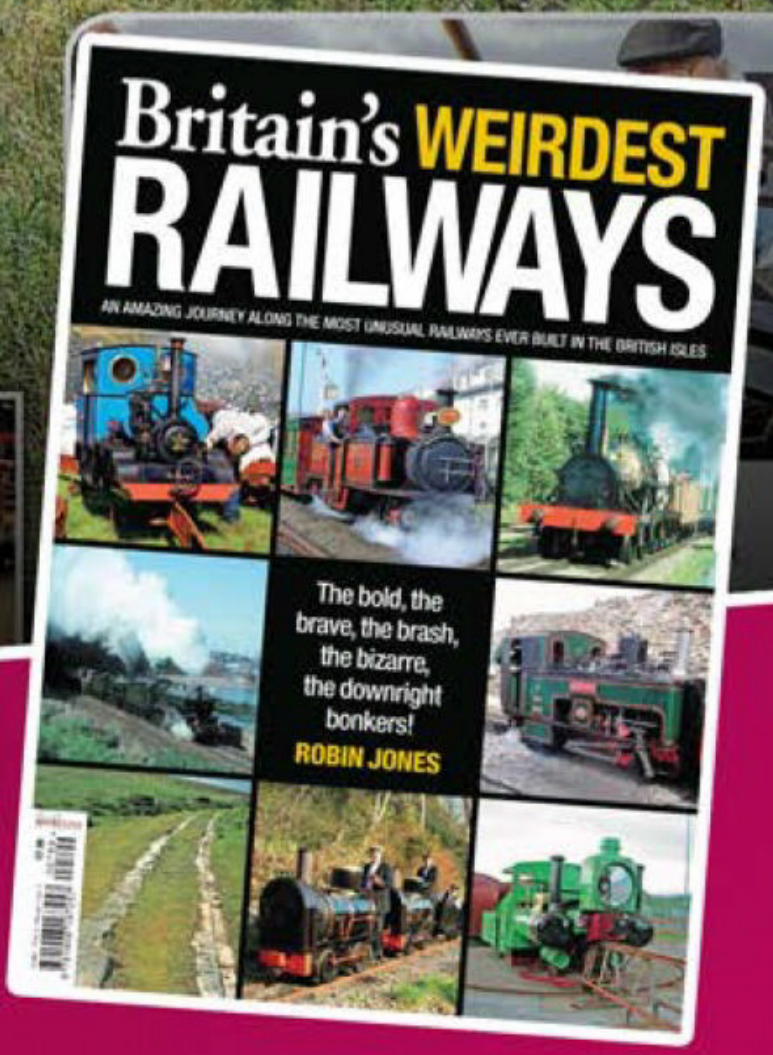





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Diesel locos

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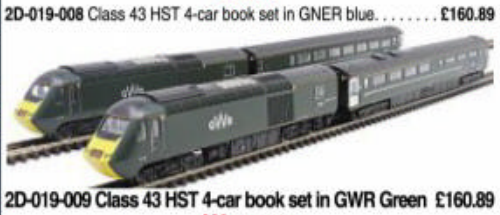

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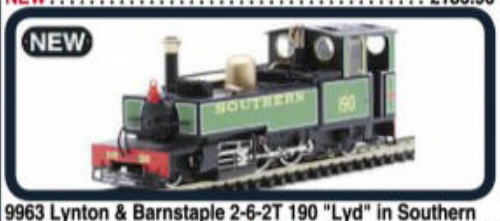

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A contrasting scene of the past – heritage train – mingling with the present – round bales and windfarm: LNER B12 4-6-0 No. 8572 hauls the demonstration freight train during the North Norfolk Railway's August 30-September 1 autumn steam gala. See the full report on pages 90-91. PETER FOSTER

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The great stage and film set of them all?

IF only through Shakespeare and his contemporaries like Johnson and Marlowe, Britain led the world in drama and the performing arts. Today, our country also offers one of the greatest stages of all, in the form of the heritage railway sector.

At every twist and turn, our heritage lines re-enact the glorious and triumphs of the past, with an army of re-enactors taking on historic roles like driver and firemen to station porters and ticket collectors, and playing them as if they were A-listers in their own right.

Drama and railways have long been bedfellows: it has been said that the origin of the railway concept could be found in ancient Greece, legendary for its early drama, when parallel grooves were cut in stage floors to allow wheeled props and scenery to be moved quickly and efficiently between acts.

Drama on the silver screen has also contributed enormously to the development of our sector: the Titfield Thunderbolt of 1953 did so much to enlighten the public at large about the concept of volunteer-led branch line revival, inspired by the exploits of the Talyllyn Railway volunteers two years before. Then The Railway Children delighted, enthralled and inspired a public recently bereft of main line steam through the landmark achievements of the Keighley & Worth Valley Railway.

Over the decades, many of our heritage railways have doubled up as film sets for major film productions. Part of the success of the North Yorkshire Moors Railway has been attributed to the TV police series Heartbeat. Now it is hitting the silver screen again, through the movie spin-off of the enormously-popular Downton Abbey, and again it is a win-win situation for both sides.

Our heritage railways surely provide one of the greatest free shows on earth. At every gala or even an ordinary running day in benevolent weather, you will see photographers amassed at every overbridge and vantage point, eager to re-create classic scenes from the Britain of yesterday, when the train not the motor car was still the premier form of transport. And if you care to buy a ticket and ride, you can step right into the thick of those illustrious stages and experience the action for yourself first-hand.

Great drama, of course, is about telling the whole story, not just the 'sexy' parts of it. Would Macbeth, for example, have ever been as successful if we for brevity's sake cut out the scenes of political intrigue and just boiled it down to those featuring the witches and the regicide?

In the same way, heritage railways can never be just about the likes of *Flying Scotsman*, *Tornado*, *Duchess of Sutherland* and *Clan Line*. Away from the big glamour machines, there are hundreds of locomotives which were never seen by the general public but which kept the wheels of industry turning on a day-to-day basis.

I join with the rest of the sector in expressing sadness at the recent loss of Rich Morris, perhaps best known in more recent times for his creation of the steam monoloco, but who saved a colossal number of industrial narrow gauge locomotive types from extinction through more than half a century of effort.

As reported in Headline News, we have just witnessed the dawn of Britain's latest heritage line, the Crowle Peatland Railway in North Lincolnshire. Of course, a short diesel-operated 3ft gauge industrial heritage line will never become another Severn Valley or Bluebell, but it its own way it is just as valuable because it is filling in another void in the complete picture of railway history, adding another dimension to the heritage sector as a whole, and therefore cannot but be highly commended for the revivalists' efforts.

Robin Jones Editor

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Don Benn describes the performance of *Clan Line* on UK Railtours' 'Atlantic Coast Express' excursion



CONTENTS: In a delightful scene taken from high ground, A1 Pacific No. 60163 *Tornado* heads along the Scottish east coast at Cove Bay with 'The Aberdonian' from Aberdeen to Edinburgh on September 7. OLI GOODMAN
COVER: Double-headed delight: Royal Scot 4-6-0 No. 46115 *Scots Guardsman* and Bulleid Merchant Navy Pacific No. 35018 *British India Line* paired up for the last Railway Touring Company York to Carlisle 'The Waverley' tour of 2019 – giving No. 46115 an opportunity for a loaded test train following overhaul. The West Coast Railways pair are seen passing Dent station on the Settle and Carlisle route on September 8. MICHAEL ANDERSON

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Features

Under the cover of darkness

The sight of TV or film companies on heritage railways is always a welcome presence – for it brings welcome publicity and financial benefit. On occasions however, things have to be top secret, with even rostered locomotive crews having no detail of what is to be done. Having obtained permission and respected the embargo, Maurice Burns recorded for posterity the proceedings for filming scenes for the newly released Downton Abbey film at the North Yorkshire Moors Railway's Pickering station on November 13, 2018.







54

Forgotten engines unveiled
Three locomotives made their first public appearances in decades at the Vale of Rheidol's September 14-15 steam festival – and scenes from the 2ft gauge line's GWR past were recreated in glorious sunshine, including the Rheidol tank trio in steam together. Gareth Evans reports.



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Do you understand the risk?
Gareth Evans talks to Ian Skinner, head of heritage, trams & light rail at the Office of Road & Rail, the independent safety and economic regulator for Britain's railways – who provides valuable insight on the work his organisation performs and what it expects from the heritage sector.



80

1969 and all that
The Great Central Railway's October 3-6 autumn steam gala is a testament to half a century of steady but stupendous progress, realising a late Sixties vision of creating an inter-city heritage line. Robin Jones looks back at the line's formative decade when pioneers laid the foundations.

Old favourites wow younger customers **90**
The North Norfolk Railway's autumn steam gala proved to be a resounding success, helped by the return of 9F No. 92203 *Black Prince* with hours to spare, and an incentive to attract a younger audience. Robin Jones reports.



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Great steam engineers of the pre-Grouping period Part 11: 1918-1922
The First World War seriously damaged Britain's railways but, as Brian Sharpe outlines, when hostilities ceased, locomotive building resumed in earnest, which saw dramatic progress in design.

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Trains headed towards each other at Romney Sands

AN INVESTIGATION into an incident in which two trains were heading towards each other on the Romney Hythe & Dymchurch Railway has been launched.

The Rail Accident Investigation Branch (RAIB) is looking into what it has described as a serious operating irregularity at Romney Sands on August 28.

A statement from the RAIB said: "At around 10.35am, a train from Dungeness to Hythe left Romney Sands station and entered the single line section to New Romney.

"A train from Hythe to Dungeness was in the same section, travelling in the opposite direction. The two trains came to a stand about 316 metres apart.

"We have undertaken a preliminary examination into the circumstances surrounding this incident. "Having assessed the evidence which has been gathered to date, we have decided to publish a safety digest."

The safety digest will be published in the near future.

Ten steam for Buzzard centenary bash

AT LEAST 10 locomotives will be in steam at the Leighton Buzzard Railway's October 5-6 centenary gala.

A weekend of bumper celebrations will recall November 1919 when the first trains run on what was then called the Leighton Buzzard Light Railway.

There will be eight passenger departures from Page's Park each day, plus four return freight journeys.

Guests will include a pair of Hudswell, Clarke Ganges class 0-6-0WTs – Nos. 1238 from Apedale Valley Light Railway and GP39 from Statfold Barn Railway – the same type as the first steam locomotives to run at Leighton Buzzard, and it will be the first time two have run together there since 1921.

There will be free footplate rides at Page's Park station, at intervals; the line's RB10 digger will be demonstrating how sand was moved during the industrial days of the line; and there is the long-awaited return of popular Kerr, Stuart Wren 0-4-0ST *Peter Pan*, which will be performing shunting duties.

➜ Full details on the gala, including the timetable, as well as fee-free booking can be found at http://www.buzzrail.co.uk/static/gala.html

Britain's newest heritage railway gives first rides

By Robin Jones

CROWLE Peatlands Railway in Lincolnshire gave its first rides in mid-September as part of the nationwide Heritage Open Days.

Cab rides in the 3ft-gauge line's sole operating locomotive, Schöma 0-4-0 diesel hydraulic No. 5220 *The Thomas Buck,* were offered to prospective members of the operating society during the public open weekends of September 14-15 and 21-22.

The Schöma, one of three in the ownership of the society, was paired with matching 'slave' unit No. 5221.

While no carriages are yet available, the diesel gave cab rides along the 110 yards of track which had been laid by the society from its shed based at the Old Peatworks off Dole Road, Crowle, earlier this year.

To ride in the cab, passengers had to first sign up as new members.

The society's Mel Bailey described the open weekend's 'soft opening' as hugely successful, adding that an official National Heritage Lottery Fund launch of the workshop will follow.



Restored Schöma 0-4-0 diesel hydraulic No. 5220 *The Thomas Buck* (right) was named after the peat extraction worker said to have refused retirement until he had laid the last length of rail on the original railway. It is pictured alongside No. 5130 outside the railway's workshop on September 14. JOHN TAVENDER/CPR

Peat extraction

Thorne and Hatfield Moors form the largest area of lowland raised peat bog in the UK, and are part of Hatfield Chase. The heritage follows the trackbed of a former railway used in peat extraction. It is hoped to extend the running line across the moors to 550 yards.

The history of peat extraction on the moors dates back to the early 17th century.

The British Moss Litter Company controlled all of the major local peat works and began laying 3ft-gauge tramways in 1896 to transport the cut peat to the various works.

Horses were gradually replaced by locomotives in the 1950s, as the means of moving wagons around the system.

As several works closed, the tramways were linked up, with the works at Swinefleet serving Thorne Moors, and Hatfield serving Hatfield Moors, both linked by standard-gauge sidings to the Axholme Joint Railway.

The company was bought by Fisons in February 1963, and in 1971 agreement was reached to convert 144 acres of Crowle Moor into a nature reserve, but peat extraction did not completely end until September 2007.

Crowle and Thorne Moors became part of the Humberhead National Nature Reserve, and the tramway tracks were removed, but around 1996, various equipment was abandoned at Bank Top, including Motor-Rail 40hp Simplex No. 40s302 of 1967.

The Crowle and Thorne Moors Peat Railway Society was formed to restore the locomotive and set up a short running line, but Natural England did not approve.

Five years ago, the society found that two of the original Schömas that had worked on the moors were being offered for sale by Norfolk dealer Ray King, and were duly bought.

The current site passed into the ownership of North Lincolnshire Council, and in 2016 the Schömas were moved there, while the society was renamed Crowle Peatland Railway. A grant of £10,000 came from North Lincolnshire Council and the Isle of Axholme and Hatfield Chase Landscape Partnership to fund the restoration of the Schömas.

Restoration and revival

The Society then received a grant of £23,000 from the SSE Keadby Grange Windfarm to finance the construction of a new Romney hut as a workshop for the project, and it was completed on September 2018.

The society's Simplex was moved to North Lindsey College in Scunthorpe for engineering students to carry out the restoration work as part of coursework.

In June 2019, the railway received £107,000 from the council to fund a visitor centre, education facilities, a shop, toilets and a cafe, also serving the Site of Special Scientific Interest.

In June 2019, a third Schöma was donated to the fledgling heritage railway by Evergreen Horticulture, which manages Hatfield Peat Works. No. 5130 had latterly served as the works' gate guardian.

American diesel in operation on Isle of Man... at last

A PROBLEM-plagued £420,000 American diesel bought by Isle of Man Railways in late 2013 and consigned to the depot for the past four years because of persistent breakdowns has re-entered passenger service.

Green-liveried No. 21, built by Motive Power & Equipment Solutions Inc of Greenville, South Carolina, works number MP550-B1, was bought to pull commuter, dining and maintenance trains, as well as acting as a shunter and recovery locomotive.

However, in 2015 it needed to be rescued by a steam locomotive after it broke down while pulling a Valentine's Massacre Murder Mystery special.

Rectifying the faults has cost £246,800, with the locomotive now set for an official naming ceremony later this year.



SR V class Schools 4-4-0 No.30925 *Cheltenham* passes North Street with the 4.45pm from Medstead & Four Marks on September 14. This was its first day back in Mid-Hants Railway service following a repaint into British Railways lined Brunswick Green livery. *Cheltenham* is an example of the last 4-4-0s to be designed in the UK, the most powerful class of that wheel arrangement produced in Europe, and a repaint from Malachite Green was necessary as its seven-years-old paintwork had begun to deteriorate. It was reliveried as a direct result of negotiations between photographic charter organiser TimeLine Events, owner the National Railway Museum, and the Mid-Hants Railway. NICK GILLIAM

'Del Boy' greets Stephenson's *Rocket* at its new National Railway Museum home

By Robin Jones

IT MAY bear no resemblance whatsoever to a Reliant Robin and certainly not a three wheeler – yet 'Del Boy' from Only Fools and Horses was nonetheless delighted to welcome Stephenson's *Rocket* to the National Railway Museum.

Actor Sir David Jason was filming a documentary at the museum on September 11.

He watched as *Rocket* was carefully unpacked after being transported 70 miles by road from its former temporary home at the Manchester Museum of Science & Industry and craned into the museum to start a 10-year loan period at York.

Because of its preservation 'in exile', *Rocket* has been dubbed the 'Elgin Marbles of the North' after being housed in London's Science Museum since 1862.

It made its York debut with the opening of a new exhibition – Brass, Steel and Fire – in the museum's Station Hall on September 26 (see News, p10-11)

NRM senior curator Anthony Coulls said: "*Rocket* was not the first steam engine, but it is certainly one of the most significant, and it combined all the technological innovations available at the time to create one engine that was faster and more reliable than anything seen before.

"The technology pioneered by *Rocket* led to the rapid expansion of the railways, which brought widespread social and economic changes that shaped modern Britain as we know it."

Museum director Judith McNicol said: "*Rocket* will join the museum as a potent symbol of what can be achieved through STEM (Science, Technology, Engineering and Mathematics), and it will inspire new generations of visitors to pursue their own futures in engineering.

"It will also represent one of the first signs that our ambitious Vision 2025 plan to transform the museum is becoming a reality."



Above: Sir David Jason witnessed the installation of the original *Rocket* in the National Railway Museum. CHARLOTTE GRAHAM/NRM



Right: Only Fools and Iron Horses: Sir David Jason with one of the replica *Rockets* at the National Railway Museum.

Shaw Savill: restoration work begins

ENGINEER Ian Riley has begun the overhaul of ex-Barry scrapyard Merchant Navy Pacific No. 35009 *Shaw Savill* at his Heywood works.

The locomotive was bought by Mr Riley in 2003 as a rusting kit of parts, after it had been stored at Swindon for many years.

It was outshopped from Eastleigh in June 1942 as No. 21C9, and first allocated to Eastleigh. No. 35009 returned to its birthplace in 1957 for rebuilding.

It was reallocated to Exmouth Junction, and hauled the 'Atlantic Coast Express' from Waterloo to Exeter. It was also used on stopping services from Exeter to Salisbury and Yeovil.

No. 35009 was withdrawn in September 1964 with 1,127,452 miles on the clock, and arrived at Woodham Bros scrapyard that December. It was bought in July 1982 for the abortive Brighton Locomotive Works project.

Riley & Son was heavily involved with the return to steam of No. 34067 *Tangmere* for the late Brian Pickett, during which time Ian became impressed with the engineering perfection and the power of the Bullied design to the point where he bought one of his own.

Will Grosmont take up offer of a third footbridge?

THE North Yorkshire Moors Railway has been offered an ex-NER footbridge by Network Rail – believed to be the Grade II-listed example from Garforth, near Leeds, which is earmarked for removal.

It would be the third NER footbridge to be moved to the line, the others being at Goathland and Pickering.

There is also a former LSWR footbridge at Grosmont that was erected to link the car park on the former ironworks site to the NYMR across the Esk Valley line.

The likelihood is the new footbridge will be erected to join platforms 2 and the island platforms 3/4 to reduce the level of pedestrians crossing the level crossing.

As yet there is no planned timescale for its erection, given the railway is heavily committed to its Heritage Lottery-funded Yorkshire's Magnificent Journey (YMJ) project, which this offer is not a part of.

However, there has been significant fundraising progress on YMJ recently, with more than £100,000 being received from donations and legacies, bringing the total raised to almost £9.14million.

Wight hopes to steam into Ryde placed on ice

THE Isle of Wight Steam Railway has placed on hold its ambition to extend its services alongside those of the electrified Island Line into Ryde St John's because the estimated costs as outlined by main line operator South Western Railway (SWR) "were neither financially acceptable nor sustainable," according to a September 17 statement.

The Government announced a £26 million investment in the 8.5-mile Island Line which will see its trademark 1938 Class 483 London Underground sets replaced. SWR has chosen manufacturer Vivarail to refurbish 1980s trains from the District Line, which will provide extra capacity, improved disabled access and wi-fi.

A new passing loop at Brading will enable a half-hourly service to Ryde Pier. The first of the five two-car District Line trains is due to be tested next summer. Rail minister Chris Heaton-Harris said: "These trains have diligently served passengers since 1938 – coinciding with the first ever edition of the Beano and the maiden voyage of the record-setting *Mallard* steam train – so this upgrade is a long overdue boost."

IoWSR chairman Peter Conway said: "We examined all options to return steam trains back into Ryde St John's but regulatory concerns and the costs involved made the project unsustainable. Our ambition remains to return steam-hauled trains to Ryde at some point in the future, but it is unlikely to be within the term of the current SWR franchise."

No announcement has been made as to the future of the 1938 stock, leading to conjecture as to whether one or more sets might be preserved.

Ropley Works reopens for viewing

THE Mid-Hants Railway (MHR) is inviting visitors to experience its main viewing gallery and carriage viewing gallery following the £46,000 refurbishment of Ropley station's engineering site.

The Bulleid Merchant Navy No. 35005 *Canadian Pacific* project is supported by the National Lottery Heritage Fund and offers visitors a host of new displays about the MHR's history, its locomotives and how its carriages are restored to their former glory. It also boasts new hands-on interactive tools for visitors to learn about many aspects of railway life.

The investment in the station's engineering site totalled £46,000 to improve the visitor experience and provide visitors with a better understanding of the work carried out at the railway.

'Eccentric' collector and steam monorail inventor dies in Wales

By Robin Jones



The unique operational Monoloco at the former site in Blaenau Ffestiniog occupied by the Rich Morris collection. Mark Hignett, of the Tanat Valley Light Railway/ Nantmawr Visitor Centre, where it is now stored, said it was recently inspected with a view to being overhauled to working order again. JOHN STRETTON

THE heritage railway world has been in mourning for narrow gauge collector Rich Morris, a man affectionately described as an 'eccentric enthusiast.'

Rich is perhaps best known for setting up the former Gloddfa Ganol museum collection near Blaenau Ffestiniog, and for inventing a steam monorail locomotive.

He passed away in a care home in North Wales on September 2. Believed to have been 80, he had been unwell for several years.

Rich began his collection in 1962/63 when he acquired redundant four-wheel, metre-gauge Ruston Proctor petrol/paraffin locomotive No. 51168 of 1916 from Blackpool China Clay Works, Trewoon, near St Austell. It had been acquired by the china clay works from Cotton Powder Co Ltd in 1921, but apparently never used at the quarry, and so remained dumped there for 42 years!

Tragic death

He moved it into a field at the end of the garden of his family's home in Pinhoe, Exeter. It was believed to be the first non-steam locomotive to be preserved by an individual in the UK.

The locomotive was then taken to Longfield, Kent, in 1965, when Rich and his mother moved to a bungalow next door to his mother's sister following the sudden and tragic death of his father.

It was at Longfield in the front and back gardens and on a farm the other side of the road where he initially built up his narrow-gauge collection of steam, diesel, petrol and battery electric locomotives and wagon.

He later expanded the collection to include diesel and steam locomotives, including Kerr, Stuart Wren 0-4-0T No. 3114 of 1918, which like the Ruston Proctor, later became part of the late Brecon Mountain Railway joint founder and Vale of Rheidol sole owner Peter Rampton's extensive private collection.

With two associates, he formed Narrow Gauge Enterprises in a bid to look for a larger permanent home for the collection, and held talks with the owner of Pen-yr-Orsedd Quarry, in Dyffryn Nantlle, with a view to setting up a museum there.

The idea proved fruitless and the collection was instead relocated to Gloddfa Ganol quarry, part of Oakley Quarry in Blaenau Ffestiniog.

The museum opened as part of the Gloddfa Ganol Mountain Tourist Centre in 1975.

At first, most of the locomotives were exhibited in a purpose-built building within the main complex, but were moved subsequently to a working mill towards the eastern end of the site, close to the walking tour adit. A passenger-carrying railway was created between the two areas, but operated only infrequently.

When the quarry was sold to Alfred McAlpine in 1997, and slate once again became the venue's sole concern, the tourist operation closed. Much of the stock was bought by Will Roberts, owner of Oakeley Quarry, who subsequently sold his items to other collectors.

Rich moved his stock to a separate site in Blaenau Ffestiniog next to his home. He also ran a miniature railway at Colwyn Bay.

In the years that followed, Rich expanded his interest in industrial monorail systems, and over 30 years had bought around 120 such locomotives. He acquired the manufacturing rights of Metalair Ltd of Wokingham, Britain's only commercial monorail builder, in 1983.

Not only that, he commissioned plans for an 0-2-0 steam 'monoloco! Rich drew rough sketches of his dream project and gave them to project engineer John Vineer, who made several adjustments to make the Monoloco a 'goer'.

Standing 6ft high and 11ft long, it was built by engineering company Century Millwrights, on Platts Eyot, a small island in the River Thames.

It was on Sunday, December 13, 1997, that his monoloco had its maiden run over a short length of track at Sunbury-on-Thames, and made its public debut at the International Model Railway Exhibition at Kensington Olympia a few days later.

The Monoloco runs on driving wheels with double flanges, which straddle a triangular-section running rail an inch wide at the top of the rail, and is fitted with outriding stabiliser wheels.

Collection relocation

In 2016, an eviction notice was served on Rich, and he was given only weeks to remove his collection from the Blaenau site. A welcome home was offered by Mark Hignett, trustee of the Tanat Valley Light Railway/Nantmawr Visitor Centre, near Oswestry, and lorries arrived to move the huge collection to its new home, where it was again displayed.

Among the items recovered for reuse at Nantmawr was the dilapidated remains of an LMS brake van. At Nantmawr, missing parts have been replaced, and it is intended to turn it into a Rich Morris Museum, showcasing his work in collecting railway equipment. It was planned to invite Rich to its opening next spring.

Mr Hignett said that a request has now been received for Rich's ashes to be scattered at Nantmawr.

Mark said: "Rich was an eccentric railway fanatic. Some of the ideas behind items in his collection are really weird, such as the BMW Isetta bubblecar to which he fixed narrow gauge wheels. We will now open the museum in his memory."

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Above: SR rebuilt West Country Pacific No. 34046 *Braunton* unusually passes non-stop through Sheffield Midland station on the Down through line with Saphos Trains' 'Yorkshire Traveller' from Crewe to York on September 14. BRIAN SHARPE

Left: Two Swindon-built locomotives on the Gloucestershire Warwickshire Railway celebrated birthdays over the weekend of September 14-15. GWR 2-8-0T No. 4270 reached its centenary, while WR 4-6-0 Modified Hall No. 7903 *Foremarke Hall* turned 70, having been built in 1949. Both were rescued from Barry scrapyard, No. 7903 having been restored on the Swindon & Cricklade Railway. Over the weekend both carried headboards marking their birthdays, and those who helped to fund and restore them were invited to spend a day travelling behind 'their' locomotives. The pair are pictured in Toddington yard with members of the locomotive department. IAN CROWDER

Last picture of Brunel published 160 years after his death

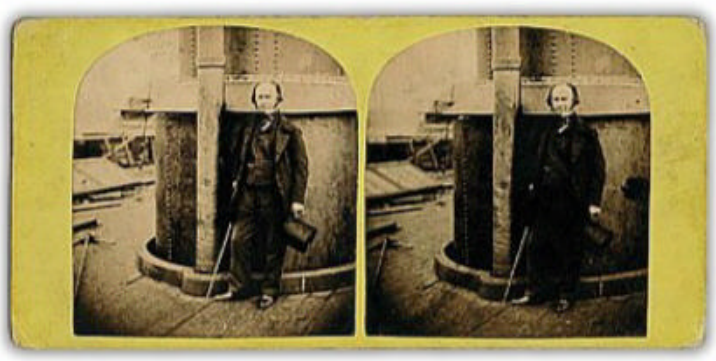
By Robin Jones

THE last photograph taken of GWR engineer Isambard Kingdom Brunel, minutes before he had a stroke which proved fatal, has been published 160 years later.

The great inventor, who was voted the second greatest Briton in history behind Winston Churchill in a BBC poll in 2002, suffered the stroke on September 5, 1859, while making a routine inspection on board his SS *Great Eastern*.

The rare stereoscopic photograph shows a man almost unrecognisable from his iconic, serious image. Brunel stands on board the *Great Eastern*, his third and final ship, leaning heavily on his walking stick for support.

There is a slight puffiness to his face and fingers, and he already looks like a sick man. Towards midday he suffered a fit of paralysis and was taken back to his home in Duke Street, where he died peacefully 10 days later.



This rare stereoscopic photograph was the last taken of Isambard Kingdom Brunel. SS GREAT BRITAIN TRUST

Nick Booth, head of collections at Brunel's SS Great Britain, said: "When we think of Brunel, it's easy to conjure him in his prime; a resolute and tireless engineer hurrying about his business of building railways, tunnels and ships. It's much harder to imagine him as a worn, exhausted and sick man, suffering from Bright's disease, but in 1859 this was very much the case."

Brunel was buried in Kensal Green Cemetery in London on September 20. Railwaymen lined the roads to pay their last respects as his family followed the coffin to its final place of rest.

Elsewhere, STEAM – the Museum of the Great Western Railway in Swindon, has acquired a paper knife that was owned by Brunel. The item, which has a decorative silver neck bearing the inscription IKB, is now on display as part of the museum's Building the Railway exhibition area.

Museum manager Frances Yeo said: "It dates from when Brunel was chief engineer for the Great Western Railway and would have been used to slit open the uncut pages of newspapers and other large documents."

The knife was given to the seller's ancestors by Brunel's son Henry Marc Brunel, and bought using a contribution from the Friends of Swindon Railway Museum.

The models that made the steam age

By Robin Jones

THE term 'model railways' immediately conjures up visions of the beautiful scale miniatures produced for the mass market by the likes of Hornby and Bachmann.

Yet in so many cases in the history of early steam railways, it was pioneer steam engineers who made small but mechanically accurate models of new locomotives to test their designs before constructing full-size versions, if only to demonstrate to the would-be builder or customer they would work.

It is far easier to save a model than a full-size locomotive, and so with the march of progress when early locomotives became obsolete and were handed to the scrapman, many priceless models of historically important engines remain with us today.

They form the basis of a new free-to-enter exhibition – Brass, Steel and Fire – which has just opened in Station Hall at the National Railway Museum in York to mark the arrival of Stephenson's *Rocket* on a 10-year loan.

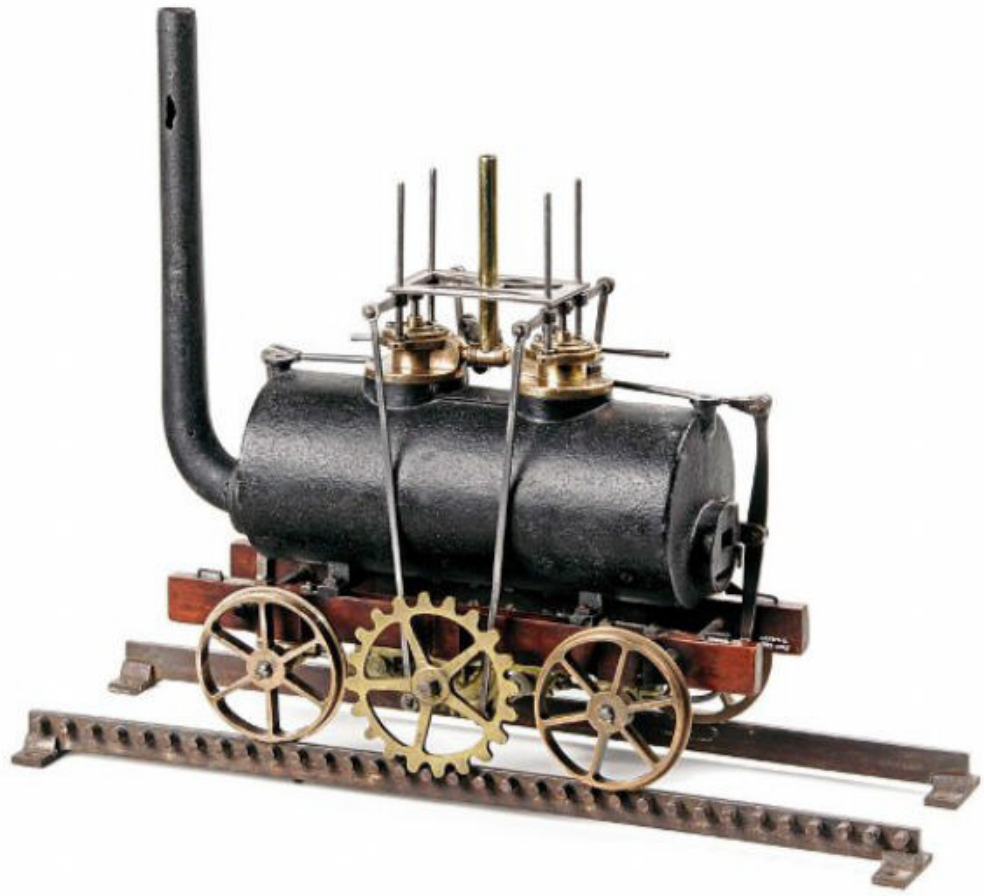
In addition to those pictured on these pages, the ground-breaking exhibition showcases many items from the first century of railway models.

Made by a clockmaker to test out engineer William Hedley's experimental ideas, a model of 1810 on display is the world's first twin-cylinder steam locomotive. Two cylinders doubled its power and balanced the motion of the locomotive, stopping it swaying from side to side.

A model of *Rocket's* younger 'sister' product *Invicta*, loaned by John Bentley, was made in 1830 by Robert Stephenson & Company apprentice Edward Fletcher as he was working on the full-size locomotive to better understand its workings.

Edward drove the full-size *Invicta* at the opening of the Canterbury & Whitstable Railway in 1830 and eventually became the NER's locomotive superintendent, designing engines using the skills and experience he gained from making models.

Shops often made models to showcase their craftsmanship to customers, and Chesterman and Bottom of Sheffield advertised the precision of their measuring instruments with models such as a locomotive built in the 1830s, which is now on display in the exhibition.



***Salamanca* was a rack-and-pinion locomotive from the Middleton Railway in Leeds. It was built in 1812, and above is the world's oldest model of a real locomotive, which is on loan from Leeds Museums and Galleries.** NRM

The company went on to become Rabone and Chesterman, famous for its tape measures, spirit levels and other tools.

A locomotive from 1851 named *Hawthorn* inspired miniature railway pioneer Henry Greenly to popularise his hobby by packaging together drawings, patterns and castings – everything you needed to build it. While the parts needed finishing before assembly, they were effectively the first model railway kits.

The Ffestiniog Railway has loaned 1869-built model *Topsy* for the exhibition, .

With a narrow track perfect for climbing the steep, winding hills of India, Russia and South America, this model helped to spread narrow-gauge railways around the world.

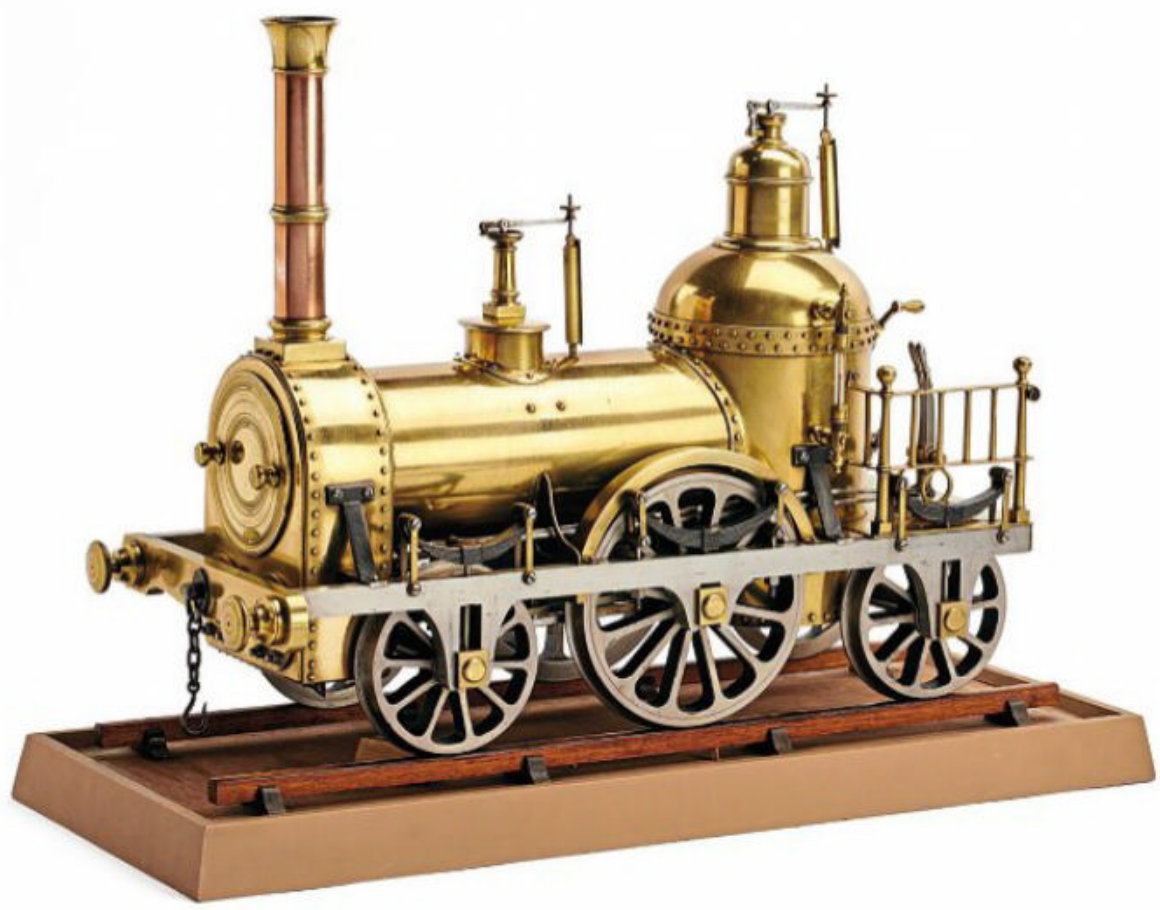
Visitors flocked to Wales to see *Topsy* in steam at the home of Charles Easton Spooner, the Festiniog Railway engineer of the day. It was built by his son George Percival Spooner and engine driver William Williams.

From the early 20th century, there is ropemaker Thomas Averill's model of the Midland Compound 4-4-0, on loan from the Society of Model and Experimental Engineers. Averill drew on the help of neighbouring railway workers to ensure it was correct in every detail.

As railways became part of everyday life, the 'chuff-chuff' of model steam engines could



One of *Rocket's* main rivals at the 1829 Rainhill Trials was Timothy Hackworth's *Sans Pareil*, for which this model was built. A full-size working replica built in 1980 is now at the Locomotion museum in Shildon, which also has the original on display. NRM



John Dawson was a district superintendent for the London & Southampton Railway, who was responsible for the maintenance and day-to-day running of locomotives. He took great pride in making the perfect copy of one in his care. NRM

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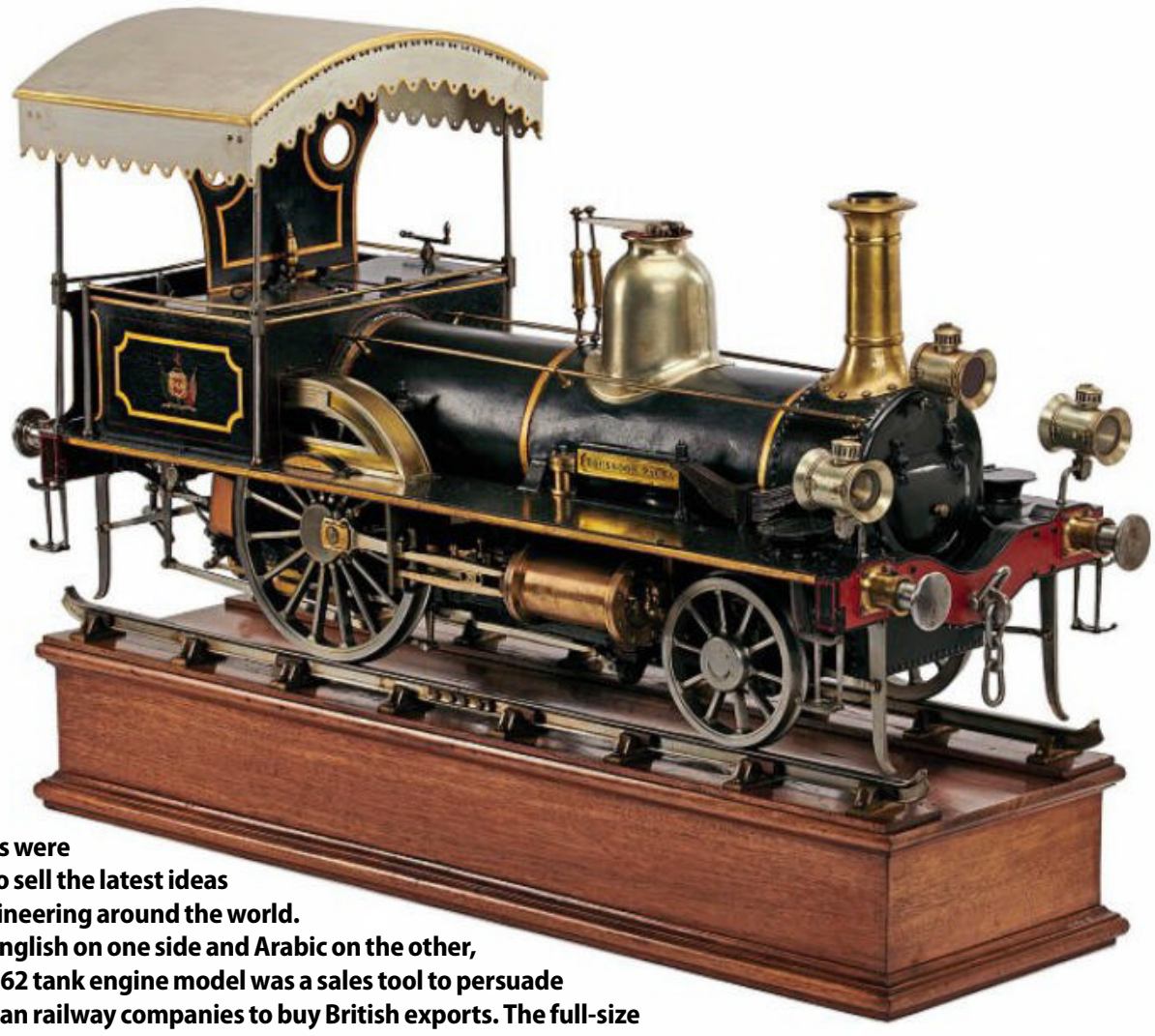
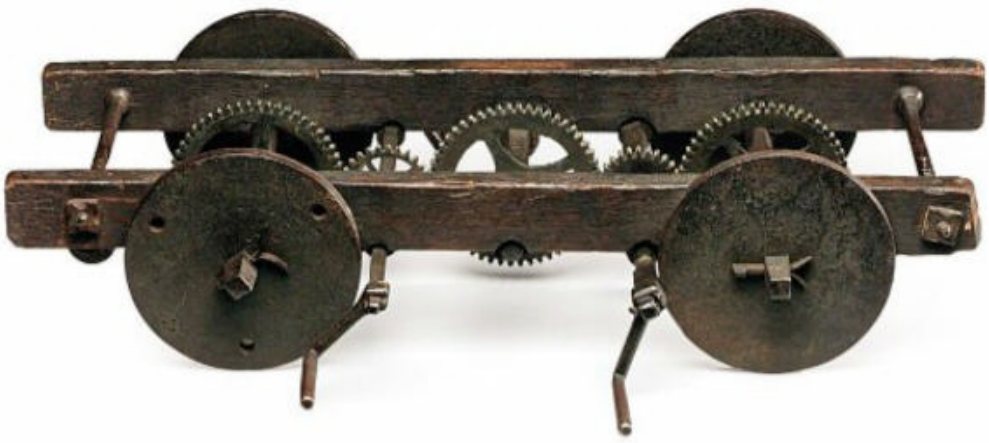
This 1820s model embodies the excitement and optimism that characterised the early railways. It was redesigned again and again by engineer Simon Goodrich as he experimented with the latest locomotive developments, having exchanged letters with other engineers, such as Richard Trevithick and Matthew Murray, sharing his findings and testing new ideas. Designed to turn in circles, its wheels are different sizes. NRM



Models were used to sell the latest ideas in engineering around the world. With English on one side and Arabic on the other, this 1862 tank engine model was a sales tool to persuade Egyptian railway companies to buy British exports. The full-size locomotive ran a service between Alexandria and Suez. NRM



Engineer William Hedley discovered a new way of connecting locomotive wheels to give them more grip. It stopped the wheels from slipping when hauling a heavy train. This experimental model made in 1812 led to *Puffing Billy*, the first steam locomotive to successfully run on smooth rails. NRM

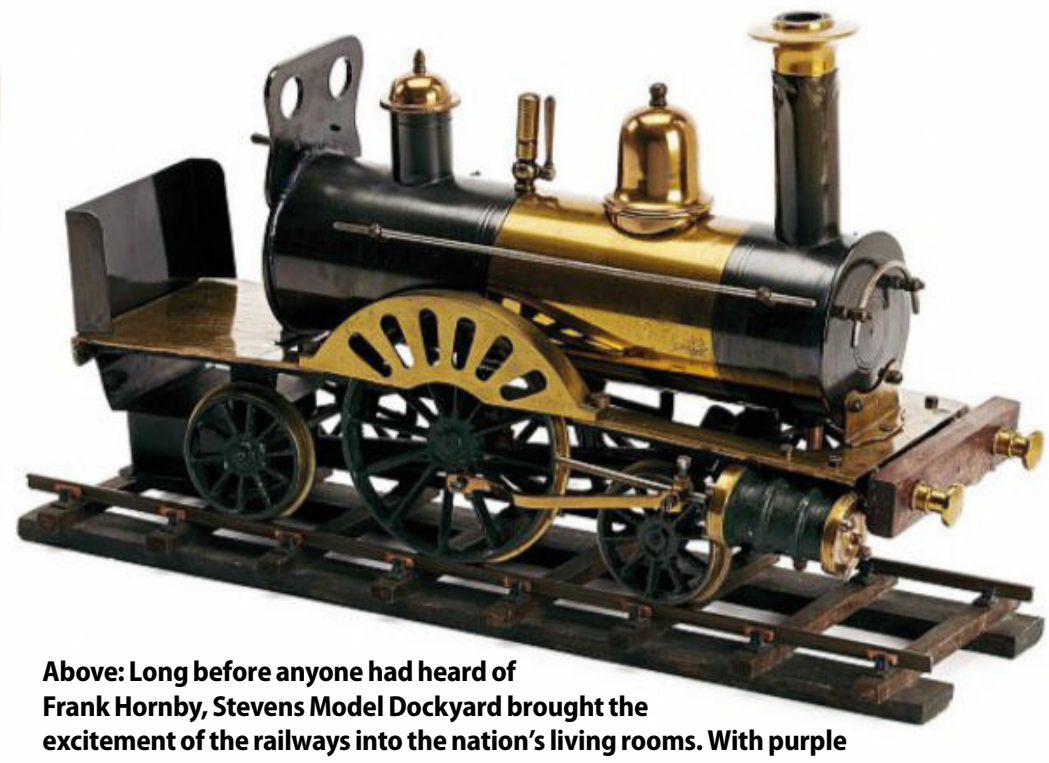
be heard from people's homes. Huddersfield MP Edward Leatham unwound in the evenings by building a model to steam around his garden, and which has been loaned from Head of Steam: Darlington Railway Museum for the exhibition.

However, a model was never made of the star of the show, the success of which formed the blueprint for the development of the steam locomotive and in turn the world's railways.

Racing to get *Rocket* completed in time for the Rainhill Trials, George and Robert Stephenson had no time to build a model first, and so their most famous product became the ultimate full-size model to test the latest technology of the time.

Brass, Steel and Fire is supported by Hornbeam Park Developments and the People's Postcode Lottery.

The exhibition will move to the Science Museum in London after ending its York run on April 13, but *Rocket* will stay behind.

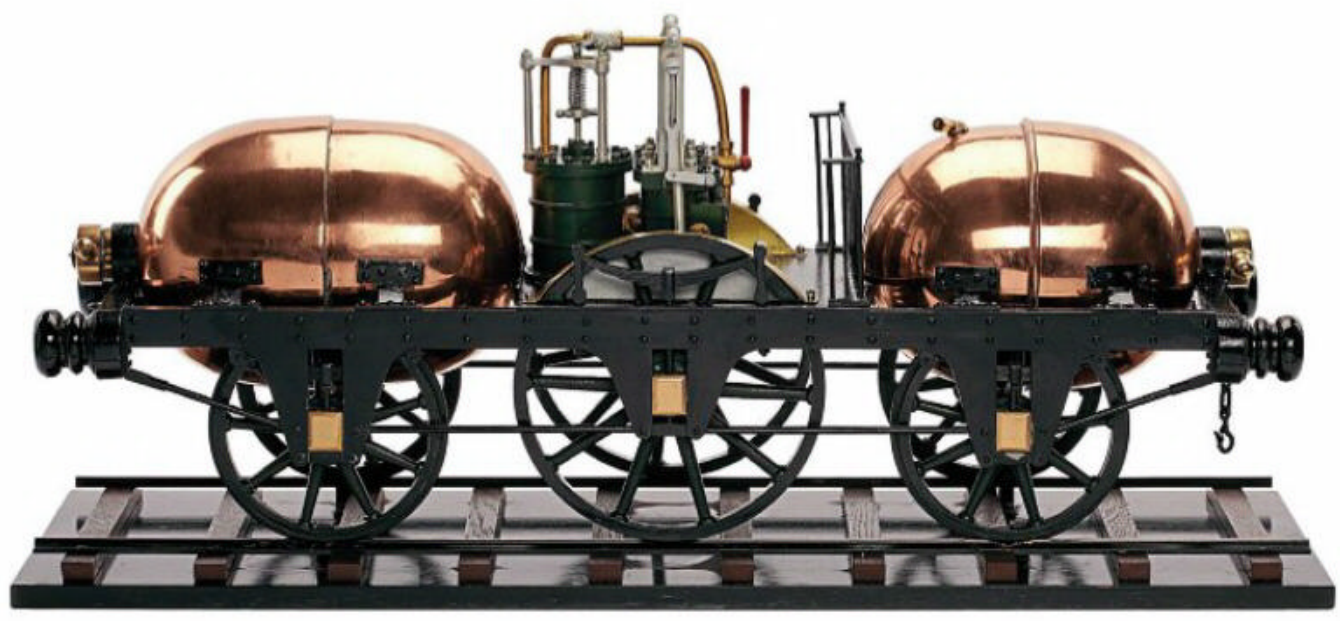


Above: Long before anyone had heard of Frank Hornby, Stevens Model Dockyard brought the excitement of the railways into the nation's living rooms. With purple flames licking up the side, these miniature steam engines (this one dating from the 1890s) were not only toys but valuable parts of Victorian education. Filling the boiler with water and lighting the spirit lamp underneath brought to life just why steam was the power of the age. NRM

Below: Arthur Parsey's idea for a locomotive run on air was ahead of its time. Instead of steam, this 1845 demonstration model was powered by compressed air from two copper tanks. Arthur patented his design and presented it to the GWR, which rejected it. However, his idea later formed the basis for locomotives used in mines.



***Rocket* being unwrapped after arriving at the National Railway Museum on September 11, at the end of a 70-mile journey by low loader from Manchester. It was then welcomed by none other than Only Fools and Horses' 'Del boy', actor David Jason, as highlighted in Headline News, pages 6-7.** CHARLOTTE GRAHAM



York museum is the next stop for Far Tottering train!

By Robin Jones

THE National Railway Museum is now the owner of the Far Tottering and Oyster Creek Railway.

The York venue has paid an undisclosed sum, reported by one source as stretching into six figures, for Quiet Afternoon in the Cloud Cuckoo Valley, a 26ft long kinetic structure built by Chitty Chitty Bang Bang creator and cartoonist Rowland Emett.

Emett created the Far Tottering and Oyster Creek Branch Railway, a fantasy line made for the 1951 Festival of Britain.

This sculpture of its whimsical train started life as a commission for a shopping centre, but by the time the sculpture was completed in the mid-1980s, it was no longer needed. The train was then sold and exhibited in London's Spitalfields Market in 1992 but seven years later was stored and came close to being scrapped.

However, once saved, the previous owner expertly restored it, adding a digital control system. After being displayed in 2014 at Birmingham Museum and Art Gallery, it proved such a crowd-pleaser that it boosted visitor numbers by 70%.

The NRM bought the sculpture through fine art auctioneers Bonhams.

NRM director Judith McNicol said: "It's the business of museums like ours to acquire and preserve those really significant objects that have played a powerful role in the ongoing development of our railways. It's what we do. However, it's not every day you have the opportunity to acquire something which combines that seriousness of purpose, design, and skill with, well, such a sense of fun.

"Rowland Emett's work bridges the worlds of engineering, modelling and railway enthusiasm. This kinetic sculpture is characteristic of his sometimes eccentric passion for railways, depicted in a whimsical and quintessentially English setting.

"I am thrilled to make this stretch of Far Tottering & Oyster Creek Railway part of the National Collection – and to keep it in this country.

"There are many people who, through their generosity and shared passion for Emett's creations, have made this acquisition possible. I would particularly like to thank the Art Fund for its contribution.

"I'm sure that people will come from far and wide to see it in action. After all, what could be more pleasant than A Quiet Afternoon in the Cloud Cuckoo Valley?"

Jon Baddeley of Bonhams said: "Rowland Emett regarded A Quiet Afternoon in the Cloud Cuckoo Valley as his finest work. I'm delighted that it will be available for future generations to enjoy."

A Quiet Afternoon in the Cloud Cuckoo Valley features a locomotive called *Wild Goose*, driven by an ingenious driver, who toasts teacakes on the firebox as the it trundles along. As he passes Cowparsley Meadow, a farmer plays his harp soothingly to his herd of cows, and in a secluded dell at Wisteria Halt, there is a beautiful flowering tree, on top of which sits the clock.



A Quiet Afternoon in the Cloud Cuckoo Valley by Rowland Emett. No date for its installation at York has yet been given. BONHAMS

At Shrimphaven Sands, a fisherman can be seen out at sea, hauling in a net in which he appears to have caught a mermaid. As *Wild Goose* continues its journey past Twittering Woods, an ornithologist is seen cycling along with his camera: he is disguised as a tree and a bird has made its nest in his bicycle lamp.

On the beach at Oyster Creek, a bathing hut is occupied by a man dressed in full-length Victorian swimwear, who dives dramatically into the water from time to time. For those passengers whose wishes and dreams are not yet met, there is a wishing well, complete with a typically Emett-esque leaking bucket.

Born in London in 1906, Emett achieved fame as a cartoonist and designer. Not only was he noted for creating the Far Tottering and Oyster Creek Branch Railway which has been described as his finest work, but also Caractacus Potts' inventions in Chitty Chitty Bang Bang in 1968. He died in 1990.

Corwen Central: closer by the week

MID-SEPTEMBER saw a major step forward with preparation of the final section of the trackwork at the Llangollen Railway's Corwen Central station site.

After the infilled section of the former gap had been consolidated and successfully plate tested, the main line was slewed away along the site of the former temporary platform at Dwyrain Corwen East. With the buffer stop removed, two extra panels of 60ft track were laid from the railhead to extend the track into the site of the former gap in the embankment.

On Monday, September 16, Class 08 No. 13265 was deployed with two Mermaid side tipper wagons to bring in stone from the ballast mound at Bowen. Working four trips along the extension, the operation saw around 100 tonnes of stone dumped trackside for onward delivery in a job that required many volunteers to start moving it into a mound.

The JCB machine was on hand to transfer loads to build up the trackbed section with the mini-digger working the ballast to create the necessary level.



Ballast being tipped at Corwen on September 16. GEORGE JONES/LR

When this work is completed, it will be possible to begin assembly of the points to serve the terminal loop and siding. There is a likely need for a further track panel in the Up loop alongside platform 1.

The materials are on site ready for assembly and the complex pointwork may begin in October and connect the terminal loop with the rest of the railway.

North Thoresby celebrates first decade of steam

ON August Bank Holiday Monday, the Lincolnshire Wolds Railway (LWR) celebrated the 10th anniversary of the first public train to run on the line between Ludborough and North Thoresby stations and to mark the occasion, free travel was given on that day to anyone whose birthday was August 26.

The BBC Look North cameras were there to record the event and reporter Nicola Gilroy travelled on a train to North Thoresby, where she met stationmaster Norman Wilsea, who worked at the same station in the days before the East Lincolnshire Line (ELL) closed in 1970.

The LWR is now planning on bringing more of the ELL back to life and has recently started work on the first stage of a five-mile extension of its running line to Louth. Here a new station will be built at a site set aside on the northern edge of the town, next to the Fairfield Industrial Estate.



Lincolnshire Wolds driver Kye Robinson and fireman Conner Thornton place the 10th anniversary headboard on Peckett *Fulstow*. STEVE SCRIVENER/LWR

➜ If you would like to donate to the Making Tracks for Louth fund, visit www.lincolnshirewoldsrailway.co.uk



Hunslet 14in 0-6-0ST *Brookes No. 1* (No. 2387 of 1941) visiting from the Middleton Railway, heads a vintage train from Furnace Sidings towards Big Pit on the Pontypool & Blaenavon Railway on September 13.

Illingworth becomes *Harold* in Blaenavon built-in-Leeds steam gala weekend

By Brian Sharpe

THE Pontypool & Blaenavon Railway marked the 150th anniversary of the first trains to Blaenavon from the north by the LNWR, with a celebration of steam, featuring three Leeds-built engines at its gala weekend of September 13-15.

An intensive timetable of passenger and mineral trains was operated, hauled by the railway's three resident and two visiting steam locomotives. Friday was Leeds day with the three Leeds-built locomotives working all trains.

Resident Hunslet 16in 0-6-0ST No. 18 (No. 873 of 1937) which worked at East Moors steelworks in Cardiff, was joined by Hunslet 14in 0-6-0ST *Brookes No. 1* (No. 2387 of 1941) from the Middleton Railway and Hudswell Clarke 0-6-0ST *Harold* (No. 1208 of 1916).

The latter engine is best-known as Stephen Middleton's ex-Nidd Valley Railway *Illingworth*, based on the Embsay & Bolton Abbey Railway but carried its *Harold* identity for the event. It carried this name while being used by Robert McAlpine Ltd during the building of the nearby Ebbw Vale steelworks.



Hudswell Clarke 0-6-0ST *Harold* (No.1208 of 1916) heads a mineral train from Blaenavon Low Level towards Furnace Sidings on the Pontypool & Blaenavon Railway on September 13.

Saturday and Sunday saw resident Barclay 0-4-0ST *Rosyth No. 1* (No. 1385 of 1914) and Bagnall 0-6-0ST *Empress* (No. 3061 of 1954) joining in for an even more intensive timetable.

Could Garsdale-Hawes trackbed become a cyclepath?

PUBLIC money is set to be spent on a study to convert the disused Midland Railway Garsdale-Hawes trackbed – part of the Wensleydale Railway's original scheme to create a 40-mile trans-Pennine heritage line – into a cycleway.

The six-mile line, which lost its passenger service on March 16, 1959, has been earmarked for the £8000 study, with Richmondshire District Council being asked to stump up half the cost. The council is being urged to join forces with the Yorkshire Dales National Park Authority to add to successful local cycling routes.

A report to the council said: "The terrain in the Yorkshire Dales presents inspiring challenges for cyclists, but it can also make access difficult for people with limited mobility, wheelchair users or those with young children. The development of a relatively flat level-surface route running on or alongside a railway line would allow a wide range of users to access and enjoy the national park."

The branch linked to the NER route from Hawes to Northallerton, the 22-mile section from Northallerton West to Redmire is now the Wensleydale Railway. The revivalists have from the outset held ambitions to restore the entire route from Garsdale to Northallerton, to provide public transport. That is still the long-term stated goal, and the trackbed has been protected from development. In more recent times, the railway has focused on providing services as a heritage line over a shorter distance.

Supporters of the cycleway scheme argue that if the railway was relaid, a parallel recreational trail could be developed.

The council's Conservative group leader Coun Yvonne Peacock said: "My only concern is there has to be some safeguards in place to ensure the cycle route does not stop the Wensleydale Railway from reinstating the railway line."

IN BRIEF

➜ THE Nene Valley Railway is offering a small number of driver experiences with visiting Clayton Class 17 D8568 from the Chinnor & Princes Risborough Railway on Monday, October 14, at £325 each. For details contact 01780 784444 or visit www.nvr.org.uk

➜ LSWR O2 0-4-4T No. W24 *Calbourne* will carry a headboard worn on the final day of Isle of Wight Steam on New Year's Eve, 1966, when it bows out of service for overhaul at the island's heritage line's September 28/29 'Four Island Classes' gala.

➜ GLOUCESTERSHIRE Warwickshire Railway-based WR 4-6-0 No. 7820 *Dinmore Manor* has joined the guest list for the Battlefield Line's October 18-20 gala, appearing alongside Quainton Road-based WR 4-6-0 No. 6989 *Wightwick Hall*.

➜ VISITING new-build Lynton & Barnstaple Railway Manning Wardle-type 2-6-2T *Lyd* is to adopt the identity of lost-long 'sister' *Lew* during the heritage line's September 28/29 gala, which will see two L&B locomotives and the line's rake of five original coaches running at Woody Bay for the first time since 1935, with other resident engines in steam.

➜ SR Schools 4-4-0 No. 926 *Repton* and A4 No. 60009 *Union of South Africa* will guest in the East Lancashire Railway's October 18-20 autumn steam gala.

➜ PLANS to convert a vacant railway stationmaster's house at New Milton in Hampshire into a heritage centre and museum have been making progress. A planning application to create the centre in the building off Station Road has been submitted by New Milton Town Council to New Forest District Council's planning department. Milton Heritage Society considers the project especially important as the station was the first brick building for the town of New Milton.

Britannia and *Mayflower* for Bluebell giants of steam gala

LMS Princess Coronation Pacific No. 6233 *Duchess of Sutherland* and LNER B1 No. 61306 *Mayflower* will be making historic first visits to the Bluebell Railway for the October 11-13 Giants of Steam event.

No. 6233 will be the first of its class to visit the line.

Visitors will also have the chance to get behind the footplate of *Britannia*, and experience first-hand firing and driving.

In addition, a special dining train – the 'Britannia Gala Golden Arrow' – will run on Monday, October 14.

Carriage convention at Quainton Road

THE Buckinghamshire Railway Centre will host this year's Carriage Convention over the weekend of October 26-27. The full agenda is still in the planning stages, but there will be a hot evening meal on Saturday and a steam-hauled train running all day on the Sunday.

The cost for the whole weekend is £26. A booking form and local bed and breakfast list are available from lystertony7@gmail.com

Housing railwaymen for 100 years

A CENTURY of an association which provided homes for railway workers has formed the basis of a new exhibition at Head of Steam–Darlington Railway Museum.

Displays highlight the history of the Railway Housing Association, from its beginnings when it provided homes for railwaymen and their families after the First World War to the present day, where it now has more than 1500 homes in areas including Darlington, Durham, York, Newcastle, Doncaster and Hull. The exhibition runs until Sunday, December 1.

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Pioneer diesel project moves to Wirksworth

By Robin Jones

THE project to replicate Britain's first main line diesel has secured a new permanent home at Wirksworth on the Ecclesbourne Valley Railway (EVR).

The Ivatt Diesel Re-creation Society has signed a contract with WyvernRail plc for the use of a workshop with 155 square metres of floorspace to carry out work on components under cover.

Until now the bogies, power unit and donor locomotive Class 58 No. 58022 have been situated in Rowsley yard at Peak Rail and not readily open to inspection or work being carried out on them.

The society is building a copy of Class D16/1 No. 10000, which was built by the LMS at nearby Derby Works in association with English Electric and the Vulcan Foundry.

No. 10000 was officially presented to the press at the works on December 5,
1947. Both No. 10000 and its sister No. 10001 were scrapped in January 1968, despite their huge historical significance.

The workshop will not be used to house the finished locomotive, but to prepare the components in readiness for its eventual assembly, and will act as a centralised base and storage unit for equipment.

It will be used too as the storage facility for the two English Electric 16SVT power units and ancillary equipment ,and also forms a restoration base for the ex-EM2 bogies, and perhaps eventually the chassis from No. 58022 in order to fit it to the bogies.

Opening

The workshop will also provide a venue where members and supporters can come to inspect progress, similar to The A1 Steam Locomotive Trust's Darlington Works.

An opening ceremony will be held on December 6, attended by society president Stan Fletcher (aged 99). An open day for members and donors will be held in the first half of 2020 on a date to be arranged.

Agreement has been made to construct a visitor centre alongside the shed to display the history and legacy of Ivatt's pioneering diesels. Subject to grant funding being successfully obtained, this could be constructed in a year and be an additional attraction for visitors arriving at Wirksworth.

The society began to seek a site for a workshop five years ago. It has been a long process, with the importance of having a building increasing as the time approaches to start constructing the locomotive, rather than simply collecting the components, which has been the case to date.





Above and right: The shed at Wirksworth station, which will now be home to the Ivatt Diesel Re-creation Society. IDRS

Below: History makers sadly no longer with us: D16/1 twins Nos. 10000 and 10001 at Carlisle on August 12, 1950, taking over the Blackpool to Glasgow service, brought in by 'Black Five' No. 45484. TRANSPORT TREASURY/IDRS



Compressed air is piped along both sides of the building, which includes a pit which runs almost the full length. There is room at the rear of the workshop for an extension in which larger pieces of equipment such as the power units can be housed.

The next steps are to buy three EM2 traction motors from Holland and transport them to Wirksworth. At the same time, the EM2 bogies bought in December 2018 will be dismantled and assessed for refurbishment.

An engineering plan has now been finalised.

The EVR may be considered a particularly appropriate place to progress the project, if only because of its widely praised restoration of first-generation DMUs.

➜ To become a member and donate toward the new D16/1 locomotive, visit www.LMS10000.co.uk. There is no set fee: membership is by monthly standing order and members set that order at whatever amount they feel they can afford.



New kid on the block: Hudswell, Clarke 0-4-0ST No. 750 of 1906 *Waleswood* (right) is seen undergoing shakedown tests at the Chasewater Railway on September 8. The locomotive spent all its working life at Waleswood Colliery in South Yorkshire, and last steamed in 1990 at the long-closed Steamport museum in Southport. Having been moved around several sites, it has spent the last three years undergoing overhaul at the Northamptonshire Ironstone Railway Trust at Hunsbury Hill. *Waleswood* moved to the Chasewater Railway at the start of September after lengthy negotiations, and is now a long-term resident of the line. The initial tests running up and down the yard at Brownhills West were its first steamings since restoration was completed. Various niggles have been found that need to be rectified before it can haul its first train, but nothing major. *Waleswood* is pictured alongside Bagnall 0-4-0ST No. 2648 of 1941 *Dunlop No.6,* which was about to drop back onto the last train of the day at Brownhills West. ALISTAIR GRIEVE

Hampshire Narrow Gauge Trust closes: key engines moving to Statfold Barn

By Robin Jones

THE Hampshire Narrow Gauge Railway Trust (HNGRT) is being wound up after 55 years.

Following the closure, many of its items will be passed to the Statfold Narrow Gauge Museum Trust at the private Statfold Barn Railway, near Tamworth, including Bagnall 0-4-0ST No. 2091 of 1919 *Wendy,* a popular visitor to 2ft-gauge lines over the years, now on loan to Amberley Museum.

A statement from the Hampahire trust said the closure was brought about following issues with its site at the Brickworks in Bursledon, near Southampton, where it was given a rolling one-year lease, which has stopped it obtaining grants to build a restoration shed.

"Also, the decreasing numbers and increasing age of the volunteers and members has meant it has struggled to find the necessary manpower required to keep the railway running," said the statement.

"Following meetings with its members to gain approval, it was agreed HNGRT would give notice to leave Bursledon and distribute its assets to other narrow gauge trusts, where they could ensure that their future was secure.

Continued enjoyment

"HNGRT has always been keen to see its locomotives visiting other railways and sites and the fact the locomotives in the Statfold collection do so as well was something that ticked another box.

"Trustees were confident the locomotives would be well looked after and continue to be seen and enjoyed by the many visitors to Statfold Barn Railway, which is already seen as the Narrow Gauge National Collection."

Other items bound for Statfold are Quarry Hunslet 0-4-0ST No. 542 of 1891 *Cloister,* which is currently running at Bressingham Steam Museum; Motor-Rail petrol Simplexes No. 5226 of 1936 *Brambridge Hall* ;and No. 4736 of 1939 *Agwi Pet* and its c1936 Ramsgate Electric Railway coach.

Wendy and *Cloister* will move to Statfold when their current loan agreements expire in November.

Statfold trustee Henry Noon said: "We are delighted to have been chosen by HNGRT as future custodians of these iconic narrow gauge locos, which are a valuable addition to our collection. We fully acknowledge the effort made over the years to secure these locos for the future and we now look forward to continuing in the same vein."

IN BRIEF

➜ BOLTON Council's planning committee has approved controversial plans for a £12 million spine road scheme which will involve the demolition of the historic former Horwich locomotive works erecting shop despite protests from historians and conservationists. Horwich Heritage chairman Stuart Whittle said: "I'm obviously very disappointed. There is absolutely no point expressing such support for local heritage, as members did, if at the end of the day you do not go along with genuine workable proposals that would save it."

➜ THE Kirklees Light Railway's general manager Stuart Moss has moved to the Ravenglass & Eskdale Railway in a new role as general manager (visitor experience). Also joining as collections assistant at the Ravenglass Railway Museum is Claire Winter-Moore, who was previously in a role at The Beacon Museum in Whitehaven.

➜ NETWORK Rail restarted work on a new and bigger sea wall at Dawlish on September 9. It is eight feet higher than the previous one, and aims to provide greater protection to the railway and resort from rising sea levels and extreme weather. The upgrade to Isambard Brunel's atmospheric railway route, which stopped throughout the peak summer tourism season to minimise disruption to the local community, will now continue for completion in spring 2020.

➜ DOUGLAS Bay Horse Tramway is bringing in extra safety measures following an outbreak of strangles, a bacterial respiratory infection which can obstruct the airways of horses and could lead to the line being closed. Members of the public have been asked not to enter its stables at Clypse Reservoir, Honey Hill and Blackberry Lane, or attempt to feed the animals until the contamination has been eliminated.

Bahamas the locomotive supports Bahamas the storm ravaged islands

THE Keighley & Worth Valley Railway-based Bahamas Locomotive Society (BLS) has held its own appeal to help the inhabitants of the islands left homeless by Storm Dorian.

The storm killed at least 43 people in the Caribbean island chain, but as we closed for press hundreds were still missing, and 70,000 were in need of food and shelter.

The society has opened a book of condolence in its Ingrow station museum, where people can express their sadness at the disaster, with Keighley town mayor Peter Corkindale being the first to sign.

The society is also holding a collection among members and museum visitors to raise cash for relief work.

The society held a two-minute silence and a collection during its annual general meeting in early September.

After the storm devastated the islands, BLS chairman Keith Whitmore wrote to the country's high commissioner to express the society's "sympathy and solidarity" at the tragedy.

He said: "We are in particular thinking of the islands after which our locomotive is named at this particularly sad time, and we are thinking of and praying for the families who have lost loved ones and have had their homes and businesses destroyed through this natural disaster."

Representatives of the Bahamas Tourist Board were among passengers when LMS Jubilee 4-6-0 No. 45596 *Bahamas* returned to the main line after a 25-year absence.

This followed its restoration at Tyseley Locomotive works, aided by a £1 million Lottery grant to the society.

Warship helps out Great Central diesel gala

By Robin Jones

Above: A last-minute gala visitor from its Severn Valley Railway home, Class 42 Warship D821 *Greyhound* trundles back to Loughborough at sunset with a fish and chip special on September 6. MATHEW YARDLEY

THE Great Central Railway's September 6-8 diesel gala continued the trend of previous years with a slow but sure rise in passenger numbers.

The late summer gala has become one of the 'must see' events of the modern traction calendar, with an increasing number of visitors enticed by the prospect of seeing classic main line types in action on the UK's sole heritage double-track trunk railway.

Encouraged by good weather, more than 2000 passengers travelled during the event.

Maroon-livieried Western Region Class 42 Warship D821 *Greyhound* from the Severn Valley Railway-based Diesel Traction Group was a late replacement for planned guest Class 17 D8568, the sole survivor of 117, which failed at its Chinnor & Risborough Railway home five weeks before its GCR visit.

Intensive timetable

The other guest was Class 25 D7535 from the South Devon Railway. The pair ran alongside Class 50 No. 50017 *Royal Oak*, Class 47 1705, Class 45 D123 *Leicestershire and Derbyshire Yeomanry,* Class 37 No. 37714, Class 20 D8098, Class 08 D4137 and the Metro Cammell Class 101 DMU from the home fleet to an intensive timetable.

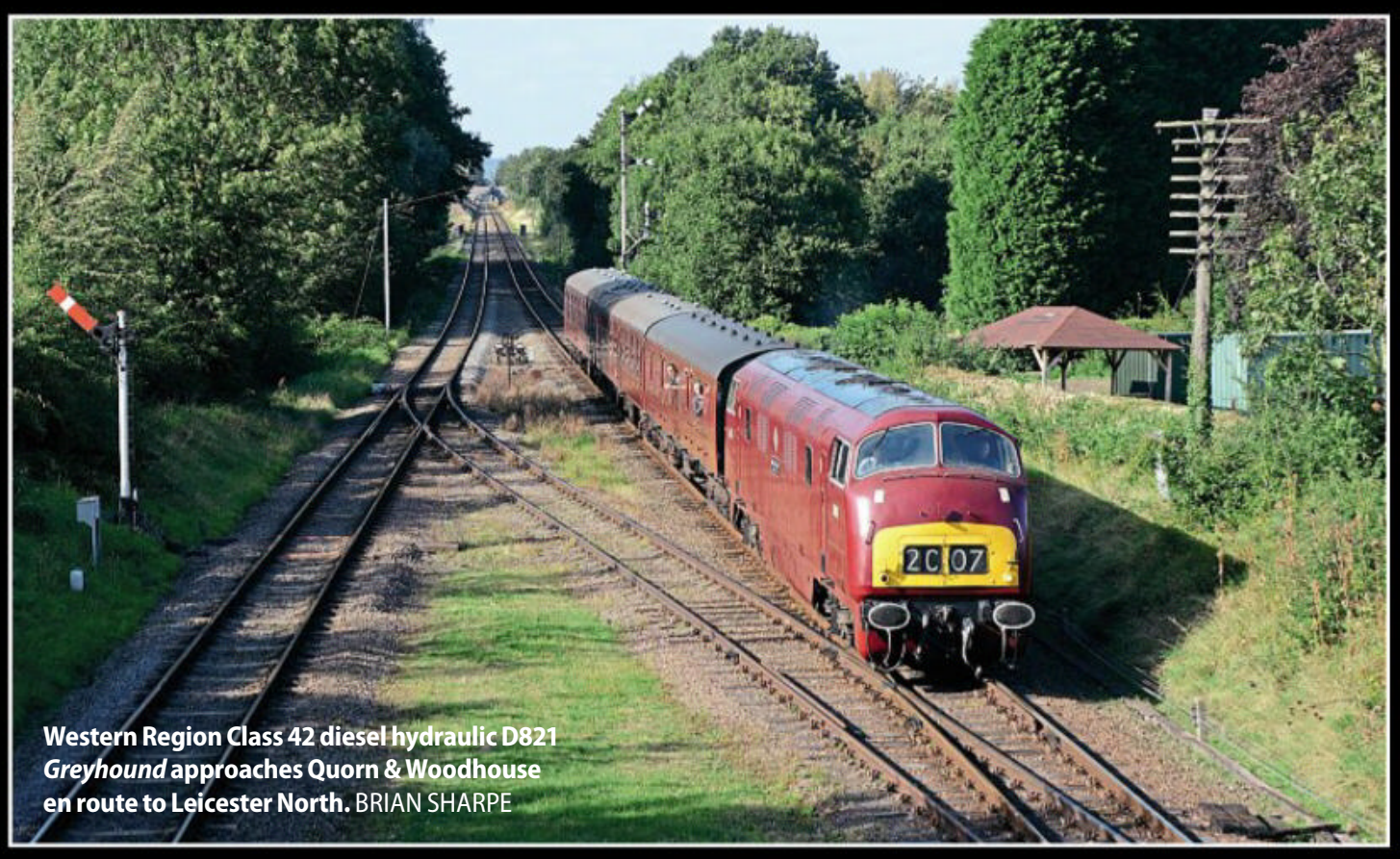
All locomotives in attendance performed faultlessly, apart from the sole steam engine in operation. LMS 0-6-0T 3F 'Jinty' No. 47406 sustained a broken spring.

According to GCR general manager Michael Gough, one surprising feature of the event was the popularity of the line's cafes. "Normally at diesel galas the catering side does not have a massive uptake, yet this time round the cafes were all very full," he said.

"On the Saturday, the griddle car on the 'A' set had a record day."

*1969 And All That: special feature on the first decade of the GCR's heritage era, marking the 50th anniversary of its founding – pages 80-85.

➜ **Heritage Diesel and Electric Locomotives – the definitive guide to main line modern traction preservation by Andy Coward: see Off the Shelf, page 100.**



Western Region Class 42 diesel hydraulic D821 *Greyhound* approaches Quorn & Woodhouse en route to Leicester North. BRIAN SHARPE



Left: Class 08 shunter D4137 in action at Quorn & Woodhouse. BRIAN SHARPE

Below: Class 50 No. 50017 *Royal Oak* passes Quorn & Woodhouse with a rake of coal empties. BRIAN SHARPE



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Double-headed 'Rats': Home-based Class 25 D5185 and Buckfastleigh-based South Devon Diesel Traction's sister D7535 are seen sharing passenger train duties at Quorn & Woodhouse. BRIAN SHARPE



KESR steam loco bids temporary farewell after centenary milestone

By Geoff Courtney

A POPULAR and much-loved steam locomotive is bidding a temporary farewell to service on the Kent & East Sussex Railway (KESR) just months after celebrating its 100th birthday.

No. 376 *Norwegian* arrived at the Tenterden-based line nearly half a century ago and has been a stalwart of operations since pulling its first passenger train in preservation in 1972.

The 21c class 2-6-0 was built for NSB, the Norwegian state railway, by the Swedish firm Nydqvist & Holm AB in July 1919, and was taken out of service in June 1971, making it one of the four last steam locomotives in regular use on the NSB.

Classmate No. 377 was already in the UK following its withdrawal in 1969, and is now resident at Bressingham Steam Museum in Norfolk.

Through the sponsorship of David Barham of Rolvenden, No. 376 was also saved for preservation, travelling under its own steam to Oslo for shipping to Felixstowe and road transfer to the KESR's Rolvenden depot, where it arrived in October 1971.

Following successful testing, it ran in steam for the first time at its new home in May 1972. It was put to unusual use in November that year when its firebox was used for cooking hot dogs during Guy Fawkes' celebrations.

As the railway's only tender locomotive it became popular with volunteers, staff and the public, mixing major and minor repairs and overhauls with the haulage of passenger trains over thousands of miles. Landmarks included being named *Norwegian* by the Norwegian ambassador Tom Vraalsen in March 1995, and in April 2016 crossing the English Channel to take part in the Baie de Somme Railway's annual steam festival.

Its last overhaul was completed in 2013, since when it has been in regular service, but with the expiry of its boiler certificate in mid-December, the time is approaching for it to be taken off the roster, probably in October.

Andy Hardy, the KESR service delivery manager, said: "At present we have no aim for a dedicated overhaul. Once it has been assessed when out of traffic, we will have a better idea of the work required and thus the costs involved. New cylinders and possibly replacement of the boiler, some of which is original from 1919, may be required."

Mr Hardy is also a member of the Norwegian Locomotive Trust, which was founded in 1984 and now owns No. 376, for which the group is responsible for its upkeep,

The trust has acquired 500 drawings for the locomotive and technical manuals, and has sourced some spare parts following a recent visit to the railway by Norwegian enthusiasts.

To help fund the work required, the trust has launched the 376 Club, in which members pay £10 per month. Andy says this is "the equivalent of one large posh coffee in Tenterden High Street, or a pint of beer, each week."



Tall order: Norwegian State Railway's Class 21c No. 376 during its service days in its home country before withdrawal in 1971. The 2-6-0, which has celebrated its 100th birthday this year, has become a popular member of the Kent & East Sussex Railway fleet since its arrival in 1971. NORSK JERNBANEMUSEUM

On joining, members will receive a print of *Norwegian* by railway artist Jonathan Clay and a print of the general arrangement drawing, life membership of the trust, and the opportunity to buy trust merchandise prior to it going on general sale.

Details of the club are available from Andy by emailing contact@norwegianlocomotivetrust.com.

"The club will give us a regular income to help support the work needed on the engine and return it to operation on the KESR for everyone's enjoyment," Mr Hardy said.

"It has enjoyed a colourful and interesting history, and we firmly believe it has a bright future on the railway."

➜ **The Norwegian locomotive that helped launch the Great Central Railway: pages 80-85.**

Ready for action: No. 376 *Norwegian* looks resplendent as it awaits its next turn of duty on the Kent & East Sussex Railway. The 100-year-old 2-6-0 is the railway's only tender locomotive, and will be taken out of service by the end of the year for overhaul after six years of regular work. ANDY HARDY





A Union Pacific excursion train at Cajon Pass in November 2011, headed by FEF-3 class 4-8-4 No. 844, a mainstay of the company's heritage fleet. DREW JACKSICH/ CREATIVE COMMONS

Big Boy No. 4014 all set for Cajon Pass excursion

By Brian Sharpe

UNION Pacific 'Big Boy' 4-8-8-4 No. 4014 was returned to service in May this year, and appeared at Ogden station to mark the 150th anniversary of the completion of the first transcontinental railroad. Since then, as highlighted in HR Issue 259, it has featured in excursion service during the summer.

The engine was preserved for many years at Pomona fairground in Southern California so it is appropriate it will return to the area for what is expected to be a memorable pair of excursions.

The Railway and Locomotive Historical Society, Southern California Chapter, operator of RailGiants Train Museum, returned No. 4014 to Union Pacific for restoration to working order.

Passengers will make their way to Rancho Cucamonga Metrolink station on October 12, from where buses will take them to Colton, near San Bernadino, to board the train. No. 4014 will haul the excursion on a one-way trip up the famous Cajon Pass to Barstow, from where the passengers will return by bus.

On the following day, the tour will be repeated, but with the train running from Barstow back to Colton.

Spectacular terrain

The Cajon Pass is located in the Mojave Desert, and is one of the most popular locations for American enthusiasts, with spectacular scenery, steep gradients and frequent heavy freight trains.

The pass was created by the movements of the San Andreas fault and is an important link from the Greater San Bernardino area to the Victor Valley, and north-east to Las Vegas.
The line reaches a height of 3777ft above sea level.

The first railroad through the pass was built in the early 1880s by the California Southern Railroad, a subsidiary of the Atchison Topeka and Santa Fe Railway, to connect the present day cities of Barstow and San Diego. Today, the Union Pacific Railroad and BNSF Railway (Burlington Northern Santa Fe; the successor to the Santa Fe) both use the pass to reach Los Angeles and San Bernardino.

The Union Pacific Railroad operates one track through the pass, on what was the Southern Pacific Railroad's Palmdale cut-off, opened in 1967. BNSF owns two tracks and began to operate a third main track in the summer of 2008. The two railroads share track rights through the pass after the Union Pacific gained track rights on the Santa Fe portion, negotiated under the original Los Angeles and Salt Lake Railroad.

Last run of 2019

No. 4014's final tour in its comeback year was scheduled to depart from Cheyenne on September 27. Under the banner of 'The Great Race Across the Southwest', No. 4014 will travel to locations in Arkansas, Arizona, California, Colorado, Kansas, Missouri, Nevada, New Mexico, Oklahoma, Texas, Utah, and Wyoming.

Display locations include October 2-3 Provo, Utah; October 7, Las Vegas; October 10-11, Greater Los Angeles area; October 18, Tucson, Arizona; and October 21-22, El Paso, Texas.

The Experience the Union Pacific Rail Car, a new, multi-media walk-through exhibition, providing a glimpse at the past while telling the story of modern-day rail-roading, will accompany the Big Boy, and will be open for free tours at select locations.

Union Pacific's Steam Locomotive Tracking map will again trace No. 4014's location, and will be continuously updated while the train is on the move. You also can track the Big Boy via the UP Steam Twitter page at http://www.twitter.com/up_steam

Book publisher Silver Link joins *Heritage Railway*

RENOWNED rail, maritime, road transport and biography book publisher Silver Link Publishing has been acquired by *Heritage Railway's* publisher Mortons.

Silver Link, which has produced more than 700 titles since it was founded in 1985, including its hugely-successful trademark Past and Present imprint, was purchased by Peter and Frances Townsend in November 1990 and relocated to Great Addington in Northamptonshire.

Silver Link was named after LNER A4 Pacific No. 2509, built in 1935 to launch the prestigious Silver Jubilee service from King's Cross to Edinburgh Waverley and which attained a record speed of 112mph on the inaugural service on September 29, 1935. The company also includes the imprint The Nostalgia Collection.

Peter, who previously worked for WH Smith, Transworld Publishing, Futura, Patrick Stephens Ltd, Thorsons Publishing Group and Harper Collins before buying Silver Link, decided to sell the business after reaching retirement age.

He said: "Silver Link has always been an independent and friendly family publishing business and when the time was approaching when 'young' old age was creeping up, what was most important to me was that the enthusiasm, dedication and hard work that is needed to run a successful publishing company aimed at enthusiasts should continue.

"I have known Mortons Media and many of its staff over many years and have much admired its ethos and output. I recognised that this would be a good home for the developing business. I am pleased that following positive discussions over the past few months, the sale of Silver Link has resulted in it finding a new independent home, with a bright future to look forward to as part of Mortons Books."

Mortons Books publisher Steve O'Hara said: "Silver Link is synonymous with creating quality products that cover a wide range of enthusiast and nostalgia subjects. It enjoys a large readership who love and respect its products. It is a huge honour to continue the Silver Link legacy and we look forward to building on the solid foundations laid by Peter."

British Railways Past and Present No. 69 Swindon to Bristol by both routes by John Stretton and Tim Maddocks will be published later this year.

➜ For more information about Mortons Books, please visit: www.mortonsbooks.co.uk

Barry scoops top award for 50 years of superb service to museum

CHASEWATER Railway Museum curator Barry Bull has carried off the Volunteer of the Year Award in a West Midlands contest among his counterparts.

He came top out of 11 finalists in the individual category of the West Midlands Museum Volunteer Awards, all of whom had made significant and outstanding contributions to their museums.

At the awards ceremony hosted by Birmingham Poet Laureate Matt Windle in in the Patrick Studio Theatre at Birmingham Hippodrome on September 11, judges cited Barry's 50 years of service to the museum, his team leadership, and enthusiasm to share his knowledge with visitors.

His award was an individually-crafted ceramic tile, specially made at the Jackfield Tile Museum, part of the Ironbridge Gorge group of museums.

David Bathurst, chairman of Chasewater's museum committee, said: "Those throughout the heritage railway movement who know Barry, and the Chasewater Railway Museum in particular, will have little doubt that his endeavours over so many years fully justified the award."

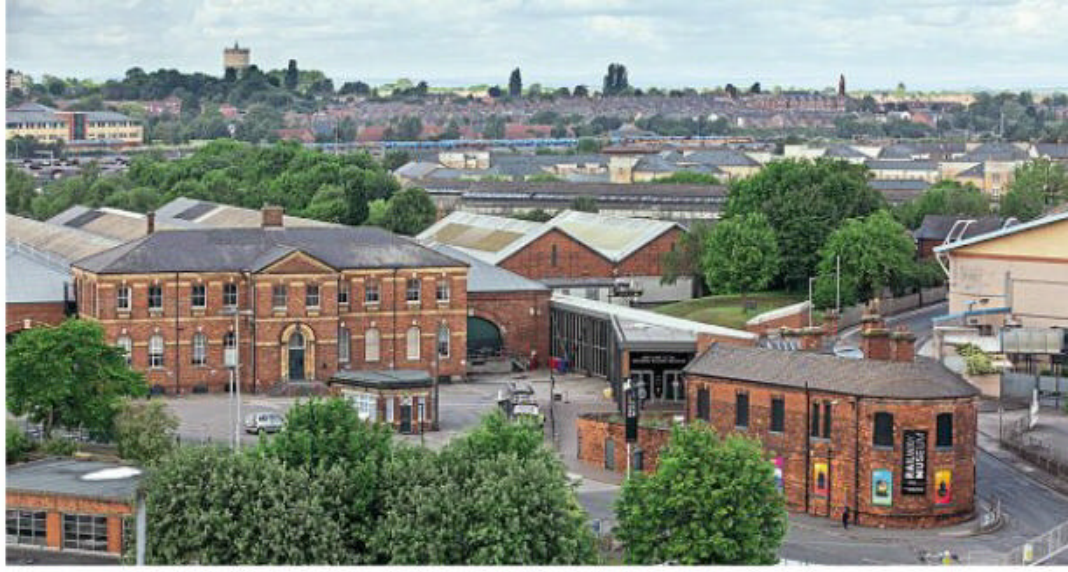


Chasewater Railway Museum curator Barry Bull (centre) holds his Volunteer of the Year Award, with Chris Copp, Staffordshire Museums Service (left) and David Bathurst, chairman of Chasewater's museum Committee. CR

Barry said: "It was a complete surprise, totally unexpected."

The annual awards are run by West Midlands Museum Development, and delivered by Ironbridge Gorge Museum Trust's national portfolio and museum development programmes, with funding from Arts Council England.

Competition to design the National Railway Museum of the future begins



The National railway Museum site as seen from the west side of York station.
RAVAGE PRODUCTIONS, MALCOLM READING CONSULTANTS

By Robin Jones

ARCHITECTS are being invited to compete to produce the design for the new £16.5million Central Hall at the National Railway Museum (NRM) in York.

The scheme is part of the NRM's £55m Vision 2025 masterplan and will link the two 'halves' of the museum, currently divided by Leeman Road, for the first time.

The 4500sq m Central Hall will connect the Great Hall and Station Hall buildings, and provide additional capacity to welcome up to 1.2 million visitors annually to what many regard as the world's finest railway museum.

The venue opened in 1975 and is already one of the most visited museums in the north of England, welcoming 782,000 visitors in 2018/19, and the development will significantly expand available gallery space and improve accessibility.

As well as reception spaces, the Central Hall will include a spectacular 1,000sq m new gallery, which will house future acquisitions and innovative technology, with a focus on the modern rail industry.

The building will be complete and open to the public in 2025 – half a century after the museum first opened and 200 years since the opening of the Stockton & Darlington Railway, the world's first steam-operated public line.

Unifying the site

Vision 2025 comprises eight projects, which will transform the National Railway Museum into a world-class visitor attraction.

These include the Central Hall, extensive landscaping of South Yard, and redisplaying the museum's famous Great Hall.

The development is earmarked as the cultural anchor of the wider York Central development, one of the largest city centre brownfield regeneration projects in the UK, which has already been given outline planning consent, and is now awaiting central government funding.

NRM director Judith McNicol said: "It's hard to overstate the importance of the Central Hall to our future. It will unify our site, sensitively connecting historic railway buildings, and providing a stunning new welcome to our visitors.

"It will also be a place where we can showcase the cutting-edge innovations of today alongside the engineering triumphs of the past; a place where we can inspire the next generation of engineers, scientists, inventors and problem solvers."

The NRM is working with internationally renowned architectural competition specialists Malcolm Reading Consultants.

The competition comes a year after the museum abandoned an earlier search for a design team for a £12m overhaul of its Great Hall after the Heritage Lottery Fund rejected a funding application.

After initial expressions of interest, at least five short-listed teams will move on to stage two, where they will produce design concepts for the new building.

They will also be able to propose enhancements to some of the fabric, infrastructure and organisation of the adjoining buildings, which may be delivered by the appointed project team.

As part of a wide-ranging public engagement process, the NRM will hold an exhibition of designs in February 2020. The winner is expected to be announced next March.

Design teams

The competition is open to international integrated design teams, which include architects, structural, civil and services engineers. The first stage deadline has been set for October 16.

For more details, visit: https://competitions.malcolmreading.com/railwaymuseum

Competition director Malcolm Reading said: "This is a project that promises to transform the museum's physical identity and relaunch it for the next 50 years."

The Science Museum Group is also recruiting a design team for a £3m Wonderlab gallery NRM.

More design contracts are set to be announced over the coming months.

Strabane's one-man railway museum founder Pat Gillespie dies at 102

By Hugh Dougherty

STRABANE'S one-man railway museum founder died on Saturday, August 27, aged 102.

Pat Gillespie, of Railway Road, vowed to keep the memory of the once-bustling busy Strabane station alive, it once having been the junction for the Great Northern Railway of Ireland and the narrow gauge County Donegal Railways (CDR).

He displayed a signal, notices, and a length of track and level crossing lamps in his front garden, just across the road from the site of the station.

His back yard wall also included murals of CDR trains, and it was fitting Strabane District Council chose the pavement outside Pat's home to place a plaque recalling railway days in Strabane.

Speaking in August 2012, Pat said: "I remember the station as a very busy place, and I was very sad when the CDR closed in 1959 and the former GNR line in 1965, and you wouldn't know now that there had once been a station here.

"A whole way of life was wiped out, so I decided to rescue what I could to keep the memory of the railways alive, in what was always a railway town, by displaying my exhibits."

Pat's funeral, at Sacred Heart Church, was attended by his eight children, 27 grandchildren and many townspeople who knew him by his unofficial title: 'The King of Strabane.'

It was understood his family will look for new homes for his collection of local railway relics and artefacts.



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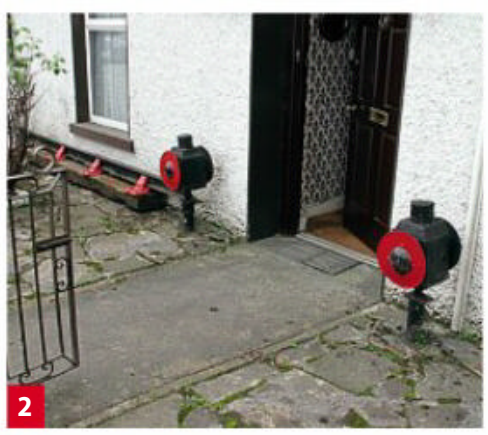
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1: The pavement plaque placed by the council outside Pat's house.
2: Crossing gate lamps and a length of rail, outside Pat's front door.
3. The late Pat Gillespie with some of his front garden exhibits in Railway Road, Strabane.

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departs Sunday 29 December **From £1395**

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Pete Best's USATC S160 2-8-0 No. 2253 *Omaha* outside Grosmont motive power depot. It is destined for a new home on the Dartmouth Steam Railway, having completed running in following overhaul, and has now entered North Yorkshire Moors Railway traffic in time for its biggest-ever gala. NYMR

Returnees make Moorsline's autumn gala the biggest ever

By Robin Jones and Roger Melton

HOPES were rising that BR Standard 9F 2-10-0 No. 92134 could make its heritage-era debut during the North Yorkshire Moors Railway's September 26-29 autumn steam gala.

The showpiece event is set to be the biggest event of its kind in the line's history, with the possibility of at least 15 locomotives in action.

On September 4, a fire was lit inside the firebox of No. 92134 at Grosmont shed for the first time in 53 years as its overhaul approached completion.

Initially, a pallet loaded with a coal sack on the forks of the shed loadall acted as a tender, but the following day, No. 92134 was coupled to its borrowed tender from the Nene Valley Railway's Standard 5MT 4-6-0 No. 73050 *City of Peterborough,* and the long job of rectifying small jobs such as tightening up weeping pipework joints began.

The coal used for the early stages of lighting up was the smokeless fuel ovate 'nuggets' that are now routinely being used at the NYMR to reduce smoke emissions in shed.

For the following week, Heritage Painting applied its usual immaculate finish to No. 92134, with 8in cabside numerals replacing the temporary 10in ones that locomotive had been carrying since the cab was refitted, but which were the incorrect size.

No.92134 was outshopped from Crewe in May 1957, and first allocated to Birmingham's Saltley shed.

In December that year it was transferred to Wellingborough. Its final move was to Birkenhead in April 1965, from where it was withdrawn in December 1966.

No. 92134 arrived at Dai Woodham's Barry scrapyard in June 1967, and left there in December 1980, the 116th locomotive to be bought for preservation from that location; its first of several restoration bases was the NYMR.

After painting, the single-chimneyed 9F was expected to begin running-in turns, initially around Grosmont and later between there and Goathland, before being unleashed over the full length of the line to Pickering in time for its gala debut.

If it appears, it will join guests WR 4-6-0 No. 6990 *Witherslack Hall,* from the Great Central Railway, GWR 4-6-0 No. 6023 *King Edward II,* from Didcot Railway Centre, and A4 No. 60009 *Union of South Africa*.



A fire was lit inside the firebox of BR Standard 9F No. 92134 for the first time in 53 years on September 4, as the locomotive prepares to make its heritage-era debut on the North Yorkshire Moors Railway, at the end of a 39-year restoration project. 92134

NELPG's opening day

Day one of the gala – Thursday, September 26 – will be taken over by North Eastern Locomotive Preservation Group (NELPG) for the first time, with a celebration of its own locomotives, drivers and cleaners.

Highlights include the return of K1 2-6-0 No. 62005 and Lambton No. 29, back after five years out of traffic.

The 0-6-2T is now lined and lettered in Lambton Hetton & Joicey Colliery livery following its successful visit to the recent Peak Rail mixed traffic gala, and will double-head with J27 0-6-0 No. 65894 and Q6 No. 63395.

LNER B1 4-6-0 No. 61264 will also be hauling trains over the Esk Valley line to Whitby.

NYMR general manager Chris Price said: "This is a great extension to the annual steam gala, and showcases the stunning engines that have been carefully restored and cared for by the group."

Peter Best's USATC S160 2-8-0 No. 2258 has been confirmed as staying on the NYMR until the end of September so it can take part in the gala. It was recently named *Omaha* and outshopped in Canadian Pacific maroon (known by the suppliers as 'Burrell Plum') livery, and is destined for the Dartmouth Steam Railway,

No. 2258, which has been out of traffic for 20 years, completed several runs topping-and-tailing with Class 37 No. 37264 prior to the August bank holiday following rectification of some niggling faults revealed by earlier steamings, notably with the air pump and air brake system.

It has now been pronounced fully fit and ready for traffic, running several trouble-free days in late August.

These are exciting times for Peter Best as his other restoration project, NGG16 Garratt No. 130, is also in the final stages of overhaul at Dinas on the Ffestiniog & Welsh Highland Railways.

The 2-6-2+2-6-2T's overhauled boiler is now mounted on the frames and is being fitted with its the crinoline that will support the boiler cladding and cover the ceramic fibre lagging. Parts are now being painted in what has been revealed to be its new livery, the same 'Burrell Plum' as on No. 2258.

September 4 was also an auspicious day for SR S15 4-6-0 No. 30825, which reached the final stage of running-in by making its first trip to Pickering following completion of its overhaul, indicating it too will be available as planned for the gala.

However, the rebuild of Cockerill 0-4-0VBT tram engine *Lucie* was not completed in time, and it is now expected to provide steam heating for Santa special stock at Christmas.

Levisham and Goathland stations will host the gala beer festival, and families can enjoy Peter's Railway – Young Engineers Centre at Pickering, an interactive exhibition for children.

➜ Details of ticket prices are available at www.nymr.co.uk

Happy endings for Bodmin loco shed's prickly finds

By Jimmy James

A PAIR of hedgehogs that found themselves in a highly hostile, oil-rich environment in the form of the Bodmin General engine shed inspection pit have been safety returned to the wild.

In August, the pair made their way into the pit, only to be found there trapped early in the morning when the Bodmin & Wenford Railway's duty driver and fireman arrived to prepare their locomotive for the day's operations.

The pit could never have been a hedgehog-friendly zone, being full of oil, grease, ash, coal dust, clinker, and dirty water.

Chances of survival in it are minimal, but in the case of these two hedgehogs, now christened Olive (Oil) and Coconut (Oil), railway staff reacted quickly and sent them off to the Prickles and Paws Hedgehog Rescue Centre in Cubert, near Newquay.

The centre's Katy South said: "Olive was the first to be admitted. She was a large pregnant female who was submerged in oil and had ingested it as well.

"She was critically ill for several weeks. She had an emergency vets appointment the night she came to us to try to remove the oil from her face and mouth, and she then went on to have multiple 'baths' with us. This is quite a stressful process but necessary to remove the oil and prevent further absorption of the toxins.

"Both hedgehogs were bathed using washing up liquid and a small amount of Swarfega. Both also had days of fluids (saline and an electrolyte solution) injected under the skin to help rehydrate and flush toxins from their systems.

"Sadly, Olive miscarried due to the effects of being submerged in the oil. She gave birth to two very premature hoglets, but suffered complications and haemorrhaged.

"We were able to keep her going, but unfortunately one hoglet was born dead, whilst the second died within a few hours of being born.

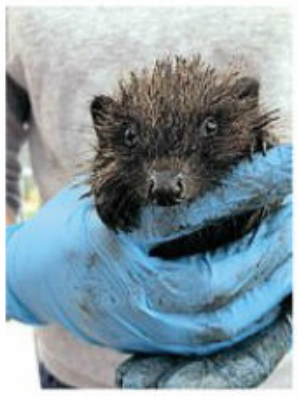
"Due to the toxins neither stood a chance. If they had survived long enough to feed from Olive, the toxins would have been present in her milk and the chance of successfully hand rearing a newborn is very, very slim.

Katy added: "It's a heart-breaking story, but after several weeks of intensive care we were able to get her strength back and once she had completed all her treatments she was released back into the wild.

"She was seen just a few days ago using one of the nest boxes at the site where she was released.

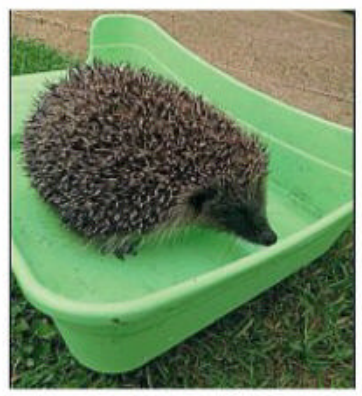


GWR 0-6-0PT No. 412 on shed at Bodmin General, with the inspection pit in the foreground. ALL PHOTOS: JIMMY JAMES/BWR



Left: One of the two hedgehogs that had the wrong sort of bath in the loco shed before they were found.

Right: Well on the way to recovery after her ordeal in a steam shed.



"Coconut was not submerged in the oil for as long, but again had absorbed and ingested some.

"She has responded well to the fluids, and after three baths and a couple of days in one of our incubators she is much stronger.

"She is by no means out of the woods, but she is now eating small amounts, which is positive."

Original West Donegal Railway wagon to be restored

A 138-year-old combined goods and cattle wagon is being restored by County Donegal Railway Restoration Limited (CDRRS) at its Donegal Town base.

The wagon was built by Oldbury in 1881 for the opening of the West Donegal Railway's 3ft-gauge line between Stranorlar and Donegal,

It ran until the closure of the CDR in December 1959, and was rescued by the North West of Ireland Railway Society (NWIRS), whose then chairman Ken Ewing restored the body at his Convoy business premises as a personal project.

He sourced buffer couplings and chains, as well as a set of axle boxes from the Isle of Man Railway, with much of the timber replacement being funded by local business sponsorship.

The intention was to run the completed wagon on the Foyle Valley Railway. The project stalled, however, and the wagon body was donated by NWIRS to the South Donegal Railway Restoration Society, now CDRRS, which sent the survivor to the Railway Preservation Society of Ireland at Whitehead for restoration.

No. 30 was stored in the open at Whitehead, and a lack of funds precluded work starting, so the wagon was brought back to Donegal Town on July 22, and is now stored undercover in the former station goods shed, to allow work to start.

Donegal Railway Heritage Centre manager Niall McCaughan said: "We will be restoring this historic wagon over the winter. Much of the work done initially, nearly 30 years ago, now needs replacing, and we will restore the wagon to its original condition.

"The flaps on the upper body sides would be opened if cattle were being carried, and left closed for general merchandise. This is a very interesting dual-purpose goods wagon of a type once common on Irish railways."



Wagon 30 in Donegal Town goods shed, ready for work to begin, clearly showing the opening flaps. CDRRL

Cleethorpes aiming for southern push after crossing problem is tackled

THE Cleethorpes Coast Light Railway remains on track to extend more than half a mile southwards to The Fitties holiday park, despite currently being banned from using a level crossing.

The 15in-gauge line's co-director John Kerr announced at its 70th anniversary celebrations last summer that a £250,000 investment would take the line past Buck Beck to a new station at The Fitties.

The aim was to provide public transport from the park into the heart of the resort.

However, the railway was ordered this summer not to go beyond the Meridian Road level crossing, leaving only half the line in service.

Passengers were having to cut short their journeys at the Platform Cafe and Signal Box Inn rather than continue to Humberston and Meridian Point.

A railway spokesman said the ban was "due to circumstances", adding, "we're getting it sorted quickly and working to get a resolution so we can get from Kingsway station to Humberston.

"We hope we can soon extend the line to The Fitties, but the matter is ongoing and it is complicated."

Mothballed Anglesey branch "should not become cyclepath" – revivalists

REVIVALIST group Lein Amlwch has disputed claims that the mothballed Anglesey Central Railway should be converted into a dedicated long-distance cycleway and footpath.

The line from Gaerwen Junction on the Bangor to Holyhead line to Amlwch lost its passenger services in 1964, but freight continued until 1993.

Since then, Lein Amlwch has been campaigning for it to be reopened, at least as a heritage railway, and has cleared vegetation from several miles of the line.

However, a rival group, Lon Las Môn, now wants to see the rails lifted and the trackbed converted into a cyclepath.

Lon Las Môn has pointed out that because the line has no level crossing, cyclists and walkers could travel from Malltraeth on the south coast of Anglesey to Amlwch without coming into contact with any road vehicles.

Railway support

Lein Amlwch, however, claims support from both the Welsh Government and Anglesey Council in its bid to see trains return to the branch. In a statement, it said: "Our project is developing the 17½ miles of railway corridor into a distinct community railway that will primarily serve the needs of its communities, but also recognises its heritage and tourist potential.

"The objective is to create a sustainable and accessible transport system linking communities, visitor attractions and strategic road and rail routes in order to boost the area's tourist potential and to act as catalyst for social and economic regeneration in association with emerging commercial enterprises.

"We've been working closely with the teams of Network Rail Infrastructure Limited; specifically the Community Rail Management Team; in granting us a Community Rail Licence in 2011 and entering full negotiations with us in 2015 for a long-term lease, which is now reaching culmination."



The latest National Lottery Heritage Fund grant will finance the restoration of the museum building on the left. DAVID WRIGLEY/ESR

Lottery £58k boost for East Somerset station refurbishment

THE East Somerset Railway (ESR) has scooped £58,700 from the National Lottery Heritage Fund to add a museum at its Cranmore base – while making the station more dementia friendly.

The project focuses on renovating and refurbishing Cranmore's 1858 station building as a museum, reinstating the second half of the Down platform and providing improved access arrangements for dementia sufferers and delivering appropriate staff training.

The completed Down platform will give people with reduced mobility access to the Discovery Centre, provided under the previous Lottery grant and officially opened on March 27. This will be complemented by a renovated and refurbished museum.

Initial renovation and construction work is expected to start in the next three months, with the museum reopening in 2020, followed by events targeted at people living with dementia and their loved ones.

The project will also enable volunteers and staff at the ESR to be trained as 'dementia friends,' which in turn will enable a wider range of visitors to better understand the importance of the railways in the historical development of the local economy in East Somerset.

Fit for the future

Once an important hub for the local quarrying industry, Cranmore closed to passengers in 1963. In 1973, international wildlife artist the late David Shepherd opened part of the ESR as a heritage railway and in 1985 the line finally took over what remained of Cranmore station. Cranmore station's workshops today provide steam locomotive and carriage overhaul/restoration services to other heritage railways.

Dick Masters, chairman of the railway's board of trustees, said: "To secure its future, the ESR is in the process of making some substantial investments, which will fund a whole range of improvements aimed at giving our visitors more to enjoy. We are confident that the project will further enhance the heritage experience we can offer to our visitors, tourists, local people and those people living with dementia or reduced mobility."

Anne Martin, chairman of Shepton Mallet Dementia Action Alliance, said: "This is wonderful news for all who know and love the railway – and those who will know it because of the National Lottery grant. The Mendip DAAs will be ready to help the ESR in whatever way we can to make the project a success."



An artist's impression of the completed Down platform which has the David Shepherd Discovery Centre as its centrepiece. On March 27, David Shepherd's widow, Avril, her daughter Melanie and carer Tina travelled from East Grinstead to share the day and unveil a plaque celebrating his founding of the railway. RICHARD WILLIAMS



The North Yorkshire Moors Railway honoured 10 volunteers as they each celebrated half a century on the line, by running a special Pullman dining train. The 10 were drivers John Hunt, Terry Newman and Chris Cubitt; infrastructure volunteers Neil McDonald, Dave Torbet, Nick Carter, Ian Varty and Nigel Trotter; carriage and wagon team member Ray Sowerby; and North Eastern Locomotive Preservation Group trustee Chris Lawson. NYMR general manager Chris Price said: "It is a privilege to work alongside such a dedicated team. I am truly humbled to have celebrated this special occasion with such amazing people."

Gateshead shunters reunited at Tyneside diesel gala



The North Tyneside Steam Railway's Class 03 No. 03078 with match wagon and Class 08 No. 08915.

THE North Tyneside Steam Railway is to hold a Gateshead TMD-themed diesel gala over the weekend of September 28/29, to celebrate the repaint of home-based Class 03 No. 03078, which left the paint shop in BR blue earlier this year.

The line's other BR shunter, Class 08 No. 08915, will take on the identity of scrapped classmate No. 08802, which was withdrawn from Gateshead TMD in 1983. Completing a trio of ex-Gateshead shunters, Class 03 No. 03079 will be visiting from the Derwent Valley Light Railway.

No. 03079 was outshopped from Doncaster Works in January 1960, less than two weeks after No. 03078 and the pair worked together at Gateshead TMD between 1976-88.

To complement the reunion of the 03s, volunteers are currently converting the railway's four-wheeled flat wagon into a match wagon in order to re-create a once-familiar sight from Newcastle Central. No. 03079's visit to North Tyneside marks the first time the locomotive has left Derwent Valley in 21 years.

It is planned to run 'Driver for a Fiver' experiences during the day on September 28, with an evening photographic charter taking place from 4pm onwards, giving the only opportunity to see the 03s running with the match wagon. Beer trains will run into the evening, allowing passengers to connect with the Tyne and Wear metro at Percy Main for trains to the coast and Newcastle.

September 29 will see an intensive timetable operating on the railway, complemented by demonstration freight trains, a presentation on Gateshead TMD by Dave Dunn, vintage buses and a reunion of ex-Gateshead drivers and staff.

Foundation laid for new Toddington welfare centre

THE foundations have been laid for the new Gloucestershire Warwickshire Railway locomotive department's Toddington welfare centre.

It is an extension of the 1903 goods shed which now acts as the railway's machine shop.

The new facility will have brick facing on the rail side so that it matches the brickwork of the goods shed. The new two-floor building will include an extension of the machine shop on part of the ground floor, as well as clean and 'dirty' changing rooms, showers and toilets, mess facilities and classrooms.

This modern facility is long overdue as the steam locomotive department has used a Mk.1 coach ever since the railway first started operating in the 1980s. It will also tidy up the yard considerably.

It's the first phase of improvements that will in the longer term include a public viewing gallery as well as eventually an extension of the David Page shed.



The wet concrete foundation of the new welfare centre. The end of the current mess coach can be seen to the right of the building. The station is beyond the goods shed to the left. IAN CROWDER

Flying Scotsman's record 85th anniversary celebrated in miniature

A RANGE of models to celebrate the 85th anniversary of *Flying Scotsman* reaching 100mph and a unique display of seven identical 5in gauge Pullman cars will be among special displays at the annual Midlands Model Engineering Exhibition. The event is being held at the Warwickshire Event Centre, near Leamington Spa from October 17-20.

More details can be found at www.midlandsmodelengineering.co.uk

Taunton shuttles now have transatlantic appeal!

By Robin Jones

THE Great Western Railway DMU shuttle services from Taunton to the West Somerset Railway at Bishops Lydeard have been given the thumbs up by enthusiasts from all over the country.

Chris Austin, chairman of the West Somerset Steam Railway Trust, who has been leading the Taunton shuttle project on behalf of WSR plc, has been collecting data which showed that on Saturday, August 31, one passenger came from California, and rode only on the shuttle.

That day, WSR officials received 100 survey forms from shuttle passengers to analyse. Results showed that there were more people from WSR stations taking a trip to Taunton than in previous weeks, with 37% compared with the previous average of 19%. Twice the number of respondents (14%) said that the purpose of their journey was shopping, compared with the previous average of 7%. Long-distance passengers came from York, Wigan, Aberystwyth and St Austell.

On August 31, the proportion of those travelling to the WSR from the national network was smaller at 38%, (previous average 49%), but was still the largest segment of visitors. A total of 25% were just travelling on the shuttle alone.

A total of 43% had heard about the shuttle from websites or social media, but 29% learned of it from the press, several noting it was via the railway press.

In order to boost the shuttles, the WSR has been marketing a list of its 10 stations and their attractions on the lines of '10 good reasons to visit the WSR this month,' based on the fact that it has more stations in the county than Network Rail does.

The final 2019 Saturday shuttle will convey passengers to the 'Country Railway' themed October 3-6 autumn steam gala, which will feature the return of GWR 0-6-0PT No. 6412 from the West Somerset Railway and its 'near numbersake' sister No. 4612 from the Bodmin & Wenford Railway, running alongside a third pannier, No. 7752 from Tyseley. A fourth pannier was being sought in No. 7714 from the Severn Valley, but not confirmed.

Fresh bid to save railway institute

A NEW Community Interest Company has been formed to save Shildon Railway Institute, the oldest of its kind in the world.

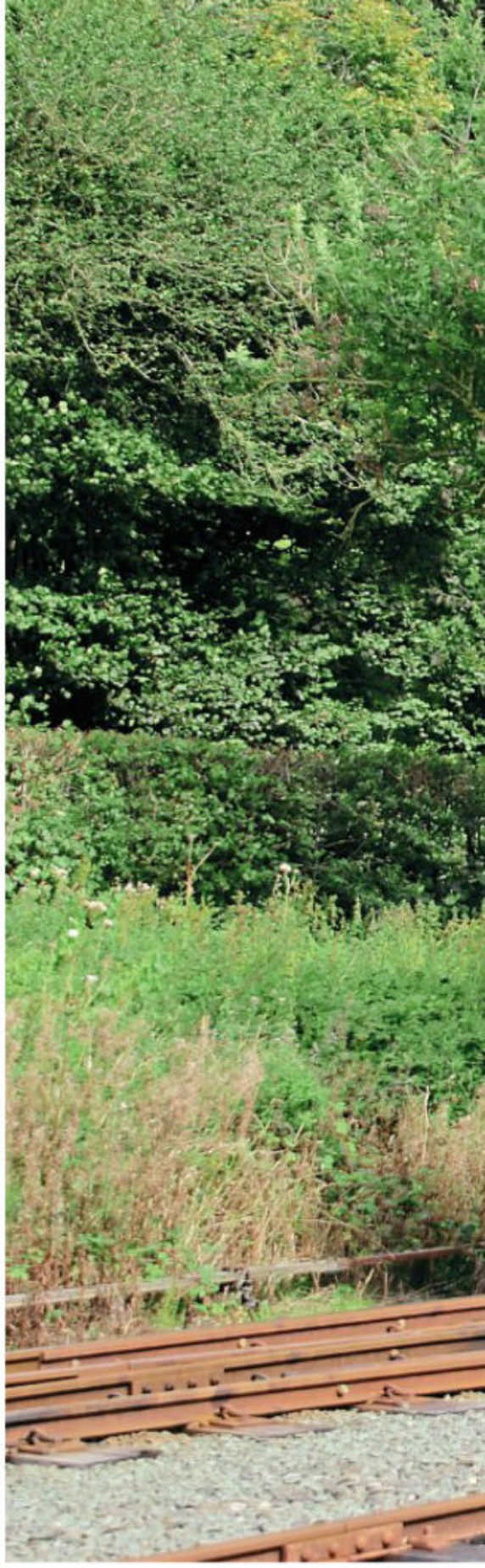
Fred Langley, son of the institute's former treasurer John Langley, is one of three directors of the Shildon Heritage Alliance CIC which was set up with it on the brink of closure.

The CIC has devised a five-year plan which includes renovations to the building.

The institute was founded in 1833 and moved into its present building in 1911. Its next event will be a reunion of Shildon Railway workers on October 5.



Popular performer: Beyer Peacock 0-6-0T No. 823 *Countess* climbs to Coppice Lane level crossing with its train of Zillertalbahn and replica original WLLR carriages. GARETH EVANS



Zillertal performs at Welshpool gala!

By Gareth Evans

IT WAS a close run affair but thanks to the herculean efforts of the mechanical engineering department members, the star of the show performed in style – visiting Austrian 0-6-2T *Zillertal* worked scheduled passenger trains at the Welshpool & Llanfair Railway's (WLLR) August 30-September 1 gala.

As previously reported, the 1900-built Krauss locomotive is on hire to the WLLR for two years from the Zillertalbahn. After arrival at the WLLR on August 13, the recently overhauled 0-6-2T had to be dismantled and its boiler lifted from the frames for a test to satisfy UK boiler insurance requirements. Remarkably, two permanent staff supported by a host of volunteers, completed the work in less than two weeks.

Zillertal was first steamed at Llanfair on August 27, and following test runs and some extra work to its regulator, it passed its boiler test on the morning of August 30, the opening day of the gala.

The locomotive worked its first passenger trains later that day and ran with no significant issues throughout the three-day event, at which it proved a star – especially when paired with the Austrian open-balcony carriages donated to the WLLR by the Zillertalbahn in 1968. Many enthusiasts attended the gala to see *Zillertal* in action – and the WLLR team received many comments praising their efforts in bringing the U-class to mid Wales.

Zillertal will now undergo some minor modifications over the winter, while more WLLR crews will be trained to use it. The locomotive is set to become a regular member of the fleet during the 2020 season.



Kerr Stuart 0-6-2T No. 12 *Joan* is seen at Llanfair with its train of Sierra Leone Railway carriages. GARETH EVANS

Museum beginnings

Another highlight of the gala was the opening of Llanfair Connections, the first phase of the railway's visitor centre project at Llanfair Caereinion station. Officially opened by WLLR president, the Earl of Powis, on August 30, the 'pop-up museum' is the initial phase of a visitor centre project that the railway is creating in industrial units it purchased in 2016.

The facility is also the first project to be opened as part of the railway's major developments programme that will also see significant improvements to the tearoom and shop at Llanfair.

A small team of volunteers has been creating the facility, led by WLLR trustee Helen Ashby, who was formerly part of the management team at the National Railway Museum.

Helen told *Heritage Railway*: "Llanfair Connections tells the story of the WLLR and highlights its influence across the world, ranging from Antigua in the Caribbean to Taiwan in the Far East and Australia. This is the first phase of creating a museum. We want to make each

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The star of the show: Krauss-built 0-6-2T *Zillertal* departs Welshpool Raven Square station on September 1. GARETH EVANS

end of the line a destination – hence exhibits at the expanding exhibition shed in Welshpool will include the heritage wagons. The WLLR is fortunate to have a large collection of artefacts – we want to display them.

"The driving force behind Llanfair Connections has been volunteer William Bickers-Jones and the design of the displays has been created by student volunteer Oliver Edwards.

"Plans are currently being finalised regarding future opening times to the public – but we hope to do so on event days. We welcome offers of assistance to help steward it."

Other attractions at Llanfair during the gala included escorted workshop tours, a real ale bar and steam road vehicles.

A model exhibition was held at Welshpool, featuring layouts from 009 to live steam 16mm scale. Next year's model show is expected to be larger, taking advantage of the increased covered space created by the shed's extension, which should be complete by then.

Acting as a 'gate guardian' for the model show was Bagnall 0-4-4-T *Monarch*, which was displayed outside.



Adorned with its illuminated headlamps and Austrian flags, *Zillertal* looked the part alongside *Joan* during the traditional Saturday night photo and social event at Llanfair Caereinion. ANDREW CHARMAN/WLLR



Privately-owned Manning Wardle 0-6-2T *Chevallier* was displayed inside Llanfair Caereinion workshop. The chassis in the foreground is under overhaul 0-8-0T *Sir Drefaldwyn* – the cylinders can be seen on the left awaiting refitting. The powerful locomotive is expected to return to action in 2020. GARETH EVANS

Where a GWR Sentinel met *Flying Scotsman*!

By Keith Lobley



Malmesbury branch veteran Sentinel No. 6515 heads towards Cholsey on August 26. DR TONY STEAD

JUST before the August bank holiday weekend, Sentinel four-wheeled geared tank locomotive No. 6515 *Isebrook* moved from the Buckinghamshire Railway Centre to the Cholsey & Wallingford Railway (CWR) for a few weeks "holiday'. As owner Peter Mitchell said: "It will give it a chance to stretch its legs"!

Not exactly a locomotive type associated with the Swindon empire of Kings, Castles, panniers and prairies, No. 6515 was delivered new to the GWR in 1926, and was initially based at Swindon for use on the Malmesbury branch, before being sent to Brentford goods yard.

It was equipped to work vacuum brakes and to provide steam heat for passenger trains. Initial trials were not successful, and it was returned to Sentinel for modifications, including fitting a larger boiler, spending two years as the Shrewsbury works shunter.

Passenger workings on the nearby Shropshire & Montgomeryshire Railway and a return to the Malmesbury branch were followed by trials on the LMS at Shrewsbury.

Subsequent career

No. 6515 spent 1929-34 again as the Sentinel works shunter, before being sold to Thomas E Grey Ltd of Burton Latimer, Northamptonshire, where it was given the number 2 and named *Isebrook*.

It was withdrawn in 1958, and the boiler and parts of the engine were removed. Afterwards it was used as a brake van. In 1972, it was condemned but bought for preservation and moved to Quainton Road.

Restoration took seven years and included fitting a reconditioned boiler and engine, and was resteamed on August 26, 1979. Two years later, vacuum brake equipment was refitted for passenger train working.

Isebrook has visited several heritage lines and returned to steam last September following overhaul after six years out of action.

Affectionately known as 'The Bunk', the Cholsey and Wallingford Railway runs through the South Oxfordshire countryside between the historic town of Wallingford and the village of Cholsey, where it terminates in the bay platform adjacent to modern-day Great Western Railway trains going to Didcot and Oxford or Reading and Paddington. Indeed, through ticketing to Wallingford is available from Great Western stations – but ask for a Wally Rover, not Wallingford Rover, as GWR computers cannot cope with 17 characters and so it was abbreviated!

On August 25, *Isebrook* found itself at Cholsey as none other than A3 Pacific No. 60103 *Flying Scotsman* passed alongside while heading a Steam Dreams circular tour from Oxford Parkway.

Wallingford interest

Wallingford has several medieval buildings, including the Town Hall, castle remains within attractive gardens and a museum. The town sits on the banks of the River Thames and there are some easy scenic walks readily available. St Mary's church in Cholsey is the resting place of Agatha Christie, although she lived in Winterbrook which is really part of Wallingford.

The railway operates with three Class 08 diesels including the two iconic ex-Guinness locomotives *Lion* and *Unicorn* from Dublin's Park Royal Brewery. These, of course, are unique with the black livery and large golden harp logos. The remaining 08, D3120, is believed to be the oldest operating example in the UK. These locomotives are usually supplemented with a steam locomotive, currently No. 6515, but the Darlington Railway Preservation society's Peckett W class 0-4-0ST No. 2142 of 1953 *Northern Gas Board No. 1*, is likely to return to Wallingford shortly following overhaul.

Two big infrastructure projects are currently underway on the CWR. The Victorian canopy from Maidenhead, a victim of Crossrail, has now been fully restored and erection of this structure should commence later this year. When finished, this project is likely to have cost in excess of £700,000 and has been funded by the Railway Heritage Trust.

Next year it is hoped to relocate another Victorian structure, Stoke Canon signalbox, to Wallingford. These two buildings will transform Wallingford station and, along with the recently-acquired Oxford signal gantry, will greatly enhance the feeling of being an Edwardian, or even Victorian, station.



Above: *Isebrook* at Cholsey carrying 'The Bunk' headboard with owner/ driver Peter Mitchell standing with his back to the camera. DR TONY STEAD



Right: *Isebook* stands at the Wallingford terminus of the 2½-mile heritage line on August 22. DR TONY STEAD

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LNER A3 Pacific No. 60103 *Flying Scotsman* passes through Cholsey station with a Steam Dreams circular tour from Oxford Parkway on August 25, while Sentinel No. 6515 *Isebrook* waits in the bay platform with its Cholsey & Wallingford Railway service train. DR TONY STEAD

MID HANTS RAILWAY
WATERCRESS LINE

General Manager

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Based at: **Alresford**

The Mid Hants Railway (MHR), popularly known as The Watercress Line has been in operation for more than 40 years and is currently one of the country's leading heritage railways. Based in the market town of Alresford in Hampshire, the MHR operates a 10-mile railway, with intermediate stations at Ropley – home of our extensive locomotive engineering works, and Medstead & Four Marks, culminating at Alton, which offers main line train connections to London. The railway is one of the top visitor attractions in Hampshire.

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- Take a lead role in the development and implementation of strategies to safeguard the MHR's position as a major tourist attraction and secure its long-term commercial sustainability;
- Identify and secure additional revenue streams for the railway, through active marketing and stakeholder relations;
- Uphold safe working practices across the business and ensure compliance with health and safety regulations;
- Actively promote collaboration within and across departments through effective communication and optimise the contribution of the volunteer workforce

The Candidate:

- An extensive track record of business and financial management, ideally with experience of the heritage and tourism industry and/or working with charitable organisations;
- A team player who is able to build relationships and motivate across all levels;
- A sound knowledge of Health and Safety regulations and their application in a safety critical working environment; and
- A strong communicator, with extensive experience of stakeholder engagement and hands on people management. Excellent written and oral presentation skills.

Further information on the railway can be found on our website
www.watercressline.co.uk

To apply or to request an informal discussion please contact Alison Houghton at mhr.mpd.cleaners@gmail.com. ***Applications require a cv and covering letter.***

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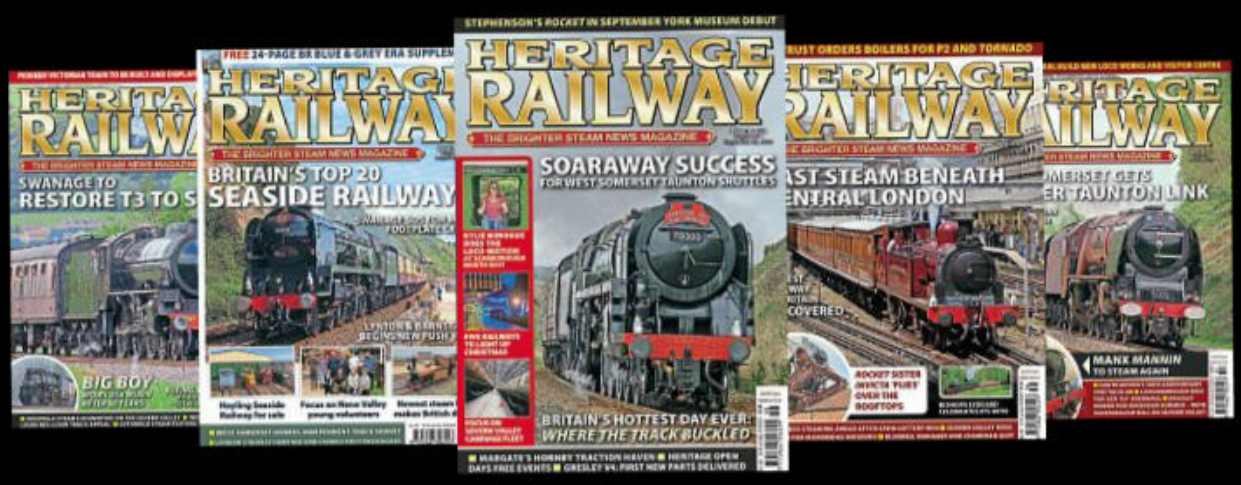

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Vintage Trains flagship WR 4-6-0 No. 7029 *Clun Castle* headed an August 24 excursion from Birmingham, Solihull and Worcester to Gloucester's unique 'blast from the past' retro festival. The event is part of the Gloucester Summer of Music, Arts and Culture season, with visitors invited to attend in period costume. It was also a homecoming for *Clun Castle* as Gloucester Horton Road engine shed was its final home in BR days before withdrawal, and its subsequent purchase and move to Tyseley. ROBIN COOMBES/VT

‘Business boom’ will follow Strathspey arrival at Grantown

By Robin Jones

PLANS to extend the Strathspey Railway into its long-term goal of Grantown-on-Spey have been unveiled to the public by the line’s officials.

It is claimed the £10 million cost of the two-mile extension will be small in comparison with the economic benefits the Aviemore-based heritage line will bring to Grantown and its businesses.

The R2G (Rails to Grantown) blueprint for the final push into the town, giving the line a ‘somewhere-to-somewhere’ purposeful destination, were unveiled to the public at the town’s former library over August 30-31.

The Strathspey Railway Charitable Trust plans showed the proposed route of the extension from Broomhill via Dulnain Bridge to the new terminus at Dulicht.

The original Grantown station was bought by the local authority to make way for an industrial estate, but the planned replacement station will be closer to the town’s historical square and retail centre. The presentation included illustrations of the two-platform station and its proposed buildings in the horse field opposite Grantown caravan park.

Discussions about completing this final link are continuing with landowners, including the Muckrach, Seafield and Ballintomb estates and the Highland Council.

‘Whisky road’

It has been indicated the Scottish Government will provide £5.5million towards the cost of the £7.5million level crossing of the A95 Aviemore-Keith ‘whisky road’ at Gaich, the biggest obstacle in the railway reaching Grantown again.

Trust chairman John Yule said: “We are moving forward and we are getting very good co-operation from them all, but we need to get contracts agreed that the Scottish Government will be happy with,” he said.

“The Scottish Government is focusing spend on infrastructure as they see a direct benefit to the economy. We have seen it recently with the announcement of the Leven railway line in Fife, which is in a depressed area. They are talking about £75million, which will largely come from the Scottish Government for that railway.”

He added: “Now we are talking about £10 million in total to get our railway into Grantown with roughly half of that being raised by ourselves.

“Everyone sees this project as being the biggest economic driver being on the go for Grantown – the community initiative and business partnership and community themselves.”

Officials have been working on the line’s Transport and Works (Scotland) (TAWS) application for the statutory powers from the Scottish Government to build the extension. The application will include an environmental study, which will cost thousands of pounds to complete.

Lady Judy McAlpine, widow of multi-millionaire enthusiast and *Flying Scotsman* saviour Sir William McAlpine, and Lady Jean Macpherson of Biallid, have been appointed as the inaugural patrons of the trust (*HR* 257).

Lady MacPherson’s husband Colonel Sir Ronald Thomas Stewart Macpherson was said to be the most highly-decorated surviving Second World War army officer when he died five years ago aged 94.

Potential

Trust vice chairman Ian Stanworth claims passenger numbers will rise from 85,000 to more than 100,000 per year once the line reaches Grantown.

As with the Gloucestershire Warwickshire Railway’s opening of its extension to the ‘purposeful’ destination of Broadway, visitor numbers to the archetypal Cotswold tourist magnet have shot up.

The original track was lifted and the line’s infrastructure removed, despite the Aviemore to Grantown section having been recommended for retention in the Beeching Inquiry in 1964.

There was also backing for a plan to retain it as a tourist facility – firstly, by the Cairngorms Working Group in 1967, and then by the Highland and Island Development Board, with the support of the Secretary of State for Scotland, in 1968/69.

Britain’s oldest funicular to mark 125th birthday in 2020

By Hugh Dougherty

THE Shipley Glen Tramway (SGT) is busy planning events to mark 125 years of trams rumbling up and down its line .

The celebrations in 2020 at Britain’s oldest funicular railway will mark its official opening to the public, which took place on May 19, 1895, after trial running the day before.

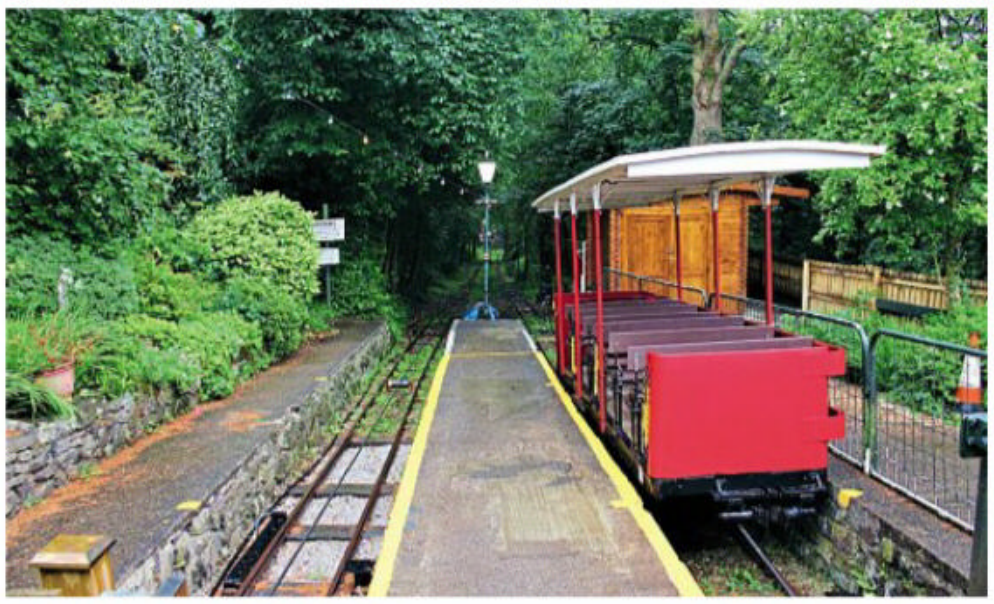
The volunteer-run, electrically driven line is owned by Bradford Council and leased to the Friends of Shipley Glen Tramway.

The SGT is planning to build on the success of its museum, at the line’s bottom station, with a series of events and improvements to the 440-yard-long, 20in-gauge double track line.

The museum reopened in 2017 after a £27,000 refurbishment.

Treasurer Richard Freeman said: “We will be using the celebrations to further raise our profile. Although we carried 27,119 passengers last year, we are short of volunteers, and we’d like many more people to come forward and join us as greeters, dispatchers, maintenance workers and drivers, to keep our wheels running.

“The 125th anniversary offers the ideal opportunity for news volunteers to come on board.”



Waiting for the off: Shipley Glen tram at the upper station.

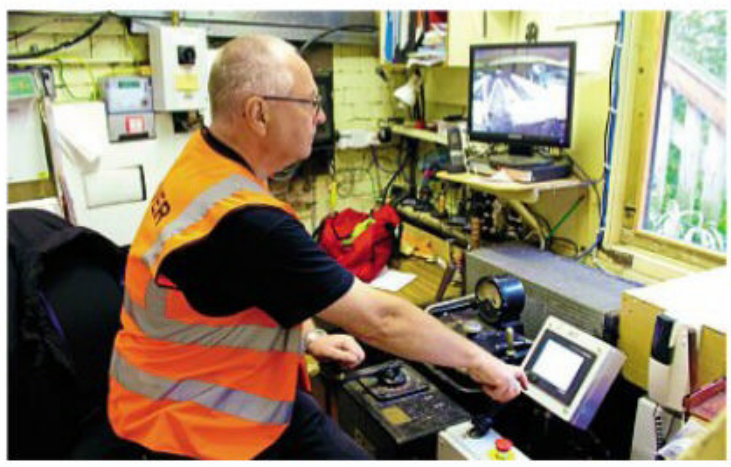
The tramway is situated close to historic Salt’s Mill at Saltaire, and is much valued by the community and local tourism providers. It was built by entrepreneur and showman Sam Wilson, who wanted to take mill workers, on their day off, up to the fair ground and thrill rides that were then at the top of Shipley Glen.

Volunteers have run the line since 2001, after it was rescued by the Bradford Trolleybus Society, and plan to rebuild the top station, where its popular Victorian sweet shop is also to be extended as part of the 125th anniversary celebrations.

For details of the 125th anniversary events being organised by special events co-ordinator Christopher Bush, visit: www.shipleyglentramway.co.uk



Link with 125 years ago: A replica of the first trams, uncovered and with tiered seating, on display outside the line’s bottom station museum.



Driving the tramway forward in its 125th year: the trams are driven from the top station.



The Bideford Railway Station Group's Hibberd Planet diesel is seen at the August 25 gala day. BRHC

Trains to run at Bideford station again

PASSENGER rides at the LSWR's Bideford station are set to resume in 2020. After several years of inactivity, the past two years has seen a total restoration of the site, which is now Bideford Railway Heritage Centre.

The railway from Barnstaple to Torrington closed to passengers in 1965, but continued as a freight service until 1982 during which time many passenger specials ran along the line.

The line was dismantled in 1984 and purchased by Devon County Council, which converted the entire line into the Tarka Trail long-distance footpath and cycleway.

The Bideford Railway Station Group secured a lease on the Bideford site in 1989 and over the past three decades has relaid double track, rebuilt the signalbox and today Mk1 carriage No. 4489 serves refreshments.

This year marks the 30th anniversary of railway preservation commencing at Bideford. A new £50,000 interactive museum was opened earlier in the year inside a SR parcels van No. S2142S, funded by the Heritage Lottery Fund.

The group's Hibberd Planet 0-4-0 diesel is now operational and following the restoration of the BR 20T brake van on site, it is planned to resume passenger rides over the 300 yards of relaid track next year.



Inside the new museum at Bideford station. BRHC

The centre held a gala day on August 25 when the public were able to visit the cab of the locomotive. Stalls, model railways and exhibitions made it a highly successful day for the group.

IN BRIEF

➜ **DYER & Butler, the company contracted to refurbish Network Rail's St Erth railway station made a generous donation of surplus material including sleepers, buffers stops and the original platform coping to the Helston Railway.**

➜ BR Mk.1 First Open carriage No. 3072 has been returned to the Great Central Railway from overhaul at Rampart Engineering at Barrow Hill. The 1955-built vehicle will require need fitting out and repainting at Rothley following after which it will be available to re-enter service.

➜ **THE East Somerset Railway will be offering 'Driver for a Tenner' over the weekend of October 26-27. Operated on a 'first come, first served' basis, visitors are welcome to take the controls of a steam locomotive in the sidings by the line's engine shed.**

➜ CLASS 03 shunter No. 03901 has arrived on loan to the Somerset & Dorset Heritage Railway's Midsomer Norton base from its home at Peak Rail's Rowsley site. It is a temporary replacement for resident industrial shunter D1120, which is at the Pete Briddon Industrial Railway Specialist workshops for vacuum brakes to be fitted. No 03901 will be used for drive experience days in September and October.

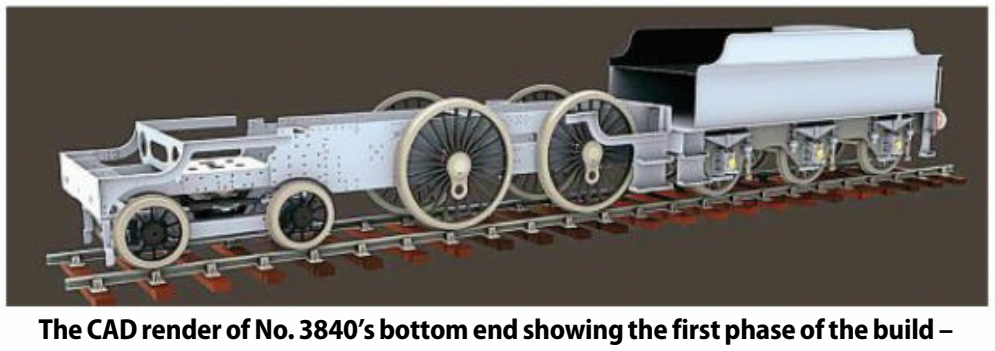
➜ **PEMBROKESHIRE Model Engineers has signed a new lease on its half-mile of 5in and 3½in gauge track on land situated behind the Meads Sports Centre in Milford Haven with the county council, giving security of tenure for the next six years.**

Extension frames for County of Montgomery ordered

THE Churchward County Trust (CCT) has ordered the front-end extension frames for new-build GWR County 4-4-0 No. 3840 *County of Montgomery* from Roach Precision in Brierley Hill, West Midlands.

In typical Churchward practice, the American-style extension frames will form approximately the front third of No. 3840's frame assembly, and in due course will carry the locomotive's cylinders and support the bogie. They will be riveted to the main frame plates that were cut in November last year at a point just behind the bear bogie wheelset.

On the original Churchward Counties, the extension frames were made of forged steel, but thanks to modern CNC manufacturing techniques No. 3840's will be machined from solid steel at a cost of around £13,000. Roach Precision recently produced a replacement set GWR extension frames for Dinmore Manor Locomotive Ltd's 2-8-0 No. 3850, currently under overhaul at the Gloucestershire Warwickshire Railway.



The CAD render of No. 3840's bottom end showing the first phase of the build – main frames, extension frames, wheelsets and bogie. CCT

CCT chairman Gary Boyd-Hope said: "The extension frames represent the last major part of the main frames jigsaw for *County of Montgomery*, with the exception of the dragbox. Placing the order for them puts us one step closer to having a completed frame assembly for the locomotive, the erection of which will be carried out at Tyseley Locomotive Works.

"We have already had the main frames and various stretcher plates cut and delivered to Tyseley, and have agreed with the works that it will source and provide the numerous angles and brackets required to turn the myriad plates into a locomotive's frames."

Subject to any unforeseen problems, the CCT hopes that the extension frames will be delivered to Tyseley towards the end of this year.

"It certainly marks another milestone for the CCT, but it also means that we must step up our fundraising and attract more supporters to the project. Having multiple components is one thing, but they will only become a set of frames if we can pay Tyseley to erect them," added Gary.

"Hopefully this order will show potential supporters, who may have been waiting to see if we're serious before donating, that we mean business and can deliver a recreated County 4-4-0 with the right support."

Full details on how to support the project can be found at www.churchwardcounty.org.uk or by writing to Churchward County Trust, PO Box 10633, Leicester, LE9 0DU.

Are any BR Standard parts hidden in your garage or garden?

By Robin Jones

A NATIONWIDE 'check your garages and storeooms' plea has been sounded by Toddington Standard Locomotive Limited (TSLL) – the owner and restorer of BR Standard 4 2-6-0 No. 76077 – which is searching for major components that 'went missing' after the engine was withdrawn from BR service.

Engineering director Andrew Meredith, who is leading the restoration of the engine for eventual use on the Gloucestershire Warwickshire Railway, said: "When 76077 was withdrawn in 1967, it was sent to Barry scrapyard in South Wales, where it remained for two decades before rescue in 1987.

"While we are fortunate that we have many components – valve gear, for example – there are others that have disappeared, possibly for other locomotive restorations or commandeered as 'spares'.

"Some of these parts may still be in existence, or there are components from other Standard classes which may be compatible with No. 76077 that survive. Parts do turn up from time to time. For example, we have been offered a regulator handle that was in someone's garage that might even have originally been fitted to our locomotive!"

Because No. 76077 was relatively late leaving Barry (the 186th out of 213 engines to be saved from Dai Woodham's yard, and the last of its class to leave) a large number of components, including the smokebox door and ring and chimney disappeared before it was bought and delivered to Toddington in 1987.

TSLL would like to know what happened to the original 4ft-diameter smokebox door. Shortly after arrival at Toddington, a brand-new smokebox door and door ring were manufactured, but these too have gone missing.

Common parts

The design is common to other engines such as LMS Classes 5 and 8F, as well as other Class 4 Standard engines, so if there is a spare door and ring of the right type TSLL would love to know. If not, any Standard smokebox furniture such as the centre boss, handrail or hinges would be welcome.

Also, No. 76077 arrived at Barry scrapyard with a BR standard reversing gearbox, but this was removed. Any reverser components, including the reverser handle and indicator drum, would be welcomed by the group.

The BR Standard chimney was also removed at Barry. Although a pattern exists and a new one could be manufactured, the restorers consider it would be far better to use the original. The chimney was unique to the Standard 4 2-6-0s and is 2ft 2in diameter at the top.

Furthermore, the Standard 4 2-6-0s were originally fitted with two 10X live steam injectors, and TSLL already has one.

The group, however, would like to also fit an 8x injector of the type fitted to many GWR designs, and which would be entirely suitable for heritage railway running. Also, the 'foot valves' that are fitted between the injector and the overflow pipes are missing.

BR reversers were connected to the valve gear linkage by a shaft with universal joints at each end, and was identified on drawings as a 'transmission tube'.

The group is wondering if there is such a component still surviving or parts that would enable a new one to be made?

The reversing screw and nut also vanished while the engine was languishing at Barry. TSLL would like to know what happened to these parts and if any similar surplus ones survive.

The screw and nut are held in a frame (which TSLL has) attached to the left-hand side of the locomotive and connected to the forward end of the transmission shaft.

This component converts the rotating movement of the reverser to vertical travel that adjusts the position of the reversing die block in the expansion link, enabling the valve travel to be adjusted by the reverser.

No grudges

Andrew added: "Of course we hold no grudges against anyone who acquired additional spare parts when they purchased a locomotive from Barry scrapyard – it was a common practice.

"And because our engine was a relatively late departure, it was subject to 'component raids' over the years – and that included the tender (which is now running behind sister No. 76017).

"For historical reasons it would be good to know what happened to the missing parts and, if they are stored unused, we would love to put them to their proper use!"

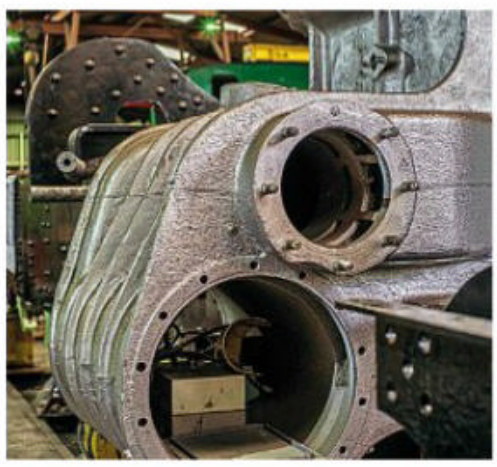
➜ If anyone has any missing parts from No. 76077 or universal components which could be used in its rebuild, they are invited to contact TSLL at info@standard76077.com or visit www.standard76077.com for more information.

GWS 'Night Owl' project needs £10k for cylinders

THE Great Western Society's project to build new GWR Churchward 47XX 'Night Owl' 2-8-0 No. 4709 has made an appeal for funds to cast new cylinders.

The cylinder block is pictured attached to the chassis inside the Llangollen Railway workshops. It came from the 'Barry 10' 2-8-0 No 2861, which was broken up for parts in 2014, with the frames scrapped.

The cylinder and saddle block, along with several other components, are being used in the construction of No. 4709. The cylinder block is currently being used to set up No. 4709's frames, and to assist in general alignment and positioning of the running board brackets.



A contract for the cutting and supply of the entire set of running boards was recently signed.

A new cylinder design has been prepared and submitted to the project's Vehicle Acceptance Body for approval to manufacture.

It is planned to make two identical patterns and cast the cylinders as soon as possible.

Once machined, the left- and right-hand castings will be joined and then replace No. 2861's casting, allowing final alignment and fitting of the axleboxes, bringing the chassis a significant step nearer to completion, which could be in December.

The project has most of the required funds, but another £10,000 is needed for this part of the scheme.

➜ Anyone who would like to contribute is invited to visit http://4709.org.uk



Say it with flowers: continuing a tradition that began 30 years ago, a flower train, beautifully decorated by Tywyn Gardening Club, made its annual summer evening excursion on the Talyllyn Railway on August 13, running to Abergynolwyn station, where Côr Meibion Bro Dysynni (Bro Dysynni Male Voice Choir) sang. The club's floral arrangements were carried on the front of No. 2 *Dolgoch* and fixed to the brass door handles of each carriage. Pictured are club members, from left, Myra Dods, Hilary Harrison, Susanne Yeomans, chairman Margaret Evans (front) and Mia Rickard, in national costume. TR



SECR 0-6-0 O1 No. 65 climbs Freshfield Bank with the 12.45pm 'Golden Arrow' from Sheffield Park on the Bluebell Railway on September 9. NICK GILLIAM

Swindon & Cricklade twice hit by vandals

THE Swindon & Cricklade Railway has become the latest target of mid-summer mindless vandalism after thousands of pounds worth of damage was caused in two separate attacks.

On Tuesday, August 13, three vehicles were attacked, with six carriage windows on the under-restoration Moonraker dining coach smashed.

A window on a carriage used for school holidays activities was damaged, as well as one on the line's recently acquired exhibition coach. The Class 119 DMU was hit, too.

East Lancs hit

Four days later, two more vehicles were damaged overnight. A Mk.1 Brake coach awaiting restoration had most of its windows broken, while another was smashed in a track maintenance vehicle. Police have appealed for information.

Meanwhile, following the breaking of a window in the East Lancashire Railway's disabled coach by trespassing youths on July 26, organisers of the line's popular Wizard Academy event have made a £300 donation to rectify the damage.

First two panels to be relaid at Maud Junction

NETWORK Rail has donated a pair of concrete-sleepered track panels to Aberdeenshire's Maud Railway Museum.

Local firms responded to an appeal for help to transport the panels from Crewe. Aberdeen haulier ARR Craib Transport Limited transported the panels to company Savoch Plant Hire near Lonmay. The firm will take the track to the museum and lay it.

The 30ft panels will be used to better highlight items of the museum's rolling stock, including the wagon used to transport convicts from Peterhead Prison to Stirlinghill Quarry at Boddam, and there are hopes to add a passenger carriage.

Expansion plans

The museum has been set up in the former Maud Junction station and is manned by Great North of Scotland Railway Association volunteers on selected weekends. The remains of the turntable can be seen, along with the cattle dock platforms.

The museum has a five-year plan to rebuild Maud to Auchnagatt line to run as a heritage railway, and sees the arrival of the panels as a physical start.

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Tornado back on the Valley

PEPPERCORN A1 Pacific No. 60163 *Tornado* is to make a return visit to the Severn Valley Railway this autumn.

The 101mph heritage era record setter will run on the line on November 9, 10, 17 and 24, hauling two services out of Kidderminster and two journeys out of Bridgnorth each day.

***Tornado* will haul the line's LNER teak set of carriages and passengers can ride in them at normal SVR fares. Seats can also be reserved with advanced booking. There will be the chance to upgrade to first class too, complete with a luxury hamper of local food.**

The iconic main line performer last appeared on the line in 2016, at a special gala alongside A3 No. 60103 *Flying Scotsman,* the pair attracting bumper crowds.

Crowd puller

***Tornado*, the construction of which began 25 years ago, is again expected to bring bumper crowds to the line thanks to its starring role in the Paddington 2 movie released two years ago.**

SVR's events co-ordinator Lewis Maddox, said: "*Tornado* was a huge hit when it last appeared here – tickets to ride behind it sold fast and our platforms were packed with people trying to catch a glimpse of it in all its glory.

"We're expecting the same response this time around, and to make sure as many people as possible can come and enjoy it, we're keeping our fares at the standard rates."

Standard fares are adult/senior from £19.80, children from £13 and family £49.

Tickets will be available to book on www.svr.co.uk or by calling 01562 757900.

Earlier, Bluebell Railway-based Q 0-6-0 No. 30541 was a late addition to the September 19-22 autumn steam gala, joining fellow guests No. 34092 *City of Wells* and BR Standard 4MT No. 76017.

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No. 35006 *Peninsular & Oriental SN Co* makes a spirited departure from Winchcombe on September 3. IAN CROWDER

Veteran seaman reboards a Merchant Navy in Toddington

By Ian Crowder

THE centenary of the Merchant Navy was celebrated in style by the Gloucestershire Warwickshire Railway on September 3.

Bulleid Merchant Navy Pacific No. 35006 *Peninsular & Oriental SN Co* was specially decorated with a spectacular and appropriate headboard, union and Red Ensign flags in a 'V' formation on the centre lamp bracket and magnetic Red Ensigns on the smoke deflectors.

Origins of the name

The title Navy was conferred upon Britain's merchant fleet on September 15, 1919, following the sacrifices made by merchant shipping and seamen during the First World War.

The term Merchant Navy has proudly been adopted by merchant ships ever since and which have flown the Red Ensign. Britain's merchant fleet was called upon again in World War Two when in no small measure the Merchant Navy kept the UK supplied and provided an invaluable role in troop and armaments movements – again with considerable sacrifice of both ships, seafarers and both civilians and service personnel.

Indeed, September 3 was chosen for the railway's commemorative event as it was when just 10 hours into the conflict on September 3, 1939, that the transatlantic liner *SS Athenia* was sunk by a German U-Boat with the loss of 117 lives of crew and civilians, including children and US citizens.

It was the first marine casualty of the war and indeed, the first of many civil ships lost during the conflict.

A short commemoration was held at Toddington, including a minute's silence in memory of those who had lost their lives at sea, witnessed by former Merchant seamen, members and shareholders of the locomotive and others who came for the occasion.

Among the visitors was 80-year-old Tony Stickler who came with his family from Cali in Wiltshire. He had served as a marine engineer and invited on to the footplate of *'P&O'* was immediately familiar with the controls.

"We had much the same on steam powered vessels," he commented. "Except of course, you couldn't see where you were going down in the engine room!"

His daughter was moved to tears by the commemoration and seeing her father's delight at making his acquaintance with a locomotive that has such strong associations with merchant seafaring.

The Pacific departed Toddington at 10am and carried its Merchant Navy regalia throughout the day.

When the SR named the class of 30 locomotives after shipping lines that had gone above and beyond in wartime conflicts and in peacetime, and which used the SR's south coast ports, Britain's merchant fleet was at the time the largest in the world and it struck a chord with public sentiments – and clearly still does so today.

Survivors

Most of the shipping lines after which the class is named have long since disappeared or have been absorbed and the names lost. Only four MN class names still survive as shipping concerns: P&O, which still has both cruise and ferry brands; Cunard (as in Cunard White Star); Holland America Line, which is now an American cruise company; and Bibby Line, which remains a freight shipping and transport organisation. Royal Mail remains but no longer operates ships.

G/WR chairman Richard Johnson said: "Our Merchant Navy Pacific, so beautifully restored by the 35006 Preservation Society, could be regarded as the 'flagship' of our locomotive fleet. I'm proud that we are able to recognise in this way, the contribution our merchant fleet made over many generations to the peace we enjoy in this country today."



Former merchant seaman Tony Stickler aboard a Merchant Navy! IAN CROWDER



Ship shape: Bulleid Merchant Navy Pacific No. 35006 *Peninsular & Oriental SN Co* dressed for the big occasion at Toddington. IAN CROWDER

New Patriot now at its 'final' home for assembly

NEW LMS Patriot No. 5551 *The Unknown Warrior* is now rubbing shoulders with an old LMS classic inside the West Shed at the Midland Railway-Butterley.

The 4-6-0 completed its move from its previous base at Crewe Heritage Centre on August 12, and is now sharing the shed with Princess Royal Pacific locomotive No. 46203 *Princess Margaret Rose*.

It will also line up alongside Stanier Pacific No. 6233 *Duchess of Sutherland* when it returns for maintenance from its main line rail tour duties.

The West Shed is just under 15 miles from Derby, where the Patriots were designed at the town's locomotive works under the supervision of LMS Chief Mechanical Engineer Sir Henry Fowler.

Building of No. 5551 started at the Llangollen Railway in March 2009, and engineering has also been carried out on it at Tyseley Locomotive Works. The Princess Royal Class Locomotive Trust was awarded the contract to complete the assembly of No. 5551 in July.

The Unknown Warrior is now expected to steam for the first time at Butterley, where construction is set to be completed next year.

➜ If you would like to help finish *The Unknown Warrior*, visit: http://lms-patriot.org.uk



***The Unknown Warrior* is seen inside the West Shed at Midland Railway-Butterley on August 25, the wheelsets having been removed.** ALAN WEAVER

Chinnor murder mystery steam train in near miss with drunken trespasser

By Robin Jones

A REAL-life death was narrowly averted when the Chinnor & Princes Risborough Railway ran an after-dark Murder Mystery train – and a drunken man decided to take a short cut along the line from the pub.

The heavily intoxicated man was walking two miles along the track from Bledlow to his home in Chinnor late on Saturday, September 7.

Luckily, Nigel Remmington, the keeper at Wainhill crossing, saved the day, and was afterwards hailed as the hero of the hour.

He spotted a moving light approaching him from the direction of Princes Risborough – and quickly realised it was a trespasser who stood in grave danger of being hit by the 200-ton GWR prairie No. 5526.

The keeper contacted the train guard and instructed him to stop it at Bledlow Cricket Club while he walked down the line to challenge the trespasser.

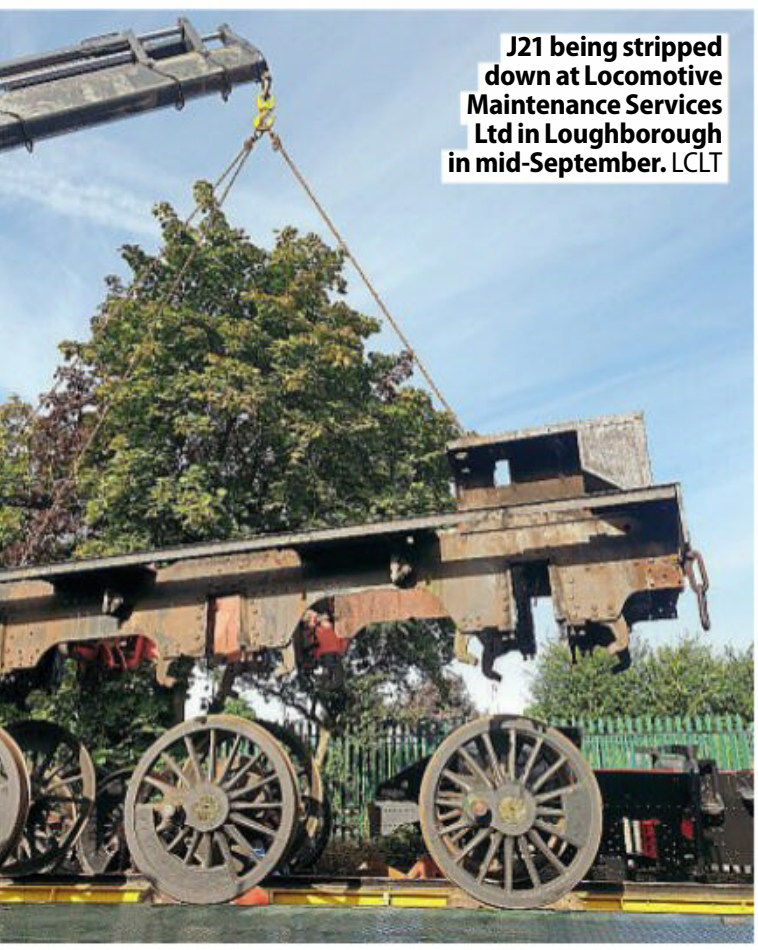
Unlike modern trains, the 1928-built 2-6-2T, on loan from the South Devon Railway, does not have powerful headlamps, and it would have been almost impossible for the driver to have seen a man walking down the track with his back to the train.

The train duly stopped around 9.45pm and was delayed by about half an hour while the trespasser was escorted from the railway.

The railway's health and safety director Stan Hart said: "This was a very foolish thing to do. While we run a heritage railway at much lower speed than the main line, our locomotives can be just as deadly. They cannot stop as quickly as a car.

"No member of the public should walk along a railway line. It is dangerous and a criminal offence. On this occasion, we do not intend taking action against the offender."

A survey of 1000 teenagers across the UK carried out on behalf of Network Rail showed 18% of them did not know walking along railway tracks was illegal.



J21 being stripped down at Locomotive Maintenance Services Ltd in Loughborough in mid-September. LCLT

J21 now dismantled at Loughborough

THE contract stripping down of NER J21 0-6-0 No. 65033 at the Locomotive Maintenance Services Ltd in Bakewell Road, Loughborough, has taken place following its move from the Locomotion museum at Shildon.

Meanwhile, custodian the Locomotive Conservation & Learning Trust has been carrying out the ultrasonic testing of the tender axles to establish whether a crack exists, as suspected, so Locomotive Maintenance Services can get the axle and wheelset works underway on both the engine and tender. Replacing a cracked tender axle was factored into the trust's final cost estimate.



Now that the J21 is in pieces, the full condition of the copper firebox should be known, enabling a decision to be taken as to whether to repair it or replace it with a new copper or steel version.

Locomotive Maintenance Services has also been measuring up the tender tank for comparison against the many drawings acquired by the trust from the National Railway Museum. A new tender tank will be required.

New cab sections will also be needed, and the contractors has been measuring them up. The old ones will not be discarded but used as an exhibit at the trust's base at Kirkby Stephen East on the Stainmore Railway, to explain the workings of a steam locomotive to visitors.

The trust's Toby Watkins said: "I have a real sense of excitement that we have something meaningful to show people and to kick start our imminent fundraising for £40,000 for the new tender tank."

Locomotive Maintenance Services is holding an open day for trust supporters at its Bakewell Road headquarters on Saturday, October 19, providing an opportunity to meet the team and hear how the overhaul is being managed.

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Mangapps Museum is home from home for ex-Stratford railwaymen

By Geoff Courtney

A ROYAL steam train driver and another driver whose footplate career lasted 60 years were among 29 former Stratford railwaymen who travelled to deepest Essex on August 17, to exchange tales of yore, drink gallons of tea and ride the tracks behind Class 31 diesels that were at the forefront of the East Anglian diesel revolution.

The reunion was organised by retired Stratford driver Dave Brennand in conjunction with John Jolly, at whose Mangapps Railway Museum near Burnham-on-Crouch the event was held.

Among the senior steam drivers present was Tony Gooding, who drove No. 4472 *Flying Scotsman* in November 1984 when it hauled the Queen Mother from Stratford Low Level to North Woolwich for the opening of North Woolwich Old Station Museum.

Another was Danny Forbes, who had travelled down from Aberdeen especially for the occasion. He started his career north of the border at Keith Junction (61C) and Hawick (64G) sheds, and ended his 60-year footplate career with West Coast Railways – his final turn also being with *Flying Scotsman*, over the reopened Waverley route, now the Borders Railway, last year.

Then there was Ken Bassington, now in his late 80s, who worked steam from Stratford in the late 1950s and early sixties, including Britannia Pacifics on the Norwich service, and



Railwaymen who enjoyed a reunion at Mangapps Museum on August 17. They are, from left, Danny Forbes, Peter Manley, Steve Fleming, Dave Underwood, Peter Mortimer, Ken Bassington and Roger Jocelyn. DAVE BRENNAND

Peter Manley, a former steam fireman at Colchester (30E) sub-shed Maldon East, which closed in 1959 after dieselisation. He became a traction inspector, and owns a collection of driver and secondmen records dating back to the 1970s.

Memories rekindled

A special train for the veterans was run on the museum's ¾-mile standard gauge line comprising preserved Class 302 EMU driving coaches top-and-tailed by Mangapps' two Class 31s, Nos. 31105 (ex-D5523) and 31233 (D5660), a class long associated with the railways in this part of the country.

When acquired by John Jolly last October, No. 31105 was Network Rail's oldest working diesel, having been allocated – appropriately – to Stratford when new in March 1959.

Another touch appreciated by the railwaymen was an original Stratford station totem sign mounted for the occasion on a lamppost on the museum's running line platform. Of this, Dave Brennand, who started his 40-year railway career at Stratford in 1973 as a 16-year-old engine cleaner, said: "Only the three Cambridge line platforms, Nos. 11-13, had totems at Stratford, and I remember a pile of them lying on the platform after removal in 1977, and walking straight past them."

About the reunion, he said: "We all had a superb day, with much good humour and tales of bygone antics, some of which couldn't be published by *Heritage Railway*. Many had never been to the museum before, and were astounded at the huge range of memorabilia. John's wife June said she had never made so many cups of tea in one day – that's railwaymen for you!"

A brilliant day

John Jolly echoed Dave's enthusiasm. "Absolutely brilliant day," he enthused. "I'm not sure which was the greatest attraction – the train rides, the museum, the tea, or the opportunity to talk about the good old days. I've never seen such a happy group of railwaymen."

He said his favourite reminiscence was from Peter Manley, who quoted the date in 1969 when he last drove Class 31 No. 31105, then D5523 and now preserved in running order at Mangapps, on a freight train from Temple Mills to Poplar.

Stratford's railway history was spread over almost exactly 150 years, from the opening by the Northern & Eastern Railway of a locomotive shed in 1840 that was to become the largest in the country, to the closure of the work's repair facilities in March 1991.

Stratford for the day: Class 31 No. 31233 (ex-D5660) at Mangapps Railway Museum platform during a reunion of former Stratford railwaymen on August 17. To mark the occasion – and to make the attendees feel at home – the station carried an original Stratford totem station sign, a gesture much appreciated by the men. DAVE BRENNAND

Railway's act of spite against local resident still debated 120 years later

By Geoff Courtney

THE history of Britain's railways is littered with disagreements and disputes between landowners, local residents, and companies, particularly in its early formative years when the country was polarised between those who welcomed this new form of transport and those who for whatever reason opposed its very existence.

In the final days of the Victorian era at the dawn of the 20th century, the railways had overcome most obstacles and settled into a system that was an entrenched part of everyday life enjoyed by the masses.

There were, though, still disputes, and one was a deeply personal difference of opinion that resulted in a railway company exacting revenge on a local resident and works manager in an extraordinary way that is still the subject of debate by locals more than a century later.

It was played out in the Essex town of Halstead, at the heart of a line that ran north-west for 19 miles from Chappel & Wakes Colne to Haverhill which was opened by the Colne Valley & Halstead Railway in stages between April 1860 and May 1863 and remained independent until the 1923 Grouping.



Old-timer: LNER J15 class No. 65475 brings the 8.30am goods train from Marks Tey into Halstead on June 26, 1959. The 0-6-0, then 46 years old and just months from withdrawal, is passing in the background the shed and 'spite wall' which was erected by the railway six decades before following a row with a local iron works. BERWYN STEVENS/MALCOLM ROOT COLLECTION



Act of spite: The Halstead spite wall, seen here in the 1950s, which was built by the Colne Valley & Halstead Railway in 1900 to block the view of a local resident and work's manager. The wall, adorned with advertising at the encouragement of the railway, survived until the 1970s. BRIAN LEIGHTON/MALCOLM ROOT COLLECTION

Origins

The dispute had its origins in 1885, when the owners of a Halstead brewery made an official complaint to the local board of health – at that time the authority on such matters – about the amount of time the station's level crossing in the centre of the town was closed to traffic due to shunting operations by the railway.

George Copus, the railway's general manager, angrily opposed the complaint, but he had to back down when the railway's directors instructed Copus to comply with the demands to reduce the time the crossing was closed, following the board of health's decision to support the brewery.

Copus complied with his bosses' orders, and in a letter to the board of health he wrote: "I have informed the several manufacturers and merchants interested in the traffic to and from the sidings contiguous to the crossing of the necessity for them to arrange for the cartage of their goods."

This move affected a number of businesses in the town who relied on the railway, especially the extensive Tortoise Iron Works, which was forced to use horse and cart to take all its castings that were to be transported by rail to the goods yard on the other side of the crossing, rather than load them onto wagons in its own siding.

Despite the railway having been obliged to change its operations due to the brewery's complaint, there was as a result bad feeling between the iron works and the railway. This wasn't helped when in 1890 Charles Portway, the work's owner, instigated proceedings against the railway about the level crossing closure which had led to his siding being put out of use.

A compromise between these two parties was reached, while the board of health finally agreed to allow the crossing to be closed during shunting operations, thus bringing the work's siding back in use, and the peaceful residents of Halstead undoubtedly thought the matter could be put to rest.

However, it wasn't, for the acrimony between the railway and the Portway family – Charles's son Harry now being in charge – dragged on, and in 1900 matters came to a head when the work's siding was again closed to traffic.

The railway's George Copus was still smarting over the affair, and he directed his ire at Alfred Kibble, the iron work's manager whose house overlooked the railway, by building a large lean-to shed with a high wall on the railway's side of a fence, so completely blocking Kibble's view from his property.

Billboard

Copus went further by encouraging billposting and advertising on the street side of the wall facing the house, for which he charged 10s (50p) a year, and locals soon dubbed it 'the spite wall.' This example of early-20th century malice became a part of Halstead folklore and remained for seven decades before being knocked down.

Malcolm Root, president of the Halstead & District Local History Society, said: "It is not known what Alfred Kibble's reaction was to the wall, but in 1903 George Copus was succeeded by Elyot Hawkins, who reopened the work's siding, and there was no further trouble during the remaining 62 years of the line's existence."

Malcolm, 68, who has lived in Halstead all his life and is one of the country's leading railway artists, added: "Even though the wall was demolished about 45 years ago it is still remembered and debated about by many local residents, and the reasons behind it have become woven into the town's history."

Mk.1 test car to be restored by Quorn Wagon Group

By Roger Melton

AN unusual restoration being undertaken by members of the Great Central Railway (GCR) based Quorn Wagon Group is former BR Test Car 2, which was originally built at Wolverton in 1962 as Mk.1 Brake Second Corridor (BSK) No. 35386 as part of Lot No. 30699 and fitted with Commonwealth bogies.

The coach was temporarily adapted for use by the Department of Mechanical & Electrical Engineers as a test car in 1974, and renumbered ADB975397. This was after the previous Test Car 2, the LNER's Thompson purpose-built Dynamometer Car No. DE320041, was irreparably damaged after a failed slip/brake test. The new Test Car 2 received further modifications in 1976, including changes to the interior layout and installation of a generator.

Between 1974 and 2006, Test Car 2 was based at the Railway Technical Centre in Derby, where it was mostly used for slip/brake testing of vehicles on the West Coast Main Line between Crewe and Winsford. Testing was required to verify the braking characteristics of new vehicles and the best way to do this was to slip them and allow them to brake on their own without influence from any other vehicle.

When not in use for slip/brake tests, the coach was often seen coupled with Test Car 1, a converted GWR autocoach, to provide additional braking effort when carrying out vehicle ride testing at higher speeds.

In 1994, Test Car 2 was used as the main test coach for the pantograph and traction performance testing of Class 92 electric locomotives. The Class 92 tests included four days of use between the Dollands Moor freight yard through the Channel Tunnel to the Fréthun freight yard near Calais. After privatisation, Serco Railtest took over the role of testing vehicles until slip testing paths became difficult to arrange and Test Car 2 was retired to the Old Dalby Test Track in 2011.

After withdrawal in 2016, Test Car 2 was saved by a GCR volunteer. It was moved to the GCR and now falls under the care of the Quorn Wagon Group, which is in the process of restoring the vehicle to its BR testing glory.

From trainspotting to publishing for Transport Treasury's Robin Fell

By Geoff Courtney



At the double: No. 5996 *Mytton Hall* pilots No. 6016 *King Edward V* on Hemerdon bank in south Devon on July 14, 1956, in a photograph from Western Ways. The footplate crews of the two 4-6-0s are putting in maximum effort with their Perranporth-Paddington Saturdays only train, as parts of the bank are a challenging 1-in-42. The Hall was to come off at Newton Abbot, and was photographed by the same photographer later that day piloting No. 6012 *King Edward VI* near Tigley signalbox on Rattery bank with a Paddington-Penzance train. TRANSPORT TREASURY/ R C RILEY

RAILWAY and bus enthusiast Robin Fell has entered the world of publishing with the launch of two books on GWR locomotives and the iconic Somerset & Dorset line.

The publications, the first of a series and each comprising 112 pages, contain images taken by renowned railway photographer R C Riley between 1937 and 1965, and are from the extensive archive of Robin's company Transport Treasury.

Explaining the background to his move into publishing, Robin told *Heritage Railway*: "In 2005, when I was working in IT rentals, the best man at my wedding reminded everyone I used to collect rail and bus timetables, as did my dad and his dad before him. Shortly after, we started selling them on eBay and built up a small business.

"A few years later my father asked about scanning his collection of 30,000 bus negatives, and this led to buying and selling negatives, slides and photographs on eBay. In 2009 I decided to give it a go full-time, and the business grew gradually, although we stopped selling timetables two years ago to concentrate solely on images.

Expansion

"In 2013 we launched Kezlan Images, and with that came the Transport Library website selling various collections, including my father's, and we now have more than 130,000 rail and bus images from the UK and world-wide."

That year Robin met Barry Hoper, who with his wife Janet ran the Transport Treasury archive of mainly railway, but also bus, ship and traction engine negatives. In 2017 the couple, both retired squadron leaders, decided to sell up, and Robin and his wife Sarah-Jane bought the business and moved it from Scotland to their home in High Wycombe.

"Earlier this year we realised that, although many requests were being made for images, only a tiny proportion were being seen, so we looked at another way of marketing them, and decided to launch the publications," said Robin.

Because he was a well-known photographer, Robin and Sarah-Jane decided to start with the work of R C 'Dick' Riley, whose archive came with the acquisition of Transport Treasury. "As well as being privileged to be the custodians of his vast black and white archive, we knew we had a name that was known and respected within our target market," said Robin.

Informative captions

As a new venture, much thought went into the books' format. "The captions, for example, must be detailed," said Robin. "In our opinion, too many books have suffered the 'one-line' caption approach, which according to our research is not what readers want today. Also, we made the slightly unusual decision to print the captions in bold type to make them easier to read. Finally, as we are producing books about Britain's railways, we decided to be loyal and have them printed in the UK."

The first two publications are, in essence, a series of black and white photographs showcasing Transport Treasury's Dick Riley archives with detailed captions that go into much more depth than is the norm. In the GWR publication, for example, we are told in one caption that prewar, Old Oak Common shed used 3000 tons of coal per week, while in the caption to an image of Castle class No. 5075 *Wellington* and WD 2-8-0 No. 90313 at Oxford in April 1956, "major GWR stations were always enhanced by a profusion of fine signals."

And in the S&D book, the caption to an image of LMS Class 4F 0-6-0 No. 44558 piloting Standard Class 5MT 4-6-0 No. 73050 at Radstock North in July 1958, talks of 19th century former miners' housing in the photograph with their large allotment gardens and the "benefit of privies to the rear."

Robin, who is 46, was a bus and trainspotter in his youth, but says it was mainly travel that interested him. "We lived in China in the early-1980s so we travelled quite extensively there, and also took the Trans-Siberian train from Beijing to Moscow and then the train onwards to London."

His first two books, Western Ways and Somerset & Dorset, are available now at £14.50 each, and others in the R C Riley series planned for publication later this year and early next year include Southern Medley and Steam at Swindon.



S&D greats: Class 7F 2-8-0 No. 53809 climbs through Midsomer Norton South station with a Derby to Bournemouth relief train on July 9, 1960, in a photograph from Transport Treasury's new publication Somerset & Dorset. The book's caption says that behind the engine is a Gresley GNR brake dating from 1920, while the figure photographing the train at the far end of the platform framed by the arms of the sack truck is none other than Ivo Peters, the renowned railway photographer who, like the locomotive approaching him, will be forever associated with the S&D. TRANSPORT TREASURY/R C RILEY

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The junction in 1957 with trains from Omagh, Enniskillen and for Bundoran.
CHARLES FRIEL COLLECTION

Bundoran Junction station up for sale

By Hugh Dougherty

ONE of Ireland's best known railway stations is up for sale, with an asking price of offers over £190,000.

Bundoran Junction Station House and refreshment room, plus a length of platform and two, cut-stone, overbridge bridges, is described by Enniskillen-based estate agents, Eadie McFarland Ltd, as 'the jewel in the crown of the Great Northern Railway of Ireland.'

The four-bedroom, two bathroom-house, stands on the apex of the former lines from Omagh to Enniskillen and from the junction to Bundoran.

The station saw much action as the spot at which passengers changed for the holiday resort of Bundoran, and where the customs-sealed 'Bundoran Express' from Dublin passed nonstop on its way to the railway's popular holiday destination on the shores of Donegal Bay, where the GNR (I) also ran a hotel.

The Londonderry & Enniskillen opened the railway in 1854, and the station became a junction, with the opening of the Bundoran branch in 1866, remaining busy during the summer, especially, until the railway closed on September 30, 1957.

The station building and grounds were sold off after the track as lifted in 1960 and have passed through different owners until the current sale, with several reminders of its railway past, including a station name board, remaining on show in recent years.

William McFarland of Eadie McFarland said: "This is a listed building of some character and we are very much aware of its railway heritage and significance. The house offers country living with a unique take on Irish railway history."

Full details of the Bundoran Junction sale are at www.eadiemcfarland.co.uk



The cut stone bridges are included with the house sale.



Bundoran Junction Station House and grounds is for sale at offers over £195,000. The refreshment room was situated in the glazed area at the front.

Vale of Berkeley Railway signalbox coming home after rediscovery

A CENTURY-OLD signalbox from the Sharpness branch is to be erected on the line after being 'rediscovered' used as a garden shed in Frome.

Alan Price of the Vale of Berkeley Railway group, who lives next door to the house where it was moved, after the 'box was bought by an ex-BR chief signal inspector, was offered it for sale earlier this year. The 'box became redundant when the manual signalling depot on the branch was shut down in 1984.

It has now been dismantled and flat-packed for delivery to the nascent heritage line.

Model wrecker sentencing delay "because guardian was on holiday"

A 16-year-old boy who along with three friends wrecked a model railway exhibition in Stamford has had his sentence postponed for a second time – because his guardian was on holiday and did not attend court.

The boy had admitted smashing up the Market Deeping Model Railway Club display at Welland Academy in Stamford on May 18.

He was due to be sentenced at Lincoln Youth Court on September 2, but the court was told his guardian, who currently lives at a different address, was on holiday. She has now been summonsed to attend a hearing at Boston Youth Court on September 24.

As reported last month, his three accomplices, who also cannot be named for legal reasons and who also admitted criminal damage, were given 12-month referral orders and their parents were ordered to pay £500 in compensation.

The court heard that they had shared a bottle of vodka as part of a "pre-exam night out" before going on a "rampage" and decided to play football in the gym where the exhibition had been set up for the following day.

In response to the damage, pop star Rod Stewart gave £10,000 to the club, supplemented by £107,000 from online donations.

Class 58 started at Battlefield

By Brian Sharpe

CLASS 58 No. 58023 *Peterborough Depot* has been restarted at the Battlefield Line, bringing the first working Class 58 in this country since 2004 nearer.

The 3300hp locomotives, introduced in 1983 for heavy freight services, were withdrawn in 2002, with No. 58023 being one of the last to be withdrawn. It was purchased along with Nos. 58012 and 58048 for preservation and remains in Mainline blue livery.



Teenager's railway discovery from the smallest constituent company of the LMS to go under the hammer

By Geoff Courtney



The Garstang & Knot-End Railway sign that will be going under the hammer on November 16. The name changed to the Knott End Railway when the line was extended in 1908. GW RAILWAYANA

NEARLY 60 years ago, teenage trainspotter George Maund was cycling the lanes near the track of a local freight-only line that branched off the WCML at Garstang & Catterall, north of Preston. It was a regular route for George, but on this particular day in 1961 something caught his eye near the site of Cogie Hill Halt, which had closed to passengers three decades earlier.

Recalling the incident, George told *Heritage Railway*: "I investigated and felt something hard beneath my feet in the undergrowth beside the line, and discovered a cast-iron sign that was absolutely filthy and covered in tar."

George was determined to take the heavy sign home but decided to do so later, so with quick thinking he hid it behind a nearby run-down old permanent way hut. Having returned to collect his prize, he restored it over the next few months in a painstaking task that involved chipping off the tar, wire-brushing and repainting.

The restoration revealed that what the teenager had retrieved from the undergrowth was a titled Garstang & Knot-End Railway trespass sign dated December 1899 that had possibly been discarded when passenger trains were withdrawn on the line in March 1930.

George, a 72-year-old retired schoolteacher who was born near Layton on the outskirts of Blackpool, has for many years displayed the sign at his home in Poulton-le-Fylde, but has decided that now is the time to sell this reminder of a long-lost railway, which was the smallest constituent company of the LMS in the 1923 Grouping.

Origins

The Garstang & Knot-End Railway – the spelling Knot-End was at variance with the spelling of the railway's intended destination of Knott End-on-Sea – opened in December 1870 for both passengers and goods traffic between the LNWR main line station Garstang & Catterall and Pilling, more than four miles short of Knott End. This seven-mile stretch included five intermediate stations, including Cogie Hill Halt, where George found the trespass sign.

In its early days it was operated by just one locomotive, 0-4-2ST *Hebe* built by Black Hawthorn & Co of Gateshead. This engine broke down in 1872, leading to services being suspended and the saddle tank repossessed by its manufacturer. After a period of the railway operating occasional horse-drawn trains, steam haulage returned in early 1875 worked by Manning Wardle 0-4-0ST *Union* and later by Hudswell Clarke 0-6-0ST *Farmer's Friend*, which was nicknamed the *Pilling Pig* due to the squeal made by its whistle.

In 1885 and 1897, two other Hudswell Clarke 0-6-0STs, *Hope* and *Jubilee Queen*, were added to the fleet, but, with funds always tight and the company facing receivership, the 4½-mile gap between Pilling and Knott End, on the southern end of Morecambe Bay, remained unbridged. In 1898, however, a separate company, Knott End Railway, was incorporated to extend the line to its intended destination, and this opened in July 1908, together with a 1½-mile branch to salt mines at Preesall near Knott End.

Cast-iron relic

The Knott End Railway took over the Garstang & Knot-End Railway and the latter name was dropped, and in 1923 it was absorbed by the LMS. With revenues hit by a dispute over haulage rates with the salt mine's owners, passenger services were withdrawn over the entire line in March 1930. Following Nationalisation, freight between Knott End and Pilling ended in 1950, from there to Garstang Town in 1963, and finally in 1965 over the short stretch between Garstang Town and Garstang & Catterall.

George remembers clearly watching the last freight train from Pilling on July 31, 1963, which consisted of a handful of mineral wagons headed by LMS 'Black Five' No. 45390 of Carnforth shed (10A).



Freight only: LMS Class 2MT 2-6-0 No. 46430 of 10B (Preston) shed waits with a local freight train beside the goods shed at Garstang Town on July 22, 1950, close to where the branch line from Knott End joined the West Coast Main Line at Garstang & Catterall. The Town station had been closed to passengers 20 years earlier, and the line shut completely in 1965. CUMBRIAN RAILWAYS ASSOCIATION/PEARSALL COLLECTION

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Teenage memories: George Maund during a visit on August 21 to the location of his railwayana find at Cogie Hill Halt in 1961, when he was a teenage trainspotter. Behind him is an original level crossing gatepost, one of the few remaining traces of the halt, which was opened by the Garstang & Knot-End Railway in 1870 and was closed to passengers by the LMS in 1930 and by BR to freight in 1963. Describing his visit as a "trip down memory lane," he said the owner of the cottage, which backed onto the line, had lived there for many years and remembered it closing when he was aged seven. A trespass sign from the line dated 1899 is coming up for auction on November 16.
GILL MAUND

Cast-iron signs have a niche, but healthy following within the railwayana movement, and those, such as the fully-titled example unearthed by George that are a previously unknown and possibly only survivor from a small independent railway that lost its passenger services nearly 90 years ago, are often sought after.

A significant find

Simon Turner of GW Railwayana, who will be putting the sign under the hammer at Pershore High School on November 16, described it as the most significant cast-iron sign he had sold for 20 years, and as such was prepared to estimate it at into four figures.

Dave Richardson, photograph archivist for the Cumbrian Railways Association who has recently written a history of the line titled The Pilling Pig, said of the sign: "Although the line was in receivership, a significant amount of money was spent on improvements around the turn of the century, and the provision of cast-iron trespass plates in December 1899 is consistent with this."



Heritage rail and sail: The Friends of Wemyss Bay Station present Paul Semple of Waverley Excursions with £1000 for the paddler's boiler appeal.

Station Friends donate £1000 to *Waverley* appeal to mark 10th anniversary

By Hugh Dougherty

THE Friends of Wemyss Bay Station have celebrated the 10th anniversary of the railway heritage group's foundation, by donating £1000 to the *PS Waverley* boiler appeal.

Friends bookshop manager Sheena Inglis presented Paul Semple, the Waverley Excursions general manager, with a cheque at Weymss Bay station on August 23.

She said it was appropriate that the group supports the appeal as Weymss Bay station and pier was built by the Caledonian Railway in 1903 as the first combined station and steamer pier on the Clyde, and is now the only one to survive in daily service.

"*Waverley* is unique," said Sheena. "We run a bookshop and small museum at the station, curate it, and tend to the floral displays that are such a feature of this wonderful, heritage railway station and pier. We felt that it was right to donate £1000 from our bookshop sales to the appeal, as part of our 10th anniversary celebrations, and because of *Waverley's* railway origins. We hope to see it berth at Wemyss Bay again after it returns to service in 2020."

Paul said: "This is the first time we have had an official donation from a heritage railway organisation and we are extremely grateful for it. Many heritage railway supporters have donated to our appeal as individuals, and we acknowledge their support, but it was wonderful to receive this donation from the Friends of Weymss Bay Station as a group. *Waverley* is an icon of the active preservation movement, every bit as much as famous steam locomotives and heritage railways are, and we hope that many more societies will follow in the footsteps of the Friends to support the appeal."

Paul also revealed that, as well as new boilers now being on order, thanks to the initial £500,000 of the target £2.3 million being raised in two months, three new generators are also on order and the ship's repair and docking schedule finalised. A £250,000 bid is now being submitted to the Heritage Lottery Fund and approaches made to corporate bodies for funding as the race continues to meet the summer 2020 deadline for *Waverley* to steam again.

Launched in October 1946, *Waverley* entered LNER service in June 1947, working the 'Big four' company's Firth of Clyde steamer route.

Another NYMR carriage headed for Ecclesbourne

FOLLOWING in the footsteps of Gresley buffet No. 641 and Pullman Car No. 79, a third coach from the North Yorkshire Moors Railway (NYMR) is headed for the Wirksworth workshop of Lee Sharpe engineering, in the form of Gresley No. 23890.

Originally a Diagram 115 eight-compartment corridor third, it was withdrawn in the early 1960s to become part of the secretive Doncaster-based Eastern Region Emergency Control Trains. Storage undercover in the carriage sheds at Doncaster meant that it was in very good condition when finally withdrawn from service and preserved at Carnforth with the intention of rebuilding it for use in the 'Queen of Scots' train.

It was later purchased by an LNER Carriage Association member and stored for a further period at Carnforth, before being sold for rebuilding and inclusion in the 'Royal Scotsman' train, which otherwise consisted mainly of converted 1960-series Metro Cammell Pullman cars. No. 23890 was converted to act as a kitchen/restaurant car but the work was carried out cheaply and when the coach was later involved in a shunting accident at Millerhill Yard, Glasgow, its body was badly damaged and the carriage was written off.

It was repurchased by the LNERCA member who had sold it to the Royal Scotsman Company originally and has been slowly undergoing rebuilding into an approximation of a Gresley first class restaurant car. It has now moved to Wirksworth for completion of this project in order to provide both a spare kitchen car for the NYMR's popular Pullman dining trains and to maintain the service when its sole Metro-Cammell Pullman kitchen car *Robin* is withdrawn for overhaul.

Railway manager's grandson donates to *Drumboe* fund

THE fundraising drive to bring County Donegal Railways (CDR) Class 5 2-6-4T *Drumboe* home to Donegal, to mark the 60th anniversary of the closure of the line in December 1959, has received a major boost thanks to a €20,000 donation from the grandson of the line's longest-serving manager.

The cash has come from Graham Henry Forbes, whose grandfather, Henry Forbes, managed the CDR between 1910-43. A forceful character and a railwayman through and through, Henry is credited with ensuring the line's survival until 1959, thanks to introducing petrol and diesel railcars, promoting the railway vigorously, and implementing a policy of strict economy and putting the passenger first.

Graham, who lives in Thailand, said: "My grandfather would have been proud of the attempts to put life back into the CDR. Being of a prudent nature, he would have been enormously proud that what is left of the railway is run by volunteers and a local charity!

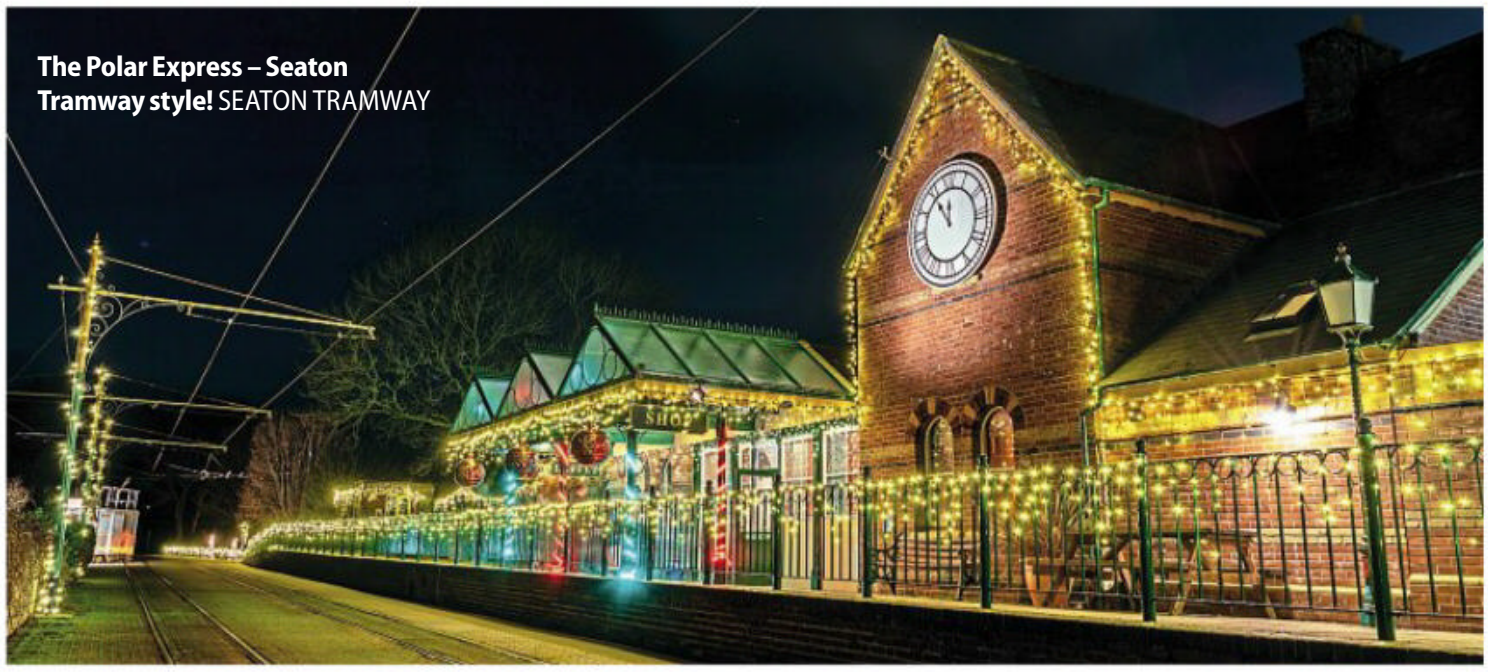
"I share the dream that *Drumboe* will steam again in County Donegal. What an asset a revived CDR would be to the area's economy. I hope that everyone who lives in, has roots in Donegal, or cares about the railway heritage of the county, will join me in supporting this bold drive to bring *Drumboe* back home and, eventually, to steam again."

Donegal Railway Heritage Centre manager Niall McCaughan said: "We are delighted with Graham's generous donation. It's wonderful that another generation of the Forbes family is, like Henry, making an impact on the County Donegal Railway."

➜ The Bring *Drumboe* Home drive needs €60,000 to bring the 2-6-4T home from the Railway Preservation Society of Ireland depot at Whitehead. Details at https://tinyurl.com/DrumboeReturn

Now Nene Valley set to trip the Christmas lights fantastic too!

By Robin Jones



The Polar Express – Seaton Tramway style! SEATON TRAMWAY

THE Nene Valley Railway has become the latest heritage line to announce a programme of illuminated Christmas trains following the stunning success of the Dartmouth Steam Railway's (DSR) venture in the last festive season.

The line has now followed the North Yorkshire Moors, North Norfolk, Great Central and Severn Valley railways in introducing the American-style services with the locomotive and carriages decorated by thousands of lights, for the coming season, while the DSR, which sold 18,000 tickets last year, has taken steps to improve its operation.

Since the Nene Valley's venture was announced in the local press in late August, under the banner of Winter Lights Spectacular, sales for the 60-minute trip have been averaging £1000 per day.

As with the other five lines running the illuminated trains, they will not replace the traditional Santa specials which will continue to run, but will appeal to a wider and different market. Indeed, Santa will not be on board the illuminated trains, an Anglicised version of operations such as the Canadian Pacific Christmas Train which was devised by the DSR in 2018.

A spokesman said: "By running this at the same time as our Santa trains, we have broadened the railway's appeal. We are now offering something for adults and older children too."

The Nene Valley illuminated trains begin on November 15 and run through December and on New Year's Eve, ending on January 4.

The services set off from Wansford, where the turntable café will be open until the train's departure.

Lineside light displays will be set up between Wansford and Overton stations.

For further details or to book, visit nvr.org.uk

Tickets are £18 for adults, £14 for children aged two to 15, while under twos sitting on laps go free. Elsewhere, the Seaton Tramway will again be running its Polar Express services in the coming festive season.

The operation, licenced from Warner Brothers and Rail Event Incorporated and based on the hit movie of the same name, takes families on a magical ride to Santa's home at the North Pole.

The concept has proved enormously popular on UK standard gauge heritage railways, but in 2015, Seaton uniquely adapted it to trams.

Riding in a special-decorated single-deck tramcar, passengers are encouraged to travel in their favourite pyjamas while they enjoy a cup of hot chocolate and a delicious treat before arriving to meet Santa's elves, before the big man hands out a present to children. On the return journey, there will be a sing-along to Christmas carols.

The trams will run from November 28 to December 24, and bookings – limited tickets being available – can be made at https://www.tram.co.uk/ThePolarExpressSeaton or by calling 01297 20375 in advance.

Success for inaugural intake of Ff&WHR trainees



The trainees who successfully completed their year under the Skills for the Future scheme at the Ffestiniog & Welsh Highland Railways are pictured at the presentation evening with officials. From left are: Kaz Spring, heritage skills – training programme manager, Matthew Davies, track engineering; Edward Laxton, mechanical engineering; Paul Lewin, Ff&WHR general manager; Ben Brotherwood, track engineering; Iwan Edwards, heritage joinery; Sam Knappett, track engineering; Bradley March, heritage joinery; and Talith Fenton, heritage interpretation. CHRIS PARRY

THE first batch of trainees taken on at the Ffestiniog & Welsh Highland Railways' (Ff&WHR) Skills for the Future scheme with the aid of a £454,500 National Lottery Heritage Fund have now passed out.

In January last year, the Ff&WHR was awarded the grant to introduce heritage skills to a more diverse audience and the subsequent programme successfully recruited 20 trainees over a two-year period, sharing the heritage skills of the railway's talented workforce.

The first intake of apprentices that joined in September 2018 have now completed their traineeships in one of five different skills areas, including mechanical engineering and heritage joinery.

The railway celebrated its successful first year of the training scheme in the Oakley Room at Plas Tan y Bwlch. The trainees were all asked to showcase their learning journey, in terms of the knowledge and skills they have gained during their year at the railway, and gave presentations outlining the progress that they have made.

The trainees also completed a nationally recognised NVQ qualification while training and worked alongside staff at other heritage organisations during their one week placements.

Three of the trainees have been offered full-time positions with the Ff&WHR, and two others have been offered places with other organisations such as the Vale of Rheidol Railway and The A1 Steam Locomotive Trust.

Heritage training programme manager Kaz Spring said: "I am amazed by the success of the raining programme and the incredible impact the trainees have had upon our organisation. They have brought the place alive and created a lasting legacy of skills for the future. We have already recruited our second round of 10 trainees ready to commence their traineeships. We look forward to welcoming them to the railway."

First launched in July 2009, Skills for the Future is a National Lottery Heritage und grants programme supporting organisations across the UK to develop vocational earning programmes.

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Donate the past to build the future G5 engine

By Robin Jones

THE builders of the NER G5 0-4-4T No. 1759 are appealing for donations of railwayana to help complete the locomotive.

The Shildon-based G5 Locomotive Company wants to amass unwanted railway relics which can then be auctioned to raise money to complete the project.

The idea is the brainchild of supporter Nigel Wright, who has donated a 40E Colwick shed plate to get the ball rolling.

Since the company issued its railwayana appeal last month, an additional 15 items, including name plates, worksplates, shed plates and miscellaneous railway items, have been promised and will be collected at the end of September.

Meanwhile, following an appeal in its supporters' magazine, the company has experienced a huge increase in funds received towards the pistons, with more than £12,000 donated, with a suggested contribution of around £180. Quotations are being sought for the pistons and piston rods.

The project's Motion Fund aims to raise £90,000 by 150 people giving £600, either as a lump sum or in instalments, to help to pay for all the connecting rods, eccentric rods, valve rods expansion links, eccentrics and associated components. Fund members will receive a 6in brass replica of the works plate carrying the number 1759, a seat on the first train pulled by the G5 and a shareholding in the company.

There are now more 100 people contributing at least £5 a month towards No. 1759 as part of the Superfriends scheme.

On the construction front, a final certification meeting to sign off the crank axle was pending,



The motion bracket now fitted. TIM TAYLOR



Nigel Wright (left) handing over the 40E shedplate to Tim Taylor, the G5 company secretary. RICHARD MAUGHAN

to allow the various engineering bodies (Mott MacDonald, Ricardo Rail, Metaltech and David Elliott) to collate the differing views regarding the certification of what is the last expensive component to be purchased. The certification process of this safety-critical component has been drawn out is due to the fact this is the first steam engine double throw crank axle to be forged since 1951 in the UK. A finalised report is anticipated soon.

The machined coupling rods have been delivered from Stephenson's Engineering, which machined the forgings and the next step is to procure the brass bearings for them. Also recently arrived are the sandboxes, made to the original NER drawings and fabricated by ID Howitt, and which have now been fitted to the motion bracket.

The four main axle springs have now been delivered by Jones Springs. Again, they have been made to the original drawings, using modern material.

The piano cover which goes in front of the smokebox is now also manufactured.

Furthermore, the tank support brackets are now fitted to the engine.

➜ Anyone who has railwayana that they are prepared to donate to the G5 project is invited to email g5locomotive@gmail.com or telephone 07764 304210. More information on how to help the project in other ways can be found at www.g5loco.co.uk

HERITAGE RAILWAY
The Brighter Steam News Magazine
www.heritagerailway.co.uk



Robert Stephenson 0-6-0T *Twizell* of 1891 climbs the steep gradient with it train from East Tanfield to Andrews House station on the Tanfield Railway on August 24. DAVID TROUT

When the geology trail led to a steaming *Jurassic*

ALAN Long, the presenter of BBC Radio Lincolnshire's Sunday morning Pirate Gold show, found treasure on the Lincolnshire Coast Light Railway.

As with TV's former Treasure Hunt with Anneka Rice, cryptic clues are handed to a presenter who, unaided by a map or the internet but relying on telephone calls and messages from listeners, must solve the puzzle and locate the next clue.

On bank holiday Sunday, August 25, Alan was tasked to find *Jurassic*.

Despite the congested traffic and record numbers of visitors to the Lincolnshire coast, and some false leads from listeners about dinosaurs and aquatic attractions, he succeeded in finding not a prehistoric monster, but instead the 116-year-old Peckett 0-6-0ST of that name standing in Walls Lane station in the Skegness Water Leisure Park ready to set off with two carriages filled with happy holidaymakers enjoying the sunshine in the resort's 'bracing' sea airs.



Success! BBC radio presenter Alan Long after being led by listeners to Peckett *Jurassic* at its Lincolnshire Coast Light Railway home. DAVE ENEFER/LCLR

Lottery-backed arts project to showcase first railway town

WITH the bicentenary of the Stockton & Darlington Railway six years ago, Shildon residents are to be given the chance to become involved in an arts project to celebrate its place in history as the world's first railway town.

The Bishop Line Community Rail Partnership and Greenfield Arts have obtained funding to develop Shildon station as an artistic gateway to the birthplace of the railways and highlight it as a destination of national significance.

Designer Nicola Golightly and creative director Katy Milne, of Greenfield Arts, will hold a series of workshops throughout October and November, in public spaces such as the Locomotion museum and empty shops, to encourage the community to develop a sense of place and pride in the town. The work produced will be shared publicly, as a precursor for a major a piece of artwork for the station being launched next spring.

They will work with other partnership members including Locomotion, Shildon Station Adoption Group (New Shildon Residents' Association), Friends of the National Railway Museum, Northern and Shildon Town Council.

The project, part of Shildon in Motion, which celebrates its legacy as the world's first railway town, has received backing from Northern Heartlands, a National Lottery Heritage Fund and Arts Council England-backed scheme that uses cultural activities to help people understand the heritage, landscapes and places they live in.

UNDER THE COVER OF DARKNESS

The sight of TV or film companies on heritage railways is always a welcome presence – for it brings with it publicity and financial benefit. On occasions however, things have to be top secret, with even rostered locomotive crews having no detail of what is to be done. Having obtained permission and respected the embargo, **Maurice Burns** recorded for posterity the filming of scenes for the newly released Downton Abbey film at the North Yorkshire Moors Railway's Pickering station on November 13, 2018.

In late October 2018, rumours were circulating that the North Eastern Locomotive Preservation Group's (NELPG) Q6 and J27 may be required for a filming job on the North Yorkshire Moors Railway (NYMR). What this actually was – a TV programme or film – was not known, because there was a great deal of secrecy involved for good reasons.

As time passed, Pickering station was found to be the location and crews were rostered for filming on November 13, 2018, still with little information except the filming would be after dark.

Looking back over the last 50 years of filming activity in the North East, the 1971 film Get Carter, starring Michael Caine, did not need preserved railways or Beamish Museum as it used coal staithes at Blyth (used for loading coal into ships) and the National Coal Board (NCB) colliery at Blackhall, then in everyday use. The words 'risk assessment' had not been invented.

In those far off days, the NCB had a conveyor to tip coal waste directly from Blackhall Colliery into the North Sea – unthinkable today – and one of the conveyor buckets was used to dump a body into the North Sea!

All this industry has been swept away and the film is now a much-treasured archive of an industrial past that filmmakers can never repeat.

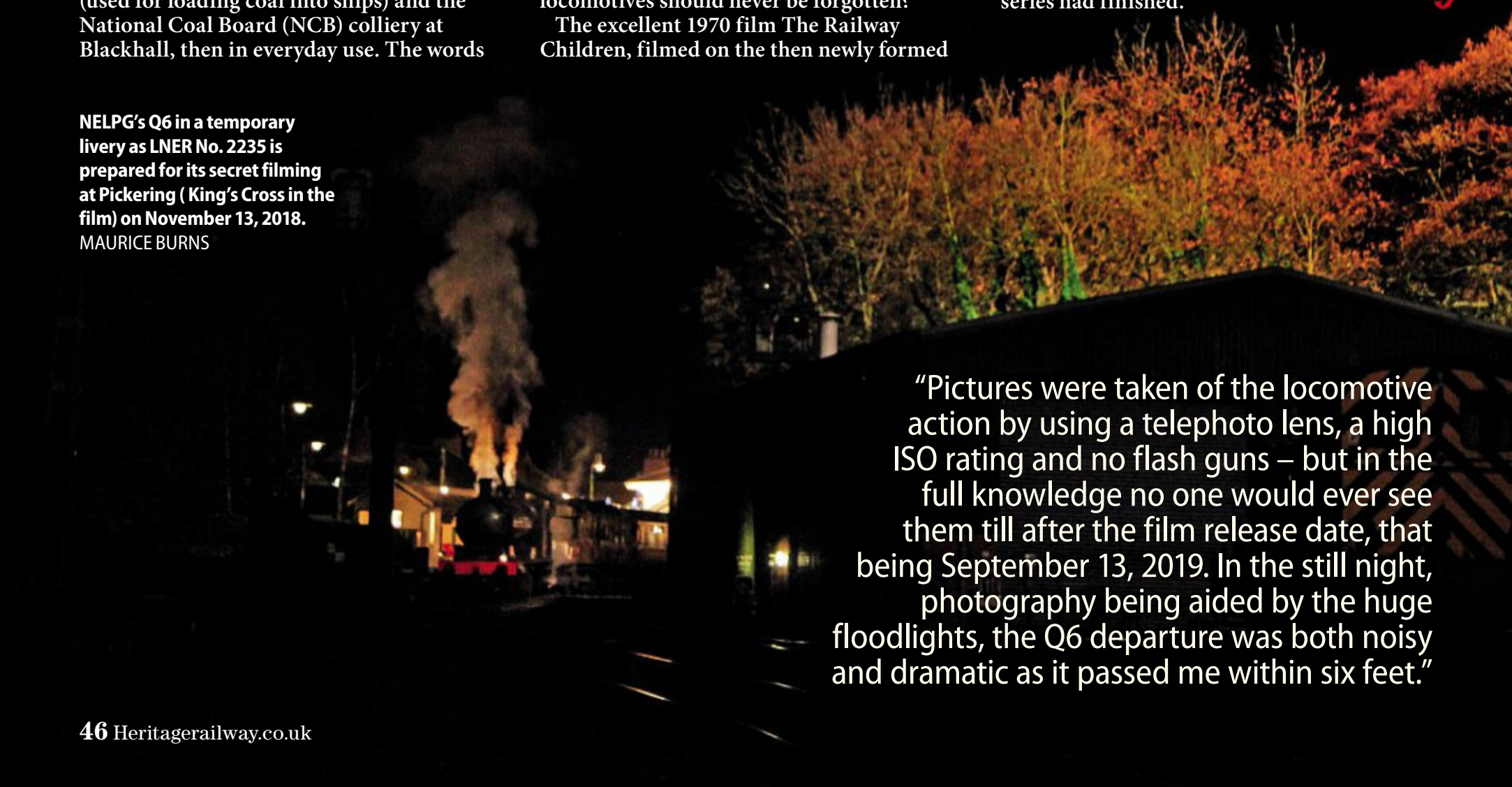
Today, the situation is in a sense reversed. It is only through the steam and railway preservation movement that filmmakers today can quickly and cheaply re-create railway scenes of the past without any construction costs. The UK's steam railways are on TV on a regular basis and perhaps those who saved our preserved railways and locomotives should never be forgotten?

The excellent 1970 film The Railway Children, filmed on the then newly formed Keighley and Worth Valley Railway (KWVR) was perhaps a turning point and without the KWVR, the film could not have been made.

The NYMR has been used for the TV series Heartbeat and the film Harry Potter and the Philosopher's Stone, amongst others, showing railway scenes that would otherwise be impossible to create without the NYMR line being preserved by its earliest volunteers.

I believed the filming event at Pickering on November 13, 2018 should be recorded photographically for the locomotive owners NELPG and NYMR membership magazines – and permission was granted by the NYMR.

A 6am departure in darkness from Teesside over the Moors to Pickering was with rostered driver Terry Newman. The rumour was the filming was about Downton Abbey, the well known TV series, but that series had finished.



NELPG's Q6 in a temporary livery as LNER No. 2235 is prepared for its secret filming at Pickering (King's Cross in the film) on November 13, 2018.
MAURICE BURNS

"Pictures were taken of the locomotive action by using a telephoto lens, a high ISO rating and no flash guns – but in the full knowledge no one would ever see them till after the film release date, that being September 13, 2019. In the still night, photography being aided by the huge floodlights, the Q6 departure was both noisy and dramatic as it passed me within six feet."



Prior to the night-time filming, the Q6 basks in the autumn sunshine in its new film livery as LNER No. 2235. MAURICE BURNS



The Q6 and J27 shunt the coaching stock with fireman Pete James in the cab, prior to the after dark filming. MAURICE BURNS



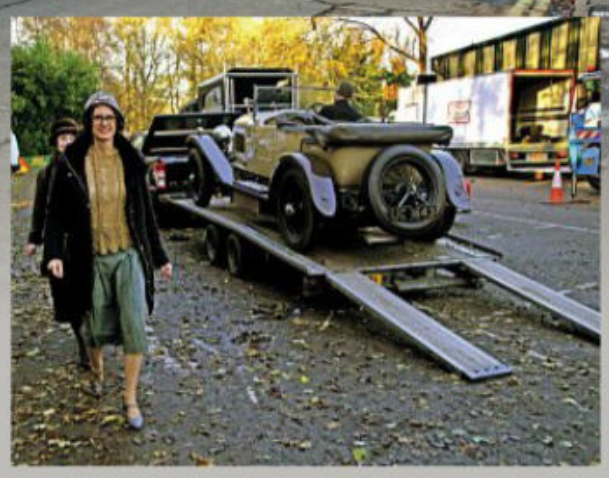
Actors in period costumes pose for the camera on Pickering station with the Great Central Railway Travelling Post Office sorting van behind them. MAURICE BURNS



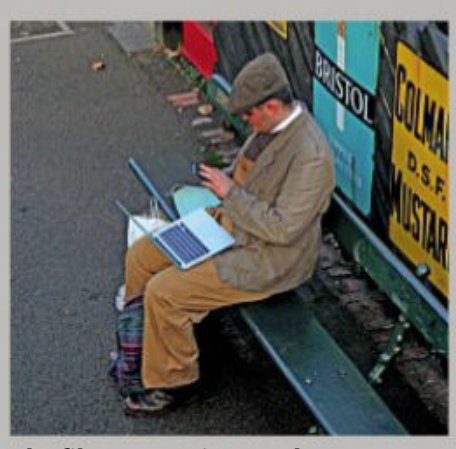
While the filming was supposedly secret, the large generator vans for lighting the station must have given a hint something was afoot. TERRY NEWMAN



Large floodlights were located around the whole station site. This one is just south of the station. MAURICE BURNS



A Bentley is about to be unloaded in Pickering station car park as actors walk by. MAURICE BURNS



The film was set in 1927, but one actor clearly was using a memory aid from a different era to remember his lines! MAURICE BURNS



The Gresley Travelling Post Office sorting van, owned by the Railway Vehicle Preservations Ltd, based at Rothley on the Great Central Railway, was secretly moved from the GCR to Pickering and was marshalled in the train set. MAURICE BURNS

On location

Upon arrival at Pickering, it was clearly evident the filming was not for a further TV series, but for a major film of the same name. Outside Pickering station were large power generators. Large floodlights had been mounted at key points, a make-up room had been established and the Q6 had been given a new livery as LNER No. 2235, while the J27 had its front numberplate removed. A total surprise was to see, in the train formation of Gresley vehicles, the Travelling Post Office sorting van 'smuggled' in from the Great Central Railway. The film was set in 1927 and the Q6 was to be portrayed hauling a mail train out of King's Cross in the hours of darkness. All a bit make-believe but filmed in the darkness, it could be very dramatic.

Some of the staff and volunteers involved included driver Terry Newman, fireman John Steels and trainee James Conway on the J27, while the Q6 had two shifts. The morning duty had driver John Hunt and fireman Pete James, while the evening shift for the main action had driver Neal Woods and fireman Phil Acaster. There were many other people involved, including Keiran Murray carriage and wagon manager; Laura Strangeway, head of marketing; Darren Palmer in control; and three guards – these being David Tibbet, Mat Donald and Stuart Bell.

The weather was a perfect sunny November day. It could not have been better for the film crew and everyone involved. In the relaxed atmosphere, it was interesting talking to the cameramen, sound recordist and actors. All those involved in the filming had to go to the make-up room and this included the volunteer footplate crews, with some notable transformations and amusement.

Photographed for posterity

Various shunting movements took place in daylight to have the stock in precisely the right spot, but as darkness fell and the floodlights came on the scene was transformed. By now the whole station had security staff to prevent local people getting pictures on social media

In the steamy atmosphere of Pickering station, driver Terry Newman gives instructions to his J27 fireman John Steeles about the planned shunting movements. MAURICE BURNS

and it was at this point I left the station site. The producer had earlier explained the considerable difficulty filmmakers of today have in keeping the storyline secret, until the film is released, especially with modern media. Filmmakers of the past certainly did not have this problem.

He also explained, that in the North East there could be up to four films being made at the same time, such is the popularity and rich character of the area. The NYMR was also under contract not to release images for the same reason.

Therefore, photographs were taken of the locomotive action by using a telephoto lens, a high ISO rating and no flash guns, but in the full knowledge no one would ever see them till after the film release date, that being September 13, 2019.

In the still night, photography being aided by the huge floodlights, the Q6 departure was both noisy and dramatic as it passed me within six feet.

Conclusion

The film Downton Abbey will now be on at cinemas near you and judging by the trailer, it should be a period drama classic. I for one cannot wait to see the Q6 depart King's Cross on the night mail train.

I would like to thank all those who assisted me on the NYMR. Copies of all images have now been submitted to the archives of NELPG and the NYMR for future generations to see what happened under the cover of darkness one night in November 2018, in the making of the film Downton Abbey.



Driver Neil Woods who had a major part to play in the filming, poses in the cab of Q6 No 2235. MAURICE BURNS



One of the NYMR's longest serving and top link driver Terry Newman, who needed no make up for the film, poses in the cab of the J27. MAURICE BURNS



Two film extras look the part after being fitted out as porters in 1927 clothing. TERRY NEWMAN



Smooth operators: The coordination on the ground involved a lot of people, with carriage and wagon manager Keiron Murray, Darren Palmer in control and guards David Tibbet, Mat Donald and Stuart Bell all playing a key part in the day's operations. TERRY NEWMAN



As the light faded, the Q6 marshals the stock ready for the evening shoot. MAURICE BURNS

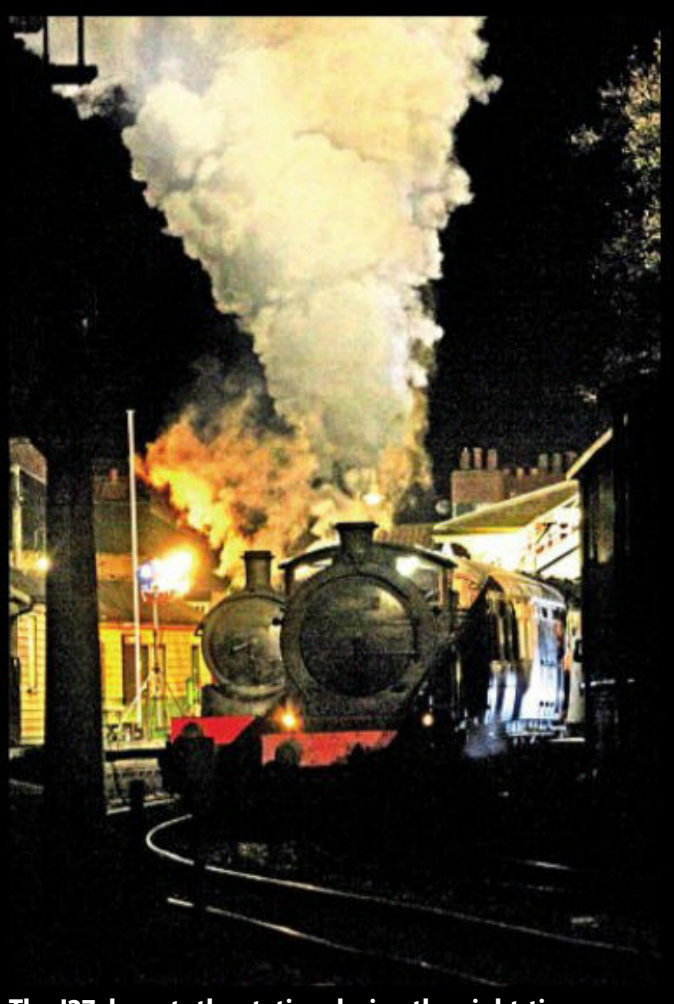


The standby locomotive throughout the night-time filming was the J27, with its BR identity removed from the smokebox. MAURICE BURNS



With space at Pickering a premium, the J27 is placed on the turntable between shunting duties. MAURICE BURNS

"Big floodlights had been mounted at key points, a make-up room had been established and the Q6 had been given a new livery as LNER No. 2235, while the J27 had its front numberplate removed. A total surprise was to see, in the train formation of Gresley vehicles, the Travelling Post Office sorting van 'smuggled' in from the Great Central Railway."



The J27 departs the station during the night-time filming. MAURICE BURNS



A picture that sums up the atmosphere of the filming after dark: Q6 driver Neil Woods (on the platform) receives instructions from the producer on the track, while fireman Phil Acaster prepares the fire prior to the dramatic departure. MAURICE BURNS



The Q6 makes a dramatic night-time departure from Pickering station, being transformed during the editing process into King's Cross. MAURICE BURNS HR

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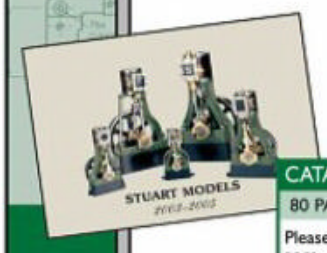

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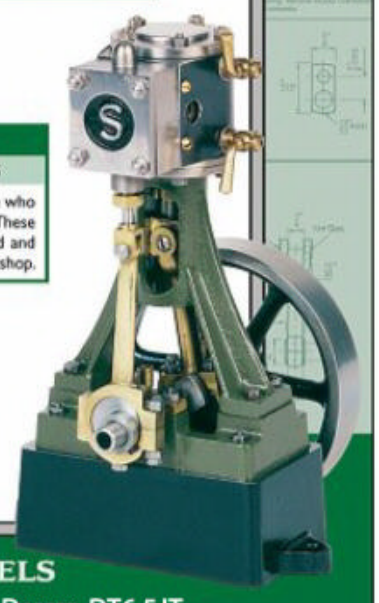

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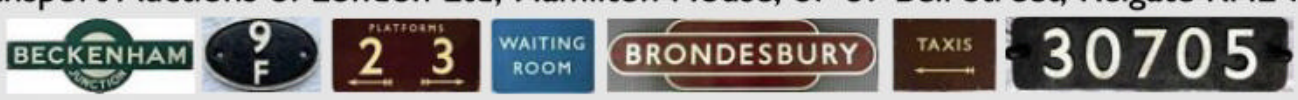

Limited edition but far wider appeal, as narrow gauge triumphs

TWO limited edition G-gauge models of narrow gauge locomotives made by LGB of Germany in conjunction with Japan's Aster Hobbies headed the realisations at a Vectis model train sale at Thornaby on August 23.

Leading the pair, each of which came in their presentation boxes, was Deutsche Bahn Mallet articulated 99 class 0-4-4-0 No. 633 that went for £750, followed at £660 by White Pass & Yukon Route preserved 2-8-2 No. 73. This railway, a 3ft gauge, 107-mile line which straddled the US/Canada border, opened in August 1900 during the days of the Klondike gold rush, and closed in October 1982. It partially reopened as a tourist heritage route in May 1988, with No. 73, which was built by Baldwin Locomotive Works in 1947, one of its major attractions.

Third place went to a live steam model of a Caledonian Railway express locomotive that went under the hammer for £580. Built in 2½in gauge, the model was of a 903 class 4-6-0, the pioneer of which was named *Cardean* after the country estate of one of the railway's directors, this being adopted as the nickname for the five-strong class.

A Wrenn OO-gauge 0-6-2T in Southern Railway olive green livery and carrying the No. 2752 took the fourth slot with a realisation of £520. Prices exclude buyer's premium of 25% (inc VAT).

GW Railwayana on track for 'Buy & Go' No. 2

GW Railwayana is holding its second 'Buy & Go' sale on October 12, with auctioneer Simon Turner expecting up to 500 lots of general railwayana, including cast-iron and enamel signs, signalling equipment, and GWR handlamps.

The sale, which Simon runs in conjunction with collector Julian Hanwell, follows the style of Great Central's Bloxham auctions – no commission or telephone bids, no reserves, and quick bidding. It is being held at Pershore High School and starts at 10am.

All four of the Big Four to the fore at Stoneleigh





THE leading results at Great Central's September 7 sale at Stoneleigh Park were railway democracy in action, with each of the Big Four sharing the top four realisations. To nobody's surprise, the LNER was at the top of the Premier League table with *Everton* from B17 4-6-0 No. 61663 selling for £25,000, some way short of the 'Footballer' record of £43,000 but still a satisfactory result in today's market.

At almost exactly half that came the runner-up, *County of Dorset* from GWR No. 1013 (£12,200), closely followed by the final five-figure sale, £11,600 for *Shrewsbury* from SR Schools class No. 30921, whose smokebox numberplate went for £2200 immediately after.

It was then the turn of the LMS, which weighed in at £8200 with *Meteor*, first carried by No. 6128 (BR No. 46128) but transferred to Jubilee No. 45734 when the Royal Scot was renamed *The Lovat Scouts* in April 1936. The Big Four having each had a say, the LNER returned with *Isinglass*, from Gresley A3 No. 60063 (£8000), followed by the sale of one of its worksplates for £5200.

A second LMS Jubilee nameplate, *Madden* from No. 45668, went to a new home for £5100, and finally came four GWR plates in support of No. 1013, headed by *Aylburton Grange* and one of its cabside numberplates (No. 6801) at £4500 and £2500 respectively.

The other three of the GWR quartet comprised *Hinderton Hall* from preserved No. 5900 (£3800); *Saint Bernard* from No. 2917 (£3500); and *Trematon Hall* (£3000) from No. 5949, one of whose cabsides also sold, for £800. A sole non-seller among the main line nameplates was *King's Courier* (LNER A1 Pacific No. 60144).

GWR Castle class No. 5070 *Sir Daniel Gooch* made a double appearance, firstly when one of its cabside numberplates realised £4900, and secondly when a painting by Gerald Broom of the 4-6-0 on an Up express near Badminton went for £1200. Another cabside success was 6854 from *Roundhill Grange* (£2300).

The runner-up to No. 60063 in the worksplate category at £4700 could hardly have come from a more contrasting locomotive. It was an engraved brass plate dated 1867 from a Manning Wardle & Co 0-6-0ST named *Thorncliffe* (works No. 241) that saw 85 years' service in a succession of ironworks, collieries and brickworks in the north-east before being sold for scrap in March 1952.

Two other locomotive items worthy of mention are the top shedplate 65I Balloch, which in the early-1950s was home to four locomotives and later just two (£2100); and the runner-up in the smokebox selection, GWR No. 6800 *Arlington Grange* (£2000). Wisbech Station emerged triumphant among the signalbox nameboards (£3000). The leading station totem sign at £3500 – seven times its middle estimate – was BR(M) Matlock, and Exeter Central headed the SR target sign category (£2150).

A 3½in gauge live steam model of GWR No. 4079 *Pendennis Castle* distinguished itself with a price of £3900; and so too a 'Manxman' express headboard (£2750); a Lynton & Barnstaple Railway Wooda Bay-Lynton Tyer's single line tablet and a GWR signalbox interlocking lever plate, each at £2600; and a BR direction sign to Northampton Castle station (£2400). Prices exclude buyer's premium of 15% (+ VAT).



Of the sale, auctioneer Mike Soden said: "Overall, it was a good in most categories, particularly with totems, targets and general enamel signs. Quality items also sold well, as shown by the *Everton* nameplate."

126-year-old train set outsteams all others in LSK sale

A 126-year-old train set outpaced the competition in the railwayana and railway models categories of a Lacy Scott & Knight sale in Bury St Edmunds on August 17 with a realisation of £950.

Dating from 1893, the German-made wooden and cast metal carpet train comprised an 0-4-0 locomotive numbered 285 and named *London*, a passenger coach, brake van and open wagon, all housed within what was believed to be the original wooden box.

Following in the veteran's wake were two O-gauge electric models, a 1937 Hornby LMS Princess Royal Pacific No. 6201 *Princess Elizabeth* (£820) and an Ace Trains Standard Class 9F 2-10-0 No. 92220 *Evening Star* (£720), while at £680 came a 2½in gauge spirit-fired LNWR 4-4-0 No. 1502 *Black Prince*.

The leading railwayana items were a BR(S) Eastbourne totem station sign which went for £520 and another totem, BR(E) New Southgate (£420). Prices exclude buyer's premium of 20% (+ VAT).

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Great Northern gains *Revenge*, *Wolseley Hall* motors in... while *Neil Gow* takes a bow

NAMEPLATES from locomotives built either side of the Grouping divide will take centre stage at Great Northern's auction on October 5. They are *Revenge* from London & North Western Railway Alfred the Great class No. 1959; *Wolseley Hall* from GWR No. 5964; *Leinster* from LMS No. 45741; and *Neil Gow* from LNER A3 No. 60082.

No. 1959 was built at Crewe in March 1902 as a four-cylinder compound 4-4-0 in the Alfred the Great class, but in April 1916 was rebuilt as a two-cylinder simple locomotive to become a member of the Renown class, still carrying the original *Revenge* nameplates and the same number. It was withdrawn in January 1930, by which time it had been renumbered 5143 by the LMS, and six years later the name, albeit not the original plate, was given to Jubilee No. 45714.

The Hall, named after a 17th century stately home near Rugeley, Staffordshire, that was demolished in 1966, was built at Swindon in July 1936 and withdrawn from Westbury (82D), in September 1962. Jubilee No. 45741 was another 1936 locomotive, emerging from Crewe works in December that year, and was withdrawn from Carlisle Kingmoor (68A) in February 1964, while the A3 was outshopped by North British in November 1924 and withdrawn from Gateshead (52A) in September 1963.

This locomotive was named after the winner of the 2000 Guineas classic in 1910, and it is tempting to assume that this racehorse was in turn named after a renowned 18th century Scottish fiddler. Except the musician's first name was spelt Niel – a mis-spelt racehorse leading to a mis-spelt locomotive nameplate perchance?





A cabside numberplate from the Hall and the smokebox numberplate from the A3 will also be in the auction, and other locomotive items include two other smokeboxes, from GWR No. 4901 *Adderley Hall* and SR Battle of Britain Pacific No. 34075 *264 Squadron*, a Gorton 1952 worksplate from Nigel Gresley-designed Class EM1 electric No. 26043, and a selection of English Electric worksplates from diesels built for BR between 1960-67.

Headboards include 'The Norseman,' 'The White Rose' and 'The Merchant Venturer,' from respectively King's Cross to Newcastle and Leeds/Bradford expresses, and Paddington to Bristol/Weston-super-Mare.

I logged each of these expresses in my trainspotting days, the first at Stevenage on July 26, 1961, behind A2 Pacific No. 60524 *Herringbone*, the second at Hadley Wood on July 8 the same year hauled by A3 No. 60063 *Isinglass*, and the third at Reading on a number of occasions, including on August 29, 1958, and June 8 the following year, each time with No. 6003 *King George IV* in charge.

Among the totem station signs is Pontypool Road, the location of a steam shed (86G) that will resonate with many trainspotters of the 1950s to whom such Welsh depots seemed a world away – and indeed were, unless there was enough pocket money available for a long train journey to the Principality.

This station was opened by the Newport Abergavenny & Hereford Railway in January 1854 two miles east of Pontypool, and within 40 years had become an important railway complex containing a large network of junctions, sidings, marshalling yard and eight-road engine shed.

In March, 1909 the GWR replaced the original station with a larger one nearby, and at its peak it was one of the busiest railway junctions in the country. Even in 1950 the shed, which had opened in 1869, was home to 90 locomotives, but inevitably this did not last, and in May 1965 the last driver signed off. The station is still open, but is now named Pontypool & New Inn and has just two platforms.

Finally, there is a one-off pencil sketch of an LNER J class 0-6-0 crossing Forth Bridge with a freight train drawn by Terence Cuneo in the mid-1950s for William Henderson, a member of the BR public relations team at Edinburgh. William had asked Cuneo to draw a sketch in his son Norman's autograph book after he accompanied Cuneo onto the bridge to enable the world-famous artist to carry out preparatory work for a poster he had been commissioned to paint by BR.

The auction is at Poynton Leisure Centre and starts at 10.30am.

TAL looks back to Met Railway opening in 1863

A METROPOLITAN Railway timetable for the line's first year of operation more than 150 years ago and a platform bullseye from a station that was renamed in the 1930s but has subsequently reverted to its original name, are two of the highlights of a Transport Auctions of London sale on October 26.



The Met opened as the world's first passenger underground railway in January 1863, running nearly four miles between the stations of Paddington (Bishop's Road) and Farringdon Street. Trains were steam-hauled and composed of gas-lit wooden carriages – a combination which seems unimaginable today – but electric traction was introduced in 1905.

The platform bullseye is Holborn (Kingsway), from the Underground station that opened in December 1906 as Holborn. The Kingsway suffix was introduced in May 1933 when the station was modernised, but gradually fell out of use and no longer appears on station signage or Tube maps.

A main line item is a Southern Railway Isle of Wight poster by George Ayling (1887-1960) dating from 1939, while other main line and London Underground memorabilia will include cab destination plates, early maps, and paperwork.

The second batch of the late Alan Jackson's photo albums covering trains, rail infrastructure, and other transport subjects, will also be going under the hammer. The auction is at Croydon m Park Hotel and starts at 11am.



FORGOTTEN ENGINES UNVEILED

Three locomotives made their first public appearances in decades at the Vale of Rheidol's September 14-15 steam festival, and scenes from the line's GWR past were recreated in glorious sunshine. **Gareth Evans** reports.



Borsig 0-4-0WT 20hp Type 2 (No. 5913 of 1916) is seen in the paint shop at Aberystwyth on September 14. GARETH EVANS

The crowds continued at Aberystwyth booking office unabated and the atmosphere was buzzing with excitement – it was clear that the Vale of Rheidol Railway (VOR) was the place to be over the weekend of September 14-15.

The mood was not unexpected, given what was on offer – most notably the opportunity to see locomotives which have remained out of the public eye for decades, as well as the GWR in all its 2ft-gauge splendour.

In the works

The 'hidden' locomotives were displayed in the impressive modern workshop at Aberystwyth, accessible for the sum of £4 to join one of the half-hourly tours.

Quarry Hunslet 0-4-0ST *Nesta* (No. 704 of 1899) made its public debut following rescue from a swamp in Puerto Rico by the line's CEO Robert Gambrill and repatriation to Britain in 2016. *Nesta*, the last remaining unrestored ex-Penrhyn Quarry Hunslet, could also be seen in Wales for the first time since export to the US in July 1965.

Also unveiled in public for the first time in the UK was ex-German army trench railways Maffei-built 'Brigadelok' 0-8-0T No. 4766 of 1916 (DFB No. 968), imported by the VOR in 2002 and Borsig 0-4-0WT 20HP Type 2 (No. 5913 of 1906), purchased by the VOR in 1994.

Another locomotive attracting considerable interest was Hanomag-built 2-6-2+2-6-2 NGG13 Garratt No. 60 (No. 1055 of 1927), which is set to operate on the VOR in 2020 following completion of its overhaul. Out of ticket Kerr Stuart 'Wren' 0-4-0ST No. 3114 was also seen.

In the carriage and wagon corner of the works was VOR coach No. 11, which is being rebuilt to accommodate a new First Class compartment, as well as wheelchair access. After No. 11 returns to service next year, No. 12 will be next in line for rebuilding.

Work in progress on other restoration and overhaul projects could also be viewed – including the Welsh Highland Heritage Railway Baldwin 4-6-0T No. 794 (which is to carry the identity of WHR veteran No. 590) and the Welshpool & Llanfair Railway's Beyer Peacock 0-6-0T *The Earl*. Not to be forgotten is metre gauge German Henschel tram locomotive *RUR* (No. 5276 of 1899). While the rest of the locomotive is being restored by Alan Keef, work on its motion was subcontracted to the VOR.

'Driver for a fiver' was on offer at either end of the line – with a Rheidol tank at Aberystwyth and Quarry Hunslet 0-4-0ST *Margaret* at Devil's Bridge.

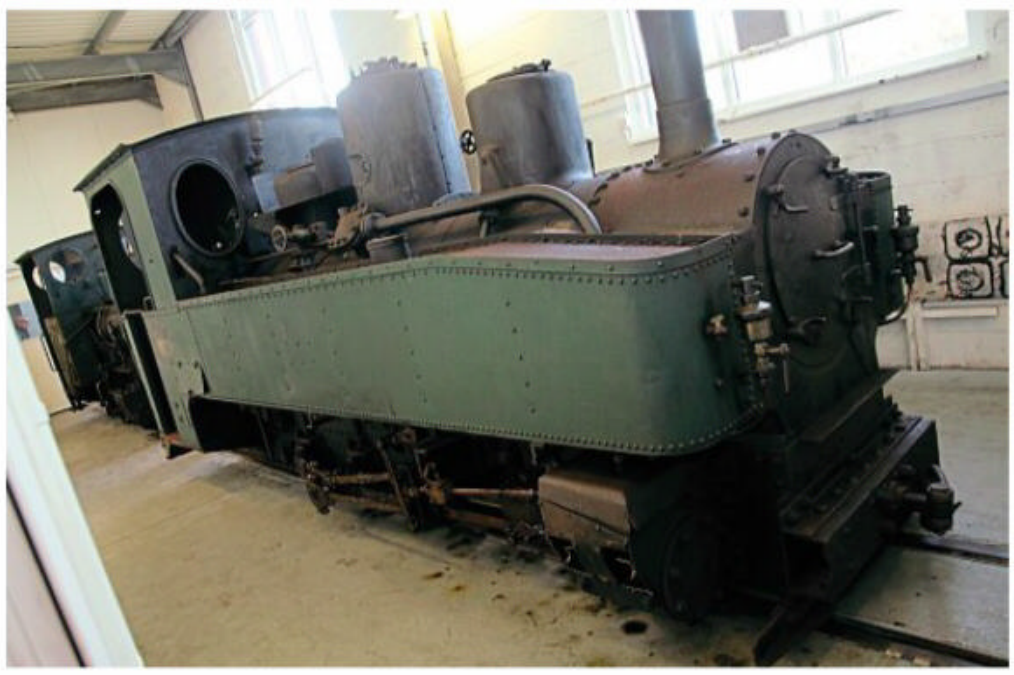
Another attraction was the sight and sound of the line's three GWR-liveried Rheidol tanks in steam together in public for the first time in 20 years. When I was advised to arrive at Aberystwyth in good time for the Saturday morning's 9.30am line-up of the 2-6-2Ts, I thought the locomotives would be placed together up on the run-round loop, with photographers positioned on the platform. Much to my delight (and I'm sure for everyone else present), we were escorted across the track, enabling photographs to be taken with the sun behind us. It was akin to a carefully managed photo charter in that locomotives were positioned in different locations. All those present respected the clear and concise but friendly instructions given by staff.

A magnificent line-up of the VOR's 2-6-2T trio in GWR green. In 'old money' Nos. 7, 8 and 9 are seen at Aberystwyth during the morning photo shoot on September 14. GARETH EVANS



Workshop tours ran every 30 minutes. Pictured clockwise from left are: Baldwin No. 794 (to run as No. 590); VOR carriage No. 11; Quarry Hunslet 0-4-0ST *Nesta*; Kerr Stuart 'Wren' 0-4-0ST No. 3114; Beyer Peacock 0-6-0T *The Earl*; NGG13 Garratt No. 60; and Henschel 0-4-0 *RUR*. GARETH EVANS





Left: Two 'forgotten engines' were displayed in the paint shop in the workshop – the Maffei-built Brigadelok 0-8-0T (No. 4766 of 1916) and the Borsig 0-4-0WT. GARETH EVANS

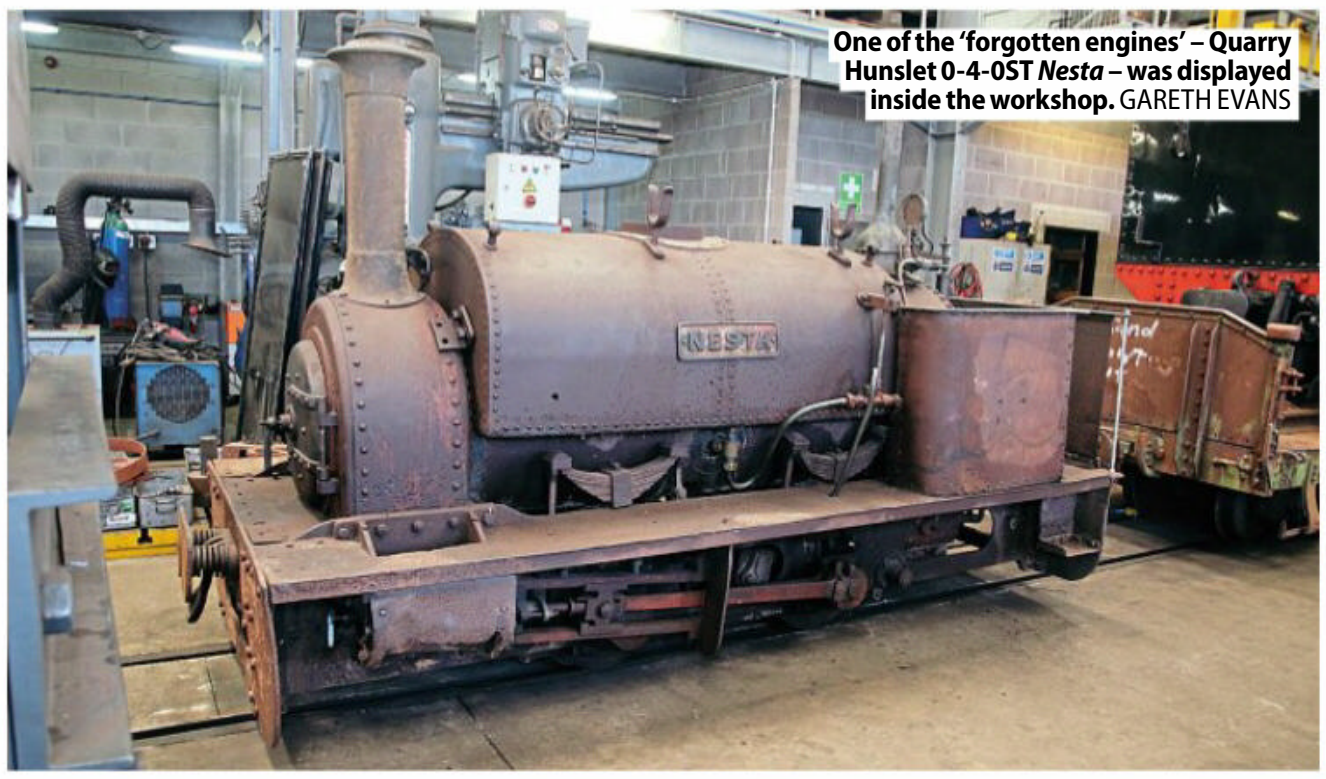
Right: Maffei-built Brigadelok 0-8-0T (No. 4766 of 1916) in the relatively tight confines of the paint shop. GARETH EVANS

Despite clearly being under pressure from the numbers of visitors, smiling faces were not in short supply among the staff. Indeed, the staff appeared to be quietly proud of the work they had put in to lay on the event and happily engaged in friendly banter, which perhaps said it all.

Asked how the event had performed, Debbie Morgan, VOR marketing manager, said: "It was an absolute bumper weekend – we broke all records.

"It was mind-blowing. I've never seen the Aberystwyth shop so full for so long. It never stopped. The staff coped so well. It was great to do it and everyone thoroughly enjoyed themselves.

"We're going to look at organising another gala in two years' time, which will be even bigger. It will have the added attraction of the Garratt and the completion of our enhancements at Aberystwyth, including our new museum, shop and tea room."



One of the 'forgotten engines' – Quarry Hunslet 0-4-0ST *Nesta* – was displayed inside the workshop. GARETH EVANS



GWR splendour on the 2ft gauge: No. 7 is seen at Devil's Bridge with its train of chocolate and cream carriages, complete with guard's van at the back. The smoke at the rear of the train provides a reminder that Quarry Hunslet 0-4-0ST *Margaret* was operating 'driver for a fiver' in the siding. GARETH EVANS

As has been reported on our news pages, the transformation of Aberystwyth station is well underway as part of the 'Wales to the World' project. Completed so far are the new platform and station toilets. The latter would not look out of place in a high class hotel and they even manage to pay homage to the GWR.

"We've been working on the enhancement of Aberystwyth station site," said VOR general manager Llyr ap Iolo.

"A new carriage shed is being built on the site of the previous platform, which once served the Carmarthen line. The target is to finish it by March 2020. This will allow the ex-GWR locomotive shed to become a new multi-purpose venue/museum, with works to be completed by March 2021.

"Our new booking office is to be opened on the site to the rear of Home Bargains. The footpath to the main line station is also to be reopened. Our current temporary booking office is to become the new café and will be relocated to be in front of the new museum."

As for engineering matters, Llyr said the workshop is extremely busy. Two new apprentices have just started, joining the three currently with the VOR. The line employs 10 part-time and 35 full-time staff, of which 15 are engaged in the workshop.



Packed trains all-round at the intermediate station of Capel Bangor on September 14. GARETH EVANS

If you haven't been to the VOR for a number of years, mark it on your 'to do' list. You won't be disappointed. Trains are running daily until November 1. HR



Kerr Stuart No. 3114 is stored after the expiry of its boiler certificate. The airy nature of the workshop is apparent in this view. The running shed area is located behind the roller shutter doors. GARETH EVANS



Reassembly of the Welsh Highland Heritage Railway's Baldwin is under way. GARETH EVANS



Hanomag-built 2-6-2+2-6-2 NGG13 Garratt No. 60, which is set to operate on the VOR in 2020, is seen on accommodation bogies in the workshop, while the contract overhaul of the Welshpool & Llanfair Railway's Beyer Peacock 0-6-0T No. 822 *The Earl* (temporarily residing on a wagon) is due to begin in earnest imminently. GARETH EVANS

Above: No. 8 is seen near Glanyrafon Trading Estate at the head of the demonstration freight train, allowing the VOR's restored wagons to be showcased. Cattle wagon No. 38089 is immediately behind the 2-6-2T. NIGEL BIRD

Below: A busy scene at Aberystwyth: No. 1213 (No. 9) waits to take up its 'driver for a fiver' duty, as No. 7 is all set to depart with a passenger train to Devil's Bridge, while No. 8 prepares to couple up to the demonstration freight train. GARETH EVANS

HERITAGE RAILWAY
THE BRIGHTER STEAM NEWS MAGAZINE

In stunning early evening light, GWR 'Modified Hall' No. 6960 *Raveningham Hall* slowly drifts across the River Severn on August 24. The Grade II listed Victoria Bridge takes the Severn Valley Railway across what is the longest river in the UK at around 220 miles. Note the swans, which can be seen in the river below the first carriage. ALAN CORFIELD



Steam Dreams carries 10,000 extra Tuesday passengers!

By Cedric Johns

STEAMS Dreams' major shareholder David Buck revealed that his hard-nosed, speculative decision to run four trains on Tuesdays between June 4 and September 3 has more than paid off.

"I'm delighted," he said. "Now that we have had time to analyse the results, I can say that we carried almost 10,000 passengers on our three Windsor trains, including the Tuesday evening Surrey Hills diner. This result is way above our original estimates made when we planned the operation."

The Tuesday passenger figures are in addition to the current Steam Dreams' railtour programme which of course runs on until mid December.

From observations carried out over the 14-week period, he said that the most of the passengers travelling to Windsor were younger people who had never experienced steam. As to the growing popularity of the dining train, the fact that the final six weeks were sold out in advance speaks for itself.

Fresh from returning early from Ireland and the Steam Dreams annual visit with the 'Emerald Isle Express' featuring 4-4-0 No. 85 *Merlin* and Northern Counties 2-6-4T No. 4 for business reasons, David described his first experience of the Irish scene as "delightful."

Asked about next year, David replied: "We shall be expanding the Windsor trips and evening diner operation as well as seeking new destinations for the rail tour programme."

More *Mayflower* tours

Now 15 months into Steam Dreams' railtour business, he said that the whole experience had been fulfilling, backed by an excellent in-house team.

Looking ahead to the immediate future, Steam Dreams will be running only one train in October, from the Bluebell Railway's Sheffield Park and East Grinstead stations, Woldingham and Clapham, to Oxford and Worcester on Saturday, October 5. Motive power was booked for No. 61306 *Mayflower*.

The Steam Dreams year ends with the traditional line up of festive tours.

The first is from King's Cross to York on Sunday, November 17, picking up at Ealing Broadway, West Hampstead, Alexandra Palace, Potters Bar and Stevenage.

It is followed by a trip to Bath on Friday, November 29, calling at West Brompton, Cheam, Leatherhead, Effingham Junction, Guildford, Petersfield and Salisbury.

On Sunday, December 1, a second train to Bath starts from Paddington picking up at Slough and Reading only.

Tuesday, December 3, sees a 'Cathedrals Express' visiting London and Windsor. The train starts from Borough Green & Wrotham and calls at Maidstone East, Charing, Ashford International, Folkestone West, Canterbury East, Faversham and Bromley South.

Lincoln is the destination on Sunday, December 8, the train starting from King's Cross and picking up at Hertford North, Hitchin and Huntingdon.

On Sunday, December 15 it's Christmas Carols at Stratford-upon-Avon, with a trip from London Victoria picking up at Staines, Ascot and Reading.

Festive season

Winchester is the attraction on Thursday, December 12, with a train from Chinnor, calling also at Princes Risborough, Bicester and Oxford Parkway.

On Tuesday, December 17, a London Waterloo departure for Salisbury, Sherborne – for carols in the abbey – or, for enthusiasts, Yeovil Junction for Yeovil Railway Centre and its turntable.

The season finishes with the 'White Cliffs Luncheon Train' on Friday, December 20. Starting from London Victoria, the diner takes a mid-morning tour of the Kent coast, calling at Bromley South and Swanley.

Motive power for these trains has yet to be confirmed but regular Steam Dreams locomotive, *Mayflower*, is likely to feature.

'St Pancras of the North' celebrates 175 years

THE 175th birthday of the opening of Manchester Victoria station is to be celebrated by a new local partnership.

As the station is today shared with Metrolink, a heritage Manchester tram will be stood outside the station when the event is launched by the Lord Mayor of Manchester Coun Abid Chohan at 10.30am on Sunday, October 20.

The partnership comprises Transport for Greater Manchester, Northern Trains, Manchester City Council and Greater Manchester Transport Heritage.

It is also hoped to have some vintage rolling stock at the station as well. On the platform concourse there will be stands to represent the rail industry, heritage railways and community rail, as well as model railway displays. Even Queen Victoria herself will turn up to oversee proceedings!

Keith Whitmore, chairman of Greater Manchester Transport Heritage, said: "Manchester Victoria is an iconic station often referred to as the 'St Pancras of the North' and again looking resplendent following the major refurbishment and new roof five years ago. We really could not let such a landmark birthday not be celebrated."



LMS Jubilee 4-6-0 No. 45699 *Galatea* passes Wichnor Junction with West Coast Railways' 1Z50 9.33am Burton-upon-Trent to Stratford-upon-Avon 'Merchant of Avon' on September 8. JOHN WHITEHOUSE

Ffarwelio â Phacer Cymoedd Caerdydd

By Brian Sharpe

IN conjunction with Transport for Wales, the Branch Line Society has announced the 'Ffarwelio â Phacer Cymoedd Caerdydd' (Cardiff Valleys Pacer Farewell) to mark the end of the Class 143 Pacer units on South Wales passenger services.

The tour will feature two Class 143 units, and will travsere a number of unusual lines across the region, along with a wide range of sought after crossovers. The highlights will be Treherbert and Rhymney sidings.

Proceeds from the tour on Sunday, October 6 will go to the British Heart Foundation.

Valleys tour

Starting at Cardiff Central, the tour will travel through Canton depot en route to Barry from where it will return to Cardiff and continue via Taffs Well and Radyr to Cardiff Queen Street.

Next comes a trip to Pontypridd; back to Radyr then up to Treherbert. After returning to Pontypridd, the train makes a trip to Aberdare, Abercwmboi and Stormstown loop.

Returning again to Pontypridd, Radyr, Cardiff Central and Queen Street using different platforms, the train runs to Bargoed and Rhymney, again traversing various loops and sidings. After also visiting Ystrad Mynach, the train finally returns to Cardiff.

Seen from the North Queensferry side, LMS Stanier 'Black Five' 4-6-0 No. 44871 crosses the Forth Bridge with the 1Z46 'The Forth Bridge and Scottish Borders Special' on August 25. Class 37 No. 37685 was present at the rear of the tour, operated by West Coast Railways and the last in the current series of Scottish Railway Preservation Society tours around the Forth Circle. CALLUM NICOLSON

Gresley A4 *Union of South Africa* avoids line closure

By Cedric Johns

AROUND the time that the Railway Touring Company's 'Dorset Coast Express' left London Victoria for Weymouth on Thursday, September 5, local radio broadcast that the line between Brockenhurst and Bournemouth had been closed because of an 'incident', bringing services to a standstill, with police estimating that lines would not reopen until 3pm. However, by 11.30am the line was re-opened to traffic and the 'Express' although some 15 minutes down, was allowed to run its course.

Further enquiries elicited that the incident turned out to be a fatality on the line near Poole.

The 'Express' was the last of a series of four Dorset Coast excursions to Weymouth this year.

RTC's 'Swanage Belle' on Thursday, September 12, was hauled by No. 60009.

Christmas focus

It is now the time of year when RTC's Christmas traffic comes into focus. The first train, 'The Christmas Cheshireman' departs Bristol on Saturday, November 16, behind No. 60009 bound for Chester, calling en route at Filton Abbey Wood, Cwmbran and Abergavenny.

On Saturday, November 23, 'The Ludlow Medieval Christmas Fayre' starts out from Slough heading for Ludlow and Shrewsbury, via Severn Tunnel and the Welsh Marches behind *Union of South Africa*. Pick-up points are Reading, Didcot, Swindon and Bristol Parkway.

The 'Christmas Sussex Belle' on Tuesday, November 26, departs London Victoria for Hastings and Eastbourne, with possibly a 'Black Five' working the train.

On Thursday, November 28, No. 60009 will now run from Norwich to York (rather than Worcester, as originally planned) and has been retitled the 'York Yuletide Express.'

Two locomotives are involved in RTC's other 'The York Yuletide Express', which gets away from Ealing Broadway behind Union of South Africa, stopping at St Albans, Luton, Bedford, Kettering and Melton Mowbray. *Duchess of Sutherland* comes on at York for the return journey.

In a new venture, 'The Bath & Bristol Christmas Express' departs Swanage on Thursday, December 5, with the *Duchess*, calling at Poole, Bournemouth, Southampton and Salisbury.

On Saturday, December 7, 'The Lindum Fayre' starts from King's Cross for Lincoln, picking up at Potters Bar, Stevenage and Peterborough. No. 6233 is also booked for this trip.

In a second visit to Chester, 'The Chester Christmas Express' leaves Stevenage Thursday. December 19 calling at Cambridge, Ely, March, Peterborough, Oakham, Melton Mowbray and Leicester, the *Duchess* providing the motive power.



A4 No. 60009 *Union of South Africa* is seen passing Totton at the head of the 'Dorset Coast Express' on September 12. DON BENN

New ventures

In another new venture, 'The Bath & Cardiff Christmas Markets' leaves Paddington on Tuesday, December 10, picking up at Slough, Reading and Newbury .With the *Duchess* on the front, the train continues down the Berks & Hants line turning off at Westbury.

The 'Christmas White Rose' from King's Cross on December 14, previously 'The Tynesider' to Newcastle, will now run only as far as York with No. 60163 *Tornado* outward and No. 60009 on the return.

Finally, RTC's festive season ends with 'Edinburgh Christmas Market' running from York to Edinburgh, calling at Durham and Newcastle on Saturday, December 21,

Vintage Trains returns main line 'Polar Express' to Birmingham

EXCLUSIVE

By Robin Jones

VINTAGE Trains has announced that it will run main line 'Polar Express' excursions from Birmingham city centre for a second year.

Last year's series of trips based on the Warner Brothers hit Christmas movie of the same name from Birmingham Moor Street station to Tyseley and back was a huge success in terms of tickets sold.

As in the film, families with young children dressed in nightclothes gather in a reception room at Moor Street station where the story of The Polar Express by Chris Van Allsburg unfolds through video, before the train conductor appears and invites them aboard, leading them to the platform.

On board, dancing chefs and waiters arrive serving cookies and hot chocolate, and showing pages from the beautifully-illustrated book of the film for the whole carriage to follow.

Last year's 'Polar Express' series was Vintage Trains' first major exercise as a Train Operating Company.

As we closed for press, the details of the arrangements for this year's trips were still being finalised, but, anticipating heavy demand, a registration webpage on which would-be travellers can receive full details when they are available and lodge their intention to buy tickets when they go on sale has been set up at www.thepolarexpressbirmingham.com

Bulleid Battle of Britain Pacific No.34053 *Sir Keith Park* will be the star guest at the September 28-29 Vintage Trains and Tyseley Locomotive Works open weekend.

The Swanage-based locomotive has been at Tyseley in recent months for bottom-end repairs, which are now complete. Its owner, Southern Locomotives Ltd, has agreed to allow it to stay on for the event, immediately after which it will return to the Swanage Railway.

At the open weekend, it will join WR 4-6-0 No. 7029 *Clun Castle* and GWR 0-6-0PT No. 7752 in steam.

The event will also feature the return of historic miniature locomotives rarely seen in public, including the 15in gauge Bassett-Lowke Class 30 Atlantic *Count Louis*, which worked on the Fairbourne Railway from 1925-1987; the Sutton Miniature Railway (SMR) railcar, built as a miniature GWR diesel railcar; and other SMR rolling stock. A 10¼in gauge miniature line will also be running, featuring *Stanley Baldwin*, built in the early 1920s and for many years in the ownership of Bassett-Lowke director Harry Franklin, and which was repatriated from the US in 2002. The 15in, 10in and 7¼in gauge railways will be available for rides.



Vintage Trains flagship WR 4-6-0 No. 7029 *Clun Castle,* heading the September 7 'The White Rose' from Dorridge to York and return, passes near Barrow Hill. MICHAEL ANDERSON

For families, a major highlight of the weekend will be the chance to see Paddington Bear, who will be making personal appearances at intervals on both event days.

Vintage fairground rides will include a steam-powered carousel built in 1893 and a children's carousel dating back to 1910, traction engines will be in attendance and there will be free admission for vintage and pre-September 1980 classic cars. The works will also be open for viewing.

➜ To book discounted advance tickets visit www.vintagetrainsevents.co.uk

NELPG's K1 on the move to Grosmont

FOLLOWING its summer stint working 'Jacobite' trains out of Fort William, the North Eastern Locomotive Preservation Group's K1 2-6-0 No. 62005 was booked to depart Carnforth on September 15 bound for Carlisle and an overnight stop.

Scheduled to arrive at Carlisle at 9.15pm, the stopover was necessary because the branch to Grosmont from Middlesbrough would have been closed by that hour.

Next morning the engine, which was reported as meeting all its commitments on the Highland Line from and to Fort William and Mallaig, set off with its support coach for the North Yorkshire Moors Railway, travelling via the Tyne Valley to Middlesborough and on to Grosmont.

It will then take part in the NYMR's September 26-29 autumn steam gala (News, page 22) and will then be moved into the Deviation Shed for winter maintenance.

Providing there are no undue problems, the 2-6-0 will move south in January to feature in the Great Central Railway's winter steam gala, before travelling back to Carnforth for wheel turning.

In May, the K1 will be ready to travel north to Fort William for another 'Jacobite' season.



BR Pacific No. 70000 *Britannia* climbing the 1-in-182 gradient and crossing Gauxholme Viaduct near Walsden with the returning Saphos Trains 'Palatine' railtour on August 24. The Grade II-listed viaduct was built in 1840 by George Stephenson and in the foreground is the Rochdale Canal. PHIL JONES

A1 Peppercorn Pacific No. 60163 *Tornado* heads south over Ferryden Viaduct on the outskirts of Montrose with The A1 Steam Locomotive Trust's final 'Aberdonian' excursion of the year on Saturday, August 7. ANDREW FOWLER

Galatea heads empty coaching stock through the Hope Valley

By Brian Sharpe

AN innovation by West Coast Railways for the summer of 2019 has been the series of 'Merchant of Avon' trains running steam-hauled between Burton-on-Trent and Stratford-upon-Avon on Sundays.

Rostered motive power for all trains was LMS 8F 2-8-0 No. 48151, which took its stock empty from Carnforth to Wetmore sidings at Burton the day before and returned on the Monday morning. The route was via the West Coast Main Line, Stockport, the Hope Valley, Erewash Valley and Castle Donington.

A reshuffle of West Coast's motive power in late August saw LMS Jubilee 4-6-0 No. 45699 *Galatea* return from York to Carnforth after spending most of the summer on 'Scarborough Spa Express' duties with SR Merchant Navy Pacific No. 35018 *British India Line* replacing the Jubilee at York.

This gave the opportunity for *Galatea* to take a turn on the 'Merchant of Avon' on Sunday, September 8 and also led to the unprecedented sight of a Jubilee heading an empty stock train through the Hope Valley on Saturday, September 7 and Monday, September 9.



LMS Jubilee No. 45699 *Galatea* heads empty stock for the following day's 'Merchant of Avon' from Carnforth to Burton-on-Trent past New Mills South Junction on September 7. BRIAN SHARPE

'Cotton Mills Express' revived by RTC for 2020

By Brian Sharpe

THE Railway Touring Company's steam railtour programme for the first four months of 2020 contains few surprises, but a welcome revival is that of the popular 'Cotton Mills Express', which has not run for several years.

The train on February 29 will follow the traditional route from Lancaster, Preston, Wigan and Manchester Victoria to Huddersfield, the Calder Valley to Hebden Bridge and on to Blackburn, returning to Manchester via Chorley and Bolton, featuring the climbs to Miles Platting, Standedge and Copy Pit.

However, in a major change from earlier years, the train then repeats part of its itinerary, travelling over Standedge to Huddersfield and Brighouse, but this time taking the direct route from Hebden Bridge back to Manchester.

The 2020 season starts on Saturday, January 25 with what has become the traditional 'Winter Cumbrian Mountain Express' (WCME) from Manchester Victoria to Carlisle, outward over Shap and returning via Ais Gill. Motive power will be one of the Carnforth Jubilees.

Other 'WCME' trains, originating from Euston, will run on February 1, 8, 29, and March 28, using an engine from the Carnforth pool.

The 'Valentines White Rose' on February 15 will see LMS Princess Coronation Pacific No. 6233 *Duchess of Sutherland* making a return run from King's Cross to York, while the 'Cotswold Venturer' on February 22 from Paddington to Worcester will feature LNER A4 Pacific No. 60009 *Union of South Africa*.

'The Yorkshireman' on March 7 will have No. 60009 running from Victoria to York one-way via Harringworth and 'The Cheshireman' on March 21 will be an out-and-back working from Euston to Chester by No. 6233.

The 'Edinburgh Flyer', which is scheduled for March 21, will feature LNER A1 Pacific No. 60163 *Tornado* running from York to Edinburgh and return, while March 28 will see a repeat of this year's 'Wensleydale' from Carnforth, taking in the Wensleydale Railway.

Duchess of Sutherland back in traffic after Norwich mishap

By Cedric Johns

While stabled overnight at Norwich on Friday, September 6, prior to working the Railway Touring Company's 'Cheshireman' from Norwich to Chester the following day, members of the support crew for LMS Princess Coronation Pacific No. 6233 *Duchess of Sutherland* discovered a problem, resulting in it being declared a failure.

It is understood that the right-hand inside valve and bush spindle had seized.

Meanwhile, the tour ran as scheduled to Chester, hauled throughout by West Coast Railways' Class 47 diesel No. 47802. The support crew members dismantled the components and took them by road for repair at No. 6233's West Shed base at the Midland Railway-Butterley, before returning to Norwich for re-assembly a couple of days later.

Working with commendable speed, newly-machined parts were put in place by September 12. The locomotive's chief mechanical engineer, Simon Scott, was able to confirm that the job had been successfully completed, allowing No. 6233 to travel light engine with a support coach back to Southall on Friday, September 13.

On the Saturday, the *Duchess* departed Southall and travelled to Bristol with empty stock in readiness to work RTC's final 'The Royal Duchy' of the year, from Bristol to Plymouth and Par, the following day.

Following the Norwich incident and its attendant costs, the Princes Royal Class Locomotive Trust is appealing for new members and donations, to assist the development of the West Shed museum and visitors facilities. For more details contact the Trust on westshed6233@btcontact.com



Princess Coronation Pacific No. 6233 *Duchess of Sutherland* crosses Cornwall's Largin Viaduct with the Railway Touring Company's 5.40pm Par to Bristol Temple Meads 'Royal Duchy' on September 1. JOHN WHITEHOUSE



LNER A3 Pacific No. 60103 *Flying Scotsman* arrives with its support coach at Peterborough on September 17 en route from Southall to the Nene Valley Railway for a three-week visit. The National Collection owned Pacific then ran tender-first along the East Coast Main Line to Fletton Junction, before operating over NVR metals on the Fletton branch line and then on to Wansford. BRIAN SHARPE

ORR 'restricts' Yeovil Railway Centre coach after collision

RESPONDING to a reported incident, an Office of Rail and Road (ORR) inspector has examined the circumstances in which a train carrying passengers was in collision with a stationary box van on the Yeovil Railway Centre's running line.

To clarify the situation, Paul Gould, chairman of South West Main Line Steam Company, issued a statement which read: "During an open day, Sunday May 19, an over-run at a stop board at the end of our running line occurred, which resulted in a minor collision at low speed with a stabled box van.

"No injuries or damage resulted. The incident was reportable to the ORR, which we did immediately.

"Following a visit by an ORR inspector, we have been restricted in using our passenger coach in a propelled move, as was the case when the collision occurred. We can, however, operate the coach top and tailed by two locomotives.

"We are currently reviewing and modifying our operational procedures and a risk assessment for approval by the ORR.

"Our operations in all other aspects, including visitor brake van rides, continue unaffected."

The coach involved in the collision was a centre carriage taken from a Class 117 DMU and acquired with the aid of donations from members.

Because the vision of the footplate crew was restricted by the size of the carriage, when compared to Yeovil's small industrial tank engines, when it was being propelled, one end was modified by inserting three windows, installing braking equipment and closing the compartment from the public.

The modifications provided the duty brakeman with forward vision and braking control of the carriage.

On the day of the collision, the train consisted of a GWR Toad guards van and the carriage propelled by Barclay 0-4-0ST No. 1398 of 1915 *Lord Fisher*.

The next main line train that is scheduled to terminate at Yeovil is a 'Cathedrals Express' running from Waterloo to Salisbury and Sherborne, on Sunday, December 17.

The centre's Santa Specials are due to run on December 1, 8, 14-15 and 22-23.



LMS Stanier 8F 2-8-0 No. 48151 passes the Claymills Victorian pumping station near Burton-on-Trent on a returning empty coaching stock move from Burton to Carnforth on August 26 following West Coast Railways' 'The Merchant of Avon' tour to Stratford-upon-Avon the day before. GAVIN THOMSON

Clan Line: 25 years of air-braked excellence

SEPTEMBER marked the 25th anniversary of both the completion of work to fit air-braking to 1948-built Bulleid Pacific No. 35028 *Clan Line,* and the first time it hauled the VSOE Pullman, now the Belmond British Pullman. Indeed, *Clan Line* was the first main line-registered steam locomotive in the heritage era to be air-braked.

This work was done during the locomotive's second major overhaul in preservation, which lasted from July 1991 to September 1994 and was carried out with the assistance of the InterCity Special Trains Unit with the specific intention that *Clan Line* should become the regular steam locomotive to haul the air-braked VSOE.

Various test trains were run on the LSWR main lines, using air-braked Mk.1 stock provided by the unit. The 4-6-2's debut air-braked steam charter with the Pullmans took place on September 24, 1994 in the form of a charity trip from Victoria to Portsmouth for the Royal London Society for the Blind .

It subsequently remained the steam locomotive of choice for VSOE and Belmond, and has worked virtually every Pullman steam trip since.

Clan Line visited the Bluebell Railway to use the Sheffield Parkwheel drop in case repairs were needed to the front bogie following a derailment at Stewart's Lane depot on August 16, and after it passed a fitness-to-run examination 10 days later, it headed a scheduled round trip to East Grinstead.



To mark the 25th anniversary of air braking, former members of the unit and Southern Special Timings Section (pictured) travelled behind *Clan Line* as guests of owner the Merchant Navy Locomotive Preservation Society in the support coach on the British Pullman 'Surrey Hills Luncheon' operation on August 16. MNLPS



Passing through editor Robin Jones' home town, 8F No. 48151 is seen at Shirley on the North Warwickshire Line heading West Coast Railway's 9.33am Burton-upon-Trent to Stratford-upon-Avon 'The Merchant of Avon' on Sunday, August 25. JOHN WHITEHOUSE

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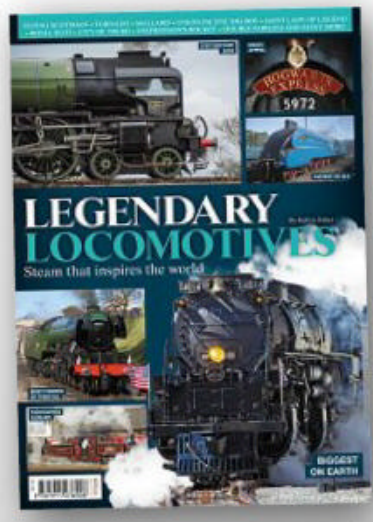





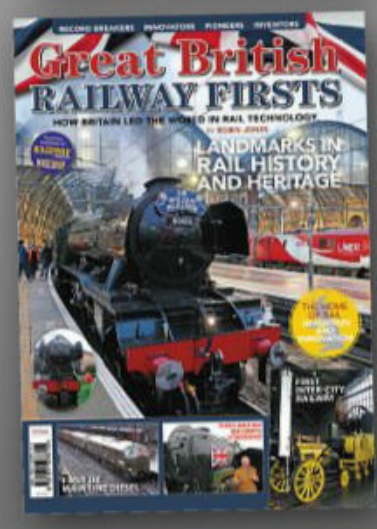

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Jubilee class 4-6-0 No. 45699 *Galatea* passes over Ais Gill on the Settle-Carlisle line with 'The Dalesman' in lovely evening sunshine on August 27. Operated by West Coast Railways, the 4-6-0's train ran from York to Carlisle, with steam traction taking charge from Hellifield. TOM HOUSEMAN

September

SAT 28: 'The Cumbrian Coast Express'
London Euston, Carlisle & return.
Steam-hauled: Carlisle, Carnforth.
Loco: 45690 *Leander*. RTC

SAT 28: 'The North Briton'
London King's Cross, Carlisle & return.
Steam-hauled: Doncaster, Carlisle.
Loco: No. 60163 *Tornado*. A1ST

October

SAT 5: 'The Pennine Explorer'
Leicester, Carlisle & return.
Steam-hauled: York, Carlisle. Carlisle, Sheffield.
Loco: No. 60163 *Tornado*. A1ST

SAT, 5: 'Steam Dreams Excursion'
Horsted Keynes, Bath & return.
Steam-hauled throughout.
Loco: No. 6201 *Princess Elizabeth*. SD

WED 9: 'Belmond British Pullman'
London Victoria, Stratford-upon-Avon & return.
Steam-hauled: TBA.
Loco: No. 35028 *Clan Line*. BEL

SAT 12: 'The Snowdon Panorama'
Horsted Keynes, Bath & return.
Steam-hauled throughout.
Loco: TBA. UKRT

SAT 12: 'The Cumbrian Coast Express'
London Euston, Carlisle & return.
Steam-hauled: Carlisle, Carnforth.
Loco: 45690 *Leander*. RTC

SAT 12: 'Chester Venturer'
Dorridge, Chester & return.
Steam-hauled throughout.
Loco: No. 7029 *Clun Castle*. VT

FRI 18: 'Belmond British Pullman'
London Victoria, Shalford & return.
Steam-hauled throughout.
Loco: No. 35028 *Clan Line*. BEL

SAT 19: 'The Yorkshireman'
London Ealing Broadway, York & return.
Steam-hauled throughout.
Loco: No. 60009 *Union of South Africa* or No. 6233 *Duchess of Sutherland*. RTC

SAT 26: 'The Golden Arrow'
London Victoria, Canterbury & return.
Steam-hauled throughout.
Loco: No. 70014 (70000) *Iron Duke (Britannia)*. ST

November

SAT 2: 'The Illuminati'
Birmingham New Street, Blackpool North & return.
Steam-hauled: Birmingham, Preston. Blackpool, Birmingham.
Loco: No. 60163 *Tornado*. A1ST

SUN 3: 'The South Yorkshireman'
Blackburn, Sheffield & return.
Steam-hauled throughout.
Loco: No. 45690 *Leander* or No. 45699 *Galatea*. RTC

FRI 8: 'Belmond British Pullman'
London Victoria, Shalford & return.
Steam-hauled throughout.
Loco: No. 35028 *Clan Line*. BEL

FRI 8: 'The North Wales Coast Express'
London Euston, Holyhead & return.
Steam-hauled: Crewe, Holyhead & return.
Loco: 60103 *Flying Scotsman*. RTC

SAT 9: 'The Citadel'
Manchester Victoria, Carlisle & return.
Steam-hauled: Manchester, Carlisle, Carnforth.
Loco: Nos. 45212 or 44871 or 45157 *The Glasgow Highlander*. WCR

SAT 16: 'The Christmas Cheshireman'
Bristol Temple Meads, Chester & return.
Steam-hauled throughout.
Loco: No. 60009 *Union of South Africa*. RTC

SAT 16: 'The Severn Valley Autumn Special'
London Euston, Kidderminster & return.
Steam-hauled: TBA.
Loco: TBA. PT

SAT 23: 'The Ludlow Medieval Christmas Fayre'
Slough, Shrewsbury & return.
Steam-hauled throughout.
Loco: No. 60009 *Union of South Africa*. RTC

SAT 23: 'The Marches & Severn Express'
Eastleigh, Shrewsbury & return.
Steam-hauled: Gloucester, Shrewsbury & return.
Loco: No. 60163 *Tornado*. PT

SUN 24: 'Santa Special'
Lancaster, Carlisle & return.
Steam-hauled: TBA.
Loco: TBA. WCR

TUE 26: 'The Christmas Sussex Belle'
London Victoria, Eastbourne & return.
Steam-hauled: London, Eastbourne. Hastings, London.
Loco: No. 60009 *Union of South Africa* or TBA. RTC

THU 28: 'The York Yuletide Express'
Norwich, York & return.
Steam-hauled: Norwich, York. York, Peterborough.
Loco: No. 60009 *Union of South Africa*. RTC

SAT 30: 'The York Yuletide Express'
London Ealing Broadway, York & return.
Steam-hauled throughout.
Locos: No. 60009 *Union of South Africa* and No. 6233 *Duchess of Southerland*. RTC

The information in this list was correct at the time of going to press. We strongly advise you confirm details of a particular trip with the promoter concerned.

Tour promoters

A1ST	A1 Steam Trust 01325 488215
BEL	Belmond Pullman 0845 077 2222
PT	Pathfinder Tours 01453 835414
RTC	Railway Touring Company 01553 661500
TEL	Torbay Express Ltd 01483 209888
SD	Steam Dreams 01483 209888
ST	Saphos Trains 0800 038 5320
SRPS	SRPS Railtours 0131 202 1033
UKRT	UK Railtours 01438 715050
VT	Vintage Trains 0121 708 4960
WCR	West Coast Railways 01524 737751

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Merchant Navy Pacific No. 35028 *Clan Line* departs Exeter St Davids for Bristol Temple Meads on August 10. PAUL BLOWFIELD/ MNLPS

WITH FULL REGULATOR

LOCOMOTIVE PERFORMANCE THEN AND NOW

In his latest column, **Don Benn** describes the performance of *Clan Line* on the UK Railtours' Atlantic Coast Express on August 10, and compares it with other runs with *Clan Line* and with No. 35022 *Holland America Line*.

THE UK Railtours' Atlantic Coast Express (ACE) on August 10 had been eagerly awaited by Southern fans, having been postponed from June 29 due to crewing issues. It was a trip not to be missed as it was the only non-Belmond charter this year for reasons not entirely clear, to me at least. Therefore, once again we found ourselves on the first train up from Southampton Airport for a pre-7am arrival at Waterloo for our 7.52am departure as we could not risk a later train

However, the prize for such an early start was a rare chance of a run down the main line to Woking, where the organisers had inserted this stop instead of the more usual Staines.

On the downside, the price to be paid was a slow line path from Woking to Basingstoke and a poor slot from there on to Salisbury – but would it be worth it?

After meeting up with the group of 'Old Timers' in the rear vehicle of the 11-coach train, and talking to many others from the days of steam on the platform, we settled down to see how Wayne Thompson and Dave Proctor would fare with this 425 ton train on a windy day of heavy showers.

Some coastal routes had speed restrictions imposed and there were reports of trees down in a number of places, but fortunately we were to be unaffected by both. The start from Platform 19 is very slow and the train was booked to run on the Windsor line to Queenstown Road, where it would cross to the fast line which it was booked to take all the way to Woking, having allowed the 7.53am Waterloo to Alton to get past and make its Clapham Junction call. All was well and we were through Clapham Junction in exactly the 11 minutes allowed at 41mph.

Table One shows the detail of the run to Woking and we were treated to a very fine piece of running to accelerate to no less that 77½mph by Hampton Court Junction and a splendid time of nine minutes eight seconds from passing Clapham Junction. For me this was maybe the highlight of the day and stands comparison with the best in the days of steam prior to 1967. The previous best I can find was on the 5.30pm down during 'the race to Basingstoke' in June 1965 when Eric 'Sooty' Saunders was trying to set a new fastest time to Basingstoke. With No. 35017 on 400 tons he equalled *Clan Line's* time on June 9, 1965, but two days previously with No. 35005 the time was eight minutes 43 seconds with a 435 ton load, probably a record with 12 coaches. This was part of an all-out effort to reach Basingstoke in 40 minutes, but was thwarted by a signal stop at Mole Intermediate after passing Esher at 83mph. Full details of that amazing week are in my book Twilight of Southern Steam' published by Pen & Sword.

Back on the 2019 run, Wayne eased the engine somewhat to keep speed down to the limit and then the brakes came on and we were diverted to the slow line at Weybridge due to track circuit problems on the fast lines, thus ruining the rest of the run to Woking reached in 34 minutes 30 seconds, a loss of two-and-a-half minutes. Net time is difficult to estimate but possibly about 27 minutes, including the very slow start to pass Vauxhall. Alongside this run in Table One is one with *Clan Line* almost at the end of steam in March 1967 with driver Tutt of Salisbury shed, one of many good drivers there. The

TABLE ONE: WATERLOO TO WOKING

Date	August 10, 2019					March 8, 1967			
Train	7.52am Waterloo to Exeter					6.54pm Waterloo to Salisbury			
Loco	Rblt MN class 4-6-2 No. 35028 *Clan Line*					Rblt MN class 4-6-2 No. 35028 *Clan Line*			
Load	11 coaches, 393 tons tare 425 tons gross					10 coaches, 324 tons tare 355 tons gross			
Driver	Wayne Thompson					Tutt, Salisbury MPD			
Fireman	Dave Proctor					not recorded			
Recorder	Don Benn					Don Benn			
Position	11th coach					front			
Weather	Showers and strong SW wind					Cold and wet			
	miles	**sched**	**mins**	**secs**	**speed**	**sched**	**mins**	**secs**	**speed**
Waterloo	0.00	0.00	00	00	P19 start	0.00	00	00	
Vauxhall	1.29		05	37	34½/37½		03	23	35
Queens Road	2.81	7.00	08	21	19* to FL		05	09	52
Clapham Junction	3.93	11.00	11	00	41	7.00	06	49	38*
Earlsfield	5.58		13	09	54		09	11	51
Wimbledon	7.24	15.00	14	54	61½		12	50	16* tsr
Raynes Park	8.64		16	13	66½		14	58	50
New Malden	9.78	18.00	17	11	70		16	13	57½
Berrylands	10.98		18	12	72		17	24	62½
Surbiton	12.04	20.00	19	05	74		18	26	66
Hampton Court Jct	13.34	20.30	20	08	77½	18.30	19	34	71½
Esher	14.39		20	55	76½		20	27	73
Hersham	15.91		22	09	76		21	44	74½
Walton	17.08		23	03	74½		22	42	70
Oatlands Box	18.12		23	53	68* sigs		23	38	66
Weybridge	19.15		25	08	44* sigs to SL		24	31	68½
Byfleet	20.40		26	38	55		25	41	70½
West Byfleet	21.68		28	38	21*/30½		26	47	71/1* sigs
Woking	24.29	32.00	34	30		34.00	32	50	
	* brakes or speed restriction					* brakes or speed restriction			
						net time 26¾ mins			



Brew time for a friendly locomotive crew: Dave Proctor and Wayne Thompson are seen at Salisbury on August 10. DON BENN

load was only a moderate 355 tons and No. 35028 did all that was needed to keep time, despite two checks and produced a net time of under 27 minutes.

Continued good running

On the August 10 run, the train was put fast line for the Woking stop to allow the 8am Waterloo to Portsmouth to use its correct platform three and so we left four minutes late in the rain to be diverted to the slow line at Brookwood, from where 50mph was reached at the Milepost 31 summit.

Wayne then let the engine run up to just under 75mph after Fleet, before we caught the stopping train in front to run into Basingstoke five minutes late in 38 minutes two seconds from Woking. Here we were due to be passed by a Cross Country service and then before Worting Junction by the 8.20am Waterloo to Exeter SWR train, which itself was slightly late. I had hoped that we would be allowed to precede it but no such luck as we crawled slowly up to the signal protecting the Junction for the Class 159s to pass us.

Worting was passed seven late and Wayne allowed the Exeter service train to get ahead and make its Andover call by recovering steadily, so speed didn't reach 70mph until just before Whitchurch. From here though it was pure Wayne Thompson and *Clan Line*. Would anybody else ever be allowed to drive this section with No. 35028? Will the Traction Inspector (TI) – Don Clarke in this case – just for once put his cap over the speedometer and allow this free-running engine to give me just one final 90mph through Andover? No, it didn't happen of course but from there to Tunnel Junction was another virtuoso performance well up the ACE standards in poor conditions.

The train touched 78mph before Andover, went over the rise to Red Post Junction at 72mph, then reached 77mph in the dip before the climb to Grateley topped at a very good 67mph. Wayne told me he was using about 160lb of steam until clear of the trees around milepost 71, then increasing to over 200lb for the last two miles. Speed only fell by 1.5mph over the final 1.25 miles, worth about 1,800 equivalent drawbar horsepower (edbh). Salisbury was reached in 45 minutes exactly or about 38 minutes net for the 35.83 miles after a signal check outside.

Excellent over Semley

At Salisbury, while the engine was watered, there was the usual mingling with others and the locomotive crews to discuss the journey down so far and prospects for the run forward to Exeter. Wayne was now joined by Steve Rodenhurst on the shovel but still with Don Clarke as inspector.

Table Two shows the continuation to the Yeovil pathing and water stop set against the run with *Clan Line* with the same engine crew on September 23, 2017. On that day the load was 12 for 465 tons as a generator coach was tacked on the back and this run had the better of it as far as Tisbury level crossing, though in much nicer weather conditions.

TABLE TWO: SALISBURY TO YEOVIL JUNCTION

Date	August 10, 2019					September 23, 2017			
Train	7.52am Waterlo to Exeter					7.13am Victoria to Exeter			
Loco	Rblt MN class 4-6-2 No. 35028 *Clan Line*					Rblt MN class 4-6-2 No. 35028 *Clan Line*			
Load	11 coaches, 393 tons tare 425 tons gross					12 coaches, 429 tons tare 465 tons full			
Driver	Wayne Thompson					Wayne Thompson			
Fireman	Steve Rodenhurst					Steve Rodenhurst			
Recorder	Don Benn					Don Benn			
Position	11th coach					11th coach			
Weather	Showers and strong south west wind					Sunny spells and south west wind			
	miles	**sched**	**mins**	**secs**	**speed**	**sched**	**mins**	**secs**	**speed**
Salisbury	0.00	0.00	00	00	1¼ mins late	0.00	00	00	2½ mins late
MP 85¼	1.70		05	43	27/34		05	32	28½/36½
Wilton South	2.50	6.00	07	20	30*	7.00	07	04	29*
MP 89	5.45		11	34	50		11	18	53/66½
MP 91	7.45		13	37	63		13	14	66½
Dinton	8.30		14	30	60½		14	04	63½
MP 93	9.45		15	34	63/61		15	08	62
Tisbury	12.60	17.00	18	34	68/70½	17.00	17	59	67½/69½
MP 99	15.45		21	01	68½		20	33	66
Semley	17.60		22	54	65		22	36	58
MP 103	19.45		24	26	78/*		24	14	76/*
Gillingham	21.70	28.00	29	14		27.00	28	47	
	0.00	0.00	00	00	1 min late	0.00	00	00	1 min early
MP 107½	2.25		05	45	41		05	31	40
MP 109¾	4.75		08	01	72		08	00	72½
Templecombe	6.80	12.00	11	33	20*	12.00	10	49	27½*
MP 113½	8.25		14	43	31		13	38	35
Milborne Port	9.15		15	54	52½		14	45	55½
MP 115½	10.25		17	08	58		15	55	60
MP 117½	12.25		18	48	79		17	34	79
Sherborne	12.85	20.00	19	13	78	20.00	17	58	74*
Wyke XC	15.48		21	33	60/7* sigs		20	16	65/7* sigs
Yeovil Junction	17.45	28.00	27	33		29.00	25	42	

* brakes or speed restriction

* brakes or speed restriction

TABLE THREE: DETAIL OF HONITON BANK

Date	August 10, 2019				July 12, 1964			
Train	7.52am Waterloo to Exeter St Davids				11am Waterloo to Exeter Central			
Loco	No. 35028 *Clan Line*				No. 35022 *Holland America Line*			
Load	11 coaches, 393/425 tons				12 coaches, 410/445 tons			
Driver	Wayne Thompson				Marsh			
Fireman	Steve Rodenhurst				not recorded			
Recorder	Don Benn				Don Benn			
Position	11th coach				Front			
Weather	Wet rails after heavy rain				Fine			
	miles	**mins**	**secs**	**speed**	**mins**	**secs**	**speed**	**gradient**
Seaton Junction	0.00	00	00	35½	00	00		300R
MP 148½	0.65	01	14	34	02	32	21	80R
MP 149½	1.65	03	11	30	05	08	24	80R
MP 150½	2.65	05	19	24½*/27½	07	32	25	70/250R
MP 151½	3.65	07	33	25*	09	53	26	80R
MP 152½	4.65	09	52	27	12	16	24*	80R
Honiton Tunnel In	4.72	10	00	27	12	27	25	80R
Honiton Tunnel Out	5.49	11	32	33	14	06	28	132R
MP 153½	5.65	11	52	37	14	29	30	90F

* slipping

From there though the recent run excelled as we topped Semley at a superb 65.2mph, speed only falling slightly over the final mile of 1-in-145. I calculate *Clan Line* was producing around 2,050 edbh, the highest figure of the day and my best speed there since 1964. Wayne told me that he was using 230lbs of steam (full regulator) and 27% cut off for the last part of the climb. We then dashed down to the Gillingham pathing stop, reaching 78mph, before braking to give a time of 29 minutes 14 seconds from Salisbury, just outside the very tight 28-minute booking.

The up SWR train was almost on time, so we were away just a minute late and climbed the 1-in-100 to Buckhorn Western tunnel at 41mph, compared to 40mph on the 2017 run, and then reached 72mph down to the level stretch before the Templecombe restriction brought speed back to 20mph. The ensuing 1-in-100 to Milepost 113½ was topped at 31mph, before the usual exhilarating full speed dash down through Sherborne and a signal checked approach to Yeovil Junction reached on time.

The climb from Templecombe on the 2017 run was very fine indeed and the minimum of 35mph attained despite some slipping. Full details of this run are in *HR* 234.

Away from Yeovil just slightly late a good climb was made up the 1-in-150/140 to milepost 126¼ beyond Sutton Bingham and 65mph touched prior to the bridge



TABLE FOUR: EXETER TO BRISTOL

Date	August 10, 2019
Train	3.50pm Exeter St Davids to Waterloo
Loco	Rblt MN class 4-6-2 No. 35028 *Clan Line*
Load	11 coaches, 393 tons tare 425 tons gross
Driver	Vince Henderson
Fireman	Steve Rodenhurst
Recorder	Don Benn
Position	11th coach
Weather	sunny spells, west wind

	miles	sched	mins	secs	speed
Exeter St Davids	0.00	0.00	00	00	23½ mins late
Cowley Bridge Jct	1.24	3.00	04	43	39½
MP 191	2.90		06	52	50
Stoke Canon	3.70		07	44	56/54½
MP 188	5.90		10	02	61½
Silverton	7.13		11	14	63½
Hele	8.39		12	22	69½
MP 183	10.90		14	43	72
Cullompton	12.56		15	45	73½
MP 180	13.90		16	59	69½/68½
Tiverton Junction	14.74	19.00	17	43	71½/74
Tiverton Parkway	16.58	20.00	19	11	73½
MP 176	17.90		20	18	68
Burlescombe	19.15		21	26	62½
Whiteball Summit	19.90	24.00	22	09	62
Tunnel In	20.11		22	24	63½
Tunnel Out	20.74		22	55	73/77
Beam Bridge	21.88		23	51	74*/76½
Wellington	23.70		25	17	72*
Poole Siding	24.90		26	16	76
Victory Crossing	27.84		28	37	76½
Norton Fitzwarren	28.89	33.00	29	27	72½
Silk Mills	29.44		29	57	73
Taunton	30.74	35.00	30	59	75½/76½
MP 161	32.90		32	44	74
Creech St Michael	33.65		33	33	73½
Cogload Junction	35.50	40.00	34	43	75
MP 155	38.90		37	31	73½
MP 153	40.90		39	09	74
Bridgwater	42.32	47.00	40	12	75½
Dunball	44.90		42	19	75
Huntspill	46.90		43	53	76
Highbridge	48.63		45	13	74½
Brent Knoll	51.40		47	32	74½
MP 139	54.90		50	18	75½
Uphill Junction	55.84	61.00	51	05	74/20* sigs
Worle Junction	58.78	67.00	55	49	36
Worle	59.37		56	41	45½
Puxton & Worle LC	59.90		57	21	53½
Huish Crossing	61.75		59	09	65½
Yatton	63.59		60	45	71/72
MP 128	65.90		62	43	70½
Nailsea	67.45		64	05	67½
MP 125	68.90		65	22	68
Flax Bourton	69.63		65	59	67½
MP 123	70.90		67	08	65½
Long Ashton	71.85		68	02	69½
Parson Street	73.73	82.00	70	00	38* sigs
Bedminster	74.58		72	02	18* sigs/24½
Bristol West Jct	75.15	84.00	73	17	19½*
Bristol Temple Meads	75.49	85.00	74	47	13½ mins late

* brakes or speed restiction

net time 70 minutes

average speed start to stop: 60.56 mph

average speed Whiteball tunnel exit to Uphill Jct: 74.77 mph



Above: No. 35028 *Clan Line* is seen at the head of UK Railtours' 'Atlantic Coast Express' charter on August 10 as it passes Templecombe. CHRIS MEREDITH

Above left: A lovely locomotive: No. 35028 *Clan Line* awaits departure from London Waterloo on August 10 with UK Railtours' 'Atlantic Coast Express' trip. DON BENN

restriction to 46mph after Hardington. Not a good place for a check but the big Bulleid recovered to 64.3mph at milepost 130¼ before tackling the three mile 1-in-80 climb of Crewkerne bank topped at 44mph. This was where on the old ACE speed usually fell to its lowest between Salisbury and Exeter, apart from Honiton bank. Some fast running up to 76½mph now followed on the downhill section to the planned pathing stop at Chard. However, it was soon clear that we were not stopping at Chard but continued to Axminster due to a late running SWR down train behind us.

Honiton Bank conquered

An up train soon appeared, but still we stood there in the pouring rain and eventually word came that we were to go on in front of the down train. So after nearly 14 minutes we set off for the climb of Honiton bank with almost no impetus to help and in very bad railhead conditions. From just over 40mph at the foot of the climb speed fell to 31½mph on the initial 1-in-100 before recovering to 35½mph on the 1-in-300 through the site of Seaton Junction station.

Table Three shows the detail of the rest of the climb set against a run from the summer of 1964 on a train stopping at Seaton Junction in almost perfect conditions and with a lineside almost clear of the tree growth that exists now.

Wayne Thompson takes up the story of the epic struggle that faced *Clan Line*: "Further down the road the railhead was worse, it gave me the memories of 1987 when we ended up with leaf sap on the railhead. We were told at Yeovil we would be going straight through to Axminster, not stopping at Chard. This was good and bad. Slowing for Chard is a pain in the neck – it's downhill and has limited visibility of the signals. Axminster is a lot better, but a dead start for the climb to Honiton. I was very apprehensive getting away from there. I could not get the locomotive going – I could not open it up at all.

"We had been told at Axminster by the signaller that we were to run straight through to Exeter, not stopping at Honiton. We were, basically, in the way. The best way was to send us through and I was told to go 'quick as possible'. That's easier said than done! Therefore, coming to a stand on the greasy rail was not really what was required.

"Getting up there was foremost on my mind before we got to Seaton Junction. Cut off at 50% and steam chest pressure 140-160psi, even though boiler pressure was right up to blowing off. Under trees it was 140psi, opening up to 160psi in open areas – there were not many of those though!

"At points, cut off was 55% and even 60% for a short period but mostly done at 50%. To see the last bridge before the tunnel was a pleasing sight – I knew we had made it by then. I began to open it up just before the tunnel and more so inside as it was a drier rail in there. Sanders were on most of the way up, so probably not much left in the sand boxes afterwards.

"It just goes to show how strong *Clan Line* is now though – 140-160psi and still climbing Honiton. Although I was worried at the time, once it settled down and I had the measure of it, the Pacific never then gave me any feeling that it wouldn't make it. At times I could have probably given it more, but it wasn't needed. A slip loses speed, and when you're going slow that's not what you want. We got up there in poor railhead conditions – that's all we needed to do!"

The rest of the run to Exeter was pure anticlimax and we arrived at St Davids 21 minutes early after missing out the Honiton stop. Some consternation in the dining section though as lunch had to be hurried! I thanked Wayne for another superb run with *Clan Line* and went off with the others to find lunch.

Even time to Bristol

Returning to Exeter St Davids in good time, we were greeted with the news that our 3.50pm departure would be delayed due to trouble loading coal. Now with Vince Henderson driving and Steve Rodenhurst still on the shovel, we left nearly 24 minutes late after allowing a Great Western service from Penzance to Paddington to go in front. I wasn't worried about our late departure as the schedule allowed 85 minutes for the 75.49 miles to Bristol Temple Meads and I fully expected *Clan Line* to make mincemeat of this. The only problem would be getting a clear road at Worle Junction as we were likely to get checked there by the 5.01pm service from Weston Super Mare to Paddington if we ran well.

The weather was now much improved, but still with a strong wind blowing though mainly sunny and much drier. After a steady start, *Clan Line* settled to its task and was soon eating up the miles as shown in Table Four.

Reaching 74mph after Tiverton Junction was a prelude to a solid 62mph over Whiteball where we had regained nearly two minutes. This climb produced about 1800 edbh, so the engine wasn't being pushed too hard. There then followed an average of a fraction under 75mph over the 35.1 miles from the exit of Whiteball tunnel to Uphill Junction, perfectly judged running by Vince.

Then, as I had anticipated, we caught the service train from Weston and were checked down to 20mph, before making an excellent recovery on the level section past Yatton to reach 72mph and falling to 65½mph minimum at the summit after Flax Bourton tunnel. Adverse signals could not prevent an unscheduled stop in Temple Meads in 74 minutes 47 seconds for the 75.49 miles from

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No. 35028 *Clan Line* passes Wimbledon with the 'Atlantic Coast Express' excursion, which ran from London Waterloo to Exeter St Davids and return on August 10. NICK GILLIAM

St Davids – a start to stop average of 60.56mph. The net time was 70 minutes and we had recovered 10 minutes of our late departure.

Upton Scudamore bank

Water was taken at Bristol East down goods loop from where we left four minutes early with Vince still driving but Paul Major firing and TI Geoff Ewans. 65½ mph before Bath took us through there a minute late and we were then stopped by signals before Limpley Stoke as we had caught a late running Bristol to Weymouth service. Recovery was good and the climb from Trowbridge saw another good edbh of about 1650. A further check this time down to 5mph before Westbury finally saw us lose the Weymouth service and we started the 1-in-76/70 of Upton Scudamore bank at 37½mph. Table Five shows the detail of another good climb producing around 1500 edbh.

After the restriction through Warminster, Vince treated us to a lovely spell of fast running down the Wylye Valley, touching 77mph at Upton Lovell. Salisbury was reached slightly early, enabling water and more coal to be taken by *Clan Line*. Here Vince Henderson left us and Paul Major took over the driving with Jim Clarke firing. Jim Smith a long way from home in Newcastle was the TI.

We left on time and after the now usual slow start to Tunnel Junction speed settled to a good 50mph up the 1-in-169/140 of Porton bank, increasing to 64mph by the top of the climb before Grateley. Even with the subdued speed now allowed down to Andover and the very slow five minutes to Tunnel Junction, our time from the start was only 21 minutes 21 seconds. From 75mph maximum, the Enham bank minimum was a very good 64½mph, also worth around 1,500 edbh so the engine not being pushed but well within its capabilities and on time anyway.

From 72½mph at Overton, Paul eased the engine in anticipation of catching an up Poole train which we duly did and we were stopped outside Basingstoke, before easing into the platform in 48 minutes 39 seconds from Salisbury a loss of two-and-a-half minutes on the schedule.

Checks spoil the end

Our train was now booked fast line over the 23.46 miles to Woking in a respectable 28 minutes but the Poole train would trouble us again as it was timed to depart Farnborough onto the fast line just three minutes in front of us. We left Basingstoke nearly three minutes late and were past Hook at 71mph in exactly eight minutes. *Clan Line* was now eased right down in anticipation of a check ahead and brakes brought speed down to 51mph, before green signals beckoned again and speed rose rapidly to 76mph through Farnborough.

The minimum at milepost 31 was 73mph, before drifting down to the Woking stop in 25 minutes 53 seconds from Basingstoke spot on time. Once again we had the privilege of a fast line path to London and made good progress to pass Hampton Court Junction in 12 minutes seven seconds from the restart after a maximum speed of 73½mph near Hersham.

There was a 50mph temporary speed restriction through Surbiton from which recovery was good to 66mph at Earlsfield, after which we were warned of problems after Clapham Junction. These caused a signal stop and some very slow running prior to our arrival back in Platform 19 at Waterloo 15 minutes late, a poor end to a brilliant day. It had been a masterpiece of planning and organisation by all concerned and involved no less than five different sets of train crew.

We lingered for a while next to the big Bulleid Pacific, taking in the atmosphere as we had so often done at the end of Southern steam 52 years previously before catching our train back to Southampton after a long but enjoyable day with *Clan Line*. HR

TABLE FIVE: UPTON SCUDAMORE BANK

Date	August 10, 2019
Train	3.50pm Exeter to Waterloo
Loco	Rblt MN class 4-6-2 No. 35028 *Clan Line*
Load	11 coaches, 393/425 tons
Driver	Vince Henderson
Fireman	Paul Major
Recorder	Don Benn
Position	11th coach
Weather	sunny spells, west wind

	miles	mins	secs	speed	gradient
Westbury	109.79	48	54	31½/37½	level
MP 110½	110.50	50	11	35½	76R
MP 111	111.00	51	02	33½	75R
Dilton Marsh	111.08	51	09	33	74R
MP 111½	111.50	51	59	29½	70R
MP 112	112.00	53	00	29	70R
MP 112½ Summit	112.50	54	07	27	70R

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Volunteers at Barrow Hill examine 1F No. 41708.

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DO YOU UNDERSTAND THE RISK?

Gareth Evans talks to Ian Skinner, head of heritage, trams & light rail at the Office of Road & Rail, the independent safety and economic regulator for Britain's railways, who provides valuable insight on the work his organisation performs and what it expects from the heritage railway sector.

It's no exaggeration to say that when it became public knowledge that the Office of Road & Rail (ORR) made a suggestion that droplights – otherwise known as opening windows – might be sealed up if there was deemed to be a safety risk, many reacted with fury. However, sometimes information can be misunderstood.

On the back of that and a host of other matters which had cropped up in conversation with fellow heritage line volunteers in recent months, I thought the best way to 'clear the air' was to hear it first-hand from the heritage railway sector's most senior safety regulator, Ian Skinner.

It's Monday, September 9 and I'm at the ORR's office just off the Strand in central London. After greeting me with a smile and a handshake, eye contact is not in short supply – something that would continue throughout our one-and-a-half hour discussion. It's immediately apparent that he's very much a 'captain safety' sort, but he is down to earth and is easy to talk to. Our conversation flows naturally and I can tell that, like me, he's passionate about his work. In what is always a sign of someone who makes visitors welcome in my experience, coffee and water are to hand.

To make my Face to Face feature topical and to be useful to our many readers who are involved at the coalface of our heritage lines, prior to the interview I spoke to individuals in key roles at a selection of railways large and small and invited them to suggest topics and questions I could raise. Perhaps reassuringly, there were common themes. As a neutral third party, I could air their concerns anonymously without fear of potential repercussions.

Career

Heritage Railway (HR): Tell us about your professional background.

Ian Skinner (IS): I'm a railwayman. I've been a railwayman for 30 years. I started off with British Rail. I'm a civil engineer and I spent the bulk of my career on the main line.

Most of my regulatory career has been spent dealing with main line too, principally infrastructure. It's featured some successes but also involved spending time investigating Potters Bar and Grayrigg – two of the main line derailments in the 21st century.

About 18 months ago I was asked to take over what is now heritage, trams and light rail safety by design – so for ORR, the stuff that isn't main line and isn't Transport for London. I'm clear in my mind that my account includes what I would term 'proper heritage' – the stuff which doesn't operate on the main line.

If it's main line heritage charter stock, it's dealt with by colleagues elsewhere in this building. There's a reason for that – risk profile. If you operate main line charters with heritage rolling stock, you are playing with the 'big boys', running at main line speeds of 50-90mph. That's a very different beast to running at 25mph on a heritage line, which in essence is a vertically integrated infrastructure manager train operating company.

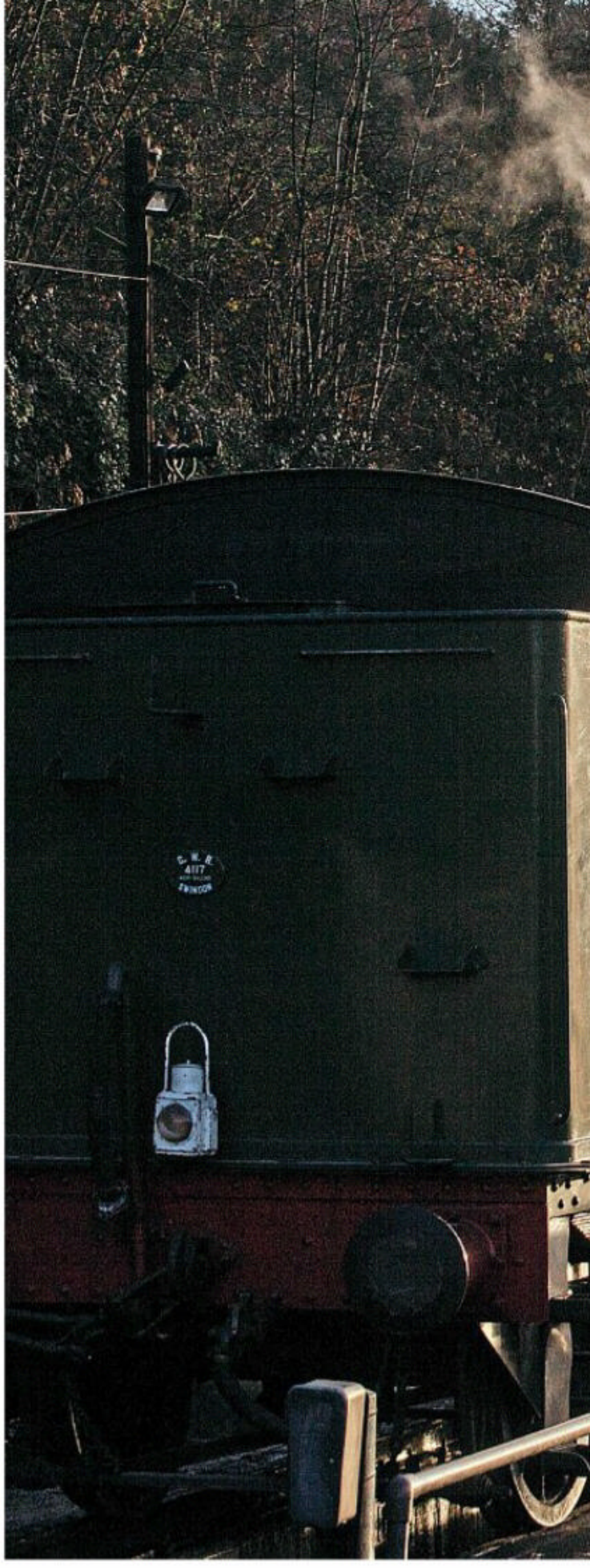
I deal with up to 25mph and I'm clear that when I speak to the industry, if it's on the main line, I deal with it in the main line way, and if it's non-main line heritage, I will help them assess how they can operate their railway safely.

HR: Do you visit and travel on heritage railways in 'civvies'?

IS: Yes. I am not a railway buff. I enjoy visiting heritage lines as part of family holidays. I don't volunteer on any of them.

I do though, have a volunteering history on canals, so I understand the concept of working for an organisation. I enjoy restoring canals because I like to play with big yellow machinery – and rebuilding and hanging lock gates, and doing the puddling.

I have helped with the group recreating London's lost route to the sea, from Guildford to Pulborough, near Arundel. There are major obstacles, but I get the enthusiasm and why people want to do it. I understand the volunteer culture, the importance of leadership, the issue of regulatory problems and what I'm trying to achieve.



HR: What's been the worst example of safety horrors or non-compliance you've seen on heritage railways in your role to date?

IS: I came into post just before we prosecuted the South Devon Railway Trust (SDR) and reading that case and then seeing what that railway had probably unintentionally done was quite shocking. The fact it had a Mk.1 coach in service with no floor above the bogie wasn't a good position to be in.

I've not seen anything as bad as that in my 18 months in this role. However, a positive experience came out of it. I have to admire how both the SDR and wider community of standard gauge rolling stock operators have responded to that.

Often when I go to different railways, I'm seeing Mk.1s getting significant work done to them – and operators want to engage with me and say how they know a carriage is in good condition. It's just about moving that forward to have a better understanding of risk before we have a bad event. It's about the culture, the mindset from the top down.

HR: What's been the highlight of your current role to date?

Ian Skinner describes steam as "powerful and emotional." Visiting No. 6990 *Witherslack Hall* prepares for the day's Santa Specials at Bewdley on the Severn Valley Railway on December 22, 2018. ROBERT FALCONER

IS: It's the enthusiasm of the volunteers. I continue to be pleasantly surprised by the enthusiasm and willingness of volunteers to engage and speak about their topic and seek opinions on how they can do things better. In other words, they want to learn. They want to understand and respond to what the inspector is saying. I feed off all that and, fortunately, I tend not to meet negative people when I'm out on site.

Approach

HR: How many people do you have in your team? For the record, who are they?

IS: I came into this role in April 2018. We've trebled the size of the team – so I now have a principal and two inspectors, who are going out there.

Steve Turner is principal inspector and Simon Smith is a highly experienced railway inspector but new to the heritage sector – and we have one of our new inspectors, who's coming towards the end of the training scheme. When people join us, we train them for two years to become a competent railway inspector. They rotate in and rotate out on a six-month basis. That's partly about increasing our resilience.

Bio



Ian Skinner, head of heritage, trams & light rail at the Office of Road & Rail: "We need, want and require the railway to be safe." GARETH EVANS

After graduating from Heriot-Watt University with a BEng in civil engineering, Ian joined British Rail as a graduate trainee, becoming resident engineer in Scotland. Upon Privatisation, he worked for First Engineering as a construction manager, before progressing to assistant track manager, east and then infrastructure manager, north.

After 11 years as an HM inspector of railways, Ian became principal inspector of railways in 2010 – a role which included leading ORR's Railway Safety Directorate's Track Team.

He was appointed to his current role in April 2018.

I'm thinking about the future. I want more of our inspectors to have had exposure to the heritage sector, as well as dealing with main line. It helps them develop their railway knowledge and technical awareness of how railways work. Heritage is a very exciting environment from that perspective.

Many things that are happening in the heritage sector today stopped happening on the main line industry years ago. For example, heritage locomotives and carriages are shunted routinely – you couple and uncouple and run round. It's a high-risk activity heritage railways are performing as a matter of course. On the main line, the stock either runs in fixed formations or it uses auto-couplers – we don't see shunting to the same extent that we see it in the heritage sector. However, it's an activity that draws together many of the principles of safe railway operation, which is about excellent communication between shunter and driver; understanding what each is going to do; a complete understanding of their roles; keeping good visibility; and the technical operation of the train, i.e. the brakes etc. They're key activities which I feel all inspectors benefit from gaining exposure to. In three years' time, maybe a third of the recently qualified inspectors will have had exposure to the heritage sector. As team members progress their careers, they will have gained an understanding of how heritage works compared to the main line.

As well as trebling the size of our resource this year and having risk-based approach towards inspections, we know what we're looking at and who we'll be seeing, so there's logic to that. That's allowed us to move from being a reactive part of the organisation to becoming more proactive. Therefore, people on the ground are seeing us more often. The feedback we're getting from the sector is that they're welcoming our increased engagement and advice.



In essence Ian Skinner is responsible heritage lines operating under 25mph. "If it's on the main line, deal with it in the main line way, and if it's non-main line heritage, I will help them do whatever they want to do safely," he said. GARETH EVANS

HR: So you've identified some railways who are 'priority cases' to inspect?

IS: We have an inspection plan, which sets out our profile of the sector, what we think the key issues are and what our priorities are. I shared these with the Heritage Railway Association (HRA) safety conference last October. From that, we have a list of operators we're prioritising over the next two years, who we'll inspect. Then we have a number of others who are not priority operators, but there's some noise that makes us feel interested in them.

We tend to find that we go to inspect and we end up giving lots of advice and guidance.

HR: Is your approach akin to the traditional so-called police attitude test? If the operator is willing to engage with you and take heed of your advice, you're happy, but if they completely ignore you, then rightly so you'll begin enforcement action?

IS: We don't generally turn to enforcement as a first point – but it's always there. We've done it twice this year so far for SMS-related matters. Generally, if we find things that are wrong but with low actual risk, we'll give advice and offer the railway the opportunity to improve with guidance from us and, for example, the HRA. We can sometimes then return for a check visit at a later date to see how they're progressing. If we're seeing progress in getting to a better place while the risk is being controlled, I'm happy with that.

It's not for my team and I to tell them how to do it. We stopped doing that several years ago. We can give advice and provide guidance and support. We're always there at the end of a phone to answer a question. We're there to support and sometimes cajole.

HR: You mentioned the SDR incident earlier. I understand that railway came as close as possible to being shut down. If the boy had been killed, what would the ORR response have been to the SDR and the wider sector?

IS: We didn't take any action to shut the SDR down because we had no reason to do so. The way we conducted the investigation and the eventual charge we presented would have been different from a crime perspective. Regardless of the injuries suffered, we focused on the risk, which was that the carriage was put into use when it was not in a safe condition, so the risk was not being managed.

It was purely good luck that the boy did not get severely injured. I'm not entirely sure that a less happy outcome would have meant that our response would have been any different in what we required the sector to do. I wasn't in post at the time but, from my understanding, the sector engaged positively with us regarding what had to be done next.

HR: Would ORR consider a database of areas of concern after inspecting individual railways to enable each line to learn these new areas of concern, so they could check their own sites for compliance? The road transport industry regulators, the traffic commissioners, publish an annual report, which includes highlighting issues for the industry to address. Would that be something you would look at?

IS: It's an area we're currently looking at. I'm conscious that this year we will have inspected between 10 and 20 railways, depending on investigations that come up. We feed back specific findings, recommendations and requirements to each individual railway. We're not allowed by law (Health & Safety etc Act 1974) to share that information with anyone other than the duty holder or a representative.

However, I'm exploring how we can share topics or themes with a wider audience beyond our Chief Inspector's Annual Report – such as if we're continually finding issues in tunnel portals for example. At the moment, the way we would do that is through raising a concern with HRA, which would then consider developing guidance.

I'm hoping that RM3 (Risk Management Maturity Model) will help us do this better. I've used RM3 effectively on the main line – and we're making a concerted effort to introduce it to the heritage sector. With the HRA we're running four conferences in November and December for heritage line personnel to attend. We'll introduce RM3, teach them how to use it and help them understand why we think it would be useful for them.

Essentially, it's a tool to help them identify where they're strong, where they're less strong and where they might need to strengthen their management system. We see that as the next step forward to help strengthen the railway SMS (Safety Management System).

Safety management system

HR: Terms such as risk assessment (RA) and SMS can be become jargon that immediately switches some people off, leading to alarming and negative thoughts. However, in my coach and bus industry days, I was told that an RA is, in essence, about stopping and thinking about something we all do unconsciously, such as when deciding whether or not to cross the road. In broad terms, what do you look for in an SMS?

IS: I like your analogy of stop and think. My experience over the last 30 years is that the railway is great at reacting to a risk. If something goes wrong, the railway will really study that and create a rule or standard, guidance or engineering solution to manage that problem. Then we get into SMSs and RAs, which is about understanding what the risks and hazards are, and what can be done to prevent those things happening.

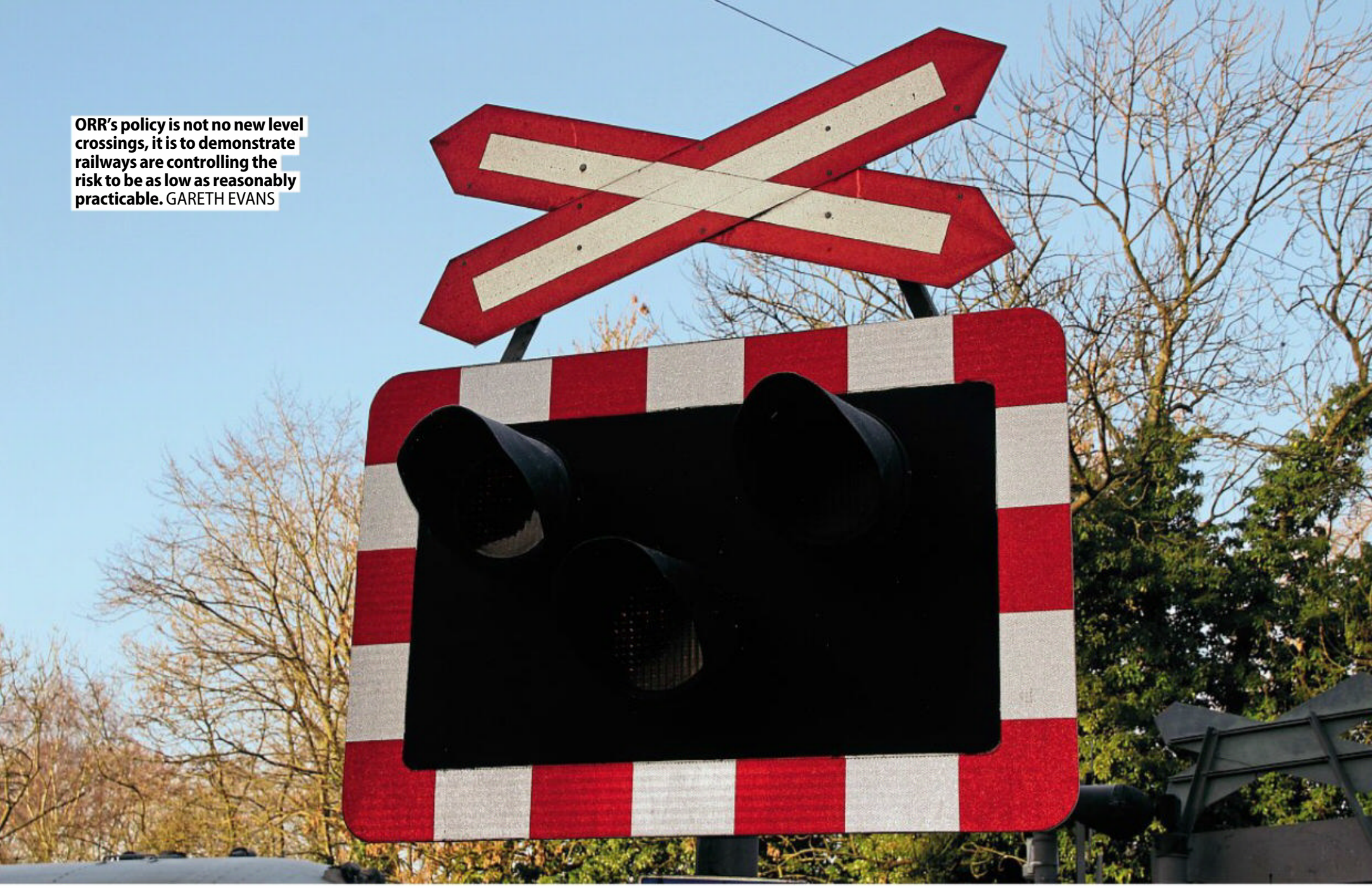
It's a subtle shift from looking backwards to looking forwards. The main line industry has been through that growing spurt over the last 10 to 15 years. While the heritage sector is starting to do that increasingly, we're still seeing parts of the industry being reactive.

Stop for a moment and ask yourself whether you understand the condition of your track, locomotives and rolling stock. If you understand that, you're halfway to managing the hazards and risks. That's what I would like to see the railway operators demonstrating, so they start predicting.

The bulk of the railways I meet are able to do that. We're making it clearer to the heritage sector what we do and don't want, while taking into account the fact they run at a maximum of 25mph and are staffed principally by volunteers.

Heritage railways have to have some form of management system. We helped HRA produce some useful guidance about how to produce an SMS. We felt it was important to put our words into the language of the heritage sector, so they could identify with it. It's to help them understand how the law applies to a smaller voluntary railway.

All heritage railways are under my jurisdiction. I appreciate they range from the North Yorkshire Moors, which although it runs on the main line, is one of mine, as it



ORR's policy is not no new level crossings, it is to demonstrate railways are controlling the risk to be as low as reasonably practicable. GARETH EVANS

is principally a non-main line operator, and then you have the tiny operations run by half a dozen individuals at the other extreme. They are managing the same risks, whether they're running a narrow gauge locomotive at 5mph or an 18-mile standard gauge line at 25mph. It's the scale of risk that's different – speed, size etc.

If we visit a heritage line and find the rule book is the Network Railway main line rule book, that raises alarm bells as it's not proportionate because it's written for people running a railway at 125mph. Operating at 25mph is entirely different.

The same applies to track standards. I don't want to see things in there about 125mph and tampers if they are not relevant – or flat bottom rail when they've only got bullhead. It's about what's right for you. Don't make it unnecessarily complicated. Keep it simple and proportionate to what you're trying to do.

It's the same approach in terms of a management system. That's about telling the management – i.e. the directors, the departmental heads and the volunteers – how they do things. If they start writing things down, not in great detail – bullet point form is sufficient – then they start thinking about what they're not doing.

Because of a really bad incident at the SDR, we found Mk.1s were not in as good a condition as everyone thought. Part of my role is helping the sector understand what else might not be good and what we can do together to ensure we can control that risk in future.

What my team and I look for is whether the railway stops and thinks about what it does, where they are, where they want to go and how they get there. They may not want to go anywhere – they may be quite happy being a small railway.

Part of the experience I'm finding from our inspections is that a lot of what those in the heritage railway industry do is because they've been taught to do it by someone else, often those who've joined the sector from British Rail.

How do we ensure that information is passed to the next generation? The SMS requires them to start writing these things down, including the standards for maintenance and inspection, and the capability, competence and knowledge required. If you start recording these things, there's more chance that, as we get new people coming into the system, they understand what is required of them. If we understand what we have to teach them, there's more chance we'll teach them the right things at the correct time and speed.

Ultimately, what I'd like to achieve in my non-main line role is to give people the 1950s experience but with 21st century levels of safety and service.

Competence

HR: Would you like to see the sector change the way it teaches its personnel, i.e. in the manner it assesses an individual as competent?

IS: I've heard recently about how long it takes to train someone as a competent steam locomotive driver – about five years on some lines. As a safety expert, to be competent in something you have to demonstrate what you need to know. You have to demonstrate how you teach people that and how you assess they're capable of using that knowledge. It can take five years or longer, but maybe you can do it in a shorter period.

If you have a clear and succinct competency management system for training drivers, you can calculate how long it takes to take a person from being a non-qualified driver to a qualified driver.

If the sector came together and was clear on what a competent locomotive driver looks like, what skills, knowledge and capabilities that person requires and then decide how it can provide the experience, knowledge and capability they need, that will lead to some form of programme.

There are three elements to being a locomotive driver – the generic driver stuff, the specific locomotive stuff (depending on the class etc) and rulebook and route knowledge.

It doesn't seem unreasonable to me that the generic driver stuff could be generic to all railways, while the locomotive stuff could be semi-generic. A 4MT at the NYMR is the same as at the Severn Valley. Of course, the route and rulebook stuff is specific to each railway.

There's no reason why the sector, through HRA perhaps, couldn't consider that. I don't like the word standardisation – all we need is some form of consistency about the end goal.

"Let us be clear – we are not requiring non-main line operators to bar up or lock off their windows. We're requiring them to do a risk assessment. Out of that may be that they identify that they may have to do some physical changes. However, that's not our starting point – it's understanding the risk. We've not had any negative feedback from any railway my team and I have spoken to since we issued that letter."

Therefore, there may be potential to develop some common standards for locomotive crews, guards and signalmen. The HRA has done some work in this area.

We need to ensure railways are sustainable. I'm not suggesting for one moment that we want to merge any of the 220 heritage lines, but how do we increase the likelihood that they will continue being successful well into the 21st century when many of the volunteers I meet are in the second or third part of their professional careers? There seems to be a desire across the sector to get more young blood in.

How do we engage and interest them? Young people are not going to spend five years polishing brass only to qualify as a passed cleaner. We need to focus on how we can make the heritage sector as appealing as possible to young people.

Droplight windows

HR: It's fair to say there has been uproar over a suggestion from ORR about sealing up or restricting the opening of windows on heritage carriages. On non-air-conditioned stock, that could make them inhospitable in hot weather. What's the real story?

IS: There has recently been some 'conversation' regarding droplight windows. We have one principal purpose for that, which is to manage the risk of people getting struck by stuff outside that train.

The approach and needs are subtly different about whether it's main line or non-main line. Both are the same in that it's about trying to manage the risk – so when the paying public get on a carriage with a droplight window, they get off at the other end in the same healthy condition as when they boarded. On main line, essentially there's a prohibition on droplight windows by 2023. In non-main line, we recognise that the operating environment is subtly different.

The recent letter we circulated to the HRA and around about the top 40 operators in terms of passenger numbers carried per annum made that clear. We expect them to do a risk assessment. That's no more than understanding your hazards. Do you have anything within a distance of your trains that someone could hit? If you have, how are you managing that risk? Speed is the big issue there. If you keep that low there's less chance of doing some permanent harm to anyone. There's lots of other stuff you can do around what I would call 'soft control measures' such as briefings, announcements, monitoring, checking and the hard stuff, such as cutting back your foliage.

When I worked on the main line, one of the principal complaints I got was foliage scratching the carriages. That's the same in heritage, although I can see an incentive for heritage lines to cut back vegetation. There's a win-win there – stop scratching your locomotives and coaches and reduce the risk of hitting people.

> "I'm not trying to stop photographers enjoying what they do, as it's part of the heritage experience. Just understand the risks and demonstrate that, so that one, I don't have to meet the railway in a bad atmosphere investigating the death or near death of someone, and two, the railway does not have to face the ORR or RAIB and answer the questions they will ask."

Let us be clear – we are not requiring non-main line operators to bar up or lock off their windows. We're requiring them to do a risk assessment. Out of that may be that they will identify that they may have to do some physical changes. However, that's not our starting point – it's understanding the risk. We've not had any negative feedback from any railway my team and I have spoken to since we issued that letter.

I spoke to one railway last week, which had done the risk assessment and found it had nothing within a metre of its rolling stock. Therefore, in essence they don't have a risk they have to manage, but they understand the risk and because they understand the risk they recognise what they have to do and what they don't have to do. That was the aim of the letter – to set out what railways did and did not have to do.

Some people have got confused between heritage on the main line and heritage on non-main line. They're two different things, so they require two different approaches. They both come to the same end point, which is that we don't hurt people. We need, want and require the railway to be safe.

It's about understanding the risk. If it's not necessary to drop the window all the way down, why allow it to happen?

There's a generation of people out there who don't understand the risk of putting their heads out of windows on moving trains or cars. On modern trains the windows are sealed and in cars we tend now to put the air-conditioning on rather than open the window.

You and I knew that if we put our head out the car window, we'd get slapped by a bush, so we were aware of the risk, but increasingly today, people are not. I've heard anecdotal tales of people visiting heritage railways and waiting for the doors to open.

Track

HR: What are your thoughts on managing track, civil engineering and signalling?

IS: Permanent Way (PW) seems to be an emerging theme. We're finding questions concerning the condition of some of the PW, which I think is probably no different to the main line historically.

My last job in main line before this role was leading HMRI's track team, focusing on how Network Rail was managing track risk and how to manage derailment risk from that.

Heritage railways run a very manual system. Has there been enough attention given to the track? I'm still coming to a view on that. I think that when I write next year's entry into our report, we'll have more clarity on that.

Traction and rolling stock is the exciting part, as everyone wants to see a steam train. That's why people pay their money to experience it. I can understand that – it's very powerful and emotional.

Then you've got the carriages, which are sort of second in line in terms of enthusiasm and then there's everything else that enables that train to run – the track, signalling system, bridges, tunnels etc.

The track is always the Cinderella of a railway. At one level it's one of the most important components of the railway as it's what influences whether or not your coffee spills on the train, forgetting it might derail – it's what gives a smooth ride.

We would like to reinforce the enthusiasm for that part of the railway.



Track has long been the Cinderella of the heritage railway world, but that's now changing. GARETH EVANS

HR: The West Somerset Railway (WSR) is an example of where PW has been brought to the forefront. That goes back to the historic learning experience – people are seeing what's happened at WSR and taking a hard look at their own operations. They're reviewing when was the last time the ballast was removed from the trackbed, for example.

IS: Correct. The WSR has had to take action, including reducing its axle loading and investing heavily in its track. We're starting to see some realisation that track now needs attention. Some of the assets we're now seeing on heritage railways are reaching a point where they are in need of major refurbishment or replacement.

There have been a number of other lines where we've had conversations that the infrastructure requires attention, including investment and the need to demonstrate that what they're doing is right. That's partly about ensuring the records are in place.

I don't like going to a railway where the PW records are in the PW engineer's head, as that doesn't lend you towards succession. It doesn't need to be complicated. It helps the board demonstrate to themselves that they're taking close attention to the high-risk assets, as members of the board have responsibilities. How do they discharge those responsibilities?

Again, HRA provides guidance to those duties and directors and trustees need to refresh themselves. All that – competence and rolling stock and track maintenance – is all wrapped together in the SMS.

Leadership

HR: There has been a turnover of general



Ian Skinner believes what he calls "the generic driver stuff" element of locomotive driver training could be developed as a sector-wide programme by the Heritage Railway Association, for example, making it easier for volunteers who wish to drive at more than one railway to do so. Pictured driving GWR 0-6-2T No. 5637 is Joe Titcombe at Swindon & Cricklade Railway. He is also a passed fireman at the Swanage Railway. GARETH EVANS

managers at some lines recently. Is the apparent instability in leadership a concern for you?

IS: We have a wider concern about the quality of governance and leadership at sector and operator level, and we have seen some churn for a number of reasons. I don't have a view as to the reasons for the churn. Sometimes churn is good – on occasion it's good to get fresh blood and a different perspective.

Where there has been churn, I'm not aware as to the reasons for that, but we haven't seen an increase in safety concern as a result yet, but that doesn't mean we're not paying attention to it.

As part of RM3 we're trying to develop clearer guidance around what good governance and leadership looks like. We're currently sponsoring a student, who is looking at succession and governance in the heritage sector to try to gain a better understanding of that area. It's an area of interest, so let's put it that way.

Level crossings

HR: ORR's default position is no new level crossing are to be installed. Is that correct?

IS: We have a guidance document available on our website that sets out our views on new level crossings, which is essentially no new installations except in exceptional circumstances. That is an industry-wide position – for main line, heritage and light rail etc.

We would expect there to be a suitable and sufficient risk assessment to support a new level crossing. That is defined in law and the starting point is how you avoid creating the risk – which would be no level crossing.

Then, if you can't avoid crossing the railway, build a bridge for example, as that avoids an at-grade conflict. Once you've demonstrated the need for an at-grade crossing, for example in places where you can't have a bridge, you can then start thinking about what type, starting with full barriers down to no barriers.

Our policy is not no new level crossings – it is that you must demonstrate you are controlling the risk to be as low as reasonably practicable. Of course, that might mean that the answer on a low-speed heritage railway is different to the main line – it's site specific. It's for the railway concerned to demonstrate that is the only option.

It must be remembered that at some point in the future there may be a fatal incident at that particular level crossing. Quite rightly, the family of the deceased would want to know why a new crossing was permitted. We need to have confidence.

Social media

HR: Do you keep an eye on social media? It's easy for people to post photos without thinking whether there are any health & safety howlers, and other issues might be raised that could be of interest to ORR.

IS: I'm not very active on social media but I have colleagues who are. If something is drawn to our attention, we do what's required.

Lineside passes

HR: Many heritage railways have withdrawn their line-side photographic passes, while others only issue a small number. What's your view on the matter?

IS: At no point have we said heritage lines cannot issue line-side photographic permits or run photo charter trains. If they want to do so, it's fine with us. However, they must ensure that they have arrangements in place to manage the risks associated with that so far as reasonably practicable.

The starting point is that the railway has to manage the risk of a person being struck by a locomotive. That's a worst case scenario. The simplest way to manage that risk is to have exclusions, so people don't get on to the operating land. That's what Network Rail does.

If an operator chooses to permit access, then what arrangements do they have to ensure that those people do not put themselves in a position of danger, which is essentially within three metres of the nearest running rail. That includes taking account of the behaviour of the photographers, who will be very enthusiastic and focused – no pun intended – on getting that shot.

I'm not trying to stop photographers enjoying what they do, as it's part of the heritage experience. Just understand the risks and demonstrate that, so that one, I don't have to meet the railway in a bad atmosphere investigating the death or near death of someone, and two, the railway does not have to face the ORR or RAIB (Rail Accident Investigation Branch) and answer the questions they will ask.

Again, HRA provides some guidance on this topic, which is a starting point at least.

Round-up

HR: Do you have anything you'd like to add or reiterate?

IS: If operators want advice and guidance, they should talk to us on the phone. A proactive chat is always better than a reactive conversation.

The bottom line for me is whether it is safe. It's not about introducing TPWS, locked doors etc, it's about having a risk control system that delivers the same outcome, which is the public enjoying a train ride, having not been harmed or exposed to any unnecessary risks. HR

1969 AND ALL THAT

The Great Central Railway's October 3-6 autumn steam gala will be testament to half a century of steady but stupendous progress realising a late Sixties vision of creating an inter-city heritage line. Robin Jones looks back at the line's formative decade in which pioneers laid foundations to produce success against seemingly insurmountable odds.

Back in 1969, there was certainly Something In the Air. No, not just the title of the smash Top 20 hit by one-hit wonders Thunderclap Newman, nor the Apollo 11 lunar landing (that was clearly some way above the atmosphere!), but the revival of part of one of the biggest Beeching closures of all – the Great Central Railway's London Extension.

A one-paragraph news item in the December 1968 edition of our (now) sister title *The Railway Magazine* said it all: "Formed to acquire a section of former main line, possibly in the East Midlands, on which privately-owned steam locomotives could be run at speed, the Main Line Preservation Group has appealed to all interested to contact its Hon Secretary, Mr J C Kirby, 2 Coventry Street, Leicester." The group had been formed, in its own words, "to acquire a suitable length of main line, for the operation of steam-hauled passenger trains, at realistic speeds".

The withdrawal of passenger services from many rural routes and their subsequent closure in the face of the growing public stampede from rail to road had been taking place throughout the Fifties, long before anyone in railways had heard the name Beeching.

However, on March 27, 1963, the British Railways chairman's report, The Reshaping of British Railways, called for around 5000 of the network's 18,000 miles to be closed completely. This time around, not only were branches serving rural backwaters earmarked for closure, but trunk routes were listed too – the Somerset & Dorset Joint Railway system, the Waverley Route from Carlisle to Edinburgh… and the GCR main line from Nottingham to Marylebone.

On the GCR, the rot had taken hold in the late Fifties when vital freight traffic began to decline, and the route was neglected in favour of rival routes, such as the Midland Main Line which it largely duplicated.

In 1958, the route was transferred from the Eastern Region to the London Midland Region, where both management and staff still had loyalties to the old LMS empire, and not a line which was long seen as an LNER competitor.

Express passenger services from London to Sheffield and Manchester were discontinued in January 1960. That left the route with only three daily 'semi-fast' London-Nottingham trains on the route.

In March 1963, just before the report was published, local trains on several sections of the route were cancelled and many of its local stations were closed. Yet there were those who still hoped that the route could be retained and improved for parcels and goods traffic.

Beeching had other thoughts, and already pruning routes that 'doubled up' with others serving similar destinations, decided that the Great Central traffic could easily be served by other main lines linking London to the North.

This decision sparked widespread controversy, especially as in February 1964, Britain signed an agreement with France for the building of a Channel Tunnel. Back in 1899, the Great Central's extension to the capital had been built to the large Berne loading gauge in the hope that it would form a link to a Channel Tunnel, and it was ready and waiting for such use.

The ninth Earl of Lanesborough, Denis Anthony Brian Butler, had a letter published in the *Daily Telegraph* on September 28, 1965 which read: "…surely the prize for idiotic policy must go to the destruction of the until recently most profitable railway per ton of freight and per passenger carried in the whole British Railways system, as shown by their own operating statistics.

"These figures were presented to monthly management meetings until the 1950s, when they were suppressed as 'unnecessary', but one suspects really 'inconvenient' for those proposing Beeching-type policies of unnecessarily severe contraction of services…

"This railway is of course the Great Central forming a direct continental loading gauge route from Sheffield and the North to the Thames Valley and London for Dover and France."

His words were in vain. The sections between Rugby and Aylesbury and between Nottingham and Sheffield were closed in 1966 and the track lifted, leaving just the section between Rugby and Nottingham over which DMUs operated a skeleton shuttle service.

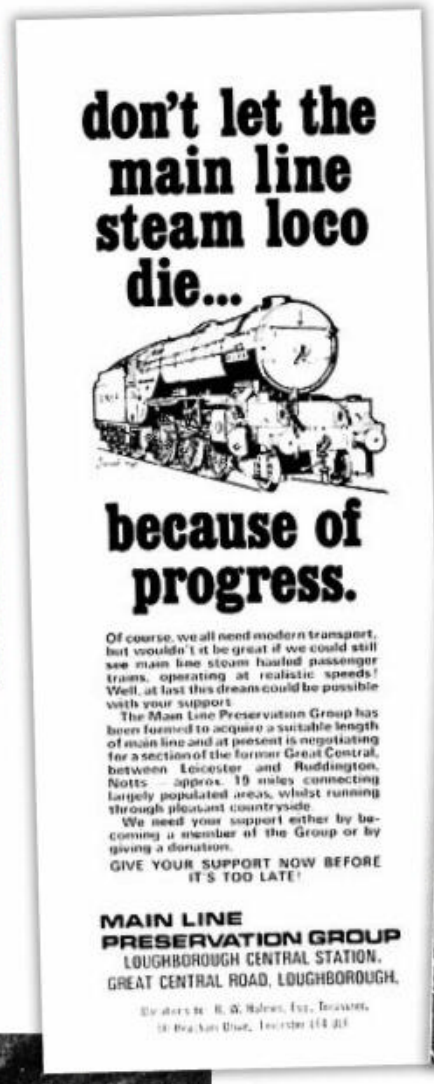
Nottingham Victoria station was closed in 1967, and British Rail sold off the prime

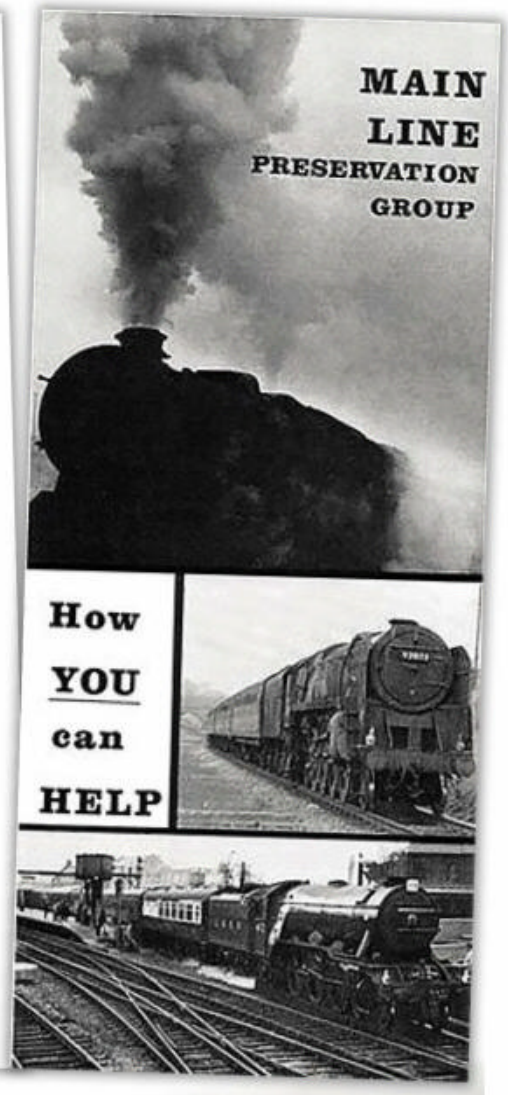


LMS 'Black Five' No. 5231 at Loughborough Central in 1973. This locomotive ran in BR service at the end of main line steam in 1968, and was a mainstay of services in the early years of what was to become Britain's ground-breaking double track heritage railway. COLOUR RAIL



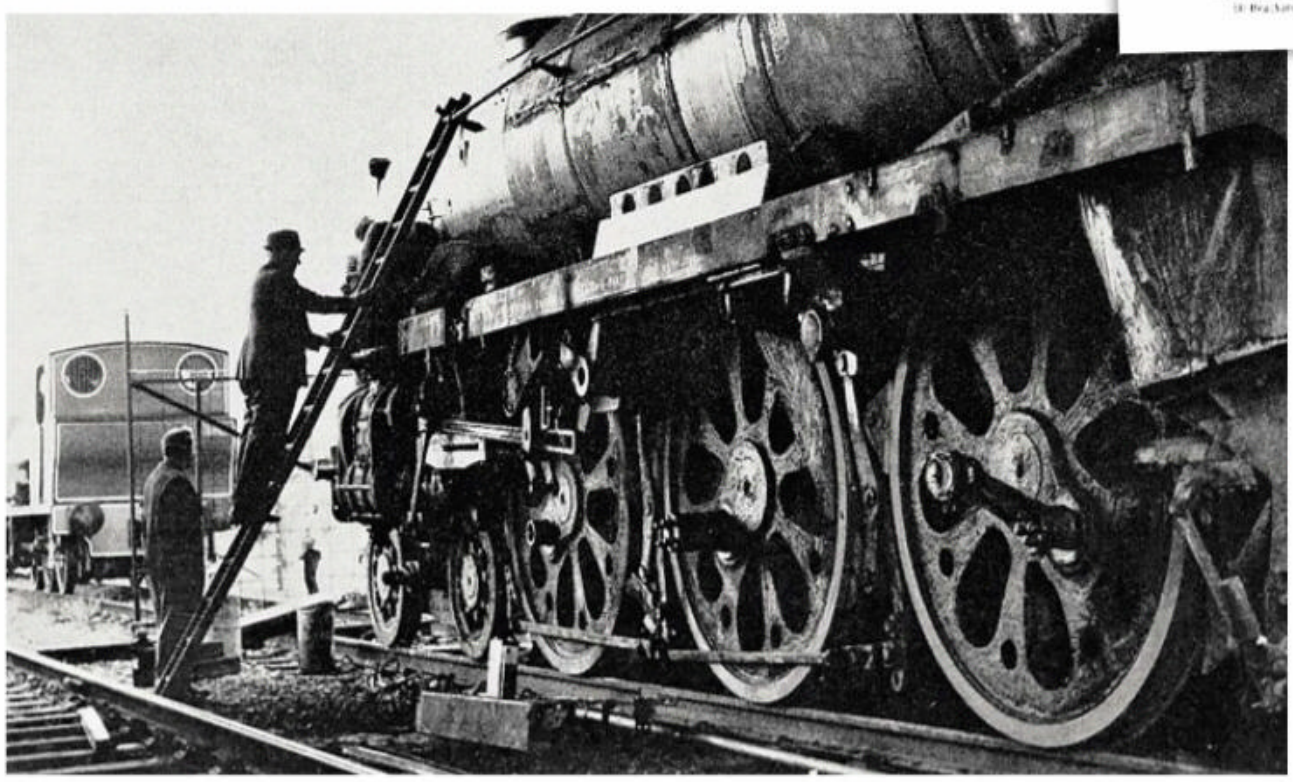
Above: The last train at Rugby Central on May 3, 1969, brought down the final curtain on BR passenger services between there and Nottingham's Arkwright Street station. DAVID HILLAS/CREATIVE COMMONS





Middle right: A Main Line Preservation Group advertisement in August 1970 canvassing support for the revival project. THE RAILWAY MAGAZINE

Far right: One of the Main Line Preservation Group's leaflets handed out at a Tyseley Locomotive Works open day in 1969.





Above: Early remedial work to the Loughborough Central platform canopy carried out after the revivalists moved in. GCR

Left: Barry scrapyard hulk Bulleid West Country light Pacific No. 34039 *Boscastle* undergoing restoration at Loughborough on June 3, 1973. GRENVILLE R HOUNSELL/THE RAILWAY MAGAZINE

city centre site for shopping development. Accordingly, trains from Rugby terminated instead at Nottingham's suburban Arkwright Street station which, ironically, had been closed in 1963. One platform was reopened to serve the six daily trains that remained.

Of course this brief respite could not last, and the closure of this final section of the London Extension went ahead, despite mass public protests. The final train departed from Arkwright Street on Saturday, May 3, 1969. The station and viaducts carrying the railway were demolished around 1975 and the site is now occupied by houses.

The roots of the second Great Central

Groups which had formed to object to the closure amassed for a meeting in a waiting room at Leicester Central in January 1969.

The revivalists' original plan was the restoration of the whole line from Arkwright Street to Rugby Central, but like many other similar schemes, this laudable aim was soon edited down, due to time and financial constraints to a much shorter length.

The group sought to emulate other successful revival schemes, such as the Bluebell, Dart Valley and Keighley & Worth Valley railways, the latter project making history by becoming the first to buy the freehold of its line from the nationalised railways, and in doing so, forged a blueprint for others to follow. The revivalists here knew that they could not restore the much-lamented public timetabled services, but they sought to create a linear museum on which steam trains could be operated as a tourist attraction over a section of line.

However, what was markedly different about this scheme from the outset was that the group wanted to save a double-track section of line, for main line locomotives representing the 'Big Four' companies and British Railways could one day again haul appropriate trains in an authentic setting.

In April 1969, the group's land agent surveyed the line, and after British Rail pulled out of Loughborough Central in May, separate groups were formed to prevent vandalism. In September, talks were opened with British Rail London Midland Estates about the possibility of buying the line.

March 1970 saw an approach by the trust to British Rail to buy the line. The asking price was £383,000, for the land between Loughborough and Birstall together with the double track between Loughborough and Quorn & Woodhouse, and a single track between Quorn and Belgrave & Birstall.

However, a public appeal raised only £50,000, still a fortune half a century ago, and British Rail added an extra £1000 a month interest to hold off lifting the track.

Local landowner Lord Lanesborough, through whose estate the railway ran, became president of the group, which embarked on a series of exhibitions and film shows to publicise its aims.

January 1970 saw the top floor of Loughborough Central leased, with renovation beginning, and two months later, an offer to buy the line was made to British Rail.

That summer, the Main Line Preservation Group began talks with locomotive owners while making an application for a Light Railway Order, giving it statutory powers to run the line.

In January 1971, a new company formed to run the revived section of line, Main Line Steam Trust Ltd, received charitable status. HM Railway Inspectorate visited and found the state of the line to be good and gave broad approval for the scheme.

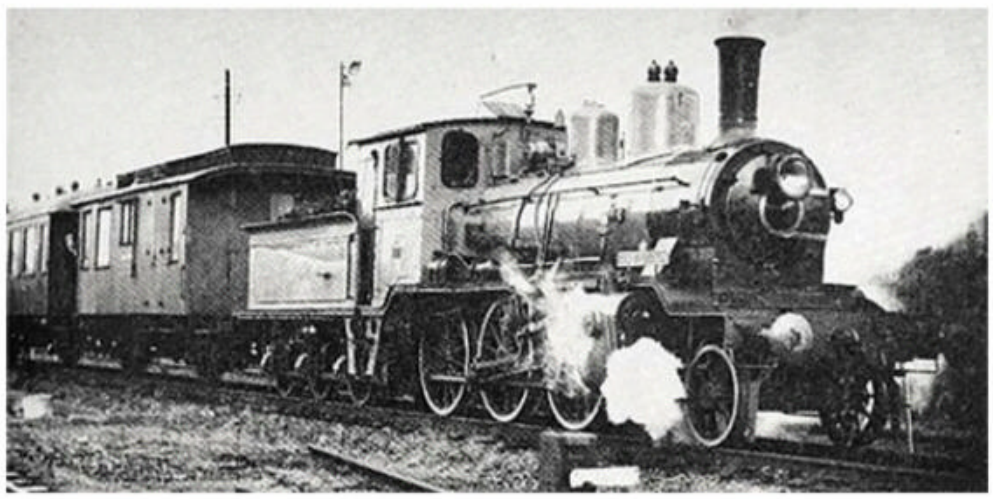
Loughborough Town Council had been considering a schemed to convert a section of the line into a road linking the A6 and A60, but in March 1971, finally abandoned the idea of building a road on the trackbed, removing a major doubt about the viability of the revival scheme.



Humble beginnings: footplate and brake van rides for 5p a time were offered at Loughborough station behind Robert Stephenson & Hawthorns 0-6-0 No. 39, then still in its saddle tank form, from June 21-24, 1973. GCR



The Quorn & Woodhouse reopening special arrives at its destination behind *King Haakon VII*. GCR



December 16, 1973, saw *King Haakon VII* and its matching two four wheelers at Loughborough forming a Santa special. J W ELLSON/T HE RAILWAY MAGAZINE



LMS 'Black Five' No. 5231 heads 'The Palatine' at Loughborough on December 16, 1973. J W ELLSON/THE RAILWAY MAGAZINE

Fundraising began that summer, and in September, the trust formally took over from the original preservation group.

Meanwhile, British Rail retained a single track from Loughborough to Ruddington to access the Ministry of Defence base there, as well as accommodating British Gypsum freight to Hotchley Hill. The revivalists had the ultimate aim of running from Ruddington in the north to Belgrave & Birstall in the south, a distance of 18 miles.

Steaming again

In January 1973, Loughborough Central was reopened to the public, and footplate rides within the station limits were offered.

On Sunday, September 30, 1973, history was made when the first public train ran from Loughborough to Quorn & Woodhouse, under British Rail supervision, as no Light Railway Order had yet been granted. Proudly heading the train was LMS 'Black Five' No. 5231, which has been bought out of BR service where it had run until the end of main line steam in August 1968, and had been initially preserved at Steamtown, Carnforth. It inaugurated a 'regular' service on the last Sunday of every month during the winter.

Before then, a reopening special had been run on July 24, comprising Swedish-built Norwegian State Railways 2-6-0 No. 377 *King Haakon VII* hauling just a single coach.

The locomotive that hauled the official first train for the services from Loughborough to Quorn & Woodhouse was itself steeped in history, but was as untypical of the London Extension or anywhere else on the UK national network as you might imagine.

Having a decidedly non-British outline, Norwegian State Railway 2-6-0 No. 377, built in 1919 by Nydqvist & Holm AB of Trollhattan, Sweden, hauled that landmark train on June 24, 1973.

No. 377 had been named after the King of Norway, King Haakon VII. It has been conjectured that the locomotive had, 33 years before, hauled another history-making train, that carrying the king and the Norwegian government from Oslo to Molde as they fled the invading German army on April 9, 1940. The king and his ministers subsequently escaped to the UK, and led Norway's resistance to the German occupation from London.

King Haakon returned to Norway five years later, and proved a popular figure for the remainder of his reign and oversaw Norway's entry to NATO in 1949. He withdrew from public life in 1955, and died two years aged 85.

No. 377 served its country's railways for half a century before it was scheduled for withdrawal in 1969. It was bought by UK enthusiast Gerald Pagano of the Norwegian Locomotive Preservation Group.

No. 377 arrived in the UK in June 1970. In May the following year, it was taken to Quainton Road station, now the Buckinghamshire Railway Centre, but was moved on to the now long-defunct Ashford Steam Centre in January 1972.

On March 27, 1973 it moved to the GCR.

Initial services were operated by engines on the front and back of the train which comprised two coaches, because there were no run round facilities at Quorn & Woodhouse at that time. It was decided to build a large locomotive shed to the north of Loughborough Central, but care was taken to leave a way through for a possible future extension to Ruddington. At the same time, BR lifted the track beyond Loughborough, as the Ruddington branch would from then on be connected directly to the Midland Main Line by a new chord.

Regular operation of services between Loughborough and Quorn & Woodhouse was achieved by July 1974. At that time, the double track from Loughborough Central to Quorn & Woodhouse and the single line south to Thurmaston Road bridge in Leicester was still in situ, prior to the building of the A563 ring road which severed the line south of Birstall.

A trial weekend in September 1975 saw trains run into Rothley for the first time, the first of these being a VIP special hauled by *King Haakon VII*.



The July 24, 1973 reopening special to Quorn & Woodhouse headed by *King Haakon VII* takes on water at Loughborough. GCR



The Great Central Railway Company (1976) Limited was incorporated as a public company on May 9, 1976 when LMS 'Black Five' No. 5231 was named *3rd Volunteer Battalion, The Worcester and Sherwood Foresters Regiment* at Quorn & Woodhouse. GCR



Hunslet 0-6-0ST No. 1800 of 1936 *Robert Nelson No. 4* heads a GCR Marylebone Extension 75th anniversary special on March 23, 1974. Already there is a restaurant car in the train: the revived GCR was to become famous for its dining services. The embryonic GCR heritage line was the haunt of many industrial locomotive types. GRAHAM WIGNALL/GCR



LNER B1 4-6-0 No. 1306 *Mayflower* and GNR N2 0-6-2 No. 4744 depart from Loughborough Central on the Great Central Railway on May 27, 1979. BRIAN SHARPE

The Great Central Railway Company (1976) Limited was incorporated as a private company on May 6 that year, and a public company three days later, when No. 5231 was named *3rd Volunteer Battalion, The Worcester and Sherwood Foresters Regiment* at Quorn. It was reputed to be the longest name ever given to a locomotive, but is no longer carried by this engine. At this time trains were still being operated under BR supervision.

In December 1975, BR gave the Main Line Steam Trust an ultimatum to buy the track outright by April 1, or it would be lifted.

A share issue was launched to buy the track from BR, but initially it was possible to buy only a single-track section from Loughborough to Quorn. However, with the help of the trust and a substantial bank loan, the company bought the single line between Quorn and Rothley, giving a total of five route miles. British Railways then lifted the remainder of the track, the second track between Loughborough and Quorn, and the Rothley to Birstall section. The Great Central was forced to close in July and August 1976, its peak season, while the second line between Loughborough and Quorn was lifted.

It seemed that the possibility of saving a stretch of double track had come to an end.

The early locomotive fleet

Most of the early services were handled by *King Haakon VII*, Hunslet 0-6-0ST No. 1800 of 1936 *Robert Nelson No.4* (now at the private Riverstown Old Corn Mill Railway in Ireland); Manning Wardle 0-6-0ST *Littleton No. 5* No. 2018 of 1922 (now at the Avon Valley Railway); Robert Stephenson & Hawthorns 0-6-0ST No. 6947, which had been converted by members from a saddle tank to a side tank (now with the Darlington Railway Preservation Society); Hawthorn Leslie 0-4-0ST No. 3581 of 1924 *Marston, Thompson & Evershed No.3* (now at the Foxfield Railway); and of course No. 5231, which was a mainstay of GCR services during the 1970s.

It was very much a 'starter' line, using whatever locomotives were available and economical to run, rather than fulfilling a main line mission statement.

However, the extension of the line to Rothley encouraged more locomotive owners to base their engines there. The Witherslack Hall Society moved its Western Region 4-6-0 No. 6990 *Witherslack Hall* from Barry scrapyard there in December 1975.

A veteran of the route, *Witherslack Hall* had run along the London Extension during the Locomotive Exchanges of 1948. Modified Halls also regularly worked over the Great Central main line while running over the Banbury to Woodford Halse link.

During the time that the GCR closed in the summer of 1976, a much-needed run-round loop was installed at Loughborough Central, eliminating time-consuming expensive shunting procedures.

While the trust was still working flat out to buy the track between Rothley and Quorn for £70,000, Rothley station was refitted with gas lighting, with the apparatus having been bought from British Rail's Collector's Corner in London. The lighting was switched on by English Tourist Board chairman Sir Mark Henig during the Bonfire Night celebrations on November 5.

The future is secure!

In 1977, British Rail gave GCR officials an ultimatum to hand over the purchase price of the route by January 20, or the line between Quorn and Rothley would be lifted. With two interest-free loans from Leicestershire businessmen topped up by a bank loan, the money was handed over with only a day to spare.

With far-sighted vision sadly absent from many other local authorities of the day, Charnwood Borough Council agreed to purchase the land and buildings of the whole route from Loughborough to Belgrave & Birstall, where the vandal-decimated original station was demolished the following year (and since replaced with the modern Leicester North a stone's throw to the south).

No. 377 was involved in a serious accident at Woodthorpe bridge on March 7, 1976, when a badly-fitted fusible plug blew out of the crown plate of the firebox, leaving a hole from which a high-velocity jet of steam and water escaped. There were no casualties among the 200 passengers on the five-coach train, but two out of four people on the footplate, Robert Anderson and Michael Mountford, received painful bums and required hospital treatment.

In 1977, major boiler work became necessary and the locomotive was withdrawn from service. It was purchased by Alan Bloom's Bressingham Steam Museum near Diss in Norfolk, leaving the GCR on April 21, 1981. Following an extensive overhaul, which included boiler restoration in Bressingham's own workshops and the building of a new tender tank, it was steamed again at the Diss venue in 2006.

In 1978, GCR chairman Bill Ford and director David Clarke bought LMS Jubilee 4-6-0 No. 5690 *Leander*, as a crucial step in fulfilling the original aim of running big main line locomotives on a main line railway. *Leander* had run over the route in 1962. The pair aimed to run *Leander* on a commercial basis, with the GCR and the locomotive owners

sharing the profits, but the GCR board rejected the idea, leaving the engine to be run on the main line. In February 1979, it was moved to the Steamtown depot at Carnforth and used on mainline tours for the next seven years until, after its boilet ticker ran out, it was sold on to firstly to Severn Valley Railway and subsequent to the late Morecambe GP, Dr Peter Beet, whose family still owns it.

Also in 1978, LNER-design B1 4-6-0 No. 1306 *Mayflower* (now owned by Steam Dreams chairman David Buck) and N2 0-6-2T No. 4474 arrived and formed the mainstay of motive power the following year, during which a second Gresley teak buffet coach and four Mk.1 carriages from the Nene Valley Railway arrived.

As with so many of the UK's top heritage lines, the GCR had relied on industrial types in those formative years, but by now it was beginning to look more and more like a steam era main line. In 1979, *Mayflower* ran in service for 109 days: by then, the modern-day GCR was already running eight-coach trains, so remarkable had been progress during the first decade.

In April 1978, Charnwood Borough Council and the railway agreed a 99-year lease on the land and buildings, allowing the line to operate. The cost of the lease was £1750 per annum.

That year, the company and the council were jointly awarded a Light Railway Order which came into effect on March 31, the day the GCR finally took complete control of all train operations. From then on, BR no longer needed to supervise operations, but nonetheless one of its supervisors became a volunteer on the line.

However, that winter, one of the biggest obstacles to reopening all the way from the southern edge of Nottingham to the fringe of Leicester appeared. The original Great Central bridge over the Midland Main Line along with the southern embankment leading to it were demolished.

Its absence has not deterred revivalists who dream of creating the world's first inter-city heritage railway, but endless discussions have taken place over the ensuing years as to how to replace it. Like a will o' the wisp, every time a costing was produced, it was always outside the grasp of the railway's finances or potential grant-funding bodies.

In time, the missing bridge came to be regarded as the biggest obstacle in the entire British preservation portfolio.

In 1980, the railway's first general manager, D Grahame Handley, was appointed.

The following year, the line was graced by a three-month visit from GNR Stirling single 4-2-2 No. 1, courtesy of the National Railway Museum. The 1907-built engine's restoration to working order had been sponsored by a West German and the GCR was selected for its running-in trials before a visit to Germany.

Another big landmark was passed in 1982 when the sole surviving original Great Central passenger locomotive, Robinson Class 11F 4-4-0 No. 506 *Butler Henderson,* made its debut on March 27, and ran on the line for many years to come.

That year also saw the arrival of the line's first heritage era main line diesels, Swindon-built Western Region diesel hydraulics Class 14s Nos. D9516 and D9523, acquired from British Steel at Corby, where they had worked in industrial service following withdrawal by BR.



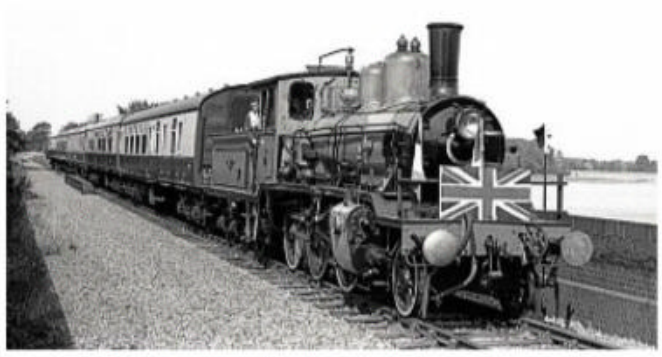
End of the beginning: GCR directors and borough council representatives pictured in April 1978, after signing the 99-year lease on the land and buildings which allowed the revivalist company to operate. In the centre holding the lease is Bill Ford who had championed the joint venture between the council and the railway to save the line. BILL SQUIRES/GCR

Now for the next 50 years and beyond!

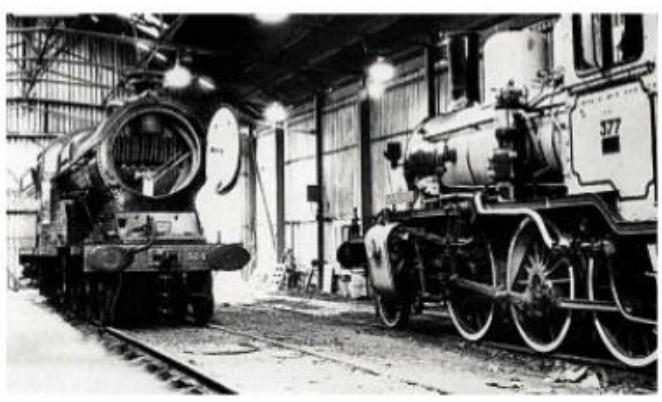
'Forward' was the motto of the original Great Central Railway, incorporated into its coat of arms. As we have seen, building on the foundations of progress that had been laid in that first decade, the revivalists have continued to make steady progress in that direction.

'Mission impossible' achievements included no less than the first double-track heritage trunk railway in the UK, with the second track relaid between Loughborough and Rothley, and single track relaid to what is now Leicester North, and not forgetting major improvements to the fabric and visitor facilities at all of the stations.

A separate group was formed to take over the Ruddington spur north of Loughborough. Branded the Great Central Railway (Nottingham), it has 'held the fort' until the dream of reuniting the lines can be realised. Overnight on September 2-3, 2017, the ultimate dream was realised when a single-track bridge span was craned into place over the Midland



September 6, 1975 saw heritage era trains run into Rothley for the first time, the first being a VIP special hauled by Norwegian State Railways 2-6-0 No. 377 *King Haakon VII*, seen crossing Swithland viaduct. GCR



No. 377 *King Haakon VII* inside Loughborough shed facing original GCR Director class 4-4-0 No. 506 *Butler Henderson*, at that time a static exhibit. GRAHAM WIGNALL/GCR



LMS 'Black Five' 4-6-0 No. 5231 departs from Loughborough on Sunday June 20, 1976 before the second track was lifted by British Rail. BRIAN SHARPE



Above: Early tracklaying being carried out on the extension from Rothley to Leicester North, which was opened on July 5, 1991 by Deputy Prime Minister Michael Heseltine. Progress on the GCR will by no means end here: next stop Ruddington! DENNIS WILCOCK/GCR



Right: GNR Stirling Single No. 1 passes Swithland on December 6, 1981. BRIAN SHARPE

Main Line, a giant step in the push to create a unique 18-mile intercity heritage line which will be the pride of all Britain.

Amongst many other achievements included the return to steam of the National Collection's GCR Robinson O4 2-8-0 No. 63601, the restoration of the Mountsorrel granite quarry branch as a 'heritage railway within a heritage railway' over which industrial locomotive types can be run; and the assembly of the 'Wincutter' rake of 16-ton mineral wagons, an initiative of Nick Pigott, former editor of *The Railway Magazine*.

Of course, a vast amount of work still lies ahead, not least of all fundraising and the building of an embankment to link the new bridge to the line to the south.

The October 3-6 autumn steam gala will undoubtedly serve as a fitting tribute to 50 years of hard slog to turn the vision of those early pioneers into reality. The two star guests at this year's event will be SR Schools 4-4-0 No. 926 *Repton* from the North Yorkshire Moors Railway and the National Railway Museum's LSWR T9 'Greyhound' 4-4-0 No. 30120, which is currently on loan to the Swanage Railway.

The gala will feature a busy passenger service on the Thursday, with the addition of freight trains on the Friday, and offering a very intensive timetable on Saturday and Sunday, including a frequent passenger service with goods trains and Travelling Post Office demonstrations.

The question as to whether Dr Richard Beeching was right to recommend the closure of the original GCR route to London will remain a matter of perennial debate. Indeed, in recent weeks, its theoretical resurrection as an alternative to the increasingly costly HS2 had been voiced in several places.

However, what we have today really is the 'Great' Central, a magnificent heritage railway near the heart of the country, very accessible by both road and rail links, and one over which the finest examples of our rich portfolio of steam and classic diesel locomotives can once again showcase Britain's proud globe-shaping railway legacy.

There is much, much to look forward to with eager anticipation in the decades ahead. HR

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TRACK TALK

SVR footplate course mirrored *Heritage Railway's* experience

INSPIRED by Gareth Evans' report in issue 255, my sisters kindly bought me a 'taster' footplate experience on the Severn Valley Railway as a 70th birthday cum Christmas present.

We are from a railway family (East Coast Main Line and Midland & Great Northern Joint Railway).

I opted to leave it until the summer for reasonable weather. I happened to pick what turned out to be the hottest on record – my timing is always suspect!

As one would expect with the short wheelbase/outside cylinder combination, the locomotive, GWR 0-6-0PT No. 1501, was rough riding, but I could feel the power it could exert.

The experience was beautifully organised. Just as Gareth described in his article, it was all very friendly and relaxed. Having gone there with some trepidation, I was amazed how well it went – it seemed to be all over in 10 minutes!

I cannot praise the organisation highly enough. Thanks to all involved – it was quite an experience!

Alan Wright, Leamington Spa, Warwickshire

Missing a trick?

FOR many preserved railways, catering is an important source of income. Arriving an hour before the first train of the day at a Midlands steam railway gala, I bought a ticket, but found the cafe closed.

I did buy a coffee before the train left, but other passengers who wanted bacon baps to take on the train were turned away. Some visitors had made a two- or three-hour journey to reach the railway in question. Compare this to the Pontypool & Blaenavon Railway, where I enjoyed a full cooked breakfast and a pot of tea before boarding the first train of their gala.

Once intensive gala timetables begin it is difficult to eat meals without missing some of the action.

So an earlier opening of cafes could have both financial benefits and happier visitors. Food for thought? (pun intended)

Peter Greaves, Walsall, West Midlands

STAR LETTER

Do many smaller lines face prospect of going under?

I RECENTLY attended a gala day at one of our minor railways. Perhaps because of the competition, the weather, or the fact that it was during the holiday season, fewer than 100 people attended. Having time to contemplate between attractions, it occurred to me that history was repeating itself.

It seems our heritage railways could fall into three broad categories, two of which have a certain future.

Firstly, there are those who will thrive because of their spectacular location, quality of infrastructure and rolling stock, or the fact they have a real destination (start or finish point). Next there are those whose location places them on a strategically important stretch of railway line, where plans, often drawn up by independent bodies, have identified some future commercial potential for revival (the Waverley Route, Aberystwyth to Carmarthen, Stratford-upon-Avon to Cheltenham etc). These are likely to survive in some form or other.

Struggle

Then there are those like the line I visited, with a journey from nowhere to nowhere, yards full of rusting hulks with little hope of any of them being restored, poor infrastructure, low supporter numbers.

They will struggle on for a few years I am sure, but it put me in mind of the mid-Victorian era, just after the first boom in railway construction, when communities up and down the country believed that their railway-from-nowhere special to nowhere else could make money, despite evidence to the contrary.

When the axe fell in the mid-20th century, we could hardly be surprised.

I did not mention the line I visited, as I do not want to do them a disservice, and I fervently hope I am wrong, but I did wonder, as I sat there between trains, if another axe is hanging over some of these lines at some point in the future. They do say, what goes around comes around.

Chris White, email



Is Aussie Garrett bigger than UP Challenger?

GREETINGS from the South where spring has sprung at last after a cold and windy winter.

I am still buying *Heritage Railway* from our local newsagent and risking someone getting in before me.

I found the June/July issue to be very good reading. In the US Big Boy article, it was suggested the next biggest locomotive still operating is the Union Pacific Challenger 4-6-6-4 No.3985.

I am not familiar with that unit, but I suspect the New South Wales Beyer, Peacock Garratt AD60 No. 6029 4-8-4+4-8-4 of 1952 could be bigger.

It was in steam for the June 2019 Transport Expo from Sydney's Central station, and here is a shot of it about to depart on a suburban run. I could well be wrong, but I thought it was worth asking about. It is such a big locomotive it was difficult to get a full shot.

Geoff Kyngdon, Albion Park, New South Wales, Australia

Heritage venues must acknowledge today's world

HUGH Dougherty's piece in Issue 257 about the use of gender-neutral terminology referred to comments from an anonymous 'heritage line volunteer'.

This person was quoted as saying "if heritage railways are presenting a true, historical picture of the steam age as it was then such terms should be used today."

The heritage railway movement has done some amazing things over many decades to preserve and re-create rolling stock and infrastructure, but surely we do not really believe that it presents a true historical picture of the way things were.

If it did, there would be no Thomas events; no female footplate staff (except, arguably, at wartime events); no adapted coaches for people with limited mobility; no baby-change facilities in station toilets; and Chris Price's stated aim of filling all North Yorkshire Moors Railway trains with diners just would not happen.

Much as some might regret it, we live in a modern world. The best that heritage railways can hope to present to a public with high expectations is an idealised (some may say sanitised) view of what the steam railway age should have looked like.

I work at a large open-air museum set largely in the Edwardian period, and I fully acknowledge that we cannot hope (or even wish to) present a true picture of how harsh life really was in those times.

If we want our movement to survive, we must wake up to who our customers are and respect their wishes. It is, after all, they who pay for us to play trains.

David Tremewan Matthews, Newcastle upon Tyne

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Ken Mumford photographed this clerestory coach at the old storehouse in Llanfrynach, near Brecon, 20 years ago, but cannot find out anything about it. Can any reader help him please? KEN MUMFORD





Most definitely not feminine by name: *Flying Scotsman* speeding through Langwathby on the Settle and Carlisle line with the southbound 'Waverley' from Carlisle to York on July 7. DAVID TROUT

Gender neutral wins on the line every time

FULL marks to the Scottish Maritime Museum's insistence that items in its collections of ships and locomotives should be referred to as 'it' rather than 'she' (issue 257).

And also full marks to *Heritage Railway* for its editorial house style which concurs with this ruling. It has always grated on me to hear people call *Flying Scotsman* or *Mallard* 'she'.

Locomotive names are often gender neutral, such as the Great Western's Castles, Halls, Granges and Manors, the many LNER Pacifics named after famous racehorses and the Southern's Schools, Merchant Navies and Battle of Britains.

Even with the racehorse series of LNER Pacifics, there are gender verbal traps, such as with A3 No. 60061 *Pretty Polly,* which was actually a horse, no doubt a mare; at least I hope so.

Preposterous

I can't imagine a less feminine machine than a magnificent LMS Duchess class locomotive or a similar LNER 4-6-2 of classes A1, A2, A3 and A4, though here too some locomotive names might tempt the unwary into referring to them as she; for instance *Meg Merrilees* (A1 No. 60115) or *Madge Wildfire* (A1 No. 60135), both named after characters in Sir Walter Scott's Waverley novels. To imagine as 'she' these powerful beasts forging up the climb to Grantshouse with East Coast Main Line cross-border expresses between Newcastle and Edinburgh seems preposterous.

On the subject of Waverley characters it would likewise be plain silly to call Class D30 4-4-0 *Jingling Geordie* or D11 4-4-0 *Laird of Balmawhapple* 'she'.

Pretty idiotic also to refer to A4 No. 60003 *Andrew K McCosh* or A1 No. 60118 *Archibald Sturrock* as 'she.' – they were named after railway company big wigs.

David Trout, Durham

Let's not forget Minehead to Taunton bus shuttles

WITH reference to the article on the West Somerset Railway (WSR) and the Great Western Railway shuttles in issue 258: yes, the shuttles are a good idea and it seems to work well, and it is portrayed as 'scheduled service' probably because it is operating for a number of Saturdays.

It certainly made history over the August steam and vintage fayre weekend at Norton Fitzwarren, and grand that it did. However, I have been a member of the WSR since 1996 and for some years worked as a volunteer guard, and memories can be very short at times!

Shuttle frequency

I can, over the past 23 years or so, remember many times shuttles have operated with a similar service, admittedly only for a Saturday/Sunday over a special weekend with DMUs from GWR and its predecessors.

On one occasion CrossCountry supplied a Voyager and I was the WSR guard accompanying this service.

So yes, it is great it is successful, but sorry, not the first time.

I was at Bishops Lydeard on Saturday, August 17, waiting to go to Watchet when the shuttle arrived and about 40 passengers alighted. At the same time, the 28 service bus arrived from Taunton and six alighted.

The 28 bus service, Taunton to Minehead, operated daily by Buses of Somerset, a FirstGroup company, has operated for many years via the station yard on WSR operating days, calling at the bus shelter opposite the platform entrance, built to former GWR style by the then Taunton Dean Council carpenters.

To my mind, this service, which had little problems over the years, gets scant recognition for all the good it does in supporting the WSR in many respects, including advertising at its own cost, with large posters at Taunton bus station, which one manager admitted he had never seen!

For years there has been an agreement that if either could not operate then passengers would be transferred to whichever service was able to do so.

This, to my knowledge, has only happened this year when the WSR was unable to operate for some weeks from Watchet to Minehead and agreed to carry passengers for the WSR between the two points with WSR tickets.

Great 'integrated transport' – a point normally sadly lacking in this country, but did Buses of Somerset get any good publicity in recognising its willingness to help? I will let you decide on the answer.

Practical and convenient

So, the next time you arrive at Taunton station, and the only service is the bus that departs on the south side by platform 2 arrivals from London and the north, and yes it is service 28, a seamless interchange, just a 21-minute journey. The service starts from Taunton bus station 12 minutes earlier.

Your return takes you to the main entrance on the north side within just a few moments via stairs or lift to platforms, and if timed reasonably, just six minutes longer than Lord Faulkner and Chris Austin took by the shuttle to get from Bishops Lydeard to Paddington – you cannot cross some roads at times in six minutes!

So congratulation Buses of Somerset, you are doing a grand job. Except for a few lines in leaflets in small print, it is a pity you don't get better recognition where it is due.

Phil Emond, email.

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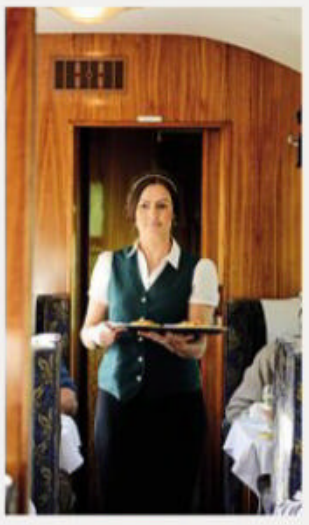



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OLD FAVOURITES WOW YOUNGER CUSTOMERS

The North Norfolk Railway's autumn steam gala proved to be a resounding success, helped by the return of 9F No. 92203 *Black Prince* with hours to spare, and an incentive to attract a younger audience. **Robin Jones** reports.

A 'Kids for a Quid' deal aimed at attracting more families helped make the North Norfolk Railway's autumn steam gala a resounding success.

Around 2200 passengers travelled on the line during the August 30-October 1 event, one of the busiest galas experienced at Sheringham for several years.

The railway exceeded its income target – and the breakfast train broke its record for the number of breakfasts sold across the weekend with more than 250 eggs fried during the event!

General manager Andrew Munden said: "Around 70% of our passengers come from the family market rather than the enthusiast sector, and numbers are moving that way. Our Kids for A Quid offer certainly brought more families to the gala which was very successful."

Guest locomotives were Stewart Robinson's nomadic BR Standard 4MT 2-6-4T No. 80078, which arrived from Mangapps Museum – and West Somerset Railway chairman Jon Jones-Pratt's Hawksworth 0-6-0PT No. 9466, which has been running on the South Devon Railway during the summer.

However, one of the star attractions was the return of BR Standard 9F No. 92203 *Black Prince,* which had been out of action for repairs since March. Andrew praised the Weybourne motive department staff for working flat out to have the repairs completed with just two days to spare before the gala started, including the fixing of cracks on the rear outer firebox shoulders; welding new sections to replace defective sections which had to be cut out; and the replacement of the right-hand rear cylinder cover. The locomotive is now back in regular traffic

Other home fleet locomotives in action were GER Y14 No. 564, LNER B12 No. 8572 British Railways Standard 4MT No. 76084 and WD 2-10-0 No. 90775 *The Royal Norfolk Regiment*.

Dining train to aid memorial

On Monday, October 14, No. 90775, is to haul 'The North Norfolkman' dining train on which a black tie and tiara dinner is to be held by the Paradis Commemoration Group, which is raising funds for a memorial in Norfolk in memory of the 97 soldiers, mostly from the Royal Norfolk Regiment, who were massacred on May 27, 1940 in Le Paradis.

More than 300,000 troops were evacuated from Dunkirk in May 1940. However, the evacuation was only made possible by the defence of the Dunkirk perimeter, with one of the battlefields focused on the village of Le Paradis and Lestrem in northern France. The troops were ordered to fight to their final bullet.

When they ran out of ammunition they surrendered, but were massacred by the SS in what was later recognised as a war crime.

The train will depart from Sheringham at 7.10pm and return at 10.10. Tickets are £100 and are available from www.nnrailway.co.uk/dining-trains HR



Back in action after repairs, BR Standard 9F 2-10-0 No. 92203 *Black Prince*, which was bought from BR by the late David Shepherd, heads towards Weybourne on September 1. ROBERT FALCONER



Making its first visit to the Poppy Line, BR Standard 4MT 2-6-4T No. 80078 departings Holt station, platform 2 with the 11.51am suburban service. This was unusual sight for the North Norfolk Railway as its locomotives normally face west. HAYDEN SHEPPARD



East meets west at Weybourne as resident Y14 No. 564 stands at Weybourne with a train for Holt as visiting pannier No. 9466 approaches with a train for Sheringham. PAUL HEINRICH





BR Standard 4MT 2-6-0 No. 76084 heads away from Sheringham on September 1. ROBERT FALCONER



WD 2-10-0 No. 90775 *The Royal Norfolk Regiment* heads out of Sheringham on August 30. LEIGH CAUDWELL/NNR

GREAT STEAM ENGINEERS
OF THE PRE-GROUPING PERIOD
PART ELEVEN: 1918-1922

The First World War seriously damaged Britain's railways but as **Brian Sharpe** outlines, when hostilities ceased, locomotive building resumed in earnest and the years leading to the Grouping of the railways in 1923 saw dramatic progress in steam locomotive design.



In the early years of the 20th century, several of the railway companies in Britain had begun a programme of electrification, particularly of suburban routes. After the First World War, the electrification programme resumed and it was inevitable that thought would be given to extending this to longer distance main lines. This was the first indication that steam traction would not last forever on Britain's railways.

The London & South Western Railway (LSWR) had decided to electrify all remaining London suburban lines in 1913 but the outbreak of war put this on hold. However, during 1920 plans were drawn up to extend the electrification to Brighton, Worthing, Eastbourne, Newhaven and Seaford, as well as to Epsom and Oxted.

Robert Urie had taken over as CME on the LSWR in 1911 and had designed the H15 and N15 4-6-0s, the latter for express passenger work. After the war, Urie moved on to build a freight version of the 4-6-0; the S15, the first of which emerged in 1920.

The S15s continued in operation until 1966. Seven examples have been preserved and three are currently in service – No. 506 on the Mid-Hants, No. 825 on the North Yorkshire Moors Railway and No. 847 on the Bluebell Railway.

Richard Maunsell had been chief engineer on the South Eastern & Chatham Railway (SECR) since 1913, but had little opportunity to produce new locomotive designs until after the cessation of hostilities.

The SECR had increased freight and passenger train loadings, but suffered from poor track and weak, lightly built bridges which led to the use of only locomotives with low axle loadings. Its locomotive stock consisted of nothing bigger than 4-4-0s and 0-6-0s.

Maunsell had, however, designed the N class 2-6-0 in 1914 for mixed-traffic duties, being assisted by former GWR engineer Harold Holcroft, who suggested a 2-6-0, having been involved with Churchward's 4300 class mogul while he was at Swindon.

The N class used a Belpaire firebox that sloped downwards towards the cab instead of a round-topped version, long-travel valves and a sharply-tapered and domeless boiler, all attributed to Holcroft.

Maunsell's chief locomotive draughtsman, James Clayton, brought functional Midland Railway influences to the design, such as the shape of the cab and the drumhead-type smokebox. Clayton was also responsible for the tender and chimney designs.

It influenced future 2-6-0 development in

North Eastern Railway T3 0-8-0 No. 901 designed by Vincent Raven and built in 1919, at Grosmont on the North Yorkshire Moors Railway. The locomotive is currently on display in the Head of Steam museum at Darlington North Road. BRIAN SHARPE



Designed by John Robinson and built in 1920, Great Central Railway 11F 4-4-0 No. 506 *Butler-Henderson* is preserved as part of the National Collection. The locomotive is currently on display at Barrow Hill Roundhouse. BRIAN SHARPE



London & North Western Railway G2 'Super D' 0-8-0 No. 49395 was designed by Charles Bowen Cooke and built in 1921. The National Collection-owned locomotive is seen at Cheddleton on the Churnet Valley Railway shortly after it was returned to steam. It is currently on display in the Locomotion museum at Shildon. BRIAN SHARPE



Designed by Henry Fowler and built in 1925, Somerset & Dorset Joint Railway 7F 2-8-0 No. 53809 is seen at Holt on the North Norfolk Railway. BRIAN SHARPE

Britain but production was delayed by the outbreak of the First World War in 1914, and the first N class rolled out of Ashford works in 1917. Maunsell also designed a 2-6-4T version for express service, the K class. Before this, the only 2-6-4Ts running in Britain were some on the Great Central Railway designed for freight service.

The first locomotive, No. 810, emerged from Ashford Works for proving trials in July 1917, one month after the first K class 2-6-4T, whose design was derived from the N class. The first batch of the N class was built in 1920 and proved successful in service, with few problems being encountered. The 2-6-Ts were a different matter. Built for express service, they proved unsteady at speed.

The N class moguls lasted until 1966 and one is preserved on the Swanage Railway in Dorset, undergoing overhaul. Maunsell also came up with a three-cylinder version in 1922; the N1.

On the London Brighton & South Coast Railway, the last of the batch of five of Billinton's L class 4-6-4Ts built in 1921-22, No. 333 was dedicated as a war memorial engine in April 1923 and named *Remembrance*.

Midland

Henry Fowler had become chief mechanical engineer on the Midland Railway (MR) in 1909. Fowler rebuilt the 2441 class introduced in 1899 by Samuel Johnson, with a Belpaire firebox and improved cab, producing the well-known 3F 0-6-0T which became known as the 'Jinties'. No less than 422 were eventually built.

Although known for its small engine policy, the MR designed a large 2-8-0 for the Somerset & Dorset Joint Railway (S&DJR) and even an 0-10-0 for banking on the Lickey Incline.

Two batches of the S&DJR 2-8-0s were built in 1914 and 1925. The MR, joint owner of the S&DJR with the London and South Western Railway, was responsible for providing motive power for the line, but being particularly heavily graded, it required something more substantial than the MR's typical small engines.

James Clayton, the draughtsman at Derby, produced something very different to the standard Derby-designed engines of MR days, using a 2-8-0 wheel arrangement, a 4P compound boiler and Walschaerts valve gear. It still had the troublesome small Derby axleboxes though.

The first six were built at Derby but the later batch was ordered by the LMS from Robert Stephenson and Co in Darlington and built with larger boilers.

Although successful working over the Mendip hills, when they were tried on MR coal trains they were found to be unsuitable, encouraging the MR to stick with its small engines. The earlier 2-8-0s were withdrawn first but the later ones lasted until 1963/64, just before closure of the S&D route.

Two found their way to Barry scrapyard and have been preserved and returned to steam; both currently being operational. No. 53808 is at the West Somerset Railway and No. 53809 can be found at the North Norfolk Railway.

The MR built its 0-10-0 in 1919; designed by James Anderson for banking duties on the Lickey Incline and which became known as 'Big Bertha'.

'Big Bertha's' cylinder arrangement was

unusual. There were four cylinders but only two sets of piston valves because there was insufficient space under the smokebox to fit piston valves for the inside cylinders. Instead, the large outside piston valves, as well as supplying the outside cylinders, supplied the inside cylinders through cross-over steam ports. The steam-flow characteristics would have been poor because of the length of the ports, but this would not have mattered unduly in an engine that ran only at slow speed. It was in use up to 1956.

London & North Western

Captain Hewitt Pearson Montague Beames took over from Bowen Cooke on the London & North Western Railway (LNWR) in 1920, but served only briefly as CME. When the LNWR merged with the Lancashire & Yorkshire Railway (LYR) in 1922, it was the LYR man, George Hughes who took over and would subsequently become the first CME of the London Midland & Scottish Railway.

After the major and complex rebuilding programme of Webb's 0-8-0s started by Whale and continued by Bowen Cooke, the LNWR started constructing G2 0-8-0s in 1921-1922 which had higher pressure boilers. Sixty G2s were built which were unique among the LNWR 0-8-0s in never being rebuilt from or into other classes.

Despite all the rebuilding, in LNWR days, all the 0-8-0 classes tended to be called Class D whether they were or not and those that received superheating became known as 'Super Ds', a name that has stuck.

The first of the new G2 class, built by the LNWR as No. 485 in 1921 was selected for official preservation as the ultimate development of the 0-8-0 type by the LNWR. It was eventually restored and worked on heritage lines until recently.

> "The reorganisation of Britain's railways in 1923 led to the abandonment of the NER's main line electrification plans by the LNER. One of the big 'what ifs' of British railway history, is how things would have developed if Raven's electrification plans for the East Coast Main Line had come to fruition in the 1920s."

North of the border

Walter Chalmers took over from William Reid on the NBR in 1919 and the job title changed from locomotive superintendent to chief mechanical engineer. However, he designed no new locomotives. Two H class Atlantics were built under his supervision which Chalmers had designed as chief draughtsman under the direction of Reid. He also started work on a 2-8-0 design but made little progress.

On the Caledonian Railway (CR), William Pickersgill had become locomotive superintendent in 1914 and introduced a further class of 4-4-0 in 1920; the 72 class, of which 32 were built. These were the Caledonian's last express locomotives, and technically being the last of the Dunalastair series, were unofficially dubbed, 'Dunalastair V'.

Pickersgill also introduced a further class of 4-6-0 in 1920 – which if anything, was even worse than the railway's previous 4-6-0 designs. It was a wheel arrangement which the CR never had much success with.

The 956 class were three-cylinder engines which at the time were the largest locomotives operated by a Scottish railway. Although visually very impressive, they were not successful. Draughting was a problem and firemen had a lot of trouble maintaining steam pressure. The main problem was that there were two sets of Walschaerts valve gear with derived drive for the middle cylinder; the design of which was simply not up to the job.

An attempt was made in 1922 to address the issue by fitting Stephenson link motion to the inside cylinder. This resulted in considerable extra noise being produced but there was little benefit in terms of power or reliability. They were soon relegated to freight traffic but surprisingly lasted into the 1930s.

The last chief mechanical engineer of the Glasgow & South Western Railway (GSWR); Robert Harben Whitelegg, born in 1871, started work under his father, Thomas Whitelegg, who was the locomotive

Great Northern Railway N2 0-6-2T No. 1744 was designed by Nigel Gresley and built in 1921. Here it is seen at Weybourne on the North Norfolk Railway at the head of the line's LNER Quad-Art carriage set. Withdrawn upon the expiry of its boiler certificate in November 2018, the Gresley Society Trust-owned locomotive is currently under overhaul at Weybourne. BRIAN SHARPE

superintendent of the London, Tilbury & Southend Railway (LTSR). After working for Nasmyth Wilson's Spanish branch, he returned to the LTSR in 1910 to succeed his father as locomotive superintendent.

The Midland Railway took over the LTSR in 1912 which was a blow to Whitelegg, who resigned, although he had just produced a large 4-6-4T for the railway. This unfortunately proved too heavy to be allowed on the viaducts outside Liverpool Street, which rather limited its usefulness.

However, in 1918, Whitelegg was fortunate enough to get the post of chief mechanical engineer of the GSWR, where he built another series of 4-6-4Ts which proved much more useful. The GSWR previously had nothing larger than 0-6-0s, 4-4-0s and 2-6-0s.

Only six of the 540 class 4-6-4Ts were built and they were early withdrawals by the LMS but they did briefly transform the GSWR's locomotive fleet. Whitelegg lost his GSWR job on Grouping in 1923, but got a much better job as general manager of Beyer Peacock & Co in Manchester.

North Eastern

The North Eastern Railway's (NER) development of express passenger locomotives was held up by the First World War. During the war, Vincent Raven was superintendent at the Royal Arsenal, Woolwich where he organised munitions production, for which he received a knighthood in 1917.

New locomotive production on the NER resumed in 1921 with Sir Vincent Raven's very successful C7 Atlantic. However, even greater power and acceleration was required for the increasing loads on the East Coast Main Line. Raven quickly developed the C7 into a Pacific.

Authorisation to build the first two locomotives was received in 1922 and two were constructed quickly to counter the Great Northern Railway's new Pacific. Both Raven Pacifics were delivered by December 1922 in time for Grouping in 1923.

Raven created his Pacific by stretching the C7 design and increasing the cylinder size and boiler diameter. Boiler pressure was increased from 175psi to 200psi. The length of the resulting engine proved to be a significant restriction on route availability.

The three-cylinder drive on the front coupled axle was kept from the C7 design. The valve arrangements and steam passages were unchanged, but were unable to handle such large volumes of steam. Three sets of independent Stephenson valve gear had to be fitted in a confined space which resulted in limited bearing sizes.

So the A2 had a number of problems. It was the biggest engine the NER built, but certainly not its best. Not only was it rushed but Raven was possibly more interested at the time in building a 4-6-4 electric locomotive to haul 450 ton passenger trains at up to 90mph.

A combination of their limited route availability, and the need for new boilers led to withdrawal of the Pacifics between 1936 and 1937. The third class member, No. 2402 was the first locomotive built by the LNER to be scrapped.

Following the success of the earlier Shildon–Newport electrification scheme, Raven set about planning the electrification of the main line from York to Newcastle, also at 1500 volts DC. Both third rail and overhead power supply systems were considered but in the end, the overhead system was selected. A prototype passenger locomotive was built in 1922 at Darlington for this, 1800 horsepower 2-Co-2 (4-6-4) No. 13. Although successfully tested between Newport and Shildon using the overhead power supply, No. 13 was never able to haul express trains as intended.





Above: South Eastern & Chatham Railway N class 2-6-0 No. 31874, designed by Richard Maunsell and built in 1925 is seen at work on the Mid-Hants Railway. The locomotive is currently under overhaul at the Swanage Railway. BRIAN SHARPE

Left: Designed by Charles Collett and built in 1923, Great Western Railway Castle 4-6-0 No. 4073 *Caerphilly Castle* can be found on display in the Steam museum at Swindon. JOHN TITLOW

Great Northern

On the Great Northern Railway (GNR), Nigel Gresley's conjugated valve gear enabled a three-cylinder locomotive to operate with only the two sets of valve gear for the outside cylinders, deriving the valve motion for the inside cylinder from them by means of levers (the '2 to 1 lever' and 'equal lever').

After Gresley had designed his first two classes for the GNR to feature his trademark three-cylinder layout with conjugated valve gear, he went on to design a three-cylinder Pacific which would revolutionise express services on the East Coast Main Line.

Britain's first Pacific had been the Great Western Railway's *The Great Bear*, designed by Churchward in 1908, but no more were built and it was not until 1922 that Gresley built A1 No. 1470 *Great Northern* for the GNR and Raven simultaneously brought out his first two A2 Pacifics for the NER.

Construction of both Gresley and Raven Pacifics continued after Grouping in 1923 and there was little difference between the A1 and A2 when they were tested. In fact, the A2 was better at maintaining full boiler pressure but Gresley's appointment as CME of the newly-formed London & North Eastern Railway inevitably led to the A1 being favoured as it was considered a better design and had more potential for further development.

Great Western

Many of Churchward's best-known designs date from early in his days as CME. He was aware that the large driving wheels on his 4-6-0s limited their usefulness on freight trains and in 1919 came up with the massive 4700 class 2-8-0 with 5ft 8 in driving wheels for fast freight service.

Charles Collett was born on September 10, 1871 close to Paddington station and studied at Merchant Taylors School in London and at The London University before joining well-known marine engineer Maudslay Sons and Field of Lambeth. In May 1893, he joined the GWR as a junior draughtsman at Swindon – and by June 1900, he was assistant manager of the works and rose to the position of manager in 1912. He became deputy chief mechanical engineer in May 1919, making him the natural successor to Churchward.

Churchward and Collett had very different personalities but they worked well together and proved a valuable team. Collett was milder but could be aloof. He became the GWR's chief mechanical engineer in 1922 just before the Grouping and inherited from his predecessor a series of excellent, standardised and innovative locomotives which were the envy of the other railways. However, with financial constraints as a result of the Great War, which had led to the Grouping, there was a need to rationalise the number of pre-Grouping designs and to develop more powerful locomotives.

Collett's strength was his ability to take a good design and improve on it, although he was sometimes criticised for simply developing existing designs with little innovation.

Collett used Churchward's Star class four-cylindered 4-6-0 of 1906 as the basis for a new design. It had the basic layout of the Star with an extended frame and a newly-designed No. 8 boiler which was larger, but equally importantly lighter to keep within the stipulated axle load limit. It retained the long-travel valves and Belpaire firebox that



London & North Eastern Railway A3 4-6-2 No. 4472 *Flying Scotsman* was designed by Nigel Gresley and built in 1923. Originally built as an A1, the engine was eventually rebuilt and reclassified A3. It is currently in main line service in A3 condition with the addition of a double chimney and number 60103. BRIAN SHARPE

had become the trademark of GWR express locomotives. There was an increase in tractive effort to 31,625lbs, and it was a locomotive that looked attractive and well-proportioned.

Better still, the GWR was able to claim that the Castle class 4-6-0 was 'the most powerful locomotive in Britain'. However, No. 4073 *Caerphilly Castle* did not roll out of Swindon works until 1923 and although the design work was carried out before Grouping and the class became a landmark in steam locomotive design, it must be considered a post-Grouping class of engine.

The Grouping

The Ministry of Supply drew up a contract for a second batch of Maunsell's N class moguls but these were to be built at the Royal Arsenal, Woolwich. The government backing came as part of a proposal to nationalise the railways, which would require a standard fleet of locomotives to promote economies in production and maintenance. The nationalisation proposal was abandoned and instead, the government passed the 1921 Railways Act, which grouped the railways into the 'Big Four' in 1923.

Charles Collett had succeeded Churchward as CME on the GWR in 1922 just before the Grouping and it was always inevitable that he would remain in his position after Grouping when the GWR grew by simply absorbing the Cambrian Railways and several smaller lines, especially in South Wales.

The Southern Railway was formed by the amalgamation of the SECR, LBSCR and LSWR. Robert Urie of the LSWR decided to retire and Richard Maunsell of the SECR was selected as CME of the newly-formed SR in preference to the less-experienced Lawson Billinton of the LBSCR.

The LNWR merged with the LYR in 1921, shortly before Grouping. George Hughes on the LYR had far more experience than the newly-appointed Captain Beames on the LNWR and was made CME of the combined company.

On Grouping in 1923, Hughes was appointed CME of the London Midland & Scottish Railway (LMSR). Hughes' main competitor, Richard Fowler on the Midland Railway, was appointed as deputy CME and probably had more influence on locomotive policy than Hughes, who retired after only two years in the LMSR job, to be succeeded by Fowler.

The LMSR was the largest of the four companies formed by the Grouping and incorporated the LNWR and MR – plus smaller companies such as the North Staffordshire and Furness railways in England, in addition to the Caledonian, Highland and Glasgow & South Western railways in Scotland.

The London & North Eastern Railway was an amalgamation mainly of the GNR, NER, GER and Great Central Railway (GCR) in England, plus the NBR and GNSR in Scotland. Probably the ideal candidate for the job of CME was Sir Vincent Raven but he was close to retirement. John Robinson on the GCR was considered more experienced than Nigel Gresley on the GNR, but Robinson thought that the job should go to the younger man and made way for the appointment of Gresley.

Raven briefly became a technical advisor for the LNER but resigned in 1924 and was appointed to the Royal Commission on New South Wales Government Railways, in company with Sir Sam Fay, formerly chairman of the GCR.

The reorganisation of Britain's railways in 1923 led to the abandonment of the NER's main line electrification plans by the LNER. One of the big 'what ifs' of British railway history, is how things would have developed if Raven's electrification plans for the East Coast Main Line had come to fruition in the 1920s.

Inevitably, the huge new companies initially continued to build locomotives to the latest designs of their new CMEs but those CMEs now had to adapt their designs to suit parts of their networks which they were unfamiliar with and where necessary, come up with new designs for what were now very different and much larger railway companies. HR

"Construction of both Gresley and Raven Pacifics continued after Grouping in 1923 and there was little difference between the A1 and A2 when they were tested. In fact, the A2 was better at maintaining full boiler pressure but Gresley's appointment as CME of the newly-formed London & North Eastern Railway inevitably led to the A1 being favoured as it was considered a better design and had more potential for further development."

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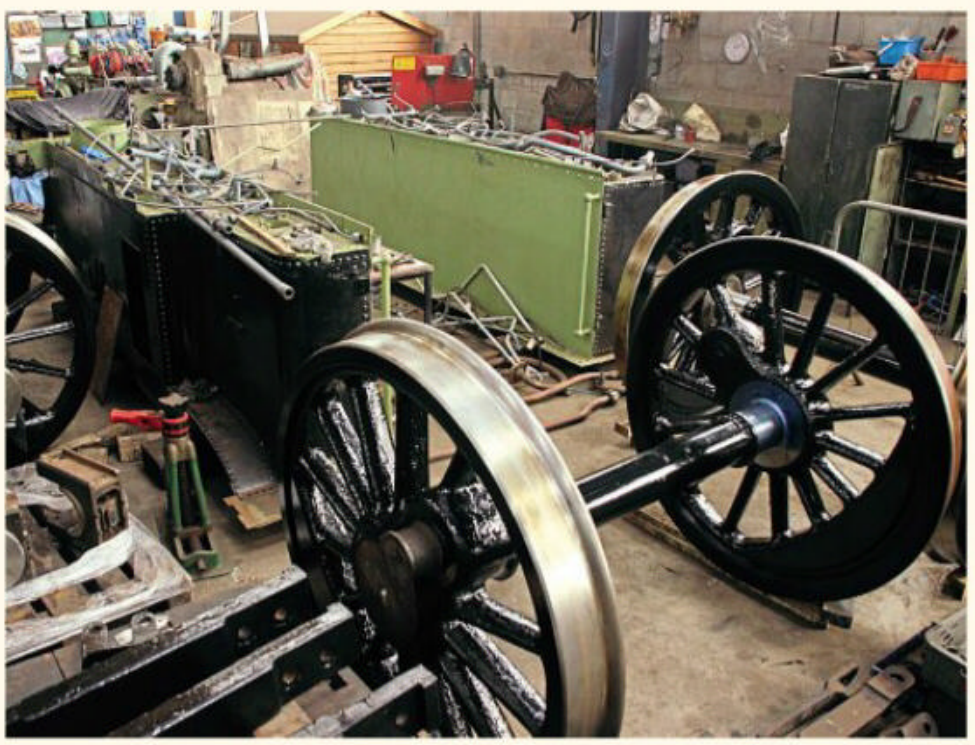

The restoration or overhaul of a locomotive involves stripping it down to its component parts, cleaning, painting and replacing parts as necessary. GARETH EVANS

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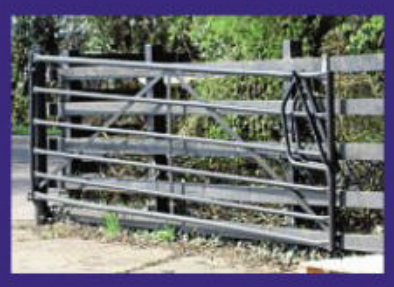

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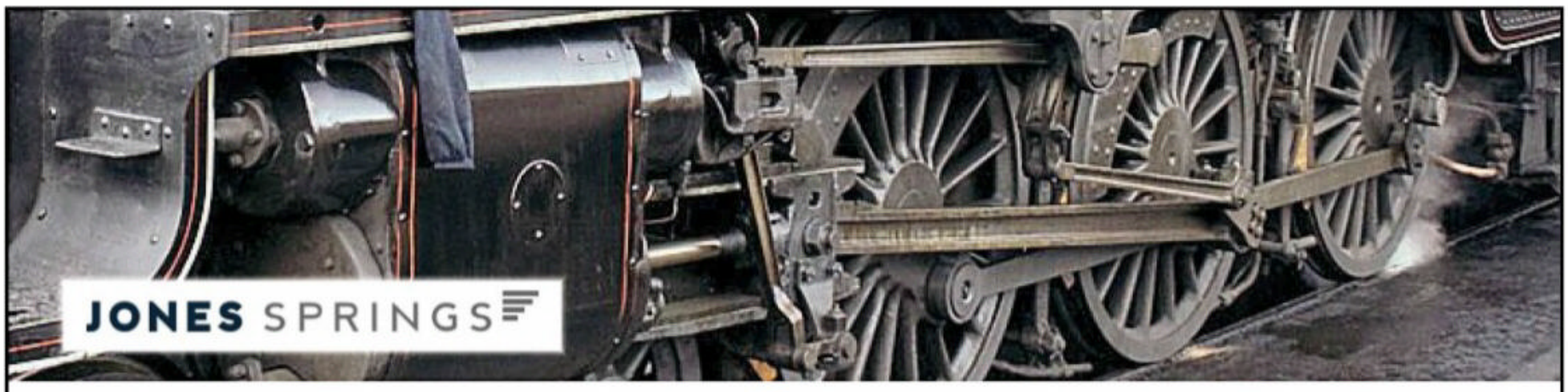

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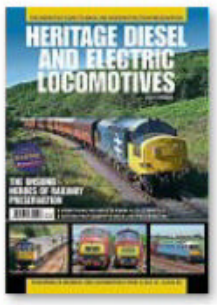
Heritage Diesel and Electric Locomotives

by Andy Coward (softback, Mortons, classicmagazines.co.uk/product/5573/bookazine-heritage-diesel-and-electric-locomotives 132pp, £7.99 post free, ISBN 9781911639046).



IT IS now more than 40 years since the first British Rail main line diesel locomotive, D821 *Greyhound* (as pictured in News, pages 16/17), was bought for preservation.

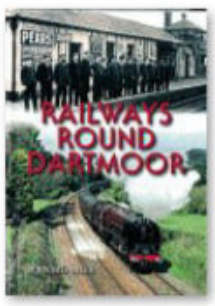
Since then, hundreds of diesel and electric locomotives have had their long-term survival ensured – the most recent being the first production High Speed Train Class 43 locomotive No. 43002 *Sir Kenneth Grange*, which has been preserved as part of the National Collection.

Andy Coward presents the definitive guide to main line modern traction preservation, taking the reader on a journey across the 39 classes which are now secure in the heritage sector.

DEFINITIVE REFERENCE VOLUME

Railways Around Dartmoor

By Bernard Mills (hardback, Halsgrove, tel: 01823 653777, 144pp, £9.99, ISBN 9780857101259).



DARTMOOR has long been a land of mystery and intrigue, its often barren and indeed other-worldly surface famously inspiring the likes of Hound of the Baskervilles, and undoubtedly hiding many secrets beneath its tors and bogs.

The appearance of this fascinating pocket-money price collection of histories of moorland railways is timely in view of discussions underway about the possibility of modern-day operator Great Western Railway running regular passenger services from Okehampton to Exeter – and disappointment at the rising reported cost of relaying the Southern Railway main line from Bere Alston to Tavistock, now said to be around £93 million.

The volume is a compendium of all railways big and small that have served the moor from all sides, starting with the Haytor Granite Tramway, an early (1820) horse-drawn affair, the rails of which were hewn from granite blocks that are still eminently traceable today, to the aforementioned SR main line from Exeter to Plymouth.

Little local affairs like the 3ft gauge steam-operated Redlake Tramway built to carry china clay from quarries on the southern edge of the moor, the nearby horse-worked Zeal Tor Tramway, the Rattlebrook Peat Tramway and the far better known 4ft 6in gauge Lee Moor Tramway (from which two steam engines survive today) are covered in depth, with essential contemporary pictures where available and present-day views.

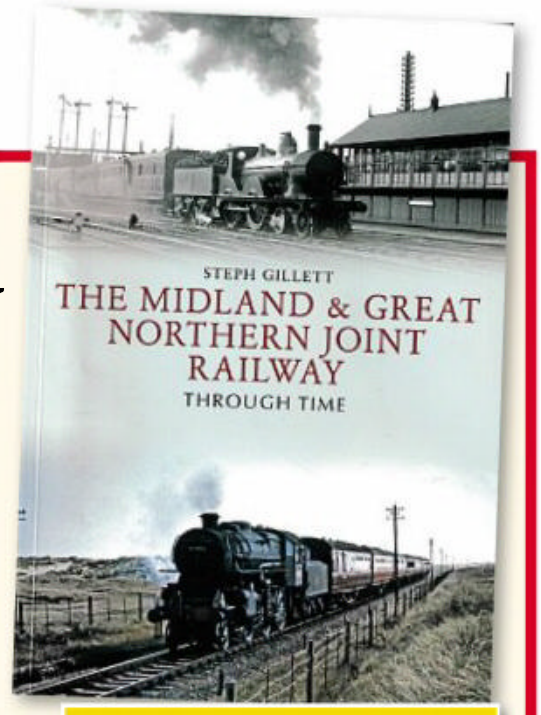
Of course, the standard gauge lines to Kingsbridge, Moretonhampstead, Launceston, Princetown and Ashburton (most of which runs today as the South Devon Railway) have their chapters, but infinitely less well known concerns to be covered are the two Okehampton Military Railways, of which relics can still be found on the ground, and the most obscure of all by far, the Fatherford Tramway near Okehampton, of which even the gauge remains unknown.

This is no less than a brilliant compendium of Dartmoor railway history, packed with facts at every turn and unmissable for those who love the railways of the West Country.

SPLENDID UNLOCKING OF MOORLAND TRANSPORT HISTORY

The Midland & Great Northern Joint Railway Through Time

By Steph Gillett (softback, Amberley Publishing, 96pp, £14.99, ISBN 9781445672489).



EDITOR'S CHOICE

IT IS a widely-held view that the north Norfolk Railway is far and away the most attractive section of the Midland & Great Northern Joint Railway (as seen in our gala special on pages 90-91). The M&GN was an amalgamation of several smaller concerns which, joined together, provided a useful cross-country link from Leicester and the East Midlands to Norwich and the coast at Cromer, Yarmouth and Lowestoft.

So much of the rest has passed into history, thanks to a 1959 pre-Beeching decision to close most of it. Indeed, the M&GN was the first system within BR to be axed and its demise sent shock waves reverberating through a national network suffering from the sharp rise in the ascendancy of motor road transport, soaring debts and somewhat haphazard modernisation.

This splendid volume adds much to our understanding of the M&GN, not least of all through its wealth of previously-unpublicised archive pictures in colour and black-and-white.

We see an LMS 2P 4-4-0 standing at Bourne with a train bound for no less than Nottingham in 1937. Bourne is a far bigger town today but sadly has long since been bereft of its rail connections. Then there is lonely Twenty station, which has the sole surviving station on the Spalding & Bourne Railway.

Among many, many other gems we see M&GN C 4-4-0 No. 55 nearing North Walsham with a passenger train in the summer of 1936, and a colour image of the derelict station in 1964, 13 years before it was all swept away to facilitate the building of a bypass.

Then there is LNER J15 0-6-0 No. 65419 heading a Midland & Great Northern Joint Railway Preservation Society tour on May 21, 1960 from Norwich City, a station which lingered on until early February 1969, before it too succumbed to road developments.

The volume is packed with treasures we have lost, such as the station building at Mundesley-on-Sea which was knocked down soon after it closed in May 1965, despite protests.

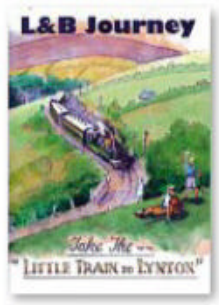
Pictures ancient and modern help unlock the secret of the system's hub, Melton Constable, where locomotives, carriages and wagons were built. A 2018 picture shows rails still in place from the 2ft gauge tramway that ran round the works site.

By no means just a photographic album, the introductory chapter describes the history of each of the little local lines that came together to make up the system.

SUPERB NEW HISTORICAL ACCOUNT

L&B Journey: Take the Little Train to Lynton

By Tony Nicholson (softback, Lynton & Barnstaple Railway Trust, Woody Bay station, Martinhoe Cross, Parracombe, North Devon EX31 4RA, www.lynton-rail.co.uk 64pp, £9.95 plus £3 p&p)



HERE is a new and greatly expanded third edition of a popular volume which sold out in January.

Published with the addition of several photographs which have never appeared in print before, it basically tells the story of a journey over the 19-mile line from Barnstaple Town to Lynton and back, in archive black-and-white pictures, vintage large-scale Ordnance Survey plans and more of those wonderful evocative modern paintings from L&B artist Eric Leslie.

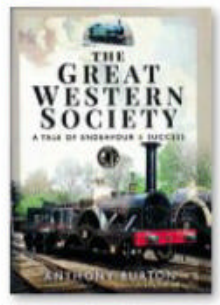
As with the previous editions, the A4 format brings out the best in all of the illustrations, making the line which closed in 1935 come alive again.

INSPIRATIONAL PORTRAIT OF A LEGENDARY LINE

The Great Western Society: A Tale of Endeavour & Success

By Anthony Burton (hardback, Pen & Sword, 205pp, £25, ISBN 1526719452).

RARELY has the germ of an idea given so much to the heritage sector. It was in 1961 that four schoolboys hit upon the idea of saving a Collett 14XX 0-4-2T from the scrapyard after realising to their horror that the type had been omitted from the prospective National Collection.



The purchase of No.1466 led to the foundation of the Great Western Society, at first represented by several groups scattered across the Swindon empire and then brought together as a whole at what is now Didcot Railway Centre.

However, much, much more has been accomplished by the society since that first engine began its collection. It not only has amassed one of the sector's finest locomotive collections, but has also built new ones to fill gaps in the UK heritage fleet, most recently Churchward Saint 4-6-0 No.2999 *Lady of Legend*.

Didcot has also accomplished projects that others might well dismiss as impossible: a replica broad gauge line, complete with steam train, for example, and GWR steam railmotor No. 93, a key dimension in railway history hitherto overlooked. The author tells the story in a lucid and absorbing style, stage by stage from those embryonic days to the present, and illustrates it with key pictures both from yesterday and today.

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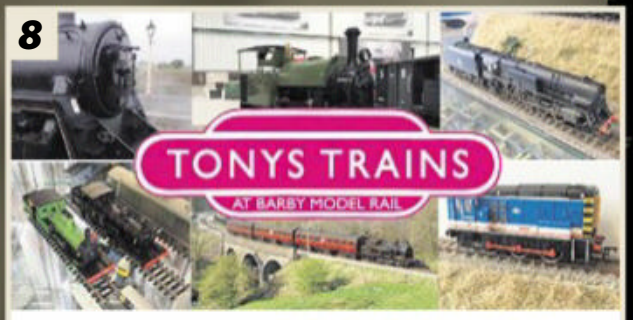

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Making a fine sight and sound, visiting No. 7820 *Dinmore Manor* is seen passing Goodrington beach on the Dartmouth Steam Railway with the 4.15pm Paignton-Kingswear train on August 31. The 1950-built 4-6-0 is due to return 'home' to the Gloucestershire Warwickshire Railway this month. MARK V PIKE

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Bredgar, Sittingbourne, Kent.
Tel: 01622 884254.
Running: Oct 6, 27.

East Kent Railway
Standard gauge, two miles,
Shepherdswell, Dover.
Tel: 01304 832042.
Running: Suns until Oct 20.

Eastleigh Lakeside Railway
10¼in & 7¼in gauge, 1¼ miles,
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Hastings Miniature Railway
10¼in gauge, 600 yards,
Rock-a-Nore Road, Hastings, East Sussex.
Running: W/Es + sch hols.

Hayling Seaside Railway
2ft gauge, one mile.
Hayling Island, Hants.
Running: W/Es, Weds + sch hols

Hollycombe Steam in the Country
2ft gauge, ¼ mile. Iron Hill, Liphook,
Hampshire GU30 7LP. Tel: 01428 724900.
Running: Suns until Oct 13.

Isle of Wight Steam Railway
Standard gauge, five miles.
Havenstreet, Isle of Wight.
Tel: 01983 882204.
Running: Daily until Oct 3. The Suns, Weds, Thurs + Oct 12, 25, 26, 28, 29.

Kempton Steam Railway
2ft gauge, ½ mile, Hanworth.
Tel: 01932 765328.
Running: Suns until Nov 17.

Kent & East Sussex Railway
Standard gauge, 10½ miles,
footplate experience, wine and dine.
Tenterden, Kent. Tel: 01580 765155.
Running: W/Es + Oct 22-24.

Lavender Line
Standard gauge, one mile, footplate experience, wine and dine. Isfield,
East Sussex. Tel: 01825 750515.
Running: Suns.

Mid Hants Railway
Standard gauge, 10 miles, footplate experience, wine and dine.
Alresford, Hants SO24 9JG.
Tel: 01962 733810.
Running: W/Es + Oct 18, 28-31.

Romney, Hythe & Dymchurch Railway
1ft 3in gauge, 13½ miles, footplate experience. New Romney, Kent.
Tel: 01797 362353.
Running: Daily until Dec 31.

Royal Victoria Railway
10¼in gauge, one mile.
Netley, Southampton.
Tel: 02380 456246.
Running: W/Es + sch hols.

Sittingbourne & Kemsley Railway
2ft 6in gauge, 1¾ miles.
Sittingbourne, Kent.
Tel: 01795 424899.
Running: Suns until Sept 29.

Spa Valley Railway
Standard gauge, five miles,
footplate experience.
Tunbridge Wells, Kent.
Tel: 01892 537715.
Running: W/Es + Oct 18, 23, 24.

SOUTH WEST

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Standard gauge, three miles,
footplate experience, wine and dine.
Bitton, Bristol.
Tel: 0117 932 7296.
Running: Suns + Sept 28 + Oct 26, 29-31.

Beer Heights Light Railway
7¼in gauge. Off A3052, Beer, Devon.
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Bodmin & Wenford Railway
Standard gauge, 6½ miles, footplate experience, wine and dine.
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Bristol Harbour Railway
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Dartmoor Railway
Standard gauge, seven miles.
Okehampton, Devon.
Tel: 01837 55164.
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Dartmouth Steam Railway
Standard gauge, seven miles,
wine and dine. Paignton, Devon.
Tel: 01803 555872.
Running: Daily until Nov 2.

Devon Railway Centre
2ft gauge, ½ mile. Bickleigh, Devon.
Tel: 01884 855671.
Running: W/Es + Oct 21-25.

East Somerset Railway
Standard gauge, two miles.
Cranmore, Somerset.
Tel: 01749 880417.
Running: W/Es, Weds until Oct 30.

Gartell Light Railway
2ft gauge, ½ mile. Common Lane,
Yenston, Templecombe, Somerset
BA8 0NB. Tel. 01963 370752
Running: Sept 29. Oct 27.

Helston Railway
Standard gauge. Helston, Cornwall.
Tel: 07875 481380.
Running: Suns, Thurs + Oct 23.

Launceston Steam Railway
2ft gauge, two miles. Launceston,
Cornwall. Tel: 01566 775665.
Running: Oct 20-25 + Oct 27- Nov 1.

Lynton & Barnstaple Railway
2ft gauge, one mile. Woody Bay,
north Devon. Tel: 01598 763487.
Running: W/Es, Tues-Thurs + Oct 21, 25, 28.

Moors Valley Railway
7¼in gauge, one mile. Ringwood, Hants.
Tel: 01425 471415.
Running: W/Es + sch hols.

Plym Valley Railway
Standard gauge, 1½ miles.
Marsh Mills, Plymouth.
Running: Suns until Nov 10.

Seaton Tramway
3ft gauge, three miles.

The information in this list was correct at the time of going to press. We strongly advise that you confirm details with the railway concerned.

October Events

Sunday 6th - Autumn Historic Transport Gathering

Saturday 20th - Autumn Industrial Trains

AMBERLEY MUSEUM

For more information, visit
www.amberleymuseum.co.uk
01798 831370

UP & RUNNING



Hunslet 0-6-0ST *Lord Phil* is pictured hauling an attractive train of vintage carriages at the Midland Railway-Butterley on August 25 – a scene enhanced by the reflection in the water of Butterley Reservoir. ALAN WEAVER

Harbour Road, Seaton, Devon.
Tel: 01297 20375.
Running: Daily until Nov 3.

Somerset & Dorset Railway
Standard gauge, ½ mile,
Midsomer Norton station,
Silver Street BA3 2EY.
Tel: 01761 411221
Open Sun, Mon.
Running: Oct 13, 26, 27.

South Devon Railway
Standard gauge, seven miles,
footplate experience, wine and dine.
Buckfastleigh, Devon.
Tel: 01364 644370.
Running: Daily until Nov 3.

Swanage Railway
Standard gauge, six miles, footplate experience, wine and dine.
Swanage, Dorset.
Tel: 01929 425800.
Running: Daily until Oct 13, the W/Es, Weds-Thurs + Oct 28.

Swindon & Cricklade Railway
Standard gauge, three miles,
footplate experience.
Blunsdon, Wiltshire.
Tel: 01793 771615.
Running: Suns + Sept 28 + Oct 5.

West Somerset Railway
Standard gauge, 20 miles,
footplate experience, wine and dine.
Minehead, Somerset TA24 5BG.
Tel: 01643 704996.
Running: W/Es + Tues-Thurs until Nov 2 + Oct 4.

EAST ANGLIA

Bressingham Steam Museum
Narrow gauge, one mile.
Diss, Norfolk.
Tel: 01379 686900.
Running: Daily until Oct 27.

Bure Valley Railway
1ft 3in gauge, nine miles,
footplate experience.
Aylsham, Norfolk.
Tel: 01263 733858.
Running: Daily until Dec 31.

Colne Valley Railway
Standard gauge, one mile,
footplate experience, wine and dine.
Castle Hedingham, Essex.
Tel: 01787 461174.
Running: W/Es + Oct 29-31.

East Anglian Railway Museum
Standard gauge, ¼ mile. Wakes Colne, Essex. Tel: 01206 242524.
Open: Daily.
Running: Oct 13, 30.

Mangapps Railway
Standard gauge, one mile.
near Burnham-on-Crouch, Essex.
Tel: 01621 784898.
Running: W/Es.

Mid-Norfolk Railway
Standard gauge, 11½ miles, footplate experience. Dereham, Norfolk.
Tel: 01362 690633.
Running: W/Es until Oct 13.

Mid-Suffolk Light Railway
Standard gauge, ½ mile.
Brockford, Suffolk. Tel: 01449 766899.
Running: Dec 7, 8, 14, 15, 21, 22.

Nene Valley Railway
Standard gauge, 7½ miles,
footplate experience. Wansford,
Peterborough, Cambs.
Tel: 01780 784444.
Running: Sats, Weds + Oct 6, 20, 24, 27, 31.

North Norfolk Railway
Standard gauge, 5½ miles,
footplate experience.
Sheringham, Norfolk
NR26 8RA.
Tel: 01263 820800.
Running: Daily until Nov 3.

Wells & Walsingham Railway
10¼in gauge, four miles.
Wells-next-the-Sea, Norfolk.
Tel: 01328 711630.
Running: Daily until Nov 3.

Whitwell & Reepham Railway
Standard gauge, ¼ mile.
Reepham, Norfolk.
Tel: 01603 871694.
Open: W/Es.
Running: Steam first Sun of month.

HOME COUNTIES

Buckinghamshire Railway Centre
Standard gauge, ¼ mile,
footplate experience.
Quainton Road, Bucks.
Tel: 01296 655720
Open: Oct 28, 29.
Running: Sept 29. Oct 27.

Chinnor & Princes Risborough Railway
Standard gauge, 3½ miles.
Chinnor, Oxon. Tel: 01844 353535.
Running: Suns + Oct 31.

Cholsey & Wallingford Railway
Standard gauge, 2½ miles.
Wallingford, Oxon.
Tel: 01491 835067.
Running: Sept 28, 29. Oct 26.

Didcot Railway Centre
Standard gauge, footplate experience.
Didcot, Oxon. Tel: 01235 817200.
Open: Daily until Oct 6. The W/Es + Oct 28, 29, 31.
Running: Oct 26, 30.

Epping Ongar Railway
Standard gauge, five miles.
Ongar, Essex.
Tel: 01277 365200.
Running: W/Es until Oct 20.

Leighton Buzzard Railway
2ft gauge, 2¾ miles.
Leighton Buzzard, Beds.
Tel: 01525 373888.
Running: Suns + Oct 5, 22, 23, 26.

MIDLANDS

Amerton Railway
2ft gauge, one mile.
Stowe-by-Chartley, Staffs.
Tel: 01785 850965.
Running: W/Es + sch hols until Nov 3.

Apedale Valley Railway
2ft gauge, ½ mile.
Apedale, Newcastle-under-Lyme, Staffs.
Tel: 0845 094 1953.
Running: W/Es until Oct 27.

Barrow Hill Roundhouse
Standard gauge, ¼ mile.
Chesterfield, Derbyshire.
Tel: 01246 472450.
Open: W/Es until Dec 15.

Battlefield Line Railway
Standard gauge, five miles.
Shackerstone, Leics.
Tel: 01827 880754.
Running: W/Es, Weds.

Cambrian Heritage Railways
Standard gauge, ¾ mile (Llynclys), ½ mile (Oswestry), footplate experience, Llynclys station & Oswestry station (museum open Tues-Fri 11-3pm + running days). Tel: 01691 728131.
Running: Llynclys (2020) & Oswestry (Oct 26).

Chasewater Railway
Standard gauge, two miles.
Walsall, West Midlands.
Tel: 01543 452623.
Running: Suns + Oct 12, 29, 31.

Churnet Valley Railway
Standard gauge, 5¼ miles,
footplate experience, wine and dine.
Cheddleton, Staffs.
Tel: 01538 750755.
Running: Suns + Sept 28. Oct 5, 30.

Crich Tramway Village
Standard gauge, 1 mile
Crich, Derbyshire. Tel: 01773 854 321
Running Daily until Nov 3.

Dean Forest Railway
Standard gauge, 4¼ miles,
footplate experience.
Norchard, Lydney, Glos.
Tel: 01594 845840.
Running: W/Es, Weds until Nov 10.

Ecclesbourne Valley Railway
Standard gauge, eight miles.
Wirksworth, Derbyshire.
Tel: 01629 823076.
Running: W/Es, Tues + Oct 31.

Evesham Vale Railway
1ft 3in gauge, 1¼ miles.
A46 north of Evesham, Worcs.
Tel: 01386 422282.
Running: W/Es + sch hols.

Foxfield Railway
Standard gauge, 5½ miles.
Blythe Bridge, Staffs.
Running: Suns + Sept 28. Oct 26, 30.

Gloucestershire Warwickshire Railway
Standard gauge, 14 miles,
footplate experience.
Toddington, Glos.
Tel: 01242 621405.
Running: W/Es, Tues-Thurs until Nov 3.

Great Central Railway
Standard gauge, eight miles.
Loughborough, Leics LE11 1RW.
Tel: 01509 632323.
Running: W/Es + Oct 3, 4, 23, 30, 31.

Great Central Railway Nottingham
Standard gauge, 10 miles.
Ruddington, Notts.
Tel: 0115 940 5705.
Running: Suns + Oct 19, 26.

Midland Railway – Butterley
Standard gauge, 3½ miles,
footplate experience, wine and dine.
Ripley, Derbyshire.
Tel: 01773 570140.
Running: W/Es + Oct 28-Nov 1.

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london transport museum

ltmuseum.co.uk
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UP & RUNNING



Class 24 D5054 *Phil Southern* is seen at Irwell Vale while working the 12.15pm Heywood-Rawtenstall service during the East Lancashire Railway's diesel gala on July 5. FRED KERR

Northampton & Lamport Railway
Standard gauge, two miles.
Pitsford, Northants.
Tel: 01604 820327.
Running: Suns + Oct 19, 26.

Peak Rail
Standard gauge, four miles.
Matlock, Derbyshire.
Tel: 01629 580381.
Running: W/Es + Oct 29, 30.

Perrygrove Railway
1ft 3in gauge. B4228, Coleford,
Gloucestershire.
Tel: 01594 834991.
Running: W/Es, Tues, Thurs + sch hols.

Rocks by Rail
Standard gauge, ¼ mile.
Cottesmore, Rutland.
Open: Sun, Tues, Thur.
Running: Sept 29. Oct 20.

Rudyard Lake Railway
10¼in gauge, 1½ miles. Leek, Staffs.
Tel: 01995 672280.
Running: W/Es + sch hols until Nov 3.

Rushden Transport Museum
Standard gauge, ¼ mile.
Open: W/Es.

Severn Valley Railway
Standard gauge, 16 miles,
footplate experience.
Kidderminster, Worcs DY10 1QR.
Tel: 01562 757900.
Running: W/Es + Oct 28-31.

Sherwood Forest Railway
1ft 3in gauge, ¼ mile.
Edwinstowe, Nottinghamshire.
Running: Daily.

Steeple Grange Light Railway
1ft 6in gauge, ½ mile, footplate
experience. Wirksworth, Derbyshire.
Running: Suns until Sept 29.

Telford Steam Railway
Standard gauge, one mile,
footplate experience.
Telford, Shropshire.
Tel: 01952 503880.
Running: Suns until Sept 29.

Toddington Narrow Gauge Railway
2ft gauge, ¾ mile,
Toddington, Glos.
info@toddington-narrow-gauge.co.uk .
Running: Sept 29. Oct 19, 20.

NORTH WEST

East Lancashire Railway
Standard gauge, 12 miles, footplate
experience. Bury, Lancs.
Tel: 01617 647790.
Running: Weds-Suns until Sept 29. Then W/Es + Oct 18, 23-25.

Eden Valley Railway
Standard gauge, two miles.
Warcop, off A66, Cumbria CA16 6PR
Tel: 01768 342309.
Running: Suns (Driver for a Fiver) until Oct 27.

Heaton Park Tramway
Standard gauge, ½ mile.
Manchester.
Running: Suns until Nov 17.

Isle of Man Steam Railway
3ft 6in gauge, 15½ miles.
Douglas, Isle of Man.
Tel: 01624 662525.
Running: Daily until Sept 30. Then Thurs-Mons.

Lakeside & Haverthwaite Railway
Standard gauge, 3½ miles.
near Ulverston, Cumbria.
Tel: 01539 531594.
Running: Daily until Oct 31.

Ravenglass & Eskdale Railway
1ft 3in gauge, seven miles. Ravenglass,
Cumbria. Tel: 01229 717171.
Running: Daily until Nov 3.

Ribble Steam Railway
Standard gauge, one mile.
Preston, Lancs. Tel: 01772 728800.
Running: Sept 28, 29. Oct 5, 6, 26, 27.

Stainmore Railway
Standard gauge, ½ mile.
Kirkby Stephen East Station,
Kirkby Stephen, Cumbria CA17 4LA.
Tel: 017683 71700. Open: W/Es.
Running: Dec 7.

West Lancashire Light Railway
2ft gauge. Hesketh Bank, Lancs.
Tel: 01772 815881.
Running: Suns until Oct 27.

NORTH EAST

Aln Valley Railway
Standard gauge, ½ mile.
Lionheart station, Alnwick,
Northumberland.
Running: Sept 28, 29. Oct 26, 27.

Appleby Frodingham Railway Preservation Society
Standard gauge, 15 miles.
British Steel Steelworks, Scunthorpe.
Tel: 01652 657053.
Running: Sept 28.

Bowes Railway
Standard gauge, one mile.
Springwell, Tyne & Wear.
Tel: 01914 161847.
Open: Thur-Sat.

Cleethorpes Coast Light Railway
1ft 3in gauge, two miles.
Cleethorpes, North East Lincolnshire.
Tel: 01472 604657.
Running: Daily until Oct 6. Then W/Es + Oct 21-25.

Derwent Valley Railway
Standard gauge, ½ mile. Murton Park,
Layerthorpe, York. Tel: 01904 489966.
Running: Sept 29.

Elsecar Railway
Standard gauge, one mile. Footplate
experience. Elsecar, South Yorks.
Tel: 01226 746746. Open: Daily.
Running: Sept 29. Oct 6, 31.

Embsay & Bolton Abbey Steam Railway
Standard gauge, five miles.
Embsay, North Yorks.
Tel: 01756 710614.
Running: W/Es + Tues until Oct 29.

Keighley & Worth Valley Railway
Standard gauge, five miles,
footplate experience, wine and dine.
Keighley, West Yorks BD22 8NJ.
Tel: 01535 645214.
Running: W/Es, Weds + Oct 17, 18, 28, 29, 31.

Kirklees Light Railway
1ft 3in gauge, four miles.
Huddersfield, West Yorks.
Tel: 01484 865727.
Running: W/Es + Oct 25, 28-31. Nov 1.

Lincolnshire Coast Light Railway
2ft gauge, ¾ mile. Water Leisure Park, Walls
Lane, Skegness, Lincolnshire.
Running: 2020.

Lincolnshire Wolds Railway
Standard gauge, 1½ miles.
Ludborough, Lincolnshire.
Tel: 01507 363881.
Running: Sept 29. Oct 13, 27.

Middleton Railway
Standard gauge, 1½ miles.
Hunslet, Leeds.
Tel: 0113 271 0320.
Running: W/Es + Oct 30.

North Tyneside Railway
Standard gauge, two miles.
North Shields.
Tel: 0191 200 7106.
Running: Suns.

North Yorkshire Moors Railway
Standard gauge, 18 miles, wine and dine.
Grosmont, North Yorks. Tel: 01751 472508.
Running: Daily until Nov 3.

South Tynedale Railway
2ft gauge, five miles. Alston, Cumbria.
Tel: 01434 382828/381696.
Running: W/Es + Tues-Thurs until Oct 31.

Tanfield Railway
Standard gauge, three miles.
near Gateshead, Tyne and Wear.
Tel: 01913 887545.
Running: Suns + Oct 12.

Weardale Railway
Standard gauge, 18 miles.
Stanhope, Bishop Auckland, Co Durham.
Tel: 01388 526203.
Running: W/Es + Oct 30.

Wensleydale Railway
Standard gauge, 22 miles.
Leeming Bar, North Yorkshire.
Tel: 0845 450 5474.
Running: W/Es + Oct 1, 4, 11, 29.

Yorkshire Wolds Railway
Standard gauge, 300ft.
Fimber, East Yorkshire YO25 3HG.
Tel: 01377 338053.
Running: Suns until Sept 29.

WALES

Bala Lake Railway
2ft gauge, 4½ miles. Llanuwchllyn,
Gwynedd. Tel: 01678 540666.
Running: Suns, Thurs + Oct 26, 28, 29, 31.

Barry Tourist Railway
Standard gauge, two miles.
Barry Island, Vale of Glamorgan.
Tel: 01446 748816.
Running: Dec 15.

Brecon Mountain Railway
2ft gauge, 3½ miles.
Merthyr Tydfil.
Tel: 01685 722988.
Running: W/Es, Tues-Thurs until Nov 3.

Corris Railway
2ft 3in gauge, ¾ mile. Corris, Machynlleth.
Tel: 01654 761303.
Running: Suns + Oct 19, 26.

Fairbourne Railway
12¼in gauge, two miles. Fairbourne,
Gwynedd. Tel: 01341 250362.
Running: W/Es + Tues-Thurs until Nov 3.

Ffestiniog Railway
2ft gauge, 13½ miles, Porthmadog,
Gwynedd. Tel: 01766 516000.
Running: Daily until Nov 3.

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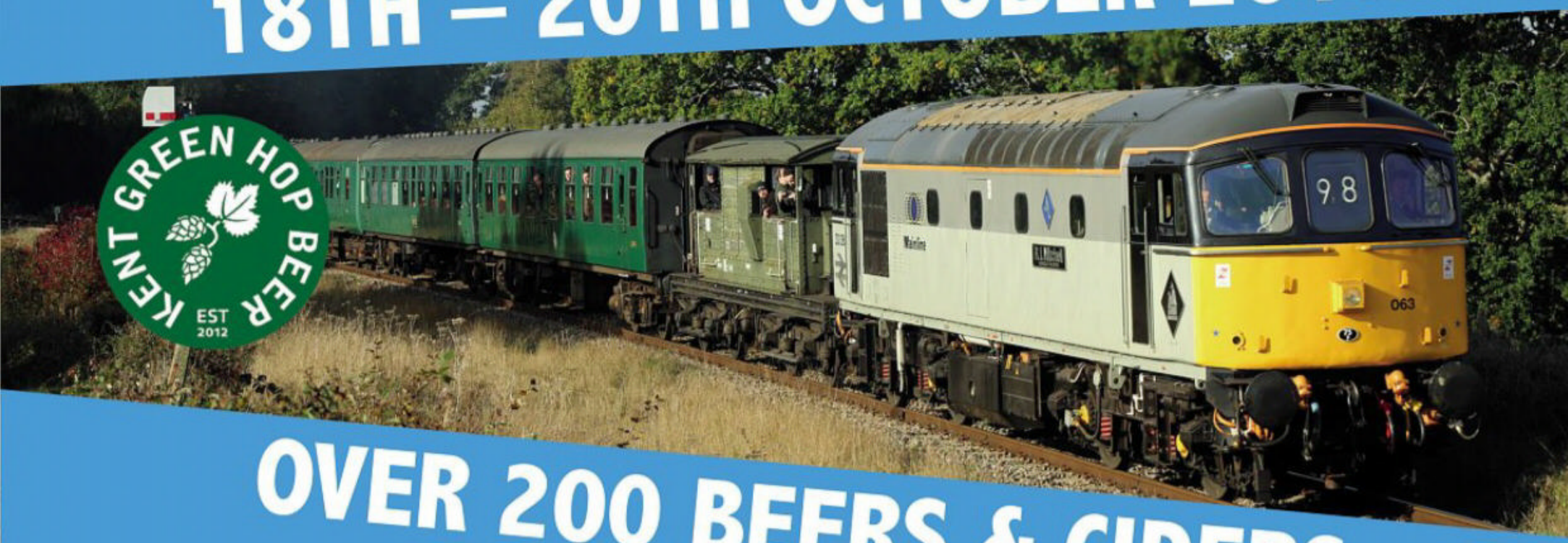

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UP & RUNNING



Hunslet 0-6-0ST No. 3193 *Norfolk Regiment* has entered service at the Nene Valley Railway. Owned by Norfolk Heritage Steam Railway Ltd, the locomotive made its first moves after overhaul at the Bressingham Steam & Gardens May 4-6 gala. The 1944-built Austerity is seen on September 8 with the 10am passenger service from Wansford to Peterborough. HAYDEN SHEPPARD

Gwili Railway
Standard gauge, four miles.
Bronwydd Arms, Carmarthenshire.
Tel: 01267 238213.
Running: W/Es, Weds-Thurs + Oct 29.

Llanberis Lake Railway
2ft gauge, three miles. Llanberis, Gwynedd. Tel: 01286 870549.
Running: Suns-Thurs.

Llanelli & Mynydd Mawr Railway
Standard gauge, ¼ mile.
Cynheidre, near Llanelli, Carmarthenshire.
Tel: 01554 759255.
Running: Oct 26. Dec 7, 8.

Llangollen Railway
Standard gauge, 10 miles, footplate experience, wine and dine.
Llangollen, Denbighshire.
Tel: 01978 860979.
Running: Daily until Nov 10 – except Oct 8.

Pontypool & Blaenavon Railway
Standard gauge, two miles.
Blaenavon, Torfaen.
Tel: 01495 792263.
Running: W/Es until Sept 29.

Rhiw Valley Light Railway
1ft 3in gauge, ¾ mile.
Manafon, nr Welshpool, Powys.
Email: steam@rvlr.co.uk
Running: Oct 5, 6.

Rhyl Miniature Railway
1ft 3in gauge.
Rhyl, North Wales.
Running: Suns until Oct 27.

Snowdon Mountain Railway
800mm gauge, 4½ miles.
Llanberis, Gwynedd.
Tel: 01286 870223.
Running: Daily until Oct 27.

Talyllyn Railway
2ft 3in gauge, 7½ miles, footplate experience.
Tywyn, Gwynedd.
Tel: 01654 710472.
Running: Daily until Nov 3.

Teifi Valley Railway
2ft gauge, ½ mile.
Henllan, Ceredigion SA44 5TD.
Tel: 01559 371077.
Running: Suns.

Vale of Rheidol Railway
2ft gauge, 11¾ miles.
Aberystwyth, Ceredigion.
Tel: 01970 625819.
Running: Daily until Nov 1.

Welsh Highland Heritage Railway
2ft gauge, one mile.
Porthmadog, Gwynedd.
Tel: 01766 513402.
Running: W/Es, Tues-Thurs + Oct 7, 21, 28.

Welsh Highland Railway
2ft gauge, 26 miles.
Caernarfon, Gwynedd.
Tel: 01766 516000.
Running: W/Es, Tues-Thurs + Oct 21, 25, 28.

Welshpool & Llanfair Light Railway
2ft 6in gauge, eight miles, footplate experience.
Llanfair Caereinion, Powys.
Tel: 01938 810441.
Running: W/Es + Oct 28-31.

SCOTLAND

Almond Valley Railway
2ft 6in gauge, ¼ mile.
Livingston,West Lothian.
Tel: 01506 414957.
Running: W/Es.

Bo'ness & Kinneil Railway
Standard gauge, five miles.
Bo'ness, West Lothian. Tel: 01506 822298.
Open: Daily. Running: W/Es, Tues.

Caledonian Railway
Standard gauge, four miles.
Brechin, Angus. Tel: 01356 622992.
Running: Dec 8, 14, 15, 21, 22.

Keith & Dufftown Railway
Standard gauge, 11 miles.
Dufftown, Banffshire. Tel: 01340 821181.
Running: W/Es, + Fris.

Royal Deeside Railway
Standard gauge, one mile.
Milton of Crathes, Kincardineshire.
Tel: 01330 844416.
Running: Suns until Oct 20.

Lothalmond Railway Museum
Standard gauge, ½ mile.
Scottish Vintage Bus Museum, Lothalmond, nr Dunfermline.
Open: Suns. Running: Oct 6, 27.

Strathspey Railway
Standard gauge, 10 miles. Aviemore, Inverness-shire. Tel: 01479 810725.
Running: W/Es, Weds, Thurs until Oct 27.

IRELAND

Cavan & Leitrim Railway
3ft gauge, ½ mile.
Dromod, County Leitrim.
Tel: 00353 71 9638599.
Open: Sat-Mon.

Downpatrick & County Down Railway
Standard gauge, four miles, footplate experience.
Downpatrick,
County Down.
Tel: 028 4461 5779
Running: Oct 26, 27, 31.

Stradbally Woodland Railway
3ft gauge, ½ mile.
Stradbally, County Laois.
Running: TBA.

Waterford & Suir Valley Railway
3ft gauge, six miles.
Kilmeadan,
County Waterford.
Tel: 00353 384058.
Running: Daily.

The information in this list was correct at the time of going to press. We strongly advise that you confirm details with the railway concerned.

Railway Museums

Beamish
County Durham.
The Living Museum of the North.
Open: Daily.

Col Stephens Railway Museum
Tenterden Station, Kent.
Open: W/Es. Tel: 01580 765155.

Conwy Valley Railway Museum
Betws-y-Coed, Conwy.
Open: Daily. Tel: 01690 710568.

Crewe Heritage Centre
Vernon Way, Crewe.
Open: W/Es + B/H. Tel: 01270 212130.

Head of Steam
North Road Station, Darlington.
Open: Tues-Sun. Tel: 01325 460532.

Hornby Hobbies Visitor Centre
Westwood Industrial Estate, Margate, Kent.
Open: Daily 10am-4pm. Tel: 01843 233524

Museum Of Scottish Railways
Bo'ness. Open: Daily.
Tel: 01506 825855.

Irchester Narrow Gauge Railway Museum
Near Wellingborough, Northants.
Open: Suns. Tel: 01604 675368.

Kidderminster Railway Museum
Kidderminster, Worcs. Open: SVR operating days. Tel: 01562 825316.

Locomotion: The National Railway Museum, Shildon
Co Durham. Open: Daily.
Tel: 01388 777999.

London Transport Museum
Covent Garden Piazza.
Open: Daily.
Tel: 0207 379 6344.

Manchester Museum of Science & Industry
Castlefield, Manchester.
Open: Daily.
Tel: 0161 832 2244.

National Railway Museum
Leeman Road, York. Open: Daily.
Tel: 01904 621261.

Penrhyn Castle Industrial Railway Museum
Bangor, Gwynedd. Open: Daily.

Rail Story
Ingrow, West Yorks. Open: Daily.
Tel: 01535 680425.

Shillingstone Station
Shillingstone, Dorset.
Open: Sat, Sun and Wed.
Tel: 01258 860696.

Somerset & Dorset Railway Trust
Washford, Somerset. Open: Weekends.
Tel: 01984 640869.

STEAM – Museum of the GWR
Swindon, Wilts. Open: Daily.
Tel: 01793 466646.

St Albans South Signalbox & Museum
St Albans City station. Tel: 01727 863131.

Ulster Folk & Transport Museum
Cultra, Co Down. Open: Tues-Sun.

West Cumberland Railway Museum
St Bees, Cumbria. Open: Monthly, dates as per Facebook entry or email petergrooke@btinternet.com

Yeovil Railway Centre
Yeovil Junction, Somerset.



TORNADO RETURNS

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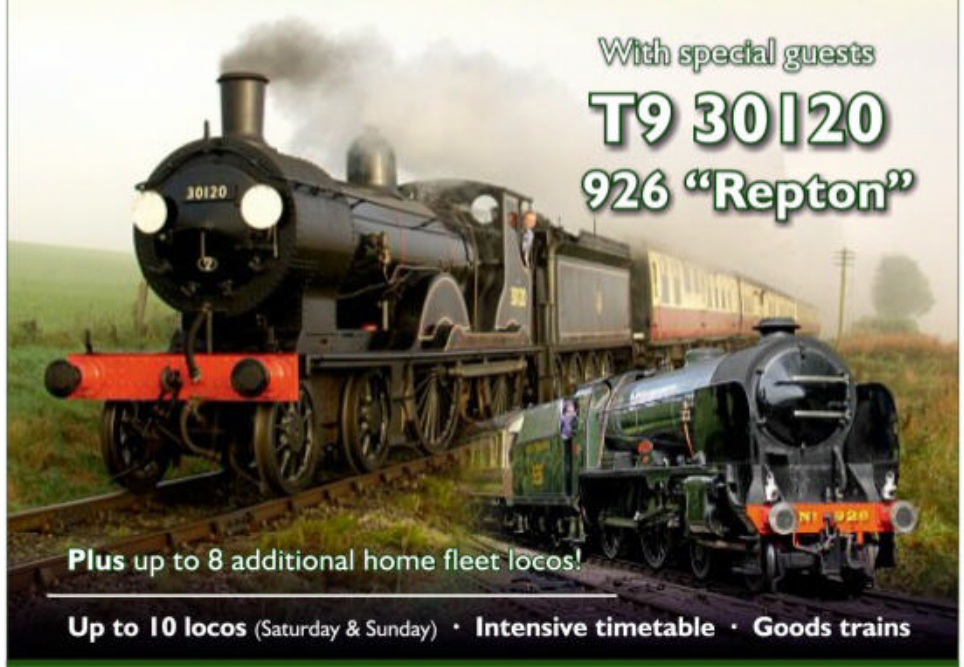

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E&OE. All train services, locomotives, exhibits and other attractions appear subject to availability and are subject to change without prior notice. 30120 appears courtesy of the National Railway Museum and Swanage Railway. 926 "Repton" appears courtesy of North Yorkshire Moors Railway.

MIDLANDS MODEL ENGINEERING EXHIBITION

THE SHOW FOR MODEL ENGINEERS





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Sunday 10am - 4pm

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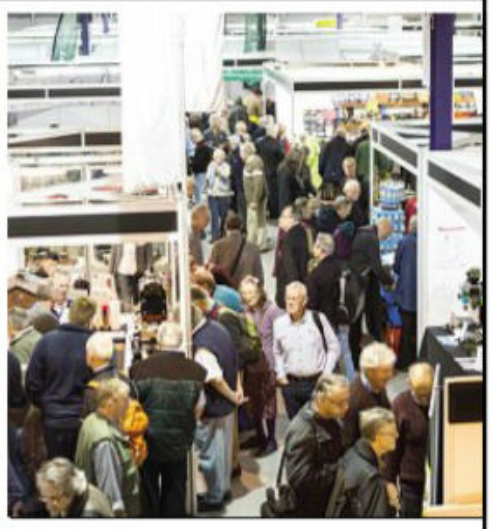

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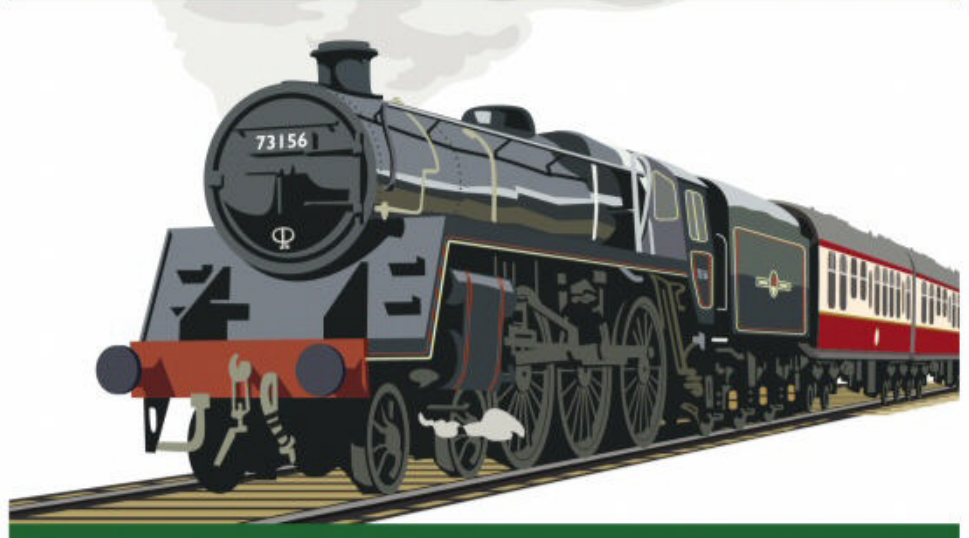

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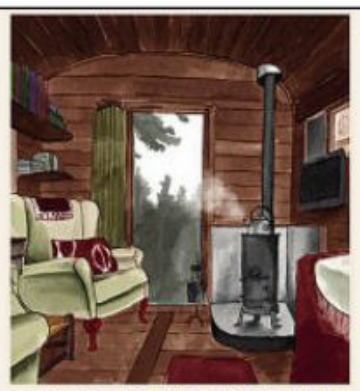

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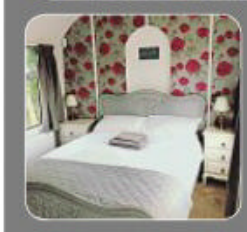

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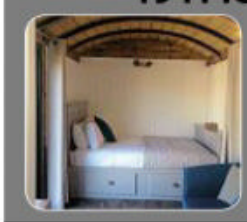

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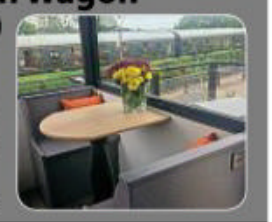

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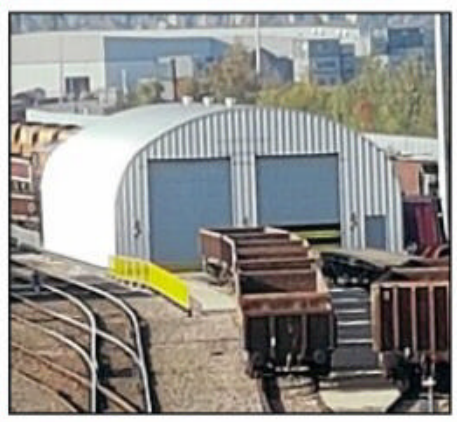

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With steam declining rapidly in the UK, Jim Clemens decided that summer family holidays should be taken in Iberia. This volume covers mostly the rail scene in Spain and Portugal between 1966 and 1969. Summer 1966 found the family on the Costa Blanca. The ESA narrow-gauge system is seen along the coast through Benidorm to Gandia. In Alicante a visit is made to the broad-gauge engine shed, and time is spent at the now-closed Benalua terminus that includes the through service from Cartaghena and Murcia to Valencia. A trip inland was also made to La Encina and Jativa. Northern Portugal was the destination in both 1967 and 1968. Visits were made to mixed-gauge Regua in the Douro Valley. The broad-gauge station pilot here was a Beyer Peacock 0-6-0 dating from 1875 whilst on the metre-gauge we get our first glimpse of the asymetric 2-4-6-0- compound mallets tanks. In Oporto in addition to watching the city's tram and trolleybus system visits are made to narrow-gauge terminus at Trindade that includes 0-4-4-0 compound mallets at work and also the newly built (1965) broad-gauge engine shed at Contumil. The narrow-gauge system south of the Douro is visited at Serada do Vouga, Oliveria de Azemeis, and Esinho. Services are seen on gauntleted track (narrow-gauge set inside broad-gauge) at Lousado and Famalicao, the branch onwards to Povoa de Varzim being particularly well covered. Other locations include Braga, Nine, Viana do Castelo, Valenca, and Moncoa. The base in 1969 was Tarragona. By this time all the 2-8-2 + 2-8-2 Garratts had been concentrated here; watch them on freight workings to Rues and Lerida. Visits are made to the Garrats home depot at Terragona south, the refuelling point at Terragona north shed, and Lerida shed. More steam is seen at Mora La Neuva, even the 4,000hp Spanish version of a 'Warship'! Filmed in colour, a commentary plus sound track complement this look at railways of Iberia mostly between 1966 and 1969.

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BY GARETH EVANS

Ghostly goings on



An atmospheric scene: As the sun sets, Urie S15 4-6-0 No. 506 waits time at the Mid-Hants Railway's Alresford station with the 'Real Ale Train' on Saturday, August 31. DAVE RYDING

SPECIAL EVENTS

September

27-29: North Yorkshire Moors Railway: Annual Steam Gala 2019 ■

27-29: Epping Ongar Railway: 25 Years In The Making ■

28: Great Central Railway: Steam Punk

28, 29: Sittingbourne & Kemsley Railway: End-of-Season Gala Weekend ■

28, 29: South Devon Railway: Models & Miniatures

28, 29: Llangollen Railway: Diesel Weekend ■

28, 29: London Transport Museum: Acton Depot Open Weekend

28, 29: Foxfield Railway: Autumn Festival of Steam ■

28, 29: Cholsey & Wallingford Railway: 1940s Weekend

28, 29: Lynton & Barnstaple Railway: Autumn Steam Gala ■

28, 29: Devon Railway Centre: Everything Goes

28, 29: Isle of Wight Steam Railway: Four Island Classes gala ■

28, 29: Bodmin & Wenford Railway: The Gruffalo ■

28, 29: Ribble Steam Railway: Steam Gala

28-30: Nene Valley Railway: *Flying Scotsman* visit ■

29: North Tyneside Steam Railway: Diesel Day ■

29: Leighton Buzzard Railway: Sand & Motorcycle

29: East Anglian Railway Museum: Diesel Gala ■

29: Bressingham Steam Museum: Vintage/Bygone Rally Day

October

3-6: West Somerset Railway: Autumn Steam Gala ■

3-6: Severn Valley Railway: Autumn Diesel Gala ■

3-6: Great Central Railway: Autumn Steam Gala ■

4-6: Ffestiniog Railway: Victorian Weekend ■

5, 6: East Lancashire Railway: Day Out With Thomas ■

5, 6: North Norfolk Railway: Home Fleet Weekend ■

5, 6: Ribble Steam Railway: Diesel Gala ■

5, 6: Nene Valley Railway: Wartime at Wansford

5, 6: Didcot Railway Centre: Day Out With Thomas ■

5, 6: Ravenglass & Eskdale Railway: Paw Patrol ■

6: Bluebell Railway: Vintage Bus Running Day

6: West Lancashire Light Railway: Working Engines Gala

6: Foxfield Railway: The Autumn Vehicle Rally

11-13: Nene Valley Railway: Diesel Gala ■

11-13: Bluebell Railway: Giants of Steam Autumn Gala ■

11-13: Swanage Railway: Autumn Steam Gala ■

11-13: North Yorkshire Moors Railway: Railways in Wartime ■

12: Great Central Railway: Real Ale Train

12, 13: Isle of Wight Steam Railway: Beer & Buses Event ■

12, 13: Gloucestershire Warwickshire Railway: Autumn Diesel Gala ■

12, 13: Tanfield Railway: Run It Weekend

12, 13: Llangollen Railway: Steam Gala ■

12, 13: Kent & East Sussex Railway: Austin Counties Car Rally

12, 13: Mid-Norfolk Railway: Autumn Diesel Gala ■

12, 13: Chasewater Railway: Moving The Goods

13: East Anglian Railway Museum: Model Railway Show & Steam Day

17-20: Keighley & Worth Valley Railway: Beer & Music Festival

18-20: Spa Valley Railway: CAMRA Real Ale & Cider Festival and Autumn Steam & Diesel Gala ■

18-20: Battlefield Line: 50th Anniversary Steam Gala ■

18-20: Mid-Hants Railway: Autumn Steam Gala ■

18-20: East Lancashire Railway: Autumn Steam Gala ■

19, 20: Gloucestershire Warwickshire Railway: Cotswold Food & Drink Fayre

19, 20: Ecclesbourne Valley Railway: Wirksworth Model Railway Exhibition

19, 20: Toddington Narrow Gauge Railway: Narrow Gauge Steam Up

19, 20: Middleton Railway: Star Rails

19-21: South Devon Railway: Day Out With Thomas ■

19-27: Devon Railway Centre: Halloween Special

20: Isle of Wight Steam Railway: Teddy Bear Day ■

20: Leighton Buzzard Railway: Bug Party ■

24, 25: East Lancashire Railway: Wizard Academy

24-26: Llangollen Railway: Day Out With Thomas ■

26: West Somerset Railway: PJ Masks Meet and Greet Day ■

26: Cambrian Heritage Railways: Halloween at Oswestry

26: East Lancashire Railway: Guided Real Ale Trail

26: Ecclesbourne Valley Railway: Wirksworth Wizarding Day ■

26: Somerset & Dorset Railway: Real Ale Trains

26, 27: Gloucestershire Warwickshire Railway: Halloween Steam & Scream

26, 27: Mid-Hants Railway: Wizard Weekend ■

26, 27: East Somerset Railway: Driver for Tenner

27: Bredgar & Wormshill Light Railway: End of Season Steam up

27: Bressingham Steam Museum: Last Day to ride until next season

27-31: Isle of Wight Steam Railway: Wizard Week ■

29-31: Gwili Railway: Ghost Express

31: Great Central Railway: Steam & Scream

KEY ■ Major or featured galas ■ Diesel and/or electric galas ■ Thomas or family event

RAILWAYANA

October

5: Great Northern Railwayana, Poynton

6: Bristol Railwayana

12: GW Railwayana 'Buy & Go', Pershore

26: Paddington Ticket Auctions, central London

26: Transport Auctions of London, Croydon



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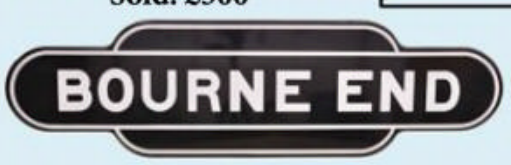

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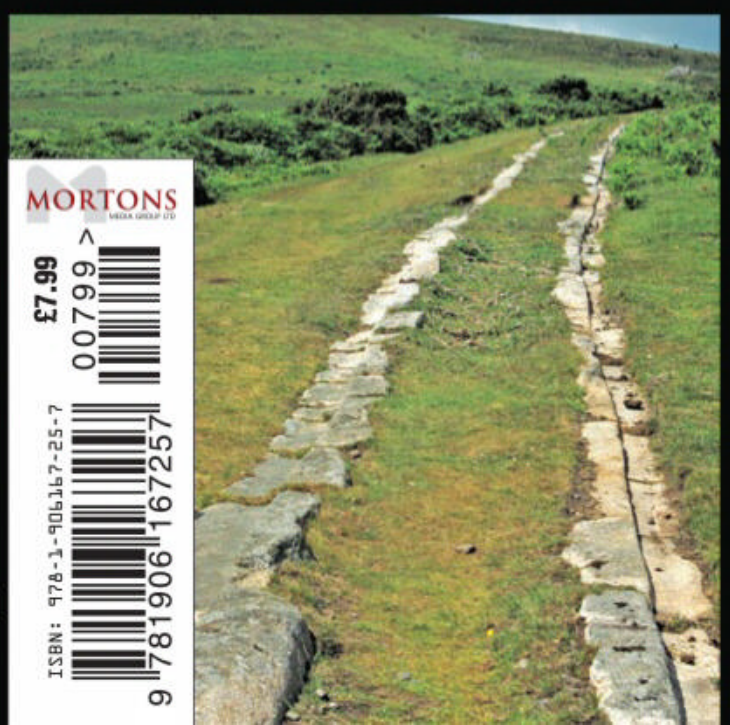





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Help bring a Northern Legend Back to Life

THE G5 IS STEAMING BACK!
WE NEED YOUR HELP



In 1893 the North Eastern Railway commissioned Wilson Wordsell to design and construct a new 0-4-4 passenger tank locomotive.

Between 1894 and 1901, a total of 110 'Class 0' (LNER Class G5) passenger tank locomotives were constructed at North Road Works in Darlington. For many years they were the standard passenger tank locomotives on branch lines all over the North East of England.

What is truly remarkable about these locomotives is that they ran for over 60 years and were only withdrawn when replaced by the new 'first generation' diesel multiple units.

All but two of the locomotives survived into the 1950's, but the class became extinct when the last two were withdrawn in December 1958. None were preserved.







The 'Class G5 Locomotive Company Limited' are already well on their way to recreating a full sized North Eastern Railway Class 0 (LNER Class G5) 0-4-4 passenger tank locomotive, over a three year period.

The construction work is being carried out by the well established firm of Great Northern Steam Company Limited at their premises in Darlington, which are some 800 yards away from the original G5 birthplace at North Road.

The locomotive is being built in sections, i.e. an all welded steel boiler, main frames rear bogie, wheel sets etc. Work on the boiler construction is at an advanced stage, while the frames, cylinders and bogie are all on site at Darlington and the wheel sets and other major components are on order.

David Elliot, who played a major part in the successful completion of the Tornado project, is assisting with the design specification and certification required for the new G5.

When it is finished the new G5 will be available for hire to Heritage Railways and the restoration of an LMS Brake Goods Van, as a support coach is nearing completion.

The Class G5 Locomotive Company Limited is now over halfway to creating the new G5 and now needs the help of additional stakeholders to complete this exciting project.

Become a stakeholder and help us complete our task
Individual stakeholder units are available from £5000 to £50,000 each
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Thank you for your interest!

Having read the above, if you are still seriously interested in becoming a stakeholder, please contact one of the following:

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Foreword

It looks every inch a 'normal' railway scene, but appearances can be so deceptive: Great Western Railway 4-6-0 No 4003 *Lode Star* running along Isambard Kingdom Brunel's famous Dawlish sea wall in the early 1930s as depicted in an oil painting by Mike Jeffries from 2004. Not only was this line built for one of Britain's weirdest railways, the South Devon Atmospheric Railway, which was akin to a giant vacuum cleaner, but because Brunel pushed engineering capability to the limits to build it at the bottom of cliffs just feet above the waves, it is now the most expensive part of the national network to maintain and faces an uncertain future with global warming. The locomotive is now an exhibit in the National Railway Museum at York. NATIONAL RAILWAY MUSEUM

Britain reshaped the world not by building a great empire, but by opening up the continents through the steam railway. Invented by Cornish mining engineer Richard Trevithick, it appeared with a whimper rather than a bang, and it was left to others to develop and hone to as near perfection as possible.

Yet Britain did not invent the railway. The concept of using rails to guide trucks on wheels had been around for more than two millennia.

It is conjectured that railways and drama had a common beginning, back in ancient Greece, when some enterprising producer discovered that it was easy to move large sections of scenery if it was built on trolleys that ran on grooves carved into the stage floor.

In that halcyon age of drama and philosophy, the great Greek thinker Plato came up with his theory of forms. Somewhere up in the heavens, there is an ideal form of every object that manifests itself on earth.

For instance, in Plato's celestial consciousness there is the perfect table: we cannot see it or know exactly what it looks like, but can merely guess, and so the concept 'table' is produced in an infinite series of shapes, styles and sizes.

The same theory may be applied to every other object on the plant – including the railway.

When someone mentions railway engines, what is the first image that comes to mind? The world's most famous locomotive, *Flying Scotsman*, resplendent in LNER apple green? A streamlined A4 Pacific like *Mallard*, which holds the world railway steam speed record? A Great Western Railway 4-6-0 like *Lode Star* in the painting? A little blue tank engine with a plastic face and No 1 on its side? Or maybe just a bog standard black steam locomotive, either with a tender or side tanks, laden with coal and emitting large clouds of black smoke.

Others more in tune with the 'modern' railway than its heritage past the might immediately think of a Class 125 High Speed Train, a Eurostar unit or a suburban diesel multiple unit.

The fact is – as with Plato's table, there is no definitive or ideal version of exactly what a railway locomotive, or indeed a railway, should look like.

Like the table, the railway principle has manifested itself in a multitude of forms, each offering advantages and disadvantages over another, and several certainly verging on the bizarre or extreme by 'normal' perfections.

This volume is like no other railway book that you will have read before. It is an attempt to bring together Britain's most unusual railways in one volume – the radical, the different, the bold, the unorthodox, the experimental, the futuristic, the hidden lines, the bridges too far.

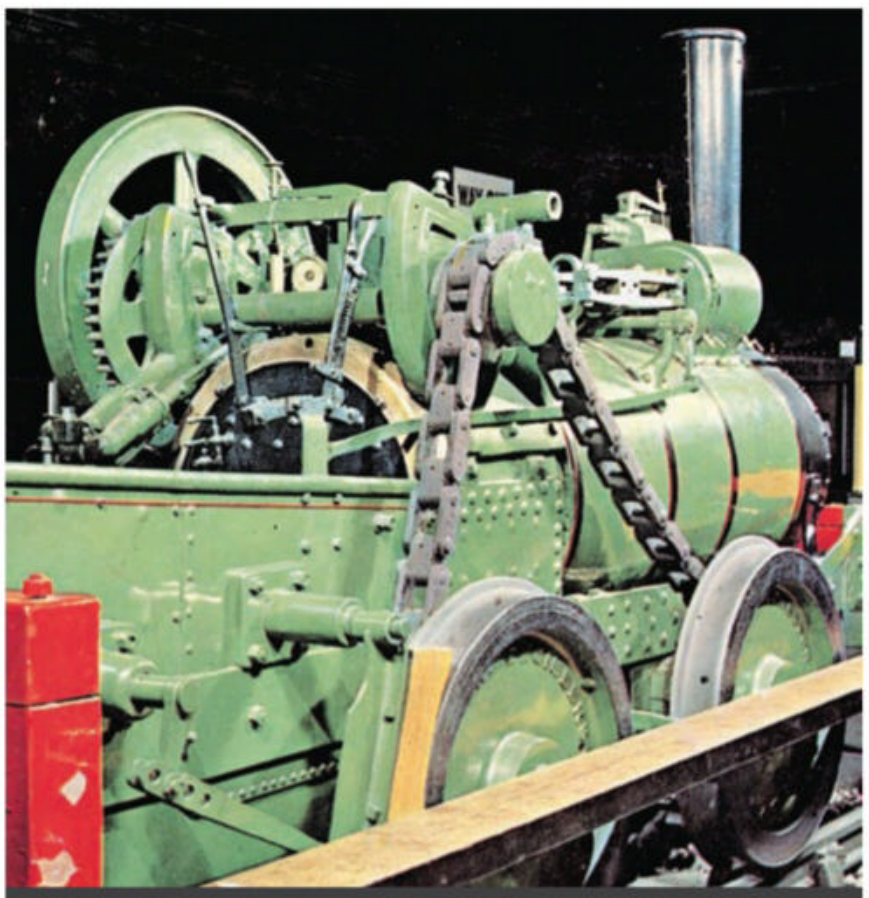
The railway principle is, of course, not just about the country's national network of main and branch lines. Individual industrial lines will produce bespoke systems, some with their own type of locomotives, often very unusual in appearance. In the steam age, there were thousands of industrial sidings and systems, many with a distinct character of their own.

Then we have cliff or funicular railways, in which the principle is used to ascend very steep gradients in a very short distance. ➤

The Romney Hythe & Dymchurch Railway is the world's smallest public double-track line. Davey Paxman 4-6-2 No 1 Green Goddess is seen heading towards *Dungeness*, a village largely comprising homes made from old wooden-bodied railway carriages. ROBIN JONES



Wind power provided transport on the Spurn Head Railway.
KE HARTLEY COLLECTION/RON REDMAN



This traction engine-like Aveling & Porter locomotive worked on Buckinghamshire's eccentric Wotton Tramway, which ended its days as part of the London Underground system! LONDON TRANSPORT

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Britain's RTV31 hovertrain is preserved at Peterborough's Railworld museum along with a section of its test track. ROBIN JONES



Leaves on the line – or just sea kale on the shingle? This is one of the fish railways of Dungeness. ROBIN JONES



Cut-down Port of Par Bagnall saddle tanks *Judy* and *Alfred* reprising their Thomas the Tank Engine roles as Bill and Ben at the West Somerset Railway on 5 July 2009. This unique pair are now operating together for the first time in preservation. ERIC BROOM

They differ greatly from the idea of a 'normal' railway, but are so commonplace around the coast that they cannot as a group be considered to be 'weird'. However, take a look at the four-track underground Clifton Rocks Railway – every bit as fascinating as Brunel's Clifton Suspension Bridge above ground!

In this book I have tried to collect together the bizarre, the weird and wonderful, the out of-place, much of which can be seen today. What may have been run of the mill 70 years ago, such as cut-down steam locomotives, may be unique and eyecatching today.

We will begin by looking at Isambard Brunel and his 7ft 0¼in broad gauge, in so many ways superior to standard gauge, yet disappeared into the black hole of history.

There are the wonderful double-ended Fairlies articulated locomotives we can ride behind on the Ffestiniog Railway today.

Nearby runs the Snowdon Mountain Railway, Britain's only rack-and pinion line, despite the fact that we invented the system!

Romney Marsh is so much more than the world's only double track mainly public railway in miniature, with its basic but ingenious fish railways across the Dungeness shingle and the nearby sprawling village made from old wooden-bodied carriages, several of which are now designer weekend retreats.

The sight of St Michael's Mount on the last leg of the train journey from London to Penzance has always had the 'wow' factor for passengers, but how many realise that a working railway runs right through the middle of this fairytale island, out of sight of the hundreds of thousands of visitors it receives each year.

Another island in the West Country, Steep Holm, appears to be little more than a lump of limestone when viewed from the mainland but not only had its own railway but a network – and it is still there, because it was too difficult for the scrapmen to rip up!

We also look at the private Statfold Barn Railway, where a myriad of traction from a rail-mounted Land Rover to an air pressure-powered steam locomotive have appeared in recent years, while the Hunslet Engine Company turns out brand new full-size steam locomotives from an adjacent workshop.

Who needs steam, when you can have electric power? Britain's first electric line was the Volk's Electric Railway in Brighton, while the world's first electric overhead line was the Liverpool Overhead Railway, again taking the railway concept into a new dimension. There again, can electric power be truly clean when it needs power station to generate it – the Spurn Head Railway may have had the answer with its two sail-powered vehicles!

And why bother with two rails when one is sufficient? We look at the legendary Listoswel & Ballybunion Railway in Ireland, and Britain's only steam monorail locomotive in Blaenau Ffestiniog.

There are those who thought that rails should be consigned to history, like the magnetic levitation train which once ran at Birmingham International Airport, or Britain's only hovertrain which topped 100mph in Cambridgeshire as the Government was pulling the plug on the project.

Indeed, the government of the day had a far deeper interest in railways than anyone imagined: below Corsham in Wiltshire, a railway system served an underground city which would have become the seat of power, housing the Royal Family, the Prime Minister and cabinet and the top brass in the event of a nuclear war. The conspiracy theorists were ridiculed when they argued for years it was there: in this volume, we have the pictures to prove it!

We round off our journey into the fascinating art of the railway possible with a TV stunt to rebuild 10 miles of the national network in just a week – using OO scale model track to relink Barnstaple with Bideford. How much more bizarre can you get? ■

Robin Jones

Britain's WEIRDEST
RAILWAYS

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The bizarre and unmistakeable double-sided steam locomotives of the Listowel & Balllybunion Railway.

Two heads are better than one – at least on the Ffestiniog Railway, famous for its distinctive articulated double Fairlie locomotives. David Lloyd George, built at the railway's Boston Lodge Works in 1992, heads through slate country towards Blaenau Ffestiniog. FR

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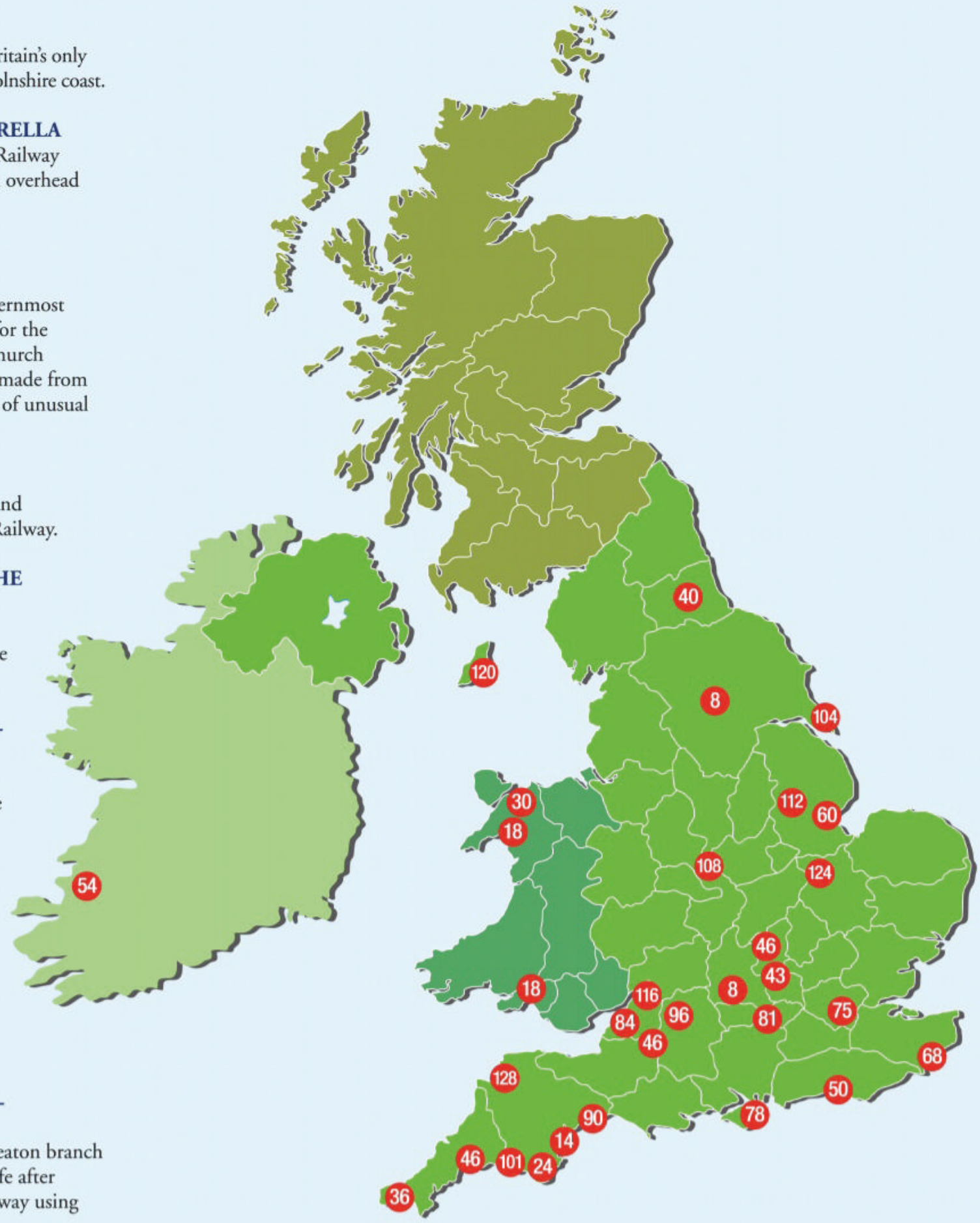

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TV presenter James May's wacky bid in summer 2009 to rebuild the Southern Railway route from Barnstaple to Bideford – using Hornby model track.

Big man, big locomotives, biggest gauge

Isambard Kingdom Brunel, voted the second greatest Briton of all time after Sir Winston Churchill in a TV poll, never hesitated to tear up the rule book in search of transport engineering excellence. His Great Western Railway was built to the massive 7ft ¼in broad gauge to link London to Wales, the West Country and the West Midlands – but despite its many clear advantages, the rest of the country did not follow suit. The system was finally scrapped in 1892, and very little survived for posterity. However, two of the massive world-beating express passenger engine types have been recreated in the heritage era – but only to run on very short demonstration lines.

In 1833, Nicholas Roch, a member of the Bristol Docks Committee, was asked to find an engineer to build a railway from the city to London.

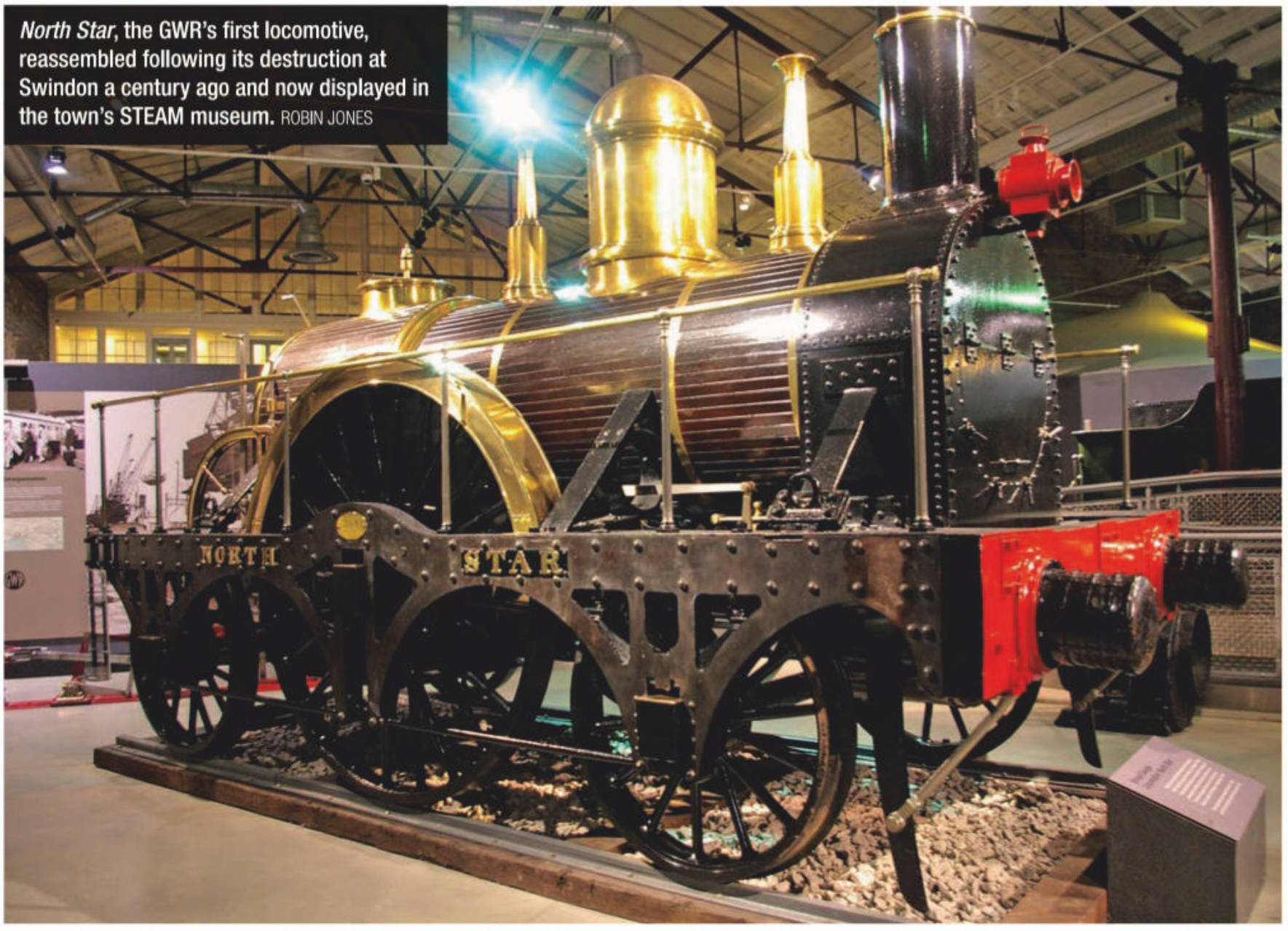
The idea had been mooted before, but Bristol merchants had since become increasingly worried about safeguarding the position of Bristol as the second port in the country and the chief one for American trade in the face of growing competition from Liverpool, which was developing its own rail connection with the capital. The year before, four Bristol businessmen, John and William Harford, Thomas Guppy and George Jones, had resolved to act.

Roch approached his young friend Isambard Kingdom Brunel, the great engineer to be, whose work on the city harbour and whose plans for a suspension bridge across the Avon Gorge at Clifton had won a competition in 1831.

Brunel told the scheme's backers that he would only survey a route that would be the best, not the cheapest – and after being told to survey the route within a month, Brunel set out on horseback and drew up his blueprint for what became the Great Western Railway. The enabling Parliamentary bill received Royal Assent on 31 August 1835 and construction began within a month, with Brunel appointed its engineer at the age of 27.

At the time, there was no national railway network as such. Designers and architects were left very much to 'do their own thing', and the net result was that one railway in one part of the country might well turn out to be very different to another.

Indeed, despite the steam locomotive having its first public demonstration in 1804, it was not until the Rainhill Trials of 1829, won by Stephenson's *Rocket*, that it was almost universally accepted as the way forward. Before it held the trials, the Liverpool & Manchester Railway had seriously considered using cable haulage rather than locomotives to pull its trains, and *Cycloped*, a contraption powered by a



North Star, the GWR's first locomotive, reassembled following its destruction at Swindon a century ago and now displayed in the town's STEAM museum. ROBIN JONES



Two new main line express passenger steam locomotives have been unveiled in Britain in the 21st century and on 29 August 2009 they were lined up at Didcot Railway Centre for the first time. Peppercorn A1 4-6-2 No 60163 *Tornado*, which has taken the national network by storm, attracting huge crowds wherever it goes since it was officially launched on the main line in January, is seen alongside replica broad gauge 2-2-2 *Fire Fly*, representing state-of-the-art steam traction of the 1840s, but which can travel only a few hundred yards on demonstration lines because there are no 7ft 0¼in routes left. Ironically, the last GWR broad gauge locomotive to be built was called **Tornado.** FRANK DUMBLETON/GREAT WESTERN SOCIETY

horse treading a drive belt on a truck, was entered into the competition.

This book deals with Britain's more unusual manifestations of the railway concept, but even in the decade that followed the trials, the notion of what constituted the 'normal' or 'ideal' railway was still very much in the melting pot.

Track gauge, the distance between rails, was one of the biggest issues of those formative years. Rocket designer George Stephenson came up with the rather odd figure of 4ft 8½in. Why not a round 4ft 6in or 5ft, you might well ask.

Stephenson's measurement was said to derive from calculations of the average space between the wheels of horse-drawn road carts in the North East, for early thinking was that such carts could be adapted to run on colliery railways. Whatever his reasons, his gauge caught on big time, and most new major railways in Britain, and later North America and the continent adopted it.

There was no legal obligation, however, for all railways to adopt the same gauge.

For instance, the Eastern Counties Railway built its first line, from London to Colchester, to 5ft gauge, but soon regretted the decision when directors realised that its trains could not run on and off the network of 4ft 8½in gauge lines that was rapidly covering Britain.

Opened on 28 March 1843, when the Eastern Counties' 5ft gauge line met what later became known as standard gauge, passengers and freight had to be taken off one train and transferred to another, creating delays and pushing up costs. So the Eastern Counties was converted to standard gauge during September and October 1844.

When the London & Blackwall Railway was built, opening in 1840/1 between Blackwall and Fenchurch Street, not only was it built to 5ft 0½in gauge, but its trains, both passenger and freight, were cable hauled. Its engineer: none other than George Stephenson's son Robert – who obviously did not have standardisation of gauges as the top of his priority list despite his father's preference for 4ft 8½in.

It did not employ state-of-the-art technology: the ropes continually broke, and the wire cables which superseded them in 1841 fared little better. When it was realised that other railway companies wanted to run over the route, cable haulage was finally scrapped and the line regauged to 4ft 8½in.

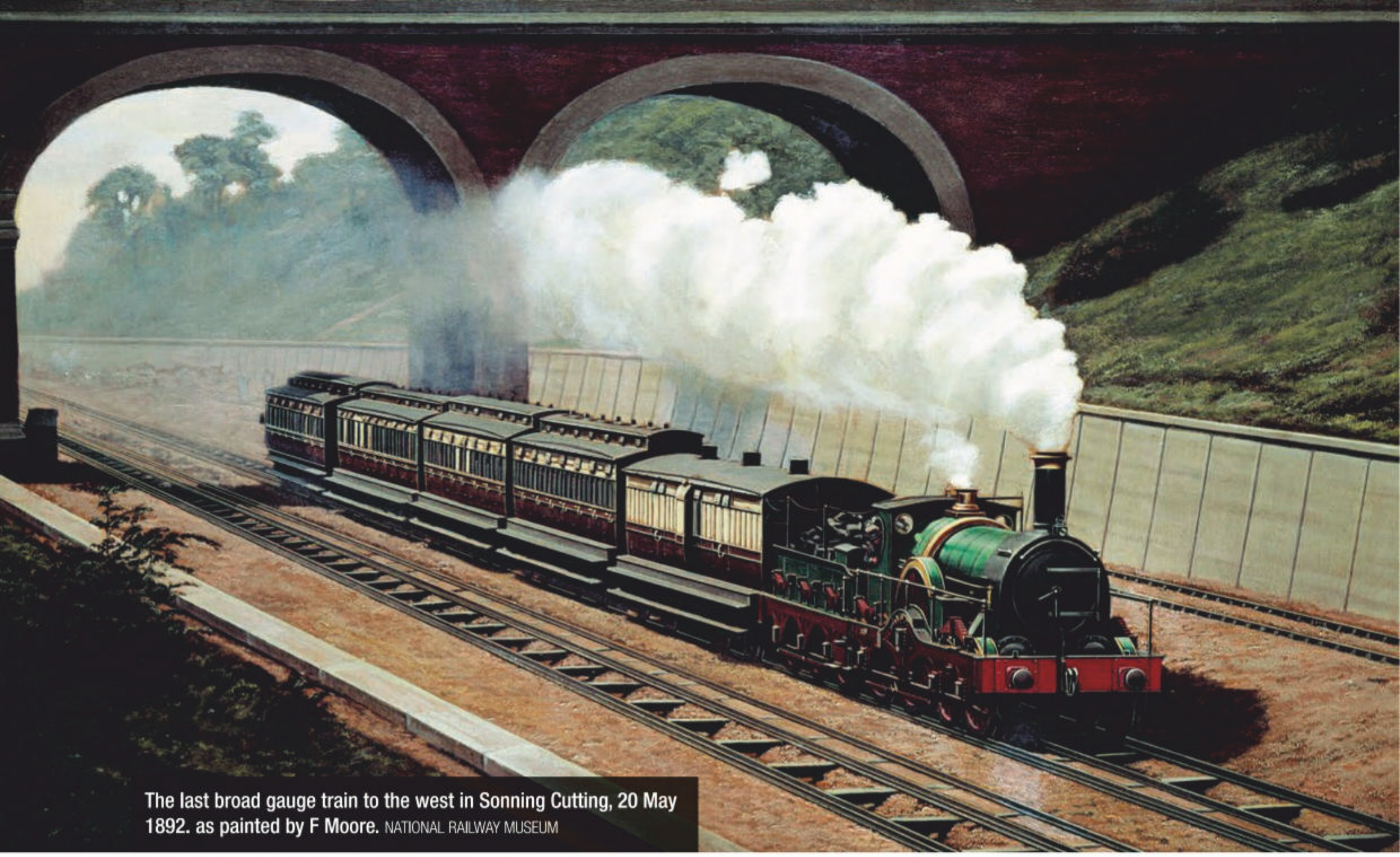
While George Stephenson came up with a gauge apparently based on historical practice, Brunel – a man who was to be internationally renowned for pushing technology and design to its utmost limits – insisting on starting with a blank sheet of paper, and choosing a brand new size dictated purely by technology and logic. He wanted his railway built to a 7ft 0¼in gauge – the quarter inch being in there to accommodate clearances.

The omission of a clause stipulating the gauge from the GWR's Parliamentary Bill allowed Brunel to choose his own gauge. His choice was both radical and highly controversial, but he justified it on scientific grounds: indeed, it is still the broadest gauge to have been used for an extensive public passenger system. He explained to the GWR directors that 7ft 0¼in offered distinct advantages in reducing the centre of gravity of rolling stock by mounting coach and wagon bodies between the wheels rather than above them.

Furthermore, the much-wider gauge would offer bigger and more powerful locomotives and carriages and wagons with a greater capacity.

However, he acknowledged from the outset that it would be impossible for GWR trains to run over other lines built to 4ft 8½in gauge, admitting the tragic flaw that would bring down broad gauge.

Brunel did not want to compromise with everyone else. He wanted only the best – and there are many who believe today that had the world opted for his broad gauge, railways would have retained a far more important role in our modern world in ➤



The last broad gauge train to the west in Sonning Cutting, 20 May 1892. as painted by F Moore. NATIONAL RAILWAY MUSEUM

which they have long since been relegated to second place by motor transport.

In terms of technological development rarely does competition lead to standardisation, at least in the first instance. For instance, only in 2009 it has been announced that the makers of mobile telephones will band together to produce a standard socket for power chargers and other cables – the nuisance value and inconvenience of manufacturers having their own fittings is immeasurable.

Likewise, I have used Pentax single lens reflex cameras for nearly three decades, because my extensive collection of K fit lenses will not fit on Canon or Nikon models and I cannot afford to buy a complete new set to fit a different camera mount. But would it not be great if there was a universal fitting?

The Stephensons may not have liked Brunel's choice of gauge, but Robert was more than happy to build him his first locomotive at Newcastle-upon-Tyne. The 2-2-2 *North Star*, originally built for the 5ft 6in gauge New Orleans Railway but regauged for Brunel, hauled the inaugural passenger train over the first section of 24 miles from Paddington to Maidenhead on 4 June 1838.



Mixed gauge trackwork on the Didcot demonstration running line leading to the relocated Burlescombe transhipment shed. ROBIN JONES

It was not until June 1841 that the GWR line from Bristol to London, a distance of 118 miles and in part nicknamed 'Brunel's billiard table' because of its smoothness, was completed throughout at a cost of £6,500,000, more than twice the original estimate, with breathtaking features such as Sonning Cutting, the gravity-defying elliptical-arched bridge at Maidenhead and the stupendous feat of early Victorian engineering that is Box Tunnel.

Some of Brunel's own early designs for broad gauge locomotives did not pass muster, but it was his appointment of 21-year-old Daniel Gooch as locomotive superintendent which won the day for him big time. Gooch set about designing a more powerful and larger version of the Star class, the Firefly class of 2-2-2s.

Seven manufacturers were contracted to build the 62 engines in the class, and the first was delivered by Jones, Turner & Evans of Newton-le-Willows on 12 March 1840. It was named *Fire Fly*, and a new era in British transportation was about to begin.

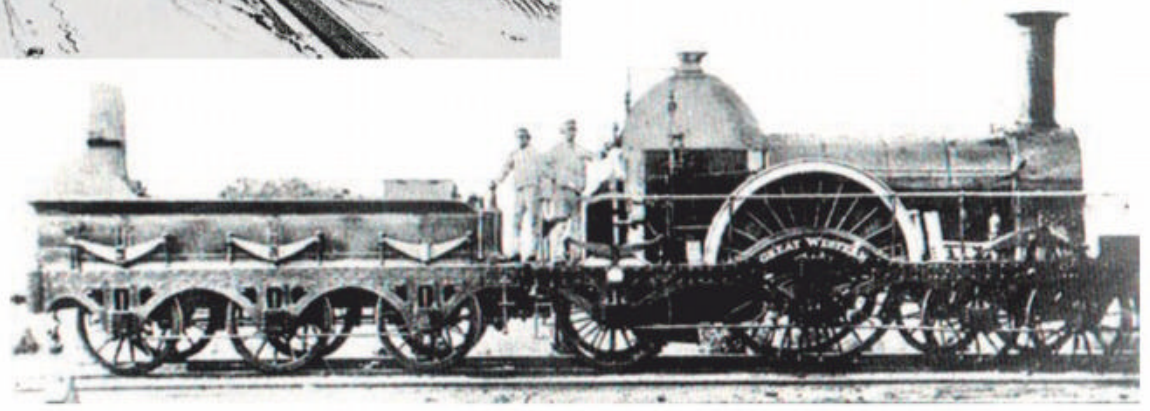
Fire Fly was chosen to pull the directors' special to mark the opening of the line beyond Twyford to Reading. The down run from Paddington took just 45mins for the 36 miles, while on the return an astonishing 58mph was reached and the 31 miles from Twyford to the capital completed in a mere 37mins.

Such high-speed running was unheard of in Britain or indeed any other country, and the Fire Fly class immediately showed it had the potential to achieve the four targets it had been set: speed, safety, reliability, and ease of maintenance.



Left: **The magnificent classic western portal of Box Tunnel near Corsham in Wiltshire, as sketched by JC Bourne in his famous album of illustrations of the GWR in 1846. Around 4000 workmen and 300 horses were engaged in digging the 9636ft tunnel, then the longest of any railway in Britain, using only picks and shovels, and it is said that around 100 men died in the grim working conditions before it opened on 30 June 1841. It is still in regular use today.** BRUNEL 200

Below: **Daniel Gooch's experimental 2-2-2 *Great Western*, built at Swindon in 1846, with 8ft driving wheels and enormous copper firebox was typical of the appearance of broad gauge locomotives. It formed the basis for the hugely successful Iron duke class.** GREAT WESTERN TRUST



Brunel and Gooch established Swindon Works where the GWR began building their own locomotives to the latter's specifications, and the move led to a succession of handsome, stable and powerful engines culminating in the superb Iron Duke class.

By the standards of the day, Gooch's locomotives recorded astonishing speeds and amazing start-to-stop times. The timings of the fastest Paddington-Didcot trains in 1848 were not bettered until the arrival of the Class 125 High Speed Train units nearly 130 years later.

Brunel also engineered the Bristol & Exeter Railway, effectively extending the GWR. On 1 May 1844, Fire Fly class locomotive *Actaeon* driven by Gooch covered the 194 miles from Paddington in an at-the-time unbelievable five hours. The return journey was even more spectacular, with Paddington reached in 4hrs 40mins, achieving a world-record average of 40.1mph for the two journeys.

On the same Wellington bank where *City of Truro* was to allegedly break the 100mph barrier in 1904, a Bristol & Exeter Railway broad gauge 4-2-4 tank engine reached 81.8mph.

So why did the rest of the country not take a leaf out of Brunel's book and converted the 7ft 0¼in gauge?

Standardisation is notorious for slowing down or even denying technological advancement. Anyone remember V2000 video recorders? Back in the early 1980s, the format was streets ahead of anything that Betamax or VHS could offer in terms of features on video players. Also, Betamax users claimed that their format was better than the bigger bulky VHS cartridges.

Yet VHS won the day by a mile, not necessarily on technological merit, but because it 'got in first', took the lion's share of the market and slowly but surely pushed the others out by offering a far wider range of products.

Parliament recommended banning broad gauge as early as 1845 in the interests of uniformity and to avoid breaks of gauges, with passengers having to change trains and freight unloaded and loaded again, even though it conceded that 7ft 0¼in was superior in terms of speed and safety. At that time there were 274 miles of broad gauge track compared to 1901 miles of 4ft 8½in gauge lines.

Despite Brunel's stubbornness over the gauge issue, a chink in his armour appeared in 1847 when the GWR began laying mixed gauge, between Gloucester and Cheltenham, in order to handle through trains.

The broad gauge empire expanded through South Wales to Milford Haven, Penzance in the far west, north to Wolverhampton and south to Weymouth. Some lines which never became part of the GWR empire, like Exeter to Barnstaple (London & South Western Railway) and the Somerset Central Railway (Burnham-on-Sea to Wells) even adopted 7ft 0¼in.

By 1866 broad gauge extended to 1427 miles, including around 387 miles of mixed gauge. However, it was still very much a London to the West Country, West Midlands and South Wales phenomenon.

The GWR built its first standard gauge engines in 1855, a year after absorbing its first 4ft 8½in gauge lines, the Shrewsbury & Chester and Shrewsbury & Birmingham railways.

Brunel died in 1859 and 10 years later, realising that the end for broad gauge was inevitable, the GWR authorised the conversion of the routes to Oxford, Birmingham and Wolverhampton to standard gauge, followed by the South Wales main line in May 1872.

However, some lines were still built to 7ft 0¼in gauge, the last being the St Ives branch which opened on 1 June 1877. Also, the Bristol & Exeter opened its broad gauge Cheddar Valley line from Yatton to Wells in 1869, converting it to standard gauge six years later.

The last GWR broad gauge engine outshopped from Swindon, Rover class 4-2-2 No 24 *Tornado*, emerged in July 1888. It ran for less than four years in traffic.

In 1891 the GWR board agreed to ditch broad gauge altogether, with only 171 route miles of pure broad gauge remaining. ➤



A typical GWR broad gauge signal, recreated at Didcot. ROBIN JONES



If you discount the reassembled non-working *North Star*, the sole surviving original main line company broad gauge locomotive is the South Devon Railway's 0-4-0VBT No 151 *Tiny*, which was also the smallest. SOUTH DEVON RAILWAY

When the last broad gauge lines were converted to 4ft 8½in by an army of 4200 workers during 21/22 May 1892, a total of 196 engines, 347 coaches and 3544 wagons remained. Around 15 miles of sidings were laid on a three-acre site at Swindon bought by the GWR specially to store them while they waited to be scrapped – as there was nowhere else where they could be used. (By comparison, you can still find Betamax recorders at car boot sales!).

On Friday 20 May, the last-ever broad gauge train left Penzance for Swindon at 9.57pm – 47mins late, due to the crowds who wanted to witness the system's last rites. The train stopped at literally every station between Penzance and Exeter, and on its departure each stationmaster had to confirm to the inspector on board that all broad gauge stock had been removed from his station.

Only then, on receipt of each stationmaster's message, were the permanent way gangs allowed to rip up the broad gauge track behind the train and replace it with standard gauge.

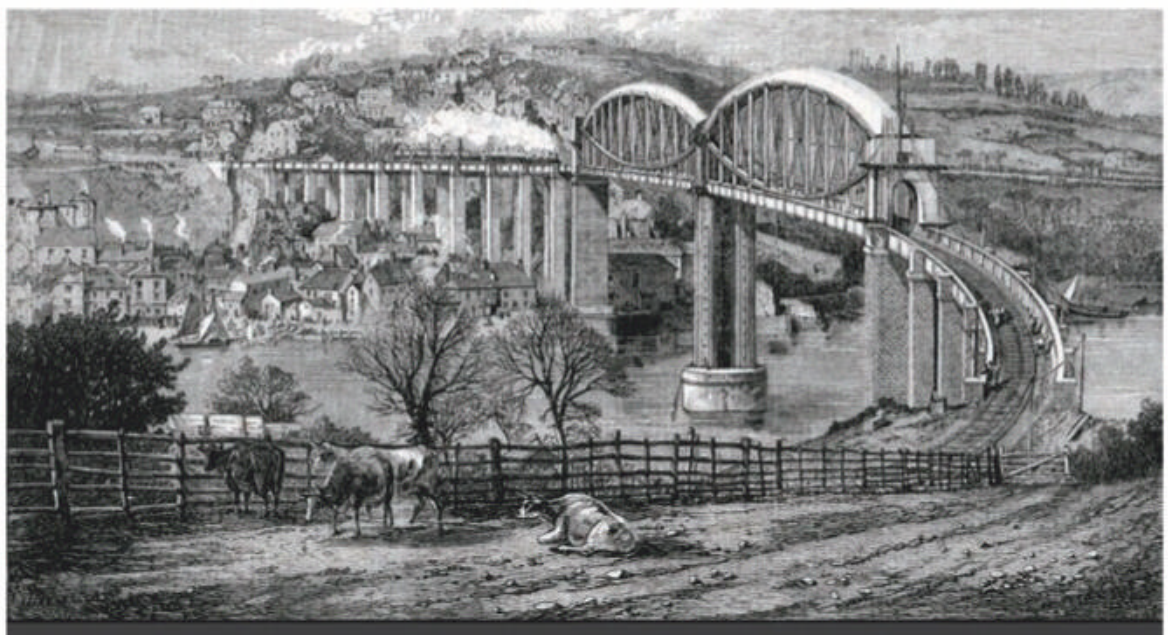
The final GWR broad gauge engines to run were South Devon Railway 4-4-0STs *Leopard* and *Stag*, used until June 1893 at Swindon for shunting stock into the cutting shop at Swindon for scrapping.

Several broad gauge locomotives were offered in the 1890s to museums for display – without any track on which to run, they were good for nothing else – but in each case the offer was declined, to the eternal regret of subsequent generations. Two were preserved by the GWR, *North Star* and *Lord Of The Isles*, but they were cut up at Swindon Works in 1906 to create storage space under the orders of none other than William Stanier, who made no secret about the fact that he was concerned about the future, not the past, and went on to design the great Pacific locomotives for the London, Midland & Scottish Railway.

However, enough parts were salvaged from this wanton act of vandalism for *North Star* to be reassembled as a stationary exhibit in 1925, and it is now displayed in STEAM – Museum of the Great Western Railway, at Swindon.

The sole surviving original main line company broad gauge locomotive is the South Devon Railway's 0-4-0 vertical-boilered tank engine No 151 *Tiny*, which was also the smallest. Bought to replace horses on Plymouth's Sutton harbour branch, it was withdrawn in 1883 and sent for use as a stationary boiler at Newton Abbot works, where it was restored and exhibited on the Down platform from 1927. It is now on static display in the modern-day South Devon Railway's Buckfastleigh museum, but cannot be said to be anywhere near representative of Brunel's 7ft 0¼in gauge system than Del Boy's Reliant Robin could claim to be typical of a motor industry which includes Rolls Royces, Aston Martins and Daimlers.

So GWR broad gauge with its larger-than-life locomotives with gleaming copper fireboxes, enormous driving wheels and stovepipe chimneys passed into history leaving only scant traces of its existence.



An *Illustrated London News* sketch of one of the first broad gauge trains over Brunel's stupendous Royal Albert Bridge at Saltash in Cornwall following its official opening by Prince Albert on 2 May 1859. BRUNEL 200

The replica of *Iron Duke* inside the Great Hall at the National Railway Museum. The importance of replicas like these cannot be overstated, for they represent a huge slice of world-beating British transport history that was all but wiped off the face of the earth in one weekend in 1892 and lost to future generations. ROBIN JONES

Its inclusion in this book poses one big question – while by today's perception Brunel's broad gauge can certainly be described as 'unusual' because of its by-comparison outsize proportions, was it the rest of the national railway network that warrants the label 'weird' for not adopting it despite its many contemporary advantages?

On a very small scale, some 7ft 0¼in gauge lines remained in use into the 20th century, at isolated outposts such as the Holyhead breakwater railway, and on a harbour line in the Azores. Incidentally, even broader gauges were to be found in Britain: the Dalzell Iron & Steel Works in Motherwell bought three new 10ft 11in gauge Barclay 0-4-0STs to haul ladles of molten slag on an internal line.

The clear advantages of the 7ft 0¼in gauge system were not forgotten; in 1928, engineer W Collard published plans for a Brunel broad gauge railway from London to Paris via a Channel Tunnel. Hitler dreamed of going one better, and formulated plans for a three-metre (9ft 9ins) gauge trans-European super railway capable of carrying ships on bogie wagons.

Broad gauge steam has since staged a heritage era comeback.

The National Railway Museum at York had a replica Iron Duke class 4-2-2 built for the Great Western 150 celebrations in 1985, using parts from two standard gauge industrial Austerity 0-6-0 saddle tanks including a boiler, and a demonstration running line was laid outside. The new Iron Duke became the first broad gauge engine to steam in Britain since 1893, and had a replica carriage made to go with it. It is now on static display inside the museum's Great Hall.



A JC Bourne sketch of the interior of Brunel's original Temple Meads terminus at Bristol, with a broad gauge train standing in one of the platforms. BRUNEL 200A JC Bourne sketch of the interior of Brunel's original Temple Meads terminus at Bristol, with a broad gauge train standing in one of the platforms. BRUNEL 200

Didcot Railway Centre, home of the Great Western Society, also has a 7ft 0¼in gauge running line, leading to the former Burlescombe transhipment shed, where in the days of the break of gauge, passengers and goods were switched from one train to another. On it runs an all-new replica of *Fire Fly*.

Aided by the rediscovered original drawings by Daniel Gooch for the Firefly class at Paddington, retired Royal Navy Commander John Mosse founded the Firefly Trust in 1982 to build a replica. By 1987, sufficient money had been raised to allow building to start, as a Manpower Services Community project backed by Bristol City Council. When funding was withdrawn, the project found a new home at Didcot, where *Fire Fly* ran under its own power for the first time at Didcot on 2 March 2005. It was the first new main line steam locomotive to be built in Britain since BR standard 9F 2-10-0 *Evening Star* 45 years before.

Yet where can the modern Iron Duke or *Fire Fly* run apart from demonstration lines? Could a new broad gauge heritage railway be built to carry fare-paying passengers, to replicate the great days of speed on the Bristol & Exeter and recapture lost glories?

There again, 7ft 0¼in gauge is still in commercial use at one location in Britain today. An electric crane runs along a 151ft-long track at the National Rivers Authority depot in Reading, a stop on Brunel's original GWR main line. ■



A truly atmospheric railway: the pumping station at Dawlish in a painting by Condy, with the vacuum pipe running between the rails. ELTON COLLECTION, IRONBRIDGE GORGE MUSEUM TRUST

A truly atmospheric railway

Beautiful, brilliant, but foolish? Isambard Kingdom Brunel jumped years ahead of steam locomotive haulage when he opened his South Devon Atmospheric Railway – but was let down by the available technology of his day. Furthermore, his famous seaside main line route through Dawlish and Teignmouth is now the most expensive stretch of the national network to maintain, because he insisted on building it at the foot of cliffs just a few feet above the waves.

In September 1844, Isambard and Daniel Gooch joined other eminent engineers of the day to witness a demonstration by inventors Samuel Clegg and Jacob Samuda of an atmospheric train on Ireland's one-and-a-half-mile-long Dalkey & Kingstown Railway.

Clegg, a gas lighting pioneer, and Samuda, a marine engineering expert, had patented an atmospheric system of propulsion on 3 January 1838.

Their method consisted of a cast-iron tube laid between rails and sealed by airtight valves at each end. A piston linked to the bottom of a carriage was pushed past the valve into the tube, and huge stationary steam engines located on the side of the railway pumped air out of the tube, generating a vacuum ahead of the piston.

The greater pressure of the atmosphere behind the piston would force it along the tube and pull the carriage with it, without the need for a locomotive.

Brunel and his father Marc had over a decade before looked in vain at pressured carbonic gas-powered alternatives to the steam locomotive, foreseeing the day when it would become obsolete. However, when he saw atmospheric propulsion at work, he believed he had stumbled on the new way ahead.

One of the biggest complaints about steam trains in the days of roofless carriages was that they showered passengers with hot water and cinders. Yet Clegg and Samuda offered a system which was clean, silent and fast.

Furthermore, since there was no engine, the trains would be lighter and more efficient, and building a railway would accordingly be less expensive.

Steep gradients could be tackled without having to bring in an additional locomotive to add extra power. Indeed, the atmospheric system presented all the advantages of the electric traction that we enjoy today.

Prime Minister Sir Robert Peel was so impressed by the atmospheric system that he wanted to see all railways adopt it.

After the Dublin & Kingstown Railway came the London & Croydon in 1846, and the 1.4-mile Paris & St-Germain Railway from Bois de Vezinet to St-Germain in Paris in 1847. They were followed by Brunel's South Devon Railway.

Three of the total of nine atmospheric railway pumping stations survive today, but only the one at Starcross (below) was ever used. The Totnes example, part of a derelict dairy, was saved from demolition in 2008 when English Heritage listed it following a massive local outcry, and another still stands at Torre. ROBIN JONES



After completing the Bristol & Exeter Railway in 1836, Isambard planned to create a 7ft 0¼in gauge route all the way from Paddington to Penzance. However, his early surveys for a main line from Exeter to Plymouth highlighted many gradients over which the steam trains of the day might well struggle.

His preferred route ran over Dartmoor foothills to the west of Newton Abbot like Hemerdon, Dainton and Rattery, all of which were later to become legendary in terms of proving locomotive and crew performances.

Yet because atmospheric traction did not rely on the adhesion of heavy locomotives to the rails, he could economise on earthworks and allow such steep inclines. To boost power on the heavy gradients, with atmospheric propulsion all you had to do would be to increase the vacuum pipe diameter, add a second pipe, or build a bigger pumping station.

Appointed as engineer to the South Devon Railway which received its Royal Assent on 4 July 1844, he convinced its directors that huge savings would be made by using Clegg and Samuda's system over the entire 52-mile route – despite misgivings both from his acclaimed locomotive superintendent Daniel Gooch and Robert Stephenson.

In line with Brunel's blending of classical styles of architecture with cutting-edge transport technology, seven huge Italianate engine houses were built at three-mile intervals along the route from Exeter to Newton Abbot – which followed the coast and created a stunningly picturesque route through a series of tunnels linking romantic red-sand beaches and coves.

The construction of this stretch of the route may be viewed either as an engineering marvel of the day, or as an absurdity. It hugged the foot of storm-lashed cliffs and cliffs and nowadays is the most expensive part of Britain's national rail network to maintain due to marine erosion and rock falls, with regular stoppages and delays.

The South Devon atmospheric system struggled from the outset, probably because it was built before its principles had been sufficiently tested. It was quickly realised that the planned 12in vacuum pipe needed to be replaced by one of 15in diameter, and so the pumping engines already installed along the route had to run faster than their design speed in order to maintain the vacuum. ➤



A surviving section of atmospheric railway vacuum pipe subsequently used for decades as a culvert on Goodrington Sands is now displayed at Didcot Railway Centre. ROBIN JONES



While no atmospheric railway carriage has survived, a 5in gauge working model of a South Devon Railway train was built in the early 21st century by Barometer World at Merton in North Devon, a firm whose business is based around the concept of air pressure! There is no driver but a guard to operate the brake: today's Dockland Light Railway has driverless trains. BAROMETER WORLD

This first section of the South Devon Railway opened on 30 May 1846 – using steam engines at first, while the vacuum tube and leather and metal valve of the atmospheric system continued to be laid.

Two public atmospheric trains ran over the line from 13 September 1847, and from 10 January 1848 services were extended to Newton Abbot, with some freight being carried. The high speeds promised by Brunel were indeed achieved– 68mph with a 28-ton load and 35mph with 100 tons, but the 20-mile journey from Exeter to Newton Abbot with four stops took a slow 55 minutes due to one train having to wait for the other to pass as it was the route was still single track.

Brunel may have been ahead of his time, but supporting technologies were not up there with him. The hinge of the airtight valve and the ring around the piston were both made of leather, an organic material which was totally unsuitable for the purpose, as had just been proved to be the case on the Croydon line, which scrapped its atmospheric system that year after repeated breakdowns.

Brunel's answer was to employ a large team of men to continually apply a sticky sealant on the valve to make it airtight. The sealant then proved useless after exposure to the air, so a new compound using cod-liver oil and soap was tried without much better success. This compound, along with natural oils in the leather, was sucked into the vacuum pipe, and the leather dried and cracked in the sun, wind and salty air. It was also gnawed by rats.

Air leaked into the pipe through the cracks in the leather and so the steam pumps had to work much harder and burn more coal to keep up the pressure.

However, there was no other suitable flexible material available in the mid-1800s. Two miles of the valve had to be completely replaced, while it was found that the vacuum pipes had been cast too roughly, and also the stationary steam engine pumps kept breaking down.

Brunel also failed to extend the line's electric telegraph system to the pumping stations. Had this been done, much costly and wasteful pumping would have been avoided.

Once teething problems had been overcome, the atmospheric railway performed well, with nine trains a day operating between Exeter and Teignmouth during spring and summer 1848, reaching average speeds of 64mph. They were well liked by passengers – apart from those travelling third class who were asked to get out and push when they broke down.

However, it was found that it cost 37 pence per mile to run an atmospheric train compared to 16 pence for steam.

Alarmed by soaring losses and vast amounts of unexpected expenditure, the directors confronted the absent Brunel at his home in Duke Street in London to demand explanations. Brunel blamed Clegg and Samuda for the failings of their system, and said that the only solution was to replace the pipes and the steam pumps.

With the railway's shareholders having lost nearly £500,000, the directors voted to scrap the system and opt for steam locomotive haulage as from 10 September 1848.

While the whole route opened throughout on 2 April 1849, the atmospheric system had not penetrated further south than Newton Abbot, although a pumping station was build at Totnes and another at Torre for a proposed branch, neither being used.

The world's other three atmospheric railways were also converted to steam. As a steam line, the South Devon Railway proved hugely successful, and was eventually converted to double track throughout to accommodate increasing volumes of traffic. It became part of the Great Western Railway on 1 February 1876.

Yet what if the materials and research to make the atmospheric system work had been available? Could it have presented a serious competitor to steam haulage more than a century before the advent of diesel and electric locomotive on the British main line?

There still remains the problem of the sea wall route.

Preserved GWR 4-6-0s Nos 5051 *Earl Bathurst* and 4930 *Hagley Hall* storm through Horse Cove tunnel with a Bristol-Plymouth charter in July 1985 during the Great Western Railway 150 celebrations. They did not make it, breaking down on the South Devon banks despite doubling up! Brunel foresaw such problems with steam traction on the route a century before, and that is why he opted for the atmospheric system. BRIAN SHARPE

Some experts predict that global warming will see sea levels rise by at least 20in in the next half century, and some of the most modern diesel multiple units have found difficulty in running over the route after storms.

In 2002, engineers battled the tides to complete a £2.4-million project to strengthen the sea wall, with 12,000 cubic metres of concrete poured into trenches at its base to stop the sea undermining it, and over 500 steel bars inserted into the cliff for stability.

Serious plans to replace the route altogether were drawn up in the steam age itself.

In 1936, a £3-million scheme for an avoiding line about a mile inland running from Exminster to Bishopsteignton was mooted by the GWR, which bought parcels of land, cleared undergrowth and marked the route out, before the Second World War suspended proceedings forever.

From 1903 onwards, the GWR used the single-track Teign Valley line via Heathfield, Chudleigh and Ide as a diversionary route between Exeter and Newton Abbot during bad weather, but British Railways saw fit to close it in 1958.

Neither available any more is the Southern Railway's main line from Exeter to Plymouth via Okehampton, which beyond Coleford Junction is now the Dartmoor Railway heritage and freight line, and which ends at Meldon Quarry. Persistent calls have been made for the reinstatement of the missing section between Meldon, Tavistock and Bere Alston. A storm-free alternative route for long-distance non-stopping services is surely vital to safeguard the future of rail transport to the south-west peninsula.

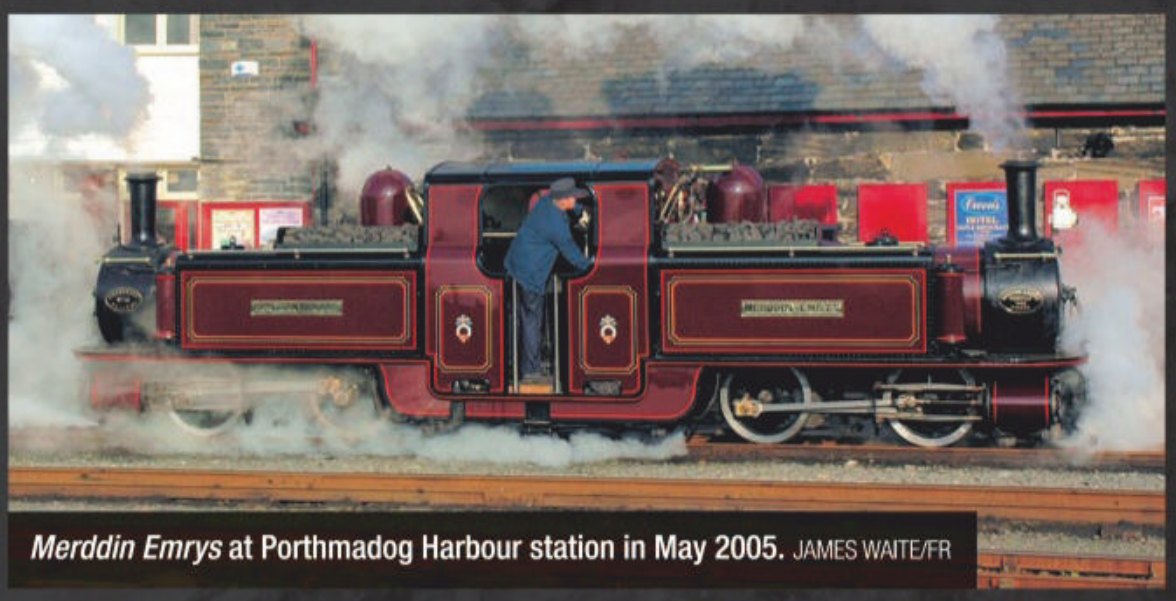
And there remains the question, which was more bizarre: Brunel's experiment with atmospheric traction, or the coastal route on which it was laid? ■



Two of the GWR's 3501 class of broad gauge 2-4-0 tender locomotives haul a train over the sea wall route at Teignmouth. BROAD GAUGE SOCIETY



David Lloyd George, the world's newest double Fairlie, runs along the deviation above Llyn Ystradau reservoir, with the original route of the railway visible on the foreshore below. ROGER DIMMICK/FR



Merddin Emrys at Porthmadog Harbour station in May 2005. JAMES WAITE/FR



Double Fairlie *Merddin Emrys* runs through a sylvan stretch of the Ffestiniog Railway which it has served for 130 years. FR

The fabulous Fairlies!

One of the strangest yet most striking steam locomotive types of all to be seen in Britain today is the double Fairlie, immortalised by its association with the Ffestiniog Railway. Looking as if they are two ordinary engines joined back to back, the Victorian design proved so successful at negotiating tight curves that two examples have been built in modern times. Yet how much do they owe to a clandestine love affair that nearly landed their designer in jail?

In the 1840s, Newcastle-upon-Tyne engineer George England founded his own locomotive building company in New Cross, Surrey, It supplied one of the earliest tank engines to the contractors building the Newhaven branch of the London Brighton and South Coast Railway and exhibited another at The Great Exhibition in 1851.

The company went on to supply locomotives to several other railways, ranging from the Great Western and Caledonian down to the 1ft 11½in gauge Festiniog Railway in North Wales. There, between 1863-7, they delivered six 0-4-0 saddle tanks, four of which survive, two in working order.

The oldest surviving railway company in the world (its name was changed in the heritage era to include both fs in the name of the locality, an omission from the original act of Parliament which empowered it in 1832), the Festiniog was originally a horse-drawn affair, but in October 1863 steam locomotives were introduced, to allow longer slate trains to be run. This move also facilitated the official introduction of passenger trains in 1865, and it doing so it became first narrow-gauge railway in Britain to carry passengers.

England's long-time business associate was Robert Francis Fairlie, who was born either in 1830 or 1831 in Glasgow, and opting for railway engineering as a career, trained in the works at Crewe and Swindon before becoming locomotive superintendent at the Londonderry & Coleraine Railway in 1852. Four years later he joined the Bombay, Baroda & Central India Railway before returning to London in 1859 where he set himself up as a railway engineering consultant.

In April 1862, England brought a criminal action against Fairlie in a case which modern observers might well consider bizarre.

At the Central Criminal Court, England alleged perjury on the part of Fairlie – who had eloped with his daughter Eliza Anne England. In order to obtain a marriage licence, Fairlie had sworn a false affidavit that her father had consented to the union, which he certainly had not done; after their wedding, the pair eloped to Spain. ➤



Earl of Merioneth running round the spiral loop above Ddualllt Halt. ROGER DIMMICK/FR

The Festiniog Railway's first Fairlie, *Little Wonder,* at Porthmadog in the 1870s. FR CO ARCHIVES

If the case had been proved, Fairlie would most likely have been sent to prison. However, under cross-examination from Fairlie's representative, England admitted that he had run away with his present companion, Eliza's mother – and that he had a wife living at that time. He had lived with this lady several years but could not marry her until his wife died.

Under contemporary English law, a child born out of wedlock was considered nobody's child. Therefore in law she was nothing to do with England and could marry anyone without needing his permission.

So there no case to answer and therefore a verdict of not guilty was returned.

It is assumed that at the time there was great animosity between England and Fairlie. However, the rift healed sufficiently for England to build the first of a remarkable series of engines for the Festiniog Railway to a Fairlie patent of 1864.

Fairlie was convinced that the conventional pattern of locomotive was seriously deficient, because they wasted weight on unpowered wheels (and on a tender that did nothing but carry fuel and water without contributing to the locomotive's adhesive weight. Also, 'normal' locomotives had a quite different front and rear, and were not intended to be driven in reverse for long periods, thereby necessitating the provision of a turntable or turning triangle at every terminus.

To Fairlie, the obvious solution answer was have a double-ended locomotive, one which carried all its fuel and water aboard the locomotive and with every axle driven (the maximum tractive effort of any locomotive is limited by the power of its driving wheels).

His double-ended design was achieved by having two boilers on the locomotive, joined back-to-back at the firebox ends, with the smokeboxes at each end, with controls at both ends of the central cab to allow the locomotive to be driven equally well in either directions.



Double Fairlie *Livingston Thompson* of 1885, now on static display in the National Railway Museum at York, is pictured at Tan-y-Bwlch in 1988. FR

The locomotive was supported on two swivelling powered bogies with all wheels driven. Steam was delivered from the boilers to the cylinders via flexible tubing. There were side tanks beside each boiler for the water supply, and bunkers for the fuel located above them.

Fairlie's first double-ended locomotive, *Pioneer*, was built by James Cross & Co of St Helens supplied to the standard gauge Neath & Brecon Railway in 1865, but it was not successful. Others went to the Queensland Railways in Australia, which were not happy with them and returned them to the builder.

However, *Little Wonder*, built by England in 1869 for the Festiniog, was a different matter, and it brought its designer overnight fortune and fame.

On the Festiniog, which was built to carry slate from the pits of Blaenau Ffestiniog to the harbour at Porthmadog, Little Wonder was tested against the England saddle tanks, which themselves have been hailed as the first ever successful narrow gauge steam locomotive design.

George England retired in 1869, and Robert Fairlie joined with George England's son and JS Fraser to take over his works and to form the Fairlie Engine & Steam Carriage Co. George England junior died within a few months, and the works were sold, locomotive production ceasing at the end of 1870. The Fairlie Engine & Rolling Stock Co continued as an office for design and for the licensing of Fairlie locomotive manufacture.

Half a double Fairlie: single Fairlie *Taliesin* hauls the Ffestiniog Railway's vintage workmen's train. FR

'The rift healed sufficiently for England to build the first of a remarkable series of engines for the Festiniog Railway to a Fairlie patent of 1864.'

On 11 February 1870, Fairlie invited locomotive engineers from all over the world to the Festiniog Railway to see his invention. Railways as far afield at Russia, Mexico, Turkey and Sweden were represented. The event was a huge success, and left Fairlie with a bulging order book: not only that, but it did much to promote narrow gauge steam, demonstrating that it was a credible alternative to standard gauge in hill terrain. The Fairlie design meant that the fireboxes and ashpans were not restricted by frame or track width, but only by the overall loading gauge. By 1876, 43 different railways had operated his engines. However, the only railways where the type was truly successful in the long term was Mexico, New Zealand and the Festiniog. More than 50 Fairlies were supplied to Mexico over four decades, including 49 massive 0-6-0+0-6-0s which remained in use until the 1920s.

The problems many of the buyers found were the limited capacity for fuel and water caused by the lack of a tender, the flexible steam pipes being prone to leakage and wasting of power and the absence of unpowered wheels, which on 'normal' types of steam locomotive act as stabilisers. Early Fairlies had a tendency for rough riding and were more susceptible to derailments: *Little Wonder* was worn out and replaced by the Festiniog after less than two decades of intensive use. ➤



Standard gauge Fairlie locomotive Victoria with a typical Burry Port & Gwendreath Valley Railway holiday train believed to be at Pontyates. BRIAN CRIPPS COLLECTION



A late 50s scene at Harbour station, with *Livingston Thompson*, then named *Taliesin*, hauling a rake of stock in the green livery of the early heritage era.

Merddin Emrys heads below Rhiw Goch on 25 August 2009 ROGER DIMMICK/FR

Fairlie also produced 'single' versions, resembling 'normal' locomotives. Effectively a double Fairlie cut in half, they had a single articulated power bogie combined with an unpowered bogie under the cab, maintaining the ability to negotiate sharp turns. Popular in the USA, a single Fairlie 0-4-4 tank ran on the Swindon Marlborough & Andover Railway and three 0-6-4Ts were bought by the North Wales Narrow Gauge Railways, predecessor of the Welsh Highland Railway.

Fairlie gave the Festiniog Railway Company a perpetual licence to use the Fairlie locomotive patent without restriction in return for using the line to demonstrate Little Wonder – which became the first of six to be owned by the company.

George England died in 1878 and Fairlie followed on 31 July 1885.

The Ffestiniog is one of Europe's most spectacular heritage railways, weaving its way through Snowdonia's slate country, and one of its trademark features is the regular use of double Fairlies. Indeed, in modern times, it has made the type its own.

The second double Fairlie to arrive was *James Spooner*, which became the line's No 8. Supplied by Avonside, it lasted in service until 1933 when it was scrapped, the fate which befell *Little Wonder* in 1882.

The line's third double Fairlie, No 10 *Merddin Emrys*, named after the sixth century Welsh poet, was delivered in 1879 and is still in service today. It underwent a major rebuild in 1987/8 with new tanks.

No 11 *Livingston Thompson* was built at the line's own Boston Lodge works in 1886. Now



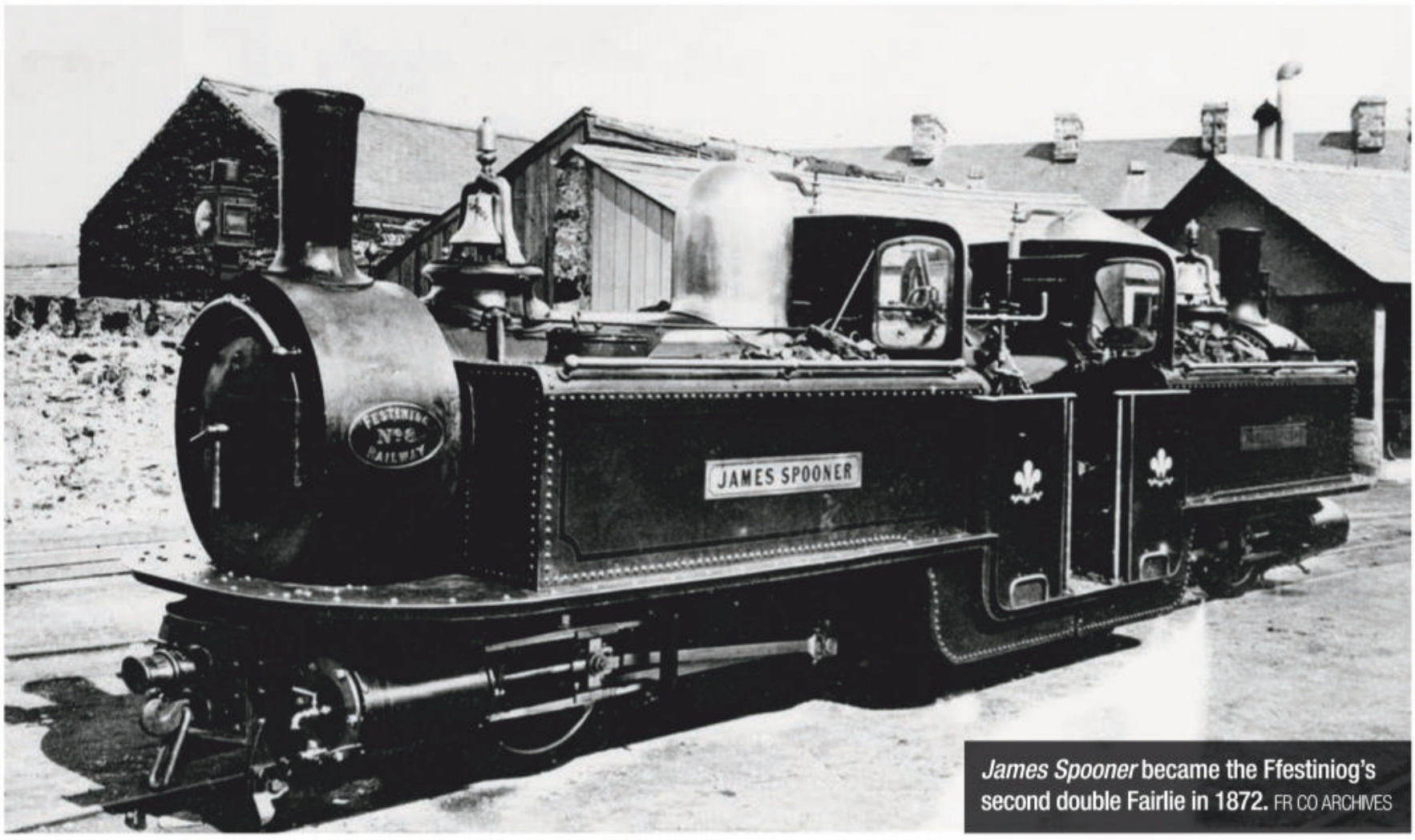
David Lloyd George at Rhiw Goch on 22 February 2003 IAN BUTTERS

out of service, it has been restored for static display, and is another star exhibit in the Great Hall at the National Railway Museum in York.

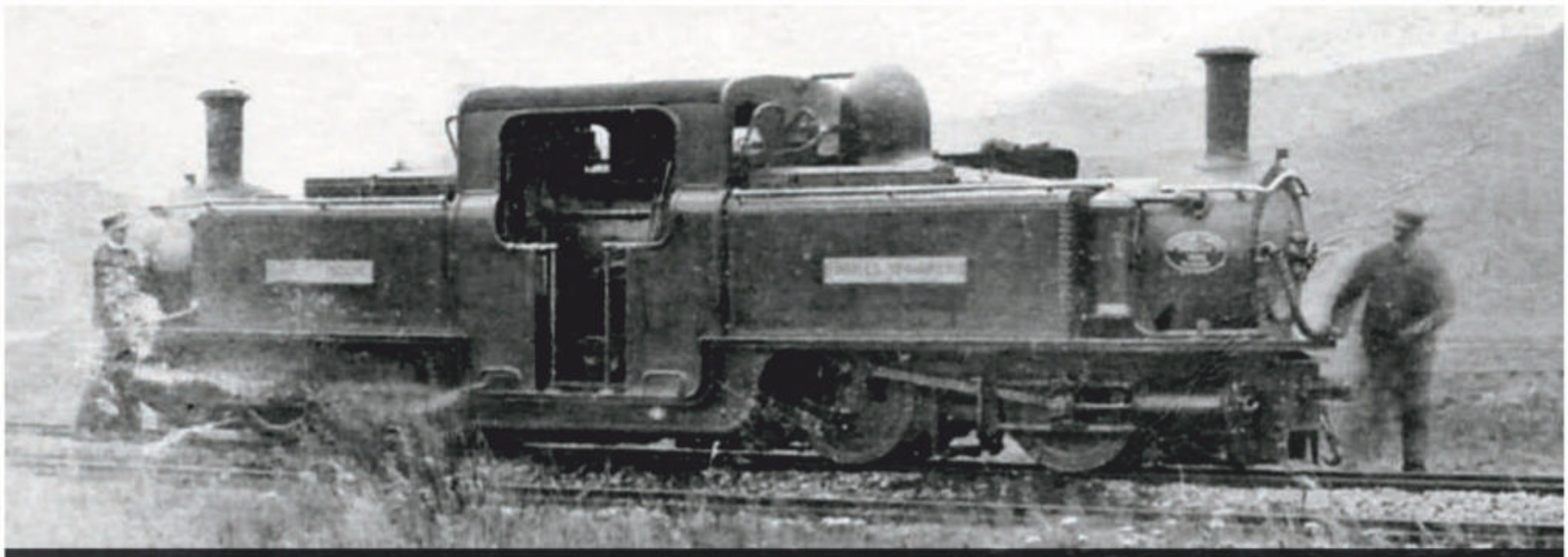
The Ffestiniog Railway had fallen derelict after World War Two, but following the success of the Talyllyn Railway revival led in 1951, the line was taken over by volunteers in 1954, under the leadership of businessman Alan Pegler, who in 1963 bought *Flying Scotsman* from British Railways. The revivalists began to reopen the railway in stages from Porthmadog Harbour station and finally reached Blaenau Ffestiniog on 25 May 1982, the 150th Anniversary of Royal Assent to the Festiniog Railway Act of 1832. In reopening the line, the revivalists had to create a deviation around the Central Electricity Generating Board's Llyn Ystradau reservoir which had flooded part of the original line. The deviation included a spiral loop atypical of the Darjeeling Himalayan Railway but not Britain, and if only because the volunteers had to hack their way through the side of a mountain, must be considered one of the greatest achievements of the preservation era.

To cope with the extra demand for motive power as their line grew longer, the revivalists needed more motive power – and what better than to continue the Boston Lodge tradition by building their own?

In 1979, a new double Fairlie 0-4-4-0 with rather utilitarian modern box-like side tanks, *Earl of Merioneth* emerged from the works.



James Spooner became the Ffestiniog's second double Fairlie in 1872. FR CO ARCHIVES



The original Welsh Highland Railway was operated by the Ffestiniog Railway which provided some locomotives and stock. *James Spooner* is seen at South Snowdon in 1923/24. While this locomotive was scrapped, its rods and wheels are now part of *Livingston Thompson*.

It was so well received that a second, *David Lloyd George*, which has a more conventional appearance, emerged three years later.

The Ffestiniog has also owned a single Fairlie, the 1876-built *Taliesin*, which was scrapped in 1935. A replica was built at Boston Lodge in 1999 – using some parts from the original: there are those who would therefore like to consider it a 'rebuild' rather than a copy.

The railways Fairlies were designed to burn coal. Following trials in 1971, they were modified to burn oil. However, with the price of fuel soaring, *Earl of Merioneth* was converted to coal in 2005 having been built as an oil burner. *Merddin Emrys* was back-converted to coal burning in 2007.

Josephine, a double Fairlie, is preserved in New Zealand's South Island at Dunedin, and a 60cm gauge double Fairlie tramway type engine that ran on a French narrow gauge line is at the Dresden Transport Museum in East Germany.

Until recently, it was thought that there were no other double Fairlies or remains thereof surviving in Britain.

However, in June 2004, Heritage Railway magazine revealed that two boilers from scrapped standard gauge double Fairlies had been rediscovered in Burry Port in South Wales. The discovery was made by the Gwendreath Railway Society, which wants to reopen the Burry Port & Gwendreath Valley Railway on which they ran.

It is believed that one of the boilers belonged to an 0-4-4-0T originally named *Pioneer* but later renamed *Mountaineer* and which in 1869 was only the second engine to be built by the Fairlie Steam & Carriage Company. The other boiler is believed to come from 0-6-6-0T *Victoria*, one of the abovementioned early Fairlies returned from Queensland, and later sold to the Burry Port line. Scrapped around the turn of the century, the boilers are now 6ft underground – in use as stormwater culverts!

The society has made the local authority aware of its interest in the boilers, which are said to be in reasonable condition taking their use for the past century into account.

Undoubtedly they are historically valuable artefacts, and will be retrieved if ever the chance presents itself. While they could not be considered themselves as the basis for any new-build locomotive project, they could be used as a template to build a new boiler, or two. Who knows: one day, the Ffestiniog may lose its monopoly on double Fairlies in Wales!

Fairlie's invention may seem weird by comparison with other steam locomotives today, but he was not far wide of the mark. Most main line diesels and traction units today have cabs at either end and turntables are a comparative rarity on the national network. ■

The 'Brio' line that built **London Bridge**



Built to last: the uppermost part of the Haytor Granite Tramway is still very much intact. Haytor and its quarries are to the left.

The ultimate in 'green' transport – a railway made from natural materials on the spot, emitted no smoke or fumes, ran on straw and bags of oats and never rusted away despite 150 years of disuse. Welcome to the Dartmoor's unique Haytor Granite Tramway, which in 1820 was a last attempt at flying in the face of steam traction.



A Brio train set operates on much the same principles at the Haytor Tramway.

I have always loved Dartmoor, forever entranced by its dark and mysterious landscape at all seasons of the year. The many mysteries that it holds, its unique sense of foreboding yet at the same time welcoming atmosphere, and the feeling that there is always something new waiting round the corner to be discovered.

Among its greatest treasures is one of Britain's most curious railways of all.

Prized for its fine grain and high quality, Dartmoor granite has been a source of building material from neolithic times when it was used to build dwellings and the stone rows and circles which survive on the barren uplands today.

From the 1730s, ball clay, which is formed by decomposing granite, was mined in the Bovey Tracey area for use in pottery, and was carried away by pack mules for shipping from Newton Abbot via the Teign estuary.

James Templer, an orphan boy who made his fortune in India after running away to sea, bought the 80,000-acre Stover Estate near Newton Abbot on his return in 1865 at the age of 43. In 1781 he built a new mansion there using stone quarried from his quarries at Haytor, today one of the West Country's best-loved beauty spots.

He died in 1792, the year that his eldest son, also called James, influenced by the canal mania which facilitated the growth of the Industrial Revolution throughout Britain, opened a one-and-three-quarter-mile artificial waterway from Ventiford near the estate to Newton Abbot to improve transport for the movement of ball clay and also lignite and iron ore, which were also found in the locality.

It was the first artificial waterway to be built in Devon since the Exeter Ship Canal in the 16th century.

Five locks facilitated a rise of 19ft 3in over the short canal. Once opened, it brought much prosperity to the surrounding area, with 17 barges operating and ball clay being supplied to the great Thomas Wedgwood & Sons potteries at Stoke-on-Trent, and land prices tripled along its length.

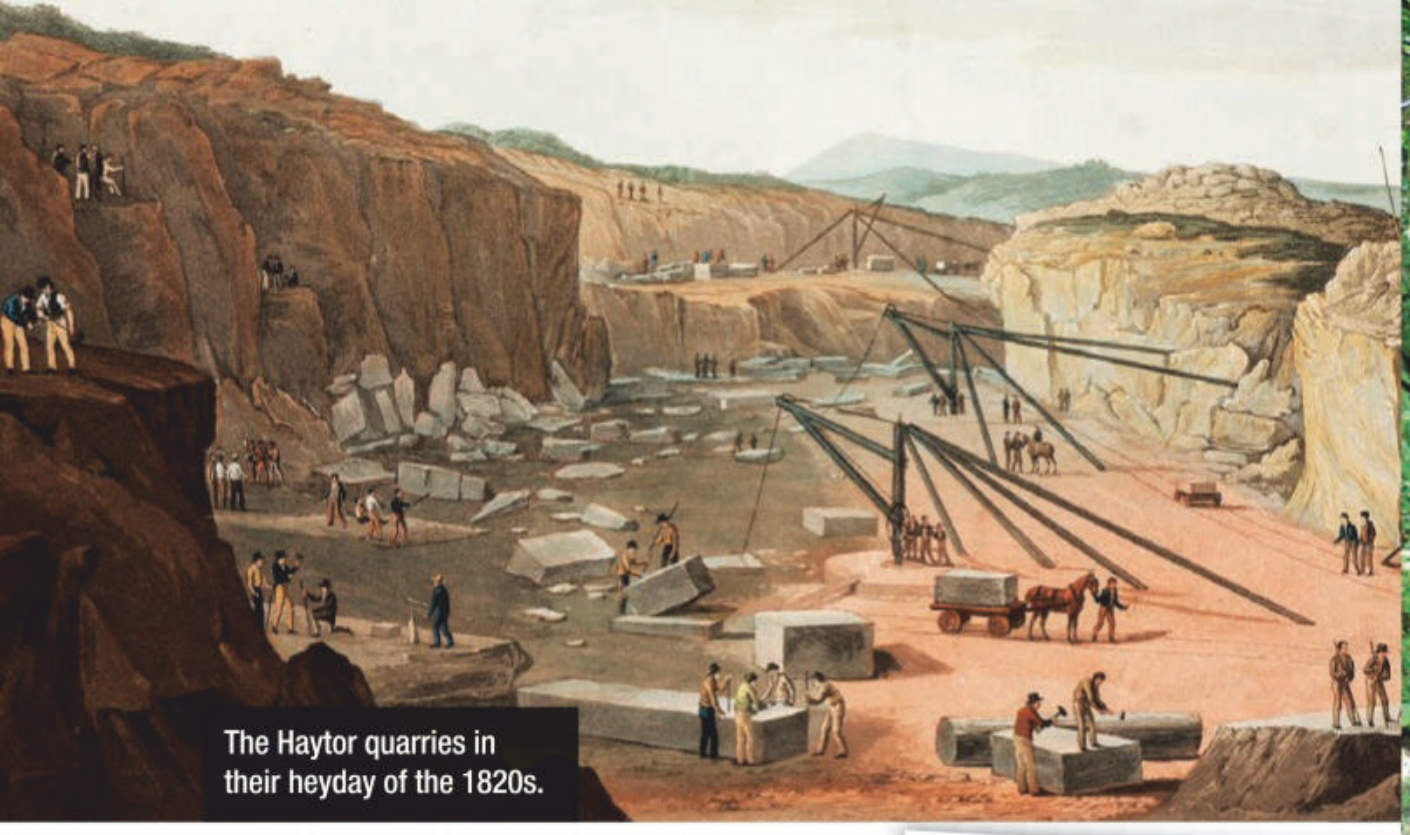
George Templer, son of the second James, developed the granite quarries at Haytor on a commercial basis, in response to demand for quality building materials.

However, if the quarries were to realise their true potential, a faster and more efficient mode of transport than horse-drawn carts over moorland tracks was needed.

George Templer came up with the idea of a railway. That in itself was by no means an original idea; the Tanfield Railway in County Durham boasts that it is the world's oldest line still in use, its ancestry dating back to 1725.

Steam traction had subsequently been invented by Richard Trevithick, his first public demonstration of a railway locomotive taking place in 1804, but had yet to take off in a big way: indeed, there were many who two decades later were still not convinced of its merits, and so Templer looked no further than the time-honoured use of horse traction.

However, George Templer's horse-worked railway would be very different to others that had gone before.



The Haytor quarries in their heyday of the 1820s.

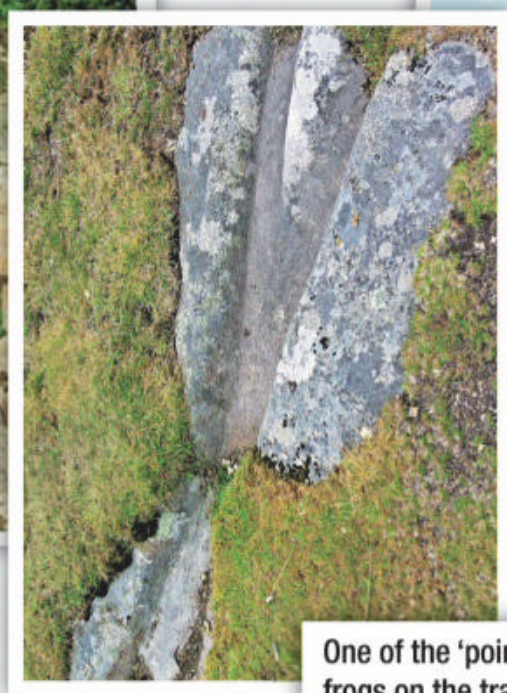


Above: A sylvan section of the old tramway south of the Edgemoor Hotel. Three of the original mileposts survive, including one in Yarner Wood.

Below: The only surviving bridge on the tramway crosses the Bovey Leat near Chapple Farm, about two miles west of Bovey Tracey.



A point and a siding.



One of the 'point' frogs on the tramway.



Tree on the line!

Suitable iron for rails was not easily available in the region at the time – cast iron was brittle and had a habit of breaking on early railways – so his scheme involved the track being made from granite blocks, appropriately quarried at Haytor and cut to size, with a rebate carved in each for carrying the iron wheels of the wagons.

It was a 4ft 3in gauge plateway or flanged way, in which the guiding flanges that kept the wagons on the rails were part of the rails. The rails or 'tramplates' were carved from irregular blocks of solid granite laid directly on the ground.

The end result was not unlike a modern-day child's Brio wooden train set, which is based around blocks of track with grooves carved into them for the push-along trains to run on. Like Brio, Templer's system was capable of having all the usual features of trackwork – points, crossovers and sidings. At the points, the wheels were guided by wooden 'point tongues' made from oak, pivoted on the granite-block rails.

The granite rails had L-shaped grooves with the flanges on the inside. The iron wheels of the wagons soon wore the straight granite flanges to shape on the curves.

The Haytor tramway was all but unique, the only other known example of this type of railway being a very short 3ft gauge limestone operation at Conisborough near Doncaster.

Going uphill, the empty wagons were hauled back to the quarries by teams of horses, but downwards, the loaded wagons moved by gravity to the Stover Canal basin at Ventiford,

The wooden flat-topped wagons had iron flangeless wheels and ran in trains of usually 12 vehicles drawn by around 18 horses in single file, in front for the upward journey and at the back for the downward trips.

The wagons were probably adapted road vehicles and were about 13ft long, with a 10ft wheelbase of 10ft (3.0m). The wheels were loose on the axles, and accidents were commonplace as the only braking was provided by the horses and long wooden poles forced against the wheels. Today's health and safety legislators would not be amused. ➤



An old sailor called Thomas Taverner was inspired by the tramway to write a poem:

Nineteen stout horses it was known,
From Holwell Quarry drew the stone,
And mounted on the twelve-wheeled car
'Twas safely brought from Holwell Tor

The '12-wheeled car' refers to 12 wagons with wheels'.

Taking a modern view, you might consider it to be a perfect 'green' form of transport with a minor carbon footprint. The stone blocks to make the track were quarried locally, and did not require iron to be smelted at polluting blast furnaces; there were no smoky emissions from steam engine chimneys and the form of traction was renewable – all you had to do was grow another field of hay or oats to keep it running.

The Haytor Granite Tramway, as it came to be known, may seem primitive when compared to its iron counterparts, but it has outlasted many of them including the northern end of the Moretonhampstead branch which superseded it. Indeed, when we talk about preserved or heritage railways, the Haytor Tramway may be considered a near-perfect example, because the rails do not rust, have no scrap value and are still in place along much of the route today.

However, in historical terms, we may also look at it as a 'last blast' from the age before steam traction was widely adopted as the only way ahead.

A complex of six branches and sidings akin to a marshalling yard sprang up around the busy Haytor quarries, and a line eight-and-a-half miles long descended from the 1300ft-high heather-clad moorland along a circuitous route into the Bovey valley, eventually reaching Ventiford basin at the northern end of the Stover Canal, which had been extended westwards to Teigngrace meet it in 1820.

Built without an Act of Parliament, the tramway was officially opened on 16 September that year amid public celebrations and much rejoicing.

A contemporary account of the opening day ran as follows:

"On Saturday Mr Templer, of Stover House, gave a grand fete champetre on Haytor Down, on the completion of the granite rail road. The company assembled at its foot on Bovey Heathfield, and in procession passed over it to the rock. A long string of carriages, filled with elegant and beautiful females, multitudes of horsemen, the workmen on foot, the waggons covered with laurels and waving streamers, formed in their windings through the valley, an attractive scene to spectators on the adjacent hill. Old Haytor seemed alive: its sides were lined with groups of persons, and on its top a proud flag fluttered in the wind.

"Never," writes the ecstatic reporter of an Exeter paper, "was the Haytor's sod graced with such blooming fair ones, nor did it ever before display so festive a scene."

From Teigngrace the granite was carried by canal boat to the New Quay at Teignmouth for export by ship, the quay having been built in 1827 for the purpose.

The following decade saw several thousands of tons of granite shipped via the tramway each year.

In 1825, it carried granite for the building of no less a structure than London Bridge, the one which in the 1960s was sold to the Americans. Indeed, it has been mooted that Templer's contract for supplying materials for the bridge was the prime reason for building the tramway in the first place.

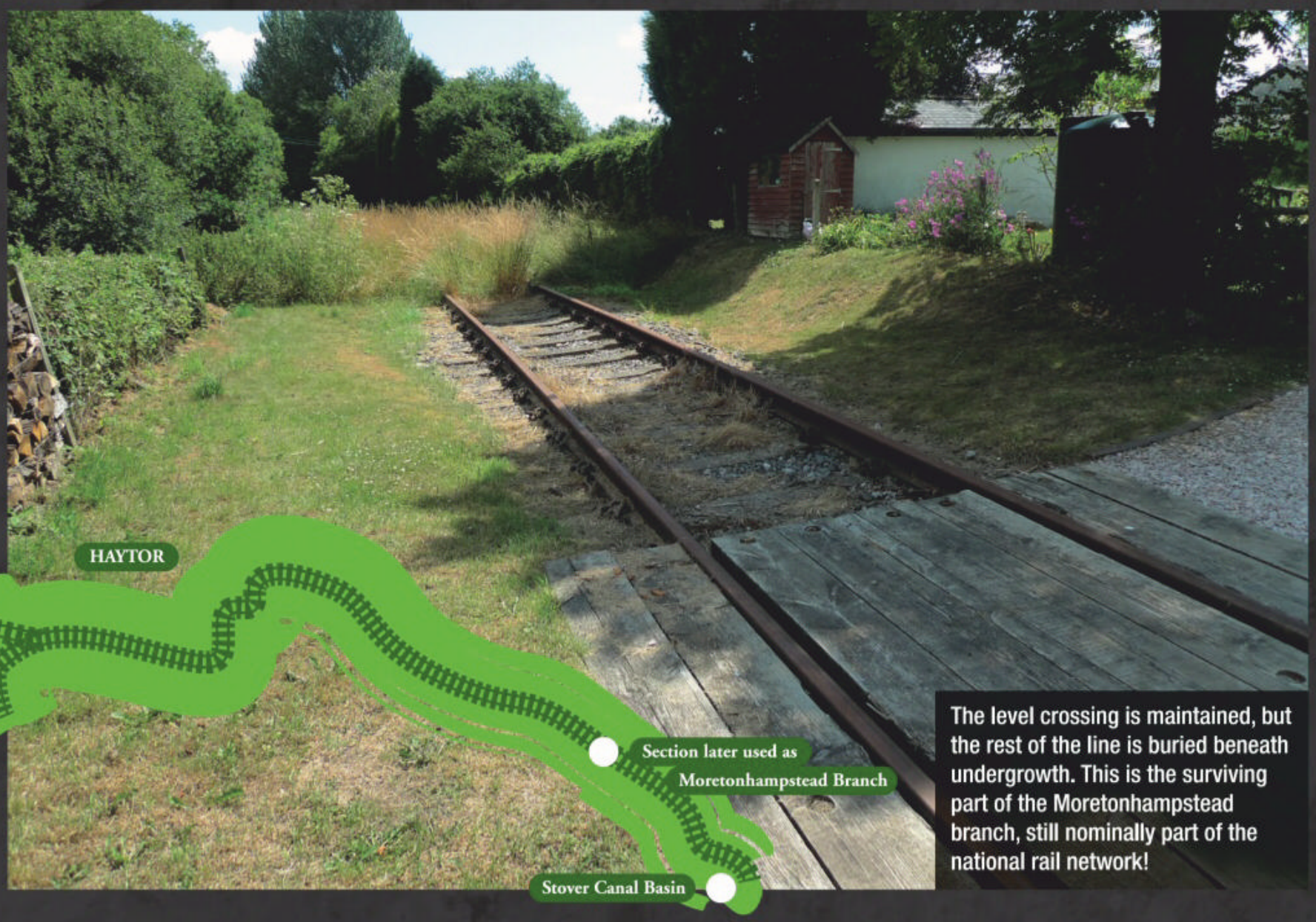
Part of the British Museum, the old General Post Office in London and the Waltham Monument in Ludgate Circus were built from Haytor granite in the 19th century. The last use of Haytor granite was the building of the Exeter War Memorial.

Templer's personal spending greatly diminished his prosperity and in January 1829 he sold the Stover Estate along with the tramway and canal, to Edward Adolphus Seymour, the 11th Duke of Somerset.

Templer left Devon, returning a few years later when he built a new mansion at Sandford Orleigh on the outskirts of Newton Abbot. He became the granite company's chief agent in the county.

A proposal to mine iron ore as well as granite from

The New Quay at Teignmouth in 1827 with a large crane and blocks of cut granite ready for transhipment.



The level crossing is maintained, but the rest of the line is buried beneath undergrowth. This is the surviving part of the Moretonhampstead branch, still nominally part of the national rail network!

Haytor and ship it via the tramway came to nothing, and a decline in quarrying set in.

Templer was killed in a hunting accident in 1843, and despite a resurgence in demand for Haytor stone in the early 1850s, with the quarries employing around 100 men, trade had all but died out by 1858 in the face of competition from cheaper Cornish granite. By then, the Haytor Tramway had long since fallen into disuse.

Isambard Kingdom Brunel's broad gauge South Devon Railway opened to Newton Abbot on 30 December 1846 and was extended to Plymouth by 2 April 1849. Landowners began to look at ways of linking smaller towns to his line, and moves to build a branch line to the ancient Dartmoor town of Moretonhampstead began. Promoters held a meeting at the Globe Hotel in Exmouth on 18 September 1861 and eventually formed the Moretonhampstead & South Devon Railway Company.

The easternmost mile of the granite railroad being used for the new steam line and it was therefore cut back from the canal terminus.

Although by then the tramway was disused, the landowner, the Duke of Somerset, insisted that new interchange sidings between the old and new lines were created a mile south of Bovey Tracey, complete with a crane for lifting blocks of granite, but it was probably never used.

The duke saw the opportunity to rid himself of both the canal and granite tramway and sold them to the new railway company.

Early hopes that the 12¼-mile steam line would encourage businessmen and middle-class commuters to settle in Moretonhampstead quickly proved ill-founded as Torquay proved more attractive.

The Moretonhampstead branch quickly settled into the daily routine of a typical country branch. When the Great Western Railway took over the branch, it also bought the Stover Canal for £2800.

The branch's three return daily passenger workings increased to five by the end of Victorian times, and tourist numbers were considered sufficient for a private operator to lay on a horsebus to connect Moretonhampstead to the isolated moorland town of Chagford. In April 1906 the GWR introduced a motor bus service between the two, ironic in view of the fact that the original promoters of the branch had intended to extend it to Chagford, which ended up never being served directly by a railway.

The granite tramway had, by comparison, never carried passengers, but around 1905 a scheme to electrify the line and run a frequent tram service was mooted. A small power station was built for it, but the scheme came to nothing. The power station was used by Bovey's clay potteries until it fell into ruin.

The steam branch had intermediate stations at Lustleigh, Bovey Tracey, Chudleigh Road (later renamed Heathfield) and Teigngrace Halt. Eager to foster 'leisure travel' the GWR bought the luxurious Edwardian home of Lord Hambleton, one of its directors, in 1929 and turned it into the prestigious Manor House Hotel on the lines of Gleneagles in Scotland. One of the more famous guests was Hitler's ambassador Joachim von Ribbentrop.

The 1930s saw branch trains peak at 10 per day and new halts were added at Brimley and Hawkmoor. Lustleigh station was chosen for scenes in a 1931 film version of Sir Arthur Conan Doyle's Sherlock Holmes classic *The Hound of the Baskervilles*, and on 1 December 1937, King George VI visited Moretonhampstead by train.

In 1936, a Mr Jeffrys-Jones presented a section of stone rail from the old granite tramway to the Science Museum, probably for use in an exhibition which told the story of early trackwork.

The growth in car ownership accompanied the postwar decline in the fortunes of the Moretonhampstead branch, and by 1958, most of its passenger services were running empty. Among the locomotives which worked the final passenger services on the branch, on 28 February 1959, was Collett 0-4-2T No 1466, now preserved at Didcot Railway Centre.

Despite the patchy custom, much local fury was vented at the withdrawal of passenger trains, as branch line closures were still a comparatively rare occurrence right up to the days of Dr Beeching and his infamous axe. ➤



The top lock on the Stover Canal at Teigngrace, still in water at this point.

Local councillors refused to accept that it really was the end of public transport on the line, and those who opposed the withdrawal of the passenger trains pointed out that British Railways' losses incurred in providing them were only slightly more than £17,000 per annum and great savings could be made by rationalising the infrastructure and introducing diesel railcars and multiple units.

Around this time the young founders of the Bluebell Railway in Sussex had attracted much nationwide publicity over their success in taking over part of a line closed by BR, and history shows that their sterling efforts were to influence events in other areas.

Launching a campaign for the reintroduction of passenger trains to Moretonhampstead, the South Devon Railway Society was formed by the Rector of Teigngrace (where the parish church was built by the Templers with their wealth from the granite quarries), Canon OM Jones and Torquay enthusiast EG Parrott, and on 6 June 1960 a Paignton-Moretonhampstead special, 'The Heart of Devon Rambler' was run, carrying more than 200 people. Shortly afterwards, the society leased Teigngrace Halt as its headquarters.

However, despite the running of a final excursion, the `South Devon Phoenix,' which generated much publicity for the cause, the arguments fell on unsympathetic ears and passenger services never returned to Moretonhampstead.

The line north of Bovey Tracey was closed to freight from 6 April 1964, following the granite tramway into oblivion. The branch was again cut back in 1970, as far as Heathfield, which was kept open to serve a Gulf Oil terminal built in 1966 in addition to ball clay traffic and other goods. The truncated branch was also used for stabling the Royal Train.

Freight declined during the 1990s to the point where the branch was merely 'retained' by Railtrack, but a weekly clay working resumed at the end of the decade.

At the time of writing, 2009, the condition of the surviving part of the branch shows that there has been no traffic for many years. It may be retained as part of the national network, but Mother Nature cares nothing for such designations, and the line is smothered by vegetation.

The South Devon Railway Society was not exactly thwarted in its aims of starting its own passenger services, even though it had to abandon all hope of reviving the Moretonhampstead line. One of the principal reasons was that the branch was unlikely to be closed completely and would still be needed for goods trains.

So members' attention was switched to other redundant branch lines in the locality which could not only be saved but retained as a showcase for heritage traction in a land which would soon be bereft of steam.

Members gave serious consideration to the GWR South Brent-Kingsbridge branch which largely followed the course of the wooded valley of the River Avon and which would undoubtedly have quickly become one of the finest British heritage lines of all had it been preserved. However, contractors had begun dismantling it on the same evening that local council support for its revival had been won.

Separate moves evolved out of the society initiative as a third branch was considered. On 29 September 1962, the *Western Morning* News reported that private plans were afoot to reopen the Totnes-Ashburton branch, which had just closed to freight, passenger services having ended on 1 November 1958.



The L-shaped section of the granite block is still visible after nearly two centuries.



Lilies adorn the water which has formed a pool in Haytor Quarry, from where granite blocks were carried out by the tramway.

Founders Bob Saunders and Peter Stedman brought together a group of businessmen to reopen the line to passengers and run it on a commercial basis as a tourist attraction. The Dart Valley Light Railway Company Limited was set up to buy the line and acquire suitable locomotives.

Sadly, while the DVR succeeded in reopening Totnes-Buckfastleigh as an attraction for summer tourists, it failed to persuade the Ministry of Transport from taking the top portion, the stretch from Buckfastleigh to Ashburton, as a route for the A38 trunk road scheme of the early 1970s.

Reopening the line in 1969 as a tourist attraction was an overnight success, but the railway world was stunned in 1971 when the company announced plans to buy the Paignton-Kingswear line from BR after it too had been identified for closure. Therein the seeds were sown for what was to become one of the country's most popular heritage lines, today's Paignton & Dartmouth Steam Railway.

The DVR's supporting association took over the Buckfastleigh line in the early 90s and later bought it, rebranding it the South Devon Railway, and its success has also grown steadily over the years. However, both of these superb attractions can trace a lineage back to the granite tramway via the Moretonhampstead line and the efforts to keep it open.

Around the start of the new millennium, plans were made to rebuild another historic transport artery, the Stover Canal, which was inherited from the GWR by British Railways.

Following the purchase of the canal, the GWR leased it in 1893 to Watts & Co for 21 years and also ran its own barges along it. Ball clay, coal and builders' materials were the main sources of freight, as the canal could offer the unrivalled advantage of carrying materials from the clay pit to the port of Teignmouth. However, lorry transport of dehydrated and powdered clay proved more attractive and the canal was basically disused by 1939, the GWR closing the navigation in 1943 and freeing itself of any obligation to maintain it.

In September 1999, the Stover Canal Society was formed with the aim of restoring the waterway as a major leisure amenity for the area. Members of the Waterways Recovery Group, an offshoot of the Inland Waterways Association, carried out significant clearance during a work camp on the canal in 2000.

Restoration is seen as possible; all five lock chambers are still in existence but new gates will be needed and the single major obstruction is a culvert at Lock 2 where the canal is crossed by the truncated Moretonhampstead branch.

The society sees a restored Stover Canal as having huge potential for boating, angling, and wildlife.

As such it would enhance the appeal of the 18-mile Templer Way long-distance footpath.

Taking its name from the family which built the canal and granite railway, the path runs from Haytor Rocks, largely follows the line of the old granite tramway through Heathfield. It passes through the outskirts of Bovey Tracey and Liverton before entering Stover Country Park, the landscaped grounds of James Templer's Stover House, which is now a girl's school.

The park is centred around a giant ornamental lake and, home to many species of waterfowl and dragonflies, and is now a Site of Special Scientific Interest. A waymarked heritage trail follows a circular tour around the Stover Estate, taking in the northern canal basin at Ventiford, running alongside the largely dried-up bed of the waterway and passing into Newton Abbot and along the south shore of the Teign estuary to Shaldon and Teignmouth.

The tramway itself is now a Scheduled Ancient Monument and in recent times efforts have been made to maintain it as such. It is clearly visible for long distances and provided an attractive and fascinating route for ramblers.

The Haytor rocks and quarries are protected from development and disturbance as a Site of Special Scientific Interest, and, surprisingly missed by the many coachloads of visitors who come to climb Haytor before passing on to the teashops of Widecombe-in-the Moor, Uncle Tom Cobley and all, are one of the most secluded and beautiful parts of Dartmoor National Park. Of course, the best way to reach the quarries is via the tramway!

*Pictures by Robin Jones ■



London Bridge around 1900, when buses were hauled by horses, just like the wagons on the tramway which carried the blocks to build it.



Heathfield was the junction of the Moretonhampstead line, which superseded the Haytor Granite Tramway, and the Teign Valley route to Exeter – which provided a ready diversion in case of blockages on Brunel's main line such as storm surges over the Dawlish sea wall, and accordingly many believe it should have been retained. On 7 June 1958, trains for Paignton, Exeter via the Teign Valley line and Moretonhampstead wait to depart. PETER W GRAY

A cog in the system

Rack and pinion railways are commonplace in the Swiss Alps and present in other mountainous regions around the world, and yet there is just one in the United Kingdom. Accordingly, the Snowdon Mountain Railway, which runs up to the roof of Wales and operates in some of the harshest weather conditions in Britain, qualifies for a place in this book.

The uniqueness of rack railways in Britain is ironic, because we invented them!

The use of a toothed rail and cog fitted to the train to improve adhesion on tracks was the brainchild of Cornishman Richard Trevithick, who invented the world's first railway locomotives. He was concerned that the friction of metal wheels on metal rails would be too low for a substantial weight to be pulled without the engine slipping, so he built his first experimental locomotives with teeth on the wheels on one side that engaged in teeth on the corresponding rails. The system was found to be unnecessary on gentle gradients, but the concept had been introduced.

Not only was this a British first, but the first cog railway in the world was not built to climb dizzy heights in Switzerland or Austria to appreciate chocolate box views, but to serve heavy industry in Yorkshire.

The Middleton Railway, which has operated on the outskirts of Leeds since 1758, and which in 1960 became one of Britain's first volunteer-run heritage lines, installed a rack and pinion system in 1812 when it upgraded from horsepower to steam traction.

The system had been designed and patented by John Blenkinsop in 1811, following on from Trevithick's ideas; and what is claimed to be the world's first commercial steam locomotive, *The Salamanca*, ran along it in 1812. The weight and friction needed to be kept low to stop the locomotive breaking the brittle cast iron rails.

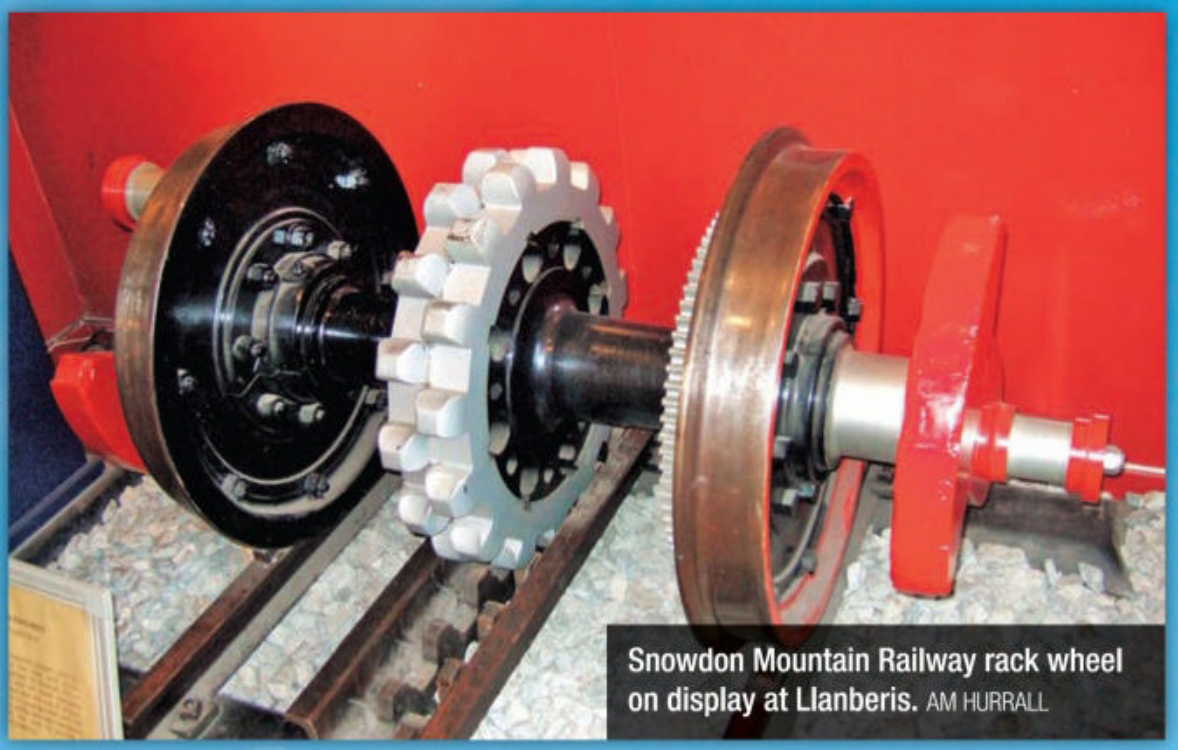
Again, for the first mountain cog railway, we must look not to the continent, but to the USA. It was in 1868 that the Mount Washington Cog Railway in the state of New Hampshire carried its first fare-paying passengers in 1868. The line, designed by Sylvester Marsh, used a central rack system whereby at least two teeth in the cog on the locomotive are engaged with it at all times. It was extended to the summit of Mount Washington in 1869.

The first mountain rack railway in Europe was the Vitznau-Rigi-Bahn on Mount Rigi in Switzerland, which opened in 1871 and like the Mount Washington line, is still operating today.

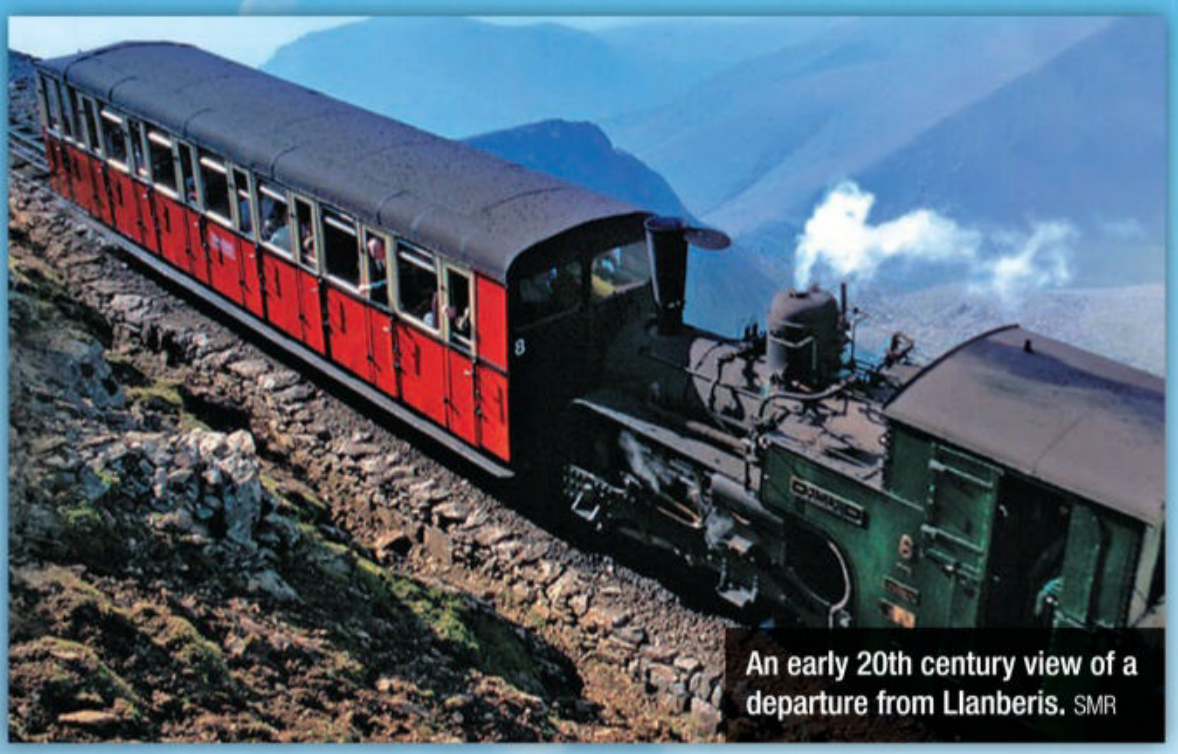
It employs the Riggenbach rack system designed by Marsh's contemporary Niklaus Riggenbach working at about the same time as, but independently from Marsh. After Riggenbach was granted a French patent in 1863 and sought investors for a line in Europe, the Swiss consul to the USA visited the Mount Washington Cog Railway and came back with glowing reports. Accordingly, the Swiss government commissioned Riggenbach to build a rack railway up Rigi Mountain.

Several different types of rack or cog systems followed in the wake of the success of these two. The one that chiefly concerns us here was designed by Swiss locomotive engineer Roman Abt, who was employed by Riggenbach at his rack locomotive company. ➤

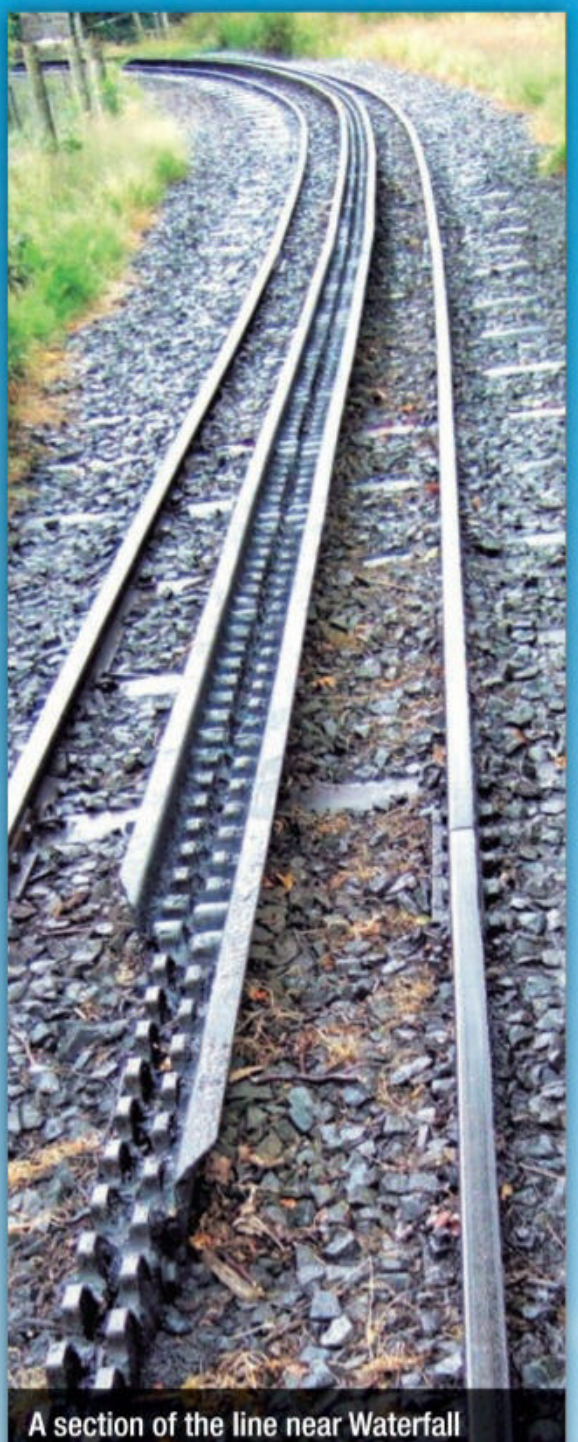




Snowdon Mountain Railway rack wheel on display at Llanberis. AM HURRALL

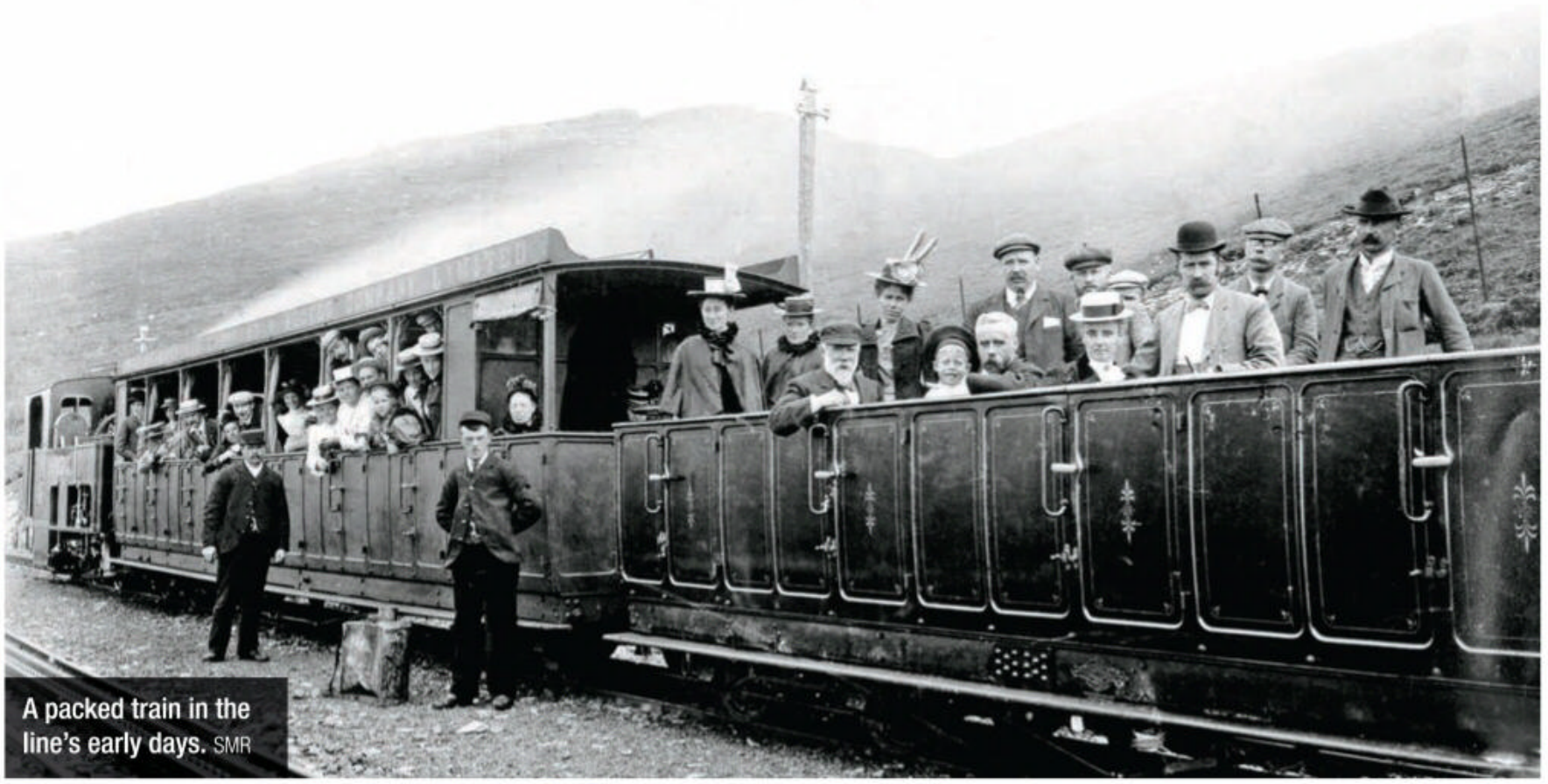


An early 20th century view of a departure from Llanberis. SMR



A section of the line near Waterfall showing the rack rail. AM HURRALL

No 2 *Enid*, named after the lady who cut the first sod at the railway, at Clogwyn. SMR



A packed train in the line's early days. SMR

Abt came up with a new rack system that was cheaper to build than Riggenbach's, and had simpler pointwork.

His system was solid bars with vertical teeth machined into them. Two or three of these bars are mounted centrally between the rails, with the teeth offset. The use of multiple bars with offset teeth ensures that the pinions on the locomotive driving wheels are constantly engaged with the rack, and the pinion wheels can be mounted on the same axle as the rail wheels.

The most distinctive feature of rack railway steam locomotives is that they are built with their boilers, cab and general superstructure tilted forward at an angle.

Steam engines can operate only when the boiler is level, because it needs water to cover the boiler tubes and firebox sheets at all times.

Such locomotives often cannot function on level track, and so the whole railway, including sheds and workshops, must be laid on a gradient. That is a prime reason why many continental rack railways have been electrified, as diesel and electric locomotives do not have the same problem.

Another way in which rack railways differ greatly from conventional lines is that the locomotives always push the carriages, for reasons of safety. The engines are fitted with powerful brakes that grip the rack rail solidly. Some have automatic brakes that apply if the speed gets too high, preventing runaways.

The carriages are often left uncoupled to the locomotive: gravity will always push the vehicle down against the locomotive.

The idea of a railway running to the summit of Mount Snowdon, the highest peak in England and Wales, was first proposed in 1869, as more and more tourists discovered the delights of Snowdonia, arriving at Llanberis from Caernarfon via a branch of the London & North Western Railway to take the mountain path. However, the scheme fizzled out after the landowner decided it would ruin the view.

When the 1ft 11½ gauge North Wales Narrow Gauge Railways (later the Welsh Highland Railway) was laid past the western side of Snowdon, and plans to build a mountain railway from its station at Rhyd Ddu were made, Llanberis traders feared that their town would lose out big time.





The roof of Wales: No 6 Padarn with a train at Summit Low. SMR



The railway in winter. SMR

As a counter measure, the Snowdon Mountain Tramway and Hotel Company was formed to build the railway, without an Act of Parliament, as it was to be laid entirely on private land without any compulsory purchase necessary.

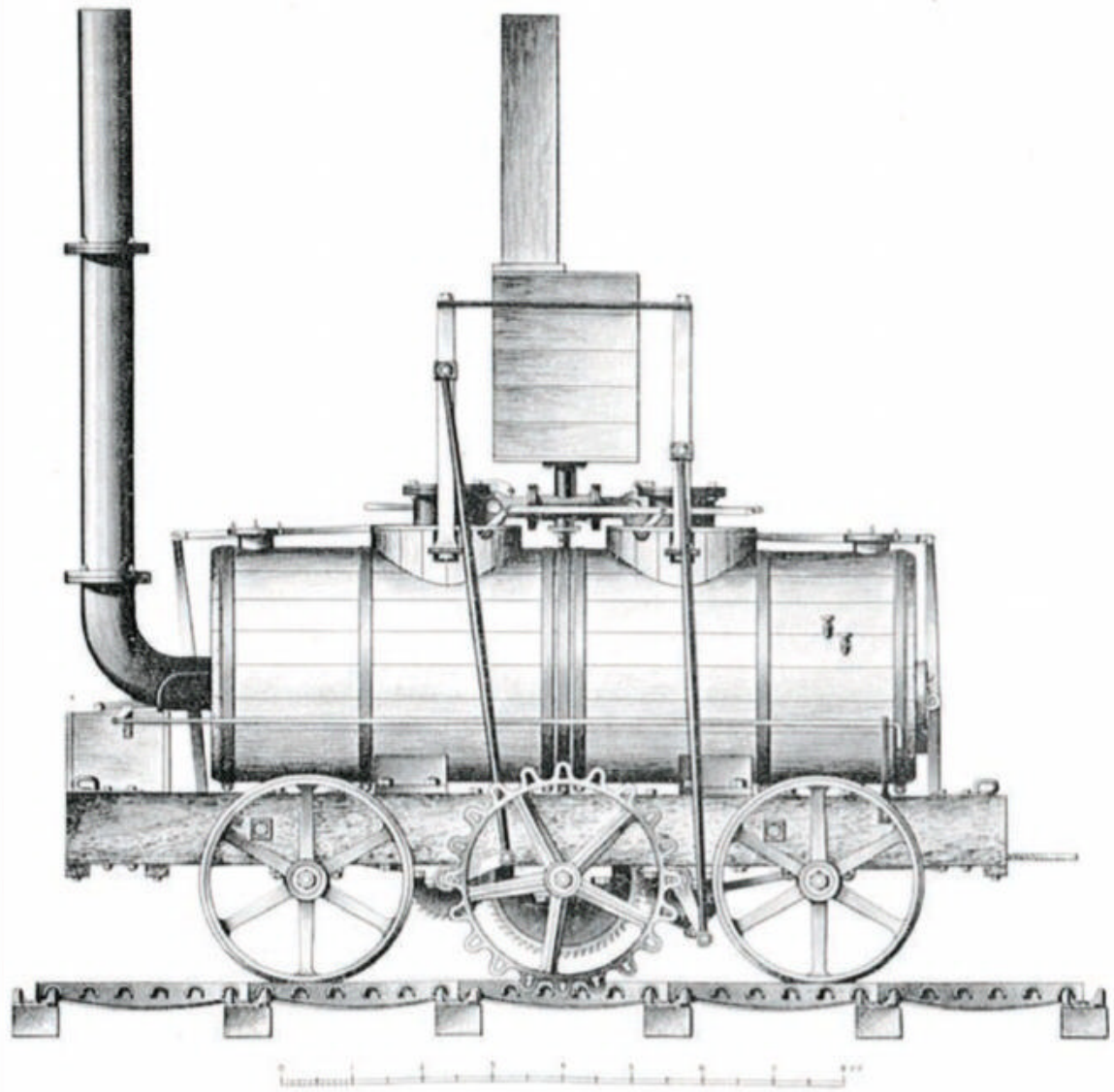
The first sod was cut in December 1894 by Enid Assheton-Smith, a member of the landowner's family, and February 1896, at a cost of £63,800. It used the Abt rack system, and involved two large viaducts being built between Llanberis and Waterfall.

The 2ft 7½in gauge railway was built to a total length of four miles 1188 yards, with an average gradient of 1-in-7.86 as it rises from 353ft above sea level at Llanberis to 3493ft at Summit station, offering stunning views of the glaciated landscape over almost every inch of the way. The steepest gradient on the route is 1-in-5.5.

As built, there were seven stations, beginning with the terminus at Llanberis, where the company offices, locomotive shed and workshops are sited.

The first station up the mountain, Waterfall, was built to allow visitors to ride on the train to travel to see a spectacular waterfall nearby, but it is now closed.

Hebron station at 1069ft was named after the nearby Hebron chapel and Halfway station at 1641ft is as its name implies. Further up, the line runs to Rocky Valley Halt and then reaches Clogwyn station at 2556ft, which overlooks the Llanberis Pass and the Clogwyn Du'r Arddu cliffs. The wind speed is measured at Clogwyn station to check whether it is safe for trains to proceed to the summit; if not, they stop at Rocky Valley Halt. ➤



World first: *The Salamanca*, built in 1812 by Matthew Murray of Holbeck for the edge railed Middleton Railway, was a rack and pinion locomotive using John Blenkinsop's patented design for rack propulsion. A single rack ran outside the tracks and was engaged by a large cogwheel on the left side of the locomotive. The engine was destroyed six years later when its boiler exploded. THE MECHANIC'S MAGAZINE, 1829



The route at Clogwyn follows a ridge and offers breathtaking panoramas of the glaciated landscape. SMR

Summit station is just 68ft below the 3560ft mountain peak.

While Britain led the world in terms of locomotive manufacture, only the Swiss had experience building rack locomotives, so the Swiss Locomotive and Machine Works of Winterthur was awarded the contract to build the first five Snowdon engines.

All of them are 0-4-2Ts, Nos 1 to 3 were used in building the line. During 1922/23, three more engines were ordered from SLM, becoming Nos 6-8.

The first train physically reached the summit in January 1896, but due to much of the line's infrastructure not being complete, it was not opened until Easter 1896.

The line was officially opened on Monday 6 April, and two trains ran up to the summit.

On the first return trip down the mountain, locomotive No 1 *Ladas* with two carriages lost the rack and ran out of control. The locomotive derailed and tumbled down the mountainside to its destruction.

A passenger, Ellis Griffith Roberts of Llanberis, died from loss of blood after jumping from his carriage. The second downward train hauled by No 2 *Enid* then hit the carriages of the first, but there were no more fatalities.

An inquiry ruled that the cause of the accident was post-construction settlement, compounded by excess speed caused by the weight of the train. Henceforth, the maximum allowed train weight was reduced to the equivalent of one-and-a-half carriages. As a result, lighter carriages were built to make up two-carriage trains.

Furthermore, a gripper system was installed to boost adhesion on the rack. On the steeper sections of the line, gripper rails are fixed to either side of the rack rail in the form of an inverted 'L' cross section. A gripper is fitted to each locomotive, which fits around the gripper rails and holds the locomotive to the rails and prevents the pinion working itself free from the rack. Snowdon is the only Abt rack railways to use a gripper system, although the feature is common on other rack systems.

The railway reopened on 9 April 1897, and there was no repeat of the calamity.

The railway took off as a major tourist attraction, especially among people who had never visited the continent and were amazed by the sight of the tilting locomotives.

In 1935, a new summit station was built. It was designed by Sir William Clough-Ellis, who had created the wonderful Italianate village of Portmeirion near Porthmadog and which shot to fame in the 60s as the setting for the cult TV spy series *The Prisoner.*

However, in later years, its grim functionality came to be widely criticised as one of the architect's less fine moments, and Prince Charles famously described it as 'the highest slum in Wales'.

Services were partly disrupted by World War Two, and when they resumed afterwards, a national shortage of coal led to old army boots being burned in the locomotive fireboxes.

British Railways closed the Llanberis-Caernarfon branch to passengers in 1962, leaving the mountain railway without a nearby station on the national rail network for the first time.

A share issue made in 1985 raised money to buy the line's first two diesel locomotives.

Between 1986 and 1992, four Hunslet diesel locomotives were built specially for the railway, and became Nos 9-12. In 1995, the diesels were followed by three identical railcars built by HPE Tredegar Ltd and designed to run as either two- or three-car multiple units.

Service trains depart from Llanberis at regular intervals, up to every 30 minutes at busy times, and in the peak summer season are often sold out.

The first train of the day is the works train, which takes supplies, including drinking water and fuel for the generator, to the summit, as well as provisions for the café at Halfway, and also carries the permanent way maintenance gang.

In 2006, the offending summit café was demolished and fundraising started for a state-of-the-art replacement, which was officially opened on 12 June in 2009 by Welsh First Minister Rhodri Morgan. It was named Hafod Eryri, Welsh for 'high residence of Snowdonia' and cost a total of £8.4-million, mostly financed by grant aid.

The railway played a part in its construction, by transporting much of the building materials to the summit – and therefore running real freight trains in the process. In the formative years, it had been hoped that the railway might have attracted some agricultural traffic as well as passengers.

The railway was immortalised by the Rev Wilbert Awdry in his Thomas the Tank Engine series of books. It is the inspiration for the Culdee Fell Railway, a fictional cog railway on the Island of Sodor, in the book *Mountain Engines.*

*For details of train times or to make advance bookings, telephone 0871 720 0033. ■





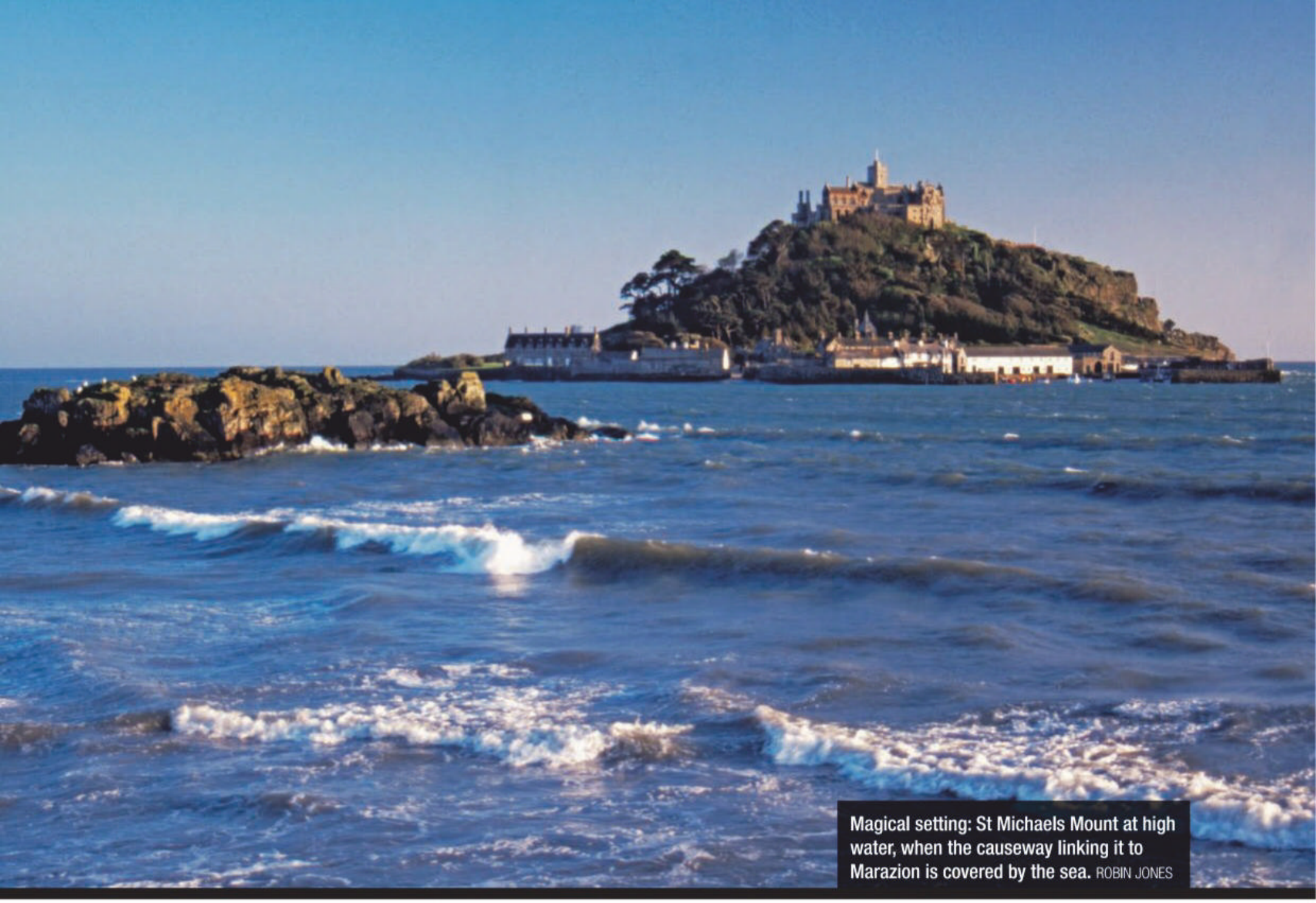
The Mount Washington Cog Railway. In recent years, long-serving Snowdon Mountain Railway engineer Nigel Day has been helping its US counterpart with improvements to locomotive performance and experiments on the conversion of steam locomotives to oil firing. MWCR

'Services were partly disrupted by World War Two, and when they resumed afterwards, a national shortage of coal led to old army boots being burned in the locomotive fireboxes.'



The 6ft 6¾in broad gauge Cairngorm Mountain Railway which opened in 2001 is the highest railway in the United Kingdom, but is a cable-operated funicular line, not a rack railway like Snowdon. FRASER ANDERSON

The railway is dwarfed by the landscape as it climbs towards the summit. SMR



Magical setting: St Michaels Mount at high water, when the causeway linking it to Marazion is covered by the sea. ROBIN JONES

Tunnelling through fairyland

The romantic Cornish island of St Michaels Mount regularly featured in the Great Western Railway's summer holiday guide – which did not mention that it had a secret line of its own.

The fairytale Cornish island of St Michael's Mount has been a source of myths and legends since time immemorial. Its greatest secret, however, is a feature not of the imagination, but of technology.

The wooded rocky outcrop with its romantic castle, miniature harbour and fishing village, and connected to the mainland at low tide by a granite causeway, is the centrepiece of one of the most romantic seascapes in Britain, on which delights passengers on board main line trains approaching Penzance as soon as the coast breaks into view.

Historians believe that the island was Ictis, the place where the great seafarers of the ancient world, the Phoenicians, traded in tin from Cornish mines in the Iron Age.

Various tales have linked it with the archangel Michael and a giant called Cormoran who later perished at the hands of Jack the Giant Killer.

The island also features heavily in the legends of the lost kingdom of Lyonesse, which stretched from Land's End to the Isles of Scilly and which was destroyed in a night by a massive earthquake, caused by Merlin the magician in revenge for the death of King Arthur.

The island's Cornish name means 'hoar rock in the wood' suggesting that it once lay several miles from the coast and was surrounded by trees; there is much truth in this, as the stumps of a prehistoric forest can sometimes be glimpsed at low tide.

The chronicler John of Worcester wrote that the now-submerged land fell beneath the waves in a great storm of November 1099, but science disagrees, for the stumps have been carbon dated to 1700BC, before recorded history began in Cornwall.

A group of monks from Mont St Michel in Normandy – almost a carbon copy of St Michael's Mount, as it is also a fortified isle linked to the coast by a tidal causeway were given the Cornish island in the 11th century and built a Benedictine priory on its summit. Subsequently, centuries before Cornwall became Britain's favourite summer holiday destination, with much help from the Great Western Railway (which had a station opposite the isle at Marazion, where redundant Pullman cars were later sited as camping coaches), St Michael's Mount attracted tourists in the form of pilgrims to the priory.

This ecclesiastical settlement survived until Henry VIII fell out with Rome over his divorce from his first wife, and dissolved the monasteries.

The remains of the island priory were later rebuilt into a castle. In 1588, the first beacon to warn of the coming Spanish Armada was lit there.

In 1659, St Michael's Mount was sold to Colonel John St Aubyn, who turned the castle into his family's home, and whose descendant, Lord St Levan, gave the island to the National Trust in 1954 and now hordes of tourists rather than pilgrims make the journey to the little harbour each year, either by boat or across the causeway, climbing steps to the medieval castle to inspect the plaster reliefs of hunting scenes in the Chevy Chase Room (the former refectory), the armoury and the fine furniture of the Blue Drawing Room. ➤



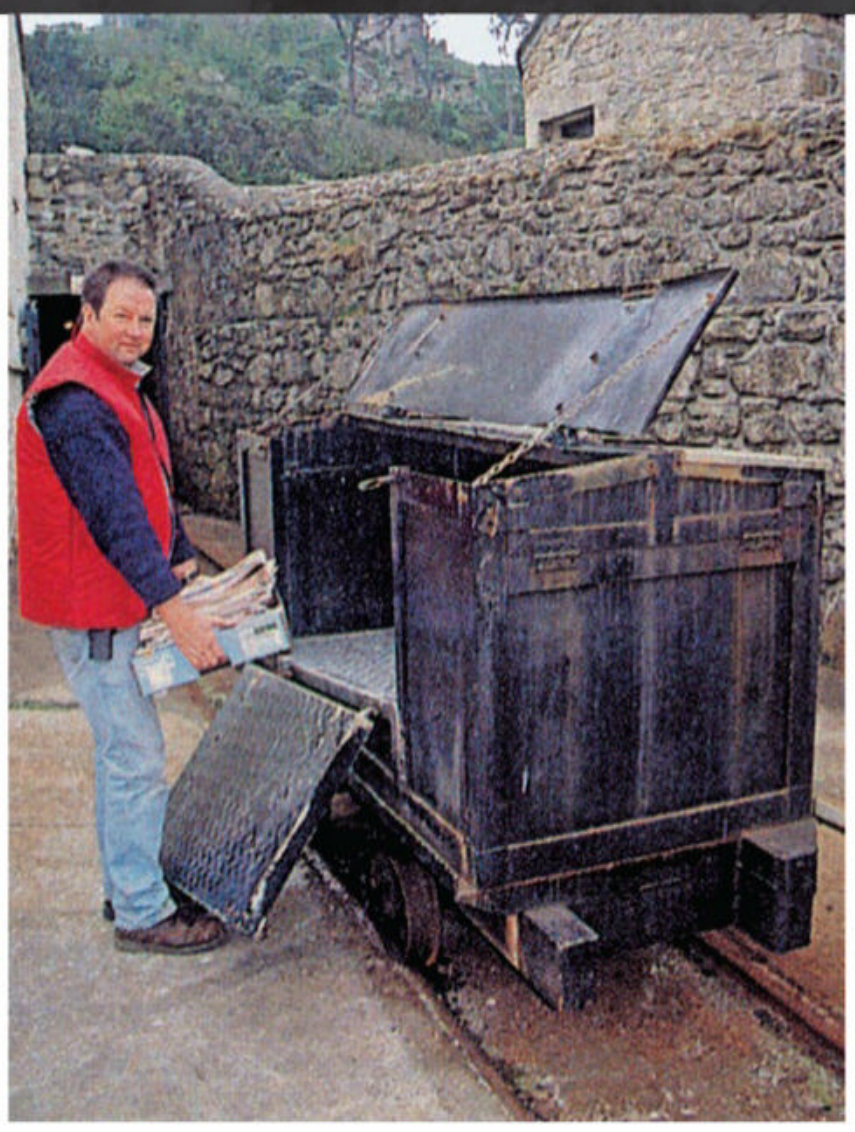
Above: **The short length of 2ft 5in gauge rail set in the island quay is the only part of the railway that the public regularly see.** ROBIN JONES

Right: **A cargo of old newspapers is received at harbour station.** ROBIN JONES

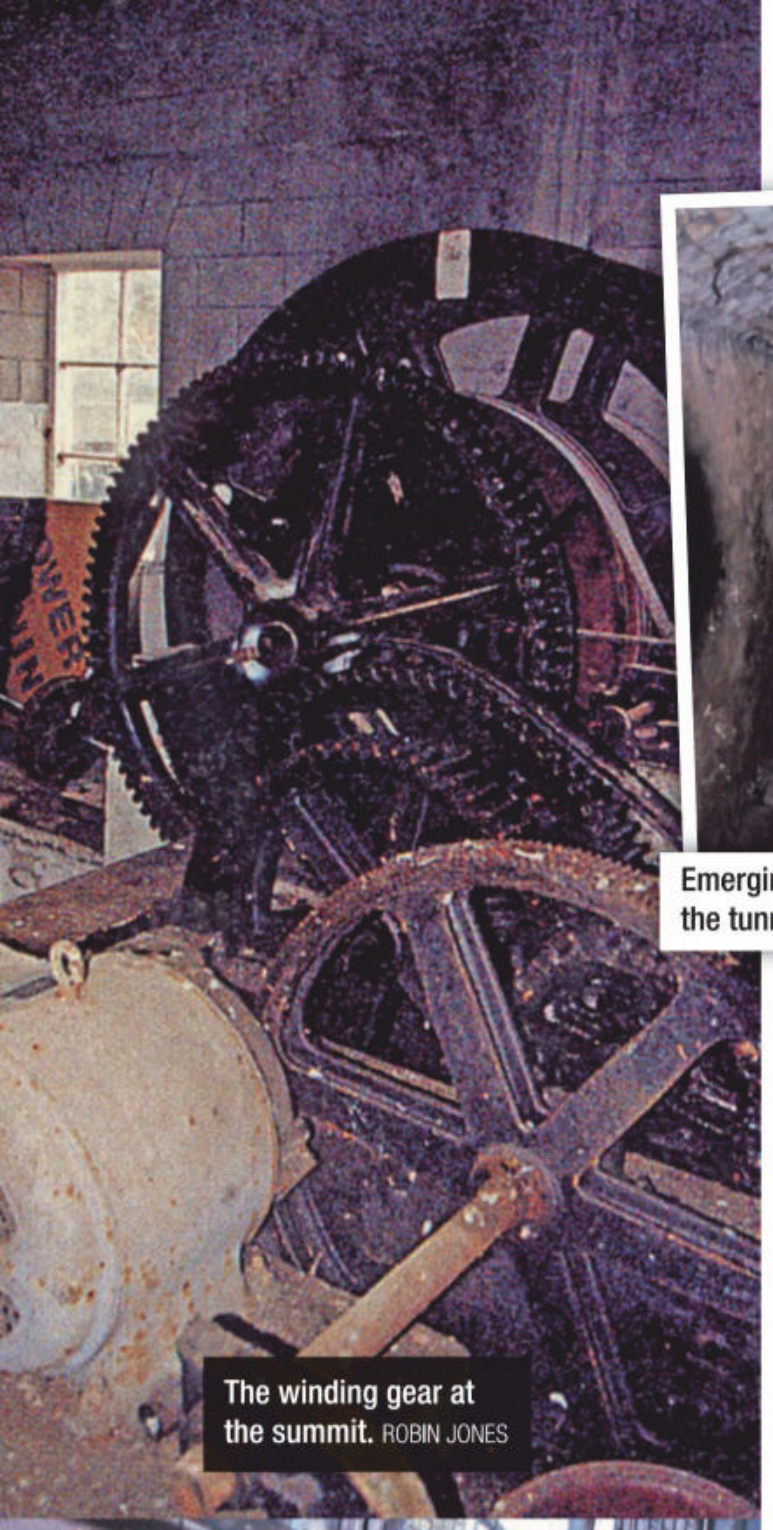
Below right: **The buffer stop at the harbour station ensures that the train never comes into contact with passers-by on the quayside.** ROBIN JONES

Below: **Boatman Dave Ladner unloading the train at the harbour station, which is housed in a metal cage.** ROBIN JONES





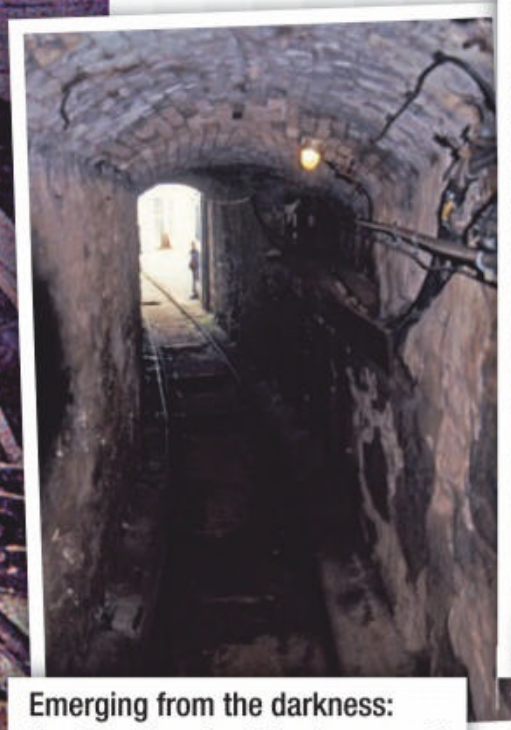




The winding gear at the summit. ROBIN JONES



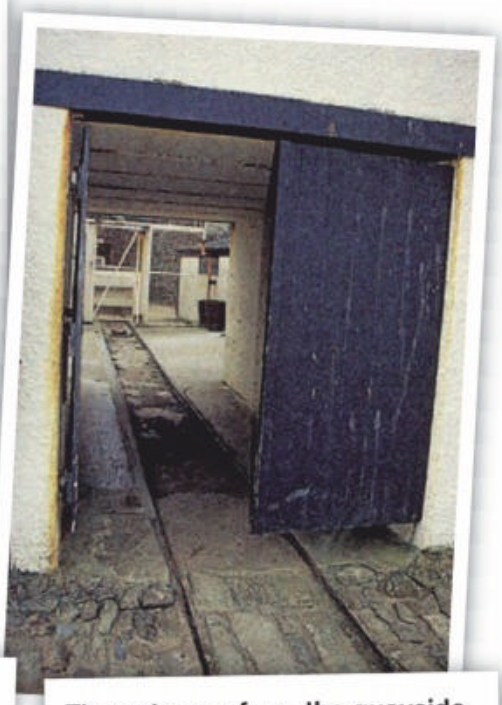
Waiting for the train at the 'pantry' station. ROBIN JONES



Emerging from the darkness: the tunnel ends at the 'tramyard.'



The railway tunnel inside the hill.



The entrance from the quayside to the 'tramyard.' ALL ROBIN JONES

The head of the family is still the island's 'lord'. The family live in the Victorian wing of the castle which was built between 1873 and 1878.

However, every fairytale castle should have a dark secret, and very few of the 200,000 or so annual visitors ever stumble across it.

Even less believe that it has its own working railway; no, not a model, nor a pleasure line, a toy or a gimmick, but a real working freight-carrying operation, one which was never threatened by the Beeching Axe (he probably never knew it was there) never came into the ownership of British Rail, and yet has successfully operated almost every day since it was built.

It is a unique 2ft 5in gauge cable-operated incline line, which is around an eighth of a mile in length, and runs through the middle of the hill on which the castle is built.

Once operated at speeds of up to 40mph, it boasts a slope of 1-in-1.9 as it ascends 174ft from bottom to top.

Its bottom station lies next to the island's quayside, from where supplies for the castle are loaded into a wagon. Its top station is a room in the castle's kitchen pantry – and the run between the two is non-stop!

The only public clue to the existence of the railway is the short length of rail laid tramway-style on the quayside beyond a set of wooden double doors between the harbourside cottages that lead to its base station, known as the 'tramyard' and nowadays concealed in a steel cage for security.

Apart from one section where tunnelling was essential, the railway was constructed in 1901 by local miners using a 'cut and cover' method with a brick arch to conceal it from view. It replaced the packhorses which previously hauled provisions up the hill.

Cornwall is famous for its mining traditions – Richard Trevithick, who invented the world's first railway engine – came from a local mine engineering background – and the miner's practice of spiking the rails directly onto the rock face was used for much of its length. Some of the original rails were still in place and in regular use a century later.

The line has a single item of rolling stock – a wagon which is hauled up and down the line by a cable connected to an electric-operated winding drum at the summit station.

Alongside the 'tramyard' stands the engine house, which contains the old winding machinery which became redundant when health and safety regulations forced the line's 'modernisation' in 1988. As designed, the winding gear at the bottom of the line hauled the cable over a pulley at the top.

This railway never saw steam traction. Power was originally supplied by a gas engine, but a Ruston petrol engine replaced it in the 1920s. When an 11,000-volt power cable supplying the island from the mainland was installed in 1951, this engine was in turn replaced by a Crompton Parkinson motor.

Inside the engine house, a system was operated whereby white marks had to line up on each of three giant cog wheels on the winding gear in the base station to indicate that the brake should be applied; if a miscalculation was made or there was a lack of concentration, gravity would take its course and the wagon would end up wherever the maximum slack allowed.

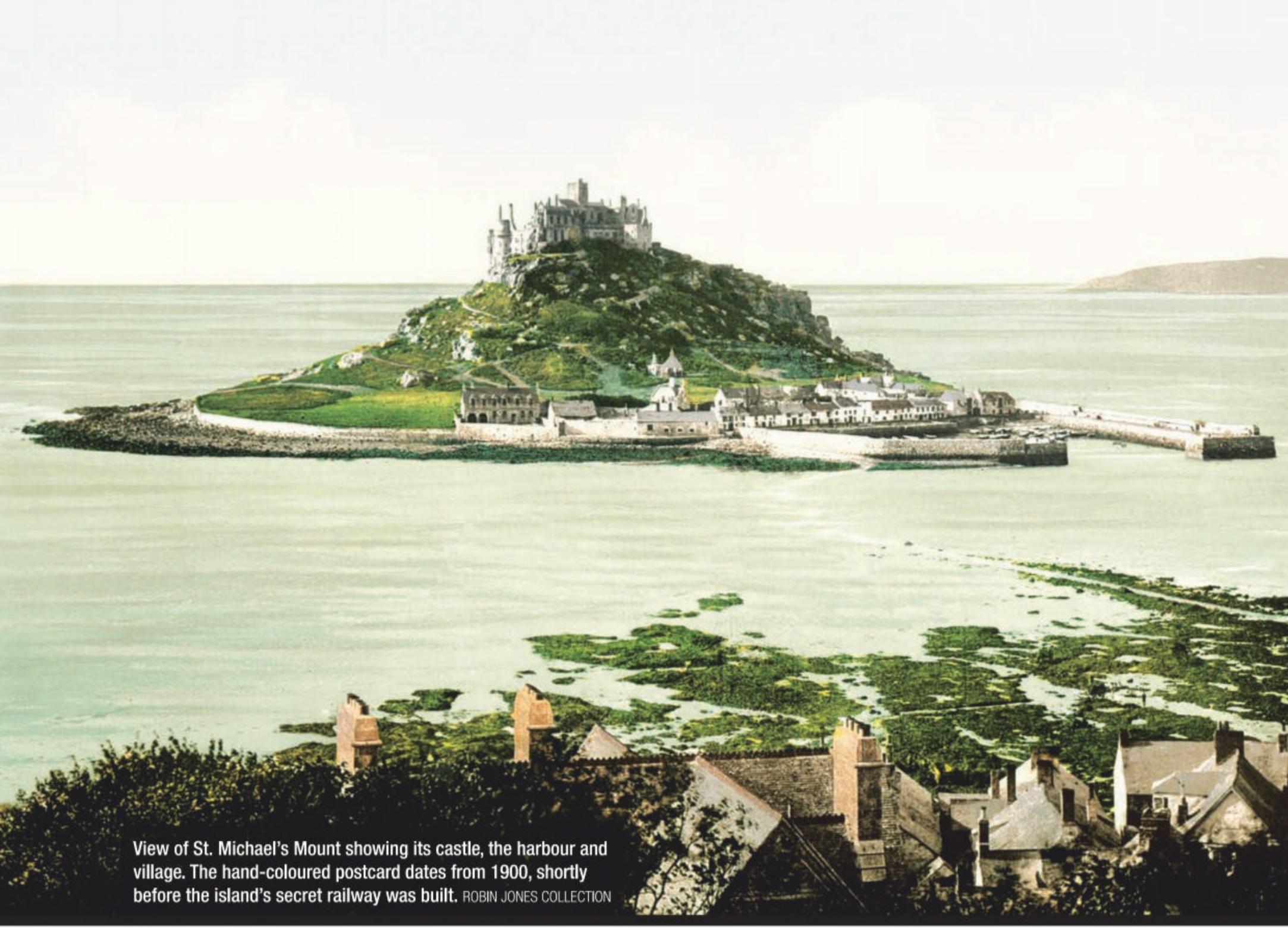
Prior to the 1988 upgrading, there had been several accidents on the railway, some which led to the wagon overshooting the buffer stops, smashing through the quayside wall... and ending up in the sea.

Luckily, there were never any injuries, but in these safety-conscious days, the possibility of the wagon smashing through the tramyard doors into passing holidaymakers has to be eradicated.

From the harbour station, where the wagon is unloaded and loaded, the line passes from daylight into the tunnel which is 5ft wide and 7ft tall and starts its ascent to the summit on a slight curve.

The tunnel begins on a slope of l-in-14, increasing to 1-in-4 over the first 250ft, and is well lit by electric lamps at regular intervals.

An upturn after this first stage takes the line up a 1-in-3 gradient for a distance of 160ft before reaching a 120ft section on a level of 1-in-1.9.



View of St. Michael's Mount showing its castle, the harbour and village. The hand-coloured postcard dates from 1900, shortly before the island's secret railway was built. ROBIN JONES COLLECTION

'Even less believe that it has its own working railway: no, not a model, nor a pleasure line, a toy or a gimmick, but a real working freight-carrying operation…'

Nearing the summit, the roof height diminishes to 6ft where the tunnel has been cut through the granite.

The journey originally ended next to the top station, known as the 'coal station'. It was situated alongside the boiler house just below the kitchens. The boiler house provides heating for the castle, but coal is no longer ferried by the railway as the boiler is now oil fired. However, the oil is piped through the tunnel.

At the 'coal station', supplies were unloaded with the wagon held by the cable in near-vertical position on the 1-in-1.9 slope. Commodities were often unloaded by means of a winch affixed to the adjacent wall of the castle, hoisted over an adjacent roof and lowered through holes in the ceilings of two storerooms serving the castle kitchens, which are off limits to the public.

However, the 1988 improvements saw the line extended to a new terminus about 20ft further up from the 'coal station', in what once served as a pantry for the kitchen. The summit station, now referred to as the 'pantry', allows the wagon to be unloaded almost on the level.

Boatman Dave Ladner, who was operating the railway from its harbour station when I visited the line, said: "The last incident happened when the wagon came down carrying a load of ashes. By the time we stopped it, it had reached the doors to the harbour.

"There are three marks on the winding mechanism which had to be lined up. When that happened, if you did not slam the brake on, the wagon ended up in the harbour.

"Incidents used to happen on a regular basis until alterations were made to the line."

Bob Hunt, head guide at the castle in the late 1990s, enjoyed an early introduction to driving trains. Both his grandfathers were GWR drivers, one at Swindon, the other at Newton Abbot. At the age of 12, however, when a relative worked at the giant Penlee Quarries which dominate the coastline south of Newlyn, he and a friend would sneak inside after dark with the keys to one of the site's narrow-gauge diesel locomotives – and drive it up and down the running line. Bob now drives a train quite legally – from the control panel in the 'pantry' next to the castle kitchen.

"The wagon used to travel at speeds of up to 40mph," he recalled. "It used to come whistling down the incline and by the time it reached the bottom it had created such a build-up of air pressure that it cleaned the tunnel out."

Before World War Two, serious consideration was given to converting the line for passenger use, but no action was taken.

However, Bob explained: "At one time seasonal staff at the castle had a tradition of riding inside the wagon as a dare at least once during their six-month summer spell, but it was against the rules even in those days.

"Riding inside the wagon made your ears pop as you went down. At the bottom end of the tunnel you'd think that it was never going to stop, and then suddenly the brake would go on."

Since the modifications were made, the train now takes a more modest 2mins 35secs to make the journey at a more controlled speed – and joyriding is definitely out.

The sole wagon is not the original; it is the latest of several which have been used in succession on the line during its history, but sadly, none have made it into preservation!

So St Michael's Mount is a prime example of one of the most contorted uses of the railway concept in the British Isles. Ingenious in its simplicity, the existence of the railway adds to the aura of magic about the island.

The National Trust does not permit public access to the railway. ■



The Steam Elephant lines up with the *Puffing Billy* replica.
BEAMISH

The world's first trunk railway!

The steam engine replaced equine haulage on early railways, and appropriately soon became known as the iron horse. However, in those embryonic days of locomotive development, there was an even mightier and bulkier beast: the Steam Elephant. Using the sketchiest surviving information, Beamish Museum in County Durham managed to bring one of these mammoths back from extinction.

In 2009, steam hit the headlines big time with the main line debut of *Tornado*, the 50th member of the otherwise extinct class of Peppercorn A1 Pacifics, which had been built from scratch by the A1 Steam Locomotive Trust over 18 years.

However, building new steam locomotives to fill missing gaps in British railway heritage was by no means new. Beamish – The North of England Open Air Museum in County Durham – constructed a replica of *Locomotion No 1* in 1975. The original was supplied by Robert Stephenson to haul trains on the world's first passenger-carrying steam railway, the Stockton & Darlington Railway, in 1825. While the original survives, in the Head of Steam museum at Darlington's North Road station, the Beamish replica is fully operational.

Locomotion No1 is well known, well documented and world famous as a landmark in transport engineering. Not only that, but also anyone wishing to build a copy of it has only to inspect the original for starters.

The years of early locomotive development is akin to the Dark Ages, those shadowy centuries when Romano-British rule in England and Wales gave way to Saxon kingdoms. Back in the early 1800s, there were, of course, no railway magazines, no lineside enthusiasts to take photographs, and few newspapers which would have documented every new locomotive design. Richard Trevithick gave his first public demonstration of a steam locomotive in 1804, but despite subsequent designs, including *Catch-me-who-can*, which hauled the world's first self-propelled passenger train in London four years later, there were few takers, and lack of interest forced him to seek other pursuits.

His invention might not have been an overnight success, but it was certainly not forgotten. Horse traction still reigned supreme, that is, until unduly large numbers were taken overseas for use by the British army in the Napoleonic Wars. The shortage of horses posed a particular problem in the coalfields of the north-east, and colliery owners began by necessity to look at fresh forms of haulage.

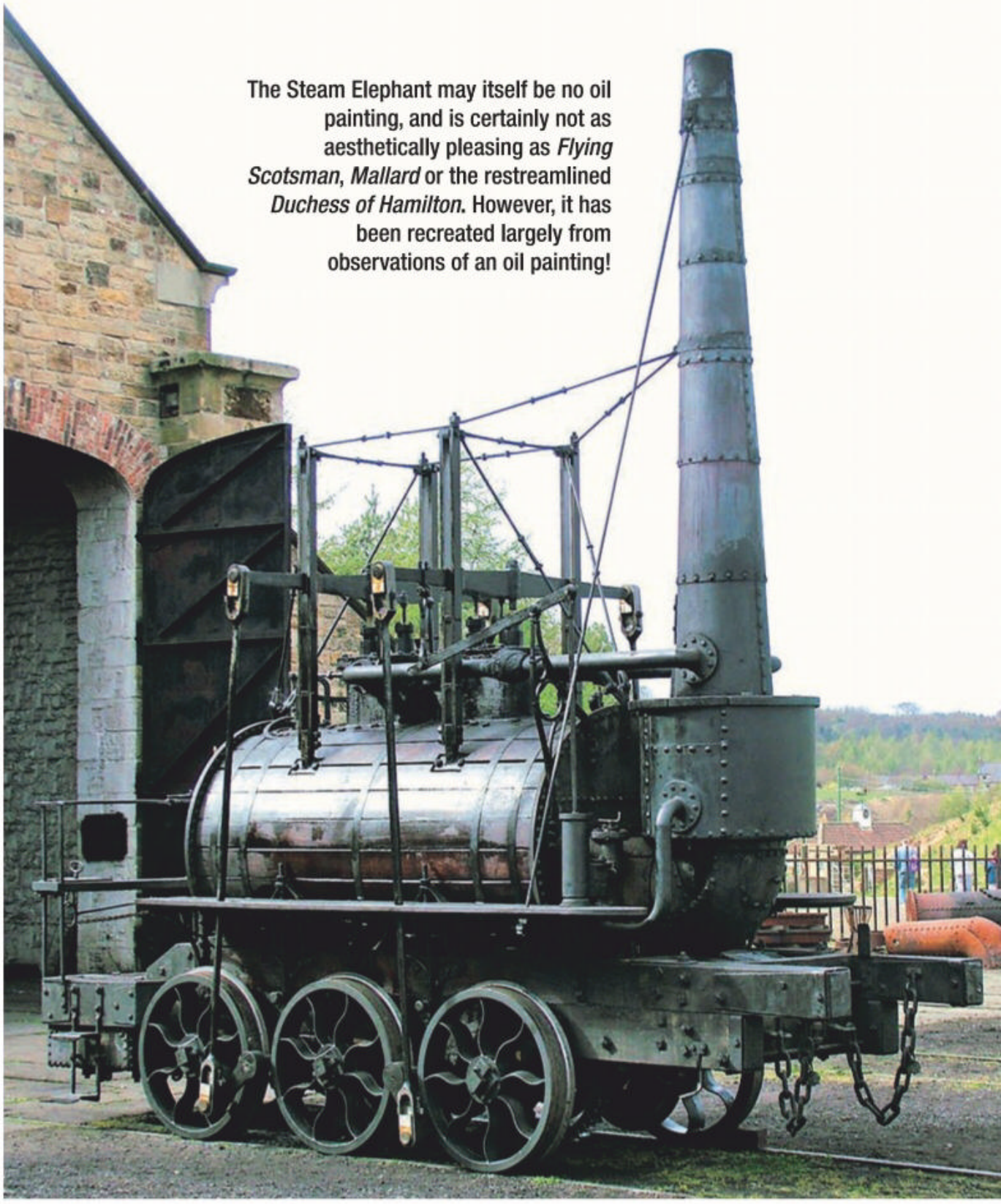
In 1812, the Middleton Railway became the first commercial railway to successfully use steam locomotives. Colliery manager John Blenkinsop approached Matthew Murray of Fenton, Murray and Wood in Holbeck, Leeds, to produce one, and he came up with a locomotive based on Catch-me-who-can, called Salamanca. William Hedley and Timothy Hackworth's *Puffing Billy* from 1813 survives at the Science Museum, while Beamish created a working replica in 2005. Another local engineer, William Chapman, who had a rope works at Willington, built chain-drive locomotives in 1813, and the following year, George Stephenson finished his first locomotive.

There were undoubtedly more designs, many of which never left the drawing board. Some were built, only to disappear in the mists of time because complete records were either not kept or have not survived.

It is suggested that a second Trevithick locomotive existed in the north east after the one built at Gateshead for Wylam Colliery owner Christopher Blackett. One version of this story places the locomotive at Chapman's works.

An account book in the possession of Beamish Museum records a payment on 20 June 1815 for `six waggon wheels for locomotive' and a kit of locomotive parts.

Further research found evidence that this 'mystery' locomotive underwent trials at Washington, while an oil painting – the earliest known one of a steam locomotive – showed it hauling chaldron wagons at Wallsend. An illustration of the locomotive had first come to modern attention in 1931 when it was wrongly assumed to be the work of George Stephenson.



The Steam Elephant may itself be no oil painting, and is certainly not as aesthetically pleasing as *Flying Scotsman*, *Mallard* or the restreamlined *Duchess of Hamilton*. However, it has been recreated largely from observations of an oil painting!



The centrepiece of the Pockerley Waggonway at Beamish Museum is this replica 1825 engine shed, which houses the museum's early locomotive replicas, including the Steam Elephant (centre), with *Puffing Billy* (left) and *Locomotion No 1* (right). The creation of such replicas allows the public to see them in a recreated working environment, and Beamish has established itself as a world leader in this field. BEAMISH

Built by Hawks and Company of Gateshead, a forgotten firm of locomotive builders, it was a Steam Elephant: the locomotive that time forgot.

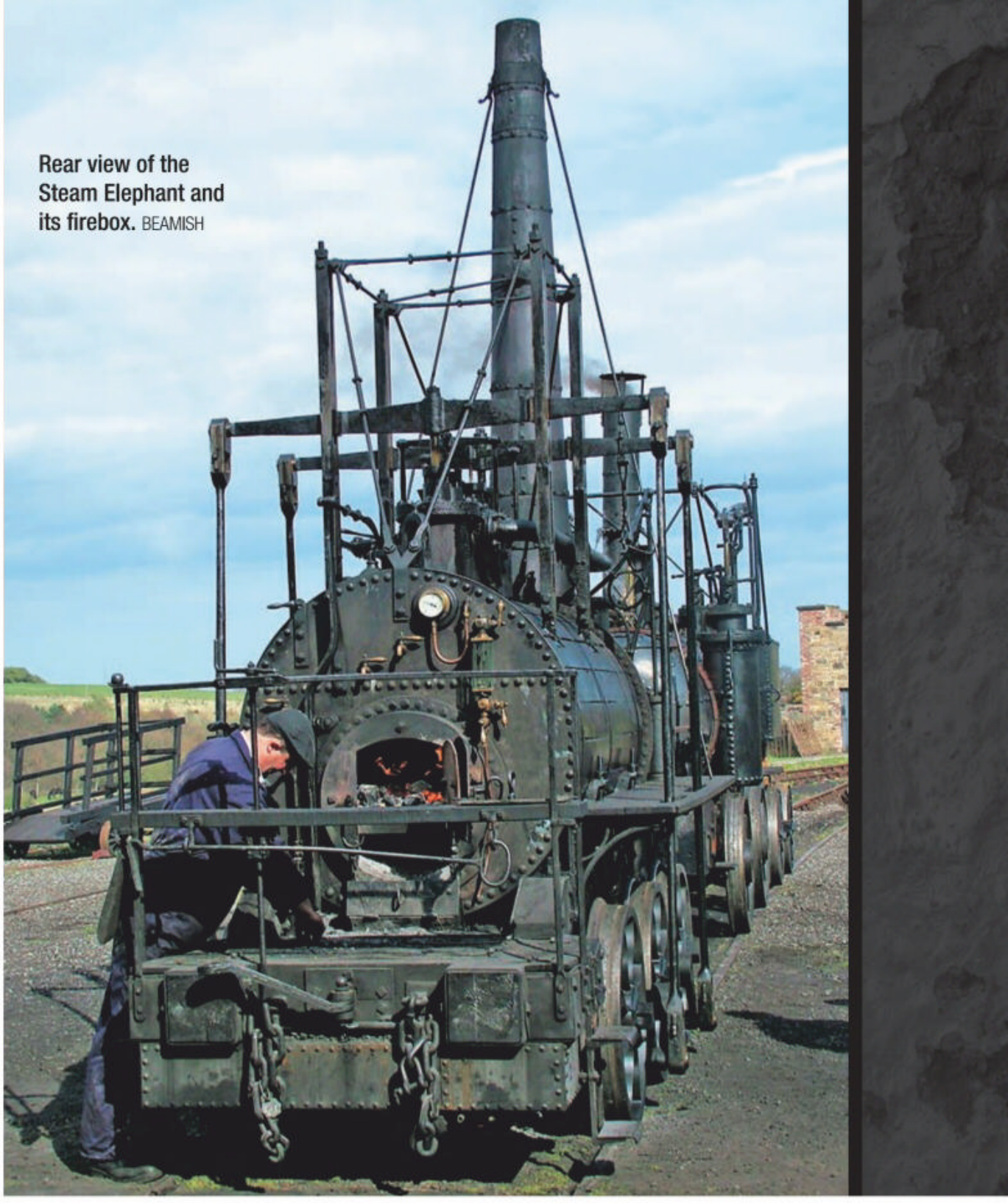
It was designed by Chapman for mining engineer John Buddle, nicknamed `King of the Coal Trade' in the north east, who had succeeded his father as manager at Wallsend Colliery in 1806 and introduced the safety lamp invented by Humphry Davy there.

The Steam Elephant was a six-wheeled locomotive of approximately standard gauge with a centre-flue boiler having two vertical cylinders set into its top centreline. The cylinders drove slidebar-mounted beams which turned crankshafts driving the axles through reduction gears between the frames.

It had a tall, tapering chimney, probably its most visually distinctive feature. It weighed about 7.5 tons and had a top speed of around 4.5mph.

The water for the boiler was pre-heated before it was pumped into the boiler in a jacket placed around the bottom of the chimney. This method not only saved fuel but also stopped the problems caused by pumping cold water straight into a hot boiler. ➤

'The Steam Elephant is certainly a jumbo-sized oddity by the standards of today's fleet of heritage steam locomotives'



Rear view of the Steam Elephant and its firebox. BEAMISH

It appears that it was at first unsuccessful at Wallsend, probably due to lack of adhesion on the wooden rails there; but once iron rails were introduced, it worked until at least the mid-1820s. Some evidence suggests that it was rebuilt for the Hetton collieries and worked there for another 10 years, possibly named Fox. Contemporary reports imply that there may have been more than one Steam Elephant working at Wallsend.

Once the researchers at Beamish had established the identity of the mystery locomotive, a decision was taken to attempt the impossible: using just the oil painting and four other contemporary pictures, knowledge of early locomotives, the contemporary Puffing Billy and models of other engines of the day, a new full-size Steam Elephant was to be built.

The £360,000 project was undertaken by Jim Rees, keeper of industry at the museum and locomotive driver on its Pockerley Waggonway early railways demonstration lines, and Andy Guy, a library researcher.

They produced a set of engineering drawings and, in October 1999, started building the Elephant. Overall, the project took six years, with final assembly being undertaken by locomotive builder Alan Keef at his workshops in Ross-on-Wye before it was launched in 2002. While the exact gauge of the original Elephant remains unclear, the modern one was built to standard gauge, so it could run on Beamish – and any other railway wishing to hire it, provided they have no bridges to clash with its trunk-like chimney.

The Steam Elephant is certainly a jumbo-sized oddity by the standards of today's fleet of heritage steam locomotives. Its type appears to be very much one of a kind: a very much local though workable design produced at a time when steam locomotive technology was in the early melting pot.

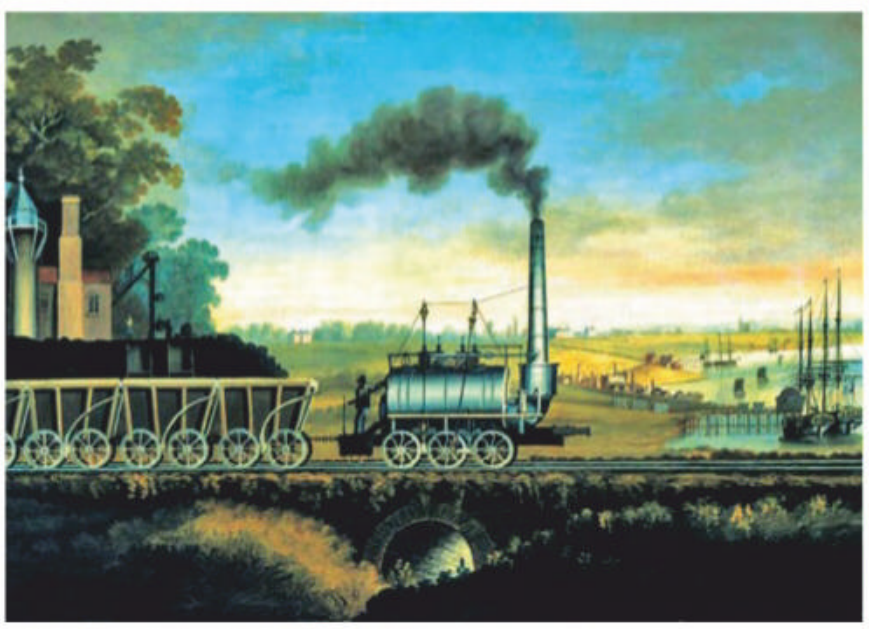
Dating from 1815, it fits almost halfway between Trevithick's first road steam locomotive of 1801 and *Locomotion No 1* in 1825, and offers a valuable insight into the thinking of contemporary designers and builders.

While Chapman's first locomotives hauled themselves along using a chain between the rails, his later locomotives, including the Elephants, used adhesion.

Chapman also invented the bogie, while it was Buddle who first installed metal springs on engines; these two innovations helped shape the future course of steam locomotive technology. However, what part the Elephant played in either of them has long been forgotten. ■



The Steam Elephant – the first standard gauge steam locomotive to be built in the 21st century – sets off with a train on the Pockerley Waggonway. BEAMISH



The oil painting from 1820 which shows the original Steam Elephant, or one of them, taking a load of chaldron wagons towards the docks at Wallsend. BEAMISH

One of two Aveling & Porter locomotives supplied to the Wotton, later Brill, Tramway in 1872, and now preserved at London's Transport Museum in Coventry Garden. LONDON TRANSPORT

Just Brill!

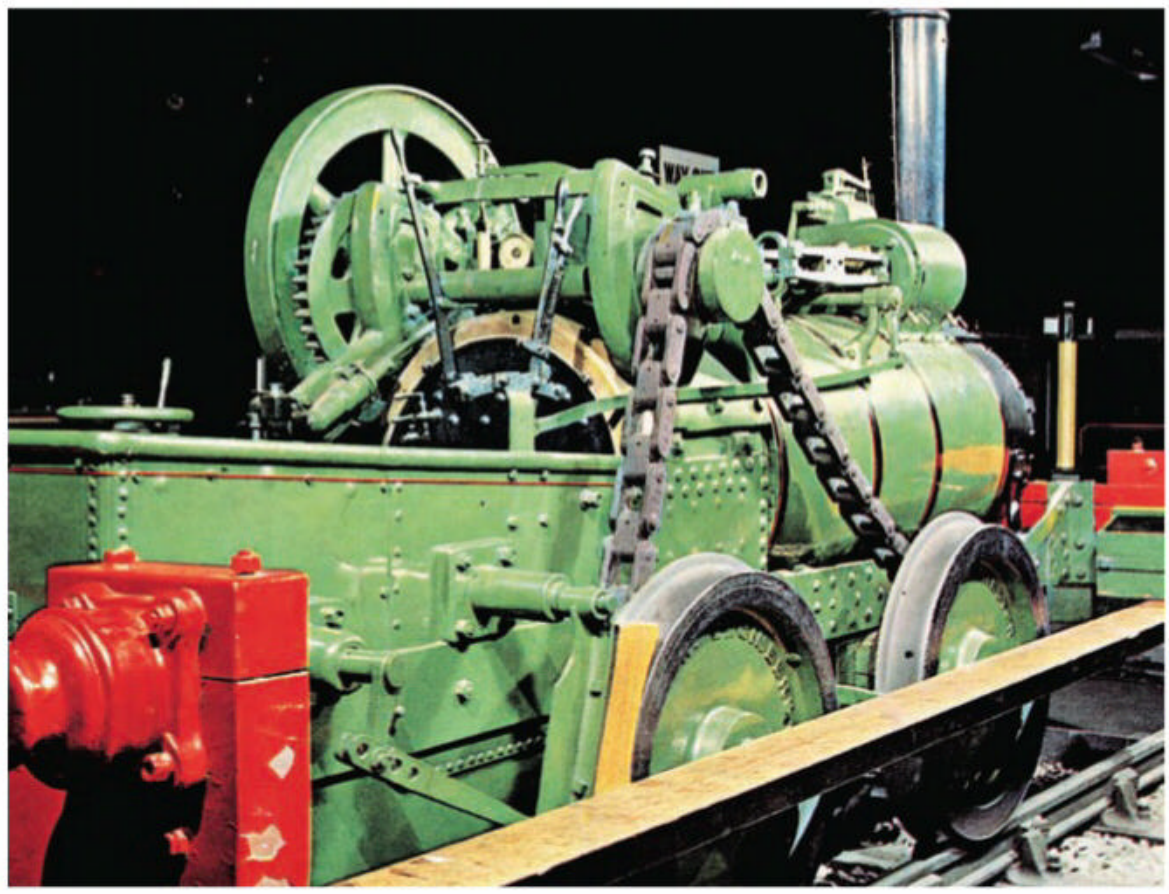
Following on from the pioneer work undertaken by Magnus Volk, London developed a transport system that was the envy of the world, with electrified railways both below and above ground providing a fast and efficient way of transporting millions of people to and from work and the shops. However, the furthest outpost of the London Underground system was, briefly, a remote and eccentric six-and-a-half mile branch that appeared to belong back in the early years of the steam age.

Fifty-one miles from the Baker Street terminus of the Metropolitan Line by train stood the Buckinghamshire village of Brill. Back in the mid-30s, it was the furthest point that you could travel from the capital via London Underground, and the remotest part of the late poet laureate John Betjeman's fabled Metroland, but few ever did.

Those that ventured this far found no sleek tube trains whizzing through tunnels. Instead, Metropolitan Railway steam locomotives hauling trains of vintage wooden carriages back and forth from the junction with the main line at Quainton Road, a route shared by the Met and the Great Central Railway. Before that, the line to Brill had used flywheel-driven locomotives whose appearance had far more in common with traction engines.

The little branch was built by third Duke of Buckingham and Marquess of Chandos, who lived at early 18th-century Wotton House, and who served as chairman of the London & North Western Railway from 1853-61.

Originally known at the Wotton Tramway because of the estate it served, and later known as the Brill Tramway, the duke had it built on his land for agricultural and industrial use between 1870 and 1872. It was also opened as a public railway. ➤





An Aveling & Porter steam engine hauling a passenger train on the Brill Tramway around 1890. LONDON'S TRANSPORT MUSEUM/TRANSPORT FOR LONDON

The first section from Quainton Road to Wotton was brought into use on 1 April 1871, and the whole line to Brill completed by summer 1872.

Running from Quainton Road (opened by the Aylesbury & Buckingham Railway in 1868) to Waddesdon (renamed Waddesdon Road in 1922 to distinguish it from Waddesdon Manor on the main line between Aylesbury and Quainton Road), Westcott, Wotton and Wood Siding.

Its western terminus beneath the hill-top village of Brill was 700ft above sea level. At first there was a halt at Church Siding, between Wotton and Wood Siding, at the junction with a spur to Woodham near Kingswood, the site of a coal wharf. A branch line connected the tramway to a brick and tile works.

In its first few months, the tramway was initially operated by horses, and by its own steam locomotives from 1872 until 1906.

The first two locomotives were very unconventional 0-4-0 single-cylinder geared steam locomotives supplied by Aveling & Porter, works numbers 807 and 846, supplied at a cost of £400 each. Each 10-ton locomotive had a single overslung cylinder connected through a countershaft and pinion to further pinions on the axles. Their maximum speed was about 8mph.

Both were later sold to Nether Heyford brickworks, near Weedon, Northamptonshire, and which kept them until 1950. No 1 survives in the custody of London's Transport Museum in Covent Garden.

The next two locomotives were supplied by WG Bagnall of Stoke-on-Trent, in the form of 0-4-0 saddle tank *Buckingham*, works number 16 of 1876, and 0-4-0 tank engine *Wotton*, number 120 of 1877. They were unusual in having 'reversed' inside cylinders, which drove the front axle.

The operation of the tramway was at first contracted out, while maintenance work was undertaken by the duke's staff. Signalling was a primitive affair, but only one engine was in use on the tramway at any one time.

The operating regulations were notably strict: a rule book published in 1873 listed fines which might be levied on staff for misdemeanours, such as: "If the train be late at Quainton Junction in consequence of a late start, the fault of the driver in not having his engine ready, a fine of half a day's pay to be imposed."

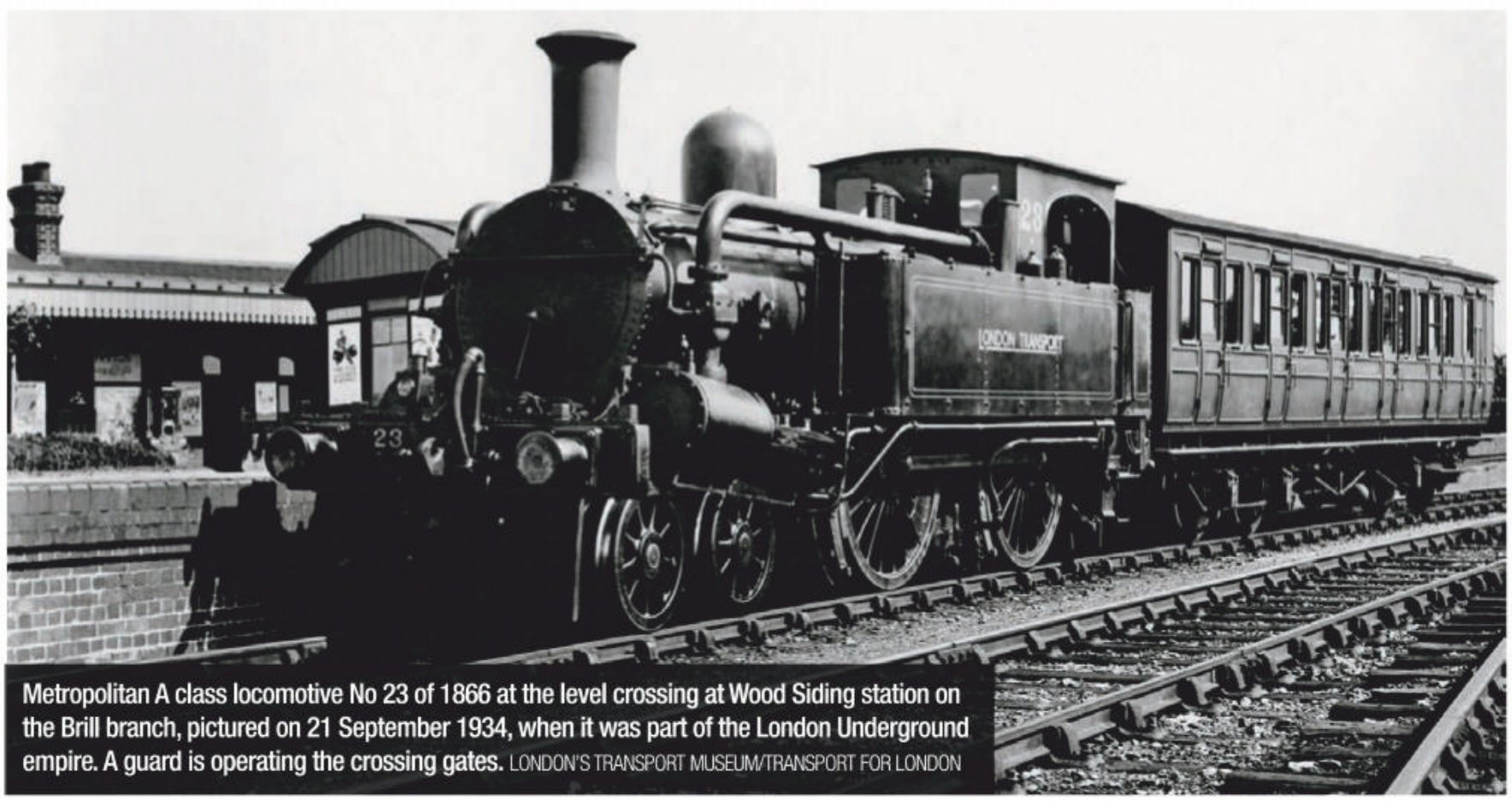
A scheme to build an Oxford, Aylesbury & Metropolitan Junction Railway by extending the tramway from Brill to the great university city 10 miles away, were drawn up in 1883, but nothing ever came of it.

In 1888, Parliament approved a similar scheme drawn up by the Oxford & Aylesbury Tramway Company, which took over the running of the tramway in 1894 on the death of the duke. The Oxford terminus would have been near Magdalen Bridge on the edge of the city centre. However, the necessary money could not be raised and the cost of tunnelling beneath 600ft Muswell Hill to the west of Brill would probably have been too much for the company.

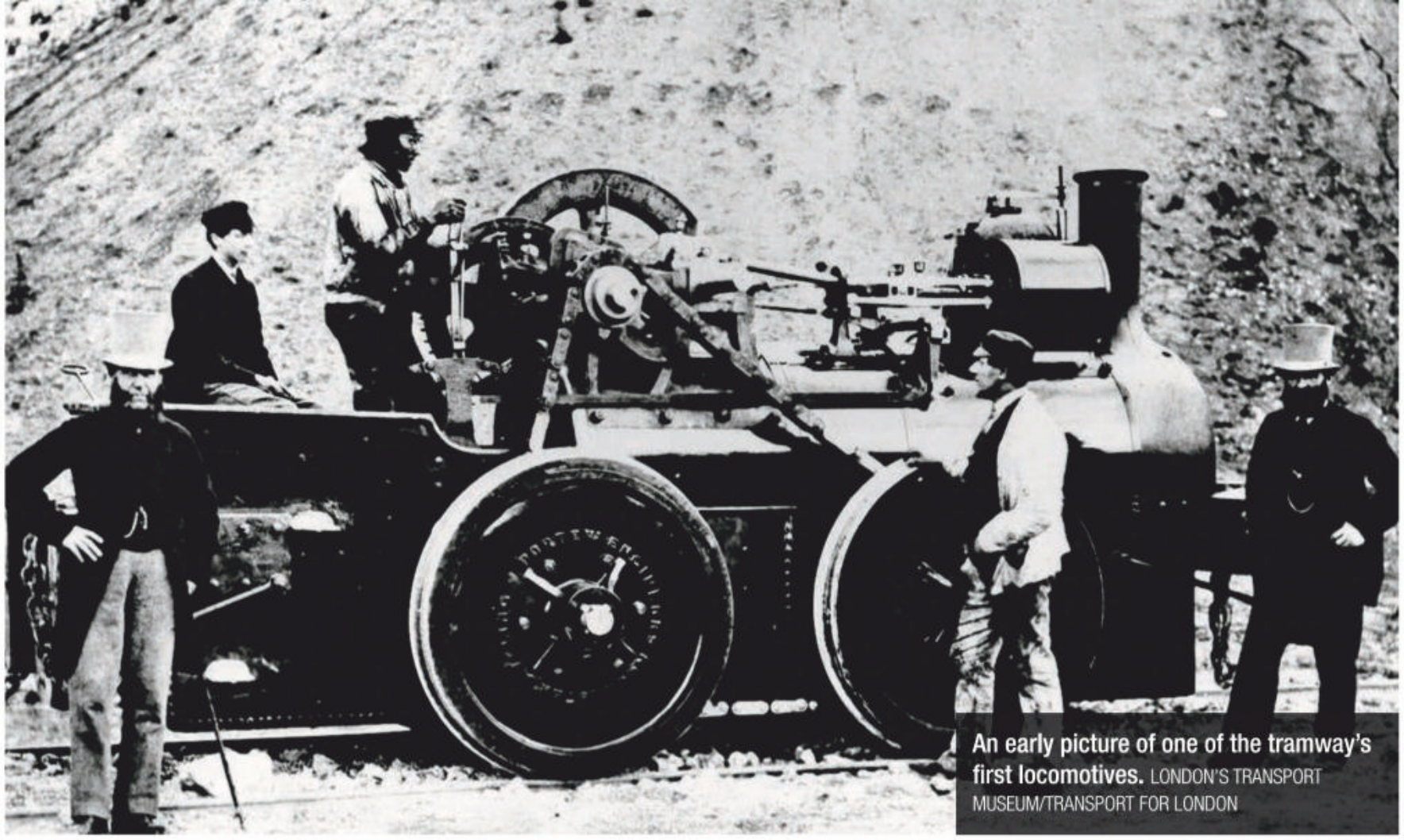
Nevertheless, the Oxford & Aylesbury Tramroad Company improved the tramway,



End of the line: Brill station as pictured in 1935. LONDON'S TRANSPORT MUSEUM/TRANSPORT FOR LONDON



Metropolitan A class locomotive No 23 of 1866 at the level crossing at Wood Siding station on the Brill branch, pictured on 21 September 1934, when it was part of the London Underground empire. A guard is operating the crossing gates. LONDON'S TRANSPORT MUSEUM/TRANSPORT FOR LONDON



An early picture of one of the tramway's first locomotives. LONDON'S TRANSPORT MUSEUM/TRANSPORT FOR LONDON

replacing the original light rails laid on longitudinal sleepers with flat-bottomed rails spiked direct to transverse sleepers as well as much of the rolling stock.

Out went the Aveling & Porters, and in came Manning Wardle industrial-type 0-6-0 saddle tanks with inside cylinders, one being replaced by another Manning Wardle in 1899. They were *Earl Temple*, works number 1249 of 1894, *Huddersfield*, works number 616, a second-hand locomotive built 1876, withdrawn 1899 and *Wotton No 2*, works number 1415, built 1899. *Earl Temple* was later renamed *Brill No 1*.

In December 1899, the Metropolitan Railway, which built the first physical link between the tramway and the main line, acquired a lease on the tramway, and brought in new locomotives and rolling stock, but never exercised an option to buy it outright.

Betjeman would later recall fond memories of the tramway during a visit to Quainton Road in 1929. In his 1973 television documentary Metroland, he spoke of watching the Brill branch train depart: "the steam ready to take two or three passengers through oil-lit halts and over level crossings, a rather bumpy journey."

It was in 1933 that the London Passenger Transport Board was formed, taking over all the underground railway companies and unifying them in one body.

Among the board's portfolio was the Metropolitan Railway, and with it was inherited the Brill Tramway.

The mid-30s saw closures of many famous light railways as motor transport rendered them unable to make ends meet, including the Leek & Manifold Valley, the Lynton & Barnstaple and the Welsh Highland,

The Brill Tramway was no exception and on 30 November 1935, it was closed by the board along with all stations beyond Aylesbury, and Quainton Road closed to passengers in 1963.



Metropolitan Railway Manning Wardle locomotive *Brill No 2* on the Brill branch around 1900. LONDON'S TRANSPORT MUSEUM/TRANSPORT FOR LONDON

Nothing remains of the tramway today, apart from privately owned Westcott station, but its route can be seen in a double row of hedges running parallel to the lane to the west of Quainton Road.

Passenger trains on the Great Central route from Marylebone to Nottingham ceased to call at Quainton Road from 1963, and on 3 September 1966, the complete route was closed to passengers apart from services between Nottingham and Rugby which lingered on until 1969.

Meanwhile, the London Railway Preservation Society which had been formed to save locomotives and stock from the steam age before they all disappeared acquired the use of Quainton Road and its sizeable goods yard as a base. Reforming as the Quainton Railway Society, they set up what is now the Buckinghamshire Railway Centre.

Ironically, over the years two Aveling & Porter locomotives similar to those used on the tramway have been based at the centre at one time or another. In the early 21st century, members built a replica Brill Tramway coach to offer the public rides behind one of them, and plans to relay a mile of the tramway were mooted – the wooden waiting room on platforms 2 and 3 at Quainton Road was once the shelter for passengers waiting for Brill branch trains – but they came to nothing. Yet who knows what might happen one day? ■

Cut down to size!

While an obvious solution to running a railway in places where clearances may be very tight is to choose narrow rather than standard gauge, that option has not always been followed. Standard gauge steam locomotives which are very different in shape and size from their 'normal' counterparts in regular main line service have always been part and parcel of the railway sectors. Here we look at a selection of those still active in the heritage sector today.

In 2009, a unique pair of twins burst on to the preservation scene, for it was the first year that both had been available to run and so they could steam together. They were soon in much demand.

The Bodmin & Wenford Railway is home to *Alfred* and *Judy*, two very unusual standard gauge Bagnall 0-4-0 saddle tanks, so much so that Thomas the Tank engine creator the Rev Wilbert Awdry immortalised them as Bill and Ben in his series of railway stories. As such, they have already appeared at Days out With Thomas weekends at places like the West Somerset Railway and the Tanfield railway.

Their diminutive size all comes down to Brunel's Cornwall Railway, or rather, a bridge built beneath it to access the port of Par.

Par harbour between Fowey and St Austell was built by Joseph Treffry and was first used in 1833, linking to tramways serving his inland copper mines and granite quarries.

In 1860, a connection was made between the harbour's internal railway lines, which were horse worked, and the Cornwall Railway.

In 1881, a new branch line was taken through an 8ft high bridge beneath the Cornish main line to serve a new china clay processing works. Not only was the bridge too low for 'normal' locomotives to run beneath it, but there was a tight 70ft radius curve. Locomotives which could overcome these two obstacles had to be obtained if the line was ever to be worked by steam.

In 1913, a small four-wheel vertical-boiler locomotive built by Sara and Burgess in Penryn arrived in 1912, followed three years later by a more conventional second-hand small Manning Wardle 0-4-0 saddle tank called *Punch*. Another vertical-boilered locomotive, this time built by the Shrewsbury firm of Sentinel and named *Toby* arrived in 1927. Harbour staff also built an engine of their own made from parts of two steam cranes.

None of these really fitted the bill perfectly, so a larger locomotive was ordered from WG Bagnall at a cost of £1200 and delivered in 1937.

To go with the earlier *Punch*, it was named *Judy*, although it did not get its nameplates until 1960. Built as works number 2572, the bespoke locomotive was only 90 inches high, allowing it to pass beneath the low bridge. This reduction in height was facilitated by dropping the cab floor down between the main frames. At 16ft 6in long over headstocks and 7ft 5in wide, Judy's 33in wheels set just 5ft (apart allowed it to negotiate the sharp curve by the Par Moors clay drier.

It was able to haul clay wagons in and out of the harbour complex to St Blazey, allowing them to be taken onwards by conventional locomotives that were registered to run over the national network.

A second one built to virtually the same design followed it to Par in 1954. This one, works number 3058, was named *Alfred* after the manager of the harbour, Alfred Truscott.

Toby was kept as a spare locomotive until it was withdrawn in 1957, while *Judy* ended its working days in 1969 when part of the firebox needed to be renewed, and was kept in the harbour engine shed until 1978. *Alfred*, however, was kept in service until 1977.



Alfred **and** ***Judy*** **in action on the Tanfield Railway in County Durham on 14 September 2009.** BRIAN SHARPE

In 1978, *Judy* was sent to the Wheal Martyn China Clay Museum at St Austell as a static exhibit, and in 2004 handed over to the Cornish Steam Locomotive Preservation Society, which has restored the locomotive at Bodmin with the aid of a Heritage Lottery Fund grant. *Judy* moved under its own power on 31 October 2008 for the first time in nearly 40 years and entered service on the Bodmin & Wenford Railway in April 2009.

Alfred was moved to the Cornish Steam Locomotive Preservation Society's original site at nearby Bugle in 1978 where a vacuum brake was fitted so that it could haul passenger trains over the short-lived Bugle Steam Railway, set up on a disused clay spur off the Newquay branch.

In 1987 the society moved to the Bodmin & Wenford Railway and took *Alfred* with them. In the late 90s it was painted yellow livery, the colour worn by Bill and Ben, but has now been repainted back into the green Port of Par livery to match *Judy*.

In August 2002, it took part in an open day at St Blazey's main line depot and was steamed down the branch to Par harbour for the first time in 25 years. In May 2009 it was taken to Saltash as part of the 150th anniversary of Brunel's Royal Albert Bridge.

Par docks is still rail connected, but the internal system is all but gone. When wagons have to be moved beneath the bridge, tractors subsequently did the job.

Meanwhile, it seems that Bill and Ben, sorry, *Alfred* and *Judy*, will be undertaking nationwide tours of heritage lines every year.

Not all cut-down locomotives or those with a decidedly unconventional appearance were restricted to private industrial lines off the national network.

The Somerset & Dorset Joint Railway employed two low-bodied Sentinel four-wheeled vertical-boilered shunters which had a somewhat bizarre bell-shaped smokebox and boiler cladding.

Anyone who went trainspotting in the 50s and very early 60s will remember the pair from the Ian Allan locospotters guides, for their shape made them stand out from the rest.

In 1927, Sentinel built one of the locomotives, works number 7109 *Joyce*, and successfully trailed it at Newton Heath carriage works in Manchester.

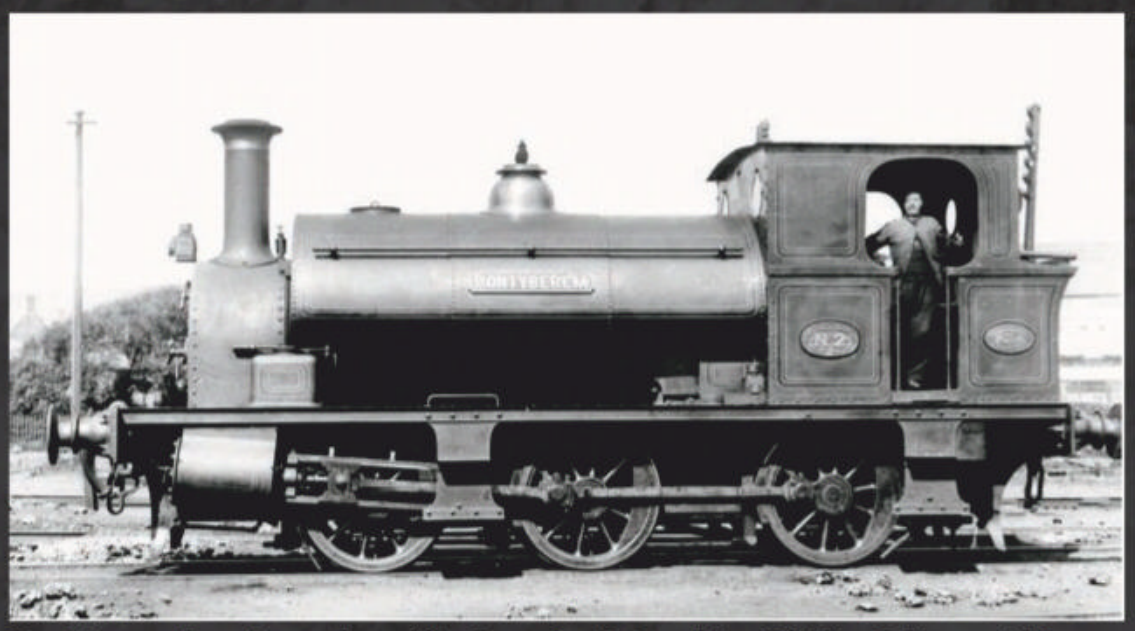
The London Midland & Scottish railway was so impressed with the design that three production examples with slight modifications were ordered in 1929, and two were sent to the SDJR.

These two were required to haul coal trains below Radstock's Tyning Bridge, which had only a 10ft 10in clearance.

They were later renumbered by the LMS as 7190 and 7191 and following nationalisation became BR Nos 47190 and 47191. ➤



How low can you go? The 'Flying Bufferbeam' – reputed to be Britain's smallest standard gauge locomotive – looks like it was built for a breakdancing competition. It is seen in action in 1992. PHIL MARSH.



***Pontyberem*, the sole survivor of the Burry Port & Gweddreath Valley Railway, which used lower than normal locomotives and rolling stock to fit beneath former canal bridges.** STUART THOMAS COLLECTION



Former Croydon gasworks Sentinel vertical-boilered locomotive *Joyce* at Midsomer Norton station being converted to represent one of its scrapped Somerset & Dorset sisters. ROBIN JONES

No 47191 was withdrawn in 1959 and the demolition of the bridge the following year rendered its sister locomotive redundant and it too was scrapped.

Yet *Joyce*, which spent its working life at Croydon gasworks, survived.

It eventually became part of a 56-locomotive static fleet owned by collector John Lees and kept at a private site in Shrewsbury.

The fleet was sold off early in 2002 and *Joyce* immediately came to the attention of revivalists who were attempting to recreate a section of the old Somerset & Dorset main line at Midsomer Norton station.

Their dream is to have an original S&D locomotive, but only two survive, 7F 2-8-0s, No 88 which is based on the West Somerset Railway and sister No 53809 which has its home at the Midland Railway-Butterley.

However, it was quickly realised that all that will be needed to convert *Joyce* into one of its 'successors' off the Shrewsbury production line is to lower and modify its cab. Apart from that, the locomotives are identical in every other respect.

Joyce has been repainted into BR black and it is hoped it will steam in 2010. Like *Alfred* and *Judy*, it will be offered for hire to other railways for special events as well as running on its 'home' line.

What happens when you get a standard gauge railway that has inherited several bridges that are too low?

That is the case at the Burry Port & Gwendeath Valley Railway near Llanelli, which was laid on the bed of the Kymer's Canal, the first canal in Wales, between 1865-69, when it was realised it could provide more efficient transport than an artificial waterway.

The canal bridges remained in situ, however, necessitating the use of both locomotives with low cabs and chimneys, and carriages and wagons which were lower than their counterparts on the rest of the national network.

The sole surviving Burry Port & Gwendreath Valley Railway steam locomotive is No 2 *Pontyberem*, supplied new by manufacturer Avonside in 1900. It ran on the line until 1914 after which it was sold in into industry, but in 1970 was bought for preservation by members of the Great Western Society at Didcot.

At one stage, seaside specials were run on the line to Burry Port, and comprised coal trucks cleaned out with temporary bench seats fitted – easily tackling the problem of carriages that might have been too high!

The railway authorities' concern over the worsening state of the track led to the line being rebuilt, with some of the sharp bends and steep gradients from the canal days (inclined planes had been used on the waterway as well as lock gates) ironed out wherever possible. The line reopened to Pontyberem in August 1909 with the final eastern stretch to Cwm Mawr reopening on 29 January 1913.

The start of the new passenger service resulted in the purchase of second-hand carriages. Due to the tight loading gauge, those acquired could be loosely classified as former underground or commuter stock from various London railways.

The Metropolitan Railway had a surplus due to the ongoing electrification of services at that time. Other sources were the London & South Western Railway and the North London Railway.

The Great Western railway took over the line at the Grouping of 1922 and new locomotives were provide for the line along with some four-wheeled carriages. However, by 1939 their condition had deteriorated to the point where new 'low height' stock had to be specially built.

The line closed to passenger traffic on 21 September 1953, but it remained open for coal traffic. In 1965, British Railway reduced the height of the cabs of some Class 03 diesels hunters and sent them to work the line.

By 1983, most of these 03s were life expired and so cut-down Class 08 shunters replaced them.



Pontyberem **and its train at Pontyberem c1909.** STUART THOMAS COLLECTION



Judy **and** ***Alfred*** **as Bill and Ben at the West Somerset Railway's Days Out with Thomas event in on 5 July 2009. The photographer's son Sean was fireman on** ***Alfred*** **that day.** ERIC BROOM



Pontyberem **arrives at the Pontypool & Blaenavon Railway for restoration.** GVRS



Operating on the 2ft 6in gauge Welshpool & Llanfair Light Railway is Barclay 0-4-0 tank engine ***Douglas***, **built in 1946 for the Provan gasworks system in Glasgow and roughly half the height of other steam engines on the line. It is seen working a full-size passenger train during the line's gala on 7 September 2009.** FRED KERR



Somerset & Dorset Joint Railway Sentinel duo No 47190 and 47191 at Radstock on 22 July 1958. RC RILEY

The line was finally closed in 1996 following the demise of the last open cast mines in the area. Most of the track on the final eight miles of main line is still in place but severely overgrown. Revivalists have looked at the line on several occasions. One group came up with the idea of converting the track to metre gauge and importing redundant Portuguese steam locomotives and carriages to work on it.

The Gwendraeth Railway Society is now working towards a revival. Its members have secured none other than *Potyberem* to work on it, moving it from the Great Western Society's base at Didcot Railway Centre to the Pontypool & Blaneavon Railway where it can be restored to running order.

The engine was modified during its time working for the National Coal Board and under the current restoration plans the locomotive will be restored as far as possible back to its appearance. The existing chimney and cab, both of which are life expired, will be replaced.

Also at Blaenavon is one of the cut-down 03s, No 03141, which is currently undergoing a full overhaul and is likely to be the Gwendraeth Railway Society's first operational engine. Incidentally, anyone wishing to help the society is invited to write to The Gwendraeth Railway Society, c/o Glanmorlais Uchaf, Llandyfaelog, Kidwelly Carmarthenshire SA17 5AP or email info@bpgv.co.uk

'At one stage, seaside specials were run on the line to Burry Port, and comprised coal trucks cleaned out with temporary bench seats fitted.'

In terms of preserved cut-down locomotives, I have been saving the best for last.

The Buckinghamshire Railway Centre at Quainton Road is home to the smallest standard gauge locomotive in Britain, which is so low that it is nicknamed 'the Flying Bufferbeam'.

Peckett No 1900 was built for Courtaulds Ltd's plant in Flint, North Wales in 1936 at a cost of £840. The plant was divided by the LMS Chester to Holyhead line, and the internal rail link between the two parts was through a very low tunnel through the main line embankment.

The locomotive's principal duty was shunting wagon loads of waste from the Rayon fibre manufacturing process onto the sea wall from where it was dumped.

The tunnel was in the dip of two very steep inclines and No 1900 had to work flat out down one side in order to gain sufficient momentum for the climb up the other, giving rise to safety fears.

Accordingly, in 1954, No 1900 was replaced by two engines, one on either side of the tunnel, the wagons being worked by a rope between the two.

The unique locomotive was not dumped but overhauled, given a new firebox and despatched to Courtaulds' Grimsby plant, where an extension was fitted to the cab and it was used work on factory construction trains. When the factory was built, Courtaulds obtained a Sentinel locomotive and No 1900 was kept as a spare.

The firm last used it in the early 60s and it then lay in store until it was bought for preservation and brought to Quainton in September 1971 for restoration.

For a time it was named *Jill*. During 1980 the engine returned to service and fitted with vacuum brakes, it was used on lightweight passenger trains – a first – and demonstration freight trains.

The locomotive spent the summer of 1983 working on the Lakeside & Haverthwaite Railway, also hauling some passenger trains.

At the time of writing, it is out of ticket and awaiting a heavy overhaul. ■

The seaside line that sparked a transport revolution

To the untrained eye, Brighton's Volk's Electric Railway may appear to be just another seaside tramway, a relic from the resort's Victorian heyday. However, it is no less than Britain's first electric railway, and the oldest in the world to be still running, and therefore of paramount international importance.



Magnus Volk: pioneer of electricity, who even built an electric car in 1888.

Magnus Volk did not invent the electric railway. However, he brought the concept to Britain, and switched the country on.

The son of a German clockmaker, Magnus Volk was born at 35 (now 40) Western Road, Brighton, on 19 October 1851. Locally educated, he became apprenticed to a scientific instrument maker but on the death of his father in 1869 returned home to assist his mother run the family business. His real interest, however, lay in the worlds of science and engineering, in particular anything that worked on electricity.

In 1879, he successfully demonstrated the first telephone link in Brighton. The next year, he connected the first residential fire alarm to the fire station.

In 1880, he became the first resident of Brighton to fit electric lights to his house at 38 Dyke Road, and over the next four years went on to fit electric incandescent lighting to the Royal Pavilion and its grounds, the Dome, the town museum, art gallery and library. Contacts made during this work proved instrumental in his most famous project of all.

On 4 August 1883, Volk unveiled a quarter-mile long 2ft gauge electric railway running from a site on the seashore opposite the town's aquarium to the Chain Pier. Power was provided by a 2hp Otto gas engine driving a Siemans D5 50-volt DC generator. A small electric car was fitted with a 1½hp motor giving a top speed of about 6mph.

Electric traction was by no means new. The first known electric locomotive was built by Scotsman, Robert Davidson of Aberdeen, in 1837 and was powered by galvanic cells. Davidson followed it up with a bigger locomotive named Galvani, which was exhibited at the Royal Scottish Society of Arts Exhibition in 1841.



Poster advertising the Brighton and Rottingdean Seaside Electric Railway as 'A Sea Voyage on Wheels'. NATIONAL RAILWAY MUSEUM



Car 7 begins its journey westwards from Aquarium station. CLEM RUTTER



A total of 160 passengers could be carried on the Brighton and Rottingdean Seaside Electric Railway's single car *Pioneer*, which was nicknamed 'Daddy Long Legs'. NATIONAL RAILWAY MUSEUM



The Brighton terminus of the unique and short-lived sea railway. VERA

This second locomotive was tested on the Edinburgh & Glasgow Railway in September 1842, but the limited electric power available from batteries prevented its general use.

The world's first electric passenger train was demonstrated by Werner von Siemens in Berlin in 1879. It locomotive was driven by a 2.2 kW motor and the train which consisted of the locomotive and three cars reached a maximum speed of 13km/h, and over four months the train carried 90,000 passengers on a 320-yard circular track.

The electricity, provided by a nearby stationary dynamo, was supplied to the train through a third isolated rail situated between the tracks.

In 1881, the world's first electric tram line, also built by Siemens, opened in Lichterfelde, near Berlin, Germany.

The idea of an electric as opposed to steam locomotive may have originated in Scotland, but Volk brought it back to Britain in the form of a workable concept.

He soon sought powers to extend his westwards along the beach to the town boundary, but the council refused. Instead, he obtained permission to extend eastwards from the Aquarium to the Banjo Groyne and the Arch at Paston Place to provide workshop and power facilities. He also decided to widen the track to 2ft 8½in gauge, and he designed two more powerful and larger passenger cars.

The route followed the seashore, and needed timber trestles to bridge gaps in the shingle, and severe gradients down and up to allow the cars to pass under the town's Chain Pier.

The new line opened on 4 April 1884, at first using one car. The upgraded power plant in the Arch gave an output of 160 volts at 40 amps, more than enough to propel the two new cars along the 1400 yard-long railway. A loop complete with halt was provided halfway along the route for the cars to pass.

With the arrival of the second car, a five or six-minute service was provided daily, summer and winter, excepting Sundays, until 1903. The service operated until 1940 when the threat of invasion closed the railway during World War Two.

While local cab drivers and fishermen working from the beach were not impressed with the competition from the railway, it was a huge hit with the public. Two new cars, Nos 3 and 4, entered service in 1892, and a fifth car followed in 1897. In 1890, frustrated at his inability to extend beyond the Banjo Groyne to Rottingdean, it being blocked, Volks produced a scheme for a new kind of railway which ran through the sea itself.

The Brighton and Rottingdean Seashore Electric Railway consisted of two parallel 2ft 8½in gauge tracks, billed as 18ft gauge, the measurement between the outermost rails. The tracks were laid on concrete sleepers mortised into the bedrock.

The single car used on the railway was a 45ft by 22ft pier-like building which stood on four 23ft-long legs and weighed 45 tons. It was powered by electric motor.

It was officially named *Pioneer*, but many called it Daddy Long-Legs and the nickname stuck. Not only did it need a driver, but a qualified sea captain was on board at all times.

Uniquely in British railways again, the car was provided with lifeboats and other safety measures. Building of the second line began in 1894 and it officially opened on 28 November 1896, only to be severely damaged by a storm a week later. ➤



A Volk's Electric Railway two-car service running eastwards to Black Rock, as seen from the mound of shingle that hides Brighton's nudist beach. ROBIN JONES

Volk rebuilt the railway, including *Pioneer*, which had been turned onto its side, and it reopened in July 1897. The railway, arguably the most eccentric in Britain, also proved popular, but faced difficulties. High tide slowed the car down, and Volk did not have the finance to install more powerful motors.

In 1900, groynes built near the railway to prevent beach erosion were found to have led to underwater scouring under the sleepers and the line was closed for two months while repairs took place. The council decided to build a beach protection barrier, and told Volk to divert his line around it. He could not afford to do so, and so closed it

The track, car and other structures were sold for scrap, but some of the concrete sleepers can still be seen at low tide. A modern-day comparision might be made with the unique sea tractor at tidal Burgh Island at Bigbury-on-Sea in south Devon, which takes passengers from the mainland to the island at high tide, on a platform carried on stilts.

After the Brighton & Rottingdean Seashore Electric Railway venture failed, Volk obtained permission to extend his first line beyond the Banjo Groyne to Black Rock and opened the extension in September 1901, bringing the total length of the railway to one-and-a-quarter miles.

The longer line needed more cars and three were added, and by 1926, the fleet had been brought up to 10. The last car built specifically for the railway was a winter car, which arrived in 1930.

In 1930, the redevelopment of Madeira Drive saw the railway cut back at the western end to a site opposite the aquarium. It was a setback for the line as the terminus was now no longer next to the pier entrance.

Sadly and short-sightedly, the line was also cut back by several hundred yards at the Black Rock end. The council decided to build a new swimming pool on the land currently occupied by the station and so cut the line even shorter.

The new Black Rock station was opened on 7 May 1937, when Volk, then 85, and the deputy mayor and Magnus Volk took joint control of Car 10 for a journey. It was Volk's last public appearance as he died peacefully at home13 days later. He is buried at St Wulfran's churchyard in Ovingdean near Brighton.

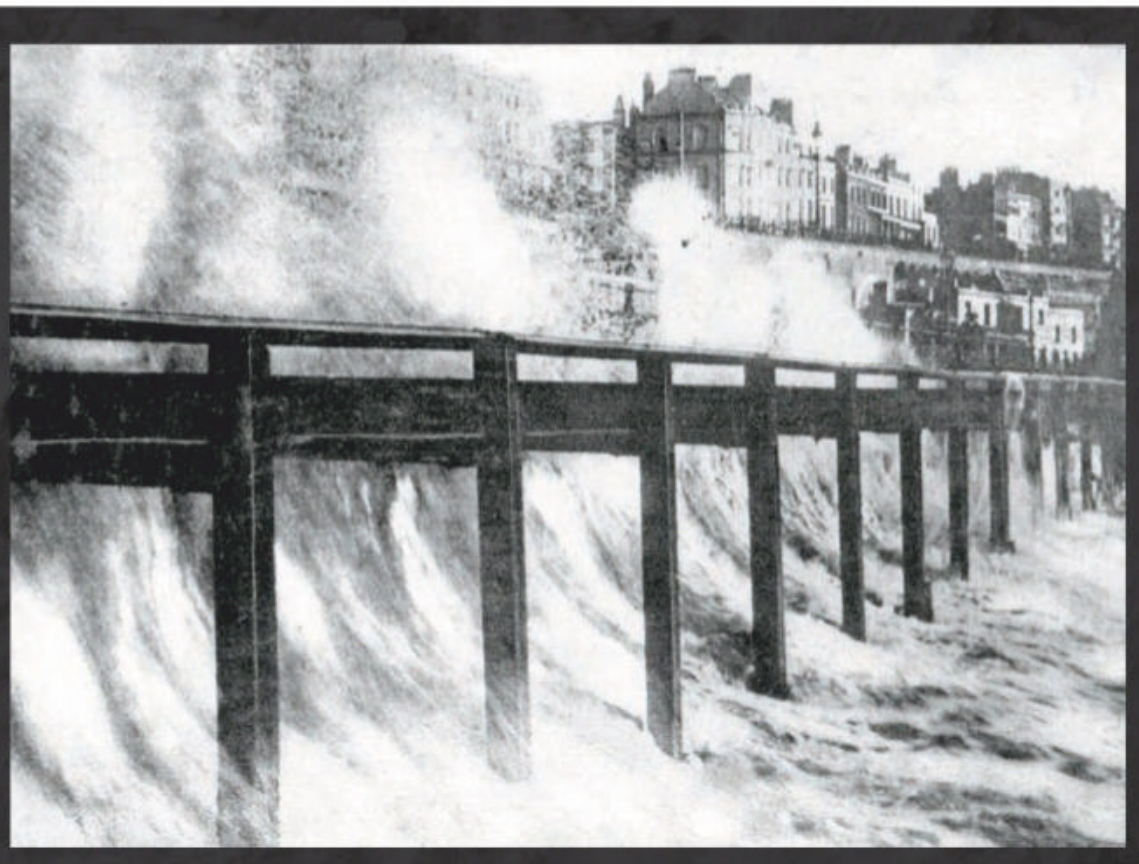
Control of the railway passed briefly to his son Herman. However, the 1938 Brighton Corporation (Transport) Act gave the local authority the powers to take over the railway.

At first the line was leased back to Herman, but on 1 April 1940 the corporation took full control, the last train running three months later before closure for the war years.

After hostilities ended, the council did much to upgrade the railway, replacing the rails and life-expired buildings. Services resumed on 15 May 1948, but winter services were suspended in 1954 and have been run only occasionally ever since. Original cars 1 and 2 were scrapped and replaced by two Southend Pier Railway trailer cars which, converted to motor cars became Nos 8 and 9 in the fleet.

During the late 60s and 70s, Brighton began to be severely hit by competition from cheap Mediterranean package holidays. The Black Rock swimming pool closed in 1978, leading to a further drop in passenger numbers on the railway.

Questions were asked as to whether the expense of keeping the railway open was justified, but in the end it was decided to keep the line open at least until its centenary in 1983. That event was a huge success, with Volk's youngest son Conrad driving a special train comprising cars 3 and 4. Afterwards, it was decided to keep the line open.



Services on the Volk's Electric Railway's elevated sections were often disrupted due to storm surges. The beach has since changed its profile and the shingle is now much higher, so the viaducts are not needed. ROBIN JONES COLLECTION.



Above: **Halfway station – is this Britain's smallest station building?** ROBIN JONES

Above right: **Two cars pass at Halfway station.** ROBIN JONES

Below: **The foundations of the Brighton and Rottingdean Seaside Electric Railway as seen at low tide.**







The successful launch of Volk's Electric Railway led to electric traction replacing steam as motive power on many railways, and today's electrified main lines can trace a lineage back to the little Brighton pioneer line. Here, a Eurostar unit speeds past Tallington on the East Coast Main Line. ROBIN JONES

Patronage is reasonably buoyant today, although there are many who have commented that it would be far greater if the line could in some way be re-extended westwards back to the pier entrance, and eastwards beyond Black Rock to the new Brighton marina.

As it is, first-time visitors who head straight from the main line railway station to the pier would not even guess that Volks Electric Railway exists. Does it provide public transport, or is it a Victorian anachronism limited to novelty value?

This writer believes that the heritage potential of the railway and surrounding attractions is huge. As stated earlier, Volks Electric Railway was not the first in the world to run on electricity, but all the earlier ones have long since passed into history. It was also the first in Britain. Therefore it should not be dismissed as a local antique, but a national attraction of immense historical importance.

By bringing it to Britain, Volk sowed seeds which may be deemed to have helped with the creation of the London underground and electrified overground suburban lines, the third-rail electric Southern Railway/Region and ultimately the inter-city trunk routes like the East and West Coast Main lines which form a backbone of the country's provincial transport system. In so many way it was a true 'first', and we should be shouting it from the rooftops. Secondly, the British seaside has seen a resurgence in recent years, with the popularity of holiday homes and then more people deciding not to go abroad because of poor exchange rates. Now is surely the time to capitalise.

The railway's western terminus, Aquarium station, stands opposite the Sealife Centre. However, this building is far more important than just another aquarium in a national chain. Dating from 1872, it is nothing less than the world's oldest working aquarium, conceived and designed by Eugenius Birch, the architect responsible for the West Pier, which is awaiting rebuilding after being left to decay and then gutted by fire. The interior of the aquarium has been kitted out to look like something from a Jules Verne submarine theme park, and its ambience dovetails so well with the early electric railway that runs outside.

While Brighton is famous for the Royal Pavilion, there are enough classic Victorian and Edwardian 'seaside' structures and features that could be enhanced to offer a package by which the town could be sold to visitors from both home and overseas who wish to revel in the finer delights of yesteryear, with the railway at its core.

At the time of writing, there is no immediate threat to close the railway, but it clearly could offer so much more. Since 1995, it has been supported by a growing band of enthusiasts under the banner of the Volk's Electric Railway Association, who, on occasions, even take over the running of the trains.

If you fancy doing something a little more elaborate than bucket and spading at Brighton, contact the group via membership secretary Alan James, 13 Rudyard Road, Woodingdean, Brighton BN2 6UB, or on alanjames812@hotmail.com

Magnus Volk has also been immortalised in Brighton's own Walk of Fame, the brainchild of local resident David Courtney, the man who discovered pop star Leo Sayer back in the 70s. Based on the Hollywood Walk of Fame, it is the only one of its kind in Britain. All the 100 names are laid in a liner alongside the resort's waterfront development, and Volk is up there with the likes of Dame Anna Neagle, Ruyard Kipling and Chris Eubank.

In terms of the impact that electric railways had on British transport, maybe he is the greatest Brightonian of them all. ■

Seeing double: **the steam camels**

We have all heard of the phrase 'iron horse'. As we have seen, Beamish Museum has recreated a Steam Elephant. And yes, there was also a steam camel...

French engineer Charles Lartigue wanted to become another Richard Trevithick or George Stephenson, either devising a completed new form of transport or making vast improvements on one that already existed.

Maybe he left it too late, or perhaps he thought too long and hard about it. Perhaps he found a solution to a problem that did not really exist. Or in solving one problem he created two…

Lartigue was born in Toulouse in 1834, the year of Trevithick's death.

Sometime in his forties, he visited Algeria and saw camels, the 'ship of the desert', carrying heavy loads balanced in panniers on their backs.

The sight provided a flash of inspiration to devise an all-new type of railway.

Instead of locomotives and stock running on two rails fixed to the ground, why not have a single rail at waist height but carried on A-shaped trestles?

The locomotives, carriages and wagons would then sit astride the track just like the camels' panniers.

By 1881, Lartigue had a 56-mile A-shaped monorail running across the Algerian desert. Its principal purpose was to transport esparto grass, with mules pulling trains of panniers carried by the trestle-mounted rail.

It was a case of a genuine innovation, as while the shifting sands of the desert would have made a conventional rail line virtually unusable, the single raised rail was a distinct advantage.

For Lartigue was a case of first Algeria, then the world… whether or not it had sufficient deserts.

In 1886, he displayed a sample length of his line to an exhibition in London in a bid to convince others it was a superior system. By then, of course, Brunel's broad gauge had but a few years left, and Stephenson's 4ft 8½in standard gauge was the norm.

At the same time, the folk of North Kerry in Ireland were pressing for the railway network to be expanded, bringing all of its benefits to the more remote communities… such as Listowel and Ballybunion.

Their demands reached a minister's desk in Westminster… and somewhere along the line, it was decided to test Lartigue's innovative idea by building a nine-mile line between the two towns.



One of the original locomotives in Ballybunion station.

The replica Listowel & Ballybunion locomotive at one of the points, or 'switches'.

The Listowel & Ballybunion Railway was opened on 1 March 1888 at a cost of £30,000. It is the town's claim to global fame as the site of the world's first steam monorailway.

Yet it was not a true monorail in the strictest sense of the word, for on either side of the trestle was another rail, on which unpowered stabilising wheels fitted to all the engines and wagons stopped them from overbalancing.

The famous Leeds firm of locomotive builders, Hunslet, supplied three engines to the line, designed by no less a person than Anatole Mallet. Nos 1 and 2 left the Hunslet works on 10 October 1887, and No 3 followed a week later.

They were 0-6-0s – or rather, 0-3-0s. Looking like steam Siamese twins, they were specially built with two boilers in order to balance on the track, and accordingly two fireboxes, one of which had to be stoked by the driver.

They also had powered tenders for auxiliary use on hills. The tender wheels were driven by two cylinders via spur gears. Two small chimneys were fitted to each tender to discharge the exhaust steam from these cylinders. ➤



Passengers crossing the rails on a steps bogie.

The tenders had two double-flanged wheels which could also be driven by a geared auxiliary engine for dealing with heavy loads on gradients; when in use it was engaged by a friction clutch, so the machinery would not be driven uselessly in normal operation. Therefore, the Listowel & Ballybunion engines could be said to have a wheel configuration of 0-3-0 + 0-2-0, all but unique in the history of locomotive engineering. However, the boilers were unable to generate enough steam to run the auxiliary engine, and it was never used.

The trains carried freight, cattle, sand from the beaches (not the local desert, as there wasn't one) and passengers, who included Ballybunion schoolchildren being carried to Listowel's secondary schools, Kerry and Limerick residents heading for the beach resort of Ballybunion and golfers travelling to the fledgling golf course at Ballybunion, which was to develop into one of the best in the world.

Freight loads had to be evenly balanced. If a farmer wanted to send a cow to market, he would have to send two calves to balance it. They would travel back on opposite sides of the same freight wagon, thereby balancing each other.

Likewise, passengers could not pass from one side of a carriage to another while in motion. A footbridge was built into one end of some of the passenger coaches, allowing them to cross from one side of the line to the other while the train was stopped at a station.

A major problem with the trestle track was that it was impossible to build level crossings.

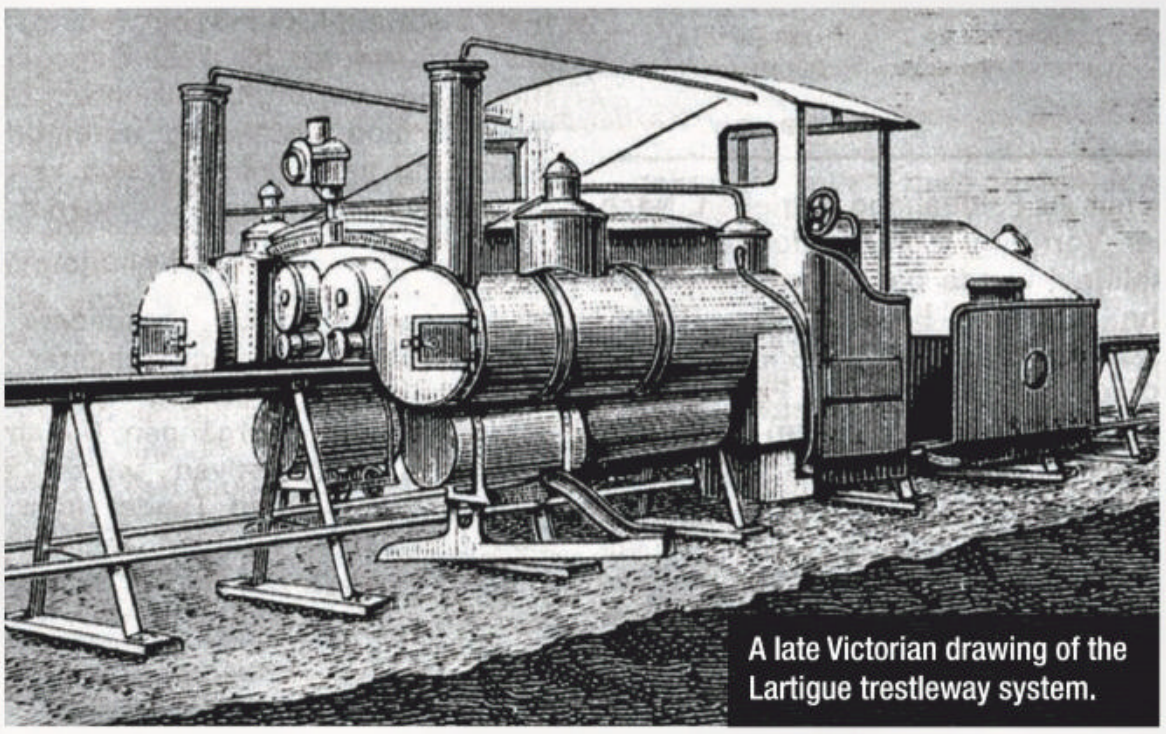
When the track met a road, a double-sided drawbridge had to be constructed, and an attendant was required to operate it.

Where farmers' tracks crossed the line, level crossings based on the principle of a turntable were provided. These were locked before and after use, and the farmer provided with a key.

Once unlocked, the track could be swivelled to one side to allow the crossing to be used.

Both the swivelling and drawbridge type crossings were automatically linked to signals which stopped any approaching trains, and road traffic was always given priority.

Conventional railway points could not be used, so to access sidings and passing loops, a large number of turntables was needed.



A late Victorian drawing of the Lartigue trestleway system.

What a much earlier innovator like Brunel would have made of Lartigue's system when he drew up plans for his Great Western Railway in 1836, nobody will ever know. Had there been a Dragon's Den back then, the words 'I'm out' might just about have cropped up more than once at this stage in the proceedings.

Like so many lines serving rural lines, the Listowel & Ballybunion just about broke even throughout its life. What is remarkable, however, is that life lasted 36 years.

The 10 January 1920 issue of *The New Illustrated* magazine contained an article titled An Unknown British Railway By S T James.

He writes: 'There are in this world of ours a remarkably high number of freakish transport concerns labelled as 'railways' and one of the most peculiar of them is the Listowel & Ballybunion line, in the county of Kerry, Ireland.

'This railway was built in 1888 for the special purpose of developing Ballybunion (Lord Kitchener's birthplace) as a seaside resort. It took only six months to build, is nine and a half miles long, and cost £3000 per mile, an extremely low figure, as many other British railway companies could testify'.

Instead of a gleaming metal track, the permanent way consists of light A-shaped trestles, about three and a half feet high, and placed across the ground at about the same distance one from another. The object of a permanent way of this description is to obviate the heavy expense of levelling the ground. By slightly varying the lengths of the trestles, the line can run fairly evenly over the grass, up hill and down dale'.

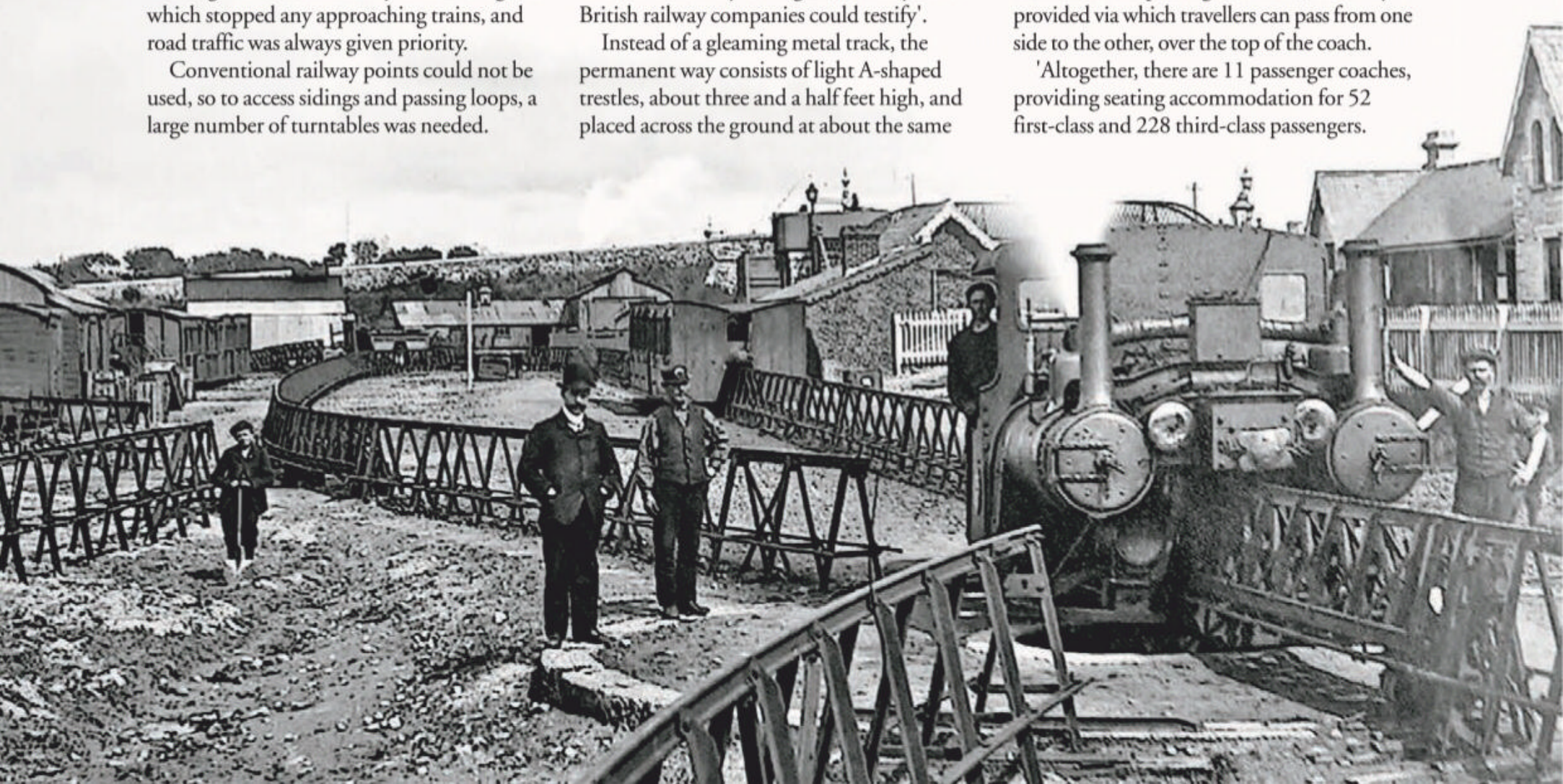
He continued: 'There are three locomotives, but only one is used at a time. The two most efficient ones work a week each in turn, while the third is kept In reserve for special occasions.

'Naturally, having to run on a single elevated line of rail, the engines have to be so constructed that they will balance, or, to use naval language, maintain an even keel. This is ensured by making each locomotive with two boilers, two funnels, two tenders, two smokeboxes, stacks etc. In fact, a Listowel & Ballybunion locomotive is just like two ordinary ones joined together in the middle.

'It is claimed that these engines can haul a load of 240 tons over the trestleway at 30mph.

'The passenger coaches and goods wagons are, of course, built on similar lines, each consisting of a double interior, and as it is necessary to have some connection between each half of the passenger vehicles, a stairway is provided via which travellers can pass from one side to the other, over the top of the coach.

'Altogether, there are 11 passenger coaches, providing seating accommodation for 52 first-class and 228 third-class passengers.



Hunslet makers' photograph of an original Listowel & Ballybunion locomotive.

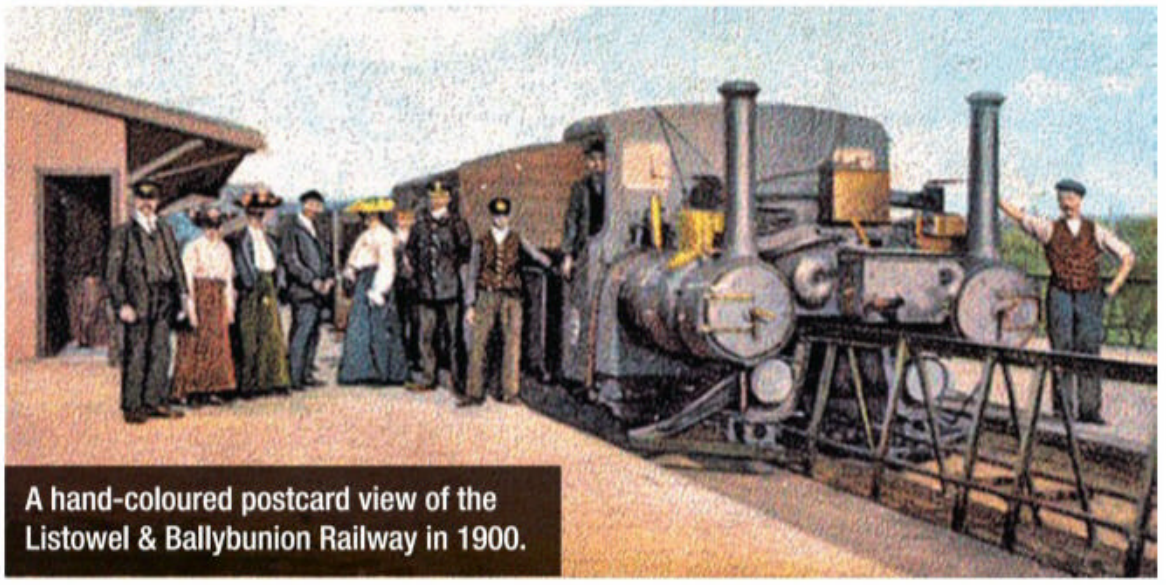
There are also 17 sand wagons and five goods wagons, with two brake vans. Truly an imposing array of rolling stock.

'Perhaps the most amusing thing of all to English visitors is the shunting. The various sidings on which vehicles are to be arranged, or 'marshalled', are all disconnected from the main line, and before a vehicle can be pushed on or drawn off such a siding, a portion of trestle way must be swung into position to connect the two.

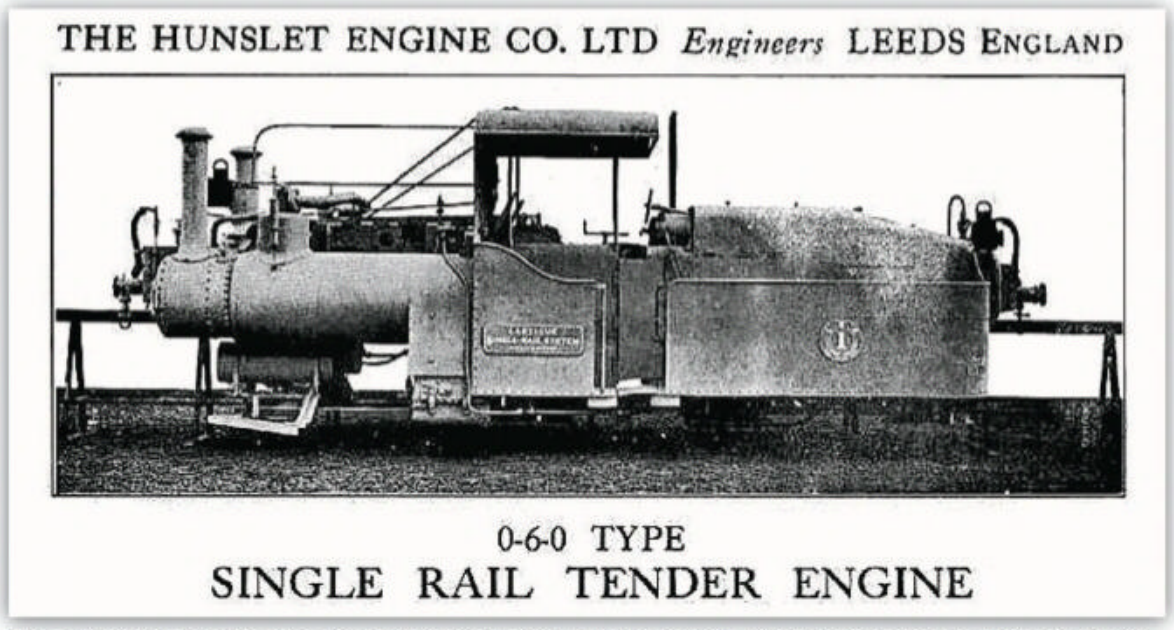
'Imagine, then, the nature of each shunting operation. A wagon has been placed on line No 1. The next vehicle is for line No 3. So the trestle track has to be unbolted from the ground, disconnected with line No 1, moved into a position that will connect it with line No 3, connected up, bolted down, and then – well, there we are! How very different to our method of merely pulling over a lever to alter the points.

'Connecting with the Ballybunion terminus of the line is a short branch of half a mile whereon sand wagons are loaded. This branch line is cleared once a day, and since it runs along the main road, the trestle track can only be allowed to remain fixed in a position during the hour or so when the train is running along it. After that it is uprooted and left lying along the roadside for the rest of the day.

'Just before the train comes along on the morrow, a railway official will arrive to reconstruct the permanent way. ➤



A hand-coloured postcard view of the Listowel & Ballybunion Railway in 1900.

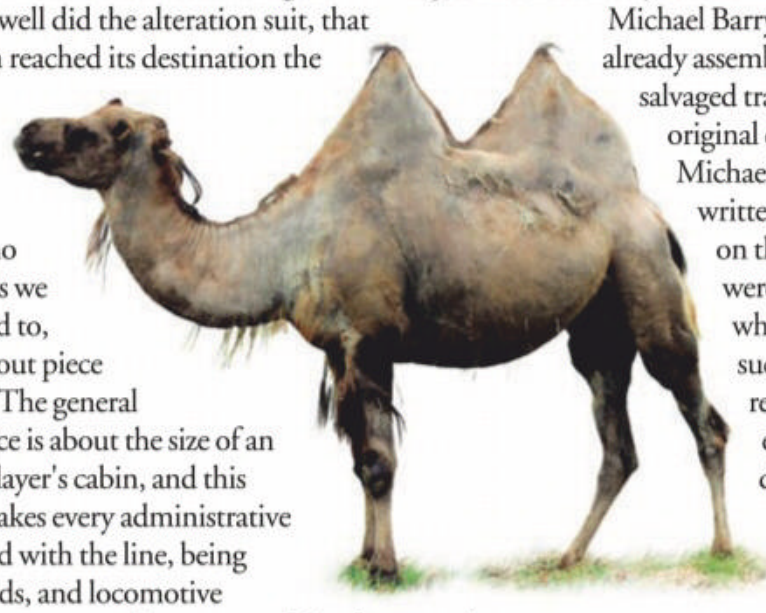


Manufacturer's advertisement for the Lartigue locomotive. There were no customers apart from the Listowel & Ballybunion.

'A ride over the Listowel & Ballybunion Railway is an experience not likely to be forgotten. As the time for departure draws near, the loading of the passengers has to be adjusted in order that the train shall balance evenly. The weight of travellers in the left half must be approximately equal to the weight of those in the right half.

'Guard and stationmaster jointly arrange the balancing, walking each down one side and calling to the other the number in each half of the coach. If perchance there should be 20 in one half and only 12 on the other, four of the 20 have to leave and proceed via the portable bridge to the other side of the train.

'Local residents assert that one day there arrived at the station just before the train started two engaged couples, a very fat pair and a very lean pair. The first-class carriages, for which these people held tickets, only hold two on each side, and the two fat ones climbed in one half, while the two thin ones sat in the other. This, of course, quite upset the balance of the train, and eventually someone – it needed an Irishman, too – intimated to the devoted lovers that they must part company. So a fat male and a thin female exchanged places, and so well did the alteration suit, that when the train reached its destination the change of partners had been made permanent.



'There are no stations such as we are accustomed to, but a marked-out piece of land serves. The general manager's office is about the size of an ordinary platelayer's cabin, and this official undertakes every administrative duty connected with the line, being passenger, goods, and locomotive manager, permanent-way inspector and Lord High Admiral of everything'.

The downfall of the line came not because of greater competition from motor transport, which killed off many British light railways in the 20s and 30s, but through damage caused during the Irish Civil War from 1921-23.

The line closed in 1924 and everything was scrapped except a short section of the track.

It seemed that the Listowel & Ballybunion would remain immortalised as the definitive oddball line which cropped up in any book covering narrow gauge railways of Britain.



A static replica of one of the French monorail locomotives in Panissières.

The year 1988 saw the centenary of the opening of the monorail and local politician and Lartigue enthusiast Michael Guerin produced a history of the line.

Michael Barry of Lisselton had already assembled 50 metres of salvaged track and an original carriage and Michael Foster had written a valuable book on the Lartigue. There were many locals who, buoyed by the success of railway revival schemes elsewhere, became determined to restore their piece of technological eccentricity.

A movement to restore part of the line offering passenger rides developed from small beginnings, and in the mid-90s the Lartigue Restoration Committee was set up with Jack McKenna, who had travelled on the footplate of the original line as its president.

Alan Keef Ltd, an accomplished narrow-gauge locomotive builder based in Ross-on-Wye, Herefordshire, was contracted by the Lartigue Monorailway Restoration Committee, a voluntary organisation from Listowel, to build a replica locomotive, but for reasons of economy (one boiler is expensive enough to maintain and overhaul, let alone two) and ease of operation, while it resembled one of the original steam engines, it was powered by a diesel motor.

Keef was also contracted to supply two third-class carriages. No drawings for the original carriages survived, so the firm closely modelled the new coaches on them as far as possible, using photographs and the memory of surviving passengers.

After much work and fundraising by the committee, work started on the building of the new line on a site on John B Keane Road in Listowel in November 2000.

In 2003, a 1000-metre section of Lartigue monorail on the trackbed of the former North Kerry line was opened, wih three points, two turntables and three platforms representing Listowel, Lisselton and Ballybunion.

The ride on the modern-day monorail starts less than 100 metres from the point where the original began its journey to Ballybunion. The site of the original Lartigue Listowel Terminal is preserved in a park adjacent to the new monorail, along with the bases of two points and the foundations of the engine house.

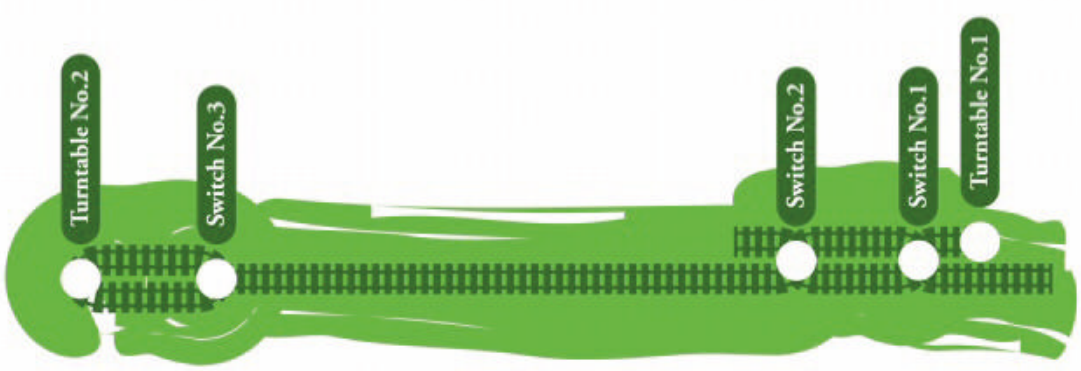
So today it is possible to ride on what must surely be a candidate for the title of the weirdest railway in the British Isles.

However, Listowel & Ballybunion was not unique.

In the wake of the opening of the Irish line, longstanding demands by up to 5000 residents of Panissières in the Loire region for a 'modern' transport link to Feurs and the national rail network were met by the building of a 10-mile Lartigue monorail in the 1890.

The route passed through Donzy, Cottance and Salvizinet, and had five stations, but no level crossings. A pair of locomotives, named Feurs and Panissières, were built by Bietrix of Saint-Etienne, a firm which specialised in manufacturing mining equipment. There were five carriages, each seating 26 passengers.

Testing of the completed line in August 1895 was less than satisfactory. A VIP trip





The replica Lartigue train in Platform 1. The train leaves Platform 1, travels via Switch No 1 through Platform 2 and down the main line for about 500 metres, then through Switch No 3 to Platform 3 where the train stops and the passengers alight. The train travels at about 15mph while on the main line, approximately the same speed as the original trains.

carrying the Prefect of the Loire was run on 14 August 1896 from Feurs to Panissières, but the train broke down after the locomotive failed to produce enough steam. The locomotives also failed regularly to tackle the gradients of 2.5 per cent with curves as tight as 25-metre radius.

After the local council agreed to subsidise the bringing of the monorail up to scratch, permission to operate it was finally given by the powers that be. However, the company then said that it no longer had the resources to operate the line, which was duly sold to a scrap merchant in Lyon in 1902.

What is believed to have been the last Lartigue monorail to be built was opened in the Mojave Desert, California, by the Sierra Salt Corporation, in the mid-20s. It carried magnesium salts from the company's mine in the Crystal Hills to the railhead at Trona.

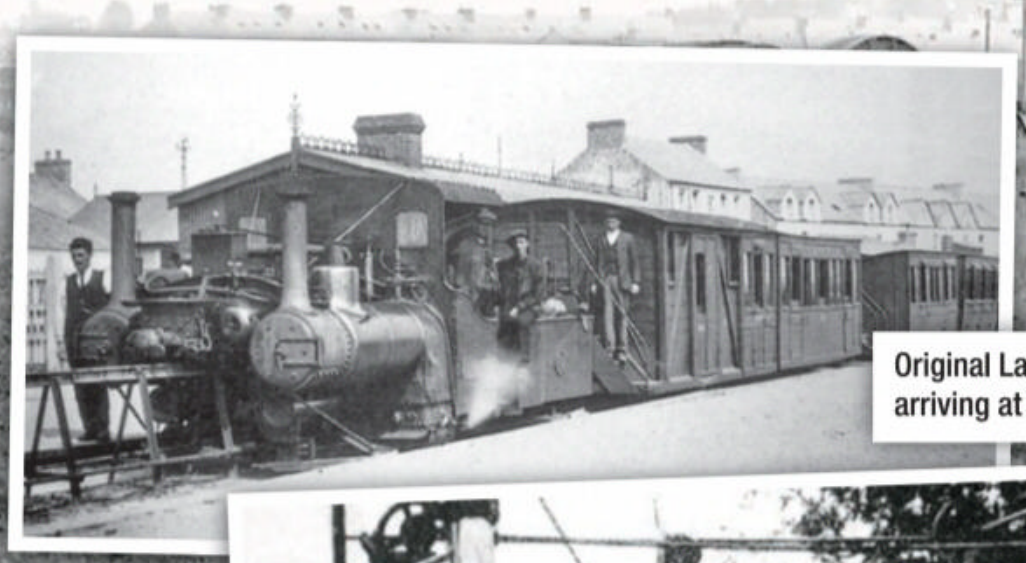
Unlike the French example, it worked, but lasted only two years before modern developments in magnesium extraction made the mine redundant.

Lartigue had died in 1907, and there were no further takers for his steam camels.

*Pictures supplied by Paddy Keane, volunteer on the Lartigue Monorailway. ■

'So today it is possible to ride on what must surely be a candidate for the title of the weirdest railway in the British Isles.'

A Lartigue train leaving Listowel station.



Original Lartigue train arriving at Ballybunion.



One of 17 'flying drawbridge' crossings on the Listowel & Ballybunion.

Go to jail!



Seaside miniature railways were for decades standard fare for the traditional British holiday, with every sizeable bucket and spade resort having at least one, and generations of happy campers holding fond memories of them. Billy Butlin even bought redundant full-size steam engines for display at his camps when they were no longer wanted by British Railway. However, in one far-flung and very desolate corner of the coast, seaside railways meant not holidays, but hell!

It was in 1935 that a group of 32 boys set off on a marathon trek from Stafford to the coast of Lincolnshire.

Under the supervision of three adults, they walked all 100 miles, stopping in village halls overnight.

And when they reached their destination, a bleak and deserted expanse of farmland overlooking salt marshes where the River Witham meets The Wash near Boston, they erected tents as accommodation.

It sounds every bit like some great Boy Scout jamboree of which Lord Baden-Powell would have been justifiably proud.

Far from it. The boys were all young offenders and the adults who accompanied them were prison officers.

And the trip was not organised by the scouting movement but the Borstal institution authorities, with the sole purpose of having the boys build their own detention centre.

Not only that, but once brick-built accommodation replaced the tents, they would be given purposeful work on the surrounding fenland.

In the days of the 'Grow For Britain' campaign, this new Borstal would run its own farm, but in doing so, 600 acres of salt marsh would have to be reclaimed from the sea, continuing a trend that had begun around the muddy shores of The Wash in Roman times.

That posed few logistics problems; a ready supply of free manpower, or rather boypower, was immediately available, and they were allocated the task of building a new sea wall and a set of dykes to hold the tides back.

In doing so, the boys would complete a task already begun by nature – the destruction of Lincolnshire's first seaside resort, Freiston Shore.

Here lies a classic example of a 'lost' resort, where the waves that once raced over its sandy beach now break over mudflats more than half a mile to the east, and what remains of the visitor facilities are now high and dry.

More than 200 years ago, Freiston Shore boasted a fine stretch of sandy beach. In the middle of the 18th century, when Skegness was still a small fishing village, visitors arrived in droves to Freiston Shore to bathe and drink the seawater for medicinal purposes.

For the Victorians, Freiston Shore was a popular year-round resort. Horse races were held on the shore between Freiston and Butterwick and proved enormously popular.



Working on the train gang: the daily life of young offenders at North Sea Camp in the 1950s.



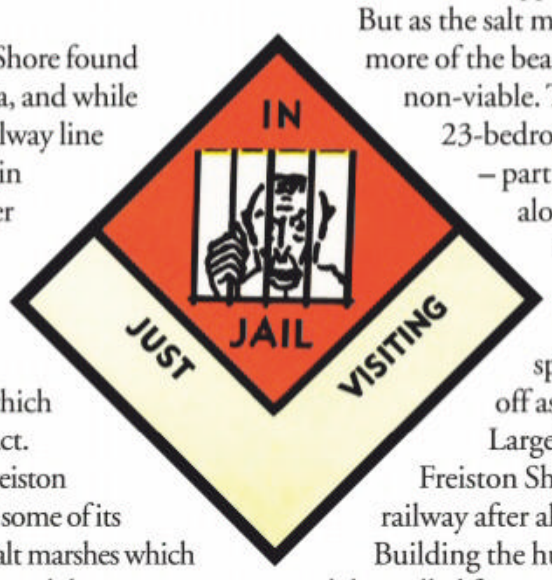
Spoil from salt marshes tipped to build up the sea wall at Freiston Shore, in a picture dating from the early 1970s.



Britain's only prison railway was used to build colossal sea defences by hand.

However, The Wash has been slowly silting up since prehistoric times, long before bad King John lost his treasure in its quicksands, and the muddy sediment suspended in the waves from the discharge of rivers slowly built up on the beach, encouraging the formation of mudflats. Also, the opening of the Witham Cut by the Boston port authorities further widened the area of salt marshes between Freiston and the sea.

Eventually, Freiston Shore found itself cut off from the sea, and while the Great Northern Railway line to 'Skeggy' was opened in 1873, Freiston was never connected to the national network. So visitors turned overnight to the more accessible destination which had its sandy beach intact.



Not to be outdone, Freiston Shore managed to retain some of its former popularity. The salt marshes which covered the once-golden sands became a popular haunt for shooting and fishing, with visitors from the Midlands and Yorkshire arriving to stop in the two hotels, the Plummers and the Marina. Stalls were set up on the sea wall and buses ferried in trippers from Boston.

But as the salt marshes took over more and more of the beach, the hotels became non-viable. The bigger of the two, the 23-bedroom Marina, closed down – part of it stands as a run alongside the original sea wall today – while the Plummers became a pub and was eventually split into six units and sold off as private accommodation.

Largely forgotten, yes, but Freiston Shore was to be given a railway after all.

Building the huge land reclamation dykes called for a means of transporting huge amounts of earth around – and what better than tipper trucks on rails.

A 2ft gauge tramway system was introduced, whereby lengths of portable track were laid in place along the construction sites, and the Borstal boys pushed the tipper wagons along it by hand.

The railway system soon spread out over the marshes and reclaimed fens, with a 'main line' running for three miles from North Sea Camp – so named because it started out as exactly that, a tented campsite – to Freiston Shore below the original sea wall.

Generations of young miscreants aided Mother Nature in pushing the sea wall further back. In time the railway switched from manpower to modern traction, in the form of Lister four-wheeled diesel locomotives, a move greatly welcomed by the exhausted inmates.

A network of sidings served the various workshops and maintenance depots at the prison camp itself. ➤

Britain's only prison railway was like a giant train set, with portable lengths of track laid across dykes to aid salt marsh reclamation by the inmates.



Horse racing along the sands at Freiston Shore in the early 19th century. The sands had long since vanished by the time Borstal boys began reclaiming saltmarsh.



This jailbird has flown: a nest was found growing inside the engine compartment of one of the railway's diesels.



Tory peer Jeffrey Archer, who was an inmate at North Sea Camp while he was serving four years for perjury.

From there, the line headed northwards, with branches diverging at various points to reclamation sites, where temporary track would be laid.

A few hundred yards from Freiston Shore stood the 'dining room'. This was/is a Nissen-type hut where locomotives and stock were stored, and prisoners working on the reclamation schemes were served hot meals at lunchtime to save them having to trudge all the way back to the camp.

The stock mainly comprised hand-operated tipper wagons, while some chassis had been modified to carrying winches and water pumps.

The railway remained in use until the 1970s as more and more salt marsh was reclaimed by the boys.

The term Borstal went out of use (it took its name from the quite innocent Kent village where the first such establishment was tried as an experiment), and the young offenders institution became an adult prison in 1988.

By that time the railway had fallen into disuse, (in its latter years, much of the manpower used in hauling large amounts of spoil and mud from the coast had been replaced by a dragline) and it was eventually decided that no more land could be reclaimed from the sea. The Wash had reached the equilibrium position where further deposited sediment was being just as quickly removed by the currents, and any eastward extension of the defences might prove impossible to maintain in the face of freak tides. In more recent times, some of the reclaimed land at Freiston Shore has been 'given back' to The Wash as part of a modern sea defence policy of 'managed retreat'.

The fleet of six diesel locomotives was placed into store, the temporary track piled high next to the old sea wall beyond the Plummers Hotel where some tipper wagons were also left to rot on a siding, and the main line became overgrown and, level crossings apart, covered by a thick layer of turf.



Is this what you call a branch railway line, or it is a trunk route?



These carriages were built by prisoners under an abortive revival scheme.



One of the prison line's Lister diesel locomotives as new.



HM Prison North Sea Camp displays one of its railway's diesel locomotive and a rake of tipper wagons at its main entrance.

'A 2ft gauge tramway system was introduced, whereby lengths of portable track were laid in place along the construction sites, and the Borstal boys pushed the tipper wagons along it by hand.'

One of the locomotives, Lister No 33651 of 1949, and three wagons were taken for preservation at HM Prison College at Newbold Revel near Rugby, where they were placed on open display.

Believed to be Britain's only internal prison railway, the potential of the railway was not lost on one of the previous governors, who in the 1980s hatched a revival plan.

He had a series of carriages built on the four-wheel wagon chassis from redundant tipper wagons, and inmates in the carpentry shop built a series of 'station buildings' which were to be erected along the line.

Sadly, this venture fizzled out, and the plywood-bodied carriages remain locked in the 'dining hut'.

A subsequent governor appointed in 2002 hatched more grandiose plans, and planned to fully revive the railway, opening it to the public on high days and holidays. He went as far as to appoint a full-time project director with railway preservation experience for the purpose and hoped to open a café at Freiston Shore so that refreshments could be served to birdwatchers.

Sadly, the scheme came to grief, after he parted company with the prison service.

The authorities then took a decision to get rid of the railway once and for all, and sold it off piece by piece at auction in March 2005.

The auction was handled by Sleaford estate agents Pygott & Crone, and bidding was brisk, despite the fact that the little railway had been rusting away for three decades and was mostly overgrown.

Some of the wagons had been left in situ since the railway was last used, and had tree trunks growing through them. And when inspected, one of the locomotives had a bird's nest in the engine compartment.

Unlike the prison's inmates, which famously included the disgraced Tory peer and novelist Jeffrey Archer after he received a four-year stint for perjury, railway enthusiasts from all over Britain queued up to visit the camp for the sale.

The Cleethorpes Coast Light Railway, spent £650 on buying spare locomotive parts.

Herefordshire locomotive builder Alan Keef bought half a mile of track for a bargain £400 – but will now have to send workers nearly 200 miles to lift it.

Another enthusiast forked out £2200 for nine huge heaps of rusting portable track sections which had been lying in a field at Freiston Shore waiting in vain for the Borstal boys to return.

One of the locomotives sold for £2576, while the same buyer acquired the chassis of another for £1600.

Perhaps the best bargain of all was the £60 paid by the private North Ings Farm Railway Museum at Dorrington, near Ruskington. For his money, the owner picked up a fleet of six carriages – made out of plywood by prisoners and fitted to wagon chassis during a previous attempt to revive the railway.

The money would scarcely have bought him three Hornby OO scale model coaches! ■

The Docker's Umbrella

While London and other world cities burrowed underground to create railways to bypass surface traffic congestion, Liverpool went in the opposite direction – and built the world's first elevated electric railway.

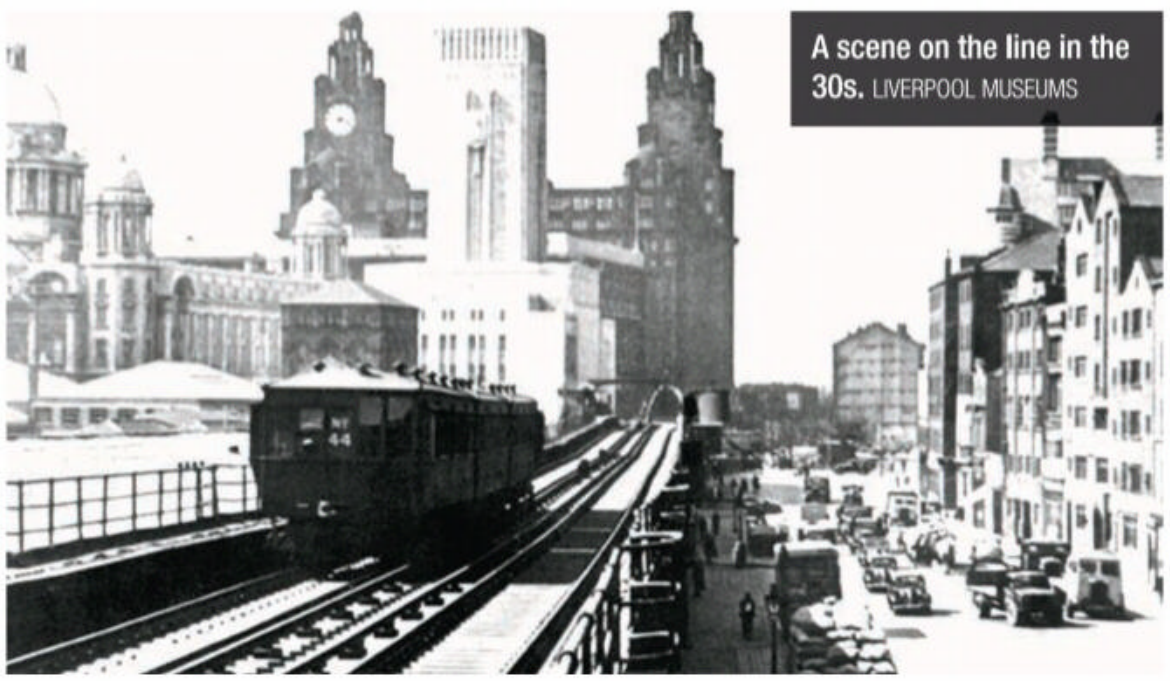
Gladstone Dock station as seen from ground level with Set No 41 entering. COLOUR-RAIL

The Liverpool Overhead Railway can claim another global first for British railway engineering.

It was the world's first electrically operated overhead railway, and also the first to be protected by electric automatic signals.

Opening in 1893 and closing in 1956, the elevated line provided quick and effective transport for generations of Merseyside dock workers, and there are many who believe it went before its time.

At a time when steam reigned supreme, and electric traction was still the domain of early inventors such as Magnus Volk, the Liverpool Overhead Railway Company was formed in 1888, although a railway along the route – linking Liverpool's docks – had been mooted as early as 1852.



A scene on the line in the 30s. LIVERPOOL MUSEUMS

By the 1880s, the city's dock network was virtually complete, but the offshoot of it was major traffic congestion in Dock Road – and that was before the invention of the motor car.

The problem was exacerbated by the many railway level crossings which connected goods stations and dockside lines. As trade boomed it was obvious that passenger traffic had to be accommodated away from the cargo routes.

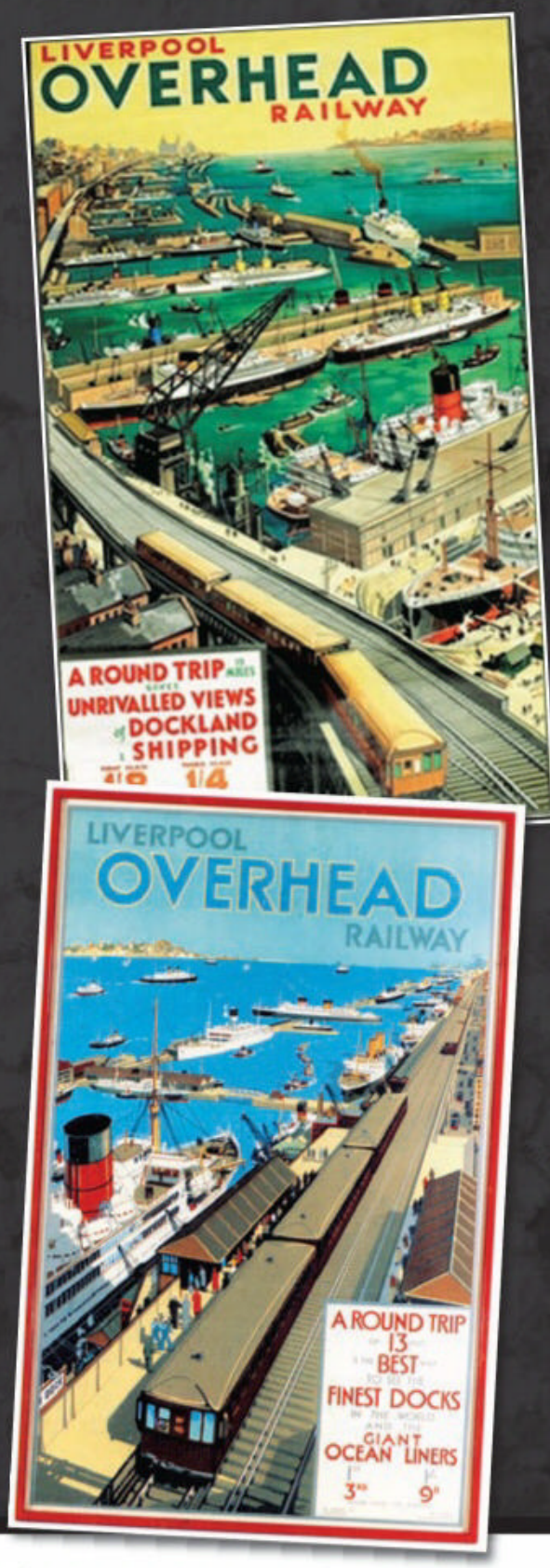
A prominent group of businessmen formed the Liverpool Overhead Railway Company and obtained powers to build the line.

Engineers Sir Douglas Fox and James Henry Greathead opted for electric traction to eradicate the possibility of sparks from the burning coal of steam locomotives setting fire to flammable cargo nearby.

Building started in 1889 and the line, nicknamed the 'Docker's Umbrella' because it ran above ground, was opened on 4 February 1893, by the Marquis of Salisbury.

Built to standard gauge, it ran six miles from Alexandra Dock to Herculaneum Dock, with 11 intermediate stations along





the line, at Brocklebank, Canada, Sandon, Clarence, Princes, Pier Head, James Street, Canning, Wapping, Brunswick and Toxteth. It was predominantly carried on iron viaducts, with a corrugated iron decking, onto which the tracks were laid.

The company quickly realised that passenger ticket sales outside working hours were poor and decided to extend the line to tap in residential areas. Accordingly, the railway was extended northwards to Seaforth Sands on 30 April 1894 and southwards to Dingle on 21 December 1896. Dingle was the railway's only underground station and was located on Park Road. The southern extension from Herculaneum Dock involved a 200ft lattice girder bridge spanning the Cheshire Lines goods yard and boring a half-mile tunnel through the sandstone cliff to Park Road.

Passengers were bemused; if they were catching an overhead train, why should they have to descend steps to a subway leading to an underground station?

The final extension was northwards, linking the railway to the Lancashire & Yorkshire Railway's North Mersey Branch on 2 July 1905.

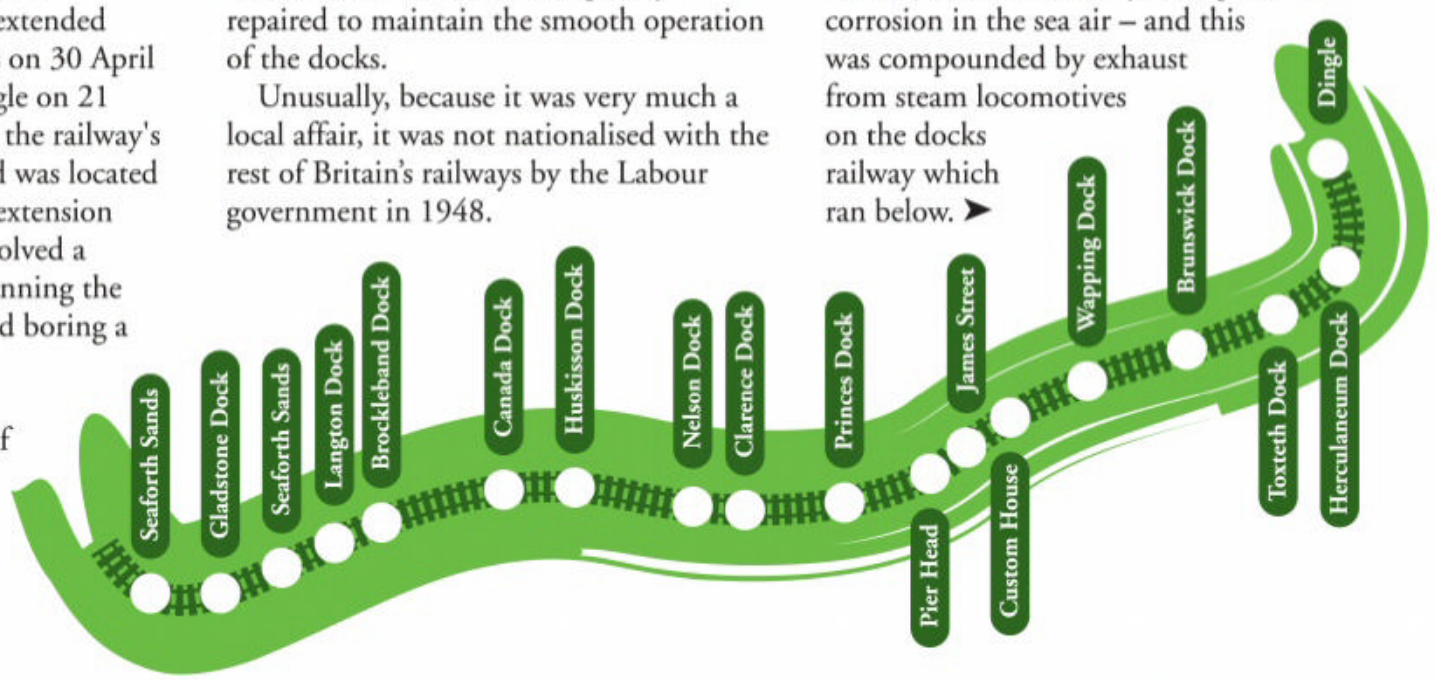
The L&Y ran some of its own specially built vehicles on the line on occasions such as race meetings at Aintree. The overhead suffered extensive damage from Luftwaffe bombs during World War Two, but it was quickly repaired to maintain the smooth operation of the docks.

Unusually, because it was very much a local affair, it was not nationalised with the rest of Britain's railways by the Labour government in 1948.

After the war, the Liverpool Overhead Railway Company began to modernise its carriages, fitting sliding doors in some of its 19 units.

The line continued to carry large volumes of passengers, especially dockers, and was an integral part of the city's transport system.

However, the iron curved deck plates which carried the railway were prone to corrosion in the sea air – and this was compounded by exhaust from steam locomotives on the docks railway which ran below. ➤







Above: **A surviving Liverpool Overhead Railway car in the possessions of the city's museum's service.** LIVERPOOL MUSEUMS

Left: **A plaque marking the location of the overhead railway.** LIVERPOOL MUSEUMS

Below: **Going up in the world: a refurbished Liverpool Overhead Railway set crosses the main road at Pier Head.** COLOUR-RAIL

Remedial work estimated at £4-million was way outside the resources of the railway company, which looked in vain to both Liverpool City Council and the Mersey Docks and Harbour Board for financial assistance.

When no bailout was forthcoming, the company went into voluntary liquidation and closed on 30 December 1956, despite protests from passengers.

The final trains each left either end of the line, marking the closure with a loud bang as they passed each other. Both trains were full to capacity with supporters and company staff.

The railway was replaced by Liverpool Corporation bus service route No 1, which was by no means as fast as the overhead line, because of traffic congestion. Repeated public calls for the railway to reopen went unheeded by local authorities.

Demolition of the elevated railway and its sale for scrap began in September 1957 and took a year.

All that remained were upright columns in the walls at Wapping, the tunnel portal at Dingle and Dingle station, which became used as a garage.Liverpool's transport world first therefore passed into history overnight, but is still remembered with much fondness.



Set No 20 enters James Street station.
COLOUR-RAIL

Its fame would soon, however, be eclipsed by another great Merseyside product, for while it was being demolished, a local teenage rock and roll group called the Quarrymen, inspired by blues music from the United States imported via the docks, were giving performances in the city. Four years later, they became the Beatles.

If you want to glimpse this unusual yet groundbreaking railway, it is featured in the 1951 film *The Clouded Yellow*, and in *Of Time and the City*, a 'cinematic autobiographical poem' produced by British film-maker Terence Davies to celebrate Liverpool's 2008 reign as Capital of Culture.

Furthermore, in 2010/11, part of the line will be 'reborn' as an exhibit inthe new £72-million Museum of Liverpool. The biggest newly built national museum in Britain for over a century, it is also the world's first national museum devoted to the history of a regional city, reflecting Liverpool's global significance through its unique geography, history and culture.

The exhibit will stand 16ft above the ground just like the original.

A surviving overhead railway 40ft third class carriage taken from the museum's storeroom at Bootle will be installed.

The exhibit will allow visitors to walk underneath, giving the same view of the line as the dockers had.

Admission to the museum will be free. ■

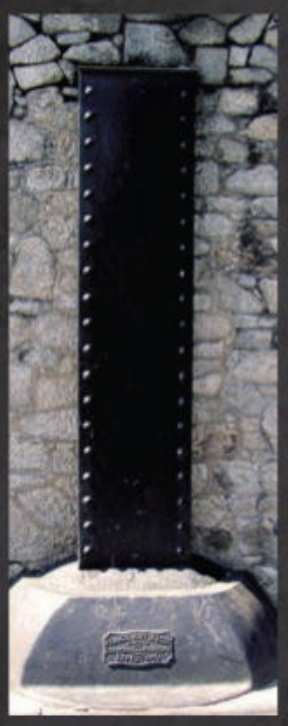


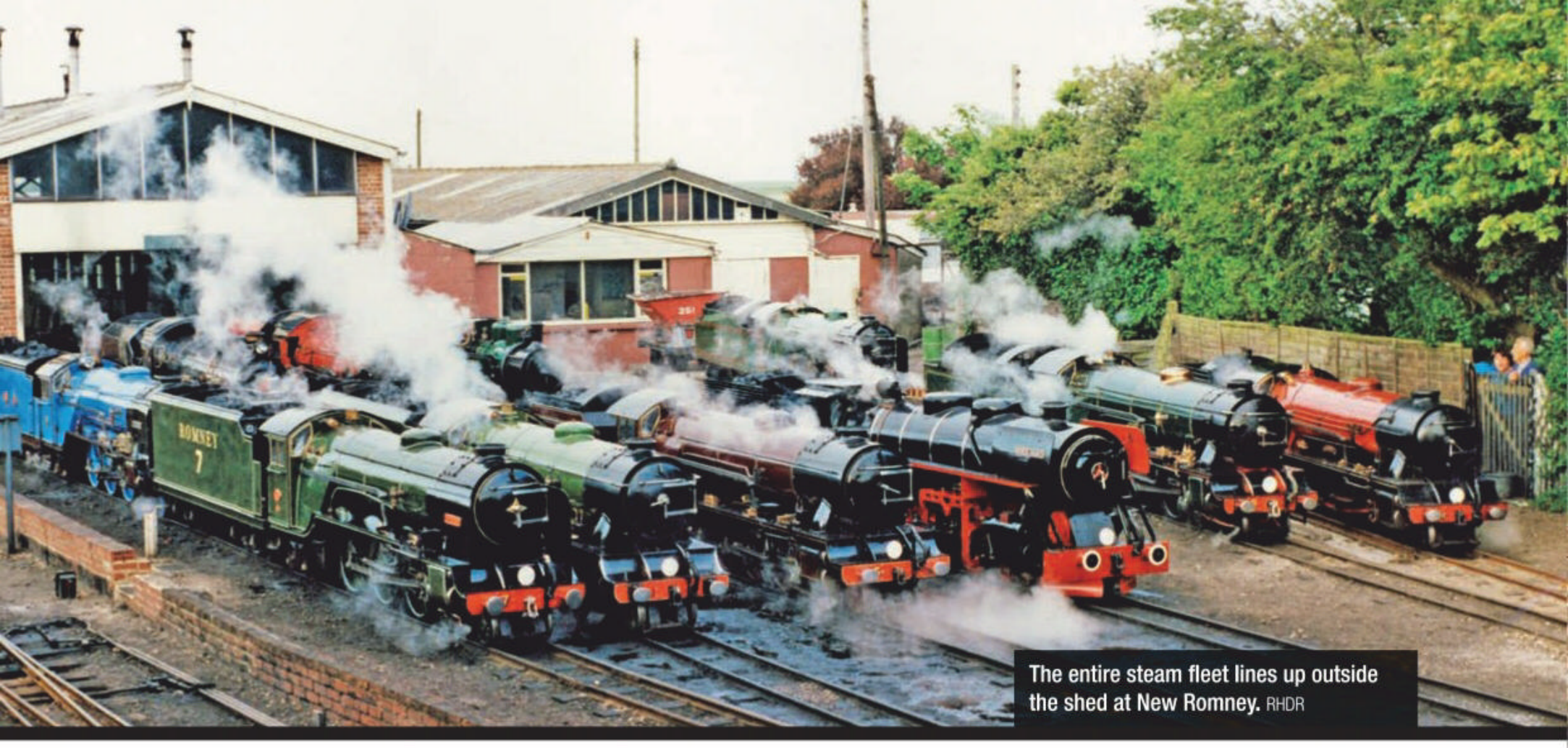
Above: **A computer-generated impression of the Port City gallery at the new Museum of Liverpool with the overhead railway carriage in place.** LIVERPOOL MUSEUMS

Right: **Remains of an upright at Wapping Dock.** ROBIN JONES

Below: **The railway as seen in the 1920s.** LIVERPOOL MUSEUMS







The entire steam fleet lines up outside the shed at New Romney. RHDR

The railway town of Romney Marsh

The Romney Hythe & Dymchurch Railway has long claimed to be the world's smallest public railway, its 15in gauge locomotives and stock running on a 'main line in miniature'. It runs for 13½ miles from Hythe to Dungeness, which has over the past century become a unique railway 'town' by the back door at Britain's south-easternmost corner.

Dungeness has that distinctive 'end of the world' feeling. The name is Old Norse for 'headland' and that is exactly what it is – Kent's version of Land's End or John O'Groats jutting out into the English Channel at the extremity of south-east England.

Headlands are normally associated with cliffs, but windblown isolated Dungeness comprises shingle – and lots of it. In fact, it is one of the biggest expanses of shingle in the world, and its rich flora and fauna – there are over 600 different types of plant and many rare insects such as moths, bees and beetles, and spiders found nowhere else in Britain – have seen it declared a Site of Special Scientific interest. Inadvertently, it has also become a place of great railway interest too, without even trying.

It is no Crewe, Derby, Swindon or Eastleigh, but that has not stopped Dungeness from developing as a railway 'town'. Perhaps 'town' is the wrong word, for Dungeness is a settlement scattered at random with houses plonked all over the shingle, with no fenced-off gardens and linked only by telegraph poles and wires – a real 'wild west' outback scenario.

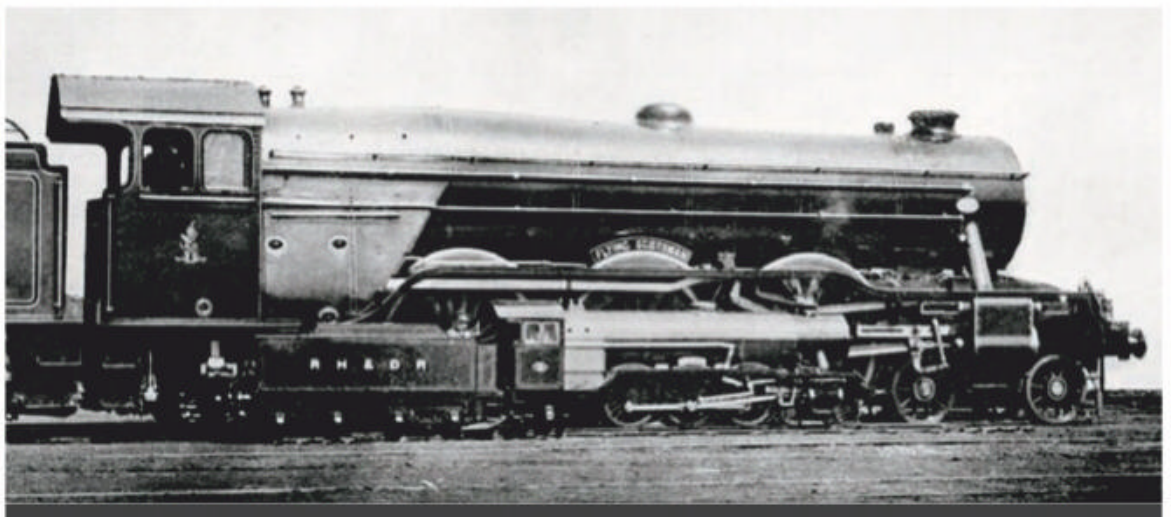
Many of these houses began life as Victorian railway carriages, the bodies sold off as homes for Dungeness fishermen when they were withdrawn from service.

The Southern Railway owned much of the land around Dungeness, and the coaches would be brought there by rail in the 1920s, down the branch line from Appledore.

That line was opened by the Lydd Railway Company on 7 December 1881, being worked from 16 February 1882 by the South Eastern Railway. The company extended the line by building a branch from Lydd to New Romney which opened on 19 June 1884. In January 1895 the Lydd Railway Company was taken over by the South Eastern which became part of the South Eastern & Chatham Railway three years later.

More railway bungalow cottages followed over the years. Some were moved there in the 1950s to house workers when the nearby Dungeness nuclear power station was built. They were intended to be only temporary accommodation, but ended up being lived in ever since.

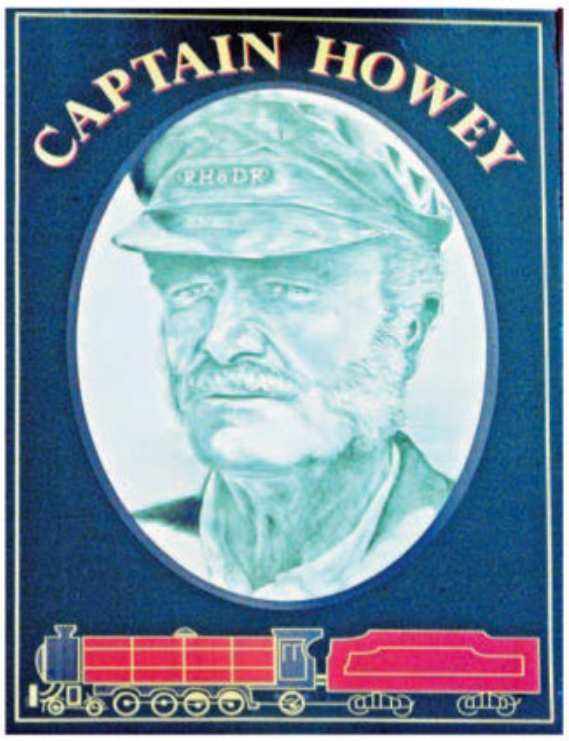
For those who could afford no better, the carriages formed cheap and instant accommodation. Starting out as basic coach bodies minus the chassis, the occupants extended and improved them, boxing in the roofs and then added chimneys and fireplaces at the rear, followed by extensions. ➤



Two Pacifics a size apart: *Flying Scotsman*, which went on to become the world's most famous railway locomotive, lines up against the Romney, Hythe & Dymchurch Railway's No 7 *Typhoon* at King's Cross depot in the mid-20s. ROBIN JONES COLLECTION

Opposite page: Davey Paxman 4-8-2 No 6 *Samson* arrives with a train at Dungeness, with the flat shingle wastes stretching as far as the eye can see. This photograph is taken from Dungeness Old Lighthouse, one of five to be built on the headland, and which is open to visitors prepared to climb its 169 steps. DAVID STAINES





Opposite the Britannia pub stands a white bungalow, the shape of the tongue and groove panelling which covers it just about betrays its origins as a railway coach. It was once a royal saloon for no less than Queen Victoria. Most other coach bodies at Dungeness are much less aristocratic.

Over the years, as more city folk 'discovered' Dungeness, the carriage houses became trendy and highly sought after as weekend retreats.

Not only that, but they came to the eye of architects and designers who stepped in to convert them into stylish and futuristic luxury dwellings – but with the original carriage still inside.

Standing in the shadow of Dungeness spower station area is a row of carriage homes, and what to the untrained eye seems to be an all-new modern wooden bungalow dwelling with glass front and veranda. From an angle, you can see the reflection of a railway carriage in the window. That is exactly what it is: the carriage now forms a state-of-the-art modern kitchen room inside the 'new' dwelling.



Surveying the scene: Captain Howey (left) and Henry Greenly (right) on the site of New Romney station in 1925. DEREK SMITH COLLECTION



Laurel and Hardy were the VIP guests at the reopening of the line to Dungeness in 1947. ROBIN JONES COLLECTION

These carriages may have been cheap to buy when first offloaded by the railway – some cost as little as £10 – but recent asking prices have placed many well upwards of £200,000.

The railway that brought the coaches to Dungeness closed to passengers on 6 March 1967. The terminus, New Romney & Littlestone-on-Sea, was closed and the rails cut back as far as Dungeness, where a loading point for nuclear fuel for the A and B power stations was created. That line still exists today, and there have been calls to reopen it for passengers to Lydd-on-Sea airport.

As we have seen, while we may have a notion of what constitutes a 'normal' railway, the concept has a multitude of applications. A primary example of an 'unusual' manifestation of the railway principle can be seen at Dungeness, where a series of ramshackle narrow-gauge tracks have been laid from the coastal road to the high shingle ridge overlooking the sea.

Typhoon being turned at Hythe in late evening. RHDR



This bungalow is said to include a royal saloon used by Queen Victoria. ROBIN JONES



Another railway carriage bungalow, with the Old Lighthouse behind it. ROBIN JONES

These 'Heath Robinson' affairs have been created by fishermen as an effective way of hauling their catch over the stones, some running for hundreds of yards, with their own bridges, viaducts and embankments. A variety of home-made motive power was used to pull them.

There were still around eight 'fish railways' evident at Dungeness at the turn of this century, but by 2009, most if not all of them had been discarded in favour of concrete or matting pathways to do the same job.

Of course, the most famous railway of all at Dungeness has to be the Romney, Hythe & Dymchurch Railway.

It was the brainchild of two men, racing driver, millionaire landowner, former Army Officer and miniature railway fan Captain Jack Howey and Count Louis Zborowski, a wealthy aristocrat who was also famous as a racing driver.

Zborowski wanted to build a fully working express railway in miniature. The locomotives would be scale replicas of main line steam locomotives, but would run on 15in gauge, not 4ft 8 1/2in.

The pair tried in vain to buy the Ravenglass & Eskdale Railway in the Lake District, a 15in gauge line laid on the trackbed of an earlier 3ft gauge freight operation.

Undeterred, Zborowski ordered two Pacific locomotives to be designed by the leading model railway engineer of his day, Henry Greenly, and built in Colchester by Davey, Paxman and Co, in anticipation of the day the pair would have a railway of their own on which to run them. They were named *Green Goddess*, after the 1921 stage play by William Archer which Howey had enjoyed, and *Northern Chief*.

However, Zborowski was killed while racing at Monza in the Italian Grand Prix before they could be delivered.

The captain was left with the two locomotives and finding a line on which to run them. Greenly came up with the idea of building a railway along the coast of Romney Marsh.

A double-track line was laid over the eight miles between Hythe and New Romney, the railway's headquarters, and the official opening took place on 16 July 1927, with another Pacific, *Hercules*, hauling the first train.

Howey extended the double tracks to Dungeness via Greatstone the following year.

The line was billed as the 'Smallest Public Railway in the World' and proved enormously popular. Soon there were nine miniature versions of main line express Pacific engines hauling a fleet of luxurious coaches.

Any notion that it was a 'toy' rather than 'real' railway were dispelled during World War Two, when it found itself in the front line of Britain's defence. Just as the Royal Military Canal had been built across the northern edge of Romney Marsh in 1810 to provide a line of defence should Napoleon's troops have landed, so the little railway found itself pressed into army service.

The War Department created the only miniature armoured train in the world as the line was used for patrols of the coast by the Somerset Light Infantry and there was extensive transport of soldiers on troop trains. The railway was also used extensively during the building of PLUTO (Pipe Line Under The Ocean) which fuelled the Allied invasion force following the D-Day landings in June 1944. ➤



Mallard it ain't: an abandoned fish railway locomotive as seen in August 2009. ROBIN JONES



Samson departs Dungeness with the modern lighthouse dating from 1961 in the background. ROBIN JONES



Look closely through the window of this very modern bungalow at Dungeness and you will see a railway carriage inside! ELSPETH THOMPSON

The railway was handed back to its owner after the end of the war, and the Hythe to New Romney section reopened to the public in 1946.

The New Romney to Dungeness section followed a year later with no less than Laurel and Hardy cutting the ribbon.

However, the war years had taken their tool, and the New Romney to Dungeness section had been reduced to single line only, as the raw materials to rebuild were scarce and the cost of reinstatement enormous.

With the growth of tourism along the Kent coast in the 50s and 60s, the railway greatly benefited, but as cheap package holidays abroad became readily available, less holidaymakers came and receipts fell.

Howey died in September 1963 with the lack of investment in the line already evident, a problem which was not fully addressed by subsequent owners. The rolling stock was ageing and giving rough rides, the locomotives were costly to maintain and carriages were in poor condition.



Samson heads towards Dymchurch with a service from Hythe on 29 August. ROBIN JONES



A Dungeness fish railway passes an abandoned hulk. ROBIN JONES

Multi-millionaire enthusiast Sir William McAlpine, who once owned Flying Scotsman, stepped in to reverse the downward trend in 1973, and since then, the railway has gone from strength to strength.

A main line should have a grand terminus, and in 1974, a new trainshed was erected over the New Romney platforms to give the impression of a major city terminus.

The fleet expanded in 1976 with German-built locomotive No 11 *Black Prince*, while all 10 original locomotives remain in service, covering thousands of miles each year. All well as the nine Pacifics and 4-8-2s, there was Krauss 0-4-0 tender tank locomotive No 4 which left the railway in 1926 after construction and ran in Belfast with the new name Jean. It returned to Romney in the 1970s and was restored in the 1970s, and is known as The Bug. There are now a total of 16 locomotives.

Not only is the line a major tourist attraction, but also provides a public service between the small towns and villages between Hythe and Dungeness. Indeed, it was conceived as a public service, rather than a visitor attraction.

It is under contract to the local council to transport children to and from The Marsh Academy in New Romney. Local residents are transported to shopping centres and the railway has operated 'shoppers specials'. Holiday camp trains have operated with campers at Romney Sands and St Mary's Bay.

So while the 10 1/4in gauge Wells & Walsingham Light Railway in North Norfolk, laid along part of the Great Eastern Railway's Wells-next-the-Sea branch, has since 1982 claimed to be the world's smallest public railway, the Romney line is still unique as a main line in miniature.

The railway's designers had also envisaged freight being carried, and that is partially why two of the original engines, No 5 Hercules and No 6 Samson were built to the Mountain 4-8-2 wheel arrangement because while lacking speed, they could haul heavy freight.

In 1937 a quarter-mile branch line was laid to the east of the main line near Dungeness, running to the beach, while platform one at Hythe was extended beside the station buildings and out to the front of the station. The purpose was to facilitate the movement of fish from Dungeness to Hythe for onward transportation by road.

The service was developed from 1937 following closure of the main line spur to Dungeness line that year. ➤

A fish railway viaduct over a dip in the famous shingle. ROBIN JONES



Green Goddess on the last lap on its journey to Hythe on 29 August. ROBIN JONES

The Romney line even went as far as to introduce its own fish wagons, but as a venture it took off in only a small way and was soon withdrawn. The venture, however, led to the idea of the above-mentioned fish railways at Dungeness.

The most successful freight service was the uncrushed ballast service. Also in 1937 a subsidiary ballast company was formed, with tipper wagons loaded with shingle from Dungeness beach taken along the fish branch and onwards to Hythe, where the contents were tipped into lorries from a ramp. The service lasted until 1951 when road transport took over.

The Romney railway is licensed by the Post Office for rail postal services, and is allowed to issue its own postage stamps. A four-wheel secure postage wagon was built, and several first-day covers have been issued.

The railway operates a parcels service, whereby parcels can be ferried from one station to another. The standard gauge line to New Romney & Littlestone-on-Sea once brought in coal for the little railway's engines. Devoid of a main line interchange for more than four decades, many have asked whether the railway could be extended.

In the late 1920s, there were plans for a two-mile extension with steep inclines from Hythe to Sandling to meet the Southern Railway at Sandling Junction; the gradients were another reason why the 4-8-2s were ordered. The plans fizzled out, but were briefly revisited in the 1980s when fresh surveys were compiled.

Since the railway was built, traffic levels on adjacent roads has increased many times over, and there have been several serious accidents on the line's 13 level crossings, two of them in recent years fatal. While the crossings have been protected since the 1970s by flashing warning lights, all of them are having lifting half-barriers installed, just like the 'big' railway.

Howey wanted a railway that would last his lifetime. Those that built the Romney, Hythe & Dymchurch did much better: it is still a thriving concern in the modern age, long after the full-size steam locomotives which its engine fleet aimed to replicate were withdrawn from British Railway service.

Other 15in gauge railways have followed in its wake of its success, such as the Bure Valley Railway in Norfolk, the Cleethorpes Coast Light Railway in Lincolnshire. However, none of them can claim the history and pedigree of the railway that Jack built. ■



King's Cross, Liverpool Street or Waterloo? None of them: this impressive main line terminus is New Romney! ROBIN JONES



Captain Howey's favourite locomotive was *Hurricane* and remains a favourite of many visitors today thanks to its eye-catching Caledonian blue livery. It is seen at Hythe in 2008. MARK HEWITT



The preserved Post Office underground railway train inside the Great Hall at the National Railway Museum. ROBIN JONES

Rail Mail

London's 'other' underground was a miniature tube railway designed to carry tons of letters and parcels quickly and conveniently below the city's congested streets – until the Post Office decided it was cheaper to use the road after all!

For anyone interested in finding out more about Britain's railway heritage, the National Railway Museum in York is the first place to start.

The centrepiece is the Great Hall, where many of the headline-grabbing giants of the steam age are there on display, in pristine conditions – LNER A4 Pacific No 4468 *Mallard*, the world's fastest steam locomotive, a replica of Stephenson's Rocket, and the most recent addition, LMS Princess Coronation Pacific No 46229 *Duchess of Hamilton*, brilliantly restored to its as-built art deco streamlined condition by Bob Meanley's team at Tyseley Locomotive Works. One of the most popular exhibits is not British or steam at all, but a power car from the Japanese Bullet Train.

There is railway age glamour at every twist and turn.

However, one of the less conspicuous locomotive exhibits in the Great Hall, a former steam age roundhouse, is from one of Britain's most unusual yet most successful railways.

It is a train from London's famous Post Office underground railway. Unlike most of the museum locomotive and rolling stock exhibits, the general public will never have glimpsed it in operation at first hand.

Designed purely for the carriage of letters and parcels, this hidden 2ft gauge line, which ran in tunnels 70ft below the city's streets, ran for 19 hours a day, 286 days a year, on 23 miles of track.

It had no drivers or guards, and was fully automated, controlled in its latter years by computer.

At its height it carried over four million items of post a day, and managed to run over its six-and-a-half-mile main line from Paddington at one end to Whitechapel at the other in 26 minutes.

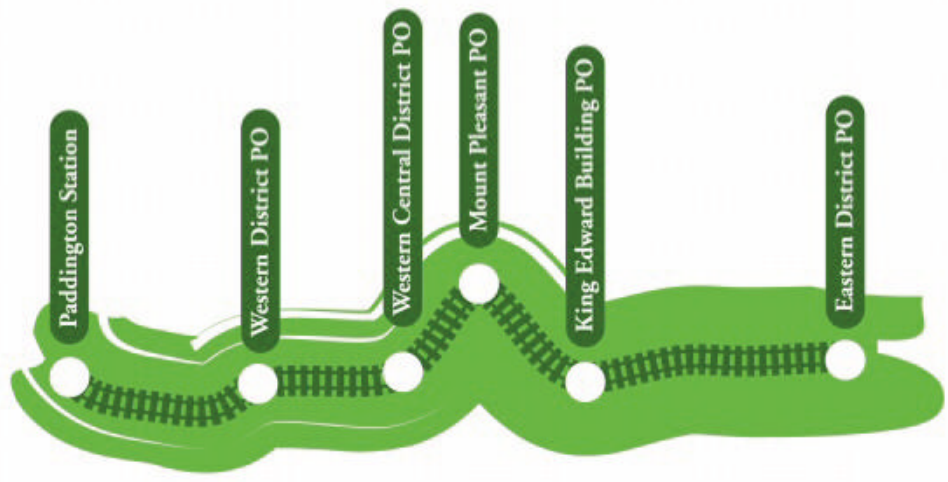
It had nine stations, the busiest being Mount Pleasant, serving two British Rail main line stations and major London sorting offices.

The idea of building an underground railway just to carry mail had its roots in 1853 when a 225-yard vacuum-operated tube just one-and-a-half inch in diameter went into service carrying letters.

The Post Office was impressed and looked into the potential that a much bigger system could offer. Six years later, the Pneumatic Dispatch Company built a test line at Battersea, followed by a tube from its headquarters next to the Post Office's North Western District Office to the parcel office at Euston station. It was followed by a second line from Euston to the General Post Office.

Receiving scant income, the company closed in 1874, but the idea was not forgotten.

Even at the dawn of the motor age in Edwardian times, congestion in the capital was nightmarish, and the Post Office needed a method other than road transport to transport mail between its city sorting offices. ➤



'Post Office Underground Mail Train: London', a GPO poster by Lili Rethi, c1950s, showing mail trains at an underground station being loaded and unloaded by Post Office workers. NRM

POST OFFICE UNDERGROUND MAIL TRAIN: LONDON



This atmospheric railcar dates from 1860 and is also in the care of the National Railway Museum at York. The idea for a pneumatic railway was devised by British inventor George Medhurst (1759-1827) in 1810. He proposed that a carriage containing goods or passengers could be blown along rails in an iron tube by the action of compressed air. The idea was revived in London 1860 by the Pneumatic Despatch Co for the transport of small goods, particularly mail. A 4ft diameter tunnel was built between Euston station and a district post office, with a later connection to the General Post Office. The venture eventually failed financially, but paved the way for the later Post Office underground railway. NRM

In 1908 a team of Post Office engineers visited the Chicago Freight subway system and a similar system in Berlin, Germany.

In Chicago, building of a subway system began in 1899, and by 1906 there was a tunnel under almost every downtown street. The 6ft wide and 7½ft high tunnels were officially constructed to house only telephone cables, but the Illinois Tunnel Company also secretly installed 2ft gauge railway tracks.

In 1911, the Post Office drew up a blueprint for a tunnel railway from Whitechapel to Paddington. Contractor John Mowlem & Co began tunnelling through the London clay in February 1915.

In 1917, work was suspended due to the shortage of labour and materials caused by World War One, and during the conflict the tunnels were used to house artworks from the Tate Gallery, National Portrait Gallery, British Museum and the Wallace Collection.

Tracklaying did not start until 1925, but progress was slowed down by the General Strike the following year.

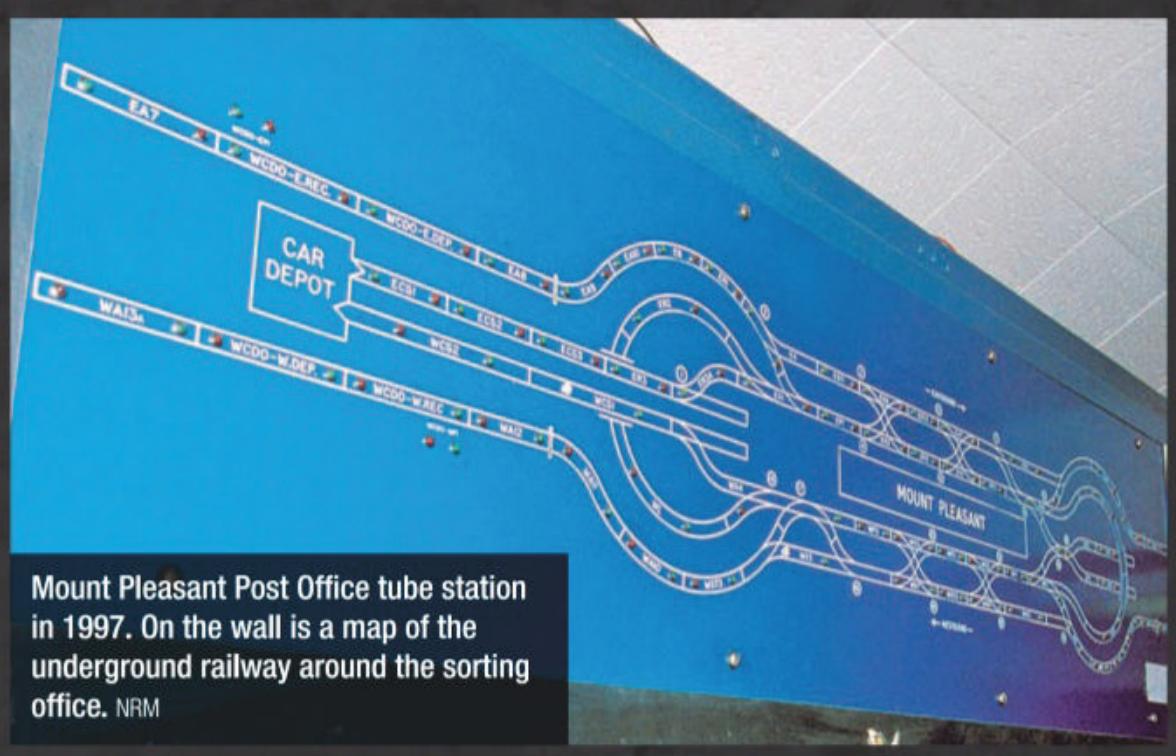
While the main railway tunnel is 70ft below ground, the stations are constructed at a much shallower depth, giving a 1-in-20 gradient into and out of the station, so that



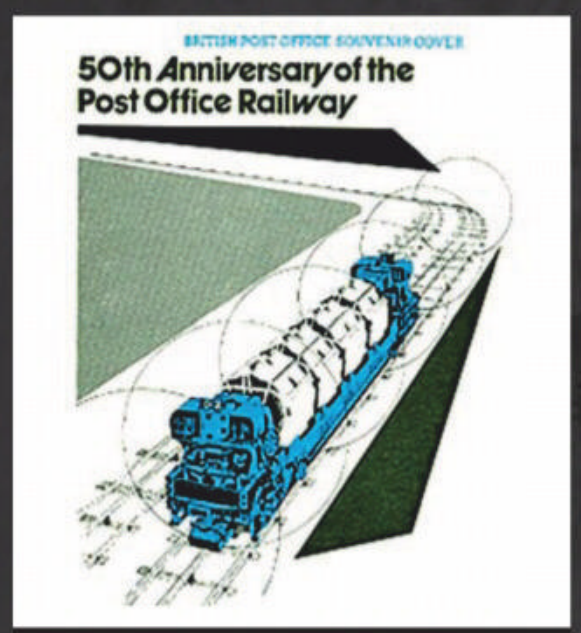
Mount Pleasant Post Office tube station in operation in 1996. NRM



A loaded Mail Rail train in 1997. NRM



Mount Pleasant Post Office tube station in 1997. On the wall is a map of the underground railway around the sorting office. NRM



The 50th anniversary of the Post Office tube railway (1952-1977) was commemorated by a Royal Mail First Day Cover.

the mail had less distance to travel from the platforms to the surface, and to help slow the trains on their approach to the stations, and help acceleration away from them.

The trains took 440V DC power from a centre rail, allowing speeds of up to 40mph.

The first section, between Paddington and West Central District Office, was available for training in February 1927, and a year later, the first letter post was carried.



Kilmarnock Engineering provided 90 4wRE (RE stands for reference, the suffix 'RE' means, third rail-powered electric locomotive) four-wheeled units with English Electric traction equipment for use on the railway, in sets of three. However, they were found to be difficult and costly to operate, because their 7ft 3in wheelbase was unsuitable for the very tight curves led to regular derailments.

In 1929, after trials with an articulated car and a bogie car, an order was placed with English Electric for 50 bogie 2w-2-2-2wRE type units, and after early problems with them were solved, another 10 were ordered in 1936.

No more new traction units were built until 1962, when two new prototype units were ordered from English Electric. With the earlier stock needing replacement, 34 units were supplied by Greenbat and Hunslet between 1980-82.

During World War Two, the line was used as dormitories for post office staff.

In 1954, that because of problems of access at the Western District Office, Wimpole Street and the Western Central District Office, New Oxford Street, it was decided to build a new Western District Office at Rathbone Place, diverting the railway to run through the basement of the new office. While trains began running in 1958, it was not until seven years later that Postmaster General Anthony Wedgwood-Benn opened the new station and office.



In 1993, a £750,000 computer took over control of the system from one central point.

By 2003, only three stations remained in use because the sorting offices above the others had been relocated.

That year, Royal Mail announced that the underground railway was to be taken out of use because it was five times as expensive to send parcels and letters along it than to use alternative road transport.

The Communication Workers Union claimed the actual figure was closer to three times more expensive and argued that costs were high as a result of a policy of running the system down and using it at only one-third of its capacity. Despite a report by the Greater London Authority in support of Mail Rail, as the line was known since its 60th anniversary, the system was taken out of use on 31 May 2003.

Alternative used for the line were considered. At one stage it was suggested that despite its claustrophobic nature, it might even become a tourist attraction, but that idea was quickly dismissed as the costs were too high.

Many of the trains found new homes at other locations. In addition to the example at the NRM, they can be seen at venues as diverse as the Buckinghamshire Railway Centre, Amberley Museum in Sussex and the Launceston Steam Railway. ■

Dinosaurs from the underground

The Isle of Wight is world famous for the wealth of its prehistoric remains, and is home to Britain's first purpose-built dinosaur museum and visitor attraction. The island is considered the most important site for dinosaur remains in Europe, but who says they are extinct? Where else can you see obsolete London Transport tube trains running in the open next to the sea, under their own power, when most of their sister units have long since been scrapped?

The Isle of Wight has traditionally been a dumping ground for ageing locomotives. The pre-Grouping Isle of Wight Central Railway bought obsolete 'Terrier' 0-6-0 tank engines from the London Brighton & South Coast Railway, while the Southern Railway deployed veteran South Eastern & Chatham Railway O2 0-4-4Ts following the electrification of London suburban lines. These two classes in particular became synonymous with the island rail network up to the end of steam, which concerns us here.

The rail closures of the 60s were particularly unkind to Wight, which was left with just part of one route – the 8½-mile Ryde Pier to Shanklin section of the Ryde Pier-Ventnor line, serving the bigger resorts on the island's east coast.

It could have been worse: British Railways, had looked at closing the whole system after the 1964 holiday season apart from the Ryde Pier section, which would remain to link the ferry to a new bus station at Ryde Esplanade. When angry local residents, the Island Council and their MP protested, BR offered to keep Ryde-Shanklin open as a compromise. Many sceptics believed that it was what BR had wanted all along, and set a worse case scenario so it could be seen to be giving concessions.

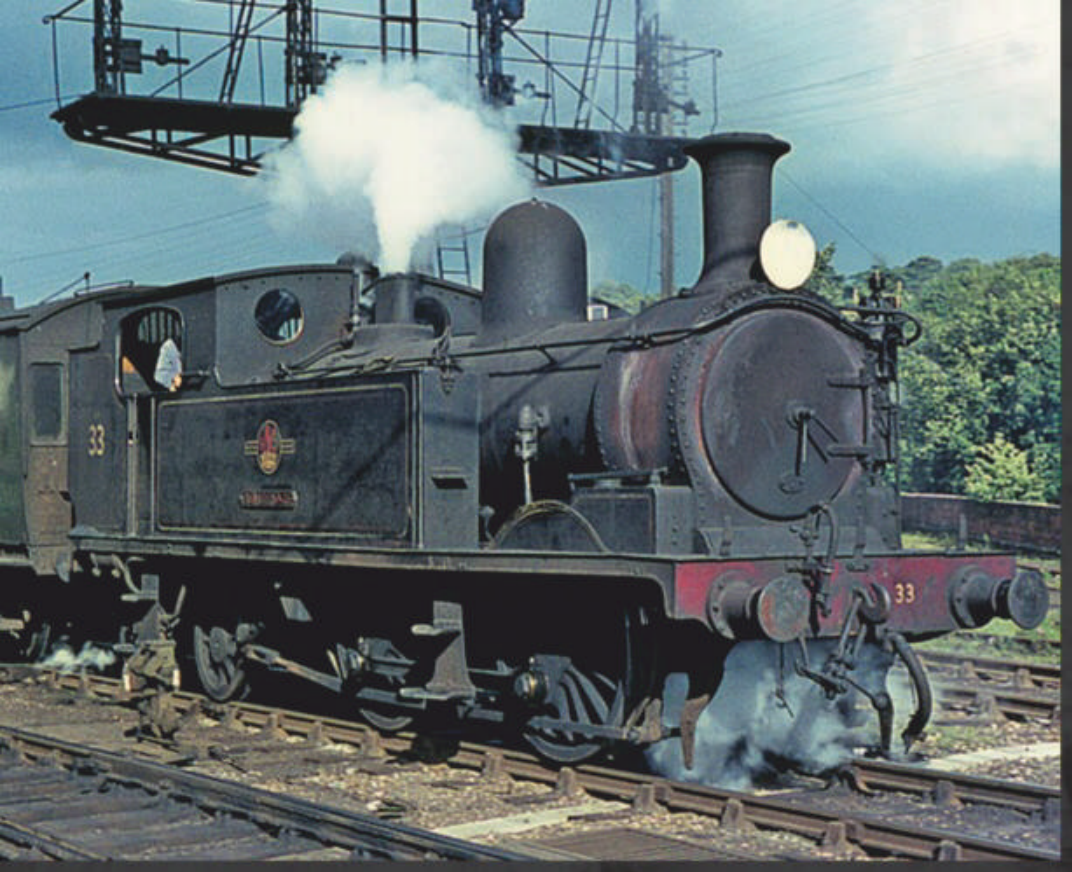
In 1955, the British Railways Modernisation Plan decreed that steam should be phased out in favour of diesel and electric traction as soon as possible. The report, aimed at making the country's railways competitive once again, sparked a mad dash by manufacturers to turn out new forms of traction, some types of which were withdrawn either within a year or two of the final end of steam in 1968, or in some cases, even before it. Although the last railway on the Isle of Wight was physically detached from the network, it had to follow suit. But were the powers that be going to order a brand-new rolling stock fleet to run on it? No way – the old tradition of second-hand stock would be followed yet again.

However, this time it would not be redundant tank engines, but electric trains – from London Underground.

Steam trains were withdrawn from Ryde Pier on 17 September, and the whole line on 31 December 1966. The closure of the line to allow electrification to take place provided the opportunity to raise the height of the trackbed in Esplanade Tunnel, to reduce flooding by very high tides and eliminate the need for costly pumping out of water afterwards. Tube trains rather than Southern Region electric multiple units were therefore ideal. Their low clearances designed to fit the headroom of the underground allowed them to fit perfectly inside the Esplanade Tunnel.



A vintage 1938 tube train restored to its London Transport livery still gives sterling services on the Island Line. SOUTH WEST TRAINS





Above left: **As it was before the line was electrified: O2 class 0-4-4T No 33 *Bembridge* in service at Ryde St Johns.** COLOUR-RAIL

Above: **One of the first generation of redundant tube trains on the Island Line, this BR blue-liveried Class 485 unit stands at Ryde Pier Head station.** COLOUR-RAIL



Two 1938 tube stock units carrying 'dinosaur' livery pass at Sandown in April 2001. ROBIN JONES



After more than 70 years, London Underground 1938 stock tube trains are still running – but not in the capital! SOUTH WEST TRAINS



Second-hand rolling stock has always found a ready home on the Isle of Wight. LSSCR 'Terrier' tank W8 *Freshwater*, typical of a class which, like the tube trains, enjoyed a second life on the island, is seen in action on the Isle of Wight Steam Railway. IoWSR

The southern section of the line, from Shanklin to Ventnor, closed in April 1966. Most people remain surprised that such a short length was not saved, bearing in mind that Ryde-Shanklin was to remain open and that Ventnor is also a sizeable holiday destination. The Southern Region claimed it was very unprofitable, but it was later claimed that BR did not want to go to the expense of building an additional electric sub station, secretly intending the close the Ryde-Shanklin line within a few years.

While the line was closed, the rebuilding of Ryde Pier Head station was completed and Ryde Esplanade station was substantially modified. The line reopened on 20 March 1967 following its electrification, with platform heights adjusted to accommodate the tube trains.

The first trains were electrical multiple units originally built for the London Electric Railway from 1923-31 as Standard tube stock. They were bought by British Rail from London Underground in 1967 and six four-cars were refurbished by Stewarts Lane depot in 1966-67. To place them in perspective, at the same time, one was sent to the Science Museum!

The units were initially classified Class 452 and numbered 041-046, later reclassified Class 485 and numbered 485041-046. Each unit was formed of a driving motor, two intermediate trailers, and a second driving motor.

At first, the units carried all-over BR blue livery with the double arrow logo.

This changed to standard blue/grey livery in the 1970s, and some units received Network SouthEast's blue livery with red and white stripes, in 1986.

Following the Southern Region's numerical classification for EMU types, the four-car sets became 4VEC, and three-car sets 3TIS. When they ran together to make a seven-coach train, they became VECTIS, the Roman name for the Isle of Wight.

Surprisingly, residents warmed to the ageing units, which had been overhauled and smartened up.

Also, the electrification allowed the line speed to be raised from 40mph to 45mph, giving a more frequent services both at peak and off-peak times. While they were perfect for negotiating the lowered clearance of the tunnel, they fared badly in the salt sea air. Out of the city tunnels and exposed to the full force of the elements, they suffered badly from corrosion damage on the island. ➤





Above: **The dinosaur livery was both striking and apart in more ways than one.** ROBIN JONES

Left: **A 1938 tube train glides along Ryde Pier.** KEITH SKUCE

By the mid-80s, it was obvious that the Class 485s needed replacing, with residents complaining frequently about rough riding. Again, because of the low clearance issue, London Underground stock was sought again, in the form of Metro-Cammell 1938 tube stock, with 20 cars secured.

The 485s were extensively refurbished between 1989-92 by Eastleigh Works in readiness for a new lease of life on Wight after half a century in the capital.

Significant electrical works were required both to replace dilapidated wiring, and to allow the units to work from the line's third rail electrical supply.

The first unit was tested on the South West Main Line between Basingstoke and Eastleigh, while testing and crew training on the others took place on the Portsmouth Direct Line and Shepperton branch.

They were introduced from 1989 as Class 483 two-car sets, running in formations of up to three pairs, with the last 485s withdrawn from service in 1992. Five 485 vehicles were sold back to London Underground for eventual restoration as part of an operational Standard stock museum heritage unit. In 1989, the last 1938 stock was withdrawn from London Underground, the final five sets in service having been required to work Northern Line trains until then.

In 1996, with the privatisation of Britain's railways, the Ryde-Shanklin line became the Island Line franchise, which was won by the Stagecoach Group. Services continued to be branded as Island Line.

In the late 1990s, several 485s were as surplus to requirements and withdrawn from service. From 2000 onwards, the remaining five units were overhauled, and most repainted into a new livery of blue and yellow… with pictures of dinosaurs on the sides – reflecting the geological riches of Wight, and ironically the nature of the electric fleet. The fleet was later repainted into the original London Transport red livery, with the additional of yellow warning panels on the cab.

There have been regular calls for the line south of Shanklin to Ventnor to be reopened. Other proposals for the future of the railway have included conversion of the line to an express bus road, rebuilding it as a light rail tram system and even linking the line to the mainland network via a tunnel beneath The Solent. Indeed, talks about a tunnel took place as early 1886, and in 1901, parliamentary powers for a railway beneath the Solent were obtained, but the scheme failed to raise sufficient capital.

In 2007, the Island Line franchise was amalgamated with South West Trains as part of the new South Western Franchise. Despite the availability of newer redundant underground stock, in 2009 there were no plans to acquire fresh units to replace the 485s. Long may the dinosaurs live.

At the midway station of Smallbrook Junction, passengers can change trains for the Isle of Wight Steam Railway, which runs on five miles of the old Ryde-Newport line from there as far as Wootton.

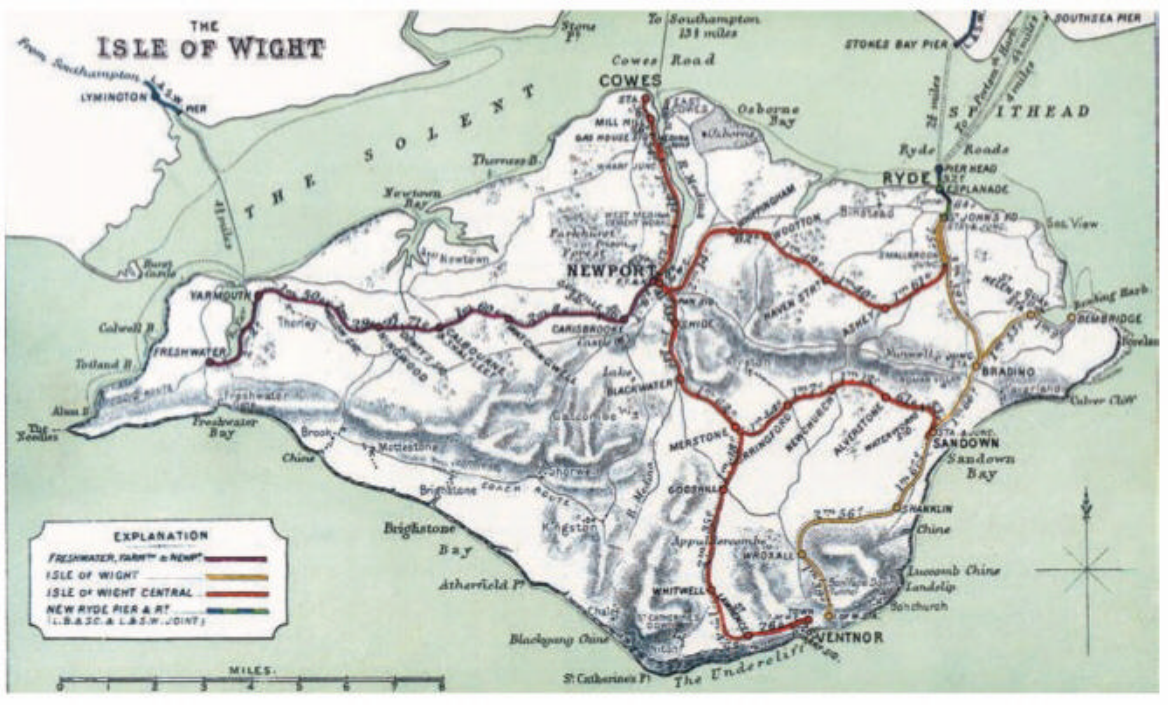
The steam line has a wonderful collection of old wooden-bodied carriages restored to pristine condition after being used as bungalows or outbuildings on the island, hauled by locomotives historically appropriate to the island. It is a classic heritage railway, but there again, surely the Island Line with its veteran stock falls into that category too?

The unusual sight of undergroundtrains running on an island is not unique to Wight.

On the two-mile Alderney Railway in the Channel Islands, two examples of 1956 tube stock are hauled by diesel shunters to make up passenger trains. ■



Above: **The interior of one of the 1938 underground cars.** KEITH SKUCE



Right: **A Railway Clearing House map of the Isle of Wight lines at their height.** ROBIN JONES COLLECTION

A garden railway — in broad gauge!

Building a model railway in the back garden has been a popular pastime for many enthusiasts. Many have electric-powered OO or O gauge systems, while others have built live steam miniature lines which offer passenger rides through the flowerbeds. However, a house in Berkshire has goner one better than the rest – for it now has a garden railway where both the locomotive and track are BIGGER than its full-size British counterparts!

Back in 1951, the first of 999 British Railways Standard steam locomotives was outshopped, in the form of Britannia Pacific No 70000 *Britannia*. For crews, passengers and the army of schoolboy trainspotters to be found everywhere on the national network, they were the ultimate in glamour power.

Two years later, a young schoolboy named David Buck had the privilege of 'cabbing' one in the form of No 70035 *Rudyard Kipling* at Ipswich station. The locomotive was on display to raise funds for the relief appeal for the east coast floods in February 1953. David grew up near the East Suffolk line to Lowestoft, and regularly watched the Claud Hamiltons, J15s and L1s in action on local lines.



David Buck on the footplate of then brand-new Britannia Pacific No 70035 *Rudyard Kipling* at Ipswich in 1963. DAVID BUCK COLLECTION

His dad Peter founded the Hornby Railway Society in Ipswich in 1929 and David still has the framed certificate.

David had his own trainset back then, and he still does today – in fact he has two.

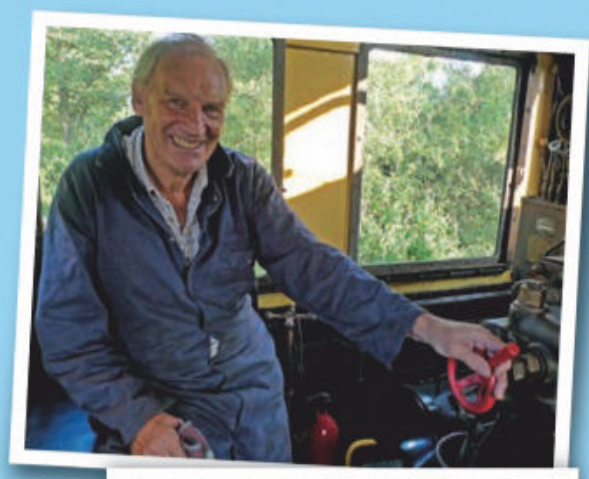
He went on to become a hugely successful businessman outside the field of railways, as managing director of a company which processes movie film for the likes of 20th Century Fox, but his passion for steam never died one bit.

In 1981, he bought a luxury half-timbered house which had previously been home to the late eccentric hairdresser 'Teasier Weasie' Raymond in a village near Windsor and began building a 3½in gauge live steam railway on land at the back.

After a few years, with the circuit up and running, he decided to go up in the world, and build a 4ft 8½in standard gauge railway.

Full-size private garden railways are not in themselves a scarcity. Multi-millionaire enthusiast Sir William McAlpine's extensive standard-gauge line at his Fawley Hill home in Berkshire is well known; while Chiltern Railways supremo Adrian Shooter has a 2ft gauge line, the Beeches Light Railway, with a former Darjeeling Himalayan Railway Sharp Steward B class 0-4-0 saddle tank providing the motive power, hauling a pair of replica coaches of the legendary Indian line built by the Ffestiniog Railway workshops at Boston Lodge.

The best-known full-size garden railway was the late Rev Teddy Boston's Cadeby Light Railway at his rectory in the Leicestershire village of the same name, which had a short 2ft gauge line in the garden. ➤



David Buck today – at home in the cab of his own Pacific, slightly bigger than a *Britannia*! ROBIN JONES



Finnish Hr1 class 4-6-2 No 1016 *Lady Patricia* has been bought to restore to steam in deepest Berkshire. ROBIN JONES



The pride of David's fleet, classic Peckett saddle tank *Hornpipe*. ROBIN JONES

His collection was sold off by his widow in recent years and the line, opened to the public once a month, sadly is no more.

Two years ago, however, David went one better, and acquired a 5ft gauge Finnish 4-6-2. Not only is the track gauge three-and-a-half inches wider than that used on the British network since Stephenson won the day against Brunel's 7ft 0¼in, but the locomotive is taller and wider than British Pacifics: it is 'the next size up' from *Flying Scotsman*.

The locomotive was acquired from British businessman Nigel Sill, who runs heritage steam excursions in Finland. In the 80s, he imported several Finnish steam locomotives to Britain for a Wild West theme park in Cornwall whoseplans to build a railway never took off,and the locomotives were left to be stored in various places around Essex and North London.

The one David bought, Hr1 class No 1016, had been on static display at Enfield for some years. Built in 1955, it was one of a class of 22 built in Finland by Tampella and Lokomo between 1937 and 1957. They were the biggest passenger locomotives built or used in Finland and remained the main locomotives used for southern Finland on express trains until 1963, when Hr12 class diesels took over. Along with the German Class 10s, the Hr1s were the last new-built Pacifics built in Europe before the end of the steam age.

After dieselisation, several Finnish steam engines were stored at the Lievestuore military depot near Haapamäki to be used during times of crisis, when diesel oil would be hard to come by. The engines were packaged and protected against rusting and weather until the 80s, when a decision was made to dispose of them.

While No 1016 has yet to steam in preservation, in summer 2009, David was carrying out a major retubing operation, after which he believes the locomotive will return to steam.

He has laid a 300-yard running line for it to move up and down. The massive tender will have a wooden deck fitted at the rear, above the coal container, and seats will be fitted so passengers will be able to ride on it.

In the meantime, the locomotive, now named *Lady Patricia*, is floodlit at night, so David can enjoy the sight of his own main line Pacific from his bedroom window.

Unlike other preserved steam locomotives, it will never be hired to other railways, because nobody else in Britain has a 5ft gauge running line.

It is unlikely to become as extensive as his standard gauge line, which has been extended to form a pear-shaped loop.



Little and large: *Hornpipe* and *Lady Patricia* line up together. ROBIN JONES

Another private railway in Berkshire is construction magnate Sir William McAlpine's line at his Fawley Hill residence, pictured with visiting London & South Western railway Beattie 2-4-0 well tank No 30587 in action recreating the Wenfordbridge freight branch in Cornwall. Passengers are likely to glimpse wallabies which roam freely in the ground (INSET). ROBIN JONES

His first standard gauge locomotive was *Hornpipe*, Peckett 0-4-0 saddle tank No 1756 of 1928 *Hornpipe*, which spent its entire working life at a chalk quarry near Holborough in Kent, owned by a cement manufacturer.

It arrived at the Buckinghamshire Railway Centre from a scrapyard in 1972 and was restored to haul passenger trains, and sold on to David in 1985.

Lengths of track were salvaged from various parts of Britain, including five points from the GWR Swindon Works which closed in 1986. It was followed by Hawthorn Leslie 0-6-0ST No 3138 of 1916, a former Corby steelworks engine, a long-term restoration project, and GWR 'Toad' brake van No 14748, which dates from 1942 and formed the line's first passenger train.

Another exile from Buckinghamshire Railway Centre now in David's possession is Aveling & Porter flywheel-driven four-wheeler No 8800 of 1917 *Sir Vincent*, which saw industrial service in Erith in Kent. Five standard gauge Aveling & Porter locomotives survive in preservation; their appearance quickly shows that they have much in common with traction engines. David bought it after a bid to restore a part of the Brill Tramway – which used such locomotives – at the centre's Quainton Road base fell flat. A converted wagon with drop sides has been fitted with two GWR station benches, and forms an open carriage for trips along the line, which now has several level crossings.

A sizeable workshop which would do justice to many a heritage railway has been erected for the maintenance of the rolling stock, and houses a four-wheel Barclay diesel obtained from the Rutland Railway Museum.The line is never opened to the general public, but has hosted visits from groups like the Industrial Railway Society.

"One of the reasons why I bought the house before the property prices went up in the 1980s was that it had so much flat land, a garden railway could be built," said David.

"The 5in gauge line was so much fun that I considered a full-size line and thought – why not? We had the space.

"A chap I knew asked me if I would show him how to drive *Hornpipe*, and offered a weekend riding in his 'old plane' in exchange. I agreed – and his 'old plane' turned out to be a Lear jet. We had a tremendous time flying all round Europe on it, while he learned to drive my steam engine. He reckoned that he had the better of the bargain."

As for the broad gauge addition, he said: "The locomotive was kept as part of the Finnish strategic reserve and the boiler is in superb condition.

"You could not buy a British standard gauge Pacific, but I will soon have an even bigger 4-6-2 of my own running."

Peter is now part of the North British Locomotive Preservation Group, which aims to build two examples of the Gresley B17 4-6-0s, the 'Sandringham' and 'Footballer' classes from scratch, one for use both on the main line and heritage railways, and the other for static display and a source of spare parts. Who knows – one might even undergo its test runs in the back garden! ■



Aveling & Porter 'traction engine' locomotive *Sir Vincent* in action. ROBIN JONES

The forgotten railways of **Seagull Island**



From the mainland, Steep Holm island appears to be a little more lump of rock in the middle of the Bristol Channel. Yet it once boasted not only its own railway, but a complete system with two separate lines – much of which are still in place today, in a place which is a unique and magical blend of historical artefacts and the natural world and is well worth making the voyage.

Somerset after the last Ice Age: a chain of limestone hills we now know as the Mendips stretched as far as South Glamorgan, perforated by a river winding its way through thick forests to a distant sea.

Over the centuries, as icecaps melted and glaciers receded, the sea rose, eventually swamping the valley and the forests.

The river became an ocean all of its own, the Severn Sea, the sweeping estuary of the longest watercourse on the British mainland. The outliers of the Mendips found themselves turned into islands, either in the great marshlands that are now the Somerset levels, or in the case of the westernmost pair, out at sea.

What had been a great valley had been turned into a funnel directly facing the Atlantic breakers. Every day the surge of the surf pushes the waters of the Severn estuary back up the funnel, creating the second biggest tidal range in the world after Canada's Bay of Fundy. At low water, vast expanses of sand and mudflats on the Somerset coast are laid bare, quickly covered again as the sediment-laden brown waters rush in when the tide turns.

The two Mendip outliers, Steep and Flat Holm, stand in the middle of the estuary as unalike twins, shaped exactly as their names suggest.

Appearing as mere lumps of grass-topped rock when viewed from either shore, to many it seems inconceivable that anyone would have ever wanted to inhabit either of them. Yet both have a history dating back thousands of years – indeed, it is believed that St Gildas wrote the first history of Britain while staying Steep Holm in the sixth century.

Not only that, but both had operational railways – and in the case of Steep Holm, an unlikely railway network!

I say 'had' – because Flat Holm, which has been part of Wales since the Norman Conquest, lost its line to the scrapmen soon after it became redundant. Yet Steep Holm proved to steep for them to tackle: quite simply, the time and expense that would be incurred in scaling its heights could never justify the reclamation of scrap rails and metal sleepers. More than 60 years after it saw its last train movements, the little railway is still there for all to see – a perfect case of preservation, if only because nobody wants to lift its rusting tracks.

The Kenneth Allsop Memorial Trust, which has managed the island as a nature reserve in honour of the late broadcaster and naturalist since 1974, runs trip boats on selected days from Knightstone Harbour at Weston-super-Mare.

The trips aboard the Bristol Queen have to dovetail in perfectly between the tides, which afford only a small window of opportunity for the island's landing beach to be used. Not only that, but an early start often has to be made, and the boat will sail northwards up the estuary away from the island on the outward journey. It is the only way that it can tackle the force of the tidal surge, the forces that have inspired the clamour in recent decades for a Severn barrage to be built to harness its energy. When sufficiently upstream, the boat will ride with the current towards the island, often making a circular tour of it before the beach is reached. The trip is an exhilarating experience in itself.

After alighting on the shingle East Beach, you immediately become aware than humans are no longer in charge of the island. Nature has long since reclaimed it; you may climb the zig-zag incline path to the top and follow the routes around the summit, inspect the sheer wealth of military structures from two world wars and an earlier conflict which never happened, take lunch in the World War Two barracks now converted into a dining room and souvenir shop, but be warned – you are not in control.

With humans occupying it only during day trips, and there being no permanent residency, seagulls are the undisputed masters of the 63-acre island now. ➤

Somerset's Steep Holm island, as viewed from the huge shingle spit which appears off East Beach at low water. ROBIN JONES







Left: The island pub that was partially demolished to make way for the railway. A harbour built at the same time as the inn was washed away in 1860. Middle: Landing on Steep Holm today can only be done at precise states of the tide. Right: The site of one of the winding houses which hauled the trains up the zig-zag path. ALL ROBIN JONES







The railway track still in place on the zig-zag incline path. The sleepers have been covered with soil to make it easier for the island's Honda Power Carrier to take supplies to the summit. ROBIN JONES

'Her attacker was a huge grizzly bear which was chained to a kennel inside the premises, which Fred had obtained in exchange for his guard dog.'

Every sound sequence in a seagull's vocabulary, and you will soon find that there are enough of them to give the impression of a language, will be shrieked over and over again.

If you inadvertently approach their nests or chicks which are to be found in the middle of the island summit's footpaths – there are no natural predators, and they breed anywhere without fear – you will be told in no uncertain terms you are not welcome. The standard practice is to dive at you directly from the front or rear, and then apply wing uplift seconds before contact, so you just feel the jet stream from the ferocious flapping passing fractionally over your head. The deafening shrieks of tens of thousands of seagulls which make the island their sanctuary quickly reinvoke Alfred Hitchcock's The Birds at every step. Indeed, Steep Holm is a world apart from the mainland civilisation in so many respects, and it is an experience to be prized.

Then there are the alexanders, a yellow-flowering herb popular as a celery substitute in medieval times. When you visit in early spring, it seems that the plant has taken over almost every square inch. To walk round the island you have to hack your way through alexanders which have grown several feet high. Their seeds get everywhere, inside your clothes, up your nose, in your mouth. You live, breathe and taste alexanders while you visit the island, and never want to see one or sense their unmistakeable aroma ever again!

From East Beach, there is one way up to the top of the island, which was once home to a small 12th-century colony of monks and a farmhouse, and that is up a natural incline in the limestone strata which as a result of primeval earth movements tilts at 30 degrees to the horizontal. It conveniently forms both a path – and a trackbed for a railway.

The first question every visitor asks is how did this all but uninhabited lump of rock end up not only with its own railway – but two separate lines?

The answer lies in the two world wars.

Following the evacuation of the British Army from Dunkirk in 1940, Britain was placed on invasion alert. Fortifications were erected at every conceivable 'weak' point across the country, with special emphasis given to the southern coastline facing the English Channel. Other areas, however, could have been equally vulnerable, and the docks at Cardiff and Newport were particularly vulnerable to Luftwaffe raids.

The Holms were not only the guardians of the shipping lane leading to the Port of Bristol but also stood below the flight path of bombers. They also afforded protection to the Atlantic convoys which would rendezvous in the Bristol Channel.

Somerset was also considered particular vulnerable to a potential invasion because of the flat levels, over which an invading force might quickly make ground, and so it was turned into a fortress, bristling with pillboxes and gun emplacements.

Both islands were taken over by the Army and again turned into fortresses. I say 'again' because both islands were already covered by an extensive series of fortifications dating from the 1860s when unfounded fears of the intentions of the French Emperor Napoleon III, a nephew of Bonaparte, prompted the British Government under Lord Palmerston to commission a new chain of defensive forts to be built around the coast of southern England.

Thankfully no shot was fired in anger. In fact, Napoleon III was rather fond of England and spent his last years in exile here after his country's humiliating defeat in the Franco-Prussian War of 1870-71 and the island forts, including the barracks on Steep Holm, were eventually vacated in 1902.

Steep Holm's 10 massive 7in muzzle loading cannons were left to the devices of the scrap merchants; however, because of the topography of the island, no-one considered their salvage worthwhile, and nine have survived intact.

As air raids began on British cities, Mk VII 6in breech loading guns up to 40 years old were hurriedly taken from ammunition stores in Cardiff by the Royal Artillery Regiment for use on the islands.

A contingent of Indian Army soldiers with mule teams arrived, the animals carrying much of the equipment up the incline path to the summit.

Building supplies and equipment were brought in by tank landing craft prior to the construction of a jetty at Last Beach, an essential amenity. The sheer extent of the planned island fortifications meant that the Indian sappers' mule trains using the single narrow incline path up from the beach would prove inadequate if the gun emplacements were to be completed in time to be effective against the growing number of air raids. As far as the military engineers were concerned, the only answer was to build a railway.

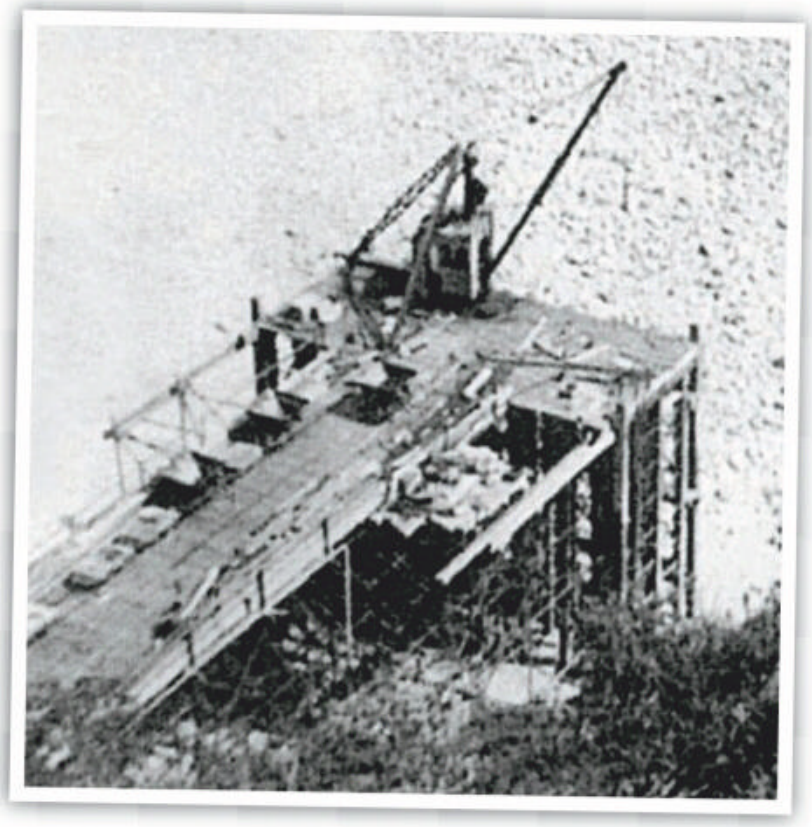
Track materials which had been held in store at the Longmoor Military Railway since World War One were brought to the island.

It is generally believed that the components had been previously used in trench lines on the Western Front; David Benger, battery commander on Flat Holm from 1941-44, said he understood that the rail at least was of German origin and had been 'captured' from the Huns in 1918.

Royal Engineers worked round the clock to build a 120ft-long girder landing jetty, standing waist deep in the freezing brown sea to complete it, as a permanent harbour that was not reliant on the precarious state of tides was necessary.

Then a formation had to be created to take the railway from the new military harbour up the zig-zag incline path to the plateau at the island's summit. A fisherman's cottage and a pub which dated from 1832 and had drawn its trade from sailors on passing ships waiting to enter the port of Bristol were largely blasted away by explosives laid by 930 Port Construction and Repair Company to make way for the railway.

As an aside, the publican in the mid-19th century, Fred Harris, who had skirmishes with Somerset magistrates over the opening hours, found himself at the centre of a claim for damages in 1858. Teacher Ann Besozzi took out a civil action against him for injuries suffered when she was felled to the floor by an almighty blow to the back.



The World War Two Meccano-style pier at East Beach being demolished in 1946. This is the only known picture of the island railway in its operational days. Only the rusting pier stanchions survive today. Several of the trucks are seen on the railway line. KAMT

Her attacker was a huge grizzly bear which was chained to a kennel inside the premises, which Fred had obtained in exchange for his guard dog. A fellow visitor succeeded in fighting off the bear with his umbrella which was broken into pieces in the process. Miss Besozzi required extensive treatment for severe injuries. In his defence, Harris said that the bear regularly played with his children like an ordinary family dog and was a docile creature.

The railway, comprising rails fixed to metal sleepers, was built in 1941 as a cable-operated incline line in separate sections laid on the zig-zag path. It was constructed to 1ft 11½in gauge, the same as the Ffestiniog Railway.

At the top of each of the three sections was a set of points and a diesel-operated winch house. Trucks were loaded on the jetty using a diesel crane. They were coupled together to the front truck. The train was then hauled up the inclines by each winch in turn, reversing at the end of each zig-zag section.

The 1-in-2/3 gradient of the path caused problems for the trucks, which each had an 8cwt (406 kg) capacity. The profiles of the rails were accordingly bent in at least five places with oxyacetylene torches to provide greater adhesion.

At the top of the incline, a long-forgotten diesel locomotive, possibly a Hunslet 0-4-0, hauled the wagons to the various construction sites and sidings around the plateau, as was the case on the sister railway on Flat Holm, ➤



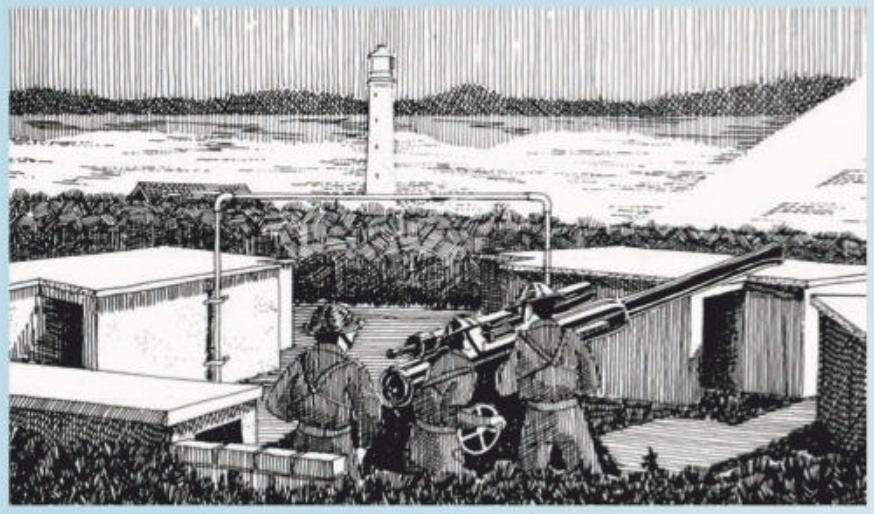
The start of the incline path over which the railway ran, the ruined pub to the right.
ROBIN JONES





Above: **Hated by World War Two soldiers, the Victorian barracks now house a shop and dining facilities for visitors.**
ROBIN JONES

Top: **The interior of the barracks.**
ROBIN JONES



A sketch of anti-aircraft guns in action on adjacent Flat Holm, which had its island military railway removed for scrap after World War Two because of the far greater ease of access. ROBIN JONES



A Victorian cannon lies on top on the island inside the battery built for it. As with the railway, scrapmen did not consider reclamation economically justifiable. ROBIN JONES

former sergeant Joe Walford later recounted. Other reports said that the wagons on the summit line were either pulled by mules or pushed by hand. The full extent of the track, believed to have been about two-thirds-of-a-mile, remains unclear.

Once operational, the line carried vast quantities of sand and cement for the military building sites. A new set of four gun batteries superseded the Palmerston era originals and searchlight positions, generator houses and a battery observation post were also constructed at different points around the summit of the 256ft high island.

After the emplacements had been finished and the heavy guns delivered, much of the rail 'network' on the top of the island became redundant and was lifted, with Nissen huts being built on part of the formation. The incline section, however, remained in use for the delivery of ammunition and general supplies.

Fears that rough weather or storm surges would render the East Beach jetty unusable led to a second landing stage being built below the cliffs to the south.

South Landing, as it was called, was also served by a winch-operated railway linking it to the path which circuits the summit of the island, although this line appears to have been seldom if ever used. With care, in dry weather, that path and the second railway can be followed today by visitors.

At one stage more than 200 men were based on Steep Holm, preparing the guns for action at any time of the day. Parachute mines dropped by Nazi planes in the Bristol Channel were often seen floating in the waters off the island; indeed, several ships from

Avonmouth were blown up by them.

Occasionally, German bombers flew low past Steep Holm on their way to Cardiff and, frustratingly, the island's anti-aircraft guns could not be lowered sufficiently to hit them.

Wartime conditions on the island were said to be very harsh, with an acute lack of water (a washing bowl had to be shared by 12 men) a typhoid outbreak, a ban on eating gulls' eggs for risk of infection, and blackout conditions which led to several men falling over the cliffs, not to mention the often-inhospitable channel climate.



A 40mm Bofors anti-aircraft gun. Six were positioned on Steep Holm during World War Two. ROBIN JONES

Soldiers who were ferried over to the island for tours of duty cheered loudly when the sea became too choppy for them to land and they had to be taken back to Cardiff.

It was not always Cardiff that took a pounding. Weston-super-Mare emerged as a prime target for bombers on 28 June 1942, just days after the News Chronicle had run a front-page splash with the boastful headline 'Weston does not know there is a war on'. Despite wartime austerity, holidaymakers continued to visit Weston and the hot summer that year brought the crowds back; unlike most other beaches, Weston's main sandy beach was not mined or protected by rows barbed wire. A display of military hardware was staged on the sea front for munitions factory workers from all over Britain and the newspaper carried a photograph of the event.

The paper's front page turned out be a red rag to an insane bull.

While most air raids over the Holms had come from the Somerset direction, the one that began that evening came unexpectedly from the sea. Air sirens were never sounded as the town was left totally unprepared, and the inhabitants did not even have time to scurry into their Anderson shelters.

Air raids from the west had not been anticipated: the distinctive white far end of Weston's Grand Pier was not camouflaged and it gave the Nazi pilots duly aided by a glorious full moon, an added navigational bonus.

Around 100 high-explosive bombs and 1000 incendiaries were dropped on the resort over two nights, several planes flying so low that they passed streets at the height of first-floor windows machine-gunning everything below. While initially released figures put the death toll at 102 with 400 more injured, many locals believed the true numbers were much higher.

After the raids, Nazi sympathiser William Joyce, nicknamed Lord Haw Haw, who broadcast German propaganda nightly to Britain on Radio Hamburg, gloated: "I presume Weston knows there is a war on."



Above: **The huge concrete batteries at the eastern end of the island.** ROBIN JONES



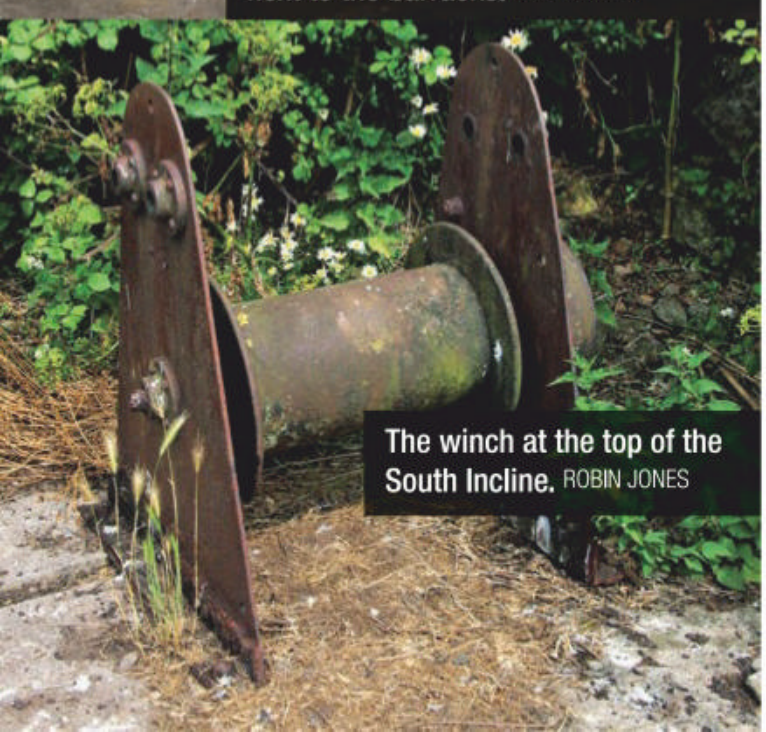
Right: **Looking down the incline towards the South Landing.** ROBIN JONES



Piles of reclaimed rails are stacked above East Beach. ROBIN JONES



A set of wheels from an island railway truck are displayed inside the museum next to the barracks. ROBIN JONES



The winch at the top of the South Incline. ROBIN JONES

However, following D-Day in June 1944, the threat of Nazi invasion quickly diminished and all defence units were run down. Steep Holm was no exception and closed down later that year.

German prisoners of war were used to dismantle much of the fortifications including the East Beach jetty. Captured German NCO Max Hemming later remarked that the railway outlived the guns and searchlights, and his group not only used the line to carry supplies but passengers too!

The weight of the trucks was all that was needed to take them back down, with a brake on the winch acting as a safeguard, the PoWs found to their delight. Once, however. when nobody bothered to operate the brake, a truck ran down out of control, left the track and somersaulted on to the beach.

It seems that became the fate of other wagons, for while none today survive intact, a set of wheels was found off South Landing in 1977, and three more sets were salvaged from the sea off the western end of the island during a very low tide seven years later.

After Germany's defeat, it was the turn of Lord Haw Haw to get his come-uppance. Shot in the backside by British troops during his arrest, the bullet had to be removed by a Dr Corcos – a Weston general practitioner who was only too aware of the casualties inflicted on his home town. Joyce was later hanged for treason.

Abandoned by the military, and unwanted by the scrapmen, the little railway was left to rust.

When the Kenneth Allsop Memorial Trust took over the island, one of the first tasks was to clear vegetation from the incline path. The Department of the Environment has also advised that the railway track should stay intact because of its historic importance.

However, while the possibility was tempting for many reasons, it was realised any restoration of the line to working order would immediately place it in potential conflict with pedestrians. A runaway truck on a cable-hauled railway would take no prisoners on the narrow incline. As there is no realistic alternative path for visitors, the railway must therefore stay closed.

In recent times the railway track has been partially buried to allow the trust's Honda Power Carrier to use the incline without risk of its caterpillar tracks becoming damaged.

Burial is also limiting the corrosive power of the salt air, which is already visibly taking its toll on many of the metal sleepers which are crumbling to dust.

However, it would be superb if the trust was to restore a part of the line, maybe a winding house and a set of pointwork at the end of a zig-zag section, for static display, and perhaps this will happen when precious funds permit.

However, it is all but certain that this forgotten but fascinating outpost of railway heritage will never see train movements again, and through necessity, it is set to remain dormant until the effects of the elements take their final toll.

*Anyone wishing to visit Steep Holm and see its unique railway relics are invited to contact the Kenneth Allsop Memorial Trust to make prior bookings, which are essential.

Telephone 01934 522125 or email steepholmbookings@fsmail.net

The fares are £25 for adults and £12.50 for children, part of which goes towards maintaining the island, and the author fully recommends the trip. ■

The company's 25th anniversary at Seaton saw an Edwardian-style terminus built in the town, seen here with three trams in service. SEATON TRAMWAY

Forget the train - take the tram!

Many seaside branch lines were closed in the 1960s, and despite the fact that the car had become king, the resorts they had served nonetheless suffered declining fortunes as a result. However, to quote Shakespeare, one such branch underwent a sea change into something rich and strange – and successfully re-emerged phoenix-like as a tramway.

A steam-hauled auto train hauled by GWR 0-4-2T No 1442 leaves Colyton for Seaton on 27 February 1965 during the twilight years of the railway. PETER W GRAY

It would have been marvellous if the string of seaside resorts that sprang up along the shore of East Devon and West Dorset could have been served by a single main line railway. However, the hilly topography did not allow it, and the London & South Western railway main line from London to Exeter had to run a few miles inland somewhat parallel to coast.

The coast was served by a series of delightful short branches running south from the main line to ancient ports and small fishing settlements – Exmouth, Budleigh Salterton, Sidmouth, Lyme Regis, and Seaton.



End of the road: Car 9 pulls up to the buffer stops at Colyton, beyond which the old trackbed of the railway branch led to Seaton Junction station on the London-Exeter main line. There are no current plans by the tramway operator to rebuild that section, but many visitors still ask about the possibility. ROBIN JONES



Car 12 prepares to depart Colyton. ROBIN JONES



The magnificent Exeter Car 19 in Riverside Depot. ROBIN JONES

It was the arrival of the Seaton & Beer Railway in 1868 which turned Seaton into a busy holiday resort, and it was the post-Beeching closure of the branch line on 7 March 1966, which dealt a blow to its seasonal trade. While around 1200 passengers rode on the line on summer Saturdays, less than a dozen were there to make the final trip that winter.

The route of the old branch railway is still, however, reverberating to the sound of steel wheels. They do not belong to trains in the conventional sense, but traditional British street trams, a typical sight in city streets throughout the country in the first half of the 20th century.

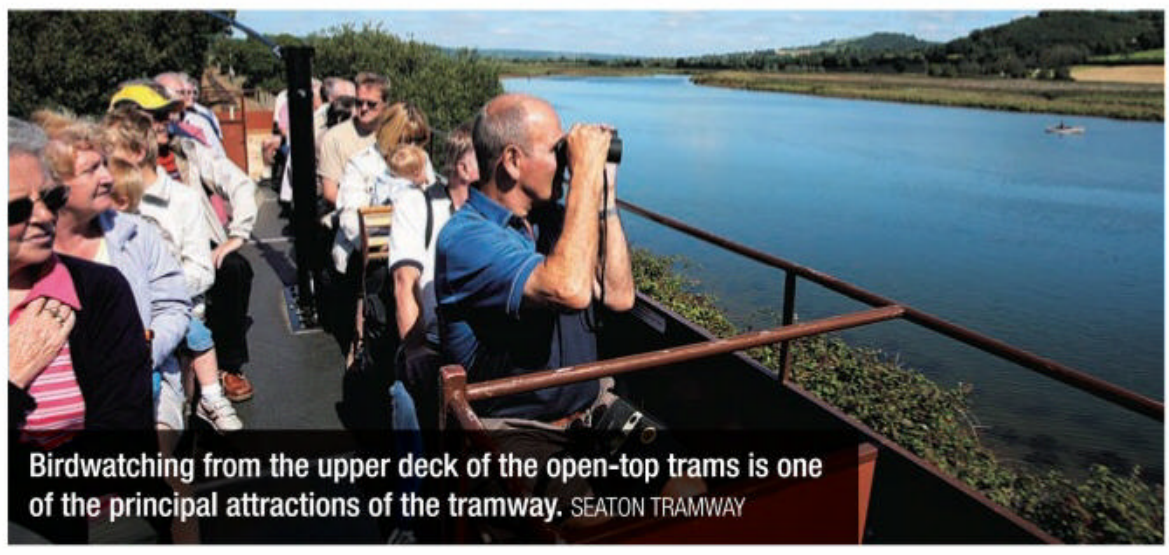
What's more, there is something very unusual about these trams. Several of them are genuine trams from the last century, but they have been dismantled and cut down to size, to make them about two thirds as big as the originals.

No longer do they ply their trade through urban roads, but alongside the beautiful unspoilt estuary of the River Axe which is famous for its birdlife.

Here is the single feature which makes Seaton different from anywhere else in Britain today. ➤



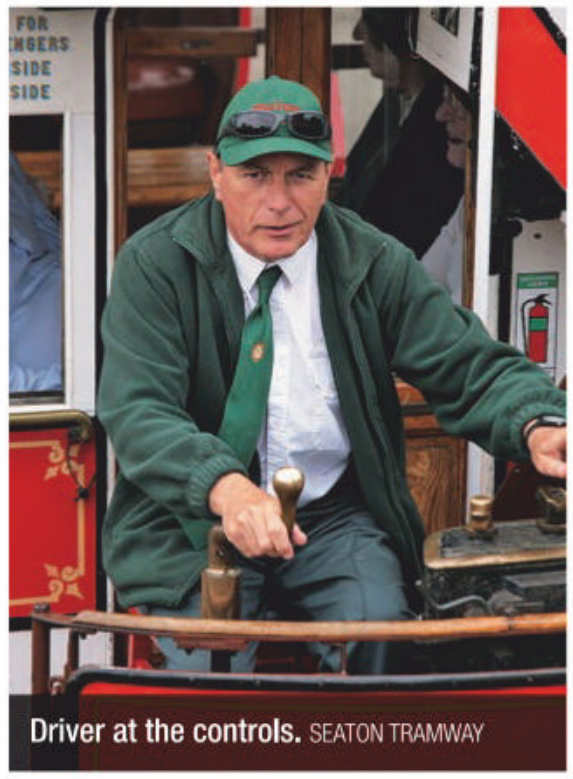
The age-old tradition of bright floral displays on station platforms is maintained at Colyton. ROBIN JONES



Birdwatching from the upper deck of the open-top trams is one of the principal attractions of the tramway. SEATON TRAMWAY



Trams passing on a loop. ROBIN JONES


Driver at the controls. SEATON TRAMWAY

'The tramway now has extraordinary varieties of vehicle from open double-deckers and basic wooden seats to luxuriously upholstered wood-panelled cars.'

The Seaton Tramway has its origins in a manufacturer of milk floats and other battery-electric vehicles. Claude Lane, owner of the Lancaster Electrical Company in Barnet, North London, had a passion for trams and at his factory in 1949 he had built a 15in gauge tram based on ex-Darwen Car 23, then running on the Llandudno & Colwyn Bay system.

Hugely popular as an attraction at fetes, Claude was surprised by its popularity. He ran it for a summer season at St Leonards, Sussex, in 1951 and for five seasons at Rhyl from 1952.

He decided to lease a permanent site at Eastbourne in 1953, and set up Modern Electric Tramways Ltd to operate it.

His 2ft gauge Eastbourne Electric Tramway ran for two-thirds of a mile between Princes Park and the Crumbles and his factory made a larger open-top tram, Car 6, also based on the open-top design of Llandudno & Colwyn Bay vehicles, to run on it. It was followed in 1958 by the similar Car 8, in 1961 by Car 4, which was based on a Blackpool Tramways 'open boat' design, and in 1964 by Car 2, based on based on a London Metropolitan Tramways design.

The growth of Eastbourne's road system began to squeeze the tramway out and Claude began looking for a freehold site.

He heard about the imminent fate of the Seaton branch tenure and eventually British Railways agreed to sell, on condition he received a Transfer Order and a Light Railway Order.

Several residents were against the idea, and a public inquiry listened to objections that trams would create unacceptable noise and harm the natural beauty of the Axe valley, but the town council argued that the tramway would become a major asset to the area, and after assurances were given about safety at Colyford level crossing, Claude won the day.

The new line would be built to a gauge of 2ft 9ins. Already in 1969, Claude had built Car 8 to larger proportions than its predecessors in readiness for the wider track.

From September 1969, the complete Eastbourne system had to be dismantled, transported 100 miles westwards and reassembled before the 1970 holiday season ended. Claude and his assistant Allan Gardner made 36 return lorry journeys between Eastbourne and Seaton.

On 28 August 1970, Car 8 became the first tram to run in passenger service on the Seaton branch, taking power from a battery car as overhead wires had yet to be installed. A depot at Riverside just north of the original Seaton branch station, which was demolished following closure, was installed so that winter the existing trams could be regauged.

The line reached Colyford, the midway point, but before the first full season could start, Claude died from a heart attack on 2 April 1971.

Allan Gardner took over as managing director to complete the project with the aid of volunteers. A 'train' returned to the Seaton branch in the shape of a diesel shunter boughtto assist works Car 02 in hauling equipment.


The handle does it all! SEATON TRAMWAY

Passing loops were installed at Axmouth and Swan's Nest, allowing trams to operate simultaneously. During 1973 overhead wire and fittings were installed, and the first tram powered from the overhead lines ran that September.

To make a success of the line, a town centre presence was urgently needed, and land was bought to lay a new trackbed to a fresh terminus site next to Harbour Road car park, the work being finished in May 1975.

Flood damage in 1978 and subsequent remedial work delayed the final extension to Colyton until 1980.

Attention then switched to expanding the fleet. Former Metropolitan Tramways Car 94, obtained by Claude in 1962, was reduced in size by cutting the body length ways in half and narrowing it by 2ft. It entered service in 1984 as enclosed single-deck saloon Car 14, launched into traffic by the late comedian Larry Grayson.

Likewise, original Bournemouth Tramways Car 106 was reduced in scale and re-emerged from the workshops in 1992 as Car 16.



Manx Electric Railway-style 'toastrack' Car 17. ROBIN JONES

In 1998, former Exeter Tramways Car 19, which ran in the city from 1906 until the system closed in 1931, was reduced in size and restored from derelict condition to become the third enclosed saloon,

More new trams followed in the 21st century in the form of Cars 9, 10 and 11, all of a hybrid design based on the old Plymouth and Blackburn full-size versions.

In short, each tram is a unique miniature masterpiece. The tramway now has extraordinary varieties of vehicle from open double-deckers and basic wooden seats to luxuriously upholstered wood-panelled cars.

There are enough trams to run a service every few minutes in the high season.

Today, the tramway carries more than 100,000 visitors a year, numbers that compare favourably with the patronage of the old steam branch. ■



The luxurious interior of Car 14, built from the cut-down body of Metropolitan Electric Tramways Car 94. ROBIN JONES



The complete Rich Morris monorail network at Blaenau Ffestiniog. JOHN STRETTON

The steam monorail

Blaenau Ffestiniog is not just the upper terminus of the Ffestiniog Railway. It is also the home of the world's only steam monorail 0-2-0 locomotive, which runs on a private system where the term rail (singular) way means exactly that!

It was on Sunday 13 December 1997 that a small steam locomotive with one very big difference made its maiden run over a short length of track at Sunbury-on-Thames in Middlesex.

From the chassis upwards it looked every bit a typical narrow gauge tank engine, a bit like a 'quarry Hunslet' 0-4-0 saddle tank, resplendent in its bright blue livery.

However, there was something about the wheels. It had just two of them!

What was believed to be the world's only 0-2-0 tank engine had been built to run on a monorail.

Dubbed the 'Monoloco', its successful debut was the culmination of a 25-year dream by enthusiast Rich Morris, who previously owned the Gloddfa Ganol narrow gauge railway and mining centre at Blaenau Ffestiniog which closed in 1997.

The Monoloco had taken shape over two years far from Snowdonia, having been built by engineering company Century Millwrights on Platts Eyot, a small island in the River Thames.

Rich, who had been collecting monorail equipment for 30 years, had drawn up rough sketches of his dream project and given them to project engineer John Vineer, who made several adjustments to make the Monoloco a 'goer'.

Standing 6ft high and 11ft long, the locomotive was constructed on the chassis of a Metalair Ltd wagon from an industrial monorail line used by Bovis at Westbury. Rich had acquired the manufacturing rights of Metalair Ltd of Wokingham, Britain's only commercial monorail builder, in 1983.

The Monoloco, which made its public debut at the International Model Railway Exhibition at Kensington Olympia in December 1997, runs on driving wheels with double flanges which straddle a triangular section running rail that is one inch wide at the top of the rail.

Outriding stabiliser wheels at the front and back ride on the 3in bottom section of the rail, to keep the Monoloco steady.

The height of the track can be altered from l4in above ground level, to a maximum 7ft 8in, using stands of different sizes. The system was originally built in the 1940s by Road Machines (Drayton) Ltd of West Drayton, Middlesex, which produced internal combustion and diesel-powered monorail equipment for use on building sites – a version of the traditional contractor's temporary railway.

The Monoloco and other monorail vehicles built by Rich now operate on his private site which is occasionally opened for arranged enthusiast parties.

The steam monorail concept is probably best-known in Britain for the Listowel & Ballybunion Railway, but that was by no means the earliest example.

With monorails, as with the steam locomotive, Britain can claim a world first. The Cheshunt Railway, which was completed in 1825 and worked by a horse, was the first to carry passengers, as it did at its opening, although it was designed by Henry Robinson Palmer to carry bricks .

In 1876, General Le-Roy Stone first demonstrated a steam-driven monorail at the United States Centennial Exposition in Philadelphia in 1876. It comprised a double-decker vehicle with two main wheels, the rear one driven by a rotary steam engine.

A modified version of General Stone's Centennial monorail was employed on a four-mile line between Bradford and Gilmore in Pennsylvania built to transport oil drilling equipment and personnel to Derrick City. Local residents also began using it.

The worst disaster in monorail history took place on 27 January 1879 when a new and more powerful engine coupled to a flat car full of officials was run at high speed to show what it was capable of doing. The boiler exploded and the train crashed into a creek, killing the

One of a kind: the 0-2-0 steam Monoloco in action at its owner's private site in Blaenau Ffestiniog on 22 August 2009. JOHN STRETTON

driver, fireman and three passengers, leaving the rest severely injured. The monorail was abandoned soon afterwards.

Probably the oldest and crudest monorail still operable is at the Indian Railway Museum in Delhi, Unlike later systems where the rolling stock straddles and balances on the railhead the Patiala State monorail had conventional rolling stock with the second rail replaced by a flat track on which a cartwheel rolled, stopping the whole ensemble from toppling over, like the stabiliser on a child's bicycle.

The locomotive was, uniquely, an 0-3-0 with double flanged driving wheels.

The system was built in 1909 and closed in 1927, following which the engine and stock were stored and forgotten until rediscovered and restored in the 1970s to run at the museum. ■



Modern traction not steam hauls this train on the Blaenau monorail! JOHN STRETTON

Narrow gauge locomotives like this Ruston diesel engine, which dates from 1936, were used for moving ammunition through the underground complex. It is pictured on site in 2002. M HESKETH-ROBERTS/ENGLISH HERITAGE

From Brunel to the Bomb!

In certain railway enthusiast circles, for many years there persisted a Cold War theory that after the end of steam, large quantities of redundant locomotives were squirreled away by stealth and hidden in a vast bunker in the south of England, a strategic reserve lying in readiness for a time of international crisis or global conflict, when diesel fuel would be in short supply.

The sad truth was that there was no secret hoard of steam engines; however, there certainly was an underground railway leading off the GWR main line into a secret underground city which would have become Britain's emergency seat of government the event of a nuclear war.

Words by Keith Falconer of English Heritage and Robin Jones.

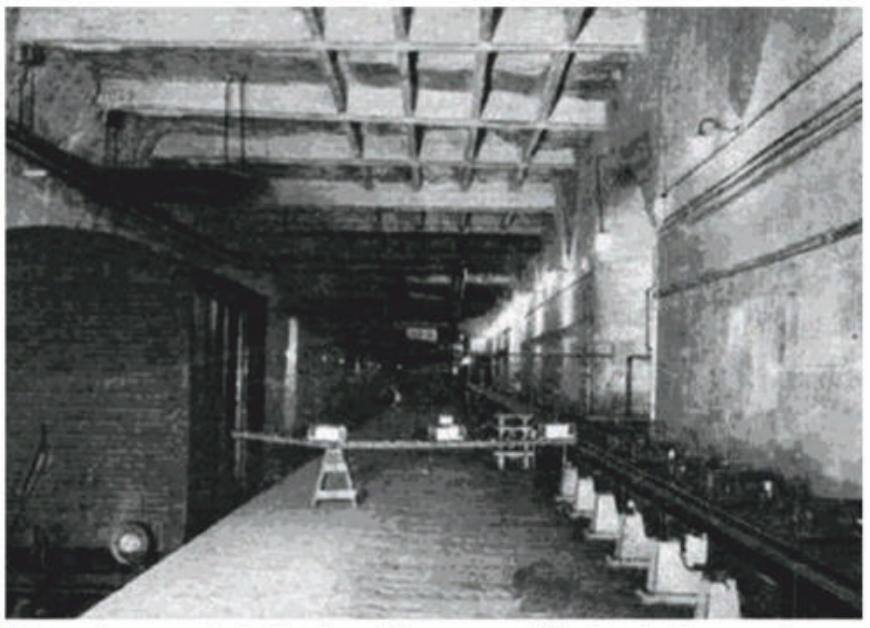
Bath stone quarried from Corsham has provided the raw material for magnificent buildings around the world. While quarrying was taking place around the Wiltshire town in the 18th century, it took off big time when Isambard Kingdom Brunel and an army of 4000 navvies arrived in 1841 to bore his stupendous Box Tunnel – and inadvertently stumbled on rich seams of freestone.

The chance discovery led to a stone mining boom, with more than 1000 people employed in the mines by the end of the 19th century, and the railway facilitating the export of the stone across the country and beyond. Huge underground caverns appeared as the seams were exploited, and a spur off the GWR main line at the eastern portal of Box Tunnel disappeared into a passageway of its own to take the stone out.

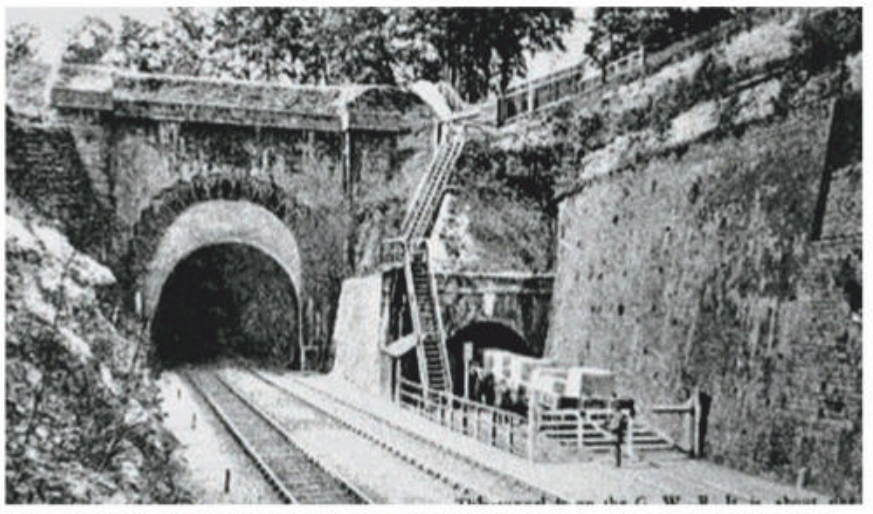
The quarrying was almost brought to an end with emergence of cheaper building materials in the 1920s, leaving many miles of underground stone workings redundant.

However, another use was found for the mines…

This turntable is sited in the underground locomotive workshop. M HESKETH-ROBERTS/ENGLISH HERITAGE



The underground station in military use, with standard gauge box vans lined up alongside. CORSHAM HERITAGE CENTRE



The eastern portal of Box Tunnel in GWR days, with the freight line leading into the quarries on the right. Initially it was big enough only to take wagons, but was enlarged in the 30s to accept early main line diesel shunters, chosen because they would not emit sparks in the ammunition dump. CORSHAM HERITAGE CENTRE

The idea of bombproof shelters to protect men and stores is enshrined in much of military defence planning since the advent of military explosives. However, it was only with the threat of aerial bombardment that it was to escape the confines of designed fortresses.

Thus, immediately prior to World War One with the apparent threat of Zeppelin raids, the Ministry of Munitions sought to protect stockpiles of bulk high explosives by storing them underground.

Initially, existing mines and caves were utilised such as a salt mine near Northwich in Cheshire adapted to house 1500 tons of explosives for north country filling factories and the Chislehurst caves near Bromley for the Woolwich Arsenal.

Likewise, a small Bathstone mine at The Ridge near Corsham was converted in 1915 for the storage of TNT and cordite. The development of underground munitions depots in the inter-war years is marked by indecision on behalf of government ministries and inter-service rivalry and argument, but in 1934 when rearmament was once again on the agenda following Hitler's accession as Chancellor of Germany the process gained some momentum. In the summer of 1936, the War Office, having decided that the stone mines in the Corsham area was the preferred location for its main underground ammunition depot, completed the purchase of Ridge, Tunnel and Eastlays quarries at a cost of £47,000. From these rather modest beginnings was to develop the Central Ammunition Depot, Corsham which, by 1943, encompassed some 125 acres of subterranean chambers containing 300,000 tons of explosives and munitions.

Its widely dispersed components stretched from Limpley Stoke and Monkton Farleigh (one of the largest single quarries) in the west and Westwood and Bradford-on-Avon in the south to Corsham and Gastard in the north and east.

The total cost of the depot was over £4,500,000 – a far cry from the initial estimated requirement for six acres at a cost of £100,000 originally envisaged.

As already mentioned, the 50-acre Tunnel Quarry was directly served by a standard gauge branch off the main line. ➤

'The quarrying was almost brought to an end with emergence of cheaper building materials in the 1920s'

This branch was upgraded for military use. Complete with a 750ft underground platform and refuge sidings, it ran for around 2000ft underground, to which 1800ft of refuge sidings can be added.

The standard gauge line was worked by three Hunslet 0-6-0 diesel shunters from the reception sidings three miles to the east at the GWR's Thingley Junction where there were a few temporary buildings.

Daily maintenance of the locomotives was conducted at the underground locomotive shed but major overhauls were undertaken at MoD Bicester. The standard gauge line fed a 2ft gauge railway system with diesel locomotives, turntables, engine houses and workshops serving the underground ammunition 'districts'.

The narrow gauge system was installed from the beginning on temporary tracks and was used mainly for very heavy ammunition items, as the extensive conveyor belt system in the complex was much preferred, as it has separate receipt and dispatch belts. Efforts were made to maintain an air of secrecy about the works going on at Corsham. By way of subterfuge, rumours were circulated that the Ministry of Food was building an emergency food dump there.

At the onset of World War Two, RAF command centres were, whenever possible, located underground and in the case of No 10 Fighter Command covering the West Country this was accomplished in Browns Quarry – a spur off Tunnel Quarry.

The onslaught of the German air offensive in 1940 also caused the various supply ministries to seek protected sites for crucial industries such as the manufacture of aircraft engines and weapons (and even for the storage of national treasures from the British Museum, the Victoria & Albert Museum, the Banqueting House and Westminster Abbey).

Huge sums were spent constructing underground factories in new tunnels driven into hillsides such as at Drakelow near Kidderminster and converting existing quarries as at Henley-on-Thames, Westwood near Bradford-on-Avon… and at Corsham itself. Under pressure from Lord Beaverbrook, the vast Spring Quarry, on the other side of Box Tunnel from Tunnel Quarry, was requisitioned late in 1940 and was converted by Ministry of Air Production for factory use at exorbitant cost to become 'the largest underground factory in the world'.

It was to be occupied by the Bristol Aircraft Company for the production of Centaurus engines while a separate part was occupied by BSA for the manufacture of gun barrels (including half of the country's entire output of Hispano and Polsen barrels).

When Spring Quarry was in BAC occupancy, the BAC chairman, Sir Reginald Verdon Smith, commissioned a professional artist, Olga Lehmann, to decorate some of the canteen areas with vivid floor-to-ceiling murals.

Over 40 of these survive in one of the canteen areas despite 60 years of disregard and neglect.

They are executed in a distinctive style very much of the pre-war period and mainly depict racing and attendant showground themes interspersed with drinking scenes, cricket matches and even missionary boiling!

The expenditure on the underground depots was to be justified after the war by their continued use as ammunition and naval stores for 50 years but the factories, as such, were an expensive fiasco.

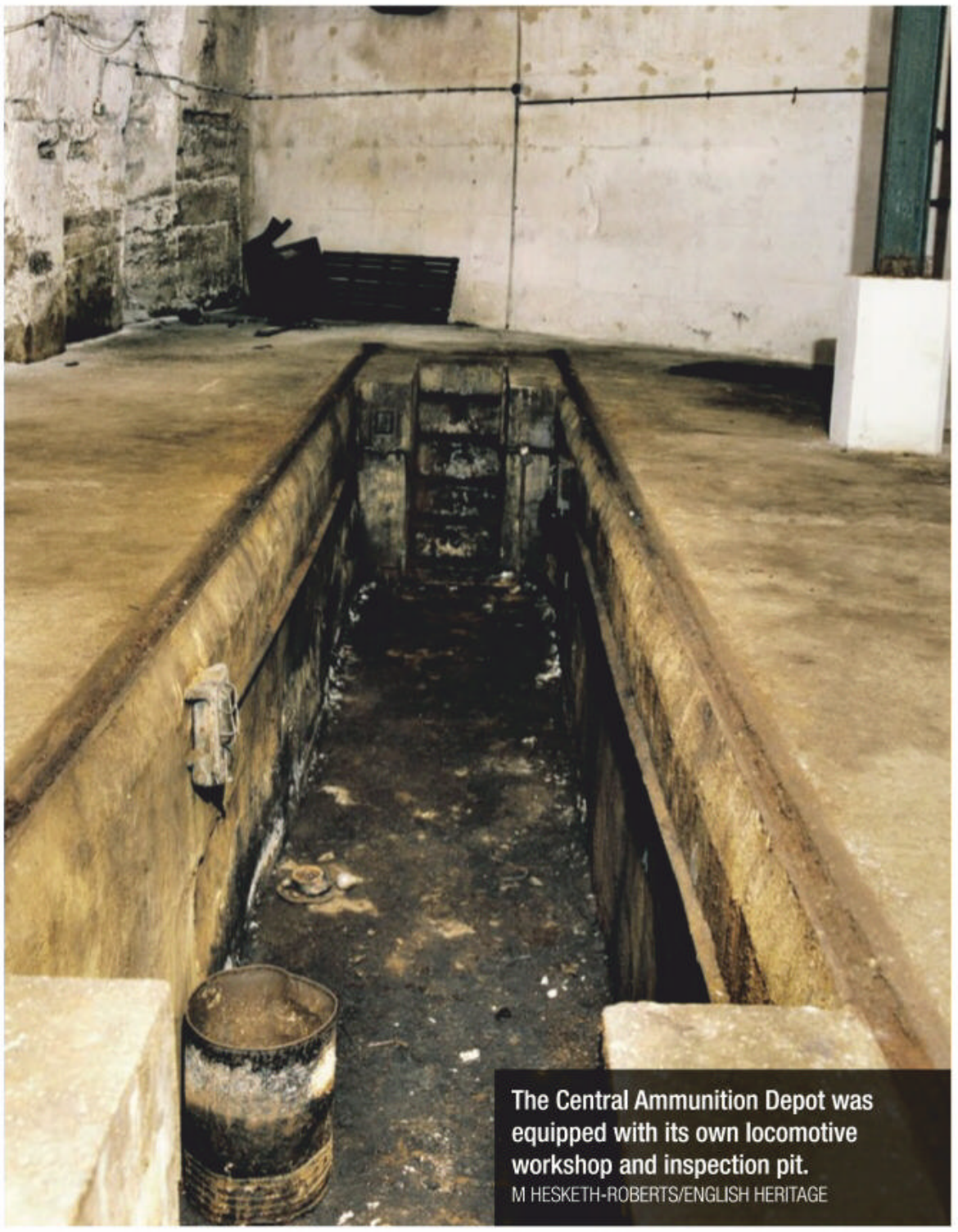
By the time they finally opened early in 1943, German bombing was no longer the



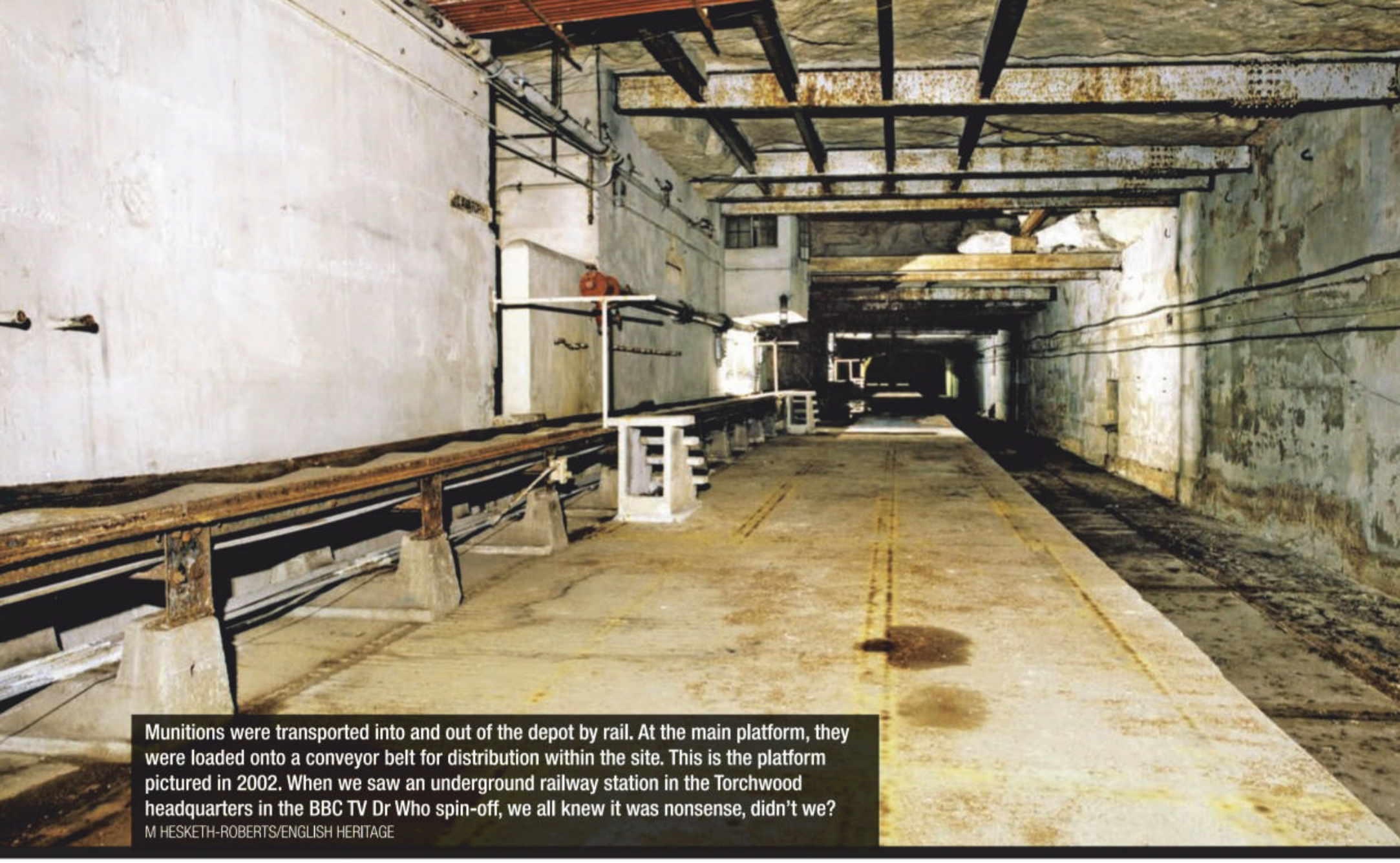
Shells being stacked inside the depot.
CORSHAM HERITAGE CENTRE



The shelves of the underground city are still stacked with supplies for worst case scenarios. M HESKETH-ROBERTS/ENGLISH HERITAGE



The Central Ammunition Depot was equipped with its own locomotive workshop and inspection pit.
M HESKETH-ROBERTS/ENGLISH HERITAGE



Munitions were transported into and out of the depot by rail. At the main platform, they were loaded onto a conveyor belt for distribution within the site. This is the platform pictured in 2002. When we saw an underground railway station in the Torchwood headquarters in the BBC TV Dr Who spin-off, we all knew it was nonsense, didn't we? M HESKETH-ROBERTS/ENGLISH HERITAGE

threat that it had been when they were first conceived and they were less than satisfactory for their purpose. When they closed just two years later, the bill for their construction had exceeded £20-million.

For the next half-century, however, the whole suite of converted Corsham quarries achieved a valuable second life as home to a variety of Cold War uses whose chronology reflects the course of strategic thinking throughout this period.

Codenamed originally SUBTERFUGE this facility developed in the early 60s under the codenames BURLINGTON (and finally TURNSTILE) into an office for Prime Minister Harold Macmillan, the War Cabinet and Chiefs of Staff, and possibly the Royal Family. It was said that it could safely house up to 4000 central Government personnel in the event of a nuclear strike, in complete isolation from the outside world, for up to three months.

Having more than 60 miles of internal roads and covering 35 acres 100ft below Corsham, the Barracks Hill military underground site was designed not only to accommodate the then Conservative Prime Minister, Harold MacMillan, but the entire Cabinet Office, civil servants and an army of domestic support staff.

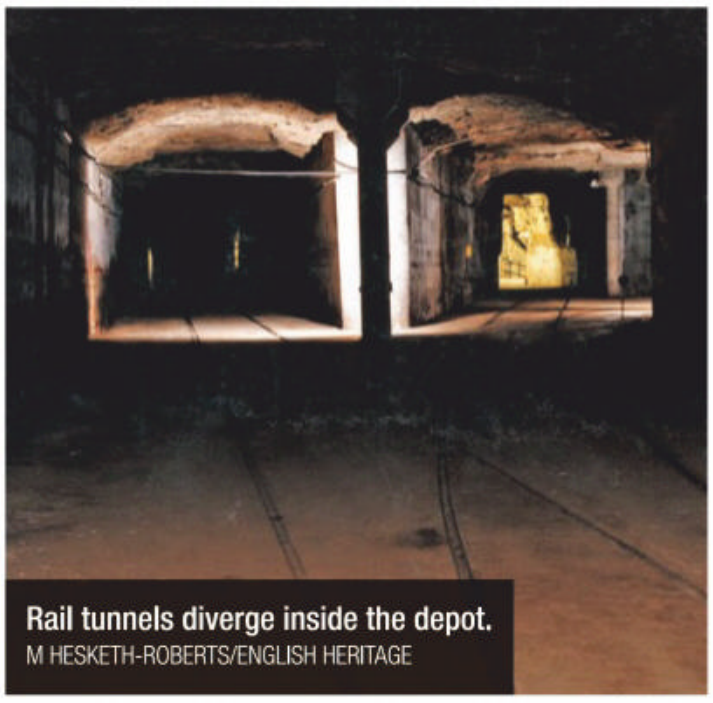
The New York grid-style city of roads and avenues was equipped with all the facilities needed to survive – underground hospitals, laboratories canteens, kitchens and laundries to storerooms of supplies, accommodation areas, offices and a bar.

An underground lake and treatment plant could provide all the drinking water needed while 12 huge tanks could store the fuel required to keep the four massive generators, in the underground power station, running for up to three months. Air could also be kept at a constant humidity and heated to around 20C.

The city also had the second largest telephone exchange in Britain, a BBC studio from which the Prime Minister could address the nation and an internal Lamson Tube system that could send messages using compressed air throughout the complex.

The site was so top secret that many of the civil servants, who had been allocated a desk at Burlington, had no knowledge of it.

The Emergency Government War Headquarters had its final upgrading in the early years of the Thatcher government but with the end of the Cold War in the early 1990s these uses have been scaled down or abandoned. ➤



Rail tunnels diverge inside the depot. M HESKETH-ROBERTS/ENGLISH HERITAGE



The underground depot continued in use during the Cold War; this kitchen area dates from the final phase of use. M HESKETH-ROBERTS/ENGLISH HERITAGE



By 1943, the Central Ammunition Depot was the largest in the world. Munitions were transported on these 2ft gauge railway wagons, of which several survive underground. M HESKETH-ROBERTS/ENGLISH HERITAGE

The original raison d'etre for the military presence has long since gone – the last munitions were shipped out or destroyed by the end of 1962 and the stores function was finally wound down in the 1990s.

In December 2008, with the underground reservoir drained, emptied of fuel and supplies and with a token staff of just four, the site was finally decommissioned. Much of the complex has now been mothballed or sold, parts of it being used for commercial storage, though there is still a significant RAF and military communications presence.

Among the decaying evidence of disused offices and stores are poignant and sinister reminders of this fascinating but little heralded chapter in our history, such as shelving with signs GAS, BIO and ATOM. The little 2ft gauge Hunslet four-wheeled diesel which operated on the system, WD1, is still underground.

The proposed development of the site by its present occupant – Defence Communication Services Agency – has involved English Heritage in photographic recording of some of the remains and advising on the management of both the surface and underground structures.

There is the argument that, just like a medieval castle or Roman camp, it is now part of the nation's history and should be preserved, at least in part. However, much of it is deteriorating due to damp and its future appears to be rather bleak. Yet if at least part of it could be saved and maybe opened to the public, what a fascinating heritage railway the internal system would make!

Sadly, it never did contain a stock of former GWR and British Railways steam locomotives despite the enthusiast conspiracy theories that abounded about them being smuggled away under cover of darkness and their numbers never appearing in the records of scrap merchants as a result. We must now accept that they were cut up at the end of the steam age and lost forever.

The entrance tunnel is now bricked up. That did not stop three men entering Box Tunnel in September 2003 looking for it, and ending up in court after causing six-hour delays to main line services while they were rescued. ■



The rail tunnel leading into the underground depot was closed off in 1974. This view was taken in the mid-90s. CORSHAM HERITAGE CENTRE



A Cold War era view of the 'overground' railway at Corsham: in the early 1960s, a Western Region diesel hydraulic passes a GWR pannier tank at Corsham signalbox. None of the passengers would have been aware of the colossal underground city nearby. CORSHAM HERITAGE CENTRE

Lee Moor No 2 standing outside Torycombe Works in 1967, when it was being cosmetically restored by members of the Plymouth Railway Circle. It last steamed on 31 December 1945. PETER W GRAY

The widest narrow gauge

Two classic Peckett saddle tanks forming the entire locomotive fleet of the Lee Moor Tramway are preserved, and they could probably be restored to running order for a reasonable cost. Yet it is unlikely to happen – for there is now no railway on which they could be run – all because of two-and-a-half inches. This unusual and historically complex line was built to the 'Dartmoor gauge' of 4ft 6in – whereas the national network is 4ft 8½in standard gauge.



Lee Moor No 1 at the Wheal Martyn China Clay Museum near St Austell. ROBSUE888 - FLICKR.COM

The Lee Moor Tramway is probably best known among enthusiasts for its flat crossing of the GWR's London-Penance four-track main line at Laira Junction near Plymouth. Into the second half of the 20th century, with the aid of wooden boards between the rails, horses would haul short rakes of laden china clay wagons across the tracks which were the domain of Kings, Castles and other illustrious express passenger locomotives.

Such an anachronism which lasted into the early years of the diesel era would easily justify the tramway a place in this book on its own. However, it is here because it utilised the widest narrow gauge of all.

The use of 4ft 6in gauge track dates back to the days before there was serious talk about a national railway network. ➤





Above: **Lee Moor Crossing on the GWR Launceston branch in 1922.** FHC CASBOURN /STEPHENSON LOCOMOTIVE SOCIETY
Right: ***Lee Moor No 2*** **hauling 17 empty wagons towards Torycombe level crossing on 18 August 1939.** ER SHPHERD

Indeed, there was no real reason why , who built Prince's Town in the heart of the Dartmoor and named it after the Prince of Wales, later King George IV, should have chosen one particular gauge over another when he planned his horse-worked Plymouth and Dartmoor Railway as a means to open up the moor to habitation.

It was Tyrwhitt who had earlier suggested to the Admiralty that his town could be the base of a prisoner-of-war camp to house captured Napoleonic militiamen, and so Dartmoor Prison was completed in 1809. When peace was declared in 1815, the prison was left empty, and Tyrwhitt looked to rail as a means of reclaiming the moor as farmland and transporting granite from local quarries.

The first large-scale railway in Plymouth, the 25-mile line from the city's Sutton Pool harbour to Princetown opened on 26 September 1823. Its 4ft 6in gauge henceforth became known as 'Dartmoor gauge'

In 1883 the top section of the railway above Yelverton became converted to standard gauge as the , later part of the GWR empire.

Tywrwhitt's railway fell into disuse around 1900, and most of the track had been lifted by 1916.

The Lee Moor Tramway was a privately owned mineral railway that was built to carry china clay and other produce from southern Dartmoor to the quays at Plymouth, and used the track for the lower portion of its journey. It was likewise built to Dartmoor gauge.

Lord Morley, who owned the mineral rights at Lee Moor, where rich deposits of china clay had been identified, leased them to J&W Phillips in September 1833. Several schemes to build a railway linking the harbour to Lee Moor were built, work on the successful one beginning in 1853. However, it was poorly built and in June 1856 Lord Morley and Phillips secured the right to run their own china clay traffic to Plymouth – as long as the 4ft 6in gauge remained – and rebuilt the tramway, including the viaduct at Wotter and the great incline at Torycombe. Five years earlier, the South Devon Railway had bought the 's Sutton Harbour branch and converted it to dual gauge, Brunel's 7ft 0¼in encompassing the existing 4ft 6in.

The Torycombe incline was ceremoniously reopened on 24 September 1858 by the Earl and Countess of Morley and marked the official opening date of the Lee Moor Tramway.

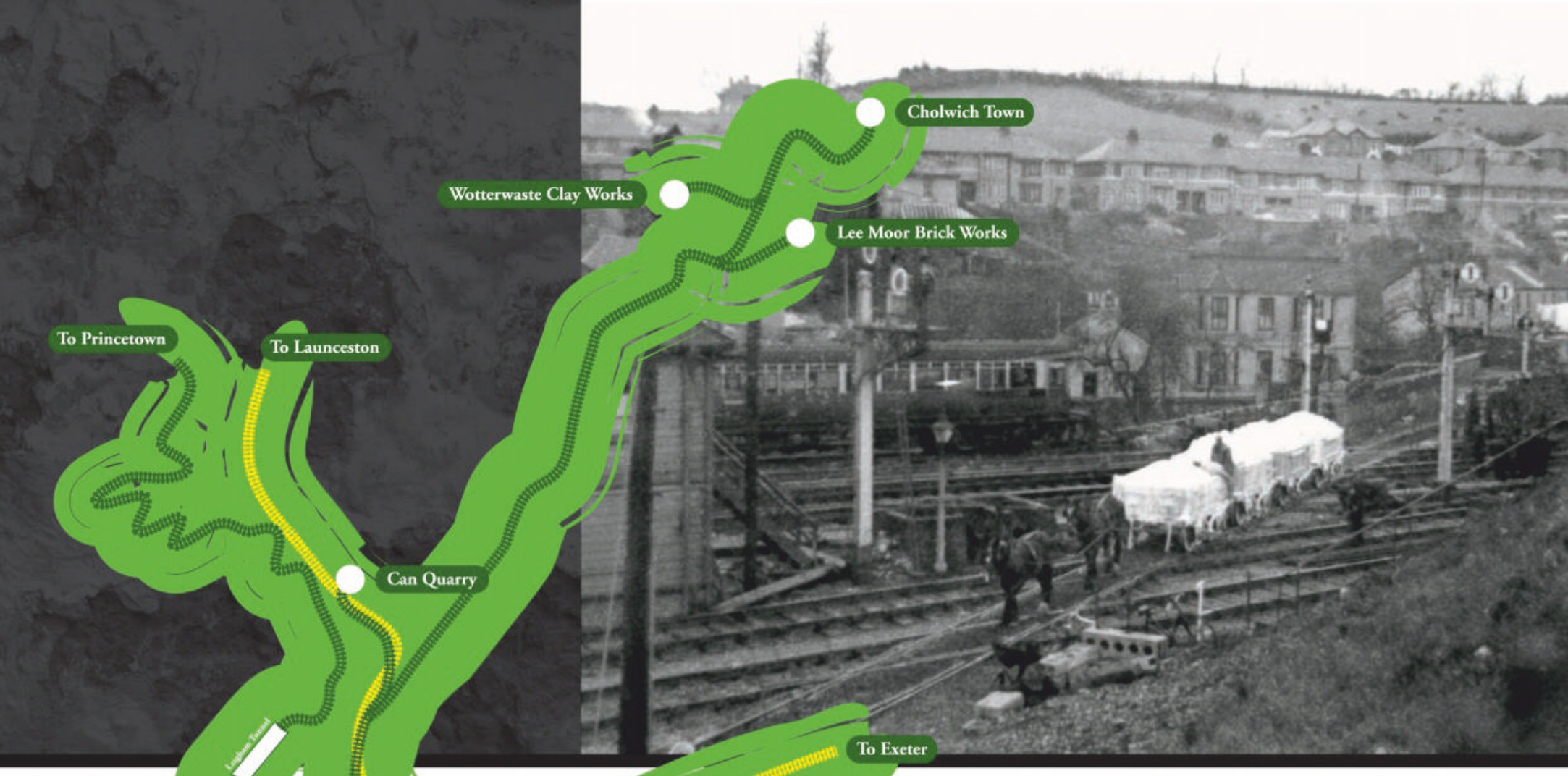
Until 1899 the tramway was operated by horses, but two 0-4-0 saddle tanks were ordered from Peckett of Bristol to handle the increase in clay production. The line was upgraded to accommodate them and an engine shed was constructed at Torycombe clay works.

Lee Moor No 1 and Lee Moor No 2 were the only 4ft 6in gauge locomotives ever built by Peckett. Their livery was green with yellow and green lining and dull red frames and wheels. They operated only on the northern section above the one-and-a-quarter-mile long 1-in-11 rope-worked Cann incline; below there, the rest of the tramway to the harbour including the famous flat crossing was worked by horses until the end.

Closure of the tramway began in 1910 when the top part of the line from Lee Moor village to Cholwich Town pits was shut down. Torycombe incline closed in



Andrew Barclay 0-4-0ST *Albert* on the Plym Valley Railway's newly finished Lee Moor Crossing. A cyclepath now follows the route of the tramway, below which a pipeline to carry china clay is buried. DAVID ELBROW/PVR



Above: **Arguably the most eccentric view on any Great Western main line: a horse hauls a rake of china clay wagons over the Lee Moor Tramway level crossing at Laira Junction in 1922.** FHC CASBOURN/MAURICE DART COLLECTION



***Lee Moor Nos 1* and *2* taken outside the Torycombe engine shed on 18 May 1966 for the first time in more than 20 years.** ER SHEPHERD

1936, having been kept open until then to transport goods for the village and stone from the local quarry.

The rest of the line was closed shortly after the start of World War Two but was reopened to transport naval stores that had been moved from the heavily bombed to Lee Moor village for safekeeping.

The tramway reopened properly on 8 October 1945 but closed again in 1947, leaving only the section from Marsh Mills to Maddocks Concrete Works at Laira, along which sand was conveyed in order to maintain the right-of-way across the at Laira Junction.

This crossing was used 14 times in 1958 but it dropped to six in 1959 and only four in 1960. The final crossing was made on 26 August 1960, at 11.19am on the outward journey and finally at 1.27pm when the horse and empty tracks returned towards Marsh Mills.

The tramway was then dismantled and replaced with a pipeline above Marsh Mills, although the track remained between Marsh Mills and Laira. Today, a cyclepath follows much of the moorland route of the tramway.

The Lee Moor Preservation Society, an offshoot of the Plymouth Railway Circle, was formed in February 1964 to carry out work on the two steam locomotives. Lee Moor No 2 was cosmetically restored for display in the National Trust's Saltram House at Plympton to where it was moved on 20 July 1970. Lee Moor No 1 went to the Wheal Martyn China Clay Museum near St Austell on 17 March 1975, by which time the society had been disbanded and absorbed back into the circle from which it originated in the first place.

In 2001, Lee Moor No 2 was transferred to the custody of the South Devon Railway at Buckfastleigh, where it is safely kept in a shed, together with the last surviving Lee Moor Tramway china clay wagon. Agreement was also reached for its sister engine to follow at a later date.

The original thinking was for one of them to be returned to steam so it could run on a short demonstration line – but where is the revenue-earning potential in such a venture for a heritage railway, like all others, forever running on a tight budget? To the untrained eye, it looks like a classic standard gauge Peckett industrial saddle tank, of which many survive in preservation, so where is the 'wow' factor for the general public. Regauging it to standard gauge would destroy its historical appeal. Therein lies a preservation enigma.

In 2009, steam returned to a small part of the Lee Moors Tramway. The Plym Valley Railway, a standard gauge heritage line at Marsh Mills which has been laid on part of the GWR Plymouth-Yelverton-Launceston route, now runs as far as the flat crossing which took the tramway across it. ■

Sail away!

Looking down the railway to Spurn Point from the top of the lighthouse. On the right are the lifeboat crew's cottages.
KE HARTLEY COLLECTION/RON REDMAN

While the steam engine technology of the first railway locomotives was also applied to ships, could the principles of sail in turn be applied to railway traction? Bizarrely enough, that did happen, in several places around Britain, perhaps the best-known being the Spurn Head Railway.



Spurn Head, the great sandspit across the mouth of the Humber.

Spurn Head is the name given to the distinctive narrow sand spit that reaches across the mouth of the River Humber from its northern bank as it enters the North Sea.

Comprising of sand and shingle eroded from the Holderness coastline and washed down from as far away as Flamborough Head, it stretches for over three miles into the estuary, but is as little as 50 yards wide in places.

At the rounded tip is a lifeboat station which was built in 1810 – houses for the crew and their families being added later – and a disused lighthouse. Since 1960, Spurn head has been owned by the Yorkshire Wildlife Trust and is a designated National Nature Reserve, Heritage Coast and is part of the Humber Flats, Marshes and Coast Special Protection Area.

At one time, it also had its own railway.

With the onset of World War One and the perceived threat of German forces to the east coast and the ports of Hull, Grimsby, Immingham and Killingholme, then newly established as an oil terminal, the War Department regarded it as imperative to fortify Spurn Head and the entrance to the Humber.



The lifeboatmen's sail bogie in use on the Spurn Head Railway. KE HARTLEY COLLECTION/RON REDMAN



Visitors enjoy a ride on a Spurn Head 'land ship.' KE HARTLEY COLLECTION/RON REDMAN



Rails still embedded in the concrete Spurn Head road. SIMON ROE

Two massive island-like forts in the estuary itself were built, Haile Sand Fort which lies on the low water mark between Cleethorpes and Humberston on the Lincolnshire coast, and Bull Fort rests on a sandbank in the middle of the river.

Bull Fort was built with great difficulty as the sandbank on which it rests is 11ft below low water.

It was constructed to a circular design on interlocking steel piles in the form of caissons. The upper part of the fort is up to 50ft above high water and comprises three floors and a basement floor, with an outer wall of concrete faced with 12in thick armour plating.

It accommodated a garrison of 200 men and provided all necessary facilities.

On Spurn Head, two coastal artillery 9.2in batteries were added at either end of Spurn Head, with 4in and 4.7in quick-firing guns in between.

Much of the materials for the building work was brought in by water, but the War Department decided to add its own railway to bring both men and materials to the new fortress at Spurn Head. Before the railway came, access to Spurn Head by land involved a three-mile walk over sand dunes.

Contractor CJ Wills of Manchester and London was engaged and brought five tank engines to build the line, one staying on afterwards to operate it.

The track comprises second-hand bullhead rail laid on cast-iron chairs obtained from the Great Central Railway, with many of the chairs carrying the initials MS&LR, the company's pre-1899 name of the Manchester, Sheffield and Lincolnshire Railway. The standard gauge line ran from a northern terminus at Kilnsea, at a fort named Godwin Battery, for three-and-three-quarter miles to Green Battery at Spurn Point, where a two-track stone engine shed was built just north of the lighthouse. The contractors also built a railway pier near the tip of Spurn Head, complete with steam crane, to receive materials brought in by river.

The small fleet of rolling stock comprised a coach built for the North London Railway; it was said have had a murder committed in it before it was moved to Yorkshire. Its body was later privately bought and moved to the grounds of a bungalow at Kilnsea. There were at first also two open wagons.

One of three Hudswell Clarke 0-4-0 saddle tanks used to build the line, No 402 of 1893 *Lord Mayor*, survived into preservation, and is now part of the Vintage Carriages Trust collection at the Museum of Rail Travel at Ingrow on the Keighley & Worth Valley Railway elsewhere in Yorkshire.

Another contractor's locomotive was Kenyon, a Vulcan Foundry inside-cylinder saddle tank dating from 1888 and acquired by the War Department in 1916, staying on to provide traction until 1929, after it had been run into the ground. It was scrapped at the Kilnsea sidings shortly afterwards.

Several petrol-engined railcars, all but one made by Drewery, appeared from 1920 onwards when a 12-seater, works number 1119, was delivered. In 1929, a bigger and more powerful Hardy railcar was obtained, but it suffered a cracked cylinder block and radiator in the icy winter of 1940 and afterwards was used as a locomotive-hauled coach, being scrapped in 1947.

A Hudswell Clarke railcar which arrived in June 1933 ended its day at Bicester Royal Engineers' depot as a runner truck in the early 1970s.

Another form of traction which saw service on the line was an adapted Itala racing car! Fitted with flanged wheels, it was said to be capable of reaching 60mph on the line. It survived until at least 1940. ➤



Lord Mayor, the sole survivor locomotive from the Spurn Head Railway, on the Keighley & Worth Valley Railway. VCT COLLECTION

However, the railway's most unusual and unforgettable feature was the use of two sail bogies or trolleys which emerged during or after World War One.

They were basic wooden platforms with flanged wheels, similar to the type once commonly used by platelayers, but with a mast fixed in the centre, to which a large balanced lug sail was fixed and braced to the corners of the trolley.

They were built and used by the lifeboatmen and the men working for the War Department, who often gave trips on them to visitors. No seats were provided and passengers had to sit directly on the decking.

The sail bogies had no proper method of braking and they were usually stopped by dropping a heavy piece of timber in front of the wheels.

The Great Northern Railway had made much of the fact that Skegness was so bracing in its Jolly Fisherman poster, in a bid to encourage people to visit the resort by train, and yet here further up the east coast was a railway which powered itself by the same gusts! An early form of 'green' transport, they were by far the cheapest forms of traction on the line both to build and to run!

It is said that the sail bogies could reach a reasonable speed, but too much wind and they would blow over. On calmer days, the sail bogie had to be pushed by hand.

Nevertheless, they proved a popular alternative to having to walk all the way to and from Kilnsea.

The military sail bogie was often used to check that the line was clear of sand, which frequently drifted over the tracks.

The earliest recorded use of a trolley by the lifeboatmen was during 1915.

Vulcan saddle tank No 1233 of 1888 Kenyon hauling a Spurn Head Railway train. KE HARTLEY COLLECTION/RON REDMAN

There were, of course, accidents and scrapes. On one occasion, a group of soldiers who had been drinking at the Blue Bell Inn in Kilnsea boarded the trolley, hoisted the sail, and set off for Spurn Point. They all fell asleep while in transit, at the same time the wind picked up.

Hurling towards the southern terminus, one of the soldiers woke up in time to stop the sail bogie ramming the battery entrance gates.

Another instance saw a sail bogie sent to Kilnsea to collect a married couple. It rapidly gathered speed on the way back and when it reached 40mph the inexperienced man in charge panicked and jumped off. The husband followed him, but his wife stayed on the trolley, and sustained cuts to her face, while the wind dropped and the sail bogie slowed down before the fort was reached.

The Reverend Alfred Poulsom, who served as Methodist chaplain at Spurn Point, wrote that on one occasion a sail bogie powered towards a coastguard walking on the track not only with his back to the oncoming 'land ship' but completely oblivious to it. The sail was lowered to no effect, and then the 'brake' was dropped in front of the sail bogie, which cut through it without stopping. Luckily, the coastguard saw the danger at the last minute and jumped clear with just seconds to spare.

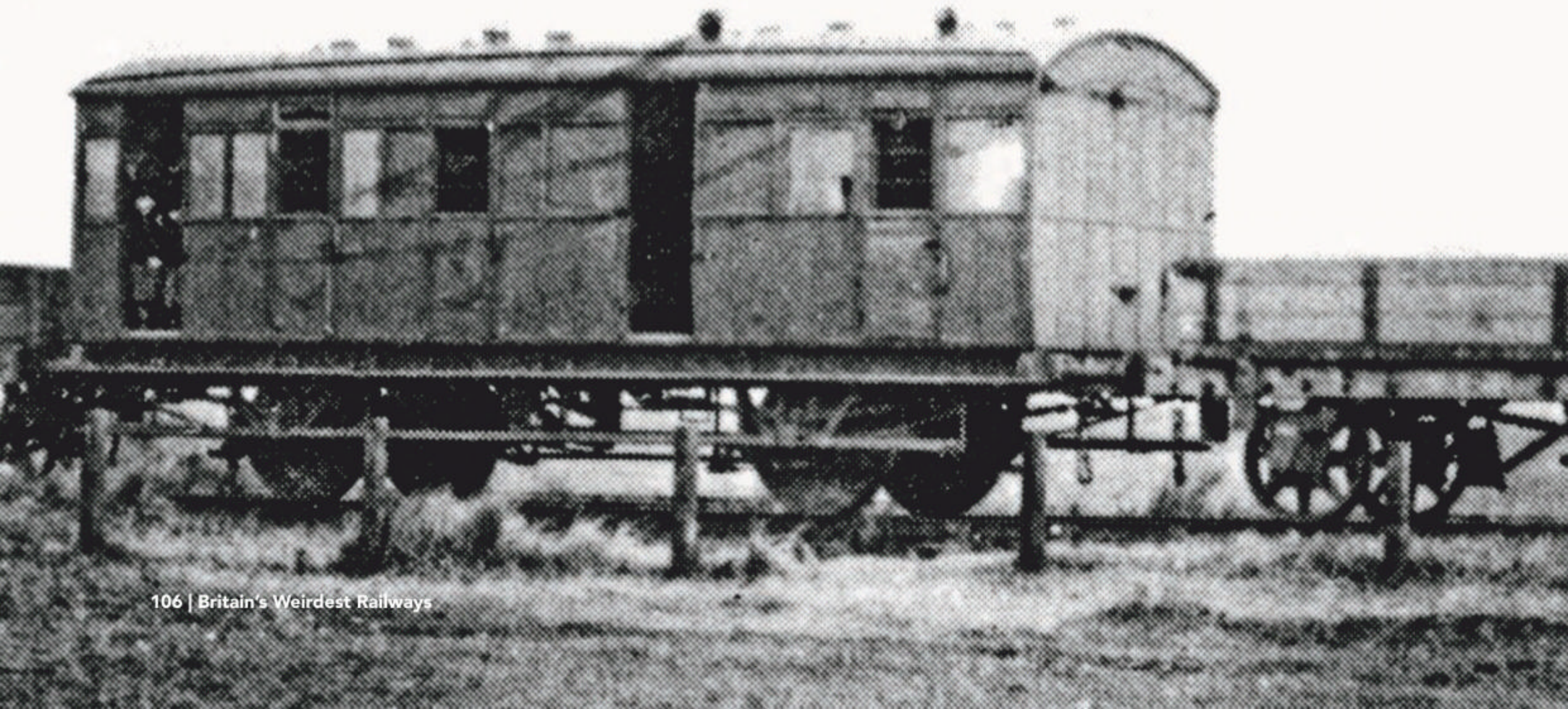
The military sail bogie was later fitted with a Raleigh 350cc side valve engine and gearbox, but it was wrecked on its trial run when it ended up under a railway truck due to wrongly set points.

It seems that sail power was last used on the railway during the Second World War, or just afterwards.

Steam returned to the railway in early 1940, when the strategic importance of Spurn Head was again realised and a London & North Eastern Railway Y8 class 0-4-0, No 559, was sent from Hull (Dairycoates) depot to Patrington station in 1940. There it was placed on a low-loader behind an LNER Scammel truck and taken to Kilnsea, where it was re-railed, and nicknamed 'Black Sapper'. The rolling stock fleet was increased by three box vans and three open wagons, at least one of which was converted to carry a gun.

During the Second World War, work on building a concrete road to Spurn Point was started, with the help of the railway that it would supersede. At the time, the railway carried much Royal Engineers traffic during work to fortify the sea defences and prevent the spit from being breached.

The railway was declared redundant in the winter of 1951-52. Contractor Thomas W Ward Ltd of Sheffield dismantled the line. The War Department decommissioned the Spurn Head military establishments between 1956-59.





The engine sheds in 1952, when the line was dismantled. KE HARTLEY COLLECTION/RON REDMAN

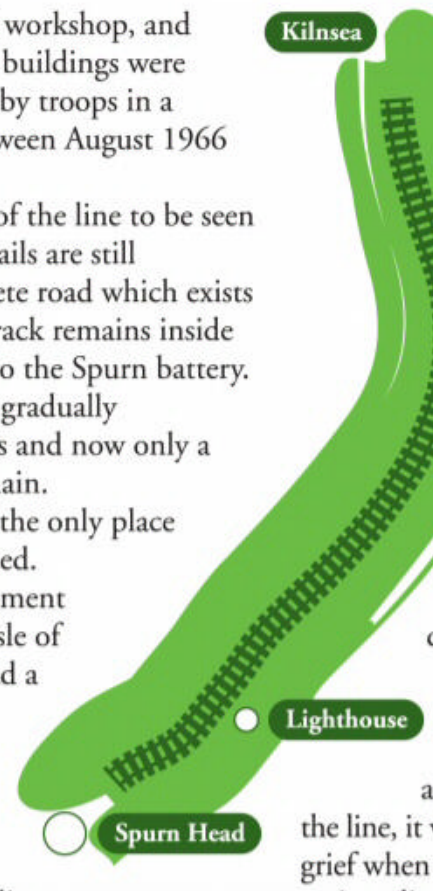
The engine shed and workshop, and adjacent fuel and water buildings were unfortunately removed by troops in a demolition exercise between August 1966 and April 1967.

There are still traces of the line to be seen today: at three points, rails are still embedded in the concrete road which exists and a short section of track remains inside what was the entrance to the Spurn battery.

The railway pier was gradually dismantled in the 1970s and now only a few rotting timbers remain.

Spurn Head was not the only place where sail power was used.

The Francis Alpha cement works at Cliffe on the Isle of Grain in Kent works had a railway linking it to a quay a mile away. After the Alpha works closed in the 50s, a sail-powered trolley was used on the line to inspect the sea defences. A sail trolley was built by Ransomes & Rapier at its Waterside Works in Ipswich in 1869. A sail bogie ran on a railway at South Gare, Teeside and one existed on the military line between Fort Blockhouse and Fort Monckton in Gosport around 1895.



The Admiralty Wireless Tramway at Port Stanley in the Falkland Islands had several sail trolleys in the early 20th century.

The Spooner family who developed the Festiniog Railway in the 19th century built their own inspection trolley in the shape of a boat complete with sail, although, like many slate trains on the line, it was gravity powered. It came to grief when it crashed into a train.

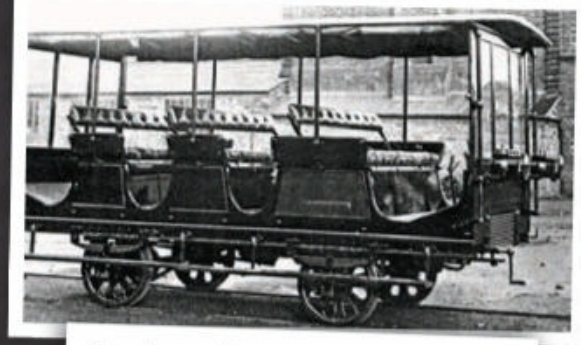
A replica was built and made its appearance at the line's annual vintage weekend in 2005. ■



The Hudswell Clarke railcar supplied to the line in 1933. RON REDMAN COLLECTION.



LNER Y8 No 559 being taken from Patrington station on the Withernsea branch to Kilnsea. KE HARTLEY COLLECTION/RON REDMAN



Baguley railcar No 1119, supplied to the War department for use on the Spurn Head Railway. KE HARTLEY COLLECTION/RON REDMAN



Steam and seed oil

One of the biggest names in British locomotive building was – and still is – Hunslet, whose renowned products were exported across the globe. At home, they had the last word in steam, building both the final standard and narrow gauge engines of the steam age in Britain. Unlike its long-vanished rivals, the firm is still building steam, for the heritage era; not in a Leeds suburb, but on a farm in Staffordshire, where a magnificent private multi-gauge railway has been developed.

In 1864, civil engineering contractor John Towlerton Leather founded a locomotive-building company in Jack Lane, Hunslet, Leeds, and named it Hunslet after the locality. The first engine to be built was *Linden*, a standard gauge 0-6-0 saddle tank delivered to railway civil engineering contractor Brassey and Ballard in 1865. Six years later, his works manager, James Campbell, bought the company for £25,000.

In Britain, the firm was hugely successful in building locomotives for industry, notably the 0-4-0 saddle tanks for the North Wales slate mines, which became known as 'quarry Hunslets'. The first, Dinorwic, was a 1ft 10¾in gauge locomotive for the Dinorwic Slate Quarry at Llanberis. This engine, later renamed Charlie, was the first of 20 similar engines built for this quarry and did much to establish Hunslet as a major builder of quarry engines.

The first Hunslet engine built for export was the firm's No 10, an 0-4-0 saddle tank exported to Java. By 1902, Hunslet had supplied engines worldwide.

The firm also built main line locomotives, including, after World War One, 90 Fowler 'Jinty' 3F 0-6-0 tank engines for the London, Midland & Scottish Railway.

Several other builders were bust during the depression, including Avonside, Manning Wardle, Kitson and Kerr Stuart, and Hunslet acquired the rights to their patterns and designs.

In the 1930s, Hunslet worked on the development of the diesel locomotive, and this continued during World War Two. A key post-war produce was the Hunslet flameproof diesel engine for use in the coal mines. Diesels accounted for more and more of the business from the late 40s onwards. The other type of steam locomotive produced in vast numbers by the firm, and other builders under licence, was the 55050 class of 0-6-0 saddle tanks, or Hunslet 'Austerity', which appeared in 1942 and eventually numbered 484 examples. The class became the standard British shunting locomotive during World War Two, when 337 were sold to the War Department, 75 subsequently being sold on to the London & North Eastern Railway, where



Britain's last standard gauge new steam locomotive (of the steam age rather than preservation era) appeared in the form of Hunslet Austerity 0-6-0ST No 3890. BOB FRISE/BRC



Hunslet celebrated building steam locomotives in a third century when 0-4-0 saddle tanks *Jack Lane* and *Statfold* were outshopped. The pair are seen together at the Statford Barn Railway. BRIAN SHARPE



Right: *Trangkil No 4* heads a passenger train along the Field Railway. SBR

Below: *Sid*, a new compressed air mines locomotive, being driven by its builder, Statfold volunteer Roy Etherington of Tamworth, who built it in the railway's workshops. The design is based on a Lishman & Young original, which worked mines in Durham from 1878 for 20 years; the tub it is pulling is a genuine one from New Lount Colliery. While other countries like the USA persevered with the development of compressed air locomotives until diesel and battery electric alternatives had been invented, Britain gave up on the concept around 1900. SBR

they became classed as J94s; and production continued until 1963, when the last all-new pair, Nos 3880 and 3890, were built – three years after British Railways built its final steam locomotive, 9F 2-10-0 No 92220 *Evening Star*. The Hunslet pair are now both at the Buckinghamshire Railway Centre.

Hunslet is also considered to have built the final locomotive of the British steam era, in Leeds in 1971, when Kerr Stuart Brazil class type 0-4-0ST No 3902, built to a design which dated back to 1909, was supplied to the Trangkil sugar mill in Java, the Indonesian island to which the firm made its first export a century before.

The Jack Lane works was closed in 1995, the last order being a batch of narrow gauge diesels for tunnelling on London Underground's Jubilee Line extension.

The Hunslet Engine Company, however, did not die with the rest. It passed through a succession of owners, and since its purchase from the Telfos Group in 2004, is part of the LH Group Holdings, a major specialist engineering business based at Graycar, near Burton-upon-Trent. It now owns the rights to use a lengthy list of names, including Barclay, Greenwood & Bagtley, Hudswell Clarke and Fowler, as well as the previously mentioned firms.

LH Group Holdings chairman Graham Lee bought both Andrew Barclay and the Hunslet Engine Company as successful going concerns, not just for their historic names. He retired from the day to day running of the LH Group business in 2004, but has since been devoted to taking the Hunslet Engine company back in time.

For it is now building classic steam locomotives for sale once again, at purpose-built engineering workshops at Graham's home, Statfold Barn Farm, located just outside Tamworth in Staffordshire, where an extensive railway system complete with station, sheds, workshops and a museum has been developed on a green field site.

Although not open to the general public, occasional enthusiast open weekends are held. Those who have visited know only too well that it is a narrow gauge Mecca.

Statfold Barn Farm is also a working farm and the home of Statfold Seed Oils, a specialist natural oil company which is a major processor and supplier of natural and refined seed oils, such as flax, hemp and borage, for use in a wide range of nutritional and personal care products. State-of-the-art technology, much of it developed in-house, is used to extract, refine and bottle the oils.

The Statfold Barn Railway began as a simple oval of 2ft gauge track around the lake in the garden of Graham and his wife Carol's farmhouse.

He built a traditional engine shed from scratch and added a signalbox, complete with Great Northern Railway signalling equipment. Passenger services were provided by a Simplex diesel Charley hauling a single coach, but Graham really wanted a steam locomotive – and had problems in finding a suitable once for sale in Britain and looked much further afield.

In 2004, following extensive negotiations, he repatriated a locomotive of immense historical significance from Java – that final steam engine built by Hunslet in 1971, *Trangkil No 4*. Bought from the sugar mill it served, it was restored to as-new condition in the Statford Barn workshops. ➤





A 'real' freight carrying a harvested seed crop on the Statfold Barn Railway hauled by a Ruston four-wheeled diesel. SBR



Cableless Quarry Hunslet *Jack Lane* on the dual gauge/standard gauge flat crossing. ROBIN JONES





Orenstein & Koppel 0-4-4-0T No 1473 of 1905 *Pakis Baru No 5* is the only Mallet operating in Britain, apart from on miniature lines. The type, compact but powerful locomotives able to negotiate relatively tight curves, is named after Anatole Mallet, the engineer credited with successfully applying compounding (using steam more than once) in locomotive design. ROBIN JONES



Graham Lee driving his Hunslet Land Rover. SBR



This Baguley-Drewery diesel railcar was supplied to the French School of Military Engineering in 1919, and bought by Graham Lee from a French car dealer in 2006. Repatriated, it has been restored to original condition. JEFF HOGAN/HUNSLET

While in Java, he visited sugar mills and was enchanted by the huge selection of early 20th century European-built steam locomotives still in existence, some working on a daily basis, others stored but steamable and some badly decayed. With the threat of imminent scrapping hanging over many, Graham was determined to rescue as many as he could.

From Pakis Baru mill, two 2ft 6in gauge Orenstein & Koppel locomotives were bought in the form of No 1, a diminutive 0-4-0 tank engine, and No 5, a substantial 0-4-4-0 compound Mallet articulated tank locomotive – a type which had never run in Britain.

At Pakis Baru, Graham caused anxiety to his Indonesian hosts by leaping into an inspection pit to examine the Mallet without first checking for any snakes, spiders and scorpions.

From Sragi mill, he bought O&K 0-6-0 tank No 14 and Krauss 0-4-2 tank No 1.

Before he could bring them back to Britain, he had to satisfy an Indonesian Government regulation banning the export of scrap metal. The engines had to be steamed first to prove that they were leaving as working locomotives.

Two more Mallets, both built by the German firm of Jung, were subsequently bought from other sugar mills.

It was obvious that Graham's garden lake railway would be far too small for most of his new acquisitions to run on, and so he developed a new running line in a field alongside.

Developed on a green field site, it offers Britain's only dual-gauge railway, combining 2ft and 2ft 6in gauge lines. There is also a short triple-gauge section, also involving standard gauge, leading to a turntable.

Furthermore, as well as searching the globe for old steam locomotives, shouldn't Hunslet be building new ones?

That is exactly what is happening in the Statfold Barn railway workshops. In 2005, the next Hunslet steam locomotive in sequence after *Trangkil No 4* appeared, in the form of No 3903. It was a classic Quarry Hunslet, just like the ones that worked in the Snowdonian slate mines, but brand new, and yours for £130,000 straight out of the box. It spent much time running on the restored section of the legendary Lynton & Barnstaple Railway at Woody Bay and toured other heritage lines as well.

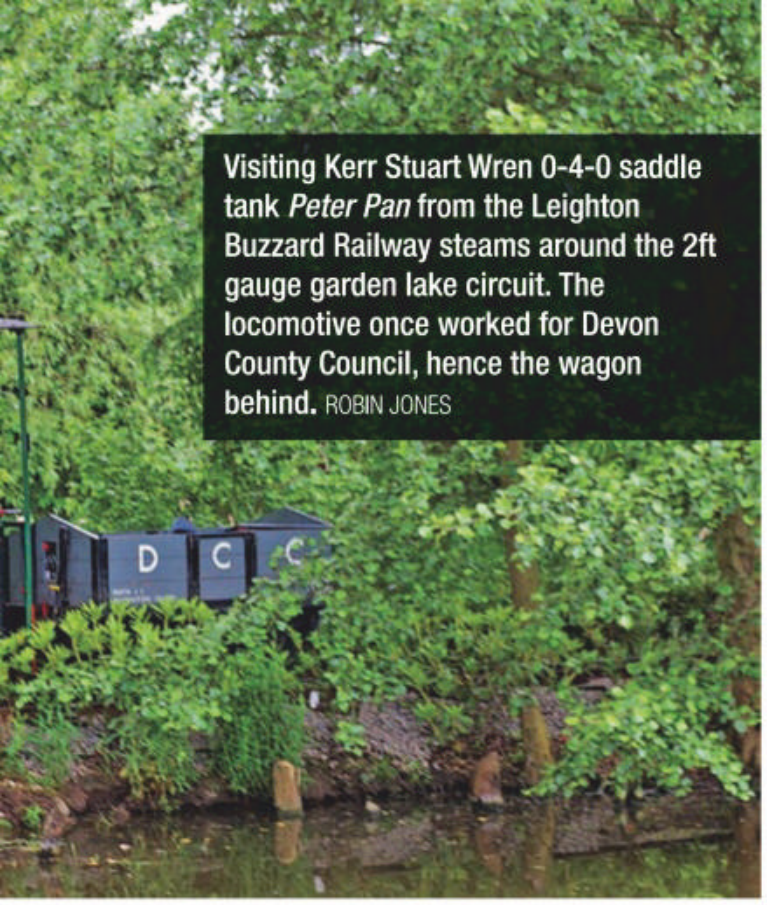
They were followed by a cableless Quarry Hunslet, No 3904 *Jack Lane*, two Kerr Stuart Wren class 0-4-0 saddle tanks.

Graham now looks after the heritage and preservation connections arising from the Hunslet Engine Company's business. The 'Hunslet Steam' name has been introduced to enable enthusiasts and museums around the world to distinguish the heritage aspects of Hunslet from the firm's modern commercial operations.

The engineering works are privately owned by Graham. As well as building new ones, here he and his staff are engaged in restoring heritage locomotives and rolling stock for use both on the railway and for external customers.

He is committed to restoring all the locomotives and rolling stock in the collection to working condition for future generations to enjoy.

The journey on the dual gauge railway starts from Statfold station, the line's terminus, which was built during winter 2006/7, with two-coach trains to be operated on open days. The platform canopies include stanchions originally from South Beach station at Great Yarmouth,



Visiting Kerr Stuart Wren 0-4-0 saddle tank *Peter Pan* from the Leighton Buzzard Railway steams around the 2ft gauge garden lake circuit. The locomotive once worked for Devon County Council, hence the wagon behind. ROBIN JONES

where they were erected by the Eastern and Midland Railway, the predecessor of the Midland & Great Northern Joint Railway.

After leaving the station, the short standard gauge line is crossed on the level, as with the Welsh Highland Railway/Network Rail crossing at Porthmadog, although the Statfold crossing has three gauges!

There is a 2ft gauge only connection with the garden lake railway.

The line then enters the Field Railway, which becomes a working industrial railway at harvest time, when seeds are collected from the combine harvester in purpose-built bulk hopper wagons. *Trangkil No 4*, which was regauged to 2ft when restored, sees regular use on the harvest at Statfold, although it is now oil seed rather than sugar cane as was the case in Java.

Oak Tree Halt has a passing loop and a platform, as well as a spur providing access to the new carriage storage shed built in 2007. From here the line continues downhill, following the perimeter of the field, to a balloon loop which enables the whole train to turn for the return journey without having to stop for the locomotive to run around.

As the Field Railway is dual gauge, a fixed crossing is provided part way around the loop to switch the 2ft gauge track from the inner and centre rails to the centre and outer rails.

The railway has become home to many less orthodox items of motive power, such as a Land Rover converted to run on rails and fitted with US-style cowcatchers, an 1880s-style bomb-shaped four-wheel locomotive which runs on compressed air and a railcar of a type which saw service in World War One.

It seems that if it runs on rails, it will be offered a home at Statfold – and it also seems that every time they hold an open weekend, there is always something either different… or very different!

• If you are interested in buying a new Hunslet steam locomotive, contact the firm on 07836 747017.



Above: ***Howard*, the new Wren 0-4-0 saddle tank, works number 3905 of 2008, at Statfold.** HENRY NOON



Right: **Quarry Hunslet chimneys batch produced in the new Hunslet locomotive works at Statfold.** ROBIN JONES

Below: **The unique triple-gauge turntable at Statford station.** ROBIN JONES





Pakis Baru 2ft 6in gauge Orenstein & Koppel 0-4-0 tank engine No 1 on a Statfold freight. SBR



Steam tram *Swift* hauls a passenger train around the North Ings Farm Museum line in September 2009. This is Lincolnshire's last farm railway, and was built after the others had ceased operation. ROBIN JONES

Adventures in potato land

About two decades ago, I browsed a railway bookstall and chanced upon a volume which gave me a completely new insight into the subject: Stewart E Squires' *The Lincolnshire Potato Railways* published by Oakwood Press. Never had I seen such a collection of weird and wonderful home-made railway lines, locomotives and rolling stock, private industrial systems not serving coal mines, iron furnaces, factories or docks, but potato fields, tomato greenhouses and even pigsties. I was hooked – and so was everyone who I shared the book with. Here is the unique story of a county which made a type of railway its own.

Lincolnshire is the second biggest county in England, and despite its very rural character, much of the landscape is man-made. Around a third comprises fenland reclaimed from the freshwater marshes and the sea, and turned into rich arable land.

The process did not happen overnight: in some regions, it took many centuries, and many areas which we now take for granted as dry land were still under water in Victorian times.

It was as simple a task as merely building a dyke to keep the water out: once dried out, the peat soil cracked and shrunk, lowering the land below sea level again. I know of several tarmacademed fenland road which regularly turn into roller-coaster rides when the soil on which they are laid contracts.

Once the fens were drained, however, it paved the way for agriculture. Houses were needed so that farmers could be near their livestock and crops, and new roads and cartways had to be built to bring labourers in and take produce out. Complex drainage systems and pumps were developed to keep the land dry, but in the winter months, the terrain often reverted to a quagmire.

Horse and early motor transport had its limitations here, especially in wet winters, and there were resulting problems with taking potatoes, a crop for which the reclaimed soil is particularly suitable, to market.

As Lincolnshire became enmeshed with a web of standard gauge lines, the growing of potatoes became a more lucrative crop, as there was a ready means by which they could be exported to the rest of Britain from the major despatch centres of Boston and Spalding. Yet how do you harvest bulk crops and carry them across muddy fields so they can be taken on by train, if a main line was near enough, or by lorry to a transhipment point?

There was a simple answer: build a light railway!

In Edwardian times, potato farmer George Caudwell of St Lambert's Hall, Weston, near Spalding, inquired about building a standard gauge line on his land for the conveyance of crops. A German firm which had built lines for West Indian sugar plantations convinced him to give a 2ft gauge railway a try instead, and it was a huge success. Other farms followed his example before World War One, when similar temporary railways proved their



A car-like paraffin-fuelled steam engine pulling a wagon load of potato sacks from the Dennis Estates system at Deeping St Nicholas lines up alongside a full-size steam engine at the main line transhipment siding. STEWART E SQUIRES COLLECTION/OAKWOOD PRESS



In 1950 the Nocton potato chitting house was used for growing tomatoes, with the railway running through the centre. W REDSHAW COLLECTION/OAKWOOD PRESS

great worth on the Western Front, for which internal combustion engines were developed so as not to give the game away to the enemy with a steam locomotive emitting huge clouds of smoke.

After the war ended, a huge amount of surplus locomotives, rolling stock and track became available on the second-hand market, and more Lincolnshire farmers eagerly snapped it up to create their own railway systems.

By the late 1920s, there were at least 34 private farm railway systems in the county, with around 110 route miles – enough to build a railway from the county to London.

Few of them had locomotives: it was far easier, cheaper, more convenient and 'greener' to revert to the time-honoured method of horse traction. In some case, World War One Simplex petrol locomotives had a basic hut built over them to offer the driver some protection from the elements.

Many of the lines were concentrated around particular areas such as Deeping St Nicholas in the south, but they could be found all over the county.

The biggest system of all was the Nocton Estate Light Railway, which may have been the longest agricultural line in Britain, its 1ft 11 ½in gauge system extending to over 30 miles at its height. Having built an earlier light railway on land at Deeping St Nicholas, W Dennis & Sons began laying a similar line at Nocton in the area between Sleaford and Bardney. It was operated by army surplus light railway equipment, several Simplex diesels and briefly two steam engines.

While its main purpose was to serve potato fields, it also ascended higher ground off the fens, crossing public roads at six places, and bridged the Lincoln to Sleaford main line. The sprawling system needed its own permanent staff of drivers, guards and platelayers.

Because of crop rotation, the system also took other crops to market, including sugar beet and grain. It also played a major role in the pastoral side of the business: lines ran through pigsties from which muck was taken by wagon to be spread on the fields, through the tomato greenhouses and ➤



Motor-Rail Simplex four-wheel diesel No 1935 of 1920 *Nocton* was the first locomotive to run on the Nocton Estates Light Railway in 1920, and also the last in 1969. It afterwards became part of the Lincolnshire Coast Light Railway fleet. ROBIN JONES



Loading potatoes from the three-quarter-mile light railway at JT White's farm in Horsepit Lane, Pinchbeck, onto a solid-tyred Thorneycroft lorry in the 1920s. The railway ran to the Boston-Spalding main line, which has long since been closed and lifted. NICHOLAS WATTS COLLECTION



Piggy in the middle: cleaning muck from pig pens at Halls Yard, Dunston, which was served by a branch of the Nocton Estates Light Railway. W REDSHAW COLLECTION/OAKWOOD PRESS



into the mill where feed for the cattle and sheep was prepared.

At the railhead, there was a transhipment siding where produce could be loaded into standard gauge wagons in a siding off the main line at Nocton & Dunston station. Nearby was the workshop where the railway stock was maintained.

The estate railway also carried coal to the Nocton Pumping Engine, which drained most of the fen, and water not only to the cattle but to farms and cottages outside the village which had no piped supply.

Staff were regularly carried on the railway, women potato pickers who had arrived by main line train riding in empty trucks in the morning and making the return journey sitting on sacks of potatoes.

In 1927, a bogie van was converted into the line's only passenger coach, with sliding doors and six windows on each side, comfortable seats and a gun rack for the use of shooting parties.

The railway also carried people on Sunday school outings to the River Witham in the 1920s, and even once accommodated a funeral cortege.

The estate's main customer was Smith's Potato Crisps, which bought the land in 1936, and continued to use the railway.

After World War Two, more tractors and lorries were introduced, and while the railway was still busy, in 1955 it was decided to cut out double handling by opting for road transport altogether. Much of the railway system therefore closed by 1960, but one branch with a locomotive and four bogie wagons serving the potato chitting house soldiered on until 1969.

By then, all of the country's potato railways had gone for similar reasons. By 1945, only 17 systems and around 60 miles remained in operation. A decade later, that figure had fallen to 25 miles on three systems, including Nocton.

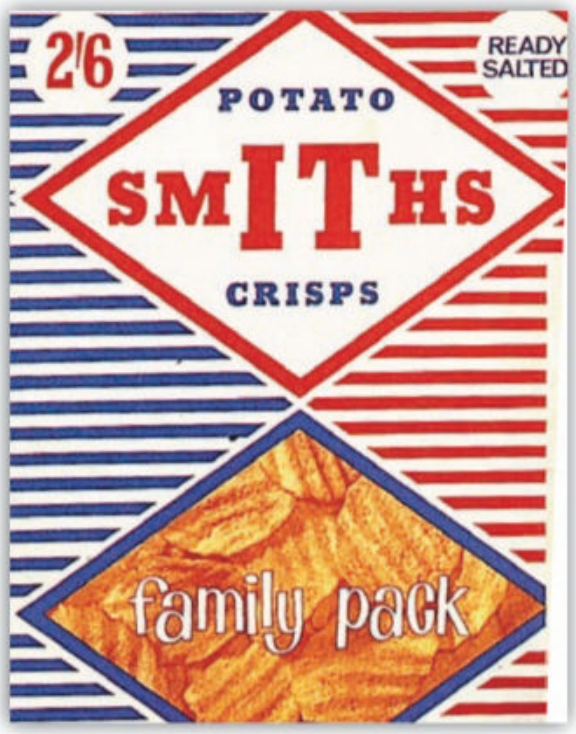
Yet as one door closed, another opened.

The British railway revival movement began with the saving of the Talyllyn Railway in mid-Wales by volunteers from the West Midlands in 1950, and it was followed four years later by a similar movement to restore passenger services to the moribund Ffestiniog Railway.

These were existing railways, but fresh ground was broken in 1958 when enthusiasts from Lincolnshire saved items from the Nocton Estates Light Railway and used them to build a new passenger-carrying line on a green field site, preserving the stock and unique atmosphere of the potato railways.



***Paul* is another former Nocton Estates Light Railway diesel now preserved at Skegness.** ROBIN JONES



The land for the railway on the edge of Cleethorpes was leased from Grimsby Rural District Council and the line opened on 25 August 1960 using a Motor Rail Simplex locomotive and a single open bogie carriage to offer genuine public transport taking holidaymakers and their heavy luggage from a bus terminus to the Humberston Fitties holiday camp and on to the beach.

In 1961, a second Motor Rail locomotive was added and the railway's first steam locomotive, Peckett 0-4-0 saddle tank No 1008 of 1903 *Jurassic*, arrived. By 1964, the line was carrying 60,000 passengers a year, and two years later it rebuilt on a new alignment. The line saw considerable

The second-time-around Lincolnshire Coast Light Railway skirted the airfield at Skegness Water Park. The Simplex locomotive is typical of those used on the Nocton Estates Light Railway, although not with the heritage era plywood body, while the coach is one of two from the 2ft gauge Ashover Light Railway in Derbyshire. ROBIN JONES

success in the late 1960s, but increasingly it struggled against competition from buses and changing holiday patterns, as more families went on cheap sunshine-guaranteed Mediterranean packages.

Much of Humberston's holiday trade came from families from the industrial north of England, and in the hardship in the wake of the miners' strike of 1984-85, passenger numbers dwindled to the point where the railway's officials could not afford to renew their lease on the trackbed.

Meanwhile, the council insisted on the installation of 6ft high fences on both sides of the railway. In 1985, faced with a series of obstacles, the railway closed and the track was lifted shortly afterwards.

However, much of the stock of the railway stayed together and a new line was built 25 miles away at the Skegness Water Leisure Park. A new passenger-carrying Lincolnshire Coast Light Railway with a somewhat unusual route along the boundary of the Skegness Aero Club's airfield publicly opened there on 3 May 2009, to widespread acclaim; with its now historically priceless Nocton stock including the line's only carriage preserved in a splendid stock and engine shed.

Anyone seriously interested in narrow gauge should visit the Lincolnshire Coast Light Railway, if only for the wealth of its museum stock, including a restored World War One ambulance van.

However, there is still one genuine farm railway running in the county.

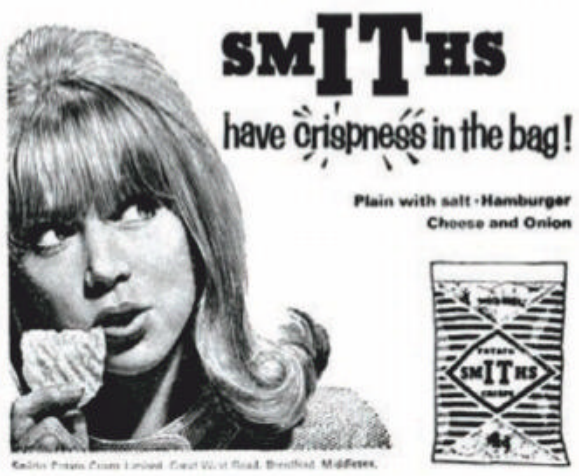
In 1971, a 2ft gauge system was installed at North Ings Farm at Dorrington, north of Sleaford, to serve the chicken farm, handling feed, eggs and waste from cleaning of the sheds.

Although the poultry business closed in 1981, the original locomotive and wagons are still used around the farm, and have been joined by six other industrial diesel locomotives, and a freelance vertical-boilered steam tram engine named *Swift*, which began life in a different form at a traction engine club in Hockley Heath, Solihull, in 1970.

All but one of the chicken sheds have gone, but the line has been extended over the years and now forms a circuit of a third of a mile.

A passenger train provides visitors with a trip on the railway, now the centrepiece of a local private agricultural museum open on the first Sunday of the month during the summer, and includes a coach with facilities for the disabled.

Rolling stock consists mainly of industrial skip wagons, though many have been converted for other purposes, such as flat wagons, ballast and rail carriers. ■





The only coach built for the Nocton Estates Light Railway is now preserved at Skegness. ROBIN JONES



A loading dock of the 2ft 2in gauge two-mile-long system at Vine House Farm, Deeping St Nicholas, complete with two of the four flat wagons, survives today. The horse-worked line was last used in World War Two. ROBIN JONES

Bristol's subterranean masterpiece

Sipping an ice-cool drink from the patio of the Avon Gorge Hotel in Bristol, you can enjoy one of the trademark panoramas of Britain: Isambard Kingdom Brunel's Clifton Suspension Bridge, which was completed by his admirers in 1864, five years after his death. However, in terms of Victorian engineering magnificence, the lofty bridge above the tidal Avon estuary is only one half of the story of Victorian engineering magnificence at the point of the limestone gorge; the other lies beneath the surface next to the hotel: the Clifton Rocks Railway.

Funicular or cliff railways may be considered an extreme manifestation of the 'traditional' railway concept: however, they are no means in themselves scarce.

At one stage, Britain boasted at least 35 of them, most of them built in Victorian times to serve the flourishing seaside resorts that sprang up with the growth of the railway network.

The world's oldest funicular predates the steam locomotive by three centuries. It is the Reisszug, a private line providing goods access to Hohensalzburg Castle at Salzburg in Austria and first mentioned in records dating back to 1515. Originally using wooden rails and a hemp haulage rope, it was operated by human or animal power. It is still operational today, but employs steel rails, steel cables and an electric motor on the same route through the castle's fortifications.

Canals used inclined planes to tackle steep hills in a relatively short space of time. The Bude Canal in Cornwall, for instance, employed several of them.

Rope-worked inclines were a common feature of industrial railways; the sole surviving one in preservation today is at the Bowes Railway in County Durham.

A development of the rope-worked incline was the water-balance incline, where a wheeled water tank would be coupled to descending wagons on one of a pair of tracks, while a rope connected via a pulley would raise empty wagons on the other line. When the water carrier reached the bottom, it would be emptied, and the empty water carrier on the train that had reached the summit refilled.

This principle was used on many funicular railways, where a water tank would be built beneath a passenger carriage.

The first funicular railway in Britain was a water-balance line opened at Scarborough in 1875, linking the town's clifftop esplanade to the spa buildings in South Bay below. Eventually, the resort had five funiculars.

What made the Clifton Rocks Railway different to the rest was that it was built underground, and had no less than four tracks (Folkestone is underground too, but only has two tracks). What's more, it served the public – and its country – well for several years after the last trains ran, and its history truly is unique.

The removal of the four cars in 1941.
FRIENDS OF THE CRR





BBC broadcasters at work in the tunnel radio station during World War Two. BBC/PATRICK HANDSCOMBE



The cable winding gear and the uppermost tracks of the railway as seen from the top station in September 2009, with a mock-up of a car front. ROBIN JONES

The line linked the genteel housing estates of Clifton – the 'cliff town' – with downmarket Hotwells alongside the river.

Building a cliff railway to take visitors to the beach seems a worthwhile business venture. Yet why would anyone want to link two then villages – and disparate ones too – to the west of Bristol?

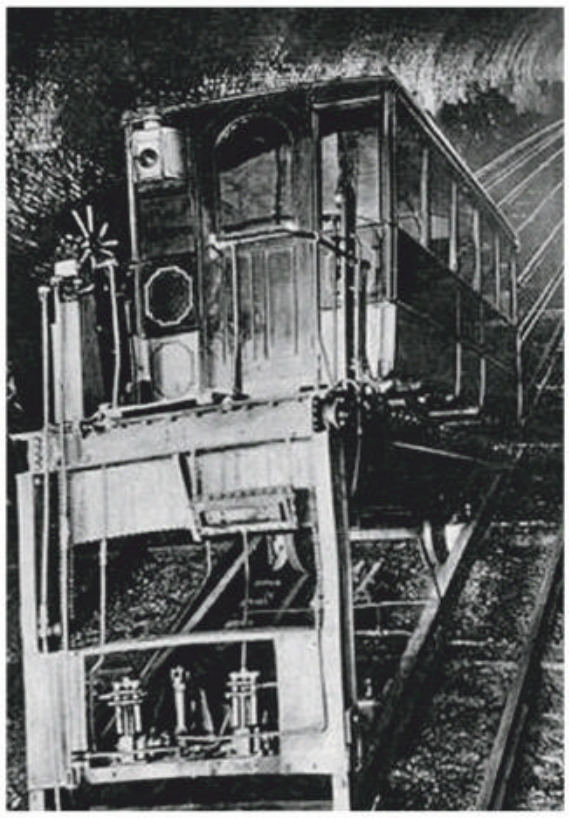
Hotwells takes its name from the hot springs which bubble up through the rocks of the Avon Gorge underneath the bridge and which were first documented in 1480. In Georgian times, when spa towns were the forerunners of the Victorian seaside resorts, attempts were made to develop Hotwells as a competitor with Bath, but it never took off to anywhere near the same extent, and the waters were later found to be polluted. Hotwells fell into decline, and by the mid to late 18th century, its population included many often-drunken sailors while the Avon had degenerated into an open sewer. Clifton was only too glad it was separated from the pair by the cliffs; its population was so determined to remain apart that it even resisted the introduction of trams from Bristol city centre.

There were, however, those who were determined that Clifton should not remain in isolation. George White, founder of the Bristol Tramway Company and later the Bristol Aeroplane Company, in 1880 proposed a cliff railway from the northern end of the suspension bridge down the rockface to Hotwells, where passengers could change for the city tramway and the Bristol Port & Pier Railway and access the Hotwells landing stage from which P & A Campbell ran its pleasure steamers to Ilfracombe and South Wales. The plan stumbled against opposition from the cliffs' owner, the Society of Merchant Venturers, whose members thought it would be an eyesore.

A second scheme was similarly turned down in 1889, but the following year, publisher George Newnes, later MP for Newmarket, Cambridgeshire, submitted plans for an inclined lift from Hotwells Road to the garden of No 14 Princes Buildings, which now includes the Avon Gorge Hotel. His scheme differed from its predecessors in that it would not disfigure the cliff faces but run behind and below them in a tunnel. ➤



One of the four cars on the Clifton Rocks Railway, from a hand-coloured postcard. FRIENDS OF THE CRR



An early postcard of the Clifton Rocks Railway in action.



The bottom station at Hotwells, with a tram running alongside the River Avon and the suspension bridge in the background. PETER DAVEY COLLECTION

Newnes had a holiday home at Lynton in north Devon and was mainly responsible for financing the water-powered Lynton & Lynmouth Cliff Railway, designed by George Croydon Marks, later Baron Marks of Woolwich, and which opened on Easter Monday 1890, and has been running ever since. The success of the Lynton funicular began a long association between Mark and Newnes, who was also heavily involved with the building of the Lynton & Barnstaple Railway.

The Merchant Venturers agreed to this third scheme on condition that Newnes, the sole financier, resurrected Clifton as a spa town by building a hydropathic institute next to the upper station. The Royal Clifton Spa, which had replaced Hotwells House as the main spa building in 1822, had been demolished in 1867. Newnes was happy at the compromise and appointed Philip Monroe & Sons of Baldwin Street, Bristol, as architects and CA Hayes of Thomas Street, Bristol, as contractors.



Cliff railway pioneer and publishing magnate Sir George Newnes, who died at his Lynton home in June 1910, having suffered from diabetes.

The works began on 7 March 1891 when Lady Wathen, wife of Lord Mayor Sir Charles Wathen, fired the first shot to start the tunnel excavation.

It took longer than anticipated to build, due to faults in the limestone strata which meant that the tunnel had to be lined with bricks, tripling the estimated original £10,000. The lower terminus was on Hotwells Road, close to the Bristol Port & Pier Railway's Hotwells station, and the upper in Sion Hill.

Because high traffic figures were expected for the railway, four tracks were laid with the gaslit tunnel built no less than 27ft wide and 17ft high to accommodate them.

Each line was 450ft long over a 1-in-2.1 gradient and built to 3ft 2in gauge, and there was a fleet of four 18-seater cars, each with its own brakeman. The cars were operated as connected pairs using the water-balance method. The water emptied from the cars into a reservoir at the lower station was pumped back to one at the upper one by four-stroke gas engines. A cabin at the upper station housed the railway controller who was equipped with a handbrake for the cable pulley sheaves.

The railway was officially opened on 11 March 1893 when 6220 passengers made the return trip. The fares were a penny to go up and four pence to go back down, the journey taking 40 seconds. On that first day, each passenger received a commemorative gilded white metal medallion in the shape of a Maltese cross with a representation of one of the cars on one side together with the initials of the promoter, engineer and architect. The first year saw 427,492 passengers carried, including 110,000 in the first six weeks: however, this proved to be the all-time high, and afterwards numbers steadily dropped.

In 1894 the Clifton Spa Pump Room, designed by Philip Munro, was opened next to the upper terminus as promised. It drew spa water from Hotwells via a 350ft borehole. Four years later, it was joined by the Clifton Grand Spa Hydro which had landscaped gardens extending down to the river.

On 29 September 1912 the railway was bought by the Bristol Tramways & Carriage Co Ltd, operator of the city's electric tramways, for £1500 after it had gone bankrupt.

In a bid to boost patronage of the funicular line, the company introduced a threepenny ticket for a round trip from the city centre to Hotwells by tram, up the cliff railway and back into Bristol by bus.

However, a major blow to the Clifton Rocks Railway came in 1922 when the Bristol Port & Pier Railway closed.

As with railways elsewhere, serious competition was presented by the new and more versatile bus services – which finally killed off the cliff railway. It last operated on 29 September 1934 and its demise was followed five years later by that of the city's tram system, which also could not compete with buses.

However, a new chapter in the story of the Clifton Rocks Railway began in 1940, when, along with the former Pump Room, by then converted to a cinema, was taken over by Imperial Airways (later to become British Overseas Airways) who built an office suite and used part of the upper section of the tunnel for storage and repair of barrage balloons.



An early 20th-century view of the top station in Sion Hill. PETER DAVEY COLLECTION

The Ministry of Works built three air raid shelters in the middle, and the BBC at the bottom housed nothing less than its wartime emergency communication headquarters outside London. The former Pump Room, which had also served as a cinema in the 1920s and as a ball room, became the administrative headquarters for Imperial Airways.

The cliff railway tunnel was leased for 21 years at a peppercorn rent of one shilling per annum and waterproofed, had electric lighting installed and was divided into seven chambers which included a studio, control room and transmitters. The cars were removed in 1941 as part of the conversion.

Thankfully, it never did have to replace the BBC headquarters at Broadcasting House in London as a last-ditch bolthole following a Nazi invasion, but it did become a key part of the national transmitting network, relaying broadcasts from the capital to West of England transmitters.

Control of the tunnel came under the Air Raid Precaution Committee, and it became public shelter No 1898. Hundreds of people who had to have passes, would crowd into it when sirens sounded: bottles, cups, toys, shoes and other items from the final air raid lay where they had been discarded for over a half century.

The BBC was set to abandon the tunnel after the war ended, but ended up retaining its transmitter as a local booster station until 24 March 1960. Since then, the tunnel has seen use only for the passage of telephone cables.

Like the Pump Room, last used as a ballroom in the 1970s and since as a store, the much-altered and derelict tunnel is now owned by the Avon Gorge Hotel. The bottom station, however, is owned by Bristol City Council.

Bristol has many great engineering masterpieces – Brunel's SS Great Britain, his original Temple Meads railway station, the Floating Harbour, the bridge – but one of the greatest is largely forgotten, out of sight and not open to the public, apart from guided tours of the top station on open days and pre-organised tours of the whole Railway run by the Friends of the Clifton Rocks Railway group (all volunteers) which is a charitable trust.

Members of the group, with the kind permission of the hotel, have done a sterling job in preserving as much of the tunnel artefacts as possible since 2005 on a severely limited budget raised purely by donations from the enthusiastic public.

However, a dream goal is the restoration of the rocks railway, estimated cost up to £15-million, and feasibility studies are being planned, once the finance for them is raised.

The wartime story gives an extra dimension, and the most feasible future could well be a static museum telling the whole history of the railway and using the shelters to show films. A railway may run part of the way since access to the bottom is limited due to the busy Hotwells Road (the A4), narrow pavement and no room to stop, let alone park.

Just running a railway might never be justified in commercial terms, or by historians, and in terms of public transport today the funicular line would be little more than a white elephant, but if heritage may be deemed to have a monetary value, the Clifton Rocks Railway is priceless – and if restored would once again form a perfect counterpart to Brunel's great bridge. We live in hope that maybe one day… ■

• Thanks to the group, especially Peter Davey and Maggie Shapland, for their help in compiling this article. If you would like to know more about the Friends of the Clifton Rocks Railway Group, contact secretary Ed Scammell at 54 Park Street, Totterdown, Bristol BS4 3BJ, or look at http://www.cliftonrocksrailway.org.uk



Clifton Suspension Bridge, viewed from the southern bank. DESTINATION BRISTOL



The white metal medallion issued to passengers on the line's first day of operation. PETER DAVEY COLLECTION



Friends of the Clifton Rocks Railway Group chairman Peter Davey shows a scale model of part of the line to visitors to the top station during a hugely successful open day in September 2009. ROBIN JONES



The original Lewin engine *Ant*, about to return to the mine workings with empty ore wagons, in a view taken before World War One. GLMR

Ant and Bee

The names might nowadays conjure images of Saturday night TV presenters, but they are two of the most unusual full-size steam locomotives currently operational in the British Isles, or anywhere else for that matter.

One of the trademark images of the Isle of Man is the great wheel at Laxey, the *Lady Isabella*, built in 1854 to pump water from the Great Laxey Mine.

With a diameter of *72 ft 6 in*, this striking masterpiece of Victorian engineering still turns today and is the largest working waterwheel in the world.

The Great Laxey Mine was one of the richest and successful lead and zinc mines in Britain. It opened in 1780 and in 1875, the year of its greatest output, more than 11,000 tons of zinc was extracted – accounting for half of the total British output of zinc. Mine shafts had been sunk to depths of over 2000 feet deep and nearly 1000 men worked there, but as with underground workings elsewhere, water was the constant problem. Hence the need for the great pumping wheel.

Like most other mines of the day, Great Laxey was also served by its own railway. The main level of the mine was known as the Adit Level and was nearly one-and-a-half miles long. It entered the hillside beneath the wheel and linked with each of the mine shafts deep underground.

A narrow-gauge tramway ran along the entire length of the Adit Level and was used to carry the extracted ore out of the mine to the 'washing floors' where the ore was prepared for sale.

Ponies were originally used to haul the tramway wagons, but in 1877 they were replaced by two tiny 19in gauge steam locomotives built by Stephen Lewin & Company of Poole in Dorset. Lewin was far better known for building steamboats; his firm turned out only a few locomotives.

They were 4ft 9in tall, 3ft wide and could pull up to seven of the mine's 200 wagons each.

Named *Ant* and *Bee*, the diminutive Laxey pair remained in use until the mine closed in 1929 and were broken up for scrap a few years later.

Two other locomotives built by Lewin were an 0-4-0 saddle tank for Seaham Harbour in County Durham and an 0-4-0 steam tram for the Guernsey Railway. Beamish, the North of England Open Air Museum in County Durham, has a Lewin 0-4-0 saddle tank in its collection, which may be the one sent to Seaham.

The Isle of Man once boasted an extensive network of public passenger-carrying railways. Of the 3ft gauge steam network, sadly only the Douglas to Port Erin section survives, while the Manx Electric Railway from Douglas to Ramsey via Laxey and the similar Snaefell Mountain Railway survive. There is also the Douglas Horse Tramway, which runs from the steam railway station along the island capital's promenade.

The 2ft gauge Groudle Glen Railway, a pleasure line which opened in 1896 and closed in 1962, was successfully rebuilt by a revivalist group formed in 1982.

Over the years, there have been many calls for the Douglas to Port Erin line of the old steam network to be rebuilt. However, a surprising choice for another revivalist group was none other than the Great Laxey Mine Railway, which had never carried passengers.

In 1999, the Laxey and Lonan Heritage Trust began the restoration of the surface section of the former tramway, with the aim of having it running again by 2004 to mark the 150th anniversary of Lady Isabella, which had been named after the island governor's wife.

The brainchild of the trust's Richard Booth and Captain Stephen Carter, funding for the revival came from many sources, the largest share from the estate of island resident Lt Col Randolph Glen.

One stumbling block to any previous revival of the tramway was the fact that the line runs beneath the main Laxey to Ramsey road and the Manx Electric Railway through what is at 100ft the longest railway tunnel on the island. Up to 1999, it housed a generator for the Manx Electric Railway, but when that was relocated that year, it paved the way for the mineral line to be rebuilt. ➤

Replica Lewin engine *Bee* being prepared for its next journey. GLMR

It might have been content to build a basic horse-drawn line, or relay it to the commonplace 2ft gauge, rather than the unusual 19in of the original, which had been dictated by the cramped loading gauge along the route.

None of these options was considered acceptable, as the trust decided that nothing less than a re-creation of the original line would suffice.

A fully-working replica of the original *Ant* was ordered from Great Northern Steam Ltd of Darlington, a firm which had established a reputation in building model steam engines. They were each built at a cost of just £30,000 – a bargain when compared to the £3-million it has cost to build the 50th Peppercorn A1 Pacific, No 60163 *Tornado*.

No original drawings for the pair survived, and because Lewin had manufactured so few railway locomotives, very little was known about them.

So a new set had to be compiled from drawings for replacement boilers, safety valves and regulators supplied by WG Bagnall & Co Ltd in 1905, some dimensions given in a 1902 edition of *The Locomotive Magazine* and contemporary photographs.

However, during construction of Ant, a decision was taken to build a replica of the second one, *Bee*.

Two tiny carriages were built by modern-day rolling stock manufacturer and restorer Alan Keef Ltd of Ross-on-Wye, the same that built the replica Listowel & Ballybunion locomotive; so that passengers can now ride along the line where loaded wagons of ore were once hauled from the mine.

The restored Great Laxey Mine Railway was officially opened on 25 September 2004. In 2009, a refurbished Clayton battery locomotive was obtained from Alan Keef, and in keeping with the insect theme, was given the name *Wasp*. The railway also has six replica ore wagons which were made by the Laxey blacksmith.

In 2006, the Laxey Mines Research Group, in conjunction with the heritage trust, completed the restoration of the former Snaefell Mine waterwheel at Valley Gardens, the terminus of the rebuilt railway. This waterwheel has a diameter of 50ft 6ins and is a fascinating feature of the terminus.

From Valley Gardens, the railway runs for a quarter of a mile up the valley to the Adit Level entrance where there is a picnic site, footpath and information boards explaining the mining features. The *Lady Isabella* wheel is only a short five-minute walk away.

Apart from the appearance of the locomotives, the railway is unusual in running beneath another 'heritage' line in the form of the Manx Electric Railway, and having replicas of its entire original fleet. Trains run every Saturday and Bank Holiday from Easter to the end of September, from 11am to 4.30pm. In addition, several special event days are operated, including popular Halloween trains where the tunnel is transformed into a ghost tunnel. ■



Ant and *Bee* stand on Great Laxey Mine station at Valley Gardens with the restored Snaefell Mine Waterwheel in the background. GLMR



Replica Lewin engine *Bee*, with *Ant* behind, and three replica ore wagons. Ant and Bee had no cabs, and because of the low clearances in the mine tunnels, drivers had to remain seated. GLMR

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Who needs wheels?



Britain's only hovertrain, the RTV31, is preserved at Railworld. ROBIN JONES

As post-war austerity was replaced by the years when we had never had it so good, rock 'n' roll became the voice of a new generation, paving the way for the sleek, streamlined swinging 60s when steam age evolved into the space age. However, there were some who thought that diesel and electric traction did not go anywhere near far enough in the brave new technological age that beckoned.

The hovercraft was the way ahead. It was one of those great pre-computer age inventions that would revolutionise sea transport. And it was British too.

On 11 June 1959, aero and marine engineering company and flying boat builder Saunders-Roe Limited, based at Columbine Works in East Cowes on the Isle of Wight, demonstrated the Saunders-Roe Nautical 1 (SR-N1), the first hovercraft built to inventor Christopher Cockerell's design, which a fortnight later, crossed the English Channel from Calais to Dover, spawning a series of air-cushioned successors.

Some designers asked the inevitable question – could the same principle be used for land transport… such as railways?

Several attempts were made to adopt air cushion technology for use in fixed track systems, taking advantage of lower frictional forces to produce high speeds. Leading the field was the Aérotrain, an experimental high-speed hovertrain built and operated in France between 1965 and 1977, when it was scrapped due to lack of funding and the adoption of TGV by the French government as its high-speed solution.

Britain wanted a slice of the action too. A short test track for a tracked hovercraft rail system was built by Tracked Hovercraft Ltd at Earith near Cambridge, sandwiched between two of the fenland's biggest drains, the Old Bedford River and the smaller Counter Drain.

The hovertrain concept was very much the brainchild of Professor Eric Laithwaite (14 June 1921-27 November 1997) of Imperial College, London, an English engineer, who developed an interest in linear induction motors. In the late 40s, he produced the first full-size working model of such a motor and continued to develop the concept.

One vehicle, RTV31, which used linear magnetic motors for forward motion, and a cushion of air, powered from giant fans to lift itself off the track, was built for the tests. From a standing start, it reached 104mph over one mile on 7 February 1973 – only for the project funding to be cancelled a week later by Aerospace Minister, Michael Heseltine.

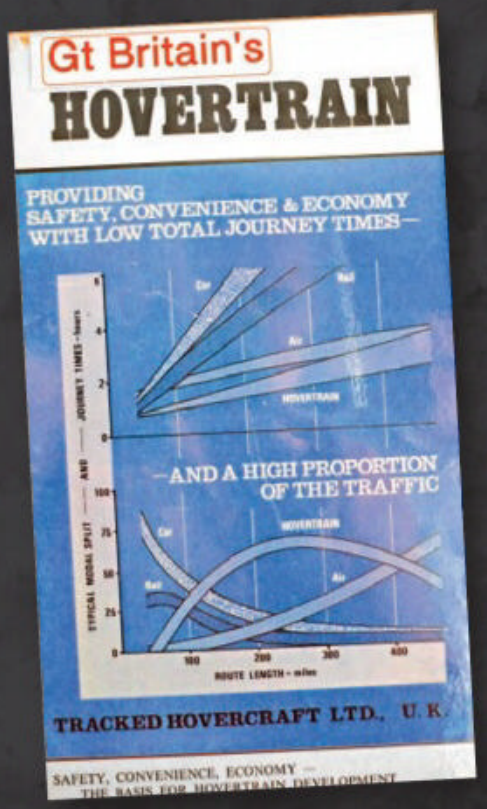
That decision provoked a political storm when MP Airey Neave and others accused him of misleading the House of Commons by stating that the Government was still considering financial support for the hovertrain project, despite the fact that the cabinet had already decided otherwise. The vehicle was considered to be too expensive for commercial use.

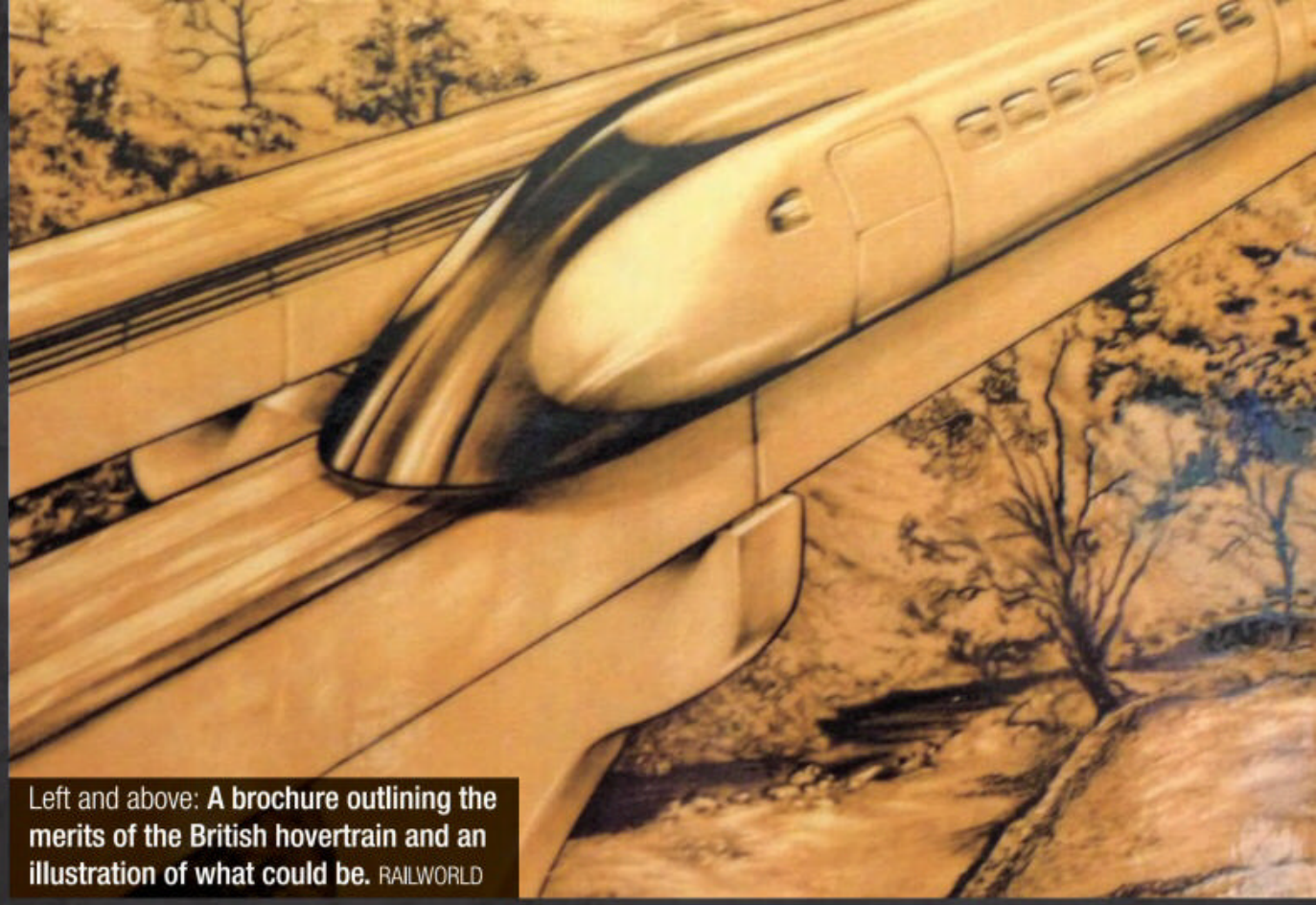
The engineering firm Alfred McAlpine took over parts of the project, which was finally abandoned in the mid-1980s.

Another form of wheel-less train, the Maglev train uses powerful electro-magnets to lift itself off its track, whereas RTV31 used the cushion of air.



A model of the proposed British hovertrain at Railworld. ROBIN JONES





Left and above: **A brochure outlining the merits of the British hovertrain and an illustration of what could be.** RAILWORLD



Above: **From the early days of hovercraft, the use of the technology for tracked trains was considered. In the UK, initial experimentation was undertaken by Hovercraft Development Ltd at the firm's Hythe base and a model was demonstrated at Hovershow '66. It is now in the Railworld museum at Peterborough.** ROBIN JONES

Right: **News cutting of the cancellation of the hovertrain project in 1973.** RAILWORLD



Cambridge NIGHT FINAL
Evening News
WEDNESDAY, FEBRUARY 14, 1973 No. 25,938 Price 3p

Rumpus over Minister's disclosure

HOVERTRAIN PROJECT TO BE SCRAPPED

By our Lobby correspondent, Peter Carver

The Government have abandoned the hovertrain project. They decided two weeks ago not to plough more money into the project, but the decision was kept secret because the Aerospace Minister, Mr. Michael Heseltine, hopes to sell off parts of the project to two con- tractors.

Unlike RTV31, two Maglev vehicles entered service in Britain, on an elevated line linking the then-new Birmingham International Airport terminal to Birmingham International railway station.

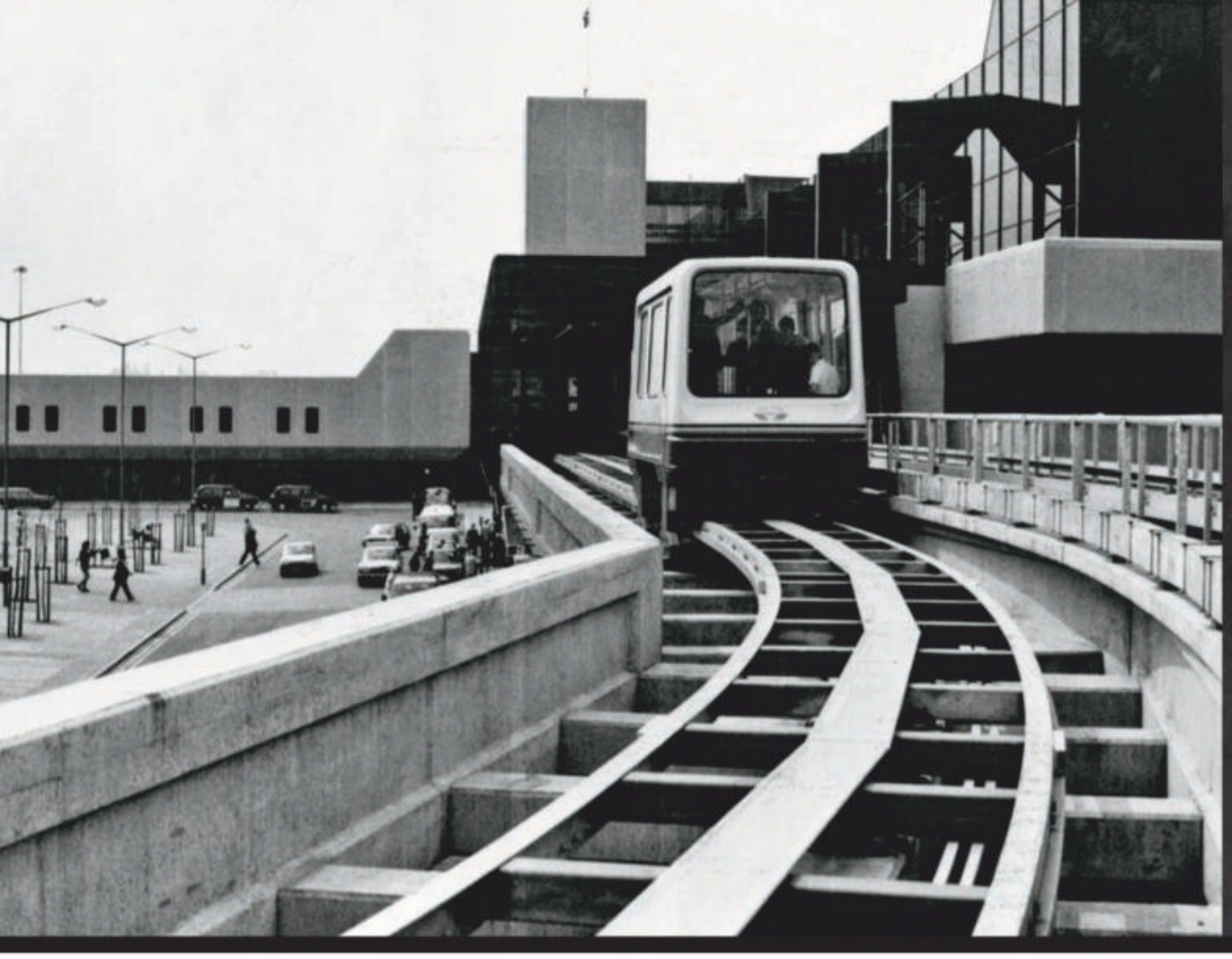
Based on experimental work commissioned by the Government at the British Rail Research Division laboratory in Derby, the length of the track was 1969ft and the driverless cars 'flew' at a height of 15mm.

The first trains ran in 1984, and each of the two cars carried up to 40 passengers with their luggage.

Birmingham's Maglev was taken out of service only due to the inability to obtain spare parts, which led to numerous breakdowns. However, it certainly made a few quid for this writer: as a local journalist at the time, I often heard via the local fire brigade that the Maglev train had broken down in midstream, leaving passengers marooned aboard, and collected tip-off fees regularly from local radio and TV stations. Perhaps this helped to pay for my wedding reception, held at a luxurious lounge in the airport terminal, with many of our guests riding back and forth on Maglev in the evening to experience the novelty. ➤



A section of the hovertrain test track at Earith in Cambridgeshire. RAILWORLD





Above: **Never to rise again: Maglev cars preserved in the National Railway Museum at York and at Railworld.** ROBIN JONES

Left: **The Maglev system in operation at Birmingham International Airport.** ROBIN JONES COLLECTION

It was replaced in 2003 by the AirRail Link people-mover cable-hauled system along the same guideway.

RTV31 and Maglev had been competitors for the same funding, but ended up in the same place. RTV31 today sits on a section of the concrete test track at the entrance to Railworld, the railway museum next to the Nene Valley Railway in Peterborough. Inside, sitting in a bed of flowers like some futuristic greenhouse, sits one of the Maglev vehicles, the other residing inside the National Railway Museum at York. Needless to say, they hover no more.

The reluctance of the UK to warm to the concept does not mean that Professor Laithwaite is a failed Trevithick or Stephenson. Far from it, for it has gripped the imagination of countries elsewhere.

The USA and Germany have carried out extensive research and development of Maglev, as have Japan, China and Korea, and many countries round the world are now looking into the possibilities that magnetic levitation technology offers.

In Japan, the development of the JR-Maglev by Japan Railways Group began in 1969; and in 2003, it reached a speed of nearly 344mph in tests. The Central Japan Railway Company intends to start a commercial Maglev service between Tokyo and Nagoya in 2025.

The world's first commercial automated urban Maglev system, a 5½-mile line between Tobu and Kyuryo opened in Aichi in March 2005 and has a top speed of 62mph.

German firm Transrapid built the world's first operational high-speed conventional Maglev railway, the 18¾-mile Shanghai Maglev Train from downtown to Pudong International Airport, the first services running in 2002 and a speed of 311mph having been obtained.

Research of Maglev and improvements over the original design and concept are still continuing in earnest in the Far East and USA, with prototype systems being produced. Even Britain, which appeared to have cooled on hovertrains, has considered Maglev for a new high-speed route from London to Glasgow, only to be rejected in a Government White Paper in July 2007, in favour of more traditional trains on steel wheels.

There is one other proposed wheel-less vehicle that should be mentioned here, if only because of the fact a patent for it was filed on 11 December 1970 on behalf of none other than British Rail. It was a flying saucer, officially known simply as space vehicle, and designed by Charles Osmond Frederick.

What began as a proposal for a raiseable platform eventually became, by the time the patent application was filed, a large passenger craft for interplanetary travel, powered by nuclear fusion, using laser beams to produce pulses of nuclear energy in a generator in the centre of the craft. A ring of powerful electromagnets would accelerate subatomic particles emitted by the fusion reaction, providing lift and thrust.

Needless to say, we have not seen it considered for London to Glasgow services, and when the patent ran out in 1973, British Rail did not renew it.

When the patent was rediscovered in 2006, several nuclear scientists said not only would the flying saucer never have flown, but much of the technology in the design had not even been invented. See you on Mars? I don't think so. ■



A Maglev train departing from Pudong International Airport in Shanghai. ALEX NEEDHAM



A Siemens brochure about the Shanghai airport Maglev line. RAILWORLD

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British Steam Preserved This illustrated comprehensive listing of ex British Railways steam locomotives has been written and edited by Keith Langston. Britain now has a railway heritage collection like no other in the world, thanks to the vast army of dedicated volunteers. This publication looks at their unselfish dedication, which ensures that not only the hardware of the railways has been kept alive since 1968 but also preserved a unique way of life.

British Steam 1948 - 1968 charts the British Railways steam years and in doing so recognises that it wasn't just all about the big named locomotives, there were many steam types which now only exist as memories and fortunately as photographic images. Within these pages, memories can be refreshed, and those who are younger can glimpse something of our glorious steam heritage. (Only available direct).

British Steam – Past & Present The third in the popular British Steam series contains a fascinating mix of modern steam images and unique archive pictures. In addition, there are features by the accomplished steam photographer David Anderson which include never before published pictures from Beattock, Oxford and the ex GNR cross border route in Ireland, plus specially commissioned photographic studies from the preservation era.

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The instant heritage railway

For more than a quarter of a century, there have been repeated calls to rebuild the Barnstaple to Bideford line in North Devon, yet BBC TV presenter James May managed it in a week.



TV presenter James May at the new Barnstaple station on 24 August.
APEX NEWS AND PICTURES

Following the closure of the London & South Western railway's route from Barnstaple to Ilfracombe on 5 October 1970, a bid was made to revive it as a heritage line. Many local people invested in it, but it collapsed in the mid-70s, leaving much bad feeling towards railway preservation in North Devon, and the line to be lifted by British Rail.

In 1982, the final trains ran over another local line, the Barnstaple to Bideford, Torrington, Marland and Meeth line, which had remained open for freight in the form of ball clay traffic since the 'Beeching Axe' fell on passenger services in 1965.

Enthusiasts again sprang into action, realising the enormous potential of a heritage line running alongside the Taw estuary and reconnecting Bideford residents to the national network once again.

Devon County Council had other ideas. As the revivalists fought a losing battle in the face of hostility from those who had their fingers burned in the earlier scheme, the local authority made plans to turn the trackbed into a long-distance footpath and cycleway, initially under the banner of the Taw/Torridge Country Park and then, as now, the Tarka Trail, after Henry Williamson's fictional otter who roamed these parts. The trackbed was bought from British Rail in the late 80s.

After having failed to save the lucrative Barnstaple-Bideford section, the enthusiast group tried to buy part of the Bideford-Torrington section, but could not raise the funds in time, and so the track was lifted.

Eventually, they acquired the use of Bideford station, set up a static museum, laid some track, and briefly in the early 21st century, were able to offer some diesel shunter-hauled passenger rides over 400 yards of track.

The brief revival came to grief when it was discovered that part of the station platform had years before been sold to a developer who intended to build houses on it.

The focus of any revival then shifted to Torrington station, which had been converted into the Puffing Billy pub and restaurant. Owner Phil Simkin, who had inherited a length of track, added to it and began bringing in a few items of rolling stock, with the eventual aim of laying a heritage line alongside the Tarka Trail, which runs past his premises.

Those who yearned for greater local authority recognition of the benefits of a complete reinstatement, at least from Barnstaple to Bideford, could only dream of the day when the tide of opinion might change in their favour.

Until, that was, 24 August 2009.

Once again, a Bulleid West Country light Pacific chugged its way from Barnstaple to Bideford with a rake of three Pullman cars forming a modern-day 'Atlantic Coast Express' – cheered on by thousands of wellwishers.

The engine in question was No 34045 *Ottery St Mary*, taking its name from an East Devon town named after the River Otter, which in times past no doubt was inhabited by some of Tarka's distance cousins.

Yes, rails again were linking the two towns 10 miles apart.

The only difference was the gauge.

When the tracks were lifted in the mid-80s, they were standard gauge, 4ft 8½in apart.

Now they had shrunk considerably in width, to 16.5mm – in other words OO gauge, where 4mm on the model equals one foot in real life.

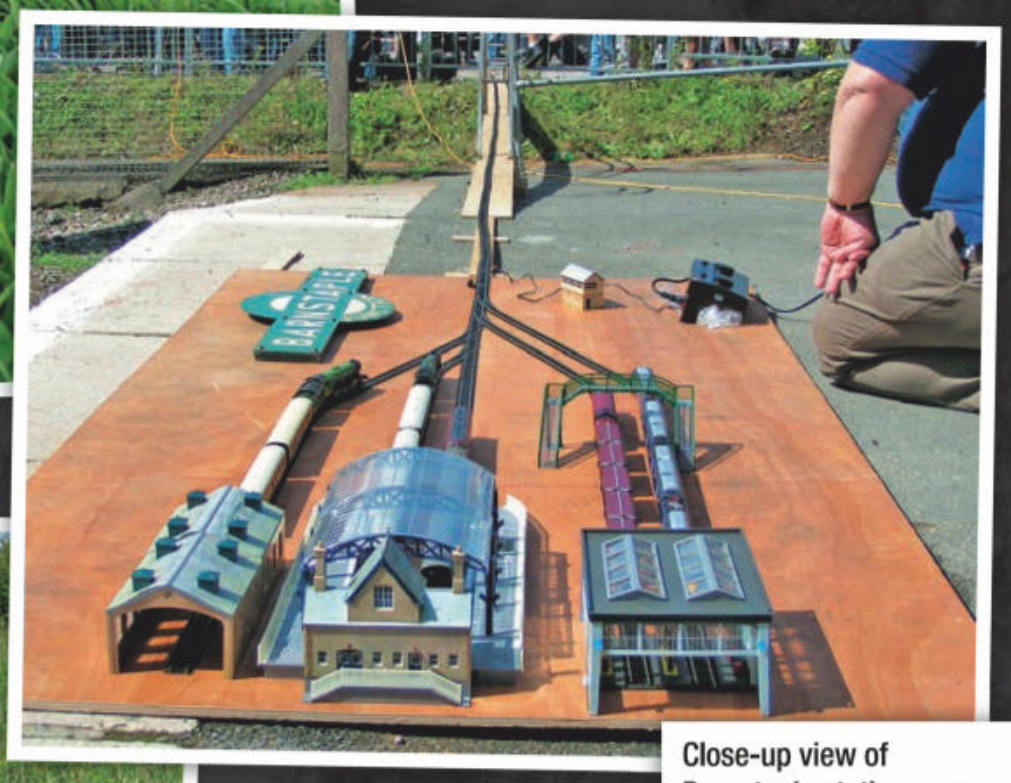
It was nothing less than an attempt to build the world's longest-ever model railway, to feature in television presenter James May's forthcoming BBC2 *Toy Stories* series.

Modelmaker Hornby provided 10 miles of OO gauge track to lay on the Tarka Trail, and the trains to go with it.

An army of 400 helpers, including around 60 different community groups, laid the track and installed 12-volt batteries at intervals to maintain the current. Where the track passed houses, mains electricity was used. Different teams operated isolated sections in a bid to ensure that twigs, stones or other objects did not mysteriously appear on the line.



The Hitachi Javelin train whizzes to success. HORNBY



Close-up view of Barnstaple station. HORNBY



The loneliest model railway in the world running along an empty section of the Tarka trail. HORNBY



The track was looped at several intervals to ensure that the world record would be attained if anything went wrong with far-flung parts of the line, fears that were to be justified. HORNBY

In scale terms, the new line represented a journey of around 760 miles, enough to run from Penzance to the far north of Scotland, rather than just along the Taw estuary.

At around £2 per yard, it was estimated that the track would have cost 35,000 to buy from your local model dealer.

James May was by then no stranger to steam railways. On 25 April 2009, he took part in motoring programme *Top Gear's* bid to race new-build A1 Pacific No 60163 *Tornado* from King's Cross to Edinburgh, with chief presenter Jeremy Clarkson acting as fireman, against a Jaguar XK120 driven by May and a Vincent Black Shadow motorbike ridden by fellow presenter Richard Hammond.

Among the other feats in the *Toy Stories* series also filmed in August 2009 were a Scalextric re-creation of the Brooklands motor racing circuit on the original site near Weybridge, Surrey, and the building of a full-size house built out of Lego bricks in the middle of the Denbies Wine Estate in Dorking, Surrey.

He said that he picked the Tarka Trail for the world record attempt not only because people wanted to see the old line rebuilt, but also because of the beautiful scenery.

Five traction units were supplied by Hornby for the attempt to run the full length of the new line.

The first trains set off from a specially created new Barnstaple station in the early afternoon, and some managed to reach a speed of more than 1mph. Sadly, none reached Bideford, due to what Hornby marketing manager Simon Kohler described as 'silliness'. At one point along the line, coins had been laid to short-circuit the track. Elsewhere, lengths of track were stolen as dusk fell.

When the last locomotive still running finally rolled into Instow – where the original full-size signalbox has been preserved – at 12.30am the next day, everyone decided to call a halt.

"Even though the last locomotive gave up the ghost at Instow, we did link the track," said Simon Kohler.

"We had spoilsports who stole parts of the track and at one point someone used two pence coins to create problems and blow the train's battery, but we refused to let it ruin things. It's sad, but it was a brave effort. ➤

As the line was first time round: Ivatt 2-6-2T No 41223 departs from Barnstaple with the 4.28pm service to Torrington on 26 August 1963. PETER W GRAY

"I think we are all disappointed because an awful lot of effort went into it and the strength and tenacity of the helpers was simply extraordinary."

Rod Garner, secretary of the Tarka Valley Railway Group, was more vociferous in his condemnation: "Everyone was doing it for free, and to have some idiots come along and ruin it really annoys everyone involved. It marred what was otherwise a successful day."

James May said that despite the vandalism, the day had been a success: "I was amazed and touched by the amount of people who turned up on the day just to see my toy train go past."

The contest was not 'won' by the Bulleid Pacific, typical of traction over the London & South Western railway's 'Withered Arm', of which the route is part. Instead, honours went to Hornby's model of the new Hitachi Class 395 electric multiple units, the train that reached Instow.

Having achieved May's goal of creating the world's longest model railway, the BBC said there would be no repeat attempt. However, the feat clearly switched many people on to the potential that a revived railway could offer the region.

Within three weeks of the stunt, local councillor Miranda Cox publicly called for the old (full size) line to be restored. "The engineering is always there to build new roads, so why not a railway? It would be great for tourism, ease congestion and reduce emissions," she said.

Her call for Torridge District Council's support was passed on for consideration by its policy performance and resources and community development committees.

The possibility of reopening the line to Bideford had been independently considered by the Association of Train Operating Companies under its Connecting Communities initiative earlier in the year. It costed reinstatement from Barnstaple to Bideford at £80-million and placed it 30th on a list of 35 potential schemes nationwide ranked on value for money. ■



Interchange: the new Bideford branch leaves Network Rail's Barnstaple station platform, terminus of the Tarka Line from Exeter. HORNBY

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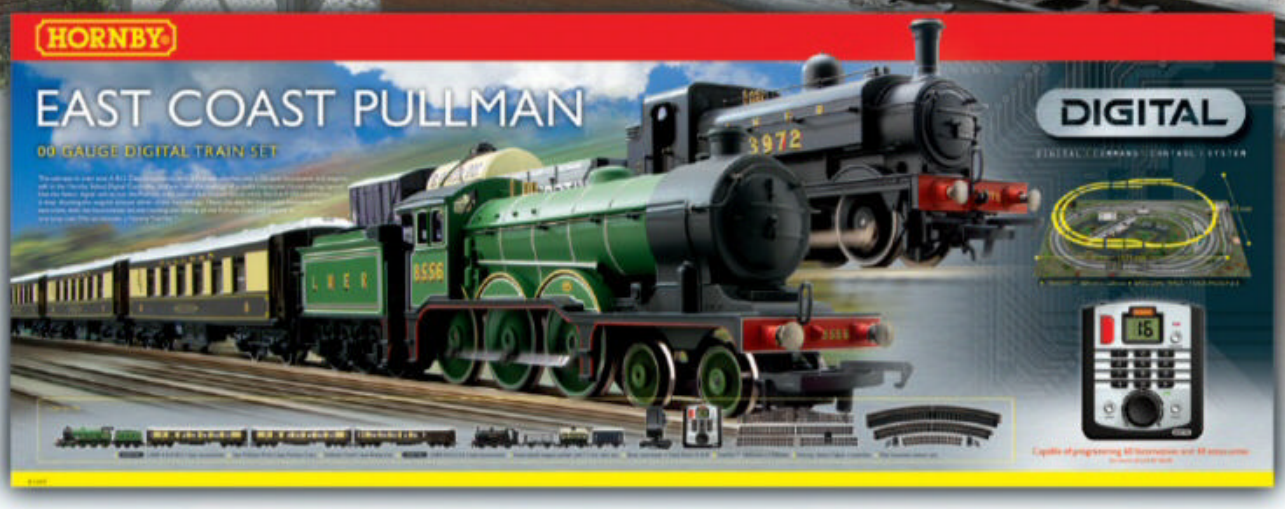

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