RAIL Special

Creating a Better Railway

TOM MCATEE.

On October 23, East Midlands Railway 158813 passes Glazebrook in the evening sunshine, while working the 1651 Liverpool Lime Street-Nottingham. HUW ROWLANDS.

Welcome

Following *RAIL*'s successful *Williams-Shapps Plan for Rail* webinar series in 2021, and then the *Reimagining & Rebooting our Railway* webinar programme earlier this year, *RAIL* launched a new three-part series on October 25.

With a focus on Great British Railways (GBR) and its mission to create a simpler, better railway for everyone, the webinars have been joined by senior members of the GBR Transition Team (GBRTT), representatives from our supporting organisations, and other industry leaders.

The creation of GBR is, of course, a key plank of the Government's rail reform package, representing the largest structural change to the industry since privatisation.

Ministers have subsequently confirmed a delay to passing the legislation needed to provide the new public body with any legal basis. But this series has shown how the important work of the GBRTT to enact reforms and implement the recommendations of the *Williams-Shapps Plan for Rail* White Paper must - and will - continue.

Coverage of the first webinar session (titled *The passenger experience, fares and ticketing*) is available in *RAIL* 969, while you can read about the second (*Placemaking: rail's role as a social and economic driver*) on page 19 of this issue. The third and final webinar (*The future role of the private sector*) is scheduled for December 13 and will be covered in *RAIL* 973. If you would like to join us and watch it live, see page 19 for registration details.

In this 22-page special, we provide further details on many of the main areas which have been discussed and explored, including fares and ticketing.

To help plot a route map of how Britain's outdated fares and ticketing systems could be overhauled to make them simpler, easier to buy, and better trusted by the public, Anthony Lambert outlines future options on pages 40-43.

Meanwhile, Independent Rail Retailers (pages 38-39) and Trainline (pages 46-47) demonstrate the role the private sector has already played in pioneering digital ticketing, and how it is poised to help GBRTT fulfil its ambition to expand Pay As You Go and contactless ticketing to other parts of the network outside London and south-east England.

Elsewhere, the Rail Safety and Standards Board reflects on two decades of industry-leading collaboration, while outlining how it will continue to support the rail sector through its latest evolution (pages 36-37). And global consultancy Atkins explains how it plans to use its expertise to help the industry maximise the benefits offered by reform (pages 44-45).

Ben Jones analyses a report from Rail Partners on the wisdom of allowing private operators to continue delivering passenger services under GBR (pages 48-49) while Peter Plisner asks whether an innovative new approach to land value capture could help capital projects to meet funding requirements at a time of considerable pressure on public finances (pages 50-53). ■

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RAIL SAFETY AND STANDARDS BOARD

Continuity in change

For nearly two decades, the Rail Safety and Standards Board has worked together with industry partners towards meeting shared safety, efficiency and sustainability goals. Chairman MIKE BROWN CBE MVO and CEO MARK PHILLIPS tell *RAIL* how it will continue to lead on that vital collaborative work as the rail sector undergoes its latest evolution

The Rail Safety and Standards Board (also known as RSSB) has a new look. Formed in the wake of the fatal rail crash at Ladbroke Grove in October 1999, the organisation has reverted to using its full name again as it approaches the 20th anniversary of its formal inception in April 2003.

As part of this recent rebrand, it also has a new logo, representing an aerial perspective of the railway. It is designed to symbolise the collaboration and cooperation the Rail Safety and Standards Board brings to the fore, as the industry prepares for its largest structural change since privatisation over 25 years ago.

But this should not be mistaken as any departure from its founding mission: to support its members achieve continuous improvement in health and safety performance. It is instead intended to more clearly communicate the full breadth of products and services that are provided not just by developing standards (via its responsibility to update the Rule Book), but also through its wide-ranging research and analytical activities.

"I've worked in railways and transport for long enough in my career to know that we are brilliant at creating mystery, codes and jargon," says Chairman (and former London Transport Commissioner) Mike Brown CBE MVO.

"What always got left out when we were known as RSSB was the 'and'. That wasn't always very helpful because the organisation is not just about safety - it's actually much broader than that.

"What the new look is really about is cracking a code and telling people what we're really about; being more explicit and more upfront about what we do."

CEO Mark Phillips adds: "During the preparation of the latest Government White Paper [*Williams-Shapps Plan for Rail*], there was widespread misunderstanding that we only produce safety standards. We are safety *and* standards. The majority of standards we produce are actually about engineering and the interoperability of rail systems like train control and other operational processes.

"If you're building small components or entire trains, the standards ensure that your products will fit the British market. But our safety work is very much around the risks that the industry currently faces. We gather data and analyse it as part of our research programmes to then provide the right guidance, products and services to enable the industry to best respond in accordance with those risks.

"That is what we have tried to emphasise with the name while the logo is a device to give a visual impression of the role we carry out as an independent not-for-profit body that facilitates cross-industry collaboration."

According to both Brown and Phillips, the timing of the move was also necessitated by the impending structural changes that are to be made as part of the Government's rail reform agenda, including the creation of a new Great British Railways public body.

While Britain's railway remains one of the safest in the world, memories of the spate of tragic accidents that occurred during the early days of privatisation serve as a reminder of the need for constant vigilance, especially during a time of great flux and uncertainty.

"We've just marked another anniversary of Ladbroke Grove in October," explains Phillips. "Since that time, the industry and our approach to safety has changed significantly. But there are sometimes occasions when people believe they have changed their approach when in fact the lessons of history still need to be heeded.

"If you cast your mind back even further to the Clapham Junction rail crash in 1988, it occurred as the result of a 'wrongside' signal failure caused by a wiring fault. Elements of that accident then reoccurred during an engineering blockade at Waterloo in August 2017 [when a commuter train derailed and collided with a barrier train because of incorrectly positioned points]. The lessons of fatigue management, supervision and inspection were obviously not as embedded as we thought, so there is always merit in making sure you have a good corporate record of why things happen. That is one of the things we particularly stress in the work we do."

He adds: "Looking to the future, there will be lots more challenges and we at the Rail Safety and Standards Board want to make sure we are providing the right products and services to the industry, so it can meet those challenges head on."

The impending reform is also a reminder of the balance the Rail Safety and Standards Board must strike between meeting the short-term needs of the industry while also preparing the sector to meet the longer-term challenges and risks that may not fully emerge for another 20-30 years.

The organisation, which employs more than 350 staff covering a range of technical disciplines, is heavily contributing to a wide range of current initiatives, for example air quality measurement and adhesion research, while also horizon scanning and investigating new and innovative technologies that are still under development.

"It's about how we ensure that the work we do meets the industry requirements of the future and the here and now and this contrast between short-term needs and long-term planning," Phillips explains.

"For example, a couple of years ago, we stepped in to help Great Western Railway, LNER and Hitachi with the cracking issue that arose on [Class 80x] bodyshells and worked with the Office of Rail and Road to establish an audit process so that the vehicles could be returned to traffic as soon as it was safe to do so.

"You can then compare that with developing the Rail Technical Strategy, particularly with our members including Network Rail and rolling stock manufacturers, to have a route map for the technological change we expect to happen over the next 20 years. We must start planning the standards and guidance that will need to be put in place to make that all happen.

"For example, that work includes elements like the East Coast Digital Programme and in-cab signalling. We are particularly looking at the human-factor implications on drivers as they move between the 'islands' of new

"We need to look at how we use data from rolling stock and other sources to make the service better, gain a better understanding of our customers and therefore tailor the services we provide to more closely meet their needs."

Mark Phillips, *CEO, Rail Safety and Standards Board*

Freightliner 66419 passes Watford Junction on September 29 with a Felixstowe-bound intermodal train. Fresh research from the Rail Safety and Standards Board will enable its freight-operating members to haul more goods wagons per train, greatly improving the financial efficiency and environmental benefits of freight flows. JACK BOSKETT.

digital signalling areas and then back to traditional signalling areas over the next few years."

The Rail Safety and Standards Board's agility to respond to emerging challenges and opportunities is also demonstrated by other live workstreams. This includes its support of the Government's 'Reversing Beeching' policy to reopen railways and restore services to areas that lost their rail connections in the last 60 years.

Much of this work focuses on achieving increased value for money and "producing solutions that lower cost, around level crossings for example, so that lines can reopen at an affordable amount of money".

The organisation was also in the vanguard of helping the industry meet the immediate challenges posed by COVID-19, including conducting its own risk analysis around transmission risk on trains and supporting cross-industry groups to establish principles around which work on the network could continue safely.

Meanwhile, an ongoing freight research project has recently enabled existing couplers, which connect freight wagons, to safely connect increased loads.

The evidence gathered by the Rail Safety and Standards Board means a 34.5-tonne coupler rating can increase 16% to 40 tonne and some 56-tonne-rated couplers by 13% to a new 63-tonne rating.

This research will have an immediate benefit for freight operators. It will affect more than 12,000 wagons in use across Great Britain, improving their environmental impact and financial efficiency.

For example, a 235-mile journey with 14 wagons can now be increased to 16 wagons, saving 1.4 tonnes of CO_2, 8kg NOX (nitrous oxides) and 171g PM2.5 (particulates). The projected financial savings are £245,000 per annum.

Looking to future research projects, Phillips identifies improvements in the way that data is shared as an emerging priority for the rail sector.

"Now that climate change is once again right at the top of the agenda, there are lots of areas of sustainability that don't always get thought of or talked about enough, like what does rail bring to our society?"

Mike Brown CBE MVO, ***Chairman, Rail Safety and Standards Board***

"We need to look at how we use data from rolling stock and other sources to make the service better, gain a better understanding of our customers and therefore tailor the services we provide to more closely meet their needs," he says.

Meanwhile, Brown points to the recent COP27 international climate change conference (held in Egypt from November 6-20) as an opportunity for rail to improve the way it communicates the social value it brings.

Co-funded by Network Rail, an online Rail Social Value Tool was launched earlier this year to help the industry measure the social value of its investment, infrastructure projects and day-to-day operations. The tool can quantify and provide a financial value for a wide range of benefits, including improving safety, changing air quality, creating jobs, increasing biodiversity and making rail travel more accessible and inclusive.

Brown concludes: "Now that climate change is once again right at the top of the agenda, there are lots of areas of sustainability that don't always get thought of or talked about enough, like what does rail bring to our society? If the Rail Safety and Standards Board can be a catalyst to some of those strategic discussions, we will be doing well to keep that light shining on the industry overall." ■

The science of simpli

Independent Rail Retailers Chairman ALISTAIR LEES outlines how 2023 can be the year that public perceptions of rail are transformed via a long-awaited overhaul of fares and ticketing

While rail reform has now taken a back seat in the Government's legislative programme, the message from the Independent Rail Retailers (IRR) is loud and clear.

"We must seize the day," says the trade body's chairman Alistair Lees. "The industry must get on and act because, as a customer, it is really frustrating that not a lot has happened. Rail still has lots of problems to solve with difficult-to-understand ticketing products, expensive fares and a lot of complexity. And those things simply cannot wait any longer."

> *"There is much more we could be doing in the here and now. We shouldn't let political upheaval or industrial relations issues destract us from that."*
> **Alistair Lees, *IRR Chairman***

The growing frustration from within industry at this perceived lack of progress is entirely understandable. More than two and a half years have elapsed since the start of the coronavirus pandemic, which accelerated fundamental shifts in the way we use public transport. Meanwhile, it's been over a year and a half since the publication of the *Williams-Shapps Plan for Rail*, which offered a blueprint for a greatly simplified 'whole system' industry structure.

Sat at the heart of this new structure is expected to be the new Great British Railways (GBR) public body. According to the Government's rail reform white paper, its accountabilities will include control of ticketing plus reform of the overcomplicated fares system, with an emphasis on standardisation, simplicity and the introduction of innovative new products.

Although GBR is unlikely to be provided with any legal basis until at least 2024, the GBR Transition Team has begun making initial moves in this area. These efforts include the introduction of a new flexi-season ticket that offers eight days of unlimited travel between two named stations in a 28-day period. A £360 million programme is also

The wider rollout of pay-as-you go technology, already operational throughout the capital at stations including London Liverpool Street, presents an opportunity for greater innovation and to restore public trust, argues Alistair Lees. JACK BOSKETT/RAIL.

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under way to expand contactless pay-as-you-go (PAYG) ticketing across the country outside London and southeast England.

But Lees says that GBRTT and industry stakeholders must go further and faster. The existing initiatives provide ample proof that reform can be achieved without waiting until 2024 for any new legislation.

"This is a good start and I welcome the arrival of GBR as a strategic mind to give the industry some of the direction that it has lacked for a few years," adds Lees. "But there is much more that we could be doing in the here and now, and we shouldn't let political upheaval and industrial relations issues destract us from setting ambitious goals.

"We currently have 2,800 ticket types, 900 unique ticket names and 650 restriction codes. Cutting these numbers in half in 2023 should be more than achievable."

Alistair Lees, *IRR Chairman*

"Rationalising the number of tickets would be a good start: we currently have 2,800 ticket types, 900 unique ticket names and 650 restriction codes. And that's before considering the 1200 route codes that establish whether a ticket can be used through a specific station or on board a particular train. Cutting these numbers in half in 2023 should be more than achievable.

"Anyone who tells you that this complexity dates back to BR days should be reminded that TOCs themselves are the real offenders: they've introduced over 300 new ticket types since the pandemic alone! Prior to that, the franchising model rewarded price competition and product differentiation which, far from promoting the simplicity and co-ordination of a national network, just created an unintelligible fares structure that has increasingly eroded public trust.

"While 'split-ticketing' has provided welcome savings for many customers, thanks to the ingenuity and technical expertise of independent retailers, the practice further erodes trust in the TOCs themselves. After all, split ticketing arises from years of differential increases in regulated and unregulated fares; so called ORCATS raiding (where fares and timetables are designed to 'play the system' used to allocate revenue); and undercutting competitors' prices. RDG's *Fares made simple* campaign back 2008 didn't really stand a chance.

"But with revenue risk now taken away from the TOCs, we have a real opportunity to put things right. An overarching fares, ticketing and retailing strategy is the key, delivered by GBRTT but informed by a wide range of retailers. This will enable us to create simple national, group and family offers that can be understood by customers and that are great value - we already have those on some TOCs, so why not everywhere, consistently? Off-peak restrictions and the many railcards and restrictions should be simplified too.

"Every customer should think rail fares are easy to understand and that travel by train is good value. They should know exactly where their ticket is valid and what compensation they are entitled to if the train is delayed.

"And what about regular travellers? TOCs expected people to pay upfront for up to a year but changing work patterns mean that model dead now. Rail needs to move with the times and create more flexible options that reward customers for frequent journeys, including partner offers or discounted travel. We should look to the growth of subscription-based models for inspiration, and build on the investment that independent retailers have made in barcode ticketing, most recently for season tickets, which were previously only available as a pre-paid paper ticket.

"Independent rail retailers already provide much of the technology that either directly or indirectly powers 50% of all UK ticket sales. It's vital that any strategy creates not just a level playing field but the right level of reward and stable policy to encourage investment from technology companies and retailers.

"By encouraging continued investment and engagement from the private sector, independent rail retailers can build on their track record of bringing new innovations to the wider market. This includes barcode ticketing, which is now taken for granted across the network, thanks to 70% of rollout costs being funded by independent retailers through a transaction levy.

"We're really proud to have spearheaded something that has has such a transformative impact on ticketing within just five or six years," says Lees.

"There's plenty of opportunity to repeat that success, which will go some way to filling the government's £2bn rail revenue shortfall."

In pursuing the 'holy grail' of simplification, Lees acknowledges the nervousness that exists within the Treasury of sanctioning a 'Big Bang approach' of radical reform on fares and ticketing.

Lees and IRR therefore advocate the use of small-scale pilot schemes to garner political support and confidence among government officials and ministers.

He concludes: "Somehow, we need to win over the Treasury and the Department for Transport as experts who know what we're doing. We can do this by demonstrating success stories and then saying 'this works, please allow us to do more of this'.

"In an ideal world, we would do the whole lot in one go, but we are a long way from having the political support to do that. We probably need to do it under the radar and by avoiding 'big bets' that would attract the Treasury's attention.

"Instead, we can experiment by choosing a particular area or route to demonstrate the positive impacts of reducing the [ticketing] offer to two or three options and seeing how that drives revenue. It will take time and might not be perfect, but we must start it now." ■

Independent Rail Retailers

assertis · atomised · ClickTravel · Commuter Club · evolvi Rail Systems · FastRailTicketing · MyTrainTicket · OnTrack · raileasy · SILVERRAIL · trainline · Trip.com

Rail fares fit for the 21st century

Fares and ticketing reforms are long overdue. What changes to each would drive revenue growth and reinforce the value of railways? asks ANTHONY LAMBERT

The need for fares and ticketing reform is almost universally agreed by everyone except the Government and the Treasury, it seems. Will the Rishi Sunak government throw up a politician with the vision and determination to cut the Gordian knot and bring about desperately needed radical change?

A window of opportunity for structural change during the pandemic was lost. We cannot lose another with the creation of Great British Railways (GBR) and the restoration of overall management of the railway - assuming that finally happens.

The Treasury must know that the method of calculating the annual fare increase based on the RPI (Retail Price Index) figure is fatally broken, now that inflation is in double digits. Moreover, the January fare increase is invariably accompanied by a media storm that damages the rail industry and encourages even more people to think trains are too expensive.

So, this is a moment when demands for root-and-branch reform of fares cannot be ignored.

Another factor impelling reform is the £360 million allocated in 2021 for long-overdue contactless pay-as-you-go ticketing to be rolled out across the commuter networks of the Midlands and the North over the next three years.

However, the Treasury sees reduced revenue as too great a risk of reform. Ian Legg, of the Legg Consultancy, acknowledges the challenge: "How do you move to an 'ideal state' from today? How do you keep £8bn-£10bn coming in when reforming fares and while waiting for demand elasticities to kick in? We don't know enough about the impact of significantly raising or lowering fares."

The answer, says Mark Smith (The Man in Seat 61), is "to reassure the risk-averse Treasury that prices within a new structure will not be difficult to adjust if calculations to achieve revenue neutrality are out by 2% or whatever. You're not stuck with the prices you implement on Day 1."

Smith adds: "The industry revenue supporting tool LENNON stands for Latest Earnings Networked Nationally OverNight, and the clue is in the name - you can implement an entirely new fares structure with new pricing designed to be a best-shot at being revenue-neutral.

"It will inevitably under-shoot or over-

Ticket barriers at London Euston. Some £360 million has been allocated towards the expansion of London-style PAYG ticketing to other urban areas. JACK BOSKETT/*RAIL*.

shoot. But you'd know within a few days which it was, and by what order of magnitude. The whole structure can then be adjusted up or down by a uniform percentage to restore revenue neutrality.

"After a few weeks, passengers will adjust to the new prices (though there would be winners and losers in pricing reforms), and a second adjustment may be necessary. In other words, the Treasury needn't worry - we can guarantee the whole thing will be revenue-neutral more or less by definition.

"Longer term, I'd expect the simplicity itself to drive a revenue increase through easier retailing and restored consumer confidence."

The end of franchising regulations and a move to National Rail Contracts (NRCs) eliminates another impediment - the need to unscramble agreements with train operating companies (TOCs). It also frees GBR to take a scythe to the plethora of tickets and devise a new structure.

Andy Wakeford, fares lead at the Rail Delivery Group, argues: "The current fare structure is inefficient in driving revenue maximisation and fails to meet the needs of today's passengers. Changing the BR-derived fare structure is not going to upset the ley lines of the universe."

Any discussion of this Pandora's box calls for clear definitions: fares, prices and tickets are sometimes used as interchangeable terms. A fare is the authority and conditions attached to travel on the railway; the price is the amount of money you pay for the fare; and the ticket is the evidence that you have paid a price for your fare.

A little history

Fares and the data sets governing them have always been complicated, from the opening of the Liverpool & Manchester Railway in 1830. Today's fares structure is largely inherited from British Rail and an analogue age. As Steer Davies Gleave pointed out as long ago as 2011: "The current set of fares has not been developed based on the passenger requirements of today, or even those of the recent past. They have been developed through a combination of historical, market and regulatory factors."

Regulation began in 1844, with the requirement to run what became known as 'Parliamentary Trains' at a penny a mile. Per mile pricing was introduced nationally in 1928, and ordinary return tickets were generally sold at double the price of a single.

In 1968, market forces rather than mileage became the prime determinant of ticket prices, to try to even out loadings. This was followed by the introduction of Railcards in the 1970s, to target savings more effectively to specific market types.

Market pricing to stimulate optional journeys created anomalies. There was no one-way Saver and many Saver returns were cheaper than an anytime or open single, so people were sold a return when they wanted a single. This could cause a ten-minute conversation to explain why.

To avoid this, in the early 1990s BR introduced a feature which meant that where a cheap return was offered, the system would generate an equivalent single that was just slightly less. The object was to discount the return, but not one-way trips.

Formal regulation was abolished with the formation of the British Railways Board in 1962, but was revived at privatisation, with a schedule in each franchise agreement capping the prices of key fares on each route.

In addition, operators were required to participate in the Ticketing & Settlement Agreement (TSA) of 1995, and this controlled the way fares were set, sold and honoured. It still does - the TSA has only grown with each new franchise agreement, and very little has been discarded.

A landmark in the move towards smart ticketing was the establishment of the Integrated Transport Smartcard Organisation (ITSO) in 1998, with support from the Department for Transport. It was created to "develop an open specification and standards so that smart ticketing could be used across different types of public transport and transport operators". Smart technology can significantly reduce transaction and administrative costs.

As originally envisaged within the TSA mechanism, TOCs would co-ordinate with each other on fares to ensure the maintenance of a rational national structure. However, the Competition Act of 1998 effectively outlawed this and resulted in ever-greater anomalies and conflicts in fares.

A Strategic Rail Authority review in 2003 simplified the regulatory structure to some degree, but it also enacted a change in policy whereby regulated fares moved from being adjusted on average by RPI -1% to RPI +1%.

The original regulation had been put place as a public sweetener for privatisation, but the Treasury had grown alarmed at the increasing public subsidy this required. The move to RPI+1 heralded a decade of above-inflation increases that have become increasingly toxic and inhibited open debate about fares reform.

The case for fares reform

The sources of frustration and confusion with fares are well-known: the sheer number of options; anomalies such as two singles being cheaper than a return or the saving that can be effected by split ticketing; regional discrepancies; varying peak hours; and conditions attached to tickets.

The degree of confusion and complexity is evident from the cases cited by Barry Doe in *RAIL*'s *The Fare Dealer*, where passengers have been wrongly denied access to a particular train owing to platform staff's ignorance of the regulations.

It was to address these shortcomings that the Rail Delivery Group (RDG) worked with Transport Focus to produce in 2021 *Easier fares for all: The Rail Delivery Group's proposal for a more transparent, simpler to use, modern system of tickets and fares*. After consulting more than 20,000 people and 60 groups representing nearly 300,000 organisations; 84% said the current system was not fit for purpose.

Word has it that the DfT and Treasury are considering gradualist tinkering. But the RDG and others have advocated a more radical approach at this watershed moment in Britain's railways. ➜

"The current fare structure is inefficient in driving revenue maximisation and fails to meet the needs of today's passengers. Changing the BR-derived fare structure is not going to upset the ley lines of the universe."

Andy Wakeford, ***Fares lead at the Rail Delivery Group***

➜ "We need a new fares structure to make it understandable, and a new internally consistent pricing structure so that split ticketing opportunities are no longer endemic," says Mark Smith.

"This should eliminate anomalies where A-B+B-C is cheaper than A-C for a given ticket type, although it will be hard to eliminate split ticketing entirely. You will still have situations where instead of a peak fare for the whole journey, you buy a peak ticket to the point when the train becomes off-peak and an off-peak ticket beyond.

"But by starting again with logical and consistent pricing, you can reduce the prevalence of split ticketing which undermines consumer trust."

The RDG has set out five principles for ticket reform:

■ **Value for money** - and transparency over the fare and what it has bought.

■ **Fair pricing** - and certainty that they are not being overcharged.

■ **Simplicity** - making buying simple and easy to find the right fare while retaining choice.

■ **Flexibility** - the ability to tailor fares to meet individual needs.

■ **Assurance** - clear, effective, transparent regulation to protect rights.

These principles informed the RDG's proposals, intended "to create a system that reflects how commuters, business and leisure customers travel today. One which makes the most of technology while maintaining discounts, looking after all groups of society and preserving regulatory protections for customers."

On one element, there seems to be consensus: that single-leg ticketing should be the bedrock of a new pricing structure, along with "algorithmic rules underpinned by regulation to allow and encourage the best combinations of single-leg fares for return, through (allowing travel from any point on the network to another regardless of operator) and multi-journey tickets", according to the RDG.

"Where there are two routes to a destination and we want both to be valid, prices may need finessing to make sure that the penultimate stations on those routes don't throw up anomalous fares. As always with fares, the devil is in the detail."

Mark Smith, *The Man at Seat 61*

There is potential for some loss of flexibility. The outward leg of an open return ticket is valid on the day of issue but the return is valid for a month, so passengers will need reminding not to buy until the date of return is known.

An alternative is to create returns at twice the one-way rate, so that on longer distances people going both ways can come back on any day within a month, rather than sell two one-ways which are only valid on the day for which they're booked.

One aspect of 'simplification', says Mark Smith, is "to throw out routes that serve no purpose - redundant legacies of inter-operator ORCATS 'raids' by which fares were set by one operator solely to gain revenue from another operator without any obvious passenger benefit - but keep in desirable options such as London-Birmingham via High Wycombe, for example".

Prices based to varying degrees on distance have been a feature since the 1830s, but the rate varies according to the area. Smith suggests basing peak and off-peak fares on distance to create an internally consistent structure, but using a different rate per mile for each service group to reflect current differences in average price levels - London commuter, Wales rural, inter-city, and so on.

"Where there are two routes to a destination and we want both to be valid, prices may need finessing to make sure that the penultimate stations on those routes don't throw up anomalous fares. As always with fares, the devil is in the detail," he says.

Even though 9-to-5 commuting with its relatively inelastic demand is largely a thing of the past, some form of yield management is still required to smooth the peaks, maximise use of capacity, and improve the passenger experience by reducing overcrowding. Current regulations and extreme variations in price can lead to peak-hour trains being lightly loaded while the following off-peak trains are overcrowded.

How will yield management to maximise revenue work under NRCs?

If the revenue does not flow to the operator, what incentive would there be to fill empty seats when we know that performance suffers with full trains? Will regional pricing managers have delegated authority to set fares, as now, with prices based on the lead operator?

As Ian Legg argues, the best customer focus is when delivery is at a local level, using local knowledge to refine the price point for the area's circumstances.

The RDG proposes replacing existing fares regulation with a new set of regulations covering such elements as price capping and reducing 'price cliffs' between peak and off-peak periods - recognising that modern digital technology can manage demand much better (as well as constructing itineraries far more complex) than a booking clerk with a manual and a piece of paper, especially for journeys that are A-B and B-C.

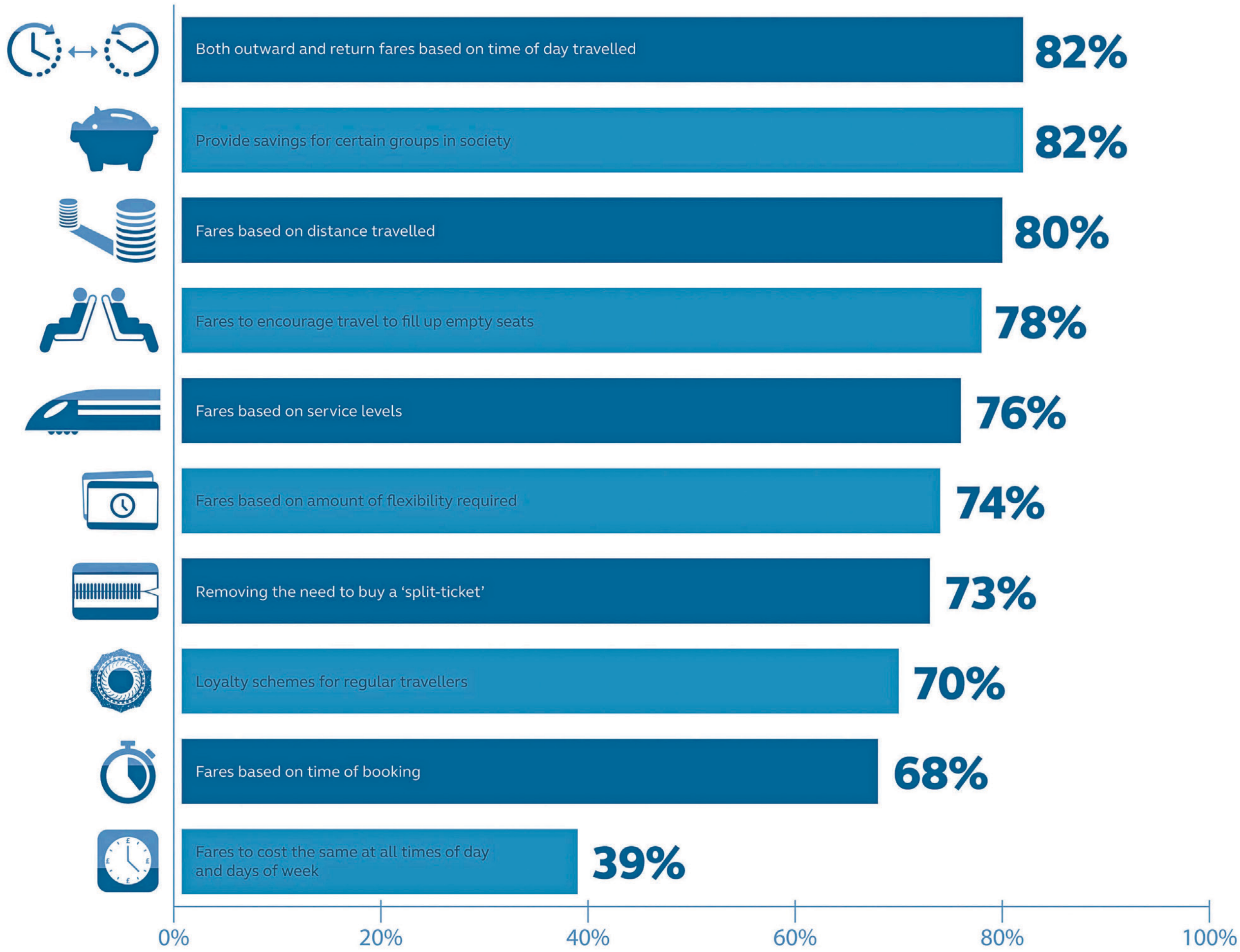
The structure must allow for both the co-ordination of train fares with other public transport systems and the flexibility to reflect the policies of devolved local and regional authorities. Besides encouraging multi-modal journeys, local authorities also need to be involved with setting fares and deciding on the balance of transport funding between fare payers and local taxpayers, requiring a system that can accommodate plural funding.

Card or contactless ticketing is ideal for urban areas where the highest-capped fare is not going to break the bank. The same is not true for long-distance journeys, where passengers need to know exactly what they will be charged before swiping in. Nor can contactless cards store such levels of information as seat reservations and First Class tickets.

The smart ticketing technology favoured by 90% of RDG respondents could incorporate discounts and entitlements - including railcards, loyalty rewards, and even personal preferences (window, table, forward-/backward-facing seat) - when making a reservation. It would provide assurance that passengers were being given the best value

A bank of ticket machines at Leicester. The Rail Delivery Group has consistently argued that single-leg ticketing should form the basis of a new pricing structure. ALAMY.

Percentage of people who believe the following scenarios should be considered in changing the structure of fares.



Source: SYSTRA, Easier Fares Consultation Summary Findings 2018

fare. The system also needs to accept late changes to travel plans (already possible with some operators up to 1800 on the day before travel).

Transport Focus Chief Executive Anthony Smith argues that a priority must be a multi-modal capped zonal system for all urban areas, for which funding has been earmarked.

"On longer-distance journeys, single-leg pricing will allow passengers to mix and match advance and flexible fares, as well as Standard and First Class - more choice should be possible. However, it is important to preserve a walk-up railway."

Mark Smith would go for all one-way, Anytime, Off-Peak and Advance, and sees no reason to change the terminology: "This enables open jaw and circular journeys without the current penalty. A one-way structure is far easier to present and sell online and on ticket machines."

Creating the new structure is going to require specialised IT expertise coupled with experience of fares and pricing. Three years ago, BR Fares Ltd warned that privatisation had led to a loss of corporate memory through the dispersal of this experience and knowledge, so the formation of a competent team to devise and manage change is essential.

The case for lower fares

All these ideas will be academic unless the Government recognises the multiple wins that fares reform would achieve.

The 1993 Railways Act charged the franchising authority to determine "rail fares [that] are reasonable". Passenger growth was not anticipated, and wider societal and environmental benefits were disregarded. Yet answers to such fundamental questions as "what do we want the railways to do - for the economy, society and the environment?" should inform fares policy and influence judgements over the ratio of industry costs borne by passengers and taxpayers.

Since 2004, it has been government policy to make passengers pay a higher share of the costs of running the railways, while freezing fuel duty for motorists since March 2011 at an annual cost to the Treasury of about £9bn a year, according to the Institute for Fiscal Studies. That figure now totals over £100 billion, a sum that dwarfs the current crisis.

The Government's Decarbonising Transport plan of 2021 says that public transport should be the cheapest and most attractive option, and cheaper relative to car usage.

Given elasticity of demand, there is a strong argument that filling the millions of empty seats through lower fares could actually increase revenue. Lower fares would also ease the cost of living crisis, help revive urban centres, and could be part of levelling up. ■

■ The writer would like to thank Silviya Barrett, Ian Legg, Alice Ridley, Anthony Smith, Mark Smith and Andy Wakeford for their contributions to this article.

About the author
Anthony Lambert, *Contributing Writer*

Anthony Lambert has written over a dozen books on railways and transport articles for a wide range of publications including *Rail Review*, *The Times*, *New Statesman* and *Local Government Executive*. He has also written speeches for the Community of European Railways and reports for transport organisations.

A new mindset for G

CARA MURPHY, GBR client director at Atkins, explains how the global consultancy is well placed to help the UK rail sector unlock the full potential of rail reform

In August 2021, Atkins - a member of the SNC-Lavalin Group - was appointed by the Department for Transport to carry out an accessibility audit of all UK rail stations. Designed to help shape future investment in accessible rail travel, the audit had been pledged just a few months earlier when the Government published its *Williams-Shapps Plan for Rail* White Paper.

It was a document well received by everyone at the design, engineering and project management consultancy, not least for its commitment to reforming the railways to put customers at the centre and integrating track and train to achieve a high performing railway for the UK.

"The reason that we needed the White Paper is because there's been misunderstanding between industry partners and that has had a knock-on effect on decision making," says Cara Murphy, Atkins' GBR client director.

"That has led to a culture of attributing blame while contractual arrangements have incentivised the wrong behaviours. Also, with the DfT and Network Rail being the largest decision makers, having a fully integrated track-train solution has been difficult when NR is wholly focused on asset management and cost reduction, but unable to see the impacts of its decision making on revenue generation. In turn, the DfT has been too close to revenue generation and franchising without necessarily understanding the cost of its decisions on infrastructure.

"A lot of that fragmentation will be simplified by having a conjoined industry P&L [profit and loss account] under GBR where there is increased visibility among all parties about where the money sits. That is instead of the 'wooden dollars' that currently get shared around between different parts of the industry through internal accounting."

As GBR is intended to operate at arm's length from government while also being responsible for implementing a 30-year strategy, it is hoped that the industry will be less micro-managed by ministers and officials at both the DfT and within the Treasury.

"We can't let that last for too long," adds Murphy. "Otherwise, people who have no credible understanding of the rail sector are making decisions that I think will have an adverse impact."

Despite the Government confirming a delay to passing legislation that would have led to the formal creation of GBR by 2024, the GBR Transition Team continues to work behind the scenes to complete much of the groundwork.

Murphy liaises closely with members of the GBRTT to provide advice and expertise and to advocate on behalf of clients from across the entire rail sector.

She explains: "Across the SNC-Lavalin Group, we have a unique perspective that other companies probably don't have because they don't work as closely with the entire spectrum of clients and industry organisations and understand what their challenges are or the complexities behind some of the contractual arrangements they have.

"We can see very clearly that some of the governance and contractual arrangements that are in place at the moment don't necessarily lend themselves to the integrated model that everyone wants.

"There are contractual arrangements that may have worked in the 1980s, but people

BR

Two TransPennine Express trains await their next duties as dusk falls upon Scarborough station on October 28. Decarbonisation, digital transformation, procurement and equality, diversity and inclusion are among the key priorities identified by Atkins for the new Great British Railways. TOM MCATEE.

behave differently now, and we live in a different society. It is therefore encouraging to see that there is a shift in mindset when I talk to people at GBRTT who are really pounding the pavement to understand what needs to be done to change behvaiours and culture and incentivise different performance models to deliver better for the industry."

Murphy says she also takes encouragement from the fact that most of the required changes to procurement and governance, including enabling private sector investment and improving productivity, can be made without the need to wait for legislation.

Although the absence of GBR from the Government's legislative programme will have been interpreted as a setback by many, Murphy strongly believes that it will not prevent many of the most significant reforms from proceeding without delay.

"Everyone is a bit concerned about the state of the industry, but if we need a bit of comfort that things are progressing, I am confident that you can already see a lot of that mindset and cultural change at GBRTT. After all of those 'Is GBR dead?' headlines, the industry is banding together to make sure that these changes happen."

Among the other macro-challenges that Murphy says GBRTT can very rapidly help the industry to meet are decarbonisation and digital transformation.

In late 2021, GBRTT launched a call for evidence for a 30-year Whole Industry Strategic Plan (WISP) which will develop long-term plans for the future of the rail network. They include how the sector will meet targets to remove all diesel-only trains by 2040 and to reach net-zero by 2050.

The WISP was expected to be published by the end of this year, but has now been delayed amid the political upheaval that has led to two changes in Government since September.

"We need to remind ourselves that the rail sector is not a massive contributor to carbon, but what it does so well is support the modal shift that allows carbon emissions to be taken out of the transport sector," Murphy says.

"While we'd all like to see a rolling programme of electrification or battery or hydrogen-powered trains in the strategy, I think the strategy needs to consider the decarbonisation of transport above the decarbonisation of railways. We'd be just as well supported by bi-mode trains as long as the network can hold up to the same performance, reliability, frequency and capacity that it needs to really affect a large-scale shift of people and freight.

"You don't necessarily want a strategy that makes the decision now to do what is a very costly and materials-intensive exercise when there may be new technologies that negate it. It's a hard decision to make and we at Atkins are supporting lots of electrification projects around the world, but it does need to be sensible. What GBRTT and then GBR needs to do is set a collective vision that everyone can grab hold of now. One that unlocks technological innovation and delivers a high-performing railway for future generations."

For digital transformation, Murphy says she'd like to see the adoption of industrywide standards and expectations for data capture and sharing. For example, she bemoans the amount of data generated across the industry that is then not made available to inform decision making in operations, improving network resilience or increasing cost efficiency.

"Digital transformation is something that we could be doing more of, now, and is going to be key to closing the post-COVID £2 billion annual funding gap that the industry faces.

"From an Atkins perspective, we are continually trying internally to create cost efficiencies by automating our design processes, introducing better ways to reuse designs and collecting information in BIM models. But it's not standard across the industry and it's very much our own investment. While that helps to make us more cost competitive, if we had a shared common data requirement, it would boost the efficiency of everyone and the ability to do more productive engineering and construction. Those things are all key to the success of a higher-performing railway.

"We have two options in terms of managing our railway infrastructure assets. We can either become smarter and create efficiencies from data and better decision making or we go into managed decline because we can't sort ourselves out and we don't have enough money to do everything. Across the supply chain, Atkins is ready for the former, but our clients need to be more commercially intelligent and less risk averse to sharing data."

Murphy also identifies equality, diversity and inclusion (EDI) as a key focus for GBR, including acting upon the recommendations made by the accessibility audit recently completed by Atkins. But it should also include other important elements such as socio-economic equality and EDI improvements to the workforce.

"Given the difficult economic climate in the UK, we risk exacerbating an already existing transport poverty. By putting customers first, devolving responsibility to local authorities and regions, and creating the opportunity for the campaign to be community focused, GBR can help create the right offer.

"Coronavirus also helped to drive a lot of the EDI agenda and there's been a real step change in the last couple of years towards diversity and inclusion in the workplace and health and wellbeing. It's going from strength to strength, and I think GBR will be out to really support that."

But GBR will not be alone, with Atkins among the industry stakeholders prepared to take a leading role in providing the necessary skills, advice and expertise.

Murphy concludes: "There are a lot of decisions being made by people who don't understand the complexity of operating and maintaining a high-performing railway. I believe that Atkins brings a more rounded view that can challenge from every angle. We recognise that GBR won't be the best thing for everyone, but it will need to be collectively the best thing for all." ■

"It is encouraging to see that there is a shift in mindset when I talk to people at GBRTT who are really pounding the pavement to understand what needs to be done to change behaviours and culture and incentivise different performance models."

Cara Murphy, *GBR Client Director, Atkins*

‘Tickets can be simple...

JOHN DAVIES, vice president for industry relations at Trainline, shines a light on the latest revolution in digital ticketing that the private sector is poised to deliver

In a little over 12 months’ time, rail users will be able to use digital barcode tickets while travelling on any part of the network.

Hitting this milestone will mark the end of a rapid rollout that began in 2014, when the first barcode tickets were piloted by Trainline, other private retailers and train operating companies across a swathe of Northern England.

Since then, operators and independent rail retailers have had to keep pace with their burgeoning popularity. Attracted by the convenience of having a barcode sent directly to their email account or mobile phone, plus the ability to book and amend travel options remotely, more customers now choose barcode tickets than any other fulfilment type.

Earlier this year, Trainline went a step further, building a partnership with Rail Delivery Group (RDG) and train operators to launch the revolutionary new sTicket product.

Following a successful trial with Govia Thameslink Railway, it provided the rail industry and its customers with a first-ever secure solution for digital barcoded season tickets.

The launch represented a significant breakthrough for digital ticketing, which had hitherto been limited to daily tickets. Just like Single or Day Return digital tickets, the sTickets work by issuing a series of time-limited, single-journey barcodes that cannot be copied or transferred between devices. They can be purchased through either the Trainline app and website or from participating operators’ own apps.

Currently available for journeys across around 40% of the network, sTickets were given accreditation by the RDG in May, paving the way for their impending rollout across the entire network throughout 2023.

“The important thing here is that the sTicket is not intended to be a Trainline-only product,” says Trainline Vice President of Industry Relations John Davies.

“Making rail simpler and more attractive to a wider audience is in the interests of customers, which is very much in the collective interest of the industry. We want to help the rail sector to succeed and, using our expertise, we would like the Government’s wider rail reform agenda to succeed, too.

“Having started the process in 2014, we are now getting towards the end of enabling barcode ticketing across the network. But the big opportunity now is for the most regular users of rail who may or may not have been season ticket holders before. The five-day commute is no longer with us so we saw the chance to develop a new, more flexible product that can be bought and downloaded to your phone.

“sTickets will continue to gain momentum and will be live with most operators within the next year. Making it easier for people to browse and buy should grow the overall market for rail and help restore it to its pre-pandemic financial health.”

Crucially, Trainline’s development of the sTicket also demonstrates an area of rail reform where swift progress can be made independently of government in the here and now. Supported by the Great British Railways Transition Team, a customer-focused ‘retail revolution’ that reduces the cost and complexity of paper-based ticket selling does not rely on the passage of any new legislation through Parliament.

As around 75% of the cost of the initial barcode ticket development and rollout has been met by Trainline and other independent rail retailers, Davies also points to the financial benefits on offer to GBR and ministers from giving the private sector adequate freedom and incentivisation to invest and innovate.

“Barcode ticketing has now become the predominant form on the network,” Davies adds.

“It came from Trainline and others stepping forward, with support from the Department for Transport and the RDG. It has been rolled out in a way that is financially self-standing and did not require large amounts of CAPEX investment.

“Our message is that if you bring experts to the table, we can make rail simpler and more appealing. The whole industry benefits, as does taxpayers. But someone must take a lead as part of a coalition of the willing and we think, having done it before, we are well placed to do just that.

“We can push on with addressing some of these challenges, even in the absence of wider reform or greater certainty from politicians around GBR.

“Using our data science expertise, we

.. if we get on with it!'

can test and learn from the powerful data produced by digital products on a local level. That makes it much easier to present a case to the DfT and Treasury to prove that it will not be detrimental to the overall farebox.

"All of the barcode ticket pilots that we have been instrumental in have been very exciting, with something very powerful borne out of it. We can repeat the formula and get more oxygen behind the next generation of products too. There is a great opportunity here for collaboration."

The next area where Trainline intends to innovate is in Pay As You Go (PAYG) ticketing. Already widespread throughout Greater London, Government has indicated that its wider rollout to other parts of the country remains a priority.

A £360 million programme is currently under way to extend contactless tap-in and tap-out ticketing to a further 700 stations by the middle of the decade.

But while the system works well in London where fixed zonal fares and daily caps can easily be applied, Trainline warns that simply extending the current boundaries won't maximise the customer benefit. Meanwhile, expanding the infrastructure of contactless bank card readers and ticket gates would also require expensive upfront capital investment.

Davies says Trainline is already hard at work to provide a more workable solution that would allow more customers to benefit from the simplicity and convenience of PAYG travel.

"This is a conversation we're about to have with the GBR Transition Team and I'm really excited about it," says Davies. "People tend to think about their experience in London where it's a seamless and world-class transiting process. But the challenge is to export that to the national network where the price point is much higher. In an era where the cost of living is paramount, it's hard to imagine that people will just tap in and tap out, shut their eyes and not care.

"What we are currently experimenting with instead is customers allowing their mobile phones to tell carriers where they are going. You can then geo-fence a station so that customers don't need to physically tap out."

John Davies, *Vice President of Industry Relations, Trainline*

"There are lots of hard limitations on how PAYG can be made to work in a national context with rail cards, concessionary fares and the unbanked, for example. But we think we might have come up with an answer."

According to Davies, the optimal solution for nationwide coverage of PAYG is likely to be app-based. This could operate alongside conventional ticketing, but would provide an attractive alternative to customers who would prefer to pay for travel while on the move.

"You might not get many people using PAYG from Edinburgh to London where it costs a bit more and there are lots of different ticket types, but we don't need to build a world of PAYG islands," says Davies.

"It would require a fundamental shift in retailing because with this system, customers don't need to tell operators what they are doing before they travel. What we are currently experimenting with instead is customers allowing their mobile phones to tell the carriers where they are going. You can then geo-fence a station so that customers don't need to physically tap out.

"That would allow app-based PAYG to shift the paradigm and deliver a London-style system without the expense of rolling out the actual London system across the network. You can have all the benefits and get to the same world of tokenised travel."

Davies predicts that Trainline has the knowledge, expertise and determination to begin pilot schemes within the next six to nine months. But it will need engagement from the GBRTT, the DfT and the RDG to chart a route to accreditation and to develop a level of interoperability so that it can become a national product that is backed by multiple retailers and technology providers.

He concludes: "We have a vision of how this would work, but it needs to be backed by standards. We would do all the heavy lifting and then, just like with barcode ticketing, give the industry an asset so that anyone can do it.

"There is a big opportunity here to work with operators, perhaps on routes out of London first where the existing PAYG network is stretched to the limits, or maybe look further north. But it is our responsibility to solve this and I back us to do it." ■

Although now commonplace at major stations including London Paddington, ticket gatelines and barcode readers would no longer be required under an app-based Pay As You Go system. JACK BOSKETT.

Making the case for the private sector

BEN JONES considers a recent report by Rail Partners which presents the case for continued involvement of private sector companies in the reorganised Great British Railways

In an industry hardly lacking in emotive issues, the subject of private sector involvement in the railways is guaranteed to fire strong opinions on both sides of the argument.

For almost 200 years, the balance has shifted between private and public sector dominance, free market and centrally planned development. But rarely has one worked without at least some influence from the other.

Even after the privatisation of British Rail in the mid-1990s, which split the organisation into dozens of smaller businesses, the government retained a strong hold on the industry through the Department for Transport (DfT). That hold has intensified over the past 20 years, especially after the collapse of Railtrack and its transformation into Network Rail.

The DfT's often-controversial handling of the franchising and re-franchising process, its micro-management of train operators, and the more recent replacement of stricken franchise agreements with management contracts has left many wondering what role the private sector can play under the new Great British Railways (GBR) organisation.

As might be expected from a Conservative government with strong free market beliefs, successive Transport Secretaries and ministers have reaffirmed their support for private sector involvement in GBR over recent months, without offering many clues as to how that might manifest itself.

And faced with the huge task of translating the broad aspirations of the *Williams-Shapps Plan for Rail* into an effective new structure for Britain's railways, the GBR Transition Team (GBRTT) has also made it clear that there will be a continuing role for the private sector.

Into this volatile mix, Rail Partners (RP, a lobby group representing private transport companies in the rail industry) has outlined the contribution its members have made to expanding and improving Britain's railways over the last 25 years.

Its recent report, *Revitalising Rail: How private operators can accelerate recovery*, brings together case studies from passenger and freight operators to highlight how the ongoing public-private partnership benefited rail users prior to the COVID-19 pandemic, more than doubling rail journeys (138% increase) between 1995 and 2019 and eliminating a £2 billion annual industry operating loss.

However, while the private rail freight sector has largely recovered and in some places is exceeding pre-pandemic levels, the passenger sector is facing a cumulative shortfall of around £20bn in fares revenue by 2025, with the gap currently being plugged by taxpayers.

RP's report points to better performance in 2022 from operators which currently enjoy more commercial freedom from the DfT - such as LNER, where revenue incentives are helping to bring back passengers more quickly than those not afforded the same flexibilities.

By July 2022, Grand Central, Hull Trains and Merseyrail recovered their collective revenues to 88% of pre-pandemic levels, whereas the average across DfT-contracted long-distance operators stood at 81%.

RP argues that activating existing revenue incentive mechanisms in current National Rail Contracts for the majority of operators will harness their commercial expertise and bring back revenue faster.

Initiatives such as targeted and localised fare campaigns can help to bring back both leisure travellers and commuters, while open access operators can win traffic from other modes by differentiating their offer with consistently low fares, longer booking horizons, or other incentives.

Co-operation

To achieve this, Rail Partners believes that it is crucial that new legislation establishes Great British Railways to harness the commercial and operational expertise of train operators, rather than be a top-down specifier of inputs.

It says: "Current National Rail Contracts and future Passenger Service Contracts must provide operators with the commercial freedom within that new framework to chase revenue, reduce costs and return passengers to rail.

"Establishing long-term structures and maintaining legislative safeguards is equally important for freight.

"Rail Partners and its members want to co-create this new system. If the reforms we are calling for are implemented, we believe we can set the railway on track to a sustainable future, supporting the wider economic and environmental outcomes that a vibrant railway supports."

To back up its claims, RP points to the faster growth of the passenger railway in the UK than its European counterparts - from 735 million passenger journeys in 1995 to 1,753 million journeys in 2019, and an 84% increase in freight volumes from 9.7 billion net tonne km (ntkm) in 1995 to 17.9 billion ntkm in 2022. However, this latter figure excludes coal traffic, which was BR's dominant freight source in the mid-1990s, but which has now collapsed to almost nothing with the reduction in coal-fired power stations and traditional heavy industries.

Despite the growth of intermodal and construction traffic, Office of Rail and Road figures in recent years have shown UK freight traffic at some of its lowest levels since records began. Even so, private freight operators are estimated to have invested £2.8bn in new locomotives, rolling stock and facilities over the past two decades.

Overall, private investment since 2015 is estimated at almost £6bn, much of it spent on reducing the average age of the British passenger train fleet and supporting accessibility for all travellers with new train fleets and station improvements. Much of this has come from the international finance markets via rolling stock leasing companies such as Eversholt Leasing, Porterbrook and Rock Rail.

Other achievements highlighted by RP include an average increase in daily train services by almost one-third (to 21,000) by 2019, and a 27% increase in rail industry jobs from around 50,000 to 63,000 since 2011.

Passenger satisfaction was higher than the EU average and other major European nations - including Germany, France and Italy - before the pandemic, although the carefully chosen sample omits any reference to the continent's better-performing railways.

> ***"To achieve this, Rail Partners believes that it is crucial that new legislation establishes Great British Railways to harness the commercial and operational expertise of train operators, rather than be a top-down specifier of inputs."***

LNER 801208 passes the clifftops above Lamberton Beach (Berwickshire) on August 8 with the 1600 Edinburgh-London King's Cross. The operator has been held up as an exemplar of how revenue can be maximised by granting greater commercial freedoms. ANTONY GUPPY.

Private investment

RP admits that it is now widely recognised that franchising had run its course prior to the pandemic, leading to operators themselves calling for reform and to others leaving the British rail industry altogether. The pandemic compounded the need for change, offering legislators a chance to create something new and better suited to 21st century needs.

However, the report offers several case studies to highlight how private investment by RP members could provide a template for private sector involvement in GBR. Examples cited include Trenitalia c2c's £30 million investment in digital ticket retailing via a new app, Greater Anglia's complete fleet replacement of a largely ex-BR fleet with new Stadler and Bombardier (now Alstom) electric multiple units, and Govia Thameslink Railway's renewable energy initiative at Streatham Hill depot.

RP says: "These improvements were largely driven by commercial incentives placed on operators through the profit motive and an understanding of the customer, which must continue to be harnessed during the reform process. With the right reforms to contracts and structures, the private sector can again help set the railway up for recovery and growth for the next decade."

Where next?

So, how would RP like to see this achieved? And what form does it believe GBR should take?

Its priorities are new contracts for passenger operators that create "an effective public-private partnership" and an "ambitious freight target to treble rail freight by 2050".

RP firmly believes that the new GBR should be a 'guiding mind' rather than a controlling one, offering a framework for private sector transport groups to innovate and flourish, attract passengers, and keep a tight control on costs.

Looking ahead to the proposed new Passenger Service Contracts, RP believes that revenue growth incentives (and in some cases transfer of revenue risk) and the commercial freedom to exploit those incentives are a must. It argues that operators should be able to influence timetabling to drive performance and patronage, shape yield-managed fares to fill seats, and deliver local marketing campaigns to boost promotions.

For freight, the ambitions are somewhat vague, beyond the ambitious target of trebling current volumes over the next 27 years. But RP believes that freight operators must also be supported by "policies, incentives and investments" that create the conditions for freight to grow. If the target is achieved, RP estimates that it could be worth £7.35bn to the UK economy and equate to 21 million fewer HGV movements every year.

Inevitably, RP believes that its members, which include Arriva, FirstGroup, Govia, Serco, Trenitalia and all five of the major freight operators, are best-placed to deliver the growth the railway, the economy and the country needs.

It says: "We believe there is a clear way forward by ensuring that GBR legislation establishes a body that enables contracted operators to deliver better outcomes, rather than be simply a specifier of the inputs it requires.

"We believe a specific duty should be placed on GBR to promote private sector innovation and investment. Right now, it is unclear how a commercial mindset is being baked into GBR, or how structures will be built which will encourage it to leverage the experience and knowledge within operators. By leaving too much unspecified, there is a risk that GBR becomes too centralised and prescriptive, rather than using operators to help solve shared problems." ■

About the author

Ben Jones, *Contributing Writer*

Ben Jones is a freelance railway and travel writer, a former *RAIL* writer and former editor of *Model Rail* magazine. As well as a long-standing follower of the contemporary UK rail scene, his travels across mainland Europe have left him with a deep interest in its railways, especially those in Germany, Switzerland and France.

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Can land value captu

The concept of capturing land value as a way of boosting funding for major infrastructure projects has been used for many years, mainly in London and the South East. With the possibility of funding shortfalls on transport schemes, could land value capture agreements be the answer elsewhere in the UK? PETER PLISNER investigates

Land Value Capture (LVC) is defined as a set of mechanisms that can be used to monetise the increase in land values that arise from being in the catchment area of public infrastructure projects.

Put simply: if you live near a railway station which has a direct link into a nearby town or city, there's a fair chance that your house will be worth more than a similar house in an area where there's no such facility. And if you decide to sell it, then you'll be able to realise that uplift in value.

Of course, no one is suggesting that you'll have to surrender part of that profit, aside from having to pay Capital Gains Tax if you're not buying another house.

Now, consider if you live in an area where there are plans for a new station. You have some land next to your house, and you decide to build on it and then sell the new dwelling. The prospect of the new station might mean an increase in the price of that new house, but only when it's fully funded and work starts will you see the full increase in value.

In short, LVC agreements effectively help to determine and then capture a percentage of the additional increase in value, which is paid once the station is built and you have permission to build the new house.

Those behind LVC agreements work with local landowners and secure a percentage of this additional value, thereby creating the opportunity to build the station much earlier - to the mutual advantage of the transport provider, the landowner, and the people who will use the railway.

LVC agreements aren't new. They've been used in the UK and around the world for many years to capture payments from private sector developers. Indeed, in some places they've also been used for transport projects.

We've all heard of the Metro-Land marketing brand created by London's Metropolitan Railway back in the early 1900s, as it expanded its network out to places such as Harrow, Wembley, and even Amersham in Buckinghamshire.

Unlike other railway companies, the Metropolitan had an advantage over others who had to sell surplus land when construction was completed. The Metropolitan was able to retain it and, realising the potential for an uplift in land values because of the extended lines, set up an independent company - Metropolitan Railway Country Estates Limited.

Hundreds of acres of land along its tracks were available to sell and then to house future customers. It meant a further source of funding for it to continue the rapid expansion.

Fast forward a few decades. In Hong Kong, faced with a rapidly growing population, the Mass Transit Railway (MTR) Corporation was established to mastermind the expansion of the then-colony's mass transit system. It developed and built more than 150 miles of new lines and 168 stations. It would also actively develop mixed-use retail, residential and commercial properties.

This later became known as the 'Rail + Property' revenue model, with leasehold payments or sales generated from MTR's expansive property portfolio, complementing the farebox revenue from its railway business.

Income from property is now thought to account for as much

re set projects free?

as 50% of MTR's revenue. This is now the source of working capital to invest in new infrastructure.

Speaking to *RAIL* earlier this year about his experience in Hong Kong, MTR's UK CEO Steve Murphy said: "The most profound characteristic to stick with me was the realisation that whenever you improve railways, you do dramatic things to land values. What I realised quickly in Hong Kong was that this was an implicit part of their business model, with the property and operational sides mutually supporting each other."

Like most places, the COVID pandemic has hit MTR's farebox income, but Murphy maintains that the property arm performed well: "You end up with this virtuous circle that railway investment increases land value, creating an income stream to support and help build more railways."

Back in the UK, local councils have often preferred to use traditional methods for raising funds from developers, including Section 106 agreements and community levies.

> ***"The most profound characteristic to stick with me was the realisation that whenever you improve railways, you do dramatic things to land values."***
>
> **Steve Murphy, *UK CEO, MTR Corporation***

Now, with less money available for things such as rail improvements as a result of greater levels of government borrowing during the COVID pandemic, there's renewed interest in LVC agreements as a way of bridging (what are perceived to be) an ever-growing number of projects where a funding shortfall is preventing them from progressing as quickly as had originally been planned.

Back in the 1990s, a report by Don Riley of the Centre for Land Policy Studies calculated that the uplift in land and property value along the route of the Jubilee Line extension to London's Docklands was likely to be around £13 billion.

The capital cost of the scheme was around £3bn, but it's thought that only a small contribution to the cost of the line was secured from developers - including at Canary Wharf. Most of the uplift in values from the new line was never captured.

Although those on the route of the Jubilee Line might not have contributed to the profits gained from land uplifts, when it came to other London projects things were different.

Crossrail (now the Elizabeth line) did manage to capture funding from some developers. Based on land value uplifts, developer contributions of up to £3bn were extracted through a special levy as part of the business rates regime.

The levy needed primary legislation and permission from the Treasury to hypothecate the proceeds back into the new line. It meant that the Greater London Authority could borrow against future income from the levy.

Further funds were captured through the Mayoral Community Infrastructure Levy (MCIL) charged against both commercial and residential property developers. The two levies are thought to be raising between them around £400 million per year across London.

But some suggest that it's a blunt tool when it comes to raising money for specific infrastructure, because it's charged across the whole of the capital and not specifically along the line of the route.

However, Julian Ware, Head of Corporate Finance at Transport for London and one of the architects of the funding mechanisms used, says: "Because the Elizabeth line passes through some of the most valuable parts of London real estate, quite a lot of the ➜

Northern 156448 stands at Bedlington station on June 7 2008, with a special charter to demonstrate the Northumberland line's passenger potential. Network Rail has since commenced work to upgrade 18 miles of track and open six new stations between Ashington and Newcastle by 2024. An innovative new Land Value Capture model has secured more than £40m in funding contributions from local landowners towards the reopening project. JOHN BRIERLEY.

revenue is raised along the line of the route. We also argued the new line would move London's economy as a whole and create employment, so everyone benefits.

"Even if you're a shop owner in Kingston, actually more people will get jobs in the city and Canary Wharf, because the economy has improved and because of the Elizabeth line. Then, at the weekend, those new workers will go and spend their money in a wide variety of places across London."

On another major project, the extension to London's Northern Line to Nine Elms and Battersea (like the Elizabeth line) used two mechanisms to raise additional funds.

Again, one was based on developer contributions and the other a business rates increase. But crucially, the income here paid for the whole scheme, rather than just part of it.

The income also comes directly from the area that's benefiting from the extension, rather than the whole of London. It's thought that around 30% of the funding has come from developer contributions, related to the buildings that have gone up as agreed with the local councils. The remaining 70% comes from the area being declared an Enterprise Zone.

Within the zone, the growth in business rates is diverted away from conventional spending and instead goes straight to the Mayor of London. That in turn allows the Mayor to borrow against what could be a 25-year stream of income, which is then handed to TfL to build the new line.

Ware explains: "If you can imagine the power station building ten years ago. It was derelict and there wasn't much in the way of business rates being collected. If you look at it now, with the shops open and the offices coming next year, the tax revenues are increasing dramatically and most of that extra is going to the Mayor."

What works in London doesn't necessarily work elsewhere in the UK. However, one place where a transport-related land capture deal is working is in Northumberland, which has pioneered an LVC agreement on a rail project.

Northumberland County Council has become the first authority in the country in modern times to strike an LVC agreement with landowners.

In 2014, it began working with Edinburgh based E-Rail to ascertain whether the company's LVC method could be used to help fund the reintroduction of passenger services to the Northumberland Line between Newcastle and Ashington. The deal has been struck with landowners at more than 20 sites along the line.

E-Rail's method of quantifying the uplift concentrates on land and property within 1km (0.6 miles) of the construction of a new transport project.

The company reckons that existing housing stock increases in value by around 20%, and maintains that by sharing this generated increase in value, the transport provider gains significant funds that do not have to be paid back and the landowner/developer secures a considerable rise in property value. The earlier that contribution agreements are reached, the earlier scheme certainty can be achieved, and the more the LVC can generate.

Opened in September 2021 to assist the regeneration of the area, the £1.1bn Northern Line Extension to Battersea power station was paid for through a combination of developer contributions and an increase in business rates. ALAMY.

Unlike Community Levies or business rate increases, such agreements (using E-Rail's method) do not require any new legislation. They can be put in place relatively quickly, by any council or transport agency in the UK promoting a project.

And experts have been quick to applaud what's been done in Northumberland. Transport Consultant Stephen Joseph says: "Previously, land capture deals were targeted at developers or based on business rate supplements around the stations. This is rather different, in the sense that it's a charge on the land. I think people have forgotten about this one. Letchworth Garden City was built around this stuff. So too was Metro-Land."

E-Rail Director George Hazel maintains the concept is ideal where there is a funding gap that's stopping the scheme from progressing: "Landowners don't pay upfront. They only pay when the value uplift occurs, and we find

"Landowners don't pay upfront. They only pay when the value uplift occurs, and we find they're still interested even though a scheme may or may not happen and they may or may not get planning permission."

George Hazel, ***Director, E-Rail***

they're still interested even though a scheme may or may not happen and they may or may not get planning permission.

"They take the view that if they sign the contribution agreement, they will only have to pay (say) 50% of the uplift that will happen, as calculated by property agents. They still retain some of the profit and, ultimately, they might get a better planning permission because their development is now close to a railway station."

But unlike the levies used in London, LVC contributions along the route of the Northumberland Line are based on voluntary participation until the contribution agreement is signed. After that, the agreement is a legal commitment built into the title of the land.

It could be, therefore, that some landowners refuse to take part, although this is rare. The risk they run is that the funding gap will not be closed, the project will not be delivered, and none of the landowners will get the extra value from the railway.

Hazel: "If somebody doesn't sign up, and that's rare, there's nothing we can do about it except that there is a risk for that person and all the others that the scheme won't then happen, and they won't get the extra profit."

Those landowners who don't sign up for an LVC agreement could later have to pay out through the more traditional developer contribution methods, such as Section 106. And having established a value along the route through the LVC process, they could ultimately have to pay more of their profits through an alternative non-voluntary land capture agreement.

"At the end of the day, we've secured £40m, more than any other method would have raised," says Hazel.

And crucially, unlike other land capture methods, the latest concept in Northumberland targets the landowner - not the developer or tenant. And the way it's being done there has the added value of potentially creating more public transport and sustainable developments around the stations.

Joseph explains: "The incentive is to reduce car parking and create denser and more walkable developments, because you're developing around public transport stops and stations.

"That makes it more likely that people will walk to the station and might not even own a car. This will create 'transit oriented development', as they call it in the US.

But to make an LVC work, you do need a certain level of certainty that a scheme will be built. And that's not always easy, particularly in the early planning stages. If the lead time is too long, contributions under LVC agreements might also be difficult to achieve. And there's a third major problem: the political appetite for what is, essentially, a wealth tax.

Henry Kelly, economist at sub-national transport body Midlands Connect, maintains that it's not always easy to work out who would benefit from the uplift in value: "It's quite difficult. You have developers. You have standard freeholders. Then you might have leaseholders. And then you have tenants, who are probably the people that will end up paying more, because they have the benefit.

"And that's just the residential side. If you think about the complexity of structure that you will have on a lot of commercial and retail developments, you end up wondering: who are you taxing and how are you taxing them?"

Even Kelly agrees that Land Value Capture will become more popular because of falling levels of Government finance available. However, he highlights another potential issue related to the structure of local government.

"The problem is the link between the planning body and the transport authority. Who's building the scheme and who is approving it? With two tier local government, that could become quite problematic."

There's little doubt that the dwindling amounts of central government funding are pushing local transport planners down the route of alternative fundraising methods, and that LVC agreements such as the ones signed in Northumberland look set to become a common arrangement.

Another solution could be greater utilisation of the 'rail + property' model captured in Hong Kong some 50 years ago. But if the Hong Kong model is to be followed, then train operators and the Government will need to ensure they are properly incentivised to invest, through the new Passenger Service Contracts and the wider rail reform that is set to replace the traditional franchising model.

Land value capture deals have the potential to capture more funding, and much earlier than other methods.

Stephen Joseph is of the view that the latest land value capture concept could help to make a difference: "It depends where we go on broader issues such as house building and the planning system, but if you do some of this then you might have housing around public transport rather than roads." ■

The colourful Clas

DAVID STAINES presents a selection of old liveries on new GB Railfreight locomotives

Brightening up the railway scene, GB Railfreight has re-visited some historic BR-era liveries and embellishments on its Class 69 locomotives, as they are being released into traffic.

Although designated as a 'new' class, the '69s' utilise the body shells and bogies of former Class 56 locomotives which they still visually resemble.

Internally, the original Ruston-Paxman engines have been replaced by the General Motors EMD 710 as installed in the Class 66s, with associated new electronic control systems and complete internal rebuilds.

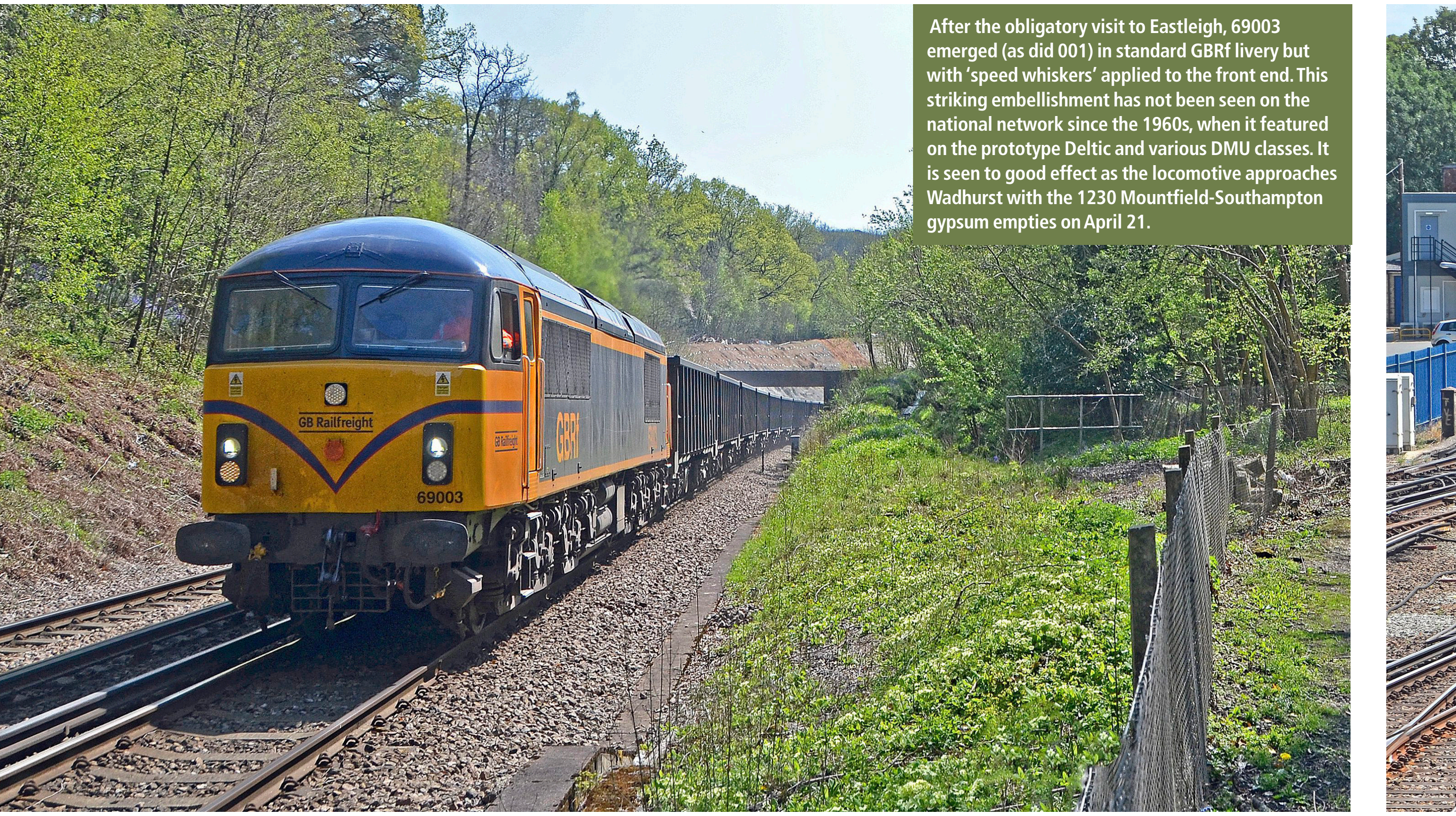
Introduced in 1976, the first 30 of the 128-strong Class 56 fleet had been controversially built by Electroputere in Romania. But many of this batch were found to suffer from a relatively poor assembly quality, particularly in relation to wiring, and required extensive work once in the UK. The rest of the Class were built at Doncaster and Crewe.

With two out of the current six Class 69s now in traffic being former Electroputere products, these locomotives have now gone through their third extensive rebuild.

The conversion process is carried out by Progress Rail at Longport, from where they are dispatched in undercoat to Eastleigh for final painting.

There has been no lack of anticipation as to what colour each example might be sporting on dispatch from the paint shop. R

At the time of this photograph, this convoy represented the entire operational Class 69 fleet. GBRf 69003 in undercoat is on its own delivery run, making its way south amid autumn tints near Dunton Green as the 0936 Peterborough-Tonbridge West Yard on November 2 2021. Accompanying it, 69001 has a variant of GBRf's house livery featuring the Union Jack and the flag of the United States. The name *Mayflower* is a further nod to Anglo-American relations. The BR large logo livery applied to 69002 *Bob Tiller CM&EE* shows up well in the landscape and looks particularly at home on the former Class 56 bodyshell.



After the obligatory visit to Eastleigh, 69003 emerged (as did 001) in standard GBRf livery but with 'speed whiskers' applied to the front end. This striking embellishment has not been seen on the national network since the 1960s, when it featured on the prototype Deltic and various DMU classes. It is seen to good effect as the locomotive approaches Wadhurst with the 1230 Mountfield-Southampton gypsum empties on April 21.

ss 69s

Possibly the livery variant which has met with the most favour is the resurrection of long-lost BR Research blue with a large red body panel lined in white, as applied to a handful of locomotives under the auspices of the former Railway Technical Centre at Derby. The locomotive was also turned out with Research Department-type lettering. Adding to the colour, environmental green-liveried 66796 hauls 69002 and 69004 past Petts Wood forming the 1304 Tonbridge West Yard-Doncaster Down Decoy on March 25.

69005 emerged from the Eastleigh paint shops in striking BR green livery with half yellow warning panels, white window surrounds and cream cab roof, with the locomotive bearing the name of the town. The detail of the livery was close to that retro-applied to 33008, which also bore the name *Eastleigh*. In the company of 69002, 69005 passes Orpington with the 1230 Mountfield-Southampton gypsum empties - a working which the class has gravitated to, although double heading is rare.