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A TRIP ACROSS LONDON

I am Birmingham bound.

Avanti may boast three trains an hour, but for the Cat lover there can be no alternative to the silver train out of Marylebone.

So it is an early morning commuter train from Kent into London for me. The Thameslink investment does not pall with familiarity: here is the Bermondsey diveunder, and an island platform at the rebuilt London Bridge for us up Kents – where formerly we had but one platform face. It is the new viaduct to the west of the station I find the real thrill, though: I love peering down on busy Borough High Street from the new structure, riding high over the market and then seeing the Blackfriars line peeling off.

Which way next? One option would be to jump off at Waterloo East, avoid the crowds with the eastern exit off the platforms down to Southwark station on the Jubilee Line, get out at Baker Street and walk past Dorset Square to Marylebone. Platform edge doors, automatic operation, a train every two minutes: the modern railway at its best. But just a little... dull.

So it's the Bakerloo from Charing Cross for me. It may be an underground hike from the main line station, but it's worth every step. 1972 stock, muted station lighting, ox blood faience: what a treat. It could be 30 years ago down here.

Clearing that long escalator ride up into Marylebone main line, the station is bustling and business like. Chris Green's

total route modernisation in the Network SouthEast era, followed by Adrian Shooter's series of Evergreen upgrades, have transformed this place.

In the dark days of the ascendancy of the red-in-tooth-and-claw free market economist Sir Alfred Sherman in Margaret Thatcher's first term in the early 1980s, closure of the rail terminus here and replacement with a coach station was seriously considered. Coaches would have come in off the North Circular, with the rails in the tunnels covered over with tarmac. That was before Sir Alfred was snookered in a deft move by John Prideaux at the Board, who ensured the rails-into-roads study was finalised to British Rail's specification when Sir Alfred was safely out of the way on a visit to Israel. Dr P had it published before his return so that it was a *fait accompli*.

That was a close shave, but looking at Marylebone today, bursting at the seams and with Old Oak Common HS2 station now being put forward as an overflow terminus, we can see retention as a rail terminus as the right decision. It may no longer be possible to reach Sheffield from here, but Oxford is now feasible and the frequency on the Birmingham line and to Aylesbury far surpasses BR levels. Sir Edward Watkin would approve.

One of the joys of the Chiltern Mk 3s is the grandfather rights on the low-back seats: the operator has avoided having to replace them

with the tombstone seats fitted on Great Western's 'Castles', safer in the unlikely event of a crash but which ruin the sight lines on every journey. A judicious choice of window seat on a Chiltern vehicle can render both sides of the line easily visible for the interested observer.

It is time for the off: the trusty Caterpillar diesel in our Class 68 fires up and we set off northwards. We head past the site of the old Class 115 DMU shed, now occupied by blocks of flats, and the turntable used by 'Wardie of the Boardie' with his steam-hauled Shakespeare specials in the 1980s, before plunging into St John's Wood tunnel under Lord's cricket ground. The throaty roar that bounces off the tunnel wall and resounds in the leading vehicle is a reminder that the Cat is working hard up the bank, prior to a flash of daylight and a tantalising glimpse of the West Coast main line prior to being swallowed up by the gloom again in Hampstead tunnel.

At the north end of the tunnel we meet London Underground lines on a broad formation, but sadly the Chiltern line here is hemmed in; to build platforms that would give Chiltern passengers access to the tube and West Hampstead Thameslink station would require some serious demolition. We run alongside the Jubilee, more interesting now we're up in Metroland. Here is pretty Dollis Hill station, home of the Dollis Hill loop – not a track layout, but a lacuna in the comedy game Mornington

Crescent. Then it's Neasden depot, home to the S stock, before we part company with LU at Neasden South Junction and flash past Chiltern's own depot at Wembley.

Wembley is one of those London locations that has been transformed almost beyond recognition in recent years. The looming presence of Norman Foster's arch over the football ground finds architectural echoes in the White Horse footbridge over the station, while those former scabby embankments where once Japanese knotweed reigned have been tamed by blocks of flats.

The Cat is into its stride as we canter past the waste depot at Northolt Junction on the Evergreen realigned track, before running alongside LU once again, this time the Central Line. Past Ruislip Gardens, where with a thousand ta's and pardon's daintily alights Elaine, and on to Ruislip depot, where smart yellow p-way locos await their next turn of duty on the Underground.

The M25 signifies the end of Greater London and we are heading into the hills whence this line derives its name, the land of my forefathers and a pleasure to ride every time. Betjeman was onto something when he derided the notion that suburbia could ever be boring. 

James Abbott
Editor



White Horse bridge: Wembley Stadium station on 26 March 2019, with a Marylebone-bound Class 168 arriving. The bridge was named in a poll by BBC Five Live listeners in 2005 after a police horse that helped restore order when spectators spilled onto the pitch in the 1923 FA Cup Final. Jonathan McGurk





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Cover: LNER Azuma No 800105 at Manea while on diversion due to engineering works on 18 January 2020. Ken Brunt
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Editor: James Abbott
Email: james.abbott@keypublishing.com

Design: Matt Chapman
Cover: Lee Howson

Editorial Address
Modern Railways, Transport Writing Services,
PO Box 206, Tunbridge Wells North, TN1 2XA, UK
Tel: 01892 457147
www.modern-railways.com

Industry and Technology Editor: Roger Ford
Email: roger@alycidon.com

Assistant Editor: Philip Sherratt
Email: philip.sherratt@keypublishing.com

Editorial Contributions

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Advertising

Business Development Manager: David Lane
Email: david.lane@keypublishing.com
Tel: 01778 420888. **Mob:** 07795 031051.
Fax: 01778 421550

Advertisement Manager and Recruitment Sales: James Farrell
Email: james.farrell@keypublishing.com
Tel: 01780 755131. **Mob:** 07741 264791.
Fax: 01780 757261

Advertising Production/Design: Becky Antoniadis
Email: rebecca.antoniadis@keypublishing.com
Tel: 01780 755131. **Fax:** 01780 757261

Modern Railways Advertising Department,
Key Publishing Ltd, PO Box 100,
Stamford PE9 1XQ

Subscriptions

Modern Railways, Subscriptions Department,
Key Publishing Ltd, PO Box 300, Stamford PE9 1NA
Tel: 01780 480 404
Fax: 01780 757 812
Email: orders@keypublishing.com
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Group CEO: Adrian Cox
Chief Content & Commercial Officer: Mark Elliott
Head of Circulation: Ann Saundry
Chief Customer Officer: Gaynor Hemingway-Gibbs
Production Manager: Janet Watkins
Head of Design: Steve Donovan
Head of Advertising Sales: Brodie Baxter
Head of Distance Selling: Martin Steele
Head of Finance: Nigel Cronin
Chief Digital Officer: Vicky Macey

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GETTING THE TRAINS TO RUN ON TIME

Network Rail Chief Executive Andrew Haines didn't mince his words on train running performance when he addressed a press conference in January. 'Every year we're more optimistic about what we will achieve and every year we fail to achieve it. So we're either in denial or incompetent. Either the inputs and the outputs don't match up, or we're trying to con people – or we're conning ourselves.'

It's the refreshingly blunt, uncompromising type of statement we have come to expect from the NR Chief Exec. There was more from him in this vein at our Golden Whistles 2020 conference, which you can read in detail on p70.

The railway is clearly struggling to accommodate the doubling or more of passengers that has taken place in the past quarter century. Lots of investment has gone in, in the shape of new trains and infrastructure, but

the dividend of a better-performing railway stubbornly refuses to show.

'The franchising system encourages operators to say they will introduce more trains, with better reliability – and it'll all be cheaper' opines Mr Haines. 'Something that sounds too good to be true, generally is.'

He says we've seen it at Northern, TransPennine Express, South Western Railway and West Midlands Trains – and the Department for Transport is admitting there is a trend. The DfT has had to respond to the public clamour about service quality in the North by relieving Arriva of the franchise and appointing the Operator of Last Resort to run the trains instead.

HOW TO EFFECT TIMETABLE CHANGE?

The crunch time generally comes when there is widespread timetable change. 'Operation Princess' on CrossCountry in 2002 had a disastrous

effect on punctuality, while May 2018 is notorious for the meltdowns on Thameslink and at Northern. Yet other timetable overhauls – think the Virgin High Frequency (VHF) timetable on the West Coast in 2008 and Great Western's changes in December 2019 – have gone relatively smoothly.

So what makes for a good transition to a new, more intensive schedule? Andrew Haines identifies a model:

- no competitive bidding process for a franchise just prior to introducing the new timetable;
- long-standing incumbents who know their business;
- no huge financial constraints;
- Network Rail has sufficient time to model the proposed timetable and test its validity.

'If you plan it as a system, it works' adds Tim Shoveller, a Stagecoach veteran who is now Network Rail's

Regional MD – North West and Central. 'When we were planning for the VHF in 2008, we considered the implications for Northern and the West Midlands – and it worked really well. If you're doing it without thinking of the implications on others, it doesn't' he says, pointing to West Midlands Trains' May 2019 changes which had disastrous implications for the south end of the West Coast route.

I WOULDN'T START FROM HERE

The next point to take on board is that a distinction needs to be drawn between:

- a timetable change where the underlying schedule is sound but poorly executed, and
- a timetable which plain won't work, however good you are at executing it.

Here the comparators are the May 2018 terrors, Thameslink and

Over the Nidd: Azuma No 800111 crossing Knaresborough viaduct on 28 April 2019 while working a Harrogate to Doncaster Carr IEP test run. Joel Coulson



Northern. There were problems with driver training and rostering on Thameslink that prevented an orderly introduction of the 18 trains per hour timetable, but a few months later, after these had been resolved, performance settled down.

Not so on Northern. There the performance problems have persisted: the timetable just plain won't work. Nowhere is this more apparent than on the notorious Castlefield corridor, the congested two-track section of railway leading west out of Manchester Piccadilly. Interrogated about Castlefield at the All Party Parliamentary Group for Rail in the North on 4 February, Chair of the OLR holding company, Richard George, told MPs it was like the old joke about the bumpkin asked for directions. 'It's the classic case of if you want to solve it, don't start from here. To solve the problem, you'd take trains off, but they're all full. We shouldn't have let those extra trains on in the first place, but we did.' Removing services to make the overall operation work properly is politically difficult; stakeholders are currently wrestling over just which should be the ones chosen (p13).

Speaking at the APPG, Rob Warnes, Northern's Network Planning Director, drew the comparison between

Great Western, where broadly the sequence went infrastructure / trains / timetable, and his own patch, where the cart was put before the horse: the new timetable came in before all the infrastructure was there and the new trains in.

It seems a simple enough lesson, but it's still going on. The December 2019 timetable brought in direct LNER trains to Harrogate every two hours – but the new platform 0 at Leeds, which will give extra flexibility for Northern services, is still a year or more away. Theoretically, the new services can be squeezed in. But in practice, the new Harrogates are frequently delaying three or four Northern services at Leeds.

And it may not end there: in May 2021, Northern is looking to extend today's Leeds – Knaresborough terminators forward to York, thereby increasing the Leeds to York via Harrogate frequency to half-hourly all day in May 2021 (currently it is half-hourly only in the peaks). At least the operator is suggesting more double track at Cattal and other infrastructure improvements as a pre-condition of this. But this proposal presumably knocks on the head any suggestion that Leeds might be relieved by rerouting LNER's Harrogate service via York.

MODELLING

'Why aren't we modelling these things more effectively before they're baked in?' Andrew Haines asks rhetorically. Network Rail is not involved in the timetable planning process until T-40 weeks, less than a year before it is due to come in. 'The system is flawed, there's no time to do anything about it' says the Chief Exec. 'A big timetable change you should have to submit much earlier: T-2 years for a really big one.'

Once the modelling is done, courage is needed to do what it tells you to do: if the tracks are crowded, don't be too ambitious. In an article in this issue (p62), LNER MD David Horne recalls how when he was at South West Trains, loosening out the schedules to give slightly longer journey times didn't result in falling revenue, as the old British Rail handbook would have suggested. No, it resulted in increasing revenue: passengers rewarded the railway for its more reliable service. He is thinking along the same lines as he reviews operations at LNER (p58).

One factor that will need consideration by the Williams review and others is the impact of the structure of the industry on all this. On the East Coast main line,

a state-owned operator (LNER) is negotiating with a state-owned infrastructure owner (Network Rail) and there is growing confidence on the part of both sides that acceptable compromises can be reached that will result in the major timetable recast due in 2021 being implemented smoothly.

It is no secret that under the franchise system, some franchisees have made large sums in Schedule 8 payments from failures on the part of the infrastructure operator. In effect, when planning timetables, this incentivises train operating companies to be over-optimistic about Network Rail performance: why worry about a punctual train service if you can make money out of Schedule 8?

GROWING

It is important to remember that poor performance is not a universal problem. Parts of the railway, such as c2c, Chiltern and Merseyrail, are doing well: we celebrated the best performers at our recent Golden Whistles ceremony (p64). Even the former misery line Southeastern has been doing better, as the London Bridge investment bears fruit and local operating initiatives (p73) yield benefits.

Complicating the railway's struggle to improve performance is that the passengers just keep on coming. Since the May 2018 meltdown, Northern has seen an 8% volume increase – despite all the problems. Just imagine what the figure might have been had the performance been good.

With journey numbers going up, the railway can't just wring its hands and declare no room at the inn. In days of yore, BR could have priced off local services where demand exceeded supply, but in the Extinction Rebellion era that's no longer acceptable – the railway must increase capacity to accept the coming modal shift. Some easing out of journey times to make the service more reliable, à la SWT in 2004, is sensible, but we must do more than that.

Andrew Haines points to the East Coast north of York, where this winter has seen problems as the track fills up with the extension of TransPennine Express's hourly Liverpool to Newcastle services to Edinburgh. After temporarily withdrawing some services to improve reliability, TPE had plans to reinstate the service fully from 17 February.

It's not just track capacity which constrains operations here.

Delays in authorising the power supply upgrade for the northern section of the East Coast main line (PSU2) mean TransPennine Express Class 802 bi-modes are currently having to be pathed under diesel-powered timings over the 65 miles between Chathill and Longniddry (p12, last month).

Between York and Newcastle there are now six passenger trains and one freight path per hour. 'We've got four-aspect signals, what is it that means we can't squeeze another train in?' asks Mr Haines. 'It's got to be stopping times.' In the medium-term we could improve the stations with passing loops, to keep the toothpaste flowing through the tube. But pending that, 'either we're happy to have seven trains per hour, or we change the stopping patterns' says Mr Haines.

There's the nub. The APPG Rail in the North meeting was rammed with MPs complaining about their local stations having trains flying through without stopping, and only an infrequent service for their constituents. This nettle has to be grasped, and it may sting: it is not always possible to serve every tip and turn while at the same time keeping the main inter-urban flows moving. At some point the politicians have to face up to this.

The Office of Rail and Road has granted paths for FirstGroup's ambition to add even more trains to the crowded East Coast route with its plans for open access services to Edinburgh, prompting Mr Haines to wonder if the pricing model is correct. 'There should be a scarcity value for the last path, it shouldn't be priced at the marginal cost of operation.' This is potentially even more politically explosive. Northumberland County Council wants to introduce a passenger service on the freight-only line from Blyth to Newcastle: this is one of the lines cited by the Government in its 'reversing Beeching' plans. But this would require use of the crowded East Coast main line between Benton Junction and Newcastle. Who would tell No 10 it couldn't have a new local service serving symbolic Blyth, the first of the former 'red wall' seats to turn blue on the night of 12 December 2019? That unenviable task must fall to Andrew Haines, who when interviewed for the Network Rail job, outlined his plans and added 'if you don't like that, then don't appointment me', or words to that effect. The industry needs to back his plain speaking to power. 



Temporary terminus? Visual of Old Oak Common station post-HS2. The Oakervee review recommends this becomes the temporary terminus for the high-speed line pending completion of the redevelopment at Euston.

BORIS BACKS HS2

OAKERVEE FAVOURS BUILDING FULL LINE

But Phase 2b route under review and new delivery arrangements for Euston

PRIME MINISTER Boris Johnson has given his backing to High Speed 2 and committed to delivering both phases of the high-speed rail programme linking London to Birmingham, Leeds and Manchester.

Speaking in Parliament on 11 February, Mr Johnson told MPs concerns over costs had not detracted from the fundamental value of HS2 and he pledged to 'get HS2 done'. His comments were made as the Government published Douglas Oakervee's review of HS2, which recommended the Government recommit to the full Y-shaped network.

The thrust of the 130-page Oakervee report is that building either Phase One or Phase Two of HS2 without the other makes little sense, building HS2 from north to south is impractical, and changing Phase One significantly would introduce years of delay because it would involve unpicking existing legislation. Mr Oakervee also pointed out that cancelling the project would cost at least £8.5 billion, including money already spent on HS2, and would inflict significant damage on the construction industry and the Government's reputation.

As newly elected Prime Minister, Mr Johnson asked Douglas Oakervee in August 2019 to lead a panel that would review 'whether

and how we proceed' with HS2. Mr Oakervee was no stranger to the project, having served as chairman of HS2 Ltd from 2012 until the end of 2013 and overseen the introduction of the hybrid bill for Phase One of HS2 into Parliament.

His review, which the Government originally said would report during autumn 2019, was to consider the benefits and impacts of HS2 and its affordability following claims that the cost of the scheme had risen substantially.

UNCERTAINTY LAID TO REST

Mr Johnson's decision to commission the review has resulted in a period of uncertainty for HS2 by providing an opportunity for arguments for and against the scheme to be reopened and ending a long run of unconditional support for the scheme from different administrations. Six months on and HS2 once again appears to have backing from Number 10 and this should allow main construction works to get underway during 2020, with those on Phase One planned to begin in April.

In his announcement Mr Johnson said: 'If we start now, services could be running by the end of the decade, so today the Cabinet has given high-speed rail the green signal. We are going to get this done, and to ensure that we do so without further

blow-outs on either cost or schedule, we are today taking decisive action to restore discipline to the programme.'

He later added: 'The review recently conducted by Douglas Oakervee... leaves no doubt of the clinching case for high-speed rail: a vast increase in capacity, with hundreds of thousands of extra seats, making it much easier for travellers to move up and down our long, narrow country.'

Mr Johnson told MPs the Government's Infrastructure and Projects Authority considers the first phase of HS2 can be delivered for its current projected cost of between £35 to £45 billion in today's prices. The opening of the Phase One route from London to Birmingham, and Phase 2a, from Birmingham to Crewe, is now anticipated between 2028 and 2031.

Mr Oakervee's report reiterates support for most parts of the HS2 Y-shaped network but advises the Government to scrap the Handsacre connection to the West Coast main line, which would allow HS2 trains to continue to Stoke-on-Trent, Stafford and Macclesfield. He says this is not required now Phase 2a to Crewe is being progressed alongside Phase One and argues it would be more cost effective to increase train frequencies running solely on the West Coast main line to these destinations. Mr Oakervee also calls for passive provision to

be made for a station at Calvert in Buckinghamshire, where HS2 will cross the planned East West Rail route.

In his foreword to the report Mr Oakervee said all members of the review panel, with the exception of Deputy Chair Tony Berkeley, supported the approach taken in the report. Lord Berkeley has previously criticised the review process and published his own 'dissenting report' (p94, last month).

HS2 LTD CRITICISED

Setting out the way forward for High Speed 2, the Prime Minister was critical of Government-owned delivery agency HS2 Ltd on which he pinned the blame for programme delays, cost rises and other issues, comments which appeared designed to deflect blame from ministers.

HS2 LTD TOP LEVEL APPOINTMENTS

CHAIR

2010	Brian Briscoe
2012	Douglas Oakervee
2014	Sir David Higgins
August 2018	Sir Terry Morgan
December 2018	Allan Cook

CHIEF EXECUTIVE

2009	Alison Munro
2014	Simon Kirby
2017	Mark Thurston

Speaking in Parliament, Boris Johnson said: 'When it comes to advocating HS2 it must be said that the task is not made easier by HS2 Ltd, the company concerned. Speaking as a member of parliament whose constituency is on the route, I cannot say that HS2 Ltd has distinguished itself in the handling of local communities. As everybody knows, the cost forecasts have exploded, but poor management to date has not detracted from the fundamental value of the project.'

Mr Johnson qualified his remarks by noting recent improvements to HS2 Ltd's performance under current chairman Allan Cook, appointed in late 2018. Prior to this Sir Terry Morgan had a short stint as chair, which ended after problems emerged at Crossrail Ltd for which Sir Terry was also chairman. Before this Sir David Higgins chaired the organisation after joining HS2 Ltd from Network Rail. His NR colleague Simon Kirby later became HS2 Ltd Chief Executive and was succeeded by current boss Mark Thurston in 2017.

UNSATISFACTORY EUSTON

One significant output from Douglas Oakervee's review of the project is the Prime Minister's decision to accept the former HS2 Ltd chair's recommendations that responsibilities for delivering parts of High Speed 2 should be taken away from his old employer and given to other organisations.

For HS2 Phase One this will see what the PM described as a 'special delivery vehicle' given responsibility for co-ordinating and realising the complex work required at Euston. Until now this has consisted of separate schemes to build a High Speed 2 station, upgrade the existing station and deliver an oversite development that will provide new public realm and improved links for communities across the railway. With a development area of 10 million square feet, Euston has been described as the largest oversite development in Europe.

In his report Mr Oakervee describes current plans for Euston as 'unsatisfactory'. Despite aspirations to redevelop Euston that go back many years a comprehensive scheme for the whole site has yet to be agreed despite the involvement of Government, HS2 Ltd, Network Rail, Camden Council and Lendlease, which was appointed master development partner for Euston in February 2018. No government has yet offered funding for the full site redevelopment, which has led HS2 Ltd to focus on building



The scheme as it stands: Phases One and 2a are likely to proceed substantially as set out here, but the route of Phase 2b is to be reviewed as part of High Speed North plans.

a two-stage high-speed annexe to the existing station. However Government chooses to structure the Euston special purpose vehicle, some form of funding guarantee will be needed to take this forward.

In addition to site-wide plans, Douglas Oakervee has questioned the scope of works planned for High Speed 2 at Euston and has suggested costs could be cut by reducing the core train specification from 18 to 14 trains per hour. Deviating from HS2 legislation would likely delay Phase One but cutting the number of trains might allow more challenging workstreams, such as a tunnelled dive-under, to be omitted. Mr Oakervee recommends a study to consider options to simplify the HS2 approach to Euston.

As part of the affordability review of HS2 Mr Oakervee was asked to consider whether it is necessary for HS2 to run to Euston or if terminating at Old Oak Common might be a more cost-effective solution. While he has concluded that Euston remains an essential part of the HS2 proposition, his recommendations for further work at Euston mean that when HS2 services start running they will initially operate to and from Old Oak Common.

Although HS2 Ltd has appointed a joint venture of Dragados and Mace as main contractor for Euston

station, the terms of this arrangement may face revision to accommodate emerging plans for the full Euston site and possible HS2 scope changes at and on the approaches to Euston. Under current HS2 plans, Euston will get 11 new 400-metre-long platforms, a new concourse and improved connections to Euston and Euston Square Underground stations. But according to the Oakervee report: 'HS2 Ltd and the DfT, together with Lendlease and Network Rail, have been exploring options for amending the design of Euston station to potentially reduce the size and number of platforms and encourage a single build.'

In addition to this rethink Mr Oakervee calls for more to be done to maximise commercial opportunities that could help finance Phase One stations, although he notes there are 'very limited UK examples of this approach being used'.

With such a significant level of uncertainty now surrounding the scope, delivery and financing of the southern High Speed 2 terminus, it seems unlikely HS2 trains will operate to or from Euston before 2030.

2B OR NOT 2B

Not only will HS2 Ltd step back at Euston but there will also be a change to the way HS2 Phase 2b is delivered. HS2 Ltd is expected to hand over

delivery of this part of the project to another agency which could take charge of all major rail investment programmes in the north of England, including Northern Powerhouse Rail. The Government says it will draw up an integrated plan for rail in the north – which will include identifying the most effective sequencing of all relevant investments in the north – informed by an assessment from the National Infrastructure Commission. Comments from the Prime Minister and Transport Secretary Grant Shapps on 11 February indicate Phase 2b will be rebranded as a standalone scheme – High Speed North.

These changes mean that despite the Prime Minister committing to HS2 Phase Two, the plans for this part of the route are now poised for their biggest shake-up since the Y-shaped network was announced more than a decade ago. Douglas Oakervee has recommended a review of Phase Two should be completed by this summer before a bill to build routes to Leeds and Manchester is laid before Parliament. Such a timescale suggests only cursory changes, but with legislation for Phase Two yet to be nailed down Mr Oakervee says opportunities exist to rein in costs and moots the idea of upgrading sections of existing railway rather than relying entirely on new alignments.

Taken together, the prospect of re-examining HS2 Phase Two alignments and integrating the scheme with a wider north of England rail investment programme suggest significant work and time will be needed before this part of Britain's high-speed rail programme can go ahead.

Mayor of Greater Manchester Andy Burnham welcomed the Prime Minister's announcement but said there were a number of issues on which he was seeking further clarification. 'The Prime Minister gave a firm timetable for HS2 from London to Birmingham, however there was no such commitment for the north. We want to see the construction of Northern Powerhouse Rail fast-tracked, in line with the commitment the Prime Minister made in Manchester shortly after entering office.'

Mr Burnham said the decision to bring development of HS2 Phase 2b and Northern Powerhouse Rail together provided an opportunity to redesign Manchester Piccadilly station to ensure it can accommodate future east-west rail connections as well as HS2. *Dan Harvey*

MAYOR'S £15 BILLION METRO VISION

150 MILES OF NEW LINE PROPOSED

MAYOR OF the West Midlands Andy Street has unveiled a 'Tube-style map of the West Midlands', setting out his 20-year ambition for Metro and rail lines in the region. Mr Street, who is seeking to be re-elected as mayor in May, proposes the construction of eight new Metro lines and 21 'heavy rail' stations across the West Midlands by 2040.

His Metro plans involve building over 150 miles of new lines and around 380 new stops and, in addition to trams running on roads and on rail lines through the use of tram-train technology, he proposes using 'cut and cover' tunnelling on narrower roads, enabling trams to run without impacting on road traffic. The eight lines would be named after local figures, giving them an identity beyond just the areas they serve.

In Coventry, new technology such as 'very light rail' trams and



Unto the breach: Conservative West Midlands Mayor Andy Street called on central government to invest in local transport in the region. Tony Miles

driverless autonomous pods could be used to connect key sites such as the University of Warwick, Jaguar

Land Rover (JLR), Ansty and the city centre, with JLR itself playing a key part in developing the vehicles.

As well as existing station reopening plans on the Camp Hill and Wolverhampton to Walsall lines, a raft of new or reopened stations is proposed, with a number of park and ride stations and infrastructure upgrades to provide the capacity needed for them where appropriate.

Mr Street says that the total cost of these plans would be around £15 billion, or around £750 million per year for the next 20 years. These costs would be met by additional funding from central government, contributions from housing and commercial developers and borrowing against the future income from ticket sales on the Metro.

Speaking to *Modern Railways*, Mr Street said his proposals had been welcomed by the Prime Minister, noting 'The Government was elected by breaching the "red wall" in the West Midlands and the North and they know that they have got to invest in infrastructure in the regions away from London.' Tony Miles

Closures confirmed for Island line upgrade

TWO MAJOR blockades will take place to enable upgrading of the Island line on the Isle of Wight ahead of the introduction of new trains.

South Western Railway's Island Line Programme Manager Andrew Mundy updated the Isle of Wight Bus and Rail User Group on the plans on 18 January. An eight-week blockade will take place between Smallbrook Junction and Shanklin, and four weeks between Ryde Pier Head and Ryde St John's Road.

The introduction of 5x2-car Class 484 EMUs built by Vivarail requires platforms at Ryde St John's Road to be lowered while those at Ryde Pier Head, Ryde Esplanade and Smallbrook Junction will be raised to meet accessibility legislation. Once platform heights have been adjusted the current Class 483 stock will be withdrawn because stepping distances will be worsened.

At Brading, where a passing loop will be reinstated to allow

the operation of an even-interval half-hourly service, the track will be lowered by 500mm to meet double track foot-crossing and Persons with Reduced Mobility (PRM) regulations. The foot crossing on the Shanklin side will be used for Disability Discrimination Act (DDA) compliant access to the island platform. The track lowering is Network Rail's responsibility and estimated to cost £1 million; it is currently

unfunded and unbudgeted and now subject to negotiations.

NR will upgrade the power supply at Rowborough and install new conductor rail with some of the existing inefficient negative earth return systems removed. Existing 98lb track will be relaid with 113lb, the whole line tamped to give a better passenger ride and Train Protection and Warning System (TPWS) introduced between Ryde St John's Road and Sandown.

The two blockades will require 7,000 tonnes of material, and to avoid road congestion consideration is being given to running engineering trains over a new connection at Smallbrook Junction between the Island line and Isle of Wight Steam Railway.

The Class 484 trains will arrive by road onto the short siding at Sandown behind the up platform. As one new train arrives, an existing Class 483 might be tripped to Havenstreet and into preservation. Class 484 trains will need to complete 750 miles of rolling test running at Long Marston and another 750 miles on Island line before acceptance. The new 30-minute interval timetable is due to commence in May 2021. Phil Marsh



Arrival point: Vivarail Class 484s will be delivered to the Island line on this siding at Sandown. Phil Marsh



APPROVAL FOR EASTSIDE METRO EXTENSION

PLANNING APPROVAL has been granted for the 1.7km Eastside extension of the West Midlands Metro, linking Birmingham city centre with Digbeth. A final business case was presented to the West Midlands Combined Authority board for approval on 14 February, based on a £227 million funding package with contributions from central Government, grants and borrowing against future profits from the tram network. The extension is expected to open by the end of 2025.

The Secretary of State has made the Transport and Works Act Order enabling the scheme to proceed. The extension will leave the current network between Bull Street and Corporation Street at a new delta junction, proceeding via stops at Albert Street, New Canal Street and Meriden Street to High Street Deritend in Digbeth. The New Canal Street stop would serve the proposed HS2 station at Curzon Street.

The funding package covers construction of the line, the

purchase of additional trams and extra work to improve Digbeth High Street. 1.2km of the 1.7km route will be without overhead wires, with trams operating through these sections on battery power.

A phased construction programme will start later this year with work on the delta junction with the existing line, requiring a short line closure during 2021. Work at the Digbeth end will start next year, including the wider project to revamp the area, with this work to be finished in time for

the 2022 Commonwealth Games. The last section to be built will be the link at the HS2 Curzon Street site in 2025, although Transport for West Midlands says it will continue to talk to HS2 about bringing this element forward.

The Eastside extension could form the first part of plans to project the network eastwards, with a 17km street tramway proposed through Solihull to Birmingham Interchange HS2 station and the NEC. This would require separate planning approval from the Secretary of State.

WMT ACTS TO CURB POOR PERFORMANCE

WEST MIDLANDS Mayor Andy Street has held off on his threat to ask the Department for Transport to strip Abellio of the West Midlands Trains franchise. The news came after WMT confirmed further compensation arrangements for passengers after poor performance last year following the introduction of a new timetable in May 2019. The compensation forms part of an extra £20 million to be spent by WMT after it breached performance targets.

On 23 December Mr Street tweeted that he had 'lost all faith' in WMT's ability to run the

network and set an ultimatum of improvement by the end of January or he would call for the franchise to be removed.

Changes to the timetable and other steps taken by the operator delivered a marked improvement in performance through January. As compensation for the poor performance, WMT has cut season ticket prices by 3% and will offer a 10% discount on walk-up fares for off-peak journeys during July and August. Mr Street insisted he wanted to see evidence that January's improvements were not just a one-off, and he has also asked

the DfT to impose a 'serious fine' over delays and cancellations last year.

Announcing the compensation commitment, WMT's new Managing Director Julian Edwards commented: 'Our performance during the second half of last year was simply unacceptable. I've put in place a clear plan of improvements which is already having an impact. The number of trains arriving on time has increased by 29% since Christmas with cancellations down by 39%.' As well as simplifying its timetable with key alterations in May, WMT is recruiting 86 more drivers and senior conductors and aiming to reduce

instances of skip-stopping, which it says will only be used as a last resort.

Talking to *Modern Railways*, Mr Street acknowledged that he understood the complex and lengthy process involved in changing timetables, and that some changes would take time. Noting performance has improved, he said: 'A fair minded person, I think, would say "yes, an improvement has come". It would have been totally unreasonable to ask to take the franchise away against that improvement and I genuinely want them to succeed.' *Philip Sherratt/Tony Miles*

Stadler wins Tyne & Wear Metro order

STADLER WILL build a new fleet of 42 trains for the Tyne & Wear Metro after being awarded a £300 million contract by North East Transport Authority Nexus. The trains will start arriving in 2022, with commercial operations beginning in 2023 and the full fleet in service by 2024.

The overall programme is valued at £362 million, with £337 million of funding from Government. The value of the deal with Stadler could rise to £700 million over 35 years through a contract to maintain the new trains.

The new trains will be walk-through five-car sets, each capable of carrying 600 passengers. Features will include air conditioning, Wi-Fi and USB charging points, as well as a sliding step deployed at each of the 16 doors (eight per side) to close the gap with the platform and improve accessibility. Nexus promises that the trains will be around 15 times more reliable than the current fleet, with a reduction of

30% in the power requirements of the new fleet thanks to more efficient motors and regenerative braking. They will also be fitted from the outset with on-board batteries, which will allow them to travel for 45 minutes away from overhead wires, potentially making expansion of the Metro easier and more affordable.

Stadler will build the trains in Switzerland, but with many parts coming from companies in the North East and elsewhere in the UK, Nexus says. The design of the trains will be finalised this year with production starting next year. The first trains will arrive slightly later than planned in 2022, but Nexus says a 'rapid delivery schedule' will see the full fleet delivered by 2024.

The design of the fleet has been the subject of consultation by Nexus, with more than 3,000 passengers giving their views in a survey in 2016. Stadler's designer, Zurich-based Nose Design Experience, teamed up with Newcastle firm Octo Design

to work on the trains. The livery of the trains is yet to be finalised, with initial images showing the new fleet in white.

Stadler will also build a new £70 million depot on the site of the current facility at South Gosforth. This will feature sedum roofing, rainwater recycling, daylight capture and other environmental features. The firm will take over maintenance of the current fleet this summer with around 100 staff transferring to become Stadler employees, before rebuilding the depot ahead of the new trains arriving. Nexus is building a separate £20 million satellite depot at Howdon in a project delivered by Buckingham Group Contracting, which will be used during the transition while the new depot is under construction.

The current fleet of 89 trains, half the length of the new ones, will be sent for recycling once the new fleet is in place. Two trains will be set aside for possible heritage interest and five carcasses for possible community use.

METRO FLOW

The order includes options for up to six additional trains to follow the initial 42. Nexus is bidding for £110 million of Government funding for the Metro Flow project, which would allow it to double the current single-track sections between Pelaw and Bede on the South Shields line, with the aim of completing construction work by October 2022. This would involve Nexus taking ownership of the single-track freight line which parallels the Metro, including track works and erection of overhead catenary, although Nexus says freight trains would still be able to run to Jarrow oil terminal. If this is achieved, four or five additional trains would be ordered and the daytime frequency of Metro trains across the network would be increased from five per hour to six per hour. The submission for the Transforming Cities Fund was made in November 2019. Nexus also promises to extend the hours of services to and from South Shields when the new trains arrive, as some will be stabled at the new Learning Centre there.

New trains for Newcastle: computer-generated image of Stadler-built trains at Tynemouth.



CASTLEFIELD CORRIDOR REDUCTIONS DISCUSSED

Welsh services could be diverted to Manchester Victoria

DISCUSSIONS OVER short-term resolutions to congestion on the Castlefield corridor in Manchester are ramping up. However, finding quick wins is proving difficult as industry experts have now suggested other nearby sections, Manchester Piccadilly to Slade Lane Junction and from there to both Stockport and Manchester Airport, also appear to meet the criteria for designation as Congested Infrastructure. Transport for the North is continuing to press for this to happen as it strengthens the case for faster delivery of infrastructure improvements.

Accepting that 'difficult decisions' need to be made about the December 2020 timetable, one industry insider told *Modern Railways* TfN's members accepted service removals in principle as long as they don't affect services they use, adding 'clearly a lot more work will be needed for December 2021'. It is understood TfN is supporting proposals to move TFW Rail services from Chester and North Wales, which run over the Castlefield corridor, to terminate at Manchester Victoria instead, and it is also keen to see Trafford Park freight



Boxing clever: one option being explored is the removal of freight trains from the Castlefield corridor at peak times. A Freightliner service negotiates the congested section between Deansgate and Oxford Road on 13 September 2019. Tony Miles

services removed from the corridor at peak times. Achieving either of these measures would, in the words of one local expert, 'Not be a silver bullet but just slightly better than now'.

TFW Rail does not have firm rights to run to Manchester Airport, but any change to its services would be seen as 'contentious', with capacity at Victoria also at a premium and turning back trains there requiring additional platform occupation. An alternative would be to run the TFW Rail trains on to Wilmslow, still using Castlefield but reducing occupation at platforms at the airport.

Whilst removal of the freight trains at key times is seen by stakeholders as 'an immediate amelioration measure', with many questioning why they are running when capacity is at such a premium, Network Rail points out this is not simple. Removing such trains from Manchester in the peaks means they will hit other parts of the network at peak times, and any changes would be reliant on goodwill from the freight operators because there is unlikely to be any commercial incentive for them to do so.

A proposal put forward to split the Liverpool to Crewe stopping

service, which regularly picks up delays on its long journey and imports them into the corridor, was 'not welcomed universally at TfN' with some members happy to accept it but others not, even though there is a view that this move would deliver tangible benefits.

It is understood some operators within Network Rail have proposed a more radical plan to switch TransPennine Express Manchester Airport services back to a reversal in the main trainshed at Piccadilly, using the original route via Guide Bridge to Stalybridge. However, this would also be complex with timetables at Slade Lane and Ardwick having been rewritten following the move by TPE to the Ordsall Chord route, and whilst this has created congestion through Castlefield it has delivered significant improvements within the Piccadilly shed – an intended consequence of the construction of the chord. This change would also remove almost all services from the Ordsall Chord, constructed at a cost of £85 million, exposing the folly of building the chord without the rest of the proposed infrastructure work. *Tony Miles*

OPERATOR OF LAST RESORT TAKEOVER FOR NORTHERN

THE GOVERNMENT'S Operator of Last Resort will take over the Northern franchise from Arriva on 1 March.

Transport Secretary Grant Shapps had already confirmed the franchise was no longer financially sustainable, which would either result in OLR taking over or a short-term management contract being awarded to Arriva. Arriva's Northern franchise began on 1 April 2016 for a nine-year term. OLR is already running the East Coast franchise as LNER.

'This is a new beginning for Northern, but it is only a beginning' Mr Shapps said in a written statement. 'Northern's network is huge and complex, some of the things which are wrong are not going to be quick or easy to put right. Nonetheless, I am determined that Northern passengers see real and tangible improvements across the network as soon as possible.'

Among these improvements, Mr Shapps promised removal of Pacers by the spring and the transfer of electric trains from other areas next year to boost capacity, along with a deep clean of all trains and a review of cleaning patterns. New technology will be trialled

to identify crowding pinch points and platforms at 30 stations will be extended. To tackle the number of cancellations to Northern services on Sundays, Mr Shapps has tasked OLR with building on the recent agreement with the drivers' union ASLEF to improve reliability. It is understood the current branding and livery will be retained but with references to Arriva removed.

Robin Gisby and Richard George, who lead OLR, have been asked to prepare a plan for the first 100 days of the operation, with the scope including operational management, rostering patterns and customer experience. A new North West Recovery Task Force, co-ordinated by Network Rail, will deliver recommendations on how best to boost capacity and performance in the short, medium and longer term. OLR will also work with NR to build 'a comprehensive new masterplan to review congestion around Manchester', which will include assessment of the Castlefield corridor as well as key junctions and interactions across the wider network, developing a series of interventions to deliver the improvements required.

Mr Shapps concluded by emphasising that change to the struggling franchising model 'is coming' as part of the Williams Review. He said the decision to revert to public sector control of Northern marks 'the first small step' in the journey to give local leaders more power over local services.

Responding to the news, Chris Burchell, Arriva MD UK Trains said: 'We had a clear vision for the Northern franchise that would better connect the cities of the North with more frequent, reliable and modern services and unlock economic growth. It was clear however that, largely because of external factors, the franchise plan had become undeliverable. A new plan is needed that will secure the future for Northern train services. As such, we understand Government's decision today.'

SWR NEXT?

Transport Secretary Grant Shapps has confirmed a request for proposal has been issued in anticipation that the South Western Railway franchise will also end prematurely.

FirstGroup and MTR took over the franchise in August 2017 in

a seven-year deal. SWR's accounts for the year ending 31 March 2019, published on 3 January, reported a significant operating loss, which the company said had continued beyond the year end date. In a written statement to Parliament, Mr Shapps said: 'South Western Railway's (SWR's) recent financial statements have indicated that the franchise is not sustainable in the long-term. Poor operational performance, combined with slower revenue growth, has led the financial performance of SWR to be significantly below expectation since the franchise commenced in August 2017.'

While the operator has not yet failed to meet its financial commitments, the Transport Secretary said the Department for Transport was preparing suitable contingency measures, with options including a new short-term contract with SWR with 'tightly defined performance requirements' or transferring the operation to the Operator of Last Resort (OLR).

Domino theory: Northern the latest to fall – p32



How it could look: artist's impression of a ground-level view of the EWR platforms proposed on the viaduct over the West Coast main line at Bletchley.

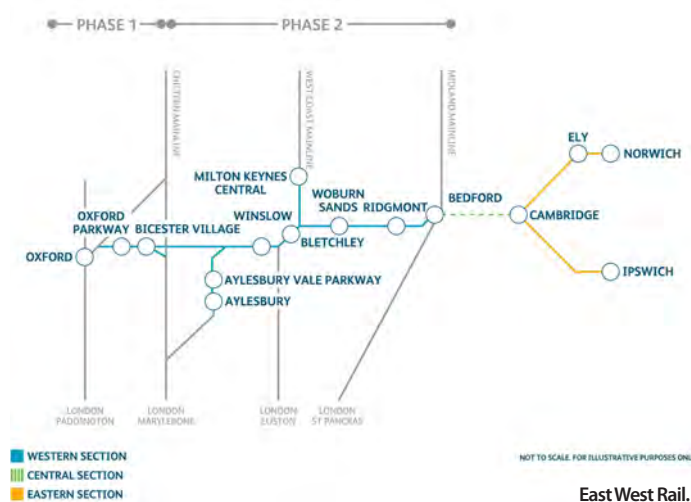
KEY LANDMARKS FOR EAST WEST RAIL

TWAO in west, route confirmation in east

EAST WEST Rail has taken key steps forward with the granting of planning permission for Phase Two and the selection of a preferred route for Phase Three between Bedford and Cambridge.

The Secretary of State for Transport has approved Network Rail's Transport and Works Act Order application, authorising the reinstatement of the partially disused routes between Bicester, Bletchley and Bedford and between Aylesbury and Claydon Junction (where the former Great Central line joins the Bicester to Bletchley route). The order also makes provision for a new station at Winslow, platforms at Bletchley and Aylesbury Vale Parkway and platform extensions at Woburn Sands and Ridgmont.

Phase One of EWR upgraded the line between Oxford and Bicester, which is now used by Chiltern Railways services between Oxford and London Marylebone. On completion of Phase Two, the proposed service pattern is two trains per hour (tph) between Oxford and Milton Keynes, 1tph between Oxford and Bedford and 1tph between Milton Keynes and Aylesbury. These would use the reinstated route as far east as Bletchley, with the Bedford services then running over the existing Marston Vale line, calling at Woburn Sands and Ridgmont. Proposed linespeeds are 100mph between Bicester and Bletchley, up to 90mph



East West Rail.

between Aylesbury Vale Parkway and Claydon and the current 60mph on the Marston Vale line.

The estimated cost of the scheme as of July 2018 was £1.084 billion, following a cost challenge exercise that saw changes to the scope and a reduction in cost, which have been a source of some controversy. These include the removal of electrification from the scheme, although new structures will have sufficient clearance to accommodate future electrification and the promoters say the benefits of the scheme can be achieved with a diesel-only service. The additional cost of replacing five existing structures with ones that can support an electrified railway has been estimated as £34.5 million.

The line between Aylesbury and Claydon Junction will be single track rather than double track as originally proposed; in part this is because an upgrade of the Princes Risborough to Aylesbury branch had already been shelved and plans for a through Marylebone to Milton Keynes service abandoned. Platform lengths have also been cut from eight-car to four-car maximum length, accommodating the three-car units initially planned for the route, while an hourly freight path between Oxford and the West Coast main line has also been removed.

BEDFORD TO CAMBRIDGE ROUTE IDENTIFIED

Meanwhile, a preferred route has been selected for the following

phase of East West Rail between Bedford and Cambridge, with this route backed by Government.

The East West Railway Company held a six-week consultation on five options in early 2019. The preferred option, Route E, would use the existing Bletchley to Bedford Marston Vale line into the current Bedford Midland station, providing interchange with Thameslink and Midland main line services. It would then leave Bedford to the north, with a new interchange station on the East Coast main line between Sandy and St Neots before continuing east through a further station at Cambourne and joining the West Anglia main line to enter Cambridge from the south.

The preferred route has an estimated capital cost of £3.7 billion, the second lowest of the five options on which EWR consulted. Estimated journey times with the preferred route are 33 minutes from Bedford to Cambridge and 1hr 28min from Oxford to Cambridge.

With a preferred route option identified, further development work will continue to select a more detailed preferred route alignment in 2021/22. A development consent order application will then be submitted, with the aim of securing consent in 2024 and starting construction the following year. EWR aims to begin running direct trains between Oxford and Cambridge by the end of the decade.

2028 TARGET FOR COWLEY REOPENING

AN INITIAL outline study has suggested reopening of the Cowley branch south of Oxford to passenger services is feasible. Capital costs are suggested as £29 to £38 million for a basic level of provision, rising to £35 to £53 million with potential enhancements, not including costs of land acquisition for stations. A likely reopening date of 2028 is suggested.

The branch would be reopened with stations at Oxford Business Park and Oxford Science Park. A doubling of linespeed to 50mph would enable a journey time to Oxford of 10 minutes. The proposed

service would be an extension of Chiltern Railways' half-hourly London to Oxford services but would require capacity enhancement on the main line between Oxford and Kennington Junction.

The report comes as part of wider findings of the first stage of the Oxfordshire Rail Corridor Study (ORCS). The study suggests extending East West Rail Phase Two services through Oxford to Didcot when EWR begins running in 2024, calling at Culham. This would restore the originally envisaged EWR service pattern, directly connecting Bicester with Didcot.

The study also found additional capacity is required on CrossCountry services by 2024 and more services by 2028, plus additional capacity on the local Oxford to Didcot corridor by the same year. Extra capacity will also be needed on Oxford to Marylebone services. There are proposals to enhance North Cotswold line services and extend EWR services beyond Oxfordshire to Bristol and Southampton, although the latter goes significantly beyond the current specification of EWR services.

As well as the two new stations on the Cowley branch, a new station at Grove/Wantage may be

justified by 2028, while a station at Begbroke is included in the 2033 scenario. The number of freight paths between Didcot and Oxford is predicted to rise from six in 2023 to seven a year later and to eight by 2043.

A study will commence in March to develop options for four-tracking from Oxford North Junction through Oxford to Didcot, including requirements for Oxford station and capacity analysis, and is expected to last around nine months. A study in the same timeframe will also examine the Didcot to Swindon section.



Demonstration service: a Chiltern Railways Class 168 DMU crosses the Isis east of Kennington Junction with a stakeholder special to Cowley on 5 November 2014. M. John Stretton

NEW EDITOR FOR MODERN RAILWAYS

JAMES ABBOTT will be retiring as Editor of *Modern Railways* after the April issue this year and will be replaced by current Assistant Editor Philip Sherratt.

James has edited the magazine since 1983, with a five-year break at the turn of the 1990s. During that time the magazine has become the leading journal for the rail industry, renowned for its up-to-date reporting and perceptive analysis on the latest developments. While he is stepping down as Editor, James will remain a key part of the *Modern Railways* team, continuing to contribute to the magazine and supporting its major programme of events including the 4th Friday Club and *Modern Railways* RVE.

'*Modern Railways* has aspired to the highest editorial standards ever since its inception in 1962: it is a great comfort to me that I can hand on the editorial baton with confidence to someone who will uphold those standards' commented James.

'Philip Sherratt has proved himself an able Assistant Editor and I am sure will shine as Editor – I wish him all the best.'

Philip joined the magazine in 2014 as an assistant within the editorial team. As well as contributing to the magazine and its events programme, he has played a key role in the development of *Modern Railways Insight*, the licensed online news and directory which launched in 2015.

'*Modern Railways* has been at the forefront of reporting on events in the railway industry for nearly 60 years' said Philip. 'Under James's editorship it has set high standards for incisive reporting which gets to the heart of the issues that matter and is now the market-leading magazine. It is a great privilege to be able to carry on this excellent work and continue to grow and enhance the *Modern Railways* portfolio at an exciting time for the industry, with major investment taking place through projects such as Crossrail and



Getting the story: James Abbott at an industry reception in the Houses of Parliament.

HS2, as well as the potential for significant structural change courtesy of the Williams Review.'

As part of these changes, there is an opportunity for a new Assistant or Deputy Editor to join the team, based at Key Publishing's office in Stamford. An attractive package is available for the right applicant; for more details of this vacancy see the advert on page 21 or visit www.keypublishing.com/vacancies.



Taking the editor's chair: Philip Sherratt.



Anglo-Dutch co-operation: Transport Secretary Grant Shapps (centre) welcomes the preview direct train from Amsterdam at St Pancras on 4 February 2020. Keith Fender

Amsterdam to London direct from 30 April

THE FIRST direct Eurostar in commercial service will run from Amsterdam to London on 30 April. Through services from Rotterdam will begin slightly later, on 18 May.

A media preview of the service took place on 4 February. Direct services from London have operated since April 2018, but the return has been delayed awaiting agreement over the carrying out of security checks before boarding in the Netherlands. Tickets for the new services went on sale on 11 February.

Initially there will be two return services, leaving Amsterdam at 07.48 (not Sunday) and 18.48 (not Saturday), taking just over four hours for the journey to St Pancras. This includes a 30-minute stop in Brussels where intra-Schengen passengers will leave the train before those travelling from Brussels to London will join. There are ambitions to add a third and then a fourth direct return service, which require additional resourcing from Dutch border controls. Three

outward direct services operate from London to Amsterdam, leaving St Pancras at 07.16, 11.04 and 17.16.

Eurostar CEO Mike Cooper told *Modern Railways* the operator already carries around 12% of London to Amsterdam traffic, even with the need to change trains in Brussels on the return journey. While he said he did not expect Eurostar's share to reach the 75% it holds for the London to Paris market, he expects demand to grow significantly with the advent of the direct return service.

Mr Cooper also reported good progress with the merger between Eurostar and Thalys to create a new company called Greenspeed. He explained this would take place in three phases, first finalising the plan as to what the company will look like, then consulting with works councils and trade unions before referring the merger to competition authorities in Brussels. These stages are expected to be completed around the turn of the year.

STAGECOACH CASE HEARD AS ARRIVA SETTLES

THE COURT case brought by Stagecoach against the Department for Transport over the company's disqualification from three franchise competitions began on 20 January. Arriva's claim against the Department for its exclusion from the East Midlands franchise competition was due to be heard at the same time, but the company reached a settlement with DfT and instead withdrew its claim.

In April 2019 it was confirmed Stagecoach was disqualified from the East Midlands, South Eastern and West Coast Partnership competitions for non-compliance concerning pensions (the latter in a joint bid with Virgin and SNCF). The East Midlands franchise was simultaneously awarded to Abellio, with the third bidder in that competition, Arriva, also excluded for submitting a non-compliant bid in respect of pensions. A spokesperson for Arriva UK Trains said: 'We can confirm that we have agreed a settlement on

terms confidential to both parties and, as a result, have withdrawn our claim.'

Stagecoach's claim centres on the legality of the disqualification decision by the Department for Transport. The company claims there was no clear guidance as to the process for disqualifying a bid, with DfT having 'wide discretion' to do so, and in any case Stagecoach believes this discretion was 'exercised in an unlawful, manifestly erroneous and disproportionate manner'.

In its opening submission to the case, released in a redacted version, Stagecoach highlights that it received 'a series of constantly evolving and contradictory bidding instructions' as regards DfT's position on pensions based on a highly limited 'pension risk sharing mechanism' (PRSM), which it says left bidders facing 'uncertain and potentially enormous pensions risks'.

Stagecoach accuses DfT of a lack of transparency for engaging PwC to carry out an additional financial robustness test on pensions

compliant bids, which had not been set out in the Invitation to Tender and was not disclosed to bidders, thus departing from the published process. It further claims this process was also erroneous, describing PwC's advice as 'manifestly flawed' in its conclusion that pensions compliant bids were robust to downside pensions risks.

BIDS NOT BELIEVABLE

A meeting of DfT's Board Investment and Commercial Committee (BICC) in December 2018 saw committee members express concern about the process on pensions, noting it seemed 'the believable bids were potentially non-compliant and the compliant bids potentially unbelievable'.

Following the completion of the PwC test, DfT's recommendation was to award the East Midlands franchise to Abellio and disqualify Stagecoach and Arriva, and to disqualify the bid put in by Stagecoach and its partners Virgin and SNCF for the West Coast Partnership competition.

A subsequent submission to the Secretary of State proposed these actions along with cancellation of the South Eastern competition. On 20 January the court was told that Chris Grayling, the Secretary of State at the time, was reluctant to follow this advice and was minded to cancel all three competitions, but was persuaded he had no choice but to disqualify Stagecoach's bids and follow the advice he received.

In the event, the South Eastern competition was not cancelled and Stagecoach's bid for that franchise was excluded in the same manner as for the other two competitions. Stagecoach was subsequently informed of the decision on 9 April. The South Eastern franchise competition was eventually cancelled in August, after Grant Shapps had replaced Chris Grayling as Secretary of State.

Closing submissions in the court hearing were expected in mid-February.

NEWHAVEN MARINE PROPOSED FOR CLOSURE

Up for closure: this is Newhaven Marine station on 12 September 2014, eight years after boat trains had ceased but technically still open. The girders were declared unsafe and all were later demolished. Although disused it is only now, in 2020, that Network Rail has applied to the Department for Transport for formal permission to close the station. Newhaven Harbour station, only steps away, remains open and the land on which the Marine station stands might be used for aggregates sidings in future. John Vaughan



ACCESSIBLE COACH EXEMPTION EXTENDED

A FURTHER dispensation against accessibility requirements for rail replacement transport has been granted by the Department for Transport, running until 30 April.

The Public Service Vehicle Accessibility Regulations (PSVAR) took effect on 1 January, meaning train operators are required to ensure replacement buses or coaches have appropriate

accessibility provision. DfT had previously granted a one-month exemption ('Informed Sources', last month), but this has now been extended subject to conditions.

Writing to Rail Delivery Group Chief Executive Paul Plummer, Rail Minister Chris Heaton-Harris acknowledges assurance provided by Mr Plummer regarding steps taken by the industry at a meeting

with the minister. Confirming the exemption, the Minister writes:

'I accept that were all non-compliant coaches and buses removed from providing rail replacement services there would be a disproportionately negative effect on the provision of rail replacement services for all passengers, given the number of compliant vehicles in the market.' The minister says a plan from the

industry is required to be submitted by the Easter Parliamentary recess.

The conditions attached to the extension are that PSVAR compliant vehicles must be used wherever possible, that alternative accessible transport must be provided where this is not the case, and 'unnecessary and extended waiting periods' must be avoided during planned engineering works.

BEECHING REVERSAL FUND LAUNCHED

THE GOVERNMENT has launched a £500 million fund which it says is 'aimed at kickstarting reversal of the Beeching cuts'.

The policy had been announced in November, prior to the General Election. As part of the launch of the reversal scheme, £1.5 million has been allocated to development of reopening of the Ashington – Blyth – Tyne line in Northumberland, and

£100,000 towards a feasibility study for reinstating the Fleetwood to Poulton-le-Fylde line in Lancashire. The Fleetwood line closed in 1970, while the ABT line is intact as a freight line but has no regular passenger services. A £300,000 'Ideas Fund' will kickstart the process of reinstating axed local services, with ideas to be considered for further funding in future.

The Government has also announced a fresh round of the New Stations Fund, with £20 million allocated. Two previous rounds have already helped develop 10 new stations across England and Wales.

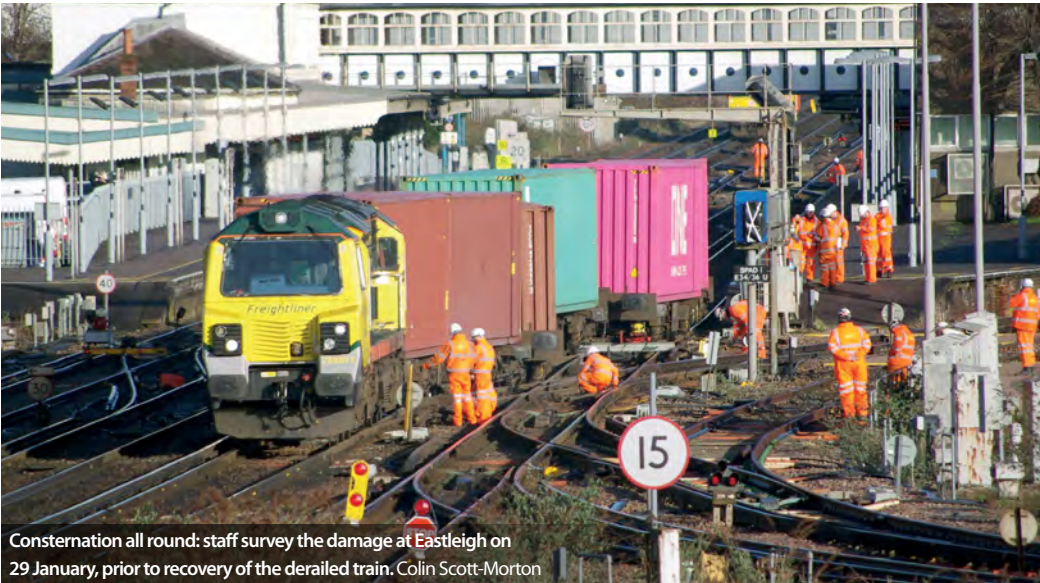
In a recognition that the £500 million fund will be of little practical use in actually reopening substantial portions

of railway, Government says the fund will 'accelerate the delivery of schemes that are already being considered for restoration, making possible the rapid reopening of certain stations and lines'. Ambitions to reopen lines closed in the Beeching era had been stated by Government as long ago as December 2017, when it published a 'Vision for Rail'.



Proposed for passengers: the Blyth route in Northumberland. At West Sleekburn on 4 February 2020, No 66039 hauls coal empties from Tees New Yard to North Blyth. Bill Welsh

BOXES OFF THE RAILS



Consternation all round: staff survey the damage at Eastleigh on 29 January, prior to recovery of the derailed train. Colin Scott-Morton



Plain-lined: the down fast line at Eastleigh on 3 February 2019 with the temporary trackwork fix, with Nos 66419 and 66592 passing with a container service. Ian Francis

The railway reopened on 3 February after Network Rail removed the wagons and installed 160 metres of temporary track. However, several sets of points were damaged, requiring a new set to be built to a bespoke design, and until these are installed operations are hampered.

The cause of the incident was a small number of fastenings giving way, leading to the rails spreading apart and the train's wheels dropping into the space between them. Network Rail reports the type of fastening involved is used in a limited number of locations, and it has conducted enhanced precautionary inspections of all similar fastenings across the Wessex route, with no additional areas of concern identified through this work. A separate RAIB investigation is also taking place.

The Eastleigh derailment followed another incident on 23 January on the Gospel Oak to Barking line between Leyton Midland Road and Walthamstow Queens Road, where a freight wagon derailed and caused extensive damage over a 2.5-mile stretch of railway. The line was closed between Barking and South Tottenham while repairs took place; the line was due to reopen on 19 February, shortly after we went to press.

ON 28 JANUARY 2020, a container train derailed on a set of points just south of Eastleigh station following a crew change. According to the Rail Accident Investigation Branch, the locomotive became partly derailed and then re-railed itself, and some of the wheels on four of the following five wagons also became derailed, causing significant damage to 160 metres of track, two sets of points and sleepers.

MORE REACH STACKERS FOR iPORT HUB

COOPER SPECIALISED Handling is to supply four new reach stackers to the iPort Rail terminal at Doncaster. The terminal has had two of the machines since it opened in 2018.

The rail terminal is integrated within the iPort logistics hub, located off junction 3 of the M18 motorway. The new machines will be Sany 4540GS machines with a 7,000mm

wheelbase and support jacks to handle fully laden containers from the second rail line at iPort Rail.

Cooper will adapt a workshop at iPort, which was purpose-built

to accommodate reach stackers, and fully equip it as a maintenance facility. The workshop will both maintain the machines at the terminal and act as a hub for the region.

Rail Freight Group

Time for timber trucks to give way to trains

Given the importance of timber to the rural Scottish economy – with 10 million tonnes forecast to be harvested every year for the foreseeable future – it is more than disappointing that not a single wagon of timber has moved by rail in Scotland for a decade. But there is now renewed hope that timber trains will once again operate north of the Border, helping the industry to meet the targets for rail freight growth set by the Scottish Government.

For a period of around five years in the late 1990s, underpinned by the wagonload network operated by English, Welsh & Scottish Railway,

a wide range of timber flows was transported by rail from Scottish forests. Trains took logs from up to 18 railheads spread across the country to board, paper and sawmills in Scotland, England and Wales, helping to ease the pressure from 44-tonne trucks on rural roads.

However, shareholder pressure for commercial returns led to a rationalisation of the wagonload network in 2000, notable in Scotland for the withdrawal of services from 12 of the timber terminals. The fragmented flows of timber – particularly to those mills (the majority) which were not

directly rail-connected – did not lend themselves to competitive pricing or service quality.

The final surviving timber train service – carrying a payload of over 600 tonnes – operated from a Crianlarich railhead, but was suspended in 2009, in part due to concerns about HGVs having to reverse out on to the A82 trunk road because of the entrance configuration and lack of space within the adjacent rail yard.

Ironically, Scottish timber still moves by train, but only southwards from the Carlisle railhead, with HGVs feeding in supply by road from wide tracts of forest in the Borders and

Dumfries & Galloway. The continuing success of the Carlisle rail facility has been attributed to five factors:

- a simple supply chain, with regular deliveries of large quantities of timber;
- a dedicated contract rail service for one buyer to one rail-served mill (in north east Wales);
- reliable access to a choice of timber suppliers and road hauliers;
- the lease of long rail sidings to handle full trainloads, supported by adequate road access, storage space and a weighbridge; and
- good quality railway rolling stock and convenient repair facilities.

Ford flow goes green

DIRECT RAIL Services has been awarded a contract to transport cars from the Ford factory at Dagenham to the rail terminal at Garston, near Liverpool. The operator will use its Class 88 locomotives to haul the services; apart from the terminals the route is electrified throughout, and the '88s', supplied by Stadler, incorporate a diesel engine for last-mile operation away from overhead wires. Under the previous operator this flow was often worked by diesel locomotives throughout.

DRS will work with automotive transport specialist STVA UK, which runs the Garston terminal. Each service will carry around 190 vehicles on a mix of double deck and single deck wagons. Trains will operate six to eight times a week, with potential for this to rise to 10 services.

GBRf waste to Calvert

IN DECEMBER GB Railfreight resumed services from Cricklewood to Calvert, transporting building and construction waste.

The service operates five times a week from the S. Walsh and Sons waste transfer station to FCC Environment's landfill site at Calvert. Trains carry around 1,500 tonnes of material from projects such as the Brent Cross redevelopment and preliminary works for HS2.

To the above should be added the principle of partnership and good communication between all the players in the supply chain and the critical importance of the motivation, management and performance of the rail haulage company. The challenge is to identify locations which can cost-effectively replicate such conditions – and/or to find innovative but robust methods of transferring logs from truck to train deep within timber harvesting areas.

In recent years the forest industry and HiTRANS, the regional transport partnership for the Highlands, have been exploring the scope for revived rail timber transport on the Far North line to Caithness, and the West Highland line to Fort

Productive times for W. H. Davis

THE WORKSHOPS of W. H. Davis in Langwith Junction, Shirebrook, are as busy as ever, with modification of existing wagons for new applications the principal activity.

The major decline in the UK coal market has left the rail industry with hundreds of 102-tonne bogie wagons that are now sat redundant in various sidings. Some have gone on to be used for aggregates, but operationally that brings its own problems. Aggregate is heavier than coal, and because of the axle loading on the network it is not possible to fill the wagons with an accurate weight.

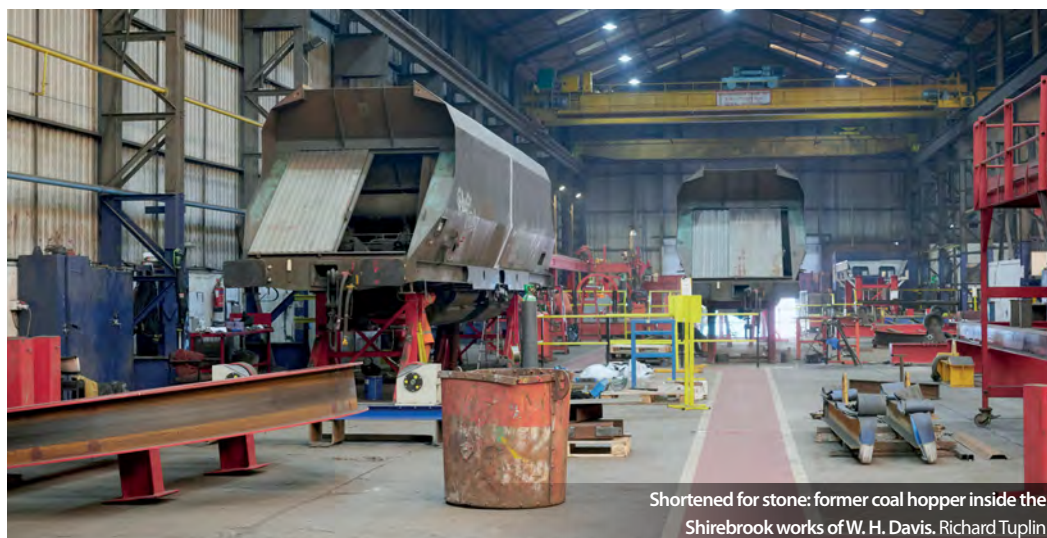
Bogie wagons owned by VTG Rail, both in the form of HHAs previously operated by Freightliner and HYAs/IAs that have been operated by GB Railfreight, are being reduced in length by having the middle hopper section cut out of them, before the remaining two halves are welded

back together to create a shorter wagon. The result is that the wagons can be fully loaded with aggregate without exceeding weight limits. All vehicles passing through the works are being allocated a new design code to reflect the technical changes but are retaining their current identities and TOPS code. Currently around 20 HHAs are complete, and these are being fully repainted, while around three-quarters of the HYA/IA conversions have been released, although the latter are only being patch painted to remove graffiti, at the request of the leasing company.

Elsewhere in the works, the first frames for the prototype new 'Ecofret' tri-deck intermodal wagon are being completed ahead of its testing, certification and commissioning process that should commence by the end of April. W. H. Davis is redesigning parts of the original VTG Rail Ecofret

design to accommodate the new Axiom LN20.5 bogie. A total of 84 triple-deck wagons are to be built at Shirebrook, with each deck being 40ft in length, and capable of carrying either two 20ft or one 40ft container.

With the reduction in 30ft containers, the existing fleet of 60ft wagons is becoming less economic, leading to empty space on trains. The new triple deck vehicles will have conventional screw coupling and buffers on the outer vehicles, with bar couplings on the two inner connections. The first 16 of the production fleet are due to enter traffic towards the end of the year, with the second 16 to be ready for the end of January, with the final batch being delivered later next year. The first customer is GB Railfreight, which will lease 32 of the triple-platform wagons from VTG. *Richard Tuplin*



Shortened for stone: former coal hopper inside the Shirebrook works of W. H. Davis. Richard Tuplin

and the Ayr to Stranraer line serving the extensive South Ayrshire and Galloway forests. At Crianlarich the A82 now bypasses the village, creating the opportunity for a more accessible, fit-for-purpose railhead to take trucks off the main road south by Loch Lomond.

Direct rail connection at one end of the transit at least can be a crucial factor in rail economics, particularly for shorter trunk hauls. One of Scotland's two remaining paper mills – at Irvine – is directly rail-connected already, and board mills at Cowie (Stirlingshire), Dalcross (near Inverness) and Barony (Ayrshire) lie close to existing rail routes, with scope to relay sidings.

We all want to see more freight on rail, and timber lorries continue to be a significant source of disruption to rural communities across Scotland. By collaborating on innovation and investment, the forest and rail industries and the Scottish Government can help to transform the role of our rural railways – realising the lessons from as far afield as New Zealand, Norway and Sweden that 'tourists and timber' are a winning traffic combination on Highland-type rail routes.

An opinion column of the Rail Freight Group, www.rfg.org.uk. A version of this article first appeared in The Scotsman.

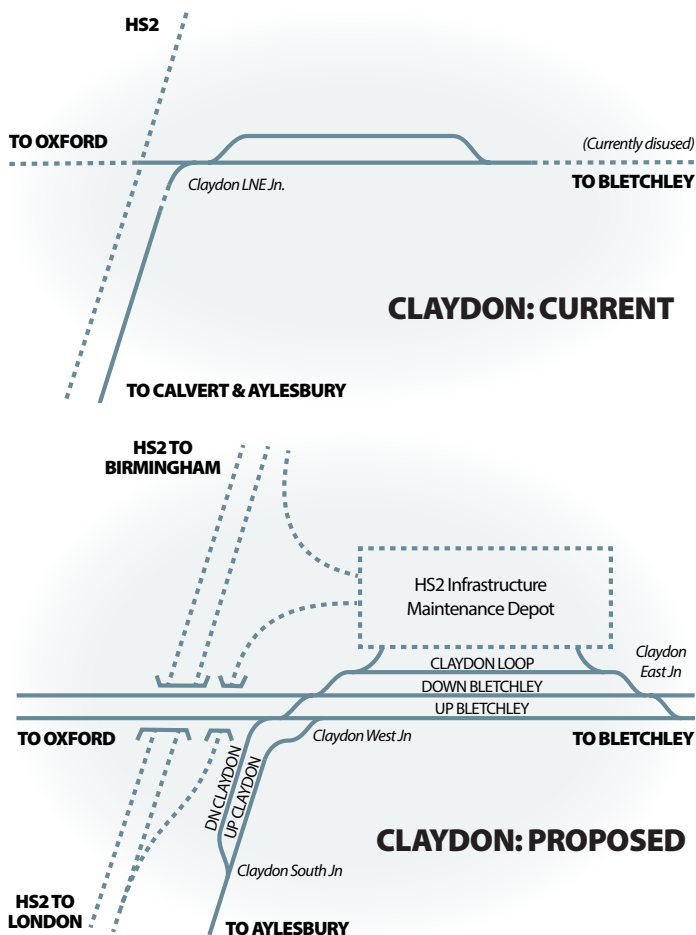


Preparing for HS2: looking north towards Claydon Junction on 22 January 2020, showing the area now given over to HS2 works. Phil Marsh

Claydon prepares for HS2

CONTROL OF the north end of the stub of the former Great Central's London extension has moved from Claydon LNE Junction to a portacabin at the site of the former Waddesdon Manor station, south of Quainton Road. The line is used by freight trains destined for the waste tip at Calvert; north of the portacabin the line will operate as a siding, with the points at Calvert being worked by train crew. In order to make way for HS2 the sidings at Calvert are to be relocated from the west to the east side of the line and will be two miles further south, at Greatmoor. Recontrol is likely within a few years as the former Great Central

route is earmarked for the return of passenger services under the East West Rail project, with an hourly service from Aylesbury to Milton Keynes pencilled in for 2025. The new Claydon loop planned under remodelling of the area for HS2 is significantly longer than the current loop, with the east end at Claydon East Junction being almost at the former Claydon station, some three-quarters of a mile further east than where the former loop ended. Campaigners are requesting provision of a station on EWR at Claydon; this could provide a service for staff at the adjacent HS2 depot.



Resonate to supply TM for Anglia

IN AN Official Journal of the European Union Notice issued on 11 February, Network Rail revealed it intends to award a contract to Resonate covering the provision of Luminate Integrated Traffic Management at the Liverpool Street and Thames Valley Signalling Control Centres. Worth £50 million over 10 years, the contract follows a one-year trial of Luminate at the Thames Valley SCC ('Informed Sources', November 2019 issue).

Funded by Resonate, the trial covered the Great Western main line between London and Bristol and started in June 2018. On the successful completion of the evaluation, the TM system remained operational pending agreement on payment for its long-term use.

A new form of contract was required for the acquisition of Luminate, which is a software-based enhancement to Resonate's IECC Scalable control systems and

workstations installed at both TVSCC and Liverpool Street. Under the proposed deal Network Rail will license the Luminate software, with Resonate providing maintenance and support. Future provision of enhancements to Luminate functionality is planned, with management of train crew and rolling stock likely to be a priority.

Liverpool Street has four IECC workstations. Three have already been upgraded to Scalable with the fourth due to be commissioned in June. Luminate will cover all the routes managed from the centre which extend to Marks Tey, Stansted/Elsenham and Shenfield.

Under a separate contract Resonate is to upgrade the Upminster IECC to Scalable. Thales' ARAMIS TM system at Romford Rail Operating Centre is providing an Isolated TM facility at Upminster ('Informed Sources', November 2019 issue). *Roger Ford*

Signalling frameworks awarded

FIVE FRAMEWORK contracts for signalling have been awarded by Network Rail. The deals are worth an estimated £2.4 billion over Control Period 6 (2019-24), and if options to extend to 2026 are exercised this could rise to £3.6 billion.

The frameworks went live on 31 January 2020 and are split into five geographical lots. Alstom has the contract for the Southern and Eastern Regions, Siemens Mobility for Scotland and North West & Central, and a joint venture of

Hitachi Rail and Linbrooke Services for the Wales & Western Region.

The major signalling frameworks are the final awards in a three-tier approach to signalling delivery for CP6, following contracts last year for minor signalling and refurbishments and for signalling and telecoms. NR says the frameworks are part of a wider new approach to commerciality with a focus on securing better deals with the supply chain, saving £3.5 billion over CP6.

Updated plans for sea wall protection

NETWORK RAIL has published updated proposals for changes to the railway along the sea wall in south Devon.

The six-week consultation concerns plans to protect the 1.8km stretch between Parsons Tunnel and Teignmouth (PT2T). NR's favoured plan is to move the railway out to sea to protect it from rock falls from the cliffs, and the company says the updated design means most of the beach is retained as it only moves the railway away from the most hazardous areas. A wider, realigned coastal path would also be built, not extending any further out than the current extent of Sprey Point, while a landward coastal path will also be created between Holcombe and Sprey Point.



PT2T: visual of the latest proposals to realign the railway.

The work requires a Transport and Works Act Order, which Network Rail plans to submit later this year once feedback is received from the consultation.



DELTIC ECHOES

Like days gone by: King's Cross hosted an array of ballast trains during engineering work on 25 January 2020. It is a while since Cubitt's shed saw as many locos as this lined up at the buffer stops. Jamie Squibbs

VP TO MAINTAIN NETWORK RAIL PLANT

NETWORK RAIL has awarded a contract worth up to £257 million to VP plc for the hire, supply and maintenance of portable plant.

The contract is for an initial period of six years from 1 April 2020 to 31 March 2026, with options to

extend to 31 March 2028. Thirteen agreements, one for each of NR's Routes, cover the maintenance and repair of 28,000 items of NR-owned small plant as well as the hire and supply of other small plant. Cost savings of £2.5 million are forecast,

while 42 apprenticeships are expected to be created with VP over the six years as part of the contract.

VP is the parent company of Torrent Trackside and Brandon Hire Station, which were among previous suppliers of small plant to Network Rail.

Wherry lines resignalling

RESIGNALLING OF the Wherry lines between Norwich, Great Yarmouth and Lowestoft began at the start of February and was due to be completed in a phased 23-day programme.

Victorian mechanical signals are being replaced by a modern signalling system, while level crossings at Brundall, Cantley, Lingwood Chapel Road, Lingwood Station Road, Oulton Broad North and Strumpshaw are being upgraded to full barriers with remotely controlled CCTV. Victoria Road crossing on the East Suffolk line near to Oulton Broad South is also being upgraded as part of the project.

Taking advantage of the closure, Network Rail scheduled planned repairs and renewals works at the same time, including a full bridge replacement at Postwick and track renewals at Lowestoft, Acle and Haddingham, while additional maintenance works were carried out to Reedham and Somerleyton swing bridges.

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Following the recently announced changes within the *Modern Railways* editorial team (see page 15), we have a vacancy for an Assistant or Deputy Editor to join the magazine. Based at Key Publishing's offices in Stamford, Lincolnshire, the role would involve supporting the Editor and the wider team of contributors in creating market-leading content for the magazine, website and social media channels and playing a key role in the magazine's extensive programme of events.

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Digital ticketing on the rise

But tangerine tickets still popular

The rise of digital ticketing was the focus of this year's Transport Ticketing Global show at Kensington in January. Transport for London had some interesting statistics, claiming it is now at three billion contactless journeys annually and growing. EMV (bank cards and phone payment) is now more popular than Oyster, accounting for 57% of pay-as-you-go (PAYG).

TfL aims to grow EMV as it cuts costs by turning the responsibility for providing the medium over to the banks and phone providers, but Oyster is proving a stubborn survivor. One reason for this is that there is a significant number of people in London who exist hand-to-mouth financially and only top up Oyster cards with enough cash for their next journey. On the buses these people benefit as a last ride is allowed on any positive balance.

21% of EMV on TfL is via mobile phones rather than payment cards. This option appeals to a section of the population, with developments like Apple Express Transit allowing users to enter the tube without waking up or unlocking the device. But bank cards and Oyster still dwarf phones for travel payment in London; in New York City, by contrast, Apple Pay and Google Pay on phones are the predominant digital medium. American banks are behind those in Europe in issuing chip cards, so in most places payments must still be signed for – thus bank cards are seldom an option for transit on that side of the Atlantic.

Seasons in London are in long-term decline, since the introduction of weekly capping (on TfL down 50%), and annuals are only available online or from train operating companies (TOCs).

Less than 10% of journeys on the TfL system are now made on mag-stripe, much of this originating with TOCs. Mag-stripe elimination

is a medium-term objective as it would bring significant savings in equipment maintenance. TfL may start removing it at quieter stations where very few are seen.

Cash elimination on the Underground, as already achieved on buses and Tramlink (but not the Docklands Light Railway) is another objective, and there is an experiment at Canary Wharf. The best time to turn these options off remains to be determined, but they offer significant potential savings when TfL badly needs to cut costs. Smart ticketing has already reduced retail costs from 14% of revenue collected to 9%. There has been little adverse impact from the closure of ticket offices in 2015.

GATES

Another driver for smart ticketing has been gateline pressure at busy stations, as digital options are generally faster than the average achievable throughput per gateline of 15 persons per minute with mag-stripe tickets.

There is a bewildering array of ITSO smartcards now issued by TOCs, such as GTR's 'Key'. The condition of ITSO acceptance by TfL was that gate throughput should be no worse than magnetic and in practice it can be better because of a reduction in false reads. So moving more TOC tickets onto ITSO is one objective (mainly seasons).

The residual TOC mag-stripe tickets are seen by the Rail Delivery Group (RDG) as going to barcodes. However, for practical and technical reasons TfL is opposed to this and the large cost of gate conversions in London to accept barcodes would have to be met by TOCs. However, TfL admitted that barcodes might be considered for cross-London journeys; many of these use the busiest Underground stations, so the barcode readers would have to be efficient. Whether or not barcodes



Going smart: gateline on the Greater Anglia network.

are eventually accepted on the tube is a matter for further negotiation.

There is also an issue of mobile phones holding both barcode tickets and working EMV or as an ITSO card: this would have to be resolved so as to ensure the gate used the correct information on the phone.

The current TfL Ticketing Services contract expires in 2025, so it is already time to start thinking about what will replace it. Market engagement is starting. The Oyster platform will be kept until then (and the brand beyond that). It at present supports ticket products not covered by EMV – seasons, freedom and staff passes etc, so will be retained for that, although long-term other solutions are possible. This could involve the development of new readers and magnetics will certainly be gone.

EVASION

TfL gave an interesting presentation on fare evasion, the subject of a recent Channel 5 series. Dan, one of the stars of the series, spoke at the conference. 97.3% of passengers have valid tickets; TfL now uses ticketing data to target hotspots and individuals using the Irregular Travel Analysis Programme. 67% of fare evasion is by recidivist offenders and it is them TfL is after – Penalty Fares do not change their behaviour so they go to court. The Underground has 150 revenue protection inspectors and there is now a deployment planner based on data. This they will share with others, though the TOCs seem curiously uninvolved with it (perhaps because of GDPR issues). With EMV, travel on cards where no payment gets made ('first ride risk') is well below 1%, a risk shared with the card issuers.

MAIN LINE

RDG spoke at the conference and claims 54% of TOC journeys are

now 'smart' (having passed the 50% mark last year). RDG's definition of smart includes EMV, Oyster, ITSO and barcodes (which can be on paper). Much of this must be in the London area, although Transport for Wales has aspirations to be the first all-digital TOC, with 2025 the aim for abolition of tangerine tickets in the principality.

RDG says 90% of gatelines are now barcode reader fitted. Every TOC gateline is supported by a local server, although those fitted for Oyster or EMV PAYG must also be linked to the TfL network. Ticket data, including pass-back protection on barcode tickets, is retained locally and not automatically shared beyond TOCs' own databases (capacity can be a constraint). There is no central facility but RDG is now collecting anonymised barcode scan data which can be used to identify suspicious activity and compare sold with scanned.

The extension of PAYG on EMV beyond London has proved difficult. With many main line fares higher than London suburban prices, touch-outs approaching the £30 EMV limit will be more common. It is impractical to ask for PINs if crowds are to be kept moving through gates, so someone – bank or TOC – has to shoulder the first ride risk. This has been a sticking point. The extension of EMV to Reading seems to be working well, but solutions to the railway's 'bridges' between the London area and other islands of PAYG remain unresolved.

Oh, and mag-stripe is not dead. *Modern Railways* asked Paragon (the ticket producer) and staff on the stand saw us coming. Same question as last year then? No noticeable reduction in paper tickets yet, he said. A lot of TOCs now issue a record card and a gold card with smart seasons, so actually more paper, not less. ^{my}

Richard Malins / James Abbott

GLOBAL BRITAIN?

One exhibitor at the ticketing show was tech company Masabi. Started by a couple of Cambridge researchers and headquartered in London, Masabi used to be in the forefront of the introduction of digital ticketing on the UK main line railway. But TOCs' insistence on bespoke systems and a failure to 'get' the Masabi offer – a common back office system so that the smallest bus or

ferry operator gets the same level of service as New York commuter rail – has led the company to downsize in UK rail, concentrating on operators in North America, Japan and elsewhere instead. Meanwhile, worries about the ability to recruit European research staff to London once post-Brexit immigration rules are in place have led the company to open a satellite office in Romania.

THIRD PARTY RAIL SCHEMES

- MAKING THEM HAPPEN



Worcestershire Parkway is the first new station to be opened in the county for over 100 years. The station was developed and delivered by Worcestershire County Council with the support of SLC Rail.

Government and the rail industry are keen to make it easier for third parties to invest in the National Rail network. SLC Rail is bridging the gap between rail and local authorities to help make third party rail schemes happen.

GOVERNMENT ENCOURAGEMENT

Government is increasingly encouraging combined authorities, local authorities and Local Enterprise Partnerships (LEPs) to make their own decisions about the rail services and facilities they need for their economies and communities. With competing demands of housing, social care and environmental management, entering the complex world of the railway industry as a 'Third Party' to promote, fund and deliver new and enhanced stations, services and infrastructure is a serious step for local politicians and officers alike.

LEADERS IN THIRD PARTY INNOVATION

The SLC Rail team has its origins in the successful Chiltern Railways franchise, having developed 'Third Party' investment and delivery models from the earliest days of rail privatisation, including Warwick Parkway, the first third party new station in 2000 and Chiltern's three 'Evergreen' projects which revolutionised train services, infrastructure and stations on the London Marylebone - West Midlands route between 1998 and 2011. Established in 2009, SLC Rail has built upon this experience and gone on to support local authorities in financing and opening six new stations, with five more in the pipeline, each bespoke to the needs of the individual customer. SLC Rail is also a key adviser to local authorities with ambitions for 'whole route' regeneration such as the North Cotswold Line Task Force (Oxford-Worcester-Hereford) or passenger re-openings such as Newcastle - Ashington in Northumberland.

HOW SLC RAIL CAN HELP

SLC Rail can help local authorities and LEPs to define, develop and deliver their aspirations across the full lifecycle of a rail scheme. The first question is and must always be 'why?' Rail services are a 'means to an end' rather than an end in themselves. The benefits enhanced rail connectivity can bring to economic growth and employment, sustainable housing and population growth, and the environment must be established at the outset. The support of the rail industry for externally driven schemes on its infrastructure must be obtained. The rigorous project development, design, commercial and operational processes of the industry must be successfully navigated. Political support, not only within the promoting authorities but with government and other stakeholders, must be gained. In addition, innovative funding and financing models must be developed and agreed with the industry and government. Taking a holistic, comprehensive approach across this lifecycle is at the heart of the SLC Rail's philosophy, building progressive confidence in the case for a scheme, and the capability of a Third Party to make it happen.

LOCAL AUTHORITIES - ESSENTIAL TO INVESTMENT

Local authorities are key industry partners ensuring locally important schemes build upon the strategic investment made by government and Network Rail. Equally if local authorities do not take the lead on those local aspirations they may not otherwise happen. That's why it is essential to have a guide that can help to make it possible. SLC Rail is there to do just that, to be a perfect partner and work with the local authority

to make investment happen. SLC's passion for doing this drives every member of the team.

DIVERSIFICATION

SLC Rail is growing rapidly, and after ten years working in this space and recruiting the best talent in the industry, now has an increased portfolio of capabilities, skills and expertise. This is why the company is growing its range of sister companies and will launch two new businesses in 2020: SLC Investments is expanding the range and reach of innovations in Third Party investment models, unlocking schemes that may otherwise not be taken forward, and SLC Operations will put forward plans to operate mainline train services, stations, and offer a range of independent training for rail safety critical roles. The other SLC business is SLC Property, which brings skills in negotiation with the rail industry on property and regulatory matters, whether for local authorities or developers.



SLC Rail

SLC brings together people from the world of rail projects, investment, engineering, operations and property to provide services that help scheme promoters develop plans, win support, secure investment and deliver schemes. If you would like to find out more about SLC, visit

slcrail.com

or call 0121 285 2622



Culture still dogs Safety Critical Communications

After 15 years safety remains at risk

In 2003 the Rail Safety & Standards Board (RSSB) set up a Safety Critical Communications Focus Group. This was in response to Network Rail's introduction of GSM-R (Global System for Mobile Communications – Railway) with the promise of a standard radio communications network.

With GSM-R being used by all parts of the industry, safety critical communications procedures would be more important than ever before. The aim of the Focus Group was to 'facilitate the progressive improvement of front-line operational communications'.

This work was reported in the November 2004 'Informed Sources' under the headline 'Safety critical comms – culture or procedure?'. I brought some first-hand experience to the subject because at that time I was learning to fly

and Safety Critical Communications (SCC) were very much on my mind.

STRUCTURED

With the signal post telephone, and even train radio, the signaller knew which train he was speaking to and where it was. With GSM-R that certainty was removed. To maintain safety, the established colloquial railway mate-speak – 'eh up Bobby' – would have to be replaced by the structured communications I was getting to grips with in the air.

RSSB suggested that I might report on their SCC work. The background briefing included an example of what they were then up against in the form of an anonymised recorded radio conversation between the driver of a tamper and a signaller (Transcript 1). Awre Junction was my great grandfather's box.

CULTURE

At the time, the aim of the Focus Group was to 'develop and maintain a culture where structured, disciplined communication is the norm'. RSSB had already produced a Railway Group Standard and accompanying Code of Practice.

However, these focused on ensuring that staff were trained in communicating correctly. They did not cover the content of these communications.

Similarly, Section 3 of the then-current Rule Book was all about when and when not to communicate using telephone, radios or bell codes. It listed the required information, but not how to communicate it.

This was in contrast to the Civil Aviation Authority's CAP413 publication 'Radio telephony manual'. CAP413 provides pilots, Air Traffic Services personnel and aerodrome drivers with

'a compendium of clear, concise, standard phraseology and associated guidance for radiotelephony communication in United Kingdom airspace'. First published in 1978, it is now in its 22nd edition.

SCC MANUAL

In 2017 RSSB published 'Safety Critical Communications: The Manual', intended as a day-to-day reference guide. Like CAP413 it includes 'cue cards', or scripts, for typical conversations (see box opposite). It supplements the six modules in the SCC training package, also provided by RSSB.

TO NE

For a document aimed at professionals the tone of the manual is frankly condescending. Take this explanation of safety critical: 'Of course, we discuss our lives, hobbies, and news with our colleagues. But

Is the work site safe? Work taking place on the track at Brock, north of Preston, on 21 June 2015. Rob France



if we're talking about operations and actions that can affect our safety and that of our colleagues, the public or the railway, then our communication is safety critical.

When an RSSB research project reviewed the take-up of the SCC Training Programme in 2019 the results were disappointing. The 176 respondents came from Network Rail, passenger and freight operators and contractors. Nearly 40% had worked in the railway industry for more than 20 years.

While 17% of those surveyed had used the training materials, less than half were aware of their existence. Given that it is 15 years since the SCC Focus Group began working, the current situation is worrying.

According to the research, 'the primary issue is that there is currently no overarching strategy

TRANSCRIPT 1

SIGNALLER (S1): Awre Junction.

TAMPER DRIVER (D): Hello Awre Junction, this is the driver of six Tango five seven six. . .

S1: Hello there.

D: . . . standing at Whiskey five four two signal at danger.

S1: Yeah.

D: Is this the blocking signal?

S1: It certainly is.

D: Thank you.

S1: The PICOP knows, I told him you're on the way and he's gonna send someone round there so I should wait there.

D: I can see someone standing by the lamps and dets so. . .

S1: Yeah, yeah but it's from 542 signal, so I mean, you know.

D: OK so what would you like me to do, or wait by the signal for further instructions?

S1: Yeah that's where the block is possession is from you know as it's booked it's 46 from 542 signal so wave 'im up there if you want. If you can see the chap shout at him.

In this initial encounter we have a driver trying to communicate by

the book coming up against the bloke-railway culture. Next the signalman phones the Person in Charge of Possession, the PICOP.

PICOP: X speaking.

S1: That tamper's gone in there 'as he? Oh he's ringing me, hang on, hang on there a minute.

D: Hello Awre Junction, this is the driver of six Tango five seven six at Whiskey five four two.

S1: Yes?

And it turns out that the driver has spoken to the PICOP who is telling him to pass the blocking signal. But the driver explains he has always had the permission of the signaller to pass the blocking signal at danger and not the PICOP.

What he wants is formal authority from the signaller to pass the signal at danger.

S1: What more do you want, you don't need my permission to go into the block you need the PICOP's permission.

D: I need the permission of the signaller to pass the protecting signal at danger, which is Whiskey five four two, that's what I require.

Eventually the signaller gives in.

D: So you're giving me permission to pass Whiskey five four two at danger.

S1: Yes.

D: Thank you signaller for that. I'll carry that out.

However, it seems that the tamper driver is still unhappy because he wants the signaller to formally give permission, instead of responding 'yes' to his prompting.

'He wants to hear the words, right. Your OK' says the PICOP. 'Have a go at him, wake him up' he adds.

When the driver calls in, still at the signal, he eventually coaches the signaller in what he needs to hear.

S1: 'Didn't I say that before? I'm certain I did at the end of it all. I said "well you pass five four two at danger and proceed up to the lamps and dets".

to address SCC across the industry'. Meanwhile, SCC training is 'slowly' being integrated into other safety initiatives, such as Network Rail's Home Safe Plan. SCC training should be embedded within all Track Safety and Operational Network Rail training courses, the report recommends.

An updated Rail Industry Standard RIS-8046-TOM 'Spoken safety critical communications' was published in September 2019. But its focus is on the management of SCC, such as training, assessing competence and monitoring.

NEAR MISS

Judging by the transcripts in an RAIB Report into a near miss at Balham on 20 April 2019 the industry continues to struggle to embed SCC. To set the scene, a tamper,

running as engineering train 6J91, had been working wrong direction on the Down Brighton Fast from Selhurst to Streatham Common.

Having completed its task, the plan was for the tamper to continue to Crossover 334 at Streatham North Junction. Still in the possession, it would then set back onto the Up Brighton Fast and continue through Balham station to Clapham Junction en route to its destination sidings at East Croydon.

These movements were documented in the possession briefing pack provided to the two Persons in Charge of Possession (PICOP). But due to a concatenation of errors and miscommunication, 6J91 is now still on the Down Brighton Fast with the driver expecting to run forward to Balham. He contacts Victoria Area Signalling Centre (Transcript 2).

In this case, Signaller 1 is trying to impose SCC protocols on the

SCRIPT FOR TRAIN ENTERING POSSESSION

The train arrives at the protecting signal and the driver contacts the signaller.

DRIVER (D): Driver of train XXXX at XXXX signal

SIGNALLER (S): Hello Driver of train XXXX at XXXX signal. Signaller XXXX at workstation XXXX. As you are aware, you are required to enter a possession. I have spoken to the PICOP and he has given me instructions to give you.

D: Hello signaller. Ok, understood. I am awaiting your instructions.

S: Driver of train XXXX, the PICOP has asked, when I give you authority, to proceed down to the stop board and detonator protection for the possession. This is located on approach to XXXX junction where you will

be met by the PICOP. He will give you further instructions.

D: Signaller, when you give me authority, I am to proceed down to the stop board and detonator protection for the possession, which is located on approach to XXXX junction where I will be met by the PICOP to give me further instructions.

S: Driver, that is correct. I now authorise you to pass XXXX signal at danger, proceed at caution, and be prepared to stop short of any obstruction. Additionally, the signal is fitted with TPWS.

D: Signaller, I am now authorised to pass XXXX signal at danger, proceed at caution and be prepared to stop short of any obstruction. The signal is fitted with TPWS.

S: That is correct, driver.

D: Thanks signaller.

INDUSTRY STANDARD

2.4 Using standardised safety critical communications protocols

2.4.1 Transport operators shall use standard spoken safety critical communications protocols, including words, phrases and the phonetic alphabet.

RATIONALE

G 2.4.2 Using standard words, phrases and protocols promotes a clear understanding and reduces confusion.

G 2.4.3 Achieving a clear understanding is the goal of spoken safety critical communications. Standardised structures and a professional approach to communications help to achieve this.

RIS-8046-TOM



Making a good ballast bed: tamper at work at Brock on the West Coast main line on 21 June 2015. Rob France

Conductor Driver, but without much success. And note a critical error.

Although the Conductor Driver correctly identifies his location

as on the Brighton Down Fast running wrong direction, the signal he can see (VC636) is on the adjacent Brighton Up Fast.

TRANSCRIPT 2

SIGNALLER 1 (S1): Victoria panel 2 Bravo speaking.

CONDUCTOR DRIVER (CD): Good afternoon Victoria, yeah, this is the Route Conductor on Six Juliet Nine One, just south of Balham Junction. Um, have you got... ..?

S1: Six nine one sorry, uh, whereabouts, are you?

C: Just south of Balham Junction. We're uh, I think it's Victor Charlie six three six we can see. We're in a worksite anyway at the moment, at the stop boards.

S1: What line are you on, sir?

CD: We're actually... wrong direction. We're on the uh, on the down fast in... travelling in the up direction.

S1: On the down fast going in the up direction?

CD: Yeah, well we're not moving obviously. Yeah, we're... yeah. I was just wondering if you've got a number for the PICOP please because they're meant to be up here and we've got nobody to come and remove the detonators and stop boards yet.

S1: You're wanting to know whether we've got the PICOP details.

CD: Yes. Have you got any number or anything for the PICOP?

S1: Yes, I do...

CD: You do? Okay.

S1: His details... it's (name of night PICOP provided)

CD: Okay.

S1: Yeah um, it's (telephone number of night PICOP provided)

CD: Lovely. Thank you very much signaller, I'll give him a quick call.

S1: Sorry, what's your name?

CD: My name's (name provided).

I'm the Route Conductor on this uh, six Juliet nine one.

S1: (Name confirmed) and its six Juliet... Nine One...

CD: That's right, yeah. We're on the down fast but we're making um, we're going to go across onto the fast up obviously and then we're changing at Clapham Junction. But I mean we can do it Balham actually, and, um, shoot up towards Streatham Hill that way, so instead of going all the way into town, you know what I mean?

S1: Right... right... right, right. Okay. Yeah, speak to the PICOP.

CD: I'll speak to the PICOP anyway. Thanks for your help signaller.

S1: Alright then, no worries.

CD: Cheers then, bye-bye.

FINGERED

Time for a brief digression on culture and what is termed 'situational awareness', in other words having an accurate mental picture of what is going on, such as the location of trains and how the service is running.

To help signallers maintain good situational awareness they are trained to use the 'finger' test. This involves using a finger to trace or follow the details being provided during a conversation on the display monitor or panel. The aim is to ensure that the details in the message match the situation displayed.

According to RAIB, both signallers at Victoria had been trained to use this method. However, they did not feel comfortable about using it in front of their colleagues. RAIB notes that the finger test could have identified that the Brighton Down Fast was occupied and the Up Fast unoccupied.

Subsequently, the tamper left the possession under the impression that it would stop at signal VC632 and ask for further

instructions. However, it continued into platform 3 at Balham station, when the tamper driver realised something was wrong and the conductor driver agreed.

He reported to a signaller that the tamper was in platform 3 at Balham, travelling 'bang road'. The signaller took charge, ordering that the tamper should stay where it was until further notice. Only 75 seconds earlier another train had left platform 3 and crossed over the junction from the down Brighton fast line, via 308 points, to the down Crystal Palace line.

SCATHING

RAIB's report is scathing over the standard of SCC 'throughout' which was 'well below that expected'. Nobody had a clear understanding of the location of the tamper or the actions to be taken.

Analysis of 33 voice recordings of conversations relating to this incident revealed a range of problems starting with communications not meeting the requirement to be Accurate, Brief and Clear (ABC).

CULTURE UNCHANGED

'The railway industry's strategy for improving and maintaining the standard of safety critical communications has been ineffective, and has not changed the workforce culture or secured the adoption of good practice in respect of communications with and between infrastructure operations staff.'

RAIB Report

According to the Rule Book, signallers should lead SCC. It was not clear from the conversations who was actually taking the lead.

Nor, faced with a poor standard of communication being used by one party, did the other party correct. Both parties 'mirrored' the poor standard of communications.

RAIB also notes that in addition to the voice recordings, verbal evidence showed that several of the witnesses involved in the incident felt embarrassed to use correct SCC methods, both when conversing with colleagues they were familiar with and with members of staff they had not previously encountered.

Overall, RAIB concluded that that over the past 20 years safety critical communication has not been embedded as standard practice in the rail industry. Causes include competence and training, monitoring and social and cultural issues.

RAIB adds that while several attempts have been made to enhance training and improve the standard of communications, the standard of verbal safety communication is poor across the different sectors of the rail industry. There is a 'particular concern' with infrastructure operations where 'it is clear that many staff have not adopted the necessary protocols, and that some staff still feel 'socially embarrassed' by using formal methods of communication.

EFFECTIVE?

Naturally, I asked Network Rail and the rail safety regulator for their reaction to this report.

Shaun King, Network Rail Route Director, Sussex said: 'We have received the RAIB report into the near miss at Balham in April 2019. The safety of all those who use the railway is our top priority, and we take our responsibilities very seriously to ensure safety is maintained. We understand that communication at this time

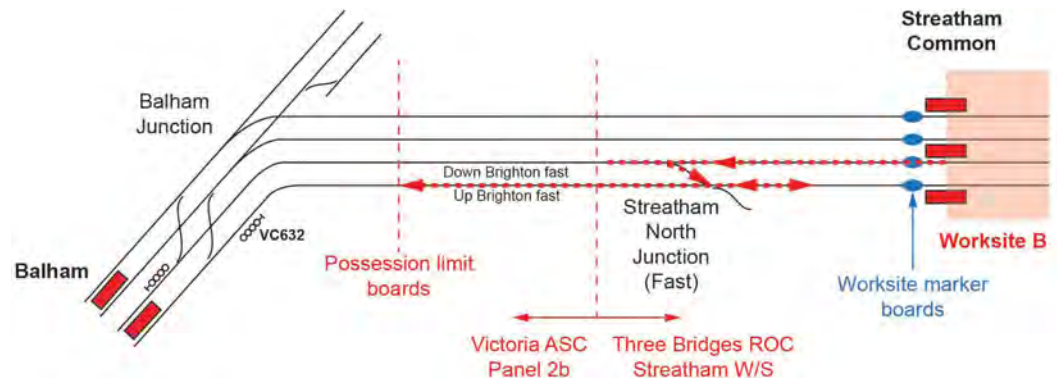


Figure 1: The planned route of train 6J91.

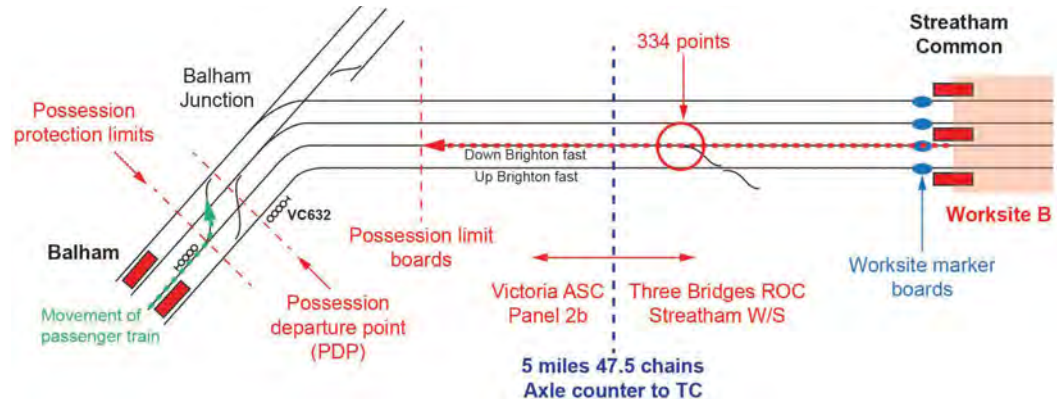


Figure 2: The actual route of train 6J91.

was not at the level expected and we will continue to work closely with RAIB and consider any recommendations made.

'We're continually improving our health and safety procedures to make sure that any dangerous occurrences are reported, investigated and analysed so that we can prevent them from happening again.'

An Office of Road & Rail spokesman told me: 'Network Rail has effective systems in place for Safety Critical Communications, these are both regularly tested and thoroughly reviewed. There does however appear to be an inherent cultural issue when it comes to dealing with issues arising from their implementation.'

'As in the case of Balham, we are engaging at the most senior level within Network Rail to ensure

there is a more rigorous approach in holding to account those who may misuse any Safety Critical Communications systems'.

Paraphrasing the ORR reply, 'on paper Network Rail

has all the right procedures needed to satisfy us, but out on the real railway people aren't taking any notice, and we want to ensure any miscreants are punished: 

TRANSCRIPT 3

SIGNALLER 2 (S2): Hello, Victoria signaller panel two B signaller.

CONDUCTOR DRIVER (CD): Hello signaller, yeah driver, I'm the conductor driver on six Juliet nine one, you wanted to speak to me about a route we're going back?

S2: Yeah hello there driver of six Juliet Nine One, um, where are you at the moment?

CD: Uh...we're just south of Balham Junction at the moment.

S2: Okay, you're still there.

What signal are you actually... going to start coming out from? Do you know?

CD: Um, I can tell you if you bear with me a moment... just bear with me a moment... yeah... I've got a... Balham junction at Victor Charlie Six Three Two...

S2: Okay yeah, that's what I thought it would be, alright. Um, you have to go to East Croydon now I hear. Is that correct?

CD: Yes, that's correct. East Croydon, into the siding there yeah.

S2: Do you sign platform sixteen in Clapham Junction?

CD: Do I sign platform sixteen in Clapham?... yeah.

S2: You do. Yeah okay. You know where to shunt back from when you go through platform sixteen?

CD: Go through platform sixteen, the dummy's down past the platform isn't it in the middle there?

S2: Yeah well if you go through platform sixteen then obviously you've got one four seven shunt signal there, or the signal before it as well six nine five, I think it is... sorry five nine five sorry that's where you can get back onto the down slow and then via Crystal Palace afterwards.

CD: Yeah that's right. I'm going back via Streatham Hill yeah.

S2: That's the one, that's the one. Yeah alright, so just give me a call once you're at six three two and what we'll do is once we've got a good path for you, what we'll do is we will get you going via platform sixteen and turn you around from there and then get you back by Streatham Hill alright?

CD: No worries.

S2: Okay, Six Three Two, no problem, thanks very much, cheers.

CD: Cheers.

CORRECTIVE PROCEDURE

G 2.9.8 In cases where spoken safety critical communications protocols have not been followed (for example, failure to use the phonetic alphabet or a failure to reach a clear understanding) a development plan for the individual is one method of addressing the issues identified. This development plan can be agreed between the individual and the nominated manager and be included as part of the individual's competency record. Corrective actions may include:

- Additional training and briefing;
- Additional monitoring and assessment;
- Use of a simulator as part of a training or assessment development plan;
- Coaching or mentoring in the workplace; and
- Development and use of job aids to remind the individual how to communicate clearly.

RS-8046-TOM



Peak passenger contribution? Travellers join a Class 175 at Crewe in 2016. M. John Stretton

SUPPORT FOR RAILWAY HITS 10-YEAR HIGH

£1 billion rise in last three years, as TOCs' net premium turns to subsidy

In Ernest Hemingway's novel *The Sun Also Rises* the character Mike Campbell is asked: 'How did you go bankrupt?' 'Two ways,' he replies, 'gradually and then suddenly.'

During the 24 years since the first passenger franchise operators took over, it became understood that, while the occasional franchise could fail, most train operators were meeting the financial obligations in their franchise agreements.

In 2012, the InterCity West Coast procurement scandal had been a shock to the system, but the appointment of a new Franchise Director appeared to have restored good order and we all moved on. However, a quirk of Network Rail's funding arrangements contributed to a false sense of well-being.

THIN VENEER

In the very first Control Period (CP1, 1996-2001) all of the then Railtrack's income came from Track Access Charges (TAC) paid by the passenger and freight operators (TOCs and FOCs). This was reflected in franchise subsidies.

In theory, this gave the operators some financial clout in dealing with their monopoly supplier. But by the time the Periodic Review

for CP2 (2001-06) began, Railtrack was already in crisis. Some financial legerdemain was needed to give the resulting Regulatory Determination a veneer of credibility.

As part of the smoke and mirrors, the Department for Transport decreed that in future Railtrack's funding should come in two parts. Franchised train operators would now pay only a portion of Railtrack's income. These 'Variable Track Access Charges' would notionally cover the wear and tear imposed by each operator's trains.

DfT would then top up Railtrack's total income for the Control Period through a Direct Grant. Table 1 shows funding before, during and after the transition years. By the time stability was achieved Network Rail was getting approaching £3.5-4 billion a year in direct grant.

Table 2 shows what the TOCs were paying in Variable Track Access Charges (VTAC) in CP5. And, boy, are they variable.

TABLE 1: IMPACT OF CHANGES IN INFRASTRUCTURE FUNDING METHODOLOGY

	Central government grants (£ million)	Direct Grant to Railtrack/ Network Rail (£ million)
1998-99	1,196	0
1999-00	1,031	0
2000-01	847	0
2001-02	731	684
2002-03	935	1,166
2003-04	1,359	1,670
2004-05	878	2,370
2006-07	1,456	4,463

Key: Blue CP1 Railtrack; Orange CP2 Interregnum; Green CP3 Network Rail

Source: Office of Rail & Road

As you can see, they bounce around all over the place. This makes analysis of TOC subsidy/premium profiles a task for the stout-hearted.

Operators are saved harmless from changes in VTAC. If a TOC's VTAC go up, it gets more subsidy or pays less premium to cover the difference.

VTAC are also recalibrated at the start of each Control Period. And in case you haven't noticed they are calculated down to the last penny!

HAPPY TIME

Thanks to the Direct Grant, from 2010-11 onwards, the franchised train operators collectively were

TABLE 2: VARIABLE TRACK ACCESS CHARGES FOR CP5 (2014-15 TO 2018-19)

£ MILLION

2014-15	2015-16	2016-17	2017-18	2018-19
406,411,057.37	325,736,071.00	342,760,080.42	449,106,742.10	855,336,890.12

Source: Network Rail

A photograph of two men, a white man on the left and a Black man on the right, both wearing safety glasses and high-visibility orange vests over business attire. They are smiling and looking at a large, complex mechanical part of a train engine. The background is a blurred industrial setting with yellow and green equipment.

Joining the Angel Trains
graduate scheme has given me the
opportunity to learn from some of
the best engineers in the industry.

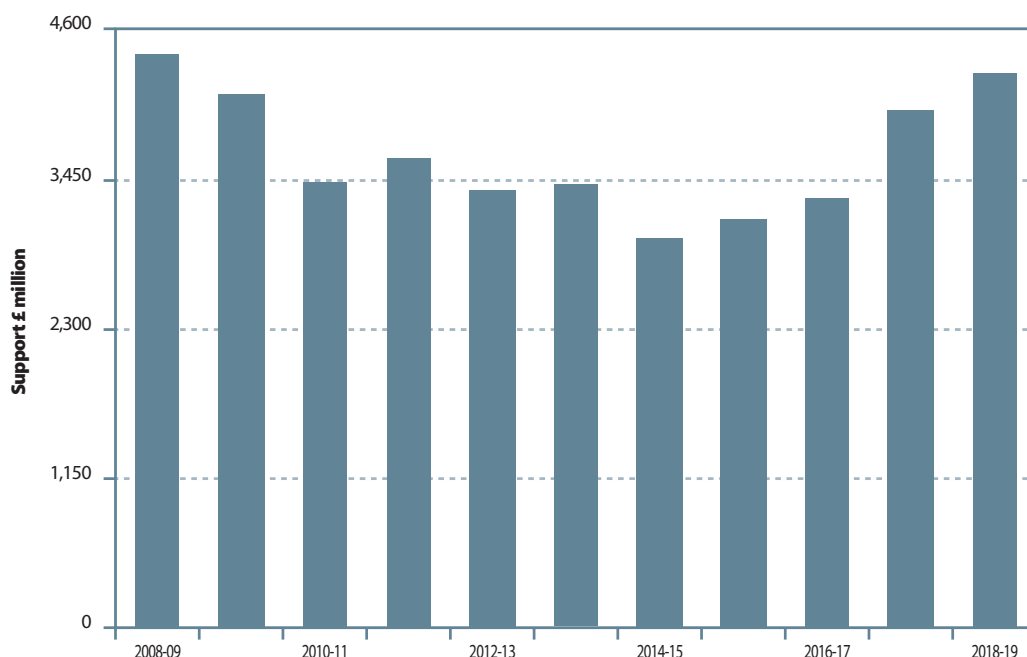
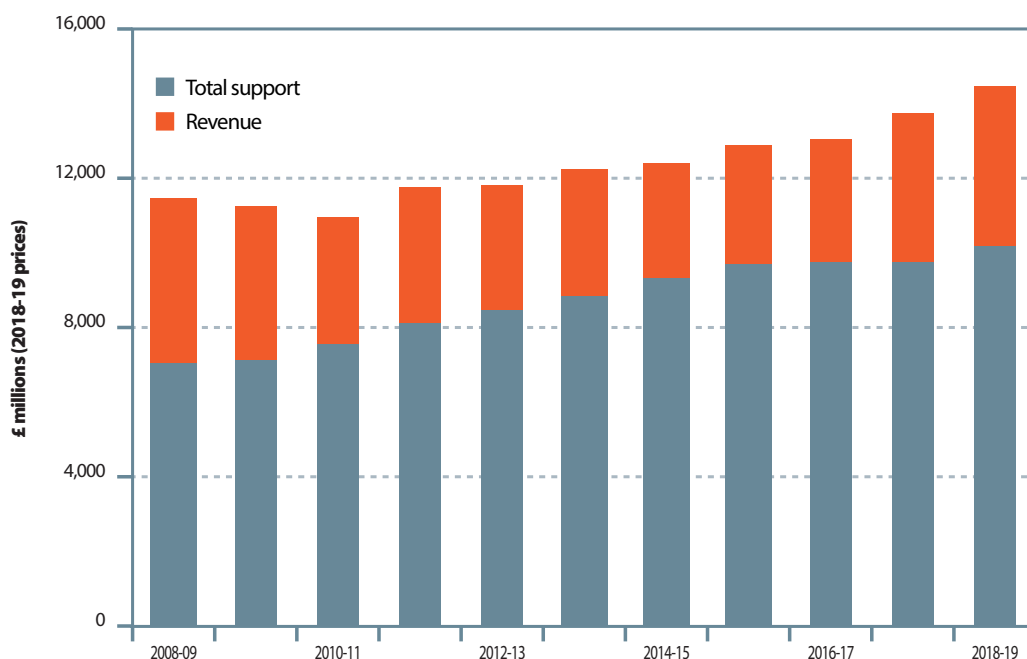
Hugh Garrett Allen

Fleet Engineer

At Angel Trains, we know that our greatest asset is our people. Our two-year graduate scheme gives the next generation of engineers the best start in rail, with support from experts across the industry.

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Figure 1: Total support for operational railway 2008-09 to 2018-19

Figure 2: Passenger revenue and government support 2008-09 to 2018-19


paying more in premia than they were receiving in subsidy (Table 3). This led the Rail Delivery Group to claim in 2015-16 that

'the £10.5 billion of revenue generated by the rail industry now more than covers the day-to-day running costs of the railway

(£10.3 billion). Twenty years ago, the railway ran at a £2 billion loss'.

If we take 1997-98 as '20 years ago', the TOCs had received £1.8 billion in government grants – near enough RDG's '£2 billion'. But that was the total central government support for the railway.

And by 2015-16, that £1.8 billion grant had been replaced with a premium paid to Government of £817 million. No wonder RDG was trumpeting the triumph of privatisation!

But as Table 3 reveals, this was a trifle disingenuous. In place of Railtrack relying wholly on the TOCs using some of their £1.8 billion subsidy to pay all their Track Access Charges,

Network Rail was now also getting the thick end of £4 billion in Direct Grant.

REAL TIME

Now, back in the present (*about time too – Ed*) the last line in Table 3 reveals that for the first time in eight years the passenger railway, collectively, was reliant on subsidy.

Between 2017-18 and 2018-19 the turn-round from net premium to net subsidy was £640 million. Of this, the jump in VTAC at the end of CP5 would have required a corresponding increase in subsidy of £400 million. Which leaves £240 million of the increase in subsidy unaccounted for.

Could this be a reflection of the emerging franchising crisis? Time for another table.

CONVENTION

Table 4 needs a 'safe method of reading' brief before being studied. The most important point is DfT's convention for differentiating between subsidy and premium payments.

Subsidy being paid out is positive: premia being received are negative. To aid comprehension, subsidies are shown in red type, premia in black.

Some franchise agreements include cap & collar revenue share/support. If revenue is above forecast, a proportion of the gain is paid to DfT (revenue share). Similarly, if revenue is underperforming, DfT shares the pain (revenue support).

In some cases, a franchise, inconveniently for those mad enough to essay this type of analysis, can change hands during the financial year. In this case the results are combined to give a total for the year in question.

Finally, the right-hand column calculates the change in subsidy or premium for each franchise across the three years. Here a positive number means that DfT is paying out more, either because subsidy has increased or premium reduced.

TABLE 3: DFT RAIL FUNDING 2010-11 TO 2018-19

	Central government grants (£ million)	Direct Grant (£ million)
2010-11	-51	3,492
2011-12	-131	3,745
2012-13	-420	3,780
2013-14	-35	3,453
2014-15	-796	3,802
2015-16	-817	3,969
2016-17	-763	4,081
2017-18	-223	4,199
2018-19	417	3,859

Negative number indicates premium paid to government

Source: Office of Rail & Road

SUBSIDY RISING

Headline figure from Table 4 is that over the last three years the swing from net premium to net subsidy means that DfT is paying out an extra £1.1 billion to the franchised passenger train operators.

However, this is not the full story. As mentioned earlier, TOCs no longer pay the full cost of access. Both DfT and ORR allow for this in their cost data.

To do this, Network Rail's Direct Grant is divided pro-rata between the franchised operators. This is termed the TOCs' 'Network Grant'.

Thus, in 2018-19 Chiltern paid a premium of £45.9 million. However, allowing for the TOCs' Network Grant

of £89.2 million, the premium became an overall subsidy of £43.3 million.

I've worked this out too, but thought it might be a table too far (*Correct – Ed*).

NETWORK GRANT FALLING

Over the three years covered by Table 4, the TOCs' collective Network Grant has fallen by around £200 million. Allowing for this gives a net increase in support of around £900 million. For soundbite purposes I am splitting the difference and using a round £1 billion.

Figure 1 shows how support – net subsidy plus Network Grant – has changed over the last 10 years. This will not make happy reading for the Treasury. But focusing on subsidy tells only half the story. Government policy has been that funding of the railway should shift from the taxpayer to the traveller. Figure 2 shows how the railway is largely funded through the fare box.

From 2008-09 onwards the proportion of the railway's costs covered by its passengers increased steadily from 62%, peaking at 76% in 2015-16 before falling back to 70% in 2018-19. More bad news for the Treasury.

But what must really gall Government about Figure 2 is that despite more money going in to the passenger railway, it is facing a string of failing franchises, with the Operator of Last Resort (OLR) on overtime.

And, by the way, I haven't mentioned Government loans to Network Rail. Since 2014-15 they have totalled £31 billion.

DESPERATE

So with all this money swilling around and ridership still rising, what explains the recent spate of failing franchises? The fatal flaw in franchising, as devised by the Government, is that its primary role was seen as reducing the cost of the railway to the state.

Yes, in the 1992 White Paper there was the usual blah about private sector entrepreneurial flair providing a better service for passengers, but the initial franchises were awarded to the bidder requiring the lowest subsidy. Not only that, the subsidy was expected to reduce year-on-year.

After Network Rail's Direct Grant was introduced, for some franchises the criterion for success became the highest premium – increasing year-on-year.

If a franchise did not generate sufficient cash to pay the premium, the owner had to make up the shortfall. If a subsidy was insufficient to cover costs, the owning group had to pay to keep the franchise going.

SUPPORT

These payments have been covered by what is known as Parent Company Support (PCS) in the franchise. PCS is based on DfT's perception of the risk of the franchise failing and is capped. When the PCS piggybank is emptied the franchise defaults.

Clearly, shareholders of the parent groups need to be told if there may be trouble ahead. This early warning is being provided by the report and accounts stating an Onerous Contract Provision (OCP).

FirstGroup has reported OCPs for TransPennine Express (£106 million) plus £145.9 million for South Western Railway shared with its partner MTR Corporation of Hong Kong. Generally, OCPs represent the maximum liability should the franchise fail.

SUPPORT

Details of the Parent Company Support (PCS) are redacted from the published franchise agreements. However, the

method of calculation is specified in the Invitations to Tender.

DfT specifies a minimum figure, to which is added a percentage of the difference between DfT's estimated baseline franchise payments (subsidy or premium) and the annual payments in the franchise bids.

Thus Northern's baseline PCS is £40 million plus 7% of the difference. For South Western Railway the baseline is £45 million plus 6%.

Which brings us to the failing franchises. 

TABLE 4: FRANCHISED OPERATOR FUNDING 2016-17 TO 2018-19

All figures in £ million		2016-17	2017-18	2018-19	Change
Arriva Trains Wales	Subsidy	99.3	100.8	59.9	
	Revenue support	3.5	4.6	0.6	
TfW	Subsidy			86.4	
ATW/TfW combined	Net subsidy	102.9	105.4	146.9	44.1
c2c (National Express)	Premium	-51.4			
c2c (Trenitalia)	Premium		-52.7	-70.7	
c2c combined	Premium	-51.4	-52.7	-70.7	-19.2
Caledonian Sleeper	Subsidy	19.0	22.5	25.1	6.1
Chiltern	Premium	-42.9	-43.5	-45.9	-3.0
CrossCountry	Premium	-159.9	-54.9	-41.6	
	Revenue support/(share)	89.4	0.0	-7.4	
	Net premium	-70.5	-54.9	-49.0	21.6
Virgin Trains East Coast	Premium	-259.4	-342.6	-116.6	
LNER	Payment			-106.6	
VTEC/LNER combined	Net premium	-259.4	-342.6	-223.2	36.2
East Midlands Trains	Premium	-65.5	-58.2	-21.3	
	Revenue share	-2.9	-4.5	-1.9	
	Net premium	-68.4	-62.7	-23.2	45.2
Govia Thameslink Railway	Premium	-296.4	-22.4	-144.6	151.9
Great Western Railway	(Premium)/Subsidy	-86.8	13.1	281.3	
	Revenue share	0	-20.9	-3.7	
	Net premium/subsidy	-86.8	-7.8	277.5	364.3
Greater Anglia	Premium	-122.8	-134.7	-176.9	
	Revenue share	-0.4	0.0	0.0	
	Net premium	-123.3	-134.7	-176.9	-53.6
London Midland	Subsidy	80.7	58.7		
	Revenue share	-3.1	-6.1		
West Midlands Trains	Subsidy		49.0	133.9	
	Revenue share			-7.7	
LM/WMT combined	Net subsidy	77.7	101.7	126.3	48.6
Northern	Subsidy	279.0	282.7	407.3	
	Revenue share	0.0	-0.9	0.0	
	Net subsidy	279.0	281.8	407.3	128.4
ScotRail	Subsidy	247.0	307.1	390.3	143.3
South West Trains	Premium	-662.1	-272.0		
	Revenue support	274.6	119.9		
South Western Railway	Premium		-108.3	-217.7	
SWT/SWR combined	Net premium	-387.5	-260.5	-217.7	169.8
Southeastern	Subsidy	51.1	80.4	112.8	
	Revenue share	-40.2	-17.8	0	
	Net Subsidy	10.9	62.6	112.8	101.9
TransPennine Express	(Premium)/Subsidy	-2.0	6.1	-3.0	-1.0
Virgin Trains West Coast	Premium	-216.2	-229.5	-216.7	
	Revenue share	0.0	-7.7	-11.5	
	Net premium	-216.2	-237.2	-228.2	-12.0
Total					1,128.2



Castlefield corridor: just one of Northern's many woes. Class 195s pass at Manchester Oxford Road on 11 July 2019. Tony Miles

DOMINO THEORY

NORTHERN THE LATEST TO FALL

DfT facing zombie franchise apocalypse

While the mainstream media talked of Arriva being 'stripped' of its Northern franchise, that is to over-dramatise what happened. Rather than DfT forces storming Arriva's Northern castle and putting its occupants to the sword, a starving franchise operator had no option but to lower the drawbridge and walk out, allowed to keep its shoes.

In fact, there were concerns that Arriva owner Deutsche Bahn, miffed at being told that German Railways wasn't much good at running trains, might chuck the keys over the battlements and depart via a sally port. But as this column went to press the Operator of Last Resort (OLR) was due to add Northern to its portfolio from 1 March.

How had it come to this? It had been obvious since early last year that Northern was a genuine zombie franchise caught in a multiple squeeze. In

Indeed, according to informed sources, when the line management found out about the commitments in the franchise agreement it was immediately clear that, given the surrounding circumstances, they would be undeliverable.

HARD TIMES

Northern has been through a hard time. First there was the late running infrastructure, particularly electrification. This segued into the May 2018 timetable crisis. Meanwhile, the running sore of strikes over the guard's duties was ever present.

Most recently, recovery of the timetable was hampered by the late delivery of new trains and the associated impact on capacity and driver training. Delays in the Castlefield corridor were hampering performance.

True, revenue was rising, but it was falling short of budget. In

parallel, costs from the various problems were mounting.

Back in October 2019 Transport Secretary Grant Shapps told the Transport Select Committee that he had asked Arriva Rail North (ARN) and OLR for proposals for the future management of the troubled franchise. But, as I have explained before, with a franchise agreement based on rising premium payments or falling subsidies, once revenue falls behind forecast it is almost impossible to catch up.

While operating performance was the overt issue, Government action was triggered by concern over the deteriorating financial position of ARN. In a statement on 9 January Mr Shapps reported that the most recent available financial information had confirmed that the franchise would be able to continue for only a 'number of months'.

On 29 January came the expected announcement that OLR would be taking over. The only slight surprise was the date: 1 March. This urgency suggested the financial situation was worse than suspected.

100 DAYS

You can find full details of DfT's announcement in our news pages, including the immediate

actions. Recovery is not going to be quick, simple or cheap.

Which is why OLR Chief Executive Robin Gisby and consultant Richard George, who was brought in by DfT after the May 2018 timetable fiasco to advise on Northern ('Informed Sources', April 2019), have allocated the first 100 days to developing a plan to recover the franchise.

OLR's task is considerable. Implementing the resulting plan is likely to take a couple of years.

First on the to-do list is to try and sort out capacity in the Manchester area. As my colleague Tony Miles explained, (p74, September 2019 issue), the Castlefield corridor is the epitome of a problem where the only solution in the near term is to run fewer trains.

Transport Secretary Grant Shapps is looking to OLR to work with Network Rail and build a comprehensive new master plan to review congestion around Manchester. But which services to cut is predominantly a political issue, since other operators running through Manchester have contractual access rights and franchise commitments.

Nor is Manchester the only issue. DfT notes that further interventions around Leeds will also be considered.

IS FRANCHISING VIABLE?

'Across the country a number of franchises are failing to provide the reliable services that passengers require and there are legitimate questions on whether the current franchising model is viable.'

Grant Shapps, Secretary of State for Transport, 22 January 2020

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**TABLE 5: NIGHT OF THE ZOMBIES CAST LIST**

Cast in order of disappearance		Cost to owner	Method of dispatch
Virgin Trains East Coast	Stagecoach/Virgin (90%/10%)	£260 million PCS	OLR June 2018
Northern	Arriva	< £40 million PCS	OLR 1 March 2020
SWR	First/MTR (70%/30%)	£138 million loss; £145.9 million OCP	OLR?
ScotRail	Abellio	£3.5 million + £25 million loan	Termination March 2022
TransPennine Express	FirstGroup	£106 million OCP	Unknown
Understudies			
Greater Anglia	Abellio	£30 million + £50 million loans	
Caledonian Sleeper	Serco	£30.6 million	

DIFFERENCE

So why is calling in OLR any different to agreeing a Direct Award franchise agreement with the incumbent operator? LNER provides some answers.

First of all, the management and staff are freed from the tyranny of financial commitments in a franchise agreement three or four years old and overtaken by events. We tend to forget that staff have been TUPE'd from pillar to post under successive replacement franchises while expected to remain committed to 'the job'. Improving staff working conditions is among OLR's immediate priorities.

But the real benefit of what the media call 'nationalisation' is that OLR owns the franchises. This means management is no longer constrained by the terms of a rigid franchise agreement. Nor does management have to keep reporting back to DfT to tick off obligations in the franchise agreement.

Counter-intuitively, 'state control' brings flexibility and releases innovation. Would a franchise under DfT's financial cosh have been able to paint an IC125 in its original livery and run a farewell tour as LNER did – generating positive media coverage and good will?

Instead, OLR treats its franchises like normal businesses. The franchise aims to make a surplus. Some of this is invested back into the franchise and the remainder paid to DfT as a 'dividend'.

SWR NEXT

One of the problems in detecting incipient franchise failure is the latency in the financial report process. Thus SWR did not post its results for the year to 2019 until early this year. These showed an onerous contract charge, an operating loss of £138 million and premium payments to DfT of £250 million. Note that the OCP is the maximum that SWR can cost its owners, FirstGroup and MTR Corporation.

On 22 January, Transport Secretary Grant Shapps issued a statement confirming that SWR's recent financial

statements 'have indicated that the franchise is not sustainable in the long term'. The combination of 'poor operational performance' and slower revenue growth meant SWR's financial performance was 'significantly below expectation since the franchise start in August 2017'.

Despite this, SWR had 'not yet failed to meet their financial commitments'. However, Mr Shapps warned: 'my Department will ensure that SWR are held to their financial obligations under the current franchise'. In other words, as with VTEC, First/MTR will continue to run the franchise until the Parent Company Support runs out.

Meanwhile, continued Mr Shapps, DfT is preparing contingency measures required under the Railways Act 1993. Options include 'a new short-term contract with SWR, with tightly defined performance requirements' or transferring the franchise to OLR.

POISON PILL

However, a revised contract with the incumbent owners contains a poison pill. Remember that Stagecoach was disqualified from bidding for South Western when it pointed out that DfT's Train Service Specification was undeliverable because of infrastructure constraints.

Giving a short-term Direct Award might be seen in Perth as letting First/MTR off a hook they happily swallowed. Already taking court action against DfT over other franchise bids from which it was disqualified, Stagecoach might choose to open a second front.

And not mentioned in Mr Shapps' list of SWR's woes is the Central London Employment (CLE) revenue share/support mechanism in the franchise agreement. Changing work patterns have decoupled employment from ridership.

This means that with rising employment, SWR is having to pay DfT revenue share while earning less revenue. Greater Anglia is also caught in this MCAS of the rails, so DfT is not going to renegotiate.

Given all this, transfer to OLR seems likely. Because of the delay in financial reporting, we don't know how fast SWR is burning through the PCS. Informed sources suggest another three months before the death ride ends.

WI' SCOTRAIL BLEED

ScotRail is also losing money, £8 million in the last report and accounts, and has increased its borrowings from its parent company. Under the terms of the franchise agreement, in the fifth year of the franchise, the Scottish Government and Abellio ScotRail must revisit cost and revenue assumptions and the associated subsidy requirements.

Under this 're-basing process' the Scottish Government and Abellio ScotRail could agree terms to continue until March 2025, with subsidy levels based on revised revenue and costs. Alternatively, either party could issue a 'no-rebasing notice', franchise agreement subsidy levels applying until termination in March 2022.

NOT THANKS

A decision was required by 31 December 2019 and the Scottish ministers decided not to rebase the contract. According to Cabinet Secretary for Transport, Infrastructure and Connectivity Michael Matheson, the Government was not satisfied that the 'significant increase in public subsidy' required by ScotRail would generate 'commensurate benefits for passengers, communities and the economy'. In other words, rebasing 'would not secure the delivery of the policy objectives that underpin the current franchise'.

As Table 4 showed, ScotRail's annual subsidy has risen from £247 million to £390 million over the last three years. That Transport Scotland refers to a 'significant increase' proposed for the rebased franchise suggests costs are continuing to rise faster than revenue.

TPE – LAST DOMINO?

TPE has been having a torrid time with late new trains and delayed driver training leading to cancellations

and overcrowding. That said, when you include Network Grant, total subsidy has fallen over the last three years, if only by £1 million.

Judging by reports of overcrowding there is clearly suppressed demand, and when all the new fleets are in service ridership and revenue should rise.

However, as with other TOCs, such as Northern and Greater Anglia, we don't know how the costs of the new fleets will affect the operators' finances. Note in Table 4 that Great Western has gone from a premium of £87 million to a subsidy of £277 million while the Intercity Express Programme (IEP) fleet has been replacing IC125.

LIMBO

Meanwhile, DfT faces the quandary of what to do about Great Western and Southeastern. Great Western has a Direct Award franchise agreement which expires on 31 March. DfT's aim was to negotiate a new Direct Award taking the franchise through to 2022 with an option to extend for a further two years.

Terms of the proposed new deal have yet to be agreed. It seems likely that it is a case of who blinks first over subsidy.

During the Great Western main line route modernisation programme, Great Western increased its profitability on the back of Schedules 4 and 8 payments from Network Rail for disruption to services. Now that the electrified timetable is in and running smoothly, that 'free income' cash flow will have diminished.

As for Southeastern, DfT's franchising team 'jumped the shark' on the specification for the replacement franchise, including a bonkers requirement for the new operator to fund and procure a Traffic Management system and hand it over to Network Rail.

Eventually a protracted bidding process ground to a halt over pensions issues. Meanwhile, the latest of several Direct Awards runs out on 1 April this year. Another Direct Award seems likely. 

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Hitachi takes top spots

Paragon of virtue? There's a new table topper this month

One new entry this month with the TPE Class 397 EMUs joining the Northern CAF fleets near the foot of the Table. Meanwhile at the top of the table some old lessons are being re-learned.

In February, ScotRail publicised its Hitachi Class 385 EMUs as the most reliable new trains on the network, based on last month's table.

It was fortunate that the press office got the release out promptly, because the Class 385s have already been usurped. No skin off Hitachi's nose, however, because the new top-dog is Hull Trains with its two Class 802 bi-modes now in service.

With the TransPennine Class 802s also in fourth place we are learning yet again that buying an established design with millions of miles already under its bogies, and from a 'hot' production line, is a good way to get a reliable train.

But note that Hitachi's victory procession is split by the TPE Nova 3 loco-hauled trains. The lesson here? Combine a well shaken-down loco, the Class 68, with some simple coaches, and you should have less to go wrong compared with an all-singing/all-dancing DMU. A British Rail rule of thumb was that



Cat amongst the EMU pigeons: No 68027 heads a Nova 3 set at Scarborough on 24 August 2019. Russell Wykes

once you have five or more coaches, loco-haulage is the better choice.

This month I have reintroduced the 'Annoying benchmark' guest fleet. The second oldest trains on the network,

Merseyrail's Class 507s, sit comfortably in seventh place.

My old chum David Powell, Merseyrail's Programme Director, has already reminded Stadler that his new Class 777 fleet will

feature in the Table of Truth when it starts to enter service in September this year. Contractually the new fleet has to achieve 41,000 MTIN MAA two years from the acceptance of the final set. 



Paragon out of place: Hull Trains' No 802303 passing Whittlesea on the Ely to Peterborough line with a Hull-bound service while diverted due to engineering works on 18 January 2020. Ken Brunt

TABLE 6: NEW TRAIN RELIABILITY, PERIOD 10 2019-20

TOC	Class	Traction	Maker	Number of units/ trainsets	Number of Technical Incidents (TIN)	Unit miles	Miles/Technical Incident (MTIN)	MTIN Moving annual Average
Hull Trains	Class 802	Bi-mode	Hitachi	2	1	22,598	22,598	24,296
ScotRail	Class 385	EMU	Hitachi	69	7	626,065	89,438	21,557
TPE	Nova 3 train set	Diesel	CAF	5	2	41,194	20,597	20,597
TPE	Class 802	Bi-mode	Hitachi	9	2	59,292	29,646	15,088
GTR	Class 700	EMU	Siemens	115	79	1,164,638	14,742	14,070
LNER	Class 801	EMU	Hitachi	18	21	288,006	13,715	13,278
Merseyrail	Class 507*	EMU	BREL/GEC	32	9	185,810	20,646	12,379
GWR	Class 800	Bi-mode	Hitachi	57	78	716,029	9,180	11,047
GTR	Class 717	EMU	Siemens	25	11	145,563	13,233	9,516
LNER	Class 800	Bi-mode	Hitachi	22	25	324,393	12,976	9,490
GWR	PRM modified 2+4 HST set	Diesel	BREL/Wabtec	9	20	170,260	8,513	9,161
GWR	Class 802	Bi-mode	Hitachi	36	47	470,652	10,014	8,559
TfL Rail (Crossrail)	Class 345 RLU	EMU	Bombardier	31	32	163,675	5,115	6,909
ScotRail	HST Set**	Diesel	BREL/Wabtec	19	22	117,709	5,350	6,255
Arriva Rail London	Class 710	EMU	Bombardier	15	11	90,448	8,223	3,721
Greater Anglia	Class 755	Bi-mode	Stadler	32	46	352,340	7,660	3,698
Northern	Class 331/0	EMU	CAF	16	34	82,252	2,419	3,341
Northern	Class 195/1	DMU	CAF	22	52	193,375	3,719	3,326
Northern	Class 195/0	DMU	CAF	12	32	85,340	2,667	2,663
TPE	Class 397	EMU	CAF	4	9	23,919	2,658	2,295
Northern	Class 331/1	EMU	CAF	12	28	65,799	2,350	2,178
TfL Rail (Crossrail)	Class 345 FLU	EMU	Bombardier	13	0	126	126	1,071
WMT	Class 230	Diesel	Vivarail	3	6	10,878	1,813	740

TIN= Technical Incident, where a train is stopped for three minutes or more due to a vehicle problem; * Reference fleet; ** Includes non-refurbished sets

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Bodysnatchers, Gronks, and Bones

Is it only me that has trouble remembering the new class numbers?

The new modernisation plan has brought a rash of new classes onto the railway, at the same time as years of logical class numbering has faltered. If that wasn't enough, some train operators have decided they don't need class numbers on the front of their trains, so they have gone the way of yellow paint. Does this matter? Well, no, not as much as HS2 or the Williams report, but yes if you are looking for a unit on a dark and stormy night or reporting a defect.

The advent of six-figure vehicle numbers has enabled the principle of vehicle numbers linking with unit numbers to survive, something really useful to depot staff as you see one vehicle and you know which set you are looking at. What has gone is the logical grouping of types of unit, such as Class 14X (Pacers), 15X (Sprinters) and the like, so now you have to remember the actual class, not just a group. In another zany development some train operating companies (TOCs) have started painting the multi-digit European Union numbers on the side on the off chance that the Scarborough train rolls up in Berlin one day.

CORPORATE NAMES

Big companies come up with names for their designs, or what they call 'platforms'. I don't know what they call actual platforms to avoid having a gap between the platform and the platform. Good examples are Turbostars and Electrostars, as they describe trains which are very similar in design. Adtranz (pre-Bombardier) stole parts of these names from Alstom's Eurostar and Networker Turbos (sounding better than diesel), but they work.

Alstom's Juniper name came from the UK side, originally as a name for their leasing company (it is said there was a juniper bush outside the office window). The accountants realised the risks of a single-fleet leasing deal and were mightily relieved when Porterbrook took the business, as indeed was Chiltern, which had had similar ideas. The name lived on as a generic name for the company's replacements for slam-door EMUs, advertised with a spiky Juniper bush and 'ouch' caption. It was marketed as a design ready to go, which it wasn't, but that's marketing for you. Once the French takeover of GEC-Alsthom was complete, the generic name

'Coradia' was supposed to be used, but that applied to a wide range of classes, including double-deck vehicles, worldwide. Its light rail 'platform' name was 'Citadis' and new EMUs were dubbed X'Trapolis. One of the UK team, hearing this revealed in Paris, asked 'What's the double deck one? Ontopodis?' Silence descended with a Gallic shrug.

PATERNITY TESTS

Siemens had more success with its 'Desiro' branding in the UK, but again the allegedly related products are spread over the world and you could say that if someone called them a family you might demand a blood test before paying paternity. The same goes for CAF's 'Civity' brand, which applies to a dinky little Class 195 DMU and the 'Nova 2' Class 397, which looks like an IEP (a 'Nova 1' in TransPennine's book). The name 'Nova' is (I think) unique in applying to three totally different designs but is used to conceal a random procurement policy. The Nova 3 is loco-hauled (so we won't complain about that), but by the rules of class numbering the '397' should have been in the 'high-speed' 800 series.

Hitachi was the chosen one for the Government's Intercity Express Project and the name 'IEP' stuck. Understandably bored with 'IEP', Hitachi later called it 'Super Express' – which was so 'Thomas the Tank' that nobody used it. Great Western really shook things up with 'IET' (Intercity Express Train), while Virgin marketing christened its '800' series trains 'Azuma' and Hitachi now uses AT300, following up the company's little-used AT200 for the ScotRail EMUs. As far as the media is concerned it is a Japanese bullet train, a definite paternity suit there.

FILLING THE VACUUM

British Rail created class numbers in the 1970s for use in its new Total Operations Processing System (TOPS). Trainspotters were shocked to see everything change to five digits, the first two being the class number. This convention survives to this day and we got used to referring to most classes by their class number, the exceptions being those with a particularly good, well-known name. Those which didn't carry the class number as a 'painted number' (as it's known in

Bodysnatcher: a daytime outing for the 'Night Riviera' seated coaches as No 57603 departs from Totnes with the 13.35 Plymouth to Exeter St David's working on 23 July 2016. D.W.V. Hunt



the business) also often had names: examples of non-carriers would be Metro-Vicks, Hymeks, Westerns, Baby Deltics and Teddy Bears, which brings us to the most amusing names: enthusiast nicknames.

Just about all loco classes have a nickname (see panel overleaf), indeed some have two or three, but the degree of use varies. Names which stick are usually descriptive and often derogatory, sometimes derivatives of the officially given name, and usually funny. Just about every new train starts off unreliable and picks up a nickname like 'Skoda' (when the cars were unreliable), 'Scud' (Iraqi missiles which rarely reached their destination) and more recently 'Basils' for Stadler's Class 755 'Flirts' (because they were Fawtly). These names don't stick when the trains get better, as they surely will.

'Flirt' and 'Kiss' are Stadler platform names, again for a range of very different products. Best change the theme soon chaps or the next in the series will have the #MeToo people after you.

If you have a good name like 'Deltic', 'Hymek', 'Azuma' or even 'Voyager' (never seen those in the same sentence before), then it will stick, but IET, AT300 or over-generalised platform names are just asking to be re-christened.

WHAT'S MY NAME?

Of the names in the heading, 'Gronk' is strangely descriptive of the ubiquitous Class 08 shunter, extended to 'Super Gronk' for a Class 09. On that basis you might wonder why TPE didn't use 'Super Nova' for its 125mph trains, but if it had, which one would it choose? Since in my opinion nothing about the IEP series is 'Super', I opted for the CAF one. 'Bodysnatchers' are Class 57s, because they stole their Class 47 bodies for their new engines (among other things), while 'Bones' were Class 58s: thin in the middle but fat at both ends.

You could argue that we have more than enough names already, but they tend to be those generic platform names. I prefer to take a leaf from the enthusiast's book and use something quick, simple and specific – if only to help me remember the given class names. While I'm at it I couldn't resist coming up with a few new names, but it's not as easy as you might think, especially if they have to get past the editor.

Nicknames arose to fill the gap when locos were 'Type 4' in many guises, then fell out of use with class numbers. But if class numbers aren't painted on the front, and

TABLE 1: MY PROPOSED NAMES

BOMBARDIER AVENTRA		
345	Lizvent	Elizabeth Line nine-cars
701/1	Sweatvent	South Western Railway 10-cars
701/5	Sweatvent	South Western Railway five-cars
710/1	Ovent	London Overground four-cars
710/2	Ovent	London Overground (last six are five-cars so far)
720/1	Hare-vent	Greater Anglia 10-cars (logo is a hare)
720/5	Hare-vent	Greater Anglia five-cars (logo is a hare)
730/0	Brummivent	West Midlands three-car suburban
730/1	Brummivent	West Midlands five-car outer-suburban
730/2	Brummivent Express	West Midlands five-car long-distance
CAF CIVITY		
195/0	2CV	Northern two-car DMU (CV as in Civvi, reference car)
195/1	3CV	Northern three-car DMU
331/0	ECV	Northern three-car EMU
331/1	ECV	Northern four-car EMU
397	Supernova	TransPennine Express 125mph five-car EMU 'Nova 2'
HITACHI 'A-TRAIN' SERIES		
385/0	Mac-AT	ScotRail three-car EMU (AT200, similarity to Star Wars AT-ST)
385/1	Mac-AT	ScotRail four-car EMU
395	Chavellin	North Kent HS1 commuter train (not my creation)
800/0	Cucumber	GW IEP five-car (looks like one)
800/1	Azuma	LNER IEP nine-car bi-mode
800/2	Azuma	LNER IEP five-car bi-mode
800/3	Cucumber	GW IEP nine-car
801/1	Azuma	LNER IEP five-car EMU
801/2	Azuma	LNER IEP nine-car EMU
802/0	Cucumber	GW AT300 five-car
802/1	Cucumber	GW AT300 nine-car
802/2	Nova 1	TransPennine Express AT300
802/3	Paragon	Hull Trains AT300 (official brand name)
803	Orcat-zuma	FirstGroup open access IEP electric (ORCATS raiding, class number not confirmed)
805	Not-elino	Avanti West Coast IEP (class number not confirmed)
810	Midzuma	EMR five-car bi-mode
SIEMENS 'DESIRO' SERIES		
380/0	Plough	ScotRail three-car EMU (shape of cab front)
380/1	Plough	ScotRail four-car EMU
700/0	Citylink	Desiro City for Thameslink eight-car
700/1	Citylink	Desiro City for Thameslink 12-car
707	Citybreak	Desiro City – short stay in franchise
717	City Gang	Great Northern Desiro City (gangway ends)
STADLER 'FLIRT' SERIES		
745/0	Long Hare	12-car Flirt EMU (hare is GA logo)
745/1	Ryan Hare	12-car Flirt EMU for Stansted Airport (hare is GA Logo)
755/3	Wanda	Flirt bi-mode (one door) three passenger cars
755/4	Wanda	Flirt bi-mode (one door) four passenger cars
777	Triple Seven	Merseyrail four-cars, too good a number to change
RECYCLERS		
230	D-Train	Converted tube trains
484	D-Ryde	Converted tube trains – Isle of Wight
769/0	Zombie	319 Flex Wales (undead, slow, plodding)
769/4	Zombie	319 Flex Northern
769/9	Zombie	319 Flex Great Western
799	Hydro Zombie	Hydrogen-fuelled '319'
LOCOS		
70	Betty	As in <i>Ugly Betty</i> (TV series)
68	Cat	Caterpillar engine
88	Electric Cat	Looks like a '68' electro-diesel with small Cat engine



Old bone: No 58050 departs from St Pancras on its first working with passenger stock on 21 May 1989, Hertfordshire Railtours "InterCity diesel day", Ken Brunt

names refer to lots of classes, there is a niche left for nicknames. Of course, if you don't like them, just ignore them, but I find them a bit of fun and an easier way to learn the new classes. I don't expect to lead the enthusiasts to use these, I'm sure they will invent better, but I see a need for a quick ID to go with a class number.

WHERE DID THAT COME FROM?

Most of these are adaptations of official names but some need a bit more explanation, not least the difficult problem of the IEP series. Azuma is fine, so tweaking that for other versions works OK, but the numerous Great Western examples merit their own name. I rode one on a 'fast' Bristol – London run the other day and it was even rougher than the Western I had a cab ride in many years ago. I toyed with 'Dekoboko' (Japanese for rough ride) but that may see the editor in trouble again. Then I thought about the Enid Blyton ads, she also wrote *Noddy* who had a dog called Bumpy, but the enthusiasts have solved it with 'Cucumbers'.

The other group is for Abellio Greater Anglia, a name that trips off the tongue like a German prescription medicine. That company has taken up a new animated logo of a hare, which I really like: it is

a good linking device, has the right message, is local and looks great in TV/Facebook advertising. Hence the use of 'Hare' in some names. I am particularly proud of the Stansted Airport units: Class 745/1 'Ryan Hares'.

The name that was always used for the Mk 3 set from Porterbrook used to deputise for Pendolinos, the 'Pretendolino', is a classic, so in homage to this it seems right to christen the IEP series on order for the West Coast as 'Not-elino', in honour of what might have been had the wires been up in the right places.

The Class 769 conversion from '319s' is officially a 'Flex', but that doesn't really seem strong enough for a unit which, if it ever works, will be the easiest unit ever to make a case to replace. 'Lead-footed scrapyard dodger' is too long, but 'Zombie' seems just right.

I have grouped my summary in alphabetical order by current manufacturer, presented here in easy format to photograph onto your phone so you never forget a class number again. 📷

TABLE 2: LOCOMOTIVE NICKNAMES

Class	Nickname	Class	Nickname
03	Flowerpot	55	Deltic
08	Gronk	56	Grid
09	Super Gronk	57	Bodysnatcher
14	Teddy Bear	58	Bone
20	Chopper, Wardrobe	60	Tug
24	Bread loaf	66	Shed
25	Rat	67	Skip
26, 27	McRat	68	Cat
31	Brush 2, Skinhead (if no route indicator)	70	Betty
33	Crompton	73	Shoebbox
33/1	Bagpipe	81-85	Roarers
35	Hymek	89	Badger
37	Tractor, Growler, Syphon	92	Dyson
40	Whistler, Big D	SOME UNIT NICKNAMES	
44, 46	Peak	153	Dogbox
47	Brush 4, Duff	321	Dusty Bin
50	Hoover	442	Plastic Pig
52	Western, Thousand	450	Roberts (Robert Desiro), Doodlebugs

Gronk: shunter No 08389 heads back to the weighbridge for stabling after depositing a rake of empty MBA wagons in Tidal Sidings, Cardiff on 11 February 2018. Martin Turner





PLAYING NICELY

A glimpse into the world of the Rail Ombudsman, the referee in the unlikely event of a train operator not playing fair

I know it sounds ridiculous, but there are times when train operating companies (TOCs) fail to delight their customers. No, stick with it, this can happen. If you are not delighted, or more likely you want your money back after sitting looking at a field for 30 minutes when you should have been at work, your first call should always be to the train operator. If after forty days, or, even earlier, after a deadlock letter, you have got nowhere, then the Rail Ombudsman is for you and is just a click away.

The Rail Ombudsman can make a binding judgement on the TOC, but not on you, you can fight on (but don't write to me!).

SCOPE

Controlling what is in scope and what isn't is the key factor. The last thing anyone needs is another group trying to control the railway, if only because failure is guaranteed. If, for example, they decided that it wasn't fair on the residents of Acton Bridge that they have two-hour gaps in their services and stopped more trains there that takes out capacity of the West Coast for

more people. Train noise waking someone up might be another one for the out basket, although the miserable blighter will be referred to someone else to complain about the line which has been there for 200 years. Biased? Me?

Within scope, and covering the majority of the complaints are the obvious ones: delay repay (263), complaint handling (98), train service performance (77), staff conduct and availability (50), company policy (49), quality on the train (my favourite, 46), fares (45), information (39), timetable and connections (18), accessibility (14), safety (14), station quality (11) and, finally, the environment with just two complaints (figures in brackets are number of complaints dealt with in the period 1 January 2019 to 31 March 2019).

With the increased publicity given to delay repay and the shortening of claim times, mediation of these claims forms the bulk of the organisation's workload, and it is going up, 28% in the last quarter. In the first year of operation from November 2018, 2,365 complaints were processed.

TIME AND TIMES

This subtle twist accounts for most scope issues; if your train is regularly not on time and your dispute with the TOC has deadlocked, then the Ombudsman will look into your case. If, on the other hand, you think more trains should stop at your station, that is timetables, and that is out of scope. This seems reasonable as if a TOC isn't in charge of the timetable then what's left? Inevitably a compulsory timetable change would be blamed for all sorts of other ills down the line as so much is interdependent.

Sadly, I don't have the space to look at individual cases, although there are some on the website along with statistics showing where the problems lie. Currently, top of the roll of shame are South Western Railway, Govia Thameslink Railway and Northern (two of which are under existential threat). This is not surprising since delay repay will have become a big financial issue with them and there will be an underlying level of passengers trying to use the chaos to make false claims. Of course, just like the removal of the franchise, compensation

holds the TOC responsible, who will then have to chase back to Network Rail in many cases to try and make their own claims. An industry in itself built on failure.

WHO IS THE OMBUDSMAN?

It would be nice to imagine a sort of Fat Controller figure, perhaps like an old Area Manager, who will represent his passengers against a tyrannical British Railways Board. The reality is that 'he' is many persons, and every one dealing with cases has a law degree. The team is part of the same group that looks after furniture. We can only hope that seat comfort at sofa-u-like is not under the same measure as the railway.

All you really need to know is that the Ombudsman exists, whatever form he/she/it may take, and the organisation's survey says that most people are happy with its service. If your train operator, or even transport minister, tells you your seat will get more comfortable over time, there is someone to turn to. If it supports your case after impartial review it will keep whipping the TOC. Who is whipping the Department for Transport? I do my best. 



In appreciation of the great sitcom of a similar name, and with no connection to the railway of today

Featuring:

Mr Grant Aided MP – Minister of Human Logistics

Sir Appleby Humpyard – Permanent Secretary

Sir Bernard Fowlds – Principal Private Secretary

Pale wintery sun beams through the window of the wood-panelled office. Grant Aided has got hold of a copy of *Modern Railways* and has called Sir Appleby Humpyard to come and explain what is going on. Bernard is sorting the minister's papers, a bit behind time due to frozen points at Guildford. Enter Sir Appleby.

GRANT: Good morning, Humpyard. Late again then?

APPLEBY: No Minister, ministerial car on time. What can I do for you?

GRANT: Have you seen this? (Waving *Modern Railways*, as Bernard looks apologetic for leaving it where the minister could find it.) They think we are all idiots! Every franchise we let ends in a fiasco, like, every single time!

APPLEBY: Indeed Minister, we have a 100% success rate, so impressive even Scotland is following our lead for once.

GRANT: Success? How can you call this a success?

APPLEBY: (looks quizzical) Didn't the calamity magnet explain? Oh, no, I suppose not, we didn't tell him to.

GRANT: Well then? I'm listening; they told me to just keep repeating 'run the trains on time' and read out the press releases in that irritating head prefect way I do so well.

APPLEBY: Didn't you ever have a train set, Minister? Surely you want to run your own railway?

GRANT: Train set? Nah: Scalextric man me – neeawm – neeawm – crash. Wow! Brilliant!

APPLEBY: I should have guessed, Minister. Anyway, most people here had train sets and have always known they could run the real railway better than anyone else.

GRANT: So you're all Commies then? Wanted that national...

APPLEBY: No Minister, we did not support the Leader of the Opposition's proposal, not that we have an opinion, however you should be aware that we have total control of everything on the UK railway.

GRANT: But it's all privatised, you know, Branson, Souter and them lot.

APPLEBY: I see we have a bit of explaining to do.

BERNARD: Shall I make a drink?

APPLEBY: Yes please, mine is on the rocks.

BERNARD: Has that been leased too then?

APPLEBY: Messrs Branson and Souter wised up some time ago when they did the sums on the pension liabilities, but there are still a few who either don't understand the risks or are prepared to take a chance on a 'flu epidemic or possibly bring their friends in from Sicily to, err – limit their liabilities, so to speak. Anyway that is just one of the reasons that we didn't want to appear to be in charge at this stage. What about all those old trains? Signalling? Driver-only operation? Timetable changes? The Bridge Too Far in Manchester?

GRANT: Hang on, that's all sorted isn't it? You know, we saw it, said it and sorted it.

APPLEBY: Well that's the point you see Minister. Tickets on the table, here is how it works. We have meetings with the franchise

bidders, all carefully recorded. Then on the way back to the lift a disposable minion tells our favourite bidder what we want, basically more capacity for less money, then next meeting the bidders come back and we pretend to be surprised and delighted. We then give them the franchise which will be a much better deal than the people running it now. The incumbent will of course complain that the proposals won't work, and they are right, which is why the franchise will fail.

GRANT:

So, you know they'll fail?

APPLEBY:

Of course, Minister, we're not stupid, do you think we would do this every time without learning something?

GRANT:

Well, it did cross my mind.

APPLEBY:

Look at what happens Minister. First, they order new trains for everywhere, and set up all the financing, so there is no need to buy any stock for the next 40 years, should anyone be lucky enough to inherit such a deal.

GRANT:

Surely that costs a fortune.

APPLEBY:

Indeed it does.

BERNARD:

But not our fortune.

GRANT:

Who then? These Disco companies? Surely they are clued up?

APPLEBY:

ROSCOs, Minister. Well some are, but they don't get the contracts, the best ones are those financed from a long way away where they don't read that magazine you were waving about. These people actually compete to lend us money and pick up the risks. It never ceases to amaze me but there it is, we pay nothing, especially since we make sure they go to suppliers who won't deliver on time so the bidders will be long gone before any serious money changes hands. The latest thinking from these Hard Place Finance people is that if a train is made bespoke to a given route it will stay there for life. You've got to laugh, have they never heard of Gatwick Express? (*Will he never get over it? – Ed.*) Anyway, they make a bespoke train which is not much use anywhere else and what do you think we say at the end of the franchise?

GRANT:

How much for the next seven years?

APPLEBY:

Not really, we just say we don't want it.

GRANT:

But it's the perfect train.

APPLEBY:

Indeed it is, but we don't want it. We make up some new requirement it can't meet, set up a 'stalking horse' new build, then at the last minute take their train at about 30% of the rental. Obviously, we make sure that nobody else wants it – if they did, we would be displeased (if you see what I mean).

GRANT:

That's genius.

APPLEBY:

Not really, it is they who are stupid. Anyway, they had it coming, they didn't even serve orange juice at the buffet last time I went to see one lot. They are remarkably gullible, one of the best was from the Prime Minister's brother who came up with 'No more diesel-only trains' in the car on the way to make a speech. Since then they have all gone away to play with hydrogen and batteries, eyes off the ball you see.

GRANT:

That's vital research for the future... isn't it?

APPLEBY:

Well, Yes Minister, in a manner of speaking. The main purpose of research is avoiding spending money. Our most successful projects have been tram-train and Great Western electrification. Tram-train put tram systems on ice for nearly 10 years and Great Western priced electrification off other routes and saved us a fortune.

BERNARD:

It also looked so ugly most towns didn't want it near them anyway.

GRANT:

Ah, but what about Scotland?

APPLEBY:

Yes, they are a bit of an embarrassment, but nobody goes there anyway, least of all the news media.

BERNARD:

You were going to explain to the Minister why we let franchises we know will fail. Didn't you tell me it was like invading a country?

APPLEBY:

Yes Bernard. Thank you for reminding me. Isn't your performance review due soon?

GRANT:

No, go on Humpyard, level with me.

BERNARD:

Humpyards are not level.

APPLEBY:

(Sighs) Bernard, you refer to the 'military assistance' principle. If a country wants to take over another they don't

just go marching in – that causes a lot of fuss, sanctions and such like. No, the aggressor will have planted or promoted some cause in the other country, such that they can be invited in to help. They are then credited with saving the economy, avoiding a bloodbath, rescuing some oppressed minority, you know the sort of thing.

GRANT:

Excuse me, is this the Ministry of Defence?

Am I in the wrong office?

APPLEBY:

That's as maybe, you may well be somewhere else shortly, but bear with me. First of all, there will not be enough trains available for the new franchise; there never are. That leads to overcrowding, which is fine because revenue goes up, but the operator can't pay for any more vehicles because it can't get any. Eventually the public rebel, the press takes it up, and we ride in on our white horses to take over.

GRANT:

But we don't want to be in charge, do we?

APPLEBY:

That is why timing is so important, we have to wait until things are just about to turnaround. When new trains are coming in and starting to work properly, and the operator has introduced a 'special timetable' which is usually like the one before they took over. Only then do we round on the operator, chuck him out and take over as conquering heroes.

GRANT:

But we still end up in charge, don't we?

APPLEBY:

We always were Minister; we just keep our heads down when there is any unpleasantness. We keep this 'reluctant saviour' routine going with our 'Operator of Last Resort' moniker, but with new stock everywhere, a proven timetable and no shareholders to pay, an idiot could do it.

BERNARD:

Some would say th...

APPLEBY:

(glaring) Bernard! Schedule your performance review for this afternoon.

GRANT:

Look, I know we are over time here.

BERNARD:

I'll say. (*Me too – Ed.*)

GRANT:

But isn't pensions the killer issue here? We can't let franchises because of the pension liabilities.

APPLEBY:

In the late 1990s the railway pension scheme was awash with money, so naturally British Rail and some new private companies would rather not keep pouring it in, they would rather spend it on racehorses, jet skis, villas and so on.

BERNARD:

Like that chap in the 'don't lose your pension to a scammer' adverts.

APPLEBY:

Coincidentally, yes. So most of these companies declared a contributions 'holiday' and stopped paying in.

GRANT:

But they must have known that in the long term more people would be retiring and taking money out.

APPLEBY:

This is the privatised railway Minister; there is no 'long term'. But you see in effect we took the money out by allowing them not to pay in. Then Gordon Brown did his 'double dip' and removed tax relief from pension fund investment profits, so you see where the money went



Destined for a new route: Class 460 units, previously used on the Gatwick Express service, are pictured during conversion to Class 458/5s at Wabtec Rail Doncaster in April 2013. Richard Tuplin



Not in service: casualty of the system. Class 195 at York, 1 December 2019. Stephen Widdowson

is not a mystery, it is all about getting someone else to pay it back. We are of course doing our best to get other companies to take the poison chalice, but the best we can do is find the odd one who say they will. People say a lot of things in franchise bids, but 'You took it – you pay it back' is not something to say if you want to win.

GRANT:

Well, Humpyard, I'm glad you felt inclined to explain the real situation, but it is rather frustrating that with all the potential of railways in transport you seem keen not to do any projects to make a difference.

APPLEBY: Do you regard being Transport Minister as the pinnacle of your career minister?

GRANT: Well, err, no – I hope not.

BERNARD: *(mutter)* They never do.

APPLEBY: So, what do you think is most likely to further your, and indeed our, careers?

GRANT: Yeah, like – some big project, flags, champagne openings, that sort of thing. Impressing voters.

APPLEBY: Minister, your stay in office at the very most will be five years, which is barely long enough to write the contract for a railway project and anything you do start will be over budget and behind time. You can only lose by doing something real and tangible. No, what matters is keeping to your budget, creating the illusion of control. You will never do that if you start doing capital projects. Stick to revenue, painting a few trains, changing a few uniforms, and, of course, 'rescuing' franchises from bad operators.

BERNARD: Which we appointed.

APPLEBY: Remember, the more projects you shunt into the sidings the better your career will be.

BERNARD: Humpyard has many sidings.

GRANT: That really is brilliant. But can you run the trains on time like I keep promising?

APPLEBY: A simple adjustment to the timetable to help the customer – we add minutes in to make the timetable more 'robust' as we call it.

BERNARD: Slower is another word.

APPLEBY: But a word we never use, Bernard. We have found that no matter what we promise from an investment nobody ever checks if we achieved it. As a rule, civil engineering projects take so long the people who started them have usually died by the time they are finished. So, can we run the trains on time? Yes Minister.

Roll credits.

Next on BBC1: Lord Berkeley in the Goes Wrong show. Pan down. 

RIP Derek Fowlds: Grant Aided enters No 10.

Trinity Mirror / Mirrorpix / Alamy Stock Photo



SCOTTISH STATISTICS

What a pity Theo Steel couldn't have delayed his article about station usage on Scottish routes (p72, last month) another month until the Office of Rail and Road had released its 2018-19 statistics. He would then have been able to be more positive about patronage of the Far North line, with Caithness figures up by 2.4% on the previous year. Not vast, I agree, but far from being 'most depressing'.

It is a pity Mr Steel didn't make contact with Friends of the Far North Line (or indeed the Friends of any of the other long straggly Scottish lines) before putting pen to paper. We would gladly have pointed him towards more good news, not least the ScotRail response to the Review team set up by Fergus (not Marcus) Ewing three years ago. The plan is to have six trains a day in each direction (up from four now), of which two will be end-to-end express-ish (my word) with a 3.5-hour journey time. Helmsdale will become an important interchange station between the two types of service, with four trains a day going north to Caithness serving all stations, and four trains a day going south to Inverness, again serving all stations.

This will naturally entail significant track enhancements at strategic points: Lentrane and Kinbrace are just two possible sites for restored passing loops; as well as upgrading the facilities at Helmsdale itself. FoFNL is expecting work to start on the track work during the second half of Control Period 6.

It would be a shame if the negative tone of the article were to be the last word on the state of the Far North line in 2020.

MIKE LUNAN

Thurso

Theo Steel comments: 'That is all good to hear – albeit to be paid for! I assume the extra units required will cascade out from some Scottish electrifications. Let's hope the thickening up of the service proposed builds on last year's growth at all but seven of the stations north of Inverness and let's hope that it is the beginning of a trend rather than a one-off.'

Arguments have long been made about doing something for the Far North line that requires some concerted promotional action. It sorely needs marketing 'welly', for instance as 'The Viking Route' with historic sites and associations pointed out by leaflets, posters and other publicity methods. And what about some exciting vinyls on the trains? The Vikings, the Sutherland Gold Rush and the Flow Country (for the birds) could be highlighted, as could other features.

Lessons could be learned from 'Route 500' that now brings motorists in their droves to north west Scotland's coasts – too many in fact. Another car route is to be promoted in Dumfries and Galloway. Rail, with its generally low emissions, is a much more environmentally friendly way of seeing the countryside.

DR ANN GLEN

Airdrie, Lanarkshire

We welcome letters for 'Forum'. Please send them, ideally by e-mail, to:



modernrailways@keypublishing.com

Modern Railways, Transport Writing Services, PO Box 206, Tunbridge Wells North TN1 2XA

Please supply your postal address, even if writing by e-mail. Please note that we may edit letters for publication. Views expressed in this letters feature are not necessarily those of the editors or publishers.

It was a very interesting article by Theo Steel on Scottish outposts. However, I wondered how accurate the station footfall figures are.

I have been on all the Highland lines mentioned several times, most recently last December when I stayed first in Mallaig, and then later in Tain, and while there making trips to Arisaig, Lochailort and Golspie. Never once in all my trips to the Highlands have I bought a ticket to one of these stations, always buying a rover ticket.

The Spirit of Scotland freedom pass is excellent value and is also valid on the ferries and many of the buses (going on a large coach round narrow twisty country lanes on its way from Thurso to John O'Groats in 2018 was quite some experience!). There is also a rover which is limited to the Highlands. I suppose the numbers quoted do give an indication of whether usage is rising or falling.

IAN K. WATSON

Carlisle

A few comments on Theo Steel's article on Scottish outputs. Of course, the Girvan to Stranraer line is not in the Highlands as per the cover flash and contents pages, it is very much in the Lowlands! The shuttle bus service to the Cairnryan

ferry terminal has been terminated a second time due to lack of custom, it had latterly been operated by the local community bus service; the previous SwesTrans (South West of Scotland Transport Partnership) bus contract was carrying on average less than one person per trip.

I do not believe most people involved in the rail industry in Scotland would 'aspire' to move services from Class 156s to '158s'. The latter's acceleration is totally dependent on the terrain, they notoriously struggle on the Borders Railway and they have a poor reliability record.

There is an urgent need to devise a fleet replacement strategy for the increasingly ageing '15x' fleets around the country, particularly those operating on long scenic rural routes that will probably never be electrified by overhead wires and are unlikely to be suitable for alternative traction modes.

GRAHAM WHITELEY

Dumfries

BERKELEY REPORT MISLEADING

If Lord Berkeley can use his engineering expertise to find some cost savings on HS2, other than just

Scenic Scotland: the 'Jacobite'
on Loch Eil. Hannu Peltola



chopping back the scope to design down to a budget, that would be splendid. However, when it comes to his suggested 'options' and what a railway is meant to deliver, namely a train service, his dissenting report (p94, last month) is a mess.

This is most evident in suggestions to 'upgrade' the Chiltern line in order to increase London – Birmingham capacity. Logically, one would expect the upgraded line to carry the three trains per hour proposed by HS2, but in order to achieve this, works proposed include four-tracking from Birmingham to Coventry, flying junctions at Coventry and Leamington, and extensive quadrupling of the Chiltern line in order to terminate in Zone 2, at a new Old Oak Common station, change for Crossrail. All this is expected to no more than equal current New Street – Euston times, not allowing for the extra time taken to reach central London.

Euston would be reached, if at all, by a new tunnel under Kensal Green cemetery, a new junction at Queen's Park, and complete reconfiguration of the Euston approaches to feed new platforms on the site cleared for HS2. Presumably the journey would be longer than existing trains, without the 400-metre capability planned for HS2. Would three trains per hour, with no journey time benefit or additional capacity per path, support a business case for all those works? Not a hope in Hades I suggest, even taking them at face value, and Lord Berkeley offers no detail such as track layouts to demonstrate their feasibility anyway, let alone specimen timetables to show how they would be used.

As an alternative to HS2, this idea is even more fatuous, as it makes no provision for services from Manchester, Liverpool and Glasgow. So these trains remain on the West Coast main line to Euston, and frustrate most of the released capacity that HS2 enables (as described in my article, p66, October 2019 issue).

Lord Berkeley also criticises HS2's business case for being based on 18 trains per hour (tph). In fact, HS2's specimen service pattern features 17tph to and from Euston, with an 18th path reserved for future growth. But Lord Berkeley thinks this is impossible, and that the economic assessment of HS2 should be based on a service of about 13tph. Apart from some years-old quotations from high-speed operators about their then-prevailing service levels, without question as to what feature of their railways they think sets the limit, he bases this on the UIC (International

Union of Railways) guidance on prudent utilisation of theoretical capacity. This, for a dedicated high-speed railway, is 75% in peak periods. HS2 standards are that the line headway should be 150 seconds or less, which in theory gives 24 paths per hour (assuming, reasonably in this case, all trains running at the same speed). 75% of this is indeed 18 paths per hour. You might wonder about the wisdom of running said 18tph every hour of the day, but an off-peak service using a couple fewer paths could be defined without damaging the business case.

But Lord Berkeley then applies the 'prudence' factor again, to reduce 18 paths per hour to 12.6 (rounded to 13). This, frankly, is an outright howler, and bad enough in itself, but not only does Lord Berkeley base his criticism of the HS2 business case on this, but the bar is set too low for the capacity he aims to achieve in his 'options'.

Inevitably, Lord Berkeley raises the old chestnut of making Old Oak Common the terminus for HS2, which he says could 'easily' handle the 10tph of Phase One. As if anything in operations planning were easy! Old Oak and Euston as planned for Phase 1/2a would indeed both have six platforms, but Euston features a grade separation to provide parallel moves between arrivals and departures, which in Phase One feeds out of six platforms, with another five being hung onto it for Phase Two. This radically improves the flexibility of the layout, which is then felt in terms of reliability, obviously, but also in things like choice of timings for trains that are received from or handed over to Network Rail. This could not be replicated within the Old Oak site, and the loss of reliability and flexibility would make even the planned 10tph unrealistic. Lord Berkeley's subsequent suggestion that Old Oak could handle the Phase 2b service given 'another platform or two' is then nothing short of laughable.

This report seems to give no thought as to how the suggested 'options' might be used, let alone whether the benefits justify the costs. It is merely an engineer's shopping list costing the same as HS2, devoid of analysis of operating feasibility and commercial attractiveness, and thus of value for money.

WILLIAM BARTER
Towcester

FRANCHISING WOES

Your editorial 'Franchising – broken beyond repair' ('Railtalk', last month) covers some interesting ground,

but we think the position can be rather more succinctly explained.

There are well-known arguments for and against franchising in general (including the business school term 'winner's curse' for the successful bidder then having to implement the most onerous bid), but we think that five things can summarise what has derailed British railway franchises in recent years:

- removal of the ability to flex fares in the regulated 'fares basket' in 2015 has exacerbated fare anomalies and significantly restricted the commercial scope for revenue maximisation amongst current franchisees;
- the imposition of extended pension liabilities has created unquantified future costs and has depleted the pool of bidders;
- making the revenue line dependent on industrial relations policies that are going to be controversial has greatly added to management risk;
- Network Rail's various problems with the delivery of electrification and infrastructure improvements have prevented the smooth introduction of new timetables that are again critical to meeting the franchise revenue line; and
- the inability of rolling stock manufacturers to deliver and commission new trains on time has caused havoc to both operational reliability and – again – to meeting the franchise revenue line.

All in all, this combination of factors has proved a fatal cocktail to a system which had been broadly sustainable until recently. That it is no longer workable is not generally due to the train operators themselves but to these factors. The way forward as recommended by the Williams Review (or, indeed, anyone else) will need to address the above issues if the railway is to move forward positively.

DR NIGEL G. HARRIS
ANDY WAKEFORD

The Railway Consultancy Ltd

Enough is enough! The excellent 'Railtalk' article in your February issue illustrates yet again that a rolling stock 'guiding mind' is desperately needed. Privatisation left 'market forces' in overall control of rolling stock allocations and that fact has perpetrated several nonsenses. This began to become apparent when, a few years ago, a rolling stock leasing company was allowed to commit to Chiltern Railways the fleet of Class 170s that was operating the Hull to Manchester TransPennine

Express service, even though there was no ready replacement at TPE. A similar situation could face Govia Thameslink Railway with the transfer away of its Class 171 fleet to East Midlands Railway (might GTR facilitate more 'Castle' HST formations for GWR so Class 165/166 Turbos can transfer to Southern?).

Other current 'nonsenses' include the storage of serviceable (albeit non-PRM) HSTs at a time when CrossCountry services, especially at weekends, are overcrowded; and the retirement of the nearly-new Class 707s on South Western. The five-car Class 707s would be ideal for the Southern suburban 10-car railway, so that four-car '377s' could displace the aged Class 455s, and three-car '377s' could displace the Class 313s on the Southern Coastway services.

But the current industry structure leaves such initiatives to chance. If franchise-end and leasing company self-interest happen to coincide, all well and good, but recent history shows this rarely happens. The Department for Transport either needs to get a grip of this situation itself or delegate it to an impartial guiding mind.

PETER FOOT

Felmersham, Bedford

Unlike the situation with TPE's '170s', we understand that the GTR '171s' won't move to EMR until there is a replacement for them on the Uckfield and Marshlink routes – Ed.

COMPETITION CONCERNS

Chris Stokes asks – reasonably enough – why the Competition and Markets Authority was concerned about the possibility of fares rises on the Ely to Norwich line following Abellio becoming responsible for both hourly services ('Between the Lines', January issue).

The short answer is that the merger will have encouraged a reduction in the number of Advance fares, one of whose aims is to deter customers from using alternative services. The amounts at stake were not huge but Abellio quickly offered the necessary undertakings to avoid such fare rises, for which many non-car owners, such as students and the elderly, will be grateful.

MARTIN STANLEY

Editor, Understanding Regulation (regulation.org.uk)

Chris Stokes comments: 'Martin Stanley is technically right – East Midlands does offer advance tickets on this route. But I still think there are rather more serious abuses of monopoly power for

the CMA to worry about, both in the railway industry and more widely!

CAMP HILL LINE SERVICES

In your 'In Focus' section on the West Midlands (February 2020), you state on p54 that a new half-hourly service on the Camp Hill line could be accommodated on the existing layout at King's Norton (without revival of the central island platforms). I would suggest that any solution that does not involve providing new or revived infrastructure would introduce additional risk to the performance of existing passenger services (especially Cross City) that pass through the station. Redditch-bound trains are sometimes turned back short of destination at Barnt Green when more than five minutes late so as to regain their schedules. This practice will almost certainly increase if there is congestion at King's Norton. There is also a distinct risk that at times of perturbation the timetable could become unworkable, with consequences across the West Midlands network.

RICHARD BROWN

Alvechurch, Worcestershire

MANCHESTER SOLUTION

I refer to the letter from William Barter ('Forum', February issue) which suggests reorganising services in the Manchester area. In making these comments, I am relying entirely on memory as I have no documents to hand.

Under Railtrack, there was a proposal to do just what Mr Barter is describing – pairing by use between Slade Lane and Adswold Road Junction. I was working for BR Research and carried out an operational simulation of this proposal using Vision, which would have simplified operation at Stockport Edgeley as well as Slade Lane. From memory, it may well have been part of the Manchester South resignalling scheme, but I cannot remember why this was not taken forward, as I was not involved in any discussions or decisions.

In addition to the difficulties mentioned by Mr Barter for up stopping trains at Levenshulme etc having to use the Up Fast line, a major minus point would have been that interchange for passengers at Stockport could have been very awkward due to going from one island to the other, via narrow staircases.

RICHARD PHILLIPS

Derby



Claydon loop, looking west: Aylesbury and the Calvert freight sidings are off to the right, Bicester is behind the photographer. John Elvin



Claydon loop, looking east: Bletchley lies beyond the undergrowth! John Elvin

William Barter writes about the possibility of changing the four lines between Slade Lane and Stockport to pairing by use rather than pairing by direction ('Forum', last month). Firstly, I would like to point out that the proposed Metrolink extension to Stockport would be a continuation of the East Didsbury line. As such it might take a small proportion of the Heaton Chapel traffic but nothing from Levenshulme. Even from Heaton Chapel the journey to central Manchester would still be a lot quicker by train.

Stockport station has two large island platforms, both faces of each island being served by trains heading in the same direction. There are currently 15 trains most hours between Stockport and Piccadilly. Passengers can go to the correct island knowing that a train to Manchester will shortly arrive at one of the two platforms there.

Changing to pairing by use would split these trains across the two islands, thus getting passengers wondering where they needed to go to catch the next service. Similarly for trains headed out of Manchester.

I believe a reorganisation like this was looked at as part of the West Coast Upgrade and rejected.

DAVID JAMES

Cheadle Hulme

POINTS

May I point out that Phil Marsh's photo at the top of p65 (last month) is facing east, although taken from the west end of Claydon Junction loop. The route to Aylesbury curves off to the right and HS2 will indeed cross under the trackless formation in the foreground that will be raised up to give HS2 sufficient clearance to pass underneath.

JOHN ELVIN

Winslow, Buckingham

Thanks to John Elvin and others who wrote to point this out. What confused me is I did not realise that, while the track from Claydon to Bletchley is long gone, last year the track between Claydon and Bicester was lifted too, in preparation for renewal under the East West Rail project – thus there is an empty trackbed at both ends of Claydon loop. There is a track diagram of the area on p20 of this issue – Ed.

Whilst I very much enjoyed Ian Walmsley's commentary on liveries past and present ('Pan Up', last month), the caption to the photo of an LNER Blue A4 on p45 is incorrect. The location is actually the former Leeds Central, long since demolished, and not King's Cross. Philip Sherratt's photo (opposite page) makes for easy comparison!

JOHN PECKHAM

Leeds

The glorious Settle and Carlisle line

A selection of images from the roof of England



Logs: hired-in Freightliner machine No 70015 stands in for Colas on the company's 12.58 Carlisle Yard to Chirk timber train, topping Ais Gill summit on 2 October 2019. Dave McAlone



Pretty Midland station: Ribblehead on 28 May 2016, with unit No 158908 arriving. Rob France



Freight-only line: the former Grassington line serves the Tarmac quarry at Rylstone and joins the southern end of the Settle and Carlisle route at Skipton. Here No 66738 negotiates the branch on 24 April 2017 with a train of stone for Hunslet. Rob France



Viaduct view: a Class 158 crosses the famous structure at Ribblehead on 29 September 2017. Rob France

Nothing short of a miracle

Departures

Time	Destination	Plat	Exit
16:12	Bradford F Sq	9C	On time
16:12	Manchester Uic via 100	On time	
16:14	Redcar Central via 15B	9	On time
16:15	London Kings X	9	On time
16:15	Manchester Air	16	On time
16:15	Harrrogate	28	On time
16:17	Higan Mailgate via 13B	On time	
16:18	York	7B	On time
16:21	Doncaster	11B	On time
16:25	Sheffield	3B	On time
16:27	Scarborough	12C	On time
16:27	Halifax	11C	On time
16:29	Poppleton via	5B	On time
16:29	Knottingley via	6B	On time
16:30	York	5B	On time
16:32	Sheffield via	17B	On time
16:33	Ilkley	1C	On time
16:34	Hull	11C	On time

Time Now 16:11:37

Time	Destination	Plat	Exit
16:38	Lincoln Cent.	17B	On time
16:41	Reading	12C	On time
16:42	Newcastle	15	On time
16:42	Bradford F Sq	28	On time
16:42	Sheffield via	2C	On time
16:45	Manchester Air	16B	On time
16:45	Horsforth via	3B	On time
16:45	London Kings X	7B	On time
Platform to be confirmed please wait on the concourse			
16:47	Huddersfield via	13B	On time
16:48	Carlisle	5C	On time
16:48	Sheffield via	10B	On time
16:54	Hull	3B	On time
16:55	Sheffield	1C	On time
16:57	Blackpool Bth	15B	On time
16:58	Knottingley via	17B	On time
16:59	Keighley via	5C	On time

Special Notice

#Security Notice

If You See Something that doesn't look right, speak to a member of Staff or text British Transport Police on 01603 761111

WE'LL SORT IT
SEE IT SAY IT SORTED

Welcome to
Leeds
Station

Timing just right: departure indicator at Leeds on the day it was announced that OLR would be taking over at Northern. Colin Boocock

Shortforming

AT GREAT Western Railway there is an internal social media platform where people can post notices, comments and opinions. One day the commercial side announced that a new series of *Famous Five* ads was going to be launched and there was a gif of one of them, 'Five go to Devon'. Within minutes of this appearing some bright spark had posted underneath: 'Should be 5 vice 10 go to Devon'.

Fork in the road

FORGET THE Profumo scandal of the early 1960s, investigative reporter Tom Mangold has uncovered evidence that Prime Minister of the day Harold MacMillan and Lord Denning colluded to suppress a long-standing arrangement between Transport Minister Ernest Marples and a prostitute who was paid to dress him in women's clothing and beat him. It is understood the woman was then paid off to prevent her story appearing in the press.

Marples, a major shareholder in a civil engineering firm working on road projects, was of course notorious for his preference for roads over railways. 'Had Denning failed to protect Marples, might the Beeching closures have lost momentum?' wonders reader John Yellowlees, who brought our attention to this gem.

SOON YOU'RE TALKING REAL MONEY

ALISON MCGOVERN (WIRRAL SOUTH) (LAB): Can I draw his (the Prime Minister's) attention to the Wrexham to Bidston line that would connect north Wales and Liverpool? Will he put some extra investment in there so that we can speed up improvements?

THE PRIME MINISTER: We will certainly examine very carefully the proposal that the hon. Lady makes, and whether it qualifies under our £1.5 billion Beeching plan.

Extract from Hansard. A £500 million budget was originally announced for the Beeching reversal plans.

THE MANY USES OF POLENTA

READER WOLFGANG Kling writes, following the story on this page in our January issue from Adrian Shooter concerning discharge of faeces from trains, about some tests that took place in his home country of Switzerland. National operator SBB was upset at the state of its carriages when they turned up for light maintenance and heavy overhaul, because, as Wolfgang explains, 'the bogies and underframes were literally full of s**t'. SBB and SIG (the company that brought Mk 4 bogies to the UK and later supplied tilting bogies for the Class 390, by which time it was a part of Alstom) tried to find the best design for the tube

that led everything from the toilet downwards and out of the vehicle: the aim of the tests was to find a way to get the faeces right to the ground and not to spread around the undercarriage. To see where the faeces would end up, white-coloured water with boiled rice and yellow polenta was used to simulate things in a hygienic way. In the end nothing was resolved before the move to retention toilets rendered the research redundant, but for a number of weeks SBB had problems with bird strikes on the stretch of line that hosted the tests. The birds found the rice and polenta lying in the track bed a tasty treat in winter.

AND YOUR POINT IS?

'WE NEED projects that favour regional connectivity and help local people in their daily lives. We need to invest in new rail connections that remove bottlenecks, increase rail freight capacity, improve journey times and frequencies, enhance capacity in the... Midlands and North and join up currently unconnected urban areas.' *The Green Party's Jonathan Bartley in a press release condemning the go-ahead for HS2*

Cuckoo clock hyperbole

'WE HAVE secured the best train builder in the world to make the new Metro fleet.'

Toby Hughes, Director General of Nexus

Gamekeeper now poacher

'INA bold new step forward, Members of Parliament met... to agree a clear agenda going forward to hold rail companies to account for poor service in the South Western Railway area' ran a news story announcing the establishment of a new All Party Parliamentary Group for MPs with constituencies in the relevant area. Elected as chairman of the APPG is the new MP for West Dorset: one Chris Loder, in a previous life Head of New Trains for SWR. Ouch.

NX NOSTALGIA



Setting up the route: as a schoolboy in the late 1970s, our contributor Tony Miles wrote to British Rail to ask if he could look round New Street signal box. An invitation duly arrived, he was shown round and then asked if he'd like to work the panel and signal an empty stock move round Birmingham. When he went back to the box over 40 years later to report on its impending demise (p60, last month), the signallers said 'well, you'd better work it again then, hadn't you?'. So here he is, doing just that.

Nothing to do with us, guv

ANDY McDONALD (MIDDLESBROUGH): To ask the Secretary of State for Transport, what assessment he has made of the effect of his Department's decision to delay the re-tendering of the East Midlands Trains franchise from October 2015 to August 2019 on the compliance of that operator's fleet with rail accessibility requirements which came into force on 1 January 2020.

CHRIS HEATON-HARRIS: No specific assessment on rolling stock compliance has been made regarding the effect of rescheduling the franchise competitions. We continue to push the rail industry for continuous improvement to deliver accessible journeys, and an accessible fleet is planned to be in place on the East Midlands franchise from December 2020. *Hansard*

100 years of Government control

From the earliest years the Government has sought to control the railways through legislation, regulation and direction. A century ago, in September 1919, their hand was immeasurably strengthened by the creation of the Ministry of Transport, under Sir Eric Geddes, whose first act was to reorganise the railways and create the Big Four. Many of the problems of these early years are the same as those with which Government struggles today – safety, fares, performance and accountability. Can we learn lessons from the past to guide future proposals from the Williams Review onwards?

WARTIME CONTROL

After seven years of Government control through World War 1 and beyond, the railways emerged impoverished, with a backlog of maintenance and a desperate need for investment to meet the challenges of a new age. Their public reputation was tarnished, as the service was poorer than pre-war, and as a result of massive increases in fares and freight rates introduced by the Government in 1916.

During the war, the Government had taken control of the railways under the provisions of the Regulation of the Forces Act, 1871. Control was exercised by the President of the Board of Trade working through a Railway Executive Committee formed of chief officers of 12 of the principal railway companies, under the Chairmanship of Sir Herbert Walker of the London & South Western Railway.

In political terms the objective was to ensure the railways did not profit from the additional wartime traffic and the Government took on directly the financial risk. Shareholders were guaranteed roughly the 1913 net revenues.

Relations were soured by the Government's refusal to pay. A test case involved the North British Railway, whose claim was not eventually settled until the railways were decontrolled finally in 1921 after a battle between Sir Eric Geddes as the first transport minister (and a former North Eastern Railway director) and William Whitelaw, the North British Chairman. Whitelaw emerged with great credit from this bruising encounter, and shortly after became chairman of the newly formed London & North Eastern Railway.



The first transport minister: Sir Eric Geddes. Alamy

POST-WAR UNCERTAINTY

The period of Government control had also given politicians a reason for intervention which they were unwilling to give up with the end of hostilities. In August 1918 the House of Commons appointed a select committee on internal transport which reported just two weeks after the Armistice was signed in November. It concluded that 'unification of the railway system is desirable under suitable safeguards, whether the ownership be in public or private hands.'

The select committee report was followed by a white paper in 1920, produced by the new ministry in a slim five-page document which was superficial in its approach, but proposed radical changes, including seven regionally-based companies with worker representation on their boards, the latter being opposed by both managers and unions (who wanted to see nationalisation).

The white paper asserted the Government's right to intervene in railway management in the national interest for the protection of the public, for economical working and common technical standards, to enforce common user of rolling stock and facilities, and to pool traffic receipts 'where competition is causing waste'.

MINISTRY OF TRANSPORT

Following Royal Assent to the Ministry of Transport Act in August 1919, it started work in September. It combined work previously undertaken by the Board of Trade, the Local Government Board and the Roads Board.

The intention of the 1919 Act was that the new Minister of Transport should exercise a general control, and will give his directions, leaving those responsible for the undertaking to carry them out in

their own way'. However, he was enabled to give directions as to rates, wages, standardisation of works and rolling stock and co-operation between companies, as well as being able to require alterations and additions to be made.

Under the 1919 Act, the Minister was empowered by order to require the railways:

- to conform gradually to measures of general standardisation of ways, plant and equipment, including methods of electrification;
- to adopt schemes for the co-operative working or common user of rolling stock, workshops, manufacturing, plant and other facilities.

The latter was to deal with the problem of private owner wagons which typically were returned empty to their station of origin. Great savings were foreseen if a common user system was adopted, allowing wagons (in theory) to make loaded journeys in both directions.

The Act enforced collective bargaining. It also required railways to handle traffic to and from connecting railways efficiently and not to give priority to their own business. Such transfers had to satisfy the 'reasonable requirements of the public'.

THE FIRST TRANSPORT MINISTER

Geddes himself was a controversial figure and did not have the universal admiration of the chairmen and general managers of the great railway companies.

He was a formidable administrator with a great intellect who had revolutionised the production of munitions in the early days of the war. He is also remembered as the chairman of the 1921 Committee on National Expenditure which proposed the massively unpopular

cuts in public expenditure later known as the 'Geddes axe'.

In retrospect, it might be seen as a mistake to appoint as the first minister of transport a former railway director who wanted to manage the railways and was quite capable of doing so, rather than a politician who would set the strategic framework and leave the railwaymen to get on with it.

The grouping of the railways was massive and featured heavy-handed interference with major joint stock companies which, before the war, had operated successfully and profitably. The interests of shareholders were over-ridden and a clear public interest element introduced in their operation. Henceforward, the Government would be able to interfere much more in the provision of railway services, while leaving the commercial risk with them. The seeds were sown which led to the Square Deal campaign of 1936 and the crippling obligation imposed on the railways in terms of common carrier liability which was not finally removed until 1962.

Nevertheless, the Big Four railways that emerged from the earlier proposals, and which lasted for only 26 years until Government control was again imposed in 1939, established brands and loyalties which have outlived them, and the half century of BR's existence, and continue today in the names of some franchise operators, notably Great Western Railway.

RESONANCE

Some of these themes still resonate today, notably the lack of clarity between the railway's public service role, the commercial imperatives of its private companies and the lack of a strategy on transport generally and the railways in particular.

Geddes' approach was the start of a long history of antipathy built up between railway managers and the newly-formed Ministry, which lasted throughout the following 85 years and only changed with the abolition of the Strategic Rail Authority in 2005, at which point so many former railway staff were taken into the Department for Transport that the wall of distrust was finally breached in an era of more open Government, encouraging dialogue and co-operation.

The Williams review, however, is evidence that the restless hunt for change to 'fix' the railway 'problem' is still there, just as it was 100 years ago.

 Chris Austin and Richard Faulkner

CAF builds for the UK

PHILIP SHERRATT visited CAF's factory at Newport ahead of its official opening on 21 February

Train building in the UK is on the rise. CAF's contribution to this trend is its new facility located at the Celtic Business Park near Newport in South Wales. The factory opened its doors in September 2018 and has been building Civity DMUs for first Northern and now West Midlands Trains. A formal event to mark the opening was due to take place on 21 February, after this issue went to press, but prior to the event *Modern Railways* was invited to visit the site and see production in progress.

CAF's decision to invest in a UK factory was confirmed in 2016, following which more than 100 possible locations were examined as CAF won UK orders in increasing numbers. It arrived at a shortlist of four sites before in July 2017 confirming its chosen location for the factory on land previously occupied by Llanwrn steelworks, adjacent to the South Wales main line.

The company says Newport was selected because of its links to roads, rail and ports as well

as the significant investment in the area, including a massive housing development and new public transport links, leading to the availability of local people with the right technical and engineering skills. £30 million has been invested to get the factory up and running, including grant support from the Welsh Government's Inward Investment Programme. St Modwen is the landowner and developer for the Celtic Business Park site, while Bowmer & Kirkland was principal contractor for construction of the factory.

UK OPERATIONS

The CAF UK Group has three operating businesses: rolling stock, rail services and BWB Consulting (the construction and consultancy arm of CAF). Newport is the centre for the UK rolling stock division, focused not just on manufacture but leading on design, system engineering and support of other UK projects, such as the passenger coaches for Caledonian Sleeper and TransPennine Express.

Newport began with just 16 employees and has since grown so that the workforce now numbers over 200 in total. Of these, broadly half are engaged in train assembly, headed up by 12 team leaders, along with staff to manage the warehousing and stores facility and to carry out testing. The remainder are office-based, including finance, HR, IT and procurement teams, with Newport being the base for CAF's wider UK procurement activities.

WORKLOAD

The first trains built at Newport were Class 195s for Northern. From an order for 149 vehicles (25x2-car and 33x3-car units), Newport has built 19 of the two-car units. Three of the three-car sets were a later addition to the original order following the cancellation of electrification of the Windermere branch, and Newport is building the driving vehicles for these, with the centre vehicles coming from CAF's factory at Irun in Spain.

Inside the assembly hall: Civity DMUs for Northern and West Midlands Trains under construction at Newport on 23 January 2020. Photos by Philip Sherratt



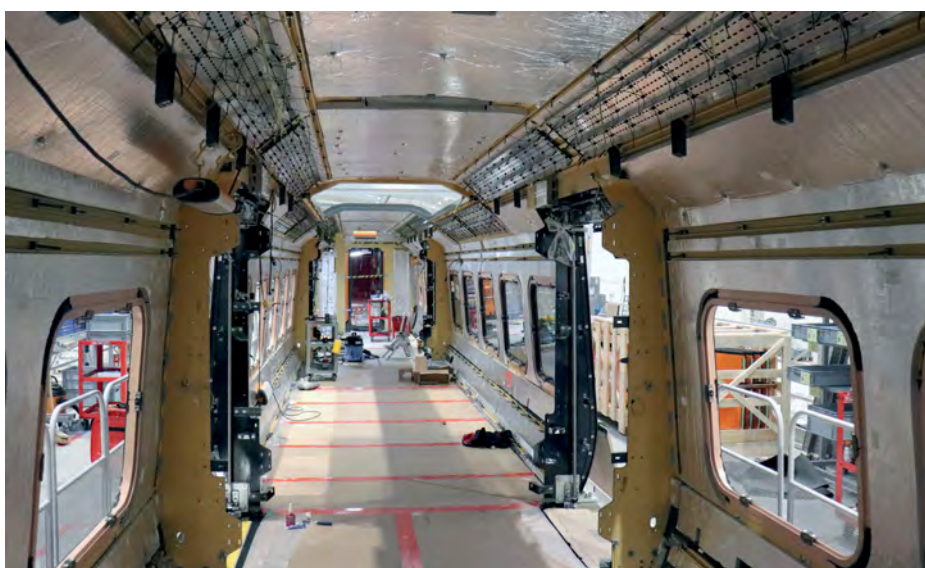
'Whilst recruiting and training new staff, we have successfully been building one complete train a week' says Darren Cumner, Chief Operating Officer, CAF Rolling Stock UK. By late January just two of the two-car sets remained to be completed, with the six driving vehicles for the three-cars due to follow by the spring, completing the Northern build.

Work has already begun on the next order for Class 196 DMUs for West Midlands Trains. 14x4-car and 12x2-car sets have been ordered by WMT, with 60 of the 80 vehicles to be built at Newport; the first 20 carriages are being built at CAF's largest facility in Beasain, Spain. By late January one vehicle built at Newport was already undergoing testing with a further 10 in production, and the first train from Newport is due to be delivered to WMT in the spring. The broad pattern will be a pair of four-car sets followed by a two-car. The WMT build will be completed by the end of the year.

Then attention will turn to the Wales and Borders contract. The complete order for 51x2-car and 26x3-car Class 197s will be built at Newport; 'this is very exciting because it will be the first time a complete fleet will have been built here' says Mr Cumner. The first car shell is due to be delivered to Newport in March, with production ramping up next year. The Welsh order will also be the first in the UK for which CAF takes on full responsibility for maintenance, including running the Transport for Wales Rail depots at Chester and Machynlleth.



Assembly underway: a Class 196 bodyshell in the first of the five zones in the production process. The '196s' are the first trains built by CAF for the UK to have corridor connections between units.



Bodyshell interior: inside a Class 196 under construction.

GLOBAL EXPERIENCE

The production process employed at Newport is based on that of CAF's other factories worldwide. 'The core principles of train building are the same' says Mr Cumner. 'For Northern we mobilised very quickly, and when you have new people and a new location it makes sense to take risk out and follow proven processes.'

During the setup phase there was close working with CAF's Spanish facilities. 'Some early starters spent a considerable amount of time in Spain across all functions' Mr Cumner explains. 'The ethos was to learn, standardise then improve. We took only best practice from other facilities and looked to employ market-leading, proven manufacturing processes.'

However, where Newport is different is that it is CAF's leading facility where all manufacturing processes are managed digitally; there is no paperwork anywhere. 'As manufacturing started

in Newport with no historical baggage, it was a great opportunity to go digital from the outset' says Mr Cumner. 'In time, other CAF manufacturing facilities will adopt this as best practice.'

The digital approach brings several advantages – as well as being paperless, it enables better tracking of performance, improved material control, advanced quality controls, clearer accountabilities and easier scheduling of work. 'Effectively it's possible to see progress of any stage in the build process' says Mr Cumner. 'It enables each department to work in real time, allowing optimisation of the effectiveness and efficiency of the facility as a whole.'

PRODUCTION ZONES

Painted car bodies have been built in Spain – for the Northern order this was at Zaragoza, and for West Midlands and Wales and Borders at Beasain. These are delivered by sea to Portbury

NEWPORT WORKLOAD

Operator	Class	Units	Carriages	Notes
Northern	195	22	44	19x2-car units, driving vehicles for 3x3-car units
West Midlands Trains	196	19	60	11x4-car and 8x2-car units
Transport for Wales	197	77	180	51x2-car and 26x3-car units

Delivery from Spain: bodysells for Class 196 DMUs for West Midlands Trains outside the factory.



Door fitment: this is part of the second stage in the assembly process.

Docks and then moved by road to Newport. On arrival, car bodies move to the main assembly hall and through the production line in five zones, spending a short time at each one and being moved forward on accommodation bogies.

'When we started building for Northern, we had six zones, but to increase flexibility we simplified our processes to reduce this to five' explains Kane Jellyman, Head of Rolling Stock Production, CAF Rolling Stock UK. 'This has enabled us to create a third production line.'

Mr Jellyman points out that CAF's Newport factory undertakes a scope of work which other UK facilities would sub-contract out, such as wiring work. Newport does not currently do painting or welding, despite there being a paint facility at the site. This facility is principally for minor repairs, with the main focus on site being final assembly. However, in the longer-term this resource could be converted if required.

Working through the zones, zone one is where installation of floor supports and interior window frames is undertaken whilst access to the underframe allows fitment of electrical ducts and other equipment. Zone two follows, where door assembly takes place, along with installation of pneumatic pipes and brake systems beneath the carriages. The third zone on the production line incorporates roof access, for fitment of heating, ventilation and

air conditioning (HVAC) equipment as well as antennae. So far Newport has only built DMUs, but for electric vehicles it is here that pantographs would be fitted, potentially requiring the work to be split into two stages due to the duration of activities. Powerpack installation and much of the interior works are undertaken at zone four.

Zone five includes the fitting of seats and sees vehicles dropped onto their bogies, using CAF-developed technology to precisely level body to bogie. Vehicles then move onto the external traverser outside the assembly hall. After water testing, they enter the test house, where cars are first tested singly and then units are formed for whole train testing. The test house has five roads, each currently capable of accommodating six cars – two of the roads have an overhead extraction facility for use when engines are running.

WORKFORCE DEVELOPMENT

'As Newport prepares to meet its ongoing manufacturing demands we will be recruiting more staff' says Mr Cumner. 'We've already strengthened our engineering, procurement and lean manufacturing teams, and this ongoing engagement will result in a total workforce of around 300.'

Mr Cumner reports that broadly three-quarters of staff at the factory are from Wales, and

there are just two Spanish expats in the permanent workforce at Newport. While there has been co-operation with CAF's Spanish bases, Newport has built up its own expert team rather than relying on a transfer of staff from elsewhere within the organisation.

'The removal of the tolls on the Severn road bridge is an advantage for us, and something we were aware of when selecting the site' Mr Cumner notes. 'We've held successful recruitment events and some staff have relocated to join us. We're also looking to bring forward graduates and apprentices in conjunction with

Test house: the on-site facility can accommodate 30 vehicles on five roads, here occupied by Northern Class 195 vehicles.



the Welsh Government, and are building links with local schools, colleges and universities.'

This reflects CAF's desire to become a part of the community in Newport and more widely in Wales, similar to the way the factory is at the heart of CAF's home town of Beasain in Spain. 'Training at Newport could give new starters opportunities within the UK or globally' points out Mr Cumner. 'CAF has a presence across the world so there's no reason why they couldn't go to Australia or India, for example.'

The ramp-up in the workforce ties in with growth at the Celtic Business Park site, whose redevelopment is being led by the Welsh Government. As well as housing, a Park and Ride is due to be built adjacent to the factory as well as a station at Llanwern on the South Wales main line; this should enable increasing numbers of the growing workforce to travel to work by public transport.

CAF's procurement team at Newport is also looking at how it can make the most of the UK supply chain. 'Whilst lots of our existing suppliers were already in the UK, we are working hard to further expand this' states Mr Cumner. 'It's great that our procurement team is working with some suppliers who didn't previously work in the rail industry. There is definitely an opportunity for firms from the UK to supply to CAF in other countries too.'

FUTURE GROWTH

Although initially concentrating on Civity DMUs, the Newport factory could build different types of

Water testing: this Class 196 vehicle has left the assembly hall and been moved using the factory's external traverser.



trains in future if required. As part of CAF's global manufacturing footprint, Newport has the capability to manufacture a whole range of trains, including light rail, suburban and high-speed. There are clear benefits in having a standardised product platform in the shape of the Civity multiple-unit, but the factory is not limited by this, and there is no reason Newport could not build trains for export abroad.

The factory has been built with future expansion in mind. CAF has already increased capabilities by introducing a third production line and increasing its warehouse space to support this. 'The warehouse on site is future-proofed and could

be turned into an assembly line if required – all the necessary overhead facilities are in place' says Mr Jellyman. 'This means we have the flexibility to manage the production lines as required.'

CAF has options for additional land within the Celtic Business Park site to cater for any future contracts. The entire facility could be expanded if longer trains are required to be built at Newport, such as 200-metre-long high-speed trains.

'We have an excellent opportunity here to further develop a world class manufacturing facility and to be the best' concludes Mr Cumner. 'This is the way to secure our future.'



MAKING THE TRAINS RUN ON TIME

THE LITTLE THINGS COUNT

Minor sources of delay add up and can make all the difference to punctuality, LNER MD **DAVID HORNE** and **NIGEL G. HARRIS** of The Railway Consultancy told the Institution of Railway Operators

Performance on the East Coast main line has been far from perfect in recent years. From a high point of a Public Performance Measure (PPM) nudging 90% in late 2015, inter-city performance declined. The dual impact of the 'Beast from the East' in March 2018, followed by the difficult May 2018 timetable change, drove PPM to a nadir of the low 70s in the latter part of 2018. Things have improved somewhat since then, but there is still some way to go.

A number of factors have been identified: trespass and fatalities are more of a problem (up 86% since 2014-15), there have been well-documented issues with the overhead line (failures peaked in 2017) and the changing fleet means East Coast inter-city operator LNER

has had to deal with both ageing trains and bedding-in problems on the new Azumas. LNER has seen very few reliability issues with the new Azumas: the majority of issues have been associated with staff getting familiar with them. A positive sign is that since the summer of 2019 Azuma delays per 1,000 miles are over 20% better than InterCity 225s or HSTs.

There has been a 30% increase in trains operating on the East Coast route north of York since May 2018 and there have been problems with the design and implementation of the timetable. Reactionary delay (primarily TOC-on-TOC) has increased by 50% since May 2018.

On top of all that, the delay per incident has increased: delays affect

more services and recovering the service is more difficult than it used to be.

WHY DO TRAINS RUN LATE?

It is not only the macro factors that contribute to poor performance. Railway managers often focus on delays over three minutes in duration, as these are the ones that trigger the industry's financial compensation mechanisms. But delays of less than three minutes – so-called sub-threshold delays – can be of crucial importance, as cumulatively they can result in trains running out of path and wider disruption of the timetable.

So, what causes these little delays? In 2018, LNER commissioned The Railway Consultancy to study station working and possible causes of why trains were not getting away on time. People

Slow approach: one of LNER's Azumas arriving at York as it heads south on 18 September 2019. Tony Winward



were sent out to observe operations in detail at stations large and small on the route, such as Peterborough, Grantham, Newark and York.

The study ignored clearly identifiable incidents causing delay, such as a smashed windscreen, as the operator already knows what is going on with something like this. The observers were more interested in the little things that go on at stations that result in a train accumulating delay.

After observation of wheel stop to wheel start time with stop watches, the study found that at Peterborough, trains dwell, on average, 13 seconds longer than they are supposed to. At Grantham, the figure is 11 seconds; at York, seven seconds. Overall, 58% of station stops were within booked dwell time, but 42% were not. You can't get PPM figures in the 90s if almost half of your trains are overstaying their station stops.

OPERATIONS IN DETAIL

Once the train has stopped, it takes three seconds to open the doors. Leaving passengers have to alight, joining passengers board. The passenger doors have to close, then they are followed by the train manager's door. Following that, there's a brief pause before wheel start while the brakes are let off.

All this takes time. Azumas have longer carriages with more capacity than the trains they are replacing, which is great for relieving overcrowding, but means each door has to pass



Customer friendly? Here at Durham there is plenty of advice for drivers regarding where to stop, but where are the equivalent signs for passengers regarding where to wait? The Railway Consultancy

more alighting and joining passengers. On the other hand, the automated doors on an Azuma save time compared to slam doors on HSTs.

If you observe operations at somewhere like York, first you see that the flat junctions in the station throat don't help, with some slow approach speeds. Then you see waiting passengers looking to see where they will join the train. Not helping here is the mix of



Don't put items of luggage in here: the offending unlabelled cupboard on an Azuma. The Railway Consultancy

train types in LNER's transition to a new fleet: doors for First Class, wheelchairs and so on can be in different places on different types of train. If the passenger information systems are poor, there can be further confusion and delay while passengers seek advice from staff.

If a wheelchair is to board, it takes 30 seconds to access the ramp fixing points on the door of an Azuma. While the operation is very safe, it takes longer to fit the ramp on an Azuma than on older stock.

LESS OBVIOUS CAUSES OF DELAY

Sometimes a minimal amount of expenditure will save minutes. As a micro example, take the case of the man the observers saw who was refusing to allow the door to shut at Peterborough. It turned out he wanted to speak to the train manager as he could not retrieve his suit, which he had placed in a cupboard on the Azuma when he joined the train at King's Cross – only to find that the cupboard had been locked by the time he reached Peterborough. It turned out that the cupboard was for staff use only – but there was



no sign to that effect. A few pounds on some stickers would have avoided this situation.

£1,000 or so on a bus shelter would free up operations at Peterborough. This important nodal point often sees driver changes on freight trains. The fresh driver is supposed to wait by a signal off the platform – which is fine in dry weather. But in wet weather, human nature being what it is, drivers often wait under the footbridge in the station. Result: the train arrives and the loco pauses under the footbridge. The two drivers have a conversation at changeover, doubtless about important issues such as the latest operating notices – but all the while 25 bogie flats behind the loco are stretching across the layout at Peterborough, delaying trains on both up and down main lines. With a bus shelter by the signal, the new driver could wait at the right point and this situation would be avoided.

PLATFORM MANAGEMENT

There are niggles in platform operation that can result in delays arising. One increasing problem as the railway has become more popular is that crowds on platforms mean platform staff and train managers have difficulty in getting a clear view, delaying dispatch.

Ramps for wheelchairs can cause delays, especially when not booked in advance. At big stations such as York, where a train might have booked dwell time of three or four minutes and there are plenty of platform

staff, this is not such an issue. But at smaller stations like Grantham, it can take a while to get the ramp to the right spot if the platform staff are not expecting to have to deploy it.

Only about one in three platforms in the UK have level boarding, so this is likely to be a problem all over the country. Steps up into the train also mean able-bodied passengers take longer to board.

Frequent rail passengers know what they are doing and are generally ready to join or leave a train as soon as the doors are released. Infrequent passengers may struggle to find their way and may prolong dwell times as a result. The doubling of rail journeys since privatisation means there are not only more passengers, but also more novice passengers than there were. In rough figures, at the time of privatisation 25 years ago, about 45% of the population used trains at least occasionally. Now the equivalent figure is 65%: so that's 10 million new people who are less used to the railway system who are having to find their way around it.

LUGGAGE AND BIKES

Not only are there more passengers, they are also tending to bring more luggage. So, there are both more people and more bags and suitcases to get in and out of the door during each station dwell. This is a non-trivial issue: at Durham, for example, at the end of the university term a train can be delayed by as much as eight minutes by

the quantity of luggage to be got on board. The Christmas holidays are another crunch time.

Train layout has a part to play here. If the stacks are at the vehicle ends, the first passengers to join take their time to place their bags on the racks – while other passengers are held up on the platform. Result: increased dwell time. If luggage stacks or seatback luggage space are in the middle of a vehicle, incoming passengers walk down the aisle to deposit their bags, which means the aisle gets blocked but does at least give the space to get people into the train.

Perhaps the worst position is where there is no obvious place to deposit bags. LNER's decision to take some seats out of the Azumas to make more space for luggage stacks is a sensible one.

But maybe limitations should be placed on how much luggage passengers can bring with them. On the Shinkansen in Japan, for example, if you want to take large bags you will soon have to reserve the space for them in advance. How far are we from having to do something similar?

The seating layout is another issue. Passengers searching for reserved seats can delay other passengers. Clear displays on the outsides of trains showing the seat numbers accessible from each door can help here, while the 'traffic light' seat reservation system on the Azumas helps those with no reserved seat find a place quickly.

One thorny question is bicycles. Unlike the HSTs they are replacing, the Azumas have



no van for bikes. Instead, bikes go through the same door as other passengers. Once inside they can hold things up while owners manoeuvre their machines into bike racks.

Bicycles may be a green form of transport. But if they extend dwell times, introduce unreliability into the timetable and consequently decrease the attraction of another green form of transport (rail), clearly there are questions to be asked. At some point someone may have to grasp the nettle and ban bikes from busy inter-city services.

REGULATION

The Railway Consultancy's observations on the East Coast main line indicated that, in some instances, there is poor train service regulation. Either trains are being prioritised in a sub-optimal way, or they are plain not being prioritised at all, with some moves allowed that hold up lots of other trains. At Peterborough, for example, a freight train may be allowed to cross the layout at a time when it obstructs Edinburgh expresses on the main lines.

There may be all sorts of reasons for this sort of thing, from a very busy railway where it is difficult to find any crossing time, to decisions being made by an Automatic Route Setting system that was put in the best part of four decades ago and which is not suited to the conditions of 2020.

But some of it is down to human factors. At York, the observers witnessed a southbound train being put into platform 11 around 11.00,



Don't try to board this train: information systems do not always reflect the train actually in the platform! The Railway Consultancy

at a time when the other through platforms (Nos 3, 5, 9 and 10) were all unused. As it happens, an hour earlier, this would have been the correct regulating decision. But at the time it did happen, using platform 11 delayed four other trains. The railway is so busy nowadays that you don't need to get much wrong at our big stations to have a serious impact on the service.

Further complicating the issue is that Azumas are longer than the trains they replace, which has an impact of a second or two on signal section blocking times. On the other hand, Azumas are more reliable than '91s' and when there are problems with them the delay per incident is lower, so the new trains mean the lengthy delays that ensue when a train sits down on the main line are more likely to be avoided.

How much opportunity do new staff have to learn the job? How many signallers know, for example, how long it takes to ladder a freight train across the Peterborough layout? And are we doing the most we can to retain the knowledge of long-serving staff? Network Rail's policy of moving signalling control into Rail Operating Centres covering hundreds of track miles adds urgency to this question. It is interesting to note in a companion article in this issue (p70) that Network Rail Chief Executive Andrew Haines has scrapped plans to move control of the sensitive Thameslink core from West Hampstead power box to the ROC in Derby, as he is concerned that such a move risks losing a store of accumulated operating knowledge.

Another issue is so-called 'professional' driving. In the wake of accidents in the 1990s, understandably, more cautious driving techniques were adopted. For example, time was when a double yellow was noted but not acted on by the driver: braking was saved for a single yellow. Nowadays, a sunflower on the Automatic Warning System for a double yellow will prompt a brake application, in anticipation of a red (and the network is so congested that often that's a fair call). But early braking means it takes longer to clear the section for following trains.



Feathered off: an InterCity 225 leaves Doncaster on 9 July 2018. Russell Wykes

Some drivers will stop short of a signal 'to be on the safe side' – again, this means that when a proceed aspect is shown, it takes marginally longer to clear the section. New, less confident, drivers may want a straight section where they can see the greens stretching into the distance before they will let rip – another factor in reducing track capacity.

Coupled to the impact of professional driving are infrastructure layouts that in many instances were designed to cope with flows much less dense than those using them nowadays. The approach to Doncaster for up trains from Leeds, for example, was designed for a service half as frequent as today. Drivers creep up as they approach the signal on the curve into the station and track capacity is eaten up.

There are few easy answers: plainly, it is unacceptable to instruct drivers to speed up, while new layouts take time to plan and are costly to install. Cab signalling will improve things, but is still some way off.

A WAY FORWARD

The Railway Consultancy's observations showed that there is a genuine problem with excessive and variable station stops. As this article has shown, there are multiple reasons for this, but overlong dwell times can result in knock-on delays and poor performance over a wide area.

What is to be done? Regulating is one area to be looked at, and things like bike policy can be reviewed.

One conclusion we are drawn to is that there needs to be more realism about the timetable. 120 seconds are not enough at Peterborough when the average overstay is 13 seconds. Three minutes would give a cushion for added reliability.

This need not be a counsel of despair. Customer research has shown that passengers dislike delays three times more than they value journey time improvements: there can be a financial incentive through the farebox to implement a realistic timetable. 



Blocking move: passengers wait on the southbound platform at Peterborough whilst a Felixstowe-bound container train prevents any other trains running at all. The Railway Consultancy

CREATING THE Right Time Railway

DAVID HORNE worked for South West Trains at the time of the introduction of the 2004 timetable. He recalls the benefits of the seminal recast

Attention to detail was key to the South West Trains timetable change in December 2004 which – now 15 years ago – delivered a 12% improvement in Public Performance Measure (PPM) within a year.

After five years of deteriorating performance (from 89.6% PPM in 1997-98 to 73.0% in 2002-03), South West Trains set about a wholesale review of its timetable – which was essentially still the 1967 Bournemouth electrification timetable, albeit much amended through piecemeal changes. Over the years timekeeping had suffered owing to:

- the effect of operating increased numbers of trains on the same infrastructure;
- performance time at Waterloo to mitigate the impacts of Passenger's Charter;
- increased numbers of passengers per train and per station; and
- the introduction of a 'professional driving' policy, leading to train drivers behaving more cautiously.

With an intensive service, every second really did matter in terms of the overall system performance. Yet a train hitting green signals was

incapable of keeping on time – a point made by Railtrack to SWT managers at the time.

The rewrite was crafted by Graham Aitken, SWT's Head of Train Planning, and four colleagues (Martin White, Jerry Chapter, Ian Gee and Peter Brooks) who – as *The Guardian* later reported – 'locked themselves up in a hotel at a secret location to plan the biggest shake-up at South West since 1967. Armed with a "big sheet of white paper, some pencils and rubbers", the crack quartet set about redrawing the operator's timetable from scratch. After 12 hard days of dawn till dusk grafting, broken only by sleep and "a few beers", they emerged victorious, having plotted the destiny of the 1,700 trains run daily by the operator.'

MID-FRANCHISE CHANGE

Martin White, SWT's Timetables Manager, says the team 'had the luxury of a major timetable change which was not part of a franchise bid, and most importantly this gave us the time needed to plan effectively'. One of the ingredients underpinning its success was sponsorship by SWT's Commercial Director Rufus Boyd but execution by operational leads.

A fundamental review of the train planning rules was crucial to the success of the timetable. The timetable was built around 'parallel moves' at Woking Junction. To deliver this, the 2½-minute margin between conflicting movements over Woking Junction was increased to three minutes to build resilience into the timetable, and station dwells at Woking itself were adjusted upwards to reflect reality at this busy station (and the door cycle times of the new sliding-door Desiro trains).

Service patterns were revised to reflect changes in use over the years. Stations where demand had increased, or where demographic analysis indicated untapped demand, received additional stops. Planned skip-stops were eliminated as the principle of standardisation was placed paramount, just as the Southern Railway's Herbert Walker had demanded 80 years earlier.

EXTENDED DWELLS

Re-occupation times at Waterloo platforms 5-19 were extended from three to four minutes with the separate service groups allocated their own platforms at Waterloo during the standard



Famous backdrop: Class 450s Nos 450029 and 450055 head out of Waterloo past Vauxhall on 11 February 2004. Brian Morrison

hour (eg West of England services planned into platforms 6 and 7 throughout the day, Bournemouth and Weymouth services used 8 and 9, etc). Sectional running times were re-validated and amended. Station dwell times were standardised across the day and extended above the previous 30-second standard dwell time to one minute at Vauxhall, Clapham Junction, Wimbledon, Surbiton and Farnborough, with extra dwell time also added at Woking, Basingstoke, Guildford and Portsmouth & Southsea, reflecting the growth in passenger numbers since 1967. Crucially, extended dwell was added as a 'fire break' in the circular Waterloo-Waterloo services (five minutes at Kingston, four minutes at Hounslow) to improve presentation on the return legs.

Sufficient dwell time was added into all trains at Salisbury and Bournemouth, to allow for attaching/detaching in any train without compromising performance. This also allowed for some performance recovery on/off the single line sections west of these centres.

To build in recoverability, turnarounds at country destinations were increased – costing some additional rolling stock and traincrew but easing platform occupation at Waterloo, where minimum turnaround times were applied. After years when resources had been diagrammed to minimise operating costs but to the detriment of performance, rolling stock and traincrews were now diagrammed on a line of route approach – to ensure that delays on one route had a minimal impact on another route, with in-and-out traincrew working at Waterloo during peak times to reduce the risk of a train being left in a platform waiting for crew during those critical time periods when Waterloo station operates at maximum platform occupancy. Almost all 'on-route' crew relief was eliminated. Selected Sunday or early morning services were planned via diversionary routes like East Putney or Byfleet curve to maintain traincrew's route knowledge.

The construction of the timetable followed sound principles. Firstly, the standard hour was designed – this was made significantly easier because other train operators over shared tracks also maintained standard hour paths. Long-distance services were put on the graph first, with the fast Weymouth service timed to follow and be clear of the southbound CrossCountry train at Basingstoke. Then semi-fast, local services and connecting branch trains were added.

When the team was satisfied, the timings were rolled out across Mondays to Fridays and Saturdays, maintaining the 'keep it simple, keep it standard' motto – after all, the timetable is the shop window and standardisation is for the benefit of both regular and occasional passengers. The morning peak was necessarily customised, as it packs the maximum number of trains into a short period but was still built around the standard hour.

STANDARDISATION

Taking a lead from Japanese principles, the standard hour continued throughout the evening peak with additional paths (for which room was left in the off-peak plan) being added in the peak to boost frequency to stations serving the core commuting markets closer to London. Standardisation extended to train IDs, with the number corresponding to the hour of operation to assist signallers in identifying late-running trains, an initiative which was well received by signallers in the London area. And



The changing face of Waterloo: Class 444 Desiro No 444010 and Class 412/1 4-CEP 'Greyhound' No 2315 at the buffer stops on 2 February 2005, forming the 12.39 to Southampton Central and the 12.45 to Portsmouth Harbour respectively. Brian Morrison

the number of timing loads was rationalised to three, covering five different types of traction, with a 'composite' 75mph empty coaching stock (ECS) timing load introduced between Waterloo and Woking to allow these paths to be occupied by any EMU stock without changing timings.

With a further eye on the detail, ECS moves out of Wimbledon and Clapham depots to country destinations were timed via Waterloo to avoid crossing the up lines. A spare crewed unit was provided at Waterloo.

On Sundays, the standard hour was maintained wherever possible, although reduced morning frequencies meant additional stops in some services. An additional initiative was to build in Sunday diversionary paths – Portsmouth via Chertsey, Bournemouth via Havant – to minimise retiming and weaving in additional paths on major routes during engineering work.

IMPLEMENTATION

Reflecting that the new timetable represented the biggest timetable change on Wessex since 1967, implementation was comprehensively managed as a special project by Andrew Harvey, SWT's business excellence lead – 60 major workstreams covered over 200 individual tasks to deliver the step change in performance, capacity and customer service. New instructions were issued to cease the unit attachments that often caused disruption to the evening peak. SWT staff were deployed to major signalling centres to improve liaison and train regulation.

Modern Railways columnist Alan Williams, then of Effingham Junction, was asked what he recalled of 1967 and he identified the lack of familiarity by staff and customers with the new timetable. As a result, a large-scale 'Know Your Numbers' campaign encouraged staff and passengers to check the new train times and platforms prior to and after the timetable launch.

Peter Brooks, then SWT's Commercial Timetable Manager, remembers how well the launch went: 'The first week of the timetable was a fantastic success, but it was tested on day five. A "Fathers for Justice" campaigner climbed a signal gantry near Waterloo late in the morning peak and brought trains to a stand. However, within



90 not out: our photographer Brian Morrison attained his 90th year in February. Now housebound, Brian continues to take a keen interest in the subject and cheers up his fellow railway photographers on the telephone. Here he is at his 80th birthday party at the Buckinghamshire Railway Centre. Ken Brunt

a few hours the train service had been restored to normal, and prior to the evening peak.'

Post-implementation, performance rose quickly. Right Time arrivals quickly rose above 70% on a regular basis. PPM rose by 11.6% to 89.9% within 12 months, peaking at 93.8% in 2008-09 after reliability improvements to the Siemens Desiro fleets and the introduction of the Waterloo Integrated Control Centre.

Although journey times for passengers did increase on some routes, independent research by Nigel Harris of The Railway Consultancy showed that generalised journey times (ie including the performance improvement) got better, so passengers perceived an improvement in their journey. As a result, it was calculated that around £10 million annually in underlying revenue was generated by the recast.

For its attention to detail, communication and mobilisation of key personnel throughout the project, the timetable change won Project of the Year at the National Rail Awards the following year.

Even *The Evening Standard* hailed it a success! 

WESTERN WINS

PERFORMANCE ACCOLADES

PHILIP SHERRATT reports on the winners at the annual Golden Whistle Awards ceremony

Passengers want a reliable railway. That fact is beyond dispute; the Transport Focus National Rail Passenger Survey for autumn 2019, published in January, reinforced this message once again.

Just a few days before those results were released, representatives from across the industry gathered in London for the Golden Whistles awards, which celebrate the achievements of those who are running the best-performing railways. After the challenges of the May 2018 timetable change, which affected many operators' performance in that year, 2019 was a year of recovery, and while there were significant variations some notable improvements were recorded.

The awards are organised by the Institution of Railway Operators (IRO) in conjunction with the *Modern Railways* 4th Friday Club. From the start of Control Period 6 in April 2019, the industry moved to 'On Time' as

its official measure of punctuality, discarding the less stringent Public Performance Measure (PPM). On Time records punctuality to within 59 seconds of schedule at every recorded station call, rather than just at a train's final destination. The Golden Whistles were ahead of the curve and had already used this measure for the previous two years in recognition that absolute punctuality should be the ultimate operating goal.

The awards were based on the Moving Annual Average (MAA) figures for the year to the end of Period 9 (7 December 2019). As usual, prizes for franchised passenger operators were split into three sectors – Long Distance, London & South East and Regional, with Gold Whistles for best in class and Silver for the most improved operator.

WESTERN WIN

The Long Distance category was typical of the significant

performance variations across the network, with the two winners recording more than worthy improvements. The result was closely contested, with just 0.4% separating the top two.

Last year's winner Greater Anglia recorded a 13.5% improvement in On Time performance, taking it to 66.4%, which ordinarily might have seen it take the Gold Whistle. However, that went to Great Western Railway, whose On Time performance improved by nearly 50%, showing what is possible on a more settled railway after the pains of the modernisation programme. With GWR taking Gold, and the awards rules stating that the same operator cannot win both Gold and Silver in one category, Greater Anglia took the Silver Whistle for the second biggest improvement.

A more familiar face was the winner for best London & South East performance in the shape of

c2c, continuing to show that the 'misery line' tag of years past has well and truly been laid to rest. In another quirk of the statistics, Heathrow Express recorded a slightly better percentage score than c2c, but the Golden Whistles include only franchised operators, ruling out HEX's open access operation. It was East London all the way in this category as the Silver Whistle went to Greater Anglia, this time for its commuter services, with a 13.1% improvement.

Another familiar winner took the top prize in the Regional category, this being Merseyrail. Silver went to GWR, which like Greater Anglia took away Whistles in two categories, with its regional services improving On Time performance by 14.9% over the year.

DRS ON A ROLL

The record winning run at the Golden Whistles is in the freight

Western winner: GWR IETs Nos 802002/014 pass Crofton with the 14.03 London Paddington to Penzance service on 29 July 2019. GWR and Network Rail's Western Route won prizes at this year's Golden Whistle awards. Ken Brunt





Keeping down delay minutes: the West Coast franchise took away a Gold Whistle. Voyager No 221101 with Avanti West Coast branding forms the 11.10 London Euston to Chester at South Kenton on 3 February 2020. Ken Brunt

category. Performance here is based on the Arrivals to Fifteen (A2F) Moving Annual Average, and for the seventh year in a row the winning operator was Direct Rail Services. The Silver award was presented to GB Railfreight for an 8.0% improvement in performance.

The next categories focus on delay minutes, the first being for self-inflicted delay minutes among franchised passenger and freight operators but normalised by train mileage in the interest of fairness. The biggest cut in delay minutes was achieved by DB Cargo to take the

Silver award, while the Gold award went to the West Coast franchise. The data used for the awards was entirely within the period when the franchise was Virgin Trains, but the team responsible for this victory has largely remained for the transition to Avanti West Coast.

Awards for Network Rail Routes were next, again based on reduction in delay minutes. After ceding the Gold Whistle last year to Wales Route, it was a return to the top for Network Rail Scotland, a regular winner in this category. With GWR

recording significant performance improvements, it was perhaps no surprise to see its infrastructure partner, Western Route, take away the Silver Whistle here.

Tracsis plc

The Golden Whistles Awards were sponsored by Tracsis (www.tracsis.com) and Porterbrook (www.porterbrook.co.uk)

porterbrook



Whistles Winners

EXCELLENCE IN RAILWAY
OPERATING TOOK
CENTRE STAGE AT THE
GOLDEN WHISTLES
AWARDS ON 24 JANUARY

Awards photography by **TONY MILES**



On time arrivals (Long Distance): the Gold Whistle went to Great Western Railway. GWR's Varun Mather (second from right) holds the trophy, presented by Alex Hynes, MD, Scotland's Railway (left).



On time arrivals (Long Distance): the Silver Whistle went to Greater Anglia. Keith Palmer (centre) and colleagues receive the trophy from prize presenter Alex Hynes (second left).



On time arrivals (London and South East): the Gold Whistle went to c2c. Chris Addy (second from right) holds the trophy, presented by Chris Barnes, CEO of Golden Whistles awards sponsor Tracsis (left).

Whistles Winners

CONTINUED



On time arrivals (London and South East): Greater Anglia won the Silver Whistle. GA's Marc Ware holds the Whistle, presented by Chris Barnes (far left).



On time arrivals (regional): the Gold award went to Merseyrail. The operator's Performance Delivery Manager Dave Stamper holds the trophy, presented by IRO CEO Fiona Tordoff (second from right).



On time arrivals (regional): the Silver award was won by GWR. Varun Mather holds the Whistle, presented by Fiona Tordoff (left).



Freight performance: Direct Rail Services was the winner of the Gold Whistle. Holding the trophy is Stephanie Hodgson, Communications Manager at DRS, with prize presenter Tim Shoveller, Network Rail's Managing Director, North West and Central, on the far left.



Freight performance: GB Railfreight won the Silver Whistle. Holding the Whistle on behalf of his colleagues is Christopher Newton, with prize presenter Tim Shoveller at right.

STATUS QUO MUST CHANGE, SAYS HYNES

The railway must embrace change and face the challenges of the 21st century, according to Alex Hynes, Managing Director, Scotland's Railway.

In his keynote speech at the Golden Whistles awards, Mr Hynes highlighted three major challenges for the railway: adapting to climate change and more extreme weather; investing to cope with increased demand; and making the railway more sustainable, noting Scotland's stated aim of decarbonising the railway by 2035.

This is a volatile and uncertain time for the railway in Britain, said Mr Hynes, who hopes the Williams Review will set out the changes needed to restore trust in the railway. Running a railway in 2020 is harder than it was 25 years ago – the fundamentals

remain the same, but attention to detail is increasingly important.

Collaboration is key to running a successful railway, and Mr Hynes highlighted the work of the ScotRail Alliance between the operator and Network Rail; the public and staff in Scotland see just one railway. Alex Hynes advocated turning the railway upside down to involve frontline colleagues more in key decisions; for example, a ScotRail driver suggested moving a signal at Westerton, which has been acted on and has delivered significant performance benefits. Collaboration is also vital for sharing experience – we are in danger of having a generation of people who have only worked on one side of the operations/infrastructure divide.

The decision to end Abellio's ScotRail franchise early in 2022



does not mean it is all doom and gloom, said Mr Hynes. He says Scotland's Railway is thriving, with a host of upgrades completed or nearing completion. The railway is vital to the future of our country, more people are using trains than ever before, but there is no room for complacency if we are to continue to retain the trust of the public and see passenger growth.

LONDON UNDERGROUND

The work to improve performance on London Underground is also recognised at the 'Whistles'. LU uses the Lost Customer Hours (LCH) measure, which considers not just delays but the impact they have on customers and the direct knock-on effects of any incidents, with both Gold and Silver awards based on improvement in the LCH MAA. The awards provided a contrast here: Silver for second most improved went to the Piccadilly Line, which awaits modernisation with new Siemens trains on order, but as yet no confirmed contract for resignalling. By contrast, Gold went to the District Line, which has new trains and is in the process of resignalling under the Four Lines Modernisation (4LM) programme.

IRISH RAIL AWARDS

Once again, the Golden Whistles incorporated awards for performance in Ireland, recognising Iarnród Éireann's support for the work of the IRO. Prizes were presented in the categories of Right Time performance and minimising delay minutes, based on Moving Annual Average data covering the 12 months to the end of IE's Period 12 (2 December 2019).

The awards here are for improvement in performance, and the winner of the Gold award for Right Time MAA was a relatively new route, the Phoenix Park Tunnel, which recorded a 9.1% improvement. In the delay minutes category, the winner was the Dublin Area Rapid Transit (DART), which also saw the

second biggest improvement in right time performance.

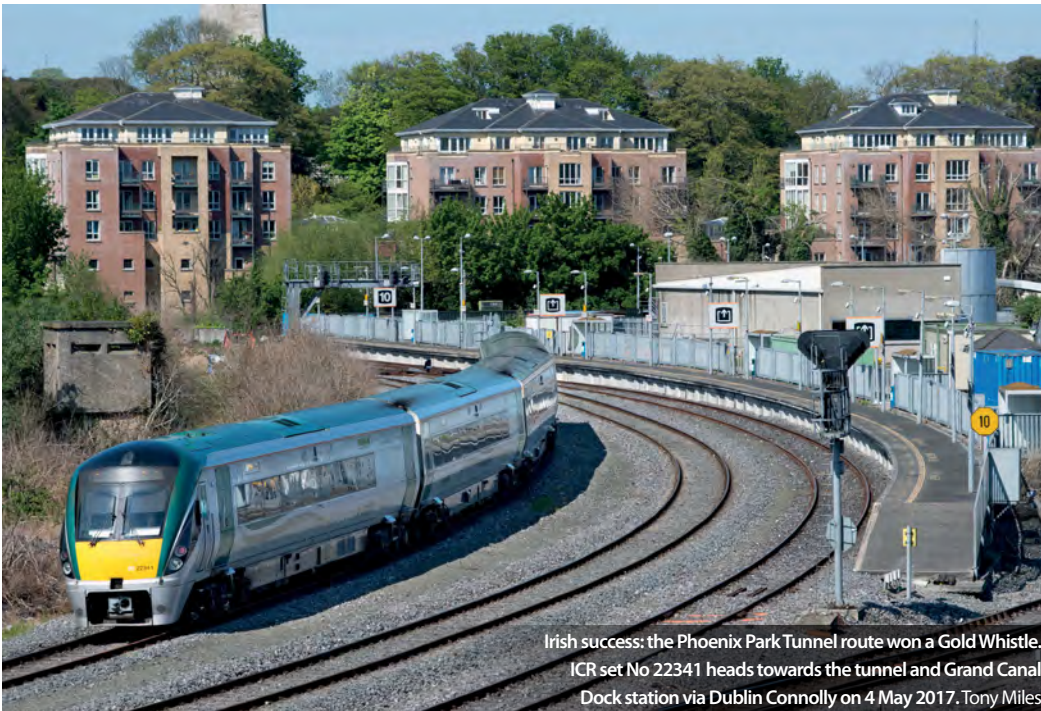
OUTSTANDING INDIVIDUALS

The awards for outstanding operations recognise individuals and teams who have gone the extra mile to enhance the operation of the railway. These awards are judged by a panel from the IRO, with separate awards this year to individuals and teams.

The Gold Whistle to an individual was awarded to Chiltern Railways Performance Manager Thomas Milnes. He is described by colleagues as 'relentless in his pursuit for a perfect service'. Recent examples of his excellent work include implementing a regulation instruction in July 2019 to mitigate reactionary

Improving performance: Greater Anglia won Silver awards for both its long-distance and commuter services. Nos 321304/307 approach Church Street crossing at Kelvedon forming the 11.30 Liverpool Street to Norwich service on 27 January 2020. Antony Guppy





Irish success: the Phoenix Park Tunnel route won a Gold Whistle. ICR set No 22341 heads towards the tunnel and Grand Canal Dock station via Dublin Connolly on 4 May 2017. Tony Miles

delay from other operators' services at Leamington, which has nearly halved the average number of delay minutes per day. He also worked closely with Network Rail to tackle an issue of ongoing disruptive vandalism at a bridge south of Banbury, identifying trends in the time of day incidents were occurring to ensure patrols were present. As a result, two youths were apprehended by the British Transport Police and there have been no further incidents reported at the location. More generally, Thomas Milnes is generous with his knowledge, always happy to help colleagues and regularly assists Chiltern's control team at times of disruption.

A Silver Whistle was presented to Samantha Rayment, Area

Manager for Watford at West Midlands Trains. In a difficult year for the operator and for performance at the southern end of the West Coast main line, she has been described as a shining light. Sam Rayment recognised her local operational knowledge and past experience in control could help implement new route contingency plans, and in less than six weeks she created, stress tested and developed an implementation plan for full and partial route blockages. As a result, management of disruption has been described as 'light years improved'. This is not to mention Sam Rayment's personal resilience, local leadership, and the many other qualities that make her an outstanding operator.

OUTSTANDING TEAMWORK

A strong field of entries for outstanding operating teams led to a shortlist of three, with a Gold and Silver Whistle awarded along with a Highly Commended certificate.

Winning Gold was the partnership of Network Rail High Speed and HS1 Ltd for its work to drive improved performance on the high-speed line linking London with the Channel Tunnel. On HS1 operating performance is measured in seconds of delay per train rather than minutes, and over the last 12 months the Moving Annual Average improved from 9.27 seconds to just 6.77 seconds per train as a result of a concerted partnership between the organisations. HS1 is a standard bearer for outstanding operational performance, and



Minimising delay minutes: the Gold Whistle went to the West Coast franchise. Alex Hellier, Vice-Chair of the IRO South East Area Council (left) presents the trophy to Matthew Prior (centre) and Craig Fletcher of Avanti West Coast.



Minimising delay minutes: the Silver Whistle was won by DB Cargo, whose Chief Operating Officer Dirk Nolte (right) receives the prize from Alex Hellier.



Minimising delay minutes by Network Rail Route: Scotland Route took away the Gold award. Jane Devine holds the Gold Whistle, while in the centre is prize presenter Rupert Brennan Brown, Head of Communications and Engagement for sponsor Porterbrook.



Minimising delay minutes by Network Rail Route: the Silver Whistle was won by Western Route. Sarah Jane Crawford holds the trophy, with prize presenter Rupert Brennan Brown at left and Route Director Mike Gallop on the right.



London Underground line performance: the Gold award went to the District Line. John Light is holding the trophy alongside line colleagues, with prize presenter Howard Smith, Chief Operating Officer at Crossrail, on the right.



Whistles Winners

CONTINUED



London Underground line performance: the Piccadilly Line won the Silver Whistle. Graham Nuttall holds the prize, with prize presenter Howard Smith at right.



Irish Rail right time performance: the Phoenix Park Tunnel route was the winner of the Gold award. Patrick Casey (centre) and Brian Downs (right) from IE received the Whistle from Steve Murphy, Managing Director of MTR Elizabeth Line.



Irish Rail delay minutes reduction: the DART won Gold in this category. IE's On Board Customer Service Manager John Kennedy (centre) and CEO Jim Meade (right) collect the Whistle from Steve Murphy.



Outstanding operations, individual: the Gold Whistle was won by Thomas Milnes of Chiltern Railways (left), pictured with prize presenter Glen Merryman, chair of the IRO South East Council.



Outstanding operations, individual: a Silver Whistle was awarded to Samantha Rayment of West Midlands Trains (right) by Glen Merryman.



Special award winner: on the last of its four days, 21 December 2019, the reliveried HST for LNER's farewell tour pauses at Retford en-route from Leeds to London King's Cross. Tony Miles

a decade after opening the line is going from strength to strength, setting high standards and recording consistently high passenger satisfaction ratings.

A Silver Whistle was presented to Network Rail and ScotRail teams from north of the border who worked on a new methodology to highlight specific trains causing most issues in 2018. Working with supplier Kestrel, innovative analysis was undertaken to show which trains were the trigger trains and caused a ripple effect across the network. This prompted 30 small interventions which have led to the highlighted trains seeing their knock-on delay reduced by one-third and their Public Performance Measure improve by

14%. Network Rail Chief Executive Andrew Haines called the paper 'the best argued paper I have seen since returning to the rail industry'.

Highly Commended for Outstanding Operations was Team Vauxhall from South Western Railway. The team has worked hard to improve security at the station, which is now rated the best for security on the SWR network. The improvement is a result of teamwork, working with stakeholders to create a security conscious culture and setting high standards around that. A shift in mindset has been achieved through activities such as individual training, briefing, building community relationships and working with other stakeholders including the police, agency staff,

tenants and SWR's security team. These continuous improvements were achieved through collaborative working, challenging bad practices and highlighting and encouraging the good.

SPECIAL AWARD

The judges also present a special award, at their discretion, to an operator or operating team that has gone above and beyond the call of duty and deserves special recognition for an outstanding act. Previous winners have included the Northern Line operators who averted disaster when an engineering train ran away, staff from Croydon Tramlink who went out of their way to help customers who were stranded in the 2011 London riots

High-speed partnership: strong performance on HS1 was rewarded at the Golden Whistles. Soon after leaving the Channel Tunnel Eurostar's No 373206 powers the 11.04 Paris Gare du Nord to London St Pancras service up the steep incline to Saltwood summit at Dollands Moor West Junction on 14 February 2019. Antony Guppy



and a manager who led the recovery of Manchester Victoria station after the terrorist attack in May 2017.

Last year the award was presented to teams who helped co-ordinate travel to Windsor for the Royal Wedding in 2018. This year's award also went to a special and unusual operation – the organisation of LNER's four-day HST farewell tour just before Christmas. The judges recognised the hard work put in by staff from across the company – arranging for the train to be repainted immaculately in its original livery, making the operational arrangements for the tour and the major publicity effort which surrounded it. The tour itself was a huge success, with passengers lining platforms to get a glimpse of the reliveried train and much positive publicity garnered for the railway in the process. The whole event was indeed very special, making it deserving of the Golden Whistles special award.

But it was not just an operational triumph – LNER supports the Campaign Against Living Miserably (CALM), a charity which works to combat suicide. In conjunction with this a collection was taken at the Golden Whistles awards for CALM, raising over £1,200 in the process and adding to the thousands of pounds already raised by LNER.

LIFETIME ACHIEVEMENT

The final award was the second Golden Whistles Lifetime

Achievement Award. Inaugurated last year to mark the tenth anniversary of the Whistles, the IRO is creating a railway operating Hall of Fame, honouring those people who have committed their lives to the improvement of the industry. The maiden award in 2019 was presented to career railwayman Chris Green, and the second entrant to the hall of fame has also devoted his life to improving railway operations – Chris Gibb.

Chris Gibb began his railway career working in a ticket office and gradually rose through the ranks, holding senior roles at British Rail and then after privatisation becoming Managing Director for Virgin CrossCountry and then Chief Operating Officer for Virgin's West Coast operation. But more than that, since his retirement he has continued to

tirelessly support the railway, through endeavours such as his comprehensive report into the challenges facing the Govia Thameslink Railway franchise and then heading up the Thameslink Industry Readiness Board. 

The success of the Golden Whistles awards depends heavily on the work of the IRO in working through a vast amount of industry data and on devising a way of ranking statistics which reflects the size of each reporting company and the importance of each section of the data. Special thanks are also due to the Network Rail Industry Performance and Freight Performance Teams, who provided the data, and to the IRO South East Area Council, in particular Alex Hellier for his work in collating the data, and for judging the nominations for the special awards.

2020 GOLDEN WHISTLES WINNERS

Operational Performance – Long Distance

Gold	Great Western Railway
Silver	Greater Anglia

Operational Performance – London & South East

Gold	c2c
Silver	Greater Anglia

Operational Performance – Regional

Gold	Merseyrail
Silver	Great Western Railway

Operational Performance – Freight

Gold	Direct Rail Services
Silver	GB Railfreight

Delay Minutes Reduction (TOC/FOC)

Gold	Virgin Trains/Avanti West Coast
Silver	DB Cargo

Delay Minutes by Network Rail Route

Gold	Scotland
Silver	Western

London Underground Line Performance

Gold	District Line
Silver	Piccadilly Line

Iarnród Éireann Operational Performance

Gold	Phoenix Park Tunnel
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Iarnród Éireann Delay Minutes Reduction

Gold	DART
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Outstanding Operations – Individual

Gold	Thomas Milnes, Chiltern Railways
Silver	Samantha Rayment, West Midlands Trains

Outstanding Operations – Team

Gold	High Speed Partnership, Network Rail/HS1
Silver	Resilient Autumn, ScotRail
Highly Commended	Team Vauxhall, South Western Railway

Special Award

LNER, HST farewell tour

Lifetime Achievement Award

Chris Gibb



Outstanding operations, team: the partnership between Network Rail and HS1 was awarded by the Gold Whistle. Holding the prize is HS1's Robert Dean, with prize presenter Glen Merryman at left.



Outstanding operations, team: a Silver Whistle was awarded to Network Rail Scotland and ScotRail. ScotRail's Donna Sim holds the Whistle, presented by Glen Merryman (second left).



Outstanding operations, team: a highly commended certificate was awarded to the team from SWR's Vauxhall station, held here by flagship station manager Sash, with prize presenter Glen Merryman on the far left.



Special award: this prize was awarded to LNER for its organisation of the HST farewell tour in December 2019. LNER's Director of Communications Kate McFerran receives the prize from Chris Loder (left), the newly elected MP for West Dorset who formerly worked for SWR.



Lifetime achievement award: Chris Gibb, the second entrant into our railway operating Hall of Fame, holds his Golden Whistle alongside Chris Green, who won the same prize last year.



Elizabeth Line precursor: almost new No 345063 approaches Twyford with the 09.52 Reading to Paddington TfL Rail service on 1 February 2020. Mark V. Pike



21st Century Operations

Network Rail Chief Executive **ANDREW HAINES** updated the Golden Whistles conference on progress with his plans to grow operational expertise

I'm passionate about putting operations back at the heart of the railway. Not for operations' sake, but because it's crucial to delivering on the railway's purpose to get people where they want to be and to support economic growth. Still too often the voice of operators isn't being heard when we're planning the future of the railway, and the events of the last year, if anything, have reinforced that – the need for relentless and sustained focus.

We started the performance year with things looking as if we were on the up. We had eight periods of modest improvement on the prior year. Then we had the May timetable. And really, ever since then, we've been in a stasis or decline on a national basis.

The good news is there are some exceptions to that, for example Scotland, Wales and Western have all seen very strong performance. But overall the reality has not been good

enough for passengers, and that is what's driving people's perceptions.

TRAINING

We have set up three pillars of operational excellence in our 21st century ops programme. For me it is fundamental to have the right people, and I'm really pleased in the last year we've been able to do some of that in terms of the senior people joining Network Rail. But as well as new senior leaders many of our frontline teams require rebuilding and empowering, having been kept back over the past decade or so. We're working really closely with the Institution of Railway Operators, to align some of our key ops roles with IRO qualifications. In the future, I want all Network Rail ops managers to hold or be working towards an IRO degree in operations. I'm really pleased that the September 2019 graduate cohort is doing both track and train activities.

Going forward, we're turning our general management scheme into a railway operations graduate scheme, being very clear with those people we're seeking to recruit what we believe to be a fundamental component of their career in Network Rail. This shows we want to build brilliant operators from the start. Over time, I genuinely believe we can transform the quality of input we're giving to the people who will be tomorrow's operational leaders.

On the Western Region, we've allocated an additional £20 million to spend on operations, mainly on new people, with a significant increase in the ops headcount. As well as that, the trial of traffic management continues, with over 100 signallers now trained to use the tool at Thames Valley Signalling Centre. We are getting better at listening to what our operators have said and have taken initial steps to increase the resources for frontline managers to



reduce their admin burden, freeing them up to get on with their jobs.

We have created dedicated investigation roles to help better understand the causes of delay. I have been reminded, very painfully, in the last year, that we're actually pretty good at identifying causes as an industry, and as Network Rail, but not very good at embedding the learning.

Individual role interventions will undoubtedly help, but I believe the time has come for a deep review of the structure of operations. We are still working on roles that haven't changed for 100 years and, in some



cases, terms and conditions that go back almost to when I was a kid in primary school. This is even more imperative now as we try to roll out traffic management. Fundamentally, it only works if we bring together some of the key elements of signaller and train-running control.

TIMETABLING

Another important challenge will be improving the way we develop our timetables. It's an embarrassment to our industry that we still have the same procedures that were designed in 1994 by those people who did a brilliant job of predicting how the industry might develop, and we've failed singularly to really transform them to the reality of operating the railway in 2020.

Fundamental to this has to be a better agreed franchise or concession specification at the outset, and one that we all know and sign up to being deliverable. There then must be clear and trusted commitments by all parties, including Network Rail, to deliver necessary resources or dependencies for the timetable. I'm confident some of these issues will be addressed in the forthcoming Williams Review, but in the meantime we can't rely on that.

Why doesn't Network Rail intervene when a bid is not good? The answer

is it's utterly too late. The system is designed to mean we can't iterate. What we've also got to do is develop mechanisms which discourage large volumes of late changes to the plan. In the past, Network Rail has been too ready to back down in the face of resistance. We're not going to do that in this case. We will take these issues to dispute as a means of surfacing the root cause of the disagreement.

There has been some really good work: take December, which saw 75% of train times changed on the Western Route and hundreds of new Sunday services introduced in Wales. A huge focus across the industry, a major step-up in service frequency and material journey time reductions, and one that is broadly performing better than expected. We can do it – it doesn't have to be a choice between benefits for passengers in terms of frequency and journey time and performance.

There's been some great performance improvements at Southeastern, which this year has seen the fastest-improving performance in the country. In the last 12 months, more than 5.2 million station stops were made on time out of 7.5 million station stops. That didn't happen by luck; it happened by close working, by looking at the underlying, root causes, by perpetually finessing the train plan, by being relentless about the causes of temporary speed restrictions, by not throwing our hands up in the air and saying there's nothing we can do about external events, by working more closely with British Transport Police.

Elsewhere, of course, there were painful surprises which snatched the headlines, a salutary reminder that no cross-industry process will ever compensate for basic operating disciplines, transparency and attention to detail. We've seen a significant increase in Network Rail timetabling resource, which means we are no longer a constraint on how much change the industry can address.

STRUGGLING

But we also have operators and routes where the timetable rarely works. There are operators where you cannot get a really good day's performance. It's not true to say that's all the fault of Network Rail. Yes, Network Rail has to improve its asset management capability. When it comes to the West Coast main line south, we have not regarded those assets with the level of rigour and urgency and priority we should have done, and that has harmed the train service.

But on days when we have very few asset failures, or no asset failures, the plan can't work. More significantly,

on the days when we have asset failures that are fixed by 06.00, we still have major disruption at 18.00. That is not an operationally credible plan, and collectively we have to be prepared to do something about that.

And I don't blame the operators for that; I blame the system. That is something we have to change when we talk about the Williams Review. 2020 will be a significant year of change for our industry. We know from what Keith Williams has already said that he recognises a situation where accountability for delivery to passengers is both diluted and compromised by conflicting agendas and conflicting priorities is fundamental to what he's doing.

But we cannot sit around on our hands waiting for Keith to somehow solve our problems. We have to decide our willingness to embrace some of the challenges Keith will shine a spotlight on.

I'm delighted the Office of Rail and Road is kicking off a review of train performance incentives, including Schedule 8. I want to look at whether the existing mechanisms encourage, incentivise or reward people for doing the right things for the users of the railway. I take real encouragement that we are seeing some interest from operators, and we're close to agreeing arrangements with LNER and Grand Central that will create new performance incentives to improve passenger outcomes, and we'll do that with the support of ORR. Those trials will begin in the spring, and I hope they will encourage other operators over the course of the year as well.

CROSSRAIL

One of the projects I'm most keen we continue to pursue this year is our work on preparing for Crossrail, and we're developing a joined-up traffic management strategy for it. It's going to be a unique part of the railway, crossing three Network Rail Routes as well as that critical core central section. It cannot be operated as four independent railways – that simply will not work. If we can see any silver lining to the cloud of the delay to the Elizabeth Line, it is that it gives us time to do that.

The plan has three fundamental aspects. Firstly, an aspiration shared by all parties to develop a railway that hardly ever fails. Secondly, clear and aligned policies and procedures to deal with incidents, with an ambition to respond within 15 minutes anywhere along the line, and the response being the same wherever you are. To deliver this, a single controlling mind with policies aligned on a range of issues, not least for

trespass and ill passengers, the things we know can catch us out. And thirdly, our new approach to maintaining the railway, minimising track access and embracing new technology.

The fact that this work is only being done now is indicative of how much the voice of the operator has been marginalised as we've developed these major projects. Can you imagine if Crossrail had opened on time, and how we might have responded as a sector to that density of traffic in that complex situation? We simply weren't ready.

STRATEGY

The establishment of the Network Service function under Nick King is critical to bringing operational excellence back into the heart of our organisation. But we've recognised as well that we need a new network management strategy, and that moving to Rail Operating Centres (ROCs) may not be the answer everywhere.

My favourite example of this is West Hampstead power signal box, which I visited seven or eight months back, and was told that the plan was to re-control it and to basically move the capability to Derby ROC. That didn't seem to me to be an obvious, no-brainer decision, moving the core operation of the Thameslink core to Derby, effectively losing all the capability. Not many of those signallers were likely to relocate to Derby to do that job.

All I had to do was ask to see the business case and the decision was overturned, because actually there wasn't really a business case in the first place. We were simply in the pattern of doing something we'd said we were going to do because there was a strategy to do it.

So we're retaining that capability at West Hampstead, and moreover we're seeking to grow it by providing some operational capability there. I'm not against ROCs, but we cannot be blindly committing to schemes and then diluting the voice of the operator to the point where we do things because we said we would do them, not because we've understood the benefits that they materialise.

In conclusion, I believe progress has been made over the past year to return ops to the heart of the railway, and I urge all of us to embrace that challenge. ■

This is an abridged version of Andrew Haines' speech at the 2020 event. His presentation at the 2019 Golden Whistles conference was reproduced in an abridged version on page 6 of our March 2019 issue.

INTRODUCING AZUMA

LNER's introduction of its new Hitachi-built Azuma trains has been hailed as an example of a successful fleet introduction, replacing the operator's legacy fleet of HSTs and InterCity 225s. Engineering Director John Doughty told the Golden Whistles conference LNER was treating the introduction as an operations and customer experience project, not just an engineering one.

From the outset the operator worked to engage the whole company in the new fleet introduction, not just the project team. For example, the name Azuma (Japanese for 'east') was chosen through a staff competition, and Azuma pioneers from different grades within the company were invited to provide feedback throughout. To help build excitement visits were arranged to Hitachi's Newton Aycliffe factory, where the majority of the fleet has been built.

A key challenge was the interface with the infrastructure, which included gauge clearance work and power supply upgrades as well as overcoming electromagnetic compatibility issues in conjunction with Network Rail. A novel feature is automatic power changeover for bi-mode Azumas to switch between electric and diesel power, which has the benefit of engineering out risk.

Practice was key to Azuma introduction: this included running 15 rehearsal trains last year



Azumas in service: Nos 801101/103 work the 08.45 Leeds to King's Cross service at Welwyn North on 23 October 2019. Ken Brunt

using invited guests. As well as generating feedback which could be implemented before introduction, these provided good practice for the official launch events and enabled simulation of emergency scenarios such as evacuation to the lineside.

A major crew training programme has been required for Azuma. In 2016, 99 drivers were recruited from 15,000 applications received, with the aim of providing a float of spare crew to cover for training requirements and natural turnover of staff. The operator has kept a healthy gap between the number of crew required and the number available, with crew training ahead

of plan. Similarly, in the transition between the old and new fleets the aim has been to have an eight-week gap between type acceptance and entry to service, in particular to ensure the right train type was rostered to maintain seat reservations for passengers.

The Azumas were ordered by the Government through the Intercity Express Programme, a unique contracting arrangement. LNER has adopted a consistent approach on standards and developed a collaborative commercial relationship with Hitachi. Reliability has been reasonably good for a new train, tracking consistently

with the similar GWR Class 800/802 fleets. Lessons are being shared with GWR and learned from that operator's experience as well.

Communication was critical to Azuma's introduction, both internally and externally. This culminated in a series of successful launch events across the route, including the use of historic steam locomotives *Mallard* and *Flying Scotsman*. And while LNER's HST farewell tour before Christmas was not directly linked to Azuma but was paying homage to its outgoing fleet, it generated around 30 million tweets and significant positive media coverage for the LNER brand. 

NETWORK RAIL'S R&D PROGRAMME

Network Rail has a significant research and development budget for Control Period 6 (2019-24). In the funding settlement for the five-year period, it has received £245 million; it is looking to bolster that with £112 million from third parties and is seeking partnerships from across the industry. At the heart of this is making best utilisation of the vast amounts of data available and of using robotics to automate tasks where it is safe and practical to do so. Andy Doherty, Chief Technology Officer, outlined to the Golden Whistles conference how some of this money is being spent with schemes in trial or going into first implementation.

One key aspect is managing infrastructure failures. Work here has included developing a new design of cast crossing, combating the

issue of rising numbers of failures; the designs are complete and will be going to suppliers to deliver this year. With a large number of landslips in recent months, all eyes will be on a trial of electrokinetic geosynthesis to help dewater embankments and reduce the likelihood of failures; the trial has been deployed in Sussex since November.

Also within the programme are two innovations which have featured at the *Modern Railways* Railway Industry Innovation Awards. The degraded mode working system, developed by Altran, won the Engineering and Safety prize in 2018 and enables infrastructure to be secured in the event of a signal failure, allowing temporary block working to be implemented remotely. A contract is running for this on the Western, with

significant safety benefits. In the same year, Project Rapport was Highly Commended at the awards in the Operations and Performance category for a collaboration on Northern's Class 333s; Mr Doherty highlighted an ongoing partnership with LNER similarly using on-board data to enable faster attendance at incidents involving the operator's new Azuma trains.

Work to tackle the challenges of autumn performance has included cryogenic blasting to clean leaf debris from the rails, with a trial ongoing in four regions; the challenge for a wider rollout here is doing this at a higher speed. Fibre optic sensing is also being used to detect wheel flats earlier, adopting technology from the oil and gas industry.

Performance improvement is being supported by the use of

virtual data to input and optimise Temporary and Emergency Speed Restrictions (TSRs and ESRs), while the Enhanced NR Information exCHange (ENRICH) is encouraging the sharing of data in an accessible place, in collaboration with RSSB.

All these examples sit within the framework of a refreshed Rail Technical Strategy, the refresh taking place this year under the direction of the Rail Delivery Group Technology Leadership Group. The key is to find system solutions which can enable the high performing railway.

The R&D programme has the potential to deliver innovations which yield significant operational benefits. The focus is to deliver and implement real solutions quickly and effectively. 

SOUTHEASTERN TAKES CONTROL

A new operational control system provided by Tracsis has delivered improved performance for Southeastern.

Andrew Toplis, Senior Programme Manager for the operator, explained the benefits to the Golden Whistles conference in a joint presentation with Alex Robertson, Head of Business Development for Tracsis. A more detailed explanation of the system featured in the November 2019 issue of *Modern Railways* ('Informed Sources').

The catalyst for change at Southeastern was 'black ice Friday' in February 2016, when freezing conductor rails caused the operator

two weeks' worth of delay minutes in a single morning. The biggest criticism, both internally and externally, was lack of information, which was symptomatic of the challenge facing Southeastern's controllers on the day. The problem snowballed quickly, and the situation worsened quicker than the control centre could keep up – not surprising when controllers were combining information from five different sources against a backdrop of incoming phone calls.

Southeastern sought a single system which could bring these information sources together in one place. The TRACS Enterprise

system from Tracsis is an end-to-end planning, rostering and control system, but the limited length of Southeastern's franchise at the time meant the operator chose to implement a subset of features concerning stock and crew.

The key aim was to have one system for managing operational planning in real time. The ability to test scenarios before implementing them means the plan can be edited offline and changes published when ready, which are then automatically relayed to staff and to passenger information systems.

Mr Toplis demonstrated to the conference how a train could be

diverted with just a few clicks of the mouse and the information would be automatically updated. With the crew and rolling stock information all in one place, the need for corresponding paperwork is eliminated and changes can be implemented much more quickly and easily.

As a result, accuracy of information has improved significantly. Tracsis systems are not just confined to train control information, with components around train planning, resources and rosters as well, and implementation of these could yield further significant improvement in the way disruption is handled. 

Developing innovative operations

Rail Operations (UK) Ltd describes itself as the UK's most innovative and unique group of companies. Its CEO Karl Watts explained to the Golden Whistles conference how thinking outside the box has been key to the company's growth since its formation in 2015.

The company was conceived in the wake of the boom in new train orders and influx of new vehicles to the network. Introduction of new fleets requires a significant amount of testing on increasingly complex rolling stock. With variations in factors such as coupler types and heights, Mr Watts explained there was no operator to look after the rolling stock engineering community, bringing operations and engineering together with technical expertise.

A key issue tackled by the Rail Operations Group sub-company is that of moving EMUs across the network. Hitherto this required locomotive haulage with large numbers of barrier vehicles as

the locos and EMUs couldn't couple directly. So ROG set about modifying locomotives by fitting translocator equipment, removing the need for the barrier vehicles and enabling the speed of these operations to double from 45mph to 90mph. Detailed planning began in July 2015, with the start of commercial services using a modified Class 37 just four months later.

ROG has been appointed test operator for several of the new fleets being introduced onto the network, for manufacturers Bombardier, CAF and Stadler as well as for Porterbrook's Class 769 Flex bi-mode. But it is also diversifying into infrastructure testing, most recently including testing of newly-installed overhead wires on the Midland main line north of Bedford. For multiple-pantograph testing, this will use a pair of Class 91s released by LNER from service on the East Coast main line.

The Traxion rolling stock storage business is managing vehicles

displaced by new train introduction. Rolling stock is in store at various locations pending either transfer to another operator or scrap. For example, HSTs withdrawn by LNER and due to transfer to East Midlands Railway have been stored at Gascoigne Wood, near Selby.

A third sub-business is Orion, specialising in high-speed logistics. The number of commercial vehicles on the roads is rising – but this is mostly smaller vans rather than heavy lorries. The light parcels market is worth £16 billion per year, prompted by growth in online retail – but rail has no share of this market.

To tackle this, Orion will use passenger trains with their interiors stripped to accommodate roll cages, with the benefit that these are faster than classic freight trains. Class 769 bi-mode Flex units have been ordered from Porterbrook to be repurposed as a go-anywhere train for the logistics business – each converted '319' can accommodate

200 roll cages. The first two units were ordered a year ago, and the company plans to add three more to the order, demonstrating its confidence in the logistics operation. Mr Watts says the vision is to flood the network with logistics services, and without the need to call at stations the '769s' will be easier to fit in on busy main lines.

Parent company Rail Operations (UK) is tasked with overseeing this and managing major projects, including the development of a new Class 93 hybrid locomotive in conjunction with Stadler. This is an adaptation of the Class 88 dual-mode design, but with a bigger diesel alternator supported by lithium titanate (LTO) batteries. The plan is for the '93s' to be capable of 110mph operation and have Dellner couplers with adjustable height. This, says Mr Watts, could revolutionise the intermodal market, where trains are slower now than when they were first introduced. 



Moving to the Midlands: No 57312 hauls Nos 91122/128 over Sopers Viaduct at Cuffley on the Hertford loop en route from Bounds Green depot to Leicester on 1 February 2020. The '91s' will be used for testing the new electrification on the Midland main line. Ken Brunt

LIGHT RAIL BEST FOR BLACKPOOL

Retired railway manager **ALEX GREEN** advocates conversion of the Blackpool South branch to light rail as part of a wider package of improvements for the resort

Blackpool has recently enjoyed significant heavy rail investment, in the form of electrification of the line from Preston to Blackpool North. Through Avanti West Coast services from London, Warrington, Wigan and Preston serve the terminus along with Northern trains from Liverpool, Manchester, Bolton, Chorley and Leyland.

This has left the Blackpool South branch struggling to survive as an isolated diesel route and heavily loss-making. Some commentators, such as Eddie Graves ('Forum', September 2019 issue), advocate perpetuating the old diesel train service, when I believe there is a better solution.

A new tram extension is currently being built to Blackpool North, connecting the existing tram lines to heavy rail. If there was a financial future for heavy rail on the South branch or indeed the Fleetwood branch, they would have been included in

the recent modernisation work, but all that could be justified was a modest resignalling scheme to reduce maintenance costs on the South branch and the removal of all points and crossings at Poulton-le-Fylde.

Although I now live in Somerset, I was the British Rail Area Manager at Preston for two years in the 1980s and later in my career was the Director of Operations for Regional Railways North West, so I know the Blackpool South line well and am acutely aware of its financial and operating weaknesses. In my opinion it has little future because of the seasonal nature of the passenger flow and the fact that the branch serves an isolated diesel rump in an otherwise electrified network. Most of the areas served by the branch can be accessed relatively easily by other means so the line is always the first to be sacrificed in times of shortage of crews and/or rolling stock.

The Blackpool Tram system is now an excellent modernised service, well managed and properly supported by local authorities, but it too suffers from its seasonal revenue stream. I believe the two lines could be co-ordinated as one operation, with local management in Blackpool rather than at arm's length from Manchester and a 12-month revenue stream from being useful to the local population.

TRAM TAKEOVER

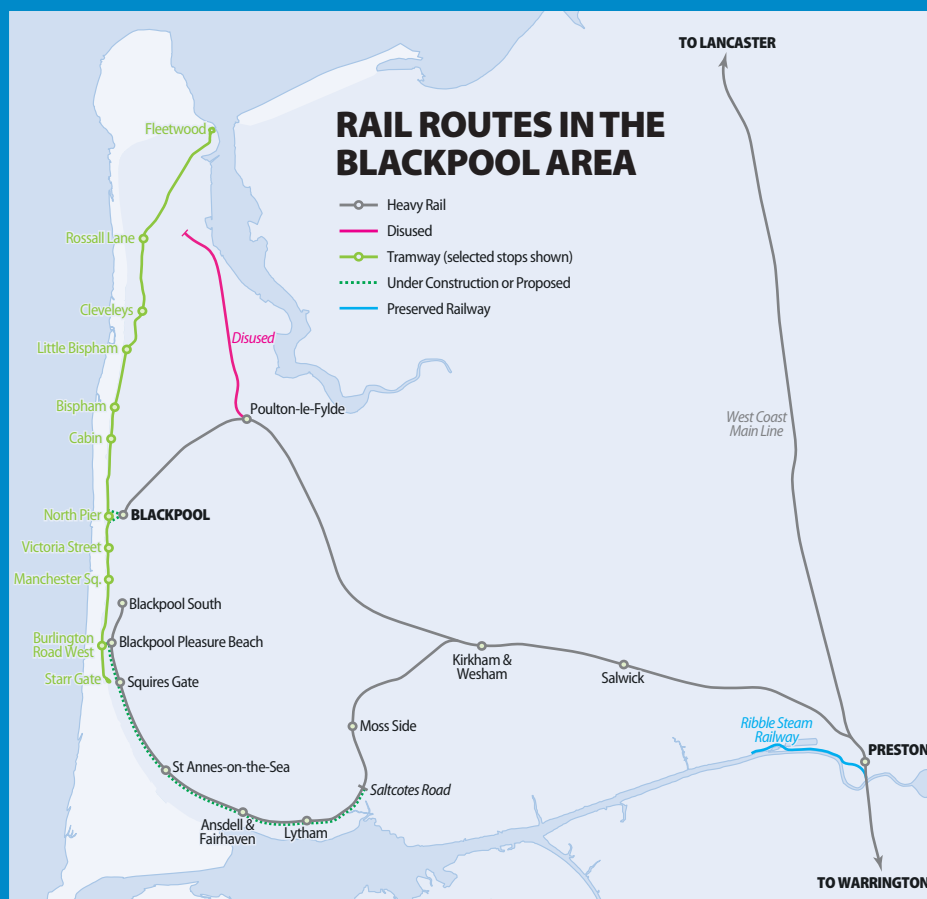
One option would be to construct a further extension from the new tram line from North Pier to Blackpool North station. It could diverge from the Promenade at Adelaide Street West to serve the Houndshill shopping centre before running along the protected rail route beside the edge of the main parks. New low-platform stations would serve shoppers, motorists, the coach station and the football ground

Light rail success: a Blackpool tram runs along the promenade in the shadow of the famous tower on 15 May 2019. Tony Miles



before being connected to the South branch at the existing station. Continuing onwards, the new tram route would call at Pleasure Beach before serving a mixture of new and existing stations at Harrowside, Squires Gate, Highbury Road, St Annes-on-the-Sea, Clifton Hospital, Ansdell & Fairhaven and Lytham.

This route with three low-speed loops and spring operated points at Pleasure Beach, St Annes-on-the-Sea and Lytham would allow a 15-minute tram service between Blackpool North station and Lytham. Continuing on from Lytham, there would be new stations at Saltcotes and Wrea Green plus the existing Moss Side before terminating in its own bay platform at Kirkham & Wesham, giving cross-platform connections northbound. There are now lifts at Kirkham & Wesham,



giving easy connections southbound. This would allow every other tram to be extended from Lytham to Kirkham & Wesham, giving a 30-minute modernised and electrified service with air-conditioned vehicles running at a high frequency but with low costs, serving new locations in a densely populated residential area.

The existing heavy rail connections from the branch to the main line would be removed as well as the set of points at the Preston end of the branch, giving very useful maintenance savings to Network Rail. Blackpool Transport, whilst staffing the trams itself, would buy in track and signalling expertise from suitable suppliers. Low-weight modern trams will be much kinder to track formations than Pacers and Class 15x units. Northern could continue to connect East Lancashire to Blackpool North.

Whereas the branch is currently doomed to have cast-off diesel units such as Class 150s, and maybe '156s' when available, these are now old, draughty, difficult to board, noisy and expensive to maintain. In contrast, a tram service would be electric, air-conditioned, low-floor, much newer and easy to maintain at Starr Gate, giving local job opportunities for train crew and maintenance staff.

BATTERY POTENTIAL

Modern trams can now be battery powered with a range of somewhere between 50 to 60 miles depending on features such as hills and number of stops. As the South branch is level and well below those figures, it is eminently suitable for a battery-operated service, meaning there would be no need to raise bridges, no need to install masts and catenary and no safety hazards in public areas such as car parks.

High-speed recharging would be available on existing tramway catenary between Blackpool

North and North Pier, giving a combined time of 15 minutes' charging, whilst a short stretch of new low-voltage contact wire between Wrea Green and Kirkham & Wesham would give 12 minutes to fully recharge at turnrounds of the tram. No recharging would be required for the Lytham turnbacks and they would receive the same 15 minutes' charging at the Blackpool end. Hopefully a deal could be struck with Network Rail to supply current off the 25kV system at Kirkham through a transformer to supply 700V DC.

With Blackpool's policy of re-equipping its buses with electric vehicles, this would give the Fylde a completely electric public transport network, which will be an enormous achievement and well before the national 2040 deadline for eliminating diesel.

With good marketing and a close relationship to heavy rail operators, it should be possible to offer the public attractive add-on fares giving a through journey or a day's tram travel with a heavy rail ticket issued offline. Similarly, in order to encourage motorists to use tram services, car park ticket options could be offered that included a day ticket for trams.

FLEETWOOD LINE TOO

The installation of a good value modern electrified tram system serving Blackpool and the Fylde provides the base order for new vehicles that will support the construction of battery-operated trams for a similar service to be introduced on the Fleetwood to Poulton route. Again, the existing tram system should be left alone with its traditional route along the Promenade.

With the new fleet of battery operated trams available, all that is needed to modernise public transport in the Thornton area is for a connection to be made just north of Broadwater

tram stop with a route along Fleetwood Road, and a new tram stop to serve the Cala Grand Holiday park before running along the safeguarded rail route through Thornton to Poulton-le-Fylde station, ending in a bay platform adjacent to the southbound heavy rail main line. This new line would be eight miles long so no new catenary or masts would be required as recharging of the trams' batteries would be accomplished on the presently wired line, giving 24 minutes of charging from Broadwater to Fleetwood and back.

BETTER PROSPECT

The prospects for an improved heavy rail service on the South branch are limited; there is nothing in Network Rail's Control Period 6 funding or the Northern franchise agreement to provide any improvements so it will be 2024 at the very earliest for a loop to be even contemplated, let alone built. The Government has recently allocated £100 million towards development of proposals for reopening the Fleetwood line as part of its 'Beeching reversal' fund, but I believe a light rail solution is greatly preferable to heavy rail.

Under my plans, an enterprising set of local authorities could grab hold of this opportunity to quickly and cheaply modernise their local transport into an integrated system using an environmentally friendly, low cost, high performance tram service. New stations will serve local residents and institutions such as the shopping mall, hospital, car parks, industry and football ground whilst the Cleveleys area would be reconnected to the national network at Poulton-le-Fylde. As an added bonus, there is funding available from central government for new light rail schemes.



Potential interchange: trains cross at Kirkham & Wesham on 27 June 2019; on the right is Virgin Pendolino No 390006 with the late running 10.36 London Euston to Blackpool North, while at left is Northern's No 319364 forming the 13.06 Blackpool North to Liverpool Lime Street. Under Alex Green's plan to convert the Blackpool South branch to light rail operation, the interchange with heavy rail services would be here. John Whitehouse

Initial work on tram utilisation shows five trams would be need for the 15-minute service from Blackpool North to Lytham with the twice-hourly extension to Kirkham & Wesham plus two trams for a half-hourly service on the Fleetwood to Poulton-le-Fylde route. Add in an extra tram for maintenance purposes and there is a completely modernised public transport offering for the cost of eight trams with minimal infrastructure costs. Isn't that a much more exciting and useful use of these two rail routes than slavishly demanding old diesel technology simply to maintain a through connection from Preston to the South branch?

Most importantly, these new routes will be specified and provided by local authorities; it is vitally important that local control is sought for these short remote branch lines when compared to being a tiny part of Network Rail and a remotely located operator such as Northern.

Let's get the two Blackpool branches electrified and modernised locally – now. 

Alex Green was Area Manager at Preston before becoming part of the Regional Railways North West team, first as Retail Manager and then as Director of Operations until privatisation in 1997.

Blackpool South branch: Northern's No 142031 has just departed Blackpool Pleasure Beach with the 16.20 Blackpool South to Colne service on 4 June 2015. Blackpool Tower, the traditional Grand National Roller Coaster (white frame) and the newer 'Big One' (orange frame) form a backdrop to the station. John Whitehouse





EUROPE

BOMBARDIER TO SELL RAIL BUSINESS TO ALSTOM

On 17 February Alstom and Bombardier confirmed they had signed a Memorandum of Understanding for the sale of Bombardier's Transportation business to Alstom. The acquisition price was expected to be between €5.8 and €6.2 billion and follows a strategic decision from Bombardier to focus on its business aviation segment. The signing of the MoU was unanimously approved by each of Bombardier and Alstom's board of directors.

The proposed merger comes after a period in which Bombardier has reported worsening financial performance, forecasting losses for 2019 linked to ongoing delays with train fleets in the UK, Germany, Austria and Switzerland which led to additional costs for Q4 2019 alone of \$350 million. This led its share price to decline by 37% in mid-January, just before the reports of merger talks became public.

Rail business subsidiary Bombardier Transportation, with a turnover of \$8.3 billion, has been 30% owned by Canadian state-owned investment fund Caisse de Depot et Placement du Quebec (CDPQ) since 2016; the transaction is fully supported by CDPQ, which would become a new long-term shareholder of Alstom. Bombardier Transportation's order backlog at the beginning of 2020 was \$35.8 billion (Alstom reported a €43 billion order book for the same period). Full year EBIT (earnings before interest and taxation) profit in 2019 was \$22 million – a \$752 million reduction compared to 2018.

In mid-February Bombardier sold all its remaining stake in the C-series aircraft business to Airbus (which has rebranded the plane as the Airbus 220) for \$591 million; CDPQ retains a 25% interest in the new aviation venture with Airbus. Bombardier retains its business aircraft segment.

Plans for mergers in the European rail supply industry are not new; Alstom and Siemens planned a merger, announced in 2018, which was blocked by the European Commission in February 2019. Bombardier had previously been in talks with Siemens about a merger. It is unclear that any of the factors that led the EU to block the Siemens Alstom merger would not also apply to a potential Alstom Bombardier tie-up; whilst the companies have different strengths and specialisms between

them, they constitute a similar sized part of the European market and are particularly strong in France, Belgium, Germany, the UK, Sweden and Italy. Both companies have manufacturing plants in eastern Europe which supply components and car bodies to factories in western Europe. Bombardier has substantial production capacity in China, both for the local market and supplying components to its wider business.

The impact of an Alstom Bombardier merger would be particularly pronounced in France; it remains to be seen what the French Government's position is, having previously supported the Siemens Alstom merger. Historically, many big contracts in France for both SNCF and Paris metro operator RATP have been effectively shared between Alstom and Bombardier with their two big assembly plants located near Valenciennes in northern France, with one company or the other acting as junior partner. In Italy and the UK Bombardier is working in partnership with Hitachi to develop and build high-speed trains, while in Germany Siemens relies on Bombardier to build most vehicle car bodies for the ICE4 high-speed train.

SABINE CAUSES WIDESPREAD RAIL CHAOS

Storm *Ciara*, which brought storm force winds of up to 155km/h to the UK on 9 and 10 February, continued past the British Isles to north western Europe, where German forecasters named it *Sabine* and winds reached hurricane force (170km/h). In Germany some rail services on lines near the North Sea coast between Norddeich and Bremen were suspended from Saturday 8 February in advance of the storm.

Most German operators suspended services, effectively closing the national rail network from early evening on 9 February, although city U-Bahn and tram systems were largely unaffected. Infrastructure manager DB Netze had imposed lower night-time speed limits on top of speed restrictions imposed earlier on those lines that remained open. Services did not begin to return to normal until the afternoon of 10 February in western and southern Germany, with DB Fernverkehr (long-distance) still advising passengers to avoid travelling before 12 February if possible as disruption continued, and the operator was accepting tickets from previous days

if passengers had heeded the advice not to travel. By contrast, in some parts of eastern Germany there was little or no weather-related damage, but rail services were still suspended on 9 February, leading to complaints from passenger groups!

International links were affected across a wide area; the Øresund bridge connecting Denmark and Sweden was closed due to the weather from early afternoon on 9 February, shutting the international road and rail fixed link between the two countries. Rail services between Denmark and Germany were also disrupted. As a result of the weather and disruption most overnight sleeper trains operated by ÖBB in both Austria and Germany were cancelled; two trains were provided as static hotel trains in Vienna and Salzburg for passengers who would otherwise be stranded.

Thanks to accurate weather forecasting few accidents and injuries were caused by the severe weather; in Switzerland a Turbo operated GTW EMU collided with fallen trees at Wald on the Rapperswil to Winterthur line in the east of the country early on 10 February, damaging train and track but not injuring anyone on-board. Several Swiss lines suffered temporary closures, some for several days, due to blockage by fallen trees or overhead line damage.

In the Netherlands one train hit a fallen tree with no injuries and, as is usual in severe winds, the HSL Zuid high-speed line was closed south of Rotterdam as it uses the high and exposed Moerdijk bridge. Remarkably, Dutch infrastructure manager ProRail's figures indicate that at the worst point of the storm on 9 February around 66% of all trains still ran, and on time!

Disruption was not limited to rail transport; most European airports had large numbers of cancelled flights and ferry services were disrupted or suspended across much of northern Europe. *Our thanks to reader John Morris for some of the information in this item.*



DENMARK

TALGO TO BUILD NEW INTERNATIONAL TRAINS

Danish Railways (DSB) has ordered 8x13-coach, 440-seat, 200km/h loco-hauled train sets from Talgo to operate international services to Germany, primarily on the Hamburg to Copenhagen

Joint effort: built by Alstom and Bombardier together, an RATP MF2000 EMU on Line 5 of the Paris Metro crosses the river Seine on the 1904-built Viaduc d'Austerlitz on 14 April 2016. Keith Fender





To be replaced: DSB IC3 DMU No 5081 at Lübeck Hbf on 21 November 2018 in the last weeks of train ferry operation. Copenhagen to Hamburg trains will not serve Lübeck again until the new Fehmarnbelt link opens in 2028. Keith Fender



Set for tendered operation from 2025: Île-de-France Mobilités suburban Line R out of Paris Gare de Lyon is one of those being assessed for early tendering. The route gained new trains funded by the Region in 2018-19 when new Bombardier-built R2N EMUs were introduced, replacing older stainless steel bodied ZS300 EMUs. A pair of the new sets wait to leave Gare de Lyon on 6 August 2019. Keith Fender

route in preparation for the opening of the new Fehmarnbelt undersea tunnel in 2028. The new trains for DSB will be very similar to the Talgo 230 train sets (ECx) ordered by German operator Deutsche Bahn last year. Talgo beat an alternative offer from Siemens for the DSB contract; several other manufacturers had previously withdrawn from the tender. The contract is worth around DKK1 billion (£111 million) and forms part of a bigger framework contract allowing purchase of further vehicles or complete train sets. DSB will maintain the new trains using parts supplied by Talgo.

The trains, which will be delivered from June 2023 onwards, will operate in top-and-tail mode using the Vectron AC locomotives already on order for DSB from Siemens; 34 locos designated DSB Class EB will be delivered from late 2020 onwards. The new Talgo trains will replace shorter IC3 DMUs currently used to operate international services from Denmark to Hamburg; these will be cascaded to regional services to allow withdrawal of newer (but problematic) IC4 trains supplied by Ansaldo Breda.

Copenhagen to Hamburg trains were rerouted from December 2019 and no longer serve Lübeck in Germany using the Rødby to Puttgarden train ferry route, now using the Storebælt route via Odense and Flensburg due to construction work for the new Fehmarnbelt undersea tunnel. Access lines on both sides are being rebuilt to double track and electrified over the next eight years; in Germany the 88km line between Lübeck and the new tunnel will be either rebuilt (30km) or constructed on completely new alignments (55km), and in Denmark the 115km line between Ringsted and the tunnel will be electrified and rebuilt for 200km/h operation. Copenhagen to Hamburg journey times using the new link and rebuilt routes will take 2hr 30min compared to around 4hr 50min in 2019; the Fehmarnbelt crossing itself is likely to take seven minutes, compared to an hour by ferry (including embarkation etc).

In February Atkins announced it had been awarded a contract by the Danish planning company Femern A/S to provide

consultancy services for the railway that will run through the new Fehmarnbelt tunnel.



FRANCE

STRIKES DAMAGE FREIGHT BUT ACCELERATE RER TENDERING

The longest national rail strike in French history ended (for now) in mid-January, having begun around 5 December. The strike was in opposition to government attempts to reform the country's pension system and was part of nationwide strikes by multiple industry sectors (many currently with sectoral pensions that are better than the average). The pension reforms have yet to be finalised, and parliamentary debate was scheduled for mid-February.

Whilst the strike paralysed the entire national network at its peak, this was due to key personnel such as signalling staff not working rather than all railway employees striking. Private freight operators found themselves unable to run trains even though their employees were not on strike. National operator SNCF was also unable to run many trains on some days, although the situation varied around the country and over time more services were operated.

By mid-January SNCF told the media the strike had cost the company around €850 million; by the end of that month the cost was probably closer to €1 billion. SNCF's new Chief Executive Jean-Pierre Farandou told local media the company would be looking at asset disposals as one possible means of generating cash – logistics business Geodis being seen by observers as an obvious (and large/valuable) asset that could be sold. The French rail freight sector – already a poor relation compared to many western European peers – has undoubtedly suffered long-term damage thanks to six weeks of strikes; one of the country's main ports at Le Havre was offering container shipping companies big incentives to make ship calls there in January and February as an attempt to win back traffic lost to Antwerp or Rotterdam during the strikes (the ports were also on strike for several weeks).

TENDERING FOR THE RER?

One of several unintended consequences from the strike could be the earlier than planned tendering of Paris area suburban services – currently the busiest part of the entire SNCF passenger operation. On the worst strike days almost no trains ran on the rail or metro networks, with the exception of the driverless Line 1/Line 14 metro routes which did operate.

In early February the Île-de-France region announced it was asking the French Government to accelerate plans for tendering all rail services in its region, including those operated on RER Lines A and B by RATP. The Île-de-France region wants all rail services, including Paris Metro and tram services operated by RATP, to be tendered by 2030, citing the enormous disruption during the strikes as one reason, with the first routes to be handed to new competitively appointed operators by December 2025.

Whilst all other French regions can tender their rail services from 2023, the Île-de-France Region is restricted, with tendering for RER services phased from 2025 to 2040, although several suburban routes can be tendered from 2023.

The Region intends to develop the tender process and documentation during 2020 with initial prior information notices for the planned tenders being issued early in 2021. Three groups of suburban services from Paris St Lazare ('Line J'), Paris Est ('Line P') and Paris Gare de Lyon ('Line R') have been identified as early candidates for tendering as transport authority Île-de-France Mobilités is not satisfied with current performance levels.



GERMANY

IC2 DELIVERIES SUSPENDED

German Railways' long-distance subsidiary DB Fernverkehr has stopped accepting 'IC2' double deck push-pull trains from Bombardier, with 21 of the final 25 on order still to be delivered. Bombardier has told local media in Germany it is working with DB to resolve the problems and has regretted the inconvenience the trains' frequent failures have caused travellers.

DB has ordered 69 of these trains in three batches; the first 25 utilise a Class 146.5 'Traxx AC2' 15kV AC loco and have been in service since late 2015. Despite some early teething problems with the Twindexx vehicle suspension (all versions of the IC2 train use the same five-car formation of Bombardier Twindexx double deck coaches with a driving trailer on one end), these trains have performed well in recent years and most operate on the routes between Emden/Cologne and Leipzig/Dresden via Hannover. The Class 146 design is a well-proven loco used widely for regional trains in Germany.

The next two lots of IC2 trains utilise Bombardier's more modern 'Traxx AC3' loco design – delivered to DB as Class 147.5. The first batch of 17 trains was delivered in 2018-19 and entered service largely on the Nuremberg to Karlsruhe via Stuttgart route. Introduction on the Stuttgart – Singen – Zürich route has been delayed due to approval problems in Switzerland (especially concerning the use of European Train Control System), although operation of domestic German IC trains between Stuttgart and Singen began during 2019. These trains have yet to become reliable, with frequent operational problems that appear to be largely software driven.

The next batch of 25 trains, ordered in 2017, was due to be delivered during 2019, although only the first four trains entered service by December 2019. Since introduction these have experienced significant software related failures with trains stopping unexpectedly and drivers reportedly having to spend up to an hour rebooting the on-board systems to operate normally. These problems appear to be exacerbated by frequent changes of direction at terminus stations – which is a feature of the routes they were bought to be used on, with direction changes multiple times each day!

TALENT EMUs GET LATER STILL

Bombardier's delivery problems are not confined to the IC2 trains. As we reported last month, the fleet of Talent 2 EMUs on order for use by Abellio around Stuttgart is severely delayed. In recent weeks Abellio has told the Baden-Württemberg regional government (which will own the trains via its in-house leasing company) that the 22 delayed trains are now not likely to be in service by June as originally promised and that approval for operation in multiple as three-unit sets has still not been obtained. Delivery by December appears likely – if achieved this will be a year late.

Bombardier has also had to notify other customers in southern Germany of lengthening delays for delivery of the newer Talent 3 version of the train; SWEG, which is owned by regional and local governments, has 12 on order for services on the newly electrified Kaiserstuhlbahn (Riegel to Breisach) but has been told it is unlikely to receive most of its trains until 2021, up to 18 months late; in the meantime DMUs continue to operate a now electrified network. In the Saarland, VLEXX took over several electrified routes around Saarbrücken in December 2019 without its fleet of 21 Talent 3 EMUs, having to hire 20 older EMUs from DB Regio (which it had beaten to win the contract); it is unclear whether any of the VLEXX Talent 3 trains will be delivered in 2020.

The Talent 3 train has also been sold to ÖBB in Austria and serious delivery delays there have led to ÖBB issuing tenders for a completely new EMU framework contract and in the interim ordering 11 more Desiro ML EMUs from Siemens using options in a 2010 contract.



IRELAND

DISTRICT COUNCIL ASKS NTA FOR BETTER RAIL SERVICE

The National Transport Authority has been asked by Tipperary-Cahir-Cashel district council to look at timetable improvements for the Limerick Junction to Waterford line. Iamród Éireann representatives who attended a recent council meeting were told the current timetable of two badly timed trains in each direction was 'of no benefit to anyone', whether they are travelling to Dublin or wishing to commute to work. Despite the poor service, IE figures show 43,000 passengers were carried on the line in 2019, up by 3.7%. *Tim Casterton*



ITALY

TWO KILLED IN HIGH-SPEED DERAILMENT

An Italian Railways (Trenitalia) high-speed train derailed on the high-speed line between Milan and Bologna near an RFI infrastructure maintenance base south of the small village of Livraga on 6 February. The train involved was the first southbound train of the day, travelling from Milan to Salerno in the south of Italy, which was fortunately very lightly loaded with only 31 people on board. Both the driver and a colleague in the cab were killed and at least 27 passengers injured, some seriously.

Based on local media reports and pictures posted on social media by the Italian railway police, it appears the train encountered a slow speed turnout from the main line to a passing loop beside the maintenance depot that was incorrectly set; it reportedly derailed while travelling at 292km/h as it went through the 60km/h design speed turnout. The first vehicle of the five-year-old 'Frecciarossa' (Red Arrow) type ETR1000 high-speed EMU (built by Bombardier and Hitachi in Italy) became detached from the rest of the train, travelling across the maintenance yard and ending up on its side on the wrong side of a trackside building at the RFI depot. The rest of the train remained coupled; the second vehicle

Difficult introduction: a DB IC2 train with Class 147.5 loco No 147 554 at Nuremberg Hbf on 3 April 2019. Keith Fender





was left on its side with the other six remaining upright but off the rails between the main line they had been on and the parallel loop line.

The Milan to Bologna high-speed line, in common with much of Italy's high-speed network, is equipped with ETCS Level 2; investigators will no doubt be focusing on whether the points were set incorrectly, and if so how the interlocking system did not make this visible to the ETCS system.

Trains were diverted via the Milan to Bologna classic line via Lodi whilst the extensive infrastructure damage was repaired, adding an hour to journey times. The accident was the first serious one on an Italian dedicated high-speed line involving a passenger train and one of very few fatal accidents globally involving high-speed trains on dedicated high-speed lines.



RUSSIA

MOSCOW OVERGROUND STYLE NETWORK TAKING SHAPE

The first two of five planned cross-city routes in Moscow were officially opened on 21 November by Russian President Vladimir Putin. They are known as the 'Moscow Central Diameters' (MCD); the 'Diameter' name is rather a misnomer for English speaking observers as the lines are neither in tunnel nor radial, but comprise 'Overground' style existing routes that have been heavily rebuilt with additional tracks and modernised stations linking existing suburban lines. Both lines now in use, totalling 132km with 57 stations (and another nine planned by 2024), have high frequency services with five to eight minute headways at peak times, and many are operated by new Class EG2T 'Oriole' six-car and seven-car EMUs built by Transmashholding.

The plan for development of the MCD network has five lines totalling 375km with 182 stations serving a population of around 12.4 million people (6.9 million in Moscow itself, the rest in the surrounding region). Ticketing for the new lines is integrated in the Moscow-wide Troika card system used on the metro, suburban rail and bus services.



SPAIN

HIGH-SPEED COMPETITION IN SIGHT

Spanish national rail infrastructure manager ADIF plans to sign contracts in March with three operators, enabling them to operate services from December 2020 and leading to a 65% increase in the number of high-speed services using its network. Following a bidding process in 2019 the three operators selected were incumbent RENFE (which won 70% of the paths on offer), the ILSA consortium including Air Nostrum and Trenitalia (20%) and French National Railways (SNCF) subsidiary Rielsfera (10%) on three core routes. Each operator will have a different level of service as follows:

- Madrid – Barcelona – French border (Corridor 1)*
- RENFE – 48 train pairs (three per hour each way)
- ILSA – 16 train pairs (hourly)
- Rielsfera – five train pairs (every three hours)
- Madrid – Valencia/Alicante (Corridor 2)*
- RENFE – 32 train pairs (two per hour)
- ILSA – 16 train pairs (hourly)



Competition coming: the Madrid to Barcelona route will have up to five trains an hour from three operators. This is a RENFE 103 Velaro EMU at Zaragoza Delicias on 31 January 2018 with a Girona to Madrid service. Keith Fender

- Rielsfera – four train pairs
- Madrid – Seville/Málaga (Corridor 3)*
- RENFE – 48 train pairs (three per hour)
- ILSA – 16 train pairs (hourly)
- Rielsfera – four train pairs.

Three other bidders (Talgo Globalia, Globalvía and Eco Rail) were all unsuccessful in the initial bids, although ADIF may offer unused or spare paths to these or other operators. It is likely Rielsfera (using SNCF TGV sets equipped for use in Spain) will begin some services in December, although ILSA has said it will wait until January 2022 to introduce 'Frecciarossa' ETR1000 high-speed trains being supplied by partner Trenitalia (another 14 sets are currently on order from Bombardier/Hitachi).

RENFE'S LOW-COST SERVICE

Incumbent national operator RENFE plans to start operating 'low-cost' high-speed services

from April under the 'Avlo' brand – a play on 'AVE', as high-speed trains are known in Spain, and 'lo' (low cost). Advertising and sale for the first services between Madrid and Barcelona (via Zaragoza) began in January, with introductory fares as low as €5 on offer; prices for most days under three months in advance are substantially higher (€40 or more), although €30 fares for mid-July could be found in early February. A quick comparison of online prices between Avlo (Madrid to Barcelona) and similar distance/time French Ouigo services (Paris to Marseille) shows the French operation to be consistently cheaper, especially nearer the travel date; this would suggest RENFE as the only current operator will have scope to reduce its prices and margins when competitors arrive.

RENFE is planning to use internally reconfigured 438-seat Class 112 trains rebranded in a purple 'Avlo' livery for these services starting on 6 April, with three train pairs daily (four from 4 May).

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FIRST CLASS 777 REACHES LIVERPOOL

THE FIRST of Merseyrail's new Class 777 EMUs was delivered to Kirkdale depot in the early hours of 16 January after a journey across Europe that was slightly delayed by industrial action in France. No 777003 is the first unit to be fully completed as Nos 777001/002 have been fitted with temporary panels in place of the end emergency evacuation doors whilst undergoing testing at Siemens' Wildenrath facility.

The contract for the supply of 52 four-car trains, replacing the Class 507 and 508 fleets, was signed with Stadler in February 2017. The £700 million deal includes a maintenance contract which will see Stadler undertaking light and heavy maintenance of the units throughout their 35-year life cycle at the new depot at Kirkdale.

Merseytravel was originally due to see the first trains delivered in mid-2019 with the first units entering passenger service with Merseyrail in the spring of 2020. Delivery of the first set is around four months behind schedule and the original plan for passenger service in May 2020 has been revised. Aspirations now are for service entry in the latter part of 2020 following a comprehensive testing and crew training programme.

One particular area of focus will be checking for electromagnetic compatibility between electrical and electronic systems. As Merseytravel's rolling stock programme director David Powell notes: 'On the Merseyrail network there is a host of compatibility issues including a number of different track circuit types and even running under 25kV AC wires; we will need to tread carefully.'

In the meantime, No 777002 will be joining No 777001 at the Wildenrath test track to enable coupling and multiple working to be thoroughly evaluated. It will be followed by No 777004, which will release set No 777001 to go back to the factory for completion, including the fitting



New train for Merseyrail: No 777003 on display at Kirkdale depot on 28 January. Tony Miles

of the end doors, ahead of its journey to Liverpool. All 52 sets are due to be in service by 2021 with the fleet owned outright by Merseytravel rather than by a rolling stock leasing company.

OPTIONS

Merseytravel has an option to purchase up to 60 additional units should operations be extended to new destinations such as Helsby, Skelmersdale or Wrexham. As these extensions may not involve further third rail electrification, the '777s' have dual-voltage capability to enable them to take power from overhead AC electrification as well as the DC third rail. Options also exist for battery/electric powering and it is anticipated that one set in the initial tranche will be kitted out with this equipment to enable battery operation to be evaluated. A space underneath one vehicle will be able to house a battery weighing around five tonnes whilst keeping the axle loads within specification. As well as the ability to power sets away



Wide inter-car gangway: interior of No 777003. Tony Miles

from the third rail, the batteries could also be used to recycle energy from braking, reducing CO₂ impact and saving money. All '777s' will be fitted with small batteries which allow independent movement around workshop and maintenance facilities.

The trains have lower floors, only 960mm above rail level, with a greater proportion of equipment located in the roof area as a result. A key feature is the intelligent sliding steps at doors, which work out exactly how far to extend at each station, enabling the trains to provide level and step-free access at all entrances. Sensitive door sensors will detect obstructions, while door illuminations will inform passengers when it is safe

to embark and alight depending on the colour being displayed.

INFRASTRUCTURE WORK

Extensive work has been required at many stations to ensure the platform height is within a very tight tolerance, and this is the first part of a programme which will also see some platform and signalling work to allow the longer units to be operated in multiple. Mr Powell explained to *Modern Railways* that this project is just beginning and currently Merseytravel is working through the process with Network Rail to identify work that is needed.

'Running four-car units will not be a problem and rumours that we can't do this are not correct' Mr Powell explained. 'Where we are limited

MERSEYRAIL CLASS 777s

Set numbers	777001-777052
Capacity	182 seated, 302 standing
Doors	2x twin sliding doors (driving cars); 4x twin sliding doors (trailers)
Maximum speed	75mph (121km/h)
Weight	99 tonnes
Power output	2,100kW (2,800hp)

is the operation of eight-car sets, which are not needed on all routes, but will be required on the busier routes. Work involves a mixture of platform lengthening and moving some signals either where longer trains will pass existing platform end signals or where we need to meet new sighting regulations.'

Mr Powell explained that signal sighting has already been done as a 'desktop' modelling exercise, but final decisions will be taken once the first set is running on the network and the assessments can be validated. He reports that a 'reasonable number' of signals will need to be relocated, with the final total being 'in double figures'.

The biggest challenge will be at Southport station where moving signals further out from the ends of the three platforms used by Merseyrail is hampered by the position of points immediately beyond the platform ends or, in the case of platform 3, inside



Articulated vehicles: note also the bodyside deflector designed to prevent people becoming trapped between the train and platform. Tony Miles

the platform. This may involve extension of the platforms into the concourse, which will require an upgrade to the buffer stops.

Work to strengthen the power supply is also ongoing. Long

distances between feeder points mean that currently the nominal 750V DC can fall to slightly below 400V at the furthest points from the feeders. With their much lower load and basic control

systems the current trains will accept this voltage and continue to work, albeit with somewhat reduced performance, but the '777s', with their higher power demands and modern control systems, will refuse to operate when the supply falls to around 500V. These two factors mean that as well as improving the existing supply connections new substations will be needed. This programme is progressing well and should be completed by the end of 2020, in advance of the full fleet introduction.

One advantage of the new trains is that the on-board Train Management System (TMS) will be able to show a precise readout of the third rail voltage along a route so the engineers will be able to ensure the supply is satisfactory at every location and monitor how it fluctuates if several units are running in close proximity. *Tony Miles*

NORTHERN'S HYDROGEN AND BATTERY PLANS

Breeze for Teesside and battery '331s' for Windermere

NORTHERN HAS submitted plans to the Department for Transport to introduce hydrogen trains on Teesside and Class 331s fitted with batteries on the Windermere branch. It is understood business cases for both proposals have been submitted to DfT's Rail Investment Board for approval.

The operator is working with Alstom and Eversholt Rail, which are developing a hydrogen conversion of Class 321 EMUs, named 'Breeze'. The work, which would take place at Alstom's Widnes plant, would involve shortening four-car units to three-car and giving over some of the space within the passenger saloons to the necessary equipment to provide hydrogen power. A three-car Breeze set is expected to have a similar passenger capacity to a two-car DMU.

Northern has submitted planning documents, with the preferred site for a maintenance and fuelling facility understood to be at Lackenby. As hydrogen units would have a more limited operating range than DMUs (around 600 miles), they would likely need to return to the depot every night. Northern believes the routes radiating from Middlesbrough to Nunthorpe, Bishop Auckland and Saltburn are ideal candidates for the operation, as they are unlikely to be electrified and can be operated as a self-contained network using hydrogen trains. A fleet of around



New train but no wires: Northern's No 195102 runs onto the Windermere branch at Oxenholme on 2 October 2019 with the 11.28 Manchester Airport to Windermere. Class 331 EMUs fitted with batteries are proposed to take over these services. Tony Miles

a dozen Breeze units is planned, with the possibility they could also operate services to Whitby and on the Durham Coast line to Newcastle. Planning documentation suggested the first hydrogen train would be ready for testing in June 2021, but this was based on construction of the depot facility beginning in January this year.

BATTERY '331s'

The battery train proposal for Windermere would involve the

addition of new vehicles containing batteries into five three-car Class 331s, creating four-car sets, with batteries also inserted into the existing centre vehicles. Northern's original order for '331s', built by CAF and financed by Eversholt Rail, is for 31x3-car and 12x4-car units.

The sets fitted with batteries would be used on Manchester to Windermere services, which apart from the Windermere branch itself run entirely under the wires yet are operated by Class 195 diesel units.

The branch was originally due to be electrified but this was cancelled in 2017, and as a result a further 3x3-car Class 195s were ordered. As well as the environmental benefits, introduction of the battery '331s' on Windermere services would free up '195s' for cascade elsewhere on the Northern network.

Northern believes battery power would be sufficient for one return trip along the branch without recharging, but as most diagrams currently involve two trips provision of a rapid recharge facility is likely, with the possibility this could be located at Windermere or that recharging could take place while units are in the platform at Oxenholme.

'769s' COMING SOON

Meanwhile, by early February Northern had accepted three of the eight four-class Class 769 bi-modes it has on order from Porterbrook. The units have been converted from Class 319 EMUs by the addition of diesel engines in a programme taking place at Brush Traction. Of the three accepted units, two had completed mileage accumulation. Northern has begun driver instructor training on the type ahead of their introduction this spring. The '769s' will work on Southport to Alderley Edge services, making use of their diesel capability between Southport and Bolton and switching to electric power east of Bolton.

TfW Mk 4s makes North Wales debut

Mk 4 coaches ventured into Wales for the first time on 28 January, when a four-coach set plus Driving Van Trailer began a series of training runs on the North Wales coast line. The initial run included the Llandudno branch, as the coaches could initially replace the Mk 3 set on the Manchester to North Wales diagram (which includes an evening working to Llandudno). Class 67 locos have been adapted for push-pull working with TfW's three sets of Mk 4 stock.

As *Modern Railways* closed for press, TfW was unable to say where and when Mk 4s would enter passenger service. 'The current plan is to introduce them to service on Cardiff to Holyhead after the May timetable, but there are a number of requirements which need to be met in order to achieve this' said a TfW spokesman. In January, TfW had said it aimed to introduce the vehicles on North to South Wales express diagrams from the May timetable change, following route clearance south of Shrewsbury by April.

There also appears to be further delay to introduction of Class 230 diesel/battery hybrid units on the Wrexham to Bidston line. Franchise operator KeolisAmey had originally expected the class to make its Welsh debut in May 2019, starting on the Conwy Valley line. The TfW spokesman said: 'We're expecting the first unit to be delivered to us during the spring and enter service on the Wrexham to Bidston line during the summer'. Asked whether the planned use of Class 230s on the Conwy Valley line had been abandoned, he said TfW had 'no immediate plans' for their operation there.

He explained that the removal of Mk 2 sets with Class 37s from



Bracing test run: TfW's second set of Mk 4 coaches ran along the North Wales coast on 12 February. Here the DVT leads the formation en-route from Holyhead to Crewe near Penmaenmawr, assisted by a stiff westerly wind, with No 67008 providing power from the rear. Rhodri Clark

peak workings on the Rhymney line depended on availability of other stock, particularly the additional Class 153s which TfW has received from Greater Anglia and East Midlands Railway. TfW will not use '153s' on the Wrexham to Bidston line but has started using them to strengthen other Class 15x units on some North Wales Coast duties.

Welsh Assembly Members asked Lee Jones, chair of KeolisAmey Wales Cymru, on 29 January when the Class 37s would be removed. He said: 'We are looking at in the next two to three months that we would hope to replace them, but if we need to hold on to them then we will hold on to them'. He said TfW now has three or four surplus units available for service each day, enabling more maintenance and Persons with Reduced Mobility work to be undertaken.

WAITING FOR '769s'

TfW chief executive James Price informed the AMs that he had told

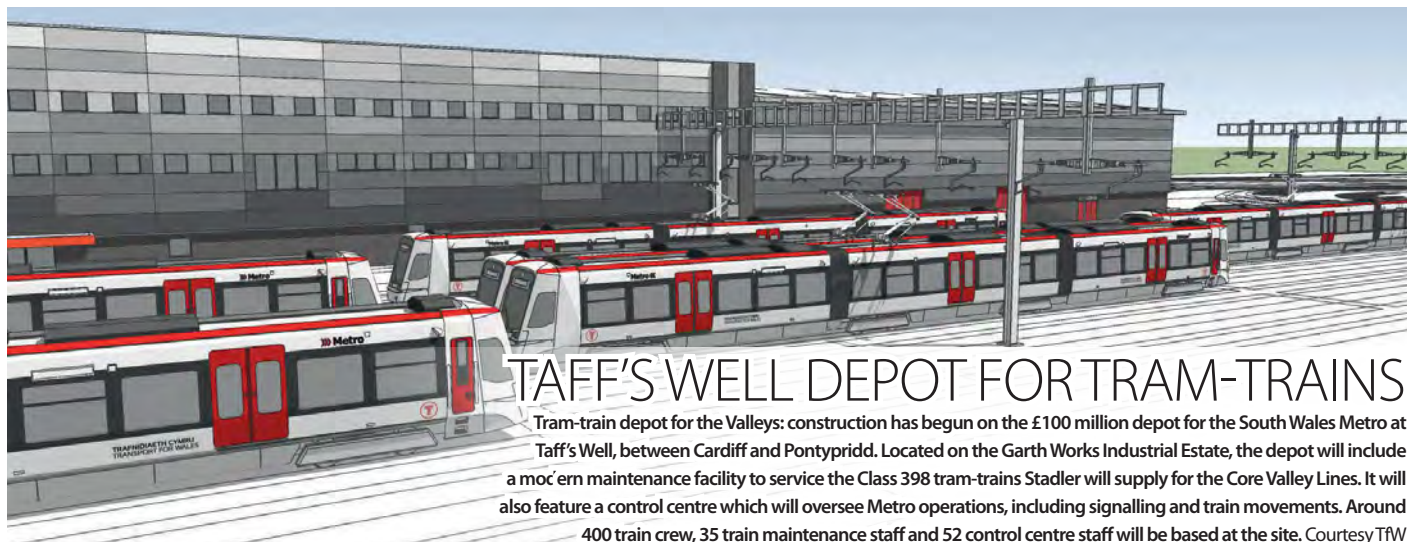
everyone not to be specific about rolling stock dates 'because we're reliant on Class 769s'. He added: 'The Class 769s' delivery date has gone back and back and back'. While TfW was getting more confidence from the supply chain, it was not fair to customers and AMs to quote 'figures that we don't fully believe ourselves'.

TfW has indicated that the first of nine Class 769s, converted from Thameslink Class 319 EMUs, will begin passenger service in May. The TfW spokesman told *Modern Railways*: 'Proving runs and crew training will commence over the next few weeks', with the operator having now accepted the first unit from Porterbrook.

Mr Price told AMs TfW was reviewing the capacity of the new trains on order because the 65% increase in capacity (compared with the stock when the franchise commenced in 2018) may be insufficient, particularly with Cardiff council proposing to introduce

a road user charge. As things stand, the Stadler tri-mode units for the Rhymney line will have slightly fewer seats than the Class 769s they replace. Mr Price said the '769s' would be 'huge' in comparison with the current stock, primarily Pacer units, which would give the Rhymney line a capacity uplift sooner than other lines. TfW was now working to ensure there was no reduction in seats on the Rhymney line.

All but one of TfW's 12 Class 170 units from Greater Anglia had been transferred to Wales by 10 February. The TfW spokesman said: 'We're really happy with the positive response to the trains entering service. They are providing a better on-board experience and a significant increase in capacity throughout South Wales, with extra spaces on the Maesteg, Ebbw Vale and Cardiff to Cheltenham lines, and [enabling] an internal cascade of trains from those lines to other routes'. Rhodri Clark



TAFF'S WELL DEPOT FOR TRAM-TRAINS

Tram-train depot for the Valleys: construction has begun on the £100 million depot for the South Wales Metro at Taff's Well, between Cardiff and Pontypridd. Located on the Garth Works Industrial Estate, the depot will include a modern maintenance facility to service the Class 398 tram-trains Stadler will supply for the Core Valley Lines. It will also feature a control centre which will oversee Metro operations, including signalling and train movements. Around 400 train crew, 35 train maintenance staff and 52 control centre staff will be based at the site. Courtesy TfW

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Awaiting transfer: stored withdrawn LNER HSTs at Gascogine Wood sidings. Nine sets are moving to EMR, although vehicles from set NL65 were moved from Tyne yard to Newport docks for scrapping on 24 January. Ian Lyall

EMR SET FOR CASCADED HSTs

THE FIRST of nine ex-LNER HSTs was expected to enter service with East Midlands Railway by the end of February. The sets, withdrawn by LNER at the end of 2019, are being introduced as they offer better accessibility than EMR's current 2+8 HSTs.

Six Angel Trains and three Porterbrook sets are being transferred in 2+8 formation. After going into storage following their withdrawal by LNER, two sets at a time are receiving modifications at Neville Hill depot in Leeds prior to entering service with EMR. This includes some corrosion rectification, application of EMR branding, finishing works on the Passenger Information Systems and minor modifications to the brake distributors, reflecting that with EMR they will do less high-speed running and have more frequent stops than they did when working for LNER.

A second set was due to follow into service shortly after, with sets to be introduced broadly in pairs in a programme running until the spring. All will remain in the red livery they wore when operating with LNER, although there are hopes one of the three Porterbrook sets might receive EMR colours.

'180s' LATER THIS YEAR

EMR also has three 2+6 HSTs owned by Angel Trains. These are to remain in service until the end

of the year, when the operator introduces Class 180s transferred from Hull Trains. Of the four '180s', two transferred to EMR in January and moved to Etches Park depot in Derby for initial inspection. They will then move to Barrow Hill for storage as the other two sets arrive, which was expected in late February, and driver training will take place out of Barrow Hill. Maintenance will be in the EMR part of Etches Park depot (as opposed to the Bombardier part where the Class 222 Meridians are maintained).

Entry into service is planned in the latter part of the year, following performance modifications to improve reliability and staff training. Initially the '180s' will directly replace the 2+6 HSTs but will then work alongside '222s' from December 2020 when EMR recasts its timetable and withdraws all its HSTs.

EMR's Class 222 Meridians and the '180s' will be replaced from 2022 by 33x5-car bi-modes built by Hitachi, now confirmed to be Class 810s. Design work on these is progressing, with further details expected to be released in the coming months.

REGIONAL CASCADE CONTINUES

In early February EMR received the last of nine Class 156s cascaded from Greater Anglia, with six in

service by mid-February. The delay in receiving the '156s' has meant EMR retained more Class 153s than expected, with dispensations for 17 of the single-car sets to continue operating even though they do not meet Persons with Reduced Mobility (PRM) regulations. This number is expected to reduce once all the '156s' are in service, with the potential for some '153s' to move to sister Abellio franchise West Midlands Trains, although this would require a separate PRM dispensation.

The first two Class 170s are expected to arrive at EMR from ScotRail in early March, followed by a further three in the middle of the year. As these sets are being retained long-term by the franchise, they are to be painted into the full EMR livery, the first trains apart from the '222' used for the launch event to be so treated. Once this has been completed driver training will begin, with entry into service likely on the Robin Hood line. This would enable EMR to end the use of Class 153s on the Liverpool to Norwich service – since the December timetable change pairs of '153s' have been used as the strengthening portion on these services west of Nottingham. An interior refurbishment of the Class 170s is planned in 2021, after EMR has received further units from West Midlands Trains.

TPE ramps up Nova fleets

TRANSPENNINE EXPRESS expects to have a significant proportion of its new trains in service by the end of March, with a further step up by the timetable change in May.

The step-up follows something of a pause in the new trains programme with no new sets accepted by TPE between mid-December and mid-February. Much of this has been due to snagging and modification work on CAF sets following delivery to the UK. The Class 397 Nova 2 EMUs will require a fleet-wide replacement of windscreens following cracking of at least five, with an improved method of fitting being employed. Concern has also been expressed at the length of time a windscreen replacement currently takes.

Eleven daily diagrams were covered by Class 802 Nova 1 bi-mode units since early February as more Liverpool to Newcastle services were extended through to Edinburgh. From 17 February this was due to step up to 13 diagrams with the target of 16 of 19 sets in service each day from the end of March.

Following a lengthy period with just two Nova 2 units diagrammed for service, TPE stepped up to three from 17 February ahead of a further increase to five from 9 March. With West Midlands Trains anxious to receive the remaining six Class 350/4 sets as part of its own service recovery and improvement plan, both companies told *Modern Railways* they are due to be released by the end of March, with Nova 2 diagrams stepping up to eight sets in service from this point. With the final uplift to 10 sets a day from 12 not expected until the May timetable change, any other diagrams will be covered by Class 185 units now released by other new trains, including '185s' continuing to operate the new Liverpool – Glasgow service until Nova 2 sets are available to take over.

Use of Nova 3 sets (Class 68/ Mk 5a coaches) will stay at four diagrams for a while as driver training focuses on the Nova 1 units. Insiders say the emphasis on getting the more critical bi-mode trains into service has created a short-term issue, with some drivers losing their competence on the Nova 3 sets.

TPE also reports that the enlarged fleet has enabled it to increase the number of six-car Class 185 formations in service, providing much-needed additional capacity, particularly on services to Hull and on its South Pennine route. *Tony Miles*

LNER to retain IC225s

LNER IS to retain its Class 91/Mk 4 InterCity 225 electric sets beyond their planned withdrawal date in the middle of the year.

Around 10 sets are expected to be retained, plus some spare locos. Until December 2021, when a major timetable change is planned on the East Coast main line, the sets will remain in 2+9 formation, but after that they may be reduced to 2+7 to better match the performance of LNER's Azumas. It has not yet been confirmed if the IC225s will be dedicated to specific routes.

The operator is introducing a 65-strong fleet of Azuma trains, and had originally planned for all services to be operated by Azumas from June. However, LNER has insufficient Azumas for the planned December 2021 timetable, and is planning to tender for an additional fleet of eight nine-car bi-modes to cover the shortfall. Retention of the IC225s will give additional resilience in the fleet and also cover for work such as modification of nine-car Azumas by fitting additional luggage space in response to passenger and staff feedback.



New depot, new train: No 195022 stands in the diesel-only road at the Wigan Springs Branch facility on 7 February 2020. Tony Miles

Wigan Springs Branch depot opens

WIGAN SPRINGS Branch depot is servicing trains once more following a £46 million project to create a new stabling and light maintenance facility on the site. The new four-road depot, located next to the existing freight yard in Ince-in-Makerfield, will handle trains working for Northern.

Up to 40 vehicles can be accommodated in the main depot area, where they will be cleaned, fuelled and maintained by the depot workforce, which has created 18 new

jobs in the area. With additional stabling space for a further 16 cars elsewhere on the site, Northern plans to service 24 electric and eight diesel trains each night with the depot expecting to handle a range of train types including Classes 150, 156, 158, 195, 319, 331, and from 2021 Class 323s as more sets move to the operator. Three of the four roads are electrified with the fourth restricted to diesel units only. The depot is capable of supplying diesel

fuel and replenishing lubricants, sand, water and coolant as well as external cleaning via a carriage washer located on the approach road and internal cleaning. The buildings on site have been fully refurbished to provide new staff accommodation for crews based at Wigan. Work is also due to be carried out at the nearby Wigan North Western station to lengthen bays so they can handle longer sets when they run into the station at the start and end of their diagrams. *Tony Miles*



Resolution agreed: the ladder arrangement of cables seen here on Azuma No 800101 is to be modified for safety reasons. Tony Miles

IEP inter-car cable resolution

AGREEMENT HAS been reached on a solution to making safe the inter-car connectors on Hitachi Class 80x fleets introduced by GWR, LNER, TransPennine Express and Hull Trains.

All four operators have fleets of EMUs or bi-modes in service, but the Office of Rail and Road approved the fleets' use on the condition a solution was agreed regarding the inter-car cables between vehicles, with concerns their positioning could create a ladder which trespassers

might climb. The solution will see the cables made longer, meaning there will be an inter-car connection at the top and the bottom but without the appearance of a ladder, with signage also applied to discourage climbing. ORR reports it has agreed a realistic timescale with manufacturer Hitachi and the operators for the modifications to be made, meaning the work can be undertaken during planned maintenance rather than requiring trains to be taken out of service specially.

Bescot depot for WMT Aventras

WEST MIDLANDS Trains plans to build a new depot on the site of the Bescot freight yard and maintenance depot as the base for its new Class 730 Bombardier Aventura EMUs. The operator says the depot will create more than 100 new jobs in the Sandwell area.

At the outset of its franchise, WMT had planned for the Aventras to be maintained at a new facility at Duddeston, but challenges with this have forced a rethink. The company

is in the very early stages of preparing a planning application for submission to Sandwell Metropolitan Borough Council. It highlights that the plans are not connected to Network Rail's plans for a sleeper factory, for which a planning application has recently been turned down.

WMT has ordered 81 Class 730s from Bombardier, with 36x3-car units for the Cross City line in Birmingham and 45x5-car units for long-distance and outer-suburban services.



TURBO TRIAL TO BRIGHTON

Gauge clearance run: with a view to using Class 165/166s on its services from Great Malvern/Cardiff/Bristol to Brighton, GWR operated a gauging train along the Coastway West line in the small hours of 22 January 2020. This is No 166211 at Worthing; the Turbos will replace Class 158s, which are being cascaded to Devon and Cornwall. John Vaughan

SHAPPS STAYS AFTER RESHUFFLE



Staying in post: Transport Secretary Grant Shapps. Philip Sherratt

FOLLOWING A cabinet reshuffle by Prime Minister Boris Johnson, Grant Shapps has remained as Secretary of State for Transport. He was elected as MP for Welwyn Hatfield in 2005 and appointed as Transport Secretary in July 2019.

However, there have been changes to the other Department for Transport ministers. Pendle MP Andrew Stephenson has been appointed Rail Minister; he was previously Minister of State at the

Foreign and Commonwealth Office and the Department for International Development. Previous Rail Minister Chris Heaton-Harris has been reappointed to DfT, although his ministerial responsibilities have not yet been confirmed. Prime Minister Boris Johnson has announced that a DfT minister will be dedicated to HS2.

Confirmed as leaving their ministerial posts at DfT are George Freeman, Nusrat Ghani and Paul Maynard..

FLAHERTY TO LEAVE CALEDONIAN SLEEPER

RYAN FLAHERTY is leaving his post as Managing Director of Caledonian Sleeper, Serco has confirmed. Mr Flaherty has been MD of the overnight service since March 2018, having previously been Guest Experience Director for the operator for just over three years prior to that.

John Whitehurst, Serco's Managing Director for Transport,

said: 'We're extremely pleased that [Ryan] will remain with Serco in a new role, having taken the decision to return to the south of England for family reasons. The recruitment process for his successor as managing director of Serco Caledonian Sleeper will begin shortly, with Ryan remaining in post until there is a managed transition.'



Leaving Caledonian Sleeper: Ryan Flaherty.

RFG APPOINTS HEAD OF POLICY

RAIL FREIGHT Group has appointed Joe O'Donnell as its Head of Policy, taking up the appointment with immediate effect.

Mr O'Donnell was previously Head of Policy and Communications at the Heritage Alliance, the umbrella organisation for the heritage sector, representing around 130 diverse heritage organisations from the National Trust and English Heritage to small charities. Prior to working

in the heritage sector, he wrote about employment law and policy for Thomson Reuters. RFG says Mr O'Donnell joins at a time of intense activity and his support will add a huge resource to the team as it meets the growing demands of RFG members and the wider sector in 2020.

Maggie Simpson, RFG Director-General, said: 'I am delighted that Joe is joining our team to focus on the vital

policy agenda for rail freight. His appointment will strengthen our team and allow us to better support our members in key topics such as decarbonisation, the Williams Review and regional devolution. His support will be invaluable in helping our members.'

Mr O'Donnell added: 'There's a real challenge in making sure the voice of all key stakeholders gets heard and I look forward to playing my part in helping that happen.'

Merriman is new TransCom chair

BEXHILL AND Battle MP Huw Merriman has been elected as Chair of the House of Commons Transport Committee. He has served on the Transport Committee since his election in 2015, save for a short period in the summer of 2017. Mr Merriman is the first Conservative MP to chair the committee in more than 20 years, the change in which party holds the post of chair following the General Election in December. Previous chair Lilian Greenwood, the MP for Nottingham South and former Shadow Transport Secretary, has been elected as a member of the committee, as has West Dorset MP and former SWR Head of New Trains Chris Loder.

Perpetuum appoints McCaskie

PERPETUUM HAS appointed Simon McCaskie as Manufacturing & Quality Director. The new role is designed to support the company as it continues to strengthen and grow into the new decade, focusing on preparing for higher volumes of product manufacture, product development and driving quality throughout the organisation, including the delivery of product in terms of cost and timescale.

Mr McCaskie has spent more than 30 years working with high technology companies, with over 20 years at director level. He was previously Operations Director at TTP Labtech, with responsibility for materials, manufacturing engineering, production, quality and



Technology expertise: Simon McCaskie.

customer support. He has a degree in Manufacturing Engineering from Cambridge University and an MBA from the University of Bradford.

OBITUARY

Ron Cotton

WHILE RON Cotton, who passed away aged 88 on 19 January, will always be remembered for his role in the 1980s campaign to relieve the Settle and Carlisle line, his more general flair for marketing in coining the now long established Awayday and Merseyrail brands is no less significant.

This manifested itself during his National Service when he organised trips out for his colleagues at Longmoor Military Railway. Other later significant project successes were the end of steam special in Scotland in 1967, and the Liverpool and Manchester 150 celebrations in 1980 during his 10-year spell as Divisional Passenger Manager in Liverpool.

He worked on all the BR Regions other than Western, having started at Liverpool Street and Knebworth control. While on Southern he was involved in creating the 'Tadpole' units, thereby accelerating the demise of steam.

After retiring from BR in 1986, he spent time advising the football authorities on football fan traffic, as well as continuing his Territorial Army role in Liverpool, rising to lieutenant-colonel and retiring in 1996.

Renowned for his always immaculate turnout, gregarious, and playing a central role in BR retirement organisations in Liverpool as recently as November 2019, as well as keeping in touch with the Settle and Carlisle organisations, he was a legend in his lifetime and will be sadly missed. *Theo Steel*

Wilkins for Porterbrook

PORTERBROOK HAS appointed Duncan Wilkins as its Head of Fleet Services (South). Mr Wilkins will join in early summer from c2c, where he is Engineering Director. He has almost 30 years of operational and rolling stock experience, beginning his career as a British Rail apprentice at Reading. Before joining c2c he was Engineering Director for South West Trains.

His role at Porterbrook will involve taking responsibility for the company's rolling stock operating with Govia Thameslink Railway, Great Western Railway, c2c, Chiltern Railways, Greater Anglia and South Western Railway, as well as freight customers and Network Rail. He will report to Fleet Services Director Neil Foster.

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A digest of the main changes on Network Rail, London Underground and Northern Ireland Railways infrastructure during December 2019 and the first few days of January 2020; compiled by Martyn Brailsford of the Branch Line Society (www.branchline.uk).

December, as usual, sees a glut of work due to the Christmas shutdown. This year has seen the re-quadrupling of the Midland main line between Sharnbrook and Kettering, the closure of Motherwell PSB (recontrol to West of Scotland SC) and another smaller recontrol in the Lewes area. Electrification has finally reached Cardiff and new stations have opened in the Warrington and Glasgow areas. A significant number of platform extensions have opened in West Yorkshire and Greater Manchester whilst work continues on new infrastructure such as Werrington grade separation, Stevenage platform 5 and the Barking Riverside project.

ANGLIA

Ripple Lane area (2:4A)

As part of the Barking Riverside project, work has commenced at Ripple Lane. Initially the current Down Goods line has been de-wired and new point work has been installed, but not commissioned, at the remodelled western end of Ripple Lane West Yard.

EAST MIDLANDS

Sharnbrook Junction to Kettering (4:9D/10A)

A new fourth line has been completed (although, as I write this in late January, I'm hearing that some of it has not been signed off yet) between Kettering South Junction (70M 57ch) and Sharnbrook Junction (56M 52ch) which has been designated the Up Slow. An additional point at Kettering South Junction on the existing Up Slow gives access to this line and at Sharnbrook Junction a new trailing point has been installed in the existing Up Slow, to allow the new line to continue into it. South of Harrowden Junction a trailing crossover, at 66M 55ch, has been provided between the Down Slow and Up Slow, whilst at Kettering North Junction (which itself was remodelled at Christmas 2018) the existing Neilson's Arrival/Departure line is now part of the Up Slow. Two new crossovers have been provided at the new Wellingborough South Junction (64M 26ch) to allow Up services to cross from the Up Slow to the Up Fast. Additionally at Sharnbrook Junction, a facing crossover has been provided from the Up Slow to the Down Slow.



New platform in Lincolnshire: at 07.03 on 16 December 2019, Councillor Keith Panter, Gainsborough Town Council's Mayor, welcomed the first train to stop at Lea Road station's new platform 2. The new platform replaces the original platform 2 which was on a tight curve and passengers will no longer have to step across a wide gap to board or alight. Courtesy: North Notts and Lincs CRP

The former Up & Down Slow has been renamed the Down Slow, although it remains bi-directionally signalled.

At Kettering South Junction a trailing point has been installed which gives access to the four Kettering Depot Sidings. At Wellingborough North Junction (65M 48ch) a new trailing point has been provided in the Up Slow (former Neilson's Arr/Dep line) to provide access to the new Wellingborough Up Siding, which in turn gives access to Neilson's sidings, the Up Siding also providing a headshunt facility for Neilson's. On the Down side at Wellingborough, Smith's private siding has been abolished, although a stub remains as a headshunt for the Down sidings.

In addition, the boundary of control between West Hampstead PSB (Power Signal Box) and EMCC at Derby has been revised, with the boundary moving south of Sharnbrook Junction to 53M 40ch approximately. Signals on the slow lines north of the former boundary and Kettering station are now plated 'BK'; those on the Fast lines remain plated 'LR'. Signals south of the former boundary to the new boundary location remain plated 'WH'.

LONDON NORTH EASTERN

Werrington Junction (2:16A)

As part of the Werrington grade separation project, both the Up and Down Stamford lines and all associated equipment from 19M 65ch have been slewed west of their current position, 20m at the furthest point, for a total distance of 1790m, returning to their original alignments at 18M 56ch.

Stevenage area (2:15B)

A new facing point has been installed at 28M 09ch in the Down

Hertford just before it joins the Down Slow at Langley Junction. The new point will provide the route into the new platform 5 currently being built at Stevenage.

Gainsborough area (2:26C)

The existing platform 2 (Down Gainsborough) at Gainsborough Lea Road (currently 98M 09ch, but may change as the platforms were previously staggered) has been decommissioned and has been replaced by a new platform 2 built to the south of the former platform, opposite platform 1. The new platform has an operational length of 110 metres (120 yards) and its centre is located at 98M 05½ch.

West Yorkshire (2:35B & 37A/B)

A number of West Yorkshire stations have had their platforms lengthened, see Table 1.

Leeds (2:36A)

In preparation for the future new platform 0 and other station capacity improvements, two new sets of points have been installed at Leeds station. One set has been installed in Line 'A' at 185M 47ch (facing for trains arriving at Leeds) and will eventually form the connection to the new platform 0 line. The other set has been installed at the country end of the platform 2 line at 185M 61ch (facing for trains leaving platform 2) and will eventually form one end of a new crossover between platform 1 and platform 2.

Scarborough (2:39E)

Associated with the opening of Scarborough Train Care Depot, the new depot siding has been brought into use. The siding is a continuation from the Scarborough excursion sidings and replaces the three dead end sidings that were previously there. A depot boundary gate is installed at 41M 17ch.

Corbridge (2:43E)

Platform 1 at Corbridge has been extended by 3 metres (3 yards) and has a new operational platform length of 97m (106 yards).

LONDON NORTH WESTERN

Warrington West (4:38B)

A new station has been built at Warrington West between Warrington Central and Sankey for Penketh. The station is at 16M 31ch and platform 1 is on the Up Main towards Manchester, whilst platform 2 is on the Down Main towards Liverpool. Both platforms have an operational length of 150m (164 yards).

Greater Manchester (4:43C/44A/45A/46B/C)

A number of Greater Manchester (plus Darwen) stations have had their platforms lengthened, see Table 2.

Between Preston and Ormskirk (4:30C)

Lodge Lane User Worked Crossing (UWC) at 24M 62ch has been equipped with telephones that connect to the controlling signal box at Midge Hall.

West Ruislip (4:16A)

In connection with ongoing works for HS2, West Ruislip Up Sidings 1 & 2 have been taken out of use until further notice.

London Euston (4:1)

As part of the HS2 project a number of out of use lines in the station area have been brought back into use. These include the former platform 17, now renamed HS2 Works Siding 1, the former Backing Out Road 2, now renamed HS2 Works Siding 2 and the former Down Side Shed Road, now renamed HS2 Works Siding 3.

Works Sidings 2 & 3 are controlled by a shunter's panel located at the north end of Works Siding 2, in the six-foot adjacent to Line E.

SCOTLAND*Robroyston (1:7L)*

A new station has been built at Robroyston between Springburn and Stepps. The station is at 101M 07ch and platform 1 is on the Down Steps towards Glasgow, whilst platform 2 is on the Up Steps towards Cumbernauld/Coatbridge. Both platforms have an operational length of 150m (164 yards).

Dunbar (1:11B)

A new platform has been built on the Down Main (designated platform 2) and has an operational length of 271m (296 yards).

Motherwell (1:1B/10A/B/E)

Motherwell PSB has closed with the transfer of control of the remaining signalling to the West of Scotland Signalling Centre (WSSC), Carstairs workstation, at Cowairs. The area affected runs from just south of Larnark Junction (76M 12ch) through Carstairs to the boundary with Carlisle PSB, south of Cove level crossing, at approximately 12M 30ch plus the branch to Edinburgh from the Carstairs area as far as the boundary with Edinburgh Signalling Centre at approximately 81M 00ch.

As previously advised, the Ground Switch Panels (GSP's) at Symington, Abington North, Abington South, Beattock Summit, Beattock North, Wamphrey, Lockerbie North, Lockerbie South and Kirtlebridge have been abolished and have had their associated telephones removed. Control of these crossovers has been transferred to WSSC and all are now designated as 'emergency crossovers'. Auchengray Automatic Half Barrier Crossing at 79M 34ch is now monitored by WSSC and the remaining ground frames are also now released from WSSC. All signals have been re-plated to 'GMC'.

SUSSEX*Norwood Junction (5:2)*

The points at 8M 35ch on the Down Platform Loop at the north end of Norwood Junction station, which gave access to the Reception Line, have been plain lined.

Lewes area and Seaford Branch (5:16/17)

Lewes, Newhaven Town and Newhaven Harbour signal boxes have all closed with the transfer of control of the signalling to Lewes workstation, located in Three Bridges ROC. The area affected includes the lines east of Falmer Tunnel and south of Cooksbridge (both boundaries with Three Bridges Area Signalling Centre), west of Glynde (boundary with Three Bridges ROC) and the entirety of the Seaford branch, including Newhaven Harbour.

The running lines between Lewes and Southerham Junction have

TABLE 1: WEST YORKSHIRE STATION PLATFORM EXTENSIONS

Station	Page	Platform	Extension	New Operational Length
Normanton	35B	1	4m (4 yards)	81m (86 yards)
		2	20m (14 yards)	81m (86 yards)
Castleford	35B	1	14m (15 yards)	104m (133 yards)
Pontefract Monkhill	35B	1	26m (27 yards)	97m (106 yards)
		2	37m (40 yards)	102m (110 yards)
Pontefract Tanshelf	35B	1	29m (32 yards)	101m (110 yards)
		2	29m (32 yards)	101m (110 yards)
Featherstone	35B	1	29m (32 yards)	101m (110 yards)
		2	29m (32 yards)	101m (110 yards)
Streethouse	35B	1	29m (32 yards)	101m (110 yards)
		2	29m (32 yards)	101m (110 yards)
Knottingley	35B	1	13m (14 yards)	106m (116 yards)
		2	40m (43 yards)	106m (116 yards)
Mytholmroyd	37A	1	19m (20 yards)	121m (132 yards)
		2	19m (20 yards)	121m (132 yards)
Brighouse	37A	1	7m (8 yards)	118m (129 yards)
		2	21m (23 yards)	118m (129 yards)
Mirfield	37A	1	33m (36 yards)	117m (128 yards)
		2	33m (36 yards)	117m (128 yards)
Ravensthorpe	37B	2	unknown	122m (133 yards)
Morley	37B	1	13m (14 yards)	117m (128 yards)
		2	14m (15 yards)	117m (128 yards)
Huddersfield	37A	2	10m (11 yards)	65m (71 yards)

been renamed from Down and Up Main to Down and Up Lewes. Telephones have been provided at Courthouse Farm (52M 03ch) and Parsons (55M 55ch) UWCs, whilst Beech Road Level Crossing (56M 62ch) has been upgraded to a CCTV controlled crossing. As previously advised Newhaven Harbour level crossing has closed. All signals have been re-plated 'TLW'.

WALES

Between Newport and Cardiff (3:20B/21)
Overhead line equipment energised at 25kV has been installed and

commissioned from the current limit of electrification near Marshfield to Cardiff West Junction. In detail the lines electrified include Up & Down Mains and Up & Down Relief lines (and their continuation as Lines 'B', 'C', 'D' and 'E') from 162M 01ch to Cardiff West Junction at 170M 56ch, Line 'A' (and the adjacent Brick Yard siding) from approximately 171M 20ch to its junction with line 'B' at the eastern end of Cardiff Central station, platforms 0 to 4 at Cardiff Central including part of the Up Barry Relief line to enable access to Brick Yard siding

from platform 4, all running line crossovers between Cardiff Central and Marshfield, and finally all three lines in Pengam Yard and both sets of associated access lines. 

Information has been grouped according to the current Sectional Appendix/Weekly Operating Notice areas. All details can be subject to subsequent amendment. Books and Diagram Reference Numbers (in brackets) relate to the latest relevant Quail Track Diagram books obtainable from Trackmaps at www.trackmaps.co.uk.

TABLE 2: GREATER MANCHESTER STATION PLATFORM EXTENSIONS

Station	Page	Platform	Extension	New Operational Length
Eccles	43C	1	58m (63 yards)*	81m (86 yards)
		2	62m (68 yards)*	81m (86 yards)
Swinton	46C	1	20m (22 yards)	117m (128 yards)
		2	24m (26 yards)	121m (132 yards)
Atherton	46C	2	18m (20 yards)	117m (128 yards)
Daisy Hill	46C	1	12m (13 yards)	117m (128 yards)
		2	15m (16 yards)	117m (128 yards)
Hindley	46C	1	18m (20 yards)	117m (128 yards)
		2	13m (14 yards)	120m (131 yards)
Darwen (not commissioned)	46B	1	14m (15 yards)	94m (103 yards)
		2	15m (16 yards)	94m (103 yards)
Smithy Bridge	45A	1	22m (24 yards)	121m (132 yards)
		2	22m (24 yards)	121m (132 yards)
Mossley	44A	2	27m (30 yards)	117m (128 yards)
Greenfield	44A	1	23m (25 yards)	117m (128 yards)
		2	35m (38 yards)	117m (128 yards)

* Denotes a reduction in operational length.

Serco to test Merseyrail '777s'

STADLER HAS awarded Serco Rail Technical Services a contract for a programme of testing services for the new Class 777 EMUs for Merseyrail.

The manufacturer is delivering 52 '777s'. Once testing is complete later this year, the fleet will be rolled out gradually over the course of 12 months. SRTS is undertaking type testing activities at the Wildenrath

test track in Germany and at the new Liverpool Kirkdale depot operated by Stadler Rail Service UK. SRTS engineers have delivered and fitted instrumentation to the first unit and are carrying out a range of tests including dynamic ride performance, electromagnetic compatibility (EMC), braking, wheel slide protection and noise.

IRIS FOR WILLIAM COOK

WILLIAM COOK Rail has achieved the International Rail Industry Standard (IRIS), the leading quality benchmark for the global rail sector.

The company says it is the only manufacturer of machined cast steel components in Europe to achieve IRIS certification. The certification covers

William Cook Rail's systems for casting, machining, assembly and overhaul of safety-critical components for train builders and operators across the world. The company went through a rigorous auditing and assessment process to gain the certification, which is held by only 22 other UK companies.

REBRAND FOR ACoRP

THE ASSOCIATION of Community Rail Partnerships (ACoRP) is to rebrand itself as the Community Rail Network.

The organisation announced a rebrand in November, since when

it has worked with brand agency David Carroll & Co to explore options. The rebrand will take effect from April, with the new look to be previewed at the Community Rail Conference on 2-3 March.

12 YEARS OF iRAIL

THE INDUSTRY'S skills shortages have been well publicised. Key clients including HS2, Transport for London and Network Rail now include requirements to recruit apprentices and in some cases to engage in schools engagement activities as part of their contracting terms and conditions, with these often flowing down through the supply chain to smaller suppliers.

iRail is the longest running continuous and collaborative rail specific schools engagement programme in the UK. Started 12 years ago by the Derby Railway Engineering Society (DRES) and now managed by Rail Forum Midlands (RFM) on behalf of the industry, iRail targets pupils in year 9 (that's 13- and 14-year-olds). iRail provides the opportunity for schools to enter a team to take part in a rail-based Science Technology Engineering Maths (STEM) Challenge. This challenge is incorporated into a day which also includes site visits to employers and a teacher briefing session about rail careers.

Over the years iRail has evolved and crucially the support from employers has allowed RFM and its education delivery partner Learn

by Design to access funding to run outreach days in the schools. This allows the programme to reach a lot more students – with an estimated 3,000 pupils involved in 2019.

Elaine Clark, CEO of RFM, said: 'Support from employers is vital to the success of iRail and similar programmes. Some companies have been long-term supporters including Bombardier, Network Rail, Porterbrook, Resonate and SNC-Lavalin Atkins, but over the last couple of years we have welcomed some new supporters such as Aegis, ISS, Loram, Tracsis and TUV, which is fantastic. All these companies add to the rich and diverse information we are able to provide to students about careers in rail. DRES continues to support iRail, developing the annual challenge, and the Rail Accident Investigation Branch has been involved every year.'

iRail provides a great example of what the industry can achieve if it works together, but more collaboration could make it even better. This is one of the reasons RFM is leading work on greater co-ordination

3Squared backs STEM event

TECHNOLOGY COMPANY

3Squared is supporting the Rail Human Library (RHL) event, to be held in Rotherham on 25 March.

RHL is part of a wider event called Get Up to Speed, the largest STEM event in Yorkshire, which encourages youngsters to take an interest in the construction, technology and manufacturing sectors. This year marks the 10th event, with over 3,000 students expected to attend.

The Rail Human Library element is a speed-dating style event that enables students to talk to a number of rail sector workers, from any discipline or background. It will also give rail professionals the chance to inspire hundreds of students throughout the day. Around 50 individuals from over 40 companies have signed up to take part in the RHL event, which 3Squared says aligns perfectly with its ethos of nurturing local talent from an early age.

Porterbrook for Long Marston

PORTERBROOK HAS signed a 15-year lease with St Modwen to take over the future direction and development of the rail-connected Long Marston facility in Warwickshire.

The company says the announcement secures the long-term future of Long Marston as a railway centre. The site covers 135 acres and consists of 12 miles of storage sidings, a two-mile test track loop, a short length of electrified line and a number of rail-served light maintenance structures.

Management of the site, also known as Quinton Rail Technology Centre, will transfer to Porterbrook by the end of June 2021, and the company says it will work with existing owner Motorail to maintain facilities during the transition. Porterbrook plans to work with the rail supply chain and academic bodies, as well as creating new partnerships with technology leaders from other sectors, so that Long Marston can play a role in helping to improve the railway for both passengers and freight customers.



Engaging with schools: participants in the iRail event, which has been running for 12 years.

of schools engagement across the region. One thing it is developing is some consistent messages about the industry. 'We need to ensure that anyone engaging with school pupils has access to some consistent core material to help spread the word about the fantastic opportunities that exist' Elaine Clark added. 'No-one is expert on all aspects of the industry so whilst an engineer might be able to talk about a range of engineering roles, will they be confident to touch on operations or digital careers without some support?'

There is also scope for greater collaboration to engage with

younger age groups – something RFM is actively looking at, and with the additional support provided by employers this year RFM is hoping to lead a collaborative effort at one or more regional Big Bang fairs, events that can attract over 10,000 school and college students.

Any employers interested in supporting iRail or finding out more about RFM's schools engagement activities should contact Elaine Clark on elaineclark@midlandsrail.co.uk. RFM is also leading some work on shared apprenticeships and employers are encouraged to contact Elaine for further information about this.

CALLING ALL INNOVATORS!

ARE YOU and your colleagues coming up with bright ideas that will make the industry work better? Bring them to the notice of your peers by putting in an entry for this year's Railway Industry Innovation Awards. Booking is now open

and the information on how to put in an entry can be found on the 4th Friday Club website here: <http://www.4thfriday.co.uk/riia-form/>
Last date for receipt of entries: 30 April 2020, awards luncheon: 26 June 2020.

Perpetuum moves to new HQ

REMOTE CONDITION monitoring specialist Perpetuum has moved to a new, larger headquarters near Southampton. The HQ accommodates the company's 76 employees, including its growing teams of engineers, and also features increased production space for providing the next generation of Perpetuum products and more test facilities to accommodate the growth in sales and the products' expanding applications.



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FORTHCOMING EVENTS

Nova Trains for TransPennine Express and Academic Support for the Rail Industry, lecture, 4 March, Huddersfield

Details at <https://nearyou.imeche.org/eventdetail?id=17147>

Future of Network Rail, lecture, 9 March, Glasgow

Details at <https://nearyou.imeche.org/eventdetail?id=17437>

Vivarail D-Train, lecture, 9 March, London

Details at <https://nearyou.imeche.org/eventdetail?id=16835>

Delivering ETCS: deploying Digital Signalling technologies in the UK, lecture, 11 March, Derby

Details at <https://nearyou.imeche.org/eventdetail?id=16906>

HS2 – The Engineering Perspective, lecture, 11 March, Stafford

Details at <https://nearyou.imeche.org/eventdetail?id=17024>

Hybrid diesel and battery-powered trains, lecture, 12 March, Cambridge

Details at <https://events.theiet.org/hybrid-diesel-and-battery-powered-trains/>

HS2 – Overview of Asset Management on the new High Speed Railway, lecture, 18 March, Maidstone

Details at <https://events.theiet.org/high-speed-2/>

Asset Management: Reliability for a Digital

Age, seminar, 26 March, London

Details at <https://events.imeche.org/ViewEvent?e=7012>

Rail in Wales and the West conference at the Modern Railways 4th Friday Club, 27 March, Bristol

Details at www.4thfriday.co.uk

Anti-Counterfeit Forum annual seminar, 1 April, Farnborough

Details at <https://www.eventbrite.co.uk/e/11th-anti-counterfeiting-forum-seminar-tickets-90150076305>

11th-anti-counterfeiting-forum-seminar-tickets-90150076305

Rail in the North conference at the

Modern Railways 4th Friday Club, 30 April, York

Details at www.4thfriday.co.uk

Women in Rail Awards 2020, 6 May, London

Details at <http://womeninrail.org/awards/>

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Systems integration is the challenge

When Mark Wild took over as Chief Executive of Crossrail Ltd in late 2018 one of his first moves was to halt, and then reverse, the reduction in key people working on the project. With a then quoted opening date of December 2018 the assumption had been that it made sense to let staff go given that their roles would become obsolete once the new railway opened.

As we now know, with the opening of the Elizabeth Line still a year or more away, this was premature. Mr Wild set about rebuilding the company's human resources, appointing more people to check off work and focus on what still needed doing. This strategy has culminated in the promotion of Crossrail's Mark Cooper to the new role of Chief Projects Officer and the top-level signing of Jim Crawford from HS2 Ltd to the newly created post of Chief Programme Officer.

The appointments reflect Mark Wild's preoccupation with the systems integration side of Crossrail, the complexity of which appears to have been underestimated by the previous Crossrail management, which is critical to getting the railway open. As reported last month, 2020 for Crossrail is all about trial running – the process which will see multiple trains operating in tunnels to simulate the Elizabeth Line timetable. Mark Cooper will oversee

completion of the remaining station and tunnel works, assurance of assets and any other activities required to allow trial running to get underway. Trial running is currently expected to start in autumn 2020, although opportunities are being sought to bring the start date forward.

Jim Crawford, like Mark Cooper, will report direct to Mark Wild. The success or otherwise of trial running is being firmly planted on his shoulders; his new job description states that he will be accountable for the entire programme from now through to trial running and on to the full opening of the end-to-end Elizabeth Line. In case anyone has any doubts about the significance of this role, a statement from Crossrail Ltd reminds us: 'Critical to the successful completion of Crossrail is the programme drive from now to trial running with a focus on finishing the remaining works and assurance and safety certification of the assets'.

The timing of Mr Crawford's appointment is curious. Having held roles with HS2 Ltd from 2014 to 2019 as Managing Director – Construction and Managing Director – Phase One Programme, the announcement that he would be joining Crossrail Ltd came just before the Government set out its decision to give High Speed 2 the go-ahead. Jim Crawford's CV shows no shortage of involvement with big-ticket rail projects: prior to working

at HS2 Ltd he was Programme Director for the Thameslink Programme from 2009 to 2014 and the National Signalling, Telecoms and Electrification programme from 2004 to 2009. However, for Thameslink and electrification he's not been in post to enjoy the celebrations of project completion and, with HS2 Phase One unlikely to be ready for the best part of a decade, perhaps the opportunity to be there at the finish line for Crossrail was too much to resist.

While being in post for the last stage of a project holds out the prospect of glory at the end, it also makes it hard to avoid responsibility if things don't work out. But if trial running goes to plan, perhaps Mr Crawford's time at Crossrail will serve as a sabbatical offering valuable expertise to take back to HS2.

EASTERN PROMISE

Belated activity to fix up existing stations on what will be the Elizabeth Line's Shenfield branch is underway. A new ticket office has opened at Harold Wood and work has begun to demolish the existing entrance at Ilford station (a temporary entrance opens on to platform 1) with construction of a new entrance expected to begin in March for completion in September.

Ilford will get a new station building with a replacement for the existing

entrance on Cranbrook Road. This will have an improved ticket hall with three new lifts providing step-free access from street level to platforms.

In September 2019 VolkerFitzpatrick won a contract valued at just under £20 million to undertake the work at Ilford as well as Romford station, where it will build a new entrance linking the Battis walkway – a distinctive narrow footpath through brick arches, which has been made less foreboding with the addition of feature coloured paving. The contractor will also revamp the ticket hall and improve passenger circulation routes from the station entrance to platforms. New lifts will provide step-free access to platforms 3, 4 and 5.

Meanwhile, Transport for London has submitted plans to Havering Council to build a new southern entrance to Romford station on South Street. If plans are approved the current ramp, which does not meet modern accessibility standards, would be replaced by a new ticket hall and gateline with lifts up to the station subway level and platforms 1 and 2.

TfL says the planned south side works, which have been developed by Aecom and BPR Architects, will support the expected increase in the number of passengers using Romford station and complement Network Rail's current works to install two new lifts and refurbish the booking hall. **mf** Dan Harvey

Romford: seven-car unit No 345003 on a Liverpool Street – Shenfield service on 31 October 2018. Plans to remodel the Shenfield platforms at Liverpool Street High Level from three short platforms to two longer ones capable of accommodating nine-car '345s' have been brought forward to Easter 2021, so that experience can be gained with nine-car operation on the route prior to sending the Shenfields down the cross-London tunnel in 2022. Philip Sherratt



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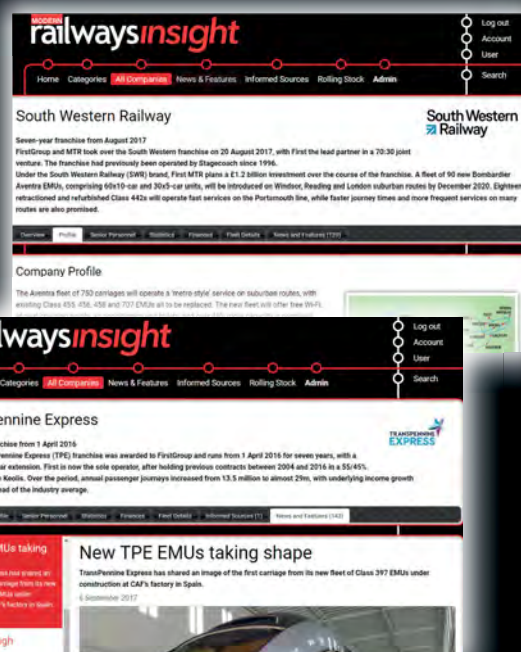
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The capacity of a rail corridor varies enormously, depending on a whole range of different factors from the signalling system and the rolling stock through to peoples' behaviour, both staff and customers.

At one end of the spectrum, Britain has world class performance. The Victoria Line now operates at 36 trains per hour over a three-hour period in each peak, with a high degree of reliability. Trains slow from 40mph to a stand in their own length, dwell times are 40 seconds, and the rear of the train is moving at 35mph as it clears the platform. The terminus at Brixton has two platforms, approached by a scissors crossover, and the driver of the return working is waiting to take over at the north end of the platform when the train comes in – he or she has to be, because the platform has to be cleared and reoccupied in just over three minutes.

It all works very well indeed, and the passengers don't notice this, nor should they; but the trains are still crush loaded in the peak direction between King's Cross and Victoria. Comparisons around the world are difficult, with different speeds and train lengths, but the Victoria Line is certainly world class.

The Thameslink core is pretty good too, at 20 trains per hour, due to increase to 22, and perhaps ultimately to 24. Like the Victoria Line, there is a single rolling stock class, delivering the same performance, albeit with a mix of 12- and eight-car units. The door configuration allows for short dwell times, and all trains stop at all stations between St Pancras International and Blackfriars.

However, there are aspects of the Thameslink operation that would

make Victoria Line frequencies undeliverable. The network is highly complex, particularly south of the Thames, and there is a critical flat junction just south of Blackfriars, a key location in terms of timetable planning, and numerous flat junctions all over the Southern network. Problems anywhere on the network, for example between Peterborough and Horsham or Bedford and Brighton, can impact on the service.

Nevertheless, the train plan is robust, and the drivers' diagramming strategy is designed to deliver reliability, with no cross-contamination between routes and no crew changes except at terminals. Services do get out of course, but the customer information is good, and problems on one route don't significantly impact on other services. Management of the trains through the Thameslink core is all under the control of a single company which runs the Southern network too, although on Southeastern and north of the Thames there are significant interfaces with other train operating companies (TOCs), together with some freight movements.

Elsewhere, capacity on many corridors is inevitably constrained by different service patterns. Birmingham – Coventry is a striking example of this. Avanti operates a 20-minute frequency to London, calling only at Birmingham International, and CrossCountry also operates an hourly fast train. West Midlands Trains serves the eight other intermediate stations on the corridor, with skip-stopping to minimise end-to-end journey times, enabling the inter-city services to have reasonable paths. There is also

an hourly Transport for Wales service between Birmingham International and mid-Wales, and a handful of freight trains between Coventry and the junction at Stechford.

This is all quite fragile, with four different passenger operators plus freight, and made much worse by the appalling timetable introduced by West Midlands in May 2019 (this column, *passim*). This section typically has 10 trains an hour each way between Birmingham New Street and Birmingham International, with seven between International and Coventry. Allowing for a freight path every hour, the section is effectively full, and any delays inevitably result in inter-city trains crawling between signals behind all-stations services – and most trains are still checked on the approaches to New Street.

The Castlefield corridor, between Deansgate and Manchester Piccadilly, is perhaps the most notorious current example of a dysfunctional route section on the British network – it even merited a reasonably accurate piece in the business section of *The Times* on 3 February, with the headline 'A mile of track shows how we came off the rails!'

Trains approaching Deansgate, at the west end of the corridor, arrive from four different directions, in most cases after also negotiating flat junctions for routes to and from Manchester Victoria. There are four different passenger operators, and even more rolling stock classes. Some of the units are not configured for short dwell times, with single end doors. For example, the East Midlands Liverpool – Norwich trains are operated by Class 158s, and frequently exceed the booked

two-minute dwell time at Piccadilly, with large numbers of passengers getting on and off. Whilst some of the new Northern units will enable shorter dwell times, the new TransPennine fleet has end doors and will make things worse. Dwell times are also extended by, for example, loading and unloading catering trolleys, and station working is by no means as smart as at, say, London Bridge. Also, a number of services stop at Deansgate, inevitably checking faster trains waiting to enter the corridor, and terminating trains at Oxford Road result in conflicting moves. On top of all this, once an hour or so a 750-metre intermodal train comes through on the way to or from Trafford Park.

The forthcoming nationalisation of Northern may provide the opportunity to take short-term action to improve performance by thinning out the service; in the longer term, major infrastructure improvements are essential.

Finally, a historical footnote: I recently read a *Railway Magazine* article from April 1918 describing how the District Line operated 43 trains an hour at the height of the peak, with train stops, automatic signalling, close-up signals to shorten headways, and active platform management. I reality checked this with two old friends, expert on these issues, who confirmed that the Underground used to deliver very short headways on a number of lines, until falling traffic led to a reduction in services in the 1960s. An early precursor of European Train Control System Level 3? chrisstokes@btopenworld.com



The Castlefield corridor: a Class 156 pulls alongside a crowded platform 14 at Manchester Piccadilly on 10 August 2018. Philip Sherratt

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At the end of January, everything supposedly changed. No, not Brexit, but Nexit, the much-heralded demise of Northern, with the Department for Transport taking control with its aptly named Operator of Last Resort. Anybody in the North of England who may be tempted to believe that the men from the Ministry will be their saviour should think again.

These are the people who have brazenly blamed everybody else for the current state of the railway across the North including Network Rail, which we should remember it has owned for more than five years. You don't need to be a forensic scientist to trace the initial causes of the 2018 timetable meltdown, the multiple failures to deliver infrastructure improvements or the inability of train operating companies (TOCs) to meet Persons with Reduced Mobility (PRM) requirements, and thus the late withdrawal of Pacers, for which the Minister had the cheek to remonstrate with the industry. And who was it that gave TOCs just a fortnight's notice over Christmas of the need to provide largely non-existent PRM compliant buses for rail replacement services (p26, last month), and has delayed approval of power upgrades at the northern end of the East Coast main line (p12, last month), even though they knew it would be necessary when they awarded the TransPennine franchise back in 2016, and subsequently acquiesced to electric open access services from Edinburgh to King's Cross?

Add in that the long, still unresolved industrial dispute that afflicted Northern (and others) was largely DfT-inspired and that DfT-specified Intercity Express Trains are now obliged to pound up and down the ECML on diesel power far more often than was originally envisaged and it all begins to look more like the arrival of the undertakers than any saviour.

If there is one thing that my namesake must deliver in his long-awaited report it is the removal of DfT's sticky fingers from the rail industry. Dominic Cummings, the Prime Minister's chief adviser, wants to reduce the number of government departments. The DfT must surely be on his little list. But let's be clear, just changing the name on the front door will not suffice. Having now reached the point where it is persuading naïve ministers to, shall we say, be less than truthful in their

utterances, it needs a complete clear out of senior officials. Quite simply, large parts of the industry no longer have any faith that the DfT works in their best interests.

Spearheading the Northern announcement, Secretary of State Grant Shapps gleefully told us Pacers would be going and that trains would be deep cleaned. Big deal! Had nobody at DfT told him that most Pacers had already gone and that the rest were going in a matter of weeks? And among all the complaints about overcrowding and cancellations, cleanliness of trains has seldom appeared.

Not before time, the announcement included a commitment to introduce electric trains from elsewhere on the network to boost capacity into Manchester and Leeds, and to lengthen platforms at 30 stations 'by spring'. That's pretty heroic, particularly for DfT, if it means this spring! My old chum and sparring partner from Effingham Junction days, Robin Gisby, now in charge of the new Northern Trains on behalf of the DfT, was characteristically more sanguine, accepting that some of the changes would take one or two years to come to fruition. Mr Gisby and Richard George, who head the new operator, have been tasked to undertake a 'top to bottom review of everything from operational management to rostering patterns and, most critically, customer experience'. But perhaps more importantly, it will also include setting up a cross-industry task force to recommend capacity improvements.

It is required to build a 'comprehensive new master plan' to review congestion around Leeds and Manchester and the interventions required, including specifically the Castleford corridor. So realistically, any major infrastructure changes, which almost everybody agrees are necessary for any significant improvement in services, are years away. Given the level of change which rail travellers across the North might reasonably now expect – Grant Shapps told them 'There will be no more leaving behind, this Government is committed to levelling-up' – either a dramatic change in the rate of planning and delivery by Network Rail will be needed or his successors will have some explaining to do in five, possibly 10 years' time.

And that's not all. In the run-up to the election, the Prime

Minister repeatedly promised he would bring rail services back to many areas by reversing the Beeching closures, which had a particularly harsh effect on the railway geography of the North, so expectations of entirely new services are high, too. The promised funding would only provide around 30 or so miles of new railway, so a lot of people are going to be disappointed. More importantly, we can be sure DfT officials are not enamoured of the idea, which is a complete reversal of their previous policy. Despite once again trying to place the blame at Beeching's door, most of the lines that deserve serious consideration for reopening were not closed by the good Doctor, and some not even listed by him, but later in the 1970s by the petrol heads in the DfT who even provided financial inducements to cash-strapped British Rail to close or rationalise lines. Their successors will not now relish being told to put back, at vastly increased cost, lines which BR was encouraged to close and dispose of, often at scrap prices. So it's a fair bet that, despite all the election rhetoric, not even 30 miles of entirely new railway will be reopened by 2030 – if indeed any.

Meanwhile, somewhat bemusingly, passengers are being told that, as a short-term fix – which remember in railway terms can mean 40 years, as in HST or Pacer – some services will have to be withdrawn if current timetables are to be made to work. That sounds like more overcrowding, not less. So why, apart from trying to be seen to be doing something, has the DfT closed down the Northern franchise just as capacity and performance was improving but left even more overcrowded TransPennine alone?

The DfT concluded the announcement of the change with the message 'Passengers' journeys will not be affected'. But passengers DO want their journeys to be affected – positively and soon!

The DfT takeover of Northern will bring no early relief to anybody, least of all those still crowding onto TransPennine and CrossCountry trains across the North. We have to hope that TransPennine performance eventually improves when all the new trains are in service, but CrossCountry remains in limbo, existing on extensions to a franchise originally due to

end in 2016 and now nowhere near fit for purpose. Unlike both Northern and TransPennine, it has not been able to extend or replace its now tired-looking fleet of 20-year-old Voyagers which are routinely overcrowded, particularly on its core York – Leeds – Birmingham axis. Despite offering no early resolution of the problem, DfT has not allowed use of suitably modernised off-lease HSTs to join the existing CrossCountry fleet of just five, a seemingly obvious solution, especially as those trains are now maintained by Great Western at Plymouth alongside its own fleet of refurbished, shortened HSTs.

In contrast, despite loud complaints from the rest of the airline industry, Government has authorised a tax holiday for the troubled airline Flybe, allowing it to defer payment to Her Majesty's Revenue and Customs of £106 million already paid by customers – and is considering a request from Flybe for a further £100 million loan. Flybe has been in financial trouble for several years and has already been rescued once. It offers domestic flights between the same cities as those served directly and mostly hourly by CrossCountry – for example from Southampton to Manchester, Leeds, Durham, Newcastle, Edinburgh, Glasgow and Aberdeen. Similar destinations are served from Exeter, including surely the daftest of all, London, also served every hour by Great Western in little more than two hours centre to centre. Flybe planes proudly boast 'quicker than rail or road' on their sides. I am not sure that is always true. But they certainly don't run every hour and they don't serve all those other places between. So, if DfT truly believes in better connectivity across the country and improving the environment, what is it doing subsidising and encouraging internal flights?

The Times questioned whether such preferential treatment with taxpayers' money could possibly be thanks to a common bond between the Chairman of Flybe and the Prime Minister, who are Old Etonian school mates. But while I love conspiracy theories, I fear this is more likely yet another example of the DfT's lack of any coherent transport policy, coupled with a demonstrably poor awareness of the country's rail infrastructure and a Trump-like determination to ignore the implications of climate change. 

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