

## George Bradshaw Address 2018

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Rail Delivery Group

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It's nice of you to have me to speak.

I came to Network Rail in July 2015 unexpectedly. None of you knew and I didn't know either until the day before it was announced.

It's a privilege for which I'm honoured, even if some of you don't think I'm a proper railway person as I have only been responsible for a little railway. Even if it is the Underground, it carries 4.5m people a day, and is the oldest metro in the world.

I did 9 and a half years at that and other things in the world's greatest city. I'll come back to the Tube.

This lecture is of course in honour of George Bradshaw.

He made a business out of recognising the railway as a network, producing timetables that weren't constrained to one company.

Punch magazine said at the time: "Seldom has the gigantic intellect of man been employed upon a work of greater utility".

Why is that? Well, because despite, then as now, the managerial desire of the individual companies to differentiate their products, the railway is crucial to its users – freight and passenger – because it's a network.

Bradshaw got that, and made a decent business dispensing reliable information, monthly, used by many for well over 100 years.

What he did is give us two lessons.

One is that the railway, the UK railway, including Scotland and Wales, must work as a whole system. Bradshaw, together with the Railway Clearing House, were the first "System Operator". Users value a consistent approach to the management of a scarce resource – capacity – even if it is hard to define, because only by contemplating the railway as a network can we maximise its capacity and benefits (and decide the best enhancements on a rational, business case basis).

The other lesson is that although we talk about the constituent parts of the industry as managers and employers, just as, in my London bus days, all of the platform staff regarded themselves as working for an individual garage, and not for either London Transport or a company, many, many passengers see us as the railway. Not as TOCs, FOCs and Network Rail, but a rail network.

We need to demonstrate this every day to ensure public confidence. The occasional incontinence of finger pointing in the media, including the trade media and in public, damages our industry in a way that certainly my bus industry colleagues find hard to understand.

It also, incredibly, belies the loyalty of all our staff, who virtually universally refer to their work on 'the railway' and not to their individual employer.

I want to look at Network Rail in the time before I arrived. Some of you, like me, must have looked at the insular, inward looking, perhaps arrogant, Network Rail pre-reclassification with some prejudice.

The extraordinary construct of an allegedly private company, with no shareholders, but members, but crucially with the ability to borrow seemingly unlimited sums of money off the Government's books but with a Government guarantee, was almost fabulous.

No wonder it was a law unto itself. And although a spiky and combative regulator chose in the wake of McNulty to force a CP5 settlement of unrealistic economies, based on, frankly, bad, and now discredited international comparisons, the worst thing of all was the CP5 enhancement programme.

I think it resembled a list – uncosted and not ranked by business case – of aspirations for railway enhancements that couldn't be paid for (except with unlimited debt), couldn't be

carried out (because of lack of definition and capacity) and in one glorious case (as I discovered during my review) had no supporters whatsoever. (The “electric spine”).

It was a plan incapable of consummation. An unrealistic proposition in every respect.

For Network Rail as whole, too many projects at once, with too great and unrealistic economy targets for operations, maintenance and renewals.

I am sorry the Board of Network Rail didn't challenge the CP5 settlement and if I had been there I certainly would have done.

So Network Rail started major projects like Great Western without knowing the definition, full cost and time it would take, largely because it could borrow as much money as it needed to finish the job.

The fabulous, in the true sense of the word, “ECAM” process was developed which allowed retrospective cost adjustment for scope changes and unforeseen delays at the outset. Don't hire a builder to do a bathroom like that – it'll cost you a lot of money!

It was this plan which Mark inherited as CEO in 2014, really too late to change it and with, I suspect, a mounting sense of apprehension as his early tenure unfolded.

He was still grappling with it, and the effects of reclassification in the Autumn of 2014, and the fallout from Christmas/New Year 2014/15, when came the election of May 2015.

I am grateful to him, and the Exec team he had to assemble (you remember that there was a migration to HS2?) – for his, and their support on my arrival, and for the extra work that Bowe, Shaw and my own report caused.

But most of all I thank Mark for his incisive diagnosis of what was wrong with the organisation and what was needed to put it right.

And it was his analysis, not Collette's, not Nicola's, not mine, which has shaped where Network Rail has gone.

He's addressed obvious (but not previously resolved) issues like aligning performance – balanced scorecards with targets set by customers and increasingly consistent with TOC targets. (How do you make a complex system work if the parties involved aren't looking, and incentivised, for the same outcomes?)

He's delivered devolution to route businesses, and the subsequent creation of the System Operator to ensure a system-wide approach to a crowded network and for a consistent approach to appraisal. A really crucial step in identifying people, and good people, who can put their arms around, take responsibility and ownership of, and drive performance of big pieces of the railway.

And despite harsh challenges, Mark has led Network Rail as it has delivered the biggest upgrade programme since Victorian times (Birmingham New Street, London Bridge, Borders, Great North Rail Electrification). Even Great Western electrification.

And he's brought a renewed focus on safety. When Mark gave the George Bradshaw Address in 2015, he talked about a "moral and an ethical responsibility to keep people safe, whether that be passengers, the public or our workforce." And this is something on which he's challenged the whole railway on and stayed true to, transforming the safety culture at Network Rail, its contractors and across the wider industry. He says 'safety and performance go hand in hand' – and he's right.

His leadership has seen workforce accidents reduced by 40%, and, touch wood – no, grip it - no workforce fatalities on the railways for the past two years, the first time ever in the history of the industry.

In total, over the course of CP5 under Mark's leadership, we have seen a 35% improvement in safety and a 16% increase in infrastructure reliability. This has been achieved alongside a 16% increase in operational efficiency and a 30% increase in overall capacity on the railway.

And the result of devolution, which has enabled a granular bottom up approach to looking at asset performance, and condition, and to performance and costs, has allowed us to secure the biggest SOFA in the railway's history, a 25% increase in funding. Who would have believed Government would have given us that five years ago?

On this basis Mark has developed the best plan for the future our piece of the railway has ever had, and one that – I predict – will be good to go even after the constructive challenge of the ORR over the next few months.

And if you wonder then why he's going, then I'd say this. I did nine and a half years at TfL – it nearly killed me, and it certainly affected my personal life and family. He's done a great job over 4½ years, he has grandchildren arrived and coming, and he's entitled to enjoy his life in Cornwall, why not!? Not everyone is as mad as me! And he is leaving space for his successor to get their feet under the table before CP6 starts, which he never had.

One of the things I do at Network Rail is to add to the opening of the lines of all our publications: "The UK's railway connects people and places, and delivers economic growth, jobs and housing."

Polly or Ruth (I think Polly) suggested I add 'the environment' and I'm pleased to do so. She's right – the railway is good for our environment.

The connectivity, competitiveness and productivity of our country are directly impacted by the capacity and performance of the railway. Our railway, and the CP6 plans to improve it, matter.

The plan will deliver:

- Continued significant investment, with record expenditure of around £47bn
- A 25% increase in funding to reduce delays and improve infrastructure reliability.
- An average of 1,000 extra services a day by 2021
- And embedding the railway in the digital age. More on this later.

In the next few months passengers' journeys will start to be transformed as thousands of new trains enter service with higher frequencies and longer formations.

Yesterday, Thameslink started using the Canal Tunnel, with services from Cambridge to Brighton and Peterborough to Horsham, and stopping again at London Bridge. I think Chris Gibb and Nick Brown were on the first train! And Nigel Harris tweeted the photos.

By 2021 we will be running almost 350,000 more services per year than today, driving economic growth across the country and relieving road congestion.

So what does Network Rail under Mark's successor need to do?

Firstly, it must deliver the first year of CP6 successfully as devolved, independently regulated routes. Failure to spend the money wisely, complete the work bank and deliver the forecast operational performance on a route basis will be a catastrophe for the routes, for the individuals who run them, and for the credibility for the CP6 Strategic Business Plan.

I believe the RMDs will deliver; and you won't be surprised to know that the Board is on their case and on the case of the rest of the organisation whose obligation it is to support that delivery.

Secondly, we have to make both the growing alignment of the performance metrics of the routes with the TOCs, and the new supervisory boards, work. I hope we see in the fullness of CP6 total alignment of track and train – forget the organisation, (and who owns it), make sure the targets are consistent and achievable!

Thirdly, we have to show that the meticulous planning and costing of projects and the politically difficult delays that that process causes, provide better project outcomes in the future – budget and results – like Transpennine Upgrade, than the past.

Let's decide what the best things for the network are, who might fund them (including third parties), work out costs, timetable and plans – then do them. More Crossrail than GWEP!

No pressure? Au contraire, loads of pressure, but on a structure and people much better placed to cope with it.

Onto Digital Railway.

The era of conventional signalling – the basis of controlling train movements for the past 190 or so years – will decline as our plan for CP6 ushers in the start of the railway's digital age with digital train control that will enable even more services to run, more safely and at a lower cost.

I don't feel bad about predicting this because I've already been responsible for a digital railway. Small, perfectly formed but carrying in excess of 4m people a day. Most of you came on it tonight; the Northern, Victoria, Jubilee and Central lines of the Tube!

Digital signalling has delivered more than we'd hoped, for example, like 36 trains per hour on the Victoria Line, and delivered, of course, by David Waboso before he came to Network Rail.

So my view is that the biggest challenge for CP6 and beyond is the necessity for the railway to embrace a further growth in demand, created by this technological opportunity, and the whole system change of our railway needed to support it.

I predict, and not just in London and the South East, that more and more services in Britain are going to start looking like the Tube. Not of course, at Georgemas Junction, Dovey Junction or Berney Arms but certainly in other places.

Look at what we're doing. 4 trains per hour from London to Bristol, both Temple Meads and Parkway. 6 trains per hour across the Pennines.

More and more frequent services in the lowlands of Scotland.

With Crossrail and Thameslink nearing completion, both will deliver 24 trains an hour in their core and good frequencies outside it.

As I said, the Victoria line has an extraordinary 36 trains per hour each peak. To deliver this, that railway needed a whole system change.

Digital signalling of course. But far more than that, new homogenous trains with the doors opening in the same place on each platform every time. Asset upgrades and renewal followed by radical changes in maintenance methods shoehorned completely into four and half hours a night, and now on only five nights a week with all night services on the other two.

Enhancement of, and reliance on, the Emergency Response Unit, to attend failures and incidents by road under blue lights, driven by the British Transport Police, counting the seconds to get the trains moving.

Practicing standard tasks with multi-skilled teams with materials and tools stored at strategic points. None of this is unfamiliar in a metro environment but has to become more common elsewhere; the pace of the change will have to accelerate.

And, these things have to be, will be, there on Thameslink in May and on Crossrail when it opens.

And it isn't just Network Rail's business. The whole of the operating culture has to change. Train crew depots strategically placed, driver changeover minimised on in-service trains. Same crews taking trains in and out of major termini with minimal platform dwell times. (Go and look at Elephant & Castle on the Bakerloo line; contrast it with Waterloo!).

Dare I say it, driver controlled operation (DCO) to minimise crew mismatches and for faster door opening sequences at every station (one of the best reasons for the abolition of the guard on LU in the 1980s was higher train mileage and faster station operation).

In compensation, far more and more energetic staff on platforms helping to get more and more passengers to get on and off and yes, even saying “this train is ready to depart”, not when everyone is on but when it’s time to go (because there’s another one behind). And cheerful drivers encouraging the same thing – any of you remember Mary, on the Bakerloo line?

Mike Brown and Mark Wild’s happy Customer Service Assistants, at Oxford Circus and Victoria and all over the Tube, are making people’s day better by making the service run well and making the passengers happy too.

And on the tube, where did many of them come from? They came out of the dullest customer service job, selling tickets from behind a glass wall. And now they are out in the open having fun, interacting with the customers, and making the service work.

This was enabled by a ticketing system the customers didn’t need human help to use. Contactless ticketing, and automatic refunds so customers trust the system with the sales staff moved onto gate lines and platforms to help everyone including those with disabilities board the trains and get on their way.

Wouldn’t that be a radical change for the big railway?

It will need educated passengers. Do people run for the Jubilee line now? No! They know the next one is coming. My good friend George McNulty, who with his Customer Service Assistants, transformed the Jubilee line, is now working for Nick Brown on GTR turning Thameslink into an urban metro.

He will succeed, as will Howard Smith, Steve Murphy and their people on Crossrail. And the same needs to be done on Southeastern, Southwestern and elsewhere, including in Glasgow and elsewhere around the country. Otherwise having run out of train length, we’ll run out of capacity and constrain the economy.

We need to think what this means for our customers. They’re clever people. Increasingly they will measure their journey not by timetable adherence but by regularity – average wait – and by journey length and by these in total.

When Bristol Temple Meads and Bristol Parkway both become 15 minute services, will people look at a timetable? Unlikely. These services will be more frequent than the outer end of the Metropolitan Line!

The ticketing implications are major, but as I’ve said, reform is overdue anyway in my view. The ticketing system should be led by passenger behaviour, not act as a constraint to it.

And we also need to look at how we measure train performance. For a growing and substantial number of passengers, average passenger wait is far more important than how close the trains are to a pre-determined timetable that doesn’t take into account the daily conditions such as weather and passenger volumes.

And people don't much care then. Alex Hynes has changed the train indicators at Glasgow Central Low Level from scheduled time to how long to wait. And he's right. Some of the overground indicators aren't very good for the same reason.

The Tube isn't measured by timekeeping but by average waiting time and lost customer hours. I predict in 10 years' time much of our railway will be measured in the same way.

The last thing I'd say is that a whole system approach includes all of this. Integrated signals, train and staffing control with train and infrastructure maintenance – and relationships and operating models suitable for this close integration and for the service operated. And we need to fit freight in too, though those trains might have to accelerate quicker and go faster to fit in.

If the total revenue of the railway is most affected by overall service reliability, I wonder whether Schedule 4 and Schedule 8 create the right behaviours. If extra drivers create greater service reliability then they shouldn't be regarded as an extra cost, they should be easily balanced against the better revenue a reliable service generates. I guess this means more flexibility in the contracting mechanisms used for franchises too.

And that will really drive the integration between track and train for the benefit of customers that our Secretary of State rightly wants to see.

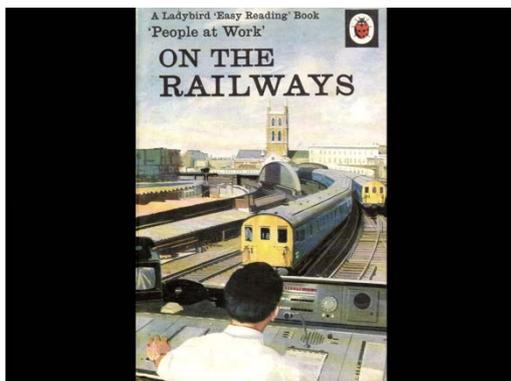
And just so nobody forgets to say it, more trains, and more people on platforms not only means more passengers, it also means more jobs.

On any rational basis, employment in the rail industry is more secure now than it has been for decades and regardless of the megaphone diplomacy surrounding guards, everyone who wants one, can have a job on the railway for the rest of their lives, if they will change what they do, where they do it, and who they do it for (and yet be in the same pension fund!). And, great, for this is a hugely committed workforce with a very good future.

Having talked about how large parts of the railway might look in the future, we also need to remember what I learned at TfL, which is that our best audience response comes when we talk about what it does. It creates jobs, drives economic growth, supports housebuilding and improves the environment.

With that in mind, I'd like to finish by contrasting the modern approach we ought to present to external audiences – one that emphasises growth, jobs, houses and the environment – with

a more familiar way in which we talk about ourselves.



This is my favourite book. It's from 1972 and it talks about the railway. Not a word is in it about what the railway does. Not a word! It's all about how it works.

Next time you look at your corporate communications, check in 2018 you're not just

doing what this book does, but talking about the benefits you bring to the economy and society. That's what I do at Network Rail and we're getting better at it.

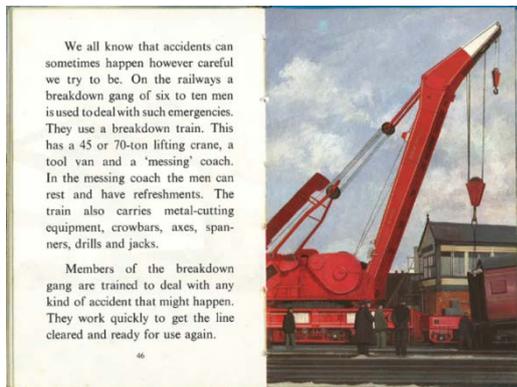
Let's look before I finish at a few pages.



Now some commentators complain we're too expensive these days, and that it costs too much to electrify lines. It was certainly cheaper in the past because the way it was done was unsafe and cost lives.

I've seen a picture I haven't got of someone on top of a stanchion – no hard hat – with a train passing underneath.

It costs more to do it properly, with modern plant and ways of working and so it should.



Just read this – “We all know that accidents sometimes happen however careful we try to be”

The historic railway attitude to safety, particularly employee safety, needed to be shaken up.

And this sort of bad practice has been happening until very recently.



Look at this picture which I shamelessly stole from Nigel Harris, from when we last worked on the tracks outside Waterloo in the 80s. There's a bloke in his underpants. Funny, but bloody awful.

Coming from his oil and gas background, Mark Carne has been determined to change this culture and change our all-too-often casual attitude to employee safety.



And this is what a modern site looks like. Clean, tidy and organised with a clear safety briefing beforehand.

The fact that, touch wood, for the first time in the history of the railway, there have been no employee fatalities for the last two years is a case for celebration but also an indictment on the



railway tradition and should spur us on to work even harder in the future, taking Mark's example. Personally, I'm completely inspired by what he's done in employment, dignity and suicides.

And lastly, take my word for it, this 1972 book has this picture; the only woman in this entire book - a cleaner. And there is not a single person from any other ethnic origin apart from old and white men (like me!), either.

Now more women are working in rail than ever before, and we are all committed to our workforce reflecting the diversity of the communities we serve. But as long as there are people who can, for example, sotto voce, but clearly heard (at least by me), question whether a job share by two women in a senior civil service job is really appropriate, (you might know at least who the two women are) then we have more to do to banish the white male domination this book portrays.



This picture from Women in Engineering day taken on the site of the Thameslink project, shows just how far we've come.

But there's much more to do and we all need to take responsibility for making our industry more diverse. The community we serve expects it, and so should we.

I started by talking about the railway as a system, as Bradshaw innovatively made a business doing nearly 200 years ago.

I've talked about what Mark Carne inherited and the huge role he's played in driving reform of Network Rail for the benefit of the industry and the economy.

I've looked at what Network Rail has to do in CP6 and in more detail about the inevitable whole industry changes that increasing metro-isation must bring and the benefits it will deliver.

And I hope I've entertained you with my Ladybird book.

We all have a lot to do for this great industry. In particular, I don't underestimate the scale and importance of the task ahead of me in replacing Mark. I've read great inaccuracies about when he was going and why, long before he announced it, and now I'm reading who will fill the job before the applications have closed.

Rest assured, it will be a fair process for one of the biggest UK industrial jobs today, even at a relatively modest salary. But it's ok, you get a demanding but supportive Chair, so please apply if you're up for it!

But most of all, my message is that we need to constantly remind ourselves of the purpose of the railway to deliver jobs, growth, housing and the environment. That's what our society and economy want and why Government puts so much money in, and why it's so crucial we all succeed.

Thank you for listening.