

This month, brace yourself for some hard reading as I continue my attempts to try and make sense of the missing detail in the Williams-Shapps Plan. I know it's not that exciting, but unless we have a handle on what is coming, we can't keep track of what should be happening in our industry and its consequences.

What is clear is that even the traditional champions of the structure introduced with privatisation 25 years ago are back-peddalling furiously. A sign of the times was a recent meeting for engineers, aimed at preventing the creation of Great British Railways repeating the impact on safety of the 1994 restructuring of British Rail.

What really surprised me was that the meeting included a performance of David Hare's 2003 play 'The permanent way'. This play, by a noted left wing dramatist, was a scathing attack on the causes of the Hatfield derailment. Another indication that privatisation truly is dead.

Siemens reboots affordable signalling renewals.

Williams-Shapps - Creating the new model railway.

Williams-Shapps - what future for Open Access.

Class 80x cracking update.

When a long-established industry claims that it cannot afford to renew one of its vital systems, something is clearly awry. Back in 1998, Railtrack Chief Executive Gerald Corbett told me that the company could no longer make a business case for renewing signalling: a policy of patch-and-mend life-extension showed a better Net Present Value.

Concern over signalling costs did not go away with the arrival of Network Rail. The focus for cost reduction was the labour intensive mechanical signalling on lightly used lines.

Around 2007-08 this resulted in a challenge to the signalling majors to develop a low-cost modern equivalent. This proposal was known as Modular Signalling, ModSig for short.

Signalling projects are evaluated in terms of cost per Signalling Equivalent Unit (SEU). An SEU is a single item of equipment, such as a signal or point-end. When ModSig was launched the cost per SEU for main line signalling schemes was around £200,000. The aim was to reduce this to £150,000. Allowing for inflation this equates to £190,000 at current prices

Early in 2011 Siemens (then Invensys) and Alstom were awarded contracts for ModSig pilot schemes – Crewe-Shrewsbury and Norwich-Ely respectively. These were commissioned in 2013 and in 2014 I reported that the initial cost target had been achieved. Network Rail was looking for further reductions to around £125,000/SEU (£160,000/SEU today).

But then, ModSig vanished from the signalling scene. When I asked what had happened, it was explained that several of the lessons learned had been adopted in main-stream signalling.

Then, in March 2018, Gerald Corbett's revelation returned with a vengeance. When the East Coast Main Line Digital Programme – essentially the installation of the European Train Control System (ETCS), was announced, I was told that that the bow-wave of future signalling renewals was affordable only by using ETCS.

However, earlier this year Network Rail announced that Siemens had been awarded a contract to renew the signalling in Devon and Cornwall. This was ModSig territory, so I asked Siemens what was going on?

The resulting briefing proved highly relevant to infrastructure investment in general, as the post-privatisation railway reverts to its historic cost constraints.

While the Siemens' Crewe-Shrewsbury ModSig pilot contract delivered an excellent system, there had been some cost and time issues. But Siemens believed that the architecture they had developed had real potential as a cheaper signalling solution.

Resignalling North Wales Coast (NWC) provided the opportunity for Siemens to apply that architecture. And as I describe in the column the key to its success was the disciplined approach accepted by both supplier and customer.

NWC was commissioned in April 2018. Despite the proven cost reduction it all went quiet again. Clearly, it took time for the message that Siemens had moved on from simply meeting the original requirement of replacing mechanical signalling on lightly used lines to be appreciated. The product deployed on NWC has much more functionality.

To reflect this, Siemens refers to the product as Low Cost Digital Ready (LoCoDR). Not only does it provide more signalling principles than were required when ModSig was first mooted, the Westrace interlocking will interface with other Siemens signalling systems and equipment, not least ETCS.

With this capability there are some interesting, not to say surprising, routes which Siemens claims could be resigalled with LoCoDR in advance of ETCS. Much more technical, commercial and operational detail in the column.

Williams-Shapps – getting from here to GBR

In the four months since the Williams-Shapps Plan was published, transport professionals have been worrying away at the detail – or, rather, lack of. In particular the missing information on how the high-level aspirations will be achieved on the real railway.

When it comes to getting from today's hybrid operation to the all-encompassing Great British Railways, the Plan has simply too many blindingly-obvious known unknowns. So I start my latest analysis by investigating how the Department for Transport's Rail Transformation Programme is trying to ensure that when policies emerge from this primordial soup of good intentions, a formal structure for their implementation will be waiting.

This is the work of DfT's Design Authority Steering Group. Its purpose is to 'provide design leadership, coordination, coherence and integration across Rail Reform'. A bit of coherence never does any harm.

I also introduce readers to a new acronym - STOM. Not to mention the four levels of activity needed to create it.

This painstaking work by DfT is in stark contrast to the gung-ho, 'look out boys I'm coming through' approach of Network Rail's Great British Railways Transition Team (GBRTT). The team is so cutting-edge right-on that it even has a Transformation Programme Director leading the definition, agreement and establishment of its new culture. Culture!!

Currently GBRTT is 'largely virtual', with the focus on 'building legitimacy and bringing the sector with us'. From April 2022 it expects that an initial legal structure will have been established, allowing GBRTT to act as a 'guiding mind and delivery agent'. 'Absorbing' RDG will retain crucial skills and, from the outset, 'construct a new whole-industry, customer-centric culture'.

GBRTT's notional timeline sees the Second Reading of the new Transport Bill in late 2023. GBR will then come into being sometime in 2024.

Also trying to make sense of the Williams-Shapps Plan is the Office of Rail & Road (ORR). Until new legislation is enacted, it is business as usual. As a result ORR has begun work on the Periodic Review for the next Control Period (CP7) which starts on 1 April 2024.

Announcing the start of the new Periodic Review, ORR helpfully provided a parallel timeline for their work and the creation of GBR. This is a bit more precise than the GBRTT version. The start of CP7 on 1 April 2024 should coincide with GBR acquiring the legislative powers needed for the new operating model to come into effect.

Railway legislation is expected to be wrapped up in a new Transport Act, so that timing seems reasonable. But, until then, the Periodic Review rolls on and I run through some of the issues, both short and long term, likely to be affected by the move to GBR.

Williams-Shapps – the Open Access challenge

One of ORR's original roles was to determine the income needed by the private infrastructure owner (Railtrack) and convert this into the fixed and variable track access charges paid by the private passenger and freight operators. These charges provided all of Railtrack's income.

But, DfT soon opted for a mixed funding approach. A direct Government grant to Railtrack replaced some of the access charge income.

This combination of grant and access charges is what we have today. But with GBR owning track and train operation, access charges for the Passenger Service Contract holders are a nonsense: they will simply run train services specified by GBR.

Historically, fixed track access charges have essentially been derived from Network Rail's income requirement. After deduction of the direct grant, the remaining Operating, Maintenance and Renewals expenditure has been jam-spread pro-rata over the Train Operating Companies' paths.

How are access charges to be calculated in the brave new railway? Freight already has its own rational, if byzantine, structure of charges. However open access passenger operators have long been a contentious anomaly, paying just Variable Access Charges based on vehicle mileage.

This has always rankled with DfT because, in addition to abstracting revenue from their tax-payer subsidised franchised operators, the open access companies had the commercial advantage of not paying their 'fair share' of Network Rail's fixed costs.

Reflecting these concerns, from April 2019 ORR introduced an additional Infrastructure Cost Charge (ICC) among other changes. During the current Control Period (CP6), existing Open Access operators are exempt from the ICC, which is set at £4 per train mile. However, in addition to new open access operators entering the market, the ICC will also apply if existing operators 'substantially modify' their services.

But there could still be trouble ahead. Quoting the Williams-Shapps Plan, 'The railways are an expensive national asset, funded by taxpayers and farepayers, so it is important that they are operated efficiently and to their full potential in the public interest. As a result the law on track access will need to be changed'.

New legislation will give GBR the powers and duties to plan the use of the network, 'balancing priorities and always seeking to maximise the overall public benefit'. Meanwhile, existing access contracts will be honoured and will initially transfer from Network Rail to GBR until a new generation of contracts and processes has been developed for freight and other private operators 'to provide clear legal rights in the future'. Another of the many 'known unknowns'

## Class 80x update

You are always learning something new in my job, and this month's discovery is the legal concept of 'cure'. In Contract Law it refers to correcting or removing a defect that would be considered a breach of contract.

A word search for 'cure' took me to page 435 of Agility Trains East's Master Availability & Reliability Agreement (MARA) for the LNER Intercity Express Programme (IEP) Fleet. This is in Schedule 6 which covers 'Expiry, events of default, termination and force majeure'. Part A of Schedule 6 covers 'Remedial Plans and Other Secretary of State Remedies'. And Section 1 of Part A Schedule 6 covers 'Remedial plans' - aka the cure, which is what the operators of Hitachi Class 80x units are waiting for.

Of course the MARA is between Agility Trains and the Department for Transport, not the train operators. And according to Schedule 6, 'the Secretary of State may serve a notice on the Train Service Provider (Agility Trains) requiring it to propose a reasonable remedial plan for the purpose of curing (progressively, if need be) the Persistent Breach in a cost-effective manner as soon as reasonably practicable'.

This is known as a Remedial Plan Notice or 'Cure-letter'. And, according to Informed Sources, when the cracking crisis emerged in mid-May, DfT duly sent a Cure-letter to Agility Trains.

Under the terms of the MARA, in the remedial plan Agility must outline the steps that it proposes to cure the persistent breach, 'with details of the resources required and deployment proposed'. This was due by the end of September

Ideally you would like a 'sheep dip' cure process, where all vehicles would have the same repairs. But it looks as though the cracking in the three locations in the Class 80x vehicle-ends varies, depending on the type of vehicle, the location of the cracking and, possibly, on the weld and material quality.

Operators fear that when a set goes in for its 'cure', it will have to be triaged followed by a bespoke set of repairs. This possible uncertainty will threaten the smooth flow of sets through the repair centres.

An alternative approach to a complete cure would see enough remedial work done to allow the trains to keep running safely, with non-critical defects simply monitored. Aluminium aircraft have been flying for years with fatigue cracks being monitored.

But DfT's rapid delivery of the 'cure letter' shows that, rightly, it is taking the threat to its multi-billion 27.5 year flagship project very seriously indeed. And after we went to press, the Office of Rail & Road published its interim report on the cracking crisis - more on that next month.

Roger's blog.

When I left you last month, I was preparing the introduction for our COP26 special feature in this issue. It turned out to be another of those articles which bring together various topics covered separately in the past to produce a piece which is more than the sum of its parts. It was helped, considerably by an in-depth interview with Network Rail's Group Safety & Engineering Director Martin Frobisher.

As I have mentioned in earlier blogs, during lockdown we introduced the video equivalent of e-Preview for the whole magazine. These video previews are available on the Modern Railways web site, YouTube and Twitter. My colleague Ian Walmsley and I give a brief run-down on what's in our columns and with the end of lockdown we started getting away from the 'office' background.

Last month I thought I had found the ideal location for my contribution. It was beside the Midland Main Line, with the railway running through golden cornfields on an embankment for my background. Not only that, there was also an Overhead Line gantry to go with my items on electrification.

Sadly, what was a quiet country road during our pre-filming 'recce' turnout out to be extremely busy at 16.00 on a Wednesday afternoon. Fortunately there was a visually less inspiring Plan B location nearby.

Although I have a location in mind for this month, looking at the weather, filming may be subject to the caveat on summer fete posters, 'Indoors if wet'.

And after that escape from the desk, it will be back to my contribution to our annual publication The Modern Railway where the deadline is approaching.

