INFORMED SOURCES e-Preview June 2024

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There's a lot of political coverage – both national and the more convoluted railway variety - in this month's column. But there's also room for some technical stuff on the consequences of squeezing a lot of diesel horsepower under the floors of passenger vehicles.

Rail Reform – Labour cuts the Gordian knot

LNER Timetable – Regulatory ambition hits reality

IEP – engine packaging hits the limit

While the polls and the betting fraternity are expecting a Labour landslide, we should not forget that the railway's current woes stem from John Major's surprise victory in the 1992 General Election.

But, with this caveat, the column has an extensive analysis of 'Getting Britain moving: Labour's plan to fix the railways', published on 25 April. And Labour has put clear blue water between its version of Great British Railways (GBR) and that in the Government's Williams-Shapps Plan for Rail.

I have been criticising the concept of Great British Railways as a 'guiding mind' for months. So I was glad to read that Labour's new, arm's length public body – still called Great British Railways – will be a 'directing mind' in charge of infrastructure and services, responsible for the day-to-day operational delivery of the railways under a single brand.

Semantics aside, the most significant break from Williams Shapps is Labour's proposal to get rid of the nonsensical Passenger Service Contracts (PSC). These assumed that private sector operators would continue to run passenger services under management contracts after GBR was established.

Why nonsensical? Because why would a vertically integrated railway want to sub-contract its point of contact with its passengers? It would be like Waitrose sub-contracting management of its check-out lines to Serco.

I have spent a lot of time trying to develop a schedule for the creation of GBR, starting with the passing of the Act providing its powers and ending with the new organisation running the network. The main problem has always been the procurement of those PSC.

To let the PSCs through competitive bidding would require the specialist franchising teams in DfT's Passenger Services Directorate to transfer to GBR. My analysis reckoned that, because of this, it would be 2029 before the Williams-Shapps GBR would be ready to let the pilot PSC.

Labour's policy will be to fold the contracts currently held by private train operators into GBR as they expire over the next few years. This 'folding-in' is expected to be completed during a Labour Government's first term in office: that is, by 2029.

How this folding will be organised is not made clear, but the expectation is that they will be taken over by DfT OLR Holdings (DOHL), more commonly known as the Operator of Last Resort.

This leads into the third key statement in the document. DOHL and Network Rail 'will be instructed to work closely together from day one of a Labour Government on getting the basics right'. This will be done through a partnership model.

In parallel, the leadership team for a 'shadow' GBR will start to bring decisions together. It will be 'tasked by the Secretary of State with delivering improvements for passengers while primary legislation is progressed'.

Labour would have to get its skates on, since it says that 'the newly appointed leadership (of GBR) will be tasked by the Secretary of State with creating a functioning organisation within six months (of Labour taking power), building on the work already undertaken by the Great British Railways Transition Team'. To meet that aspiration, Labour will surely need to have the new GBR Chair and Chief Executive 'in waiting' selected before the end of this year.

As ever, it is the means we need to focus on – not the end. While BR by-and-large got on with implementing privatisation, should Labour implements its plan, opposition can be expected from within the industry.

After 30 years of anarchy, there is already resistance to even the thought of a directing mind. Pushing through GBR will require determined leaders with strong personalities – where is Sir Robert Reid when the railway needs him?

Finally, a word of caution. Labour has form when it comes to changing its rail policies when elected.

During the run up to the 1997 General Election, there were blood curdling threats from Labour that rail privatisation would be reversed. But after that landslide victory little, if anything, changed on the railway.

LNER Timetable – mission made impossible

Just six years ago, yes, six years, the cover of the March 2018 Modern Railways carried the headline ‘East Coast in crisis’. Inside the magazine, I analysed the dual causes of the crisis.

Virgin Trains East Coast (VTEC) could not meet its future premium payments. And the infrastructure enhancements, on which the franchise bid had been based, were becoming increasingly unaffordable and delayed. Fast forward and in last month’s Modern Railways we revealed that the new high capacity East Coast Main Line (ECML) timetable, scheduled for December this year, had been deferred.

It is now (almost) universally acknowledged that separating responsibility for track and train was probably not the cleverest way to privatise British Rail. But often ignored is the on-going influence of the regulatory structure introduced in 1994.

What was then the Office of the Rail Regulator, and is now the Office of Rail & Road, was responsible for allocating access rights to the rail network. This took away from the railway responsibility for the scheduling of its passenger services. It was compounded by the acquisition by the Department for Transport of responsibility for setting service levels for replacement franchises – in the form of detailed timetables.

Making matters even worse, was the introduction of the High Level Output Specification (HLOS). Under the 2005 Railways Act DfT must specify the levels of service it wants for each new five-year Regulatory Control Period (CP).

Where the ECML timetable started to go wrong was during the Periodic Review for CP5 (2014-19) In those days, the industry put forward its aspiration for the next Control Period in an Initial Industry Plan (IIP).

They were heady times and in 2011 the IIP proposed a number of ‘funds’, including a ‘provisional £500million’ to provide enhancements needed to accommodate a potential enhanced ECML train service specification for December 2018.

And when, in 2012, DfT published its HLOS for CP5 it included a ring-fenced £247 million East Coast Connectivity Fund (ECCF). One of Network Rail’s obligations was ‘to work with the industry to develop plans to deliver works within a maximum CP5 expenditure of £247 million on ECML to improve capacity and reduce journey times’.

In the column I have a Table listing the enhancements in the ECCF and their role in providing additional capacity. Restoring four tracks between Woodwalton Jct, south of Peterborough, and Huntingdon was one of the enhancements required to unlock more long distance high speed train paths. These enhancements would support the introduction of the new Intercity Express Programme (IEP) fleet, due to be in service by the end of CP5 in March 2019.

Meanwhile DfT was preparing to return the Intercity East Coast franchise to the private sector. According to the invitation to tender, from December 2018 the new franchisee would be required to ‘step up services as new IEP trains are accepted into service’ The full requirements of DfT’s tightly specified Train Service Requirement (TSR2) were to be introduced ‘no later than May 2020’.

TSR2 included a minimum off-peak frequency of 6 trains per hour to/from King’s Cross Monday-Fridays. It also required shorter average journey times between London King’s Cross, Leeds and Edinburgh.

Virgin’s winning bid was based on increasing service frequency to 6 trains/h each way) from May 2019. From May 2020, VTEC was proposing 11 daily London-Edinburgh services timed at 4 hours, with other services ‘just over 4 hours’. Leeds would get two trains an hour timed at an even 2 hours. This, claimed VTEC, ‘would drive significant growth in demand and revenue and enhance rail’s competitive position verses air and car’.

These plans depended on ORR approving VTEC’s extra paths. In 2016, ORR accepted VTEC’s applications, but granted firm access rights only from May 2021. This reflected advice from Network Rail that an additional hourly service would depend on the availability of infrastructure enhancements, in particular four-tracking at Woodwalton and grade separation at Werrington.

ORR had based its decisions on Network Rail’s then current enhancement plans. But with other major Network Rail projects, such as the Great Western Route Modernisation, running over budget, in 2015 DfT had commissioned recently appointed Network Rail Chairman Sir Peter Hendy to report on the overall costs of its CP5 enhancements programme.

This review resulted in the completion of some enhancements being slid back into CP6 (2019-2024). For example ECCF expenditure in CP5 had been cut back to £197.2 million.

All this effectively wrecked VTEC’s franchise plans. With the revenue from the new timetable pushed back to 2021, it would not be possible to meet the premium profile. The only solution was to renegotiate the franchise terms.

However, Transport Secretary Chris Grayling decided that VTEC was just another example of an over-optimistic franchise bid coming to grief. And in 2018 the poisoned chalice of generating a return on the ECML enhancements passed to the Operator of Last Resort. As we now see, LNER has faced the same problems, with lack of capacity. central to the deferral of the December 2024 timetable.

This on-going fiasco tells us, well tells me, that privatisation, with the separation of track and train, has reduced the railway to being told what to do, rather that determining its own future.

For example, in 2011, the IIP gave a finger in-the-air cost of the ECCF enhancement of £500 million, only for the HLOS to reduce this to £247million.

Similarly, with the IEP fleet. When the ICEC franchise was re-let to VTEC, it was DfT that specified the service to be provided by the new trains, in terms of frequency and journey times.

And in allocating capacity, the ORR commissioned its own timetable modelling to challenge Network Rail and seemed oblivious to the impact of the loss of the Woodwalton four tracking. Network Rail's timetablers were always on the back foot as applicants and the ORR constantly claimed that more paths were available than Network Rail allowed.

But for the present, resolution of the new ECML timetable seems unlikely until Great British Railways, as a directing mind, not ORR or DfT, can determine who runs what and when on the Route.

IEP – engines on the limit?

As we all know, the Intercity Express Programme (IEP) was a bit of a bodge-up. What began as an IC125 replacement, with two diesel driving power cars, morphed into a bi-mode, with a pantograph/transformer driving car at one end and an electric version at the other. There was also an all-electric IEP.

But, when cost threatened the project, Hitachi came up with a cunning plan. Scrub the expensive power cars, taking up potential passenger room, and turn the train into a multiple unit. So a five-car Class 80x bi-mode now has three diesel power packs beneath the intermediate vehicles, a nine-car has five.

To provide the required power, Hitachi selected a little jewel of a Vee-12 MTU engine. Previously, the standard engine for post privatisation 125 mile/h DMUs had been the Cummins. This is a six cylinder power unit: sitting above one when idling in a station, you can sense those six big pistons going up and down.

By comparison, the Vee 12 cylinder MTU under the Class 80x bi-modes is silky smooth. But IEP performance required an installation package which effectively puts the power of a Class 20 locomotive under the floor.

Squeezing this power under the floor within the UK loading gauge has come at a price. Class 80x engines shutting down are a daily occurrence. According to Informed Sources there are a 'whole host of modifications' to the power packs to be introduced to improve reiability, including some which can be applied only during up-coming major overhauls.

Now, as a fully paid up diesel-head, I think the problems are not with the engine, but the installation. As with the Paxman Valenta – the original IC125 engine which suffered from inadequate cooling - I think the Class 80x problems are due to nurture rather than nature.

Cramming lots of horsepower into a small space may be clever, but is it engineering? As Stadler has also found with the power cell in the Anglia bi-modes, Deutz diesel engines equally don't like being stuck in a cramped hot space – however convenient this installation may be for the train-builder.

These views may damn me as an apologist from the Diesel Liberation Front. But experience tells me that rail traction is a uniquely demanding application for engines, both in environment and power demands.

With hindsight, perhaps it would have been better to have retained the driving power cars from when IEP was also called HST2. Sure, you would have sacrificed passenger space, but the diesel engine would have enjoyed more comfortable accommodation – worth it in the long run.

Roger's Blog

Before breaking off to write this, I had already started research for next month, which promises to be a rolling stock spectacular, with two Invitations to Tender to analyse.

Plus, my mischievous suggestion that Pendolinos, or should that be Pendolini, running on HS2 at 140 mile/h could cut London-Glasgow journey times clearly lacked ambition. With DfT 're-setting' HS2, I will have details of a radical proposal.

And, as this is the halfway point between Golden Spanners awards, I'm aiming to provide reliability data for all the new train fleets and not just the struggling laggards which usually feature in the monthly Table. This snapshot should provide a fairer picture of the good, the bad and the average.

Meanwhile, as ever, there is a queue of topics which I've been meaning to cover and have had to be put back following the arrival of more important issues. Hopefully, there may be room for a couple of these.

That's all for now, must rush.

Roger