INFORMED SOURCES e-Preview October 2017

I suppose I had better issue a health warning: this month's column is full of tables. Most of them cover rolling stock, but there are also some intriguing commuter ridership growth forecasts.

Nearly 3000 ex-BR vehicles face the scrap-heap

Waterloo – minor impact, major consequences

DfT predicts declining growth

As explained in previous columns, the introduction of quality factors into franchise bid assessment has produced some dramatic effects. Previously the Net Present Value of the premium or subsidy was calculated and, all things being equal, the highest or lowest won the bid.

Now, bidders are encouraged to include quality improvements in their offers. These are weighted and multiplied by a Quality factor. The resulting number in pounds is added to the premium NPV, or subtracted from the subsidy, and the bids are evaluated on the resulting figure.

As we have seen, by varying the weighting and the Quality factor DfT has made the provision of new trains a potential franchise winner. It has also helped that, currently, new trains are cheap.
While infrastructure costs have rocketed since privatisation, EMU costs have remained stable. In 1990, a state-of-the-art Class 323 with three phase traction cost £1.26 million per vehicle at today's prices. Recent EMU orders have been averaging £1.2 million a vehicle for a much more highly-specified train.

At the same time, the cost of borrowing that £1.2 million has dived and the result has been a series of 'mass extinctions', as winning franchise bids have been based on replacing existing rolling stock with cheap new trains. This started with Greater Anglia. South Western followed, where new, new trains were even cheaper than new trains just being delivered. Now the same scenario is playing with the West Midlands replacement franchise, where Class 350s are to be supplanted.

Add in the start of deliveries by the long-running rolling stock mega-contracts for the Intercity Express Programme (IEP), Thameslink and Crossrail, and future prospects for the Rolling Stock Companies' ex-BR fleets are pretty thin.

This is what the Tables are all about. And when I pulled all the new train contracts and the fleets they are replacing together in a single spread sheet, even I was surprised.

Coming on for 3000 ex-BR vehicles, could potentially be coming off lease by 2020. Add in the Southeastern Networkers, which are expected to be the next mass extinction when the replacement franchise is let at the end of next year, and the number is nearer 3,500.

But even trains ordered since privatisation are affected. These include the Greater Anglia Class 379 fleet, Class 707s, where SWT just managed to get two in service before the franchise terminated, and the West Midlands Class 350s already mentioned. In the latter case DfT is funding a £10 million upgrade to allow 110mile/h running.

My tables try to provide a snapshot of the rolling stock market on the day I pressed the 'send' icon to get the column to the editor. They were changing up to the last minute. For example, when Stagecoach/Virgin won the Intercity East Coast franchise, the intention was to retain around half a dozen shortened IC225 sets alongside the IEP fleet to cover the hourly 4hr flagship London-Edinburgh service.

That's what the Table assumes. But we won't know until October the status or timescale of PSU2 – the upgrade of East Coast Main Line traction power supplies north of Doncaster. This uncertainty means that Virgin Trains East Coast is developing 'Plan B' which would see the IC225s off lease with seven IC125 sets retained.

Another factor is that operators want large homogenous fleets. This means that finding new homes for the fleets of 30 or so four-car modern EMUs coming off lease may not be as easy as some might think.
DfT data too.

I also include a 2015 DfT table listing ex-BR stock which is either compliant with the accessibility regulations or in the process of being modified. The deadline for compliance with the Persons of Reduced Mobility Technical Specification for Interoperability (PRM-TSI) is midnight on 31 December 2019. With this DfT Table the interest is in what isn't included.

This imminent mass extinction of the ex-BR fleets does not seem to have registered fully with DfT. A written Parliamentary answer in August this year claimed that 75% of the current passenger fleet, which totals over 12,300 vehicles, have been built, or fully refurbished, to modern access standards. That leaves roundly 3000 vehicles still non-compliant.

For those trains built before 1999 which are still in service, DfT says it is 'working closely with the owners and operators to ensure that the necessary work is scheduled in time to meet this deadline'. DfT added that in 'some cases', older trains, such as Pacers in the north of England, will be replaced by modern trains by 2019. I suspect that won't be all.

Waterloo collision raises serious concerns

At 05.42 on 15 August a train leaving Platform 11 at Waterloo had reached 11 mile/h when it was diverted at a set of double slip points and sideswiped a rake of hopper wagons on the track into Platform 10 acting as a stationary barrier train. There were no injuries.

This barrier train had been positioned to allow Adjacent Line Operation while work was proceeding on the partial blockade to lengthen Platforms 1-4. A still from the forward facing Closed Circuit Television camera on the EMU shows that the train left on a green signal. A second still, approaching the set of points just beyond the platform end, shows them stopped in mid-swing. In other words, neither switch blade was in contact with its stock rail.

On 30 August the Rail Accident Investigation Branch confirmed that it was investigating the collision. According to the RAIB's preliminary statement, the 'misalignment' of the points 'was a consequence of a temporary modification to the points control system which also caused the train driver and signaller to receive indications that the points were correctly aligned'.
Issues to be covered by the investigation are:

The circumstances leading to installation of the temporary control system modification;

The safety measures provided while the temporary modification was in place;

The checking and testing procedures applicable to the modification;

For the signaller at Wimbledon to be able to set the route and the driver to receive the green signal, the detection on those points must have been either by-passed, and isolated from the interlocking, or the relevant relay false-fed.

Either way, this would have represented a change to the interlocking and should have been identified by Level 1 (Principles) testing before being put into use.

Long before the blockade started signalling informed sources were expressing concern about the time in the schedule allowed for testing and at T-12 the possession footprint was increased. In part this explained the extension of the blockade to include platform 10.

Level 1 testing is complex, draws on a small pool of suitably licenced engineers and technicians – which makes it expensive – and it is also time-consuming. Note the RAIB reference to the checking and testing procedures 'applicable to the modification'.

So now we wait for the RAIB report, and let us hope that the inquiry proceeds with some urgency. Meanwhile there seem to be two schools of thought on the incident.

There are those, like me and the signal engineers I talk to, who see it as a fundamental flaw which could have led to another 'Clapham'. But chatting to a senior and highly respected railwayman recently I explained the incident and his response was 'the points should have been clipped'.
Well yes, that would indeed have stopped the collision, but the first line of safety would still have been breached.

DfT forecasts 3% growth over CP6

Now for the second set of tables. As mentioned in last month's column, the Department for Transport's High Level Output Specification (HLOS) was padded out with some passenger demand forecasts. These showed the change in peak demand over the five years of Control Period 6 (1 April 2019-31 March 2024) and looked very ho-hum.

But then I entered the numbers into a spread sheet and calculated the percentage increases and the numbers became very interesting. They show that DfT is expecting the peak ridership into the main Regional stations and London termini over the five years of CP6 to grow by 3%. That's over the five years, not per annum.

For some reason, Kings Cross and Liverpool Street are different. At these two stations, excluding Thameslink and Crossrail through traffic, a Compound Annual Growth Rate of 5-6% is expected.
In the HLOS, DfT explains that the forecasts of demand are the Department's 'best assessment using available models and based on available information and plausible assumptions'.

Given the high levels of sustained growth on L&SE services since 2010-11, expecting around 3% in total over the next five years might seem seems overly pessimistic. However it appears justified by the latest statistics.

I've pulled together the Office of Rail & Road's passenger journey statistics for London & South East ridership since growth resumed after the dip following the global financial crisis in 2009-10. This shows year-on-year growth averaging 4-8% up to 2015-16.

But last year (2016-17) L&SE passenger journeys fell by half a per cent. In contrast passenger journeys in the Long Distance and Regional sectors increased by 3.8% and 3.9% respectively.

This is one of those cases where readers can draw their own conclusions from the data. For example, reader Andrew Bodman wrote to point out that Euston operators London Midland, London Overground and Virgin Trains are still showing sustained growth making the 2023-24 figures look significantly understated.

Puzzlements

And what on earth is going on at Liverpool Street where terminating services enjoy 20% growth while Crossrail appears to have zero growth over its phased introduction. Similarly at Paddington Crossrail.

I am tempted to conclude that these tables were cobbled together to pad-out an HLOS which, in effect, tells ORR 'Dunno, come back in October when we may have a better idea of what's happening'. On the other hand, if you take the figures seriously, some recently awarded franchises must be fretting over their business plans.

And finally

A date for your diary, or perhaps a hostage to fortune. If all goes according to plan Great Western Railway should have seven Hitachi Class 801 electro diesel multiple units available for passenger service from 16 October, starting with two diagrams. How much of the running will be 'electro' remains to be seen.

Roger's blog

With the holidays over it’s been time to get out and about again. September began with the Retired Railway Officers Society monthly lunch. This was a chance to catch up with old chums and exchange current gossip, since a high proportion of them are still active as consultants and advisors.

Next day, I had a catch-up briefing with London North Eastern & East Midlands Route Director Rob McIntosh. Power Supply Upgrade 1, south of Doncaster, has been completed successfully and we should know more about the remaining ECML upgrades in October. Meanwhile Rob is ensuring that the OHLE continues to get the tender loving care it needs.

September continued with a Railway Industry Association seminar on the Hansford Review into the ‘contestability’ of rail infrastructure projects and ended with a session with Abellio. October sees the latest Virgin Trains railway media dinner. This is always an enjoyable, but informative, event with the sort of in-depth discussions you don’t get at main stream media functions.

Meanwhile, with Informed Sources put to bed, it’s time to get on with my contributions to our annual sister publication ‘The Modern Railway’ now in its 11th year – how time flies. One of my roles is to write the introduction, setting the scene for the year ahead. For some reason I headlined the article in the first edition ‘2008 – year of challenge’ and this format has become a convention.

So 2018 is the ‘Year of delivery’, which sounds suitably up-beat after ‘2017 – year of recovery’. But it carries the implied threat that with the industry already under pressure failure to deliver could have serious consequences.

One last thing, while there is no longer time and space for the fully fledged book reviews of pre-privatisation days, this blog does provide the chance to mention publications I have found interesting or useful.

As a Vice-President of Railfuture I was sent a copy of the latest edition of ‘Britain’s growing railway’ which lists stations and lines opened, or re-opened, since 1960. The oldest entry is Garscadden in Scotland and the most recent Cambridge North, It also looks ahead to lines opening soon and includes metros, light rail and tramways.

It’s gone straight onto my reference bookshelf – much faster than Google. It costs £9.95 for 192 pages and further details are available from books@railfuture.org.uk or the web-site www.railfuture.org.uk

Roger