## Informed Sources e-preview by Roger Ford

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A varied column this month with a first look at the HS2 high speed train order, an update on the state-of-play with the second generation post-privatisation rolling stock contracts and an analysis of why LNER is so far ahead of the 'franchised' train operators in winning back passengers

New HS2 fleet - short on detail.

Operators face on-going new train woes.

Passenger traffic recovery - LNER shows the way.

When announcing the contract for its 54 new trains, High Speed 2 provided a lot more detail than the joint venture manufacturers – Hitachi and Alstom. This included some numbers on weight and seating capacity.

Now you know the effect numbers have on me – I have to open a spread-sheet to check their veracity. HS2 used the Bombardier-AnsaldoBreda (now Hitachi following recent takeovers) ETR1000 Freciarossa as the comparator.

So I have produced a table of data for ETR1000 and other international high speed train designs, plus a line for HS2's Fantasy High Speed Train (FHST) derived from the press release. I call it this because the numbers imply some heroic engineering achievements when it comes to weight saving and seating density.

In their enthusiasm for a bit of Bullet Train glitz, HS2's press release also waxes lyrical about using of Hitachi Rail's 'pioneering low noise pantograph' This claim resulted in some really obscure research.

This included a research paper published in Japan last year on the latest stage in the reduction of noise emitted by Shinkansen trains. It covered a joint programme to reduce pantograph noise by the Advanced Railway System Development Centre of JR East and the Design Division of the Transportation Business Unit of Toyo Electric. No mention of Hitachi. note.

So having gone into this Japanese work on reducing pantograph noise I asked Hitachi about their 'pioneering pantograph'. They explained that much of the final detail of the design on the new train will emerge during the collaborative design stage with HS2 and the future operator. Whether it will be a new pantograph or building upon an existing pantograph remains to be decided.

So why did HS2 highlight this theoretical pan' in the press release? Nowt so strange as railway folk.

Of course, the JV partners are dealing with an hubristic client which has been promoting its new rolling stock as the fastest, bestest, high speed train in Europe. Presumably, having a modern high speed train like everyone else wasn't acceptable.

However, particularly given the pretty heroic reliability requirements for the new fleet, I concluded that common sense would prevail, with HS2 buying a UK gauge ETR1000 clone. But stop press, I may have been premature!

It looks as though it really will be a brand new design. All will be revealed in the March issue of Modern Railways, which will include an interview with Alstom's UK Managing Director.

## New train blues continue

Informed Sources 8th Law is unambiguous: Nothing works out of the box. I'll grudgingly accept a repeat order for an established product off a hot production line as an exception – but, even then, subject to the proviso that the manufacturer hasn't changed the supplier of a component in an attempt to cut costs.

New Train TIN-Watch, Informed Sources' monthly review of new train reliability, is four years old this month. In February 2018 the Table had just four entries.

Despite the downgrading of the reliability needed for promotion from the Table to 20,000 miles per Technical Incident Moving Annual Average (MTIN MAA), there are now over 20 fleets in the Table, the majority under 10,000 MTIN MAA. As a rule of thumb, 15,000 MTIN MAA is the point at which train performance is not a significant factor in service reliability.

Not very impressive. And this is compounded by late deliveries, with some fleets yet to have a train in service after the date when whole contract was supposed to be commissioned.

Then there are on-going technical issues still being resolved which can also affect availability as well as reliability. To an extent, availability issues are being masked by service cut-backs due to the pandemic.

To bring all this together, the column goes through the manufacturers one by one, outlining the status of their various contracts and, where relevant, performance. I also look at the future prospects for their UK assembly plants.

My conclusion is that, from Japanese bullet train technology to Swiss precision, by way of England and Spain, the 8th Law applies. Problems were to be expected with any new design – one of my first jobs in the railway industry was spraying crack detecting fluid on then-new Class 55 Deltic bogies.

But what this month's review highlights is the time being taken to resolve these initial problems, plus the painfully slow progress on reliability growth. How soon before the Treasury notices, I wonder?

#### How LNER is winning back customers

Finally, some good news. On 18 December, the Office of Rail & Road published its latest analysis of passenger ridership data. This covered Quarter2 of the current reporting year (1 July to 30 September 2021).

During the quarter, ridership was continuing to recover. As we know, the improving fortunes of the passenger operators were subsequently overtaken by the emergence of the omicron variant and the reintroduction of restrictions, plus government encouragement to work from home, if possible.

This created an almost overnight fall in demand. More seriously, the increased transmissibility of the new variant has seen train services affected by staff absence due to sickness or self-isolating (details of the resulting revised timetables are in our News pages).

As the omicron wave passes, the industry will have to pick up the long process of re-growing passenger traffic. This is not going to be easy, but within the Quarter 2 data, one operator's recovery stands out. LNER's ridership, as a percentage of pre-Covid levels, was a full 20 percentage points ahead of the first franchised TOC in the ORR table.

Clearly, each TOC will have had its own constraints on growth during the recovery period, whether the impact on services of scheduled infrastructure upgrades, industrial relations disputes, or the on-going impact of Covid restrictions on commuting and business travel. Similarly the destinations and markets served by each TOC will have been affected differently by the pandemic.

That said, the gap between LNER and its long distance peers is so wide that, irrespective of such variables, it must have some point of difference. And in the column I investigate the various factors that have contributed to LNER's returning ridership.

A key move was the early decision to reinstate 100% of Anglo Scots services so that growth would not be constrained by capacity. Similarly, under 'Project Horizon', tickets were on sale well in advance, ahead, even, of Network Rail releasing the timetables. And despite the ambiguity in the DfT message on rail travel, LNER was the first to resume its marketing activities in May 2021.

I attribute this difference to LNER's greater commercial freedom as a result of answering to the Operator of Last Resort (OLR),) rather than directly to the Department for Transport. When bold decisions were needed, the franchised operators were being 'man-marked' by DfT officials, with cost control, for example, requiring authorisation down to quite minor expenditure.

Subsequently, this control has become even tighter. Since the end of 2021, Treasury approval has been required for any increase in train services – DfT clearly not being trusted to spend prudently. And all along there has been uncertainty from Government over whether the priority has been to cut costs or grow revenue.

Overall, with OLR providing a buffer between them and DfT, LNER's old-school railway managers have had the freedom, indeed, been encouraged, to get on with what they knew needed to be done.

### **DVRS** update

Last month I reported that Porterbrook and Network Rail had finally signed the contract funding the fitment of Dual Variable Rate Sanding (DVRS) to the Northern Class 323 fleet. Tests have demonstrated that DVRS ensures Step 2 braking under low adhesion, irrespective of the railhead condition.

The next stage was to run a trial in everyday fleet service, providing a wide range of track conditions and driver experience. Fitment for the trial is being paid for by Network Rail's Performance Improvement Fund.

With the funding agreed, all that was needed was for Porterbrook to sign its contract with the supplier AB Hoses. This contract was tendered in August 2021 and the validity expired on 31 December.

Anyway the New Year came and went with no signatures on the dotted line. However the deal was eventually done on 12 January. The reason for the brief delay was Porterbrook's legal team being up to their ears in leases for Chiltern's new National Rail Contract.

Anyway, it's all systems go now, and I hope to see the equipment being fitted later in the year.

# Roger's Blog

Working life is still very much on-line. Last week I joined a Teams presentation by the Great British Railways Transition

Team (GBRTT) on the consultation supporting the development of its 30 year Whole Industry Strategic Plan (WISP).

This presentation was targeted at the industry supply chain and provided an an informative hour and a half, with useful background information on the article on WISP I have planned for next month's column. My immediate view is that the WISP consultation is currently a distraction, taking those fully employed, and more, running today's railway and its supply chain away from their day jobs. And with so many 'known unknowns' in the Williams-Shapps Plan, future requirements are hard to gauge until the structure of GBR becomes clearer.

Also last week, I was interviewed, instead of doing the interviewing, for a change. The Railway Industry Association (RIA) is revamping its magazine for its members and wanted my thoughts on the industry over the years and where it is heading.

I was Editor of RIA's Export magazine for 16 years and have always maintained close ties with the industry which took me in when I qualified as an engineer, so I hope the session was useful and look forward to seeing the resulting article.

Meanwhile, with the pandemic seeming to ease, it's time to revive some research visits which had to be cancelled in December.

Roger

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