

Improving Railway Performance

Following problems with the introduction of the June 2018 national rail timetable in Britain, there was an increased public and Government focus on train service performance, leading several train operators to undertake detailed studies. LNER, operators of the key East Coast Main Line, approached the Railway Consultancy with a view to understanding in more detail the reasons why trains were exceeding their planned station dwell times at various stations along the route.

RCL undertook two waves of operational research surveys, each lasting several days, combining statistical analysis of 'function' times (such as door opening and closing) and passenger movements with wider observations of other activities, and discussions with local staff.

At Newark and Grantham, analysis showed that it should be possible to reduce the existing time taken, for instance by spreading passengers more evenly between doors (whether by investing in signage, platform or canopy extensions), as well



Despatch staff at Grantham

as by improving processes for seat allocation and caring for mobility-impaired customers.

On the other hand, at Berwick and Durham, there seemed to be less scope for speeding up processes, and increases in dwell times are likely to be required, in order to accommodate the growing numbers of passengers. A range of other issues related to rolling stock, the timetable and staff duties were also noted. LNER are now taking forward RCL's recommendations as appropriate.



Train Stop Markers for Drivers, Durham

A subsequent study for GTR highlighted similar types of problems. Issues on the Thameslink network include minor infrastructure deficiencies resulting from reductions made under BR, inadequate timetabling parameters, and operating practices not being aligned with the latest operating conditions. All these were leading to operation at high levels of capacity utilisation not achieving the levels of performance required to sustain high-frequency operation.

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Project News: National

More Cost-Effective Solutions

Many railway schemes seem to cost too much, thereby preventing their development. However, as reported last year, working with Cadenza we had developed a Penryn-type solution for a passing loop at Bricket Wood, on the St Albans Abbey branch line.

During 2018-19 we collected the data to support a multi-modal demand model to examine the demand and revenue potential from improving services on the line. This was done using our GCOST™ methodology, and examined trips to and from 20 origins (10 local, 10 further afield), for car, bus and train, and in both peak and offpeak conditions.

Base demand conditions needed to be scaled up, not only to account for background growth, but also for some very large relevant local developments now under construction, including some directly adjacent to Watford Junction station. Model calibration highlighted the very local catchments of stations, and also that the relative service quality of the line (as perceived by passengers) was little better than that of bus.

When the model was used for forecasting, it did indeed suggest significant increases in patronage, but unfortunately (and, as expected) these did not seem to be sufficient to cover the extra operating costs. Whilst further thought is being given to how operating costs might be further reduced, there could be scope for additional sources of income e.g. from development gain monies from a large local housing development at Radlett Aerodrome. However, we were able to suggest ways of improving the business case further, and our report has been widely circulated to local and national stakeholders as the basis for taking forward a cost-effective improvement to the rail network. Moreover, improving the railway is not the only idea being considered by local stakeholders. Our work therefore enables the case for this rail improvement to be considered alongside larger and thus-far less-enumerated suggestions, including for road improvements or the development of a guided bus system.

Local Rail Strategy

As part of its wider consideration of the future transport strategy for its area, Chorley Borough Council commissioned RCL, working through WYG, to address a number of rail issues. These included an assessment of the appropriateness of both train services and physical facilities at the five stations within the borough (Adlington, Buckshaw Parkway, Euxton Balshaw Lane and Croston, as well as Chorley itself). This was undertaken through a combination of site visits, and desktop analysis comparing the existing patronage, train services in the area and impact on both locals and through passengers of any changes in stopping patterns. This analysis was also extended to cover a potential station site at Coppull, on the West Coast Main Line.



Chorley's rail stations include traditional local halt Croston (improvement works underway, above) as well as recently-opened Buckshaw Parkway (below)



Project News: International

Sørlandsbanen Stations

Railway privatisation is not just a British phenomenon. After restructuring in recent years, the railways in Norway are currently being privatised, and we have been supporting the Go-Ahead group, who have successfully won the competition for the Sørlandsbanen franchise. This covers the line from Oslo to Stavanger, together with the Arendal branch.

The mobilisation period in Norway is rather longer than in Britain – Go Ahead Norge won the contract back in the Spring, but franchise start date is not until December. This gives greater time for the detailed development of plans.

In the winning bid, 20m NOK (c. £2m) was allocated for 'station improvement works'. Analysing exactly what was appropriate seemed to be usefully undertaken during the mobilisation period, and the Railway Consultancy (with our expertise in rail planning and station access issues) were asked to help.



Nordagutu – in a delightful condition



Sandnes Sentral – in need of improvement

We have now visited almost all the stations on this route. Architecturally, they clearly fall into several categories: those with original wooden buildings, more recent concrete-era replacements, and those with very few facilities at all.

In terms of assessing what might benefit passengers most, we took into account the severity of deficiencies, the number of passengers affected, and a geographical spread along the line. In practice, however, where the original wooden buildings still exist, they are in good condition – whereas some of the more modern facilities in the Stavanger commuter area have been graffitied or are otherwise providing poor amenity.

However, there were some generic problems (signage, for one) as well as some appraisal issues – what should one do, for instance, if facilities are extremely basic but there literally are only a handful of passengers using a station?



A timetable poster and sandbox are only very basic facilities – but are these fit for purpose? Is it appropriate to spend public money to improve things?



Platform at Drangedal needing significant work

Our analysis also demonstrated instances where platforms were inadequate (including in terms of height, or cross-fall towards the track) and such issues were raised with BaneNor and the Norwegian Ministry of Transport, as being outside the scope of the train operator to fix.

In the meanwhile, some of the smaller items we have recommended for attention has been prioritised for implementation before the actual hand-over date – which clearly benefits passengers.

Freight Arranger

We have continued to work on the Innovate UK/DfT-supported F3 freight project noted in last year's newsletter. This project has been focussing on domestic inter-modal traffic (e.g. for the FMCG sector), with the aim of being more efficient in the local truck hauls, at terminals, and on the rail network. It had been hoped to run a validation train (indeed, on five separate occasions we had a date on which to operate!), but so far this has not happened. Reasons have included shortages of wagons, traincrew with the appropriate route knowledge, and an engineering possession – none of which are problems for the competing road haulage industry.

However, commercialisation of the project has gone faster than we were expecting. Discussions with logistics companies and others have led to direct requests to move freight by rail, including both by running new services, and by adding traffic to existing ones. A key reason for this has been the state of the British road haulage industry, which currently has a shortage of about 50,000 drivers out of a workforce of c. 500,000. As the average age of truck drivers is reported to be 57, and only 1% are under 25, this problem looks to get worse – which should give rail some opportunities.



Within TruckTrain Industries, the Freight Arranger brand has been resurrected, and a new website set up at: www.freightarranger.co.uk.

If you are aware of shippers, forwarders or 3PLs wanting to use rail for their freight needs, please get in touch.

Fares Review

The Williams Rail Review was set up in Autumn 2018 to examine possible changes to the structure of the rail industry in Britain. We have given direct input into that.

However, that review also enables the consideration of other changes within the industry, which has so far been difficult to consider. A key one amongst these is the fares system, which is of critical importance to the industry but has a low public image. As well as the (sometimes-incorrectly!) perceived high cost of rail travel, price discrepancies have led to passengers using split ticketing to try to get the best deal, which is not the ideal outcome for anyone. Unfortunately, hitherto, proposed changes to fares have inevitably meant that some train operators would have been made worse off, which they have of course argued against. The review should give the opportunity for such a problem to be incorporated in future funding decisions.



To aid us in our work, we are delighted to be joined by Andy Wakeford. With a career spanning several train operating companies and (more recently) the Rail Delivery Group, Andy is one of the few people in Britain who actually knows how the rail fares system works, and he will be leading our projects to improve it. This will include strategic considerations of

which technologies and processes might be appropriate in the future, as well as smaller, more technical pieces of work about revenue allocation between operators, retailing mechanisms etc.

Consultancy Comment

The Railway Consultancy provides services across areas such as demand forecasting, operational planning, strategy and business development; for more details see our website www.railwayconsultancy.com.

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