

An Extraordinary Year

I write this as an unprecedented period of mobility restrictions, imposed by the Government to help with addressing the Corona virus, is coming to an end. Like most other companies, we have had staff affected by the virus, and have been trying to maintain something like normality in the meanwhile. We hope that everyone reading this is similarly slightly, rather than severely, affected.



Even though new trains are entering service, there currently aren't many passengers: this is brand new bi-mode 755413 at Newmarket during one of our (socially-distanced) site surveys

In these times, running the railway has simultaneously become much easier operationally but much harder commercially. Fewer passengers and fewer train services have meant that knock-on delays have fallen significantly, and the timetable has often run exactly as planned. However, fewer passengers and fewer train services also make a complete mess of any train operating company's finances, and the Government has more or less nationalised the railway, with all franchised TOCs just trading on a small management fee, and open access TOCs suspending services completely. Freight, however,

has shown its need to continue serving the economy.



Lockdown downstairs: no passengers at Crystal Palace either

But what about afterwards? Anyone honest who undertakes railway demand forecasting should always tell you that they provide estimates, not certainty. Now, however, even our best estimates may be well adrift. It seems likely that some people currently displaced from rail, and working from home, will continue to do so, at least sometimes, so recent passenger demand maxima are likely to remain records for a time.

However, we do need to carry out planning and investing. It seems to us that schemes which focus on passenger capacity enhancement have their *raison d'être* challenged, but those which provide new links, accessibility to regional facilities and operational improvements should have a more robust business case. Those wider benefits are increasingly being acknowledged, for instance through the Government's "Reversing Beeching" agenda (see below).

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Reversing Beeching

In the run-up to the November 2019 election, a £500m fund to “reverse Beeching” was announced. Dr Beeching was commissioned in the early 1960s to improve the finances of the railway, which he did. Some of the measures – such as introducing trains for containerised freight – have been immensely successful, but some of the cost-cutting measures have not. Whilst the rail network of the time was too large (resulting, as it did, from unfettered 19th century competition), some of the line closures resulting from his report have clearly led to social isolation and economic deprivation. This had particularly occurred outside S E England and, given the geographical nature of the Conservative Party’s election win, has led to a political (as well as economic) need to address some of these issues.

An initial deadline of March was set for the submission (by MPs, but with local support) of schemes which might be appropriate within this funding mechanism, which is acknowledged only to provide funding for a small proportion of any comprehensive rail programme of rail re-openings. In May, several schemes were announced as immediate beneficiaries, including the re-opening of the Ashington branch (Northumberland).

Many other schemes are currently being given advice by the Department for Transport about their development, including several schemes with which the Railway Consultancy is involved e.g. our ‘old friend’ the passing loop on the St Albans branch. We were also commissioned earlier in the year by EMR to prepare a Strategic Outline Business Case for the re-opening of the Ollerton branch, in Nottinghamshire.

In a rather older scheme for the Consultancy (we first undertook work for it in 1997!) is the potential re-opening of Pontrilas station, in rural Herefordshire. This could provide access to a wide swathe of countryside distant from a station: the 22 miles between Hereford and Abergavenny is currently one of the longest stretches of passenger railway in Britain without an intermediate station. At present, we have just completed an update of the demand and revenue forecasts, noting that:

- rail trip rates have broadly doubled in the intervening years;
- car ownership has increased;
- the local population has increased but (much more difficult for demand forecasting) has somewhat changed in type, with many of the extra people being those from outside the area, with their (longer-distance) trips to other areas (potentially by rail).



The old station at Pontrilas – but any replacement facility would be at a new, less-constrained, site

However, all the “Reversing Beeching” type projects are challenging the historic wisdom of conventional Benefit: Cost Appraisal techniques. No longer is it sufficient to ensure that revenues and time savings will comfortably exceed operating and capital costs because, for the majority of the cases being examined, that will simply not be true. Whilst the biggest schemes (for instance, Crossrail) may support the effort properly needed to estimate Wider Economic Benefits, this is not realistic for smaller schemes. Values that are difficult to quantify are increasingly prized: for instance, domestic tourism clearly benefits from places being on “the network”.

If investment in rail is to become a facilitator in wider local strategies, such as improving accessibility, and enabling local tourism and economic development, then this may be helpful if funds are available. If, however, funds are not available because the Government has run out of money, then there is a danger of a more politically-driven agenda for selecting rail improvements – or getting none beyond those already being delivered.

Access to Stations

The Railway Consultancy has supported rail clients over the last decade with specialist input into access strategies, including cycling, Station Travel Planning and particularly car parking. We have undertaken a series of appraisals of demand assessments and feasibility surveys for the potential expansion of car parks at stations managed by a major regional and commuter Train Operator. Using occupancy, revenue, access mode and catchment area data, we developed a hierarchy of demand for additional spaces. Working with parking construction specialist McLaren, we then surveyed the preferred sites in more detail and produced outline designs for multi-storey and decked car park expansions, to feed into the future strategic direction of station developments.



South Western Performance Task Force

In recent years, train service performance on the routes out of Waterloo has slipped somewhat, and the jointly-owned MTRC/First Group South Western Railways franchise needed to address this. A project team was set up to manage a range of workstreams, including into the quicker recovery from delays – and (of course) having fewer delays in the first place.

The University of Southampton had previously undertaken some meta-analysis of train running information across the franchise area, including the development of a dataset of all delays mapped geographically. This was used to identify specific locations where the Railway Consultancy's specific 'forensic planning' skills were put to effect: Guildford, Raynes Park and Barnes.

Temporary speed restrictions proved to be the main problem at Guildford, and these have recently been lifted by Network Rail, following a programme of track maintenance during the Spring. Conflicting train movements were causing problems at Barnes, despite correct application of junction margins within the timetable. However, we identified that the differential lateness of punctuality was the problem – that is to say, if the first train (here, an up train) is generally later at the point of conflict (here, the down one), delays will occur, even if the timetable has been correctly constructed.



The railway probably doesn't know enough about the detailed operational impact of temporary speed restrictions, such as these at Guildford

At Raynes Park, knock-on delays were found to be preventing easy merging of up services to form the core suburban service – but we identified these delays to be fourth-order: late local services from Basingstoke were delaying semi-fast services starting at Woking, which were then delaying slow trains joining the main line at Hampton Court Junction, which were themselves the trains causing problems at Raynes Park. We are not aware of anyone else having managed to trace systematic knock-on delays back four trains. The resolution to this last problem was therefore the addition of small amounts of extra station stop time – but at locations of up to 30 miles from the location where the symptom was showing.

This project shows the benefits of applying rigorous analysis to railway operating problems, and the ongoing implementation of our recommendations should contribute to improved train service performance when the railway is faced with greater public demands again, in the coming Autumn.

Sydney Area Timetable Review

The development of new railway timetables inevitably leads to many trade-offs between different objectives and different groups of passengers, many of which are in the public eye. Ensuring that the best decisions are made is therefore crucial, if significant social inconveniences and economic losses are to be recognised and avoided.

In the Greater Sydney area, in which RCL have been active for over a decade, plans are in hand for a multi-stage development of suburban rail service enhancement. A particular issue arises in 2024, when conversion of part of the Bankstown line into a metro line requires changes to services between Lidcombe and Bankstown, and to/from Liverpool.



New and old Sydney Trains pass at Bankstown: by 2024, this will look quite different, as it will become a metro:rail interchange

That date also provides an opportunity for some route simplification designed to enhance punctuality levels within a new service pattern covering routes to the South West.

Because of the obvious stakeholder interest in these changes, Transport for New South Wales thought it would be useful to request technical peer review from an independent perspective, and the Railway Consultancy was selected to provide this. We are currently undertaking detailed (signalled/ station stop) capacity analysis, challenging the logic and appraisal method behind TfNSW's proposals, and considering whether the selected service options are both operable, and the best that can be achieved within the resources available.



Erskineville Jct: by 2024, a 20tph service will run on the lines to the right, through the CBD, to the 2-platform terminus at Bondi Junction, where operations are going to need to be planned - and managed – very tightly

Consultancy Contact

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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Publications

Still available from www.anharris.co.uk: “Designing and Maintaining the Urban Railway” and “An Introduction to Railway Operational Planning”. An up-dated version of “Wheel: Rail Interface” is in preparation.

