

Southern Performance

We have continued to help Southern with detailed issues affecting train service performance. During December 2004, we carried out an audit of the suburban train service at Victoria (platforms 9-12), following a similar exercise carried out the previous year on Southern's mainline services. Whilst the operation of suburban services at Victoria is complex (requiring a considerable amount of attaching and detaching trainsets), services ran well during our period of surveys. Nevertheless, we were able to make a number of recommendations which will aid Southern's upward performance trend.

We have also become particularly familiar to staff at Clapham Junction, since we have also carried several studies for Southern there too. These have included examining the travel patterns of cyclists, and the methods passengers use to obtain train running information, including whether or not train headcode data is useful.

Website

Additional information about the Company, may be found on our website www.railcons.com which has recently been updated.

Staff E-Mail Addresses

Staff can be contacted using firstname.lastname@railcons.com

...although we are sorry to see Matthew Smith leave to continue with accessibility issues on a full-time basis at Southern.

Project Updates:

Developments in the North West,

Further to features in previous newsletters, we are glad that progress has been made on a number of the projects with which we have been involved. The Allerton interchange in South Liverpool, giving access to John Lennon airport, is due to open with the December timetable. Funding has now been agreed for an upgrade to Salford Central station in Greater Manchester, whilst Deeside-based Toyota has now run a trial using intermodal rail services from the Trafford Park terminal. We are continuing to work with the Welsh Development Agency, freight train operators, terminal operators and industrial customers to increase freight services to/from Dee Marsh yard (near Shotton), taking traffic off the road network. Also in the same area, we have been facilitating discussions about potential rail service options for a major new industrial customer investing in North East Wales, which should lead to significant additional rail tonnages.

...and abroad

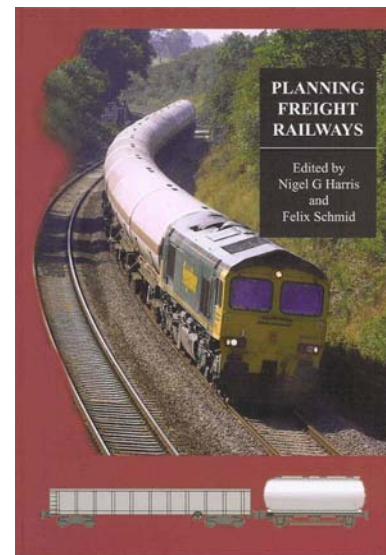
We continue to support the Railway Technology Strategy Centre (RTSC), Imperial College in their benchmarking of metro railways across the world (the Nova group). During the last year we undertook a performance study of the Dublin suburban system, in which we were able to make a large number of specific recommendations about improvements to timetabling parameters, platform management, information provision and business planning processes. We also helped RTSC with a project examining the cost structure of metro stations. It has been possible to derive a formula to indicate the likely cost of stations, given their physical characteristics (e.g. number of platforms, lifts etc.), with the residual values giving some indication as to the ability of local management to achieve expected costs.

For more information about RTSC and the Nova metro group see their respective websites at www.rtsc.org.uk and www.nova-metros.org

Planning Freight Railways

"Planning Freight Railways" was published in late 2003. Co-edited by director Nigel G Harris, the book contains a wide range of contributions (including from other members of the Consultancy) and will be of interest to all those seeking to know more about rail freight's potential for development.

Although the book is available in bookshops at £30, we can offer it to you for this price post-free in the UK (please send cheques made payable to 'A & N Harris' at our address on the front of this newsletter).



Did it Work?

One of the most significant recent changes in the rail industry which will have been noticed by passengers was the complete re-write of the South West Trains' timetable late last year. We have carried out both operational and commercial analysis on this.

Over the last few years, train service performance in Britain has rightly received considerable attention. A number of issues have become apparent as being causes of its decline, including increased numbers of trains on the same infrastructure, increased numbers of passengers per train and per station, and increased safety equipment and regulations, leading to train drivers behaving particularly cautiously. Following such a period of indifferent train performance, SWT introduced a new timetable on 12th December 2004. As well as re-casting the services on many lines completely, this included wholesale revisions to booked times, with more time being allowed for both station stops and inter-station running. However, significant improvements in performance were recorded, with punctuality afterwards typically reaching 90%

As reported in 'Modern Railways', the Railway Consultancy was commissioned to conduct an objective analysis of the effects of the new timetable. Using a sample of 570 journeys from across the SWT network, as agreed by the Southern Rail Passengers' Committee, timetabled journeys were examined, both before and after the timetable change. In addition, analysis was conducted using output from the EGRET and PIPIT train running systems, to examine the performance of the sampled trains.

Generalised cost analysis was used to weight the different parts of journeys by the relative difficulty perceived by passengers. Results were also weighted within each of the 10 service groups by the relative demands at different times of day, and between the service groups (to reflect their relative importance). Overall, it was demonstrated that passengers' timetabled journey times had increased by around one minute, but that the performance improvement was worth four minutes to them so that overall, passengers should perceive an improvement of three minutes in their journey.



Trains in the 'throat' of Waterloo station

This work was supported by further operational analysis of the key Waterloo-Clapham Junction line section, the data collected being compared against that from the defensive driving surveys we carried out in 2003-4 (see last year's newsletter). A number of detailed issues were identified regarding despatch procedures and inter-station running, and some minor timetable revisions are expected to be made this December on the basis of our results, in order to improve performance yet further.

The Railway Consultancy Ltd

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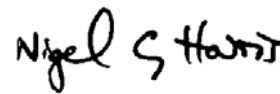
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After nearly ten years of the Consultancy, we decided that it was time for a change to our corporate design, including incorporating colour. Whilst wishing to retain some element of our initial 'track' design (see the green lines at the foot of the page), we have also gained an icon in the shape of a tunnel. Without wishing to take this too seriously, this can either be considered as our helping clients to 'see the light at the end of the tunnel', or merely a reflection of the view of the Crystal Palace tunnel mouth from our office window. However, our aims remain the same – to provide a professional friendly and cost-effective support to the rail industry, enabling it to develop its business with both passengers and freight customers.

We have been extremely busy over the last few months, in a wide variety of studies across our client base. We continue to help the SRA/DfT with planning improvements to the rail network to serve the enlarged Stansted Airport, whilst we have been assisting franchise bidders with data analysis for the East Coast, Kent, and Greater Great Western franchises, although as can be understood we are not able to go into details.

Much of our effort in the last year has (rightly) been on improving the operational performance of the railway, and we are pleased to report such work for SWT, Southern and LUL. It is also pleasing to see physical progress on projects previously worked on; for instance, minor works have now been carried out at a number of Southern stations, following the mobility-impaired access work reported in last Summer's newsletter.

However, as well as detailed work on the existing railway, we are also now able to say something about our futuristic work on the proposed maglev line between London and Scotland, on which we have been working for over two years. Britain's increasingly-congested transport systems need investment in solutions for the 21st century; we wait with interest to see if the Government will take this project forward.



Nigel G Harris
Managing Director

Project News

North-South Maglev Feasibility Study

Although the Department for Transport had (in 2001) commissioned a study into a North-South high-speed conventional railway line in Britain, its high costs appeared to be difficult to repay, and an opening date of 2040 was suggested as the earliest possible, despite unambiguous and ongoing domestic transport problems.

However, simultaneously, the two major German companies involved in the development of magnetic levitation technology (Siemens and ThyssenKrupp) began enquiries into the potential of maglev to fulfil a similar role. A project development group was set up,

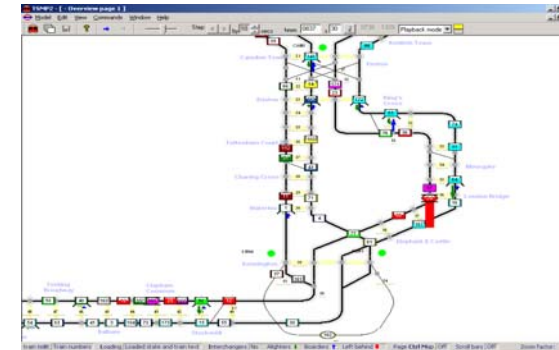


Prototype maglev on the test track at Dörpen, Germany.

led by Expert Alliance. Initial work showed that, by using an elevated guideway, construction could potentially be much quicker and cheaper, as more prefabrication work could be carried out offsite. The higher speeds achieved (500kph could be attained in revenue service) would also lead to higher revenues, further improving the business case.

The Railway Consultancy was therefore commissioned to provide detailed transport planning services for this project, including the identification of potential routes and the forecasting of possible demand, as part of the business case development process. Demand forecasting was undertaken using our multi-modal GCOST™ model, which provides estimates of time savings as well as revenue increases. With the higher speeds expected to be achieved by UKU, the macro-economic benefits of time savings could be very substantial (around £2bn p.a.). The transport impacts are complex. Effects include abstraction from domestic air, and considerably increased opportunities to develop more efficient use of the existing rail network for both passenger and freight traffic.

Further information about this project is available at www.500kmh.com.

Train Service Modelling for Driver Training Video

London Underground's operations, with their high service frequency and heavy passenger demand, are a challenging task and require team working by all operational staff on the ground. It can, however, be difficult to raise awareness among staff of how crucial the co-operation of drivers, station staff and signallers is for service performance, and how small delays caused by staff or lack of communication can potentially lead to severe disruption across the complex network, affecting thousands of passengers.

After the success of an initial awareness film focussing on these issues on the Jubilee Line, London Underground commissioned The Railway Consultancy to assist in the production of a series of similar films covering most of the other lines. The films are based on scenarios highlighting specific problems on each line, e.g. crew changes at Earl's Court on the District Line.

London Underground's own simulation tool, the Train Service Model (TSM), was used to model the possible consequences for service performance and passengers caused by a small initial incident of delay. Consultancy staff created the scenarios and storyline for each film based on suggestions from London Underground and conducted all the modelling runs using the TSM. We also assisted with the actual production of the films through suggesting suitable shots and filming locations. At a later stage we liaised with the production company during the cutting and polishing of the final version of each film to help ensure topicality, continuity and consistency.

Watford-Gatwick Route Survey

During 2004, the Strategic Rail Authority produced its Brighton Line Route Utilisation Strategy, one of a series of documents aiming to plan demand and capacity on key sections of the national rail network. As one of its recommendations, it was suggested that the Watford-Gatwick service should be terminated at Clapham Junction, with passengers for stations further South changing at Clapham. This suggestion was made on the basis of apparently-low numbers of passengers remaining on the service through Clapham.

However, the figures underlying this recommendation did not ring true with the London Transport Users' Committee (LTUC), who therefore commissioned The Railway Consultancy to carry out a thorough assessment of demand levels on this service. We carried out on-train counts of every service between Watford and East Croydon, also noting passengers boarding and alighting. In addition, we handed out 3500 reply-paid postcards to passengers, inviting them to give details of their journeys. Remarkably, over 1600 passengers responded, enabling us to analyse with confidence the trip patterns on the line, and to supply train operator Southern with a demand matrix.



A Class 377 from Gatwick, on arrival at Watford Jc

Our analysis highlighted a weakness in the SRA data, which had been derived from only partial ticket sales information. Our counts indicated that roughly double the number of passengers were using the service, compared to the SRA figures. As a result, our report rejected the SRA's suggestion, instead arguing for limited expansion of the service, given the levels of business actually being carried.