RPS – April 2011 meeting – East/West Which is best?

The Chairman welcomed the audience, and took an initial straw poll of preferences: 13 favoured the East Coast and 8 the West Coast. He introduced the first speaker:

Alan Varley

Summarising the routes he said that the WCML was constrained by natural obstacles in the form of the summits and valleys in the Pennines and Southern Uplands, and the resulting curvature of the line – it was suggested that the straightest part of the line was through Kilsby Tunnel!. The ECML was hampered by the strangely-placed stations, drainage problems and historically the effect of the positioning of water troughs.

His initial 1960's recollections of the ECML were of short sprints with Deltics between numerous temporary speed restrictions, and on the WCML were of Class 40's struggling up to the northern summits, and taking half an hour on each.

Subsequently, the ECML was improved by the lifting of many speed restrictions, during which time the Deltics gave way to the HSTs and then to the class 91's following electrification. Sadly, the expected 140mph speeds did not materialse.

Following the electrification of the WCML in the 1960's, very little changed until the Pendolinos were introduced in the 21st century. Here again, the expected 140mph speeds have not arrived.

He compared the speed limits on the two lines, and suggested that times of 3hr41½min should be achievable over the 393miles to Edinburgh, and 3hr50½mins over the 401 miles to Glasgow, and could not understand how Virgin could not offer a 4hr journey time, although East Coat are doing so from May – although KX to York times continue to deteriorate.

As to the future he wondered whether the upgrades at Welwyn, Hitchin and Doncaster would ever happen in view of the diversion of resources (and services) to HS2.

Jonathan Tyler

He was involved in the early proposals for the new EC timetable which, sadly, have not all been adopted in the May 2011 timetable. He is now involved with Greengauge on the WCML services post-HS2.

He recommends regular stopping patterns with good connections, and is critical of intermediate timings on non-London routes. He maintains that traffic flows should be improved by maximising capacity.

He contrasted current UK policy with that of the Swiss. They are formulating policies strategically for the 2030 timetable, by ensuring suitable rolling stock will be available and that changes will be made to the infrastructure to ensure that the timetable is workable. Having rolling stock with different maximum speeds (e.g 125mph (Pendolino's) and 100mph (Class 350's)) on the same track will inevitably cause problems. He thought that a problem like Welwyn Viaduct could be handled by having a well-structured timetable and suitable signalling.

His current thinking is that the West Coast is constrained by the layout at Colwich. He thought that sectional running times should be expressed as a tenth of a minute rather than a half minute. He has concerns about the running of freight trains, and how accurately they are timed. Following consideration of headway and reoccupation times, he suggested that trains should be timed tightly into terminal stations, and lightly further out. He considered that 16tph on the fast line should be achievable (12 Virgin, 4 LM). Observations suggest trains arrive in KX/Euston every 2mins in the peak.

East Coast

Paul Walker (see file)

Paul said that his first experience of the route was on VE Day, 8th May 1945, when his parents allowed him to travel on the Sleeper, and his most vivid memory is of the bonfires throughout the journey.

His favourite features are the bridges (Tyne, Forth and Tay), the proximity to the sea at the northern end, the cities of York, Newcastle and Edinburgh and the rolling stock which is comfortable and rides well

He presented a log of the 1130 Kings Cross-Newcastle HST which was 5mins late away from Stevenage but had recouped it all by York He also showed a log throughout on the 0952 Aberdeen to Kings Cross. Contrary to current practice, the driver ran to the limits all the way through Scotland, with a consequent 11min wait at Newcastle. Following a punctual arrival in York, the train was then following a preceding train all the way to Kings Cross, where arrival was 19mins late.

Sam Walker – on behalf of John Heaton (see file)

A log of 55022 on the 1555 Kings Cross-Leeds behind a Deltic – his favourite. Doncaster at 156miles was passed in 100mins and arrival in Leeds in 127min. In his experience, East Coast tended to introduce infrastructure improvements that would save just 10 seconds. West Coast, on the other hand, tended to suffer from slow approaches and departure from intermediate stations, and did little to improve them.

A log on the 1500 KX which covered the 188miles to York in 97m10s was presented, together with a 1991 log from Peterborough to York taking just 57m16s, a York to Durham Voyager and Hull Trains Stevenage to Grantham log.

He offered the improvements proposed at Hitchin, Werrington and Shaftholme Junctions as evidence that there is a policy of continuous improvement. Reliability is getting better, although the rise in cable theft is a cause for concern.

He was disappointed with the new EC timetable which is riddled with slack timings and unnecessary station stops.

Comments following the presentation covered the recent tendency for EC trains to cruise at 127mph while WC tend to hover around 124mph. This was thought to be due to less supervision on the EC, whilst WC drivers tend not to drive as hard, due to higher density of traffic, they catch up with the earlier trains. It was suggested that the greatest effect on performance was the variability of acceleration and braking, rather than maximum speed.

West Coast

John Rishton & David Stannard (See file)

John Rishton presented a chart showing the track profile of the route, the associated pinch points and speed restrictions, together with a typical timetable graph. He explained the likely constraints that affected each train. The main problems appear to be around Ledburn Junction, Norton Bridge and Crewe.

David Stannard reviewed the rolling stock on the WCML: The 390 was originally designed as an 8-coach train with 140mph maximum speed and an 8% tilt. An extra coach was added, and the maximum speed of the fleet was reduced to 125mph. 31 of the 53 sets will have two extra unpowered coaches added. The power/weight ratio is 13.8, and they produce 6836hp. As 11coach sets, the ratio falls to 13.3, but is only expected to cost 15seconds between Euston and Crewe. The balancing speed of 125mph can be achieved on a 1in85 gradient. They operate with regenerative braking and have energy meters to encourage power saving. It was suggested that energy costs represents 4% of total costs, and a £50 saving between Euston and Manchester was minimal but that increasing capacity was more important than cost saving.

“Thunderbirds” are rarely used these days, as there is little engineering work and failures

The Class 221 Voyagers have a 6% tilt and 9.2 power/weight ratio. They have recently been de-rated from 750 to 700hp. Cross Country tilt is now inoperative.

It was suggested that the acceleration of Voyagers and Desiro’s was identical up to line speed, but having rebuilt the railway to 125mph it was illogical to mix 100mph Desiros with 125mph Pendolinos. Similarly, low turnouts at Hanslope Junction, between Tamworth and Lichfield, 20mph at Crewe and the Lancaster turnout immediately prior to an adverse gradient were hindrance to performance.

Finally, the Chairman requested a further vote on preferences which resulted in 12 in favour of East Coast and 9 West Coast – a net move of 1 from West Coast to East Coast