Philip Haigh's synopsis of the Government's rail freight strategy (RAIL 810) made interesting - if somewhat disheartening - reading. A section of the article concerned the limited number of freight trains that are electrically hauled, as a result of the current lack of useful electrified routes available. The current 25kV and 750V networks are primarily in existence to service the passenger sector. Only a handful of short-distance but operationally desirable freight links have ever been wired - a rare example is the line from Cornbrook junction to the two intermodal terminals at Trafford Park. Herein lies one of the big barriers to entry for electrically hauled rail freight in the UK - a lack of suitable terminals, with the few that exist only being connected to a disjointed, piecemeal, electrified network.

There has been little (if any) investment in extending wires into other terminals that are within a short distance of the existing electrified network. Daventry, Mossend, Ditton and Garston are exceptions, but locations such as Leeds, Doncaster and (during the heyday of Anglo-Scottish coal movements) Hunterston have never had such treatment.

It will be interesting to see if, for example, the lines into Grangemouth, Colnbrook, Theale, Cowley, Bristol FLT, Wentloog or East Midlands Gateway will ever be electrified, following completion of the respective Edinburgh-Glasgow, Great Western Main Line and Midland Main Line electrification programmes. At the same time, inclusion of the Bootle branch in Liverpool must be high on the wish list once the trans-Pennine route is wired, although given the continued apparent lack of interest in wiring the Felixstowe branch this is probably unlikely. It is therefore understandable why the freight operating companies (FOCs) tend to prefer diesel traction, because of its go-anywhere flexibility.

Generally speaking, the business case for utilising a diesel for the first or last few miles at each end of a long-distance electric haul does not add up. Hence (again) the FOCs' preference for not using electric traction, but instead using a single diesel from start to finish - even though it may be under the wires for over 90% of its journey. This is frustrating for the FOCs. It potentially

Following the recent publication of the Government's Rail Freight Strategy, JONATHAN MOSER, managing director of Railfreight Solutions, examines the prospects for developing electrically hauled freight

 reduces network capacity for both passenger and other freight services, it results in the overhead line equipment assets not being fully utilized, and it undermines rail's favourable carbon footprint characteristics.

Hopefully the arrival of the Class 88s may help to change this a little (only ten were initially ordered), but there literally needs to be more joined-up thinking if electric haulage is going to be more attractive to the freight operators.

Possibly some form of grant similar to MSRS (Modal Shift Revenue Support) might assist the economics of using electric traction. A positive side-effect could be marginally increasing route capacity as well as reducing delays to other trains, thereby providing additional value to the rail industry as a whole.

Lobbying for wiring of the Felixstowe-Nuneaton (F2N) route has long been ongoing, and rightly this has been in an intermodal context. However, other commodities should not be dismissed in relation to this route - including the construction sector, which is now the second biggest growth area for rail freight.

Mountsorrel (Leicestershire), on the MML, eschews over 2.5 million tonnes of aggregate per year, the vast majority of which goes to London and the South East together with East Anglia. Many of the destinations are adjacent to existing electrified lines (both overhead and third rail), and so the case for wiring Mountsorrel is very compelling - as little as one sidings would be required, since diesel-powered shunters are already used to place trains under the loaders.

Flows to Doncaster, Tetton, Elstow, Luton, Radlett and several others in London could potentially be electrically hauled (subject to suitable exchange sidings being put in place at the receiving terminals).

However, electrification of the F2N line

There literally needs to be more joined-up thinking if electric haulage is going to be more attractive to the freight operators."
Electric-hauled freight

would also allow electric haulage of aggregate trains to destinations such as Peterborough, Ketton, Chesterfield, Bury St Edmunds, Needham Market, Marks Tey, Harlow, Broxbourne and even Bow or West Thurrock. Should grab discharge be required at these terminals, then use of diesel shutters is not always necessary. Inserting barrier wagons between the electric locomotive and its train at the receiving terminal allows the locomotive to propel its loaded wagons from a wired reception siding onto a non-electrified unloading siding.

This was successfully done at Manchester Euro-terminal, when DB Cargo operated its Duisburg-Traford Park service using a Class 92 all the way from Calais, rather than a Class 66 from Dollards Moor as had previously been the case.

In the case of Mountsorrel, it lies adjacent to the fast lines. This results in trains having to weave over to or from the slow lines, reducing line capacity.

A study has been carried out looking at potentially moving the terminal to the eastern side of the MML, adjacent to the slow lines. This would remove this constraint, and could also significantly benefit British Gypsum, whose plant is less than 100 metres away. I believe the scheme is still under consideration by Network Rail, although the chances of a positive outcome are not looking to be overly encouraging.

Of course, none of these aspirations are viable without reliable electric traction, and the surplus of diesel now within the total UK fleet would not help a potential switch.

However, by 2020 another 15 Class 90s will be released by Greater Anglia once all its new trains are delivered. And the new and more powerful Class 73/9s present new opportunities for freight moving within third rail territory as well as away from it.

That said, the real potential ‘jewel in the crown’ is the Class 92, with its extremely useful dual-voltage configuration capable of working everywhere from the Channel Tunnel or Southampton to the Scottish Central Belt via two separate Anglo-Scottish routes. And yet over half this fleet has no regular work.

It will be interesting to see how the Government moves forward, in light of what it has said within its freight strategy publication.

Many of the ideas are commendable, such as providing support in looking to identify new markets (by no means easy), but sensible investment in the strategic freight network would help most in the short to medium term.

Electricity of a few key specific locations in the near term - such as Mountsorrel, the Dodding Hill line, Cacont Road to Junction Road, Acton Wells to Acton Main Line and Willesden South West Sidings (circ eight miles in total) would provide a quick win for freight.

On a larger scale, but still in a manageable chunk, would be to wire the 19-mile Ipswich-Felixstowe line (long since called for, and to most people an absolute ‘no brainer’). This would remove 90% of the current diesel moves on the Great Eastern Main Line, thereby increasing marketable resilience on the busiest two-track line in the country.

A subsequent phased F2N project plan would then implement successive electrification stages - starting with Nuneaton to Hams Hall, then Hams Hall to Birmingham, the Sutton Park line, Haughton Junction to Peterborough, and finally Helsington to Nuneaton. Each step of the plan would involve the number of Class 90s, which could use electric traction throughout their complete journey. The other benefits already described would also kick in at the same time.

Intermodal is the biggest growth area for rail freight. Only around 30% of it is currently carried by rail, while the UK’s trunk roads and motorways are choked with HGVs.

Supermarket asks, retailers and freight forwarders, who represent the majority of intermodal customers, require frequent, fast transit, on-time service. And although outside the scope of this discussion, ideally they want them seven days a week.

Expansion of the electrified network can help deliver these customer requirements, relieve congestion on major roads, and at the same time stimulate further growth in rail freight.

On November 9, GB Railfreight 92044 Copperin heads north through Greenholme on the West Coast Main Line hauling a bauxite train. Jonathan Moser suggests these dual-voltage, powerful electric locomotives could be a real asset for the rail freight industry, but less than half of the 46 built have work, and many have been exported for use in Eastern Europe. JASON BUSSETT.

About the author

Jonathan Moser, Contributing Writer

Jonathan Moser is the founder and managing director of Railfreight Solutions. He has been involved in the rail freight industry for over 25 years, both as a major service provider and as a significant buyer and user of rail freight. He has a wide-ranging knowledge of the UK rail freight market, and has held directorships for two of the leading freight operating companies in the UK - GB Railfreight and DB Cargo.