

National Infrastructure Commission call for evidence

Connecting Northern Cities and London's Transport Infrastructure

Submission from DB Schenker Rail (UK) Limited

January 2016

1. This is the response of DB Schenker Rail (UK) Limited (DB Schenker) to the call for evidence issued by the National Infrastructure Commission (NIC) in November 2015.
2. DB Schenker is the largest rail freight operator in the UK and is a wholly owned subsidiary of Deutsche Bahn, the second largest mobility and Logistics Company in the world. DB Schenker operates over 5000 trains per month in the UK conveying everything from cereals to coal, consumer products to biomass, petroleum to steel and is the leading rail provider to the construction industry in the UK. DB Schenker employs over 3300 people in the UK providing freight, infrastructure, rail support and charter passenger services within the UK and freight services to and from continental Europe via the Channel Tunnel.
3. DB Schenker, in common with other rail freight operators, is a wholly private sector activity receiving no material direct government support in the UK. In a heavily-capital intensive industry, DB Schenker owns and operates its own assets, including depots and rolling stock, and has invested heavily in new locomotives, wagons and facilities since UK privatisation.
4. DB Schenker's response is in four parts – general observations about the value and characteristics of rail freight, a description of the current demand forecasts for rail freight, observations on current government policy and rail freight's specific infrastructure needs and how these relate to two of the three national challenges set out by the NIC.

Rail Freight

5. Rail freight is a wholly private sector activity determined by customer and market needs. In this respect it is different to passenger rail and rail freight has a very different, less direct, relationship with Governments, funders and other devolved bodies as a result.
6. Rail freight generates over £1.5bn of economic benefits for UK plc every year through a combination of improved productivity, reduced congestion and wider environmental benefits. It is vital for the competitiveness of the UK economy and is an intrinsic part of everyday life in the UK.
7. Rail freight transports goods worth over £30bn pa, moving over 25% of the containers entering the UK and underpinning industrial sectors such as power

generation, construction and steel. Rail is a key supplier to UK manufacturing sectors such as the automotive industry and a major supplier to Network Rail and other Infrastructure Managers.

8. Rail freight has transformed itself since privatisation in the mid-1990s into a competitive and vibrant industry, recognised by the CEO of the Office of Rail & Road as “the most transformed sector in the rail industry since privatisation”. Total volumes increased by over 80% from 13.5bn ntkms in 1995 to 24.4bn ntkms in 2013-14.
9. The sector is changing as the UK economic base itself shifts, with reductions in traditional rail freight markets such as moving coal to power stations - where Government environment and other policy choices are driving conversion to biomass, renewables and other forms of electricity generation. Alongside this is an increase in the volume of containers moved for the growing retail/consumer sectors.

Continued rail freight growth will increasingly focus on the retail, construction and international sectors reflecting the general change in patterns of the UK economy.

10. This will have geographical as well as sectorial implications, as the concentration of the UK's population south of a line from the Humber to Lancashire means that this will become increasingly significant for rail freight. Ensuring sufficient usable rail capacity is available south of this line to allow rail to compete with road will be more complex than ever over the next decade.
11. Rail freight is an intensely competitive industry – both within the mode and with road transport in particular. This strong competition has driven efficiencies, lowered prices to customers and reduced the costs of operation. The drive for longer and heavier freight trains is one example of how this has been achieved. In the decade after 2002/3 the number of freight trains on the network reduced by over 33%, whilst volumes increased by 17% - this meant (taking distance into account) that each freight train increased its cargo carried by over 50%.

These pressures will continue and the sectors offering the most volume potential for future rail growth are also those with the strongest price and service competition with road transport.

12. Intrinsic to maintaining rail freight growth and development will be continued private sector investment. Investment in rolling stock and facilities by freight operating companies such as DB Schenker is clearly understood - over £2bn has been invested by FOCs since privatisation.

In addition over £500m has been invested by Government (including EU funding) in Control Period 4 on freight specific network enhancements. In addition, a further £230m has been planned for Control Period 5 freight specific network enhancements by the UK Government and Transport Scotland.

Freight customers and suppliers - including ports and terminal operators have also invested heavily in rail freight facilities - over £250m in the last decade on port-related rail infrastructure alone. Investment in new rail-connected warehousing and terminals is critical for future rail freight growth.

Ensuring the private sector has the confidence to continue to invest to support rail freight - and rail freight growth in particular - should be a key consideration.

13. Rail can move freight in greater volumes, more safely and reliably than road transport. Each freight train removes up to 75 HGVs from the UK's roads – without rail freight over 7.5m additional road journeys would have been needed. Transporting freight by rail reduces CO2 emissions by 76% compared to road.
14. Rail freight operates in *response* to specific customer demand - a key distinction from passenger where services are planned in *anticipation* of demand. Many trains are customer-specific rather than multi-customer - so if a customer does not require a service on a particular day or week it will neither be scheduled nor operated. Rail freight's use of capacity is therefore often very different to that of passenger operators.
15. Both railway and political devolution pose challenges for national activities such as rail freight – for example in how an appropriate balance will be made between local/regional and national requirements/priorities in ways that best support both regional and national economic activity and growth.

Freight Market Study and demand forecasts

16. In October 2013 Network Rail published a Freight Market Study (FMS) as part of its Long Term Planning Process that (inter alia) contained growth forecasts for 2023 and 2043. These suggested that further rail freight growth of 2.9% until 2043 was possible. Government accepted that these forecasts were robust and should be adopted for planning purposes.
17. Crucially these were an *unconstrained* set of forecasts - i.e. current or anticipated future constraints were not taken into account.
18. In reality the railway is already constrained in many locations –e.g. the Midland Main Line which Network Rail has formally declared as “Congested Infrastructure” and for which there is increased current and forward demand for rail freight services. There are also well-known bottlenecks and capacity pinch points (such as the Felixstowe branch) that are inhibiting freight growth and development today.
19. The FMS forecasts were based on a series of key assumptions - two notable examples being the price of oil and its impact on road haulage costs/economics & the ability of the UK Planning system to enable necessary Strategic Rail Freight Interchanges (SRFIs).
20. The output of the FMS was consistent with previous studies in suggesting future growth will be concentrated in a relatively few key economic sectors - including Intermodal (the movement of goods in containers for both industry and the retail sector), Automotive, Construction (aggregates, other building materials and spoil/waste) and International (via the Channel Tunnel).

21. The FMS forecasts reflect the changing nature of the UK economy as it continues to develop and move away from traditional “heavy” industrial sectors such as coal and steel to a more service orientated composition which relates more closely to where people live and work.
22. Historic rail freight infrastructure provision reflected the role rail freight played between the 1960s and the 1990s; this has meant that the growth in intermodal traffic has driven the need for enhancement of rail infrastructure in other geographic areas, often in parallel with growth in passenger traffic.
23. The forecasts also highlight the critical and growing role of ports in the rail logistics chain; suitable and sufficient infrastructure connectivity to/from ports is critical for rail freight to be able to support the role the UK economy plays in global economic activity.
24. Appropriate connectivity between key UK ports and the main centres of UK population and economic activity is now a key imperative for future rail freight growth and the associated current (and additional) benefits for the UK economy.

This is where Government’s role - in terms of both policy support and funding - is key.

25. Alongside this, it will be necessary for continued investment in rolling stock and SFRIs (which will need to encompass both rail connected terminals + rail connected warehousing). The private sector will be willing to continue to invest in such facilities (both Freight Operating Companies such as DB Schenker and third parties) if both the investment climate and levels of political/regulatory risk are acceptable.

Government Policy and Rail Freight Infrastructure needs

26. The 2007 Rail White Paper defined the Strategic Railfreight Network (SFN) as “a core network of trunk freight routes, capable of handling more and longer freight trains, with a selective ability to handle wagons with higher axle loads and greater loading gauge, integrated with and complementing the UK’s existing mixed traffic network”.
27. The subsequent 2007 publication “Strategic Rail Freight Network - the Longer Term Vision” - was the then Labour Government’s expression of a long term rail freight policy. This policy was subsequently explicitly continued by the Coalition Government who (together with associated EU funding) invested over £0.5bn in rail freight infrastructure enhancements in Control Period 4.

The present Government is currently reviewing and reforming its rail freight policy.

28. Since 2007, UK rail infrastructure planning has adopted the central themes of the SFN;
 - a. Longer and heavier trains – with the standard length for intermodal trains becoming 775m;

- b. Efficient operating characteristics;
 - c. 24/7 capability;
 - d. W10/W12 gauge capability (including W9 gauge if Channel Tunnel traffic is involved);
 - e. New freight capacity where required;
 - f. 25kv AC electrification of freight routes (which provides opportunities for gauge enhancement as well as electric haulage).
 - g. The development of SFRIs, supported by the National Networks and Ports National Policy Statements;
 - h. Strategic Freight Capacity to protect necessary train paths.
29. These features remain relevant and usually form the starting point of rail freight infrastructure planning. This should continue to be the case, but the themes need regular review to avoid ossification.
30. European railways are already researching the feasibility of freight train lengths of 1500m on selected European mixed-traffic routes, and it is well known that North American practice remains to operate freight trains that are significantly longer than 775m.

Connecting Northern Cities

31. Northern cities are already important destinations/origin points for intermodal and other traffics to/from ports and the Channel Tunnel, with established services to & from key ports such as Southampton, Felixstowe and London Gateway (the three ports that currently dominate UK links to many global supply chains).
- Much of the Control Period 4 and 5 rail freight expenditure / plans have been targeted at improving gauge capability and limited capacity additions on routes to/from these ports. Some of the CP5 plans – for example gauge enhancement between Syston Junction (near Leicester) and Stoke-on-Trent - are currently being re-phased following the Hendy Review.
32. Planning freight trains into some existing terminals (e.g. at Trafford Park in Manchester) is already complex because of the sheer number of other trains at locations such as Manchester Piccadilly.
33. In addition, movements of bulk products such as aggregates and building materials also feature into cities such as Manchester and Leeds, although not to the extent currently seen in London and the South East.
34. The Humber ports – and especially Immingham – are the UK's largest rail freight forwarding locations with very substantial volumes especially of bulk products such as petroleum, coal, biomass and steel.

35. The port of Liverpool, with established rail traffics such as coal, steel and biomass, is investing in a new £300m deep-water container terminal that will double the port's container handling capability and a trial rail intermodal service to the West Midlands has recently been operated.

If the port's aspirations for growth are achieved, it is likely that there will be significant increases in rail freight volumes and these are likely to impact across the north of England and pose significant challenges for the rail sector.

36. Northern cities, particularly in the NW, are central to the FMS growth plans, whether from local ports or more distant ports or regions of the UK. Crucially capacity to accommodate this potential growth is limited/constrained on *all* the key routes.
37. Cross-Pennine transits have become especially challenging. It is not possible to obtain economically viable freight paths during the day on the main Manchester – Leeds route via Huddersfield (known colloquially as the “Diggle” route) and it is increasingly difficult to obtain freight paths on the Calder Valley route via Hebden Bridge.

The main “freight” cross-Pennine route has therefore become the more southerly Hope Valley line between Stockport and Sheffield. This is better located for (e.g.) aggregates movements from the Peak District rather than for intermodal or biomass movements. However access to, and capacity on, this route is not without its own challenges.

38. Studies into options for future cross-Pennine rail options therefore need to ensure that rail freight's needs are taken fully into consideration and that current routing assumptions should not be presumed to be ideal or even acceptable.
39. The West Coast Main Line (WCML) is the UK's principal freight artery, critical for intermodal and international movements and central to the realization of the FMS growth projections. Key elements in achieving this will include;
- a. Securing for rail freight an appropriate share of the capacity on the WCML that will be released after the construction of High Speed Two;
 - b. Ensuring that the introduction of classic-compatible HS2 trains onto the WCML north of the HS2 dedicated infrastructure does not result in a timetable that “squeezes” existing rail freight services or projected rail freight growth;
 - c. Ensuring sufficient connections for rail freight exist between the WCML and existing / proposed SFRIs in the North West.
40. Increased use of rail freight into and through Northern Cities would seem to offer potential additional benefits for customers/users if sufficient capacity could be developed. There would also be wider societal/environmental benefits in terms of a reduction in carbon and other emissions and improvements in air quality.

London's Transport Infrastructure

41. London's current rail freight activity falls into two distinct categories;
- a. Trains that support the economic activity of London and the surrounding region.
 - b. Transit freight that passes through London because of its hub position in the UK rail network.

42. Very substantial volumes of construction materials are moved into London and the surrounding region and underpin much building and development activity. Trains come from Yorkshire, the Mendip Hills, the Peak District and Leicestershire as well as closer locations on a very frequent basis, conveying aggregates, cement and other building materials.

These are delivered to a network of relatively small single-user rail terminals where the product is unloaded, stored and then distributed by road to building sites. Physical space limitations at these receiving rail terminals mean that frequent rail deliveries are necessary and the operations often have characteristics similar to "just-in-time" deliveries. Many of these terminals also have operating limits imposed as part of planning consents which in turn impedes the relationship with the rail network.

43. In the opposite direction, rail can be an effective solution for the removal of spoil or waste from larger development sites, especially if the material is contaminated or requires special handling. For many years rail has moved containerized domestic waste from London for landfill.
44. Rail freight also provides substantial support for the Automotive industry in the London area, in moving automotive components and on occasion finished vehicles.
45. A notable exception to the commodities handled by rail in London is Intermodal or containerized goods. In part this reflects the proximity of London to the main Deep Sea ports, as well as the Channel Tunnel and short sea ports such as Tilbury and Purfleet. However the lack of any substantial SFRIs or terminals in the London area means that potential domestic intermodal traffics cannot be realized.

Strenuous attempts have been made over the past decade to develop new intermodal rail handling facilities in the London and South East. In particular, potential developments at Radlett and Colnbrook have spent years attempting to navigate the Planning System and being resisted by local authorities and residents at every stage.

46. A network of SFRIs, around London (perhaps in relation to the motorway or trunk road network) are a key requirement for the nation as well as the city/region to realise the economic and other benefits of modal shift to rail.
47. London's proximity to key ports such as London Gateway, Felixstowe, Tilbury and Purfleet also explains much of the transit freight that is routed via the capital. The broadly "hub and spoke" nature of the UK rail network means that there are few

routes between the arterial “main lines” outside of London.

Until relatively recently, some cross-London railways such as the West London Line & Gospel Oak – Barking Line were predominantly freight; however growth in demand for passenger rail services has led to dramatic increases in passenger use of these and other lines such as the North London Line, and increasing pressures between passenger and freight use. These routes are moving toward a very frequent ‘turn up and go’ passenger service which reduces capacity for rail freight services dramatically.

48. In addition, all rail freight services from the Channel Tunnel (whether traveling via High Speed One or Network Rail infrastructure) are routed via London.
49. Almost without exception, there are no alternatives to the current transit freight train routing through London. Development of the route north of Ipswich to Peterborough is aimed at accommodating *some* of the projected freight growth from Felixstowe – but none of the existing traffic.
50. Looking ahead, the volumes of rail freight in and around London will continue to increase.
 - a. The role of rail in moving construction materials will continue – DB Schenker, together with the construction industry, are developing new, larger & more efficient multi-user aggregates facilities at Bow, Cricklewood and Willesden. These will be capable of handling larger trains more quickly and will help to create the capacity required to support infrastructure growth in London. They will increase the product carried per train path into the capital and will provide modal shift potential. It is not clear if the development of these sites will create land capacity elsewhere for development or whether these will be in addition to existing facilities rather as replacements.

Without this movement of construction materials, planned developments and increases in housing supply are also likely to be impeded or frustrated.

- b. Rail will continue to support major infrastructure schemes – for example in the building of High Speed Two and associated developments such as the redevelopment of Euston Station or the Old Oak Common area.

This contribution can be maximized with early engagement within the Pre-Planning / Consultation process so that rail freight can deliver enhanced economic and environmental benefits to projects as proven by in the cases of Heathrow Terminal 5, London 2012 Olympics and Crossrail.

- c. DB Schenker is also investing in a new Railhub for automotive handling adjacent to the junction between Network Rail infrastructure and High Speed One at Barking. This facility will be able to exploit the movement of finished vehicles to and from the UK via High Speed One with its larger loading gauge which will increase the rail options available for use.

This facility will benefit Automotive manufacturers in the London area, but

also others across the UK and has the potential to become a vital node in imports and exports for a key UK manufacturing sector.

- d. When one or more SFRIs are finally opened, the potential for intermodal movements between London & the South East and the North West/Scotland will be significantly enhanced. Such movements are a key part of the forecast growth of the Network Rail FMS.
 - e. In addition, there is potential for rail involvement in “City Logistics” with rail movement of consolidated deliveries for retail outlets to terminal stations or other hubs, and then transshipment to (e.g.) electric or other vehicles for sustainable “last mile” delivery.
 - f. The continued development of London Gateway will also result in increased rail services, most (if not all) of which will be routed via London.
51. Increased rail freight services also offer the potential to reduce carbon and other emissions, improving air quality and supporting improved quality of life.
52. Together with the forecast increases in demand for passenger services, it is evident that much of London’s key rail infrastructure will remain mixed traffic in nature and operating at or near capacity, with potential implications for performance.
- Increasing rail capacity in London via physical enhancement is expensive and disruptive; the deployment of ERTMS/ ETCS might offer some relief, but this is uncertain and some years away.
- As a minimum, improved planning and co-ordination (within what is possible in competitive markets and customer requirements) would seem advisable.
53. On its own, it is unlikely that any rail freight developments will justify the level of capital expenditure in major infrastructure enhancement – but the benefits of rail freight may well make a substantial contribution to the benefits calculation of any wider business case and it is important that these are always carefully articulated and factored in.
54. Network Rail and other railway organizational forms typically follow the arterial route structure into London and hence cross-London movements such as rail freight will cross two, three or four railway organizational boundaries. It is important that any potentially negative effects of this are avoided as Network Rail devolves more power to its routes; this will be a key task for the System Operator function of the future.