

AII-PARTY PARLIAMENTARY GROUP FOR HIGH SPEED RAIL

INQUIRY INTO BRITAIN'S RAIL CAPACITY

SUBMISSION BY GLASGOW CITY COUNCIL

Summary of Main Points

Glasgow City Council recognises the requirement for increased capacity on Britain's railways and considers that the construction of High Speed Rail (HSR) lines will form an essential element of its provision. Significantly, HSR infrastructure has the potential not only to provide increased transport capacity but also to reduce end-to-end rail journey times. This is particularly important over longer distances, such as Glasgow – London, where HSR can enable return journeys, otherwise entailing an overnight stay, to be made within a single day.

Glasgow City Council considers that, while current capacity constraints occur at specific 'pinch points', rather than across the network as a whole, the maximum benefits from the provision of additional capacity will result from its delivery not on a 'piecemeal' basis but in accordance with a pre-determined plan for the entire network. This will enable the provision of new capacity to be focused initially on those routes where it will deliver additional benefits in terms of reduced journey times and additional modal shift to rail. Given the significant journey-time reductions and consequent modal shift from air that would be achieved by providing a dedicated HSR line over the entire route between London and Scotland, the City Council considers this route to be a priority for the provision of additional rail capacity in Britain.

The ultimate goal should be the provision of Britain's required rail capacity in an integrated network of HSR and classic rail lines. While a dedicated fleet of continental-gauge HSR trains would run exclusively on HSR track and separate fleets of UK-gauge trains would provide services on classic lines, all would be operated to an integrated timetable, providing seamless interchange for passengers at a limited number of HSR stations.

Responses to Listed Questions

1. *How do you view the current capacity situation on Britain's railways?*

- 1.1 The current capacity on Britain's railways is insufficient to accommodate the ever-increasing demand for passenger travel and the carriage of goods on the network. Many trains, in addition to those purpose-designed for local commuter services, are carrying standing passengers, while other would-be passengers opt to travel instead by road or air. Similarly, trunk roads and motorways in rail corridors carry freight which could otherwise be transported by rail, if capacity were available.
- 1.2 There can be little doubt that current capacity constraints on the rail network are proving costly to business and restricting economic growth. Glasgow's economic development is particularly at risk from insufficient rail capacity on local commuter services, inter-urban passenger services and cross-border goods services. This deficiency in rail capacity is likely to become more critical as oil prices and/or road congestion increase. Scotland's economy is increasingly dependent on tourism and rail, particularly high speed rail (HSR) internationally, is becoming more popular for tourist travel. Capacity constraints also reduce the contribution that the rail network can make to reducing Britain's carbon emissions, through a modal shift in the movement of people and goods to rail from road and air.
- 1.3 Rail capacity is not constrained uniformly across the network. Instead there are specific 'pinch points' on the network – sections of track and specific junctions which are unable to provide sufficient 'paths' for all the trains wishing to use them. There are also particular times of day – most notably the morning and evening 'peak periods' – when capacity is more constrained than at other times. In Glasgow, a lack of capacity at the City's terminal stations is among the most significant constraints on the growth of rail passenger traffic and was almost certainly a factor in the Scottish Government's decision to cancel the construction of a rail link to Glasgow Airport.

1.4 Many capacity constraints are exacerbated by the mix of traffic on the rail network. Inter-urban passenger services, local/commuter passenger services and freight trains all travel at different speeds with different stopping patterns. It is difficult to combine these rail services in a way which maximises the capacity of the network, particularly when there are only two tracks available. Difficulties arising from the speed differential between long distance high speed (LDHS) and local services are less prevalent where routes can be physically segregated, either by the provision of four tracks over the entire route or by the local provision of passing loops; e.g. at intermediate stations.

2. What capacity do you believe Britain's railways will require in the future?

2.1 Glasgow City Council considers that, rather than managing demand to match available capacity as advocated for the road network, every effort should be made, wherever feasible, to meet in full the demand for rail travel by increasing the capacity of the network and its services. Movement of people and goods by rail has the potential to reduce the environmental impacts of moving the equivalent numbers and tonnage by air or road. It will also release the capacity on these competing modes to accommodate the demand for travel/goods movement between destinations not easily accessed via the rail network, thus improving the overall efficiency of Britain's transport system.

2.2 To fully meet the demand for the carriage of passengers and goods by rail, current capacity will require to be enhanced both to remove the constraints identified above in response to Question 1 and also to accommodate future growth. It is likely that future growth in demand will be greatest for those rail services already experiencing capacity constraints; i.e. commuter and inter-urban passenger services and long distance freight services.

2.3 With agglomeration benefits increasingly recognised as a factor in economic development, there is a tendency towards the concentration of employment opportunities in city centres. Rail services are particularly effective in transporting the resultant large numbers of commuters to and from city centres and the demand for such services is likely to increase. Meantime, as more employees are located within easy reach of mainline stations, rail becomes an increasingly attractive mode for inter-urban passenger travel. For business travellers in particular, reduced inter-city journey times and the ability to work via wi-fi etc. en route, are likely to further increase the demand for rail services, in preference to travel by road or air.

2.4 For travel between Glasgow and English cities, there is likely to be a 'step change' in demand for rail services when dedicated HSR tracks are provided. City centre to city centre rail journey times of less than three hours are expected to result in some 80% of these journeys being made by rail compared with around 20% at present. This will obviously require significant additional capacity both en route and at Glasgow's terminal station.

2.5 The capacity required in future for goods traffic is not as easy to predict. Rail is most suitable for bulk cargo and the demand for this will be highly dependent on the future of the industries involved; e.g. timber, fuel and aggregates. Developments in fuel-cell technology could maintain road's dominant role in freight transport. On the other hand, the environmental benefits of electric traction, combined with additional wagon-load containerisation and an enhanced loading gauge, could significantly increase the demand for freight to be transported by rail.

3. What is the best way of providing capacity and future-proofing Britain's rail network?

3.1 While the most obvious means of providing capacity is to adapt/extend the network's infrastructure to provide additional train paths, this may not always be necessary. In some cases it may prove possible to provide the necessary capacity within existing train paths by lengthening trains or spreading demand on to existing under-utilised services. However, while lengthening trains and spreading demand outwith peak periods will usually be the more cost-effective means of providing capacity, the scope for these 'lower cost' solutions is often limited: peak spreading by the finite number of journeys which require to be undertaken during a relatively short time period and train lengthening by the ability of the permanent way and associated infrastructure (particularly stations) to accommodate longer trains.

3.2 It has also become apparent that, in Britain's major inter-urban rail corridors, most notably the West Coast Main Line (WCML), train lengthening and peak spreading can only provide a temporary fix. The rate of growth in the demand for rail passenger and freight services is such that, ultimately, there will be no alternative to the provision of more infrastructure (principally railway track) to provide the capacity required. The manner in which this additional capacity is best provided requires very careful consideration to maximise the resultant benefits.

3.3 As stated above (paragraph 1.3), many capacity constraints result from specific 'pinch points' on the network. Here, the provision of relatively short lengths of additional track, a junction re-configuration or

upgraded signalling may be all that is necessary to remove the identified capacity constraint. However, the 'built-up' nature of much of the territory through which Britain's railways pass can make even a minor alteration to the existing permanent way extremely expensive and, in some cases, totally impracticable. Any widening of an existing rail corridor is likely to require the purchase of several parcels of land and will almost certainly be resisted by some owners. Similar difficulties are likely to arise where proposals to run longer trains necessitate platform lengthening at stations.

- 3.4 Where several expensive/impracticable infrastructure capacity improvements are required in close proximity, it will invariably make sense to investigate the provision of a new length of track on an alignment remote from the current railway. This may have the added advantage of being less disruptive to existing transport services than would be the case for capacity enhancements on the existing alignment. Such provision may also have the potential to double the capacity of this section of the rail network, rather than simply removing an existing constraint. However, unless significant surplus capacity exists on adjacent sections of the network, the likely result will be to move, rather than remove, the capacity constraint.
- 3.5 It may, therefore, ultimately be concluded that the best means of addressing a series of capacity constraints on the network is to construct a significant length of new railway on a new alignment. In such circumstances, it is likely to be recommended, as in the case of the HS2 line between London and Birmingham, that the new line be constructed as HSR. This will not only provide the additional capacity required but reduced journey times, thereby increasing the potential for the modal shift of passenger traffic to rail from air and road, with consequent additional economic and environmental benefits.
- 3.6 A further advantage of constructing a significant length of railway as HSR on a new alignment is that it makes it possible to physically segregate LDHS passenger rail services from slower freight trains and local/commuter passenger trains with frequent station stops. The removal of the LDHS services from the existing line will also provide additional capacity on that line for more frequent freight and local passenger services, which will, in turn, encourage more modal shift from road thereby reducing road congestion and further benefitting both the economy and the environment.
- 3.7 For the benefits of HSR in terms of reduced journey times to be maximised, there should be few, if any, intermediate stops on routes between any two city centre stations. Consequently, the lengths of new HSR line provided on an incremental basis to provide additional network capacity should be designed to combine, ultimately, to provide a rail equivalent of the UK's motorway network with HSR lines bypassing most, if not all, towns and cities en route. In general, intermediate cities would be served not by through stations on main HSR lines but by terminal stations reached via spurs off the main lines, similar to that currently planned by HS2 for Curzon Street in Birmingham.
- 3.8 It follows from the above that, before deciding where and how to provide additional capacity, it will be essential to identify capacity requirements across the network as a whole. In considering how these capacity requirements can be best met by a dedicated HSR network, the minimum end-to-end journey times between each pair of Britain's major cities utilising existing lines should be first be computed. Priority for the provision of new HSR lines should then be afforded to those intercity routes with end-to-end journey times currently in excess of two hours. It is further suggested that HSR stations should be provided only in cities where passenger demand for travel to a single destination served by HSR is sufficient to entirely fill a high speed train. If it becomes necessary for HSR trains to collect passengers from several stations to achieve the loading required for viable operation, the benefits of high speed travel will be seriously eroded by repeated station stops. Where a city cannot generate sufficient patronage to justify a HSR station, feeder services should be provided on existing 'classic' lines to a convenient HSR station for interchange. To minimise the number of feeder journeys undertaken by private car, interchange with HSR services should take place at city centre stations, wherever possible. Glasgow City Council has already identified its preferred site for a HSR interchange station in the city centre, together with a route into the city for a dedicated HSR line to serve it.
- 3.9 In conurbations like Glasgow with a large network of local commuting routes, there are currently particular conflicts between local services stopping at all (or most) stations and long distance high speed (LDHS) services. Stopping LDHS services only at the city centre station minimises end-to-end journey times and also avoids LDHS trains being crowded with standing commuters on approaches to and departures from city centre stations. The provision of dedicated HSR tracks for LDHS services running into dedicated HSR terminal platforms in city centre stations will completely remove these conflicts, thereby providing significant additional network capacity for both LDHS and local/commuter passenger services. The new dedicated HSR platforms will also release terminal capacity at existing stations (e.g. Glasgow Central) to accommodate the additional commuter services required to transport the growing number of city centre employees (paragraph 2.3).

4. What will be the effects of providing extra capacity, beyond addressing journey supply? What would be risked by failing to provide that capacity?

- 4.1 The effects of providing extra capacity in the manner outlined above in response to Question 3 would be reduced journey times for LDHS services and significantly increased reliability for all rail services. Crucial to achieving this increased reliability is the physical segregation of the HSR and classic rail networks. While requiring passengers to board continental-gauge HSR trains at a limited number of dedicated HSR platforms may appear less convenient for passengers than HS2's current proposals to run 'classic-compatible' over existing tracks into many more stations, the reliability of HSR services is likely to be severely compromised by the necessity to interface directly with slower classic passenger and goods trains using the same tracks. It appears inevitable that any breakdown or late-running of a classic train will impact upon the extremely precise scheduling required to run up to 18 trains an hour on the HS2 line.
- 4.2 The reduced LDHS journey times which will result from the provision of extra capacity as HSR will also encourage modal shift from air and road to rail. This will generate patronage and revenue for the railway additional to that which would be achieved if the additional capacity were provided as conventional (or classic) railway. This modal shift will, in turn, reduce the carbon emissions generated by these trips, particularly where HSR trains run with high load factors and utilise electricity generated from renewable fuels. Additional environmental benefits will result from the modal shift of freight and local passenger traffic from road on to the classic rail lines relieved by the provision of the new LDHS infrastructure. These benefits will arise not only from a reduction in the carbon emissions generated by the transport of the freight transferred to rail but also from the reduced congestion on the road network as a consequence of this transfer. Similarly for passenger traffic, additional commuter and local rail services will reduce emissions both directly, in terms of those who shift from road to rail, and also indirectly, in terms of a reduction in road congestion.
- 4.3 The provision of extra capacity as continental-gauge HSR lines will facilitate the provision of through rail services between Britain's major cities and those in mainland Europe. This will reduce the number of passengers flying on these routes, further reducing carbon emissions. It will also provide more 'slots' at Britain's major airports for flights to the more remote areas of Britain (e.g. northern Scotland) and long haul international destinations, further benefiting Britain's social and economic development.
- 4.4 Failing to provide new LDHS tracks and station capacity in the manner suggested would risk the reduction or withdrawal of local rail services to accommodate additional LDHS services. This has already been suggested for Glasgow in Transport Scotland's recent Rail 2014 Consultation document. It has even been suggested that there should be no station stops within two or three miles of city centre terminal stations, with all local transport provided by buses. Glasgow City Council is strongly opposed to such suggestions and considers that, rather than closing local stations close to the city centre termini, more such stations should be provided. Rail is predominantly a mass-transit passenger transport system and passenger volumes and demand for local rail services are greatest within the city's core area. The provision of additional local stations will increase the accessibility of the rail network for city-centre commuting and its ability to contribute to the social and economic regeneration of the city.
- 4.5 The city's economic regeneration will also be assisted by the provision of additional capacity for LDHS passenger rail services between Glasgow and other major British cities and for increased capacity for rail freight to England and its ports. Consequently, the failure to provide such capacity will restrict Glasgow's potential for economic growth, particularly if it is relatively disadvantaged as a location for inward investment as a result of other British cities gaining additional rail capacity and direct HSR services to Europe.
- 4.6 Failing to provide extra capacity could also risk a requirement to manage demand by higher rail fares, which would encourage passengers to travel by less sustainable modes (i.e. car or air) and, in the case of car travel, would increase road congestion. Alternatively, some journeys may not be undertaken at all which, while more sustainable, would be detrimental in overall socio-economic terms.
- 4.7 A further implication of failing to provide extra rail capacity could be an increase in domestic air travel. This would ultimately necessitate the provision of additional runway capacity at Britain's airports but, meantime, would be likely to restrict opportunities for additional long haul flights, with consequent adverse impacts on Britain's economy. Flights to Scotland's more northerly airports, including Aberdeen and Inverness could also be reduced as a result of a general increase in demand for domestic air travel and this is likely to have a particularly adverse effect on Scotland's economy.
- 4.8 Finally, failing to provide extra rail capacity would risk a reduction in the efficiency of freight transport and adverse environmental impacts as roads became more congested and fuel costs rose. Ultimately, this would give rise to demands for additional road construction to relieve congestion, which, if undertaken, would reinforce the perception that road is the preferred mode of travel, leading to greater congestion elsewhere on the network and further adverse impacts on the environment.