

3.53. January 23rd HS2 Debate Lords

My Lords, I declare my interest as adviser to the Japan Central Railway Company, the main operator of the Tokaido Shinkansen high-speed rail system, which is generally recognised as by far the most efficient, reliable and punctual, as well as the safest, high-speed system in the world, both economically and in terms of energy efficiency. I have been its adviser for almost 20 years, except of course with a break when serving in government.

I congratulate my noble friend Lord Forsyth on his excellent report but I believe that, in addition, there are still some valuable and important lessons to be learned from Japan which it may not be too late to apply to this whole ill-managed project. People forget that high-speed rail has evolved as an entirely different technology from conventional rail operation. It has been built up over the years—and over the world, as the noble Lord, Lord Grocott, reminded us—by layer upon layer of innovation, somewhat like a great master painting, and we are learners at every stage. In my few minutes, I shall offer five brief lessons from the Japanese.

First, the key to Shinkansen's success is that it is a sealed system with dedicated track. Trying to run it—or even think of running it—on conventional rail or a mixed system, as people here have been talking about for the HS2 leg north of Birmingham, is a basic error. You immediately lose most of the advantages of high speed and import all the problems of the classic system. A quick transfer to normal fast trains is much the best—indeed, Central Japan Railway Company leaders would say the only possible—way of operating.

Secondly, almost all high-speed rail stations in Japan which have been built over the last 60 years are sited away from or on the edge of city centres. Euston is a terrible mistake. Away from old centres, as could be the case with Old Oak Common, the report rightly suggests that there is a sharp reduction in costs and disruption, and improved passenger access to local connections as, in our case, will be available via Crossrail, the Elizabeth line and so on. In Japan, not a single day of normal passenger rail service has been lost in the building of the entire HSR system.

Thirdly, speed and precision of service, plus frequency, plus acceleration power, are all far more important than trying to achieve some eye-catching top speed. The Shinkansens run mostly at about 285 kph; that is 180 mph or a little more, although they can go faster. It is perfectly true that the superconductor Maglev Yamanashi, or the Chuo Shinkansen as it is called, is designed to run on its first leg from Tokyo to Nagoya, opening in 2027, at 570 kph, but frankly that is not

suitable for our very different conditions and considerably smaller country. So, building HS2 for a top speed of 250 mph—that is, 400 kph—is costly nonsense. There is far more travel time to be gained from speed of turnaround at the termini at either end and the 40-second stops in between. I had to smile with other noble Lords the other day when there was discussion about all doors having to be closed two minutes before departure. That is Luddite nonsense belonging to a previous world of technology.

Fourthly, as Professor Roderick Smith, chair of the Future Rail Centre at Imperial College, reminds us, it is a complete fallacy to assume that HS2 should only serve end points. Professor Smith, incidentally, is one of the most expert figures in this country on real HS technology and the evolving possibilities about which we have just heard from the noble Lord, Lord Mair, and on the Shinkansen system. Shinkansen intermediate stopping services bring enormous prosperity and vitality to local points; I do not think this is properly reflected in any of the assessments so far.

Fifthly, in a sealed, crash-proof system, much lighter rolling stock is both safer and much more efficient. This is very important because the latest designs leave space for large battery storage and propulsion under each car, which does away entirely with costly overhead lines. The Japanese are experimenting now with this development. Are we doing so? I have no idea, but I doubt it very much. Noble Lords can be sure that this is the technology of the future; the unsightly and expensive overhead lines and gantries will be completely out of date.

Everywhere one looks at this project, there are telling signs of the “not invented here” syndrome—the idea that we are wise old railways hands and have nothing to learn from overseas. The Japanese have been saying for years that HS projects like this should be built downwards, or inwards, from the destinations; in our case, from the north. As the report suggests, it may be too late for us to do that now, given that £8 billion or £9 billion—we talk about billions so easily, but that is £8,000,000,000 or £9,000,000,000—has already been spent. No nation can afford to write off that kind of colossal sum, even if some of it can be recouped. It is time we swallowed our pride, examined the possibilities of what is happening in the outside world and applied some of these long and very obvious lessons, before it is too late.

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