

Train Specification

In the ES there is reference to “TSI” trains which refers to the “Technical Specifications for Interoperability” that allows High Speed trains to cross national boundaries in the European Union. This was important as initially it was expected that HS2 would connect with HS1 and allow European trains to operate direct services to stations in the UK beyond London St Pancras.

HS2 was expected to run two types of trains, being “Captive” versions capable of operating at up to 360kph on HS2 tracks between London and Birmingham, and “Classic Compatible” versions that could also use the rest of the existing national train network which has smaller tunnels than the European standard “gauge”. The “Captive” trains are essentially the same as the “HS2” trains referenced in the ES.

HS2 “Captive” trains are presented in the ES as having peak noise 3dB lower than the TSI specification. However none of these are being procured for the initial Phase 1 “fleet”, which is solely consisting of what are now known as “Conventional Compatible” (CC) trainsets. HS2’s guidance to the Local Planning Authorities is that these will be 2dB quieter than TSI. Recently we have discovered that HS2 cannot specify CC trains to be quieter than TSI due to carry over of EU legislation after Brexit; but expect to provide commercial incentives that will cause the train manufacturers to improve the noise performance of their products.

With the financial impact on the UK economy following Covid-19 measures, it is not clear if there will be budget available to fund the commercial incentives, or if the train manufacturers will be motivated to develop their products regardless. A budget of £7.5 billion for rolling stock was included in the 2013 HS2 Cost Estimates, making the procurement a substantial proportion of the overall system cost. A more likely scenario is that DfT will be pushed to procure cheaper trains that meet the current noisier specification.

What we conclude from this is that the anticipated 2dB improvement compared to TSI trains may not actually materialise from the procurement. HS2’s view is that this will be covered by the 3dB standard noise error included in the ES.