THE RT HON. ANDREA LEADSOM MP

HOUSE OF COMMONS

LONDON SW1A 0AA

Mr Mark Thurston
Chief Executive Officer
High Speed Two (HS2) Ltd
One Canada Square
London
E14 5AB

31st January 2019

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Dear Mr Thurston,

Further to my letter of the 11th January, I write again as several of my constituents have been in touch with me to express their absolute dismay following the appearance by HS2 Ltd's former Chairman, Sir Terry Morgan, before the Lords Economic Affairs Committee on the 22nd January.

They are incredulous that a former Chairman of the project could state that nobody knows what the final cost of HS2 could be, and that he did not reject the premise of Lord Hollick's point that billions more may be needed "*in order for this system to work and to have the wider benefits that everybody hopes it will bring*".

Sir Terry also stated that he thinks "*in the triangle of scope, cost and time, something has to give*", which resonates with the remarks you made at the All-Party Parliamentary Rail Group meeting on Tuesday 20th November that HS2 Ltd is considering fundamental changes to the project, namely reductions in the speed and number of trains per hour as well as a change to underlying track.

Turning to the track changes first, my constituents have asked me to raise their deep concerns that HS2 Ltd is now reported to be seriously considering changing the track bed to ballast. Whilst I recall from the petitioning process that ballasted track is about 3-5 dBA quieter than slab track (in its basic form), I am also aware that work undertaken by Professor Woodward of Heriot-Watt University for the promoter found that the ballasted track of the kind proposed to be used by HS2 prior to 2017 – before concrete slab was adopted as part of the Phase One design – may not be able to adequately retain the track geometry.

As highlighted to the House of Lords HS2 Select Committee, according to Prof Woodward "*it may not be feasible to routinely run at 360kph on ballasted track due to vibrations in the track bed causing degradation of ballast and supporting material leading to several unacceptable effects (rapid degradation of the ballast contaminating the rail surface, making it rougher and noisier, reducing the stability of the rails with the risk of derailment), movement of the track bed or embankment etc.*"

You will recall the issue of Rayleigh waves that was raised by Professor Victor Krylov of Loughborough University, and that the risk of these ground-vibration booms, similar to a sonic boom, is greatest in soft ground such as is found along much of the line of route. The effect has been observed in trains travelling as slowly as 175kph in Sweden, across similar ground soils.

Both Profs Woodward and Krylov have stated that the most cost-effective measure to reduce the risk of derailment and catastrophic track failure through the use of ballast track is to reduce the speed of the trains. Alternatively, there may need to be substantial additional works undertaken to stiffen the ground through the injection of concrete, or piling, potentially adding billions of pounds to the cost of the project.

Research from Herriot-Watt University concluded that, to mitigate the impact of ballast track, the safe maximum speed along much of the line of route may be as low as 252kph. If HS2 Ltd does have to reduce the maximum speed to account for the risks of derailment and catastrophic track failure, then the business case and benefit-cost ratio would be substantially damaged.

So, whilst my constituents welcome the clear commitment by the Department for Transport in its Sponsor's Requirements that journey times must be maintained, I would seek reassurances from HS2 Ltd on their behalf that, should ballast track be brought forward, this would still be the case. I would also be grateful to receive a detailed analysis from HS2 Ltd on exactly what mitigation options you are developing to keep costs under control and deliver the project within the funding envelope.

And, of course, should the speed of the line be reduced, then my constituents point out that the frequency of services and the number of trains would also have to be reduced. They have highlighted with me that, if the speed of the line were to be set at the industry standard of 300kph, then the journey time between London and Birmingham would only be around 15 minutes faster than the current journey time on the West Coast Main Line.

I know that you will join with my constituents in agreeing that the business case for HS2 must be maintained, and that value for money for taxpayers is a key concern, particularly given the collapse of the business case for HS1 under the last Labour government.

You will appreciate why my constituents – who are directly affected by the construction and operation of HS2 but will see no benefit – are increasingly concerned that the business case is being undermined from all angles, and the basis for which Parliament gave its support to the project may no longer exist.

I am copying this letter to the Chairman of the HS2 Compensation & Mitigation Forum in Parliament, my colleague the Rt Hon. Dame Cheryl Gillan MP.

With best wishes,

Andrea Leadsom

The Rt Hon. Andrea Leadsom MP
Member of Parliament for South Northamptonshire

Cc: Rt Hon. Cheryl Gillan MP, Chairman, HS2 Compensation & Mitigation Forum