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Dear Sir / Madam,

**High Speed Rail (London - West Midlands) Bill (the Hybrid Bill)
Response to the Supplementary Environmental Statement deposited with
Additional Provision 2**

This letter sets out the response of Transport for London (TfL), the Greater London Authority (GLA) and Old Oak and Park Royal Development Corporation (OPDC) to HS2 Ltd.'s Supplementary Environmental Statement (SES) which updates the earlier Environmental Statement to the Hybrid Bill and also relates to the second Additional Provision to the Hybrid Bill (AP2) deposited on 13 July 2015.

TfL, the GLA and OPDC have been working closely with HS2 Ltd. to develop some aspects of the designs for the HS2 scheme within London, however there are still a number of areas requiring further consideration and development, including those contained within AP2 and the SES. Also, for elements such as those impacting Crossrail, designs have been developed by HS2 Ltd., independently of TfL. On a number of these issues, TfL and the GLA have made representations via the petitioning process for amendments to the proposals and this response provides additional commentary on a number of matters within the SES that we request are amended or clarified by HS2 Ltd.

While TfL, the GLA and OPDC are supportive of the merits of HS2, it is disappointing that HS2 Ltd. has not responded proactively to many of the numerous and detailed comments and concerns received from TfL, the GLA, OPDC, local authorities and others in response to the December 2013 Hybrid Bill. Limited progress has been made in developing possible mitigations to the negative impacts generated by the proposals and little consideration has been made to provide clear commitments to seek agreement from TfL and other

relevant bodies to develop acceptable mitigations. We urgently believe that HS2 should redouble its efforts in engaging with TfL, the GLA and OPDC to ensure that the project is a good neighbour and is seen as applying best practice. This should as a minimum, meet or even exceed the standards set by TfL and other infrastructure organisations on projects in London such as Crossrail, the Northern Line Extension and Thames Tideway Tunnel.

This response is structured into two main sections:

- 1.0 Concerns remaining unanswered from TfL and the GLA's responses to previous deposits of Transport Assessments (TAs) and Environmental Statements (ESs) with the Hybrid Bill and Additional Provision 1 (AP1).
- 2.0 Additional issues identified within SES documents deposited on 13 July 2015. These can be summarised by the following headings:
 - *London-wide issues*
 - *HS2-HS1 Link Removal*
 - *Construction Impacts on the Highway Network*
 - *Environmental issues*
 - *Air Quality*
 - *Compensation for Londoners*
 - *Impacts on other major projects*
 - *Area-specific issues*
 - *Old Oak Common*
 - *Ruislip and Ickenham*
 - *Langley*
 - *Greenpark Way*

1.0 TfL and GLA concerns remaining from previous responses

In TfL and the GLA's joint response to the previous ES & TA deposit, dated 27 February 2014, it was mentioned that no prior opportunity was provided to comment on the TA. It should be noted that again, we have had no opportunity to comment upon drafts of the [AP2 and] SES documentation prior to their formal deposit.

A number of concerns remain following our responses to previous deposits of TAs, ESs as part of the Hybrid Bill and AP1 deposits. These do not appear to have been taken account of in the content of this submission and, thus, using the structure of previous submissions, TfL's key concerns are re-iterated below.

1.1 General

It should also be noted that our previous request that *“HS2 Ltd. take the opportunity to digest important stakeholder feedback and refine any future documentation so that is as comprehensive and robust as is practicably possible”* appears to have been unanswered. A number of concerns remain in the general approach of the SES, including;

- i) **Impacts and methodology** – there remains no consistent application of a methodology to determine and define the impacts and their ratings used within the SES. This makes it very difficult to identify and compare individual impacts and understand their ratings. The approach retained from existing ESs seems highly subjective in nature and should be modified (or at the very least explained) to allow impacts and the need for any mitigation to be fully understood and assessed. There also appear to be shortcomings with specific elements of the methodology in assessing the impacts of the scheme. For example, in CFA 05 a number of additional habitat surveys have been undertaken at the wrong time of year to assess whether protected species are present or not, yet despite this incomplete evidence, the report has concluded that there is no impact to these species as a result of the scheme.
- ii) **Cumulative impacts** – the combined impacts of works undertaken at various sites in London have the potential to cause significant cumulative impacts on both focussed locations (e.g. construction traffic from Euston and other worksites combining on the A40) and wider areas of London in general. This applies to issues including air quality, highway network performance and socio-economic impacts from possible disruption to Crossrail services. HS2 Ltd. should consider and analyse these cumulative impacts and identify any mitigations as appropriate.
- iii) **Wider and combined impacts** – the SES still does not recognise the wider positive and negative impacts of HS2's proposals, background growth and other committed schemes. The documentation should take a more proactive role in identifying the future issues that are likely to arise separately from the scheme even though HS2 is not the sole contributor. This will allow relevant stakeholders including TfL, the GLA and HS2 Ltd. to develop and prepare appropriate mitigations.
- iv) **Mitigations/interventions** – as per our previous response to the Hybrid Bill, ES & TA, little mitigation is proposed for the impacts identified by HS2 Ltd. Specific examples include the additional visual and noise impact on properties on Wells House Road as a result of the Crossrail turnback

facilities and the additional construction traffic on the A40 Westway, which have been introduced by AP2. The documentation has not considered or proposed any additional or alternative mitigations to these, to minimise the impact of the scheme.

- v) **Performance** – no mitigations are proposed for any impacted junctions and triggered links as a result of either the AP2 proposals. TfL and the GLA would expect this to be addressed and TfL to be engaged in the development of any mitigations. At junctions that perform badly in the reference case without HS2, TfL and the GLA expect HS2 Ltd. to identify these locations to help TfL, the GLA and London boroughs to develop solutions to these challenges.
- vi) **Construction** – as per our previous response, TfL and the GLA expect HS2 Ltd. to clearly state construction impacts and propose worksites and methodologies that minimise impacts on the surrounding communities. Unfortunately, limited detail has been provided in the SES of the additional proposed works – in particular regarding the Crossrail turnback construction, impact of the deletion of the HS2-HS1 link, constructions logistics tunnel and significant increase in volume of inert and demolition waste to be transported by road. Further detail including mitigation proposals is required.

1.2 Traffic & Transport

1.3.1 General :

- i) The AP2 and SES documents still provide no clear, co-ordinated strategy to mitigate the impacts of HS2 on London's transport network and in particular lack an adequate assessment of the impact on rail services (for instance disruption to Crossrail services as a result of relocation of the Heathrow Express depot to Langley).
- ii) There is still insufficient detail provided regarding local junction impacts. HS2 Ltd. must work closely with TfL to understand these impacts comprehensively and provide greater micro-simulation including VISSIM modelling of key junctions and roads impacted by the scheme.
- iii) In addition to this, the traffic modelling assumptions in relation to the Heathrow Express depot at Langley have assumed there to be zero traffic growth in the surrounding area, which in the vicinity of Langley station following the introduction of Crossrail services in 2019 is unlikely to be appropriate. TfL therefore questions the existing reporting of only minor adverse impact on access to the station.

1.3.2 Construction assessment:

- i) As per TfL and the GLA's previous consultation response, adverse impacts on the Crossrail 1 depot (during its construction and operation) are still not clearly or adequately defined including the nature, timing and extent of works. Subject to completion by the Secretary of State of the agreed undertaking in relation to the Crossrail 1 depot, our concerns remain. In any event, more detail is required for us to make our assessment on potential impact of the logistics and sewer tunnels contained within AP2, particularly in relation to the impact of settlement and vibration on the Old Oak Common Crossrail depot.
- ii) There is also very limited information provided in regard to the methodology for the construction and commissioning of the relocated Heathrow Express depot at Langley and how any possible impacts on Crossrail services, which are due to fully commence (at a similar time to the depot's commissioning) in 2019. In addition, it is not clear how the works will be coordinated with other projects, particularly the proposals for the Western Rail Link to Heathrow (WRLtH), a major blockade for which TfL understands is scheduled around December 2019. A clear programme which fully demonstrates the relationship between both proposed and committed projects should be provided which also provides assurance that the Crossrail project will not be adversely impacted.
- iii) Other than reference to the deletion of the HS2-HS1 link from the scheme, there is no further detail provided as to the impact of this change on the construction of the scheme and in particular no evidence of any reduction in the volume of waste removal or construction vehicle activity associated with this. This detail could provide a number of further opportunities in terms of the providing "spare" capacity to use rail services to remove additional volumes of spoil or deliver additional materials at the Euroterminal site. Further information is also required to assess the cumulative impact of the link's deletion with the various other changes proposed at Old Oak Common as part of the AP2 proposals.
- iv) Despite previous requests, no further assessment has been undertaken of the viability of increased use of rail and water as a means of reducing the volume of construction traffic on the road network. TfL and the GLA consider there to be potential for greater use of these means to reduce the volume of construction traffic on London's highway network and expect opportunities to be analysed and identified to use these alternative means of transport within the scheme.

1.3 Environmental

1.3.1 General:

- i) As per previous comments, TfL and the GLA consider there to be insufficient consideration of mitigation to negate environmental impacts of the scheme and in particular the SES should include evidence that mitigations proposed are shown to be better than alternative measures considered.

1.3.2 Air Quality:

- i) There remains no consideration in the SES of Air Quality Neutral (as required by Policy 7 of the Mayor's Air Quality Strategy 2010 and in the London Plan) and no statement as to whether HS2 Ltd. is of the view that the scheme is Air Quality Neutral;
- ii) HS2's treatment of the air quality impact of the scheme having "reduced" where peak traffic levels have been reduced (in particular in CFA 07) is questioned by TfL and the GLA. This is as while peak traffic levels have been reduced, peak traffic levels remain high and the duration of these peak HGV movements has in some cases doubled. As a result local areas are in fact exposed to greater overall levels of pollution and other forms of disruption than under the previous proposals.
- iii) TfL and the GLA welcome the reference to The Control of Dust and Emissions during Demolition and Construction: GLA Supplementary Planning Guidance Document, July 2014 and expects HS2 Ltd.'s work programme to comply with this.

For example, from September 2015, all Non-Road Mobile Machinery (NRMM, estimated to be responsible for 12% of Nitrogen Oxide and 15% of total particulate emissions in London) operated in London will need to meet emission standards as part of the GLA NRMM Low Emission Zone - further details can be found at www.nrmm.london. The requirements for this zone will be strengthened from September 2020.

Taking this into account and the scale of the impact of the project, TfL would expect HS2 Ltd. to meet the strengthened requirements from the start of construction (i.e. in advance of them coming into effect from September 2020). These requirements are as follows:

- Stage IV of the Directive as a minimum for NRMM used on any site within the Central Activity Zone.
- Stage IIIB of the Directive as a minimum for NRMM used on any site within Greater London.

1.3.3 Community:

- i) TfL and the GLA continue to expect a comprehensive plan of mitigation to be included for affected residents and businesses in all the London Community Forum Areas. Of particular relevance to the SES and AP2, detail is required of the analysis of the impact of the works impacting Old

Oak Common Lane. This should consider the disruption to bus services and vehicular access as well as the impacts of diverted traffic in the area and address the uncertainty in the wording of the SES about the need for “short term closures” of the pedestrian link under the GWML and the quality of the link itself.

1.3.4 Socio-economic

- i) TfL and the GLA’s concerns regarding the limited detail about the socio-economic impacts of the project and their impact on the existing and emerging policies/strategies such as the London Plan remain.
- ii) As per the previous response of TfL and the GLA to the TA & ES, all socio-economic impacts (including those on local businesses including shops and hotels) should be included in the quantified socio-economic assessment of the scheme. We feel that various socio-economic impacts have been omitted from the economic case, particularly construction impacts.

1.3.5 Noise & visual:

- i) Repeating two previous requests, TfL and the GLA expect the ES (and SES) to aim for the highest practicable noise standards to minimise adverse impacts and ensure an acceptable living and working environment, by identifying a comprehensive programme of mitigation measures fully funded by HS2 Ltd. It is still unclear what standards HS2 are using to define the Environmental Minimum Requirements (EMR) to be applicable to the scheme.

1.3.6 Habitat & ecology:

- i) As previously raised, TfL and the GLA are concerned about the assessment applied to potential habitats in area CFA 05 and require HS2 to work with Natural England to ensure that a robust assessment (including the methodology of ecology surveys being to Natural England’s satisfaction) of the potential impact of the scheme on protected species is undertaken and that, where necessary, appropriate mitigation is provided.
- ii) TfL and the GLA have previously requested that HS2 Ltd. sets out a comprehensive mitigation and compensatory package that seeks to (a) create replacement habitat in areas where such replacement habitat adds value to existing similar habitats; and (b) reduce deficiency in access to nature in areas adjacent to the route. No response has been received to this request to date and the GLA and TfL expect that HS2 will incorporate these proposals.
- iii) In common with the previous petitions and responses of the National Farmers Union and the Wildlife Trust, TfL and the GLA do not consider the ‘sustainable placement’ proposed by HS2 Ltd. in Hillingdon as an acceptable mitigation measure to the transportation of spoil material. HS2 Ltd. must put forward alternative measures to remove the spoil produced by

the HS2 works so that the amount deposited on surrounding farm land and the amount transported by road is substantially reduced. After this, where sustainable placement is still absolutely necessary, HS2 Ltd. must ensure that this is only provided with adequate prior assessment of the impact of these proposals and delivery of appropriate mitigation in collaboration with Natural England.

1.3.7 Carbon Emissions:

- i) TfL and the GLA expect HS2 Ltd. to demonstrate clearly the scheme's contribution to the Mayor's objective of a 60% reduction in carbon emissions in London. For example, will HS2 result in reduced numbers of private car trips to/from London?

1.3.8 Vibration and settlement:

- i) Settlement of the Crossrail 1 depot infrastructure caused by HS2's proposed works is a serious concern for TfL. Crossrail's depot has not been designed to withstand the settlement expected as a result of HS2. No provision has been made within Crossrail's designs to take account of HS2. The Secretary of State has agreed to execute an undertaking in favour of TfL which seeks to reduce concerns regarding settlement, however, that undertaking has not yet been executed. TfL asks that HS2 Ltd. suggest an appropriate way forward to mitigate these likely impacts.
- ii) Concerns remain about the sensitivity of the Grand Union Canal wall; and the risk of it having an adverse impact on the Crossrail depot, about which the SES has not provided any further detail. The undertaking referred to in the paragraph above makes some provision in relation to the Canal, but TfL considers that the SES must in any event provide further detail as to what measures HS2 Ltd. have taken to evaluate potential adverse risks to Crossrail and identify mitigations (including proposals for monitoring) to ensure that Crossrail assets are protected.

2.0 New issues within the AP2 and SES documents

2.1 London-wide issues

2.1.1 HS2-HS1 Link Removal –

As per previous correspondence, TfL and the GLA welcome the decision to remove the original surface rail link between HS2 and the existing HS1 lines, as this had unacceptable impacts on other passenger and freight services across London.

However, TfL, the GLA and OPDC remain strongly supportive of an alternative HS2-HS1 Link, which could offer significant benefits in terms of

inter-regional and international connectivity, congestion relief and ease of travel for longer distance journeys across London. It is therefore of concern that the AP2 submissions include no consideration of any alternative form of link, including making passive provision for the completion of such a link at a future date. No analysis is provided of the impact of this link's removal on a number of key factors including regional and international connectivity and increased congestion on other central London public transport links.

2.1.1.1. Passive provision for future connection at Old Oak Common

– The SES does not contain any examination of the impact of the deletion of the HS2-HS1 link, despite stating there is no impact. Of particular concern to TfL, the GLA and OPDC, the potential for providing passive provision for such a link in future through delivering a portal at Old Oak Common is not referenced at all. Failure to provide such a facility as part of the scheme would mean that even if future provision of the Link is physically possible, it would require significant interference with, and the likely suspension of, both HS2 (and possibly HS1) services for extended periods.

2.1.1.2. Reference to existing studies into HS2-HS1 connectivity –

The decision to remove the link has been made before the findings of either of HS2's two studies into options for HS2-HS1 connectivity have been published. This means therefore that the basis for the HS2-HS1 link is only based on international demand and takes no account of any potential for inter-regional demand which TfL believes to be proportionally far greater. Furthermore, the AP2 documentation makes no reference to these studies and remains silent on whether a HS2-HS1 Link will be provided at a future date or whether with the deletion of the portal such a link would indeed be possible in future.

2.1.1.3. Impact assessment of the removal of a HS2-HS1 link – TfL and the GLA do not agree with the conclusion in the SES that the HS2-HS1 Link's removal will have no impacts. TfL considers that the HS2-HS1 Link would play an important role in managing interchange demand at Euston and Old Oak Common and in supporting long-term demand for inter-city and London-wide travel.

Additionally, it appears the SES does not reflect the impact of the Link's removal on the construction of the scheme and thus the reduction in activity and traffic associated with the deletion of a 6.3km tunnel. We request confirmation of how the link's deletion has been treated from a construction perspective in the AP2 documentation and whether any additional ESs will be submitted to capture the impact of this, as there is the potential for significant capacity to be released for the transport of spoil (particularly by rail) and materials for other aspects of the project at Old Oak Common.

2.1.1.4. TfL requirements – TfL and the GLA seek a commitment from HS2 Ltd. that the HS1-HS2 Link will be provided as a minimum at a later

stage and that HS2 will deliver the provision for delivery of such a Link in the future. Given the implications for travel across (and to and from) London, we seek a commitment that HS2 Ltd. will agree the design and provision of the Link with TfL. Failure to do so would represent a significant missed opportunity to fully capitalise on the transformative effect of high speed rail services on both international and inter-regional travel in the UK and make the future provision of such a link either impossible or significantly more expensive and disruptive in future.

2.1.2 Construction impacts on the Highway Network –

The SES describes a substantial increase in HGV traffic in London, despite the proposed removal of the HS2-HS1 link. This in part appears to be related to the near 300% increase in the volume of inert waste to be sent to landfill in the South East by the scheme, for which the SES provides no explanation or indication of possible traffic, noise and air quality impacts. There are also a number of methodological inaccuracies in modelling the anticipated consequences for the performance of London's highway network. Combined, these are likely to have significant congestion impacts in London both on a local and city-wide level.

We note that the transport of excavated material now accounts for 11% of the HS2 scheme's Greenhouse Gas emissions.

2.1.2.1. Modelling of highway impacts of construction traffic – It is of significant concern that journey time validation for the PM peak fails badly (on four out of six routes modelled journey times are 25% quicker than those observed) and is likely to significantly underestimate future congestion from the construction and operation of HS2 in London. This may be due to the fact that the models have not gone through the full validation process. HS2 Ltd. need to produce a full "Local Model Validation Report" for further reassurance including further refinements to the models used to better reflect observed traffic conditions.

Additional detail is also required to improve our understanding of the impacts of HS2's construction. For example, providing analysis of journey times for an area further South in the West Ruislip area will allow the impact of congestion on the approaches to the A40 to be more robustly assessed. Also, the local study area assessed for Old Oak Common is too small, only considering a boundary of one kilometre from the HS2 station, a minimum boundary of two kilometres should be used for the analysis. This means that a number of roads (potentially significantly) impacted by the scheme (including residential streets impacted by diverted traffic avoiding congested main roads) are likely to have been omitted from HS2 Ltd.'s analysis.

2.1.2.2. Minimisation of impacts and consideration of alternatives –

The use of a larger number of local roads by construction traffic reported in the SES is of particular concern to TfL, the GLA and OPDC, as is the potential for cumulative impacts of the various London-wide HS2 worksites on the A40 and other strategic routes. The AP2 documentation provides no evidence of any consideration being given to reducing the highways and associated impacts of the HS2 works. For example, there is no commitment to transport materials or spoil by water rail or haul road (including for the new Heathrow Express depot at Langley). Similarly, there appears to be a general lack of consideration of alternative options or mitigations to address the significant increase in HGV movements and associated impacts.

Based on TfL's experience of delivering the Crossrail project at a number of worksites across London (with the benefit of moving materials and spoil by rail, water and haul road), there are concerns about the deliverability of HS2's traffic proposals and the impact of the proposed volume of HGV movements on the resilience of both London's highway network and HS2 Ltd.'s construction programme.

To alleviate this, TfL, the GLA and OPDC consider that HS2 Ltd. should commit to transfer a proportion of materials and waste off public roads and onto rail (avoiding heavily utilised routes that are likely to have an adverse impact on other services, including but not limited to Crossrail and London Overground), water (river and canal) and designated haul roads. Similar commitments have been provided by other recent, large infrastructure projects in London, including the Northern Line Extension and the Thames Tideway Tunnel. Crossrail has transported 80% of its excavated material (on a tonne per kilometre basis) by more sustainable rail and water modes.

2.1.2.3. Assessment of impacts and cumulative impacts – With a range of worksites across London, TfL and the GLA are concerned that HS2 Ltd. has not identified the cumulative impacts of the construction traffic servicing these on London's road network. Additional strategic modelling is required to understand these impacts and develop the necessary mitigations to ensure London's highway network continues to function during the scheme's construction.

Additionally, a greater level of detail is required in the assessment of the highway impacts of HS2 construction traffic at specific key junctions and links impacted by the scheme. This will be of particular relevance for the A40 including junctions and adjoining roads.

2.1.2.4. Mitigations for highway works, noise and air quality impacts

– There are currently no additional proposals to provide mitigation for the additional impacts associated with the revised HGV movements in the AP2 proposals including additional traffic, noise and air quality impacts. HS2 should as a minimum provide evidence of the consideration of possible

mitigation to these additional impacts and if appropriate explain why these would not be necessary or appropriate to deliver.

2.1.3 Environmental Issues

There are a number of specific issues contained within the SES that TfL, the GLA and OPDC feel warrant further consideration.

2.1.3.1. Habitat – Further surveys of potential habitats for species including bats have been undertaken in a number of areas including CFA 04-06. However, these appear to have been undertaken at the wrong time of year to ascertain whether these roost sites are in fact active. Based on these findings, the relevant reports have concluded that there is unlikely to be significant impacts in the vast majority of these locations. HS2 Ltd. should engage with Natural England to ensure an agreed approach is taken to identify possible habitats and suitable mitigations.

2.1.4 Air Quality

The GLA is concerned about the impacts on local and London-wide air quality as a result of the increased HGV activity and OPDC has concerns about the more localised impact of this in the Old Oak and Park Royal area. HS2 Ltd. should implement an air quality management plan throughout the construction of the scheme, including undertaking ongoing monitoring in badly affected areas. This plan should be in conformity with the requirements in the Mayor's Control of Dust and Emissions from Construction and Demolition Supplementary Planning Guidance, which sets out best practice that all construction sites in London should follow.

2.1.5 Compensation for Londoners

As per previous submissions, the GLA is concerned that the compensation being provided for Londoners is not satisfactory. These concerns are compounded by the content of AP2 and the ES Addendum, which clarifies that in fact the impacts on London residents as a result of construction, particularly increased HGV movements, will be greater than originally thought. The GLA seeks a commitment from HS2 Ltd. that London residents and businesses blighted by the construction and operation of HS2 will receive treatment that is on a par with other areas.

The GLA is pleased that HS2 Ltd. has agreed to extend the rural compensation boundary to the tunnel portal at West Ruislip, but this creates a small disparity for those properties that are a similar distance away from the open section of HS2 by distance, but as presented, would not be eligible for compensation. These properties would be impacted by HS2 noise, in

particular the 'Tunnel Boom' effect of high speed trains entering and leaving the tunnel portal. The GLA is seeking that HS2 Ltd. extend the rural support zone and home owner payment zones to cover the area within 300m of the West Ruislip tunnel portal. This would include around 200 additional residential properties.

The GLA seeks an enhanced community and business fund with a minimum of £30m dedicated for London to cover public realm improvement works; local transport / infrastructure improvements (i.e. cycling or broadband); and community facility improvements. We are also seeking specific enhanced compensation/mitigation packages for residential and business areas that are particularly hard hit by HS2 construction works – this would include Old Oak, West Ruislip/Ickenham and Euston.

This would cover:

- a) mitigation in relation to access to public transport and essential services;
- b) replacement open space and child play facilities;
- c) additional noise and dust mitigation measures;
- d) financial assistance for local businesses impacted by HS2 works; and
- e) a specific Undertaking relating to mitigation measures for residents.

HS2 Ltd. should also adopt the following general compensation improvements:

- a) introduce a (route wide) Property Bond Scheme;
- b) provide a more flexible Exceptional Hardship Policy/Need to Sell scheme (route wide); and
- c) allow for earlier application of the HS2 Express Purchase scheme.

2.1.6 Impacts on other major projects

The cumulative impact of increases in the volume of waste generated by HS2 detailed in the SES is that there will be a significant major adverse impact on hazardous waste landfill capacity in the UK. There will also be moderate impacts on inert waste landfill capacity and moderate-adverse impacts on non-hazardous landfill capacity.

The SES non-technical summary document surmises that by implementing mitigation measures to three other authorised major projects (Crossrail 1, Thames Tideway Tunnel and the Northern Line Extension), the cumulative effects of these impacts can be reduced.

The SES should provide an assessment of what mitigations can be applied to HS2 Ltd.'s own scheme to prevent any impacts on the cost and scope of other prior-committed projects.

2.2 Area-specific issues

2.2.1. Old Oak Common

2.2.1.1. Highway impacts – At Old Oak Common changes to construction routes have redirected HGV movements onto some residential and busy local routes. In combination with the increase in the volumes of waste material within the SES, over five times as many HGVs per hour will travel along Old Oak Common Lane between the HS2 station site and the Atlas Road compound site, requiring conversion of the current Atlas Road/Victoria Road/Old Oak Common Lane roundabout to a signalised junction. These changes will have a number of significant impacts on:

- congestion as a result of the increased HGV volumes;
- noise, vibration and air quality for residents near Old Oak Common Lane;
- the performance of Atlas Road Junction;
- access to bus garages;
- road safety impacts at Old Oak Common Lane and Atlas Road Junction;
- increased congestion as a result of removing the Atlas Road/Victoria Road/Old Oak Common Lane roundabout;
- access to the Crossrail depot from Old Oak Common Lane.

In providing the revised construction traffic estimates, the revised SES makes no reference to the consideration of any possible alternatives including; constructing the North Acton link tunnel early to allow off-street access to the adjacent worksite, transporting materials through the Heathrow Express depot site (whilst in use) or making greater use of the existing proposed construction logistics tunnel.

In addition, the SES reports a doubling of the number of HGVs joining and leaving the A40 at Gypsy Corner. However, it is not clear why this increase has occurred and further explanation of the reasons for this should be provided.

HS2 Ltd. has only strategically assessed the impact of the proposed 12 month Old Oak Common Lane closure (assumed to take place in 2023) against the early (2017 – 2020) HGV movements required to remove the

material generated by site clearance/preparation. TfL and the GLA are concerned that the HGV volumes and routings will differ in 2023 when the HS2 infrastructure is being built, which with Old Oak Common Lane being closed, could have larger impacts on parts of the network (such as Victoria Road and Gypsy Corner) than have currently been identified.

We believe HS2 Ltd. has failed to assess accurately the impact of the proposed Old Oak Common Lane closure on planned HGV flows and routing in the 2023 construction scenario, which will in turn affect traffic flows on surrounding roads, including Victoria Road.

HS2 Ltd.'s own modelling in the SES shows that many local roads will see significant increases in general traffic flows as a result of the works proposals at Old Oak Common. HS2 Ltd. needs to provide a package of mitigation to respond to these significant impacts on the local road network.

We also require HS2 Ltd. to develop further measures to adequately mitigate the impacts of traffic diverted as a result of the Old Oak Common Lane closure, including impacts on surrounding roads and junctions. Pressures on the A40 will in turn have a significant impact on junctions onto the A40 in the Old Oak Common area.

The changes introduced by AP2 will mean construction traffic will no longer use a haul road to access the satellite compounds close to Midland Terrace, and will instead use the already busy Old Oak Common Lane and Atlas Road junction.

TfL, the GLA and OPDC consider that HS2 Ltd. must review the worksites in these particularly badly-affected areas and should:

- consider alternative means of access (e.g. by canal, dedicated haul-road and rail) to provide a solution that reduces the total numbers of HGVs using the public road network to acceptable levels;
- reconfigure vehicular access routes to minimise transport distances;
- commit to avoiding the use of local and residential routes for construction traffic and consider alternative options;
- consider the early construction of the 'shell' of the subway which HS2 Ltd. has recently committed to part construct for use as a pedestrian and cycle access to the HS2 station at Old Oak Common. The subway link will run between the proposed HS2 Old Oak Common Station and the Victoria Road HS2 construction site and, if constructed in advance of the main works, could act as

a temporary construction haul road between the worksites, largely removing the need to use Old Oak Common Lane and Victoria Road for construction traffic;

- commit to fund junction improvement works at Gypsy Corner;
- configure the Atlas Road Junction and signal timings in order to minimise delays to traffic and provide for safe through transit of pedestrians and cyclists;
- redesign the HS2 site access junctions to prioritise road safety;
- where impacts cannot be reduced, commit to adequate mitigation to minimise the disruption and effects on local residents and businesses, including further mitigation of noise and air quality impacts; and
- revise the Code of Construction Practice to meet the standards established for Crossrail as well as proposed Codes of Construction Practice for the Northern line Extension and Thames Tideway Tunnel, and to incorporate the additional changes and improvements suggested by TfL and the GLA in their original petition.

TfL and the GLA consider that the SES is deficient to the extent it does not consider the above matters.

2.2.1.2. Crossrail impacts – Sewer works east of Mitre Bridge under the Crossrail depot throat and the proposed logistics tunnel under the Crossrail depot will be invasive and impact the Crossrail depot construction and operations. TfL understands that HS2 Ltd. wish to ‘pipe-jack’ the sewer under what will be an operational railway. The SES documentation does not provide a sufficient level of detail for TfL to understand where the sewer works will be located, how access to both the logistics tunnel and sewer works will be gained and what HS2 Ltd.’s proposed approach to construction is. Initially, HS2 Ltd. should provide a contour map which clearly sets out the settlement impacts of these works so that TfL can better assess what the potential consequences are for the Crossrail depot. These items should be subject to the protection to be afforded by the undertaking agreed to, but not yet executed by, the Secretary of State in respect of the Crossrail depot.

TfL, the GLA and OPDC require that details are provided (missing within the SES) that the works avoid the need for any closures of the operational Crossrail depot, which extends above the sewer and logistics tunnel. TfL is also concerned that settlement may occur which may cause damage to its assets and result in construction or operational impacts, possessions and potentially temporary closure of the depot. We therefore require HS2 Ltd.

provide evidence that the proposed construction methodology will not require possessions and that proper monitoring is put in place.

While, in general, the proposed changes to the Crossrail turnback capacity at Old Oak Common and passive provision for a Crossrail-West Coast Mainline link are welcomed, the approach outlined to delivering these works within the SES is currently unclear. TfL and the GLA require clarity that Crossrail will remain open throughout the HS2 construction works and that these are coordinated to avoid disruption and minimise the risk to the successful delivery and operation of Crossrail.

2.2.1.3. Crossrail turnbacks and impacts at Wells House Road and surrounds – TfL, the GLA and OPDC support the provision of the Crossrail 'turnback' facility as proposed in AP2. However we are concerned that the new and increased impacts that will occur as a result of these additional works are adequately mitigated, as provision within the SES is limited. The provision of the turnbacks will result in noise impacts for an additional 80 residential properties in the evenings around Wells House Road, on top of additional daytime impacts.

Wells House Road, Midland Terrace and the surrounding streets are already badly affected by the provision of the conveyor. The noise, vibration, visual and dust impacts of the turnbacks can be remedied, however it is felt that current approach to mitigating these impacts is inadequate. Therefore we request that HS2 Ltd. examine alternative design and construction options to mitigate the scheme's impact as far as reasonably possible, whilst not undermining the benefits of providing the additional infrastructure TfL, the GLA and OPDC believe is required. As a key element of this, HS2 Ltd. should engage with local people, the local Boroughs and the OPDC to agree an approach to mitigation for all affected residents in this area.

2.2.1.4. Temporary Construction Tunnel at Old Oak Common – The GLA and OPDC support the provision for the Atlas Road to Old Oak Common Logistics Tunnel on the basis that it provides an alternative means of transporting construction materials and waste away from public roads. The GLA and OPDC believes there is a strong case for the continued use of the Logistics Tunnel after the HS2 construction works have completed, in order to support future activities associated with the redevelopment of the Old Oak and Park Royal Opportunity Area.

An undertaking has already been agreed with the GLA that provides for the possible continued use of the Logistics Tunnel after the HS2 construction works have completed. However, the SES makes no mention of the possible future use of the Logistics Tunnel in this way, instead it states that the Logistics Tunnel will be backfilled once HS2 uses are complete. This is of concern and the SES should be amended to recognise such future appropriate use of the Logistics Tunnel.

2.2.1.5. Old Oak Common Lane Underbridge Closure – the impacts of the closure of Old Oak Common Lane under the Great Western Mainline have been revised to provide pedestrian connectivity for the majority of these works. However, in the absence of clarity on how the scale of individual impacts is determined, it is difficult to analyse whether the modifications are adequate.

The proposals within the SES do not provide sufficient assurance that the quality of pedestrian access through the bridge will meet the standards in terms of lighting, security, width etc. as previously petitioned by TfL and the GLA. Further assurances are required in this respect, as is greater detail regarding the length and frequency of “short term closures” proposed. In addition, no reference has been made to HS2 Ltd. providing further mitigations in response to the severance created by the closure of Old Oak Common Lane to vehicles, in particular buses. TfL and the GLA require HS2 Ltd. to propose and contribute to the provision of alternative public transport services to connect impacted communities during the closure.

Whilst TfL, the GLA and OPDC acknowledge a Further Protective Undertaking (FPU) has been agreed in principle by the Secretary of State and is to be executed to address these issues, they wish to reiterate the expected levels of access and connectivity to be provided during these works and are surprised that the revised SES does not take into account the revised parameters as to any potential closure that the FPU will put into place.

2.2.1.6. Second World War pillbox next to the parliamentary line south of the Wells House Road estate – TfL, the GLA and OPDC are concerned regarding the lack of mitigations considered in response to the identification of the additional heritage asset in CFA 04 (Second World War pillbox next to the parliamentary line south of the Wells House Road estate). As a minimum, TfL would expect justification of why the asset has been allocated “low” heritage value and consideration of alternative options including the possible relocation of the pillbox prior to the conclusion that the structure will need to be demolished.

2.2.2. Ruislip and Ickenham

2.2.2.1. Highway impacts – In the Colne Valley and Ruislip to Ickenham areas, impacts on the A40 are now predicted to increase from six months to one year, meaning that very high impacts from construction traffic (up to 1,460 two-way daily movements) will now last twice as long. Most of the HGVs will travel via the A40, Swakeleys Roundabout and Swakeleys Road, which will be under significant pressure.

TfL and the GLA are concerned that this extended duration of peak HGV use will have significant impacts on highway network performance, road safety, air quality, noise and community life in this area. In addition, we are concerned that the SES does not consider the additional HGV traffic generated by other HS2 worksites (e.g. Euston, Old Oak and Langley) that will travel along the A40 past Swakeleys roundabout and that the strategic modelling that has taken place underestimates these cumulative impacts.

Further to the Committee Statement dated 13 July 2015 requesting HS2 Ltd. and TfL to work together to review the use of the Harvil Road construction site, TfL considers HS2 Ltd. must revisit the assessment and mitigation of construction traffic impacts in these areas, including:

- The use of the local rail network, including Ruislip Depot to maximise the transport of construction materials and spoil by train and commencing works to enable the depot's use ahead of those for construction of the relevant sections of HS2 infrastructure in the area.
- A detailed commitment to provide the mitigation needed to offset residual impacts along the A40.

Without a significant review of the approach to construction traffic in this area, TfL and the GLA consider there is a significant risk that the both the road network in this area and HS2 Ltd.'s own delivery programme will not cope with the HGV volumes predicted.

2.2.3. Langley

2.2.3.1. Highway impacts – It is noted that the proposed works for the Heathrow Express depot at Langley include HGVs accessing the site by Hollow Hill Lane. This is a narrow road and may not provide sufficient access for HGVs required to deliver this project. The SES should at least consider alternative routes and modes to transport materials to and from site. This should however not impact the successful delivery and operation of the Crossrail Project.

The SES assumes traffic levels in the Langley area to experience zero growth between 2013 and 2026/41. In addition traffic surveys were undertaken in June, when traffic levels are likely to be lower than during core school term times. Further analysis of the impact of construction traffic at the site should therefore be undertaken reflecting the possibility of higher background traffic levels. This is of particular relevance given the introduction of Crossrail services during construction is likely to increase traffic in the area.

2.2.3.2. Crossrail impacts – Although it is noted a substantial proportion of the proposed works will be constructed off-line, TfL is concerned that the SES contains little detail on how the works required to connect the depot to the operational railway, just as Crossrail is scheduled to open, will not have adverse impacts on the successful delivery and operation of the train service. As such, TfL requires HS2 Ltd. to demonstrate that the works at Langley will not require any possessions and that they will not impact the operation of the Crossrail network or Langley station (within the limits being sought by HS2).

In addition, any works should be consistent with options which have been identified through Network Rail's Route Studies, such as the proposed WRLtH and the planning and delivery of any proposal should support the future needs of the railway and be coordinated to minimise disruption to planned Crossrail services during delivery and operation.

2.2.4. Greenpark Way

It is noted that the proposed location of the auto-transformer at Greenpark Way has been modified to accommodate the needs of an adjacent property. The revised works should be reviewed with TfL to ensure the design does not conflict with the requirements set out in the Further Protective Undertaking agreed by the Secretary of State for TfL's protection at this site.

3.0 Additional Provision Undertakings and other items

It should also be noted that TfL and the GLA have deferred a number of issues raised in their original petition and consultation responses in relation to the Hybrid Bill and previous submissions by HS2 Ltd., pending publication of further additional provisions. However, until this has been completed satisfactorily a number of concerns relating a range of issues including the Code of Construction Practice and Euston remain.

In addition a number of issues previously raised by TfL and the GLA are awaiting resolution through agreement of additional undertakings by HS2 Ltd. These include access under the GWML on Old Oak Common Lane and alternative bus connectivity during this time, connectivity between the HS2 and Overground stations at Old Oak Common, greater oversite development, protection of Crossrail operations and compensation.

In conclusion, whilst TfL and the GLA's previous response acknowledged good progress having been made in reducing HS2's impact through London since the

2011 consultation, it is unfortunate that subsequent progress has been much more limited. In particular, little or no progress has been made regarding the key issues of the HS2-HS1 link, alternative means of transport for construction materials and construction proposals at Old Oak Common. The AP2 proposals include a number of additional issues of concern, which this document outlines.

TfL, the GLA and OPDC are ready and eager to work with HS2 Ltd. on addressing all of these issues as the project develops.

Yours faithfully

A handwritten signature in black ink, appearing to read "Michael Colella". The signature is written in a cursive, flowing style.

Michael Colella
TfL HS2 Interface Lead Sponsor