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14 November 2016

Dear Neil Chester

**Nationally Significant Infrastructure Project  
Proposed Silvertown Tunnel  
Statement of Common Ground**

Thank you for providing a draft statement of common ground (SoCG) relating to the above development. Where possible Public Health England (PHE) prefers to provide comments in the form of a letter rather than a SoCG.

PHE notes that we have replied to earlier consultations as listed below and this response should be read in conjunction with that earlier correspondence.

- Request for Scoping Opinion 24<sup>th</sup> July 2014
- Section 42 Consultation 18<sup>th</sup> December 2014
- Health Impact Assessment and Equality Impact Assessment Scoping Reports Consultation 24<sup>th</sup> July 2015
- Section 42 Consultation 27<sup>th</sup> November 2015
- DCO Consultation 30<sup>th</sup> August 2016

We have reviewed the submitted draft Statement of Common Ground and can confirm the following in regards to matters where PHE is in agreement / disagreement. With regards to section 4.2.2 of the SoCG (validation of traffic modelling) PHE are unable to make any additional comments on this further to our previous responses as it falls outside our area of expertise.

**1) Matters with which PHE is in agreement**

4.2.1. General Approach to assessment

PHE has considered the submitted documentation and can confirm that we are broadly satisfied with the approach taken in preparing the Environmental Statement and Health and Equalities Impact Assessment (HEqIA) and the conclusions drawn.

#### 4.2.3 Method for quantitative assessment of air quality and noise effects on health

PHE can confirm that following extensive discussions with TfL we are satisfied with the methodologies undertaken for determining the health impact as a result of modelled air quality changes. However, we have not assessed the noise methodologies (see section 4, limitations of the PHE response).

#### 4.3.1 Baseline and operational monitoring:

PHE can confirm following discussions with TfL we are satisfied with the proposed monitoring locations and strategy both during the construction and operational phases of the scheme.

#### 4.3.2 Using the base year 2012 for modelling

PHE can confirm that following discussions with TfL we are satisfied with the justification provided for using 2012 as the baseline year for modelling purposes.

#### 4.3.3 Cumulative impacts

PHE can confirm that we are satisfied that cumulative impacts have been considered appropriately by the scheme.

#### 4.3.4 Selection of receptors

PHE have been provided with modelling data at all receptors considered by the scheme and agree that TfL have selected appropriate receptors to represent “worst case” impacts. In addition, PHE has analysed data at receptors where Air Quality Standards were not breached (or an Air Quality Standard exceedance created / removed) and this did not change our overall assessment of the air quality impacts.

#### 4.4.3 Contaminated land

PHE can confirm that they are satisfied with the proposed methodology for control and mitigation of potential off-site impacts from excavation of contaminated soil.

#### 4.5.1 Impact on air quality at two schools

PHE can confirm that following discussions with TfL and the provision of further modelled data; the potential air quality impacts at the 2 schools are predicted to be relatively small and below the relevant Air Quality Standards for nitrogen dioxide (NO<sub>2</sub>). Given this, PHE recognise further mitigation is not indicated at these receptors.

#### 4.5.2 Transport of waste by river

PHE are broadly satisfied that air pollution mitigation measures have been adequately considered around the transfer points for excavated waste and subsequent transport during construction of the Scheme.

## **2) Matters still under discussion**

### 4.1.1 Active travel

PHE would like greater assurance that there is commitment to a bike bus or similar scheme in order to support active travel on both sides of the crossing.

### 4.4.1 and 4.4.2 Environmental (Air Quality) Mitigation measures

PHE note that mitigation at specific receptors was also a question directed to PHE by the Planning Inspectorate as below:

“Are the LPAs, No to Silvertown, PHE and other IPs (who have responded on air quality matters) satisfied with the mitigation proposed by the Applicant in relation to locations and sensitive receptors where there would be a significant impact in terms of predicted air quality changes arising from the development? If not, why not?”

Following discussion with TfL it is apparent that TfL have considered a wide range of air quality mitigation measures for the scheme and also more specifically at certain sensitive receptors such as the Hoola building. PHE note that there is the potential for the scheme to implement landscaping / urban greening in the vicinity of the Hoola building. Despite there being limited evidence for urban greening improving air quality at pollution hotspots there are potential additional benefits to residents from a wider health and well-being perspective. There is significant and growing evidence on the health benefits of access to good quality green spaces<sup>1</sup>. The benefits include better self-rated health; lower body mass index, overweight and obesity levels; improved mental health and wellbeing; increased longevity.

In summary, despite an extensive range of mitigation measures being investigated the current modelling indicates that there is still the potential for residents of the Hoola building to be exposed to significantly increased concentrations of both NO<sub>2</sub> and particulate matter (PM<sub>10</sub>). PHE understand TfL are planning to undertake further modelling at the Hoola building to take into account additional factors (e.g. the use of new emission factors for Euro VI buses) and look forward to seeing the outcomes of this in due course. It would be helpful for TfL to confirm their proposals/approach to urban greening in areas surrounding the Hoola building.

#### 4.5.4 Effects on community anxiety / stress

Our findings indicate that while there are additional factors outside the scope of this project that can contribute to individual stress which are hard to measure, community anxiety and stress can arise from both the construction and operational phases of the Silvertown Tunnel project, and that this has the potential to adversely impact both the perceived health of local populations and actual physical and mental wellbeing.

PHE accepts that TfL is following a statutory process to consult the local population. The studies below give some indication of good practice based on research in this area, which PHE recommend be taken into account:

- Perception is a key factor influencing the public acceptance of environmental policy.<sup>ii, iii</sup>
- Appropriate use of information should address psychological stress in environmental decision-making.<sup>iv, v</sup>
- That methods to communicate information on issues such as air pollution should directly address
  - o The public's identification with a place or industry,

- Immediate environmental stressors such as abandonment, waste and odours, and
- Public perceptions of lack of social control and fear of displacement.<sup>vi</sup>
- That strategy to address air pollution take into account the combined effect of psychological stress and air pollution on immune function and susceptibility to respiratory disease onset, particularly on lower income urban communities.<sup>vii</sup>

### Crossing Charge

PHE is very concerned with the introduction of a charge to use the existing river crossing, Blackwall Tunnel, which is currently free of any charge. PHE is primarily concerned that the level of the charge may present a greater burden on those in the lower socio-economic groups, who use Blackwall Tunnel as a means to access employment, healthcare, etc and the introduction of the charge may have a 'community severance' effect.

### 5.1 Local Air Quality should not be worsened

PHE recognise that the Environmental Statement concludes that there are more receptors that experience a perceptible improvement in air quality compared to deteriorations, despite emissions from the scheme increasing overall. However, TfL have stated that this improvement is not determined as significant under the IAN 523 guidance and hence concludes that the scheme will have "no significant impact" on air quality. Hence, PHE would like to clarify their position as follows: PHE would encourage any new road or traffic development to consider, if practicable and cost effective, opportunities to secure improvements in local air quality.

## **3) Matters in which PHE are in disagreement**

### 4.5.3 Modelling of 20mph speed limit

PHE have discussed this subject with TfL at length. PHE recognise that traffic modelling falls outside their area of expertise but would ideally like to see evidence to confirm that the introduction of a 20mph zone couldn't have potential benefits on local air quality. The introduction of a 20mph zone may also have associated benefits on road safety with regards to accidents. It is well established that the rates of road traffic accidents in the most deprived communities are disproportionately higher than those in more affluent communities. In addition, several studies have concluded that 20 mile per hour (mph) zones are effective in reducing road traffic accidents and improving the perception of safety amongst communities. Whilst the effect of 20 mph zones on health inequalities has not been proven it is possible that targeting such interventions in the most deprived areas will be beneficial.<sup>viii</sup>

## **4) Limitations of the PHE response**

PHE is a statutory consultee for applications which fall under the provisions of the Nationally Significant Infrastructure Planning (NSIP) regime. Our statutory remit in these consultations covers applications which could potentially cause harm to people and are likely to significantly affect public health. However due to limited resources, PHE will not provide comments on the following matters included in the draft SOCG.

a) Aspects of the application relating to noise exposure/mitigation.

Should you have any questions or concerns please do not hesitate to contact us.

Yours sincerely

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*Please mark any correspondence for the attention of National Infrastructure Planning Administration.*

Cc: Amanda Pownall, Transport for London

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<sup>i</sup> Balfour R, Allen J. Local action on health inequalities: improving access to green spaces. London: Institute of Health Equity, 2014

<sup>ii</sup> Kim, M., Yi, O. & Kim, H. 2012. The role of differences in individual and community attributes in perceived air quality. *Science of the Total Environment* 425 20-26.

<sup>iii</sup> Valentic, D., Micovic, V., Kolaric, B., et al. 2010. The role of air quality in perception of health of the local population. *Collegium Antropologicum* 34 Suppl 2 113-7.

<sup>iv</sup> Couch, S. R. & Coles, C. J. 2011. Community stress, psychosocial hazards, and EPA decision-making in communities impacted by chronic technological disasters.

<sup>v</sup> Liu, X., Zhu, H., Hu, Y., et al. 2016. Public's health risk awareness on urban air pollution in Chinese megacities: The cases of Shanghai, Wuhan and Nanchang. *International Journal of Environmental Research and Public Health* 13 (9) (no pagination)(845).

<sup>vi</sup> Kondo, M. C., Gross-Davis, C. A., May, K., et al. 2014. Place-based stressors associated with industry and air pollution. *Health & Place* 28 31-7.

<sup>vii</sup> Clougherty, J. E. & Kubzansky, L. D. 2010. A framework for examining social stress and susceptibility to air pollution in respiratory health. *Ciencia & Saude Coletiva* 15(4) 2059-74.

<sup>viii</sup> Cairns J, Warren J, Garthwaite K, Greig G, Bambra C. Go slow: an umbrella review of the effects of 20 mph zones and limits on health and health inequalities. *Journal of public health*. 2015 Sep 1;37(3):515-20.