

# MAYOR OF LONDON

**Emre Williams**  
The Planning Inspectorate  
3/18 Eagle Wing  
Temple Quay House  
Temple Quay  
BRISTOL  
BS1 6PN

**Our ref:** D&P/4039/NG  
**Your ref:** TR010021 – SILV-402  
**Date:** 14 November 2016

Dear Mr Williams

**Planning Act 2008 (as amended) – Section 89; Infrastructure Planning (Examination Procedure) Rules 2010 (as amended) – Rules 8 and 13**  
**Application by Transport for London for an Order Granting Development Consent (DCO) for the Silvertown Tunnel**  
**Local Impact Report and Initial Questions**

I refer to your letters of 18 October and 9 November 2016 inviting interested parties to submit Local Impact Reports, Statements of Common Ground, written representations and responses to the Examining Authorities initial questions.

Attached to this letter is the Local Impact Report of the Greater London Authority, which sets out the authorities views on the strategic impacts on London and compliance with London Plan policies. Appended to this letter is also the GLA's response to the Rule 8 initial questions in relation to air quality. In addition, because of the GLA's strategic role and the Mayor's particular interest in air quality, the GLA has also responded to the Rule 17 request for further information relating to air quality and the High Court judgement of 2 November 2016.

Yours sincerely



**Jules Pipe**  
Deputy Mayor for Planning, Regeneration and Skills

cc Unmesh Desai and Len Duvall, London Assembly Constituency Members  
Tony Devenish, Chair of London Assembly Planning Committee  
National Planning Casework Unit, DCLG  
Lucinda Turner, TfL



## Rule 8: GLA response to Examining Authorities initial questions

	Question to:	Question:	GLA Response
AQ	<b>Air Quality</b>		
AQ1	Applicant, Greater London Authority (GLA), London Borough of Newham, Royal Borough of Greenwich, London Borough of Tower Hamlets and other IPs with an interest in air quality	<p>Paragraph 6.1.1 of the ES [APP-031] explains that the air quality assessment uses 2021 as the year for the basis of modelling air quality levels for both the proposed scheme and the situation without the scheme.</p> <p>Is the use of 2021 as the base year sufficiently robust to provide air quality modelling data for the whole of the operational phase, given the stated life of the scheme being 120 years and, if the Order is made, Silvertown tunnel is not proposed to be operational until 2023?</p>	<p>Yes.</p> <p>Both ambient pollutant concentrations and emissions from vehicles are expected to reduce over time as older more polluting vehicles are phased out of the fleet.</p> <p>Thus by selecting a date of 2021 the air quality modelling presents a 'worst case' scenario. We consider this sufficiently robust to assess the impacts of the scheme.</p>
AQ2	Applicant, GLA, London Borough of Newham, Royal Borough of Greenwich, London Borough of Tower Hamlets and other IPs with an interest in air quality	<p>The ES, in table 6.1 (page 6-11) [APP-031] explains that the Applicant has not carried out an assessment of the proposed development in terms of whether it is "air quality neutral". This term is derived from the Mayor's Air Quality Policy.</p> <p>(a) Please can the Applicant provide a copy of the following ES references [APP-031], Mayor's Air Quality Strategy, Greater London Authority (Ref 6.13) and GLA Air Quality Neutral Planning Support, Air Quality Consultants Ltd, 2013 (Ref 6.14) to the Examination as PDFs?</p> <p>(b) Please can the Applicant explain why it has not provided an assessment of the scheme in terms of whether it is "air quality neutral"?</p> <p>(c) Please can GLA and the Local Authorities confirm</p>	<p>In response to (c):</p> <p>We can confirm that an "Air Quality Neutral" calculation is neither necessary nor possible for this development.</p> <p>The Air Quality Neutral calculation assess the estimated emissions from a given development against an average value (benchmark) derived from assessment of similar use classes in London.</p> <p>The benchmarks for transport emissions are ultimately tied to trips associated with parking provision at residential or other buildings. As such there is no mechanism to apply this calculation to new road projects such as the Silvertown Tunnel.</p> <p>A plain English reading of the phrase "Air Quality Neutral" would indicate that the total emissions associated with the scheme once complete should be the same or less than those without. The applicant has addressed this question through the calculation of the total NO<sub>x</sub> and PM emissions</p>

		<p>that the assessment of air quality impacts undertaken by the Applicant is sufficiently robust in the absence of this information?</p> <p>Please can the GLA and the Local Authorities confirm whether these documents remain extant and whether there are any other London based air quality policy documents (apart from the London Plan and their own Unitary Plans) that are relevant to the Examination?</p>	<p>presented in table 6-25 of their Air Quality Assessment (6.1.6 Environmental Statement Chapter 6 – Air Quality). We have considered these figures in our Local Impact Report.</p> <p>As the air quality modelling presents an assessment of the likely scale and distribution of impacts, both negative and positive, of the scheme on air quality in the vicinity we believe that it is sufficiently robust to assess the scheme.</p> <p>In addition to the documents referenced in the question we believe that the following GLA Supplementary Planning Guidance is relevant to the development:</p> <p>“The Control of Dust and Emissions During Construction and Demolition, July 2014”</p> <p>This document sets out standard processes for assessing the likely impacts of construction activities on local air quality and appropriate methods of mitigation. It also imposes minimum emissions standards on construction equipment. The relevant assessment is presented by the applicant in “Environmental Statement Appendix 6.A (6.3.6.1)”</p>
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14 November 2016

## Silvertown Tunnel

in the London Borough of Newham and the Royal Borough of Greenwich

Planning Inspectorate reference: TR010021 (SILV-402)

### Application for a Development Consent Order for a Nationally Significant Infrastructure Project – Local Impact Report

Planning Act 2008 (as amended), National Policy Statement (NPS) for National Road and Rail Networks (2015).

#### The proposal

The Silvertown Tunnel scheme involves the construction of a twin bore road tunnel providing a new connection between the A102 Blackwall Tunnel Southern Approach on the Greenwich Peninsula (in the Royal Borough of Greenwich) and the Tidal Basin roundabout junction on the A1020 Lower Lea Crossing/Silvertown Way (in the London Borough of Newham). The scheme includes the introduction of free-flow user charging on both the Blackwall Tunnel (where the northern portal is located in the London Borough of Tower Hamlets) and at the new Silvertown Tunnel. The Silvertown Tunnel would be approximately 1.4km long and would include a dedicated bus, coach and heavy goods vehicle lane.

#### The applicant

The applicant is **Transport for London (TfL)**.

#### Strategic impacts summary

**Principle:** The principle of the scheme is supported. It will improve connectivity in east London and reduce the severance impact caused by the river Thames. This will assist in delivering growth in homes and jobs across the two opportunity areas at Greenwich Peninsular and the Royal Docks (paragraphs 19-25).

**Design:** The design principles are supported. They will ensure that the final design of the portals, the structures and the land surrounding contributes to the continued regeneration of Silvertown and Greenwich. The design principles will ensure that the final design will fit in with the emerging and changing context of surrounding development land and masterplans for these areas (paragraphs 26-35).

**Air quality:** GLA officers are broadly satisfied with the air quality assessment, impacts identified and the proposed mitigation measures. Further measures have been discussed with the applicant relating to updated modelling to reflect ULEZ, GLA representation on STIG, and a programme to identify further mitigation measures and benefits to locally impacted properties (paragraphs 36-54).

**Flooding:** The approach to the low level of flood risk and surface water drainage, are acceptable and in line with both the NPPF and London Plan. GLA officers request that the DCO includes the requirement for the surface water drainage arrangements to be agreed with the respective Lead

Local Flood Authorities in consultation with Environment Agency and Thames Water (paragraphs 55-63).

**Transport:** TfL Borough Planning officers are satisfied that the submitted documents are sufficient to enable the expected transport impacts of the scheme to be fully assessed. The scheme will relieve congestion and improve journey time reliability at the Blackwall tunnel and will improve connectivity and public transport accessibility in east London (paragraphs 64-72).

**Ecology and Noise:** There is no strategic concern with the schemes impacts on noise or ecology and GLA officers are satisfied with the conclusion of the Environmental Statement in this regard (paragraphs 73-76).

## **Context**

1 TfL has submitted an application for a Development Consent Order for a Nationally Significant Infrastructure Project (NSIP) to the Planning Inspectorate (PINS) for the project outlined above. The scheme was designated as an NSIP by a Direction issued by the Secretary of State for Transport under section 35 of the Act in June 2012. The Secretary of State considered that the project was of national significance because: it will impact on current and forecast congestion at the Blackwall Tunnel, which has a wider impact on the strategic road network both within and outside of London, which will impact the projected growth of London, and therefore may have a corresponding impact on the country as a whole as London is the engine for economic growth nationally.

2 Section 60 (2) (B) of the 2008 Planning Act sets out that PINS is required to invite the GLA to submit a local impact report. The GLA may also make representations on the proposal. The GLA is therefore submitting this local impact report (LIR), which focuses on strategic impacts on London and the project's compliance with the policies of the London Plan.

### Adequacy of consultation

3 On 27 May 2016, the GLA responded to PINS request on the applicant's adequacy of consultation, confirming that prior to the application being submitted, GLA officers were satisfied that the applicant had made every effort to engage with relevant parties, provide requested information and answer any queries.

### Relevant representation

4 Following the submission of the DCO application, the GLA received correspondence from the applicant advising of the need to register as an interested party and submit relevant representation in order to be involved in the public examination. The GLA submitted a relevant representation to PINS on 30 August 2016, which set out the following:

*The GLA supports the principle of the Silvertown Tunnel project, which will address severance issues and improve connectivity north/south across the River Thames in east London. The City in the East masterplan highlights the significant growth potential in east London, but acknowledges the challenges that exist to realise this potential, in relation to infrastructure constraints and poor connectivity, and the Silvertown tunnel project is one measure that will improve this situation.*

*As the statutory planning authority, the GLA will be submitting a Local Impact Report at the next stage of the process, and this will cover the following strategic matters in more detail, in relation to compliance with the London Plan policies:*

*Principle – This section will expand on the above and provide additional policy context, in particularly in relation to emerging policy in the draft Royal Docks Opportunity Area Planning Framework (OAPF).*

*Urban design – This section will look at the design principles and indicative design and how the tunnel will integrate with key development sites to ensure that land use strategies, densities and connections can be optimised.*

*Air quality – Improving London’s air quality is a top priority for the Mayor, so this section will look at how the scheme delivers improvements in air quality, mitigation and monitoring.*

*Transport – this section will cover: the existing situation; the TA; construction, including use of river transport (and wharves); future traffic and transport impacts; design and local connectivity around portals (in relation to pedestrian/cycle connectivity), and; monitoring and mitigation.*

*Flooding – This section will cover the long term look at flood risk, including the Thames Estuary 2100 flood defences, given the long term nature of this piece of infrastructure.*

*Ecology and noise – how the project ensures compliance with the relevant London Plan policies.*

## History

5 Plans for an additional crossing of the River Thames in the vicinity of the existing Blackwall Tunnel have a long history. In 1995 and again in 1997 the principle of the scheme was subject to a Safeguarding Direction issued by the Secretary of State. The most recent Safeguarding Direction was issued by the Government Office for London in May 2001 and has subsequently been



transferred to the Mayor of London. The direction includes the Third Blackwall Crossing (now known as the Silvertown Crossing or Tunnel) and requires all planning applications within the safeguarding area to be referred to the Mayor. The Safeguarding Direction establishes the importance of the project and it must be taken into account in local planning policy and development management decisions.

**Image 1: Safeguarding area**

## Site description

6 The above ground sites for the project comprise the two portals and the land surrounding them at Silvertown on the north side of the river, and Greenwich on the south side.

7 At Silvertown, the portal site and its surroundings is industrial land, part of it designated in the London Plan as a Strategic Industrial Location (SIL). Much of the area has also been safeguarded for a number of years as a works site for the Jubilee line and Crossrail. The site is in multiple ownership with the GLA owning a portion, Quintain, and a few industrial operators such as ASD and EMR, carrying out activities including metal recycling and concrete batching.

8 Parts of the site are constrained by existing infrastructure including two branches of the DLR and a section of Silvertown Way that all over sail the site.



**Image 2: Northern portal at Silvertown**

9 Similarly, at Greenwich the portal site and surroundings are currently dominated by industrial type uses such as open storage, depots and gas storage, and there is also a nightclub currently present. Further to the west around the Blackwall Tunnel Approach, the character is similar to Silvertown with larger scale industrial and wharf activities.

10 The remainder of the Peninsula is a combination of residential areas, retail and leisure venues including The O2 and substantial surface car parking.

11 Both of the portals and the land surrounding is subject to significant change, with the masterplan for Greenwich Peninsula continuing apace, and further industrial sites coming forward for redevelopment, which is likely to increase as the direction of travel for forthcoming policy (as highlighted in the Draft Royal Docks and Beckton Riverside OAPF) suggests that much of the SIL is suitable for de-designation.





**Image 3: Southern portal at Greenwich**

### Details of the proposal

12 The Silvertown Tunnel scheme involves the construction of a twin bore road tunnel providing a new connection between the A102 Blackwall Tunnel Approach on the Greenwich Peninsula (in the Royal Borough of Greenwich) and the Tidal Basin roundabout junction on the A1020 Lower Lea Crossing/Silvertown Way (in the London Borough of Newham).

13 The Scheme also includes the introduction of free-flow user charging on both the Blackwall Tunnel and at the new Silvertown Tunnel. This measure is intended to play a fundamental role in managing traffic demand (and its associated environmental and socio-economic impacts) and supporting the financing of the construction and operation of the Silvertown Tunnel.

14 The tunnel will be approximately 1.4 km long and has been designed to accommodate large vehicles, including double-deck buses. It will include a dedicated bus, coach and goods vehicle lane, which will enable TfL to provide additional cross-river bus routes.



**Image 4: Route of the Silvertown tunnel**

## Strategic planning issues and relevant policies and guidance

15 The relevant issues and corresponding policies are as follows:

- Principle of development *London Plan;*
- Urban design *London Plan; Mayor's Character and Context SPG;*
- Transport *London Plan; the Mayor's Transport Strategy; Land for Industry and Transport SPG*
- Air quality *London Plan; the Mayor's Air Quality Strategy;*
- Flooding/Sustainable drainage *London Plan;*
- Noise *London Plan; Mayor's Ambient Noise Strategy;*
- Ecology *London Plan.*

16 The Secretary of State must decide an application for a DCO in accordance with any relevant National Policy Statement (NPS) unless the adverse impact of the proposed development would outweigh its benefits. The relevant NPS in this case is the NPS for National Road and Rail Networks, 2015. The NPS itself makes clear that, for applications which have been the subject of a Direction from the Secretary of State, the relevant development plan policies are also likely to be important and relevant, especially in establishing the need for the development.

17 For the purposes of Section 38(6) of the Planning and Compulsory Purchase Act 2004, the development plan in force for the area is the Newham Core Strategy (2012) and the 'saved' policies of the Unitary Development Plan (originally adopted 2001 and reviewed in 2012) on the northern side. On the southern side, the development plan in force is the Royal Greenwich Core Strategy with Detailed Policies (adopted in July 2014). The London Plan (Consolidated with Alterations since 2011) is the spatial development strategy for Greater London and therefore forms part of the development plan for both areas.

18 The following are also relevant material considerations:

- The National Planning Policy Framework, Technical Guide to the National Planning Policy Framework and the National Planning Policy Guidance;
- Newham Council's Detailed Sites and Policies Development Plan Document (Submission Version, April 2016);
- Working Draft of the Royal Docks and Beckton Riverside Opportunity Area Planning Framework (March 2016);
- Royal Greenwich Draft Site Allocations Local Plan (Issues and Options Consultation, March 2016);
- Peninsular West Supplementary Planning Document (2012).

### Principle of development

19 In west London, highway crossings of the Thames are spaced on average 2km apart, and in central London the average distance is around 1km. In the east, the average is 8km (three crossings in a 25km section, with a much longer distance between the easternmost London crossing at Woolwich and the Dartford Crossing in Kent/Essex). This is in part due to the historical development of London. The western and central parts developed for residential and commercial uses, while the east became the home for industrial and shipping activities because the river is

broad and deep – ideal for docks and shipping, with less need for extensive cross-river infrastructure.

20 However, population numbers and densities between west and east are now not dissimilar and, as highlighted in the City in the East masterplan, Opportunity Area Planning Frameworks or similar strategies/masterplans for London Riverside, Royal Docks and Beckton Riverside, Isle of Dogs, Bexley, Thamesmead and Greenwich Peninsula, growth in east London over the next 20-30 years will be significant and the demand for crossing the river will increase.

21 London Plan Policy 3.3 identifies growth in the region of 19,145 homes in borough of Newham and 26,850 homes in Royal Greenwich. As noted above, the land in the immediate vicinity of the southern and northern portals of the Silvertown Tunnel has a particular role to play in this growth as both are within Opportunity Areas (OA's).

22 London Plan Policy 2.13 identifies Opportunities Areas as the capital's major reservoir of brown field land with significant capacity to accommodate new housing, commercial and other development linked to existing or potential improvements to public transport accessibility. Annex A to the London Plan identifies that the Greenwich Peninsula OA has a minimum new homes capacity of 13,500 dwellings and an indicative employment capacity of 7,000 jobs. The Silvertown area forms part of the Royal Docks and Beckton Riverside OA with a minimum capacity for 32,000 homes and 50,000 jobs. This growth, and in particular the potential for both residential and non-residential densities to be maximised as set out in Policy 2013 however, is in part reliant on improvements to connectivity and infrastructure, and the inability to cross the river conveniently and quickly, is a barrier to this growth potential.

23 The London Plan also contains direct policy support for the Silvertown Tunnel. Policy 6.1 states that the Mayor will work with all relevant partners to encourage the closer integration of transport and development through the schemes and proposals listed in Table 6.1, which includes *"new and enhanced road vehicle river crossing(s) in East London - Programme of works under development to improve cross-Thames road links in East London, including Silvertown Tunnel."*

24 Paragraph 6.20 and paragraph 6.41 of Policy 6.12 relating to road and network capacity also provide explicit reference to the Mayor's support for the Silvertown Tunnel, provided that such proposals show, overall, a net benefit when taken as a whole and demonstrates how any dis-benefits will be mitigated. The application documents, and in particular the Environmental Statement and Transport Assessment conclude that overall there will be a net benefit.

25 From a strategic planning perspective therefore, as set out above the principle of the proposal is strongly supported as it is crucial to improving east London connectivity in order to support continued residential and commercial growth and link communities and opportunity areas across the river.

## **Urban design**

26 Good design is central to all objectives of the London Plan and is specifically promoted by the policies contained within chapter seven which address both general design principles and specific design issues. London Plan Policy 7.1 sets out a series of overarching design principles for development in London.

27 The DCO application process requires 'certified documents' to be submitted, similar to parameter plans for an outline planning application. These documents set the framework and define the parameters, within which the detailed design of the scheme will be required to respond. In this case, the Design Principles (also containing the Design Vision) is a certified document, whereas the Design and Access Statement is submitted for illustrative purposes only to show a way in which the design principles could translate.

28 The design principles cover matters relating to: landscape, the integration of permanent structures (the Silvertown and Greenwich portals), Boord Street pedestrian and cycle bridge, sustainability and environment, public art, advertising and commercial activity, signage, wayfinding and lighting.

29 Aside from being a piece of highway infrastructure that provides a vehicular link, at the surface/streets level it is crucial that the scheme acts as a stimulus for economic growth and regeneration, improving movement of all kinds around the portals and does not create additional barriers, 'blight' land or hinder development opportunities.

30 Of the design principles, the most crucial from an urban design point of view is the integration of the permanent structures and landscaping. At each end of the tunnel, there are three common component parts comprising:

- Portal structure including retaining walls;
- Tunnel services buildings housing mechanical, electrical and fire suppression accommodation; and
- Tunnel services compound sited within operational land and containing the services buildings and providing parking for operational and maintenance vehicles.

31 These elements may be physically separate or combined in a number of configurations subject to the detailed design of the portals and the emerging third party masterplan proposals adjacent to them. A head house is also required at each portal which will be located directly above the tunnel boring machine (TBM) launch chambers.

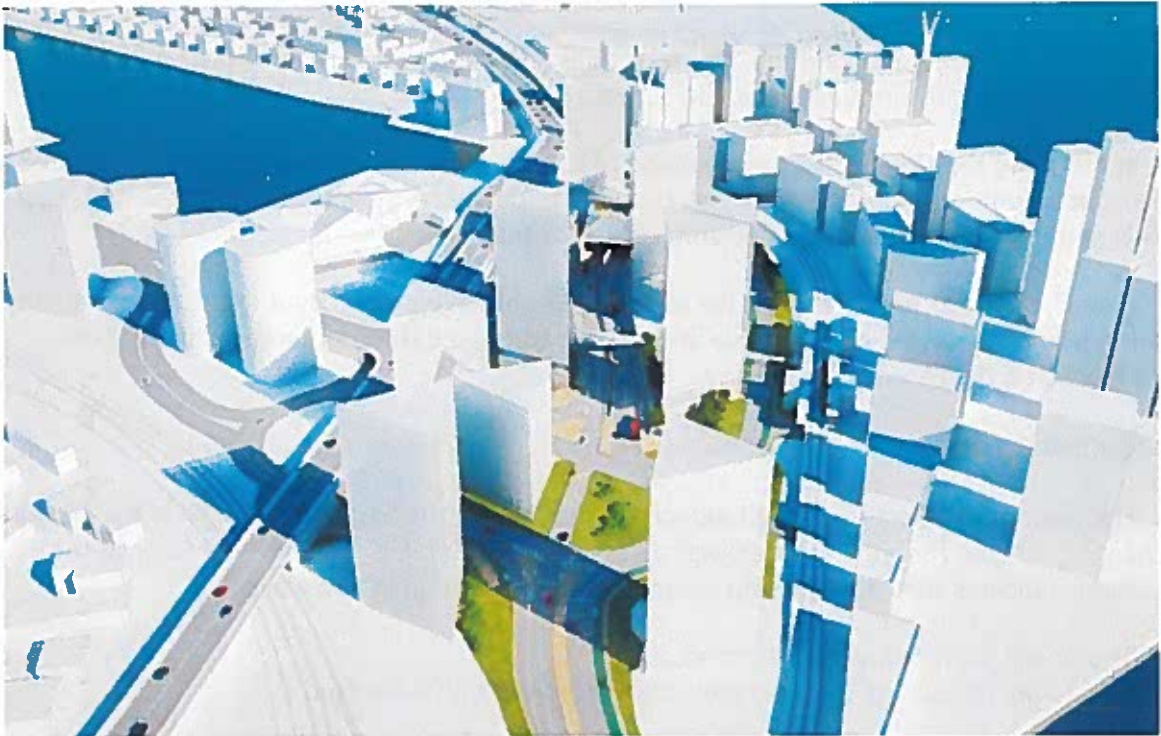
In general terms, the Design Principles set out a number of criteria to ensure that the buildings and other structures will integrate with the surroundings in such a way as to not impede adjoining development sites or worsen local connectivity. For example, one of the principles requires the detailed design of the scheme to integrate with the masterplan design where one has been and approved.

32 GLA officers support the principle that the building layouts should facilitate the development of adjacent sites to secure long-term place making, and require buildings to form edges rather than relying on fences. It is also good to see that the applicant is committed to minimising the spread of multiple structures with one of the principle requiring them to be amalgamated into single structure where possible. The design principles also require new buildings and structures to be high quality in design and architecture with a language that is recognisable to signify their importance to the area.

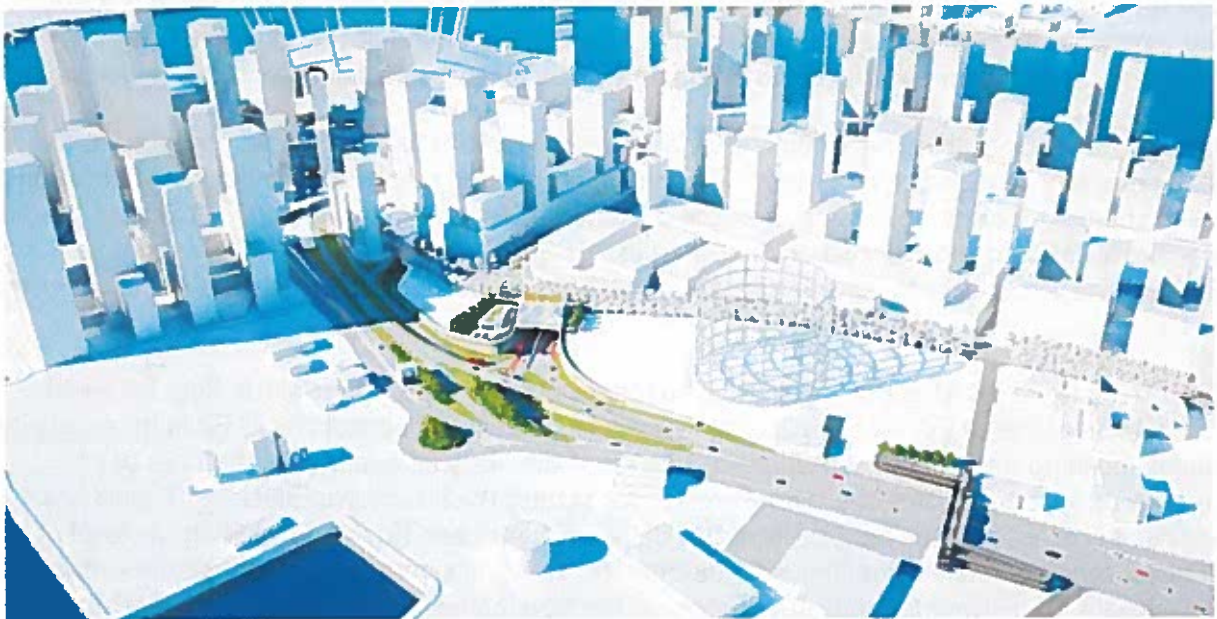
33 More specific principles are set out for the Silvertown and Greenwich portal areas and for the Boord Street replacement pedestrian and cycle bridge. These will ensure that wider place-making is achieved so the scheme becomes a catalyst for regeneration of these two areas, improves upon the severance caused by roads and prioritises improved access by pedestrians and cyclists.

34 Whilst only for illustrative purposes, the design and access statement contains a number of images showing ways in which these principles could be translated into a design, and these appear positive at this stage. The other design principles in relation to signage, wayfinding, public art and lighting are all supported at this stage and have the potential to ensure that the finished appearance of the structures and portals has a positive impact upon these two areas.

35 The application documents also confirm that a Silvertown Tunnel Design Review Panel has been set up to provide design assurance throughout the Silvertown Tunnel design process. This will be independent, administered by Urban Design London, and the terms of reference are included as an appendix to report 7.4.



**Image 5: Illustrative view of Silvertown looking east with potential future development**



**Image 6: Illustrative view looking north towards Greenwich Peninsula**

## **Air quality**

36 London Plan Policy 7.14 states that the Mayor recognises the importance of tackling air pollution and improving air quality to London's development and the health and well-being of its people. The policy sets out that the spatial, climate change, transport and design policies of the plan support implementation of the Mayor's Air Quality and Transport strategies to achieve reductions in pollutant emissions and minimize public exposure to pollution.

### Air Quality Assessment and interpretation

37 GLA officers are satisfied that the air quality chapter of the Environmental Statement (document reference 6.1.6) is of good technical quality and represents the likely impacts of the project on local air quality. In addition, document 6.8 relating to health and equalities impacts reflects the results of the air quality study in chapter 11.

38 In assessing the significance or otherwise of the impacts on local air quality, the assessment has been carried out in accordance with the appropriate guidance, specifically the Design Manual for Roads and Bridges and associated Interim Advice Notes.

39 Overall, GLA officers agree that the scheme will not have a significant impact on air quality, although it is important that any negative impacts are addressed through targeted mitigation measures, which is discussed further below.

### Charging scheme – demand/impact management

40 The main mechanism to prevent induced demand from the Silvertown tunnel is the proposal for a charging scheme for both the Blackwall and Silvertown tunnels. The assessed case in the traffic model indicates that the charging scheme will be successful in two ways:

- 1) That it will prevent induced demand, and;
- 2) That it will reduce the morning and afternoon peak traffic demand.

41 Submitted document 7.11 sets out the process for setting the charge and document 7.5 gives an example of how a charging scheme might be designed to achieve both these objectives. GLA officers are content that this shows that it is possible to use a charging scheme in this way. The proposal is to finalise the charging scheme closer to the time that the tunnel will be completed, to allow for circumstances at the time to be taken into account, and this is welcomed.

42 The example charging scheme is variable over time, with higher charges proposed at the peak times and zero charge over-night. The example charging scheme does not set out emissions based charges, nor does it consider how the proposed Ultra Low Emission Zone (ULEZ) will interact with the Silvertown and Blackwall tunnel charges. Given that the ULEZ proposals are not yet finalised and are subject to consultation we would not expect them to be included in the current modelling.

43 The expected effect of the ULEZ is to reduce emissions from the vehicle fleet both within and outside of the ULEZ. The applicant has not included the impacts of the ULEZ in its air quality model, meaning that a more conservative forecast of the likely air quality situation has been presented. By the time that the formal process for setting the Silvertown/Blackwall Tunnel charges begins, it is expected that the details of the ULEZ will have been finalised including the level of charges, zone boundaries and implementation date. The applicant has however been in liaison with the relevant TfL (Planning) and GLA officers on the development of the ULEZ (and potential

further extensions) and has provided assurance that the scheme would work effectively alongside the ULEZ.

44 The ULEZ proposals also show how road pricing can be designed to promote the uptake of low and zero emissions vehicles and address emissions. By incorporating emissions based charging in the scheme, GLA officers consider that the impacts on local air quality from traffic using the tunnels could be further reduced from the assessed case. However we recognise that a balance will need to be struck to ensure that the objectives of preventing induced traffic and avoiding displacement of traffic and associated emissions are also met as these are important to the success of the Silvertown scheme. As the final charging structure for the scheme is developed emissions based charges and interactions with the proposed ULEZ should be considered.

45 In order to ensure that the charging scheme for the tunnels delivers the expected level of control, the applicant needs to ensure that:

- 1) The impacts of and interactions with ULEZ are explicitly considered when setting the initial charge, and;
- 2) Emissions-related charges are considered as part of the tunnel charging scheme, without leading to a displacement of the dirtiest vehicles to other crossings;
- 3) Highways England, who set the charges for the Dartford Crossing, should also be approached to co-ordinate their charging structures as this will increase the potential benefits from emissions-related charges.

#### Other mitigation measures:

46 A number of other enhancements to the scheme are proposed to minimise the regional and local impacts of the Silvertown tunnel. The following measures have already been agreed with the Mayor:

- A clear commitment within TfL's Business Plan to support the new bus routes, as well as a bus concession for local residents for a period;
- The tunnel to be one of London's low emission bus zones when it opens;
- TfL will also look at providing a bespoke cycle-bus which will carry cyclists and their bikes through the tunnel, potentially on a turn-up and go basis;
- Further pedestrian and cycling improvements to the local areas on both sides of the tunnel entrance.
- Exploring further benefits for local residents who use the tunnel

47 The air quality assessment indicates that 483 properties would be likely to experience a change in air quality. While only four of these were formally categorised as perceptible under the DMRB definition (these four would remain above legal limits) there is still scope for properly targeted mitigation measures to address all of the impacted properties. In particular exploring further benefits for local residents who use the tunnel should result in explicit actions targeted at reducing or removing the impacts at all of the negatively impacted properties. For example the Mayor has funded five Low Emission Neighbourhoods (LENs) in London which use a suite of interventions to tackle local air quality hotspots. These measures can include:

- Access restrictions;
- Green infrastructure and buffer zones;
- Walking and cycling enhancements;
- Anti-idling enforcement;

- Other locally appropriate measures.

48 The LEN approach provides a good model for how the applicant should go about exploring further benefits. To support this the applicant should analyse the geographical spread of affected properties – this would show where there are clusters of affected properties that would be amenable to a LEN approach or might benefit from other forms of intervention. The LEN approach also requires adequate funding to ensure success. In addition to providing maps showing the negatively affected properties, in order to ensure that the local mitigation measures are sufficient and appropriately targeted the applicant should also:

- Set out a programme to develop local mitigation measures, ideally in consultation with the STIG or similar forum, and;
- Demonstrate that the proposed measures are properly funded and sufficient to mitigate the negative impacts identified.

### Monitoring and management

49 The applicant has acknowledged that the success of the scheme, and particularly the success of measures to reduce air quality and traffic impacts, will require monitoring and review during and after the construction of the tunnel.

50 The principal mechanism for review and oversight is the Silvertown Tunnel Implementation Group (STIG). Consisting of representatives of the affected boroughs, TfL and other interested parties, STIG will review the annual monitoring reports, consult on the charging scheme and decide priorities for additional mitigation, should it become necessary.

51 STIG will actively monitor the impacts of the scheme for a maximum of 5 years after implementation, although consideration should be given as to whether the TMS and MS should be extended to match the timescales of the traffic modelling. Within the draft DCO as submitted, the GLA were not represented on the group. As the strategic authority for London, it has been agreed with the applicant that the GLA should have formal representation on the group and the final DCO should reflect this.

52 Submitted documents 7.6 and 7.7 set out how the monitoring will be reported and how STIG will operate. While it is clear that STIG will make recommendation to the TfL Board who will have ultimate decision making responsibility, GLA officers consider that the process could be improved as follows:

- Assessment of impacts: The impacts reported to STIG will be classified using a ‘red, amber, green’ system to identify the severity of the impacts and the risk posed. As set out in the documents there are no details of how this system will work in practice, and GLA officers would welcome further details on this and clarification of STIG’s role in considering these impacts and potential mitigations.
- Deciding on mitigation: Paragraph 2.2.6 of the Traffic Impact Mitigation Strategy states that “if the change or impact cannot be attributed to the scheme in operation, mitigation does not need to be considered under this strategy”. It is accepted that there is potential for there to be impacts within the affected road network that are not attributable to the Silvertown Tunnel, although it is likely that there will be a degree of ambiguity about the cause of any given change. Where there is ambiguity about the cause of impacts there should be a preference for undertaking mitigation measures, subject to approval by STIG that this is required. This should not mean that TfL are expected to mitigate impacts caused by other schemes or impacts that are clearly not attributable to the tunnel.



53 In order to ensure that the monitoring and mitigation strategies are successful in ensuring that there is no unanticipated impact on local residents the applicant should:

- Include formal representation from the GLA on STIG;
- Produce a clear method for categorising change in the monitoring report by developing traffic-related triggers;
- The results of any real-time air quality monitoring should be publicly accessible through the internet, ideally as part of the London Air Quality Monitoring Network.

#### Construction impacts:

54 GLA officers are broadly satisfied with the construction impacts. The proposed measures to mitigate any potential construction impacts include those set out in planning policies to reduce emissions from construction sites and the standards for Non-Road Mobile Machinery (NRMM) engine emissions, which is welcome. It is also noted that oversight of the implementation of the Code of Construction Practice will be agreed with the relevant borough as is normal practice and will not involve STIG. The applicant must also be mindful of the commitments made to the Mayor already in relation to:

- Reduced road use by construction vehicles with 55% of all material to be carried via the river. TfL will also look to review this throughout the project to see whether this could be increased further;
- All vehicles working on the construction of the Silvertown Tunnel will be Euro 6 and comply with the Mayor's new Direct Vision Standard.

## **Flooding**

### Flood risk

55 The flood risk assessment submitted by the applicant as part of the Environmental Statement (Appendix 16.A) confirms that the majority of the site around the portals is within flood risk zone 3, with a small area of flood zone 2.

56 The FRA also confirms that the area benefits from a high standard of existing flood defences provided by the Thames Tidal Flood Defences. The Environment Agency has in place a programme known as Thames Estuary 2100 to maintain and improve the standard of flood defence through the rest of this century, and this is referenced in the FRA.

57 The applicant has employed a specialist consultant (Arcadis) to consider the potential impacts of a breach of the flood defences. This analysis concludes that the northern portal will remain at relatively low risk, although the risk at the southern portal would be higher. The breach analysis has considered whether a flood barrier is justified and concludes that a Flood Warning and Evacuation Plan is a more cost effective approach, even though there would likely be significant damage to the fittings of the tunnel but the structure itself is expected to remain sound. This is considered acceptable given the very low likelihood of such an event happening.

58 There are some areas of medium to high surface water flood risk that are highlighted on the Environment Agency website, including at the Tidal Basin roundabout at the northern end of the tunnel.

59 The FRA states that the scheme's drainage strategy centres on providing cut off drainage to prevent ingress of surface water run-off from the approach roads into the tunnel. A drainage sump would be located at the tunnel portals which would provide an intercept and storage facility for collected surface water run-off.

60 The proposed approach to the low level of flood risk present at the site is considered to be acceptable and in line with both the NPPF and London Plan Policy 5.12.

### Sustainable drainage

61 The FRA states that surface water will be directed to four outfalls, two that flow into the Thames Water combined sewer, and two that flow to the River Thames via a watercourse known as the Cut. The FRA states that the outfalls to the river will be limited to 10l/s in line with the greenfield run-off rate. This is supported and, where possible, surface water should be directed to the River Thames (with suitable pollution controls) in preference to the combined sewer. It should be noted that the Thames Water combined sewers also have capacity issues and it would be desirable to aim for somewhere close to greenfield run-off rates into the sewer as well.

62 The FRA also notes that there will be "cut-off" drainage to divert surface water away from the tunnel portals, it is not entirely clear from the FRA, but it is assumed that this will also be diverted to the River Thames via the Cut or the combined sewer system. The FRA also states that there will be a separate system for collecting spillages and wash-down from within the tunnel. This is likely to be highly contaminated and as such should either be treated or directed to the sewer system.

63 The principles of the surface water drainage system are generally acceptable and compliant with London Plan Policy 5.13. It does appear however, that the exact details are not yet fully worked out. Given that this is a relatively detailed aspect of the DCO application it would be acceptable to apply a DCO Requirement for the surface water drainage arrangements to be agreed with the respective Lead Local Flood Authorities in consultation with Environment Agency and Thames Water.

### **Transport**

64 The Silvertown Tunnel scheme is identified in London Plan Table 6.1 and the Mayor's Transport Strategy Proposal 39 a). Whilst TfL is the applicant, TfL Borough Planning team has a regulatory role and is responsible for managing TfL's statutory role in the planning process, TfL Borough Planning team exercise the planning responsibilities independently of the TfL Board and the Silvertown project team.

65 The Transport Assessment (TA) (report 6.5) has had due regard to the published best practice advice, namely TfL's Transport Assessment Best Practice Guidance, and takes into account proposed development within the local area (including major planning applications referred to the Mayor in the Royal Docks and Canning Town in the London Borough of Newham and sites in the Royal Borough of Greenwich), in line with London Plan Policy 6.3.

66 The TA sets out the existing situation, future baseline growth and impacts, construction impacts and transport impacts of the proposed scheme. Overall the scheme is expected to have a positive impact on road network performance in east London, particularly at the Blackwall tunnel which is currently one of the worst performing links on the strategic road network in London. The scheme would also have a positive impact on connectivity and, through the proposed enhancements to the cross-river bus network, public transport accessibility.

67 The principal transport impacts of the scheme are set out and evidenced in the TA, and in summary the scheme is expected to:

- Address the congestion problems currently experienced at the Blackwall Tunnel and forecast to worsen in future;
- Reduce journey times for tunnel users, with journey time savings of up to 20 minutes at peak periods;
- Reduce both the number and impact of unplanned closures at the Blackwall Tunnel;
- Enable a significant improvement in cross-river bus services and connectivity; and
- Support planned growth in east London, in particular at the Royal Docks and Greenwich Peninsula.

68 The Code of Construction Practice (COCP, report 6.10) includes details of the Construction Traffic Management Plan (CTMP) which will be prepared by the contractor before construction commences and a framework Construction Site Travel Plan. The COCP includes measures to maximise river transport for construction materials and excavated material. Due regard should be given to TfL's Construction Logistics Plan Guidance, in line with London Plan policy 6.3.

69 The Monitoring Strategy (report 7.6) and Traffic Impacts Mitigation Study (report 7.7) set out the governance process for monitoring and mitigation which will be established via a Silvertown Tunnel Implementation Group (STIG). The proposed approach to monitoring and mitigation means that it is important that detailed monitoring of the schemes impacts takes place and these impacts are appropriately considered in determining mitigation measures that may be required. The establishment of STIG is considered to be an appropriate and pragmatic way of ensuring this will be the case.

70 The Update Report submitted by the applicant in October 2016 updates the Examining Authority and interested parties on a number of matters which have developed since the submission of the application, as well as updated versions of documents. The Update Report includes the outcomes of the Mayoral Review which include:

- A clear commitment through the TfL Business Plan to support new bus services through the Silvertown Tunnel;
- Investigating providing a bespoke cycle-bus; four specific pedestrian and cycling proposals;
- Increasing the proportion of construction material which would be carried by river;
- All vehicles working on the Scheme will be compliant with Euro VI emissions standards and with the Mayor's new Direct Vision Standard – supporting London Plan Policy 7.14;
- To explore the provision of further benefits for local residents who use the tunnel.

71 These measures will further add to the benefits of the scheme as set out in the submission documents, particularly for local residents living close to the scheme. These measures are therefore welcome by the GLA.

## Other matters

### Ecology

72 London Plan Policy 7.19 states that the Mayor will ensure a proactive approach to the protection, enhancement, creation, promotion and management of biodiversity in support of the Mayor's Biodiversity Strategy. The Policy provides a hierarchy that should be applied when considering proposals that affect sites of nature conservation interest.

73 There are no strategic concerns with the impact of the proposal on biodiversity and ecology, and GLA officers are satisfied that this can be dealt with at a local level.

### Noise

74 London Plan Policy 7.15 states that the transport, spatial and design policies of the London Plan will be implemented in order to reduce and manage noise to improve health and quality of life and support the objectives of the Mayor's Ambient Noise Strategy.

75 The Environmental Statement concludes that during construction and upon operation, noise impacts from the scheme would not be significant. Whilst some impacts are identified for residential properties within the Hoola development, the assessment concludes that with the proposed mitigation measures, internal noise levels would not exceed the threshold of 'reasonable'. Construction noise impacts would generally be below the level of human perception, with the mitigation measures outlined which contractors would be required to adhere to.

## Conclusion

76 Having reviewed the application documents and after a number of helpful meetings with the applicant, GLA officers are of the view that the proposed Silvertown Tunnel scheme will be a significant asset to east London. It will act as a catalyst for the continued regeneration of the two opportunity areas at Greenwich Peninsula and the Royal Docks, improving north-south cross-river connectivity and therefore supporting growth in both homes and jobs to the area.

77 The strategic planning issues relevant in this case in relation to principles, design, air quality, flooding, transport and other environmental matters, have been assessed against the London Plan policies, being the spatial development strategy for London. With the mitigation measures outlined and the principles set out in the application documents, GLA officers are confident that the scheme can be delivered in such a way to have an overall positive benefit to east London.

78 The applicant should be required to apply the guidance set out in the Control of Dust and Emissions During Construction and Demolition SPG. This will meet the requirements of Policy 7.14 of the London Plan. This should be set out in the DCO.

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for further information, contact GLA Planning Unit:

**Colin Wilson, Senior Manager – Development & Projects**

020 7983 4783 email colin.wilson@london.gov.uk

**Sarah Considine, Strategic Planning Manager (Development Decisions)**

020 7983 5751 email sarah.considine@london.gov.uk

**Natalie Gentry, Senior Strategic Planner - Case Officer**

020 7983 5746 email natalie.gentry@london.gov.uk

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