

SILVERTOWN TUNNEL

Volume 8

Development Consent Order Application

8.39 Comments on Written Representations -
Community

The Infrastructure Planning (Examination Procedure)

Rules 2010

December 2016

THIS PAGE HAS INTENTIONALLY BEEN LEFT BLANK

Silvertown Tunnel

Development Consent Order Application Comments on Written Representations - Community

Document Reference: 8.39

Author: Transport for London

Rev.	Date	Approved By	Signature	Description
0	14/12/2016	David Rowe (TfL Lead Sponsor)		For Deadline 2

THIS PAGE HAS INTENTIONALLY BEEN LEFT BLANK

Contents

1	INTRODUCTION	9
1.1	Purpose of this report.....	9
2	RIK ANDREW	10
2.1	Comments on Written Representation	10
3	COLIN ESPINER.....	12
3.1	Comments on Written Representation	12
4	DARRYL CHAMBERLAIN	20
4.1	Comments on Written Representation	20
5	WESTCOMBE SOCIETY	21
5.1	Comments on Written Representation	21
6	SIMON ROBINSON (SILV-217).....	32
6.1	Comments on Written Representation	32
7	SALLY HUGHES	46
7.1	Comments on Written Representation	46
8	REBECCA MOORE	61
8.1	Comments on Written Representation	61
9	N J MARKS.....	64
9.1	Comments on Written Representation	64
10	EMILY & MICHAEL NORTON	69
10.1	Comments on Written Representation	69
11	HELEN HUTCHINSON & DUNCAN MARLEY	82
11.1	Comments on Written Representation	82
12	EAST GREENWICH RESIDENTS ASSOCIATION	84
12.1	Comments on Written Representation	84
13	GREENWICH SOCIETY.....	110
13.1	Comments on Written Representation	110
14	RALPH HARDWICK	116
14.1	Comments on Written Representation	116
15	NO TO SILVERTOWN TUNNEL.....	120

15.1	Comments on Written Representation	120
16	HACKNEY AND TOWER HAMLETS FRIENDS OF THE EARTH	184
16.1	Comments on Written Representation	184

List of Tables

Table 1 - Key issues identified from Written Representation by Rik Andrew with TfL's commentary	10
Table 2 - Key issues identified from Written Representation by Colin Espiner with TfL's commentary	12
Table 3 - Key issues identified from Written Representation by Darryl Chamberlain with TfL's commentary	20
Table 4 - Key issues identified from Written Representation by Westcombe Society with TfL's commentary	21
Table 5 - Key issues identified from Written Representation by Simon Robinson with TfL's commentary	32
Table 6 - Key issues identified from Written Representation by Sally Hughes with TfL's commentary	46
Table 7 - Key issues identified from Written Representation by Rebecca Moore with TfL's commentary	61
Table 8 - Key issues identified from Written Representation by N J Marks with TfL's commentary	64
Table 9 - Key issues identified from Written Representation Emily & Michael Norton with TfL's commentary	69
Table 10 - Key issues identified from Written Representation by Helen Hutchinson & Duncan Marley with TfL's commentary	82
Table 11 - Key issues identified from Written Representation by East Greenwich Resident Association with TfL's commentary	84
Table 12 - Key issues identified from Written Representation by Greenwich Society with TfL's commentary	110
Table 13 - Key issues identified from Written Representation by Ralph Hardwick with TfL's commentary	116
Table 14 - Key issues identified from Written Representation by No to Silvertown Tunnel with TfL's commentary	120
Table 15 - Key issues identified from Written Representation by Hackney and Tower Hamlets Friends of the Earth with TfL's commentary	184

THIS PAGE HAS BEEN LEFT BLANK INTENTIONALLY

1 INTRODUCTION

1.1 Purpose of this report

1.1.1 This report provides the Applicant's responses to Written Representations (WRs) submitted by Interested Parties (IPs) at Deadline 1 with a community interest in the Scheme, either as a local resident, local community interest group or local business (but where no land interests are affected directly by the Scheme). The Applicant has categorised these IPs for presentational purposes only and attaches no greater or lesser weight to their WRs than WRs made by other categories of IP.

1.1.2 The following IPs' WRs are covered in this report:

- Rik Andrew
- Colin Espiner
- Darryl Chamberlain
- Westcombe Society
- Simon Robinson (SILV-217)
- Sally Hughes
- Rebecca Moore
- N J Marks
- Emily & Michael Norton
- Helen Hutchinson & Duncan Marley
- East Greenwich Residents Association
- Greenwich Society
- Ralph Hardwick
- No to Silvertown Tunnel
- Hackney and Tower Hamlets Friends of the Earth

1.1.3 The Applicant has reviewed and considered in detail the matters raised in these WRs and, to assist the ExA, has responded or commented where the Applicant considers there is a significant matter to address. The Applicant's responses and comments on the WRs are set out for each IP in turn in a tabular format.

2 RIK ANDREW

2.1 Comments on Written Representation

Table 1 - Key issues identified from Written Representation by Rik Andrew with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Page 1	WR.RA.1	<p>I gave evidence last thursday that challenged TFL's (over-)reliance on traffic models, which are NB only forecasts - not 'facts' - and should be treated with the same caution as other forecasts e.g. weather / election / stock market... TFL models are based on highly questionable ASSUMPTIONS and are subject to manual interventions / adjustments I was asked by the Inspector to provide supporting documentation ere it is...</p> <p>(Editors note - paper titled 'Who will save us from the misuse of transport models' – see http://www.ctthink.com/publications.html by</p>	<p>The paper 'Who will save us from the misuse of transport models' sets out ways in which transport models and their outputs can be misused. It explains how there is a risk of undertaking transport modelling in an irresponsible way and mentions common types of misuse and ethical compromise in transport modelling, although doesn't attempt to prove that they exist.</p> <p>Dr Hollander was responsible for strategic traffic modelling when he worked for TfL. A number of steps have been taken to avoid what he describes as ‘the misuse of transport models’ in support of this scheme. For</p>

		<p>Yaron Hollander (until recently a senior modeller) describes 10 ways in which traffic models are misused I was unable to download a copy but its freely available to read and print from the CTthink web site or info@CTthink.com</p>	<p>example, TfL has made sure that the strengths and weaknesses of its strategic models are explained in the Transport Assessment (paragraph 1.5.14). TfL has also refrained from using detailed model outputs such as turning movements at junctions when it does not match the capabilities of the model. In addition, paragraph 1.5.5 of the Transport Assessment discusses the uncertainty associated with population and employment forecasts which are one of the model inputs.</p> <p>By recognising that all these types of misuse exist, TfL has been better equipped to ensure that the attendant risks are avoided and that any forecasts produced by the model have an appropriate role in the decision-making process.</p> <p>In addition, all modelling undertaken by the Applicant has been carried out in line with recognised guidance and has been subject to independent audit and review.</p>
--	--	--	---

3 COLIN ESPINER

3.1 Comments on Written Representation

Table 2 - Key issues identified from Written Representation by Colin Espiner with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Page 1	WR.CE.1	<p>The User Service Change (USC) will impose a financial barrier to travel across the river for some of the most impoverished areas of both London and the county. USC is Government policy and outside the remit of this planning examination. Therefore I will suggest improvements to the proposed USC. First to paid 1 billion to build it. TfL does often repeat the need to collect money for different reason including construction. I hope that maximise revenue is not the main reason for (user charge). As a motorist and trying to ignore all the other billions of tax motorist pay, I can see the logic in that. Motorist will be the main but not the only benefiter could pay for it. However other</p>	<p>As set out in the Charging Policies and Procedures [REP1-123], section 2.2, a user charge is essential to achieve the Project Objectives over the long-term. It is not proposed to discontinue the charges once the Scheme construction costs have been met as the user charge will have an essential ongoing demand management role.</p>

		groups and people will benefit but not contribute to the cost. Therefore first improvement is to legally only have user charge for as long as the need to pay for it	
Page 1	WR.CE.2	<p>Second USC as congestion charge to manage demand. This would allow TfL to keep USC in perpetually. TfL also state this a lot. The Blackwall Tunnels are not congested because of the lack of charge and the Dartford crossing free from congested because it has one. All river crossing East of London are congested due to the dire lack of them. TfL states “charging is proven means of demand management” (Section 12 page 15). They don’t state what this “proof” is or where to find it. Whether or not this relate to river crossings or area charges etc. Congestion charge is intended to manage demand in part by suppressing and displacing traffic. TfL states (section 12 page 10), “It is not expected that the number of vehicles using the crossing will increase”. They also state, “It is</p>	<p>The Transport Assessment [APP-086] contains data on the projected impacts of the Scheme at other east London river crossings at different periods: Figure 7-13 on page 243; Figure 7-14 on page 244; Figure 7-15 on page 245. As it states in paragraph 7.3.16, 'the changes in actual flows at other crossings are minimal as a result of the Scheme.' The Applicant considers that the significant improvement in conditions at the Blackwall Tunnel with the introduction of the Scheme means that the incentive for traffic to be displaced to alternative routes would be small.</p>

		<p>not expected that signification number of drivers would divert”. This is in part because the proposed Silvertown tunnel will cater for different destination.</p> <p>However the USC will apply to Blackwall tunnels as well. If the USC is effective as congestion charge it will suppress and displace traffic to the nearby and also Rotherhithe tunnel.</p>	
Page 1	WR.CE.3	<p>2). Second improvement is to apply USC between 7 am to 7 pm and lower inter-peak charge (say £1) between 10 am to 4 pm.</p>	<p>The Assessed Case user charges appear to broadly reflect the suggestion made by Mr Espiner, with a lower charge inter-peak between 10am and 4pm. The Applicant has explained the need to charge beyond 7pm as traffic levels are still significant at this time.</p>
Page 1	WR.CE.4	<p>Lack of Residence discount. I am not a residence. Again this is inconsistent with CCZ. The reason given by TfL for this different is that, “Residents in the CCZ are eligible for discount because if they need to move their car at all they have no choice but to drive in the zone.” Section 12 page 47.</p> <p>TfL do not state what reason, other than</p>	<p>See FWQ SE2 [REP1-176] for rationale for not providing Resident Discount in the Assessed Case. The Applicant considers that there is a material distinction to be drawn between the case of the Congestion Charging zone, where those living inside it have no alternative at all but to travel within the charged zone if they wish to travel by car at all, and the case of the Blackwall and</p>

		<p>traveling why resident would need to move their car. TfL give a whole raft reason not to residence to the Silvertown tunnel. They state the need to obtain money, manage traffic demand with 25 to 30% of locals who use the current Blackwall tunnel. However early in TfL document (page 17) they state “the scheme does not uniformly affect all local residents most of whom do not drive across the river on a regular basis.” As that is the case the lack of discount make less sense. They also state difficult in identify specified local areas. To my mind in easy solution are the host boroughs. TfL point out there are “free” alternatives to cross the river nearby. Displacement of local traffic to the congested Rotherhithe tunnel contradict what they state about displacement.</p>	<p>Silvertown tunnels where all drivers would have a choice of avoiding the charged crossings if they wished to do so by using an alternative route. However, because of the positive impact on highway conditions at the Blackwall Tunnel (and as noted in the Transport Assessment [APP-086]) it is not expected that a significant number of drivers would divert to either of the alternative crossings (Rotherhithe Tunnel or Woolwich Ferry) to avoid the charges at the Blackwall and Silvertown Tunnels.</p>
<p>Page 2</p>	<p>WR.CE.5</p>	<p>3). Third improvement. Have a discount, even a small (10%) one for residence who have had to put with congestion, pollution and noise from the current tunnels and will also have to put up with disruption and</p>	<p>See Report ‘Comments on Borough LIRs and WRs’ (sub theme “Residents discount”)</p>

		possibly other negative effect cause during its construction.	
Page 2	WR.CE.6	<p>4). Fourth improvement. Have a discount for congestion caused by other reason than weight of traffic, accidents etc. To be charged a premium for poor service cause with no fault of the motorist stuck in the resulting jams seems unfair. TfL states (section 12 page 31) “refunding user charges would not help achieve the project objectives because it would undermine the demand management effect of the charge.” What demand management would stop accidents? It is true that road tunnels is not like a train service with set timetable. The USC feels more like Air Passenger Tax, than a premium charge for a premium service. TfL also states the difficulty deciding went to enforce this discount. However after an accident and the traffic queues are more than set distance (2 miles) or the average</p>	<p>The Applicant considers that it would not be appropriate or necessary to refund or discount charges on occasions when travel conditions are poor. The charges are designed to encourage users to consider whether they need to travel on the charged crossings or whether there are alternative options they could adopt, and to provide funding to cover the costs of implementing the Scheme.</p> <p>The applicant considers that complexities associated with providing refunds in certain circumstances mean that this proposal is not feasible.</p>

		speed drops below a set amount (10 mph) seems fair.	
Page 2	WR.CE.7	<p>USC as pollution control. TfL state that “Although reducing pollution is not an objective of the user charge, controlling the environment effect is a project objective and the user charge is intrinsic to achieving this.” (Section 12 page 9). However one the most harmful pollutants are Nitrous Oxides (NOX) from diesel vehicles.</p> <p>However both buses and taxis, which are mostly diesel powered are exempted. This runs counter to this stated project objective. As real life example of this look at the pollution levels in Oxford Street. I understand this has the highest (or one of) levels of pollution in the whole of London. Yet Oxford Street has stopped all vehicles except buses and taxis.</p>	<p>The rationale for having a discount for these vehicles in the Assessed Case is in the Charging Statement [APP-097]: for taxis see 4.11.18-22, and for buses see 4.11.4-4.11.6.</p> <p>As stated in the Update Report [AS-021], the new tunnel will be a low emission bus zone (paragraph 2.11). This is to be secured by a requirement in Schedule 2 to the DCO (as included in the revised version of the dDCO submitted at Deadline 1).</p>
Page 2	WR.CE.8	<p>5). Fifth improvement. Motorcycles should be free to use the Silvertown tunnel. I am not motorcycles rider but is again inconsistent with the CCZ. Also no other</p>	<p>The principal objective of the user charge is to manage demand for the Scheme and to help to pay for the Scheme. Motorcyclists will benefit from the increased resilience, journey</p>

	<p>tolled/ charged river crossing throughout the country, with the possible exception of the Humber bridge charge motorcycles. The justification TfL have for the proposal to charge motorcycles the same as cars does not make sense. They state, “The principal objective of the user charge are to manage demand for the tunnel and to pay for the construction”. Carries on to say, “While it is true that motorcycles do not contribute to congestion in the same way as other vehicles”. However reducing congestion is only one of a number objective of Scheme. “It is important to manage their (other) effects. Particularly important here is the air quality effects: motorcycles contribute to air pollutant emission which are detriment to human health. The user charge is an important way to manage these environmental effects.” However there are few motorcycles on the road, each one take up less space and produce’s less pollutant than a car. The proposed change is disproportionate to this effect and unfair.</p>	<p>time improvements brought about by the Scheme and so it is fair that they like other users should pay for these. In the Assessed Case, motorcycles are charged at a lower rate than other vehicles, reflecting their relatively smaller contribution to congestion, road wear and tear and emissions. Nevertheless, motorcycles do contribute to all these areas and it is therefore fair that the user charges reflect this.</p>
--	--	--

	<p>TfL carries on, "Another consideration is that motorcycles, in common with other vehicles, result in wear and tear of the road and maintaining the tunnels will be paid for by the user charge which applies to all the vehicles using it" All quotes from section 12 pages 72 and 73. Except it does not! Buses and taxies are exempted. These produces the most harmful pollutant (NOX). The idea that a motorcycle produces as much wear and tear to the road as a motor car is silly. The idea that a bus does not produces any wear and tear of the road is ridiculous.</p>	
--	---	--

4 DARRYL CHAMBERLAIN

4.1 Comments on Written Representation

Table 3 - Key issues identified from Written Representation by Darryl Chamberlain with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Page 1	WR.DC.1	<p>I referred to a Greenwich Council press release which talked about "exploring further benefits for local residents who use the tunnel" as a clear indication that the council sees charge reductions or exemptions as a possibility.</p> <p>The full press release is here: http://www.royalgreenwich.gov.uk/news/article/776/london_mayors_greener_river_crossing_proposals_to_benefit_royal_greenwich</p>	<p>The Mayor has asked TfL to explore further benefits for residents, and the Applicant will update the ExA in due course (Update Report, paragraph 2.17) [AS-021].</p>

5 WESTCOMBE SOCIETY

5.1 Comments on Written Representation

Table 4 - Key issues identified from Written Representation by Westcombe Society with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Paragraph 1 point 1	WR.WS.1	The probability of additional traffic on the A102, including full-sized HGVs which will have access to the north through the Silvertown tunnel. Extra HGV traffic has the potential to increase significantly noise and air pollution, with little sign that that lorry emissions will be improved in coming years.	See Report ‘Comments on Borough LIRs and WRs’ (sub theme "Number of HGVs will increase" and “induced demand”)
Paragraph 1 point 2	WR.WS.2	Economic impacts of charging on local residents and businesses, who may well suffer given the tidal flows of traffic which will be charged more heavily as a means of keeping traffic at its current level at peak hours. While the London First representative pointed to more dependable access, there	As set out in Section 4.2 of the Transport Assessment [APP-086], levels of congestion at the Blackwall Tunnel are highest travelling northbound in the morning peak and southbound in the evening peak. Whilst users of the Blackwall and Silvertown Tunnels travelling northbound in the morning peak,

		are economic disadvantages which could counterbalance any reliability benefits.	and southbound in the evening peak, will be charged a higher rate, they will also benefit more from reduced levels of congestion. As set out in Table 3.1 of the Distribution of User Benefits note, residents of RB Greenwich, LB Bexley and LB Lewisham are expected to gain £176m, £14m and £59m respectively through non-business highway benefits, net of user charges.
Paragraph 1 point 3	WR.WS.3	Traffic effects on local roads. We are concerned about impacts from drivers seeking uncharged crossings at Rotherhithe and further west or at Woolwich (depending on whether the Ferry becomes charged, a matter of discussion between the Royal Borough of Greenwich, Newham, and TfL), and from drivers through the area attracted to a quick and clear crossing. Both flows and the combination of the two could impact the Maritime Greenwich World Heritage Site via roads through our area, which includes some of the Buffer Zone.	See Report 'Comments on Borough LIRs and WRs' (Sub theme "Displacement impacts" which explains that displacement to other crossings (which could in principle lead to increased traffic through the Maritime Greenwich World Heritage Site) is unlikely. A note summarising the impacts on the Scheme on the Maritime Greenwich World Heritage Site has been submitted for Deadline 2 (Appendix B, response to Borough LIRs and WRs).
Paragraph 1 point 4	WR.WS.6	Many of our residents and local businesses use the Blackwall Tunnel, and we are very	See 'Report Comments on Borough LIR & WRs' (Sub theme "User charging", submitted

		<p>aware of current congestion and that over-height vehicles regularly try to enter the Tunnel despite north-bound restrictions. This, and the uncertain queuing time drivers endure to use the Blackwall Tunnel, is indicative of demand for the crossing. Yet, we have not seen evidence for how that demand translates into the monetary value that drivers would be willing to pay. TfL argue that charging for the crossing would ensure traffic remained at current levels. However, we believe that TfL’s indicative charges will be insufficient to deter extra traffic, given demand. This is particularly the case with commuter coaches, which will not be subject to charges.</p>	<p>at Deadline 2)</p>
<p>Paragraph 1 point5</p>	<p>WR.WS.7</p>	<p>We also believe that locals would suffer unfairly compared to those in other parts of London:</p> <ul style="list-style-type: none"> · As the only charged crossing on the Thames apart from Dartford, locals would be disadvantaged in relation to all areas to the west. · The proposed charging structure will work against those based south of the Thames due to higher charges north-bound in the morning and south-bound in the 	<p>See Report ‘Comments on Borough LIR & WRs’ (sub theme Resident Discount – unfairness).</p> <p>Article 52 of the draft DCO concerns changes to the Charging Policy, not changes to the user charges themselves. The procedure for varying the user charges is set out in the Charging Policies and Procedures [REP1-123] section 4.2 page 24. As it states, STIG</p>

		<p>evening peak periods. Contrary to claims by TfL that the proposed tunnel would give access to thousands of jobs on the north side of the Thames, we feel that tidal flow charging does nothing to improve the 'barrier effect' of the river.</p> <p>Local jobs are decreasing in relation to the number of homes being built e.g. Charlton Riverside, a designated 'opportunity area', where businesses are having to close or move as developers buy property to create large residential communities¹.</p> <p>Therefore, we believe that the economic disadvantages would outweigh the benefits for local businesses and residents though we agree that charging is the only available means for controlling traffic levels. With or without charging our area is facing unwelcome effects if the Silvertown Tunnel is built.</p> <p>If the development proceeds we therefore ask as representatives of regular users to be included as consultees on changes to the charges, as laid out in the Draft Development Consent Order, paragraph 52.</p>	<p>will be consulted on proposed changes to the user charges..</p> <p>With regard to consulting non-permanent members of STIG, there is provision for non-permanent members of STIG to be invited onto STIG: Article 65 (2) (o) states that 'any other person TfL considers appropriate' can be invited to join STIG.</p> <p>In addition to this, STIG may establish sub-committees and their membership can be determined by STIG. If landowners or other groups such as residents were affected by particular issues they could be involved in this way.</p>
Charges and	WR.WS.8	We are not convinced that TfL has taken full	See Report 'Comments on Borough LIR &

<p>Economic Impact, p. 1-2</p>		<p>account of the probability that local traffic patterns will be disrupted. One key concern is that the A2 southbound is already prone to congestion from the A206 Woolwich Road flyover through to Kidbrooke and Eltham during the evening peak period. If TfL's traffic modeling is incorrect, then this problem could increase, causing residents to suffer even more.</p>	<p>WRs' (Sub theme "Impact on local junctions / networks", which refers to RB Greenwich's LIR Appendix 1 which references this stretch of the A2).</p>
<p>Charges and Economic Impact, p. 2</p>	<p>WR.WS.9</p>	<p>TfL argues that the scheme will not induce traffic because of '(1) a powerful demand management tool in the form of a user charge; (2) a public transport improvement in the form of dedicated HGV and bus lanes which will accommodate improved cross-river bus connections in the local area; and (3) the Scheme is being built in a congested urban environment where capacity is constrained on the surrounding network.'³ However, the prospect of a free-flowing crossing – even if charged – is likely to attract vehicles from other areas, including the Dartford Crossing, and other drivers are likely to reconfigure their routes to find an uncharged crossing. TfL has argued that the two effects would cancel each other out, in</p>	<p>See 'Comments on Borough LIRs and WRs' (Sub theme "Displacement impacts" and "induced demand"). A note summarising the impacts of the Scheme on the Maritime Greenwich World Heritage Site has been submitted for Deadline 2 (Appendix B, Comments on Borough LIRs and WRs).</p>

		<p>terms of effects on adjacent crossings, but this does not take account of the added congestion as drivers cross each other's paths. This will inevitably affect junctions between river crossings. In particular, we are concerned about the Maritime Greenwich World Heritage Site, which is already subject to heavy flows of traffic at peak times. Our area includes some of the buffer zone for the Heritage Site and a number of connection routes between major roads e.g. Maze Hill, Vanbrugh Hill and Westcombe Hill. While changed journeys may not be true induced traffic, TfL's optimism about demand management is misplaced. We also feel that modelling needs to include all proposed river crossings.</p>	
<p>Traffic Impacts, p. 2</p>	<p>WR.WS.10</p>	<p>A further concern is that we will see drivers entering our area to park and wait for off-peak charging to begin, adding to congestion on local roads. We question whether TfL has considered how to monitor or mitigate this potential time-shift problem.</p>	<p>The likelihood of this happening is assessed as being very low. There is little evidence of 'boundary parking' happening in (or around) the CC scheme where the potential cost saving (£11.50 per day) is far greater. It is hard for drivers to time their journeys in such a way that they end up 'hovering' nearby. They are much more likely to retime their</p>

			<p>journey (if they retime it at all) by a sufficient margin so as to be sure of avoiding the charge. The comprehensive monitoring programme that the Applicant is proposing would ensure that any such impact was detected and could be acted upon.</p>
<p>Traffic Impacts, p. 2-3</p>	<p>WR.WS.11</p>	<p>All in all we feel that TfL could increase the resilience of the current Blackwall Tunnel and that insufficient consideration has been given to reducing overall demand for this crossing which runs through predominately residential areas.</p>	<p>The Applicant has set out a comprehensive option assessment process in its Case for the Scheme [APP-093], including a comprehensive package of public transport investment combined with user charging at the Blackwall Tunnel. The Case for the Scheme explains that the Applicant’s analysis has demonstrated no alternative approach would effectively address the Project Objectives. The Scheme would directly address the severe unreliability and routine congestion which affect the Blackwall Tunnel.</p>
<p>Traffic Impacts, p.3</p>	<p>WR.WS.12</p>	<p>Although TfL’s traffic monitoring covers the area well, we would like to see the heavily used A2213 Kidbrooke Park Road link between the A20 and A2 included.</p> <p>Air quality monitoring is woefully inadequate. TfL proposes to monitor only a narrow</p>	<p>The Applicant considers that sufficient monitoring is proposed. This monitoring covers both air quality and traffic flows. The focus is on locations where the changes are expected to be largest and likely air quality impacts are reported.</p>

		<p>corridor around the ‘affected roads’ picked out by their traffic modelling.⁴ However, this takes no account of the possibility that their traffic modeling may not correctly predict the effects of the scheme. We ask that other obvious points where traffic effects could affect air quality be included i.e. Trafalgar Road, Shooters Hill Road, Blackwall Lane, the A2 through to the Danson Interchange, Woolwich Road between the Woolwich Flyover and Woolwich, Greenwich Town Centre, and Blackheath Hill. In addition, TfL ought to supply a map of sensitive receptors, such as schools, and show how they plan to monitor these for changes to air quality.</p> <p>Noise monitoring is also inadequate, extending only just metres beyond the order limits⁵. This is unacceptable, given that the proposed tunnel would be both accessible to heavy HGVs north-bound and free to use for coaches. TfL predicts these will be moving faster at peak times. Faster, heavier vehicles make more noise but the plan does not even include the full extent of the ‘affected roads’, and fails to take account of</p>	<p>It should also be recognised that, in addition to the locations the Applicant is suggesting for air quality in relation to pre-and post-Scheme monitoring, there is already considerable monitoring that is being undertaken by the local authorities. This information would be used to supplement the additional sites proposed as part of the Scheme. All this information will be presented to and discussed openly within the STIG.</p> <p>The noise monitoring strategy has also been informed by the likely noise impacts as reported in the ES [APP-031] for the Scheme.</p> <p>The monitoring of noise will be limited to the area around the tunnel portals as broadly detailed in Figure 5-1 and within Appendix A of the Monitoring Strategy [REP1-121]. Noise monitoring is not proposed, or considered necessary, outside of this immediate area having regard to the noise modelling undertaken and included in the ES [APP-031].</p> <p>The noise impacts of the Scheme are a function of the volume of traffic flows, which</p>
--	--	--	---

		a number of sensitive receptors locally, including many schools.	may change over time. Traffic flow thus provides a means by which any localised traffic noise issues which might arise from the Scheme in operation may be identified.
Traffic Impacts, p.3	WR.WS.13	We welcome plans to erect much needed noise barriers along the west side of the A102 from the Charlton Road bridge to the rail bridge on Westcombe Hill but fear these will only be built if the scheme is consented. See Appendix A for TfL's provisional plans and email regarding this. We believe that this should be monitored for noise (alongside the plans to monitor air quality already proposed by TfL).	<p>The noise assessment in the Environmental Statement submitted by the Applicant does not identify a need for mitigation at Seibert Road as a result of the Scheme. However, the Applicant has had discussions with the RB Greenwich and has committed to providing an acoustic barrier at Seibert Road to attenuate existing noise from the A102 as an environmental enhancement, subject to feasibility and the necessary consents.</p> <p>The location of the acoustic barrier is outside of the Order limits and it is considered appropriate that this be secured through a legal agreement between TfL and the RB Greenwich.</p>
Monitoring and Mitigation, p.3	WR.WS.14	We also welcome the supervision of the Silvertown Tunnel Implementation Group (STIG), and strongly urge that it both continue well beyond the planned five years of monitoring AND include local residents	<p>There is no end date specified for STIG in the draft DCO.</p> <p>For the involvement of non-permanent members of STIG, see response to WR.WS.7.</p>

		who can often provide additional information not picked up in regular monitoring.	
Monitoring and Mitigation, p.3-4	WR.WS.15	<p>We do not consider construction dust or noise is likely to affect our area but traffic almost certainly will. We note that the Construction Management Plan includes a number of safeguards, including approved construction routes, monitoring of lorry movements, and construction workers' travel plans. It also outlines liaison with key stakeholders, including local residents.</p> <p>Westcombe Park currently suffers from lorries diverting from the A102 onto local roads to avoid traffic congestion. There is a particular problem in the morning peak, where large tipper lorries from plants based on Greenwich Peninsula cut through via Westcombe Hill and the B210 Vanbrugh Park Road to the A2 Shooters Hill Road on Blackheath to avoid queuing traffic on the A2. They create considerable noise, pollution and congestion, on a key route for buses. Residents of Westcombe Hill and Royal Borough of Greenwich Council officers, have together carried out traffic</p>	<p>The Applicant agrees that it is important to liaise with the local community to ensure that the effects of construction traffic on them are minimised and mitigated.</p> <p>As such, the Applicant has committed to continual engagement with local residents in the Code of Construction (CoCP) [APP-092] section 4. This engagement will be detailed in the Community Engagement Plan (CEP) which must be agreed by the relevant local authority.</p> <p>The outcomes of this engagement relating to construction traffic will be embedded in into the Construction Traffic Management Plan (CTMP); which is also to be agreed by the relevant local authority. This is secured within the Code of Construction (CoCP) [APP-092] para 3.1.4.</p> <p>The Applicant has committed to set up and maintain a 24 hour telephone helpline service in the Code of Construction (CoCP) [APP-092] section 4 paragraph 4.1.4.</p>

		<p>studies. For this traffic, the only constraints are a 20 mph speed limit, and prohibition on use from 21:00 to 07:00. Both are sometimes breached. We ask to be included in any consultations and to have access to the proposed 24-hour helpline, if the scheme goes ahead.</p>	
--	--	---	--

6 SIMON ROBINSON (SILV-217)

6.1 Comments on Written Representation

Table 5 - Key issues identified from Written Representation by Simon Robinson with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
<p>The Problem of Induced Traffic, p. 1-2</p>	<p>WR.SR.1</p>	<p>Firstly, I would point out that extensive academic research shows that when new road capacity is provided in areas experiencing congestion, the new capacity invariably induces a mode-shift from public transport to private cars, as people modify their travel patterns in such a manner as to fill the new capacity, usually resulting after a few years in no reduction of congestion and the possibility of increased congestion on roads that feed into the new capacity. This knowledge is so well known that it should not require backing up, but in case it is helpful, I refer to Todd Litman's article, Generated Traffic and Induced Travel</p>	<p>See report ‘Comments on Borough LIRs and WRs’ (sub theme "Induced Demand").</p> <p>Research on the matter of new road capacity resulting in a mode shift towards private motor vehicle use remains unclear. The potential for induced demand (including this suggested mode shift) is addressed through the inclusion of a user charge at both the Blackwall and Silvertown Tunnels as a key component of the Scheme. The principal objective of the user charge is to manage demand; without the user charge is it likely that induced demand would occur, and that</p>

	<p>(http://www.vtpi.org/gentraf.pdf), which provides a list of extensive references to original research on the topic.</p> <p>I are not aware of any reason to believe that the proposed Silvertown and Silvertown crossing would be an exception to this general rule. And indeed this problem is acknowledged by TfL:</p> <p>Without a user charge, the benefits of additional capacity put in place by the new tunnel would be short-lived, owing to an effect known as 'induced traffic' in which the increased convenience of driving (owing to reduced journey times, for example) attracts additional traffic to the point where queues initially relieved return to their former levels. (Charging Policy Document, https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010021/TR010021-000241-7.11%20Charging%20Policy.pdf, Section 2.2.1)</p> <p>I believe this statement is correct and constitutes the fundamental flaw in the proposed crossing: If induced traffic occurs at the levels suggested, then the Silvertown</p>	<p>the problems of the Blackwall Tunnel would continue.</p> <p>The analysis and modelling undertaken on the Scheme, which includes the user charge, demonstrate that it would be capable of achieving its objectives, which are discussed in further detail in comments below.</p>
--	--	--

		<p>crossing will fail in its aims of improving traffic flows, mobility and connectivity, and will further cause considerable harm both to the general environment (air quality and noise etc.) and to the local economy and businesses – since the resultant increased congestion on feeder roads would slow down existing journeys and make them less reliable – with all the associated problems that would cause.</p> <p>TfL argue in their proposals that this problem will not occur because the user charges that they plan to introduce would circumvent the problem of induced traffic. I argue below that this is unlikely to be the case, and that the problems described of induced traffic, leading to a return of the long queues, are likely to occur despite user charging.</p> <p>If that is the case, then the Silvertown Crossing should not be built because it will not achieve its aims, and would further cause considerable economic harm.</p>	
<p>The Charge Risks being</p>	<p>WR.SR.2</p>	<p>As noted earlier, TfL do acknowledge the potential problem that induced traffic could</p>	<p>The Scheme has a number of objectives. It is intended to address congestion and poor</p>

<p>Ineffective, p. 2</p>	<p>nullify the claimed benefits of the crossing. The Charging Statement (https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/TR010021/TR010021-000232-7.5%20Charging%20Statement.pdf) argues strongly that this user charging ('tolls') would avoid this problem. However there are issues in the logic behind TfL's reasoning. Firstly, TfL are not proposing to impose charges at all hours. Page 78 of the Charging Statement makes it clear that there will be no charges between 10pm and 6am. This omission undermines the rationale that charging will manage traffic. By TfL's own logic this lack of charging will result in considerable induced traffic at those hours. Although congestion may not be such an issue during the night, pollution remains an issue and night-time noise will be particularly important, since many of the traffic will pass through residential areas en route to the crossing. Further, not charging during the night will cause some traffic to be displaced in time to use the no-charging period. While this may reduce congestion to</p>	<p>reliability and resilience at the Blackwall Tunnel, which currently has an adverse impact on network performance across a large part of east and south-east London, with associated impacts environmental and economic impacts. It is also intended to improve cross-river connectivity to and from areas such as the Royal Docks and the Isle of Dogs, and through providing a more direct route to those with an origin or destination in these areas (and would otherwise use the Blackwall Tunnel) helps to address a local bottleneck.</p> <p>Whilst the Blackwall Tunnel would continue to carry the majority of strategic traffic, the Silvertown Tunnel would nonetheless be expected to accommodate high volumes of traffic at peak times and it is considered appropriate that the Tunnel and its approaches are designated as part of the TLRN.</p> <p>The Assessed Case does not have user charges from 10pm to 6am because the current and forecast position is that demand</p>
--------------------------	---	---

		<p>some extent during the day, this will also worsen night-time noise pollution.</p>	<p>for travel is low at this time. It may be the case that sufficient traffic is shifted to this period (as a consequence of the zero charge or other reasons) to mean that a night-time charge is considered in future and the Charging Policies and Procedures [REP1-123] would enable these to be implemented, provided this was in compliance with the policies.</p>
<p>The Charge Risks being Ineffective, p. 2-3</p>	<p>WR.SR.3</p>	<p>Secondly, TfL state that Setting a charge means that drivers (and potential drivers) must decide if they are willing to pay to make this journey and if not, respond by switching to another mode, changing the time or route of their journey or not making the journey at all. (Section 3.2.4 of the Charging Statement) The logic here is sound as an abstract principle, but applying it to the Silvertown Tunnel is questionable: The argument that drivers could switch to another mode is dependent on other modes being available. But I point out later in this submission that for all but the shortest, most local, journeys that would use the tunnel, other modes are</p>	<p>TfL does not claim in the quoted passage or elsewhere that every trip currently made through the Blackwall Tunnel could be made by another mode - the fact remains that the charge is an incentive to consider such alternatives as are available for a given individual's journey. It is also not the case that other modes are unavailable for longer distance trips (there are extensive rail and coach services from Kent for example).</p> <p>TfL has demonstrated in response to FWQ TT.9 [REP1-174] that the likelihood of substantial timeshifting of journeys is low (although some businesses might be expected to take advantage of the potential</p>

		<p>not available. Further, the suggestion that drivers will change the time of their journey does not resolve the problem of induced journeys: Even if a driver changes the time of a journey induced by the tunnel to avoid the charges, it remains an induced journey with the potential to cause knock-on congestion for other road users.</p>	<p>cost savings of this) and there is no reason to consider that there would be any substantial congestion impact arising from this cause.</p>
<p>The Charge Risks being Ineffective, p. 3</p>	<p>WR.SR.4</p>	<p>Thirdly, where public transport alternatives are available (this is really only for very short journeys), the proposed off-peak charging levels, are less than typical public transport fares. For example, a single Oyster bus fare is currently £1.50, but the proposed off-peak charge for is only £1. It seems implausible that this will provide an effective inducement for people to use public transport.</p>	<p>While comparisons between the user charges assumed in the Assessed Case and fares for specific public transport journeys may at first sight appear persuasive, they in fact oversimplify the issues. Fares and charges do not exist in isolation - for vehicle journeys other costs include fuel and parking charges, while all journeys have a time cost associated with them. The transport modelling undertaken by TfL, which accounts for all of the major monetary and time costs involved in alternative mode and journey choices, demonstrates that in the Assessed Case there is forecast to be a substantial increase in the proportion of person trips across the river at the Greenwich Peninsula made by</p>

			public transport.
The Charge Risks being Ineffective, p. 3	WR.SR.5	There is a further issue with user charging: User charging is not particularly tied to the physical infrastructure, and will therefore always be subject to the prevailing political mood. In their application to build the crossing, TfL give what appears to constitute good guidelines for the principle of charging in order to constrain demand. Unfortunately, there's no guarantee that this approach would continue after the crossing is built. Charging for road use tends to be politically very unpopular, and there would in all probability therefore be tremendous political pressure on TfL to abandon user charging in the future. In that scenario, there is a high risk that political pressures would mean TfL is unable to manage demand in the way that they are predicting.	See Report 'Comments on Borough LIRs and WRs' (Sub theme "Risk of political pressure affecting charge-setting")
Provision for Cyclists and Pedestrians, p.	WR.SR.6	The crossing is to be built for motorized traffic only; there will not be any facility in the physical structure of the crossing for pedestrians or cyclists to use it. In previous	See Report 'Comments on Borough LIRs and WRs' (sub theme "Scheme should provide a walk and/or cycle link / Scheme does not

<p>3</p>		<p>consultations, TfL has justified this stance by claiming that pedestrians and cyclists can use the cable car that operates in the area; this is disingenuous because it ignores that the cable car does not operate 24 hours a day, and charges relatively high fares – much higher than the proposed toll levels for the Silvertown crossing. Under the proposals, at night time motorists would be able to use the crossing free of charge, but pedestrians and cyclists would not be able to cross at all because the cable car would not be operating. The incompatibility of this situation with the need for a transport policy to encourage alternatives to car use in order to avoid congestion should be obvious.</p>	<p>address needs of pedestrians and cyclists").</p> <p>The Scheme is enabling substantial improvements to sustainable cross-river transport by facilitating the delivery a number of new and extended cross-river bus routes. Furthermore, as discussed in response to FWQ PN.6 [REP1-178], the Applicant will be undertaking further investigations into a potential cross-river bus shuttle service operations.</p>
<p>Provision for Cyclists and Pedestrians, p. 3-4</p>	<p>WR.SR.7</p>	<p>Recently the Mayor of London, Sadiq Khan has suggested that a bus service could be provided specifically to transport cyclists through the tunnel. This appears unsatisfactory for several reasons:</p> <ul style="list-style-type: none"> • The bus service does not form part of the physical structure of the crossing, and therefore there is no guarantee that it would continue to be provided in the future: It could 	<p>See Report ‘Comments on Borough LIRs and WRs’ (sub theme “bus shuttle/transit issues”)</p>

		<p>easily be withdrawn because of, for example, political issues.</p> <ul style="list-style-type: none"> • It means that cyclists would be required to stop and wait for the next bus. Combined with the inconvenience of having to manhandle bikes onto the proposed buses, this is likely to be perceived by many cyclists as a considerable deterrent to using the crossing. This may well mean that the bus is poorly used (leading to its withdrawal) even if the ability to cycle directly would have been well used. 	
<p>Provision for Cyclists and Pedestrians, p. 4</p>	<p>WR.SR.8</p>	<p>TfL have also separately suggested that a ferry might be provided in the area for pedestrians and cyclists to cross the Thames, but again, this does not fully make up for the lack of crossing facilities for pedestrians and cyclists within the tunnel itself:</p> <ul style="list-style-type: none"> • The ferry does not form part of the plans for the Silvertown crossing, and there is therefore no guarantee that it would be provided, even if the tunnel is built. • The ferry would also be subject to political whim (and would be expensive to operate), 	<p>As set out in the Update Report October 2016 [AS-021], the Mayor has set one of his next river crossing priorities as investigating the case for a ferry between North Greenwich and the Isle of Dogs, however this scheme is not required to deliver the benefits or mitigate the impacts of the Scheme and is therefore being pursued separately.</p>

		<p>and could therefore be withdrawn in the future.</p> <ul style="list-style-type: none"> • Unlike the Silvertown crossing, any ferry is unlikely to operate 24 hours a day. 	
<p>Provision for Cyclists and Pedestrians, p. 4</p>	<p>WR.SR.9</p>	<p>In view of these considerations, it seems important that if the crossing is built, it should include permanent physical facilities for pedestrians and cyclists to use it (for example a separate tunnel, accessed by lift, just on either bank of the Thames). Failing to provide this with the new road crossing suggests inadequate attention to the need to encourage walking and cycling in order to avoid the problems caused by the tunnel.</p>	<p>The reasons for not providing a dedicated pedestrian and cycle link through the Tunnel are set out clearly at Paragraphs 3.3.19, 3.3.22 and 5.7.9 and summarised in the table on page 192 in the Case for the Scheme [APP-093]. However, there will be local improvements for pedestrians and cyclists, on both sides of the river, as described in Chapter 5 of the Design and Access Statement [APP-095].</p> <p>Furthermore, the Update Report October 2016 [AS-021] sets out the Mayor's next priorities for new river crossings in east London, and this includes a dedicated pedestrian and cycle bridge between Rotherhithe and Canary Wharf to encourage more walking and cycling in this part of east London. However, this scheme is not required to deliver the benefits or mitigate the impacts of the Silvertown Tunnel Scheme and is</p>

			therefore being pursued separately.
<p>Lack of North-South connectivity, p. 4-5</p>	<p>WR.SR.10</p>	<p>A further concern of the Silvertown tunnel is the lack of public transport alternatives. The crossing would of course potentially be used by a variety of journey, but fundamentally, what the tunnel enables is easier North-South journeys in East London that cross the Thames. In other words, orbital journeys around London by car. The exception is the DLR, which does have two largely North-South routes: From Stratford to Lewisham and Woolwich. However, the DLR is also relatively slow and only really designed for short journeys. As such, it cannot provide an alternative for most of the car journeys likely to use the new crossing. This brings out a fundamental problem with the proposed Silvertown crossing: It would enable medium-distance car-based orbital journeys across the Thames, while still till not allowing rail-based alternatives for those journeys. This is likely to cause a further mode-shift to cars – as people arrange their lives to take advantage of the crossing, and</p>	<p>Modelling takes into account the alternatives available to people so the ability or otherwise of people to change mode is incorporated into the forecasts.</p> <p>The Case for the Scheme [APP-093] considered other options for solving the problems of the Blackwall Tunnel, including public transport options (in Chapter 3 and Appendix) as an alternative to the Scheme. The evidence set out there demonstrates that other options could not achieve the Project Objectives. That said, the ability of the Silvertown Tunnel to enable significantly enhanced cross-river bus services is an important part of the Scheme and will contribute to the continued predominance of the public transport mode share in the east sub-region.</p> <p>While a public-transport only solution is not appropriate for solving these problems, TfL is actively progressing two new rail crossings</p>

		<p>then find there are no alternatives to driving on those journeys. Once again this would increase congestion, reduce mobility, and harm air quality, as it creates a new generation of car-dependency.</p>	<p>(Crossrail and DLR) in the east and south east areas of London, as well as having spent £20 billion on other river crossings in the eastern part of the Thames over last twenty years.</p> <p>The Transport Assessment [APP-086] has considered the impact of the Scheme on mode share and there is no evidence of a shift to car use as a consequence of the Scheme (see for example Figure 7-1 on page 230).</p>
<p>Lack of North-South connectivity, p. 5</p>	<p>WR.SR.11</p>	<p>But there’s a further issue. As noted earlier, TfL have argued that user charges for the crossing would encourage people to seek alternatives to driving – this is core to their argument that the crossing will not cause induced traffic. But this argument breaks down if there are no alternatives to driving in the first place! In the absence of alternatives, people would be likely to drive, irrespective of user charging. And there is clear evidence of this phenomenon at the Dartford crossing, where user charges that are considerably higher than those</p>	<p>Dartford charging strategy is not our charging strategy. We are actively seeking to manage demand to the point that queues are effectively eliminated.</p> <p>Modelling takes into account the alternatives available to people so the ability or otherwise of people to change mode is incorporated into the forecasts.</p> <p>With regard to alternative options, please see</p>

	<p>proposed for Silvertown do not prevent often massive queues of traffic for the Dartford crossing. The common theme there is of course that at Dartford, there are no alternatives to driving: There is no other way to cross the Thames there – which obviously leads to the tolls being largely ineffective at managing demand.</p> <p>It is clear that for many journeys, these same factors will apply to the Silvertown crossing, which would therefore imply that user charging at Silvertown is also likely to prove ineffective at managing traffic. People making local journeys of only a few miles may be able to use the DLR or buses, and for those journeys user charging is likely to be effective. But most journeys through the tunnel will be longer, and for those journeys, the lack of alternatives means that user charging will not be effective.</p> <p>The solution to this is obviously to provide public transport (especially rail)-based crossings that would allow orbital journeys by public transport in the area of Silvertown (beyond the very short journeys that are possible on the DLR or would be enabled by buses using the tunnel). This reasoning</p>	<p>response to WR.SR.10.</p>
--	---	------------------------------

		<p>gives a clear argument that the Silvertown tunnel should not be built without also providing reasonable rail-based crossings.</p>	
<p>Bus Services, p.5</p>	<p>WR.SR.12</p>	<p>The new crossing includes bus lanes so that buses can use it. TfL have suggested that the crossing is therefore good for public transport. However, while enabling bus journeys is welcome, this ignores the issue that buses are slow and therefore generally only suitable for short journeys. Further, buses often struggle to tempt people out of cars.</p> <p>In addition to this, I understand that bus use in London has peaked and started to decline in recent years – this appears to be due to traffic congestion slowing bus journeys and harming reliability. If, as I’m arguing, the new crossing causes new induced traffic, then this problem would be exacerbated by the new tunnel. Buses would become even less reliable, so that the new crossing could on balance do more harm than good to bus services, despite the possibility of buses being able to use it.</p>	<p>The Applicant considers that the effective elimination of the severe congestion which currently routinely affects the Blackwall Tunnel, together with the substantial improvements to reliability and the dedicated bus and HGV lane that the Scheme will bring will directly contribute to very substantial improvements in bus services. Bus journey times and speed for both cross-river and local routes are included in the indicative monitoring plan which is at Appendix A of the Monitoring Strategy (see page 67)[APP-098]. This data can be used to inform decisions about charge-setting and mitigations.</p>

7 SALLY HUGHES

7.1 Comments on Written Representation

Table 6 - Key issues identified from Written Representation by Sally Hughes with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Summary, p. 2	WR.SH.1	Mitigation of Blackwall Tunnel congestion now by more conservative measures could be achieved without building a second crossing on the Woolwich Peninsula. A new road crossing would be best placed between Woolwich and Dartford.	A crossing further east could not address the issues of congestion, resilience and reliability associated with the Blackwall Tunnel as demonstrated in the Case for the Scheme [APP-093] on pages 99-101 and 189 and therefore do not meet the Project Objectives as well as the Scheme does. Response to PN.1 in FWQ Principles PN Report [REP1-178] is also relevant in this context.
Public policy, p.	WR.SH.2	In general, the interaction of political factors with the goals of the project and other policy	The Applicant disagrees that the case for alternatives has not been considered.

<p>2</p>	<p>objectives has not been analysed appropriately. The application is narrowly focussed on:</p> <ul style="list-style-type: none"> • creating road traffic capacity and • peak hours traffic management. <p>However the supporting case focuses on policy objectives that include the generation of ‘access to jobs’ and economic growth in Silvertown. The case for alternatives, such as crossings located farther to the east, at least on the south side, is not considered even for the purposes of discounting it or making a comparison.</p> <p>Despite progress in public policy, no analysis considers externalities or public policy goals such as:</p> <ul style="list-style-type: none"> • conserving capital and monetary resources, • promoting public health, • cutting emissions (except in the context of operating the route from 2023 when additional traffic generated will increase emissions locally), • reducing or avoiding increases in carbon footprint, or • encouraging changes in mode of travel and route (except for the extension of two 	<p>Throughout the development of the Scheme, alternative crossings and packages of crossings have been assessed, as described in Chapter 3 of the Case for the Scheme [APP-093]. Road crossings further east were considered and the work demonstrates that they could not address the issues of congestion, resilience and reliability associated with the Blackwall Tunnel. Please see pages 99-101 and 189 of the Case for the Scheme [APP-093].</p> <p>The Traffic Forecasting Report - Sensitivity Testing [APP-105] presents the modelling analysis undertaken to assess crossings further east and this work also demonstrates that these crossings could not address the issues at the Blackwall Tunnel and therefore would not meet the Project Objectives as well as the Scheme does.</p> <p>How the Scheme meets public policy goals is presented in the Planning Policy Compliance Statement [APP-094].</p>
----------	---	---

		<p>bus routes – which could be extended via the use of single decker buses in the existing tunnel).</p>	
<p>Political intervention, p. 3</p>	<p>WR.SH.3</p>	<p>A project of this nature should be seen as capable of achieving environmental benefits in the public interest, and in conformity with the government’s international climate change undertakings.</p> <p>It should also have been measured against the economic advantages of the London Gateway Bridge, crossing from Becton to Thamesmead, which would:</p> <ul style="list-style-type: none"> • provide a substantial crossing almost half-way between Woolwich and Dartford, better meeting the prime strategic economic goals defined by both national and local strategy; • serve a large population and development area lying between the Greenwich/Woolwich crossings and the Dartford Crossing, thereby enabling a more equal distribution of opportunities to cross the river; • potentially have had the lesser environmental impact; • induced route and mode change by new users as well as those who contribute to the 	<p>The Case for the Scheme [APP-093] considers alternative options for solving the problems of the Blackwall Tunnel in Chapter 3 and Appendix A. It demonstrates that these other options would not meet the Project Objectives of the Scheme, although they may have merits on other grounds.</p> <p>The Mayor’s recent announcement regarding his next river crossings priorities is also relevant in this context. He has stated that his priorities are the Silvertown Tunnel, a pedestrian and cycle bridge between Rotherhithe and Canary Wharf and the case for a DLR crossing at Gallions Reach. The Applicant’s response to PN.1 in FWQ Principles PN Report [REP1-178] is also relevant in this context.</p>

		<p>current congestion;</p> <ul style="list-style-type: none"> • be cheaper to construct than the tunnel. Bridges are cheaper, mile for mile than under water tunnels. The real London Gateway cost in 2009 (£500m) was half the current projected cost of the Silvertown Tunnel (almost £1bn); and • as a bridge, better accommodate break-downs and large vehicles. 	
<p>Public consultation, p. 3</p>	<p>WR.SH.5</p>	<p>The supporting documentation includes the case in principle for cross-river movement to stimulate economic growth ('connectivity').</p> <p>However, although the Silvertown Tunnel has been labelled 'Nationally Significant Infrastructure Project', the economic case is not made convincingly or in terms. The 2014 Outline Business Case [for the Silvertown Tunnel] repeats a phrase from a draft 'National Policy Statement for the National Road and Rail Networks', as follows:</p> <p>Transport is an engine for growth. Well-connected and high performing road and rail</p>	<p>The Secretary of State for Transport issued a direction (which can be found here: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010021/TR010021-000014-Silvertown_Tunnel_s35_Direction.pdf) that the Silvertown Tunnel should be treated as a project which is required to be authorised by a DCO in 2012, stating that it should be treated as nationally significant for the following reasons:</p> <ol style="list-style-type: none"> 1. London as an engine for economic growth nationally. This recognises that congestion at the Blackwall Tunnel

		<p>networks with sufficient capacity are vital to meet the country’s long term needs and support a prosperous economy.</p> <p>How very true. However, the project only meets these criteria ‘by inference’ according to the documentation as an addition to connectivity. The document continues:</p> <p>By inference the lack of such connections and capacity is a barrier to economic growth, and the Silvertown Tunnel is regarded as an important additional connectivity in East London.</p> <p>However, subsequent exposition of the primary area for the economic opportunities makes it clear that the important Thames Gateway area requires new connectivity. As London grows, demand inevitably will be much farther east of north west Greenwich.</p> <p>London Thames Gateway is one of the most deprived areas not only in London but also in the UK; and the lack of adequate road transport connections and capacity is a</p>	<p>constrains economic growth in London, and therefore has an impact on the UK economy too</p> <ol style="list-style-type: none"> 2. The projected growth of London. This recognises that there are large areas for growth that have been designated by the London Plan and will be directly served by the Scheme, including the Greenwich Peninsula and Royal Docks 3. Current congestion at the Blackwall Tunnel is having a significant impact on the strategic road network. This recognises that congestion and poor reliability at the Blackwall Tunnel is having impacts on the Dartford Crossing 4. The size and nature of the Silvertown Tunnel compared to other Nationally Significant Infrastructure projects <p>Nothing has changed since 2012 that materially affects any of the above four points and therefore its designation as a Nationally Significant Infrastructure Project.</p>
--	--	--	---

		<p>major barrier to the accommodation of population and economic growth which is forecast for south and south east London.</p> <p>The case for building a new, more easterly connection has therefore been transposed onto the case for duplicating the Blackwall Tunnel, while simultaneously dealing with congestion at that crossing.</p> <p>Traffic surveys in the supporting documentation indicate that the majority of traffic originates in the three London boroughs in which the Blackwall/Silvertown tunnels are located. The case for designating it a nationally significant infrastructure project is not made, or not made sufficiently well to justify the cost and disadvantages, or the westerly location.</p>	
<p>Strategic economic goals, p. 3-4</p>	<p>WR.SH.6</p>	<p>The Silvertown Tunnel will not be a ‘new’ crossing. It is a replacement for and an enlargement of an established crossing, and simply proposes to accommodate more vehicles to keep the crossing flowing.</p>	<p>The Case for the Scheme [APP-093] clearly sets out the reasoning behind the need for a new crossing at this location; including addressing the key issues of congestion, closures and incidents, and a lack of</p>

	<p>The analysis in the supporting documentation for this application amounts to an expensive measure to reduce hold-ups on entry to the Blackwall tunnel during peak hours. This traffic-based justification is based on analyses of the origin and frequency of traffic movement, and reasons for ‘incidents’ (reasons for delay, blockages and hold-ups) in traffic movement at and in the tunnel.</p> <p>Pie charts presenting ‘incidents by type’ in the supporting documentation³ suggest that ‘Overheight Vehicles’ account for 60 per cent of hold-ups north bound. The explanation is that filtering of overheight vehicles creates hold-ups on the approach immediately south of the tunnel entrance. (Each such vehicle detected results in a red light to all traffic while the vehicle is filtered to the escape road.)</p> <p>The north-south return only records one per cent overheight vehicle ‘incidents’. This suggests either that filtration works better on the northern approach, or that journeys through the tunnel originate south of the river. Surely far less than £1bn would buy a</p>	<p>resilience.</p> <p>In relation to the disparity between north and south-bound over height vehicle incidents; the northbound portal of the Blackwall Tunnel has a maximum height clearance of 4.0m, while the southbound portal has a height clearance of 4.7m. Because of the additional height clearance in the southbound direction, incidents due to over height vehicles are negligible compared to those recorded in the northbound direction.</p> <p>With respect to the northbound over height vehicle incidents, the existing management system has been developed over a number of years, and includes a height detection and traffic signalling system, the provision of an ‘escape ramp’ just prior to the tunnel portal, and the creation of a segregated diversion lane on the A102 approach. Prior to these systems being installed, vehicle strikes (at the tunnel portal itself) occurred on a fairly regular basis, typically several times per week, with consequent safety risks to tunnel users and cost implications for rectifying any damages</p>
--	--	---

		<p>solution to this.</p>	<p>caused to the tunnel infrastructure. The current detection system allows for these vehicles to be identified and extracted before striking the tunnel portal itself.</p> <p>Further detail on this matter is provided within the Draft Heavy Goods Vehicle Management Strategy (Appendix K of FWQ AQ.10 [REP1-151]).</p>
<p>Improving the Blackwall Tunnel route, p. 4-5</p>	<p>WR.SH.7</p>	<p>The other major ‘incident’ creating hold-ups is given as breakdowns. Breakdowns are inevitable. As demand increases, whether induced, or resulting from organic growth in London, a new tunnel and its approach roads must perform well.</p>	<p>It is recognised that all types of incidents cannot be fully mitigated or designed for. However, the Silvertown Tunnel will meet current design standards and as a result will be much safer and reliable than other road tunnels in London, including the Blackwall Tunnel. The Silvertown Tunnel further improves the resilience of the corridor by providing a convenient alternative in the event of an incident occurring in either tunnel.</p>
<p>Improving the Blackwall Tunnel route, p.</p>	<p>WR.SH.8</p>	<p>While a new location for the approach has been found north of the river at Silvertown, none has been sought in north Greenwich. The projected tunnel will not be capable of</p>	<p>The Silvertown Tunnel is expected to improve cross-river connectivity to areas such as the Royal Docks and the Isle of Dogs, however it is not expected to generate significant</p>

<p>5</p>		<p>high performance because the transport infrastructure south through Greenwich RB will remain the same. Two tunnels will feed into one road (A102), pushing the bottleneck south.</p> <p>It is claimed that the Silvertown arm of the tunnel will deliver new connectivity north of the river. Unfortunately this implies more traffic originating in the feeder area in Greenwich, thus contributing to even more congestion south of the tunnel.</p>	<p>increases in traffic in Greenwich (due to the proposed user charge and enhancements to the bus network). The Applicant acknowledges that measures may be required to address increased flows on a limited number of links during peak periods, for example the A102/A2 southbound in the PM peak, and it is planned that this will be delivered through the Traffic Impacts Mitigation Strategy [APP-099].</p>
<p>Improving the Blackwall Tunnel route, p. 5</p>	<p>WR.SH.9</p>	<p>The business case for the tunnel is inadequate in that it simply describes a financial mechanism to pay for the road via charging. The ‘business’ case discussion is effectively the ‘practical’ case.</p> <p>The supporting documentation refers to charging as ‘the key mitigation’ in reducing the impact of pollution.⁴ Charging is also essential to the business case in that it is the only means – apart from general taxation – of paying for the tunnel. Charging as a means of improving traffic flow now in the existing Blackwall Tunnel is not considered as a means of testing</p>	<p>The Outline Business Case [APP-100] has been developed in line with the best practice five case model approach recommended in WebTAG (The Transport Business Cases, DfT, January 2013), and covers far more than the financial mechanism.</p> <p>The Case for the Scheme [APP-093] discusses the assessment of many options, including the option of only introducing a user charge at the Blackwall Tunnel (see option 4C of Appendix A of that document).</p>

		assumptions or offered as an immediate mitigation.	
The 'business' or 'practical' case, p. 5	WR.SH.10	<p>Traffic inducement is ignored in the supporting documentation. Various factors in the current situation congestion at certain times, and/or the opportunity to route via different crossing points at Rotherhithe, Blackwall, Woolwich Ferry and Dartford. Analysis of Induced Traffic would be an important analytical tool in considering the proposal also. Induced effects of faster, incident-free roads (including the new Silvertown Tunnel) generally include:</p> <ul style="list-style-type: none"> • 'rescheduling of trips to take advantage of improved conditions at peak periods; • increasing frequency of trips; • decreasing vehicle occupancy; • switching between public transport and private vehicles (mode shift); • travelling to new destinations; • making entirely new vehicle trips; and • car ownership' <p>according to research into road systems in Manchester. 5</p> <p>The new tunnel could intensify car use as a</p>	See report 'Comments on Borough LIRs and WRs' (sub theme "Induced demand")

		<p>result of induced usage, defeating efforts to substitute public transport as the mode of travel. Induced traffic effects also include changes in the patterns of land use and therefore land pricing. This would apply in north Greenwich and prove counter-productive to efforts to provide affordable housing.</p> <p>Knowledge of induced effects in north America as well as the UK has provided a factual basis for understanding the effect whereby new roads generate more traffic than the amount for which they were planned.</p> <p>Although many of these effects are already intuitively understood, and implied by some of the rhetoric of change, the Manchester study models predictive survey methods that could have an important and influential effect on consideration of the complex scenario in which the current project is located.</p> <p>The Manchester Motorway Box study suggests various mitigations of peak traffic flow that could be manipulated via induced effects (such as charging), including:</p> <ul style="list-style-type: none">• car occupancy changes;	
--	--	---	--

		<ul style="list-style-type: none"> • (macro) changes in departure time – through rescheduling of activities; • peak spreading – through smaller (micro) changes in departure time; • changes in route choice. <p>This means that mitigation of Blackwall Tunnel congestion now could save the huge cost of simply expanding road capacity via a second tunnel. A second tunnel is likely to create induced traffic effects capable of increasing traffic in addition to succeeding in generating traffic for the stated aim of connectivity. It is vital to begin now to reduce congestion and create a knowledge base to determine whether this crossing can continue without duplicating capacity and depriving more easterly locations.</p>	
<p>Traffic inducement, p. 6-7</p>	<p>WR.SH.11</p>	<p>The supporting documentation refers to charging as ‘the key mitigation’ in reducing the impact of pollution.⁶ Charging is also essential to the business case in that it is the only means – apart from general taxation – of paying for the tunnel. Charging is politically sensitive, and can militate against ‘connectivity’. However we</p>	<p>The Applicant has provided a detailed justification for the Scheme, as set out in the Case for the Scheme [APP-093].</p>

		<p>are entering an era of declining car use, and there is more widespread acceptance of payment for pollution by polluters. Apart from the general political point, more specific turf wars are already being carved out by politicians along the south bank. There is a widespread belief in the perceived inducement to travel west to Rotherhithe to avoid charging at Blackwall. By the same token, more westerly local authorities might perceive advantage in supporting an expansion of the Blackwall crossing to shift traffic into north Greenwich. The Silvertown Tunnel cannot be expected to fulfil contradictory goals, or be subject to charging simply to pay for a white elephant. A far more substantial and convincing case needs to be made for it.</p>	
<p>Traffic inducement, p. 7</p>	<p>WR.SH.12</p>	<p>On the evidence presented, a second tunnel at Blackwall will not (apparently) add significantly to pollution when in operation in 2023. I cannot follow the reasoning for this. The environmental impact will rather -</p> <ul style="list-style-type: none"> • perpetuate unacceptably current high levels of existing pollution.; 	<p>The Air Quality assessment [AS-022] has utilised the traffic modelling outputs to calculate the emissions that are used in the air quality modelling to assess the impact of the Scheme on pollutant concentrations. Pollutant concentrations at receptors close to the roads affected by the Scheme are used to</p>

		<ul style="list-style-type: none"> • consist also in the carbon emissions, extractive activity and energy squandered in building the tunnel. <p>The analysis supporting the application incorporates unacceptable assumptions about tolerable levels of environmental harm. Car pollution along the A102 corridor is already beyond current lawful limits, a major factor not acknowledged in the supporting information to the application. A recent European Court ruling found that the UK is breaching requirements to cut pollution over time. This is said to be leading to a vital review of policy in this area. To increase future car use in a populous area that is already heavily polluted, is regressive in light of current and future trends in transport, and contrary to public policy.</p>	<p>determine the overall impact on air quality.</p> <p>The Air Quality assessment [AS-022] has demonstrated that the Scheme will have a beneficial impact at locations with the highest concentrations, exceeding the Air Quality Strategy (AQS) Objective. This is as a result of a proportion of traffic being rerouted from areas around Blackwall Tunnel where air quality is poor to areas around the Silvertown Tunnel where concentrations of pollutants are generally lower.</p> <p>The Applicant has provided a response in relation to the recent High Court judgement in relation to the achievement of compliance with the EU Limit Values [REP1- 093]. It is the Applicants view that given the Scheme has a beneficial impact in relation to areas with the poorest air quality the scheme will not hinder the UK government’s plans to achieve compliance with the directive.</p> <p>The assessment concludes that the Scheme is compliant with the National Networks National Policy Statement (NN NPS) as the</p>
--	--	--	--

Silvertown Tunnel

Comments on Written Representation

			scheme does not cause a Significant impact on air quality or impact on compliance with the EU Directive.
--	--	--	--

8 REBECCA MOORE

8.1 Comments on Written Representation

Table 7 - Key issues identified from Written Representation by Rebecca Moore with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
All	WR.RM.1	<p>I am writing to express my concerns regarding the building of the Silvertown Tunnel without appropriate health and safety checks and balances for the people who live directly next to the Blackwall Tunnel Southern Approach. The pollution levels on our road were 2.5 times higher than EU limits in 2014, I dread to think what they are at now.</p> <p>Since 2014 we have filed a petition, and been in contact with various MPs and Councillors as well as TfL. Recently TfL have said they will consider a barrier if the</p>	<p>In general, the results of the Applicant’s air quality assessment demonstrates that the impact of the Scheme on the air quality at the Blackwall Tunnel Southern Approach in the Seibert Road area are imperceptible.</p> <p>The Applicant has also undertaken an assessment of the health effects of the Scheme (Health and Equalities Impact Assessment APP-090). This assessment concludes that the impact on health as a result of changes in air quality as a result of the Scheme as negligible.</p> <p>It is assumed that the ‘barrier’ referred to in</p>

		<p>Silvertown Tunnel gets the go-ahead.</p> <p>We fundamentally disagree with the linking of a barrier to the Tunnel. The pollution is bad now and will only get worse if the tunnel is built. We recently held a "Playing out Streets" event on our road, if you take a look at the attached photo, those are our kids on a Saturday afternoon - take a look at the traffic behind them!</p> <p>We are just a group of neighbours and concerned parents who live on a lovely street, there are also 3 great schools nearby, so this doesn't just affect our kids. We need to ensure our kids do not join the 50,000 people in the UK who die each year due to illnesses directly resulting from air pollution.</p> <p>If I can't keep my kids healthy and safe on my own street, what hope is there? Please back us by postponing the building of the Silvertown Tunnel, or stopping it completely until TfL build a noise and pollution barrier to protect the residential areas backing on to</p>	<p>the written representation is the proposed noise attenuation barrier at Seibert Road. Although the noise assessment in the Environmental Statement submitted by the Applicant does not identify a need for mitigation at Seibert Road as a result of the Scheme, TfL has had discussions with the RB Greenwich and has committed to providing an acoustic barrier at Seibert Road to attenuate existing noise from the A102 as an environmental enhancement, subject to the Secretary of State granting the DCO, together with feasibility checks and the necessary consents.</p> <p>The location of the acoustic barrier is outside of the Order limits and it is considered appropriate that this be secured through a legal agreement between TfL and the RB Greenwich.</p> <p>The Applicant would be very happy to meet with the Interested Party to better understand the concerns raised and provide a more detailed response if that would be helpful.</p>
--	--	--	--

		the Blackwall Tunnel approach. Lets be honest the A102 is not an A Road it is a full on motorway.	
--	--	---	--

9 N J MARKS

9.1 Comments on Written Representation

Table 8 - Key issues identified from Written Representation by N J Marks with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Traffic Forecasting, p. 1	WR.NM.1	<p>Latent and induced demands are inevitable impacts of a new road link. The Department for Transport report by the Standing Committee Advisory Committee on Trunk Road Assessment (SCACTRA) advised the government as long ago as 1994 that this was a probable outcome of new road links. Specifically the report stated that ‘...induced traffic will be of the greatest importance in the following circumstances:</p> <ul style="list-style-type: none"> • Where the network is operating or is expected to operate close to capacity • Where the elasticity of demand with respect to travel costs is high as may occur where trips are suppressed by congestion 	See report – Comments of Borough LIRs and WRs’ (sub theme "Induced demand")

		<p>and then released when the network improves;</p> <ul style="list-style-type: none"> • Where the implementation of the scheme causes large changes in travel costs <p>This suggests the categories of road where appraisal needs to be most careful are improvement to trunk roads in and around urban areas, estuary crossing schemes and strategic capacity enhancing inter-urban schemes including motorway widening.’ [Executive summary para 13]</p> <p>The proposed tunnel fulfils all the conditions of a scheme likely to induce traffic from the government’s own report.</p>	
<p>Traffic Forecasting, p. 2</p>	<p>WR.NM.2</p>	<p>In 2006, the Campaign to Protect Rural England and the Countryside Agency commissioned a report to look at traffic impacts from more recent road projects ‘ Beyond Transport Infrastructure – lessons for the future from recent road projects’ http://www.transportforqualityoflife.com/u/files/Beyond-Transport-Infrastructure-fullreport%20July2006.pdf</p> <p>The report ‘...demonstrated that traffic growth on the new routes in question was</p>	<p>See report –Comments on Borough LIRs and WRs’ (sub theme "Induced demand")</p> <p>The Applicant notes that the quote referenced from the Transport Assessment refers to the reference case (e.g. the 'do nothing' scenario), not the assessed case.</p>

		<p>higher than forecast, sometimes quite dramatically so' (para 3.1.1 Traffic flows) The potential for both the release of latent demand and induced demand on completion of the tunnel is both real and significant. TfL have identified latent demand as an issue. The Transport Assessment states 'there inevitably be a growth in trips made by private vehicles'...'demand for river crossing will ..Increase further..' & 'demand to flow southbound is forecast to increase from 104% to 142%' [S3]</p>	
<p>Traffic Forecasting, p. 2</p>	<p>WR.NM.3</p>	<p>Despite the inevitability of additional traffic using the new crossing, TfL forecasts that the number of private motor vehicles using the new link will actually fall. The Transport Assessment states '...Total cross-river person trips by private vehicle reduces by 1,800 in the Assessed Case across the 24-hour weekday period (-0.22%)' (para 7.2.9). This assertion is not credible. At the very least there should have been traffic modelling to show the impacts of the two tunnels operating at capacity on both traffic congestion in the surrounding (unimproved)</p>	<p>The Applicant has considered a range of scenarios in its Traffic Forecasting Report which together demonstrate that the Scheme would meet its objectives under the range of plausibly foreseeable scenarios. The Applicant does not consider that an approach of directly specifying the volume of traffic to use the Blackwall and Silvertown tunnels would be in accordance with standard modelling guidelines.</p>

		road network and the effects this congestion would have on air quality and noise. Given the increase in traffic when the 1968 tunnel opened it is entirely conceivable that traffic levels would increase to more than the combined capacity of the new crossing.	
Economic Assessment, p. 2	WR.NM.4	<p>Much has been made of the new tunnel opening up job opportunities the people through the use of the new crossing by private motor car. The Transport assessment states: ‘...Greenwich, Lewisham and Bexley are estimated to see over 200,000 additional potential jobs made accessible within a 45 minute journey time [by private vehicle]...’ [7.11.5]</p> <p>However TfL’s traffic forecasts state that the number of private motor vehicle trips will fall. Either the Economic Assessment is false or the traffic forecast is false. Both cannot be true.</p>	Section 7.11.5 of the Transport Assessment [APP-086] refers to the potential number of jobs accessible to private car users, not to the number of people that actually cross the River. The Scheme effectively eliminates congestion, which makes more job opportunities accessible to residents, whilst the user charge manages the demand for the crossing. Chapter 7 of the Transport Assessment [APP-086] sets out that, under the Assessed Case charging schedule, the number of private vehicles motor trips is forecast to be similar to the Reference Case at opening year.
Environmental Assessment, p.	WR.NM.5	The environmental impacts of the operation of the tunnel are dependent on the accuracy	See report ‘Comments on Borough LIRs and WRs’ (sub theme "General disagreement with

2		of the traffic forecast. If the traffic forecast is inaccurate, the environmental impact must also be inaccurate.	assessed Case forecasts")
User Charging and demand suppression, p. 2	WR.NM.6	TfL explicitly state that user charging will suppress induced demand [User Charging section of Transport Assessment] and implicitly assert that user charging will also suppress induced demand. That TfL do not do is provide evidence to support either assertion. In case of a crossing or the Thames close by at Dartford, user charging seems to have no impact on control of traffic flows. The Dartford crossing has always been tolled, despite that, the capacity of the original tunnel crossing has had to be increased first by a bridge, in itself larger than the original tunnel and now proposals are under consideration for a further, tolled, crossing at Gravesend to meet the demand. If user charging was an effective way of controlling demand, then TfL should have considered user charging on the existing, unimproved tunnel.	User charging is an established method of influencing demand. Evidence related to the central London Congestion Charging Scheme is given in the Charging Statement [APP-097] section 5.9 page 68. User charging at the Blackwall Tunnel (without the new Silvertown Tunnel) is considered in the Case for the Scheme [APP-093] page 113. While this could reduce traffic flow, it would not address the delay and lack of resilience which are a problem at this crossing. Comparisons with the Dartford Crossing need to consider how the objectives and constraints for that scheme may differ from the Scheme that the Applicant is proposing.

10 EMILY & MICHAEL NORTON

10.1 Comments on Written Representation

Table 9 - Key issues identified from Written Representation Emily & Michael Norton with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Para 2, page 1	WR.EMN.1	The Blackwall Tunnel approach roads pass through residential areas where the level of housing is increasing all the time. The priority should be to reduce levels of traffic and discourage through traffic rather than build a new tunnel that will encourage more traffic.	See report ‘Comments on Borough LIRs and WRs’ (sub theme "Traffic will increase")
Para 2, page 1	WR.EMN.2	The proposals submitted by TfL for the Silvertown Tunnel don’t seem to guarantee that levels of pollution will lessen and we fear worsening pollution in some areas due to increased congestion on roads away from the proposed crossing as vehicles change	The Air Quality assessment [AS-022] demonstrates that although air quality is expected to deteriorate in some areas, the Scheme, on balance is expected to have a beneficial impact on air quality. The RXHAM strategic traffic model used to create the

		<p>their journey patterns to use or avoid the new crossing.</p>	<p>traffic data inputs for the air quality modelling covers Greater London; therefore the re-distribution of traffic across a wide area is captured in the Scheme traffic datasets. The air quality study area is defined by applying the traffic change criteria set out in the DMRB which are as follows:</p> <ul style="list-style-type: none"> • road alignment will change by 5m or more; • daily traffic flows will change by 1,000 Annual Average Daily Traffic (AADT) or more; or • Heavy Duty Vehicle (HDV) flows will change by 200 AADT or more; or • daily average speed will change by 10 km/hr or more; or • peak hour speed will change by 20 km/hr or more. <p>On those roads where none of the criteria are met, air quality impacts would be expected to</p>
--	--	---	---

			<p>be negligible and are consequently not assessed. It is therefore the applicant's opinion that those areas where increased congestion is expected have already been taken into account and assessed in the air quality chapter of the ES [AS-022].</p>
<p>Para 3, page 1</p>	<p>WR.EMN.3</p>	<p>Further improvement of public transport infrastructure should be the priority so that public transport becomes a real option for travelling between north east and south east London. Huge improvements have happened in the last 20 years and there has also been a significant increase in traffic congestion but it is still much easier to use a car when travelling anywhere other than central London.</p>	<p>The Silvertown Tunnel scheme itself facilitates the delivery of a number of new and extended cross-river bus routes that will improve the capacity and resilience of cross-river public transport in the area. The Scheme is part of a multi-modal approach to address the poor cross-river connectivity that has existed between east and southeast London, and there has been significant investment made in cross-river travel options in east London over the last 20 years, including the delivery of:</p> <ul style="list-style-type: none"> • Jubilee line extension to Stratford; • DLR to Lewisham; • DLR to Woolwich; • Re-opening of the East London Line and its inclusion in the London Overground network; • Emirates Air Line; and • Crossrail (due to open in 2018).

			The Update Report October 2016 [AS-021] is also relevant in this context.
Para 4, page 1	WR.EMN.4	We haven't seen any proof that the Silvertown tunnel would even be needed if other crossings were built first. Considering the Silvertown Tunnel as a standalone project without taking into account other proposed East London river crossings is crazy	The Case for the Scheme [APP-093], clearly demonstrates the work undertaken to identify the scheme that would best address the problems of congestion, resilience and reliability associated with the Blackwall Tunnel. See Chapter 3 and Appendix A of the Case and Traffic Forecasting Report - Sensitivity Testing [APP-105] for further detail on why other schemes could not meet the project objectives as well as the Silvertown Tunnel scheme.
Para 6, page 1	WR.EMN.5	We are particularly concerned that traffic levels will increase and related congestion/pollution increase in areas away from the Blackwall/Silvertown tunnel approach roads. We question whether future increase in demand for river crossings can be avoided even with the introduction of tolls. We do not believe that demand for this river crossing in particular will simply go	See Report 'Comments on Borough LIRs and WRs' ("Induced demand")

		away if tolls are introduced and that this demand may continue to increase well beyond the first 5 years especially if additional crossings are not built.	
Para 7, page 1	WR.EMN.6	Having read the Traffic Impacts Mitigation Strategy we feel those three to five years is not long enough to assess the long term impact of this scheme. We feel that the effects of the crossing should be monitored for at least 10 years, probably 20.	Experience from other major schemes, such as the Central London Congestion Charging scheme, shows that most changes tend to materialise within the first 18 months of operation, but the Applicant has committed to a minimum of 3 years monitoring with the potential for this to be extended to 5 years.” TfL has an extensive monitoring programme for the road network in London (and the transport network generally). The longer-term monitoring of the Scheme would be wrapped up in this.
Para 2, page 2	WR.EMN.7	Even if demand levels at Blackwall/Silvertown are successfully controlled we fear that a significant amount of traffic will divert to alternative crossings. 3.2.4 of the Charging Statement recognises that drivers may find alternative routes to avoid tolls. TfL modelling does not seem to	See Report ‘Comments on Borough LIRs and WRs’ (sub theme "Displacement")

		<p>have taken into account the impact of drivers changing route on roads between crossings (both towards a supposedly free flowing Blackwall/Silvertown crossing and away from it to free crossings). This may result in increased traffic in multiple directions on other roads most of which are in residential areas. Has there been any robust modelling done of the effect of this on junctions when drivers divert in opposing directions?</p>	
<p>Para 3, page 2</p>	<p>WR.EMN.8</p>	<p>We know that the A2 southbound is congested almost every night at current traffic levels. We fear additional overspill into local roads if the Silvertown Tunnel is built. We also fear overspill onto local roads that link the A2 and A206. We haven't seen anything in the proposals that guarantees this will not happen.</p>	<p>See Report 'Comments on Borough LIRs and WRs' (sub theme "Traffic will increase" and "Impact on local junctions / networks")</p>
<p>Para 4, page 2</p>	<p>WR.EMN.9</p>	<p>Unfortunately traffic impact mitigation appears to be planned as reactive rather than proactive. Although the reasons for this are valid in that the effects are unknown we</p>	<p>It is not correct to describe the Applicant's proposals for mitigation as 'reactive'. The Applicant proposes to undertake a refreshed assessment of Scheme impacts prior to</p>

		<p>have the following concerns:</p> <ul style="list-style-type: none"> · lack of knowledge of the effect that the proposed scheme will have elsewhere brings into question whether this scheme is the right solution for the current problems. · A reactive system means that there will inevitably be long delays in making changes due to the length of the process. · It seems likely that it could be difficult to show that any specific traffic problem is definitely attributable to the Silvertown tunnel scheme so mitigation may never happen in some instances. · There doesn't seem to be any reference to funding for mitigation schemes and therefore one wonders if the funding will be available even if traffic problems are attributable to the Silvertown Tunnel scheme 	<p>opening as a means to ensure that the implementation of the Scheme, including the user charges and any required mitigation, takes account of the most up to date information and the traffic conditions which exist at that time. See Report 'Comments on Borough LIRs and WRs' (sub theme 'Mitigation').</p>
<p>Para 5, page 2</p>	<p>WR.EMN.10</p>	<p>We welcome STIG but feel that in order to be effective STIG must include local representation so that local knowledge can be included in identification and solution to problems</p>	<p>As standing members of STIG, the local authorities are in the best position to ensure that local knowledge is brought to the table and local issues are appropriately highlighted. Individual residents and businesses could make their concerns known to their local</p>

			boroughs.
Para 6, page 2	WR.EMN.1 1	We also question the accuracy and reliability of TfL data. For example Figures 4.1 and 4.2 of the Charging Statement show hourly flow rates with a level at which queues are likely to build up. What these graphs don't show is how big these queues are nor how quickly they grow. Northbound there are queues on the A102 most of the time, most days, even at weekends although the length may vary. This is contrary to the statement made at 4.9.6 which says that at weekends traffic volumes remain marginally below the level at which queues build. This raises the question of how accurate the data is in the TfL documents. Clearly a second tunnel is meant to decrease queues but what about the crossover point when users choose between the Silvertown or Blackwall tunnel approach? It is well know that lane changing causes increased congestion	See Report 'Comments on Borough LIRs and WRs' (sub-theme "General disagreement with Assessed Case forecasts") Generally, the scheme has been designed in accordance with the recognized highway design guidance for the UK, which is the Design Manual for Roads and Bridges (DMRB). The Scheme proposals include lane merge and diverges on the A102 that are sufficiently long enough to ensure any potential conflicts arising from lane changing are minimised, and are compliant with the DMRB guidance.
Para 2, page 3	WR.EMN.1	We also feel strongly that charges unfairly penalise those who live/work in East London	As set out in section 4.2 of the Transport Assessment [APP-086], levels of congestion

	2	<p>and that residents/businesses in South East London will be further penalised by the proposed tidal flow system. Road user charges should be aimed at reducing traffic in the whole area not just at river crossings. The river is already a barrier to movement, charging for crossing the river further reinforces this</p>	<p>at the Blackwall Tunnel are highest travelling northbound in the morning peak and southbound in the evening peak. Whilst users of the Blackwall and Silvertown Tunnels travelling northbound in the morning peak, and southbound in the evening peak, will be charged a higher rate, they will also benefit more from reduced levels of congestion.</p> <p>As set out in Summary Table 3 of the Economic Assessment Report [APP-101], the Scheme will generate £1,343m of benefits for residents and businesses, net of user charges and including reliability benefits.</p> <p>Table 7.2 of the Regeneration and Development Impact Assessment [APP-102] shows that there will be an increase of 2,000 trips per day as a result of the Scheme, largely as a result of new bus services facilitated by the Scheme.</p>
Para 3, page 3	WR.EMN.1 3	<p>We also support discounts for local traffic. Charging should be discouraging long distance traffic that has more choice of crossings. Local traffic should not be encouraged to travel further to access a free</p>	<p>See Report 'Comments on Borough LIRs and WRs' (sub theme "Residents Discount")</p>

		crossing. In general tolls should be part of a far wider scheme that discourages the use of roads in all of inner London not just the central zone	
Para 4, page 3	WR.ENM.1 4	If there are to be no discounts for local traffic then any proceeds beyond build and maintenance of the crossing should be made available for local transport infrastructure and not for general London wide use. (Development Consent Order para 56)	<p>The rationale for not proposing local residents discounts is set out in the response provided by the Applicant to question SE.2 from the Examining Authority (FWQ Socio-Economic Report [REP1-176]).</p> <p>The revenue generated by the introduction of user charging at the Silvertown and Blackwall tunnels will be used to meet the construction and ongoing operation and maintenance costs associated with the new tunnel, as well as the ongoing costs associated with the existing Blackwall Tunnel. In terms of the Silvertown Tunnel, a Private Public Partnership (PPP) Project Company will be responsible for raising the finance for the detailed design, construction and maintenance of the new tunnel and once it is open will, in return, receive payments from TfL for a period of 25 years. The payments will be linked to the availability of the tunnel</p>

			<p>for safe use by traffic.</p> <p>The revenues from user charging at both the Blackwall and Silvertown Tunnels will, over time, cover the cost of the Scheme. As charging is anticipated to be a long term measure which is required to manage traffic demand at the tunnels for the foreseeable future, the revenue from user charging may also play a part in funding other future transport investments in London once the Scheme costs have been met.</p> <p>Any surplus revenue from user charging at Silvertown and Blackwall would contribute to the delivery of the priorities identified within the Applicant’s Business Plan, as is the case for all other revenue generated from TfL services, such as the Congestion Charge and public transport fares. The east London sub-region can expect to see a higher proportion of expenditure within TfL’s Business Plan reflecting the need to improve connectivity within the area to support the expected increase in population, housing and</p>
--	--	--	---

			employment growth in the coming years.
Para 5, page 3	WR.EMN.1 5	Our area already suffers from construction traffic from Greenwich Peninsula trying to avoid traffic congestion. Given that congestion is likely to remain at significant levels at least until the Silvertown Tunnel is built we fear even more construction traffic diverting via our area to avoid traffic queues. We are aware of the Construction Management Plan but are also aware that these usually have clauses that allow alternative routes in the case of congestion on agreed routes. If the Silvertown Tunnel is to be built then the Construction Management Plan needs to prohibit the use of residential streets completely and this needs to be enforced	<p>Further to the Code of Construction Practice, secured by Requirement 5 to the DCO, the Applicant will produce a Construction Traffic Management Plan (CTMP) which will detail the construction routes to be used during the scheme.</p> <p>The CTMP must be agreed with the relevant local authority, in the case of the Greenwich Peninsula, this will be the London Borough of Greenwich, as set out in the Code of Construction Practice (CoCP) [APP-092].</p> <p>The Applicant has provided indicative construction routes which could be used during the construction of the scheme in Chapter 6 of the Transport Assessment [APP-086] which predominantly uses main distributor roads to minimise any adverse effects on local access roads.</p> <p>However, the specific routes to be included in the CTMP will be agreed with the relevant local authority at detailed design stage, once</p>

			<p>the exact details of the construction methodology are known, and will holistically consider the traffic impacts caused by the scheme to mitigate and minimise them as best as practical. As such, the Applicant is not able to provide specific routes at this stage. However, the CoCP para 3.1.4 specifically states that, in respect of the CTMP: “Detailed construction and delivery traffic routes will be specified and agreed by the relevant planning authority in consultation with the relevant highway authority, with local roads only to be used for immediate access to the worksites or local businesses (including wharves).”</p>
--	--	--	--

11 HELEN HUTCHINSON & DUNCAN MARLEY

11.1 Comments on Written Representation

Table 10 - Key issues identified from Written Representation by Helen Hutchinson & Duncan Marley with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Page 1	WR.HD.1	<p>Constant gridlocks on the A102 run alongside our houses day and night. The traffic trying to escape comes down into our roads and blocks those too.</p> <p>Building a tunnel at Silvertown will only add to this. More roads equal more traffic - just look at the M25 as an example.</p>	<p>See Report ‘Comments on Borough LIRs and WRs’ (sub themes "Traffic will increase" and "induced demand")</p>
Page 1	WR.HD.2	<p>Furthermore, charging for the Silvertown crossing will only push more traffic to the Blackwall Tunnel.</p>	<p>In the Assessed Case, the same user charges would be applied at both the Blackwall and Silvertown Tunnels. This will mean that there is no financial reason to prefer one tunnel to the other, and drivers will</p>

			use the most appropriate tunnel for their journey.
--	--	--	--

12 EAST GREENWICH RESIDENTS ASSOCIATION

12.1 Comments on Written Representation

Table 11 - Key issues identified from Written Representation by East Greenwich Resident Association with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Under Air Quality heading	WR.EGR.1	The Department of Transport’s National Policy Statement for Ports (para 5.7.7) states that on air quality: 'In the event that a project will lead to non-compliance with a statutory limit, the decision maker should refuse consent'. As Greenwich is within an Air Quality Management Area we believe that this policy guidance should apply to the Project. Studies undertaken by the Royal Borough of Greenwich, by TfL and by EGRA already show that air pollution breaches legal limits at sites close to the A102 (51-88 milligrams of NO2 per cubic metre of air), Tunnel Avenue (47-65 milligram of NO2 per	<p>It should be noted that the Silvertown Tunnel Scheme is a road scheme that has been designated as a Nationally Significant Infrastructure Project (NSIP). This means that the Scheme must adhere to the National Networks National Policy Statement (NN NPS). The NPS for Ports is not relevant to this Scheme.</p> <p>The applicant acknowledges the existing poor quality at sites close to the A102, Tunnel Avenue and Trafalgar Road. The Scheme is expected to result in improvements of up to 1.2 µg/m3 at those receptors located between</p>

		<p>cubic metre of air) & Trafalgar Road (29-88 milligrams of NO2 per cubic metre of air).</p>	<p>Tunnel Avenue and the A102. Trafalgar Road is not included in the air quality assessment as the changes in traffic flow are below the criteria for assessment as detailed in the DMRB. Therefore no air quality impacts are expected along this link.</p>
<p>Under Air Quality heading</p>	<p>WR.EGR.2</p>	<p>Whether increased traffic will significantly worsen air pollution or whether better traffic flows will improve it is not sufficiently established. Even taking the admitted increase in traffic of between 35 and 50%, it is unclear that this will be compensated by less idling traffic during peak demand.</p>	<p>The Air Quality assessment [AS-022] is based on the data provided by the traffic model. The traffic is broken down into five periods of the day to ensure that account is taken of the traffic conditions throughout the day and in particular for congested periods. Page 55 of the Air Quality Chapter [AS-022] provides the detail in relation to the traffic data that has been used in the scheme assessment.</p> <p>The emissions are calculated based on the traffic data provided in these periods and therefore elevated emissions during congested periods are taken into consideration in the air quality modelling and the assessment of impacts at nearby</p>

			<p>receptors.</p> <p>The applicant is unclear as to which road is expected to experience increased traffic flows of 35-50%. The applicant is also unclear as to what time period the increase is expected. On the A102 Southern Blackwall Approach road in Greenwich, traffic flows are not expected to increase by the metrics cited in WR.EGR.2.</p>
<p>Under Air Quality heading</p>	<p>WR.EGR.3</p>	<p>We understand that the AQ modelling included just one “real world” test and that much of the evidence is based on laboratory emission test data. We believe this is insufficient after overwhelming evidence of the disparity between the two types of test, especially that of diesel vehicle emissions</p>	<p>The emissions that are used in the Air Quality assessment [AS-022] are based on the Defra published emissions factors. However, it is acknowledged that vehicles in the real world have not performed to their respective emissions standards.</p> <p>The air quality assessment accounts for this through the methodology that are used in the assessment in two ways. Firstly, actual monitoring data was collected across the air quality study area, both by local authorities and additional Scheme specific data commissioned by TfL. This data is used within the air quality assessment to ensure the modelling is predicting pollution</p>

		<p>concentrations reasonably across the study area. Concentrations of NO₂ are predicted at the monitoring locations for the Baseline Year (2012) and compared against the concentrations measured in those locations.</p> <p>Where the modelling under -predicts pollutant concentrations, an adjustment factor was derived which was then applied to the future modelling predictions to correct for any systematic under-predictions. This approach is intended to address any gap between real-world conditions, and assumptions included in the modelling variables, for example emission factors which would include relevant vehicles which are not performing to the emissions that are assumed in the EfT.</p> <p>Secondly, the assessment has utilised the advice in Interim Advice Note 170/12v3 which is described in Chapter 6 of the ES [AS-022] P58-59. This ensures that the modelled results utilised in the Scheme assessment are not solely reliant on the emission factors as published, as an uplift is applied to the model results to account for emissions from Pre</p>
--	--	---

			<p>Euro 6/VI vehicles not declining as quickly as expected. There is also an allowance for Euro 6/VI emissions not reducing as assumed in Defra’s published emission factors. Therefore, the methodology has allowed for the performance of vehicles in the real world.</p>
Under Air Quality heading	WR.EGR.4	<p>There are numerous studies which now link pollution to early deaths, these are now estimated to be about 9,500 a year in London (see “Lethal and Illegal”, Institute for Public Policy Research, 2016). Furthermore a high proportion of vehicle emissions of the toxins nitrogen dioxide and particulates are from diesel vehicles. It seems paradoxical to facilitate increased diesel vehicle traffic at a time when evolving policy is to attempt to constrain it, and maybe even to eliminate it in London.</p>	<p>A Health and Equalities Impact Assessment (HEqIA) [APP-090] has been undertaken for the Scheme, this includes a quantitative assessment of Air Quality and Health, the assessment shows that the Scheme will not be significant.</p>
Under Air Quality heading	WR.EGR.5	<p>The Mayor of London has proposed to extend an Ultra Low Emissions Zone to the South Circular road. The Project would be within</p>	<p>If the ULEZ is expanded as proposed then there are a number of ways in which it could be configured, including in relation to the boundary route which could potentially</p>

		<p>this zone if it were to be established. Has the effect of this been adequately modelled?</p>	<p>include or exclude charges on the Blackwall and Silvertown Tunnels. The Applicant has considered the potential impacts of an extended ULEZ (which has not yet been fully defined) and considers that the impact on traffic volumes is likely to be relatively modest under either scenario. Any impact would be well within the range of conditions assessed through sensitivity testing and which the Applicant has demonstrated could be addressed through small alterations to the user charges at the Blackwall and Silvertown tunnels.</p>
<p>Under Air Quality heading</p>	<p>WR.EGR.6</p>	<p>There are a large number of schools and nurseries within East Greenwich and Peninsula Ward as a whole as well as a new school St Mary Magdalene, Peninsula being built next to the A102. Have the impacts on these and other “sensitive receptors” been adequately assessed?</p>	<p>The impact of the Scheme on schools within 200m of affected roads (as defined by the DMRB traffic change criteria) is presented in the Social and Distributional Impacts (SDI) assessment [APP-104]. The SDI assessment demonstrates that the impact of the Scheme on all schools within the Royal Borough of Greenwich is imperceptible.</p>
<p>Under Air</p>	<p>WR.EGR.7</p>	<p>Noise levels due to additional traffic and the fact that the new tunnel is proposed to be</p>	<p>As set out in Section 14.5 of Chapter 14 Noise and Vibration of the ES [APP-031] and</p>

<p>Quality heading</p>		<p>able to accommodate larger HGVs which in themselves are noisier vehicles. There are not sufficient noise barriers or mitigation measures outlined in the plan</p>	<p>Drawing 14.6 Road Traffic Noise Mitigation [AS-020], the use of low noise surfacing and barriers around the tunnel portals are embedded in the Scheme design as feasible measures to reduce noise levels during the operational phase of the Scheme.</p> <p>Additional locations of noise barriers have also been considered and discounted due to highways safety, visual and townscape impact on the Hoola development, and ineffective reduction of noise levels. These are discussed further in the Noise Mitigation Technical note included in Appendix C (Comments on Borough LIRs and WRs).</p>
<p>Under Air Quality heading</p>	<p>WR.EGR.8</p>	<p>Have options to ban HGVs from using the Silvertown tunnel in line with the existing Blackwall Tunnels, but allow double decker buses through in a dedicated lane to ensure public transport cross river is improved been considered?</p>	<p>As is set out within the response to FWQ PN4 [REP1-178], in order to maximise the efficient movement of HGVs and improve overall resilience, allowing all vehicles to use either tunnel, provided height restrictions are met is deemed to be the most appropriate option for</p>

			<p>the routeing of vehicles through the tunnels.</p>
<p>Under Air Quality heading</p>	<p>WR.EGR.9</p>	<p>Air quality adjustments should also be provided in different scenarios, what if traffic were 10% or 20% higher than the modelled scenario (as indicated by 1996 induced traffic survey) how quickly does air quality become materially affected under the modelling i.e. what is the margin for error at which it becomes detrimental to Air quality under this modelling?</p>	<p>The Air Quality assessment [AS-022] has been undertaken in accordance with the DMRB guidance that requires the air quality assessment to be based on the ‘most likely’ forecast traffic flows (DMRB HA207/07 Paragraph 3.8). As discussed in the previous response the air quality assessment does ensure that the predictions of future concentrations of NO2 are uplifted in accordance with the Advice in IAN 170/12v3.</p> <p>To further ensure that uncertainty in modelled forecasts are considered the applicant has committed to rerun the air quality modelling prior to the Scheme opening (outlined in the Charging Policy [REP1-123]) to ensure that using the most up to date information in relation to traffic, air quality monitoring and emissions data that the Scheme lead to the same outcome as reported in the ES, that there are no significant impacts. The Applicant has also committed to a Monitoring and Mitigation Strategy [REP1-121] whereby</p>

			<p>air quality and traffic monitoring will be undertaken both pre and post opening to ensure that the impacts of the Scheme are consistent with the assessment.</p>
<p>Under Policy and Objectives heading</p>	<p>WR.EGR.1 0</p>	<p>Whilst an additional river crossing may be required and it is acknowledged that there are already major congestion challenges when the current Blackwall Tunnel is disrupted for any reason, by adding another river crossing in an area where the approach roads are already heavily congested will only make matters worse and not better. This, alongside other planned developments such as the Ikea, Charlton Retail Park, residential housing being built along the river front at East Greenwich & on the Peninsula as well as the Cruise Ship Terminal, will all add to traffic in the area and result in worsening congestion, not relief</p> <p>We would argue that congestion would merely be displaced on to “the road network” and that it would be severe even with only a 35-50% increase in traffic</p>	<p>The Applicant considers that because of the user charging element of the Scheme, there is not likely to be an increase in traffic on the approaches to the Blackwall and Silvertown Tunnels and hence rather than an increase in congestion, the Scheme will bring about a very significant reduction in congestion compared to current conditions. The Applicant has set out in Chapter 7 and Appendix C of the Transport Assessment [APP-086] the results of its assessment of the impacts of the Scheme on the wider road network, which indicates that most impacts are either relatively modest, and/or can be resolved by future signal timing changes, or are locations where other major schemes are currently under consideration. The modelling undertaken for the Scheme takes account of projected growth from developments using established GLA forecasts.</p>

<p>Under Policy and Objectives heading</p>	<p>WR.EGR.1 1</p>	<p>Resilience is important. We understand that about 700 incidents a year are caused by accidents or over-height vehicles at the Blackwall tunnels. These need to be addressed by better management not by duplicating tunnels. What future-proofing against such incidents are envisaged?</p>	<p>By directing all over-height vehicles to use the Silvertown Tunnel in the northbound direction through the use of clear and consistent signage, the number of over-height vehicle incidents at the Blackwall Tunnel is expected to significantly reduce. These proposed improvements are considered to be the most appropriate response to existing problems caused by over-height vehicles at the Blackwall Tunnel.</p>
<p>Under Policy and Objectives heading</p>	<p>WR.EGR.1 2</p>	<p>Cross-river public transport links are at breaking point. Passengers on cross-river bus, tube and rail services are suffering far more disruption to their trips than those using the existing Blackwall tunnels. What serious investment will be made in public transport links to South East London and what measures to improve its resilience?</p>	<p>The Silvertown Tunnel scheme itself facilitates the delivery of a number of new and extended cross-river bus routes that will improve the capacity and resilience of cross-river public transport in the area. The Scheme is part of a multi-modal approach to address the poor cross-river connectivity that has existed between east and southeast London, and there has been significant investment made in cross-river travel options in east London over the last 20 years, including the delivery of:</p> <ul style="list-style-type: none"> • Jubilee line extension to Stratford; • DLR to Lewisham;

			<ul style="list-style-type: none"> • DLR to Woolwich; • Re-opening of the East London Line and its inclusion in the London Overground network; • Emirates Air Line; and • Crossrail (due to open in 2018). <p>The Mayor’s next priorities for river crossings in east London were set out in the Update Report October 2016 [AS-021]. This multi-modal approach includes the Silvertown Tunnel scheme as well as a dedicated pedestrian and cycle bridge between Rotherhithe and Canary Wharf and a DLR at Gallions Reach.</p>
<p>Under Policy and Objectives heading</p>	<p>WR.EGR.1 3</p>	<p>The Project may benefit HGV movements (especially from the London Gateway Port to Europe), taxi trips to City Airport (which should be better accommodated by public transport) and through traffic to the motorway network. No serious argument has been made as to how it will benefit local business in East Greenwich</p>	<p>Section 7.1 of the Regeneration and Development Impact Report [APP-102] summarises how the Scheme will support businesses in East London. The Scheme will benefit local businesses in East Greenwich by reducing staff and vehicle costs lost to congestion, by increasing the number of potential customers suppliers and workers within an acceptable travel time, and by improving the reliability of the highway</p>

			network, allowing businesses to plan their journeys more effectively.
Under Policy and Objectives heading	WR.EGR.1 4	Would it not be better to either widen another river crossing or add an additional crossing that does not rely on the same arterial routes as the current Blackwall Tunnels to try and spread the traffic more evenly across the capital?	<p>The Applicant has set out a comprehensive option assessment process in the Case for the Scheme [APP-093], which explains that the benefits for resilience (a key Project Objective) are likely to be best met by implementing a new connection close to the Blackwall Tunnel. A location further away would not greatly improve upon the present situation in which large volumes of traffic are required at short notice to find alternative crossing points, travelling often long distances along unsuitable routes to do so. With the Scheme in place, the impact of closure incidents would be greatly reduced.</p> <p>See answer to WR.EGR.10</p>
Under Redevelopment heading	WR.EGR.1 5	It is significant that any positive improvement in the area, be it land or business development, or improved visual impacts, have followed better public transport links. The second Blackwall road	The Applicant recognises the link between public transport provision and economic growth and development. Summary Table 3 of the Economic Assessment Report [APP-101] shows that public transport user benefits

		<p>tunnel was followed by another 20-30 years of decline. We appreciate that this may not be causal but has any historical study been made of the economy of East Greenwich</p>	<p>enabled by the Scheme will be £590m. The enhanced public transport network is expected to support the regeneration objectives of east London.</p> <p>Chapter 7 of the Regeneration and Development Impact Assessment [APP-102] contains an analysis of historic employment and population trends in each east London Borough since 2001.</p> <p>It is considered unlikely that the second Blackwall road Tunnel contributed to the decline of East London, with the restructuring of the London and UK economy from manufacturing, utilities and port related industries to higher value services a much more significant factor. The Silvertown Tunnel is part of a set of proposals to respond to this economic restructuring and the significant opportunities for growth in East London it has generated.</p>
<p>Under Redevelopment heading</p>	<p>WR.EGR.1 6</p>	<p>Poor environments deter economic and business improvement. Where is the evidence of the likely trade-off between improved environment and saving 20</p>	<p>The Scheme is expected to reduce journey times without having significant impacts on the environment.</p>

		<p>minutes of journey time?</p>	<p>Page 12 of the Environmental Statement Non-Technical Summary identifies that, according to the evaluation criteria set out in the relevant guidance produced by Highways England, the Scheme does not have a significant impact on local air quality.</p> <p>Page 21 of the Environmental Statement Non-Technical Summary identifies that, for noise and vibration, adverse traffic noise impacts of the Scheme would be limited to slight adverse and would not be significant. In the long term, changes in road traffic noise would result in six dwellings at the Hoola Development experiencing a noise increase which has been assessed as having a moderate adverse effect. A further assessment of the impact at these dwellings has been carried out considering the noise insulation included in the approved design of the Hoola development. The assessment concludes that the dwellings' noise insulation would ensure that internal noise levels with the Scheme in operation would not exceed internal noise levels specified within BS8223. This is further set out within the Applicants response to NV27 within Appendix E 'Noise</p>
--	--	---------------------------------	--

			Impact Upon Hoola Development'														
Under Redevelopment heading	WR.EGR.17	Construction will inevitably lead to increased Heavy Duty Vehicles (HDV) during the period of construction, the estimated figure is 61 movements per day in the peak constructions year, as it is below 200 no assessment was required. Whilst this may be below required levels, it will undoubtedly increase traffic, pollution & reduce air quality in an area which already exceeds legal limits and therefore should be taken into consideration. If this traffic is using the already congested routes it will certainly worsen congestion in the short term and add to air quality issues.	<p>In terms of HGV movements in RB Greenwich, the table below provides a summary of Table 6-10 and 6-12 of the Transport Assessment which demonstrates the proportion of HGV's during the peak phase of the construction period would be negligible compared to existing flows along these links.</p> <table border="1"> <thead> <tr> <th rowspan="2">Link</th> <th colspan="2">No of HGVs</th> <th colspan="2">Proportion of all traffic (%)</th> </tr> <tr> <th>AM peak</th> <th>PM peak</th> <th>AM peak</th> <th>PM peak</th> </tr> </thead> <tbody> <tr> <td>Millennium Way</td> <td>9</td> <td>9</td> <td>0.78</td> <td>0.70</td> </tr> </tbody> </table>	Link	No of HGVs		Proportion of all traffic (%)		AM peak	PM peak	AM peak	PM peak	Millennium Way	9	9	0.78	0.70
Link	No of HGVs		Proportion of all traffic (%)														
	AM peak	PM peak	AM peak	PM peak													
Millennium Way	9	9	0.78	0.70													

			A102	9	9	0.17	0.14
			A2 (south of Sun in Sands)	7	7	0.11	0.10
<p>The assessment of the construction impacts is consistent with the assessment of the operational impacts in relation to the change criteria attributed to whether an assessment of the impacts is required. In addition, the construction impacts will be short term, TfL has also committed to using river vessels to transport construction materials thereby reducing HGV impacts. Therefore every effort has been made to reduce the impact of the Scheme on air quality during the construction phase.</p>							
			<p>The contractor is required to produce a CTMP prior to the start of construction for approval of the relevant local authorities, this would set out detailed measures for managing</p>				

			construction traffic and its impact on the network including routes to and from the worksite.
Under Redevelopment heading	WR.EGR.1 8	Methods of transportation of construction materials & waste such as by river have been considered, can these be further utilised to reduce HDV movements?	See Report 'Comments on Borough LIRs and WRs' (sub theme "Commitment to river transport")
Under Redevelopment heading	WR.EGR.1 9	In addition there will also be Non-road mobile machinery (NRMM) emissions it is acknowledged that these are inevitable but states that these will not significant, where is the data to back this up?	This is addressed by ensuring that all NRMM meets the standards set by the GLA, as set out in paragraph 5.2.1, on page 43 of the Code of Construction Practice [REP1-119]. Further details of the assessment are provided in Appendix 6.A Construction Dust to the ES [APP-049] on pages 1, 28, 31, 32 and 47.
Under Redevelopment heading	WR.EGR.2 0	Can HDV movements be limited to off rush hour times of day such as mid morning to early afternoon to minimise traffic impact and that to local residents of early morning / late night movements?	The Applicant considers that while many freight movements are likely to be time-critical and therefore less able to be made at different times, the differential charges proposed in the Assessed Case between peak and off peak periods provide an

			incentive for those that could potentially shift to consider doing so.
Under Transportation heading	WR.EGR.2 1	Studies have shown that building new roads is likely to increase the overall amount of traffic in the area, this is particularly true in places where demand for those roads is very high and the existing road are operating close to capacity, as is already the case on the A2, A102, Tunnel Avenue, Trafalgar Road and their surroundings, all of which border or run through the EGRA area. Our members already experience large delays whether driving or using buses when the existing tunnel is closed or accidents occur, this would only increase with the increased traffic we believe would be attracted to the area as a result of Silvertown tunnel	As set out in the Transport Assessment, the scheme is not expected to generate any additional traffic at the tunnel nor on the surrounding road network - this is because the user charge will act as a demand management tool which can be adjusted if necessary to control traffic levels. With regard to closures and incidents, as set out in the Transport Assessment, the introduction of the Silvertown Tunnel scheme will improve the resilience and reliability of the surrounding road network as it will provide an alternative crossing whenever an incident occurs at the Blackwall Tunnel, consequently reducing the occasions when large delays occur.
Under Transportation heading	WR.EGR.2 2	It is admitted that, even when tolled, the Project is likely to increase traffic by 35-50%. This estimate remains opaque. In the first year of operation of the second Blackwall Tunnel the increase in traffic was	As set out in the Transport Assessment [APP-086] the Scheme is not expected to result in an increase in traffic, which is primarily due to the user charge that will be introduced at the

		<p>over 100% (Research Memo 185, GLC, 1969). Admittedly that new tunnel was not tolled. Estimating induced traffic is however subject to wide margins of error. Have sensitivity tests of possible margins of error been sufficiently assessed?</p>	<p>Silvertown and Blackwall tunnels.</p> <p>The increases in flow forecast during individual modelled hours reflect the release of currently queued traffic rather than the generation of new traffic, and are expected to be offset at other times by reductions in traffic.</p> <p>See Report 'Comments on Borough LIRs and WRs' (sub-theme "Induced demand" for more information).</p>
<p>Under Transportation heading</p>	<p>WR.EGR.23</p>	<p>As highlighted by the No to Silvertown tunnel campaign, a 1996 study into the phenomenon of induced traffic was carried out by an independent group of experts at the request of the Department for Transport. It found that where induced traffic was not included in the original estimates for new roads, then a year after opening, on average they showed 10% more traffic than the estimates suggested. Meanwhile the old roads that should have benefited</p>	<p>See WR.EGR.22 above</p>

		<p>from less congestion showed a bigger rise: 16% more traffic than estimated used the old road over the same time period. This overall increase in traffic means local residents will bear the burden of increased traffic – increased pollution, increased risk of traffic accidents, increased noise. Contrary to the position put forward by TFL we think it very likely that instead of easing congestion, there will be an increased volume of traffic heading through our area and that both drivers and local residents will suffer as a result.</p>	
<p>Under Transportation heading</p>	<p>WR.EGR.2 4</p>	<p>The congestion is likely to shift south of the tunnels onto the A102. This is a road that already suffers from high congestion levels and would be hugely expensive to widen. Has sufficient modelling of congestion at pinch-points been undertaken?</p>	<p>The Applicant’s assessment of the impacts of the Scheme included the effects of releasing traffic which is currently held on the approaches to the Blackwall Tunnel on ‘downstream’ junctions (see Chapter 7 of the Transport Assessment [APP-086]). This assessment indicated that most of these locations were not likely to experience significant impacts, while at a very few locations some mitigation may be required and preliminary work has identified a range of</p>

			<p>solutions, most of which were relatively minor in nature. The Applicant will carry out a refreshed assessment of Scheme impacts with up to date data ahead of opening the Scheme and determine the need for and approach to mitigations (in consultation with STIG). The Monitoring Strategy and Traffic Impacts Mitigation Strategy provide further assurance that the Applicant will continue to take account of this issue and bring forward appropriate mitigation if required.</p>
Under Transportation heading	WR.EGR.2 5	<p>Whilst user charging is being proposed to ease congestion as there are no toll free crossing east of Rotherhithe we do not believe that this will not deter travel as there is no toll free choice available and the only one available will mean further traffic trying to get to Rotherhithe which will likely mean they travel on roads between the A2 and there which are already congested and have air quality issues</p>	<p>See Report 'Comments on Borough LIRs and WRs' (sub theme "Traffic displacement and adjacent crossings")</p>
Under Transportation	WR.EGR.2 6	<p>Can modelling be provided showing scenarios where traffic through the tunnels</p>	<p>The Applicant considers that the scenarios set out in the Traffic Forecasting Report</p>

<p>heading</p>		<p>is increased by 10 or 20% on the current estimates? Given the timelines involved here, these would hardly be unheard of changes and we would like to understand the impact of these and on which roads to properly assess the impact. We should be able to assess realistic, better & worse case scenarios</p>	<p>[APP-105] including low and high growth scenarios collectively demonstrate that the Scheme would achieve its objectives across the range of plausibly foreseeable scenarios.</p>
<p>Under Transportation heading</p>	<p>WR.EGR.2 7</p>	<p>How small a change to the forecast traffic models brings significant detrimental outcomes? Have other possible infrastructure projects been taken into account and what the effect would be if for some reason other river crossings were not fully operational?</p>	<p>The modelling for the Assessed Case takes into account all committed and funded schemes in accordance with WebTAG guidance. These include a number of borough-led highway initiatives that are due to be implemented by 2021. Furthermore, additional sensitivity testing has been undertaken to consider the effects of additional river crossings further east of the Silvertown Tunnel scheme. In the event that other river crossings (e.g. the Rotherhithe Tunnel) were not fully operational, the Silvertown Tunnel will provide additional resilience to the local road network and so will enable better management of any additional traffic that would divert to the Blackwall/Tunnel corridor in the event of an</p>

			<p>incident at another crossing.</p> <p>The Applicant considers that the scenarios set out in the Traffic Forecasting Report [APP-105] including low and high growth scenarios collectively demonstrate that the Scheme would achieve its objectives across the range of plausibly foreseeable scenarios.</p>
Under User Charging heading	WR.EGR.2 8	There are few studies of the effect of urban road user charging on traffic levels. On what evidence are the forecasts of tolled traffic use based?	See Report 'Comments on Borough LIRs and WRs' (sub theme "VOT/Charging elasticity")
Under User Charging heading	WR.EGR.2 9	Removing the only toll free crossing east of Rotherhithe does not seem fair on East Greenwich residents nor on East Londoners as a whole. There are at least 10 river crossings in the west of London all of which are free, this feels that it is unfairly weighting the charges to those in East London	See Report 'Comments on Borough LIRs and WRs' (sub theme "Resident discount-unfairness")
Under User Charging	WR.EGR.3	Tolls are cheaper per individual journey than the Dartford tunnel (Cars £1 vs £2.50, Large	While comparisons between the charges and fares applying at different crossings and

<p>heading</p>	<p>0</p>	<p>Van (£1.65 vs £3, HGVs £4.00 vs £6.00), this is effectively enticing people to use these crossings rather than Dartford and particularly for the heavier polluting larger vehicles which are currently not able to travel through the Blackwall tunnel will bring them from a much less densely populated area into a much more densely populated area bringing with them increased pollution and other road risks such as accidents.</p>	<p>modes of transport are of interest, they do not take into account the other costs associated with alternative options. The convenience of alternative highway crossings for a given journey is an obvious factor. The charges quoted here for the Blackwall and Silvertown Tunnels are the off-peak charges. The Dartford Crossing does not have different charges for peak and off-peak periods. If the peak user charges for the Scheme are considered, there is a closer match to the Dartford Crossing. For example the peak charge for a car is £3 at the Scheme compared to £2.50 at the Dartford Crossing. The various costs associated with alternative travel options are accounted for in the Applicant's modelling of the Scheme's impacts, which demonstrates that there would not be any significant diversion of traffic from Dartford towards the Blackwall and Silvertown tunnels at any time of day.</p>
<p>Under User Charging heading</p>	<p>WR.EGR.3 1</p>	<p>Creating a toll on the existing Blackwall Tunnel crossing will undoubtedly have an impact on local businesses, both in terms of those travelling to their places of work,</p>	<p>The Scheme will result in significant benefits for businesses. Although under the Assessed Case charging schedule businesses would be required to pay a charge to use the Blackwall</p>

		<p>receiving deliveries & customers travelling across the river as well on local residents going about their day to day activities. Whilst encouraging people to think twice about whether a car journey is required and encouraging people to use public transport, some journeys are necessary and this will add an extra financial burden on East Londoners who need to cross the river for business or pleasure as there will no longer be a free river crossing east of Rotherhithe.</p>	<p>and Silvertown crossings, the time savings they get back in return are much larger. As set out in Summary Table 3 of the Economic Assessment Report [APP-101], the Scheme will result in total net benefits of £503m for businesses once user charging costs have been taking into account, including reliability benefits.</p>
<p>Under User Charging heading</p>	<p>WR.EGR.3 2</p>	<p>The incentives for lower emission vehicles are welcomed, but the exemptions for Buses, coaches & minibuses should take into account whether they are low emissions or not rather than a blanket exemption</p>	<p>TfL buses (which will form the majority of this type of traffic) will all be Euro VI or equivalent (as stated in paragraph 4.2 of the Update Report [AS-021] and secured by a requirement in Schedule 2 of the dDCO – this was included in the revised version submitted at Deadline 1.</p> <p>The Assessed Case user charges do not assume a low emission criterion for this discount because of the social benefits of the 100% discount for these types of vehicles, as set out in the Charging Statement paragraph</p>

			4.11.4 -4.11.6.
Under User Charging heading	WR.EGR.3 3	What was the rationale / methodology used to arrive at the charges and how were the relative benefits to drivers of using the Dartford tunnel vs the Blackwall tunnel vs Silvertown Tunnel assessed to predict their behaviour in the traffic and hence air quality modelling?	The rationale for the user charges in the Assessed Case is set out in Appendix A of FWQ Socio-Economic Report [REP1-176], 'Selecting the Charges for the Assessed Case'. The various costs associated with alternative travel options are accounted for in the Applicant's modelling of the Scheme's impacts, including the options of travelling via the Dartford crossing, the Blackwall Tunnel or the Silvertown Tunnel. The Transport Assessment [APP-086] shows in Chapter 7 how the choice between the Blackwall Tunnel and Silvertown Tunnel is driven largely by the location of the trip's northern end – with locations in the Royal Docks and Isle of Dogs being more easily accessed via the Silvertown Tunnel, and other locations being more easily accessed via the Blackwall Tunnel because of its more direct connections to the strategic road network,

13 GREENWICH SOCIETY

13.1 Comments on Written Representation

Table 12 - Key issues identified from Written Representation by Greenwich Society with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Air Pollution, p. 2	WR.GS.1	As a result of traffic congestion, predominantly along the A102, this area is among the worst affected by air pollution in south-east London. In their 2015 consultation TfL argued that the Silvertown Tunnel scheme was the only way to prevent harmful traffic emissions around the Blackwall Tunnel getting worse. It is therefore surprising and disappointing that their latest forecasts show only small or ‘imperceptible’ changes in NO2 emissions along the A102 in our area. Apparently this is because the improvement in the morning peak is offset by increased traffic congestion southbound from the tunnels in the	<p>The air quality assessment within Chapter 6 of the ES [AS-022] has concluded that the Scheme’s impact on air quality will be ‘not significant’ in accordance with IAN174/13, and it therefore meets the relevant test as set out in the NN NPS.</p> <p>The Transport Assessment [APP-086] notes in section 7.8.2 that, aside from the benefits to the A102, the implementation of the Scheme with user charges is expected to have a relatively low impact on junction delays in the 2021 modelled year. Appendix C of the Transport Assessment [APP-087]</p>

		<p>afternoon peak. This needs to be reviewed urgently to see how junctions along the A102 southbound can be improved, before Silvertown is opened, to achieve a much-needed net improvement in air pollution in our area. The Society considers that the imperative of improving air quality means that these measures should be conditions attached to the DCO.</p>	<p>reviews a number of junctions identified through the strategic model and/or public consultation. Local modelling has been used to examine a number of junctions most impacted by the Scheme in more detail. The conclusion, which is consistent with the outputs from the strategic modelling, is that most impacts are either very low, and/or can be resolved by future signal timing changes, or are at locations where other schemes are currently under consideration.</p> <p>Consequently TfL is not proposing specific junction mitigation works in the DCO application, and instead proposes to assess the traffic impacts on the wider network closer to the opening date of the Scheme to determine whether any consequential mitigation measures are required at that stage; and if so, will undertake those works.</p> <p>This approach also means that the impacts described in the Transport Assessment [APP-086] represent a conservative assessment, in that they do not take into account the impacts of the potential mitigation in addressing</p>
--	--	--	---

			<p>adverse effects of the Scheme. Inclusion of mitigation within the strategic modelling will be undertaken as part of the refreshed assessment of the Scheme undertaken closer to time of opening, when details of the mitigation measures have been confirmed. This would be expected to have a positive impact on the overall effects of the Scheme on the road network.</p> <p>Following the opening of the Tunnel, TfL would then monitor the wider network to accurately identify the scale and location of any adverse impacts attributable to the Scheme in operation and would implement any mitigation necessary in connection with those impacts. This approach to the mitigation of Scheme effects is set out in the Monitoring Strategy [REP1-121] and the Traffic Impacts Mitigation Strategy (TIMS) [APP-099]. The Monitoring Strategy provides a list of specific junctions Table A1 that would be monitored, these include junctions along the A102. Should unforeseen impacts arise following the opening of the Scheme at these junctions, appropriate mitigation, as outlined within the Traffic Impacts Mitigation Strategy</p>
--	--	--	--

			<p>[APP-099] would be discussed with STIG and implemented where necessary.</p>
<p>Consultation, p. 2</p>	<p>WR.GS.2</p>	<p>The impact of the Silvertown Tunnel scheme on local roads is necessarily uncertain. TfL have assured us that their forecasts show ‘no negative effects’ along Trafalgar Road, which is also already congested at peak times (and the same applies to the Town Centre and Creek Road). But the diversionary effect of tolls on cross-river traffic which now travels free – and in particular diversion to and from the Rotherhithe Tunnel which stays free – cannot be predicted in advance with any confidence. So we welcome TfL’s proposals for detailed annual monitoring, and the commitment to liaise with ‘the host boroughs’. But borough councils do not always consult</p>	<p>1. The Community Liaison Group is specifically to deal with construction impacts and it is not appropriate for it to deal with wider, long-term impacts. These will be dealt with by STIG, as described in the Monitoring Strategy [APP-098]. The Applicant would expect the local boroughs, which are part of STIG, to seek views from local interested parties and communicate those views as part of the STIG processes. The Applicant considers that it would not be appropriate for it to prescribe to the local boroughs how they seek these views.</p> <p>2. No Community Fund is proposed - see the Applicant’s response to FWQ SE1 [REP1-176].</p>

		<p>adequately with local amenity societies. A wider Community Liaison Group is proposed 'for the duration of the works' to deal with construction issues; this should be extended through the monitoring period so that TfL can communicate directly with local amenity societies on data collection and possible mitigations. We also note that the details of the proposed Community Fund will be decided 'through discussions with the relevant local authorities'; we hope the Community Liaison Group will be kept in touch with this.</p>	
<p>Tools, p.2</p>	<p>WR.GS.3</p>	<p>This is the first occasion (so far as we know) when a toll is proposed on an existing free main road. It will also be the only inner London river crossing where tolls are charged. We understand TfL's reasons for proposing a toll (to pay for the tunnel and control traffic levels). But locals who regularly drive through the tunnel, and whenever possible outside peak</p>	<p>See FWQ SE2 [REP1-176] for rationale for not providing Resident Discount in the Assessed Case. The same issues apply to local businesses and compliance with State Aid regulations would need to be confirmed.</p>

		<p>hours (hence without imposing any 'cost' on other users) will be differentially penalised by comparison with other users. In our view there should be a discount for local resident account-holders, allowing them free off-peak travel (which could be easily arranged given automatic charging).</p>	
--	--	---	--

14 RALPH HARDWICK

14.1 Comments on Written Representation

Table 13 - Key issues identified from Written Representation by Ralph Hardwick with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Page 1	WR.RH.1	The Environment Agency has an application for an unknown capacity of power generation by gas at Greenwich Power Station. This is an incremental amount of emissions to what there is currently.	<p>The air quality assessment is undertaken in accordance with the relevant technical guidance, including Local Air Quality Management Technical Guidance 2016 (LAQM.TG(16)). The prediction of impacts in the future are reliant on a set of published tools issued by the Department for Environment, Food and Rural Affairs (Defra). These tools include the vehicle emission factors for each year up to 2030 and background pollutant maps for each year to 2030.</p> <p>The background pollutant maps are 1km</p>

			<p>square maps that cover the whole of the UK. These maps are available for the key traffic related pollutants assessed within the air quality assessment (particulates and nitrogen dioxide). The background maps provide information on how pollutant concentrations change over time. The maps allow for the assessment of new pollutant sources that are introduced into an area.</p> <p>The background maps include contributions not only from each individual 1km grid square but also consider the impact of more distance sources of emissions that are transported into an area by the meteorological conditions.</p> <p>The background maps are updated by Defra periodically to ensure that the underlying data, including emission factors and new emission sources are included in the projections that are published and utilised in assessments. As the maps provide emissions projections in the future they need to factor in not just current emissions but future emissions projections. For example in relation to projections of energy usage the</p>
--	--	--	---

			<p>Department of Energy and Climate Change (DECC) projections are used in the modelling process to estimate future energy usage and emissions to calculate the pollutant concentrations for that component of the backgrounds.</p>
<p>Page 2</p>	<p>WR.RH.2</p>	<p>We also have the Enderby Wharf Cruise Terminal where cruise liners will moor for almost 6 months of the year in the summer months without connecting to a shore power supply. Cruise ships can produce large amounts of NO₂ and PM from their auxiliary engines. The GLA confirm that it is the equivalent of 688HGVs as a single point source of emissions. The figures used were flawed and it is possible that the emissions could be the equivalent of 2000HGVs.</p> <p>http://www.ship-technology.com/features/featurelondons-first-cruise-terminal-tourism-goldmine-or-dangerous-polluter-4651548/featurelondons-first-cruise-terminal-tourism-goldmine-or-dangerous-polluter-4651548-1.html</p>	<p>In relation to the Enderby Wharf Cruise Terminal and consequent new emission sources in Greenwich, the emissions of those types of sources are considered in the background maps. Shipping emission and industrial sources (which include energy production) are part of the background component that is used in the air quality assessment to determine the total concentrations of pollutants in both the Reference Case and Assessed Case in the assumed opening year 2021.</p>

<p>Page 2</p>	<p>WR.RH.3</p>	<p>I would hope that the Planning Inspectorate can consider the cumulative effect on emissions of all these sources along with the effect of the Silvertown Tunnel.</p>	<p>As above, the sources identified in this response are included in the in the background maps used in the Air Quality Assessment.</p>
---------------	----------------	---	---

15 NO TO SILVERTOWN TUNNEL

15.1 Comments on Written Representation

Table 14 - Key issues identified from Written Representation by No to Silvertown Tunnel with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Page 1	WR.NS.1	While we note that TfL has modelled different scenarios within its base models, it is unclear with what degree of confidence original or extrapolated estimates are made. This leads to an imperfect understanding of the risks involved.	<p>The high and low growth scenarios that were tested represent the two likely “end points” of a continuous range of reasonably foreseeable outcomes where the probability of growth falling within that range is close to 1 (i.e. highly probable). Furthermore, the Assessed Case represents the most likely outcome which means that a scenario closer to the Assessed case has a higher probability of occurring than one that is closer to the high or low “end points”.</p> <p>As reported in the Transport Assessment [APP-086], the testing of the high and low</p>

			<p>growth scenario “end points” has demonstrated that the Scheme, with the aid of the ability to adjust the user charge, will still meet the project objectives without unacceptable adverse traffic or environmental impacts at the tunnel itself or on the surrounding road network. Based on this, the Applicant is confident that it has demonstrated that the scheme will meet its project objectives across the full range of reasonably foreseeable outcomes.</p>
Page 1	WR.NS.2	<p>With regard to monitoring and mitigation, the annual cycle, as planned, is slow and unresponsive.</p>	<p>The process of monitoring and considering impacts is not constrained to the formal timescales set out in the Monitoring Strategy. For example, during the first year of operation, the Monitoring Strategy [APP-098] notes that STIG will meet on a six-monthly basis, and where STIG meetings are held outside of the cycle of the annual monitoring process, TfL will provide STIG with a data summary four weeks in advance of the meeting to consider relevant issues at hand. However, as noted in the Monitoring Strategy [REP1-101], in order for a trend or Scheme impact to be determined, data</p>

			<p>patterns will need to be observed over an appropriate length of time to ensure that decisions on mitigations are not based on temporary effects e.g. as a result of local road works.</p>
Page 1	WR.NS.3	<p>The planned noise monitoring is insufficient, given that the Scheme will attract full-sized HGVs (which cannot use the existing 1897 Blackwall Tunnel) travelling northbound and traffic will, according to TfL, move faster. This will result in more noise, including in areas well outside TfL’s monitoring area of 200 metres beyond the order limits.</p> <p>As air quality monitoring inputs are derived from TfL’s traffic modelling outputs, the results are subject to the same risks. The plan for monitoring air quality is inadequate.</p>	<p>The air quality and noise monitoring strategy has been informed by the likely noise and air quality impacts as reported in Chapter 14 - Noise of the ES [APP-031] for the Scheme and Chapter 6 Air Quality [AS-022].</p> <p>The monitoring of noise will be limited to the area around the tunnel portals as broadly detailed in Figure 5-1 and within Appendix A of the Monitoring Strategy [REP1-121]. Noise monitoring is not proposed, or considered necessary, outside of this immediate area having regard to the noise modelling undertaken and included in the ES [APP-031].</p> <p>The noise impacts of the Scheme are a function of the volume of traffic flows, which may change over time. Traffic flow thus</p>

			<p>provides a means by which any localised traffic noise issues which might arise from the Scheme in operation may be identified. As for air quality, TfL will make use of a combination of data from noise monitors and traffic monitoring data to ascertain the air quality impacts of the Scheme in operation.</p>
Page 1	WR.NS.4	<p>As air quality monitoring inputs are derived from TfL's traffic modelling outputs, the results are subject to the same risks. The plan for monitoring air quality is inadequate.</p>	<p>The Applicant has reported on the assessed case in 'Comments on Borough LIRs and WRs' (Section 3).</p> <p>The proposed monitoring plan set out in chapter 4 and Appendix A of the Monitoring Strategy [REP1- 121] is based on the results of the air quality assessment [AS-022] and provides for a network of diffusion tubes and automatic monitors to be located across the study area. It provides a robust mechanism for identifying the air quality impacts occurring as a result of the Scheme and has been developed in liaison with the host local authorities. . The monitoring locations set out in Appendix A of the Monitoring Strategy may be supplemented as stated in paragraph</p>

			<p>4.3.2 of the Monitoring Strategy [REP-121]:</p> <p><i>‘Proposals for changes in the monitoring locations may be made by any member of the STIG if thought appropriate to allow for future impacts to be fully captured during monitoring. STIG is responsible for considering and making a collective recommendation to TfL.’</i></p>
<p>Page 1</p>	<p>WR.NS.5</p>	<p>We are concerned that this scheme will not address congestion in areas that are already vulnerable to queueing traffic, both north and south of the Thames.</p>	<p>As reported in the Transport Assessment, the testing of the high and low growth scenario “end points” has demonstrated that the Scheme, with the aid of the ability to adjust the user charge, will still meet the project objectives without unacceptable traffic or environmental impacts at the tunnel itself or on the surrounding road network. Based on this, we are confident that we have demonstrated that the scheme will meet its project objectives across the full range of reasonably foreseeable outcomes.</p>

<p>Page 2</p>	<p>WR.NS.6</p>	<p>We argue that TfL’s plans for bus services should be reviewed and a commitment to improve them should be included in the Development Consent Order. We question the efficacy of the dedicated cycle carrier proposed by Mayor Khan.</p>	<p>As set out in the Applicant’s answer to FWQ PN6 [REP1-178], it is not considered appropriate to specify exact bus services some seven years before the Scheme is implemented. Appendix A of FWQ Principles Report [REP1-178] is TfL’s Bus Strategy, setting out the principles of how the services would be determined. Nor is this the type of commitment to be given in a DCO which is intended to last for the lifetime of the Scheme - it would limit the Applicant’s ability to provide responsive and useful bus services over time.</p> <p>With regard to the potential for a cycle shuttle service, as stated in FWQ PN6.5-8 of the Applicant’s FWQ Principles Report [REP1-178], the Applicant is now undertaking further investigation and will provide more information to the examination in due course.</p>
<p>Page 2</p>	<p>WR.NS.7</p>	<p>As the economic case takes output from the transport models as a key input, it suffers from the same flaws and risks. If these underlying transport models do not accurately forecast traffic volumes and</p>	<p>Refer to Report ‘Comments on Borough LIRs and WRs’ (sub theme “General disagreement with Assessed Case forecast”)</p>

		flows, there can be no hope that the economic assessment will be correct.	
Page 2	WR.NS.8	We note that although TfL stresses the importance of price flexibility, STIG is at present only expected to meet annually after they first year of operation, and for five years at most after the Scheme’s implementation. It seems unlikely that this group, as presently planned, will be able to influence any truly flexible pricing strategy.	See WR.NS.2
Section 2.1.4	WR.NS.9	However, it is foreseeable that user organisations and political representatives will apply pressure to keep charges low so that costs are not passed on to constituents. Political pressure has affected road pricing in London in the past: the western extension of the central London congestion charge was cancelled in 2010 after a commitment to review its operation was made in Boris Johnson’s 2008 election. Already, we are seeing Newham Council applying pressure for local concessions on user charging ¹⁵ , along with the London Assembly member	See Report ‘Comments on Borough LIRs and WRs’ (sub theme “Risk of political pressure affecting charge-setting”) Article 52 of the dDCO requires the user charging power to be exercised in accordance with the Charging Policies and Procedures [REP1-123]. That document contains clear policies which regulate how the power is exercised. In particular, it requires the charges to be used as a means of achieving clearly defined project objectives.

		<p>for Havering and Redbridge, Keith Prince¹⁶. It is unlikely that the Applicant will be able to act as freely as it wishes if it is found that the equilibrium price to manage demand is higher than public and political expectation.</p>	<p>The dDCO and the Charging Policies and Procedures also contain provisions which ensure that the exercise of the user charging power is subject to appropriate consultation with STIG - which is made up of the relevant local authorities and other relevant organisations. STIG is able to make recommendations in relation to the level of the charges and the TfL Board must take these recommendations into account when making decisions on the charges - see Charging Policies and Procedures [REP1-123] paragraph 4.1.4 and paragraph 4.2.3. It should be noted that it is the TfL Board, rather than the Mayor who takes decision in relation to setting and varying the charges.</p>
<p>Section 2.1.6</p>	<p>WR.NS.10</p>	<p>If TfL cannot set prices high enough to manage demand, the only mitigation strategy it has to deal with induced traffic (and associated air and noise pollution) will fail.</p>	<p>User charging is the principal mitigation for the effects of the Scheme. It is a powerful and flexible tool and there are many ways in which it could be varied to manage demand effectively. Local mitigations are also available as described in the TIMS [APP-099].</p>

<p>Section 2.1.7</p>	<p>WR.NS.11</p>	<p>The Applicant also argues that “user charging is a means of ensuring that those using the tunnel address the full external costs of their travel”¹⁷. Yet no other reference within TfL’s documentation refers to using proceeds of the user charge to address external costs. The Applicant should provide more detail on this possible use of funds.</p>	<p>External costs is a term widely-used in economics and the external costs of travel are often used to inform transport policy-making. External costs of travel are the costs - including congestion, environmental impacts and wear and tear on the roads - which are not borne by the consumer. While these do not factor in the user's decision-making they nevertheless have a cost to society as a whole. User charging is a way of internalising these costs so that the potential consumer is made aware - via the price mechanism - of the wider costs of their travel. Information on and a source for external costs is provided in the Applicant’s response to FWQ SE.3 (paragraphs 3.6-3.10 and Table 5)[REP1-176]. These external costs have been used, alongside other inputs and modelling, to inform the setting of the Assessed Case user charges, as described in the response to FWQ SE.3. These external costs should be understood as a notional cost - meaning that certain types of vehicle have higher costs than others. For example HGVs have higher external costs than smaller vehicles. Since these are notional costs, it was not the</p>
----------------------	-----------------	---	--

			intention to imply that revenue from user charging would be used to meet them.
Section 2.1.8	WR.NS.12	The Charging Statement allows discounts for scheme account holders ¹⁸ . It is unclear whether the sensitivity testing outlined in the Traffic Forecasting Report accounts for this discounting. Will this discounting dilute the effect of demand management through user pricing?	The modelling of the Assessed Case assumes that accounts are taken up by users. As described in the Charging Statement [APP-097] paragraphs 6.2.1-3, there are a number of advantages for account-holders.
Section 2.03.2a	WR.NS.13	Not fair - Businesses and residents of east and south-east London will pay to cross the River Thames, unlike residents who live further to the west. This places an unfair burden on residents and businesses based in the area and may make investment in the area less likely.	There is a current fairness issue in that residents and businesses of East London are subject to significant delays and poor reliability when crossing the River in a way that those in West London are not. The Scheme will directly address this by effectively eliminating congestion and, as set out in Summary Table 3 of the Economic Assessment Report [APP-101], resulting in total net benefits of £1.3bn for residents and businesses once user charging costs have been taken into account and including reliability benefits. Table 5-6 of the Economic Assessment Report demonstrates that the

			<p>majority of these benefits would accrue to East London Boroughs.</p> <p>Reductions in travel costs and improvements in network reliability will result in a more favourable business environment, making investment from existing and new businesses more likely and supporting the creation of new jobs in East London.</p>
<p>Section 2.3.2b</p>	<p>WR.NS.14</p>	<p>Businesses and residents of south-east London are particularly affected by the proposed peak charging arrangements. Peak flows are specified as traffic driving northbound in the morning peak hours and southbound in the evening peak. This has the effect that those commuting northwards from a home south of the river are likely to pay twice the amount of those commuting southwards from a home in the north.</p>	<p>As set out in Section 4.2 of the Transport Assessment [APP-086], levels of congestion at the Blackwall Tunnel are highest travelling northbound in the morning peak and southbound in the evening peak. Whilst users of the Blackwall and Silvertown Tunnels travelling northbound in the morning peak, and southbound in the evening peak, will be charged a higher rate, they will also benefit more from reduced levels of congestion than those travelling at less congestion times.</p> <p>As set out in Table 3.1 of the Distribution of User Benefits note, residents of RB Greenwich, LB Bexley and LB Lewisham are</p>

			<p>expected to gain £31.2m through non-business highway benefits, net of user charges. Residents will also gain significantly from the step-change in cross-river bus services facilitated by the Scheme, which will provide additional benefits to residents of these Boroughs of £218.1m</p>
Section 2.3.2c	WR.NS.15	<p>The Case for the Scheme deals in particular with the issue of the “barrier effect of the Thames” for businesses and workers who live south of the river wishing to gain access to regeneration areas in the north. It seems unlikely that a solution based on effectively charging those in the south twice the amount of those in the north will meet the objective of removing this barrier effect.</p>	<p>The higher user charge for vehicles travelling northbound in the morning peak, and southbound in the evening peak, has the effect of maintaining highway traffic levels that are similar to that in the Reference Case at opening year. However, the step-change in bus services facilitated by the Scheme will enable an increase in the number of people that cross the River without increasing traffic.</p> <p>Table 7.2 of the Regeneration and Development Impact Assessment [APP-102] shows that the total number of cross-river trips in 2021 will increase by 2,000 as a result of the introduction of new cross-river bus services.</p>

			<p>The response provided to paragraph 2.3.2 of No to Silvertown’s Written Representation details the economic benefits that are realised from the Silvertown Tunnel, together with the introduction of user charging and the new bus services that the Scheme enables.</p>
<p>Page 8, Section 2.4.1-2</p>	<p>WR.NS.16</p>	<p>Under the Scheme, the Applicant is to be given responsibility for operating and setting the user charges. It suggests that the secondary reason that user charges are required is to pay for construction and maintenance. This responsibility for construction and maintenance is subcontracted to a project company, whose payment is affected by performance on availability and quality of maintenance measures.</p> <p>2.4.2 This means that TfL may be incentivised to vary the user charges to meet the payment requirements, with the resulting risk that demand is not managed according to impact on the road network or surrounding environment but according to TfL’s obligations to pay the project</p>	<p>Article 52 of the dDCO requires the user charging power to be exercised in accordance with the Charging Policies and Procedures [REP1-123]. That document contains clear policies which regulate how the power is exercised. In particular, it requires the charges to be used as a means of achieving clearly defined project objectives.</p> <p>The dDCO and the Charging Policies and Procedures also contain provisions which ensure that the exercise of the user charging power is subject to appropriate consultation with STIG - which is made up of the relevant local authorities and other relevant organisations. STIG is able to make recommendations in relation to the level of the charges and the TfL Board must take these recommendations into account when</p>

		<p>company.</p>	<p>making decisions on the charges - see Charging Policies and Procedures [REP1-123] paragraph 4.1.4 and paragraph 4.2.3.</p> <p>The Applicant's response to FWQ DC.76 [REP1-177] explains how the demand management function of the user charge takes priority.</p>
<p>Page 8, Section 2.5.2</p>	<p>WR.NS.17</p>	<p>In any comparison of 2015 public transport charges with the user charges for private cars specified in the Assessed Case²² use of the road crossings is cheaper. This is likely to incentivise use of the road crossings rather than public transport, and works against Project Objective 7, "to achieve value for money and, through road user charging, to manage congestion".²³</p> <p>2.5.2 This applies when both Oyster/contactless discounts and membership discounts for the user charge are taken into account. It also applies before any other reasons for driving (space to bring shopping, additional passengers, etc) are</p>	<p>The costs for car use provided here do not fully reflect the cost to the consumer of a car trip, because only the Scheme user charges are considered. The comparison does not include the other costs of buying and running a car, including fuel costs. There are also additional costs such as parking associated with private transport. Public transport users do not have these additional costs: the fare includes them. In 2016 the Hopper fare was introduced, meaning that two journeys can be made by bus on the same fare, so the comparison is not entirely correct. As stated paragraph 7.2.9 and Figure 7-2 in the Transport Assessment [APP-086], there is an increase in cross-river trips by public transport in the Assessed Case compared to</p>

		taken into account.	the Reference Case, and a small fall in the number of private transport trips, with no change to mode share overall. This indicates that cross-river public transport will become more attractive as a result of the Scheme.
Page 8, Section 2.5.3	WR.NS.18	At off-peak charging, cars need to only have one occupant for driving through the tunnel to be more cost-effective. At peak times, driving becomes cheaper as soon as there is more than one person in the car.	The costs for car use provided here do not fully reflect the cost to the consumer of a car trip, because only the Scheme user charges are considered. The comparison does not include the other costs of buying and running a car, including fuel costs. There are also additional costs such as parking associated with private transport. Public transport users do not have these additional costs: the fare includes them. In 2016 the Hopper fare was introduced, meaning that two journeys can be made by bus on the same fare, so the comparison is not entirely correct. As stated paragraph 7.2.9 and Figure 7-2 in the Transport Assessment [APP-086], there is an increase in cross-river trips by public transport in the Assessed Case compared to the Reference Case, and a small fall in the number of private transport trips, with no change to mode share overall. This indicates

			<p>that cross-river public transport will become more attractive as a result of the Scheme.</p>
<p>Page 8, Section 2.5.4-8</p>	<p>WR.NS.19</p>	<p>Any of the shortest possible Tube or Docklands Light Railway crossings starting on the south side of the Thames between Greenwich and Woolwich (Cutty Sark to Island Gardens, North Greenwich to Canary Wharf/Canning Town, Woolwich Arsenal to King George V) cost more at 2015 prices (£1.50) than driving a car through Silvertown or Blackwall Tunnels at off-peak (£1.00), even if the car has only one occupant.</p> <p>2.5.5 At peak times, it is cheaper for a driver and one passenger to use Blackwall/Silvertown (£3.00) than to use these DLR or Tube links (£1.70 for each passenger, so a total fare of £3.40 for two people).</p> <p>2.5.6 This comparison of costs above also holds for the reference journey – Lewisham to Stratford – given in documents from this application as well as earlier consultations. TfL suggests provision for pedestrians and cyclists to cross the river at the Greenwich</p>	<p>The costs for car use provided here do not fully reflect the cost to the consumer of a car trip, because only the Scheme user charges are considered. The comparison does not include the other costs of buying and running a car, including fuel costs. There are also additional costs such as parking associated with private transport. Public transport users do not have these additional costs: the fare includes them. In 2016 the Hopper fare was introduced, meaning that two journeys can be made by bus on the same fare, so the comparison is not entirely correct. As stated paragraph 7.2.9 and Figure 7-2 in the Transport Assessment [APP-086], there is an increase in cross-river trips by public transport in the Assessed Case compared to the Reference Case, and a small fall in the number of private transport trips, with no change to mode share overall. This indicates that cross-river public transport will become more attractive as a result of the Scheme.</p>

		<p>Peninsula has already been provided by the Emirates Air Line cable car. At 2015 prices, the cheapest discounted fare for a single journey on the cable car is £3.40 and so use of a car is incentivised over use of the cable car at any time of day.2.5.8 Travelling by bus (£1.50 per journey at 2015 prices) is more expensive than driving through Blackwall/Silvertown at off-peak and as expensive for two people sharing a car at peak hours.</p>	
<p>Page 9, Section 3.1.1-2</p>	<p>WR.NS.20</p>	<p>All forecasts given within the Applicant’s submission documents flow from the use of models, in accordance with DfT guidance. Whether modelling is used to estimate the traffic volumes and flows likely once the Scheme is completed or the economic impact of the Scheme, any further figures is based on these original estimates. For example, the forecasts of air quality impact take as their base the forecasts for traffic movement and volume. 3.1.2 While we note that TfL has modelled different scenarios within those base models, it is unclear with what degree of</p>	<p>The Applicant considers that the scenarios set out in the Traffic Forecasting Report [APP-105] including low and high growth scenarios collectively demonstrate that the Scheme would achieve its objectives across the range of plausibly foreseeable scenarios. The Applicant set out its considerations in relation to the High Court judgment of 2 November 2016 in its response to the Examining Authority’s Rule 17 request of 9 October 2016.</p>

		confidence original or extrapolated estimates are made	
Page 9, Section 3.1.3	WR.NS.21	<p>The Traffic Forecasting Report²⁴ describes current forecasts as “the best estimate of most likely impacts of the Scheme which forms a single point within a range of possible outcomes”. It is inevitable that estimating future outcomes in a complex environment will lead to uncertainty. But given the high risks and costs that would be associated with the Scheme if the estimated traffic volumes are wrong, we would expect the Applicant to be able to give an indication of how likely the outcome that they have presented is.</p>	<p>The high and low growth scenarios that were tested represent the two likely “end points” of a continuous range of reasonably foreseeable outcomes where the probability of growth falling within that range is close to 1 (i.e. highly probable). Furthermore, the Assessed Case represents the most likely outcome which means that a scenario closer to the Assessed case has a higher probability of occurring than one that is closer to the high or low “end points”.</p> <p>As reported in the Transport Assessment [APP-086], the testing of the high and low growth scenario “end points” has demonstrated that the Scheme, with the aid of the ability to adjust the user charge, will still meet the project objectives without unacceptable adverse traffic or environmental impacts at the tunnel itself or on the surrounding road network. Based on this, the Applicant is confident that it has demonstrated that the scheme will meet its</p>

			project objectives across the full range of reasonably foreseeable outcomes.
Page 9, Section 3.1.4	WR.NS.22	No evidence is provided for the reliability of the entire forecasting system as measured against actual traffic flows. TfL has presented evidence on the number and range of sensitivity tests, and carried out Monte Carlo simulations. But it has not addressed the risk that the underlying model may not adequately simulate real-life traffic flows and volumes. If the model is incorrectly specified, then results from it will be in error, no matter how many times they can be reproduced.	See Report 'Comments on Borough LIRs and WRs' (sub theme "General disagreement")
Page 9, Section 3.2.1	WR.NS.23	Evidence is given for modelling traffic forecasts at three different levels of pricing: higher than assessed case, assessed case, lower than assessed case. But as the viability of the project depends on being able to manage demand by means of a flexible user charge, more information is needed on the price elasticity of demand to cross the river by road vehicle before the likely	See Report 'Comments on Borough LIRs and WRs' (sub theme "VOT/Charging elasticity")

		<p>success of the Applicant's demand management strategy can be fairly assessed.</p>	
<p>Page 10, sections 4.1.1-6</p>	<p>WR.NS.24</p>	<p>4.1.1 We doubt that the Applicant's monitoring and mitigation strategy, as presented, can achieve TfL's stated aim of free-flowing traffic which remains at current volumes.</p> <p>4.1.2 For traffic congestion, noise, and air quality, there are two possible means of mitigating impacts. One is by TfL adjusting the charging amounts and structure; for instance, raising charges or changing the times of day to deal with new traffic patterns as they arise. The other is local mitigation, for instance road layout changes, carried out by local highway authorities.</p> <p>4.1.3 TfL intends to consult on mitigation measures through STIG, following monitoring of changes to traffic, noise and air quality.</p> <p>4.1.4 We have considerable reservations about this process.</p> <p>4.1.5 Firstly, and as we have mentioned above, the process is likely to be slow and</p>	<p>See WR.NS.8</p>

		<p>unresponsive, given that after the first year of operation STIG is intended to meet only annually. After that, TfL will be obliged to produce monitoring reports only once each year. There is nothing nimble about this process.</p> <p>4.1.6 Secondly, STIG appears to have a role only for the first three years of operation, extendable for a further two years. But if the scheme proves more popular with road users than TfL expects, the impacts will be felt for considerably longer.</p>	
<p>Page 10, Section 4.1.7</p>	<p>WR.NS.25</p>	<p>TfL argues that after five years it will be impossible to attribute changes to traffic patterns to the scheme. But the A102, whose principal function is to bring vehicles to and from the river crossing, is likely to be carrying more traffic both south- and northbound. If the A102 continues to be congested or to be subject to changing road use patterns after five years of monitoring and mitigation, local authorities affected by the Scheme will have a much harder time making a case for mitigation. Yet the</p>	<p>It is not the case that any increased traffic (on the A102 or anywhere else) must inevitably be an effect of the Scheme. Population and employment growth would be expected to lead to increased traffic, for example.</p> <p>For effects attributable to causes other than the Scheme, TfL has a network management duty under the Traffic Management Act 2004 which requires it to make sure road networks are managed effectively to minimise congestion and disruption to vehicles and pedestrians. It can (and does) implement</p>

		problem will still stem from the Scheme.	mitigations when required on the road network.
Page 10, Section 4.1.8	WR.NS.26	Thirdly, we note that other mitigation will be agreed through STIG, including all changes to local road patterns. However, for all this work, the responsibility for delivery will lie with local highway authorities. We cannot see any mention of how this work will be funded. Without TfL's agreement that it would fund all agreed works, we cannot see how any of them will be carried out.	See Report 'Comments on Borough LIRs and WRs' (sub theme "Funding for mitigations")
Page 10, section 4.1.10	WR.NS.28	The decision process represented by the diagram given at Figure 3.2 of the Monitoring Strategy is flawed. STIG should consider first whether any adverse impacts detected in the local area could be mitigated by mechanisms within the scheme, rather than only considering mitigating action if the problem is believed to have originated with the Scheme	See WR.NS.25

<p>Section 4.1.11</p>	<p>WR.NS.29</p>	<p>With regard to monitoring, some of our key concerns are the same as those for mitigation. The annual cycle as planned is slow and unresponsive; the monitoring period is inadequate; and we believe that there will be tensions within STIG to do with collecting and analysis of monitoring results. The Red-Amber-Green grading system for classifying impacts is unclear, with little to indicate the performance indicators. In addition, we have some specific concerns.</p>	<p>The updated Monitoring Strategy [REP1-121], paragraph 7.2.4 clarifies that data summaries would be produced four weeks in advance of STIG meetings (in addition to annual Monitoring Reports). With regard to frequency of meetings, this matter was addressed response to FWQ DC86 [REP1-177]. In paragraph DC86.2 it notes that the limitations on frequency apply only after the Monitoring Strategy and TIMS have been implemented. Paragraph CD86.4 notes the extent to which STIG can determine its own procedures, which within the other constraints of the dDCO, encompasses the meeting frequency of STIG and its sub committees.</p> <p>The process of monitoring and considering impacts is not constrained to the formal timescales set out in the Monitoring Strategy. For example, during the first year of operation, the Monitoring Strategy [APP-098] notes that STIG will meet on a six-monthly basis, and where STIG meetings are held outside of the cycle of the annual monitoring process, TfL will provide STIG with a data summary four weeks in advance of the</p>
-----------------------	-----------------	--	---

			<p>meeting to consider relevant issues at hand. However, as noted in the Monitoring Strategy [REP1-101], in order for a trend or Scheme impact to be determined, data patterns will need to be observed over an appropriate length of time to ensure that decisions on mitigations are not based on temporary effects e.g. as a result of local road works.</p> <p>It is planned that a R-A-G summary will be adopted to identify the 'trigger points' to be considered further by STIG. A detailed set of traffic-related triggers have now been developed and this can be found in the updated Traffic Impacts Mitigation Strategy submitted for Deadline 2.</p>
<p>Page 11, Section 4.2</p>	<p>WR.NS.30</p>	<p>Noise Monitoring The Monitoring Strategy document sets out the area which TfL proposes to monitor, encompassing an area around 200m from the order limits. We regard this as hugely inadequate.</p>	<p>The Study Area for the Noise and Vibration assessment has been defined in accordance with DMRB. The methodology for defining the study area is presented in Table 14-8 of the ES [APP-031] and presented below:</p> <p>Identify the start and end points of the</p>

		<p>4.2.2 The A102 and A1261 Aspen Way can expect a large increase in the number of full-sized HGVs, while the A12 southbound and A102 northbound at peak periods will - if TfL is correct in its traffic modelling - see vehicles moving much faster than at present. Faster and heavier vehicles mean more noise.</p> <p>4.2.3 Residents, schools, businesses and all sensitive receptors from Blackwall Lane Flyover to at least the A2/A2213 Kidbrooke Interchange will all experience more noise, as well as those along the expected routes for traffic from the northern portal.</p> <p>4.2.4 Specific points for monitoring along the A102 should include Tunnel Avenue by the Blackwall Lane Viaduct; Combedale Road and Tunnel Avenue near Woolwich Road Flyover; Westcombe Hill near the junction with Humber Road; and Siebert Road by the Bramshot Avenue underpass.</p>	<p>physical works associated with the road project.</p> <p>Identify the existing routes that are being bypassed or improved, and any proposed new routes, between the start and end points.</p> <p>Define a boundary one kilometre from the carriageway edge of the routes identified in (B) above.</p> <p>Define a boundary 600m from the carriageway edge around each of the routes identified in (B) above and also 600m from any other affected routes within the boundary defined in (C) above. The total area within these 600m boundaries is termed the 'detailed calculation area'. An affected route is one where there is the possibility of a change of 1dB(A) or more between the Do Minimum and Do Something scenarios in the short-term or 3dB(A) or more in the long term.</p> <p>Identify any affected routes beyond the boundary defined in (C) above.</p>
--	--	--	---

		<p>4.2.5 Further mapping of sensitive receptors should be done, and should at least include Montessori Education for Autism, 135 Westcombe Hill SE3 7DP; Invicta Primary School, Invicta Road, SE3 7HE; the 30A Charlton Road Care Home SE3 8TY; Blackheath Standard Surgery, 11-13 Charlton Road, SE3 7HB; St</p> <p>Mary Magdalene School, Old Dover Road, SE3 8SY; Blackheath Day Nursery, Rectory Field, SE3 8SR; Halstow Primary School, Halstow Road, SE10 0LD; and the Holiday Inn, Bugsby Way, SE10 0GD. Mitigation</p> <p>is likely to be needed, and cannot be carried out without proper monitoring.</p>	<p>Define a boundary 50m from the carriageway edge of the routes identified in (E) above.</p> <p>Paragraph 14.3.13 of the ES outlines that for the operational road traffic noise assessment, it was decided to omit stage D and undertake the detailed calculation in the larger 1km area detailed in stage C. This means the calculation area is larger than that required within DMRB and impacts have been considered over a wider area.</p> <p>Noise changes along traffic routes outside of the detailed calculation area (defined in bullet point d), above), but within the RXHAM traffic model area have also been considered and are presented in Figure 14-3 of the ES [APP-031].</p> <p>Potential noise changes as a result of the Silvertown Scheme are presented within section 14.6 of the ES [APP-031] the results at the specific sensitive receptors mentioned are as follows:</p>
--	--	---	--

			<p>Montessori Education for Autism</p> <p><i>Is located outside of the DMRB defined detailed study area, no road links are predicted to experience a perceptible change in noise level outside of the detail calculation area.</i></p> <p>Invicta Primary School</p> <p><i>Is located outside of the DMRB defined detailed study area, no road links are predicted to experience a perceptible change in noise level outside of the detail calculation area.</i></p> <p>Charlton Road Care Home</p> <p><i>Is located outside of the DMRB defined detailed study area, no road links are predicted to experience a perceptible change in noise level outside of the detail calculation area.</i></p> <p>Blackheath Standard Surgery</p>
--	--	--	--

			<p><i>Is located outside of the DMRB defined detailed study area, no road links are predicted to experience a perceptible change in noise level outside of the detail calculation area.</i></p> <p>St Mary Magdalene School</p> <p><i>Assessed as a sensitive receptor within the DMRB defined detailed study area. This is noted in the ES as OSR 36 within Table 14-42 and Table 14-46 which presents the noise assessments for this receptor In the short term this receptor is predicted to experience a negligible increase of 0.1dB and in the long term a negligible increase of 0.6dB. These changes in road traffic noise level are considered imperceptible</i></p> <p>Blackheath Day Nursery</p> <p><i>Is located outside of the DMRB defined detailed study area, no road links are predicted to experience a perceptible change in noise level outside of the detail calculation</i></p>
--	--	--	---

			<p>area.</p> <p>Halstow Primary School</p> <p><i>Is located outside of the DMRB defined detailed study area, no road links are predicted to experience a perceptible change in noise level outside of the detail calculation area.</i></p> <p>Holiday Inn, Bugsby Way</p> <p><i>Assessed as a sensitive receptor within the DMRB defined detailed study area. This is noted in the ES as OSR 5 within Table 14-42 and Table 14-46 which presents the noise assessments for this receptor. In the short term this receptor is predicted to experience a negligible decrease of 0.4dB and in the long term a negligible decrease of 0.9dB. These changes in road traffic noise level are considered imperceptible.</i></p> <p><i>As stated in paragraph 5.1.1 of the Monitoring Strategy 'The design and content of the noise monitoring strategy has been informed by the</i></p>
--	--	--	--

			<p><i>likely noise impacts as reported in the ES (Document Reference 6.1) for the Scheme.</i></p> <p>The Applicant believes that the monitoring locations included in Appendix A of the Monitoring Strategy are adequate. It should also be noted that the noise monitoring suggested is only part of the process and would be used in association with noise modelling of a much wider area to conclude impacts associated with the Scheme as stated in paragraph 5.5.1 of the Monitoring Strategy [REP1-121] and in the Applicants response to the EXA's First Written Question NV25 [REP1-166].</p> <p>Traffic monitoring is also taking place over a much wider area, details are provided in Section 3 and Appendix A of the Monitoring Strategy [REP1-121]. Should the traffic monitoring show that unforeseen impacts arise the Applicant will engage through the Silvertown Tunnel Implementation Group (STIG) to confirm whether further monitoring of environmental factors such as noise are necessary. As stated in paragraph 2.4.4 of the Monitoring Strategy [REP1-121] <i>'STIG will also review the monitoring plans prepared</i></p>
--	--	--	---

			<i>by TfL having had regard to the findings of the annual monitoring report, and will make recommendations for changes if necessary e.g. changing data collection methods.'</i>
Page 12, Section 4.3.1-2	WR.NS.31	<p>Reductions in air quality are perhaps the most dangerous of the potential impacts of this scheme.</p> <p>We note that TfL has consulted with local authorities and statutory bodies to refine its approach to this element of the environmental assessment.</p> <p>4.3.2 However, TfL's strategy for assessing air quality impacts is based on its own traffic modelling, and it gives its own assumptions precedence over other traffic data, such as that used in the London Atmospheric Emissions Inventory. Therefore, our concerns over the levels of risk in the traffic modelling carry over into our response to TfL's air quality monitoring.</p>	<p>It is entirely appropriate that the assessment of the Scheme's air quality impacts is based on the traffic modelling. The air quality assessment [AS-022] requires the outputs of a traffic model in order to assess how the changes in traffic flows on the road network as a result of the Scheme will result in changes to local air quality.</p> <p>It is not possible to use tools such as the London Atmospheric Emissions Inventory (LAEI) for this purpose as the assumptions within the future projections would not include the Silvertown Tunnel Scheme. To determine the Scheme impacts on air quality, traffic forecasts both with and without the Scheme are required. This information can only come from a traffic model that is built specifically to</p>

			<p>assess the Scheme's impacts.</p> <p>The Applicant has reported on the assessed case in 'Comments on Borough LIRs and WRs' (Section 3).</p>
<p>Page 12, Section 4.3.3-6</p>	<p>WR.NS.32</p>	<p>TfL's assessment of the affected road network to be monitored for changes in air quality has resulted in a much less extensive area than that to be monitored for traffic impacts. TfL's plans for its own air quality monitors do not extend south of the Sun-in-Sands junction on the A102, or west of the Blackwall Tunnel. While the Applicant will also draw on local authority air quality monitoring, both automatic and non-automatic, it will restrict this to locations within 200 metres of the affected road areas. This is too narrow an area. If TfL plans to monitor traffic impacts as far from the order limits as the A2 Danson Interchange, A100 Tower Bridge, or the junction of the A105 Green Lanes with the</p>	<p>The Applicant believes that the proposed monitoring regime is robust and in addition to the automatic and diffusion tube monitoring sites proposed as part of the Monitoring Strategy (updated at deadline 1) [REP1-121], the Applicant is aware of the existing monitoring undertaken by the Local Authorities. This information would be used to supplement the additional monitoring proposed by the Applicant. The monitoring locations have been chosen so that the Applicant in partnership with the Silvertown Tunnel Implementation Group (STIG) can assess whether the Scheme is performing as anticipated.</p> <p>Monitoring is installed within 200m of affected roads as installing monitors at a distance of greater than 200m from roads would only</p>

		<p>A406 North Circular Road, then it must surely accept that traffic effects would demand a wider range of monitoring air quality impacts.</p> <p>In addition, the Applicant has failed to provide an assessment of sensitive receptors in relation to air quality. The modelled receptors, used for the baseline 2012 figures, do not point out sensitive receptors specifically.</p> <p>TfL notes that the proposed Silvertown Tunnel would carry 10-11,000 vehicles per day (if successful), including full-sized HGVs.</p> <p>The northern portal will be most disadvantaged by the increase in air pollution. The Applicant’s map of sensitive receptors for noise impacts shows three schools and several other vulnerable non-residential receptors within 200 metres of the northern portal. Equally, there will be two new schools near the southern portal.</p>	<p>provide an indication of background concentrations, this is because pollutant concentrations drop off rapidly away from the road. This would not provide the information necessary to determine the performance of the Scheme.</p> <p>Table 6-15 of the ES [ASS-022] provides the details of the representative receptors that have been modelled in the Base Year (2012) and Opening year (2021) both with and without the Scheme. The table highlights the type of receptors e.g. residential, school etc. In additional all relevant receptors (residential, schools, hospitals etc.) have been modelled within 200m of roads that trigger the change criteria in DMRB.</p> <p>The air quality model built to assess the Scheme impacts considers the tunnel portals and the emissions that will result from the portals themselves. The tunnel portals emissions are combined with the emissions from the roads to provide the impact of the</p>
--	--	---	---

		Both portals will have large residential developments immediately beside them. Given these points, we are not willing to accept that the Applicant's air quality monitoring strategy is adequate for assessing impacts or providing necessary data for consideration of potential mitigation.	scheme on receptors within the vicinity of the tunnel portals.
Page 12, Section 4.4.1	WR.NS.33	TfL has set out a wide-ranging traffic monitoring plan, although it may not fully capture the Scheme's effects. For instance, the Kidbrooke Interchange is scheduled for monitoring only during weekday peak hours. We feel it should be monitored - along with other key junctions - at weekends, to compare against peak tidal flow periods, as changes to the charging periods and local mitigation may be needed.	See Report 'Comments on Borough LIRs and WRs' (sub theme "Approach to monitoring is inadequate/ suggestions to add to Monitoring Plan")
Page 13,	WR.NS.34	The plan should also include routes including A206 Woolwich Road/Woolwich	Several respondents including the boroughs made suggestions for further additions to the

<p>Section 4.4.2-3</p>		<p>Church Street and Trafalgar Road; A205 South Circular Road between Catford and A20 Sidcup Road; A2213 Kidbrooke Park Road (and its junction with the A2 at Kidbrooke Interchange); and A2016 Western Way. 4.4.3 These are routes which feed into the northbound A102/A2 and are vulnerable to pressure if, as we expect, demand for the Silvertown/Blackwall crossing increases.</p>	<p>indicative Monitoring Plan. The Applicant has noted in Report 'Comments on Borough LIRs and WRs' (sub theme "Approach to monitoring is inadequate/ suggestions to add to Monitoring Plan") that further additions may be made to the plan. I</p>
<p>Page 13, Section 4.52-3</p>	<p>WR.NS.35</p>	<p>Based on our consideration of the difficulties in using pricing to manage demand, and on the widespread resistance to charging as unfair to local residents, we have concerns that some drivers will divert towards the Woolwich Ferry and Rotherhithe crossings (if avoiding charges) and others to the Blackwall/Silvertown crossing in search of a clearer, faster journey. 4.5.3 TfL has argued that neither adjacent free crossing is an attractive alternative, and that effects on them from the Scheme will be minimal. It also suggests that the one</p>	<p>See Report 'Comments on Borough LIRs and WRs' (sub theme "Traffic displacement and adjacent crossings")</p>

		diversion would offset the other. ³³ Complicated traffic impacts like this, though, could create far worse junction and route delays than expected.	
Page 13, Section 4.5.4	WR.NS.36	We are concerned that this type of traffic impact could seriously affect Greenwich Town Centre, a Unesco World Heritage Site, and the buffer zones. Monitoring would require qualitative surveys, and mitigation again depends on charging - which TfL suggests could be lowered in response to pressure on adjacent crossings.	A note summarising the impacts on the Scheme on the Maritime Greenwich World Heritage Site has been submitted for Deadline 2 (Appendix B, Comments on Borough LIRs and WRs).
Page 14, Section 5.1.1	WR.NS.37	Nobody would deny that congestion at Blackwall Tunnel is a problem. But a new crossing at this location would exacerbate congestion on a road network that is already struggling. Particularly as the proposed Silvertown Tunnel shares a southern approach with the Blackwall	It is not the case that any increased traffic (on the A102 or anywhere else) must inevitably be an effect of the Scheme. Population and employment growth would be expected to lead to increased traffic, for example. For effects attributable to causes other than

		Tunnel.	the Scheme, TfL has a network management duty under the Traffic Management Act 2004 which requires it to make sure road networks are managed effectively to minimise congestion and disruption to vehicles and pedestrians. It can (and does) implement mitigations when required on the road network.
Page 14, Section 5.1.2	WR.NS.38	<p>In the morning rush hour, the tunnel would feed straight into the existing queues on the A1261 Aspen Way through Poplar. In the evening, traffic from the tunnel would add to congestion heading southbound on the A102 through the Sun-in-the-Sands roundabout. Other locations, such as the A1020 Leamouth Road and North Woolwich Road will also be affected - indeed, the junction designs³⁴ show the new tunnel would provide easy access to these roads.</p>	<p>The Silvertown Tunnel would provide more direct connections to a number of areas. Whilst some links would experience an increase in flows as a result of the Scheme, other links would experience a decrease in flows. Where any changes in flow as a result of the Scheme are forecast to have a problematic impact on any link or junction, the Applicant is committing to addressing this as detailed in the Traffic Impacts Mitigation Strategy [APP-099]. For example, on the A102/A2 southbound the Applicant acknowledges that mitigation would likely be required and appropriate measures would be implemented to effectively address the impacts of the Scheme on this corridor. The Scheme is not intended to address existing</p>

			and future performance issues across the wider network that are not impacted by the Scheme.
Page 14, Section 5.1.5	WR.NS.40	In general, TfL is presenting a best case scenario in this application. It appears very little work has gone into considering what will happen if the traffic predictions prove to be overly optimistic. This tunnel cannot be unbuilt, and people who live near its approaches will have to live with its consequences.	<p>The Applicant has considered a range of possible scenarios (including higher and lower growth) that could affect demand for the Scheme. This is set out in the Traffic Forecasting Report [APP-105]. These scenarios collectively demonstrate that the Scheme would achieve its objectives across the range of plausibly foreseeable scenarios.</p> <p>The Applicant set out its considerations in relation to the High Court judgment of 2 November 2016 in its response to the Examining Authority’s Rule 17 request of 9 October 2016.</p>
Page 15, Section 5.2.1	WR.NS.41	TfL claims there will be “a small decrease” in HGV use ³⁷ . In general, we have trouble believing this assertion - this tunnel is, in part, being constructed to allow better HGV access. In particular, this surely will not be the case for	The Applicant has carried out a robust assessment of traffic impacts which indicates that the number of HGVs crossing the River would reduce slightly with the Scheme in place. This reflects the balance of user charges and time savings across a 24 hour

		<p>the North Woolwich Road, the main route linking the new tunnel with the North Circular Road.</p>	<p>period, with some of these vehicles switching to other crossings such as the Dartford Crossing. From the modelling undertaken, North Woolwich Road is not expected to experience any significant increase in HGV traffic as a result of the Scheme (although a number of the bus routes assumed in the Assessed Case would use the road). While it is true that the scheme would improve accessibility for HGVs, the Royal Docks would not be a convenient route for through-traffic and so traffic which does not have a destination or origin in this area is unlikely travel along North Woolwich Road. The quickest route between Tidal Basin Roundabout and the A406 North Circular Road for vehicles which have to use the Silvertown Tunnel would be via the Lower Lea Crossing and A13.</p>
<p>Page 15, Section 5.2.2</p>	<p>WR.NS.42</p>	<p>We simply don't believe the Silvertown Tunnel will bring an end to overheight vehicles at the Blackwall Tunnel - many HGVs will want to follow the most direct route across the Thames, and the high numbers of</p>	<p>It is recognised that all types of incidents cannot be fully mitigated or designed for. However, the Silvertown Tunnel will meet current design standards and as a result will be much safer and more reliable than other road tunnels in London, including the</p>

		<p>overheight vehicles there show that there are many who do not take notice of signs. Indeed, beyond the creation of a “working party”, nothing is being done to stop northbound HGVs earlier (perhaps at Sun-in-the-Sands or before Woolwich Road flyover) and encourage them to turn back.</p>	<p>Blackwall Tunnel. In addition, the Silvertown Tunnel allows for a number of response options for incidents when they do occur, significantly improving the overall resilience of the corridor and surrounding network, as well as providing a more convenient diversion route for northbound over height vehicles.</p> <p>The Scheme will include a comprehensive review of existing signing and the development of a signage strategy as a requirement of the DCO which will cover both the Blackwall Tunnel and Silvertown Tunnel. As an outcome of this, it is likely that there will be revisions and additions to <u>all</u> types of signing (including variable message signing) which, amongst many other elements, will clearly identify diversion arrangements in the event where either tunnel is subject to closure, as well as the detection and direction of over-height vehicles.</p>
<p>Page 15, Section 5.2. 3</p>	<p>WR.NS.43</p>	<p>We also do not believe the tunnel provides an adequate diversion route for traffic heading to the A12 if the northbound Blackwall Tunnel</p>	<p>The Applicant is not suggesting that there would be no negative impact in the event that the Blackwall Tunnel is closed. Some increase in delay is inevitable even with the</p>

		<p>suffers a lengthy closure (as happened on 24 May 2016 when a crane spilled hydraulic fluid on the carriageway), with a number of traffic lights slowing drivers down.</p>	<p>Scheme in place if there is a prolonged closure of the Blackwall Tunnel at busy times. However, the analysis undertaken by TfL and presented in the Transport Assessment (Appendix D) makes clear that the impact of a closure of the Blackwall Tunnel would be very greatly reduced in the context of the Scheme, both in terms of overall delays and in terms of displacement of traffic to crossings such as the Rotherhithe Tunnel and Woolwich Ferry. Additionally, the Scheme would greatly reduce the number of closures of the Blackwall Tunnel and would improve TfL's ability to address closure incidents when they do occur.</p>
<p>Page 15</p>	<p>WR.NS.44</p>	<p>5.2.4 We would also question what hazardous loads are to be allowed through the Silvertown Tunnel, and how they will be handled. At the Dartford Crossing some need to be escorted, causing delays.</p>	<p>The Silvertown Tunnel will be operated as a Category E under the ADR Regulations (the European agreement regarding the carriage of dangerous goods by road - "Accord européen relatif au transport international des marchandises dangereuses par route"), and therefore no Dangerous Goods will be allowed to be transported through the tunnel. This is consistent with the existing restrictions at the Blackwall and Rotherhithe Tunnels.</p>

			Dartford Tunnel has a lesser restriction (Category C under the ADR Regulations), and therefore hazardous loads are allowed under escort.
Page 15	WR.NS.45	5.2.5 TfL notes that 2,100 incidents took place around the southbound Blackwall Tunnel between 2013-2015 . We would ask how many incidents it expects to take place in the Silvertown Tunnel.	Appendix F of the EAR (ref Doc 7.8.1) describes the background to incidents and journey time reliability estimates made for the Assessed Case. No specific estimate has been made of the number of incidents likely in the Silvertown Tunnel, but these are expected to be related to the volumes using the tunnel, the level of congestion and the geometry/standard of the tunnel. Given that the volumes expected will be lower than in the Blackwall Tunnel, and that it will be built to modern specifications, we would expect the number of incidents to be much lower than in the current Blackwall Tunnel. In addition, certain incidents, such as those relating to northbound overheight vehicles in the Blackwall Tunnel will be almost completely avoided due to the new tunnel height.

<p>Page 15, Section 5.3</p>	<p>WR.NS.46</p>	<p>We also note that TfL’s “incidents” affecting the Blackwall Tunnel include episodes of congestion and accidents that occur outside the tunnel³⁹ - these would affect any new tunnel as well. TfL calls the Blackwall Tunnel a “lynchpin” of the transport network⁴⁰ - but with several routes converging on the A102⁴¹, the same applies to its southern approach, which will face new pressures from a new tunnel.</p> <p>5.3.2 Furthermore, adding a new tunnel at this location will make the area surrounding the A102 even more vulnerable if that road is closed, as happened on 1 May 2014 when a fire broke out in a nearby yard. More traffic on the A102 will also mean even worse queues if there is a problem at the Dartford Crossing.</p> <p>5.3.3 The two A102 flyovers, at Woolwich Road and Blackwall Lane, will experience exceptional strain on their infrastructure. Engineering assessments already indicate they are in a poor condition⁴³. It appears TfL is taking best case scenarios, crossing its fingers,</p>	<p>The Blackwall Tunnel experiences a disproportionately high number of unplanned closures each year compared to other tunnels, as evidenced in Appendix D (page 74) of the Transport Assessment [APP-086]. A significant proportion of the closures are a result of over-height vehicles, which are dealt with after the point at which the Silvertown Tunnel approach would diverge from the existing A102, and the majority of other incidents resulting in unplanned closures also occur north of this point. Overall the Scheme is not expected to result in significant changes in traffic on the A102, hence the Applicant does not consider it will become more vulnerable, and the positive impacts of the Scheme in reducing incidents and congestion will greatly benefit the A102 overall.</p> <p>The flyovers on the A102 are regularly inspected and assessed to ensure their continued safe function, and are deemed to be structurally sound and capable of accommodating traffic. TfL has a statutory duty under the Highways Act 1980 to</p>
---------------------------------	-----------------	--	--

		and hoping for the best.	maintain the highway network for which it is highway authority.
Page 16, Section 5.4.1	WR.NS.47	We also cannot understand how TfL believes the Silvertown Tunnel, the north entrance of which is in a completely different location, will eliminate southbound queuing on the A12 through Bow and Poplar heading to the Blackwall Tunnel.	Some of the traffic using the Blackwall Tunnel has an origin or destination that would be better served by the Silvertown Tunnel, and hence, in future, would be expected to use this tunnel. Extracting these trips from the southbound Blackwall Tunnel queue means that the severe congestion experienced today would be relieved.
Page 16, Section 5.4.3	WR.NS.49	Furthermore, TfL concedes there is regular evening southbound queueing on the A102 back from Sun-in-the-Sands, where it meets the two-lane A2 (and a set of traffic lights at Kidbrooke). Additional traffic from a new tunnel will only exacerbate this problem - something TfL acknowledges in Appendix C of the transport assessment.	The Scheme is assessed to have an overall positive impact on the performance of the road network. Reliability and journey times on the A102 are expected to improve and the road would be affected by fewer incidents and unplanned closures with the Silvertown Tunnel in place. Where any changes in flow as a result of the Scheme are forecast to have a problematic impact on any link or junction, the Applicant is committing to addressing this as detailed in the Traffic Impacts Mitigation Strategy (TIMS)[APP-099]. For example, on the A102/A2 southbound the

			<p>Applicant acknowledges that mitigation would likely be required and appropriate measures would be implemented to effectively address the impacts of the Scheme on this corridor.</p>
<p>Page 16, Section 5.4.4</p>	<p>WR.NS.50</p>	<p>TfL suggests some remedies for the A2, such as creating more capacity by using the hard shoulder. But there is no user charge on the A2, and more capacity is likely to induce more traffic on this road - tailing back onto the A102 (as now) and towards the Silvertown Tunnel. It also mentions the A2 “connected corridor” scheme, but this is merely a trial - there is no guarantee this will be in place by the time the Silvertown Tunnel opens.</p>	<p>The road network and the pressures on it are going to evolve between the current day and Scheme implementation. As a result, TfL is committing to future monitoring and implementation of mitigation where appropriate by assessing the traffic impacts closer to Scheme opening, and monitoring actual impacts thereafter to accurately identify the scale and location of adverse impacts to enable implementation of effective mitigation where required. This approach is explained in detail in the Monitoring Strategy [REP1-121] and the Traffic Impacts Mitigation Strategy (TIMS) [APP-099].</p> <p>Appendix C of the Transport Assessment [APP-087] sets out an example of the assessment process methodology and illustrates, based on knowledge at the time, the potential type and scale of mitigations that may be required if flow patterns change,</p>

			<p>including those along the A102. The Monitoring Strategy and the TIMS take effect from three years before the Scheme opens and continue for three years (with the option to extend to five) post-Scheme opening. TfL will develop and assess appropriate mitigation options in response to proposed assessment and monitoring.</p>
<p>Page 16</p>	<p>WR.NS.51</p>	<p>We find some of TfL’s Blackwall Tunnel usage statistics to be unsatisfactory; boroughs are large and diverse areas and it is hard to learn anything meaningful about who uses the tunnel through borough breakdowns.</p> <p>5.5.2 That said, we note that the largest single group of commuters through the Blackwall Tunnel comes from Kent - a small toll charge of £3 each way will remain attractive compared with, for example, the £37.60 peak return fare from Ebbsfleet International to Canary Wharf.</p>	<p>In addition to breakdowns of the usage of the Blackwall Tunnel by origin borough, the Transport Assessment [APP-086] presents information on journey purpose, trip length, departure time, origin and route used for the return journey.</p> <p>While comparisons between the user charges assumed in the Assessed Case and fares for specific public transport journeys may at first sight appear persuasive, they in fact oversimplify the issues. Fares and charges do not exist in isolation - for vehicle journeys other costs include fuel and parking charges, while all journeys have a time cost associated with them. The transport modelling undertaken by TfL, which accounts for all of</p>

			<p>the major monetary and time costs involved in alternative mode and journey choices, demonstrates that in the Assessed Case there would be a substantial increase in the proportion of person trips across the river at the Greenwich Peninsula made by public transport</p>
<p>Page 16</p>	<p>WR.NS.52</p>	<p>5.5.3 There is also evidence of user demand from Thamesmead, as well as a belief that the Silvertown Tunnel will boost that particular area’s economy. It seems strange that TfL would try to achieve this by prioritising a tunnel at the Greenwich Peninsula if the demand is further downriver.</p>	<p>Data set out in the Transport Assessment [APP-086] and elsewhere does indeed indicate that some of the users of the Blackwall Tunnel begin their journeys in Thamesmead. These journeys would, like others, benefit from greatly reduced congestion and improved reliability, which would in turn improve access to jobs north of the river and could therefore assist with regeneration. The Applicant has not presented specific assessment regarding the benefit of the Scheme for Thamesmead in particular, and cannot comment in detail on the reference to a boosting of that area's economy which appears to relate to a press-release published by RB Greenwich in response to a variety of announcements regarding River Crossings plans made by the</p>

			Mayor of London.
Page 17, Section 5.6.2-4	WR.NS.53	<p>If TfL and the boroughs are serious about encouraging modal shift away from cars, then residents' discounts should be resisted. Those who live closest to the tunnel will - according to TfL's statements - have access to better public transport access across the Thames.</p> <p>5.6.3 Furthermore, these discounts risk being applied on an arbitrary, per-borough basis, which would increase congestion even further in the host boroughs as residents would be incentivised to drive rather than use public transport.</p> <p>5.6.4 In addition, residents' discounts increase the risk that TfL's traffic modelling would not match real-world outputs, with consequent impacts on congestion and air quality.</p>	See Report 'Comments on Borough LIRs and WRs' (Sub theme "Resident discount")
Pages 17-18, Section 5.7.1	WR.NS.54	It seems to us to be impossible to construct the tunnel without causing huge disruption to both the operations of the O2 as well as the operation of buses into and out of North	The purpose of the Code of Construction Practice (CoCP)[APP-092] is to set a framework to control possible Scheme construction impacts covering environmental,

		<p>Greenwich bus station, which already suffer badly when the O2 is busy; particularly during major events such as the National Television Awards (we would suggest a site visit on the evening of 25 January 2017, when the next awards take place).</p>	<p>public health and safety aspects of the Scheme that may affect the interests of local residents, businesses, the general public and the surroundings in the vicinity of the Scheme.</p> <p>The CoCP requires that Construction Traffic Management Plans (CTMPs) are prepared for each worksite for approval by the relevant planning authority. These plans will include details on construction vehicle routes, volumes and potential impacts and any necessary mitigation.</p> <p>The CoCP also requires the CTMPs to set out constraints and restrictions on road vehicle movements, which are likely to include days of the week and times of the day when road vehicle movements are not permitted, maximum number of vehicle movements permitted at defined periods of the day, e.g. between 08:00 and 09:00, or restrictions on the use of the Blackwall Tunnel by construction lorries at peak times.</p>
--	--	---	--

<p>Page 18</p>	<p>WR.NS.55</p>	<p>5.7.2 The operation of route 108 and the various commuter coach services will be severely impaired if they are forced to use the northbound slip road from Blackwall Lane rather than Tunnel Avenue during construction works.</p>	<p>There is no evidence that route 108 or coaches would be "severely impaired" during construction: Table 6-5 on page 200 of the Transport Assessment [APP086] lists the diversions that would be temporarily in place during construction. In any event, any construction impacts will be temporary and the scheme will ultimately result in significant enhancements for bus services once it is completed.</p>
<p>Page 18, Section 5.8.1</p>	<p>WR.NS.56</p>	<p>The impact of the tunnel alongside new developments in the area has not been sufficiently considered. Of particular concern is the impact of a new Ikea store planned for Greenwich Peninsula, which is likely to draw custom from across a wide area. TfL incorrectly asserts that the Ikea store merely replaces a Sainsbury's outlet. In fact, it is in addition to a relocated Sainsbury's store (half a mile away at Gallions Road), with a further shopping development - Brocklebank Retail Park -</p>	<p>Growth has been taken into account in the Reference Case modelling in accordance with projections set out in the London Plan, including growth in the Greenwich Peninsula area. This has been independently audited by consultants SDG and signed-off as 'fit for purpose' as set out in the Applicant's response to FWQ TT.1 and TT.4 [REP1-174].</p>

		due to open in between the two sites in 2017.	
Page 18, Section 5.9.1	WR.NS.57	TfL claims there has been no investment in road capacity in this area since the 1960s . This is not the case. Capacity has added to the road network since the 1980s, most notably as part of schemes to regenerate the Isle of Dogs and Royal Docks	The Applicant acknowledges that the meaning of the sentence referred to is not clear when it is taken out of its context. Pages 17-22 of the Consultation Report [APP-018] states that there has been no investment in road capacity, and while the preceding sentences refer specifically to cross-river, this is not stated in relation to roads. The Case for the Scheme [APP-093], Figure 2-4, for example, shows that - east of Tower Bridge - compared to public transport capacity improvements, highway capacity has barely changed.
Pages 18-19, Section 5.9.2 -5	WR.NS.58	But while public transport has been improved, the cross-river links it provides remain poor. The 1999 Jubilee Line extension follows the river and heads no further south than North Greenwich station; the 2009 Docklands Light Railway link to Woolwich Arsenal terminates just a few	It is misleading to suggest that proposals to extend the DLR network have been rejected 'out of hand' by the Applicant. The work carried out by the Applicant to consider public transport alternatives to the Scheme is set out clearly in the Case for the Scheme [APP-093]; page 177 of this document discusses DLR alternatives specifically and

	<p>hundred metres south of the river. The Abbey Wood branch of Crossrail follows the line of the river, and will primarily be a means of reaching central London rather than a way of making north/south journeys.</p> <p>5.9.3 The most recent addition, the Emirates Air Line, is primarily a tourist service, charging premium fares that are incompatible with the London zonal fares system. And by its nature as a cable car, it has a very limited catchment area of those who can use it without needing to buy additional tickets for other forms of transport. TfL cites its lowest fare of £1.70 - this is only available for a tiny number of carnet users (and just 25 of these were sold in a sample week in October 2015), and still more expensive than the off-peak charge for a car to use the Silvertown Tunnel.</p> <p>5.9.4 The public transport system remains inconvenient for the orbital journeys that many Blackwall Tunnel users are making. A trip from Eltham station to Clapton Pond takes 30 minutes by car but 65 minutes by public transport (which may include travelling into central London and back). A journey from Thamesmead Town Football</p>	<p>demonstrates that, in addition to the considerable engineering challenges such schemes present, they would not meet Project Objectives 1 or 2 as they would not address the issues of congestion or poor resilience at the Blackwall Tunnel.</p>
--	--	---

		<p>Club to Leyton Orient Football Club is 35 minutes by car, but 71 minutes by public transport .</p> <p>5.9.5 The Silvertown Tunnel will do little to solve these disparities. Proposals to address this, such as extending the Docklands Light Railway to Eltham, have been rejected out of hand.</p>	
<p>Page 19, Section 5.9.6</p>	<p>WR.NS.59</p>	<p>The Applicant has submitted evidence that the Mayor of London, Sadiq Khan, has recently undertaken to assess the possibility of extending the London Overground and Docklands Light Railway to Thamesmead. Given that these suggested improvements have been suggested after the Applicant’s demand model was assessed, it is not clear whether TfL has reassessed what the demand would be for private river crossings should these suggested schemes come to pass.</p>	<p>As presented in the Traffic Forecasting Report – Sensitivity Testing [APP-105], and described in pages 109-112 of the Case for the Scheme [APP-093], the Applicant tested a substantial public transport alternatives package (including a London Overground extension to Abbey Wood and several DLR extensions, albeit not one to Gallions Reach), representing several billions pounds, to test how such investment would compare to the Silvertown Tunnel scheme. This highlighted that even with all these public transport schemes in place, there was no discernible drop in traffic flow at the Blackwall Tunnel and that such a package of investment would not solve the problems of congestion and poor</p>

			<p>resilience at the Blackwall Tunnel.</p> <p>It is important to note that both a potential Docklands Light Rail (DLR) extension to Thamesmead and a potential London Overground extension to Abbey Wood are unfunded schemes and therefore would not be included in a Reference Case against which the Scheme would be modelled. As set out in the Applicant's response to FWQ PN.2 [REP1-178], while the DLR extension to Thamesmead could be delivered within the next 10 years (subject to Planning consent and funding becoming available), the London Overground extension to Abbey Wood is a much longer term aspiration.</p>
<p>Page 19, Section 5.10.1</p>	<p>WR.NS.60</p>	<p>The attitude of TfL and its predecessors to running bus services across the Thames in this part of London give us little confidence that the services proposed as part of the Scheme will come to pass as promised without a clear commitment in the Development Consent Order.</p>	<p>See WR.NS.6</p>

		5.10.2	
Page 19, Sections 5.10.2-3	WR.NS.61	<p>The 108 service has been the sole route through the Blackwall Tunnel since 1968, while the only route through the Rotherhithe Tunnel was withdrawn in 2006. The 108 has been much less useful as a cross-river link since November 1998, when a circuitous and lengthy diversion via North Greenwich station was added .</p> <p>5.10.3 We accept running a bus service through the Blackwall Tunnel is challenging. But a fuller study of bus reliability statistics shows that the 108’s reliability is not remarkably poorer when compared with other services. The final 1.9 miles of the 108 are in Lewisham, where nine out of 35 other services had the same or a longer excess waiting time in the second quarter of 2016/17</p>	<p>It is normal practice both in London and elsewhere to use buses as a way to connect to stations and for this reason the route was changed to include North Greenwich station, which gives access to the Jubilee Line (and the Emirates Air Line). Most of the 108 route is located south of the river, and 37% of all trips terminate at North Greenwich station (reflecting the demand for this hub). Around 4 out of every 5 of these trips to North Greenwich station have an origin south of the river.</p> <p>The Case for the Scheme [APP-093] in paragraph 2.10.3 on page 69 refers to the relatively high Excess Wait Time for the 108. It states that this is an average and that EWTs in peak periods would be higher. Importantly, the figure given also excludes exceptional delays caused by tunnel closures (as these are beyond the operator’s control). The figures given in No to Silvertown’s WR are not disputed, but the Applicant therefore considers that these do not give the full</p>

			picture of the exceptional delay and unreliability experienced on the 108 service (and which, without the Silvertown Tunnel, would apply to other bus services through the Blackwall Tunnel in future).
Page 19, Section 5.11.1	WR.NS.62	Even where TfL could have improved services on the corridor served by the 108 bus, it has chosen not to do so. A passenger petition for a more frequent service south of the river resulted in only a single extra departure slotted into to the morning rush hour in 2014. The only enhancements are on weekday late evenings, when additional double-decker buses run in one direction from North Greenwich to Lewisham only to assist with clearing crowds from the O2.	The Applicant disagrees that improvements have not been made, particularly along the key section from the bottom of the Greenwich peninsula to North Greenwich; route 129 for example has had a 137% increase in capacity since its introduction in 2006.
Page 20	WR.NS. 63	Indeed, TfL has risked making reliability worse by rerouting the 108 north of the river via the A102/A13 junction - which the transport assessment concedes has “high levels of delay” - to run via Chrisp Street rather than the A12, adding 14 minutes to a	The change to the 108 route in October 2016 was made in the context of falling usage of the D8 bus service in the section of the route around Chrisp Street; although there is still enough demand to warrant a service. Because the D8 already duplicated the DLR

		northbound journey at midday on a weekday	route here, this route was swapped with the 108, thereby opening up cross-river services to these local communities.
Page 20, Section 5.12	WR.NS.64	<p>TfL claims the number of journeys crossing the river at Blackwall/Silvertown would hardly change following the Silvertown Tunnel's completion. Yet TfL also claims route 108, which carried 3.3 million passengers in 2015/16 , would see a 25% increase in patronage if the Silvertown Tunnel were built because the route would have fewer delays, and claims two new routes would each achieve 70-95% of the 108's patronage. This seems contradictory to us.</p> <p>5.12.2 In any event, the possibility of introducing new bus services isn't an argument for spending £1bn on a new road, this is an argument for expanding services through the existing Blackwall Tunnel - perhaps by introducing services that don't suffer the delay of double-running via North Greenwich station.</p>	<p>It is correct to say that the Transport Assessment [APP-086] at paragraph 7.2.9 reports that there will be very little change in total cross-river person trips (private vehicle reduces by 1,800 in the Assessed Case across the 24-hour weekday period (-0.22%), while PT demand increases by 2,500 (0.13%)), the increase in bus patronage can be explained by the switch from rail to bus as set out in paragraph 7.9.17 of the Transport Assessment. This paragraph also states that the increase in patronage on the 108 is due to an increase in the frequency of the route.</p> <p>With regard to expanding bus services through the Blackwall Tunnel, this is not the optimal approach for the reasons given in paragraphs 1.3. 2-3 of the Silvertown Tunnel Bus Strategy [Appendix A of FWQ Principles Report REP1-178]: the northbound Blackwall Tunnel will still not be able to accommodate double-deck buses and better tie-ins to the</p>

			network exist (on the north side) from the Silvertown Tunnel.
Page 20, Section 5.13.3	WR.NS.65	If delays at Blackwall Tunnel will be eliminated, as TfL so confidently asserts, why are there no new services planned for this tunnel, and just a small frequency increase for the 108	See WR.NS.6
Page 20	WR.NS.66	Despite TfL talking up the option to use double-decker buses, one of the routes to be extended includes the 309, which uses single-deckers that are only 9.6m long.	As set out in the Applicant's response to FWQ DC.86 [REP1-178], STIG can meet more frequently than to coincide with the annual monitoring report. There is no end date for STIG specified. In addition to mitigations approved by TfL, the TIMS [APP-099] states in paragraph 2.3.4 that boroughs can undertake mitigations on their roads as they wish, outside the Scheme process.
Page 20	WR.NS.67	.13.5 Indeed, with two services from East London - the 104a and 309 - set to run no further south than	

		<p>North Greenwich, rather than running onto destinations such as Blackheath, Charlton, Greenwich town centre or beyond. It appears TfL's bus planners share our fears about the effects of the Silvertown Tunnel on south-east London's wider road network</p>	
Page 21	WR.NS.68	<p>We would suggest that the draft Development Consent Order contains a commitment to a more comprehensive bus network, with a minimum level of service.</p>	
Page 21	WR.NS.69	<p>The Scheme offers very little for cyclists; cyclists will not be permitted to use the tunnel and the risk of increased traffic in the wider area is likely to make conditions more dangerous for vulnerable road users.</p> <p>5.14.2 The Panel will be aware of the Mayor raising the possibility of a "bespoke cycle bus"⁸⁰; we find it</p>	<p>See Report 'Comments on Borough LIRs and WRs' (Sub theme 'response to walking and cycling issues')</p>

		<p>hard to believe this will come to pass considering such a service failed as long ago as 1965, when specially-designed cycle buses were withdrawn from the Dartford Tunnel. (A limited service remains available using Land Rovers, but is unavailable at various times of day including mid-morning</p>	
<p>Page 21, Section 5.15</p>	<p>WR.NS.70</p>	<p>As outlined in section 4.5, we understand TfL’s modelling suggests traffic is unlikely to divert to Rotherhithe Tunnel to avoid charges. We feel this is unlikely to be the case.</p> <p>5.15.2 If traffic does divert to Rotherhithe, the already vulnerable roads surrounding the World Heritage</p> <p>Site at Maritime Greenwich will be seriously affected.</p> <p>5.15.3 Other areas will be affected: TfL’s 2014 consultation included forecasts of</p>	<p>A technical note outlining the potential for traffic to impact the Outstanding Universal Value of the WHS has been produced (Appendix B in report ‘Comments on Borough LIRs and WRs’)). This note has concluded that changes in traffic will not have a negative impact on the WHS.</p>

		increased air pollution along the B207 Trundleys Road in Deptford and along A200 Lower Road to the Rotherhithe Tunnel ⁸³	
Page 22	WR.NS.71	<p>It is difficult to assess the likelihood of the economic benefit forecast by the Applicant coming to pass. As we argue in our Modelling section above, while we understand that TfL believes its forecasts are the most likely outcome after sensitivity testing against different scenarios, there is no information presented on the confidence with which these estimates are made.</p> <p>We note that TUBA - the model used for economic assessment - takes output from the transport models as a key input. If these underlying transport models do not accurately forecast traffic volumes and flows, there can be no hope that the economic assessment will be correct. While information is presented on the economic outcomes if the economy is depressed at the forecast time, we can find no assessment of economic outcomes if traffic</p>	<p>The issue on the accuracy of the transport model, and the validity of using this to assess economic benefits, is considered in the Applicant's response to page 2 of No to Silvertown's Written Representation.</p> <p>The assessment of economic benefits if growth, and therefore transport demand, is higher than expected are set out in Table 5.20 of the Economic Assessment Report [APP-101]. This table demonstrates that, under a higher growth scenario, net user benefits will increase from £1,086m to £1,112m, or £1,343m to £1,345m once reliability benefits are included, compared to the Assessed Case.</p>

		flow is higher than expected	
Page 22	WR.NS.72	Time saved as the result of avoiding incident delays is included as an economic benefit derived from the Scheme: does this benefit take into account delays caused by incidents that take place on the shared approach roads on the northbound approach to the tunnels?	The time savings estimated from avoiding major incident delays and from reductions in incidents involving overheight vehicles did not assume any savings from incidents that take place on the shared approach roads on the northbound approach to the tunnels, as described in section 2.5.2 of Appendix F of the Economic Assessment Report [APP-101].
Page 22	WR.NS.73	We note that the economic assessment includes a cost attributed to NO2 pollution. This would seem to contradict assertions in other documents that the impact of the Scheme on NO2 pollution is net positive. Is it therefore correct to assume that current modelling shows the Scheme will increase NO2 pollution?	<p>The economic appraisal has been undertaken in accordance with TAG Unit A3 Environmental Impact Appraisal. To complete the TAG assessment the impact of the scheme on NOx emissions is calculated.</p> <p>When considering the analysis presented in the economic appraisal it is important to recognise that emissions changes over the whole of the modelled network are not directly comparable to how the scheme will affect pollution concentrations at sensitive receptors (residential properties, hospitals, schools, etc) as assessed in the ES Chapter 6 [AS-022].</p>

			<p>This is due to the fact that increases in emissions can occur in areas where there are no receptors (for example within the Silvertown Tunnel itself).</p>
<p>Page 22</p>	<p>WR.NS.74</p>	<p>The Economic Assessment Report shows that, according to the applicant's assessment, heavy goods vehicles are the only types of vehicles to incur costs rather than receive benefits as a result of the Scheme</p> <p>This reinforces our argument that the Scheme is more likely to act to depress business investment in east and south east London than to act as a catalyst for regeneration</p>	<p>Although under the Assessed Case charging schedule heavy goods vehicles (HGVs) would experience economic disbenefits, as set out in Table 3 of the Economic Assessment Report [APP-101], businesses using LGVs, cars and buses would all benefit from the Scheme. The table demonstrates that the Scheme will result in total net benefits of £503m for businesses once user charging costs have been taking into account, including reliability benefits.</p> <p>Reductions in travel costs and improvements in network reliability will result in a more favourable business environment, supporting</p>

			<p>the creation of new jobs in East London.</p> <p>Although HGVs will experience economic disbenefits under the Assessed Case charging schedule, some HGV users will have the opportunity to retime and consolidate their journeys to reduce economic disbenefits.</p>
--	--	--	--

16 HACKNEY AND TOWER HAMLETS FRIENDS OF THE EARTH

16.1 Comments on Written Representation

Table 15 - Key issues identified from Written Representation by Hackney and Tower Hamlets Friends of the Earth with TfL’s commentary

Location in Representation	TfL Reference	Interested Party’s Comment	TfL Comment
Paragraph 1 and beyond under 'Emissions data'	WR.FOE.1	Our understanding is that TfL used DEFRA Euro 6 emissions data and modelling to undertake their air quality impacts assessment for the Scheme. The High Court ruling in the case of Client Earth vs Secretary of State for the Environment, Food and Rural Affairs found that this same emissions data has been shown to be up to five times lower than real world emissions [9]. In addition, DEFRA themselves recognise that they adopted an overly optimistic forecast as the foundation for their	<p>It is not the case that the Applicant has relied solely on the Defra emission factors as published.</p> <p>The applicant has provided a full response to the issue relating to the High Court Judgement as part of the Request for Further Information (Rule 17) [REP1-093]. This is summarised below.</p> <p>Although the Scheme assessment utilises the</p>

		<p>modelling. The Government’s Air Quality Plan notes that this discrepancy is ‘unacceptable’ [10], and DEFRA have begun a programme of retesting vehicles to establish the accuracy of the data. Mr Justice Garnham noted it was ‘remarkable’ that DEFRA had observed in its own plan that it was built around a forecast based on figures which ‘emerging data’ is undermining. It is because of the flawed data and overly optimistic forecast that results from it that we find TfL’s model of air quality impacts for the Scheme inadmissibly flawed.</p> <p>We strongly believe that no decision can be made on the Scheme until this retesting is complete and its impacts on vulnerable people in Tower Hamlets and other affected boroughs can be known. Even based on the current air quality data, the Scheme will have a perceptible impact on at least two schools, including the Faraday School in Tower Hamlets, where N02 levels are predicted to rise.</p>	<p>Defra emission factors, which were criticised as part of the judgement for being too optimistic, the modelled results have been uplifted to account for vehicle performance in the real world. This is because the Scheme assessment followed the procedure set out in Highways England’s guidance in IAN 170/12v3. This guidance allows for the under-performance of vehicle emissions in the real world - particularly light duty diesel vehicles (cars and vans), which has led to concentrations not falling as fast as expected - by uplifting the air quality modelling results.</p> <p>In addition, it is the Applicant’s view that the judgement provides further justification for the proposed approach in relation to the flexibility in setting the user charge prior to the Scheme opening. The Applicant has committed to re-running the air quality assessment prior to the Scheme opening utilising the latest evidence at that time, which would include the pre-scheme air quality monitoring, latest vehicle emissions information and consideration of future Defra AQPs, to ensure that the scheme would not lead to a significant impact on air</p>
--	--	---	--

		<p>In response to the Rule 17 letter dated 09 November 2016, point 3.1, it is therefore our opinion that this planning application must now be reconsidered in light of the High Court ruling noted above.</p> <p>This is not only because the ruling identifies flaws in the air quality monitoring data and as such calls into question the baseline condition, but also because it ruled that the Government must reduce exposure to air pollution and achieve compliance with Regulation 26 of the Air Quality Standards Regulations 2010 by the soonest date possible [9].</p> <p>Once the process of remodelling of air quality impacts is complete, following retesting of emissions data, we maintain that if there are negative net impacts in Tower Hamlets or in any one of the affected boroughs then there is no way the Scheme should be permitted to proceed.</p>	<p>quality or delay compliance with the directive.</p> <p>The Social Distributional Impacts (SDI) Appraisal [APP-104] summarises the likely impacts of the Scheme based on income quintiles. The guidance used states that the SDI appraisal should be carried out at a Scheme level and therefore the impact across all receptors (rather than those in a single local authority). The Scheme-wide SDI concluded that the populations that comprised the two lowest income quintiles were likely to experience a beneficial impact due to the Scheme.</p> <p>The impact on schools was also published in the SDI. The total assessed case concentration at Faraday School was predicted to be below 30 µg/m³ with the Scheme in operation, which is well below the AQS Objective.</p> <p>The applicant has provided a full response to the issue relating to the High Court Judgement as part of the Request for Further</p>
--	--	--	--

			<p>Information (Rule 17) [REP1-093].</p> <p>Within Tower Hamlets the Scheme is predicted to have an overall beneficial impact on air quality. This is the case with an approach to the assessment that already allows for the under-performance of diesel vehicles that was a feature of the High Court judgement. The overall pattern of concentration changes would remain the same, even if different emission factors were used; the pattern of changes in concentrations is based on the pattern of changes in traffic flow.</p>
<p>Under 'Traffic Modelling' heading</p>	<p>WR.FOE.2</p>	<p>We are concerned that the TfL's traffic modelling does not accurately reflect the likely induced demand. It seems that TfL has also made no assessment of increased traffic at Blackwall and Silvertown due to increased use by those who currently avoid the Blackwall tunnel because of congestion. TfL has considered those who change their route from the Silvertown to the Rotherhithe tunnel, or vice versa, in their discussion of induced demand. However, they suggest</p>	<p>As set out in our answers to first written questions TT1, TT4, and TT6, the models have been developed in accordance with DfT WebTAG guidance and also independently audited by consultants Steer Davies Gleave who have signed off the models as "fit for purpose". Furthermore, the model's detailed study area covers all potential alternative routes via each potential river crossing in East London, including the Rotherhithe Tunnel and Tower Bridge. Therefore, the</p>

		<p>that there is no impact on induced demand because ‘the rerouted traffic is not additional or new’ (Transport Assessment Appendices, Section B, B.4.2) in relation to the Scheme impacts as a whole. Nonetheless, such rerouting may result in local impacts from induced demand at either tunnel, and given that the area around the Rotherhithe tunnel is not included in the Air Quality Study Area, we suggest that this is a significant failure of the modelling. If there are any failures in the traffic modelling, we foresee that the additional road capacity would send a signal to potential road users that will lead to increased traffic, congestion, and commensurate additional air pollution.</p>	<p>model considers those who may change their route to the Rotherhithe Tunnel to avoid the charge as well as those who change their route from the Rotherhithe tunnel to benefit from the improved traffic conditions at the Blackwall and Silvertown Tunnels.</p>
<p>Under 'User Charging' heading</p>	<p>WR.FOE.4</p>	<p>The traffic modelling, impacts, and business case are all predicated on TfL being able to control traffic levels by charging, so addressing these concerns on user charging is of vital importance to the Scheme’s viability. We are concerned that the user charging designed to manage the induced demand is not robust:</p> <ul style="list-style-type: none"> - To the extent that this is based on flawed 	<p>The Traffic Forecasting Report - Sensitivity Testing [APP-105] sets out the different scenarios that the Applicant has tested for the Scheme. These sensitivity tests show that in scenarios of higher or lower growth (and traffic demand), changes to user charging would produce a similar effect to that in the Assessed Case.</p>

	<p>air quality data – as noted above – it cannot provide an accurate basis for setting user charges;</p> <ul style="list-style-type: none"> · TfL provide no description of the different possible outcomes included in their charging models, and without understanding the breadth of possible outcomes, it is impossible to be confident that the modelling accurately predicts likely outcomes; · The effectiveness of the charge is partly based on mitigation provided through the Traffic Impacts Mitigation Strategy (TIMS), but such mitigation is not guaranteed since it has to be approved by the Silvertown Tunnel Implementation Group, and if it is, no guarantees are provided of funding to deliver the mitigation actions. Furthermore, it is not clear what impact the ‘cost effectiveness’ criterion for the suitability of mitigation measures will be, particularly in regards to health impacts on vulnerable residents (TIMS, p.17); · TfL do not envisage applying the user charge at night (between 10pm – 6am), on the basis that this will encourage journeys that would otherwise be made during the night to be made at night, thus reducing 	<p>With regard to funding for mitigations, see Report ‘Comments on Borough LIRs and WRs’ response to Mitigation issues.</p> <p>The assumption of a zero charge between 10pm and 6am in the Assessed Case is based on a lower demand for travel at night and to encourage time-shifting (see paragraph 4.911 in the Charging Statement [APP-097]. Further discussion is made in Report ‘Comments on Borough LIRs and WRs’ (sub theme “Induced demand”).</p>
--	---	--

		<p>congestion (and thus air pollution). However, can TfL be confident that this will not also contribute to induced demand? Furthermore, the Charging Statement states that ‘User charging is a means of ensuring that those using the tunnel address the full external costs of their travel’, and that ‘It is also important to reiterate the adverse impacts of traffic on the environment and [that] the stated objective of user charging is to help to manage these impacts.’ Why should users who are able to make their journeys at night then be exempt from paying for the impacts of their vehicle use?</p>	
<p>Under 'User Charging' heading</p>	<p>WR.FOE.5</p>	<p>Given that the environmental viability of the Scheme – in relation to air pollution – is based on the user charge, the statement that TfL ‘shall set the charge at a level and subject to conditions so that the Scheme in operation is not likely to give rise to significant environment effects which are materially worse than those reported in the ES’ (our italics) does not provide confidence that the Scheme is viable (Charging</p>	<p>Charging at the Blackwall Tunnel (without the new Silvertown Tunnel) is considered in the Case for the Scheme [APP-093] page 113. While this could reduce traffic flow, it would not address the delay and lack of resilience which are a problem at this crossing.</p>

		<p>Statement, 5.2.4). We strongly urge that no net increase in any individual borough or across the Scheme as a whole should be created through subsequent changes to the charging regime.</p> <p>If the introduction of user charging proposed to reduce congestion is likely to be effective as claimed by TfL we question why this could not be considered at the existing Blackwall Tunnel?</p>	
<p>Under 'Considering Scheme in Context' heading</p>	<p>WR.FOE.6</p>	<p>Because TfL has a responsibility to look at the Scheme in the context of the overall transport network, we believe submitting this planning application is premature in the context of the Mayor of London's recently announced review of river crossings [12], and ongoing consultation into, for example, the multi-modal river crossings at Gallions Reach and Belvedere as noted by the ExA in PN1. We fully support the ExA in their position on questioning why the Silvertown Tunnel has been prioritised over those multi-modal crossings.</p>	<p>The Mayor has recently announced a multi-modal approach for his next east London river crossings priorities following a review. These are set out in Update Report October 2016 [AS-021] and include support for the Silvertown Tunnel, a pedestrian and cycling bridge between Rotherhithe and Canary Wharf and a DLR extension at Gallions Reach. The Applicant's response to PN.1 is also relevant, please see document REP1-178.</p>

<p>Under 'Considering Scheme in Context' heading</p>	<p>WR.FOE.7</p>	<p>TfL has put forward a scheme that it claims will 'create opportunities for new jobs in the local area, help local employers to access new markets and reduce the environmental impact of traffic congestion'. We submit that this is a regressive way of looking at transport provision within the capital. Instead of accepting that the most harmful traffic modes will increase, TfL should be actively seeking to achieve an urgent structural shift away from reliance on fossil fuel-based transport options.</p>	<p>TfL remains committed to achieving continued mode shift in London and has been very successful in doing so since its inception. Figure 2.2 of TfL's Travel in London 8 report shows that car mode share has fallen in London from 47% in 2000 to 37% in 2014.</p> <p>TfL has considered a significant number of public transport based options to address the issues of poor cross river connectivity and network resilience and reliability, as set out in Chapter 3 and Appendix A of the Case for the Scheme [APP-093]. However, none of the options assessed were able to meet the Project Objectives in the way the proposed Scheme does.</p> <p>It is important to note that the Scheme will not result in an increase in cross-river traffic at opening year. This is because user charging is an integral part of the Scheme and will be used to manage highway demand. As set out in Figure 7-16 of the Transport Assessment [APP-086], under the Assessed Case charging structure, the amount of traffic flow using the Scheme at opening year will be almost the same as under the Reference</p>
--	-----------------	--	--

			<p>Case.</p> <p>Furthermore, the Scheme will facilitate a major new cross-river bus network in east London, which will support sustainable movement and improve access to jobs and services for local residents and businesses.</p> <p>This is therefore not a regressive Scheme, but one that enables a step change in cross-river public transport connectivity without increasing traffic at opening year.</p>
--	--	--	---