

SILVERTOWN TUNNEL

SUPPORTING TECHNICAL DOCUMENTATION

PRELIMINARY CHARGING REPORT

October 2015

This report outlines the user charging proposals for the Blackwall and Silvertown Tunnels.

It sets out:

- TfL's reasons for proposing user charging;
- the proposed structure and implementation of the charge; and
- the objectives TfL would take into account in setting the charge and varying it in the future.

This report forms part of a suite of documents that support the statutory public consultation for Silvertown Tunnel in October – November 2015. This document should be read in conjunction with other documents in the suite that provide evidential inputs and/or rely on outputs or findings.

The suite of documents with brief descriptions is listed below:-

- **Preliminary Case for the Scheme**
 - Preliminary Monitoring and Mitigation Strategy
- **Preliminary Charging Report**
- **Preliminary Transport Assessment**
- **Preliminary Design and Access Statement**
- **Preliminary Engineering Report**
- **Preliminary Maps, Plans and Drawings**
- **Preliminary Environmental Information Report (PEIR)**
 - Preliminary Non Technical Summary
 - Preliminary Code of Construction Practice
 - Preliminary Site Waste Management Plan
 - Preliminary Energy Statement
- **Preliminary Sustainability Statement**
- **Preliminary Equality Impact Assessment**
- **Preliminary Health Impact Assessment**
- **Preliminary Outline Business Case**
 - Preliminary Distributional Impacts Appraisal
 - Preliminary Social Impacts Appraisal
 - Preliminary Economic Assessment Report
 - Preliminary Regeneration and Development Impact Assessment

SILVERTOWN TUNNEL

Preliminary Charging Report

October 2015



THIS PAGE IS LEFT INTENTIONALLY BLANK

Silvertown Tunnel

Preliminary Charging Report

Planning Act 2008

Infrastructure Planning

The Infrastructure Planning (Applications: Prescribed Forms and Procedure)
Regulations 2009

Document Reference: ST150030-PLN-ZZZ-ZZ-RP-PC-0002

Author: Transport for London

Rev.	Date	Approved By	Signature	Description
1	02/10/2015	David Rowe (TfL Lead Sponsor)		For Consultation
		Richard De Cani (TfL MD Planning)		

Contents

1.	INTRODUCTION	7
2.	POLICY CONTEXT.....	9
3.	RESPONSES TO MOST RECENT CONSULTATIONS	13
4.	REASONS FOR AND ROLE OF CHARGING	17
5.	PROPOSED CHARGE STRUCTURE	21
6.	EXEMPTIONS AND OTHER DISCOUNTS	27
7.	CHARGE COLLECTION AND ENFORCEMENT.....	33
8.	PROCESS TO SET AND VARY THE CHARGE.....	37
9.	INDICATIVE CHARGES AT CONSULTATION	43
10.	NEXT STEPS	47
	APPENDIX A.....	49

List of Abbreviations

TfL	Transport for London
MTS	Mayor's Transport Strategy
DCO	Development Consent Order
CIL	Community Infrastructure Levy
AQMA	Air Quality Management Area
HGV	Heavy Goods Vehicle
LEZ	Low Emission Zone
CC	Congestion Charge
ULEZ	Ultra Low Emission Zone
NRMM	Non-road mobile machinery
PVH	Private Hire Vehicles
PCN	Penalty Charge Notice

Glossary of Terms

Blackwall Tunnel	A pair of existing road tunnels under the Thames at Blackwall in east London
Silvertown Tunnel	Proposed new twin-bore pair of road tunnels under the Thames from Silvertown to the Greenwich Peninsula in East London
Host boroughs	The London Boroughs of Tower Hamlets, Greenwich and Newham
Assessed charge	Indicative user charges for the scheme
Account holder	User of the tunnels who has registered their vehicle and payment details with TfL
Charging period	6 am to 10 pm every day

1. INTRODUCTION

- 1.1.1 The Scheme – known as the Silvertown Tunnel – involves the construction of a twin bore road tunnel providing a new connection between the A102 Blackwall Tunnel Approach on Greenwich Peninsula (Royal Borough of Greenwich) and the Tidal Basin roundabout junction on the A1020 Lower Lea Crossing/Silvertown Way (London Borough of Newham). The Silvertown Tunnel will be approximately 1.4km long and will be able to accommodate large vehicles including double-deck buses.
- 1.1.2 The Scheme will be the subject of an application for a Development Consent Order (DCO) under the Planning Act 2008. As well as authorising the construction of the new tunnel, the DCO will also provide the necessary powers to impose charges on users of the Blackwall and Silvertown Tunnels and to enforce the collection of those charges.
- 1.1.3 The charges are proposed for two principal reasons which will ensure that the Scheme delivers its objectives:
- to help manage the demand for using both crossings and to keep traffic levels within appropriate limits; and
 - to help to pay for the new tunnel.
- 1.1.4 This Preliminary Charging Report explains the user charging proposals for the Blackwall and Silvertown Tunnels and gives consultees the opportunity to provide feedback on the specific details of the user charging proposals.
- 1.1.5 It forms part of a suite of preliminary which have been produced for the pre-application statutory consultation on the proposed DCO application for the Scheme. In finalising the DCO application, TfL will have regard to all responses to the consultation.
- 1.1.6 The structure of this report is as follows:
- Section 2: Policy context
 - Section 3: Responses to previous consultations
 - Section 4: Reasons for and role of charging

- Section 5: Proposed charge structure
- Section 6: Exemptions and other discounts
- Section 7: Charge collection and enforcement
- Section 8: Process to set and vary the charge
- Section 9: Indicative charges at consultation and anticipated effects
- Section 10: Conclusion and next steps

2. POLICY CONTEXT

2.1.1 The Preliminary Case for the Scheme document prepared by TfL sets out in detail the framework of national, regional and local plans and policies that have informed the development of the proposals for a new river crossing at Silvertown including user charging.

2.1.2 There is a clear policy basis for the introduction of a user charge. Proposal 130 of the Mayor's Transport Strategy ('MTS') sets out the circumstances in which the Mayor may consider pricing incentives to manage demand. Charges or tolls to support specific infrastructure improvements, such as river crossings, are specifically referenced.

Proposal 130
<p>The Mayor, through TfL, and working with the London boroughs and other stakeholders, if other measures are deemed insufficient to meet the strategy's goals, may consider managing the demand for travel through pricing incentives (such as parking charges or road user charging schemes). This would depend upon there being a reasonable balance between the objectives of any scheme and its costs and other impacts. Any scheme would need to take account of local conditions, as well as the impact on surrounding regions, and to be fair and flexible relating charges to the external costs of travel with sensitivity to time of day, and with scope for discounts or exemptions for specific user groups. The Mayor will also consider imposing charges or tolls to support specific infrastructure improvements, such as river crossings.</p>

2.1.3 For the reasons set out in Section 4 of this report and in more detail in the Preliminary Transport Assessment, road user charging at both the Blackwall and Silvertown Tunnels is required to manage traffic demand and ensure the environmental impacts of the Scheme are properly managed. TfL is proposing a charge that will be varied by reference to time of day and for different classes of user. The charging mechanism will allow for changes to the charge and have scope for discounts and

exemptions for specific user groups as set out in section 6 of this report. TfL therefore considers that the proposals for user charging accord with the principles of the MTS Proposal 130.

2.1.4 Reference is also made here to the National Networks National Policy Statement (NN NPS), which is the principal national policy document against which the Silvertown Tunnel DCO application will be examined and determined.

2.1.5 The NN NPS sets out the Government's policy on road tolling and charging as follows:

DFT'S policy statement for National Networks

Strategic Road Network

3.24 The Government will consider tolling as a means of funding new road capacity on the Strategic Road Network. New road capacity would include entirely new roads and existing roads where they are transformed by an improvement scheme.

3.25 River and estuarial crossings will normally be funded by tolls or road user charges.

Other roads

3.26 Proposals for tolling or user charging to fund new capacity and/or manage demand on roads or proposed roads that do not form part of the Government's Strategic Road Network are a matter for local and other traffic authorities.

3.27 Where tolls or road user charges are proposed as part of a highways project that is the subject of a direction given under section 35 of the Planning Act 2008, the Government will expect the applicant to demonstrate that the proposals are consistent with this NPS, the relevant development plan and relevant statutory transport strategies and plans.

2.1.6 The introduction of road user charging at the Blackwall and Silvertown Tunnels aligns with the objectives of the NNPSS set out above.

2.1.7 Paragraphs 3.26 and 3.27 are directly relevant to the Silvertown Tunnel which will not form part of the Strategic Road Network but is being treated

as a nationally significant project by virtue of a section 35 direction made in respect of the Scheme in 2012. TfL is the strategic traffic authority for London and the user charge for the Scheme is being introduced in accordance with MTS policy.

THIS PAGE IS LEFT INTENTIONALLY BLANK

3. RESPONSES TO MOST RECENT CONSULTATIONS

Summary of feedback from consultations

- 3.1.1 In autumn 2014 TfL undertook a public consultation on the Scheme which included information on the emerging charging strategy.
- 3.1.2 Amongst the key findings from the consultation responses were that 83% agreed that a new crossing was needed and 37% supported a user charge at levels similar to Dartford Crossing.
- 3.1.3 There were expressions of both support and opposition to the principle of user charging. The broad themes raised by respondents were as follows:
- Support for user charging in general terms
 - Conditional support for user charging, for example on the condition that there should be an easy-to-use payment system
 - Opposition to user charging in general terms
 - Specific opposition to charging, for example highlighting a concern that the charge could 'push' traffic to other crossing points
 - Suggestions for the charge, including (but not limited to) suggestions for discounts.
- 3.1.4 A Consultation Analysis Report¹ is available on TfL's website which summarises the feedback in detail.

Summary of response to issues raised

- 3.1.5 TfL acknowledges the high number of responses to the consultation which contained concerns around charging. Although constructing the Silvertown Tunnel without user charging would relieve delays at Blackwall, the increased demand on the wider road network would cause significant delays elsewhere. The introduction of user charging, with a level of

¹ <https://consultations.tfl.gov.uk/rivercrossings/silvertown-consultation>.

charges that will vary by class of vehicle, time of day and direction, will help manage the overall flows as well as encourage travel outside of peak times, thereby reducing the impact on the surrounding network. The case for introducing user charges at the Silvertown and Blackwall Tunnels is set out in Section 4 of this report.

- 3.1.6 TfL acknowledges that some stakeholders and people will oppose user charge, but this needs to be weighed against the travel and wider benefits of the Scheme. The Preliminary Case for the Scheme document which has been prepared for the statutory consultation also sets out the wider benefits of the Scheme, such as reduced congestion, shorter journey times and increased reliability, which outweigh the disbenefit to users of having to pay for the journey, particularly for business users. The Preliminary Case for the Scheme also explains that there will be opportunities to introduce new bus routes through the new tunnel, which will provide significant benefits to local residents and commuters
- 3.1.7 TfL has also considered the consultation responses in relation to discounts and exemptions to the user charge. TfL acknowledges the need to avoid unreasonable adverse impacts to certain users. However, it is essential that discounts and exemptions do not undermine the objectives of charging by encouraging additional traffic to use the additional road capacity which the Silvertown Tunnel will provide.
- 3.1.8 Having considered the feedback it has received on this issue, TfL proposes to offer discounts to the headline charge to all users who have pre-registered their vehicle and payment details for automatic payment, and also to offer discounts or exemptions to certain limited user groups or vehicle classes. Section 6 of this report sets out TfL's proposed approach to discounts and exemptions, and the rationale for this approach. Section 6 also explains why TfL cannot extend discounts or exemptions to wider groups of users such as local residents, due to the negative effect those discounts/exemptions will have.

- 3.1.9 A Response to Issues Raised Report² is available online which sets out TfL's response to each of the issues raised in the previous consultation.

Ongoing engagement

- 3.1.10 Since the 2014 consultation, TfL has continued to engage with stakeholders on the scheme proposals, including user charging. This ongoing engagement has included events with local businesses and other bodies, and liaison with residents groups and environmental organisations.
- 3.1.11 A survey of 500 businesses across east London, which was undertaken in summer 2015, revealed that 52% of businesses were happy to pay charges at the Blackwall and Silvertown tunnels that were in line with the charges for the Dartford Crossing, as long as it reduced congestion and made journey times more reliable. Just 30% of businesses interviewed said they disagreed with this. Further details on the business survey are included in the Preliminary Outline Business Case which has been prepared for the statutory consultation on the proposed application.

² https://consultations.tfl.gov.uk/rivercrossings/silvertown-consultation/user_uploads/silvertown-responses-to-issues-raised-report.pdf-1

THIS PAGE IS LEFT INTENTIONALLY BLANK

4. REASONS FOR AND ROLE OF CHARGING

4.1.1 As outlined in the Preliminary Case for the Scheme document, TfL proposes to charge for the use of the Silvertown and Blackwall Tunnels for two principal reasons:

- a) to help manage the demand for using both crossings and to keep traffic levels within appropriate limits; and
- b) to help to pay for the new tunnel.

4.1.2 By directly managing traffic demand and indirectly through the consequential benefits of reduced demand, the user charge will help to ensure that the Scheme delivers its objectives³.

a) Managing demand

4.1.3 TfL will use charging as a way to manage demand and therefore levels of traffic passing through the Blackwall and Silvertown Tunnels.

4.1.4 While the provision of additional capacity delivered by Silvertown Tunnel Scheme is fundamental to addressing the existing traffic problems at the Blackwall Tunnel, the absence of a charge will mean that the benefits gained could be short-lived if this extra capacity was to encourage significantly more highway trips not currently on the network or if the trips currently made by public transport were encouraged to use private vehicles.

4.1.5 This reflects an effect known as ‘induced traffic’ in which the increased convenience of driving (for example owing to reduced journey times) attracts additional traffic to the point where queues and congestion eventually reach their former levels. Without a user charge, as journey times improve with the introduction of the Scheme, new demand attracted from the network would rapidly take up the additional capacity through the tunnels to a point where the approach roads (both north and southbound) would reach capacity. At this point, congestion on the road network

³ Scheme objectives are set out in the Preliminary Case for the Scheme document

surrounding the crossing would increase, eroding the main benefits of the Scheme.

4.1.6 This potential adverse effect can be managed effectively through a user charge, which acts to suppress demand and can therefore be used as an effective and flexible tool to ensure the continuing benefits of the additional capacity provided by the Scheme are secured.

4.1.7 TfL has undertaken preliminary modelling to assess the traffic impacts of charging at the Blackwall and Silvertown Tunnels. Specifically, TfL has considered the options of implementing the Scheme without a complementary system of user charging at both the Blackwall and Silvertown Tunnels (referred as the “no charge scenario”). The analysis indicates that, in the absence of user charging, there would be a significant increase in demand at the Blackwall and Silvertown Tunnels and consequential negative impacts on the surrounding road network in terms of additional traffic generated and continued long queues in the peak periods. The scenarios with charging at the Silvertown and Blackwall Tunnels perform much better in managing the demand on the tunnels and the surrounding network, show improved journey times and indicate almost no queues at the Blackwall Tunnel in the peak periods.

4.1.8 The traffic impacts of the “no charge” scenario are described in more detail in the Preliminary Case for the Scheme.

Consequential benefits from managing demand

4.1.9 There are a number of consequential benefits arising from managing demand for the Blackwall crossing through user charging. As well as having a positive impact on the environment and, the economy, the charging regime provides a means of encouraging positive travel behaviour and of reinforcing the effects of other policies, such as encouraging the re-timing of freight movements and off peak travel. These consequential benefits are described below.

Positive impact on the environment

4.1.10 The charge will manage demand for the Silvertown and Blackwall Tunnels and by so doing, it will play an important role in managing the environmental effects of the resulting traffic flows, in particular on air quality. A reduction in congestion results in a reduction in vehicle emissions. The level of the charge and how it is applied at different times

of day will influence travel behaviour and therefore, traffic flows on the network, which in turn, will affect the air quality.

- 4.1.11 TfL has undertaken an initial air quality assessment, which is reported in the Preliminary Environmental Information Report.

Support growth of the local population and economy

- 4.1.12 The Scheme will have a positive impact on local businesses, many of whom state that congestion and poor journey time reliability are a significant constraint on the operation of their business. Businesses will benefit from being able to access a greater number of potential customers, a larger potential labour market and a greater range of potential suppliers. Reduction in congestion as well as the improved resilience and reliability of the local road network will reduce unproductive staff time, and enable more efficient delivery patterns.
- 4.1.13 In addition to benefits for existing businesses, the improved attractiveness of east and south east London as a business location will also attract higher levels of inward investment, including new jobs. The positive impact of the Scheme on businesses and the economy is explained in more detail in the Preliminary Outline Business Case and Regeneration and Development Impact Assessment.
- 4.1.14 Significant employment and population growth is forecast in east and south east London, which will create the need for additional cross river trips. The Silvertown Tunnel scheme is part of the River Crossings programme which will support this growth by enhancing connectivity and expanding opportunities for public transport and private modes.

Positive influence on travel behaviour

- 4.1.15 The user charge will help to encourage people to consider public transport as an alternative to travel by road. The Scheme will also enable improved bus reliability due to the reduced congestion and the creation of opportunities for more cross-river bus services, thereby enhancing the attractiveness of public transport as an alternative to private modes.

b) Paying for the Scheme

- 4.1.16 TfL will use the revenue generated from the user charge to help pay for the construction, operation and maintenance of the new tunnel.

- 4.1.17 Charging users generates a relatively stable long-term source of revenue that can support both the servicing and repayment of construction finance (either publically or privately raised) and ongoing operation and maintenance costs. It is an approach that has been adopted on "crossing" schemes around the world and there is an established market for financing on this basis (Mersey Gateway Bridge is a recent UK example).
- 4.1.18 It is possible to use other sources of funding, including a Mayoral or Borough Community Infrastructure Levy (CIL) to cover some of the Scheme cost. However none of these alternative funding options would manage demand and since this is the most important function of the charge, these alternatives would still require a user charge to apply in addition to any other funding. Furthermore, the amounts likely to be raised from some of these sources like CIL are expected to be modest and not sufficient to meet the Scheme cost.
- 4.1.19 In overall terms, TfL forecasts indicate that revenues from both Blackwall and Silvertown Tunnels will, over time, cover the cost of the Scheme and may also play a part in funding other future transport investments in London.
- 4.1.20 TfL anticipates that charging will be a long-term measure, continuing at least for as long as its traffic management effects were required. In this respect, user charges differ from tolls (which are set in order to pay for infrastructure and so have a fixed end date).

5. PROPOSED CHARGE STRUCTURE

5.1.1 This section sets out the proposed scope of the charges and explains when, how and where these will apply.

5.1.2 In common with many other charging schemes, the level of the proposed charge at the Blackwall and Silvertown Tunnel will vary by different vehicle types and by the time of the day. Reflecting this in the structure of the charging scheme is likely to have a strong impact on the effectiveness of the charge in achieving the traffic management objective and delivering the other consequential benefits of the Scheme.

5.1.3 The principal elements of the proposed structure for the user charge are set out below.

Free flow

5.1.4 There will be no toll plazas, booths or barriers at the tunnel entrances or elsewhere to pay the charges; instead the charge will be payable after a trip is recorded based on automatic detection of a vehicle's use of either tunnel.

Scope of charging

5.1.5 The charge will be payable for every trip made through either the Blackwall or Silvertown Tunnel during the charging hours - i.e. the charge will apply every time either of the tunnels is entered by a vehicle during the charging period every day of the year.

5.1.6 No cap or daily charge is proposed as this would operate as an effective discount thereby incentivising frequent travel, contrary to the traffic demand management objective.

Charging hours

5.1.7 The charging scheme is proposed to apply during the day between 6 am and 10 pm. Night travel between 10 pm and 6 am is proposed to be free for all users as there is relatively low demand during these times.

Charging by vehicle type

- 5.1.8 TfL is proposing a charging structure that will vary the charge according to the type of the vehicle. This approach is common to most road user charging schemes and reflects the amount of road space occupied, the contribution to congestion, the emissions and the wear and tear to the road surface caused by different types of vehicles.
- 5.1.9 TfL is proposing to adopt a vehicle classification similar to the proposed Ultra Low Emission Zone (ULEZ) scheme. This will offer a number of advantages including ease of understanding from a customer's point of view as well as lower implementation costs.
- 5.1.10 It is proposed that each class of vehicle will have a headline charge. The headline charge will be the advertised maximum charge that will be applicable to the vehicle class at the given time.
- 5.1.11 Table 5-1 shows the proposed vehicle classification for Blackwall and Silvertown Tunnels.

Table 5-1: proposed vehicle classification for Blackwall and Silvertown Tunnels

Proposed vehicle class for Blackwall and Silvertown Tunnels	Description	Vehicle type approval⁴
Motorcycle, moped	Any motorcycle, moped, tricycle or quadricycle	L
Car and small van	A passenger vehicle with no more than 8 seats in addition to the drivers seat and a goods vehicle with weight less than 1205 kg	M1 N1 (i)
Large van	Goods vehicle with a gross weight of 3.5 tonnes or less	N1 (ii,iii)
HGVs	Lorries and Specialist vehicles of more than	N2, N3

⁴ <http://www.dft.gov.uk/vca/vehicletype/definition-of-vehicle-categories.asp>

Proposed vehicle class for Blackwall and Silvertown Tunnels	Description	Vehicle type approval⁴
	3.5 tonnes gross vehicle weight	
Bus ,Coach and minibus	Passenger vehicles with more than 8 passenger seats of more than 5 tonnes gross vehicle weight	M3 , M2

Account holder and non-account holder

- 5.1.12 TfL is proposing a charging regime which differentiates between account holders and non-account holders.
- 5.1.13 Account holders will be those users who have signed up to an auto-pay arrangement whereby the charge is automatically paid from a designated account when they pass through the crossing (“Auto-Pay”). This is similar to the Congestion Charge auto pay or Dart-Tag arrangements.
- 5.1.14 Users who do not register for an account will need to pay through one of the other designated payment channels, such as via a website and will be able to do so in advance of using the tunnels or within a limited time after the journey is complete.
- 5.1.15 Registration for automated payments will bring benefits to the account holders in terms of removing the need to make manual payments, a single monthly bill, greater flexibility if travel plans change and avoiding the risk of penalty charges for forgetting to pay. As well as benefiting users, the auto pay arrangements will significantly reduce the costs to TfL of administering the charges.
- 5.1.16 Account holders will receive the financial benefit from this through paying a lower charge as compared to non-account holders.
- 5.1.17 Non-account holders will pay the headline charge for journeys through the tunnels at all times during the charging period (6 am to 10 pm). The account holders will receive a discount to the headline charge via a peak and off peak charge which will be set below the headline charge and will be available to the account holders.

5.1.18 The size of the discount will be set to incentivise users to register for auto pay arrangements. Over time, TfL expects that the majority of users at the Blackwall and Silvertown Tunnels to be account holders.

Peak and off peak charges – effective discount to account holders

5.1.19 To manage the traffic using the crossings effectively, it is proposed that the charges for account holders, who are expected to be the majority of users, will vary with:

- Time / day; and
- Direction of travel (going northbound / southbound).

5.1.20 This is because the flows in the northbound direction in the AM peak (06.00 to 10.00) and southbound in PM peak (16.00 to 19.00) on weekdays are expected to be significantly higher than at other times and directions (as they are at present through the Blackwall Tunnel). It is therefore proposed to have a peak charge for account holders during these busier periods. The peak pricing will help to discourage travel within the peak hours and thereby reduce the pressure generated by traffic volumes on the road network.

5.1.21 At all other times, including weekends, journeys through the tunnels by account holders will be subject to off-peak charges.

5.1.22 The peak and off peak charges will act as an effective discount to account holders as these will both be less than the headline charge that is payable by non-account holders.

5.1.23 Table 5-2 and 5-3 show the proposed charge structure for account holders and non-account holders.

Table 5-2: proposed charge structure for account holders

Time of travel	Travelling northbound		Travelling southbound	
	Monday to Friday	Weekend	Monday to Friday	Weekend
6am - 10 am	Peak	Off -peak	Off -peak	Off -peak
10 am - 4 pm	Off -peak	Off -peak	Off -peak	Off -peak
4 pm - 7 pm	Off -peak	Off -peak	Peak	Off -peak
7 pm - 10 pm	Off -peak	Off -peak	Off -peak	Off -peak
10 pm – 6 am	free	free	free	free

Table 5-3: proposed charge structure for non-account holders

Time of travel	Travelling northbound		Travelling southbound	
	Monday to Friday	Weekend	Monday to Friday	Weekend
6am - 10 am	Headline charge	Headline charge	Headline charge	Headline charge
10 am - 4 pm				
4 pm - 7 pm				
7 pm - 10 pm				
10 pm – 6 am	free	free	free	free

Headline charge- highest charge

Peak charge- second highest charge

Off peak charge- lowest charge

THIS PAGE IS LEFT INTENTIONALLY BLANK

6. EXEMPTIONS AND OTHER DISCOUNTS

- 6.1.1 In addition to the account holder discounts, TfL has considered and assessed a number of other potential user charge discounts and exemptions for Blackwall and Silvertown Tunnel users. These options have been identified through discussions with the local boroughs and other stakeholders, from feedback to previous consultations and from a review of other charging schemes (such as the Congestion Charge (“CC”) and the Dartford Crossing).
- 6.1.2 Exemptions and discounts can be helpful in mitigating potentially adverse impacts of charges on specific user groups. However, they could also undermine the benefits and possibly the viability of the Scheme by prejudicing both the traffic demand management effects of the charge and the level of revenue generated. This is because, if the discounts and exemptions were to result in a large number of vehicles not paying any or all of the charge, the Scheme's main objectives are unlikely to be met. Furthermore, there may be consequential adverse impacts on the environment as a result of consequential increased traffic levels and congestion.
- 6.1.3 Accordingly, TfL's proposal for the Silvertown and Blackwall Tunnels is to offer discounts and exemptions only to limited categories of users and classes of vehicles where these are clearly justified, for example: users who are performing critical services (e.g. buses, ambulances), user groups with limited travel alternatives (e.g. disabled drivers); or environmentally efficient vehicles.

The proposed discounts and exemptions are show in Table 6-1 below:

Table 6-1: Proposed discounts and exemptions

Exempt from the charge	100% Discount will be applied
Emergency services vehicles	Recovery and accredited breakdown vehicles
Disabled vehicle (tax registered)	Buses, coaches and minibus
NHS vehicles exempt from vehicle tax	Blue Badge holders

Exempt from the charge	100% Discount will be applied
Military vehicles	Low emission vehicles
Non-road mobile machinery	Taxis and private hire vehicles (PVH) – (registered with TfL)
	Selected partner discount (these are some specific vehicles used in the provision of particular public services like local authority bin lorries)

- 6.1.4 TfL is committed to promote, through offering discounts and other incentives, the use of low emission vehicles to reduce transport related impacts on the environment. The introduction of an Ultra Low Emission Zone in central London, taxi and private hire vehicle age limits, bus retrofit schemes are examples of recent initiatives to address this issue.
- 6.1.5 The low emission vehicles that will qualify for the discount will be decided nearer the time of opening and will align with the Ultra Low Emission Discount (ULED) arrangements within CC.
- 6.1.6 After the Silvertown Tunnel opens, TfL will monitor and review the impact of discounts and will retain the ability to change or withdraw them by giving notice to the affected user groups if this was shown to be necessary to ensure the Scheme objectives could continue to be delivered.
- 6.1.7 TfL has reviewed the various suggestions made in the consultation responses with regard to potential discounts and exemptions. The initial assessment undertaken by TfL indicates that further discounts/exemptions are likely to undermine the demand management objective by encouraging significantly more traffic on the roads, because of the large numbers of users to which the discount/exemptions could apply. Table 6-2 lists the key user groups for whom exemptions or discounts have been considered and, in each case, summarises the reasons why discounts and exemptions are not being proposed.

Table 6-2: Key user groups for whom neither exemptions nor discount are proposed.

User group	Rationale for not proposing any discount or exemption
Local residents	<p>The three key reasons for not offering local residents discount are</p> <ul style="list-style-type: none"> • Undermines the Scheme objectives <p>This group forms such a large proportion of tunnel users that any specific discount would undermine the traffic demand management and funding objectives of user charging.</p> <ul style="list-style-type: none"> • No clear justification for giving a discount <p>Although there are precedents from other charged crossings for giving discounts to local residents, there is no clear rationale for giving discount in this instance. For example, residents living inside the Congestion Charging zone are eligible for a discount because, if they need to move their car at all they have no choice but to drive in the zone. For the Silvertown and Blackwall Tunnels this is not the case as there are free alternative highway crossings, as well as numerous alternative routes to cross the river using public transport.</p> <ul style="list-style-type: none"> • No fair basis for deciding who qualifies for the discount <p>A local residents discount would have to distinguish between groups of people by whether or not they live within a specified area. There is no proper basis on which to determine the boundary of such an area and any such area could not take into account other relevant criteria such as hardship caused by the charge or the need to drive.</p> <p>A further point to note is that the Scheme will provide opportunities for new cross-river bus services to improve public transport links between south-east and east London. These new bus services will connect local communities and further improve the public transport in the area.</p> <p>TfL is developing proposals for a Community Fund for the Boroughs in which the Scheme is located. The Community Fund will provide an opportunity to deliver transport, environmental and social enhancements to local communities, and whilst the proposals are at an early stage, it is possible this could be used to mitigate any adverse impacts arising from the charge on low-income groups. Further information on the Community Fund is</p>

User group	Rationale for not proposing any discount or exemption
	included in the Preliminary Equality Impact Assessment (EqIA).
Frequent users / commuters	<p>The same points apply to frequent users as for local residents in relation to discounts. TfL considers that a discount for this group would :</p> <ul style="list-style-type: none"> • Undermine the Scheme objectives; and • There is no clear justification for giving discount. <p>Frequent users /commuters will receive significant benefits from the reduction in congestion and delays which the Scheme will bring about and they will as a group benefit the most from registering for auto pay arrangements that will attract discounted charges, which further supports the conclusion that they should not be eligible for an additional discount.</p>
Local businesses	<p>Similar reasons to those for not offering discounts to local residents apply to local businesses:</p> <ul style="list-style-type: none"> • Undermine the Scheme objectives; • No clear justification for giving discount ; • No fair basis for deciding who qualifies for the discount ; and • Potential state aid issues in giving discounts to some businesses and not others. <p>Local businesses will receive significant benefits from the reduction in congestion and delays which the Scheme will bring about which further reinforce the conclusion that they should not receive discounts.</p>
Older people	<p>It is unlikely that older people as a group will be disproportionately affected by charging.</p> <p>Also those who are most affected by charging are likely to have a blue badge and therefore entitled to discounts.</p>
Public sector workers	<p>Similar reasons apply for not offering discounts to local residents apply to public sector workers :</p> <ul style="list-style-type: none"> • Undermine the Scheme objectives; • No clear justification for giving discount ;and

User group	Rationale for not proposing any discount or exemption
	<ul style="list-style-type: none"><li data-bbox="539 450 1342 521">• Unlikely to be any particular adverse impact for this group compared to others

THIS PAGE IS LEFT INTENTIONALLY BLANK

7. CHARGE COLLECTION AND ENFORCEMENT

7.1.1 TfL is proposing that the operational regime for collection and enforcement of the charges at the Blackwall and Silvertown Tunnels will be similar to that used by TfL for CC and Low Emission Zone ("LEZ") schemes. Although these are operated under different statutory powers, it is an established and successful approach, and one with which many drivers will be familiar. This section gives an overview of the process, the final details of the operational regime will not be determined until closer to the opening of the Silvertown Tunnel.

Vehicle detection

7.1.2 The payment system for the use of the tunnels will be automated as far as possible. There will not be any booths or barriers at the tunnel entrance to pay the charges. Instead, the charges will be collected by means of automatic detection of a vehicle's use of the tunnels. The charges will apply to non-UK registered vehicles as well as those registered in the UK.

7.1.3 Automatic Number Plate Recognition ("ANPR") technology is currently being used for the CC & LEZ schemes and it is likely that this system will also be adopted for the Blackwall and Silvertown Tunnels. The type of technology to be used for vehicle detection will be determined at a later date to enable flexibility and the adoption of the most efficient and reliable system available in the market at the time.

Payment channels

7.1.4 As described in Section 5, TfL anticipates that the majority of users will be account holders who will have registered with TfL for an automated payment arrangement whereby the relevant charge will be paid for via direct debit or a registered debit/credit card. All information will be held securely and only for the purposes of user charge payment.

7.1.5 For those not wishing to register, the charge could be paid through a number of payment channels either in advance of using the tunnels or within a limited time after the journey is complete. The payment channels are proposed to be similar to those offered under the CC & LEZ schemes, under which the following are currently available:

- online using the TfL website

- by phone;
- by automated telephone service;
- by post; or
- by SMS (however this payment channel will be replaced by an "App" in February 2016)

7.1.6 TfL will keep these payment options under review to ensure that it offers best value for its customers.

Administration

7.1.7 The process for administering exemptions and discounts is expected to be similar to the CC. For vehicles that are exempt from the charge, no action will be required by the vehicle owner as the exemption will be picked up through the tax class i.e. as recorded by the DVLA and shown in the vehicle logbook (V5C). In order to be entitled to a discount, users will need to register as account holders (see 7.4 above) and then complete a registration for the applicable discount otherwise the relevant headline charge will need to be paid in full. Information on how to register a vehicle for a discount will be provided nearer the time of scheme implementation.

7.1.8 Currently, under the CC, registration for a discount requires the user to apply via TfL's website providing supporting documents (if required) as proof of eligibility. An annual charge is made, to cover administrative costs. The current annual charge for registering for a CC & LEZ discount is £10.

7.1.9 Where possible, TfL will seek to make any account system and payment channels inter-operable with other TfL schemes such as CC and LEZ. This will offer both users and TfL a number of benefits such as a single point for customer interface and reduced collection costs.

Enforcement

7.1.10 TfL will aim to ensure that all drivers, including non-UK drivers, are aware of the charges and find it easy and convenient to pay the relevant charge. However, as with any free flow charging scheme, there will need to be an enforcement process to ensure compliance with the charging regime.

7.1.11 The enforcement provisions are expected to be a civil process, similar to the existing CC scheme. A penalty charge notice (PCN) will be issued to

the vehicle's registered keeper if the appropriate charge has not been paid within the time limit for using Blackwall or Silvertown tunnels and there are no applicable exemptions or pre-registration for discounts.

- 7.1.12 The penalty charge payable will be determined before charging commences and will be adjusted from time to time to ensure that the level of the penalty charge is an effective deterrent and covers the costs of enforcement. The penalty payable for non-payment of the CC is currently £130 and that for moving traffic offences and parking offences which is set by London Councils is between £100 and £130.
- 7.1.13 More details on the CC, including the enforcement process, can be found online at <https://tfl.gov.uk/modes/driving/congestion-charge> .
- 7.1.14 Further details of the collection and enforcement methods will be publicised prior to the Silvertown Tunnel opening.

THIS PAGE IS LEFT INTENTIONALLY BLANK

8. PROCESS TO SET AND VARY THE CHARGE

8.1.1 Charging is an effective and flexible tool to manage demand for the tunnels and deliver other Scheme benefits as a consequence of improved traffic management. However, the effectiveness of the charge depends on the level of the charge, and the structure of the charging regime, being designed in a way that takes account of the specific conditions that exist at the time.

8.1.2 For this reason, TfL proposes to set the initial level of the user charge and the structure of the charging regime closer to the date that the Silvertown Tunnel opens to traffic. This will ensure that the charging regime reflects the conditions that exist at the time and the charges are set at a level which will manage demand for the tunnels most effectively.

8.1.3 To ensure that the user charge remains responsive to changing conditions, TfL will also have the ability to vary the charge in the future. The ability to vary the charge would encompass all aspects of the charge; for example, its level, the times it applies, vehicle classifications, direction of travel and any discounts. This flexibility will ensure the responsiveness of the charge to meet the Scheme objectives, which is essential if it is to remain effective in the future.

Key considerations in setting and varying the charge

8.1.4 In setting and varying the charge, TfL will have regard to the two overarching principles of managing traffic and paying for the scheme as well as the other consequential benefits and Scheme objectives described in Section 4 of this report.

8.1.5 In setting and varying the charge, TfL will have regard to:

- Traffic and transport: TfL will consider the likely effects of the proposed charge on demand for the Silvertown and Blackwall Tunnels as well as effects, such as changes in flow or delay, on traffic and transport across the wider network. In evaluating these factors and their implication for setting the charge, TfL would have regard to its network

management duty under the Traffic Management Act 2004⁵ and the policies, proposals, and objectives of the Mayor's Transport Strategy.

In assessing the traffic and transport effects, TfL will, amongst other things, monitor the changes in flow, capacity and delay on the surrounding strategic and local road network in the vicinity of the Scheme as well as adjacent river crossings.

Overall, TfL will seek to manage traffic demand at the Blackwall and Silvertown Tunnels to a level that ensures network capacity is not exceeded, and that significant displacement to alternative crossing routes is minimised.

- Environment: TfL will consider the likely effects of the proposed charge on the environment. TfL will seek to ensure that the Scheme in operation does not give rise to unacceptable environmental impacts (e.g. noise levels or emissions). TfL will have regard to relevant legislation and strategies, including the national and Mayor's air quality strategies.

Measurements that will be used to assess the environment effects of the Scheme will include air quality concentrations and noise levels on affected roads.

Overall TfL will seek to contribute towards environmental goals and provide net benefit to London's Environment

- Population, economy and growth: TfL will consider the likely effects of the proposed charge in supporting the performance of the local economy, the ability of residents to access employment opportunities and the delivery of new housing. TfL will have regard to planning policy set out in the London Plan and the Boroughs' Local Plans.

Overall, TfL will seek to facilitate planned economic development in east and south-east London by enhancing cross-river connectivity to

⁵ TfL's network management duty under the Traffic Management Act 2004 requires it to make sure road networks are managed effectively to minimise congestion and disruption to vehicles and pedestrians

enable businesses and residents to undertake essential movements by road more efficiently.

- Paying for the Scheme: TfL will have regard to the level of revenue likely to be generated from user charging. The amount of revenue will be considered against the cost of financing, constructing, maintaining and operating the new tunnel. TfL will manage the impact of any resulting shortfall having regard to TfL's business plan and the associated prioritisation of financial commitments.

Overall, TfL will seek to contribute, through the charge to the costs of building and maintaining the new tunnel and to use any surplus revenue in future years towards other transport improvements, including possibly other river crossings.

Setting the initial charge

- 8.1.6 The initial charge is the charge that will be payable when the Scheme opens. TfL will not set the initial charge until nearer to the opening of the Scheme to ensure it reflects and responds to the conditions that exist at the time.
- 8.1.7 In setting the initial charge, TfL will have regard to the key considerations discussed in 8.1.5 and take into account the up-to-date information on traffic, environment and other general factors including background growth and developments, particularly in east London. It will also take into account the price inflation from today's prices up to the point at which the charges come into effect.
- 8.1.8 In advance of the tunnel opening, TfL will publish a report setting out the up- to-date information on traffic, environment and other relevant variables, the proposed initial charge and the likely impacts of the charge relative to the Scheme objectives. It will also set out the details on the exemptions and discounts as well as the process for registration and payment options. Feedback and comments on the report will be invited from all key stakeholders including members of public. It will then submit a report supporting the proposed charges to the Mayor for approval.
- 8.1.9 Details on the timescale for publishing the report and the Mayoral approval process will be set out in the DCO application.

Increasing the charge for inflation

- 8.1.10 Over time, traffic levels across London are expected to grow. In order to protect the benefits of reduced congestion and improved journey times that the Scheme will deliver, it is proposed that the user charges will automatically increase in line with general price inflation. The DCO application will set out further details on the process including the frequency for applying automatic inflation based increases.

Revising the charge

- 8.1.11 After opening, TfL will continue to assess the effectiveness of the charge to meet the stated Scheme objectives and its role in assisting with the discharge of TfL's network management duty.
- 8.1.12 The key considerations discussed in section 8.5 which will apply in setting the initial charge will also inform the process for considering a revision to the user charging regime.
- 8.1.13 TfL will monitor the traffic and environmental effects of the Scheme once the new tunnel is operational. This will enable TfL to identify any unanticipated impacts arising from the introduction of the new tunnel and the implementation of the charging regime and to provide appropriate mitigation where necessary.
- 8.1.14 The Preliminary Monitoring and Mitigation Strategy describe the types of mitigation measure that could be implemented to manage any adverse impacts of the Scheme and sets out the proposed monitoring regime and timelines.
- 8.1.15 Adjusting the level /structure of the user charge is one important mitigation measure, which could be used to alter the way in which drivers use the tunnels and the local road network. Other mitigation measures could include changes to signal timings or similar traffic management measures.
- 8.1.16 For example, if the monitoring programme finds that the adverse traffic and/or air quality impacts arise along alternative routes and river crossings due to traffic rerouting away from Blackwall and Silvertown Tunnels, then measures will be developed to mitigate such effects, one of the options could be a revision to the user charge which may involve lowering the charge in order to encourage this re-routed traffic to return to using the Blackwall/Silvertown crossings.

- 8.1.17 Alternatively, if the monitoring programme finds that delays along the Blackwall Tunnel approach road continue to remain significant following Scheme opening, or adverse Air Quality impacts are found to arise on nearby surrounding roads (e.g. A12 Blackwall Northern Approach, A13 East India Dock Road), then measures will be developed to mitigate any adverse effects. One of the considerations may be to increase the charge in order to maintain its effectiveness to manage demand at the Blackwall/Silvertown crossings and their approaches.
- 8.1.18 If, at any future time, adjusting the level of charge or charge structure is considered to be appropriate, then TfL will adopt a process very similar to that adopted for setting the initial charge.
- 8.1.19 TfL will publish a report setting out the background traffic and road network data, the rationale for any revision of the charges, the revised charges and the likely impacts of the changes and give stakeholders an opportunity to provide feedback on the proposed changes. It will then submit a report supporting any proposed revision of the charges to the Mayor for approval.

THIS PAGE IS LEFT INTENTIONALLY BLANK

9. INDICATIVE CHARGES AT CONSULTATION

- 9.1.1 TfL has undertaken preliminary modelling to assess the traffic and other impacts of different levels of charges at the Blackwall and Silvertown Tunnels. In doing so, TfL has made informed predictions based on forecasts traffic conditions that will exist in the future when the Silvertown Tunnel is due to open and also taking account of existing crossing user's responses to the charge.
- 9.1.2 Specifically, TfL has considered the likely impact of the different level of charges including different peak and off peak prices, on managing traffic and paying for the Scheme as well as the consequential impacts on the environment and the local economy (described as key considerations listed in 8.1.5 above).
- 9.1.3 TfL's preliminary conclusion from this current analysis is that the charge levels shown in Table 9-1 meet the Scheme objectives and achieve a balance between limiting displacement to alternative routes and river crossings and, avoiding increasing overall demand on the Blackwall Tunnel approach routes.
- 9.1.4 The preliminary traffic, environmental, and revenue modelling indicates that at these charge levels
- There will be significant improvements to journey times and the queues on the approach roads to Blackwall Tunnel, in particular delays on the A102 and A12 in peak periods and in peak directions will be effectively eliminated without causing a material increase in demand (and hence delays) in the local area and on other routes and river crossings;
 - There will be an overall net improvement to air quality and noise across the local area as a result of less traffic and reduced congestion along the Blackwall Tunnel approaches and the A13;
 - The reduction in congestion will reduce the costs of cross river travel. This, and the improvements to journey time reliability, will make business operations more efficient and encourage increased investment, including the development of new housing and job creation; and

- The revenue from user charging will, over time, cover the Scheme cost. There may be a shortfall in the early years of the Scheme and this would be met through funding from TfL's business plan.

9.1.5 At charges higher than those shown in Table 9-1, the modelling indicates there is a risk that traffic demand at Blackwall and Silvertown would be suppressed to the extent that some traffic would be displaced towards other routes or crossings particularly during off-peak periods - most notably the Rotherhithe Tunnel, Tower Bridge, Woolwich Ferry and surrounding routes. This displacement is expected to increase the risk of adverse traffic and environmental impacts on alternative routes and crossing, and result in an overall reduction in total benefits for road users as they incur longer journey times and incur increased journey costs through the higher charge, which could also have a detrimental impact on the local economy.

9.1.6 At charges lower than the than those shown in Table 9-1, the modelling indicates that a modest amount of relief would be provided to other routes and crossings, but the overall number of trips on the Blackwall Tunnel approaches would increase particularly in the peak periods. This is expected to increase the risk of adverse traffic and environmental impacts in the local area and would result in an overall reduction in total journey time savings.

9.1.7 TfL has therefore used the charge levels shown in Table 9-1 to assess the likely significant effects of the Scheme for the purposes of the statutory consultation on the proposed DCO application. This is referred to throughout the statutory consultation documents as the "Assessed Case" and is the basis of the various assessments presented in the technical documents including the Preliminary Environmental Information Report.

9.1.8 Further details on the impacts of the Assessed Case, as well as the impacts of charges set higher and lower than those in the Assessed Case, are included in Appendix A of this report.

Charges in the Assessed Case

9.1.9 Table 9-1 below shows the Assessed Case. Within the different pricing options, TfL expects the lowest charge will be the most common (i.e. an account holder making an off-peak journey, which is £1 for cars and small vans).

Table 9-1: Charges in the Assessed Case

Charge per trip in 2015 prices (during charging hours: 6 am to 10 pm)			
User type	Account holder		Non account holder
Charge rates	Off peak charge	Peak charge	Headline charge
Time	Weekdays outside of peak period and all times on weekend	Weekday peak periods between 6-10am going Northbound and 4-7 pm going Southbound	At all times
Motorcycle, moped, motor tricycle	£1.00	£2.00	£3.00
Car and small van	£1.00	£3.00	£4.00
Large van	£1.65	£5.00	£6.00
HGVs	£4.00	£7.50	£8.50
Bus ,Coach and minibus	Free (100% discount)		

- 9.1.10 The charges used for the Assessed Case are indicative. The initial user charges will be set closer to the opening of the tunnel (under the process described in section 8 of this report) when more accurate information will be available concerning the traffic conditions that exist at the time of opening of the Scheme. Prior to submitting the DCO application, TfL will continue to model and assess the likely impacts of the Scheme and will collate information available showing the traffic conditions that are likely to exist when the Silvertown Tunnel is opened to traffic.
- 9.1.11 If new information emerges about the conditions that are likely to exist in the future or regarding drivers' likely responses to the charge, TfL may

need to revise the indicative charges that are used in the Assessed Case that is presented with the DCO application.

Current charges at Dartford Crossing

9.1.12 The charges currently payable at Dartford Crossing are shown in Table 9-2 for comparison. Within the different pricing options, the standard or commercial account option is comparable to the Account holder option under the Scheme and the single journey option is comparable to the Non-account holder option.

Table 9-2: Dartford Crossing Charges

Charge per trip (during charging hours: 6 am to 10 pm)		
User type	Standard or commercial account	Single journey
Time	Weekdays and weekends	Weekdays and weekends
moped, motorcycle, motor tricycle or quad bike	n/a	n/a
Cars	£1.67	£2.50
2 axle heavy goods vehicles	£2.63	£3.00
Multi-axle goods vehicles	£5.19	£6.00

10. NEXT STEPS

- 10.1.1 This Preliminary Charging Report is part of a suite of documents which have been made available for the statutory consultation on the Silvertown Tunnel scheme which runs from 5 October to 29 November 2015. Following this consultation, TfL will carefully consider comments made by the public and stakeholders in order to improve and refine the scheme proposals. TfL aim to submit a DCO application to the Planning Inspectorate in Spring 2016. This application will seek the consent of the Secretary of State for Transport to build and operate the proposed tunnel and all associated measures.

THIS PAGE IS LEFT INTENTIONALLY BLANK

APPENDIX A

Introduction

This note sets out the rationale behind the adoption of the charging levels defined under the 'Assessed Case' as the core forecasting scenario for assessment. These charging levels, as set out in 9.9 of this Report, were adopted on the basis that the analysis undertaken to date has shown that they achieve the traffic management objective and deliver an acceptable balance between environmental, economic and financial considerations.

This Appendix outlines, for each consideration outlined previously in 8.5 of this Report, the expected impact of implementing the Assessed Case user charges, with a brief commentary of the how the impacts are expected to differ if a higher or lower charge was adopted instead.

Assessed Case

Traffic and Transport

At the Blackwall Tunnel, peak traffic conditions (i.e. when demand is highest) typically occur in the northbound direction in the morning between 06:00 to 10:00 and in the southbound direction in the evening between 16:00 and 19:00.

The impact of the Assessed Case on peak demand through the Blackwall and Silvertown tunnels is illustrated below in Tables A.1 and A.2 and Figure A.1, where it can be seen that whilst there is expected to be an increase in peak *hour* traffic flows through the combined Blackwall/Silvertown crossing, the total demand across the wider peak *periods*, is expected to show little change, due to reductions in traffic flows during the hours immediately adjacent to the peak hour.

This demonstrates that the additional peak *hour* traffic reflects a more efficient throughput of vehicles, not an overall increase in demand. The more efficient throughput of a stable level of demand therefore results in a reduction in the duration of peak traffic conditions.

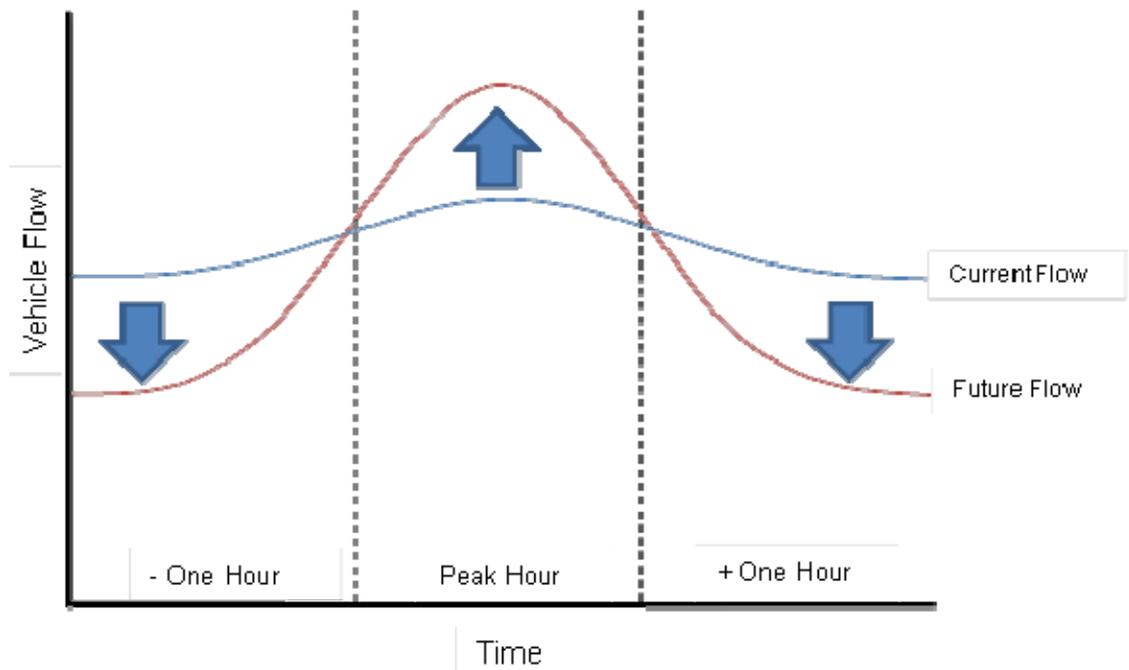
Table A.1 – Impact of Assessed Case on Peak Flows through Blackwall and Silvertown Tunnels – AM Peak Hour (08:00-09:00) Northbound

Crossing	Reference Case	Assessed Case	Change
Blackwall Tunnel	3,236	2,696	-540
Silvertown Tunnel	n/a	929	+929
TOTAL	3,236	3,625	+389

Table A.2 – Impact of Assessed Case on Peak Flows through Blackwall and Silvertown Tunnels – AM Peak Hour (17:00-18:00) Southbound

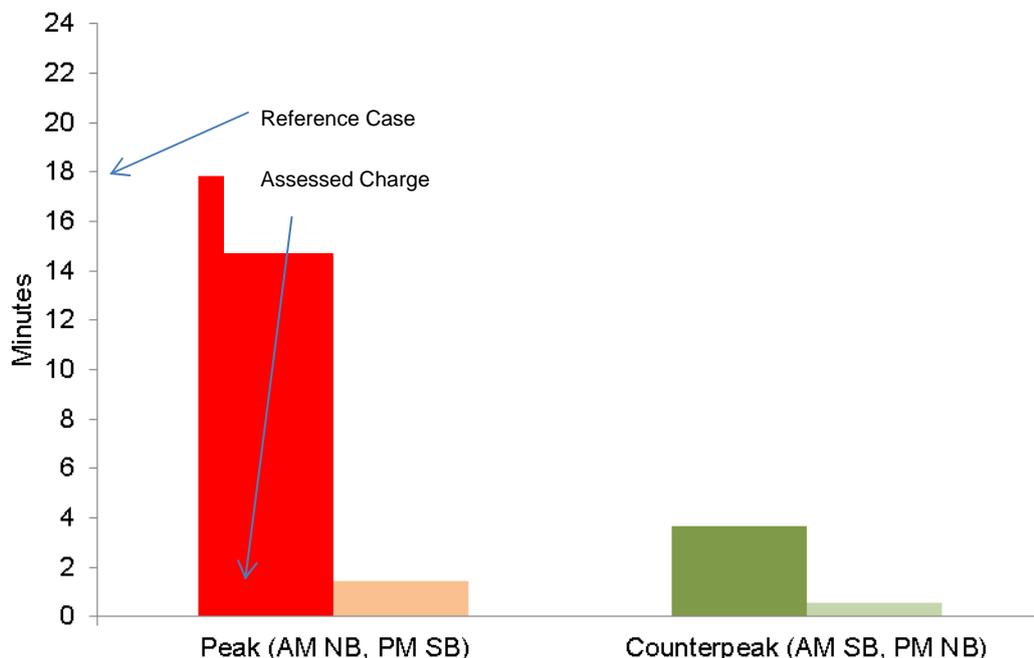
Crossing	Reference Case	Assessed Case	Change
Blackwall Tunnel	3,704	3,232	-472
Silvertown Tunnel	n/a	1,607	+1,607
TOTAL	3,704	4,839	+1,135

Figure A.1 - How traffic flows could change at the Blackwall Tunnel in peak periods



Focusing on peak hour delays at the Blackwall Tunnel, Figure A.2 illustrates the impact of the Assessed Case. It can be seen that despite the increase in peak hour traffic throughput seen previously, the Assessed Case is expected to eliminate the peak hour delays that are predicted to occur at the Blackwall Tunnel in the absence of the Scheme (the peak delays are approximately 20 minutes at present if no incidents or breakdowns occur). The peak delay shown in Figure A.2 is a typical average delay for the peak hour movements (i.e. AM 08:00-09:00 northbound, PM 17:00-18:00 southbound).

Figure A.2 – Impact of Assessed Case on Delays at Blackwall



The wider road network (i.e. beyond the Blackwall and Silvertown Tunnels and their approach roads) was also examined to determine whether the Assessed Case is expected to cause delays at any key locations and in particular, whether it would be necessary to propose mitigation works on any part of the network as part of the Scheme. This analysis showed that no significant delay increases are expected and therefore mitigation measures will need to be implemented at the time when the Scheme opens to traffic. However, the local road network will be monitored before and after Scheme opening to identify actual impacts and their cause, and then determine whether any mitigation measures are required.

This all demonstrates that, as well as eliminating queues on the A102 Blackwall Tunnel Approach roads, the Assessed Case will also not cause any additional delays elsewhere across the wider road network. Consequently, drivers will benefit from significant journey time savings. For example, the Assessed Case will save drivers some 16 minutes on a morning peak journey from Lewisham to the Royal Docks. In the evening peak, the Assessed Case would deliver savings of around 20 minutes for journeys from Stratford to key destinations on the south side of the Scheme (e.g. Lewisham, Charlton, or Eltham).

In summary, it is expected that the Assessed Case will find a reasonable balance between managing demand to cross the combined Blackwall/Silvertown crossing itself without displacing significant traffic demand (and hence delays) onto other routes and river crossings.

Environment

As a consequence of the reduction in traffic levels (both general vehicle and HGV movements) and congestion, the Assessed Case is expected to bring about a reduction in air quality emissions from transport; for example along the Blackwall Tunnel Approach roads i.e. as the A102, A12 and sections of the A13. Air quality emissions from transport would increase along roads that experience significant increases in traffic as a result of the new tunnel alignment, such as Tidal Basin Road which directly adjoins the new junction. There would also be a small increase close to the tunnel portal on the Greenwich Peninsula. Overall, this assessment suggests that there would be a **net improvement in air quality**.

Regarding road traffic noise, the impact of the Assessed Case will be negligible for the majority of receptors. In both the short term and long term there would be a net gain in the number of dwellings within the study area that would receive a decrease in road traffic noise compared to those that would receive an increase. Increases in noise would be localised around the northern tunnel portal as a result of new traffic and more HGV's in this area. Areas that would receive a perceptible decrease in noise include East Greenwich, the western side of the Greenwich Peninsula and Poplar. Overall, this assessment suggests that there would be a **net improvement in noise**.

Population, economy and growth

The effective elimination of the delays at Blackwall is expected to result in time savings, including those from improved reliability, worth £2,393m over 60 years for businesses and residents (see Table A.3). Once user charges, as well as savings from vehicle operating costs, are taken into account, net benefits to users are expected to be around £1.14bn over 60 years (in 2010 prices).

Table A.3 – User benefit summary (£m, 2010 prices, including reliability benefits)

Description	Total user benefits (£m)
Travel time	£2,393
Vehicle operating costs	£103
User charges	-£1,119
Delays during construction	-£11
Net user benefits	£1,1367

These net benefits are accrued by both car and bus users in equal measure and, to a lesser extent, by users of passenger coach services. For car users, the benefits are largely accrued by business users.

These benefits are the result of the provision of new cross-river bus services, and the removal of delays at Blackwall arising from the additional capacity (see Table A.4).

Table A.4 – Net user benefits by users (£m, 2010 prices)

User Class	All modes	Cars	Goods Vehicles (OGVs and LGVs)	Coach	Bus
Commuting	£292	£44	0	£120	£128
Other	£556	£154	0		£403
Business	£519	£539	-£80		£60
Total	£1,137	£737	-£80	£120	£591

In summary, under the Assessed Case improved journey times and journey time reliability, as well as improved access to customers and suppliers are expected to make the local area more attractive to businesses. This will support inward investment and job creation. This in turn could also improve the area's attractiveness for new housing development.

Paying for the Scheme

The revenue from user charging will, over time, cover the Scheme cost. There may be a shortfall in the early years of the Scheme and this will be met through funding from TfL's business plan.

Higher Charge

Traffic and Transport

If a charge higher than the Assessed Case is adopted then this would suppress and lower demand at the Blackwall and Silvertown Tunnels to the extent that it is expected to be even lower than in the Assessed Case. As a result, peak hour delays will be eliminated in a similar manner, however since the Assessed Case is expected to be sufficient to effectively eliminate the peak hour delays at the Blackwall Tunnel, a higher charge is not expected to provide any additional journey time improvement compared to the Assessed Case.

There is a high risk that traffic demand at the Blackwall and Silvertown Tunnels could be suppressed to the extent that some traffic will be displaced towards other routes or crossings particularly during off-peak periods - most notably the Rotherhithe Tunnel, Tower Bridge, Woolwich Ferry and surrounding routes. This displacement would be expected to result in adverse traffic and environmental impacts on alternative crossing routes, which are already operating at capacity during peak periods.

In summary, the overall impact on traffic and transport of a higher charge, compared to the Assessed Case is **slightly negative** due to the effects of likely diversion towards other routes without any additional improvement at the Blackwall and Silvertown Tunnels.

Environment

Traffic impacts arising from a higher charge are expected to result in larger improvements to air quality along the Blackwall approach routes compared to those expected from the Assessed Case – particularly along the A12 immediately north of the combined Blackwall/Silvertown crossing.

However, increases in traffic on other routes and crossings would result in an air quality worsening along these alternative routes. Since the roads leading to most of the alternative crossings are significantly more residential in character than the A102 leading to the Blackwall Tunnel and

Silvertown Tunnel, there is a likelihood that increased emissions in those locations would give rise to more problematic impacts.

In terms of traffic noise, a higher charge would see the majority of areas within the noise study area receive a minor to negligible decrease in noise levels compared to the Assessed Case. In the short and long term, the net benefits would be of a similar magnitude to those experienced in the Assessed Case. The area around the Silvertown Tunnel northern portal would see a minor to moderate increase, while the eastern side of the Greenwich Peninsula would receive a negligible increase in noise.

In summary, the overall impact on the environment of a higher charge, compared to an assessed charge, is **negative** due to adverse air quality impacts expected on routes incurring displaced traffic, some of which pass through sensitive locations.

Population, economy and growth

As outlined previously, the Assessed Case is sufficient to effectively eliminate congestion at the Blackwall Tunnel. Consequently, a higher charge is not expected to result in any additional journey time benefits beyond those accrued from the Assessed Case. Since some road users are likely to use other crossings instead, their trip length (and hence, the generalised cost of their journeys) will increase, whilst bus and coach users are unlikely to incur any benefit from a higher charge.

Whilst user benefits for bus and coach users with a higher charge are expected to be comparable to those seen for the Assessed Case, the overall net effect for road users is likely to be a **reduction in total benefits**, as each user either pays a higher charge or incurs a longer journey time by finding an alternative route.

In summary, a higher charge is likely to result in a **less attractive** environment for businesses, with lower levels of investment and job creation compared to the Assessed Case.

Paying for the Scheme

A higher charge would result in an increase in revenue, provided that the effect of reduced demand is outweighed by the additional revenue generated per user. However, if the charging level is set too high then the

consequent reduction in demand could eventually outweigh the increased revenue per user, resulting in a fall in overall revenue.

Lower Charge

Traffic and Transport

If a charge lower than the Assessed Case is adopted demand at the Blackwall and Silvertown Tunnels is expected to be higher compared to the Assessed Case. This may result in traffic from other routes and crossings diverting to use the two crossings, providing a modest amount of relief across the wider network.

Despite the additional demand at the Blackwall and Silvertown Tunnels compared to the Assessed Case, a modestly lower charge will eliminate most of the peak hour delay, but a significantly lower charge will not.

A lower charge is also expected to result in a smaller reduction in the duration of peak traffic conditions, compared to the Assessed Case. This raises the risk that, across the wider peak period, there is likely to be an increase in traffic congestion and delay in the immediate local area - particularly on key strategic junctions e.g. Preston's Road Roundabout, which could require the implementation of mitigation measures as part of the Scheme even with a modestly lower charge.

In summary, the overall impact on traffic and transport of a modestly lower charge, compared to the Assessed Case, is expected to be slightly negative. If the charge is significantly lower then the impact compared to the Assessed Case is expected to be more significantly negative due to insufficient elimination of delays at the Blackwall Tunnel.

Environment

Analysis of a lower charge, compared to the Assessed Case, shows a relatively even spread of both air quality improvements and worsenings in locations where traffic levels show increases and decrease respectively. The number of receptor incurring an adverse air quality impact is expected to be greater for a lower charge compared to the Assessed Case.

Regarding noise, compared to the Assessed Case it is likely that more receptors would receive an increase in noise compared with those

receiving a decrease. There would be a moderate to major increase in noise around the northern tunnel portal in Silvertown and the Royal Docks, along with areas on the Greenwich Peninsula and East Greenwich. Poplar and the northern tip of the Greenwich Peninsula would receive a negligible to minor improvement to noise.

In summary, the overall impact on the environment of a lower charge, compared to an assessed charge is expected to be negative, due mainly to the expected noise increase in the Silvertown area, and the number of receptors incurring an adverse Air Quality impact.

Population, economy and growth

A lower charge would increase the number of users of the Blackwall and Silvertown Tunnels compared to the Assessed Case. Whilst peak hour delays are still expected to be lower than the present-day situation, they are likely to be higher than under the Assessed Case. This would reduce the value of time savings for all users when compared to the Assessed Case.

If the charge is set low enough that congestion increases significantly compared to the Assessed Case, this would result in a reduction in total economic benefits for users as time savings would be significantly reduced for both road users and bus and coach users. High levels of congestion could also mean the area is less attractive for inward investment and may therefore result in lower levels of job creation.

Paying for the Scheme

A lower charge is expected to result in a fall in overall revenue. Whilst demand will increase if a lower charge is implemented, the additional demand will not be sufficient to outweigh the reduced revenue generated by each individual user. Furthermore, if the charge is set too low then congestion and delays will increase, which limits the potential for additional demand.