



# RIVER CROSSINGS: SILVERTOWN TUNNEL

## SUPPORTING TECHNICAL DOCUMENTATION

### OUTLINE STRATEGY FOR USER CHARGING AT BLACKWALL AND SILVERTOWN TUNNELS

Transport for London

October 2014

The draft outline strategy for user charging at Blackwall and Silvertown Tunnel aims to set out TfL's emerging approach to charging and give consultees the opportunity to provide feedback on the strategy as it is developed.

It sets out:

- TfL's reasons for proposing user charging;
- an outline charging proposal; and
- the anticipated effects of charging.

This report is part of a wider suite of documents which outline our approach to traffic, environmental, optioneering and engineering disciplines, amongst others. We would like to know if you have any comments on our approach to this work. To give us your views, please respond to our consultation at [www.tfl.gov.uk/silvertown-tunnel](http://www.tfl.gov.uk/silvertown-tunnel)

Please note that consultation on the Silvertown Tunnel is running from October – December 2014



This report (or note) forms part of a suite of documents that support the public consultation for Silvertown Tunnel in Autumn 2014. 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:-

- **Silvertown Crossing Assessment of Needs and Options**

This report sets out in detail, the need for a new river crossing at Silvertown, examines and assesses eight possible crossing options and identifies the preferred option.

- **Outline strategy for user charging at Blackwall and Silvertown Tunnels**

This note sets out TfL's emerging approach to charging at Blackwall and Silvertown Tunnels.

- **Silvertown Tunnel Traffic Forecasting Report**

This report presents the traffic impacts that the Silvertown Tunnel would have on the highway network.

- **Silvertown Tunnel Introductory Transport Assessment**

This report presents the existing transport network and travel demand and assesses the transport impacts of the proposed Silvertown Tunnel.

- **Silvertown Tunnel Outline Business Case, including:**

- **Economic Assessment Report**
- **Distributional Impact Appraisal**
- **Social Impact Assessment**

Sets out the evidence for intervening in the transport system to address the issues of congestion and road network resilience at the Blackwall Tunnel.

- **Silvertown Tunnel Introductory Environmental Assessment Report**

This report summarises the environmental work undertaken to date and presents an early indication of the potential impacts of the proposal and the mitigation measures being considered.

- **Silvertown Tunnel Introductory Equalities Impact Assessment Report**

This report presents an early indication of the potential impacts of the proposal on gender, race and age groups. It also outlines potential mitigation measures to encourage a positive impact.

- **Silvertown Tunnel Introductory Health Impact Assessment Report**

This report presents an early indication of the potential impacts of the proposal on health and wellbeing. It also outlines potential mitigation measures to encourage a positive impact.

# TRANSPORT FOR LONDON

## Draft outline strategy for user charging at Blackwall and Silvertown Tunnels

October 2014

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### 1 INTRODUCTION

- 1.1 Transport for London (TfL) is proposing a new road tunnel under the river Thames between the Greenwich Peninsula and Silvertown ("the Silvertown Tunnel"). The Silvertown Tunnel is planned as a full length twin bore road tunnel running alongside Blackwall Tunnel with connections to the A1020 Silvertown Way/Lower Lea Crossing at the Tidal Basin roundabout on the north side and to the A102 Blackwall Tunnel approach with grade-separated free-flow junction on the south. Given their close proximity and common access route on the northbound direction, the Blackwall and Silvertown Tunnels TfL would operate these as a combined crossing for traffic management purposes.
- 1.2 TfL is also proposing to charge for the use of both Blackwall and Silvertown Tunnels for two principal reasons:
- (a) To help manage the demand for using both crossing and keep traffic levels within acceptable limits; and
  - (b) To help raise funding to pay for the new tunnel.
- 1.3 This draft outline strategy for user charging at Blackwall and Silvertown Tunnel aims to set out TfL's emerging approach to charging and give consultees the opportunity to provide feedback on the strategy as it is developed. It forms part of the documents for the non statutory public consultation on Silvertown Tunnel starting in October 2014.

### 2 BACKGROUND AND RELEVANT POLICY

- 2.1 In 2012, the Secretary of State for Transport designated the Silvertown Tunnel as a Nationally Significant Infrastructure Project (NSIP). The NSIP designation requires TfL to secure planning and consents for Silvertown Tunnel by means of a Development Consent Order (DCO).
- 2.2 TfL will need to apply to the Secretary of State for a DCO to authorise the construction and operation of the Silvertown Tunnel. The DCO would also provide the necessary powers to impose charges on users of the Blackwall and Silvertown Tunnels and to enforce the collection of those charges.

#### Relevant Transport Policy

- 2.3 The Silvertown Crossing Assessment of Needs and Options report<sup>1</sup> prepared by TfL sets out in detail the framework of national, regional and local plans and policies that have

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<sup>1</sup> Silvertown Crossing Assessment of Needs and Options

informed the development plans for a new river crossing at Silvertown including user charging.

- 2.4 In particular, the strategic need and case for improving river crossings in east London is set out in Section 5.8 of the Mayor's Transport Strategy (MTS). This section contains MTS Proposal 39 (set out below) which specifically references a new fixed link crossing at Silvertown to relieve Blackwall Tunnel congestion:

#### **Proposal 39**

The Mayor, through TfL, and working with the London boroughs and other stakeholders, will take forward a package of river crossings in east London, including:

- a) A new fixed link at Silvertown to provide congestion relief to the Blackwall Tunnel and provide local links for vehicle traffic.

- 2.5 In Proposal 130 the MTS sets out the circumstances in which the Mayor may consider imposing road user charging. Charges or tolls to support specific infrastructure improvements, such as river crossings, are specifically referenced.

#### **Proposal 130**

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.

- 2.6 Reference is also made to the draft National Policy Statement on National Networks<sup>2</sup>, specifically paragraphs 3.18 to 3.21 which cover the Government's policy on road tolling and charging. Paragraph 3.20 would be relevant for Silvertown Tunnel.

#### **Government's policy on road tolling and charging**

##### *Strategic road network*

3.18 Government's policy is not to introduce national road pricing to manage demand on the strategic road network.

3.19 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

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<sup>2</sup> Department for Transport's Draft Policy Statement for National Networks;  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/263720/consultation-document-draft-national-policy-statement.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/263720/consultation-document-draft-national-policy-statement.pdf)

existing roads where they are transformed by an improvement scheme.

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

#### *Local road network*

3.21 Decisions about local tolling and charging schemes are for local and London traffic authorities.

### **3 SCOPE OF OUTLINE STRATEGY**

3.1 This outline strategy for charging sets out:

- (a) TfL's reasons for proposing user charging;
- (b) An outline charging proposal; and
- (c) The anticipated effects of charging.

3.2 In developing the Silvertown proposals further, TfL will take into account feedback on this outline. Updated material on the proposals (which will include more detailed proposals for user charging) would be made available to support the statutory consultation prior to the DCO application.

3.3 The possible introduction of charging on other proposed river crossings schemes east of Silvertown is excluded from the scope of this note. However, TfL is in the process of testing whether the presence of additional crossings could affect the demand for Blackwall and Silvertown Tunnels. Within the Traffic Forecasting Report<sup>3</sup> prepared by TfL sensitivity tests have been carried out to assess traffic impacts with both the proposed Silvertown Tunnel and crossings east of Silvertown Tunnel crossings at Gallions and Belvedere in place.

### **4 REASONS FOR CHARGING**

4.1 TfL proposes to charge for the use of Blackwall and Silvertown Tunnels for two principal reasons:

#### **Traffic management**

4.2 TfL would use charging as a way to manage demand and therefore levels of traffic passing through Blackwall and Silvertown Tunnels. This, alongside the additional capacity that Silvertown Tunnel brings, will help TfL manage overall traffic levels within acceptable limits and support its objectives of improving the resilience and road network performance of the Blackwall Tunnel and its approach roads.

4.3 While the provision of additional capacity is fundamental to addressing the problems at Blackwall Tunnel, the absence of charging to manage demand would mean that the benefits could be short-lived if this extra capacity encourages significantly more highway trips or if trips currently made by public transport were encouraged to use private

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<sup>3</sup> Silvertown Tunnel Traffic Forecasting Report

vehicles. As journey times improve with the introduction of Silvertown Tunnel, new demand attracted from the network would rapidly take up the additional capacity through the tunnels up to a point where the approach roads (both north and southbound) would reach capacity. At this point, congestion on the road network surrounding the crossing would increase, offsetting the benefits of the scheme.

- 4.4 Significant economic growth is forecast in east London and Silvertown Tunnel and a future package of river crossings will help enable and support this growth. However, preliminary traffic modelling undertaken by TfL suggests that implementing Silvertown Tunnel without a complementary system of user charging would lead to increased demand and consequential negative impacts on the surrounding network in terms of additional traffic generated. The scenarios with charging perform better in managing the demand on the tunnels and surrounding network and show improved journey times and indicate almost no queues at Blackwall Tunnel in the peak periods.
- 4.5 The introduction of charging alongside the new capacity provided by Silvertown Tunnel should also improve the air quality in the surrounding area by reducing levels of congestion and queues on the overall local road network, although further assessment is needed.

#### **Financial**

- 4.6 TfL would also use revenue generated by the user charging scheme to help pay for the new tunnel. In overall terms TfL expects 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 investment in east London.

## **5 CHARGING PROPOSALS**

### **Key principles**

- 5.1 TfL's approach to developing a user charging strategy is underpinned by the following principles:
- (a) The impact of the system upon individual road users should be seen as fair;
  - (b) The charging structure should be transparent – the charging method and associated responsibilities for the user should be clear and readily understood;
  - (c) Prices should be predictable and readily ascertainable by road users before they embark upon a journey;
  - (d) The charge system and tariff should be easy to understand;
  - (e) The charge system should be reasonably free from the possibility of fraud and evasion, both deliberate and unintentional;
  - (f) The charge scheme should be cost effective - with the charging method delivering the expected outcomes while also providing value for money; and
  - (g) Charges should as far as possible relate to the amount of use made of the scarce road space and promote the wider goals of the Transport Strategy.

### **Charging for use of both crossings**

- 5.2 Given the close proximity of Blackwall Tunnel to Silvertown Tunnel both crossings must, for both operational and financial reasons, be charged on a consistent basis.
- 5.3 From an operational perspective, if Blackwall Tunnel were not charged, traffic would naturally use this crossing instead of using Silvertown Tunnel. Only once there were queues to enter into Blackwall Tunnel would users decide to use a charged Silvertown Tunnel. However, by this time, queuing from Blackwall Tunnel, particularly for northbound traffic, would be blocking access to Silvertown Tunnel removing the time benefit of crossing via this route.
- 5.4 From a financial perspective, TfL expect that the majority of revenue will be collected from a charged Blackwall Tunnel. This is because Blackwall Tunnel will continue to operate as the main strategic link for vehicles and attract a higher proportion of traffic. The balance of revenue will come from Silvertown Tunnel. If Blackwall Tunnel were not charged, revenue from Silvertown Tunnel would be materially lower if the option of a free Blackwall Tunnel existed and total revenues would not be sufficient to cover the cost of the scheme. Alternatively just charging Blackwall Tunnel without building Silvertown Tunnel would help to manage traffic levels but not resolve the issues of resilience and capacity to support future growth.

### **Charging as a long-term measure**

- 5.5 As noted above, as well as playing a fundamental role in meeting the cost of the scheme, charging would also provide the essential means of ensuring that the scheme continues to deliver the benefits it sets out to provide. For this reason, TfL anticipates that charging would be a long-term measure, continuing for the foreseeable future at least as long as its traffic-management effects were required. In this respect, user charges would differ from tolls (as strictly defined).

### **Account and Non-account holders**

- 5.6 TfL are proposing a charging regime which differentiates between account holders and non account holders.
- 5.7 Account holders will be those users which sign-up to an auto-pay arrangement whereby they automatically pay the charge from a designated account when they pass through the crossing. This is similar to the Congestion Charge Auto pay or Dart-Tag arrangements.
- 5.8 Non-account holders will need to pay through one of the other designated payment channels, such as via a website.

### **Price of charges**

- 5.9 In setting the charging regime for Blackwall and Silvertown Tunnels, TfL has given consideration to prices on the Highway's Agency's Dartford Crossing and also to the level of revenue needed to cover the cost of scheme. Charges at Dartford Crossing, expected to come into effect in November 2014, are set out in the table below.

<b>Dartford Crossing Prices from November 2014</b>				
2014 prices	Day charges (06.00 – 22.00)		Night charges (22.00 – 06.00)	
	Cash	Dart Charge account <sup>4</sup>	Cash	Dart Charge account
Motorcycles	Free	N/A	Free	N/A
Cars	£2.50	£1.67	Free	Free
2 axle goods	£3.00	£2.63	Free	Free
Multi-axle goods	£6.00	£5.19	Free	Free

5.10 In order to meet the schemes objectives, TfL believes that:

- (a) For account holders – the price that the users would pay would vary between a peak and off-peak rate which will be set to reflect levels of traffic demand during the day. Indicatively, TfL expect that off-peak rates will be similar to Dartford Crossing cash rates, while the peak rate, when demand is at its greatest, is expected to be higher. The higher peak period rate is still being assessed and a range of options have been tested; and
- (b) For non account holders – a flat charge would apply for the use of Blackwall and Silvertown Tunnels. The charge would be higher than Dartford rates and possibly higher than what account holders would pay. Like non-account holders, night travel would be free.

5.11 This is on the assumption that Blackwall and Silvertown Tunnels prices would increase for inflation from today's prices up to the point at which the charges came into effect.

5.12 TfL will finalise the proposals for pricing together with detailed description of vehicle classification for the statutory consultation on the project to be undertaken next year.

### **Adjustment Mechanism**

5.13 After opening of the crossing, TfL expect that charges will increase annually in line with inflation and be adjusted to reflect levels of traffic demand during the day. The statutory consultation on the project undertaken next year will set a proposed mechanism for adjusting.

### **Exemptions and discounts**

5.14 In user charging schemes, exemptions and discounts are sometimes offered to classes of vehicle or types of user. Exempt vehicles are not required to take any action to comply with the scheme. However, users in receipt of a discount may need to take some action, such as registering their details, in order to secure the benefit to which they are entitled.

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<sup>4</sup> From November 2014, holders of a Dart-Tag will be asked to transfer to a new Dart Charge account.

- 5.15 Exemptions and discounts can be helpful in mitigating otherwise the unreasonable adverse impacts to the users. However, by definition they also undermine the benefits and possibly the viability of the scheme by diluting both the traffic and revenue effects. For this reason discounts and exemptions need to be considered carefully.
- 5.16 It is expected that certain categories of vehicles (such as emergency services and local TfL buses services in view of the service they provide) would be exempt from any charges. Other categories for exemption would require further consideration following this consultation.
- 5.17 TfL's present proposals do not include any specific discounts such as local residents' discounts, however consultation is likely to elicit responses on these issues and further work is to be done in this area following this consultation.

### **Collection**

- 5.18 In a scheme designed to support efficient movement of traffic, toll-barriers can undermine benefits. The viability of "open-road" or "free flow" charge-collection systems has been widely demonstrated, including in London's Congestion Charging system. A similar approach is proposed for Blackwall and Silvertown Tunnels, and TfL's assumption is that there would be no physical booths or barriers at the tunnel entrance or elsewhere to pay the charges, with charges instead being collected based on automatic detection of a vehicle's use of the tunnels.
- 5.19 TfL anticipates that the majority of users would be account holders who would sign-up to an automated-payment arrangement whereby the charge would be paid for automatically via direct debit or a debit or credit card. A smaller proportion of users are expected to be non account holders. These users would have the option of paying in advance or the next day via an on-line portal and other channels similar to congestion charging.
- 5.20 Where possible, TfL would seek to make any account system interoperable with Congestion Charging and east of Silvertown river crossing schemes. This would enable users to manage their accounts with TfL conveniently.

### **Enforcement**

- 5.21 TfL will seek the necessary powers in the DCO to enforce the collection of charges. The statutory consultation to be carried out next year will set out the key aspects of the enforcement regime including the level of penalties, the provisions to increase the penalties and the enforcement process.
- 5.22 It is proposed that the enforcement for Blackwall and Silvertown Tunnel user charges will be a civil process. The enforcement provisions are expected to be similar to the existing Congestion Charging scheme.

## **6 EFFECTS OF CHARGING**

- 6.1 TfL has undertaken preliminary modelling to assess the traffic impacts of charging at Blackwall and Silvertown Tunnels. Specifically, TfL has considered the options of building Silvertown Tunnel with and without charging against a reference case, which would be the

do minimum option<sup>5</sup>. TfL has also considered charging Silvertown Tunnel but leaving Blackwall Tunnel as a free crossing. While further work is needed in this area results of work undertaken to date are set out in the Traffic Forecasting report<sup>6</sup>.

6.2 Key findings are as follows;

- (a) The option of introducing the Silvertown Tunnel without road user charging does not adequately address the project objectives and there are some considerable negative impacts on the surrounding network in terms of additional traffic generated;
- (b) The Silvertown-only charging option performs worst against all of the project objectives. This is primarily because a high number of vehicles are estimated to be likely to queue to use a potentially uncharged Blackwall Tunnel. This queue is estimated to block the shared approach to the Blackwall and Silvertown Tunnels, leading to a very low usage of the Silvertown Tunnel as well as high levels of delay; and
- (c) The scenario where both Blackwall and Silvertown Tunnels are charged performs best against the project objectives. Under this scenario, there are considerable improvements to journey time and the queues at Blackwall Tunnel in peak periods and in peak directions are almost eliminated<sup>7</sup>.

6.3 TfL will be undertaking further work to model and assess the traffic, environmental, social, distribution and equality impact of specific charging scenarios.

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<sup>5</sup> "Do minimum option" (reference case) would see no Silvertown Tunnel and Woolwich Ferry replaced with 30% additional capacity and free

<sup>6</sup> Silvertown Tunnel: Traffic Forecasting Report

<sup>7</sup> For the purposes of traffic modelling the central case assumes a peak direction charge equivalent to Dartford and a half rate charge for counter-peak direction. Other charging scenarios will be tested prior to future consultations.