Programmes and Investment Committee

Date: **13 October 2021**

Item: **Silvertown Tunnel**

This paper will be considered in public

1 Summary

Silvertown Tunnel					
	Existing Financial Authority	EFC	Existing Programme and Project Authority	Additional Authority Requested	Total Authority
TfL Direct Costs	£117.6m[1]	£178.4m	£178m	£0	£178m
Other Costs[2]					

Notes:

[1] Reporting Financial Authority is up to 2022/2023 based on the 2021 Revised Budget. For future years additional authority will be provided for in future Business Plans.

[2] Other costs relate to Availability Payments and commercially sensitive parts of the project authorities as described in the paper on Part 2 of the agenda.

1.1 This paper provides the Committee with an update on the Silvertown Tunnel project (the Scheme) including progress with design and construction since the Committee last considered a specific paper on the scheme in July 2019. We did not provide an annual update in 2020 due to other priorities for the Committee during the coronavirus pandemic, although the Committee received regular updates as part of our general investment programme reports.

1.2 The paper also asks the Committee to approve transfer of existing Programme and Project Authority for the user charging element of the scheme to the Air Quality and Environment Programme.

1.3 A paper containing exempt information is included on Part 2 of the agenda. The information is exempt by virtue of paragraphs 3 and 5 of Schedule 12A of the Local Government Act 1972 in that it contains information relating to the business affairs of TfL and legally privileged advice. Any discussion of that exempt information must take place after the press and public have been excluded from this meeting.

2 Recommendations

2.1 The Chair, following consultation with the Committee, is asked to note the paper and the related paper on Part 2 of the agenda and approve the transfer of Programme and Project Authority to the Air Quality and Environment Programme in respect of the user charging element of the Silvertown Tunnel scheme (the Scheme), at the sum set out in the paper on Part 2 of the agenda.

3 Background

3.1 The Scheme has been developed to address the significant issues of traffic congestion and unreliability at the Blackwall Tunnel and the consequential effects these have on travel, the environment, the economy and growth across the wider east and south east London area. The Scheme has long been recognised as essential investment to support the objectives set out in the Mayor's Transport Strategy. For example, the Silvertown Tunnel allows us to develop the cross-river bus network to fill gaps in the rail system and increase the share of public transport travel across Blackwall and Silvertown tunnels to 30 per cent from less than 10 per cent today. This will increase the potential to deliver new housing and improve access to jobs.

3.2 The scheme consists of a twin bore road tunnel providing a new connection between the Greenwich Peninsula and the Royal Docks. There will be two traffic lanes in each direction with one lane reserved for buses, coaches and Heavy Goods Vehicles. Once open, the tunnel will be located within the expanded Ultra Low Emission Zone. New junctions will be constructed to link the tunnels into the existing road network and new portal buildings to house the equipment necessary to operate the tunnels. An overview plan of the Scheme is provided below.

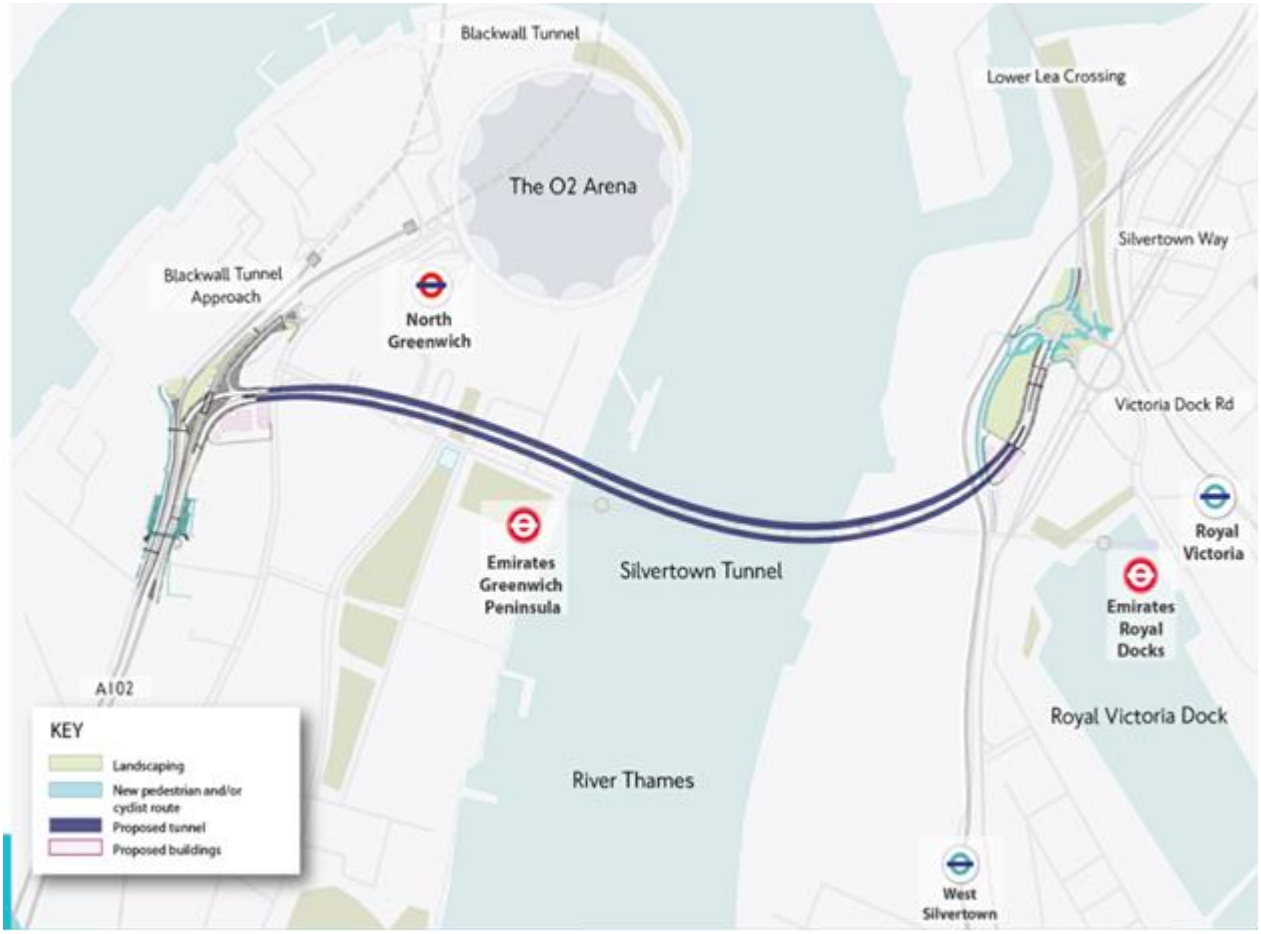

Figure 1: overview of the Silvertown Tunnel scheme

3.3 To ensure that traffic levels are managed and that the benefits of the Scheme are secured for the long term, a user charge will be implemented at both Silvertown and Blackwall Tunnels. The user charge is expected to be an effective mechanism to manage demand at the crossings by creating a disincentive for private vehicle use. The revenue from the charge will also help pay for the Scheme.

3.4 The Secretary of State for Transport designated the Scheme a Nationally Significant Infrastructure Project in 2012 and granted a Development Consent Order (DCO), on 10 May 2018, which has provided us the powers to construct and operate the Scheme, as well as introduce user charging at both the Silvertown and Blackwall Tunnels.

3.5 In May 2019, the Committee agreed the relevant authorities for awarding the contract to design, build, finance and maintain the tunnel. The Committee received an update in July 2019 and the contract was subsequently awarded to the Riverlinx consortium in November 2019. This paper provides an update on Scheme progress since then.

4 Design and Construction Progress

4.1 Since award of the contract in November 2019, Riverlinx have made substantial progress on the design and initial construction works for the Scheme. Appendix 1 provides images that highlight design and construction progress.

4.2 Riverlinx have established a high-quality team of specialists to design the tunnel and associated works. The tunnel is designed by COWI with Arup and dRMM input into the above ground elements of the project.

4.3 As well as the new tunnel itself, we are designing a range of improvements to the existing road network and streetscape either side of the river, where significant regeneration is underway and planned in the coming years, including the move of the Greater London Authority to the Crystal building in the Royal Docks.

4.4 A number of local walking, cycling and urban realm improvements are being designed as part of overall landscaping plans for the site, with off-carriageway cycle routes provided with segregation from pedestrians where practicable.

4.5 We have established design review processes to ensure good practice is incorporated in the design and the requirements of the contract are delivered in full. The design review process includes input from external stakeholders through several targeted forums, including:

(a) Stakeholder Design Consultation Group: Members consist of surrounding landowners and other interested parties;

(b) Design Review Panel: Members consist of a panel of independent experts who advise on the above ground elements of the Scheme; and

(c) Local Planning Authority: Many aspects of the authorised development must be submitted to and approved in writing by the relevant planning authority as required by the DCO.

4.6 A Tunnel Design Safety Consultation Group has also been established to ensure the tunnel design is properly focused towards operational safety. Members of the group include the designers, Fire Brigade, Ambulance Service, Environment Agency and local borough emergency planning departments.

4.7 Construction worksites are now established on both sides of the river, and enabling works are underway including site clearance, set up and utility diversions. Piling works to construct the launch chamber shafts for the Tunnel Boring Machine (TBM) are also complete, with their excavation and TBM manufacture progressing well.

4.8 At Greenwich, a replacement coach park for the O2 Arena is now complete and works will shortly begin on a multi-storey car park to consolidate parking facilities on the peninsula and enable our main construction works but also to facilitate wider redevelopment of the area in line with the Greenwich Peninsula Masterplan.

4.9 While the Scheme's construction requires the removal of certain trees and habitat, the Scheme overall will lead to an increase in biodiversity with planting on building roofs and new landscaping areas creating new habitat.

4.10 We are actively incorporating measures into the design and construction methods to ensure that carbon emissions of construction of the Scheme are minimised as far as reasonably practicable.

4.11 All construction vehicles meet the highest emission and safety standards. The use of hybrid excavators has also shown positive early results with a reduction in fuel use of up to 80 per cent.

4.12 Most construction material will be transported via the River Thames to remove construction traffic from the road network. Over 60,000 tonnes of spoil have already been transported off site via barge, removing in excess of 3,500 equivalent vehicle loads from the road network. Several thousand tonnes of concrete arising from site clearance and demolition works will be re-used on site within both temporary and permanent works. Examples of this so far include reusing crushed concrete to form the new site access road and creating piling mats to allow our rigs to safely carry out their work.

Equality, Diversity and Inclusion

4.13 As required by the contract, Riverlinx is complying with key equality and diversity measures and adopting best practice in this area, including through:

(a) setting a comprehensive equality policy in line with current legislation;

(b) establishing recruitment policies and procedures which exclude practices that are discriminatory, create unfair conditions of employment or create unequal rates of pay;

(c) actively engaging and securing of long-term relationships with employment agencies in the local community and unemployment programmes; and

(d) promoting access to employment and training opportunities connected with the construction for people in the local boroughs, and disadvantaged groups.

5 Programme and Key Milestones

5.1 We brought all non-essential construction works to a safe stop in March 2020 in response to the coronavirus pandemic. This included some ground investigations which were being undertaken by Riverlinx. However, as the Scheme was in the design phase, rather than construction, impacts to programme were limited. Commercial impacts, along with further details on the current programme, are detailed in the paper on Part 2 of the agenda.

5.2 The key construction milestones for the project are set out in Table 1 below:

Table 1: construction milestones

Milestone	Target Date
Construction activities started	2020
Tunnel boring operation commences	2022
Tunnel boring operation completes	2023
Tunnel opening	2025

6 Communications and Engagement

6.1 Working closely with Riverlinx, we hold regular meetings to ensure we keep relevant stakeholders updated on our plans and can address any risks to delivery. We hold Community Liaison Groups on both sides of the river to provide updates to the local community, businesses and other interested parties. The groups are held quarterly (currently on-line) but may return to venues in Newham and Greenwich when practical.

6.2 This summer, we distributed 40,000 leaflets to residents and businesses across the local area to provide information and updates about the Scheme and make clear how we will keep people informed as the Scheme progresses.

6.3 This coincided with the launch of a new website by Riverlinx[1] and a virtual exhibition[2] where people can learn more about the details of the Scheme.

7 Silvertown and Blackwall Tunnel User Charging

7.1 An integral element of the Scheme is the implementation of user charging at both the Silvertown and Blackwall Tunnels when the Silvertown Tunnel opens. The charge will be an effective mechanism to manage demand at the crossings by creating a disincentive for private vehicle use and ensuring greater network efficiency and reliability for essential traffic. This is crucial to ensuring the project can meet its objectives around improving road network performance and resilience, and mitigating any impacts on communities, health and the environment.

7.2 We are responsible for designing and implementing the tunnel user charging system outside the scope of the Riverlinx contract, although Riverlinx is constructing some physical infrastructure such as gantries.

7.3 Activity is ongoing to develop the user charging system for Silvertown and Blackwall Tunnels. We have transferred responsibility for delivering the tunnel user charging elements of the Scheme to the teams within TfL responsible for delivering the expansion of the Ultra-Low Emission Zone, Congestion Charge changes, and other future road user charging projects. This will not affect our ability to manage the user charge in line with TfL's obligations under the Development Consent Order, but recognises the potential efficiencies, delivery expertise and importance of consistency for our operations and our customers that will be provided by delivering all road user charging activities through the same team. Tunnel user charging remains an important aspect of the overall Silvertown Tunnel programme and so overall accountability remains with the programme sponsors and Major Projects Directorate.

7.4 Further detail on the initial work to develop the tunnel user charging elements of the Scheme is provided in the paper on Part 2 of the agenda.

7.5 The Committee is asked to approve the transfer of the relevant authorities, as set out in Part 2 of this paper, for the user charging element of the Scheme to the Air Quality and Environment Programme.

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[1] https://www.riverlinx.co.uk/
[2] https://www.riverlinx.co.uk/virtual-tour-mode

8 Monitoring and Mitigation

8.1 Also, separate from the Riverlinx contract scope, we are undertaking a range of monitoring, modelling and assessment work to ensure we understand the Scheme's benefits and impacts in operation. This comes alongside our wider work to deliver on the objectives of the Mayor's Transport Strategy, such as the expansion of the Ultra Low Emission Zone to the area.

8.2 This work will assist in setting the initial values for the tunnel user charges for the Scheme, plan the new cross-river bus network, and develop appropriate localised mitigation for traffic, air quality and other matters, if required.

8.3 The aim of this work is to ensure we develop the Scheme in a way that delivers on the forecast benefits and impacts as identified through the DCO. This showed that the Scheme would effectively eliminate congestion at the Blackwall Tunnel and provide much improved reliability and resilience to the regular incidents that lead to miles of standing traffic across wide areas of south and east London.

8.4 The new tunnel, along with the new user charge and opportunities offered by new cross-river bus and coach services will allow us to effectively manage travel demand at this key river crossing for the long-term. The Scheme is not forecast to lead to an increase in traffic and associated carbon emissions and is expected to provide an overall improvement in air quality. The latest air quality assessment is summarised in Table 2 below, and further detail is provided in the documents submitted as part of the DCO application, available on the Planning Inspectorate website[3].

Table 2: Air quality assessment results

Magnitude of Change in Annual Average NO_2 or PM_{10}	**Total Number of Receptors at which:**	
	Worsening air quality	**Improvement in air quality**
Large (>4µg/m³)	0	8
Medium (>2µg/m³)	0	22
Small (>0.4µg/m³)	17	70

8.5 Our modelling and assessment work will be updated prior to the tunnel opening and this will be used, for example, to set the initial user charges, to inform establishment of the initial bus network and to identify any localised mitigations, if required.

[3] https://infrastructure.planninginspectorate.gov.uk/projects/london/silvertown-tunnel/

8.6 This will account for any changing transport patterns as a result of the coronavirus pandemic. Early indications, however, suggest that there has not been significant change in this area, as even in the height of the lockdown there were still queues and congestion on the Blackwall tunnel approaches, highlighting the importance of this river crossing. It will also take into account other schemes, such as the expansion of the Ultra Low Emission Zone which will cover both the Silvertown and Blackwall tunnels and their approaches. This was not planned at the time of the previous work and so is likely to bring further air quality improvements to the area prior to the opening of the Silvertown Tunnel.

8.7 Once the tunnel is open, real-life monitoring of traffic, air quality and other factors will continue to review the benefits and impacts of the Scheme, and allow us to make adjustments as required, e.g. to the tunnel user charge.

8.8 We have appointed a number of specialist consultants to support us in this work, which has progressed significantly over the past year, including the installation of new traffic and environmental monitors at strategic locations around London. In certain areas we have gone above and beyond the minimum monitoring commitments set out in the DCO in order to support improved understanding of air quality across London and wider initiatives to deliver the objectives of the Mayor's Transport Strategy. For example, we have installed additional monitoring of PM2.5 despite our assessment demonstrating that the Scheme will not have any significant impacts on this pollutant.

8.9 We are also working closely with stakeholders to develop this work through Silvertown Tunnel Implementation Group (STIG), whose members consist of 12 London Boroughs, the Greater London Authority and Highways England.

8.10 The STIG meeting papers are all published on the TfL website[4] and provide further details of our work in this area.

9 Bus Network Planning

9.1 The opportunity to transform the cross-river bus network in this part of London is a major benefit of the Scheme. Once the tunnel is open, the total number of buses running through both Blackwall and Silvertown Tunnels will increase, and we are planning to run at least 20 zero-emission buses per hour through the tunnels at peak times from Scheme opening. We expect the overall provision of buses through the area could increase to 37 buses per hour over time as new developments drive growth in the area. We will provide concessionary bus travel to encourage uptake of these new services once the tunnel opens and capitalise on the opportunity for mode shift provided by the Scheme.

9.2 An assessment framework is currently being developed to compare different bus network options and further information on this work will be shared with STIG in the coming months. The bus network will be planned to meet current and future predicted demand and to deliver against our obligations in the DCO[5].

[4] https://tfl.gov.uk/travel-information/improvements-and-projects/silvertown-tunnel-implementation-group
[5] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010021/TR010021-001649-TfL%208.82%20Bus%20Strategy%20R1.pdf

10 Assurance and Governance

10.1 In April 2021, the Audit and Assurance Committee considered a review from our auditor, Ernst & Young[6], investigating objections raised by Stop the Silvertown Tunnel Coalition, the London Assembly Oversight Committee, Transport Action Network and Friends of the Earth. The report focused on the business case, with review of optioneering and Value for Money considerations, as well as termination cost provisions in the contract. Ernst & Young's conclusion was that the business case was well constructed and went through an extensive governance process. They agreed that our consideration of options was sufficient, and the benefits of the Scheme would deliver Value for Money.

10.2 The programme has recently been the subject of an Integrated Assurance Review by Project Assurance, an External Expert and the Independent Investment Programme Advisory Group. The review did not identify any critical issues. The relevant reports are provided to the Committee.

List of appendices to this report:

Appendix 1: images of design and construction progress

A paper containing exempt supplementary information is included in a paper on Part 2 of the agenda.

List of Background Papers:

Independent Investment Advisory Group (IIPAG) Report

TfL Project Assurance Report

Management response to IIPAG and TfL Project Assurance reports

Papers relating to Silvertown Tunnel, submitted to the Committee meeting in May 2019

Contact Officer: Alexandra Batey, Director of Investment Delivery Planning
Email: AlexandraBatey@tfl.gov.uk

Contact Officer: Stuart Harvey, Director of Major Projects
Email: StuartHarvey@tfl.gov.uk

[6] https://content.tfl.gov.uk/project-telford-final-report.pdf