

Meeting title:	Silvertown Tunnel Implementation Group Meeting #05
Date & time:	27 January 2022, 0930-1130
Location:	Virtual meeting hosted on MS Teams

Item:
<ol style="list-style-type: none">1. Introductions and welcome (All)2. Review of actions from previous meeting on 30 September 2021 (TfL)3. Safety, Health and Environment (All)4. Project update (TfL)5. Emerging modelling outcomes (TfL/Jacobs)6. Update on initial bus proposals (TfL)7. User charging assessment framework (TfL)8. Approach to identifying mitigation measures (TfL)9. Other relevant updates (All)10. Obligations and forward meeting planner (All)11. Next steps and AOB (All)

Item 4



Silvertown Tunnel Implementation Group

Update report
27 January 2022

MAYOR OF LONDON



**TRANSPORT
FOR LONDON**
EVERY JOURNEY MATTERS

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STIG administration	4
General project update	5
Refreshed Assessment of scheme impacts	7
User charging	7
Bus network planning	8
Mitigation measures.....	8
Monitoring of scheme impacts	9

STIG administration

Remit of STIG

The Silvertown Tunnel Implementation Group (STIG) has been established under the terms of the Silvertown Tunnel Order 2018 (the Development Consent Order, or DCO), available here:

<https://www.legislation.gov.uk/ukxi/2018/574/contents>

Article 66 of the DCO sets out details of the group, the bodies that are represented on the group and the matters on which TfL must consult STIG. In summary, these matters concern the following two activities:

- Undertaking an updated or 'Refreshed Assessment' of the scheme's impacts when operational, to inform the user charges, changes that will be made to the bus network and any mitigation measures that may be required
- Monitoring the scheme's traffic, environmental and socio-economic effects once operational

These activities will be undertaken in accordance with the following documents which were certified as part of the DCO:

[Monitoring & Mitigation Strategy \(rev 2\)](#)
(herein referred to as the MMS)

[Bus Strategy \(rev 2\)](#)

[Charging Policies and Procedures \(rev 3\)](#)
(herein referred to as the Charging Policy)

A Terms of Reference was agreed by STIG members at the meeting on 28 January 2021. This will be kept under review and updated where necessary. Further information on STIG including papers and meeting notes can be found on TfL's website here:

<https://tfl.gov.uk/stig>

Meeting frequency / dates

In keeping with the STIG meetings that have taken place to date, we anticipate continuing the STIG meeting frequency on a four-monthly cycle until the Refreshed Assessment is concluded in early 2023. The next meeting is provisionally planned for 26 May 2022, with the subsequent meeting planned for September 2022.

Recording of decisions

Where TfL consults with STIG members on any matter listed within Article 66 of the DCO, a summary of the consultation undertaken, the responses received by STIG members and any material decision subsequently made by TfL in relation to that matter will be duly recorded. Draft 'record of decision' forms in respect of the socio-economic and traffic monitoring have been circulated to STIG members with the meeting papers for this meeting.

DCO obligations

The DCO and associated certified documents contain a large number of obligations which, under DCO conditions, TfL must discharge. Several of these obligations make a direct reference to the role of STIG and its membership.

TfL is maintaining a record of those DCO obligations that either make a direct reference to STIG or are deemed to be of specific interest to members. Progress on these obligations is being tracked in the form of a tracker and shared with the group at each meeting.

A copy of this obligation tracker will continue to be sent out to STIG members, with all other pre-meeting material prior to each meeting.

Purpose of this report

This report is intended to provide an overview of progress on the matters that are relevant to STIG. It also includes a brief update on the general progress of the project for information.

General project update

Safety, Health & Environment update

At the last meeting in September 2021 a question was raised on SHE incidents and reporting. Riverlinx report on the following SHE-related key performance indicators:

Category	Key performance indicators
Environmental	No of Notifiable Environmental Incidents
Waste	% of total construction waste reused or removed for beneficial use
Safety	Safety reporting within agreed timeframes
	RIDDOR reportable accidents
	H&S tours / inspections completed
	New starter inductions & health questionnaires within agreed timeframes
	Worker engagement tours completed

TfL uses this reporting to monitor Riverlinx's SHE-related performance, benchmarking against other major projects where necessary, and to ensure commitments are being met. SHE data can be reported to STIG members going forward if this would be useful.

Construction update

The scheme's detailed design is moving into the final stages, with major aspects of the scheme now signed-off and in construction. The final detailed design submissions for the new tunnel portal buildings are due to be submitted to Greenwich (21-Mar-2022) and Newham (15-Apr-2022), as the local planning authorities. The final detailed design submission for the new Boord Street pedestrian and cyclist bridge is due to be submitted to Greenwich on 21-Mar-2022 .

The Tunnel Boring Machine (TBM) passed its Factory Acceptance Test in December 2021. The TBM is now being dismantled in Germany and the individual components transported in more manageable sizes that have now started

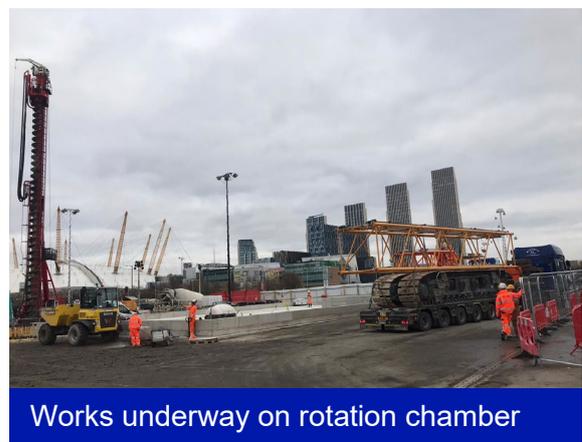
to arrive to site from Germany, where it will be reassembled ahead of commencement of tunnelling from the north work site. In preparation for this work is progressing to construct the TBM launch chamber, with piling now complete and the first stages of excavation continuing.



Aerial view of the launch chamber

The key elements of the works to the river wall on the north site have been completed to allow for the TBM to pass safely underneath. Works to divert Dock Road and all of the associated utility diversions required to achieve this have continued, with many now completed.

At the south site, works have commenced on the rotation chamber with this being a critical path activity. These works are on track to be ready for when the TBM arrives for rotation.



Works underway on rotation chamber

Programme

Based on the current programme the Silvertown Tunnel is planned to open in spring 2025.

Community Liaison Groups

Community Liaison Groups (CLGs) are held to provide construction updates to the local community, businesses and other interested parties and are an opportunity to provide feedback to Riverlinx directly. CLGs are held quarterly (currently on-line) but will return to venues in Newham and Greenwich when practical.

The next meeting dates are:

- 8 March 2022 (Greenwich)
- 15 March 2022 (Newham)

Any party wishing to be sent an invitation to attend a CLG should contact the site helpdesk:

Email: help@riverlinxcjv.co.uk

24/7 Helpdesk: 07907 978 486

Project communications – September to January 2021

Since the last STIG meeting two CLG meetings were held where a range of issues relation to the delivery of the scheme were discussed, including air quality monitoring, defences, deliveries to and from the site, the removal of trees on Boord Street and the impact of a de-watering pipe installation.

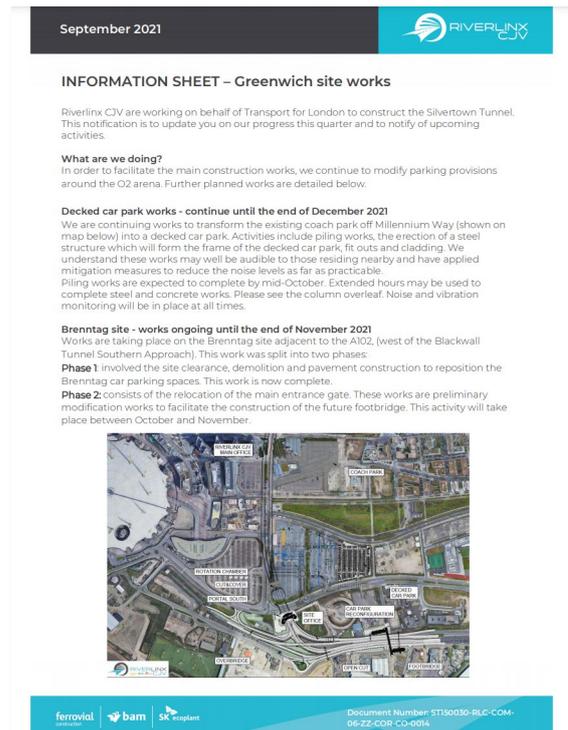
TfL representatives attended a meeting of the Greenwich Regeneration, Transport & Culture Scrutiny Panel on 9 December 2021 to provide an update on progress. We are happy to consider invitations to any Council meetings from any borough represented on STIG.

A number of questions relating to the scheme were also received by the Mayor from London Assembly members. The questions covered various topics including project costs, user charging and

emissions. London Assembly questions and answers relating to the Silvertown Tunnel project can be found [here](#).

Riverlinx information bulletin

The latest information bulletin was distributed to local residents and businesses in September 2021, covering works at both work sites and road closures to Dock Road and West Parkside.



Upcoming communications in 2022

This year we will continue to focus on the key message that construction of the tunnel is now well underway, with sites established on both sides of the Thames and a year of tunnelling ahead.

Specific communications projects for the year ahead include:

- TBM naming competition results to be announced
- Continued updating on progress of the TBM arrival and assembly
- Promoting our 'Year of Tunnelling' ahead
- Raising awareness of upcoming road closures and diversions

Refreshed Assessment of scheme impacts

A range of modelling applications will be used to inform the Refreshed Assessment of the scheme's operational impacts, based on updated information and data.

Traffic modelling

The strategic modelling is now well into the forecasting stage. We have undertaken a year 2025 model run where all aspects of the scheme (e.g. charging levels, bus service specification) are assumed to be the same as per the original DCO Assessed Case. This allows us to evaluate the effect of adopting the new MoTiON model and updates input assumptions therein e.g. revised OBR economic growth projections, latest GLA population/employment forecasts and updates to TAG guidance including latest values of time.

In addition, work has also commenced on a series of further model runs including the testing of alternative bus service specifications and a low-income discount, as well as a year 2041 forecast. Analysis of these model runs is underway and some emerging highlights are going to be shared with STIG at the meeting on 27 January.

The data collection exercise for the local modelling has completed and the modelling is progressing in accordance with the TfL Model Auditing Process. The validation of the junction base models are currently being audited by TfL Network Performance Delivery (LMAP 3). The base microsimulation model is at an earlier stage (VMAP 2B) due to model complexity. Over the next couple of months validation for the microsimulation model will be complete and the focus will turn to the Reference Case models.

Environmental modelling

The scope of the environmental compliance assessment report was shared with STIG members in July 2021. No comments were received on the report, and we are continuing to progress with the environmental compliance assessment in line with the scope. The compliance assessment will utilise outputs from the Refreshed Assessment to respond to the requirements of Policy 10 of the Charging Policy in connection with setting the opening user charges.

The environmental modelling will comprise updated air quality and noise models and will utilise outputs from the traffic modelling. Development of the environmental models has now commenced, with a review of the links within the air quality model underway to determine any amendments that are required to ensure consistency with the traffic modelling. The outputs from the models will feed into the environmental compliance assessment report in due course.

Since the last STIG meeting in September, good progress has been made on developing the air quality baseline models that will be used as part of the Refreshed Assessment. This is in advance of the commencement of the air quality (Lot B) modelling programme which starts in February. Outputs from the air quality modelling work will be shared with STIG later in the year.

User charging

An integral element of the scheme is the implementation of user charging at both the Silvertown and Blackwall Tunnels when the Silvertown Tunnel opens.

High level requirements for the user charging system for both tunnels have now been captured, in accordance with the Charging Policy. These

requirements are being used to inform the user charging system design. The user charge will need to be flexible to allow for any future changes that need to be made to manage impacts once the tunnel is open, and this flexibility has already been captured within these requirements.

Whilst the design and delivery of the user charge system has been handed over to the team that manages other Road User Charging schemes within TfL, appropriate governance and procedures are in place between the Silvertown project team and the User Charge deliverability team to ensure that specific requirements remain up-to-date, for instance through regular meetings to manage key interfaces between the different parts of the project. It will be important for regular updates on the Refreshed Assessment work that will determine the appropriate level of user charge are provided at these regular meetings, and any changes needed to be fed through at the appropriate time.

The upcoming Refreshed Assessment work will initially assume the same user charges as proposed during the DCO application stage. As this work progresses over the coming months, and the interactions between the traffic and environmental modelling are better understood, the charges will be reviewed and refined where required. The User Charge Assessment Framework (UCAF) will be used to assess the performance of any changes proposed to the user charge.

Bus network planning

The development of the future cross-river bus network is continuing, with the focus now on assessment framework that will be used for assessing different bus network options.

As advised at the last STIG meeting, a separate working group meeting was held for interested STIG members on 20 October 2021. Minutes of this meeting were circulated to all STIG members on 3 December 2021.



At this working group TfL outlined its strategic approach for identifying the future corridors in east London that the cross-river bus network could serve. Feedback and suggestions from STIG members on how the bus network should be planned will be used alongside outputs from the Refreshed Assessment to develop the STT bus network. This will be in line with the objectives and commitments set out in the Bus Strategy. TfL's proposed approach to addressing Requirement 14 of the DCO, which relates to the cross-river bus network, will be covered at the meeting on 27 January.

Mitigation measures

TfL is required to submit details of any necessary mitigation measures to the Secretary of State for Transport for

approval having first consulted with members of STIG. Initial discussions have taken place with the Department for Transport regarding the format of the submission to ensure the necessary level of detail is provided.

Consideration is now being given to the options for identifying the need for potential mitigation measures, drawing on the process outlined in the MMS as well as recent experience from the Ultra Low Emission Zone extension project. A paper which updates on this has been circulated to STIG members and will be discussed at the meeting on 27 January.

Monitoring of scheme impacts

The scheme's effects once operational must be monitored for at least three years, and in order to provide a representative baseline this monitoring must commence at least three years pre-opening.

Traffic monitoring

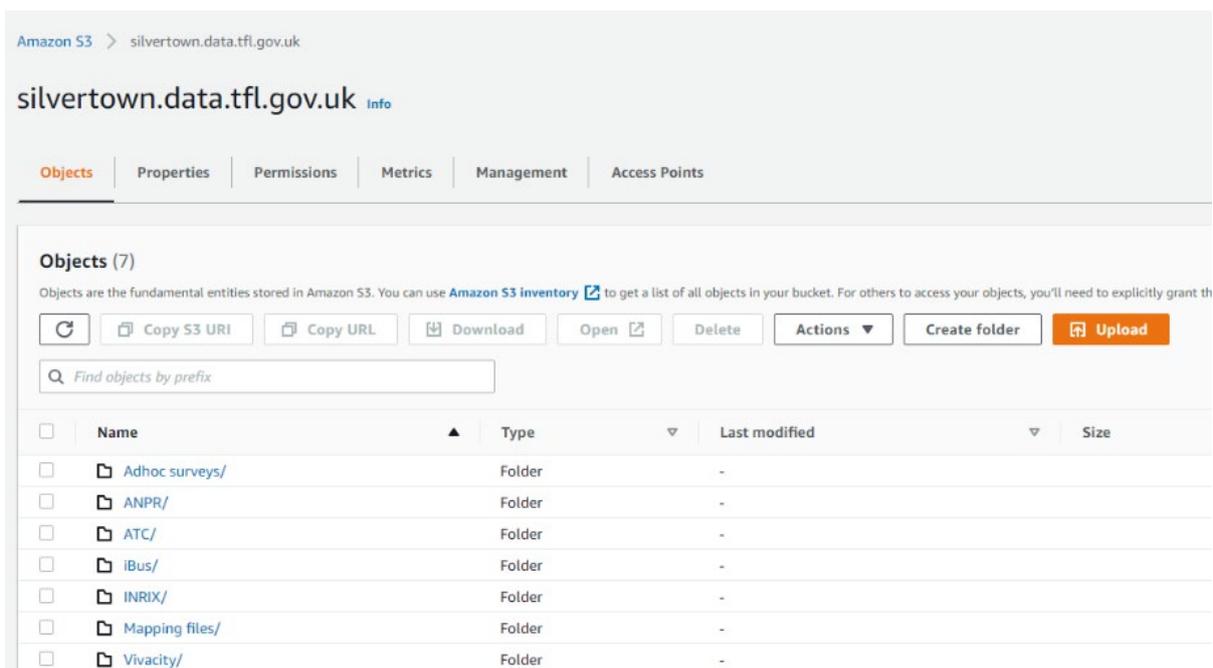
The proposed approach to traffic monitoring was presented to STIG on 27 May 2021 and the traffic monitoring plan

was shared at the last meeting on 30 September 2021. Traffic monitoring in connection with the scheme commenced in November 2021, including a bespoke survey at the Woolwich Ferry.

Installation of the new market-leading traffic monitoring sensors is continuing, with all sensors expected to be installed in early 2022, and the data collected will be assimilated into the monitoring baseline as it becomes available. Further engagement has also taken place with affected boroughs about incorporating borough owned traffic data in the monitoring plan.

We have been considering the best means of making the monitoring data collected available to STIG members, and it is now intended that all of the raw data that is being collected to monitor the traffic impacts in the scheme's area of influence will be made available using the cloud storage platform Amazon Web Services (AWS). A link to access the platform and log in details will be provided to all STIG members.

This appears to be a more flexible solution than other options that have been considered, such as Sharepoint. The option of a PowerBI dashboard can still be



Screenshot showing proposed AWS platform for traffic monitoring data

explored in the future once more data has been gathered.

Air quality monitoring

December 2021 saw the first anniversary of the air quality monitoring baseline. Work has now commenced to compile the data into the first annual air quality baseline report. This work is due be completed in spring 2022. In the meantime the data from the CMS sites is accessible on the London Air Quality Network Website:

<https://www.londonair.org.uk/LondonAir/Default.aspx>

Noise monitoring

Noise monitoring data was collected in the vicinity of the Silvertown Tunnel portals in RB Greenwich and LB Newham for a period of 12 months prior to the start of construction activities. No further noise monitoring has been undertaken to inform the refreshed assessment. Noise monitoring as part construction activities is undertaken by Riverlinx.

Socio-economic monitoring

TfL's approach for socio-economic monitoring was presented to STIG at the meeting on 27 May 2021. The first wave of resident and business surveys have now been completed, and the final versions of the questionnaires have been made available to STIG members.

As explained at the last STIG meeting, the 2021 primary research will be supplemented with business focus groups, to allow a greater qualitative exploration of issues identified in the business survey. Four focus groups have been planned for late January with local businesses and outputs from the primary research will be shared with STIG in due course.

Item 7

Silvertown Tunnel Implementation Group

User Charge Assessment Framework

January 2022

This note provides an overview of the User Charge Assessment Framework (UCAF) and its use in setting the initial user charge, as part of the Refreshed Assessment work, and in making any subsequent changes to the user charge once the tunnel opens. It will also describe the preliminary thinking about how the UCAF will be used in practice during the Refreshed Assessment work over the next 12 months, for discussion with the Silvertown Tunnel Implementation Group (STIG).

Background

The DCO grants powers to TfL to impose user charges on vehicles using both Silvertown and Blackwall tunnels, giving TfL the power to:

- Set the user charges prior to scheme opening (a key task within the Refreshed Assessment)
- Keep the charges under review and,
- Vary the charges.

The process that TfL must adopt when applying these powers is set out in detail in the Charging Policies and Procedures (CPAP) certified document. The CPAP sets out the formal procedures and policies that shall apply when TfL sets the initial charge and makes any subsequent variations to the user charge post-opening.

User charges are an essential component of the scheme and are required to meet the Project Objectives through managing traffic demand and therefore mitigating against adverse traffic and environmental impacts. The Project Objectives are listed in section 2.1.2 of the [CPAP](#) and Policy 2 specifies that, in setting and varying the user charges, TfL must ensure that the user charges are fair, justified and will not undermine the Project Objectives.

Given the length of time between securing powers and the opening of the tunnel, the DCO stipulates the project must undertake a Refreshed Assessment of the scheme's operational impacts nearer to the time of tunnel opening in order to establish the proposed bus network, plan for any local highway mitigations needed and to set the user charge. To achieve the optimal charge on opening, the CPAP proposes that a UCAF should be completed to assess the extent to which the proposed user charges will achieve the Project Objectives, and also enable TfL to fulfil its other duties, including its network management duty under the Traffic Management Act 2004.

A UCAF was developed during the DCO application process and is included in Appendix C of the CPAP. The UCAF includes a list of proposed measures against which the performance of the seven Project Objectives is assessed. In addition to using quantitative measures from forecast models and monitoring data, Project Objective 6 also allows for stakeholder representations to be captured, the primary source of which will be from STIG members. The UCAF from the CPAP is also copied at the back of this note for ease of reference.

The UCAF will also be used when making any subsequent variations to the charge. Policy 11 states that TfL must keep the user charges under review, and will make variations to charges where this is considered necessary to ensure the continued achievement of the Project Objectives.

A full description of the procedures for how the UCAF is to be used in the setting of the initial user charge, and in any subsequent variations to the charge after tunnel opening, can be found in the CPAP. It's expected that the form of the UCAF post-opening will vary from the UCAF used for the Refreshed Assessment dependent on the data that will be available when the tunnel is open. This is due to the fact that, as part of the Refreshed Assessment, detailed modelling and appraisal tools are being developed to forecast the scheme impacts which won't be available once the tunnel is open. However new data including traffic, air quality and socio-economic monitoring data will be available once the tunnel is open and can be considered for use in any UCAF assessment post-opening. This will need to be discussed further with STIG closer to the tunnel opening date.

The remainder of this note focuses on the initial setting of the user charge as part of the Refreshed Assessment work.

Use of UCAF within the Refreshed Assessment

The UCAF will be an important tool in the assessing the impact of potential changes to the user charge as part of the Refreshed Assessment work. Procedure 1 of the CPAP (copied below) describes the process and the point at which the UCAF is used to assess the impact of the user charge.

Procedure 1: TfL will propose the initial user charges for the Scheme, having regard to the factors set out in section 3.2 above. TfL will follow the process set out below:

- TfL will re-run the strategic traffic model (using up-to-date data)
- TfL will use the outputs of this model run to undertake a re-assessment of the significant likely effects of the proposed initial user charges on air quality, noise, socio-economic effects, in accordance with the approach adopted in the Environmental Statement (Document Reference: 6.1)
- TfL will populate the UCAF with its impact assessment

TfL will consult with members of STIG on the proposed charges for the opening year, and present the completed UCAF. STIG members may make recommendations or representations to TfL in response to these, and the views of STIG's members will be recorded under PO6 of the UCAF.

TfL will then submit the proposed charges, including setting out the recommendations and representations of STIG members, to the TfL Board for approval. When deciding whether or not to approve the proposed charges the TfL Board must:

- in accordance with article 65 of the DCO have regard to any recommendations or representations made by members of STIG; and
- only approve the charges if it is satisfied that Policies 9 and 10 are met.

As described above, the primary purpose of the user charge is to manage traffic demand for the river crossing. Policy 9 of the CPAP states that ‘the extent to which the user charges will assist in achieving the Project Objectives is the primary consideration which TfL will have regard to when setting the initial user charges’. The output will provide an evidence base that will underpin the selection of the most appropriate level of user charge.

On that basis the UCAF uses the Project Objectives as a way of appraising the impacts of the user charge. Each project objective in the UCAF has a number of different measures against which the performance will be assessed. The metrics for each measure have not yet been determined, and as part of the Refreshed Assessment workstream we are currently considering the most appropriate metrics including those from traffic and air quality models, appraisal outputs from business case tools, or more bespoke analysis. We are seeking a balanced approach for the population of the UCAF that ensures the process is not overly-onerous and so can be used to assess a range of different sensitivities, but will also provide a robust framework for decision-making.

In order to define what success looks like once the metrics are identified, clear thresholds will need to be set for each measure so that the relative performance of different options can be considered. A reference point will also be required, and this is likely to come from the DCO Assessed Case work.

The plan for the Refreshed Assessment work is to first assess the performance of the user charge using the charges specified in the DCO (allowing for inflation), but then to flex those charge levels to understand how the Project Objectives perform against higher and lower user charge rates, either across the board, but also potentially by vehicle type / time of day etc. This will help to inform the initial setting of the user charge, but also the potential impacts that changes to the user charge are likely to have post-opening.

Action: At this stage, we are looking for STIG feedback on the measures proposed in the UCAF and any suggestions on the metrics to be used for the measures listed in the UCAF.

Next Steps

Following feedback / suggestions from STIG members, the UCAF will be developed in greater detail including establishing metrics for each measure. We will then re-engage with STIG for further feedback and discussion.

Appendix 1 – UCAF template as set it in CPAP

Project Objective 1: To improve the resilience of the river crossings in the highway network in east and southeast London to cope with planned and unplanned events and incidents	
AND	
Project Objective 2: To improve the road network performance of the Blackwall Tunnel and its approach roads	
Impact on traffic flow and composition at the Blackwall & Silvertown Tunnels	
Impact on delay at the Blackwall & Silvertown Tunnels	
Impact on journey time and journey time reliability on strategic routes	
Impact on traffic flow at nearby crossings incl. Tower Bridge, Rotherhithe Tunnel, Woolwich Ferry, Dartford Crossing	
Impact on traffic composition at nearby crossings incl. Tower Bridge, Rotherhithe Tunnel, Woolwich Ferry, Dartford Crossing	
Impact on traffic on diversion routes and local roads	
Overall impact against Project Objective(s)	<i>State summary outcome</i>
Project Objective 3: To support economic and population growth, in particular in east and southeast London by providing improved cross-river transport links	
Impact on user benefits	
Impact on business	
Impact on the ability of residents to access employment opportunities	
Impact on public transport	
Overall impact against Project Objective(s)	<i>State summary outcome</i>
Project Objective 4: To integrate with local and strategic land use policies	
Summary of assessment in relation to integration with relevant policies	
Overall impact against Project Objective(s)	<i>State summary outcome</i>
Project Objective 5: To minimise any adverse impacts of any proposals on communities, health, safety and the environment	
Impact on emission levels (air quality) on the Blackwall & Silvertown Tunnel approaches	
Impact on emission levels (air quality) on the approaches to nearby crossings incl. Tower Bridge, Rotherhithe Tunnel & Woolwich Ferry	
Impact on noise levels on the Blackwall & Silvertown Tunnel approaches	
Impact on noise levels on the approaches to nearby crossings incl. Tower Bridge, Rotherhithe Tunnel & Woolwich Ferry	
Impact on emission (air quality) levels on diversion routes and local roads	
Impact on noise levels on diversion routes and local roads	
Impact on different socio-economic groups	
Impact on safety	
Overall impact against Project Objective(s)	<i>State summary outcome</i>
Project Objective 6: To ensure where possible that any proposals are acceptable in principle to key stakeholders, including affected boroughs	
Summary of STIG's and relevant stakeholders' views	
Overall impact against Project Objective(s)	<i>State summary outcome</i>
Project Objective 7: To achieve value for money and, through road user charging, to manage congestion	
Impact on the ability to fund the Scheme and other transport improvements without significantly impacting on other funds	
Overall impact against Project Objective(s)	<i>State summary outcome</i>
Other TfL duties	
Impact on TfL's network management duty under the Traffic Management Act 2004	
Impact on compliance with relevant legislation relating to TfL's functions	
Overall impact against other TfL duties	<i>State summary outcome</i>
Compliance with AQ mitigation	
Consistency with approved air quality mitigations	
	<i>State summary outcome</i>
Summary assessment	
<i>Insert a summary of the above assessment, weighing up the outcomes against each project objective and taking into account TfL's other duties to arrive at an overall outcome and recommendation.</i>	

Item 8

Silvertown Tunnel Implementation Group

Approach to identifying mitigation measures pre-opening

January 2022

This note provides an update on the proposed approach to identifying potential mitigation measures required in connection with the Silvertown Tunnel scheme, for discussion with the Silvertown Tunnel Implementation Group (STIG). As well as informing the opening user charges and opening cross-river bus network, prior to scheme opening the Refreshed Assessment of the scheme's operational impacts – which is now underway – will be used to identify the need for any localised mitigation measures that are required across the network.

Background

The approach to be adopted for identifying the need for and form of localised traffic-related mitigation required was set out in section 2.3 of the Monitoring & Mitigation Strategy (MMS) (Rev 2, April 2017), available [here](#). This approach aligns with DCO Requirement 7 (sub-sections 4-8) on pre-opening mitigation.

In summary, a long list of potential locations that could require mitigation will be developed and this will be reviewed in consultation with STIG having regard to the outputs from the strategic highway model, following which a short list of locations will be compiled which will be subject to further assessment including local modelling. Where mitigation is deemed necessary, the form of mitigation will be developed with affected local highway authorities and a package of mitigation will be developed for consultation with STIG members. Once finalised, the package of measures – together with details of the consultation undertaken, costs and programme for implementation – will be submitted to the Secretary of State for Transport for approval. The measures will then be implemented in accordance with the approved programme. This approach is illustrated in Appendix 1.

The forms of mitigation that could potentially be implemented to address scheme impacts was also set out in the MMS, in Appendix F. The form of mitigation to be adopted will be considered on a case-by-case basis, with the aim being to ensure the measures are tailored to the cause, locality, and extent of expected impacts.

Thresholds for identifying locations requiring mitigation

The approach outlined above and set out in the MMS has been reviewed and remains suitable for identifying pre-opening mitigation measures. For the purpose of establishing a long list for review, as per the MMS outputs from the strategic highway model (LoHAM) will be used to identify:

- All links where one-way traffic flows are forecast to increase by more than 15% and by at least 60 vehicles per hour
- All junctions that are forecast to experience an increase in aggregated delay of greater than 10 passenger car unit (PCU) hours

These thresholds draw on the approach taken to identifying indicative mitigation measures set out in Appendix C of the Transport Assessment (April 2016), available [here](#). They are intended to ensure potentially material changes to road network performance are 'screened in' to the long list, which will then be subject to a more detailed assessment which utilises the granularity and detailed network operation of the local modelling. Areas of potential concern not identified through these thresholds but flagged by local highway authorities can also be included within the long list for initial review.

Approach taken for ULEZ expansion

Since the MMS was produced in 2017, further experience in identifying the traffic and highway-related impacts of major schemes has been gained particularly from the Ultra Low Emission Zone extension (ULEX) project which went live on 25 October 2021. ULEX has some commonality with the Silvertown Tunnel scheme insofar as it is a major road user charging scheme with potential to impact the network across a wide area. It is therefore considered appropriate to take account of experience from the ULEX project, on the basis that this could improve the robustness of the process for identifying the need for and form of mitigation to be delivered as part of the scheme.

To highlight those links and junctions forecast to see the largest impact as a result of ULEX, a set of thresholds were used to identify the magnitude of impact of the scheme at each location in the study area. These thresholds, alongside other measures, were then again used as success criteria in determining how successful each proposed mitigation would be in reducing the impact of the scheme. The thresholds were based on established guidance at the time, including:

- TfL modelling guidance (Sub-regional Highway Assignment Models Guidance on Model Use, version 2.6, June 2017)¹;
- Institute of Environmental Management & Assessment (IEMA) guidance; and
- Design Manual for Roads and Bridges (DMRB): Volume 11 (Environmental Assessment).

The thresholds were split into two categories (junctions and links), with a range of values defined for each category. The measures considered were as follows:

- Change in actual flows: % change in the vehicular flow on a link or through a junction
- Change in volume over capacity: a measure of traffic demand at a junction relative to the junction's capacity, both in terms of a threshold banding and the absolute % change
- Total vehicle hours delay: delay per vehicle (converted to PCU hours) multiplied by the number of vehicles per hour

The magnitude of impact, be it adverse or beneficial, was categorised as either no change, negligible, minor, moderate or significant. The impact thresholds and magnitude definitions used can be found in Appendix 2.

Where an impact was deemed to be 'moderate' or 'significant' adverse, it was investigated further to determine the root cause of the decrease in performance. An adaptable approach was applied with regards to the level of assessment undertaken for each location identified as adversely affected. For example, some locations on the network were identified as critical

¹ This has since been superseded by TfL modelling guidance version 4, September 2021, and this updated guidance will be used to inform any additional thresholds used for this exercise.

and a small increase in capacity could push them over the edge leading to functionality issues.

These junctions required a more detailed assessment, to provide additional detail on where mitigation might best be targeted to alleviate the negative impacts of the intervention. Mitigation was considered where the impact was deemed to be 'moderate' or 'significant' adverse. For areas where there was no significant change between the pre- and post-ULEX, e.g. a junction was already at capacity pre-ULEZ expansion and was forecast to remain the same post-ULEZ expansion and therefore the scheme was not expected to have a negative impact on the junction, mitigation measures were not proposed or implemented for this area.

The approach adopted for ULEX provided a consistent and transparent approach for identifying and developing mitigation measures, and TfL considers there is merit in drawing from recent experience on the ULEX project to supplement and enhance the approach taken on the Silvertown Tunnel scheme. Options for utilising all or parts of the ULEX approach are being considered, and current thinking is that the ULEX thresholds could be applied both as a means of shortlisting the long list of locations identified to identify where mitigation is required and for assessing the effectiveness of proposed mitigation measures. Observations from STIG members on whether and how the ULEX approach could be utilised, or indeed other approaches that could be used for identifying mitigation, are welcomed.

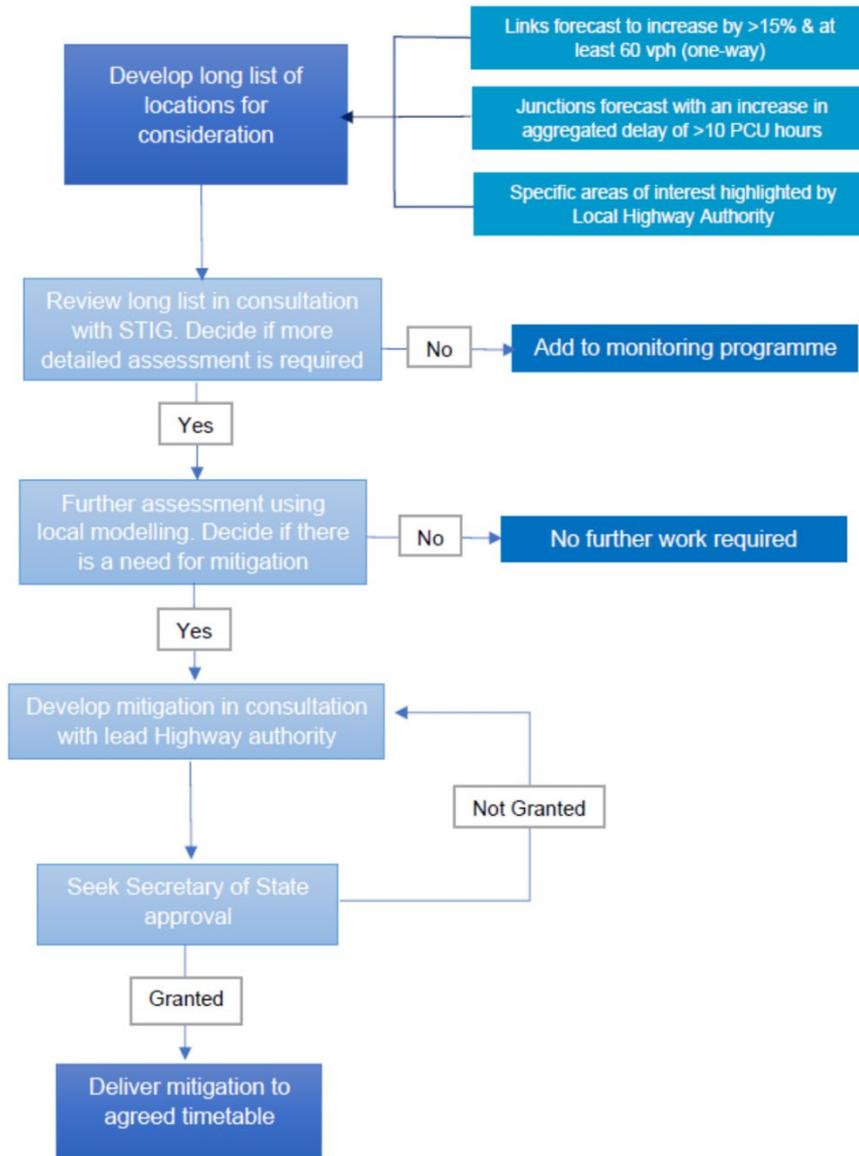
Next steps

The thresholds to be applied to the modelling outputs are an important part of the process of identifying the need for, and potentially the effectiveness of, mitigation measures. There is merit in having a consistent and structured approach for identifying the locations requiring mitigation, building on the approach that has been set out in the MMS, and to that end options for utilising aspects of the ULEX approach are being considered.

Once a list of locations requiring mitigation has been confirmed, a detailed operational study will be undertaken which utilises the granularity and detailed network operation of the local model to determine the form and extent of mitigation needed in response to the impact identified. This assessment will depend on the location in question and the nature of the impact, and an adaptable approach will be taken to ensure the assessment is fit for purpose. 'Significant' or 'moderate' impacts may require further work to understand mitigation measures that need to be applied at these sites and potentially inform a design process to deliver a scheme / physical intervention.

In line with Requirement 7 of the DCO, STIG will be consulted throughout the process of identifying locations requiring mitigation and engagement will be undertaken with affected local highway authorities on the detail of mitigation measures within each borough. Details of consultation with STIG members on the mitigation measures as well as responses received will be included within the submission to the Secretary of State in due course.

Appendix 1 – Process for identifying mitigation set out in MMS



Appendix 2 – Impact thresholds and magnitude definitions used for ULEX

Assessed Element	Impact Measure	Impact	No Change	Negligible	Minor	Moderate	Significant	
Links	Actual Flow (% change)	Adverse	0%*	Between +2% and +10%	Between +10% and +30%	Between +30% and +60%	Greater than +60%	
		Beneficial		Between -2% and -10%	Between -10% and -30%	Between -30% and -60%	Less than -60%	
	Volume over Capacity (v/c threshold change)	Adverse	0%* difference between "with" and "without ULEZ extension" scenarios	v/c <80% in both "with" and "without ULEZ extension" scenarios and v/c increases* from "without ULEZ extension" scenario	Scheme causes link to go from v/c <80% to v/c 80-90%*	Scheme causes link to go from v/c <90% to v/c 90-100%*	Scheme causes link to go from v/c <100% to v/c >100%*	
		Beneficial		v/c <80% in both "with" and "without ULEZ extension" scenarios and v/c decreases* from "without ULEZ extension" scenario	Scheme causes link to go from v/c 80-90% to v/c <80%*	Scheme causes link to go from v/c 90-100% to v/c <90%*	Scheme causes link to go from v/c >100% to v/c <100%*	
	Volume over Capacity (% point change)	Adverse	0%*	Between +2% and +5%	Between +5% and +10%	Between +10% and +15%	Greater than +15%	
		Beneficial		Between -2% and -5%	Between -5% and -10%	Between -10% and -15%	Less than -15%	
	Total Vehicle Hours Delay (% change)	Adverse	0%*	Between +2% and +10%	Between +10% and +30%	Between +30% and +60%	Greater than +60%	
		Beneficial		Between -2% and -10%	Between -10% and -30%	Between -30% and -60%	Less than -60%	
	Junctions	Volume over Capacity (v/c threshold change)	Adverse	0%* difference between "with" and "without ULEZ extension" scenarios	v/c <80% in both "with" and "without ULEZ extension" scenarios and v/c increases* from "without ULEZ extension" scenario	Scheme causes junction to go from v/c <80% to v/c 80-90%*	Scheme causes junction to go from v/c <90% to v/c 90-100%*	Scheme causes junction to go from v/c <100% to v/c >100%*
			Beneficial		v/c <80% in both "with" and "without ULEZ extension" scenarios and v/c decreases* from "without ULEZ extension" scenario	Scheme causes junction to go from v/c 80-90% to v/c <80%*	Scheme causes junction to go from v/c 90-100% to v/c <90%*	Scheme causes junction to go from v/c >100% to v/c <100%*
Volume over Capacity (% point change)		Adverse	0%*	Between +2% and +5%	Between +5% and +10%	Between +10% and +15%	Greater than +15%	
		Beneficial		Between -2% and -5%	Between -5% and -10%	Between -10% and -15%	Less than -15%	
Total Vehicle Hours Delay (% change)		Adverse	0%*	Between +2% and +10%	Between +10% and +30%	Between +30% and +60%	Greater than +60%	
		Beneficial		Between -2% and -10%	Between -10% and -30%	Between -30% and -60%	Less than -60%	

Item 10

Silvertown Tunnel - Combined Obligations Tracker

Work In Progress: This tracker is regularly updated & subject to change
v.17/01/2022

Category	STIG ref #	Year* Activity commences	Quarter* Activity commences	Document	Document ref	Activity	Requirement	Status	Updates
01 - STIG administration	1	2020	Q3	DCO	66 (1)	Establishment of STIG	TfL must establish and fund the reasonable secretarial and administrative costs of a consultative body to be known as the Silvertown Tunnel Implementation Group.	Underway	STIG now established
	2	2020	Q3	DCO	66 (7)	Frequency/timing of STIG meetings	Unless otherwise agreed by STIG, TfL must convene a meeting of STIG, chaired by a representative elected by the members of STIG, at least twice a year on a date to be determined by TfL, including on each occasion that TfL publishes a monitoring report in accordance with the monitoring and mitigation strategy.	Underway	Meeting 1: 16 Sep 2020 Meeting 2: 28 Jan 2021 Meeting 3: 27 May 2021 Meeting 4: 30 Sep 2021
	3	2020	Q3	DCO	66(8)	First STIG meeting	The first meeting should be held no less than 3 years before the tunnel opens.	Completed	First STIG meeting held on 24/09/2020
	4	2020	Q3	DCO	66 (5)	STIG matters - need to consult STIG	TfL must consult the other members of STIG on the following matters relating to implementation of the authorised development :	Underway	
	5	2020	Q3	DCO	66 (5)	STIG matters - (a) monitoring	(a) the extent, nature and duration of monitoring to be implemented in accordance with the monitoring and mitigation strategy.	Underway	16/09/2020 - Paper on air quality monitoring proposals to be presented at STIG meeting on 16/09/2020 20/05/2021 - Papers on Socio economic and traffic monitoring proposals presented at STIG meeting on 27/05/2021 24/09/21 - Socio-economic surveys shared for comment with STIG members 20/08. Further traffic monitoring information to be shared at 30/09 STIG meeting
	6	2020	Q3	DCO	66 (5)	STIG matters - (b) bus services	(b) the proposals for the initial bus services that will operate through the tunnels when the Silvertown Tunnel opens for public use;	Underway	
	7	2020	Q3	DCO	66 (5)	STIG matters - (c) monitoring reports	(c) the monitoring reports produced in accordance with the monitoring and mitigation strategy;	Not started	
	8	2020	Q3	DCO	66 (5)	STIG matters - (d) revisions to charging policy	(d) any proposed revisions to the charging policy under article 53 (the charging policy); and	Underway	
	9	2020	Q3	DCO	66 (5)	STIG matters - (e) user charges	(e) the level of charges required to be paid for use of the tunnels	Not started	
	10	2020	Q3	DCO	66 (6)	STIG recommendations / representations	In taking any decision in respect of any of the matters set out in paragraph (5), TfL must have regard to any recommendations or representations made by a member of STIG in response to the consultation carried out under that paragraph	Underway	20/01/2021 - Process discussed at 28/01/21 STIG meeting
	11	2020	Q3	DCO	66 (10)	Publication of STIG material	TfL must publish on its website agendas, reports, minutes and other relevant documents relating to the operation of STIG as soon as reasonably practicable after they become available.	Underway	Link to website
02- Refreshed assessment / pre-opening mitigation	12	2022	Q3	DCO	Sch 2 Req 21	Agree £1m business transitional support package with councils	Prior to the opening of the authorised development for public use TfL must make all reasonable endeavours to agree a business transitional support package with the councils of the London Borough of Newham, the London Borough of Tower Hamlets and the Royal Borough of Greenwich. As part of this business transitional support package TfL must make available to those councils the sum of one million pounds for the purpose of supporting local businesses.	Not started	
	13	2020	Q4	MMS	2.1.1	Develop refreshed assessment	Prior to the Silvertown Tunnel opening for public use, TfL must refresh its assessment of Scheme impacts, in order to: • Set the opening user charges; • Define the requirement for and form of localised mitigation for residual effects; and • Specify the bus network through the Silvertown Tunnel that will operate on opening.	Underway	28/01/21 - approach to strategic transport modelling for refreshed assessment presented to STIG 20/09/2021 - update on refreshed assessment to be presented and discussed at 30/09/21 STIG meeting
	14	2020	Q3	MMS	2.1.2	Update the transport and environmental models	For this process TfL will update the relevant transport and environmental models, rerun those models, and develop its proposals for each element in conformity with the commitments, policies and procedures set out in the relevant certified documents and any DCO requirements. The assessment will incorporate a wider range of analyses than the modelling alone.	Underway	
	15	2022	Q1	MMS	2.3.13	Develop package of mitigation measures	TfL will work closely with affected local authorities to identify and develop the package of localised traffic mitigation to be implemented pre-opening. Once the proposed package of localised traffic-related mitigation measures has been finalised, TfL will submit details of the package to the Secretary of State for Transport for approval.	Not started	
	16	2022	Q1	MMS	2.3.8	Take view of LHAs into account in assessing localised mitigation measures	In assessing the need for localised mitigation for locations in the short list, TfL will take into account views from the affected local highway authority (or authorities should the location affect more than one borough).	Not started	
	17	2022	Q2	MMS	3.8.5	TfL to install noise monitors	Once operational, the noise monitoring will continue for a minimum of three years. Before the end of that period, TfL will consult STIG members on whether it is appropriate to extend this period by up to an additional two years.	Not started	
	18	2022	Q1	DCO	Sch 2 Req 7 (2)	Implementation of mitigation measures when TfL powers are not sufficient	If the statutory powers vested in TfL in relation to highways and road traffic in Greater London are not sufficient to enable TfL to implement any mitigation measure which it is obliged to implement under this requirement, TfL must either agree with the council to implement the changes on its behalf or pay the council to implement the measures.	Not started	
	19	2020	Q4	DCO	Sch 2 Req 7(4)	Refreshed assessment	TfL must undertake an updated assessment of the scheme's impacts and consult STIG on a proposed scheme of mitigation including the locations where mitigation is required, the measures proposed and the programme for implementation	Underway	28/01/21 - approach to strategic transport modelling for refreshed assessment presented to STIG 20/09/2021 - update on refreshed assessment to be presented and discussed at 30/09/21 STIG meeting
	20	2022	Q1	DCO	Sch 2 Req 7 (5)	Consultation on the scheme of mitigation	TfL must have regard to any consultation responses from STIG members on the proposed mitigation and engage with local highway authorities as required.	Not started	
	21	2022	Q1	DCO	Sch 2 Req 7 (7)	SoS to consult STIG on mitigation measures	The Silvertown Tunnel must not open for public use until the scheme of mitigation has been approved by the Secretary of State. If the Secretary of State proposes to approve the scheme of mitigation with material modifications, the Secretary of State must consult the members of STIG on the proposed modifications and have regard to any responses received when deciding whether to approve the scheme.	Not started	
	22	2022	Q2	DCO	Sch 2 Req 7	Mayor of London to consult relevant air quality authority	Before considering whether to approve the scheme of mitigation, the Mayor of London must consult any relevant air quality authority and take into consideration any responses received. TfL must implement or secure the implementation of the scheme of mitigation approved by the Mayor of London in accordance with the programme contained in the approved scheme of mitigation.	Not started	
	23	2022	Q1	MMS	2.1.8	Development of pre-opening mitigation measures	If, through the refreshed assessment, the need for localised traffic-related mitigation measures is identified, TfL will develop these measures in consultation with STIG and submit them to the Secretary of State for Transport for approval.	Not started	
	24	2022	Q3	MMS	2.1.8	Implementation of pre-opening mitigation measures	TfL must then implement the approved measures before the Silvertown Tunnel opens for public use, or provide funding for the relevant local highway authority to implement them.	Not started	
	25	2022	Q2	MMS	2.1.9	Noise mitigation measures	Any measures required to mitigate residual noise impacts will be submitted for the approval of the local planning authority in accordance with requirement 12 of the DCO.	Not started	
	26	2021	Q3	MMS	2.2.2	Approach to refreshed assessment	TfL will engage with STIG members on the approach to completing the refreshed assessment, including aspects that are of particular interest to host boroughs such as the collection of origin and destination data and users' values of time (including stated preference surveys).	Underway	28/01/21 - approach to strategic transport modelling for refreshed assessment presented to STIG 20/09/2021 - update on refreshed assessment to be presented and discussed at 30/09/21 STIG meeting
	27	2022	Q2	MMS	2.3.4	STIG review of long-listed mitigation measures	Once the long list has been populated this will be reviewed in consultation with the members of STIG and TfL will make a decision on which locations will be included within a 'short list' to be assessed further using local modelling.	Not started	
	28	2021	Q4	MMS	2.5.2	Commencement of baseline monitoring	Monitoring of baseline conditions pre-opening will commence no later than three years prior to the expected date of Scheme opening, and any data that is required to inform the refreshed assessment (for example traffic counts) will be collected as part of this process.	Underway	Jan21 - air quality baseline monitoring is underway
	29	2021	Q2	MMS	2.5.2	Final scope of monitoring programme	The finalised scope of the monitoring programme will be presented to STIG members for review approximately six months before the commencement of traffic-related monitoring (i.e. around three and a half years prior to Scheme opening).	Underway	27/05/21 - traffic monitoring approach presented to STIG 24/09/21 - further information on approach to be presented at 30/09 STIG meeting
	30	2020	Q3	MMS	3.3.2	Monitoring data collected by others	The monitoring programme will be of sufficient scope to provide a sound understanding of the impact of the Scheme in operation. Nonetheless, TfL recognises the value of monitoring undertaken by others and hence in addition to the data collected through the monitoring programme, TfL will take into account monitoring data collected by local authorities and other bodies where it is relevant and appropriate to do so.	Underway	
	31	2022	Q1	MMS	3.5.3	Geographical extent of monitoring	The geographical scope of the monitoring will be reviewed at the time when TfL is undertaking its refreshed assessment of Scheme impacts. Should this refreshed assessment identify potential Scheme impacts at locations not identified in current modelling, the scope of the monitoring programme will be extended to ensure these locations are included in the monitoring programme. If justified by the refreshed assessment, the monitoring of Scheme impacts could be undertaken over a much wider area through TfL's wider monitoring programmes.	Not started	
	32	2020	Q3	MMS	3.7.1	Commencement of air quality monitoring	Three years prior to Scheme opening TfL will install a network of diffusion tubes and, where appropriate, automatic air quality monitors to collect air quality data for a continuous period of at least twelve months to establish an up-to-date baseline. This will provide a picture of the actual concentrations at a point closer to the Scheme opening. In addition, the results of monitoring undertaken by relevant local authorities and Defra will be utilised by TfL to provide additional baseline information.	Underway	Diffusion tubes and CMS installed at agreed sites - baseline air quality monitoring data collection underway since December 2020.
	33	2022	Q2	Charging Policy	2.3.4	User charge discount	For a period of not less than 56 days prior to Scheme opening, eligible residents and small businesses in the host boroughs will be able to register online for a payment account without paying the annual registration fee for the initial year (Policy 5).	Not started	

03 - User Charging	34	2022	Q2	Charging Policy	2.3.7	User charge discount	For the duration of the monitoring period a discount of not less than 50% on the user charges will be available for eligible residents of host boroughs on a low income who register for an online account with TfL. After the expiry of the monitoring period, TfL will review in consultation with the host boroughs whether the discount should continue (Policy 6).	Not started		
	35	2022	Q2	Charging Policy	3.2.3	Setting the initial user charge	The extent to which the user charges will assist in achieving the Project Objectives is the primary consideration which TfL will have regard to when setting the initial user charges (policy 9). In this TfL will have regard to: <ul style="list-style-type: none"> - traffic - the environment, and - population, economy and growth - other project objective considerations, including the ability to pay for the Scheme. 	Not started		
	36	2022	Q2	Charging Policy	3.2.4	Setting the initial user charge	TfL will set the initial charges at a level and subject to conditions so that the Scheme in operation is not likely to give rise to materially new or materially different environmental effects to those reported in the ES (Policy 10).	Not started		
	37	2025	Q2	Charging Policy	3.3.1	Variations to the user charges	TfL must keep the user charges under review, and will make variations to charges where this is considered necessary to ensure the continued achievement of the Project Objectives (policy 11). In this TfL will have regard to: <ul style="list-style-type: none"> - traffic - the environment, and - population, economy and growth - other project objective considerations, including the ability to pay for the Scheme. 	Not started		
	38	2022	Q2	Charging Policy	4.2.1	Setting the initial user charge	TfL must set initial charges before the Silvertown Tunnel opens to traffic. The process for setting the charges will commence around two and a half years in advance of Scheme opening.	Not started		
	39	2022	Q2	Charging Policy	4.2.1	Setting the initial user charge	In the setting of the initial user charge, TfL will follow this process <ul style="list-style-type: none"> - TfL will re-run the strategic traffic model (using up-to-date data) - TfL will use the outputs of this model run to undertake a re-assessment of the significant likely effects of the proposed initial user charges on air quality, noise, socio-economic effects, in accordance with the approach adopted in the Environmental Statement (Document Reference: 6.1) - TfL will populate the UCAF with its impact assessment 	Underway	Re-run of strategic traffic modelling is underway	
	40	2022	Q2	Charging Policy	4.2.1	Setting the initial user charge	TfL will consult with members of STIG on the proposed charges for the opening year, and present the completed UCAF. STIG members may make recommendations or representations to TfL in response to these, and the views of STIG's members will be recorded.	Not started		
	41	2022	Q2	Charging Policy	4.2.1	Setting the initial user charge	TfL will submit the proposed opening user charges, including setting out the recommendations and representations of STIG members, to the TfL Board for approval. When deciding whether or not to approve the proposed charges the TfL Board must: <ul style="list-style-type: none"> - in accordance with article 65 of the DCO have regard to any recommendations or representations made by members of STIG; and - only approve the charges if it is satisfied that Policies 9 and 10 of the Charging Policy are met. 	Not started		
	42	2022	Q2	Charging Policy	4.2.1	Setting the initial user charge	The completed UCAF will be published on TfL's website as a record of the assessment undertaken.	Not started		
	43	2025	Q2	Charging Policy	4.3.1	Variations to the user charges	In proposing variations to the user charges, TfL will use the UCAF to assess the likely impacts of variations to the charges on the achievement of the Project Objectives and other considerations (set out in 3.3 of the Charging Policy). In accordance with Article 65 of the DCO, TfL will consult with members of STIG on these proposed variations who may make representations and recommendations in response.	Will be undertaken if required		
	44	2025	Q2	Charging Policy	4.3.1	Variations to the user charges	TfL will then submit the proposed variations to the user charges, including setting out the recommendations of STIG members, to the TfL Board for approval. When deciding whether or not to approve the variations the TfL Board must: <ul style="list-style-type: none"> - in accordance with article 65 of the DCO have regard to any recommendations or representations made by members of STIG; and - only approve the charges if it is satisfied that the proposed charges comply with Policy 12 of the Charging Policy. 	Will be undertaken if required		
	45	2024	Q4	Charging Policy	4.4.1	Statement of charges	In accordance with Article 53 of the DCO, where the TfL Board decides to approve the proposed charges (for the initial charge and for subsequent variations), TfL must publish a Statement of Charges describing the charges in the form set out in Appendix A of the Charging Policy or in a form to the like effect. The Statement will set out the date from which the charges take effect.	Not started		
	46	2026	Q3	Charging Policy	5.1.2	12-month review of user charges	TfL must complete a '12-month review' of the user charges not later than 15 months after the Scheme opens for public use and, if necessary, must revise the charges to mitigate any significant adverse impacts attributable to the Scheme which were not predicted in the preopening assessment (Policy 15).	Not started		
	47	2026	Q3	Charging Policy	5.4	12-month review of user charges	TfL will consult on its proposed response to the data analysis for the '12-month review' with members of STIG. Members of STIG may make representations in response to TfL's proposal. The decision on the response to the review will be made by TfL. TfL will publish a report summarising the review and its outcome.	Not started		
	48	2022	Q2	DCO	53 (2)	Revisions to charging policy	TfL must consult STIG on any proposed revisions to the charging policy	Will be undertaken if required		
	04 - Buses	49	2025	Q2	Bus Strategy	2.2.3	Concessionary bus travel	Commitment 1: TfL must provide £2m in funding for concessionary bus travel to residents of the London Boroughs of Newham and Tower Hamlets and the Royal Borough of Greenwich for a period after the Silvertown Tunnel opens for public use	Not started	
		50	2022	Q2	Bus Strategy	3.4.3	Bus network proposals	Commitment 7: Prior to the Silvertown Tunnel opening for public use TfL will consult with STIG members on its outline proposals with regard to the bus network.	Underway	
		51	2022	Q2	Bus Strategy	3.4.5	Bus network planning	Commitment 8: Bus service planning will commence not less than 2 years prior to Scheme opening, using TfL's Bus Service Planning Guidelines	Not started	
52		2022	Q2	Bus Strategy	3.4.8	Bus priority measures	Commitment 9: TfL will work with STIG members to seek opportunities to implement bus priority measures on the network around the Silvertown Tunnel, for example by undertaking bus priority studies	Not started		
53		2022	Q2	Bus Strategy	3.6.3	Socio-economic impacts of bus services	Commitment 10: TfL and STIG members will consider socio-economic monitoring and information in assessing bus services.	Not started		
54		2025	Q2	Bus Strategy	3.6.4	Socio-economic impacts of bus services	Commitment 11: TfL will collect monitoring data on cross-river bus performance and use this to modify services in order to maintain the continued achievement of the Project Objectives.	Not started		
05 - Monitoring / post-opening mitigation	55	2022	Q3	DCO	Sch 2 Req 7 (10)	Monitoring programme implementation	For the duration of the monitoring period (at least 3 years before opening and 3 years after scheme opens), TfL must— <ul style="list-style-type: none"> (a) implement a monitoring programme in consultation with the members of STIG; 	Underway		
	56	2025	Q1	DCO	Sch 2 Req 7 (10)	Monitoring reports	For the duration of the monitoring period (at least 3 years before opening and 3 years after scheme opens), TfL must— <ul style="list-style-type: none"> (b) prepare— (i) quarterly monitoring reports for a period of one year from the Silvertown Tunnel opening for public use; and (ii) annual monitoring reports thereafter, derived from that monitoring, and submit them for consideration by the members of STIG; 	Not started		
	57	2021	Q4	DCO	Sch 2 Req 7 (10)	Thresholds for changes to the highway network	For the duration of the monitoring period (at least 3 years before opening and 3 years after scheme opens), TfL must— <ul style="list-style-type: none"> (c) identify in consultation with the members of STIG appropriate thresholds for changes on the highway network which require TfL to investigate whether mitigation measures are necessary; 	Underway		
	58	2021	Q4	DCO	Sch 2 Req 7 (10)	Development of post-opening mitigation measures	For the duration of the monitoring period (at least 3 years before opening and 3 years after scheme opens), TfL must— <ul style="list-style-type: none"> (d) develop in consultation with the relevant highway authority any measures which are necessary to mitigate adverse impacts on the highway network which are attributable to the operation of the authorised development; and 	Not started		
	59	2021	Q4	DCO	Sch 2 Req 7 (10)	Consultation with STIG on changes required to the highway network.	For the duration of the monitoring period (at least 3 years before opening and 3 years after scheme opens), TfL must— <ul style="list-style-type: none"> (e) implement or secure the implementation of the necessary mitigation measures. 	Not started		
	60	2026	Q1	DCO	Sch 2 Req 7 (14)	Independent review of air quality monitoring data	The monitoring data within each annual monitoring report referred to in sub-paragraph (10) must be reviewed as soon as reasonably practicable by a firm of independent air quality experts appointed by TfL in consultation with the members of STIG. The annual review undertaken by the firm of experts must determine in accordance with the criteria set out in the monitoring and mitigation strategy whether or not there has been a material worsening of air quality as a result of the authorised development beyond the likely impacts reported within the environmental statement at locations where there are (whether as a result of the authorised development or otherwise) exceedances of national air quality objectives.	Not started		
	61	2020	Q3	MMS	3.4.1	Commencement of monitoring	The monitoring programme will commence no later than three years prior to the expected date of Scheme opening.	Completed	Air quality monitoring commenced December 2020 Socio-economic primary research commenced September 2021 Traffic monitoring commenced December 2021	
	62	2025	Q2	MMS	3.4.1	Extending the monitoring period	The duration of the post-opening monitoring will be reviewed and TfL will consult the members of STIG on whether it is appropriate to extend this period by up to an additional two years.	Not started		
	63	2025	Q2	MMS	3.5.4	Scheme impacts not captured by monitoring programme	Once the Scheme is operational, should a member of STIG identify potential impacts that they consider may be a result of the Scheme at a location not being monitored under the Scheme's monitoring programme at that time (for instance using TfL's publicly available wider data set), this can be brought to TfL's attention for further consideration and possible inclusion in the monitoring programme going forward.	Not started		
	64	2026	Q3	MMS	3.7.6	Reporting and expert review of AQ data	The air quality monitoring data will be reported in the annual monitoring report which must be reviewed as soon as reasonably practicable by a firm of air quality experts appointed by TfL in consultation with STIG members. The expert review must determine whether or not there has been a material worsening of air quality as a result of the Scheme (as detailed in section 4.4 of this document).	Not started		
	65	2025	Q2	MMS	3.10.3	Quarterly interim reports in first year after opening	For the first year after the Silvertown Tunnel opens for public use, TfL will produce and submit to STIG interim monitoring reports on a quarterly basis to help ensure that any impacts can be identified promptly. These reports will be less detailed than the annual monitoring reports but will include data collected to date and a high level analysis of the results.	Not started		
66	2026	Q3	MMS	3.11.1	Production of monitoring reports	The annual monitoring reports will be produced by TfL and sent to STIG members within two months of data collection.	Not started			

	67	2026	Q3	MMS	3.11.1	STIG review of monitoring reports	STIG will be responsible for: <ul style="list-style-type: none"> Reviewing the findings presented in the monitoring reports Considering the need for and type of any mitigation measures that might be required to address Scheme impacts, in line with the process set out in Chapter 4 of this document Reviewing the monitoring programme and make recommendations to TfL for changes where appropriate 	For reference	
	68	2020	Q3	MMS	3.11.2	Changes to monitoring programme	Proposals for changes to the monitoring programme can be made by any member of STIG in the interest of enabling future impacts to be fully captured. Aspects on which STIG members may request changes include the monitoring locations, metrics considered and data collection methods. In updating the monitoring programme, TfL shall have regard to any recommendations made by STIG.	Will be undertaken if required	
	69	2026	Q3	MMS	3.11.3	Contents of monitoring reports	STIG will also be able to request changes to the contents of the monitoring reports including the addition of new topics and removal of existing topics if considered appropriate. TfL will remain responsible for the final content and structure of the monitoring reports.	Not started	
	70	2026	Q3	MMS	4.1.2	Post-opening mitigation measures	The need for any mitigation following the Scheme's opening will be identified through review of the monitoring reports containing the data collected through the monitoring programme. Different processes will apply to different Scheme impacts, as follows:.....	Not started	
	71	2026	Q3	MMS	4.1.2	Post-opening mitigation measures	The air quality data will be reviewed by a firm of experts appointed by TfL in consultation with the members of STIG. If in the view of the experts there has been a material worsening in air quality as a result of the Scheme, TfL must develop a scheme of mitigation and submit this to the Mayor of London for approval.	Not started	
	72	2026	Q1	MMS	4.4.1	Appointment of independent air quality expert	TfL will appoint an independent air quality expert to review the post-opening air quality monitoring data set in the annual monitoring reports. TfL will consult with STIG members regarding the expert to be appointed.	Not started	
	73	2026	Q1	MMS	4.5.2	Appointment of noise expert	TfL will appoint an independent noise expert to carry out an annual review the post-opening noise monitoring data presented within the annual monitoring reports. TfL will consult STIG members regarding the expert to be appointed.	Not started	
	74	2026	Q2	MMS	4.5.3	Annual review by independent noise expert	If the annual review carried out by the independent noise expert concludes that the difference in calculated Basic Noise Level values between the predicted flows and measured flows through the Blackwall and Silvertown Tunnel is greater than 1dB (and that the difference is attributable to the Scheme), TfL will consider the need for localised noise mitigation measures in consultation with the relevant local authorities.	Not started	
06 - Other (non MMS) obligations / requirements	75	2022	Q2	DCO	Sch 2 Req 21	Agree £1m business transitional support package with councils	Prior to the opening of the authorised development for public use TfL must make all reasonable endeavours to agree a business transitional support package with the councils of the London Borough of Newham, the London Borough of Tower Hamlets and the Royal Borough of Greenwich. As part of this business transitional support package TfL must make available to those councils the sum of one million pounds for the purpose of supporting local businesses.	Not started	

Meeting 1 – 24 September 2020

- Terms of Reference
- Update on MMS procurement
- High-level milestones and engagement
- Air quality monitoring proposals



Meeting 2 – 28 January 2021

- Election of chairperson
- Recording of decisions made
- Approach to strategic transport modelling
- Lot B, C and D – general update



Meeting 3 – 27 May 2021

- Scope of environmental compliance assessment
- Approach to socio-economic monitoring
- Traffic monitoring proposals



Meeting 4 – 30 September 2021

- Update on refreshed assessment, including core modelling scenarios
- Socio-economic monitoring – primary surveys
- Final traffic monitoring plan



Meeting 5 – 27 January 2022

- Emerging modelling outcomes (Lot A)
- Update on initial bus proposals
- User charging assessment framework
- Approach to identifying mitigation measures

Meeting 6 – 26 May 2022 (tbc)

- Environmental compliance assessment
- Air quality monitoring data
- Early air quality modelling outputs
- Emerging mitigation measures – feasibility stage

Meeting 7 – September 2022

- Opportunities for bus priority measures
- Reporting of monitoring data
- Proposed scheme of mitigation

Meeting 8 – January 2023

- Submission to Secretary of State