



Meeting title:	Silvertown Tunnel Implementation Group Meeting #3
Date & time:	27 May 2021, 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 (TfL)3. Safety, Health and Environment (All)4. Project update (TfL)5. Scope of environmental compliance assessment (Lot B) (TfL / AECOM)6. Approach to socio-economic monitoring (Lot C) (TfL / Arcadis & Steer)7. Traffic monitoring proposals (TfL)8. Other relevant updates (All)9. Obligations and forward meeting planner (All)10. Next steps and AOB (All)

Item 4



Silvertown Tunnel Implementation Group

Update report
27 May 2021

MAYOR OF LONDON



**TRANSPORT
FOR LONDON**
EVERY JOURNEY MATTERS

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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/uksi/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 \(rev 2\)](#)

[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

STIG has so far met twice; on 24 September 2020 and 28 January 2021. We anticipate continuing the STIG meeting frequency on a four-monthly cycle until the Refreshed Assessment is concluded in late 2022 / early 2023. The next meeting is provisionally planned for 30 September 2021 and will be confirmed nearer the time, with the following two meetings in January and May 2022 respectively.

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.

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. If STIG members find it useful similar reports can be provided for future meetings.

General project update

Construction update

The scheme is being constructed by the Riverlinx consortium. Good progress continues to be made on detailed design and construction is underway in accordance with industry guidance on Covid-secure measures.

Construction worksites have been established on both sides of the river, and enabling works are underway including site clearance, ground preparation and utility diversions.

Piling works have begun to construct the launch chamber shafts for the Tunnel Boring Machine (TBM), and piling is now more than 60% complete. TBM manufacture has commenced.

At Greenwich, a replacement coach park for the O2 Arena is now complete. This is part of a series of works to consolidate parking facilities on the peninsula. This will enable our main construction works but also facilitate wider redevelopment of the area in line with the Greenwich Peninsula Masterplan.

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 June 2021 at 6pm (Greenwich)
- 15 June 2021 at 6pm (Newham)

The following CLGs are planned for 7 September and 7 December 2021.

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



Piling works at the Silvertown worksite and the new coach park

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

Calibration and validation of the 2019 base year strategic highway and public transport models (LoHAM and Railplan) are at an advanced stage. Completion of technical work is expected in summer, with documentation available in time for the next STIG meeting.

An interim 2026 demand model (MoTiON) run is currently being finalised and will provide a first indication of how the updated model outputs compare with those undertaken to support the DCO application in 2015/16. The interim run has also provided a valuable insight regarding the performance of the MoTiON model in a forecast year scenario, particularly with regard to model convergence. This will be taken on board when the development of the 2025 forecast year model commences next month.

To ensure the microsimulation (Vissim) and local junction modelling is based on up-to-date data, traffic data is scheduled to be collected from the week commencing 7 June 2021. As well as informing the form of any mitigation measures that may be required, this modelling will be used to develop the network management strategy for the scheme.

Environmental modelling

Work has been progressing on developing the scope for the environmental compliance assessment reporting. This will utilise outputs from the Refreshed Assessment to respond to the

requirements of Policy 10 of the Charging Policy as set out below:

Policy 10 of the Charging Policy states:

“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 Environmental Statement.”

A separate summary note has been produced which sets out this work in more detail.

The environmental modelling will comprise updated air quality and noise models and will utilise outputs from the traffic modelling. Development of the environmental models is due to commence in summer and the outputs from this will feed into the Environmental Compliance Assessment report. Further updates will be provided to STIG members as this work progresses.

User charging

User charging will be implemented at both the Silvertown and Blackwall tunnels when the Silvertown Tunnel opens. The user charge is required to manage demand for the crossing and is crucial for ensuring the project can meet its objectives around improving road network performance and resilience, and ensuring that adverse impacts on communities, health and environment are minimised.

Work has begun in establishing the project requirements for the development of the user charging system for Silvertown and Blackwall tunnels, in accordance with the Charging Policy including the User Charging Assessment Framework contained therein. This work is taking account of existing and potential user charging schemes as necessary in the interests of synergy.



User charging at both the Silvertown and Blackwall tunnels will have an important role in managing traffic demand

The early traffic modelling work (described above) will assume the same user charges as proposed during the DCO application stage. As the Refreshed Assessment progresses later this year, and the interactions between the traffic and environmental modelling are better understood, the charges will be reviewed and refined where required.

Bus network planning

The opportunity to transform the cross-river bus network in this part of London represents a major benefit of the scheme. Under the DCO TfL is required to operate a minimum of 20 buses per hour through the tunnels in both directions during peak times. The bus network will be planned to meet current and future predicted demand, to deliver benefits equal to or excess of those forecast in the DCO.

A review of the previous work undertaken has commenced and consideration is being given to developing an assessment framework for assessing different bus network options. This framework would take account of the Bus Strategy as well

as TfL's business-as-usual bus planning processes.

Should STIG members have any suggestions on potential changes to the bus network or on the approach to planning the new cross-river network they are invited to contact the Silvertown project team.

We intend to arrange a discussion on the approach to planning the network and the initial scenario that will undergo detailed appraisal with interested STIG members ahead of the next STIG meeting.

Mitigation measures

If the Refreshed Assessment indicates that the scheme could have material adverse impacts on the performance of the highway network TfL will investigate the need for mitigation measures. Pre-opening, 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. Similarly, should the monitoring undertaken post-opening indicate adverse unanticipated effects the need for appropriate mitigation will be investigated.

Work is now underway to consider what changes have taken place to the highway network (or are planned) since the DCO application was submitted in 2016, and to what extent these changes may affect the need for mitigation measures including potential adjustments to the user charge.

Should STIG members be aware of any material borough-led changes to the highway network that have been delivered or are committed for delivery before the scheme opens they are encouraged to provide details to the project team; a separate request to this end will be sent to STIG members in due course.

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. The monitoring programme is being developed in accordance with the Monitoring & Mitigation Strategy (MMS).

Traffic monitoring

TfL's emerging thinking on traffic monitoring is set out in more detail in a separate update. In summary, the traffic monitoring will comprise a range of

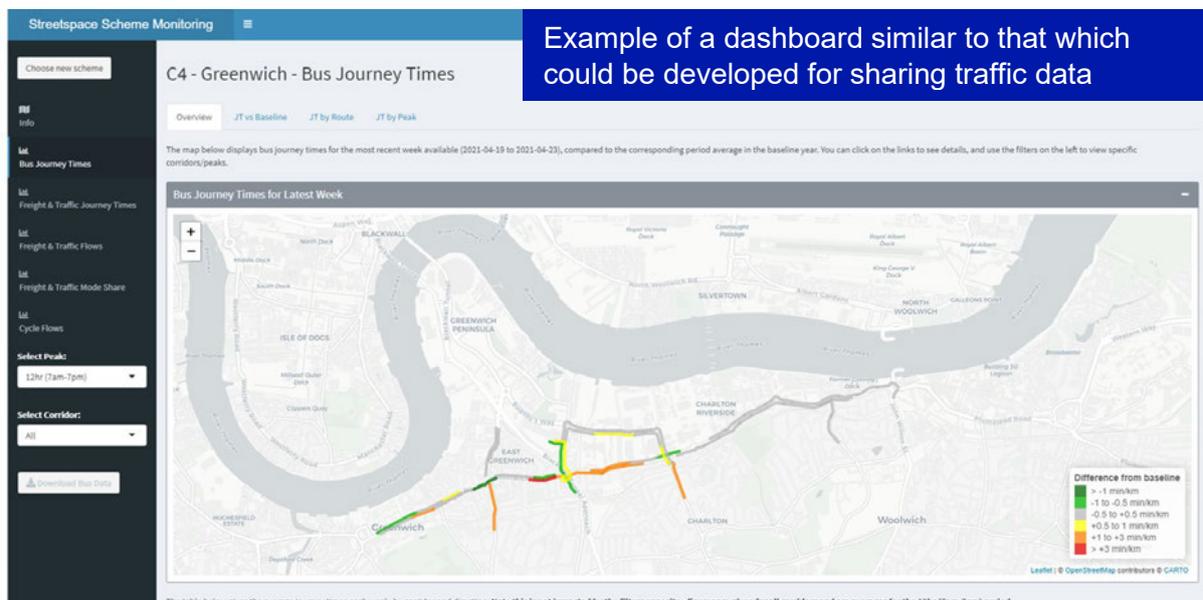
metrics including traffic flows, traffic composition, journey times and journey time reliability, junction performance, bus performance and road safety.

Where possible the suite of monitoring technology currently available to TfL will be used. Since the MMS was produced, technology has improved and we now have a number of new camera-based sensors in place across the network, data from which will feed into the monitoring programme. Procurement is underway for around 30 additional market-leading sensors to supplement the existing network, and these sensors will be focused within the scheme's area of influence on key corridors.

Traffic monitoring is expected to commence in late 2021. We are currently exploring a range of mediums for making the data collected accessible.

Air quality monitoring

TfL's proposals for air quality monitoring were presented to STIG at the meeting on 24 September 2020. Monitoring has been underway since December 2020 at a total of 38 sites across five London Boroughs. This includes three continuous monitoring station (CMS) sites in RB Greenwich and LB Newham.



Example of a dashboard similar to that which could be developed for sharing traffic data

The data from the three CMS sites will soon be accessible on the London Air Quality Network Website. <https://www.londonair.org.uk/LondonAir/Default.aspx>

In terms of diffusion tube data, once 12 months' data has been collected, the data will be ratified and made available to STIG.

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 from February 2019. This data was collected prior to the start of construction activities to avoid skewing the data and hence provide a representative pre-opening baseline.

Socio-economic monitoring

TfL's approach for socio-economic monitoring will be presented to STIG at the meeting on 27 May 2021.

The socio-economic monitoring comprises two elements:

- Primary research made up of surveys of residents and businesses.
- Secondary research involving the analysis of secondary data sources. This is information collected or compiled by third parties such as the Office for National Statistics.

Primary and secondary data analysis will be used in tandem to discern specific changes in the study area, against the general backdrop of social and economic trends.

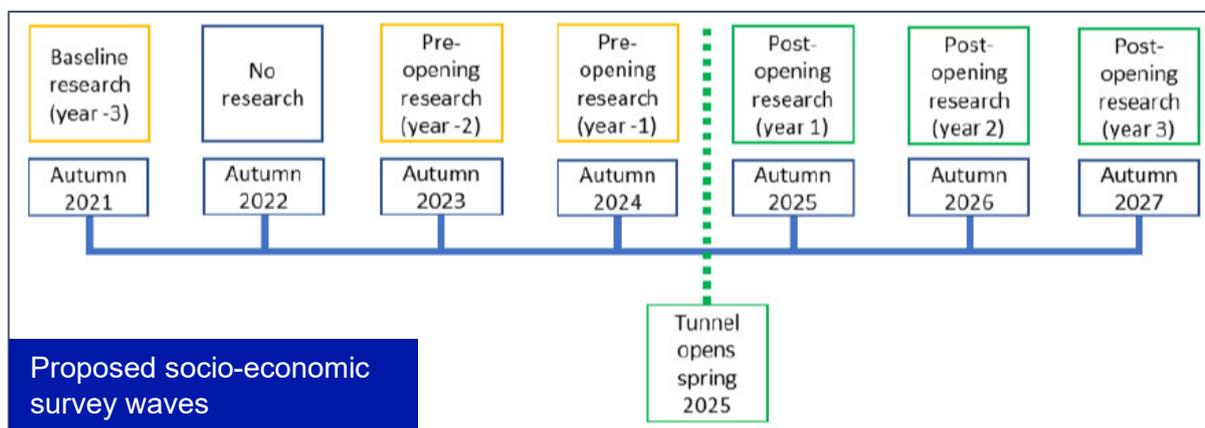
As per the MMS, three waves of data collection and analysis will be undertaken before the tunnel opens, and three waves after. The timings are shown in the Figure below. 2021 is the baseline year for this work to ensure that there are sufficient insights before major construction of the tunnel begins. The report baselining secondary data has been completed and the primary research is planned for Autumn 2021.

Provision and interpretation of monitoring data

TfL will receive monitoring data from our appointed contractors in different formats, depending on the topic and metrics being collected. We are currently considering the most appropriate means of providing this data to STIG members.

Our current thinking is that close to the point of scheme opening, TfL will produce a report that draws together the data collected hitherto and summarises baseline conditions pre-opening.

Post-opening of the scheme, on an approximately annual basis, TfL will review the emerging results from the monitoring programme and produce a combined report exploring, assessing



and interpreting the evidence for change in relation to the project. Interim quarterly reports providing an initial analysis will also be produced in the first year after opening.

These reports will function as TfL's view of the emerging impacts and evaluation of the scheme and will also serve as a resource for stakeholders. Further consideration is being given to the format of the reports and the means of making the data collected available, and we will provide a further update on this in due course.



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Project name:
Silvertown Tunnel Lot B Progress

From:
[REDACTED]

Date:
20th May 2021

To:
Transport for London

CC:
[REDACTED]

1. Introduction

1.1 Purpose of this Briefing Paper

This Briefing Paper explains the proposed approach to utilising the outputs from the Refreshed Assessment of the Silvertown Tunnel scheme (hereinafter referred to as the Scheme) to respond to the requirements of the Silvertown Tunnel Charging Policies and Procedures (CPAP) Policy 10 as set out below:

Policy 10 of CPAP states:

“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.”

Paragraph 3.2.5 of CPAP goes on to state:

“For the purposes of Policy 10, the Scheme shall be deemed not to give rise to materially different environmental effects if the significance of the effect reported for each topic, taking account of any necessary mitigation, is the same as or better than the level of significance reported against that topic in the ES. In this context, ‘the ES’ means the document of that description set out in Schedule 14 to the DCO.”

The findings from the Refreshed Assessment will be assessed against those reported in the Environment Statement (ES) to determine accordancy with Policy 10. It is proposed that the outputs from this compliance assessment will be set out in a report to be known as the Environmental Compliance Assessment Report.

The first stage in that process is to identify those topics and matters to include in the Environmental Compliance Assessment. To that end, an Environmental Compliance Assessment Scoping Note has been prepared, which sets out in more detail the topics and topic specific aspects that will be included in the compliance assessment reporting.

This Briefing Paper provides a summary of the Scoping Note and starts with an overview of the Refreshed Assessment process and relevant Development Consent Order (DCO) requirements and certified documents. This Briefing Paper also outlines the proposed scope and approach to the Environmental Compliance Assessment and reporting.

1.2 Refreshed Assessment

A significant programme of modelling was completed between 2014 and 2017 to inform the DCO application, including strategic demand, highway and public transport modelling, local highway modelling, economic appraisal modelling (TUBA), air quality and noise modelling. An 'Assessed Case' was developed, representing the most likely scenario of the Scheme's effects in operation based on central forecasts and it was on this basis that the DCO was approved.

The Assessed Case is a scenario adopted for assessment of likely effects of the Scheme, in the context of central forecasts of transport conditions and with user charges set so as to achieve the Scheme's traffic, environmental, socio-economic and financial objectives.

Transport for London (TfL) proposed a requirement as part of the DCO process to undertake a 'Refreshed Assessment' of the Scheme's effects closer to the time of opening, comprising updated transport, air quality and noise modelling, based on the most up to date information available.

The Refreshed Assessment will be used pre-scheme opening in:

- Setting the opening user charges;
- Defining the requirement for and form of any localised mitigation required to address residual effects; and
- Specifying the bus network through the tunnels that will operate on opening.

For this process, the relevant transport and environmental models will be updated, the models rerun, and proposals developed for each element in conformity with the Scheme commitments, policies and procedures set out in the relevant certified documents and any DCO requirements.

For the purposes of the Environmental Impact Assessment produced for the DCO application, a worst-case design envelope was applied. The focus of the Refreshed Assessments will be on Scheme opening and ensuring the Scheme impacts associated with traffic changes resulting from the Scheme are, as far as possible, aligned and improved on those put forward in the DCO application. As stated in section 2.1.7 of the Monitoring and Mitigation Strategy (MMS), *"the refreshed assessment will not 'replace' the Environmental Impact Assessment, rather it will enable TfL to have the benefit of the most up-to-date data when setting the initial user charges and identifying any implementing any mitigation measures that are necessary before the Scheme opens."*

In particular, the Refreshed Assessment will enable uncertainties identified during the DCO examination process to be considered including:

- The extended duration between the DCO being granted and the predicted opening of the Scheme;
- The rates of growth in both population and employment within the London Boroughs of Greenwich, Newham and Tower Hamlets; and
- Anticipated changes in the road and public transport networks due to other schemes.

Additionally, consideration will also be given to the changes to traffic patterns as a result of the Covid-19 pandemic and the associated impact on future scenarios.

1.3 Relevant DCO Requirements and Certified Documents

The requirement for a Refreshed Assessment and the details of what is to be considered within the Refreshed Assessment is set out in the Silvertown Tunnel Order 2018 (the DCO), particularly Article 53, Requirement 7 and Requirement 14, as well as the following certified documents:

- The Charging Policies and Procedures contained in document reference 7.11 (revision 3);
- The MMS contained in document reference 8.84 (revision 2); and

- The Bus Strategy contained in document reference 8.82 (revision 2).

There are interactions between each of the above areas of Scheme development. Therefore, TfL is ensuring that all elements are developed and considered in light of one another and that the Refreshed Assessment appropriately considers these interactions.

1.3.1 DCO Article 53 and Charging Policies and Procedures

The CPAP sets out the principles according to which TfL must set and vary the user charges and the procedures that apply when doing so. Article 53 of the Scheme DCO requires TfL to exercise the user charging power in accordance with the CPAP document.

The CPAP sets out the process for setting (and subsequently varying) the user charges, including the requirement to ensure that the initial charges are set at a level so that the Scheme in operation is not likely to give rise to materially new or different environmental effects to those reported in the ES.

The extent to which the expected environmental effects of the Scheme accord with those reported in the ES will thus be a key consideration when undertaking the Refreshed Assessment. The CPAP also sets out a requirement to undertake a review of the user charges once the Scheme has been operational for 12 months.

1.3.2 DCO Requirement 7 (Schedule 2) and Monitoring and Mitigation Strategy

The MMS sets out the scope of monitoring of Scheme impacts that TfL will undertake and the processes for determining and implementing appropriate mitigation for any localised traffic and traffic-related impacts.

The DCO requirement 7 (Schedule 2) requires that TfL must comply with the MMS. The MMS sets out the scope of the Refreshed Assessment that must be undertaken pre-opening, pre-opening monitoring of baseline environmental and socio-economic conditions, monitoring of Scheme impacts that TfL will undertake post-opening and the processes for determining and implementing appropriate mitigation for any adverse impacts identified.

1.3.3 DCO Requirement 14 (Schedule 2) and Bus Strategy

The Bus Strategy sets out the commitments which TfL will fulfil in developing bus services prior to Scheme opening and in reviewing and modifying services. This commitment is secured in the DCO through requirement 14.

As part of the Bus Strategy TfL committed to running at least 20 buses per hour through the tunnels in each direction at peak times from the point of Scheme opening, with the expectation being that the number of bus services using the tunnels would increase in the future as demand grows.

The Bus Strategy sets out a number of objectives and requirements with the aim of ensuring the opportunity presented by the Scheme to transform the bus network in this part of London is realised.

1.4 Refreshed Assessment Approach

The Refreshed Assessment will incorporate the following elements:

- Collection of up-to-date traffic count data and the latest available origin and destination data.
- Updating of the strategic transport modelling with new travel, population and employment data and any new committed relevant transport schemes or major developments that will be implemented prior to scheme opening (i.e. schemes that are not currently included within the Assessed Case but which are committed at the time of the traffic modelling for Refreshed Assessment). Updating of environmental modelling in parallel with transport modelling.

- Development of an updated Reference Case (without Scheme) for the scheme opening year.
- Testing of user charge scenarios in the context of updated Reference and Assessed Cases. This includes the completion of a User Charge Assessment Framework that will assess the performance of the user charges against the Project Objectives.
- Collection of air quality baseline data and assessment of likely traffic, air quality, noise, and socio-economic impacts of scenarios at strategic level and identification of charges which meet the requirement of Policy 8 in the Charging Policies and Procedures document.
- Identification of likely location and magnitude of any localised impacts including the development and updating of local traffic models as required, to enable more detailed consideration of Scheme impacts on the highway network.
- Iterative use of the strategic and local models to identify and optimise any localised mitigation that may be required as a result of the Refreshed Assessment.

1.5 Purpose of the Environmental Compliance Assessment Scoping Note

The purpose of the Scoping Note is to set out the approach to undertaking an Environmental Compliance Assessment that utilises the Refreshed Assessment of the Scheme to respond to the requirements of CPAP Policy 10. This includes identifying the topics, and the specific matters within those topics, that are to be included in the Environmental Compliance Assessment, and the method by which that assessment will be undertaken.

For each of the matters identified for inclusion within the scope of the Environmental Compliance Assessment, it will be necessary to establish what is meant by 'material'. Most of the EIA topics use the Design Manual for Roads and Bridges (DMRB) 5 significance ratings (Neutral, Slight, Moderate, Large and Very Large). Ratings of Moderate and above are generally regarded as significant for the purposes of EIA. It is therefore proposed that a materially new effect is one that is assessed as being Moderate or above, and that a materially different effect is one that takes the original rating to Moderate or above. Changes below Moderate would not be regarded as material.

The purpose of the Refreshed Assessment is to allow TfL to consider new data since the DCO was granted. As stated in the MMS, paragraph 2.1.7 " *The refreshed assessment will not 'replace' the assessment which was used to identify the likely significant effects of the Scheme in the Environmental Statement. Rather, it will enable TfL to have the benefit of the most up-to-date data when setting the initial user charges and identifying any implementing any mitigation measures that are necessary before the Scheme opens.*" To allow consistency of the Refreshed Assessment with the ES, the same methods of assessment will be adopted as previously utilised.

It should be noted that the Environmental Compliance Assessment Scoping Note does not seek to update or replace the Silvertown Tunnel EIA Scoping Report (June 2014), nor is TfL seeking a formal Scoping Opinion.

2. Topics to be included in the Environmental Compliance Assessment

Table 2-1 lists the environmental topics that were included within the scope of the original Environmental Impact Assessment and reported in the ES that accompanied the DCO application. Against each topic a commentary is provided to explain whether it is proposed to include it within the scope of the Environmental Compliance Assessment or not.

Since the Refreshed Assessment relates to the impacts of the scheme once operational there is no requirement to re-assess the construction-related impacts of the Scheme. The Environmental Compliance Assessment is therefore focused on those transport related topics, and specific matters within those topics, that could be affected by the outcomes of the Refreshed Assessment, i.e. they are triggered by changes identified through the updated transport modelling and associated noise and air quality modelling.

While the updated modelling for the Refreshed Assessment will reflect the proposed user charge and updated bus network, it may identify the need for localised mitigation measures, these are unlikely to result in materially new/different effects from those assessed in the ES. Appendix F of the MMS lists the types of local mitigation measures that might be introduced and the majority of these do not require any highway works. Reference is made to “*minor junction or geometry changes*” but the expectation is that these can be implemented within the existing highway boundary and delivered under existing TfL or Borough powers for the improvement or maintenance of the highway. For that reason, land use related impacts are excluded from the Environmental Compliance Assessment.

Table 2-1 Environmental Compliance Assessment Scoping Table

ES Topic¹	Scoped In or Out
Chapter 6 - Air Quality	Scoped in. Matters included: NO2 Emissions, Compliance Risk Assessment and Ecological Receptors.
Chapter 7 – Community & Private Assets	Scoped in. Matters included: Community Severance, Amenity and Cumulative Assessment.
Chapter 8 – Cultural Heritage & Archaeology	Scoped out. The Refreshed Assessment relates to traffic effects once the Scheme is in operation. Para 8.6.11 of the ES states that “ <i>No potential direct physical impacts to cultural heritage assets have been identified as likely due to the operation of the Scheme</i> ”.
Chapter 9 – Terrestrial Ecology	Scoped out. Operational effects reported in the ES relate to permanent land-take only.
Chapter 10 – Marine Ecology	Scoped out. No likelihood of materially new or materially different effects to those reported in the ES.
Chapter 11 – Effects on All Travellers	Scoped in. Matters included: Journey Length, Changes in Amenity, New Severance, Relief from Severance and Driver Stress.
Chapter 12 – Geology, Soils & Hydrogeology	Scoped out. No likelihood of materially new or materially different effects to those reported in the ES.
Chapter 13 – Material Resources & Waste	Scoped out. No likelihood of materially new or materially different effects to those reported in the ES.
Chapter 14 – Noise & Vibration	Scoped in. Matters included: Operational Road Traffic Noise and Vibration, Operational Tunnel Ventilation Noise, Impacts on Noise Important Areas and Assessment Outside of Detailed Calculation Area.
Chapter 15 – Townscape & Visual Amenity	Scoped out. No likelihood of materially new or materially different effects to those reported in the ES.
Chapter 16 – Surface Water Quality & Flood Risk	Scoped out. No likelihood of materially new or materially different effects to those reported in the ES.
Chapter 17 – Cumulative & Synergistic Effects	Scoped in. Matters included: Operational Cumulative Effects and Synergistic Effects.
Chapter 18 – Summary of Health & Equality Effects	Scoped in. Matters included: Noise and Air Quality.

1. The chapter numbers are those used in the ES. Chapters 1-5 were introductory rather than topic assessment chapters and are therefore not included in the table.

For each of the topics scoped in, there is a separate chapter in the Scoping Note which includes further details on the specific matters to be included within the Environmental Compliance Assessment and an explanation for any that it is proposed to scope out. Each topic chapter also includes a description of the methodology to be adopted for the Environmental Compliance Assessment.

The scope of the Environmental Compliance Assessment will be kept under review during the Refreshed Assessment.

Item 6

Silvertown Tunnel Socio-Economic Monitoring:

Overview of Socio- Economic Monitoring and Summary of Baseline Secondary Data Analysis



Image: flickr.com James Petts*

Client: Transport for London
Date: May 2021
Our ref: 23766101



steer

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Part 1: Overview of Socio-Economic Monitoring

Introduction

Background

One of the major strands of the Silvertown Tunnel Project's Monitoring and Mitigation Strategy (MMS) is to monitor socio-economic change within the project's area of influence and discern specific impacts arising from the project. Transport for London (TfL) has divided the MMS into the following five Lots:

- Lot A – Traffic modelling
- Lot B – Air Quality and Noise modelling and monitoring
- Lot C – Socio-economic monitoring
- Lot D – Traffic monitoring
- Lot E – Delivery of mitigation measures

The socio-economic monitoring is being undertaken by Steer, a transport and economic development consultancy, in partnership with Arcadis, a multidisciplinary engineering consultant. Other consultants are responsible for other Lots and TfL facilitates interaction between the Lots.

Overview of the socio-economic monitoring

Socio-economic monitoring uses a range of indicators to track changes in the social and economic characteristics of the area of influence of a project – indicators include levels of deprivation, household income, the number of businesses and jobs, and the age, number and density of the population.

The monitoring for the Silvertown Tunnel project will draw on existing datasets as well as annual survey data from residents and businesses (for example about the journeys they make before and after tunnel opening) to explore how the project has changed access to social and economic opportunities (for example access to employment, housing, and leisure activities).

Content and purpose of this paper

This paper describes the proposed methodology for the socio-economic monitoring, including the research methods to be used, the frequency and timing of data collection and the secondary data sources that will help to inform analysis.

Part 2 of this paper contains a summary of the secondary data analysis that has been undertaken to date. The secondary data analysis, along with the first wave of primary data collection, will provide a baseline against which future changes can be measured for consideration by the Silvertown Tunnel Implementation Group (STIG).

Socio-Economic Monitoring Method

Methodology

The socio-economic monitoring comprises two elements:

- Primary research made up of surveys of residents and businesses
- Secondary research involving the analysis of secondary data sources. This is information collected or compiled by third parties such as the Office for National Statistics.

The general methodology was originally outlined by TfL in the MMS and has since been refined by Steer and Arcadis in discussion with TfL. This has ensured for example that the most appropriate data sources are utilised and has enabled consideration of the impact of coronavirus restrictions on data collection.

Primary and secondary data analysis will be used in tandem to discern specific changes in the study area, against the general backdrop of social and economic trends.

The primary research will help us to understand changes and trends identified in the secondary data analysis. Similarly, the secondary research will inform the approach to the primary research and the types of questions included in the surveys.

Study area

Findings from the traffic modelling undertaken previously by TfL have been used to inform the study area for the socio-economic monitoring. This works from the broad assumption that changes in travel patterns coincide with socio-economic changes, therefore the area in which travel patterns are forecast to change is a reasonable proxy for the area in which to monitor socio-economic characteristics.

The study area is outlined in red on the map overleaf, informed by the traffic modelling undertaken as part of the work from Lot A. This area represents the relatively 'local' area of impact on traffic and has been selected as the study area for the secondary data analysis (and for the collection of primary research data in due course). The wider yellow area shows where some traffic impact is expected.

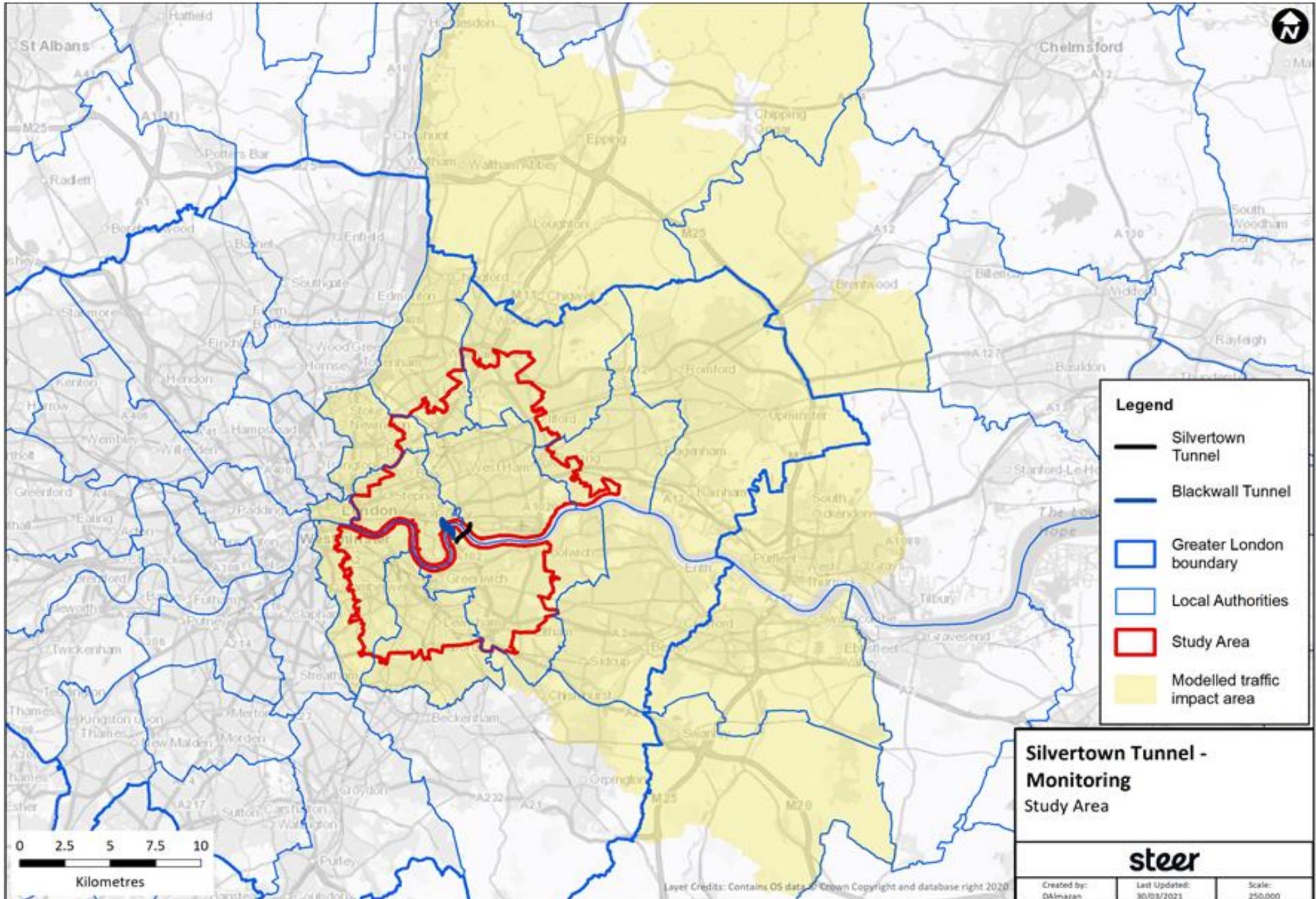
Timescales

The timescales for the research are shown on page 10.

Causation and correlation

It is noted that changes in local socio-economic indicators can be influenced by a variety of external factors. These changes could be influenced for example by the interplay of factors such as Brexit or the coronavirus pandemic, or the more localised effects of regeneration and government efforts to 'level up'. These forces are likely to affect the project's area of influence; it is therefore important to consider the extent to which observed changes may be as a result of the project and which could be attributed to other factors. For this reason, changes in socio-economic indicators (secondary data) within the project's area of influence will be compared with other parts of London and with the UK as a whole. This will enable us to see whether changes detected in the project's area of influence are also noticeable elsewhere.

The Study Area for Socio-Economic Monitoring



Analysis of Secondary Data

Scope of secondary research

A wide range of secondary data sources can be used to monitor for socio-economic change and a baseline analysis of secondary sources has been undertaken (summarised in Part 2 of this paper). The secondary research helps to inform the development of the primary research and in turn, provides an opportunity to consider secondary data sources in response to issues identified in the primary research.

The secondary data analysis focuses on three areas of interest

- Economic
- Social
- Travel

Sources include data from the Office for National Statistics (ONS), central government departments and TfL. Not all datasets are updated annually, therefore the focus of the secondary data reports in future years will be on comparing datasets that have been updated with the earlier analysis to identify changes or trends (which could then be attributable to the project or other factors).

Primary Data Collection: Residents

Overview

Annual research with residents will consist of 1,000 surveys undertaken with people living in the study area. Assuming coronavirus restrictions are lifted as planned, the research will be undertaken face to face with residents in the autumn.

The research will aim to including a range of demographic types so that it is representative of the people living in the study area. A demographic classification system such as TCOL or ACORN will be used to monitor the demographics of respondents.

Six waves of research are planned: three before tunnel opening and three after tunnel opening. This will enable 'before' and 'after' comparisons to be made. The aim is for the survey waves to be undertaken at the same time of year to remove the potential effects of seasonality from the responses.

Types of questions

- Length of time resident.
- Household confidence (income, spending, children's future) and changes over time.
- Travel habits commuting and accessing education.
- Travel habits visiting friends and family.
- Views on river crossings and Silvertown Tunnel project.

Primary Data Collection: Businesses

Overview

Annual research with businesses will entail surveys of 300 businesses in the study area and up to four focus groups enabling more detailed discussion of some of the themes and issues to emerge from the surveys. Business surveys will be undertaken by telephone.

A range of business types and sizes across the study area will be targeted in the research.

Types of questions

The types of questions will be broadly consistent with 2013-15 research (undertaken by WSP on behalf of TfL) to enable comparison with this earlier research:

- Business outlook and reasons for this.
- Advantages and disadvantages of current location.
- Deliveries and servicing requirements, and challenges.
- Access to labour and skills market.
- Access to customers and business travel.
- Cross river travel, changes in travel and views on river crossings and the Silvertown Tunnel project.

The aim is to ask the same or similar questions in each wave of data collection to enable comparison of responses between survey waves. However, some flexibility is needed to iterate or adjust the survey to take account of learnings, contextual changes or emerging areas of interest (e.g. identified in the secondary data analysis) that would warrant further research.

Research Timescales

Frequency and timing of data collection and reporting

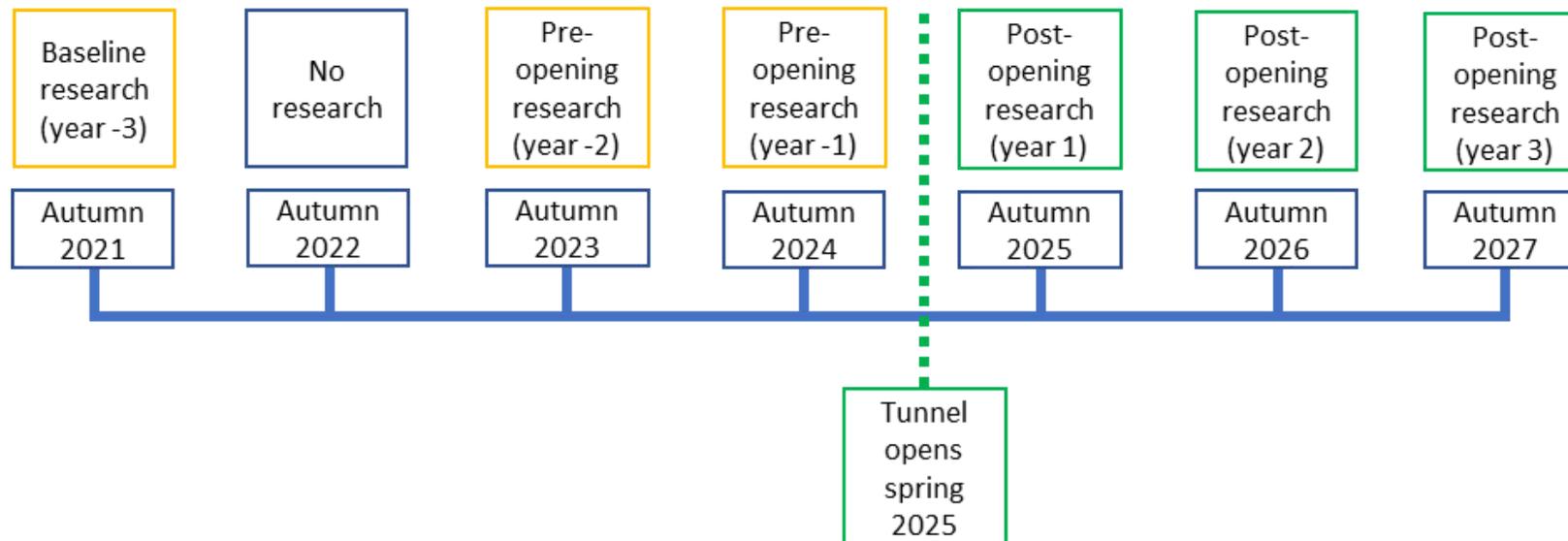
Six waves of data collection and analysis including three waves before the tunnel opens, as per the MMS.

We aim to collect primary data at the same time of year so that the effects of seasonality can be discounted from the analysis.

For consistency, the aim is to report on secondary data analysis alongside the primary data each year.

No research is planned for 2022 as the DCO requires three waves of research prior to tunnel opening. The baseline primary research is planned to start in 2021 while construction is still in the early stages.

The baseline report includes pre-pandemic secondary data. Annual Monitoring Reports will consider how factors such as the pandemic may have influenced secondary data gathered subsequently.



Part 2: Summary of Baseline Secondary Data Analysis

Introduction to Part 2

Secondary data analysis

Part 2 of this paper presents analysis of secondary data sources which provides a baseline against which future changes to the socio-economic environment will be monitored.

The secondary data analysis focuses on indicators within the three broad categories of Economic, Social and Travel. Datasets have been selected because they provide an overarching narrative to the socio-economic environment within the study area.

Indicators across the three categories are as follows:

Economic:

- Employee Claimant Count
- Business and Employees by Sector
- Deprivation
- Income
- Housing Affordability and Development

Social:

- Population
- Ethnicity
- School Census

Travel:

- Public Transport Accessibility
- Commuting Patterns – Census Travel to Work Data
- London Travel Demand Survey

Where possible, we have drawn from datasets that align directly with the study area. This is not always possible, for example if data is reported at a borough or London level, for which boundaries do not directly align with the study area.

Emerging trends will be tracked against these baselines. Expected impacts which may arise from socio-economic monitoring may include for example improvements in the economic environment as a result of improved accessibility and improvements in levels of deprivation as a result of investment and regeneration stemming from the project. However, it should be noted at this stage that potential impacts are speculative in nature.

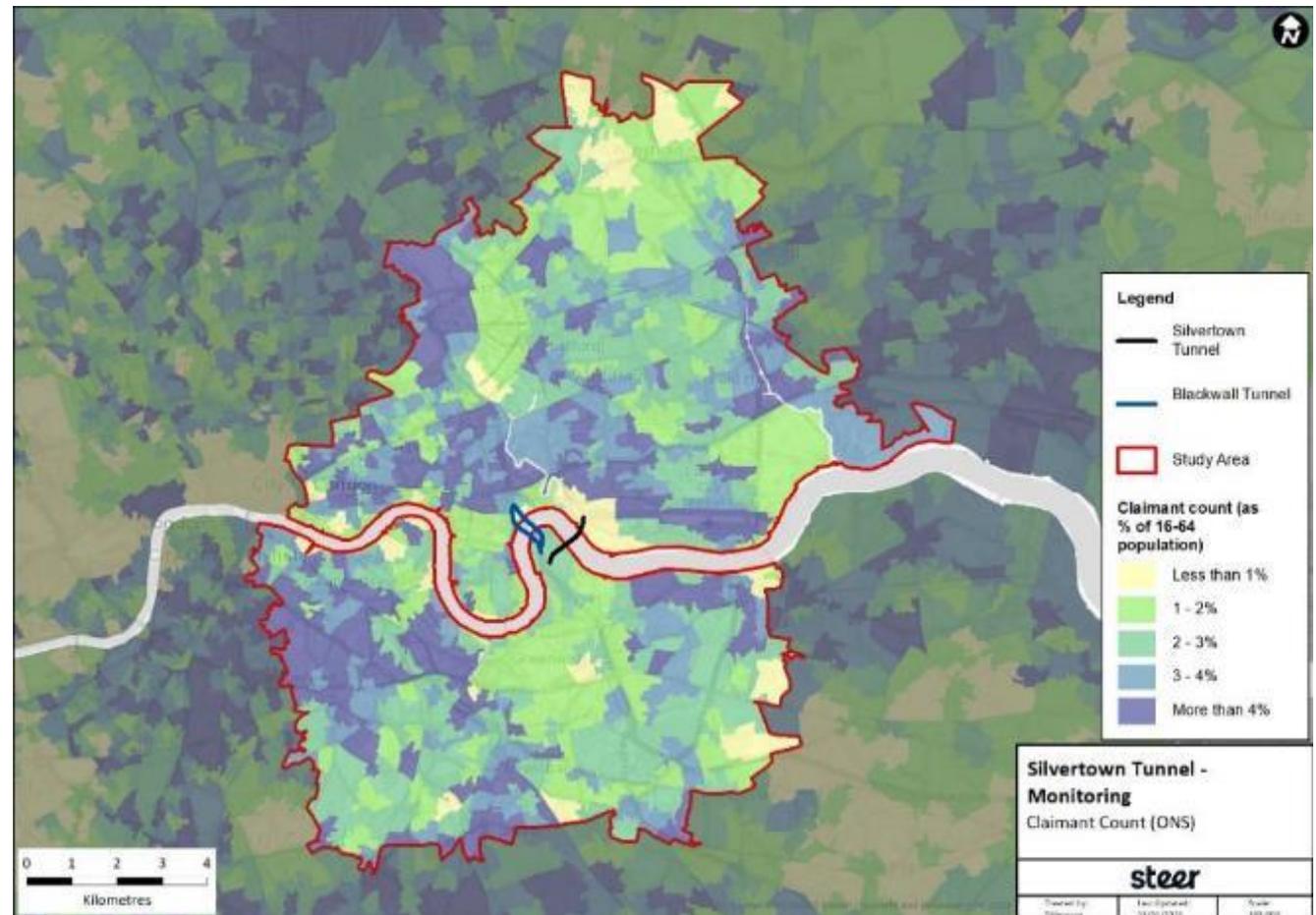
Economic



Employee Claimant Count

Claimant count is often used as an indicator of unemployment in smaller geographic areas because unemployment data are only published at local authority level.

Claimant count is a measure of the number of people claiming benefits principally for the reason of being unemployed and includes Jobseeker's Allowance (JSA) and Universal Credit (UC).



Businesses and Employees by Sector

Business and employees by sector measures employment across five main sector groups:

- Primary/Manufacturing
- Construction
- Transport, Retail and Distribution (TRAD)
- Private Services (e.g. financial, technical and administrative)
- Public Service (public administration and defence)

This data has been obtained from the Business Register and Employment Survey (BRES) and – categorised into sectors – will allow for specific impact assessment in relation to each business sector.

The information can be analysed by total employment account or organised by business size as seen in this table.

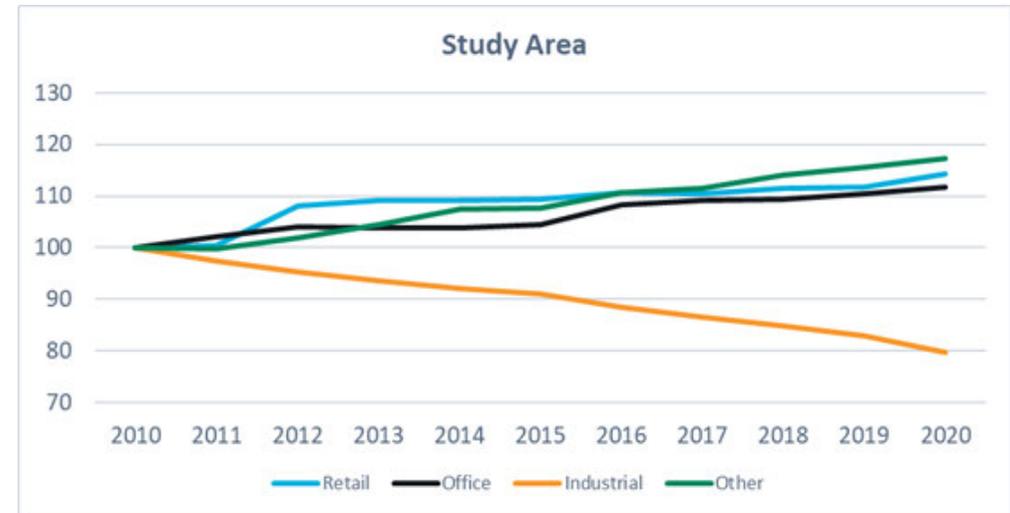
Area	Business size band	1: Primary, Manufacturing	2: Construction	3: TRAD	4: Private services	5: Public services	Total
Study Area	0-9	1.5%	10.4%	38.0%	50.1%	-	53,350
	10-49	2.2%	3.0%	47.7%	47.1%	-	2,510
	50-249	-	1.9%	36.5%	61.5%	-	260
	>250	-	-	11.1%	77.8%	11.1%	50
	Total	1.8%	9.9%	38.1%	50.2%	0.0%	56,170
Comparator Area – West London	0-9	1.8%	9.2%	31.7%	57.3%	-	135,250
	10-49	1.7%	3.1%	43.1%	52.0%	0.0%	10,320
	50-249	2.3%	0.6%	44.7%	52.1%	0.3%	1,550
	>250	1.7%	-	52.5%	39.0%	6.8%	300
	Total	2.0%	8.5%	32.5%	56.9%	0.0%	147,420
Comparator Area - Greater London	0-9	1.8%	11.6%	33.5%	53.1%	-	459,730
	10-49	2.2%	3.5%	42.4%	51.9%	0.0%	28,410
	50-249	1.2%	1.2%	36.6%	60.7%	0.2%	4,140
	>250	1.2%	-	33.1%	62.0%	3.6%	830
	Total	2.0%	10.9%	33.7%	53.4%	0.0%	493,110

Source: Business Register and Employment Survey 2019

Business Floorspace

A measure of total floorspace dedicated to business as well as its distribution across sectors gathered by the Valuation Office Agency. This dataset shows total business floorspace remained steady over the last ten years at around 10 million sqm. Within this growth however, there has been a decline in floorspace for industrial business and growth in other sectors (Retail, Office, Other).

This trend is consistent with London as a whole, but is more pronounced within the study area.

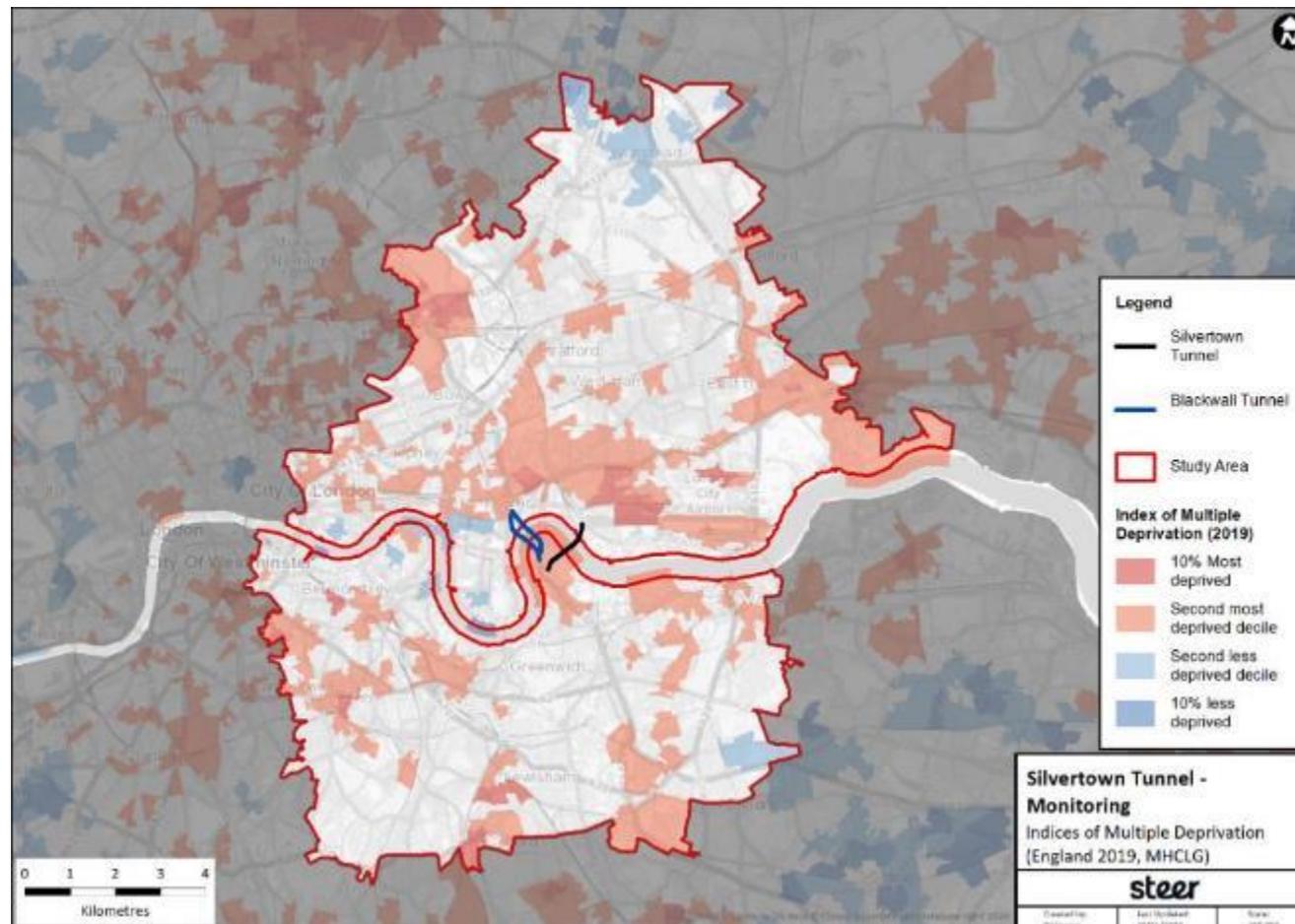


Deprivation

The Index of Multiple Deprivation (IMD) is the official measure of relative deprivation in England, published by the Ministry of Housing, Communities and Local Government. It consists of 39 separate indicators organised across seven domains of deprivation (i.e. crime, health).

IMD data can be analysed in totality or individual indicators can be isolated such as health deprivation and disability.

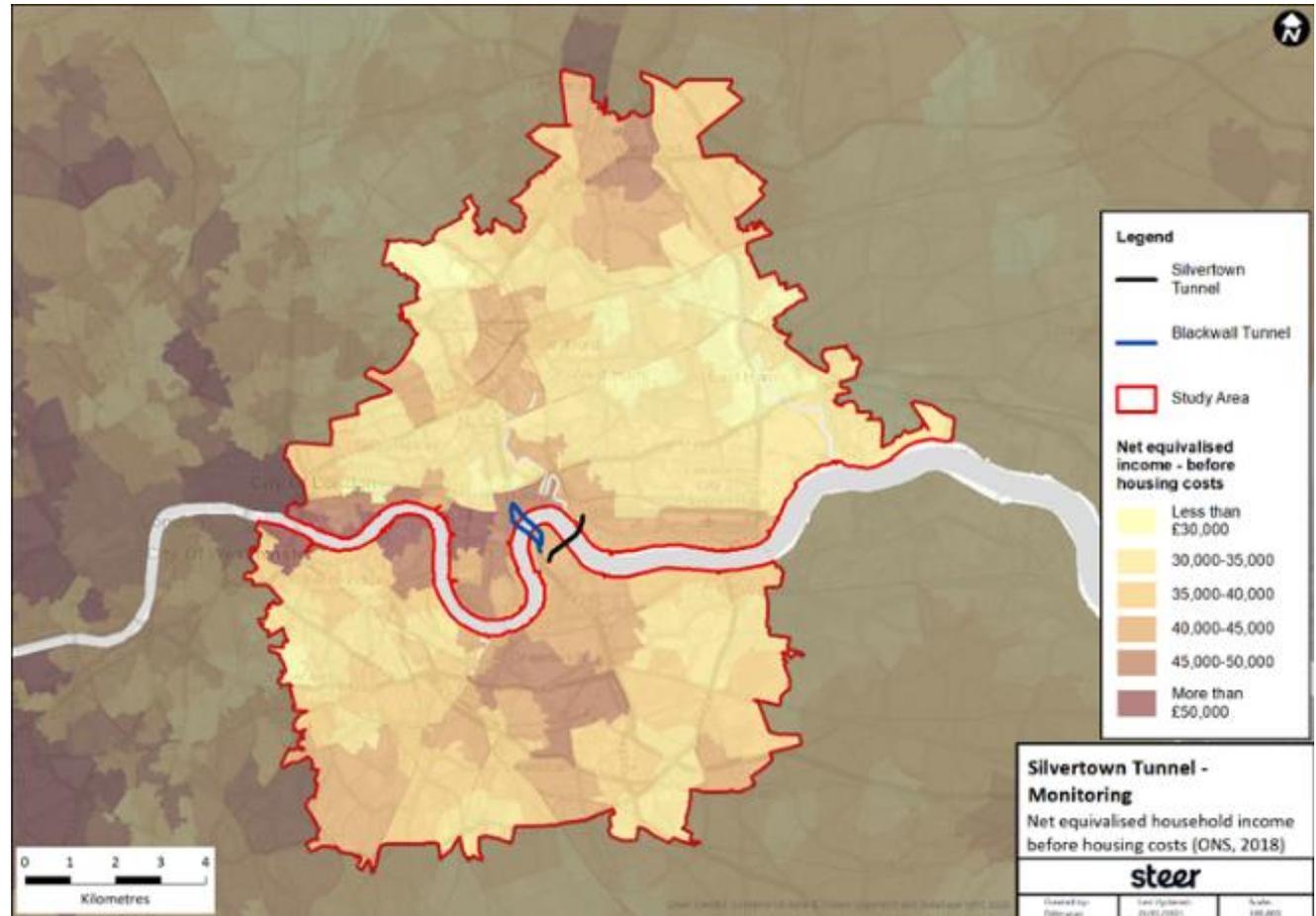
The study area includes a substantial proportion of the population living in areas with high levels of deprivation – with instances of relatively high deprivation directly to the north and south of the tunnel.



Income

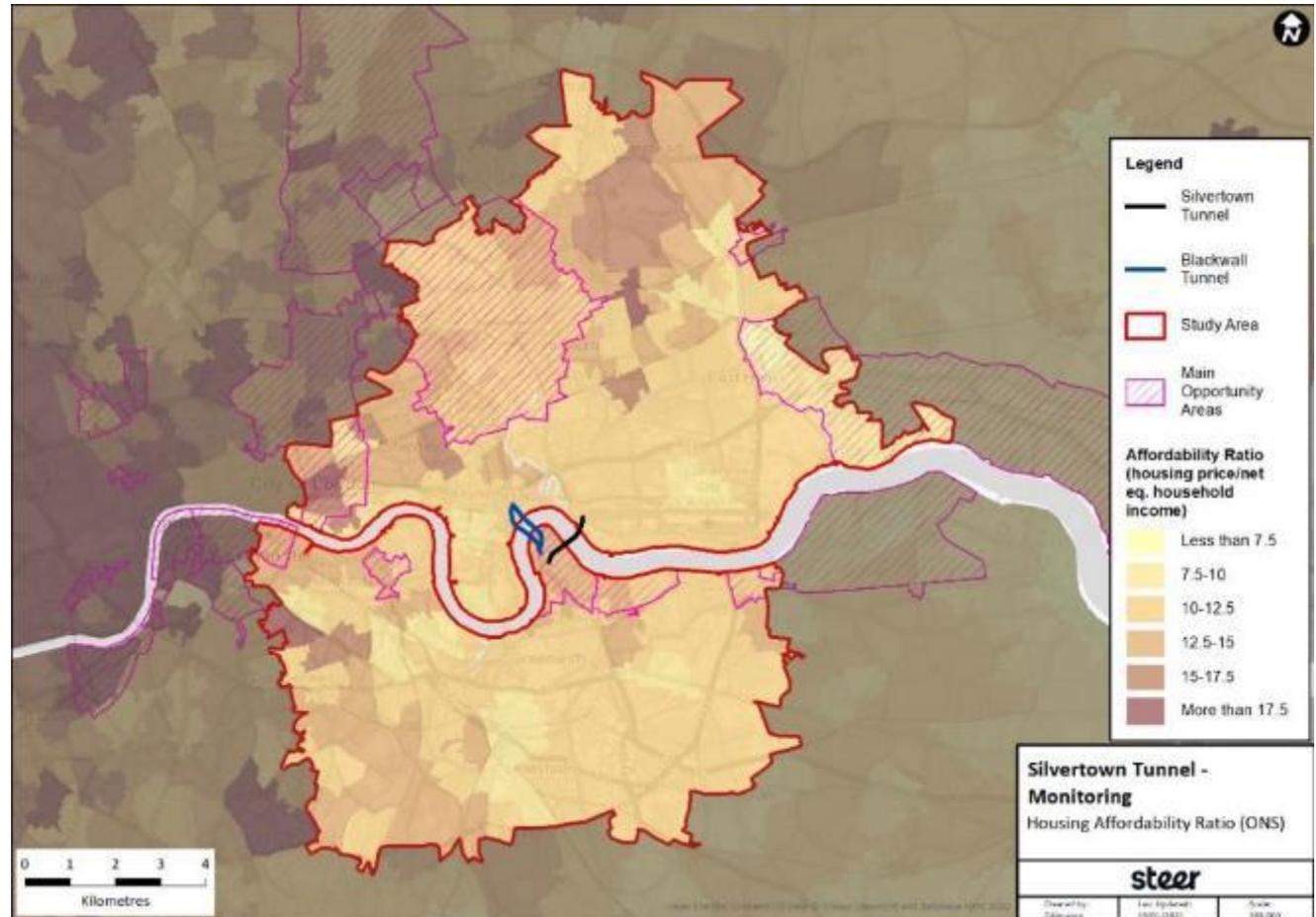
Income levels are analysed using annual net equivalised household income. As defined by the ONS, this methodology adjusts household income to account for the different financial resource requirements of different household types, including household size. This is because housing affordability is measured as a separate indicator, thus allowing for better comparison between study area and comparator areas.

The average equivalised income in the study area is just under £37,000 per annum, which is lower than London as a whole. Within the study area there are large differences between lower income areas to the east, with averages below £30,000 and higher income areas in Wanstead, the Isle of Dogs, Rotherhithe and Wapping – with average incomes over £45,000.



Housing Affordability

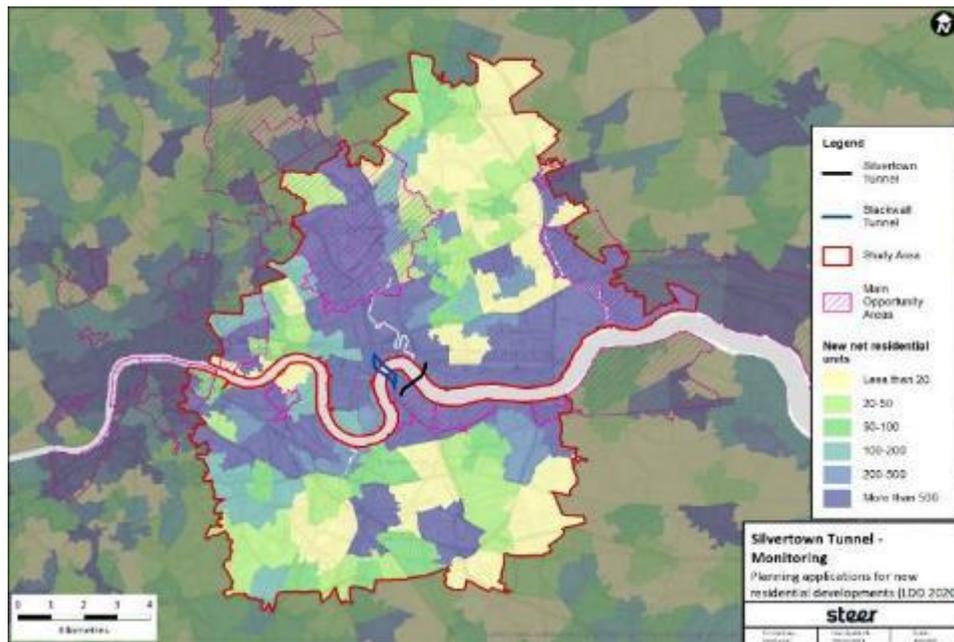
Housing affordability is measured as a ratio of the average housing sale price to the net equivalised household income, as defined by the ONS. A higher ratio reflects lower affordability, and a lower ratio means greater affordability. The average affordability ratio in the study area is 12.08, with the east having more affordable homes, and the north being the least affordable. Both equivalised income and the housing affordability ratio are lower in the study area in comparison to the west London comparator area indicating that while income is lower, housing is more affordable.



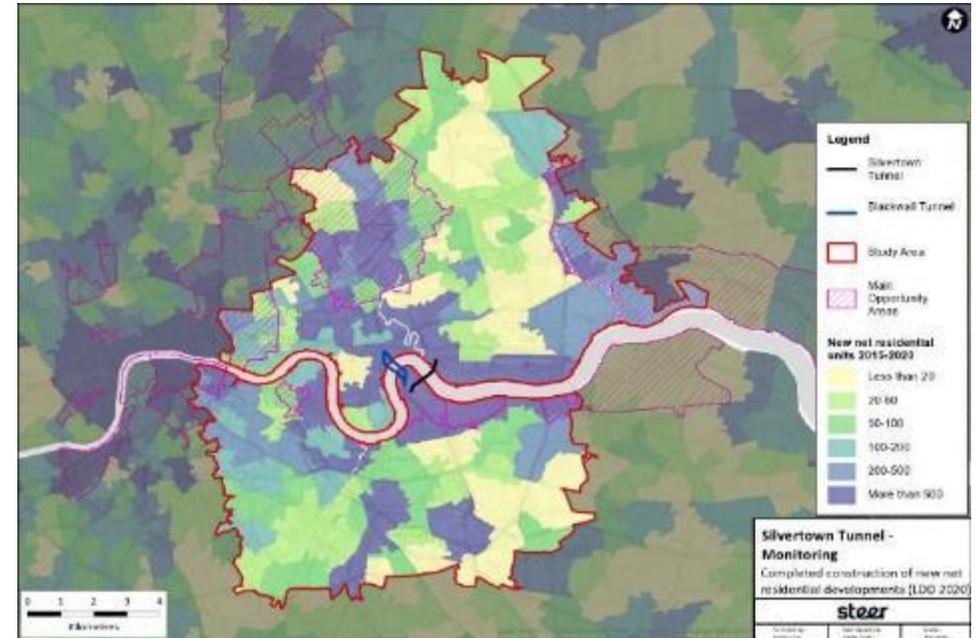
Housing Developments

The study area is expected to see significant housing growth, as evidenced by live planning applications for residential developments. Data from the latest version of the London Development Database (July 2020) has been analysed. This indicator is measured in net additions to total residential units. A net addition of 165,000 residential units is expected in the study area, compared to 103,000 in the west London comparator area and 400,000 across the Greater London.

Planned new developments 2020



Completed new developments 2015-2020



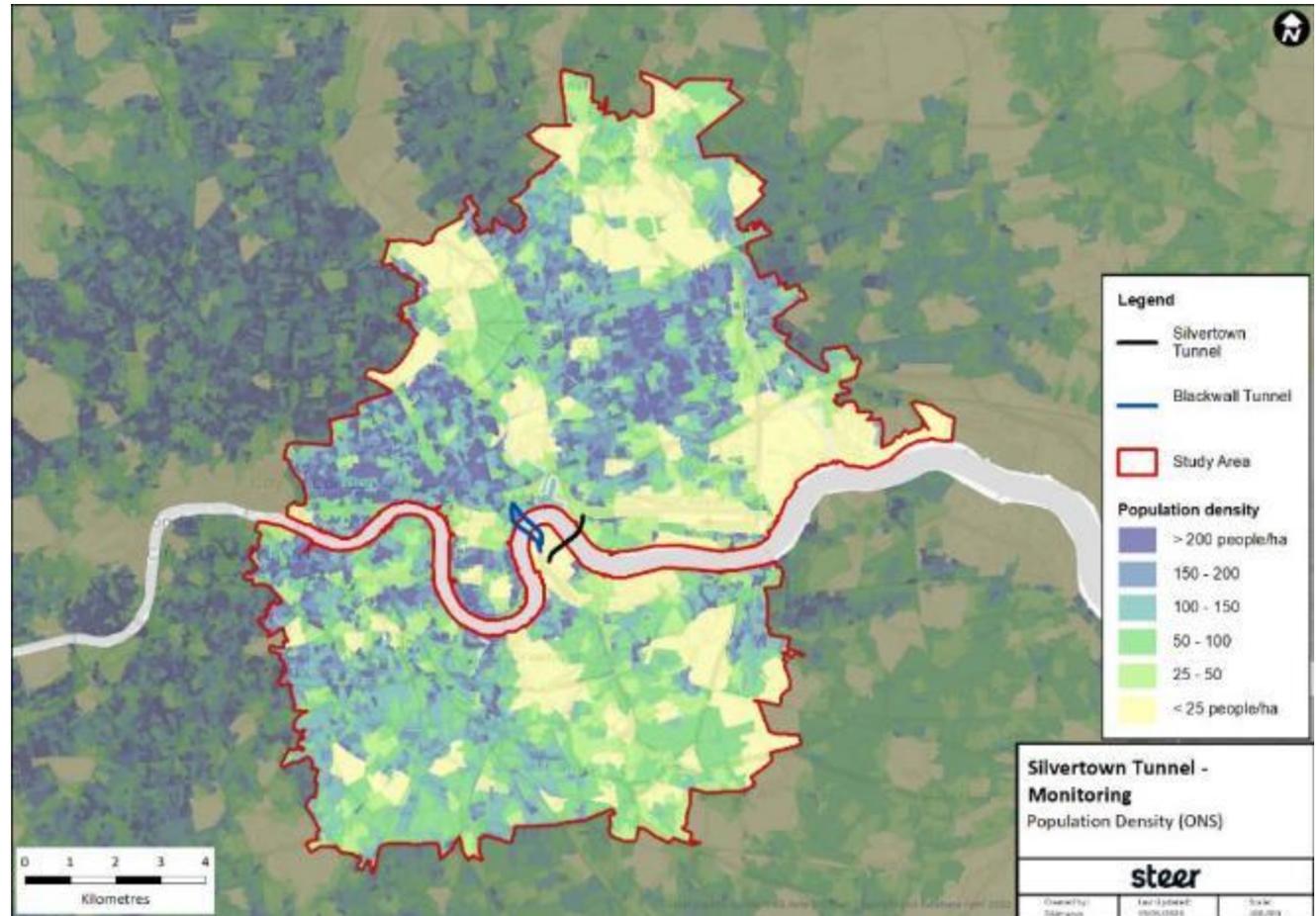
It can be seen from these maps showing completed new residential developments in the last five years (above) and planned new residential developments (left) that areas with intense growth in previous years coincide with areas with expected growth in the near future. The main areas of development are the Lee Valley, Isle of Dogs, North Greenwich/Woolwich, the Docklands, and Barking.

Social



Population density

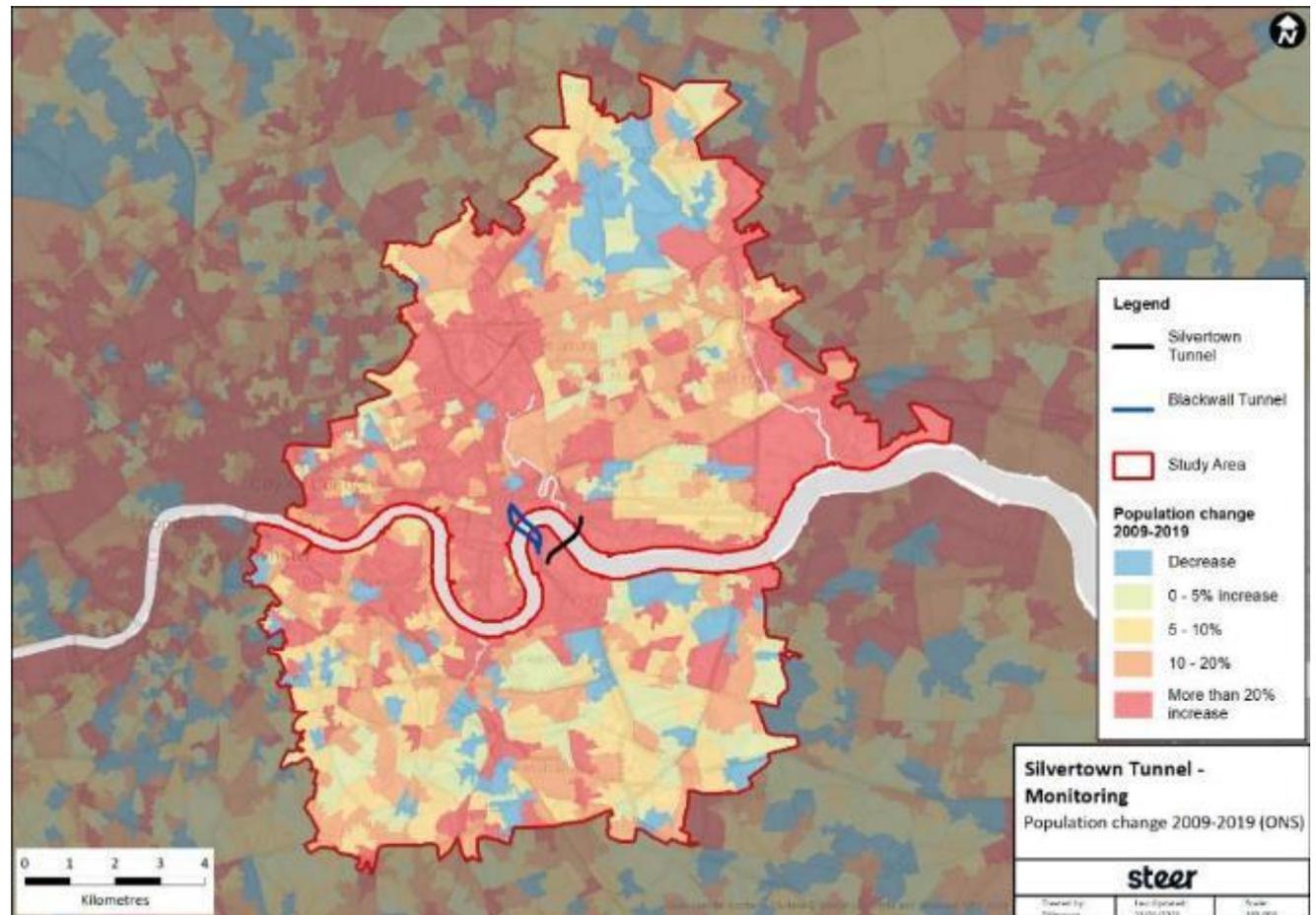
The population of the study area was 1.4 million people in 2019, as per the mid-year population estimates published by the ONS. As seen from this map, population density is higher (over 200 people/hectare) in most areas of Tower Hamlets, and central Newham. There are fewer areas of high population density south of the river in Southwark, Lewisham and Greenwich. Population density is currently lowest in the Lee Valley (corresponding with the Lee Valley Regional Park) and North Greenwich and Woolwich.



Population growth

There has been considerable growth in population north and south of the Silvertown Tunnel between 2009 and 2019 (although a decrease has been recorded in parts of Canning Town, slightly to the north of the tunnel's northern entrance).

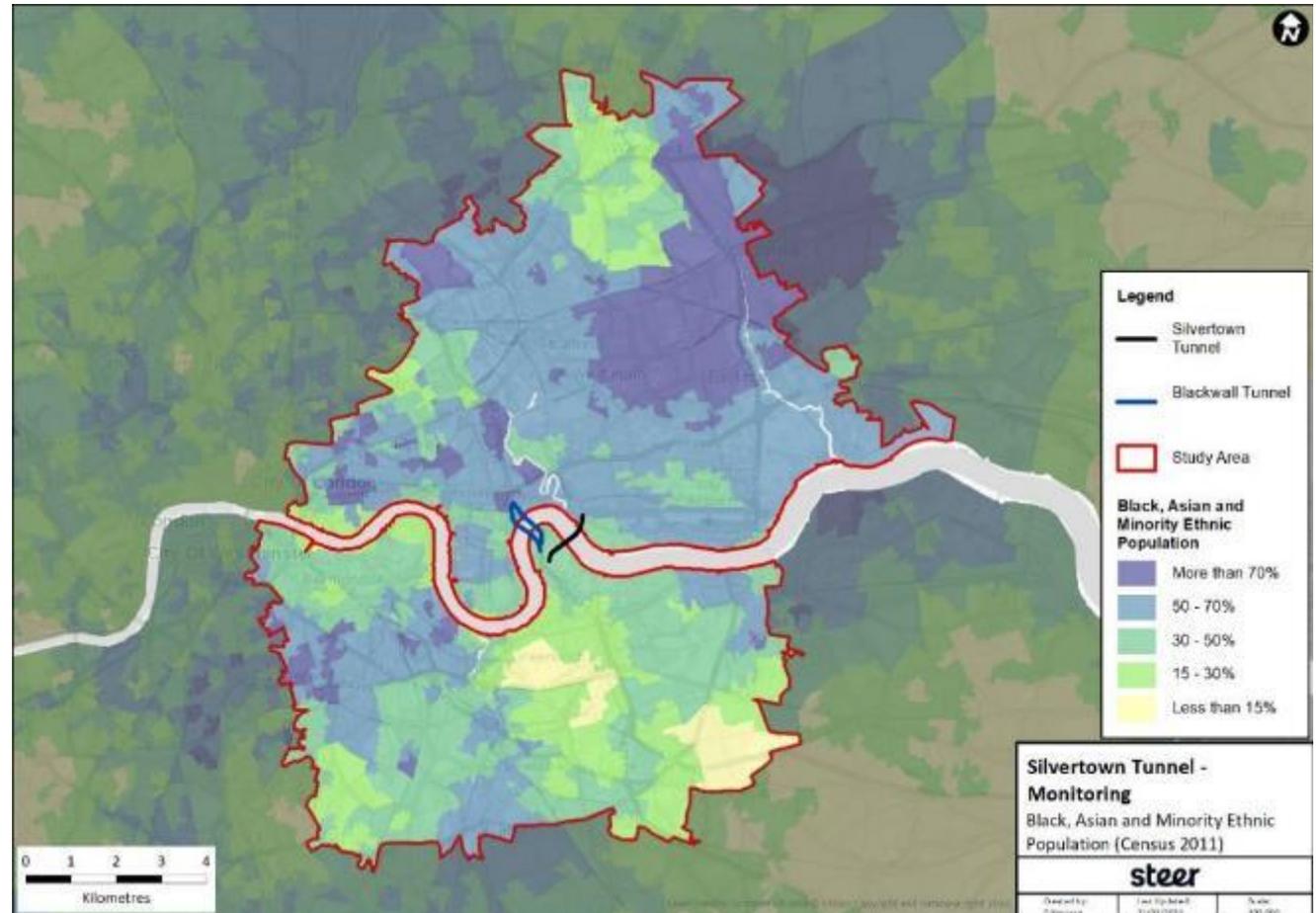
Population growth has been higher within the study area than comparator areas at 22.1% over the period 2009-2019 – compared with less than 13% in the comparator area of west London and London a whole.



Ethnicity

Ethnicity data has been obtained from the 2011 Census, as it provides detailed spatial disaggregation (unlike other datasets which only report at borough level). The downside of this dataset is that there is a ten year period between censuses. This means that ethnicity data will not be updated for each monitoring report and is unlikely to be used to determine the impacts of the scheme. However, it has been included in the baseline report to provide background social characteristics for the study area and informs the general baseline narrative.

The largest ethnic groups are people identifying themselves as white (45%), followed by Asian (28%) and Black (19%). Population from Black, Asian and Minority Ethnic (BAME) groups in combination represent a majority in the study area, comprising 55% of the total population.



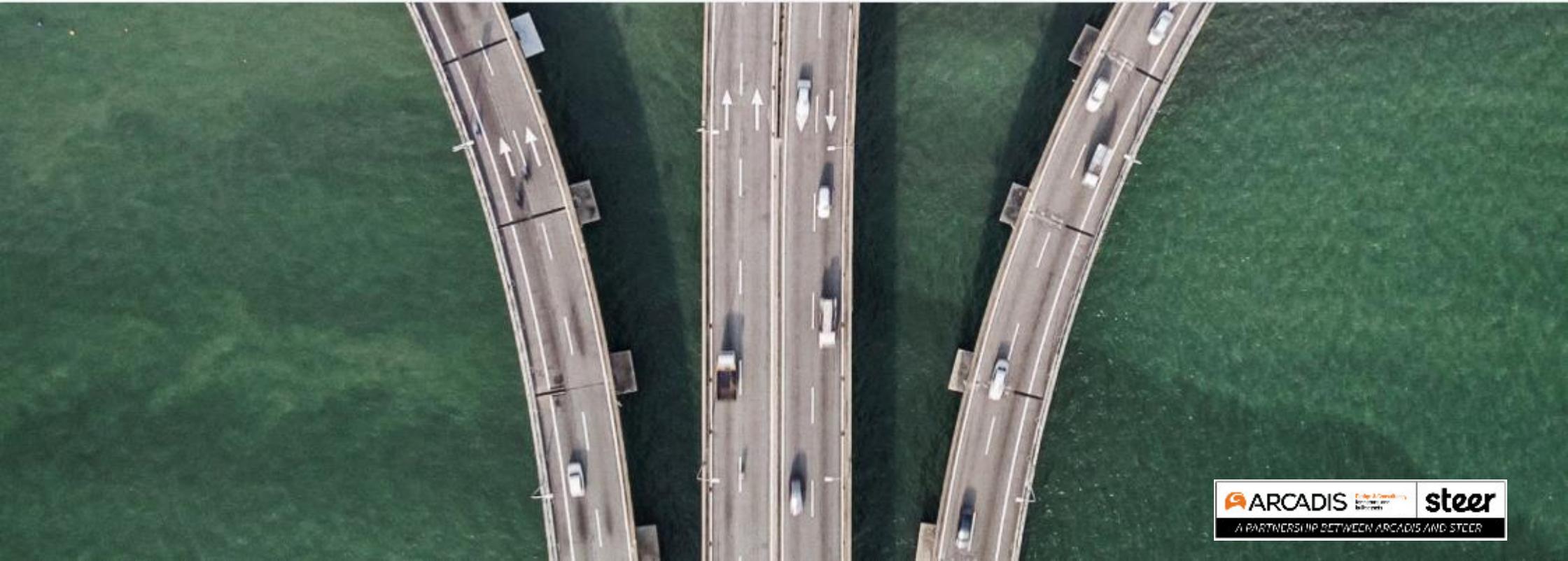
School Census

The School Census for the 2019/20 academic year provides data at borough and school level regarding total number of pupils and characteristics such as ethnicity, spoken languages, eligibility for Free School Meals (FSM), Special Educational Needs (SEN), and others.

In the study there are over 200,000 pupils attending nursery, primary and secondary schools. The study area has a higher number of pupils eligible for FSM than the comparator areas, and a significantly lower proportion of students with white-British ethnicity.

Area	Total pupils	Pupils eligible for FSM	White British	English as first language	Special Educational Needs
Study Area	213,645	22.8%	13.6%	44.1%	15.2%
Comparator Area - WL	326,920	17.5%	20.7%	46.9%	15.3%
Comparator Area - Greater London	1,452,246	18.8%	24.8%	54.2%	15.1%

Travel

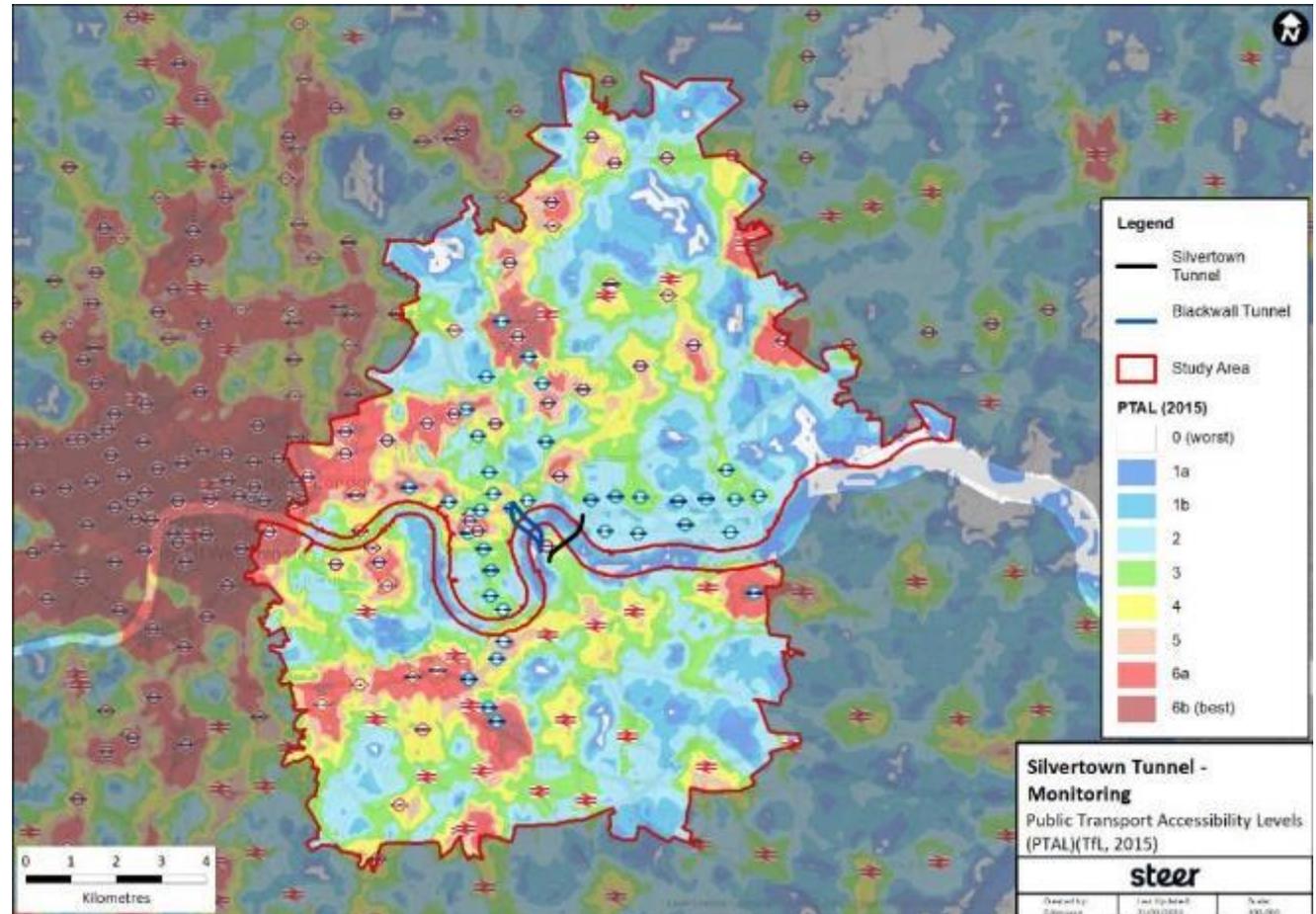


Public Transport Accessibility

Public Transport Accessibility Level (PTAL) is a metric used by Transport of London to measure access of a given location to the public transport network. This takes into account not just walking time to access transport – but also frequency, reliability, and number of services.

There are eight levels in this measure ranging from 1a, or “Low” to 6b, or “High”. Areas with the highest levels are those which are near frequent rail or Tube stations. Larger areas of high PTAL can be identified; these are where there is a combination of different rail services and bus routes, such as interchanges (e.g. Stratford or Lewisham). Alternatively, areas with poor access can be identified and are mostly concentrated to the north, east, and south-east.

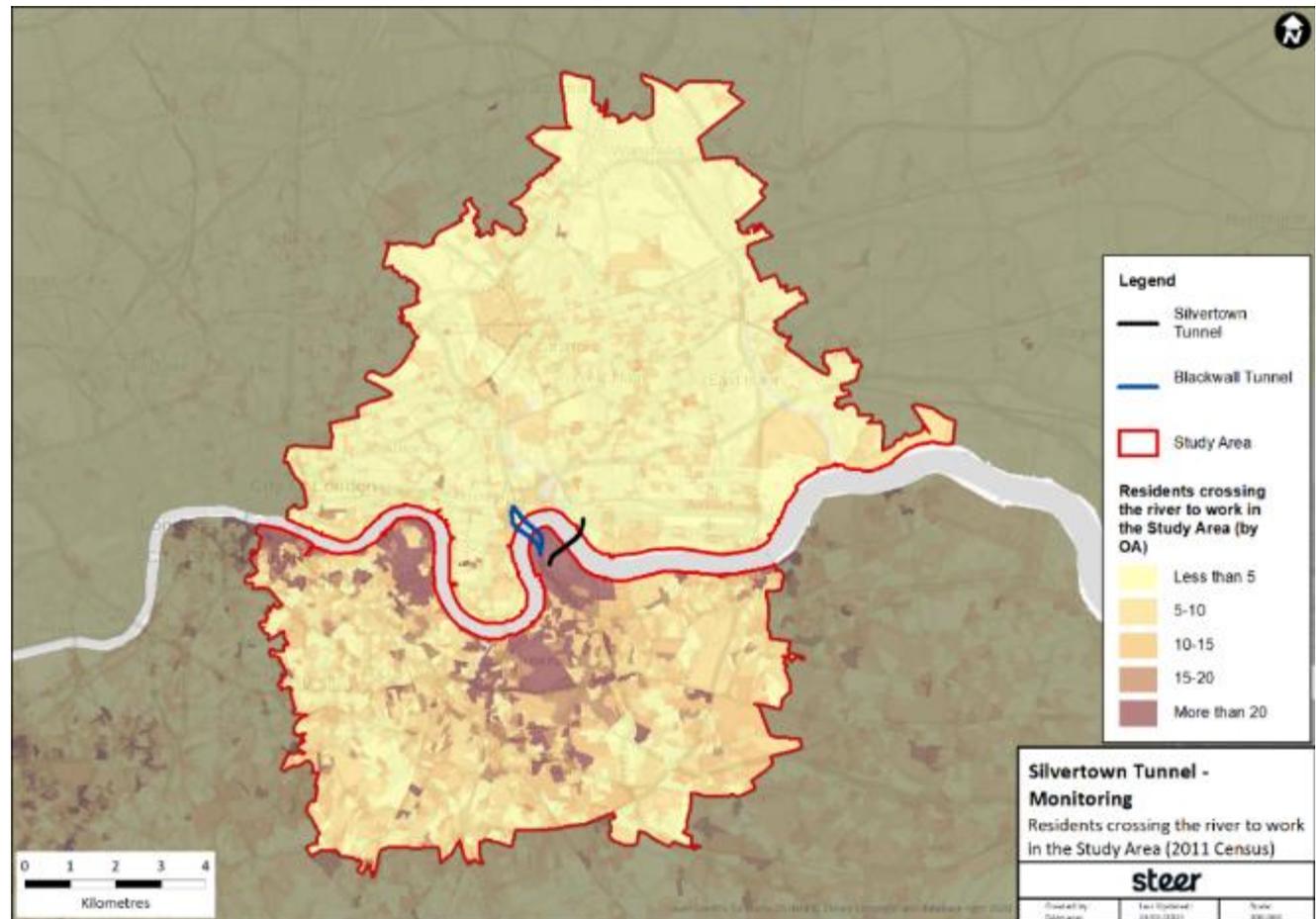
PTALs are unlikely to be updated annually throughout the study period, however they provide a useful snapshot of accessibility at this baseline stage.



Commuting Patterns – Census Travel to Work Data

The 2011 Census provides detailed data regarding places of residence and work, as well as preferred commuting mode. While this data is published only once every ten years, and is not suitable for annual monitoring, it is useful in establishing a general baseline for trends in commuting trips.

Of note are the cross-river commuting flows. The data shows that cross-river commutes are south-north dominated – with many more residents in the south crossing river for work.



The London Travel Demand Survey

The London Travel Demand Survey (LTDS) is updated annually by TfL and contains a wide range of detailed information on trips – including individual stages of trips, and characteristics of the people making them (although the survey is undertaken with a smaller group of people than the Census). The data for years 2016-17, 2017-18, and 2018-19 have been obtained from TfL for analysis.

While the zones of analysis do not exactly correspond to Middle-Layer Super Output Areas (the size of zones analysed in other indicators), the LTDS does use zones of a similar size called LATS zones. This allows for only minor discrepancies between the LATS-based area and the actual study area.

The data provides insights into journeys across the study area. Residents within the study area make a daily average of 1.8 trips, slightly lower than the average for Greater London (just over 2). The main reason for this difference is the number of trips by private transport, which is significantly lower in the study area. This data also shows that the study area has lower levels of car ownership than the Greater London as a whole. Distances travelled and reasons for travel are shown to be broadly similar between the study area, and Greater London.

Mode	Trips per person per day		Mode split	
	Study Area	Greater London	Study Area	Greater London
Active modes (walking and cycling)	0.663	0.681	36.5%	33.8%
Private transport	0.509	0.741	28.0%	36.7%
Public transport	0.644	0.596	35.5%	29.5%
Total	1.816	2.018	100%	100%

Car availability	Study Area	Greater London
No car	55.0%	44.3%
1 car	37.5%	40.8%
2 or more cars	7.5%	14.9%

Distance band	Study Area	Greater London
Less than 2km	48.6%	47.9%
2 to 5km	21.0%	22.2%
5 to 10km	16.4%	14.6%
10 to 20km	10.0%	10.3%
20 to 50km	2.4%	3.5%
more than 50km	1.7%	1.6%

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Silvertown Tunnel traffic monitoring proposals

27 May 2021



Background

- The aim of the Traffic Monitoring Plan is to monitor performance changes on the network in the Silvertown Area of Influence using the suite of technology currently available.
- The traffic impacts will be measured using a range of metrics. The key metrics to be used will be vehicle flow and journey time data. These will be used to analyse the effects of the scheme along the key corridors, river crossings and other strategic local links.
- TfL will commence traffic monitoring in late 2021 to provide a robust baseline. Monitoring will continue for at least 3 years post scheme opening to ascertain the main effects of the scheme in operation.

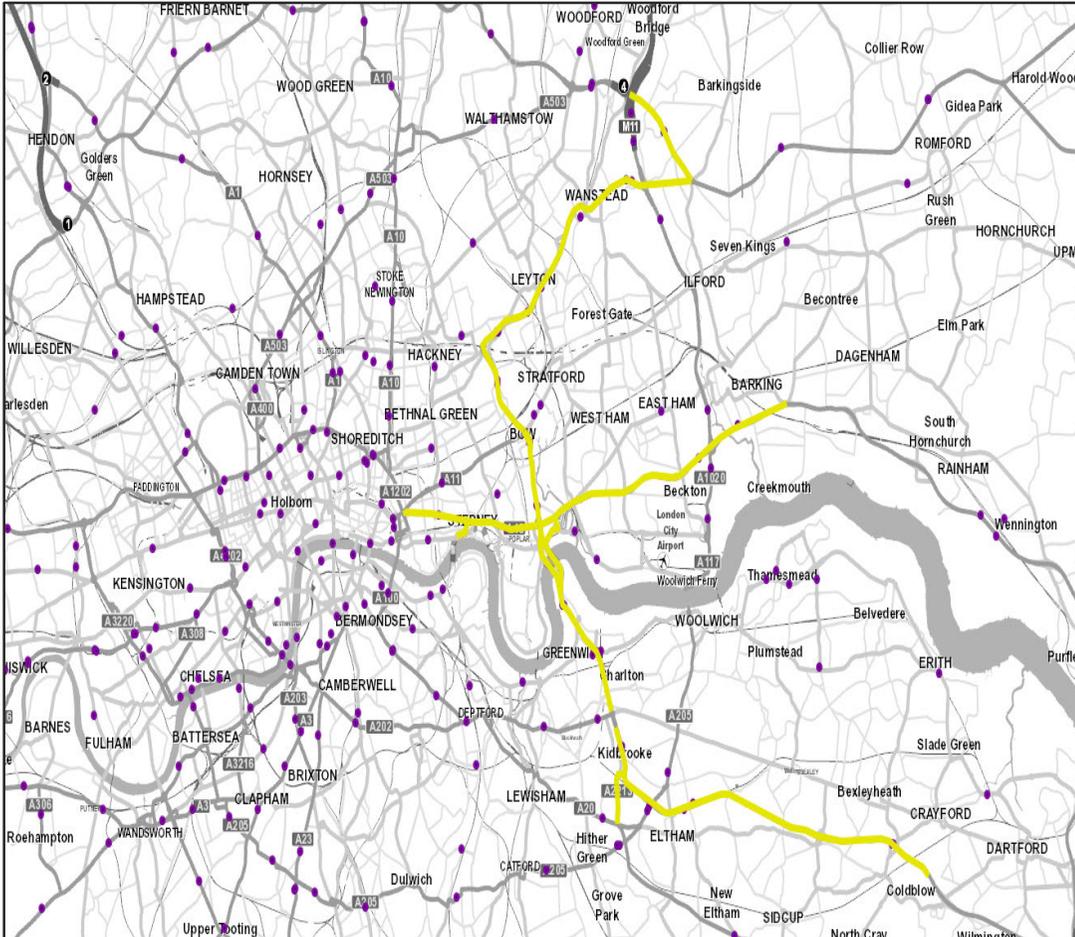


Traffic Monitoring Plan

- The initial Traffic Monitoring Plan set out in the Monitoring and Mitigation Strategy (MMS) forms the basis for TfL's traffic monitoring in the Silvertown area
- Since the MMS was created we have new technology and data sources available to us and we already have a number of new sensors on the network, data from which will feed into the monitoring programme.
- Key metrics are:
 - Traffic flow including cyclists
 - Journey times
 - Journey time disruption
 - Bus and rail data
 - Road safety
 - Travel behaviour



Metric: traffic flows



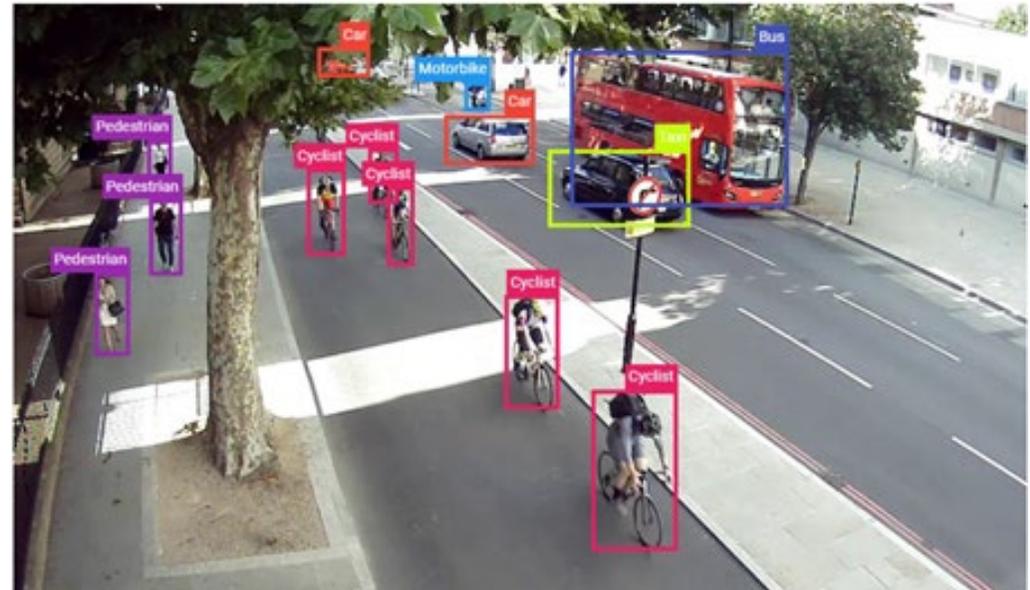
Existing Automatic Traffic Counters (ATCs)

- We have 305 existing ATCs across the network which supply accurate volumetric data. These will be used to monitor flow along the key corridors as well as for some river crossings and key strategic sites.



Use of video analytic sensors

- This new technology provides full multi-modal classification including cyclists
- Each sensor has an on-board camera, a processor and 3G connectivity. The camera takes video continuously and feeds this through to the processor, where machine learning algorithms are used to extract useful data and identify learnt objects within the video. Once objects have been identified and classified, the video feed is discarded, and the anonymous data is sent to cloud servers and made available for use through web interfaces.
- It will complement the existing loop based ATCs that we have on the network which do not record by mode
- Where possible they will be co-located near air quality sensors
- They will also be used to record pedestrian data at some designated sites
- Aim to install approx. 40 new sensors at strategic sites across the Area of Influence



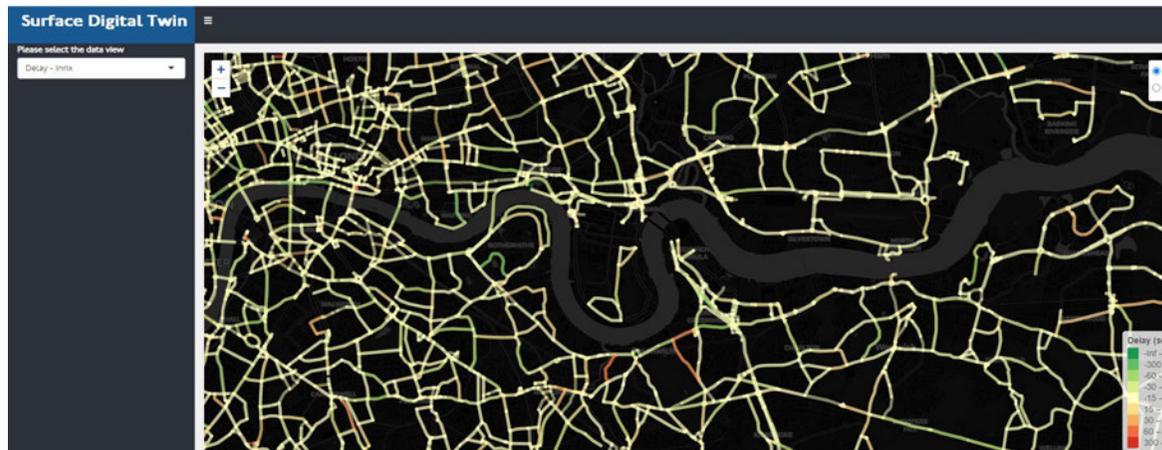
Metric: journey times

LCAP

- Freight & Traffic Journey Times can be reported using London Congestion Analysis Project (LCAP) links, where available. This data is based on Automatic Number Plate Recognition (ANPR) camera captures and comprises of long links between these cameras in key strategic positions.

INRIX

- Provides speed data using GPS data from vehicles
- Can be used for point to point journey times using thousands of shorter tactical links which can be used to complement LCAP data
- Provides journey time performance of major routes and corridors



Metrics: journey time disruption and PT

Journey time disruption

- New – Journey Time Disruption metric has replaced the old Journey Time Reliability metric to reflect our Scorecard
- Disruption is represented as the total amount of additional delay between a set day and the baseline figure, as a proportion of baseline historical delay

Bus and rail data

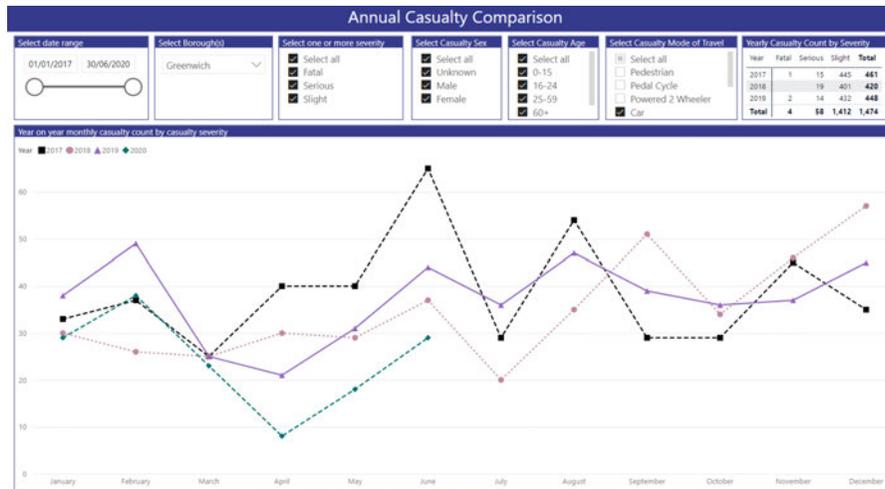
- Key bus routes in the Area of Influence and key corridors will be identified
- iBus is an automatic vehicle location system which tracks buses on the network. We are provided with weekly and period average journey time data by peak, which has been used to develop the iBusMap dashboard. This allows us to see changes in bus journey times and compare performance.
- NIMBUS is the Near Instant Monitoring of accumulative bus delay across the network. It's a tool which presents live bus performance and highlights delay against schedule in near real-time.
- Data gathered by other TfL departments to feed into reporting e.g. Excess Wait Times & bus/rail patronage data



Metrics: road safety and travel behaviour

Road Safety

- Finalised data from accident statistics to be provided annually, a year in arrears
- External dashboard available to visualise the Road Safety Collision Data Extracts using police and self reported casualties. This can be used to filter the data by location, date, severity etc



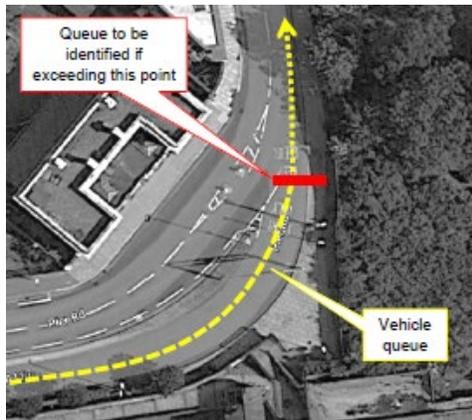
Travel Behaviour

- Traditionally carried out using road side surveys – further work required to develop this with other TfL departments



Ad hoc / bespoke surveys

- Woolwich Ferry (now TfL run) – annual bespoke video survey proposed at northern and southern terminals so that the % of time per day that the ferry traffic queue extends to a point that then impacts on through (non-ferry) traffic can be monitored



- Emirates Air Line – boarding figures to be obtained and ad hoc surveys completed if necessary



Frequency of collection and reporting

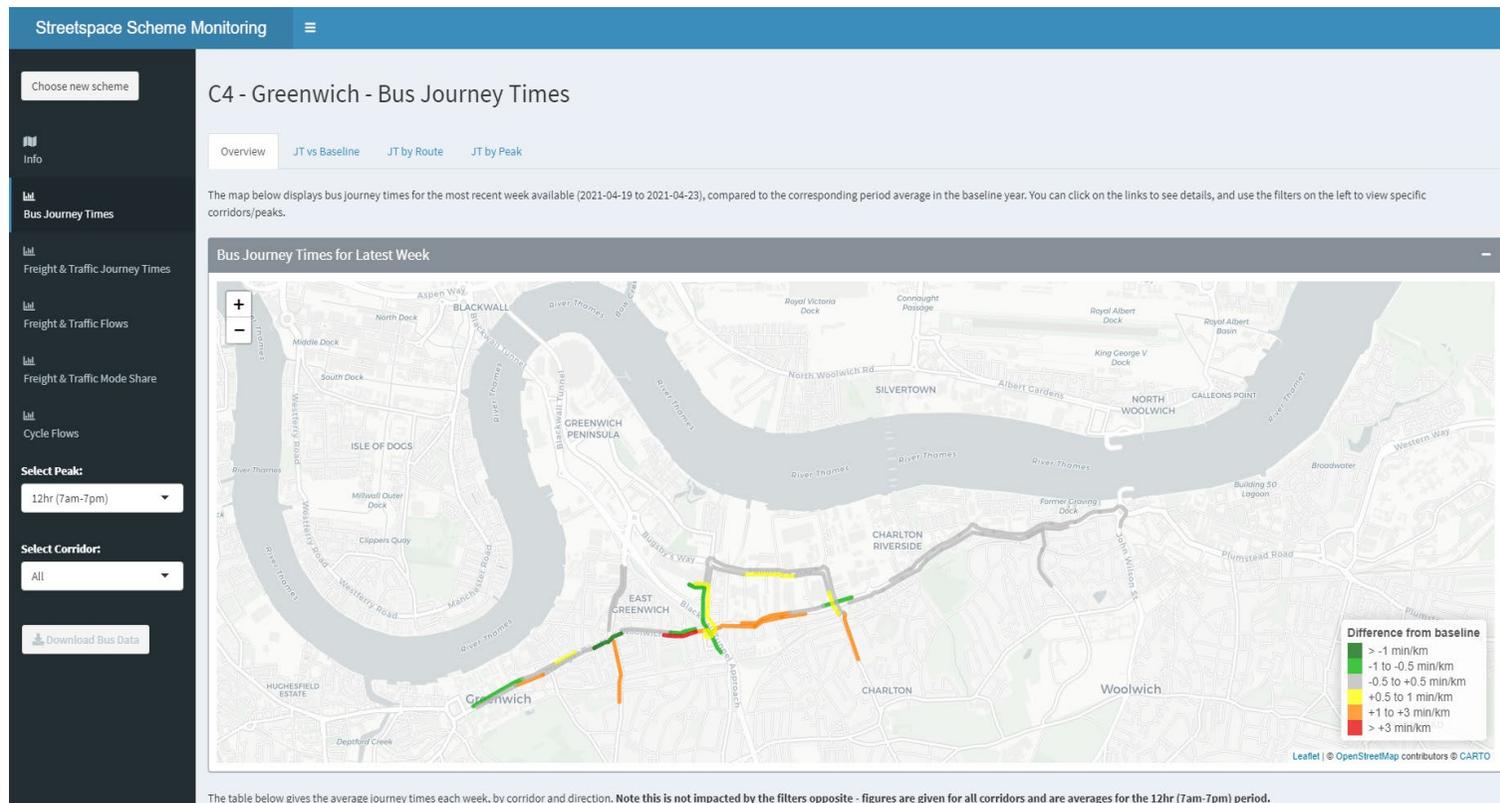
- Certain types of data collected via the monitoring programme will be available on a 'live' basis
- Where possible we aim to make the monitoring data available to members of STIG via online data platforms
 - Live data ingested into dashboards in real time (Inrix/ibus)
 - ATC and flow data updated next day
 - Dashboards updated daily/weekly as required
 - Daily data available to create baseline figures and for use in strategic reporting
- We will produce annual monitoring reports on the impacts of the scheme across key areas, using comparisons to baseline figures. Within this report we will carry out high level analysis across the area of influence as well as focussed analysis of critical corridors, junctions and strategic sites.



External data sharing

Interactive dashboards

- Building on existing examples created for current schemes
- Can include traffic flow, journey times, delay
- Visual displays of real time and historical data



Item 9

Silvertown Tunnel Programme - Silvertown Tunnel Implementation Group Obligations / Requirements

Work In Progress: This tracker is regularly updated & subject to change
v.20/05/2020

Category	STIG ref #	Year Activity commences	Quarter Activity commences	Document	Doc 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	16/09/2020 - First STIG meeting planned for 24/09/2020 20/01/2021 - Second STIG meeting planned for 28/01/2021
	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
	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	16/09/2020 - First STIG meeting planned for 24/09/2020
	4	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
	5	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 : (a) the extent, nature and duration of monitoring to be implemented in accordance with the monitoring and mitigation strategy; (b) the proposals for the initial bus services that will operate through the tunnels when the Silvertown Tunnel opens for public use; (c) the monitoring reports produced in accordance with the monitoring and mitigation strategy; (d) any proposed revisions to the charging policy under article 53 (the charging policy); and (e) the level of charges required to be paid for use of the tunnels	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 to be presented at STIG meeting on 27/05/2021
	7	2020	Q3	DCO	66 (5)	STIG matters - (b) bus services		Underway	
	8	2020	Q3	DCO	66 (5)	STIG matters - (c) monitoring reports		Underway	
	9	2020	Q3	DCO	66 (5)	STIG matters - (d) revisions to charging policy		Underway	
	10	2020	Q3	DCO	66 (5)	STIG matters - (e) user charges		Underway	
	11	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. 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.	Underway	20/01/2021 - Process to be discussed at 28/01/21 meeting
	02 - Refreshed assessment / pre-opening mitigation	12	2022	Q3	DCO	Sch 2 Req 2	Agree £1m business transitional support package with councils	Prior to the opening of the authorised development 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. 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.	Not started
13		2020	Q4	MMS	2.1.1	Develop refreshed assessment	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.	Underway	
14		2020	Q3	MMS	2.1.2	Update the transport and environmental models		Underway	
15		2022	Q1	MMS	2.3.13	Develop package of mitigation measures		Underway	
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	
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		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— (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;	Not started	
23		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— (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	
24		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— (e) implement or secure the implementation of the necessary mitigation measures.	Not started	
25		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. (17) 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	
26		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	
27		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	
28		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	
29		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	
30		2021	Q4	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	
31		2021	Q4	MMS	2.5.2	Commencement of baseline monitoring	Collection of the data required to inform the refreshed assessment represents the first step in the process. 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	
32		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).	Not started	
33		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	
34		2021	Q2	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	
35		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	
36		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	
37		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	

03 - User Charging	38	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: - traffic - the environment, and - population, economy and growth - other project objective considerations, including the ability to pay for the Scheme.	Not started	
	39	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). 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: - traffic - the environment, and - population, economy and growth - other project objective considerations, including the ability to pay for the Scheme.	Not started	
	40	2025	Q2	Charging Policy	3.3.1	Variations to the user charges	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	Not started	
	41	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. In the setting of the initial user charge, TFL will follow this process - TFL will re-run the strategic traffic model (using up-to-date data)	Not started	
	42	2022	Q2	Charging Policy	4.2.1	Setting the initial user charge	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	Not started	
	43	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 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: - 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	
	44	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 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: - 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	
	45	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	
	46	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. TFL will 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: - 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	
	47	2025	Q2	Charging Policy	4.3.1	Variations to the user 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. 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).	Will be undertaken if required	
	48	2024	Q4	Charging Policy	4.4.1	Statement of 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	
	49	2026	Q3	Charging Policy	5.1.2	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	
	50	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	
	51	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 - Monitoring / post-opening mitigation	52	2022	Q3	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— (a) implement a monitoring programme in consultation with the members of STIG;	Underway
53		2022	Q3	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— (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	
54		2026	Q1	DCO	Sch 2 Req 7 (14)	TFL to consult STIG on the appointment of independent air quality experts to review each annual monitoring report	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 of otherwise) exceedances of national air quality objectives.	Not started	
55		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.	Underway	
56		2020	Q3	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	
57		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	
58		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	
59		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	
60		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. STIG will be responsible for: • 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	Not started	
61		2026	Q3	MMS	3.11.1	STIG review of monitoring reports	STIG will be responsible for: • 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	Not started	
62		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	
63		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	
64		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	
65		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	
66		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	
67	2026	Q1	MMS	4.5.2	Appointment of noise expert	TFL will appoint an independent noise expert to carry out an annual review of 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		
68	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		
05 - Buses	69	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	
	70	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.	Not started	
	71	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	
	72	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	

	73	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	
	74	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	

Item 9

Silvertown Tunnel Implementation Group – forward meeting planner

20.05.2021

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:
 - Initial bus proposals
 - Emerging modelling outcomes
- Update on traffic and socio-economic monitoring
- Approach to identifying / consulting on mitigation measures

Meeting 5 – January 2022

- Opportunities for bus priority measures
- Update on bus proposals
- User charging assessment framework

Meeting 6 – May 2022

- Environmental Compliance Assessment report
- Emerging mitigation measures

Meeting 7 – September 2022

- User charging assessment framework
- Proposed scheme of mitigation
- Submission to Secretary of State

Meeting 8 – January 2023