Chapter 7: Traffic and Transport

TOPIC	Traffic and Transport
AUTHOR	**Caneparo Associates**
COMPARISON OF EFFECTS	The assessment presented within this ES Chapter is based on the revised proposals (referred to as the 'Proposed Development'), as described in ES Chapter 0 'Preface' and ES Chapter 4 'The Proposed Development'. A comparison of the findings and conclusions of this assessment against those of the December 2018 ES in relation to traffic and transport is provided in the section of this ES Chapter titled '*Comparison of Effects*'.
SUPPORTING APPENDIX	***ES Volume 4, Appendix Traffic and Transport, Annex 1: Transport Assessment (TA) (dated October 2021)*** This ES Chapter is based upon and should be read in conjunction with the findings of the Transport Assessment (TA) produced by Caneparo Associates.
KEY CONSIDERATIONS	This ES Chapter provides an assessment of the traffic and transport effects of the Proposed Development, both during demolition and construction and once the Proposed Development is complete and occupied / operational. The assessment has been undertaken in accordance with discussions with Transport for London (TfL) and the London Borough of Southwark (LBS) and the Greater London Authority (GLA) in respect of the TA. The GLA have replaced the London Borough of Southway (LBS) as the local planning authority for the planning application. The assessment presented within this ES Chapter should be considered in the context of the TA, which provides a comprehensive assessment of the traffic and transport effects. This ES Chapter considers the potential for the Proposed Development to effect: Severance, Delay (Driver, Cycle, Pedestrian and Public Transport), Amenity, Fear and Intimidation, Accidents and Safety and Hazardous Loads (in accordance with the Institute of Environmental Assessment (IEMA) Guidance – see below.
CONSULTATION	The scope of the traffic and transport assessment was presented to the LBS and TfL and discussed as relevant throughout the 2018 pre-application consultation process. Neither LBS nor TfL indicated that they disagreed with the scope of the assessment. Further scoping discussions took place with the LBS and TfL in 2020 in advance of submission the December 2020 ES and December 2020 scheme. Additional pre-application discussions took place with the GLA and TfL in September 2021. An EIA Scoping Report was prepared and submitted to the LBS for discussion on the 24th September 2018 in relation to the 2018 Environmental Statement (ES) (see ***ES Chapter 2 – EIA Methodology (Volume 1)***). Informal feedback on the Scoping Report was received from the LBS on the 29th November 2018 in the form of a high-level review (the 'LBS Review') with recommendations for consideration within the ES. The LBS Review comments were incorporated where appropriate within the 2018 ES that was submitted in support of the 2018 planning application to the LBS. A summary of the key points raised in the LBS Review in terms of the approach and methodology is presented within Annex A of this ES Chapter. This table signposts where these issues have been addressed within the chapter. In addition to the Scoping Process, the 2018 ES was reviewed by an independent third party (Land Use Consultants (LUC)) on behalf of the LBS. The feedback received from LUC on the 2018 ES was responded to at the time and has been, as relevant incorporated into this 2021 ES, thus ensuring that the 2021 ES for the revised scheme is comprehensive in terms of scope and addressed requested clarifications and points raised previously by LUC on behalf of the LBS under Regulation 25 of the EIA Regulations. The LUC review comments and subsequent responses relating to the traffic and transport assessment have been considered in this ES Traffic and Transport chapter. The 2018 scoping process was undertaken in detail and has provided the Applicant, Trium and Caneparo with sufficient knowledge of the site and the surrounding area to be able to determine the scope of the EIA for the 2021 revised scheme In October 2020, an EIA scoping note was issued to the GLA (see ***ES Chapter 2 – EIA Methodology (Volume 1)***). The note confirms that in determining the scope of the EIA for the 2021 amended scheme, reference has been made to the September 2018 Scoping Report, the November 2018 LBS Review, the 2018 ES and the LUC Review. A further scoping meeting (virtual) was held with the GLA on 8th September 2021 to review and confirm the approach to the EIA.

ASSESSMENT METHODOLOGY

Background

7.1 The data and analysis discussed in this ES Chapter is taken from the Transport Assessment (TA) which has been submitted in support of the planning application and which is appended to the ES (***ES Volume 4 – Appendix: Traffic and Transport (Annex 1: Transport Assessment)***).

7.2 This ES Chapter provides a summary of the transport-related effects that have been fully assessed within the TA. All transport modes have been considered including changes in traffic volumes and public transport accessibility and capacity.

7.3 A summary of proposed mitigation measures is included in this ES Chapter. However, the detailed mitigation measures are presented in ***ES Chapter 15 – Mitigation and Monitoring (Volume 1)***.

7.4 The following policy documents have been referred to in this ES Chapter, where necessary / appropriate, when identifying the scope of the assessment of transport-related effects:

- National Planning Policy Framework (NPPF) (July, 2021)[1], Chapter 9: Promoting Sustainable Transport;
- London Plan 2021 (March 2021)[2];
- The Mayors Transport Strategy (2018)[3];
- Saved Policies of the Southwark Plan (2007)[4];
- Southwark Core Strategy (2011)[5];
- New Southwark Plan 2019-2034 Submission Version (Updated August 2020)[6];
- New Southwark Plan (Main Modifications)[7]; and
- TfL Guidance on Transport Assessments[8].

7.5 In addition, this ES Chapter has been undertaken in line with the Institute of Environmental Management and Assessment (IEMA) and the 'Guidelines for the Environmental Assessment of Road Traffic (1993)' [9]. The Design Manual for Roads and Bridges (DMRB) (Volume 11, Section 3)[10] has also been referred to as appropriate.

7.6 The IEMA Guidelines advise the use of a 'check-list' of likely significant effects; this ES Chapter considers transport effects likely to be relevant to the Proposed Development (references to the Proposed Development throughout this ES Chapter unless specified otherwise refers to the 'revised October 2021 scheme') i.e. severance; pedestrian and cyclist amenity (which for the purposes of this assessment includes fear and intimidation); driver delay; public transport delay; hazardous loads; pedestrian and cyclist delay and accidents and safety. In addition to the above, a quantitative assessment of the change in trips by public transport has been undertaken.

7.7 To allow flexibility in the final end uses of the scheme, two options have been assessed:

- Option 1: Where levels 1 - 10 of the Main Building are provided as D1 Use Class (medical use); and
- Option 2: Whereby levels 1 - 10 of the Main Building are provided as B1b Use Class (research and development use).

  In both options the remaining levels of the Main Building and Warehouse are provided as B1(a) Office, affordable workspace (B1 / D1), D1 (community) and A1-A4 (retail).

7.8 As such, references to the Proposed Development throughout this ES Chapter, unless specified otherwise, refer to Option 1 and Option 2.

[1] MHCLG (2021). National Planning Policy Framework
[2] London Plan 2021 (March 2021)
[3] Mayor of London (2018) Mayor's Transport Strategy
[4] LBS (2007) Saved Policies of the Southwark Plan
[5] LBS (2011) Southwark Core Strategy
[6] LBS (2020) New Southwark Plan Submission Version (Updated August 2020)
[7] LBS (2021) New Southwark Plan Main Modifications
[8] https://tfl.gov.uk/info-for/urban-planning-and-construction/transport-assessment-guide/transport-assessment-inputs
[9] Institute of Environmental Assessment (2004), Guidelines for the Environmental Assessment
[10] http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3.htm

Defining the Baseline

Study Area

7.9 In accordance with the IEMA Guidelines, the 'study area' has been defined by identifying any link or location where it is considered that significant highways or transport related effects may occur as a result of the Proposed Development. Since the Proposed Development provides no on-site car parking, with the exception of two on-street disabled parking bays, the majority of vehicle trips associated with the site will be servicing and delivery trips and taxi and drop off and collection trips.

7.10 The geographical extent of the study area which is outlined in the table below and shown in **Figure 7.1** has been established based on the following assumptions:

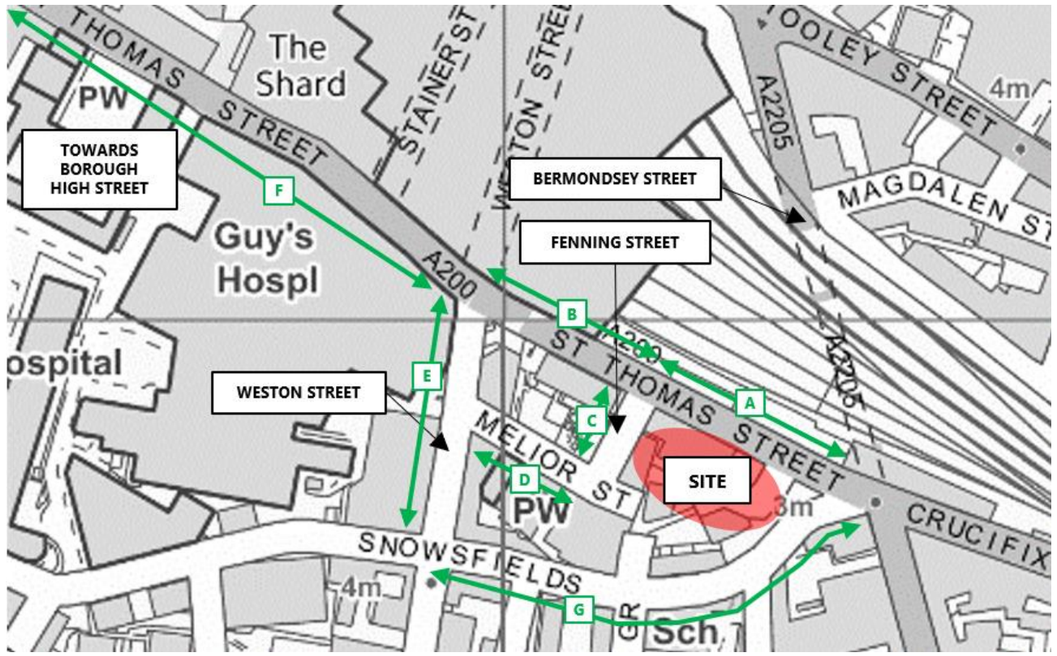
- All loading and unloading activities associated with the operational phase of the Proposed Development will take place from the proposed on-site loading / unloading area accessed off the Snowsfields site frontage (i.e. between St Thomas Street to the north and Hardwidge Street to the south);
- St Thomas Street will remain one-way (westbound) between Bermondsey Street and Weston Street and for vehicular access only (in accordance with the current situation); and,
- Demolition and construction vehicles will enter and exit the site via the St Thomas Street frontage (i.e. between Snowsfields and Fenning Street).

7.11 The highway links that have been assessed are summarised in **Table 7.1** below.

Table 7.1 Highway Link References

Link Reference	Link Name
A	St Thomas Street between Bermondsey Street and Fenning Street
B	St Thomas Street between Fenning Street and Weston Street
C	Fenning Street between St Thomas Street and Melior Street
D	Melior Street between Fenning Street and Weston Street
E	Weston Street between St Thomas Street and Snowsfields
F	St Thomas Street west of Weston Street
G	Snowsfields between Bermondsey Street and Weston Street

Figure 7.1 Study Area



Current Baseline Conditions

7.12 The baseline conditions have been established from that used to assess the 2018scheme and has not been updated. This is due to the impact of Covid-19 pandemic on travel behaviour with overground and underground rail usage lower than pre-pandemic levels. It is therefore considered that the 2018 baseline data is a representative data set. The 2018 baseline conditions were established from a series of detailed site visits, a review of the site's existing and previous uses, a review of the local transport network and the results of a number of traffic surveys undertaken on St Thomas Street and Fenning Street in November 2018 as outlined below.

7.13 In addition to the above, the following studies were undertaken as part of the TA:

- Automatic Traffic Counter (ATC) data collected on Snowsfields at a point on the east side of the junction of Snowsfields and Weston Street between 13th November 2018 to 19th November 2018.
- Classified 24hour traffic counts on St Thomas Street (between Bermondsey Street and Fenning Street) and Fenning Street between 13th November 2018 and 19th November 2018.
- A Pedestrian Environment Review System (PERS) assessment was undertaken to understand the existing pedestrian environment surrounding the site;
- A review of Personal Injury Collision (PIC) data for the roads that surround the site has been conducted. An assessment has been undertaken based on the most recent available data for a five-year period (i.e. 5 years up to December2018). The PIC assessment determines whether there are any significant highway safety issues that could be exacerbated by the Proposed Development;
- Local Census data (2011) has been reviewed to ascertain the mode people use to travel to work in the area surrounding the site;
- Information relating to public transport services has been obtained from TfL's online resources which set out London Underground services, bus routes and cycle hire, whilst the National Rail website provides detail on local rail services from London Bridge station; and,
- Publicly available Department for Transport (DfT) count data for the count site on St Thomas Street (DfT reference 70194).

7.14 It is considered that the existing use of the site as a temporary use by food and drink stalls, retail units, a bar and events space along with art installations and art artist studios does not have any material or noticeable effect on the local highway and transport networks of the study area and as such there is no need to quantitatively consider this temporary use as part of this assessment and the 2018 baseline data remains a representative data set.

Evolution of the Baseline to Opening Year

7.15 Based on a review of the count data obtained from the DfT site referred to in **Paragraph 7.13** above, St Thomas Street has experienced negligible traffic growth in recent years.

7.16 St Thomas Street currently operates one-way for vehicular traffic (for access only) in a westbound direction from its junction with Bermondsey Street.

7.17 Furthermore, vehicular traffic is only permitted to enter Weston Street from either its junction with St Thomas Street or Fenning Street, to access the nearby development sites. Vehicular traffic is not permitted to access Weston Street from its junction with Snowsfields to the south.

7.18 In effect, the roads within the study area defined above, including St Thomas Street, Fenning Street, Melior Street and Weston Street are only to be used by drivers of motor vehicles wishing to access the development sites that front these roads – general 'through' traffic is not permitted to use these roads, and, as such, only vehicles associated with the development sites that front these roads are permitted to use these roads.

7.19 On this basis, it is assumed that there would be negligible background traffic growth on the roads contained with the study area between 2018 and 2025[11] (proposed opening year of the Proposed Development (see ***ES Chapter 5 – Demolition and Construction (Volume 1)*** for further detail). It is further assumed that any traffic growth that occurs would derive from any development sites (i.e. cumulative schemes) that are accessed from these roads.

7.20 The cumulative schemes that have been considered as part of the cumulative assessment are outlined in ***ES Chapter 2 – EIA Methodology (Volume 1).***

7.21 The vehicle trip generating characteristics associated with the cumulative schemes have been reviewed based on the information set out within the various planning reports that support the planning applications. For those cumulative schemes which benefit from planning permission, the trip generation has been considered within the Baseline. For those cumulative schemes which are pending planning determination, the trip generation has been accounted for within the Cumulative Effects Assessment. In summary, all of the approved cumulative schemes identified except for the approved developments at Capital House (which is accessed off Weston Street) (planning application reference 14/AP/4640), Beckett House, 60-68 St Thomas Street, the Edge scheme[12] (planning application reference 20/AP/0944), and 2-4 Melior Place (planning application reference 18/AP/3229) are expected to have a negligible impact on traffic flows on the roads within the study area described above, given that motor vehicles are only permitted to use the roads within the study area for access purposes only.

7.22 All of the cumulative schemes identified that are submitted and pending determination, except for the proposed developments of: the Sellar scheme (40-44 Bermondsey Street Vinegar Yard Warehouse 9-17 Vinegar Yard And Land Adjacent To 1-7 Snowsfields) (19/AP/0404); and New City Court (18/AP/4039) are expected to have a negligible impact on traffic flows on the roads within the study area described above, given that motor vehicles are only permitted to use the roads within the study area for access purposes only.

7.23 The TA that supports the Edge scheme indicates the scheme is intended to be car-free, although available information indicates that it is expected to generate some delivery and servicing trips. The Traffic and Transport Chapter of the Environmental Statement that was produced in support of the approved Edge scheme confirms that all motor vehicles would access the site via St Thomas Street (in a westbound direction) and Fenning Street (in a southbound direction) and leave the site via Melior Street (in a westbound direction); Weston Street (in a northbound direction) and St Thomas Street (in a westbound direction).

7.24 The TA for the Sellar scheme identifies that the scheme is proposed to be car-free, other than a small number of on-street disabled bays. However, the scheme is expected to generate some servicing and delivery trips as well as some taxi trips. Available information indicates that vehicular access to the development would be from Snowfields.

7.25 The New City Court proposals are proposed to be car-free. However, the proposed scheme is expected to generate service vehicle trips. Available information indicates that some service vehicles would access the site from St Thomas Street, and it is assumed that vehicles wishing to access the site from St Thomas Street would access the scheme from the east and leave along St Thomas Street in a westbound direction towards Borough High Street.

7.26 With respect to Melior Place, the scheme is proposed to be car-free, with no on site car parking. Given the limited information for traffic flow or traffic routeing, it is assumed any service or taxi trips generated by the scheme would travel to the site via Snowsfields (in a southbound / westbound direction) and leave the site via Snowsfields (in a westbound direction) given Snowsfields is westbound only in the vicinity of the site.

7.27 In terms of public transport, walk and cycle trips, the TAs for the above approved and submitted schemes each show that each respective scheme would generate a negligible number of additional trips on foot, by cycle, bus, train and London Underground that would not have a material impact upon walking, cycling and public transport networks or individual services.

Baseline Scenarios

7.28 The following traffic assessment scenarios have been considered in this ES Chapter.

- **Baseline (2018)** - to understand the prevailing conditions (as per surveys undertaken, and as detailed above).
- **Future Baseline (2023)** – Baseline (2018) plus additional demolition and construction traffic flows associated with the following approved schemes (as set out above):
  - Capital House, 40-46 Weston Street (reference 14/AP/4640);
  - 2-4 Melior Place (reference 18/AP/3229); and,
  - The Edge scheme (reference 20/AP/0944).
- **Future Baseline (2025)** – Baseline (2018) plus additional operational traffic flows associated with the following approved schemes (as set out above):
  - Capital House, 40-46 Weston Street (reference 14/AP/4640);
  - 2-4 Melior Place (reference 18/AP/3229); and,
- **Cumulative Future Baseline (2023)** – Baseline (2018) plus additional demolition and construction traffic associated with the following cumulative schemes (as set out above):
  - Capital House, 40-46 Weston Street (reference 14/AP/4640 - approved);
  - 2-4 Melior Place (reference 18/AP/3229 - approved);
  - New City Court (reference 18/AP/4039 - proposed); and,
  - The Sellar scheme (reference 19/AP/0404 - proposed).
- **Cumulative Future Baseline (2025)** – Baseline (2018) plus additional operational traffic associated with the following schemes (as set out above):
  - Capital House, 40-46 Weston Street (reference 14/AP/4640 - approved);
  - 2-4 Melior Place (reference 18/AP/3229 - approved);
  - New City Court (reference 18/AP/4039 - proposed); and,
  - The Sellar scheme (reference 19/AP/0404 - proposed).

Assessment Scenarios

7.29 The following assessment scenarios have been addressed throughout this ES Chapter:

7.30 The effects of the construction traffic have been determined by assessing the impacts of the estimated construction traffic arising from the Proposed Development against the 'Future Baseline (2023)' and

[11] It is understood that there may be future aspirations to alter the flow of traffic and traffic management on St Thomas Street to include reversing the one-way motor vehicle flow on St Thomas Street in the vicinity of the site, i.e. change the one-way direction from east to west to west to east. However, it is understood there is no decision or definitive steer has been made on potential future traffic flow alterations at the time of writing.

[12] It is noted that the Edge scheme has a Resolution to Grant (Officer report dated 20th July 2021) and as such has been considered as an approved cumulative scheme within this ES.

'Cumulative Future Baseline (2023)' traffic flows. The demolition and construction programme and peak construction periods are the same for both Option 1 and Option 2 and therefore it is considered that an assessment of the individual options is not required and the residual effects identified can be applied to both Option 1 and Option 2.

7.31 The potential effects of the completed Proposed Development have been determined by comparing the impacts of the road traffic attributable to Option 1 and Option 2 that are proposed against the 'Future Baseline (2025)' and 'Cumulative Future Baseline (2025)' traffic flows. This ES Chapter assesses the likely significant environmental effects of both Option 1 and Option 2 and the effects for each option will be clearly stated as relevant throughout this ES Chapter.

Impact Assessment

7.32 The following paragraphs provide a detailed methodology of how the IEMA Guidelines have been applied in this assessment.

7.33 Two components are considered. First, the receptors (road links) at which assessment is being undertaken. The sensitivity of each receptor to impacts is considered. Secondly, the magnitude of the impact is assessed which will depend on the factor being considered (e.g. severance or pedestrian amenity); the change in traffic flow; and the total traffic flow.

7.34 The above two components are then combined to give a "Scale of Effect" which depends on the sensitivity of the receptor and the magnitude of the impact.

7.35 With reference to paragraph 4.5 of the IEMA Guidelines, the judgement of the magnitude of impact, sensitivity of receptors and the scale of an effect is primarily a matter for the assessor based on experience and an assessment of relevant factors, backed-up by data or quantified information wherever possible. It is set out as necessary in the following sections where professional judgement has been used.

Sensitivity of Receptors

Transport Users

7.36 Receptors are defined as the users of the transport network, i.e. drivers, pedestrians, cyclists or public transport users of each mode of transport. The criteria used to assess the sensitivity of receptors are presented in **Table 7.2.**

Table 7.2 Sensitivity of Receptors: Transport Users

Sensitivity	Criteria
High	Modes of transport which are heavily used (by all users or particularly by vulnerable road users) relative to other modes within the study area or those which have a low capacity to accommodate change without significant effects arising.
Medium	Modes of transport which are used (by all users or particularly by vulnerable road users) to an average level relative to other modes within the study area or those which have a moderate capacity to accommodate change without significant effects arising.
Low	Modes of transport which are lightly used (by all users or particularly by vulnerable road users) relative to other modes within the study area or those which have a high capacity to accommodate change without significant effects arising.
Negligible	Modes of Transport which are very lightly used (by all users or particularly by vulnerable road users) relative to other modes within the study area or those which have a very high capacity to accommodate change without significant effects arising.

7.37 The transport users that may be affected by the Proposed Development are presented in **Table 7.3** below.

Table 7.3 Transport Users: Receptor Sensitivity

Receptor	Sensitivity
Driver Delay	Low
Pedestrian and cyclist amenity, fear and intimidation, accidents and safety	Medium
Pedestrian severance	Medium
Capacity of the pedestrian and cycle networks	High
Capacity of the London Underground network	Low
Capacity of the rail network	Low
Capacity of the bus network	Low

Highway Network

7.38 The sensitivity of a road can be defined by the vulnerability of the user groups who may use it, e.g. elderly people or children. A sensitive area may be where pedestrian activity may be high, for example in the vicinity of a school or where there is already an existing accident issue. It should be noted that the sensitivity of the receptors is judged on the sensitivity of road users (primarily pedestrians). It also takes account of the existing nature of the road, e.g. an existing "A" road is likely to have a lower sensitivity than a minor residential road. **Table 7.4** below provides a summary of the types of receptors and the sensitivity of each, defined as high, medium, low or negligible.

Table 7.4 Sensitivity Receptors: Highway Network

Sensitivity	Criteria
High	Receptors which are heavily used (by all users or particularly by vulnerable road users) relative to other receptors within the study area or those which have a low capacity to accommodate change without significant effects arising.
Medium	Receptors which are used (by all users or particularly vulnerable road users) to an average level relative to other receptors within the study area or those which have a moderate capacity to accommodate change without significant effects arising.
Low	Receptors which are lightly used (by all users or particularly vulnerable road users) to an average level relative to other receptors within the study area or those which have a high capacity to accommodate change without significant effects arising.
Negligible	Receptors which are very lightly used (by all users or particularly vulnerable road users) to an average level relative to other receptors within the study area or those which have a very high capacity to accommodate change without significant effects arising.

7.39 A desktop exercise augmented by a number of site visits was undertaken to identify the receptors and the sensitivity of receptors in the study area. All road links within the study area have been assessed and assigned a sensitivity based primarily on the assessor's experience and judgement. The results of the analysis are shown in **Table 7.5** below. A plan of the links is shown at **Figure 7.1** above.

Table 7.5 Highway Network: Study Area Receptor Sensitivity

Link Reference	Link Name	Sensitivity
A	St Thomas Street between Bermondsey Street and Fenning Street	Low
B	St Thomas Street between Fenning Street and Weston Street	Low
C	Fenning Street between St Thomas Street and Melior Street	Negligible
D	Melior Street between Fenning Street and Weston Street	Negligible
E	Weston Street between St Thomas Street and Snowsfields	Negligible
F	St Thomas Street west of Weston Street	Negligible
G	Snowsfields between Bermondsey Street and Weston Street	Low

Magnitude of Impact

7.40 To assist with the judgement of magnitude of impact, reference has been made to the IEMA Guidelines. This guidance sets out considerations, and, in some cases, thresholds in respect to changes in the volume and composition of traffic to facilitate a subjective judgement of impact and magnitude. These thresholds are guidance only and provide a starting point by which a detailed analysis will inform a subjective analysis of the impact magnitude.

7.41 It is important to note that during the construction stage the impacts assessed are temporary, not permanent and this affects the magnitude (and so resulting effect scale) attached to them.

Screening Process

7.42 Within the IEMA Guidelines, two broad rules are suggested which can be used as a screening process to limit the scale and extent of the assessment:

- Rule 1: include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%); and
- Rule 2: include any other specifically sensitive areas where traffic flows have increased by 10% or more.

7.43 Where the predicted increase in traffic flows is lower than the above thresholds, the IEMA Guidelines suggest the magnitude of impact and so the resulting scale of the effect can be stated to be negligible (not significant) and further detailed assessments are not warranted. Furthermore, increases in traffic flows below 10% are generally considered to be insignificant in environmental terms given that daily variations in background traffic flow may vary by this amount.

Type of Impact

7.44 The IEMA Guidelines set out a number of potential environmental effects relating to highways and transport considerations which potentially require assessment. The following paragraphs cover each of the impacts that are considered in this assessment.

Severance

7.45 Severance is defined as the perceived division that can occur within a community when it becomes separated by a major traffic artery and describes a series of factors that separate people from places and other people. Such division may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by the road itself.

7.46 For the purposes of the assessments presented within this ES Chapter, the measurement and prediction of severance is made with reference to road width, traffic flow, speed, the presence of crossing facilities and the number of movements across the affected route.

7.47 IEMA Guidelines refer to the DfT's 'Manual of Environmental Appraisal', which suggests that changes in traffic flow of 30%, 60% and 90% would be likely to produce 'slight', 'moderate', and 'substantial' changes in severance, respectively. It is advised that these broad indicators should be used with care and regard paid to specific local conditions.

Pedestrian Delay

7.48 IEMA Guidelines note that changes in traffic volume, composition and / or speed of traffic may affect the ability of people to cross roads. Typically, increases in traffic levels result in increased pedestrian delay, although increased pedestrian activity itself also contributes. The guidelines do not set any thresholds, recommending instead that assessors use their judgement to determine the magnitude of the impact.

7.49 The IEMA Guidelines refer to a report published by the Transport Research Laboratory (TRL SR356, Goldschmidt, 1976) as providing a useful approximation for determining pedestrian delay. The TRL research concluded that mean pedestrian delay was found to be 8 seconds at flows of 1,000 vehicles per hour and below 20 seconds at 2,000 vehicles per hour for various types of crossing condition. This research has been reproduced in DMRB Volume 11, Section 3, Part 8. Figure 1 of Part 8 provides predictive mean pedestrian delay based on empirical data taking into account traffic flow and a range of parameters such as crossing width and vehicle speeds.

7.50 A two-way flow of 1,400 vehicles per hour has been adopted as a lower threshold for assessment (equating to a mean 10 second delay for a link with no pedestrian facilities) in the TRL report. Below this flow pedestrian delay is unlikely to be a significant factor. This is deemed a robust starting point for narrowing down the modelled routes within the study area and ensuring the routes selected exceed the suggested threshold of analysis in DMRB Volume 11. It should be noted that for controlled forms of pedestrian crossing the pedestrian delays are less.

7.51 The IEMA Guidelines focus on delays created by increased traffic levels, however this assessment has been broadened to also take account of the impacts on delay that will result from improved pedestrian and cyclist permeability and connectivity brought about by the Proposed Development. In addition, the IEMA guidelines do not explicitly include for cyclists, however judgement has been applied to extend this criterion to also cover cycle users.

Pedestrian Amenity, Fear and Intimidation

7.52 IEMA Guidelines define pedestrian amenity as the relative pleasantness of a journey and can include fear and intimidation if they are relevant. As with pedestrian delay, amenity is affected by traffic volumes and composition along with pavement width and pedestrian activity. The guidelines suggest tentative thresholds of impact would be where the traffic flow is halved or doubled.

Cyclist Delay and Amenity

7.53 Given the IEMA Guidelines do not explicitly include guidance on cyclists, this ES Chapter considers traffic flows in order to take account of any potential adverse effects of increased Heavy Goods Vehicle (HGV) traffic on roads where there are no cycle facilities.

Driver Delay

7.54 Driver delay is identified in the IEMA Guidelines as an issue which can occur at several points on the highway network, although the effects are only likely to be significant when the traffic on the highway network is predicted to be at or close to the capacity of the system. The impact of the Proposed Development on driver delay has been assessed in the TA for the morning (AM) and evening (PM) highway network peak hour periods (8-9am and 5-6pm, respectively).

Accidents and Safety

7.55 IEMA Guidelines do not include any definition in relation to accidents and safety, suggesting that professional judgment will be needed to assess the implications of local circumstance, or factors which may increase or decrease the risk of accidents.

Public Transport

7.56 Public transport is not covered within the IEMA Guidelines therefore, the assessment of public transport effects has comprised a qualitive judgement based on the findings of the assessments contained within the TA.

Hazardous Loads

7.57 The Proposed Development is not expected to generate or attract hazardous loads during the demolition and construction works or when the Proposed Development is complete and operational and, on this basis, no likely significant effects are anticipated. Therefore, an assessment of hazardous loads is scoped out of this assessment.

Magnitude of Impacts Summary

7.58 **Table 7.6** below summarises the criteria that has been used to determine the magnitude of impacts. However, the absolute level of an impact is also important e.g. the total flow of traffic or HGVs on a link. This is because an increase of, say, 100% in the traffic flow on a road link is likely to still lead to negligible or low impact magnitudes if the baseline flows are low.

Table 7.6 Magnitude of Impact Summary

Impact	Negligible	Low	Medium	High
Severance	Change in total traffic or HGV flows of less than 30%	Change in total traffic or HGV flows of 30% to 60%	Change in total traffic or HGV flows of 60% to 90%	Change in total traffic or HGV flows over 90%
Pedestrian Delay	Two-way traffic flow < 1,400 vehicles per hour	A judgement based on the road links with two-way traffic flows exceeding 1,400 vehicles per hour in the context of individual characteristics		
Pedestrian Amenity	Change in total traffic or HGV flows < 100%	A judgement based on the routes with > 100% change in context of their individual characteristics		
Fear and Intimidation	Changes which are unlikely to be perceptible (based on a judgement).	Changes which are likely to be perceptible but not to the extent that it would materially change conditions which would otherwise prevail.	Changes which are likely to be perceptible and which would materially change conditions which would otherwise prevail to the extent that it may affect travel behaviour to a measurable degree.	Changes which are likely to be perceptible and which would significantly change conditions which would otherwise prevail to the extent that it would significantly affect travel behaviour.
Cyclist Delay				
Driver Delay				
Accidents and Safety				
Public Transport				
Hazardous Loads				

7.59 The magnitude of impact on severance is also determined using the matrix set out in **Table 7.7** below.

Table 7.7 Magnitude of Impact - Severance

Absolute Change in Total Flow (or HGV Flow)	Percentage Change in Total Flow (or HGV Flow)			
	<30%	**<60%**	**<90%**	**>90%**
<30 vehicles	Negligible	Negligible	Negligible	Negligible
<60 vehicles	Negligible	Low	Low	Low
<90 vehicles	Negligible	Low	Medium	Medium
>90 vehicles	Negligible	Low	Medium	High

7.60 The above criteria reflect the guidance set out in paragraph 4.31 of the IEMA Guidance which states the following:

"Changes in traffic flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance respectively. These figures have been derived from studies of major changes in traffic flow and therefore should be used cautiously in any environmental assessment" [note, the terminology adopted throughout this ES Chapter in relation to impact magnitude is: negligible, low, medium and high. Low, medium and high correspond to slight, moderate and substantial in the IEMA Guidance.

7.61 The inclusion of the absolute change criteria in the table above reflects the fact that the percentage change criteria are derived from studies of major changes in traffic flow. This seeks to prevent nonsensical and counterintuitive 'default' results such as increase of four vehicles on a road with an existing flow of three vehicles being classified as a 'large' change.

Scale of Effects

7.62 The scale of the resulting effect is judged on the relationship of the magnitude of impact to the assessed sensitivity and / or importance of the receptor. The predicted scale of effect is summarised in **Table 7.8.**

Table 7.8 Scale of Effects

Sensitivity of Receptor	Magnitude of Impact			
	Negligible	**Low**	**Medium**	**High**
Negligible	Negligible	Negligible	Negligible	Minor
Low	Negligible	Negligible	Minor	Moderate
Medium	Negligible	Minor	Moderate	Major
High	Minor	Moderate	Major	Major

7.63 In terms of effect significance, moderate and major effects are considered to be 'significant'. Effects that are minor and negligible are not significant.

Effect Nature

7.64 The nature of effects is described as either:

- **Beneficial** – meaning that the changes produce benefits in terms of transport and access (such as reduction of traffic, travel time or patronage, or provision of a new service, access or facility);
- **Adverse** – meaning that changes produce disbenefits in terms of transport and access (such as increase of traffic, travel time, patronage or loss of service or facility); or
- **Neutral -** meaning that changes produce no benefits or disbenefits in terms of transport and access (such as no reduction/increase in traffic, travel time, patronage or no loss/provision of service or facility).

7.65 Direct effects result without any intervening factors whilst indirect or 'secondary' effects are not directly caused by an action or trigger or result from something else.

Geographic Extent of Effect

7.66 The geographic extent of the effects is identified. At a spatial level, **'site' or 'local'** effects are those affecting the site and neighbouring receptors, while effects upon receptors in the LBS/surrounding boroughs beyond the vicinity of the site and its neighbours are at a **'district / borough'** level. Effects affecting Greater London are at a **'regional'** level, whilst those which affect different parts of the country, or England, are considered being at a **'national'** level.

Duration of Effect

7.67 The temporal scope (duration) of effects is described in the IEMA Guidelines as short, medium, long term, or permanent as shown below.

- Short term - <12 months
- Medium Term – 1 to 5 years
- Long Term - + 5 years
- Permanent – effects that are considered to be extremely long lasting.

7.68 For the complete development / operational assessment, the effects are permanent whereas for demolition and construction effects they are likely to be short to medium term. No long-term effects are anticipated.

Assumptions and Limitations

7.69 The main limitation to the assessment of the baseline conditions presented in this ES Chapter is the precision of traffic counts. Such counts are recorded over a day or week and are subject to an accuracy of + or – 10%. However, conditions have been predicted using standard criteria (e.g. with reference to TfL Guidance on Transport Assessments) and are therefore considered to provide a representative estimate.

7.70 Traffic generation estimates for the demolition and construction phases are based on a number of assumptions on matters such as materials quantities, number of workers, construction programme etc. Further details are provided in ***ES Chapter 5 – Demolition and Construction (Volume 1)***.

7.71 Traffic generation estimates for the operational assessment in 2025 are based on trip rate information contained within the Trip Rate Information Computer System (TRICS) database[13] as highlighted in the TA. Estimates of service and delivery vehicle trip generations are based on data provided in transport reports that were submitted alongside development schemes that have recently been approved in addition to schemes which have been submitted for planning but are yet to be decided ('cumulative schemes').

7.72 With regard to the operational traffic assessment, the multi-modal trip generation estimates are based on 'worst case' trip rates based on the flexible uses proposed.

BASELINE CONDITIONS

Current Baseline Conditions

7.73 The relevant baseline conditions within the study area are described below.

Walking

7.74 The Chartered Institution of Highways and Transportation (CIHT) Guidelines (*Planning for Walking)*[14] suggest that walking neighbourhoods are typically characterised as having a range of facilities within 10 minutes' walking distance (around 800m). In addition, further research reviewing walking distances reviews the National Travel Survey data for 2010-2012 undertaken by WYG in 2015[15] suggests that walking should be considered suitable for distances of up to 1.95km.

7.75 A summary of the local public transport services and amenities available within acceptable / convenient walking distance of the site is provided in **Table 7.9.**

[13] http://TRICS.org/
[14] CIHT Planning for Walking (April 2015)
[15] How Far Do People Walk? WYG Research Paper, 2015

Table 7.9 Approximate Distances to Local Amenities

Amenity	Location	Approximate Walking Distance (metres)	Approximate Walking Time (minutes)
Public Transport Opportunities			
Bus stops	London Bridge Bus Station	400	5
London Bridge Rail Station	St Thomas Street	170	2
London Bridge Underground Station	St Thomas Street	240	3
Facilities and Amenities			
Convenience and Grocery Store	Snowsfields	140	2
Tesco Metro Supermarket	Tooley Street, Bursar Street	400	5
Barclays Bank	Borough High Street, St Thomas Street	550	7
Post Office	Borough High Street, St Thomas Street	600	8
Pharmacy	Borough High Street, St Thomas Street	610	8

7.76 As shown in **Table 7.9** there are a number of amenities and public transport services available within convenient walking distances of the site, including bus, underground and rail services, as well as amenities such as food stores, a bank and a post office.

7.77 Pedestrian infrastructure in the immediate vicinity of the site is well-maintained with footways on both sides of the majority of roads. There are regular street lighting columns in the local area, as well as pedestrian crossing facilities along the majority of pedestrian desire lines.

7.78 The Healthy Streets and Active Travel Zone audit included in the TA indicates that the pedestrian environment within the vicinity of the site is positive, overall.

Cycling

7.79 Guidance on cycling can be found in 'Cycle Friendly Infrastructure' guidelines published by the Chartered Institution of Highways and Transportation. This guidance highlights previous research by the DfT that three quarters of all journeys are less than 5 miles (8km) of which 60% are undertaken by private cars. The guidelines highlight that there is a 'substantial potential' for substituting driving for cycling for distances up to 5 miles.

7.80 TfL's Local Cycle Guide No.7 indicates that there is a good network of cycle ways in the local area with Bermondsey Street, Weston Street, Tooley Street and London Bridge labelled as *'Routes signed or marked for use by cyclists'*. Additional roads are labelled as *'Quieter roads that have been recommended by other cyclists'* including Leathermarket Street, Whites Grounds and Druid Street.

7.81 There are a number of cycle routes surrounding the site. Cycle Superhighway No.7 passes the site to the west in a north-south orientation via Southwark Bridge Road and Southwark Bridge. National Cycle Network 4 passes the site to the north via Tooley Street. London Cycle Network route No. 22 passes the site to the east via Bermondsey Street and finally Quietway No. 1 passes the site to the south via Tabard Street and Trinity Street. Quietway 4 is located to the south and southwest of the site, connecting Blackfriars Road to Tower Bridge Road, via Snowsfields to the southwest of the site.

7.82 Much of central London is within a convenient cycle ride of the site, while the following areas are available within an 8km radius of the site; Stoke Newington, Queen Elizabeth Olympic Park, Poplar, Deptford, Brixton, Hyde Park and Chalk Farm.

7.83 The site is located within short walking distance of the London Cycle Hire docking station on Snowsfields. The docking station provides 30 bikes / spaces. It is located within a loading bay on the north side of Snowsfields to the north west of Hardwidge Street.

7.84 A number of other London Cycle Hire docking stations can be found in the wider vicinity, including on Tooley Street to the north east of the site, Tyers Gate to the south east of the site and Southwark Street to the west.

7.85 Raw survey data relating to cycle usage is included in the TA within Appendix B (Video Survey). The raw data was extracted from a video survey that was undertaken between Tuesday 13th and Monday 19th November 2018 to understand vehicle flows on St Thomas Street. The number of cycle movements on St Thomas Street is summarised below:

- Weekday Morning (AM) Peak – 31 Westbound, 10 Eastbound (average movements per hour)
- Weekday Evening (PM) Peak – 18 Westbound, 19 Eastbound (average movements per hour)
- Average Daily (24hour) – 194 Westbound, 170 Eastbound

Public Transport

Public Transport Accessibility Level (PTAL)

7.86 The site has a PTAL rating of 6b, demonstrating an 'excellent' level of accessibility to public transport and the highest possible rating. Further details are provided in the TA.

London Underground Services

7.87 The closest London Underground station to the site is London Bridge. The nearest London Underground access is some 240 metres walking distance to the west of the St Thomas Street site frontage. Northern Line (Bank Branch) and Jubilee Line London Underground services can be accessed from London Bridge station.

7.88 During peak travel times the Northern Line operates every 2 to 3 minutes in each direction while the Jubilee Line operates every 2 minutes in each direction.

7.89 In addition, Circle and District Line London Underground services can be accessed from Monument station which is within approximately 1.25 kilometres walking distance to the north of the site.

Rail Services

7.90 In addition to the London Underground services that can be accessed at London Bridge station, outlined above, the station is also served by Southeastern, Southern and Thameslink services.

7.91 An extract of departures from London Bridge Rail Station in the PM Peak is summarised in **Table 7.10**. Based on this it can be deduced that there are around 106 services operating from the station during peak times.

Table 7.10 PM Peak Rail Frequency[16]

Service	Departures from London Bridge Station (Destinations)	Frequency (Trains per Hour)
Southeastern / Southern Railway / Thameslink	London Charing Cross	21
	London Cannon Street	13
	Luton	10
	Sevenoaks	10
	Bedford	8
	Gatwick Airport	7
	Gravesend	7
	Orpington	6
	Tunbridge Wells	6
	Hayes	5
	Ramsgate	5
	Hasting	3

[16] Rail service frequencies currently subject to change due to fluctuating COVID-19 travel restrictions and associated demand.

Service	Departures from London Bridge Station (Destinations)	Frequency (Trains per Hour)
	Brighton	2
	East Grinstead	2
	Margate	2
	Guildford	1
	Littlehampton	1
TOTAL		**106**

Bus Services

7.92 According to the PTAL report appended to the TA, there are multiple bus stops at London Bridge Station, Tooley Street / Hays Wharf, Tower Bridge Road / Druid Street, and Long Lane / Bermondsey Street (**Table 7.11**).

Table 7.11 Bus Route Summary[17]

Route Number	Route	Frequency in Minutes		
		Weekdays	Saturday	Sunday
42	East Dulwich – Druid Street – Liverpool Street station	10-14	10-14	15
43	London Bridge – Friern Barnet	4-8	5-9	7-11
47	London Bridge – Catford Shoreditch	9-13	10-13	10-22
78	Shoreditch - Druid Street – Peckham Rye	9-12	9-12	10-14
141	London Bridge – Palmers Green	6-10	7-11	10-13
149	London Bridge – Edmonton Green	4-9	7-10	7-10
188	North Greenwich – Druid Street – Russell Square	6-10	8-15	11-20
343	City Hall – New Cross Gate	7-10	6-10	8-12
381	County Hall – Peckham	9-12	10-12	11-14
521	London Bridge – Waterloo	2-13	7-10	10-13
C10	Victoria – Canada Water	7-10	8-12	11-13
RV1	Covent Garden – Tower Gateway	18-22	18-22	18-22

7.93 Further information regarding local bus routes is shown in the Bus 'Spider' Map appended to the TA.

7.94 According to the PTAL report appended to the TA, there are around 226 buses operating within the area surrounding the site per hour during peak periods.

Riverboat Services

7.95 London Bridge City Pier is located within approximately 650 metres walking distance of the site. The following services can be accessed from this pier:

- RB1 – Westminster to North Greenwich. 2 to 3 services.
- RB1X – Westminster to North Greenwich express. 1 to 2 services per hour.
- RB2 – Battersea Power Station to London Bridge City. 2 services per hour.
- RB6 – Putney to Blackfriars / Canary Wharf. 1 to 3 services per hour. Peak time only service.

[17] Bus service frequencies subject to change due to fluctuating COVID-19 travel restrictions and associated demand

Highway Network

Vinegar Yard

7.96 Vinegar Yard is a short (circa 30 metre long) cul-de-sac located on the south side of St Thomas Street. It connects with St Thomas Street via a priority-controlled T-junction approximately midway between Fenning Street and Snowsfields.

7.97 Vinegar Yard currently provides vehicular access to the site and is subject to double yellow line marking restrictions.

7.98 Pedestrian facilities are provided along the western side of Vinegar Yard which link the footways on St Thomas Street with the traffic free routes / pedestrian facilities on Melior Street and Melior Place to the south.

St Thomas Street

7.99 St Thomas Street forms part of the A200 and Transport for London Road Network (TLRN). Within the vicinity of the site, St Thomas Street is a TfL 'Red Route' and subject to double red line (no stopping at any time) restrictions.

7.100 Along the site frontage, St Thomas Street is subject to a 20mph speed limit and benefits from pedestrian footways and street lighting.

7.101 The section of St Thomas Street adjacent to the site (between Snowsfields and the St Thomas Street access to The Shard) is access only and one-way in a westbound direction for motorised vehicles. Further to the west, St Thomas Street is two-way between The Shard and its junction with Borough High Street.

Snowsfields

7.102 Snowsfields is a one-way road providing access between the junction of St Thomas Street and Bermondsey Street to the east of the site and Weston Street to the west of the site. Snowsfields provides on-street parking bays which are managed under the label 'F' Controlled Parking Zone (CPZ) which is operational Monday to Saturday between 08:00-18:30.

7.103 A total of 26 'F' zone parking bays are located on Snowsfields between St Thomas Street and Weston Street. There is also a loading bay located on the northern side of Snowsfields, close to Weston Street with capacity for 3 vehicles and a London Cycle Hire docking station located on the northern side of the carriageway between Kirby Grove and Hardwidge Street, with 30 bikes / spaces.

Fenning Street

7.104 Fenning Street is a relatively short, two-way, narrow access road which is lightly trafficked. It connects St Thomas Street to the north, via a priority-controlled junction, and Melior Street to the south, via a priority-controlled junction.

7.105 It is subject to single yellow line restrictions along the majority of its length. There is a recently installed parking bay at the northern end of Fenning Street. There are a number of dropped kerbs along its eastern edge which previously provided vehicular access to part of the site.

7.106 There are footways on both sides of the carriageway and street lights on the eastern footway.

Melior Street

7.107 Melior Street is a cul-de-sac that provides vehicular access to Weston Street to the west via a priority-controlled junction and Fenning Street to the east. Beyond the junction of Fenning Street, Melior Street provides a pedestrian link to Melior Place.

7.108 Melior Street is lightly trafficked and is subject to single yellow line markings along its southern side and double yellow line restrictions along its northern end.

Weston Street

7.109 Weston Street is a two-way access road connecting St Thomas Street to the north and Long Lane to the south via junctions with Snowsfields and Leathermarket Street.

7.110 Weston Street incorporates footways on both side of the carriageway and within the vicinity of the site is subject to double yellow and single yellow line restrictions. It also incorporates a number of parking / loading bays.

7.111 Vehicular access to Weston Street is restricted north of its junction with Snowsfields and at the junction of St Thomas Street.

TfL Personal Injury Collision Data

7.112 Personal Injury Collision (PIC) data has been obtained from TfL for the highway network surrounding the site. The data covers a 5-year period up to the end of December 2018[18].

7.113 A summary of the data is provided in **Table 7.12** below. This shows there were a total of 31 PICs in the study area between 1st January 2014 to 31st December 2018. Of these, 26 (84%) were recorded as having a 'slight' severity and 5 (16%) were considered 'serious'. No PICs were recorded as 'fatal'.

7.114 The TA, which provides further details relating to the PIC data, concludes that the data does not indicate that there is a highway safety issue within the study area that would benefit from remedial measures.

Table 7.12 TfL Personal Injury Collision Data Summary

Year	Slight	Serious	Fatal	Total	Percentage of Total
2014	9	0	0	9	29%
2015	8	2	0	10	32%
2016	4	0	0	4	13%
2017	5	2	0	7	23%
2018	0	1	0	0	3%
Total	26	5	0	31	100%

Baseline (2018) Traffic Flows

7.115 The results of the traffic surveys carried out on Fenning Street, St Thomas Street and Snowsfields referred to above are summarised in the TA and below in **Table 7.13**. No traffic flow information is available for Melior Street and Weston Street. However, given that motor vehicles are only permitted to use the roads within the study area to access the developments that are served by the roads (as highlighted earlier in this ES Chapter), and that Melior Street is a cul-de-sac / is effectively an extension of Fenning Street, it is assumed that traffic flows on Weston Street and Melior Street are comparable to the traffic flows observed on Fenning Street.

Table 7.13 Baseline (2018) Traffic Flows (Two-Way)

Link	Link Ref.	AM Peak		PM Peak		AADT	
		Total Vehicles	HDVs	Total Vehicles	HDVs	Total Vehicles	HDVs
St Thomas Street (Bermondsey Street - Fenning Street)	A	19	13	10	3	316	132
St Thomas Street (Fenning Street - Weston Street)	B	23	14	12	3	345	143
Fenning Street (St Thomas Street - Melior Street)	C	4	1	1	0	66	21
Melior Street (Fenning Street - Weston Street)	D	4	1	1	0	66	21
Weston Street (St Thomas Street - Snowsfields)	E	4	1	1	0	66	21
St Thomas Street west of Weston Street	F	23	14	12	3	345	143
Snowsfields (Bermondsey Street - Weston Street)	G	125	17	119	7	1,593	189

7.116 The above Baseline (2018) traffic flows are defined in terms of total vehicles (including motorcycles) and Heavy Duty Vehicles (HDVs). HDVs are a class of vehicle over 3.5 tonnes and this includes vehicles from transit vans to rigid / articulated vehicles with 3 or more axles with a maximum gross weight of up to 44 tonnes. It should be noted that not all HDVs are also Heavy Goods Vehicles (HGVs).

7.117 The Baseline (2018) traffic flows set out above have been provided for the following periods:

- AM Peak Hour – 08:00 to 09:00;
- PM Peak Hour – 17:00 to 18:00; and
- 24 Hour Annual Average Daily Traffic (AADT).

Future Baseline (2023) Traffic Flows

7.118 Future baseline road traffic flows for the Proposed Development construction year (2023) are summarised in **Table 7.14** below and have been derived by adding the flows associated with the construction phases associated with the approved schemes at Capital House, 2-4 Melior Place and the Edge scheme (referred to earlier in this ES Chapter) to the Baseline (2018) traffic flows set out in **Table 7.13**.

Table 7.14 Future Baseline (2023) Traffic Flows (Two-Way)

Link	Link Ref.	AM Peak		PM Peak		AADT	
		Total Vehicles	HDVs	Total Vehicles	HDVs	Total Vehicles	HDVs
St Thomas Street (Bermondsey Street - Fenning Street)	A	27	21	18	11	393	209
St Thomas Street (Fenning Street - Weston Street)	B	31	22	20	11	422	220
Fenning Street (St Thomas Street - Melior Street)	C	4	1	1	0	66	21
Melior Street (Fenning Street - Weston Street)	D	4	1	1	0	66	21
Weston Street (St Thomas Street - Snowsfields)	E	7	4	4	3	96	51
St Thomas Street west of Weston Street	F	34	25	23	14	452	250
Snowsfields (Bermondsey Street - Weston Street)	G	125	17	119	7	1598	194

7.119 Construction vehicle traffic information for the Edge scheme is based on information provided within the planning documents submitted alongside the approved scheme. Given that limited construction traffic flow or traffic routeing information is provided within the planning documents submitted with the approved schemes at Capital House and 2-4 Melior Place, it has been assumed that construction traffic would access the Capital House site in the same way as it would for the latest development proposal at the site (for which information is provided within the planning documents that supported the proposed scheme) and that construction traffic would access 2-4 Melior Place via Snowsfields.

Future Baseline (2025) Traffic Flows

7.120 Future baseline road traffic flows for the Proposed Development operational year (2025) are summarised in **Table 7.15** below and have been derived by adding the flows associated with the operational phases associated with the approved schemes at Capital House, 2-4 Melior Place and the Edge scheme (referred to earlier in this ES Chapter) to the Baseline (2018) traffic flows set out in **Table 7.13** above.

Table 7.15 Future Baseline (2025) Traffic Flows (Two-Way)

Link	Link Ref.	AM Peak		PM Peak		AADT	
		Total Vehicles	HDVs	Total Vehicles	HDVs	Total Vehicles	HDVs
St Thomas Street (Bermondsey Street - Fenning Street)	A	27	13	18	3	382	169
St Thomas Street (Fenning Street - Weston Street)	B	24	14	13	3	363	148
Fenning Street (St Thomas Street - Melior Street)	C	11	1	8	0	123	55
Melior Street (Fenning Street - Weston Street)	D	11	1	8	0	132	58
Weston Street (St Thomas Street - Snowsfields)	E	11	1	8	0	117	43
St Thomas Street west of Weston Street	F	30	14	19	3	396	164
Snowsfields (Bermondsey Street - Weston Street)	G	125	17	119	7	1601	194

7.121 Operational vehicle traffic information for the Edge scheme is based on information provided within the planning documents submitted alongside the approved scheme. Given that limited traffic flow or traffic routeing information is provided within the planning documents submitted with the approved schemes at Capital House and 2-4 Melior Place, it has been assumed that all operational traffic would access Capital House via St Thomas Street (in a westbound direction) and Weston Street (in a northbound direction) and leave the site via Weston

[18] CrashMap data shows that no PICs were recorded on the roads surrounding the site in 2019 and 2020.

Street (in a northbound direction) and St Thomas Street (in a westbound direction), whilst operational traffic would access Melior Place via Snowsfields. The routeing assumptions above are reasonable given there are limited routes to and from the site due to the one-way nature of the roads surrounding the site.

Cumulative Future Baseline (2023) Traffic Flows

7.122 Cumulative future baseline road traffic flows for the Proposed Development peak demolition and construction year (2023) are summarised in **Table 7.16** below and have been derived by adding the flows associated with the construction phases associated with the approved schemes at Capital House, 2-4 Melior Place, and the Edge scheme, and the proposed schemes at New City Court and the Sellar scheme (referred to earlier in this ES Chapter) to the Baseline (2018) traffic flows set out in **Table 7.13** above.

Table 7.16 Cumulative Future Baseline (2023) Traffic Flows (Two-Way)

Link	Link Ref.	AM Peak		PM Peak		AADT	
		Total Vehicles	HDVs	Total Vehicles	HDVs	Total Vehicles	HDVs
St Thomas Street (Bermondsey Street - Fenning Street)	A	31	25	22	15	437	253
St Thomas Street (Fenning Street - Weston Street)	B	35	26	24	15	466	264
Fenning Street (St Thomas Street - Melior Street)	C	4	1	1	0	66	21
Melior Street (Fenning Street - Weston Street)	D	4	1	1	0	66	21
Weston Street (St Thomas Street - Snowsfields)	E	7	4	4	3	96	51
St Thomas Street west of Weston Street	F	38	29	27	18	496	294
Snowsfields (Bermondsey Street - Weston Street)	G	131	23	125	13	1653	249

7.123 Construction vehicle traffic routeing for the approved schemes at Capital House and 2-4 Melior Place is as set out above whilst construction vehicle traffic routeing for the proposed schemes at New City Court and the Sellar scheme is based on information provided within the planning documents submitted alongside the proposed schemes.

Cumulative Future Baseline (2025) Traffic Flows

7.124 Cumulative future baseline road traffic flows for the Proposed Development operational year (2025) are summarised in **Table 7.17** below and have been derived by adding the flows associated with the operational phases associated with the approved schemes at Capital House, 2-4 Melior Place, and the Edge scheme, and the proposed schemes at New City Court and the Sellar scheme (referred to earlier in this ES Chapter) to the Baseline (2018) traffic flows set out in **Table 7.13** above.

Table 7.17 Cumulative Future Baseline (2025) Traffic Flows (Two-Way)

Link	Link Ref.	AM Peak		PM Peak		AADT	
		Total Vehicles	HDVs	Total Vehicles	HDVs	Total Vehicles	HDVs
St Thomas Street (Bermondsey Street - Fenning Street)	A	27	13	18	3	402	189
St Thomas Street (Fenning Street - Weston Street)	B	24	14	13	3	383	168
Fenning Street (St Thomas Street - Melior Street)	C	11	1	8	0	123	55
Melior Street (Fenning Street - Weston Street)	D	11	1	8	0	132	58
Weston Street (St Thomas Street - Snowsfields)	E	11	1	8	0	117	43
St Thomas Street west of Weston Street	F	30	14	19	3	416	184
Snowsfields (Bermondsey Street - Weston Street)	G	133	17	127	7	1687	212

7.125 Operational vehicle traffic routeing for the approved schemes at Capital House and 2-4 Melior Place is as set out above whilst operational vehicle traffic routeing for the proposed schemes at New City Court and the Sellar scheme is based on information provided within the planning documents submitted alongside the proposed schemes.

POTENTIAL EFFECTS

Demolition and Construction

7.126 The assessment of the potential effects during the demolition and construction works associated with the Proposed Development has been undertaken based upon the anticipated requirements concerning deliveries and traffic management.

7.127 As highlighted in ***ES Chapter 5 – Demolition and Construction (Volume 1)***, the anticipated construction and demolition requirements for both development options is the same.

7.128 Traffic generation estimates for the demolition and construction of the Proposed Development are based on a number of assumptions on matters such as materials quantities, number of workers, construction programme etc. and informed by information from Mace who have considered the demolition and construction methodology.

7.129 Details of the construction programme, demolition and construction phases, and vehicle numbers and proposed access routes are discussed in detail in ***ES Chapter 5 – Demolition and Construction (Volume 1)***.

7.130 In terms of timescales, the current expectation is that works on-site will take approximately 36 months, commencing during the fourth quarter (Q4) of 2022.

7.131 Whilst all details regarding future construction have not been finalised at this stage, it has been possible to provide general information about the key demolition and construction activities. The works programme is expected to be continuous, with no phasing involving occupation of completed elements of the scheme whilst construction is completed elsewhere on-site.

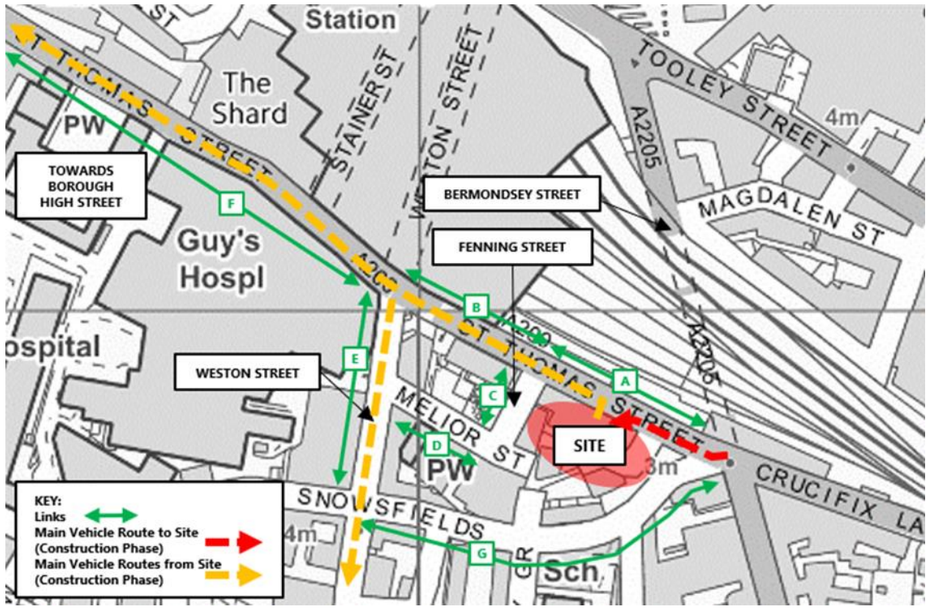
7.132 The effects of construction traffic have been determined by assessing the effects of the estimated construction traffic associated with the Proposed Development against the 'Future Baseline (2023)' traffic flows. This has been assessed for the 'peak year' construction period vehicle movements, i.e. when construction traffic will be at its greatest. At other times demolition and construction vehicle flows will be lower, often considerably so. By adopting this approach, the assessment takes account of the wider regeneration of the area in that construction traffic associated with the cumulative schemes is accounted for.

7.133 An estimate of the traffic generated during the construction of the Proposed Development assumes that 'peak year construction' will occur in 2023 when the construction of the site is at its greatest which will amount to approximately 36 vehicle arrivals per day and 36 vehicle departures per day (based on 5.5 days of work per week).

7.134 The operational hours of the site will be 08:00 - 18:00 Monday to Friday, and 08:00 - 13:00 on Saturdays. While it is considered likely that all construction traffic will occur outside the AM and PM peak hours as London traffic makes peak hour travel very unattractive, particularly when construction sites employ 'just-in-time' delivery schedules or use materials which spoil (such as concrete), for robustness, it has been assumed that 15% of the daily construction traffic generation will occur during the AM peak hour and 15% of the daily construction traffic generation will occur during the PM peak hour, i.e. there will be 6 construction vehicle arrivals and 6 construction vehicle departures during the AM and PM peak hour periods.

7.135 As highlighted in ***ES Chapter 5 – Demolition and Construction (Volume 1)***, demolition and construction vehicles have been assumed to originate from the junction of St Thomas Street and Snowsfields from a north easterly direction and depart via St Thomas Street and Weston Street in a westbound and southbound direction respectively (in accordance with the existing one-way traffic management system). The demolition / construction vehicle route to and from the site is illustrated in **Figure 7.2**. It is assumed that on average 50% of vehicles would depart via St Thomas Street and 50% would depart via Weston Street.

Figure 7.2 Demolition / Construction Vehicle Routeing Plan



7.136 With reference to ***ES Chapter 5 – Demolition and Construction (Volume 1)*** it is assumed that 70% of demolition / construction vehicles will be HDVs as an average proportion across the length of the construction programme.

7.137 No car parking will be available on site for construction staff as the assumption is that staff members will access the site via public transport. Construction staff travel will therefore not contribute to local traffic.

7.138 Information is presented in **Tables 7.18** to **7.20** for peak hour and daily traffic flows.

Table 7.18 AM Peak: Future Baseline (2023) plus Proposed Development Construction Traffic

Link	Link Ref.	Future Baseline (2023)		Future Baseline (2023) plus Proposed Development Construction Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	27	21	33	25	6	4	22%	19%
St Thomas Street	B	31	22	37	26	6	4	19%	18%
Fenning Street	C	4	1	4	1	0	0	0%	0%
Melior Street	D	4	1	4	1	0	0	0%	0%
Weston Street	E	7	4	10	6	3	2	43%	50%
St Thomas Street	F	34	25	37	27	3	2	9%	8%
Snowsfields	G	125	17	125	17	0	0	0%	0%

Table 7.19 PM Peak: Future Baseline (2023) plus Proposed Development Construction Traffic

Link	Link Ref.	Future Baseline (2023)		Future Baseline (2023) plus Proposed Development Construction Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	18	11	24	15	6	4	33%	36%
St Thomas Street	B	20	11	26	15	6	4	30%	36%
Fenning Street	C	1	0	1	0	0	0	0%	0%
Melior Street	D	1	0	1	0	0	0	0%	0%
Weston Street	E	4	3	7	5	3	2	75%	67%
St Thomas Street	F	23	14	26	16	3	2	13%	14%
Snowsfields	G	119	7	119	7	0	0	0%	0%

Table 7.20 DAILY: Future Baseline (2023) plus Proposed Development Construction Traffic

Link	Link Ref.	Future Baseline (2023)		Future Baseline (2023) plus Proposed Development Construction Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	393	209	429	234	36	25	9%	12%
St Thomas Street	B	422	220	458	245	36	25	9%	11%
Fenning Street	C	66	21	66	21	0	0	0%	0%
Melior Street	D	66	21	66	21	0	0	0%	0%
Weston Street	E	96	51	114	64	18	13	19%	25%
St Thomas Street	F	452	250	470	262	18	12	4%	5%
Snowsfields	G	1598	194	1598	194	0	0	0%	0%

Magnitude of Impacts

7.139 In summary, the tables above demonstrate that the daily increase across the study network due to total construction traffic will be no greater than 19%. Whilst the percentage increases in HDV traffic is around 25% on Weston Street and no more than 12% on St Thomas Street, with reference to the actual numbers it is clear that the increase is from a very low base figure and the absolute increase in numbers is very low.

7.140 Construction traffic mitigation measures and how these will reduce potential impacts will be set out in a Construction Environmental Management Plan (CEMP). It is anticipated that the requirement for a CEMP will be secured by the LBS / GLA by a suitably worded planning condition / planning obligation and that this will be submitted to the LBS for approval prior to the commencement of the construction works on site. Measures to be included in the CEMP are outlined in ***ES Chapter 15 – Mitigation and Monitoring (Volume 1)***.

Severance

7.141 Examining daily flows, it anticipated that there would be no increases in total vehicle flows or HDV flows greater than 30% on any of the links. The magnitude of impact is therefore assessed as negligible for all links. Regardless of the sensitivity of the links, the resultant effect for all links is **negligible adverse** (not significant) for both Option 1 and Option 2.

Pedestrian and Cyclist Delay

7.142 The analysis shows that the links within the study area are subject to hourly flows of significantly lower than 1,400 vehicles; on this basis the receptor sensitivity (for all links) is defined as low / negligible. In addition, there

are a number of crossing opportunities on St Thomas Street and at the junction of St Thomas Street and Snowsfields and dedicated cyclist facilities within the vicinity of the site. The magnitude of impact on the links within the study area is assessed as being low. Therefore, the effect of the Proposed Development on pedestrian and cyclist delay would be **negligible adverse** (not significant) for both Option 1 and Option 2.

Pedestrian and Cyclist Amenity, Fear and Intimidation

7.143 As shown in **Tables 7.20** above, total traffic flows and HDV flows are not anticipated to increase by more than 100% across the day and during peak hour periods. As a result, based on professional judgement there will be a **negligible** magnitude of impact on pedestrian and cyclist amenity, fear and intimidation within the study network and therefore the scale of the effect will be **negligible adverse** (not significant) for both Option1 and Option 2.

Driver Delay

7.144 Given the demolition / construction phase of the Proposed Development would likely generate around 6 one-way trips per hour during peak times, there will be a negligible magnitude of impact on driver delay. Taking into account the receptor sensitivity of the links within the study area, which are judged to be negligible to low, the resultant effect is **negligible adverse** (not significant) on driver delay for both Option 1 and Option 2.

Accidents and Safety

7.145 The Proposed Development is not expected to generate a significant number of vehicle trips during the demolition and construction works; on this basis the magnitude of impact and resultant effects on accidents and safety (given that the links within the study area are judged to be of low or negligible sensitivity (reference **Table 7.5**)) will be **negligible neutral** (not significant) for both Option 1 and Option 2. Demolition / construction vehicles will not be permitted to use unsuitable routes and will use main roads (as will be outlined in the CEMP).

Public Transport

7.146 It is estimated that the construction site could employ an average of 520 construction staff each year across the demolition and construction period. All staff are expected to travel by public transport as there will be no on-site car parking provided for site staff.

7.147 The site is located in a very accessible part of London as represented by the PTAL value of 6b as detailed earlier in this ES Chapter. Site staff will be afforded the opportunity to travel by a number of bus, underground, and rail services within a short walk distance of the site. Once staff are dispersed across the significant volume of local public transport services, the magnitude of impact upon any one mode will be negligible. The small increase in patronage would not create the need for additional services and thus will not change the number of vehicles when considering road modes of public transport. Based on a receptor of low sensitivity and the negligible magnitude of impact, the resultant effect on public transport users will be **negligible adverse** and not significant for both Option 1 and Option 2.

Transport Users

7.148 Given that it has been demonstrated above that the demolition / construction phase of the Proposed Development will have a negligible adverse / neutral effect on severance, driver delay, pedestrian and cyclist delay, amenity, fear and intimidation, accidents and safety and the capacity of the public transport network, the magnitude of impact and resultant effects on all users of the local transport network (regardless of their sensitivity) will be **negligible adverse** (not significant) for both Option 1 and Option 2.

Significance of Impacts

7.149 Given that all the demolition / construction impacts are assessed to be of negligible magnitude it follows that the scale of the effects will also be negligible except if the sensitivity of a receptor is high. No links within the study area are judged to be receptors of high sensitivity and therefore the scale of all demolition and construction related highways effect are **negligible** (not significant). The effects are direct, temporary and local.

7.150 Overall, the percentage change in total traffic flows and HDV flows resulting from the demolition and construction works would have a direct, temporary, **negligible adverse** effect (not significant) on the local transport network.

7.151 These construction effects on highways and the local transport network apply to both Option 1 and Option 2.

Completed Development

7.152 As noted earlier in this ES Chapter, the operational assessments have been undertaken for 2025 when it is predicted that the Proposed Development will initially open (i.e. Opening Year).

7.153 The potential effects of the Proposed Development when it is completed have been determined by comparing the traffic flows associated with the operational phase of the Proposed Development with the 'Future Baseline (2025)' traffic flows. The potential likely significant environmental effects associated with both Option 1 and Option 2 has been assessed and clearly stated for each effect.

7.154 The primary assessments have been undertaken on a daily basis (24-hour AADT) since this reflects the impacts on severance, pedestrian and cyclist amenity, fear and intimidation and safety. However, the highway network weekday morning and evening peak hours have also been assessed since these are relevant in terms of driver, pedestrian and cyclist delay.

Multi Modal Trip Generation

7.155 **Table 7.21 and Table 7.22** summarise the estimated multimodal trip generation for Option 1 and Option 2. Full details of the derivation of the multi-modal trip generation estimates for Option 1 and Option 2 are provided in the TA. The figures in the table below relates only to the additional journeys created by the Proposed Development. As highlighted in the TA, the multi-modal trip generation estimates are based on a number of reasonable 'worst-case' assumptions. As such, the trip generation associated with Option 1 is likely to be lower than estimated in **Table 7.21**.

Table 7.21 Proposed Development Option 1 Multi-Modal Trip Generation Estimates

Travel Mode	AM Peak Hour			PM Peak Hour			AADT		
	In	Out	Total	In	Out	Total	In	Out	Total
Underground	174	49	223	34	139	173	1188	1182	2370
Train	241	51	292	37	201	238	1378	1367	2745
Bus	76	20	96	15	62	77	501	498	999
Taxi	7	3	10	2	5	7	68	68	136
Motorcycle	1	0	1	0	1	1	4	3	7
Car Driver	0	0	0	0	0	0	0	0	0
Car Passenger	0	0	0	0	0	0	0	0	0
Cycle	53	15	68	10	42	52	363	361	724
Walk	132	55	187	35	97	132	1179	1177	2356
TOTAL	**684**	**193**	**877**	**133**	**547**	**680**	**4681**	**4656**	**9337**

Table 7.22 Proposed Development Option 2 Multi-Modal Trip Generation Estimates

Travel Mode	AM Peak Hour			PM Peak Hour			AADT		
	In	Out	Total	In	Out	Total	In	Out	Total
Underground	117	12	129	15	96	111	447	442	889
Train	192	13	205	17	161	178	668	658	1326
Bus	57	6	63	7	45	52	217	215	432
Taxi	1	0	1	0	1	1	3	3	6
Motorcycle	1	0	1	0	1	1	4	4	8
Car Driver	0	0	0	0	0	0	0	0	0
Car Passenger	0	0	0	0	0	0	0	0	0
Cycle	33	3	36	4	27	31	122	120	242

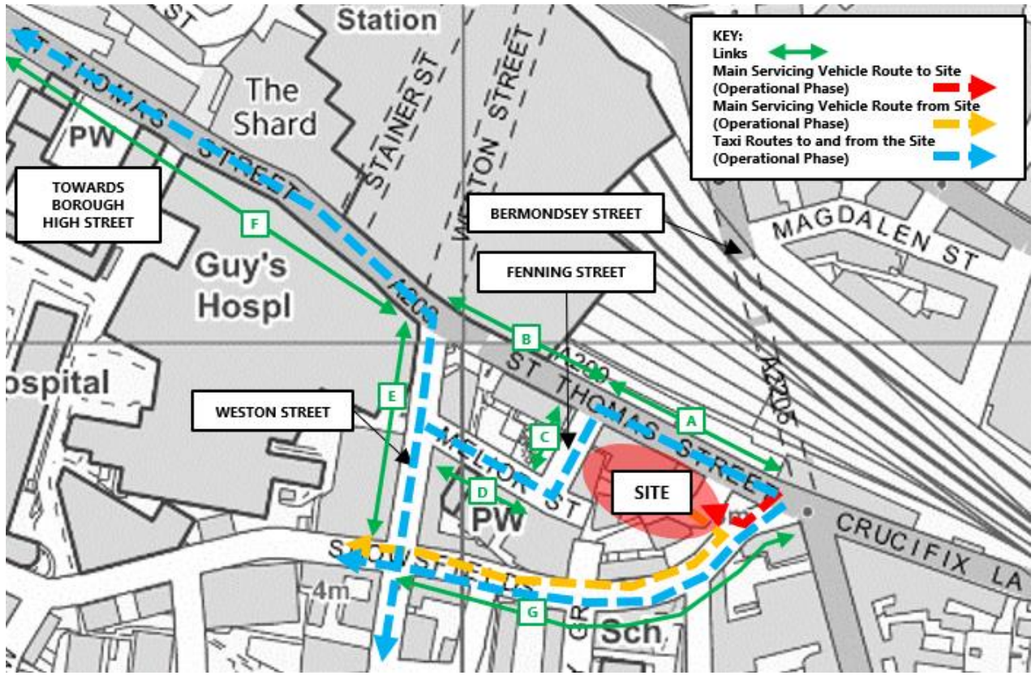
Travel Mode	AM Peak Hour			PM Peak Hour			AADT		
	In	Out	Total	In	Out	Total	In	Out	Total
Walk	50	9	59	11	40	51	240	239	479
TOTAL	**451**	**43**	**494**	**54**	**371**	**425**	**1701**	**1681**	**3382**

7.156 In terms of taxi trips, the TA notes that not all taxi pick-up / departure trips will occur on the roads within the study area – it is likely that some (around 50%) of departure taxi trips will start from further afield, e.g. on Bermondsey Street to the east or Borough High Street to the west (or potentially from Snowsfields). In addition, the arrival taxi trips will occur across a number of roads within the study area and potentially further afield. As such, not all the taxi trips set out in the tables above will occur on the roads within the study area.

7.157 The above estimates of multi-modal trip generation for the Proposed Development is not inclusive of deliveries and servicing vehicles. As highlighted in the TA[19], Option 1 is anticipated to generate around 4 one-way delivery / service vehicle trips per hour (including 2 one-way HDV trips per hour) during peak periods for the transport network and around 38 one-way AADT trips (including around 19 one-way HDV trips per day). Option 2 is anticipated to generate around 3 one-way delivery and service vehicle trips per hour (including around 1 one-way HDV trips per hour) during peak times for the transport network and around 29 one-way AADT trips (including around 15 one-way HDV trips per day). With reference to the TA, it is assumed that for both Option 1 and Option 2 around 50% of delivery and servicing trips would be carried out by vehicles with a maximum gross weight of 3.5 tonnes (i.e. HDVs) and the remaining 50% would be carried out by smaller goods vehicles or cars. These estimates are based on a number of reasonable 'worst-case' assumptions as described in the TA[20].

7.158 The motorcycle, taxi / drop off and collection, delivery and service vehicle routes to and from the site are illustrated in **Figure 7.3**.

Figure 7.3 Delivery, Service Vehicle and Taxi Routeing Plan



7.159 Given the one-way nature of the road network that surrounds the site and on the basis that the proposed access arrangements will result in servicing and delivery vehicles accessing the site from Snowsfields and taxis, drop off and collection vehicles mainly accessing the site from Fenning Street and Melior Street, inbound and outbound vehicle trips to and from the site will be distributed across a number of different routes. For example, the inbound vehicle trips will mainly take place on the roads to the east and north of the site, while the outbound trips will mainly take place on the roads to the west and south of the site (i.e. any one stretch of St Thomas Street, Snowsfields, Fenning Street and Melior Street will only be travelled on once). As a result, and as highlighted below, the total traffic generation for both Option 1 and Option 2 (inbound and outbound vehicle trips) will not exceed 100 AADT on any of the roads within the study area.

7.160 The estimated number of vehicle trips associated with Option 1 and Option 2 (motorcycle, taxi / drop off and collection and delivery and service vehicle) is summarised for each link / road in the tables below (**Table 7.23 and Table 7.24**), based on the assumptions set out above.

Table 7.23 Proposed Development Option 1 Traffic Flows (Two-Way)

Link	Link Ref.	AM Peak		PM Peak		AADT	
		Total Vehicles	HDVs	Total Vehicles	HDVs	Total Vehicles	HDVs
St Thomas Street (Bermondsey Street - Fenning Street)	A	6	0	1	0	58	0
St Thomas Street (Fenning Street - Weston Street)	B	1	0	0	0	14	0
Fenning Street (St Thomas Street - Melior Street)	C	3	0	3	0	42	0
Melior Street (Fenning Street - Weston Street)	D	2	0	3	0	42	0
Weston Street (St Thomas Street - Snowsfields)	E	1	0	2	0	25	0
St Thomas Street west of Weston Street	F	1	0	2	0	25	0
Snowsfields (Bermondsey Street - Weston Street)	G	5	2	4	2	48	19

Table 7.24 Proposed Development Option 2 Traffic Flows (Two-Way)

Link	Link Ref.	AM Peak		PM Peak		AADT	
		Total Vehicles	HDVs	Total Vehicles	HDVs	Total Vehicles	HDVs
St Thomas Street (Bermondsey Street - Fenning Street)	A	2	0	0	0	6	0
St Thomas Street (Fenning Street - Weston Street)	B	0	0	0	0	1	0
Fenning Street (St Thomas Street - Melior Street)	C	0	0	1	0	6	0
Melior Street (Fenning Street - Weston Street)	D	0	0	1	0	6	0
Weston Street (St Thomas Street - Snowsfields)	E	0	0	1	0	4	0
St Thomas Street west of Weston Street	F	0	0	1	0	4	0
Snowsfields (Bermondsey Street - Weston Street)	G	3	1	3	1	31	15

7.161 Based on the vehicle trip information contained within the tables above, it is considered that Option 1 has the potential to generate more vehicle traffic movements on the roads surrounding the site during the operational phase than Option 2. However, for completeness, the effects of both options during the operational phase has been assessed in this ES Chapter.

7.162 The changes in peak hour and daily traffic flows resulting from the operational phase of the Proposed Development Option 1 is presented in **Tables 7.25 to 7.27**.

[19] ES Volume 4, Appendix Traffic and Transport, Annex 1: Transport Assessment (TA) (dated October 2021) Section 6.

[20] ES Volume 4, Appendix Traffic and Transport, Annex 1: Transport Assessment (TA) (dated October 2021) Section 6.

Table 7.25 AM Peak: Future Baseline (2025) plus Proposed Development Option 1 Operational Traffic

Link	Link Ref.	Future Baseline (2025)		Future Baseline (2025) plus Proposed Development Option 1 Operational Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	27	13	33	13	6	0	22%	0%
St Thomas Street	B	24	14	25	14	1	0	4%	0%
Fenning Street	C	11	1	14	1	3	0	27%	0%
Melior Street	D	11	1	13	1	2	0	18%	0%
Weston Street	E	11	1	12	1	1	0	9%	0%
St Thomas Street	F	30	14	31	14	1	0	3%	0%
Snowsfields	G	125	17	130	19	5	2	4%	12%

Table 7.26 PM Peak: Future Baseline (2025) plus Proposed Development Option 1 Operational Traffic

Link	Link Ref.	Future Baseline (2025)		Future Baseline (2025) plus Proposed Development Option 1 Operational Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	18	3	29	3	1	0	6%	0%
St Thomas Street	B	13	3	13	3	0	0	0%	0%
Fenning Street	C	8	0	11	0	3	0	38%	0%
Melior Street	D	8	0	11	0	3	0	38%	0%
Weston Street	E	8	0	10	0	2	0	25%	0%
St Thomas Street	F	19	3	21	3	2	0	11%	0%
Snowsfields	G	119	7	123	9	4	2	3%	29%

Table 7.27 DAILY: Future Baseline (2025) plus Proposed Development Option 1 Operational Traffic

Link	Link Ref.	Future Baseline (2025)		Future Baseline (2025) plus Proposed Development Option 1 Operational Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	382	169	440	169	58	0	15%	0%
St Thomas Street	B	363	148	377	148	14	0	4%	0%
Fenning Street	C	123	55	165	55	42	0	34%	0%
Melior Street	D	132	58	174	58	42	0	32%	0%
Weston Street	E	117	43	142	43	25	0	21%	0%
St Thomas Street	F	396	164	421	164	25	0	6%	0%
Snowsfields	G	1601	194	1649	213	48	19	3%	10%

7.163 The changes in peak hour and daily traffic flows resulting from the operational phase of the Proposed Development under Option 2 is presented in **Tables 7.28** to **7.30**.

Table 7.28 AM Peak: Future Baseline (2025) plus Proposed Development Option 2 Operational Traffic

Link	Link Ref.	Future Baseline (2025)		Future Baseline (2025) plus Proposed Development Option 2 Operational Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	27	13	29	13	2	0	7%	0%
St Thomas Street	B	24	14	24	14	0	0	0%	0%
Fenning Street	C	11	1	11	1	0	0	0%	0%
Melior Street	D	11	1	11	1	0	0	0%	0%
Weston Street	E	11	1	11	1	0	0	0%	0%
St Thomas Street	F	30	14	30	14	0	0	0%	0%
Snowsfields	G	125	17	128	18	3	1	2%	6%

Table 7.29 PM Peak: Future Baseline (2025) plus Proposed Development Option 2 Operational Traffic

Link	Link Ref.	Future Baseline (2025)		Future Baseline (2025) plus Proposed Development Option 2 Operational Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	18	3	18	3	0	0	0%	0%
St Thomas Street	B	13	3	13	3	0	0	0%	0%
Fenning Street	C	8	0	9	0	1	0	13%	0%
Melior Street	D	8	0	9	0	1	0	13%	0%
Weston Street	E	8	0	9	0	1	0	13%	0%
St Thomas Street	F	19	3	20	3	1	0	5%	0%
Snowsfields	G	119	7	122	8	3	1	3%	14%

Table 7.30 DAILY: Future Baseline (2025) plus Proposed Development Option 2 Operational Traffic

Link	Link Ref.	Future Baseline (2025)		Future Baseline (2025) plus Proposed Development Option 2 Operational Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	382	169	388	169	6	0	2%	0%
St Thomas Street	B	363	148	364	148	1	0	0%	0%
Fenning Street	C	123	55	129	55	6	0	5%	0%
Melior Street	D	132	58	138	58	6	0	5%	0%
Weston Street	E	117	43	121	43	4	0	3%	0%
St Thomas Street	F	396	164	400	164	4	0	1%	0%
Snowsfields	G	1601	194	1632	209	31	15	2%	8%

Magnitude of Impacts

Severance

Option 1

7.164 With reference to the daily / AADT flow information set out above in **Table 7.27**, it is anticipated that there would not be any increases in total traffic flows and / or HDV flows of over 30% on the links within the study area, apart from on Fenning Street (34%) and Melior Street (32%). However, the numerical increase in daily traffic flows on these links would be 42, i.e. less than 60.

7.165 Therefore, based on **Table 7.6 and Table 7.7**, the magnitude of impact of the Proposed Development (Option 1) on severance on Fenning Street and Melior Street is anticipated to be 'low'. Therefore, given that these links are judged to be receptors of negligible sensitivity (reference **Table 7.5**), the resultant scale of effect is considered to be **negligible adverse** (not significant).

Option 2

7.166 With reference to the daily / AADT flow information set out in **Table 7.30** above, it is anticipated that there would not be any material increases in total traffic flows and / or HDV flows of over 30% on the links within the study area.

7.167 Therefore, based on **Table 7.6 and Table 7.7** above, the magnitude of impact of the Proposed Development (Option 2) on severance is anticipated to be negligible. Therefore, based on **Table 7.5** the resultant scale of effect is considered to be **negligible adverse** (not significant).

Pedestrian and Cyclist Delay

Option 1

7.168 The information provided in **Tables 7.25 to 7.27** illustrate that the links within the study area will be subject to hourly flows of significantly lower than 1,400 vehicles per hour. In addition, **Table 7.25 and Table 7.26** show that the Proposed Development (Option 1) would result in a negligible increase in two-way traffic flows during peak hour periods. Therefore, the magnitude of impact will be negligible. As such, the effect of Option 1 on pedestrian and cyclist delay will be **negligible adverse** (not significant) given that the sensitivity of the links within the study area is negligible / low (reference **Table 7.5**).

Option 2

7.169 The information provided in **Tables 7.28 to 7.30** illustrate that the links within the study area will be subject to hourly flows of significantly lower than 1,400 vehicles per hour. In addition, **Table 7.28 and Table 7.29** show that the Proposed Development (Option 2) would result in a negligible increase in two-way traffic flows during peak hour periods. Therefore, the magnitude of impact is considered to be negligible. As such, the effect of Option 2 on pedestrian and cyclist delay is considered to be **negligible adverse** (not significant) given that the sensitivity of the links within the study area is negligible / low (reference **Table 7.5**).

Pedestrian and Cyclist Amenity, Fear and Intimidation

Option 1

7.170 With reference to **Table 7.25 and Table 7.26**, the Proposed Development (Option 1) will generate a negligible number of additional vehicle (including HDV) trips during the morning and evening peak hour periods (up to around 6 additional vehicle trips per hour on St Thomas Street). In addition, **Table 7.27** indicates that Option 1 will increase total daily traffic flows and daily HDV flows by less than 30% except on Fenning Street and Melior Street. However, the numerical increase in daily traffic flows on these links would be 42, i.e. less than 60. Therefore, the magnitude of impact will be 'low'. Given that the sensitivity of these links is negligible (reference **Table 7.5**) the effect of Option 1 on pedestrian and cyclist amenity, fear and intimidation is considered to be **negligible adverse** (not significant).

Option 2

7.171 With reference to **Table 7.28 and Table 7.29**, Option 2 will generate a negligible number of additional vehicle (including HDV) trips during the morning and evening peak hour periods (up to around additional 3 vehicle trips per hour on Snowsfields). In addition, **Table 7.30** indicates that Option 2 will increase total daily traffic flows and daily HDV flows by less than 30% on the links within the study area. Therefore, the magnitude of impact is considered to be 'negligible'. Given that the sensitivity of these links is negligible (reference **Table 7.5**) the effect of Option 2 on pedestrian and cyclist amenity, fear and intimidation is considered to be **negligible adverse** (not significant).

7.172 Notwithstanding the above, the Proposed Development (Option 1 and Option 2) includes significant enhancements to the pedestrian footways that front the site including on Fenning Street, St Thomas Street and Vinegar Yard, as well as a new public space off St Thomas Street. These enhancements to pedestrian facilities as well as the proposed improvements to site permeability will mitigate, to some extent, the already negligible adverse impact on pedestrian and cyclist amenity (and fear and intimidation) resulting from the Proposed Development.

7.173 Further details relating to the potential impact of the Proposed Development on the local pedestrian and cycle network are provided in the TA and Health Streets Assessment. In summary, the results presented in the TA conclude that the Proposed Development is compliant with the Healthy Streets Approach.

7.174 In addition, the Proposed Development includes a significant number of on-site cycle parking spaces as well as changing facilities / showers, as highlighted in the TA. The provision of on-site cycling facilities will encourage travel by active travel modes.

Driver Delay, Accidents and Safety

Option 1

7.175 Given Option 1 will generate a very low number of additional vehicle trips during the morning and evening peak hour periods (as illustrated in **Table 7.25 and Table 7.26)**, there will be a negligible magnitude of impact on driver delay and accidents and safety. As the sensitivity of the links (receptors) within the study area is low / negligible, the impact on driver delay, accidents and safety will be **negligible adverse** (not significant) for Option 1.

Option 2

7.176 On the basis Option 2 will generate a very low number of additional vehicle trips during the morning and evening peak hour periods (as illustrated in **Table 7.28 and Table 7.29)**, there will be a negligible magnitude of impact on driver delay and accidents and safety. As the sensitivity of the links (receptors) within the study area is low / negligible, the impact on driver delay, accidents and safety will be **negligible adverse** (not significant) for Option 2.

Public Transport Network

7.177 There will be an increase in the number of person trips associated with the Proposed Development when compared with the baseline conditions, with an increase in the number of people travelling locally by public transport.

Option 1

7.178 The multi-modal trip generation for the Proposed Development (Option 1) set out in **Table 7.21** forecasts an additional 223 two-way trips by London Underground services during the weekday morning peak hour period and 173 two-way trips by London Underground services during the weekday evening peak hour period. As highlighted in the TA, assuming a 'worst-case' scenario in which all London Underground trips associated with Option 1 are carried out at London Bridge station, Option 1 will generate around 1 to 2 extra passengers per train per hour on average during the morning and evening peak periods. Although a degree of loading variation would be expected, the likely magnitude of impact will be negligible and therefore, given the low sensitivity of the receptors (reference **Table 7.3**) the resultant effect on London Underground services will be **negligible adverse** (not significant) for Option 1.

7.179 In terms of the effect on the rail trips, it is estimated that Option 1 will generate around 292 two-way rail trips per hour during the morning peak period (comprising241 inbound rail trips and 51 outbound rail trips) and some 238 two-way rail trips per hour during the evening peak period (comprising 37 inbound rail trips and 201 outbound rail trips).

7.180 As highlighted in the TA, during the morning peak hour, it is anticipated there will be around 2 to 3 extra rail passengers per train, per hour, on average arriving into London Bridge and less than one extra train passenger per train, per hour, on average departing London Bridge.

7.181 During the evening peak period, there will be less than one additional passenger, per arriving train, per hour, on average, and around 2 extra passengers every departing train, on average, per hour.

7.182 Given the above, Option 1 will not result in any noticeable changes in levels of service experience by existing rail passengers. Based on receptor of low sensitivity and the negligible magnitude of impact, the resultant effect on rail users will be **negligible adverse** (not significant) for Option 1.

7.183 With regard to the local bus network, it is estimated that Option 1 will generate around 96 two-way bus trips per hour during the morning peak period and in the region of 77 two-way bus trips per hour during the evening peak period. Given that there are around 226 buses operating within the vicinity of the site (as highlighted in the TA), Option 1 will result in circa 1 additional bus passenger every 2 to 3 buses during the morning peak and circa 1 additional bus passenger every 2 to 3 buses per hour, on average, during the morning and evening peak periods. The magnitude of impact will be negligible and therefore the effect of Option 1 on bus services and users will be **negligible adverse** (not significant) given the low sensitivity.

Option 2

7.184 The multi-modal trip generation for Option 2 set out in **Table 7.22** forecasts an additional 129 two-way trips by London Underground services during the weekday morning peak hour period and 111 two-way trips by London Underground services during the weekday evening peak hour period. As highlighted in the TA, assuming a 'worst-case' scenario in which all London Underground trips associated with Option 2 are carried out at London Bridge station, the Proposed Development will generate around 1 extra passenger per train per hour, on average, during the morning and evening peak periods. Although a degree of loading variation would be expected, the likely magnitude of impact will be negligible and therefore, given the low sensitivity of the receptors (reference **Table 7.3**) the resultant effect on London Underground services will be **negligible adverse** (not significant) for Option 2.

7.185 With regard to the effect on rail trips, it is considered that Option 2 will generate around 205 two-way rail trips per hour during the morning peak period (comprising 192 inbound rail trips and 13 outbound rail trips) and some 178 two-way rail trips per hour during the evening peak period (comprising 17 inbound rail trips and 161 outbound rail trips).

7.186 As highlighted in the TA, during the morning peak hour, it is anticipated there will be around 1 to 2 extra rail passengers per train, per hour, on average, arriving into London Bridge and less than one extra train passenger per train, per hour, on average, departing London Bridge.

7.187 During the evening peak period, there will be less than one additional passenger, per arriving train, per hour, on average, and around 1 to 2 additional passengers every departing train, on average, per hour.

7.188 Given the above, Option 2 will not result in any noticeable changes in levels of service experience by existing rail passengers. Based on receptor of low sensitivity and the negligible magnitude of impact, the resultant effect on rail users will be **negligible adverse** (not significant) for Option 2.

7.189 In terms of the effect on the local bus network, it is estimated that Option 2 will generate around 63 two-way bus trips per hour during the morning peak period and in the region of 52 two-way bus trips per hour during the evening peak period. Given that there are around 226 buses operating within the vicinity of the site (as highlighted in the TA), Option 2 will result in circa 1 additional bus passenger every 3 to 4 buses per hour, on average, during the morning and evening peak periods. The magnitude of impact will be negligible and therefore the effect of Option 2 on bus services and users will be **negligible adverse** (not significant) given the low sensitivity.

Transport Users

7.190 Given that it has been demonstrated above that the operational phase of the Proposed Development (Option 1 and Option 2) will have a negligible adverse effect on severance, driver delay, pedestrian and cyclist delay, amenity, fear and intimidation, accidents and safety and the capacity of the public transport network, the magnitude of impact and resultant effects on all users of the local transport network (regardless of their sensitivity) will be **negligible adverse** (not significant).

MITIGATION AND MONITORING

7.191 The following mitigation measures are applicable to both Option 1 and Option 2.

Demolition and Construction

7.192 The assessment presented in this ES Chapter has shown that the impact of construction traffic on the study area will be negligible. As a result, no additional mitigation measures will be required and no management measures over and above those to be included in the CEMP have been identified as being necessary to accommodate the demolition and construction phase of the Proposed Development.

7.193 As highlighted above, previously a CEMP, to be submitted and approved by LBS pre commencement, will be implemented to avoid, minimise and mitigate any construction effects on the environment, existing surrounding communities and residents. The CEMP will include information relating to operational hours, on site mitigation measures such as wheel washing, monitoring and reviewing the construction programme and any potential issues raised during this period.

7.194 The CEMP will be monitored by the Applicant's Principal Contractor and regularly reviewed. All of the Applicant's contractors will have a duty to ensure compliance with the CEMP.

7.195 Specific to transportation matters, the CEMP is anticipated to include the following measures:

- There would not be any on-site car parking for construction workers and accordingly construction workers would be encouraged through the implementation of the CEMP to use public transport and / or active modes to travel to and from the site each day;
- Haulage routes will be agreed with the relevant highway authorities and all movements by HGV / HDV on and off of the site would be supervised with vehicles adhering to routing agreements;
- Provision will be made for loading and unloading of vehicles off the public highway; and,
- Regular information shall be provided to local residents and businesses regarding on site activities and construction progress.

7.196 The CEMP will reduce the potential for any adverse impacts arising from changes to the construction programme.

Completed Development

7.197 No significant adverse highways and transport related effects have been identified; therefore, no further mitigation is considered to be required. Nevertheless, a range of mitigation measures will be implemented to promote the use of sustainable modes of travel.

7.198 For instance, the Applicant will implement a Framework Travel Plan which will cover all employees based at the Proposed Development and visitors. The Travel Plan will contain a range of measures and targets to reduce travel by car and public transport and encourage shorter trips by foot and cycle. The travel plan requirement is anticipated to be secured by a suitably worded planning condition / planning obligation.

7.199 In addition, to reduce the impact of servicing and deliveries, the provision of a Delivery and Servicing Management Plan (DSMP) will also be secured via a suitably worded planning condition / planning obligation (as appropriate) which will, among other things, set out how delivery and servicing activities will be managed, and where possible, reduced and scheduled outside of transport network peak periods.

RESIDUAL EFFECTS

Demolition and Construction

7.200 The implementation of a CEMP will reduce the potential for any unexpected effects as a result of the construction programme.

7.201 A summary of the residual effects resulting from the demolition and construction phase of the Proposed Development is provided in the table below. Unless stated otherwise, the residual effects are the same for both Option 1 and Option 2.

Table 7.31 DEMOLITION AND CONSTRUCTION - Summary of Residual Effects / 2021 Proposed Development

Receptor	Receptor Sensitivity	Residual Effect (Nature and Scale)	Effect Significance	D / I	P / T	R / IR	St / Mt / Lt
Severance, Pedestrian and Cyclist Delay, Amenity, Fear and Intimidation*	Medium	Negligible adverse	Not Significant	D	T	R	Mt
Local Pedestrian and Cycle Networks	High	Negligible adverse	Not Significant	D	T	R	Mt
Capacity of the Highway Network, Accidents and Safety	Medium	Negligible adverse	Not Significant	D	T	R	Mt
Driver Delay*	Low	Negligible adverse	Not Significant	D	T	R	Mt

Receptor	Receptor Sensitivity	Residual Effect (Nature and Scale)	Effect Significance	D / I	P / T	R / IR	St / Mt / Lt
Capacity of the Public Transport Network, Public Transport Users	Low	Negligible adverse	Not Significant	D	T	R	Mt

Notes:

D = Direct / I = Indirect

P = Permanent / T = Temporary

St = Short Term / Mt = Medium Term / Lt = Long Term

*Note that some sensitivities have been revised from that which was presented in the 2018 ES (Severance, Pedestrian and Cyclist Delay, Amenity, Fear and Intimidation have been changed from high to medium to account for human error) and Driver Delay has been changed from medium to low to account for human error.

Completed Development

7.202 The assessments contained within this ES Chapter do not consider a quantitative analysis of the impact of the Travel Plan which will aim to reduce the number of trips, and hence impact, on the public transport network. Whilst a quantitative analysis has not been carried out, the Travel Plan will mitigate any (albeit negligible) adverse impacts arising.

7.203 The residual effects resulting from the operational phase of the Proposed Development are summarised in the table below. Unless stated otherwise, the residual effects are the same for both Option 1 and Option 2

Table 7.32 COMPLETED DEVELOPMENT - Summary of Residual Effects / 2021 Proposed Development

Receptor	Receptor Sensitivity	Residual Effect (Nature and Scale)	Effect Significance	D / I	P / T	St / Mt / Lt
Severance, Pedestrian and Cyclist Delay, Amenity, Fear and Intimidation*	Medium	Negligible adverse	Not Significant	D	P	Lt
Local Pedestrian and Cycle Networks	High	Negligible adverse	Not Significant	D	P	Lt
Capacity of the Highway Network, Accidents and Safety	Medium	Negligible adverse	Not Significant	D	P	Lt
Driver Delay*	Low	Negligible adverse	Not Significant	D	P	Lt
Capacity of the Public Transport Network, Public Transport Users	Low	Negligible adverse	Not Significant	D	P	Lt

Notes:

D = Direct / I = Indirect

P = Permanent / T = Temporary

St = Short Term / Mt = Medium Term / Lt = Long Term

*Note that some sensitivities have been revised from that which was presented in the 2018 ES (Severance, Pedestrian and Cyclist Delay, Amenity, Fear and Intimidation have been changed from high to medium to account for human error) and Driver Delay has been changed from medium to low to account for human error.

LIKELY SIGNIFICANT EFFECTS

7.204 Overall, no significant environmental effects have been identified in relation to transport for either Option 1 or Option 2.

CLIMATE CHANGE

7.205 Climate change will not have a direct effect on severance, delay or amenity, fear and intimidation. However, changing travel behaviour in response to climate change concerns is expected to result in a switch to more sustainable and active travel modes, lower emission (delivery, servicing and taxi) vehicles, and encourage advances in technology which in turn would support improved telecommuting and flexible working, reduce the scale of peak hour travel. A reduction in vehicle emissions and traffic volumes would have a benefit for pedestrian and cyclist amenity, fear and intimidation.

7.206 The Proposed Development, designed based on current behaviour patterns, is therefore considered to be resilient. Any future changes in travel patterns would serve to increase benefits for users of the site as well as visitors and employees of the local area, although this benefit is not expected to be of a scale that would change the overall residual effects and their significance.

ASSESSMENT OF FUTURE EFFECTS

Evolution of the Baseline Condition Scenario

7.207 When considering the likely evolution of the baseline conditions, other nearby cumulative schemes have been accounted for as part of the Future Baseline scenario as explained in the 'Assessment Methodology' section of this ES Chapter.

7.208 The local highway network and public transport infrastructure is assumed to continue operating as existing if the Proposed Development were to not come forward.

7.209 The only known exception to this that is likely to have an impact on the baseline conditions are the works that are proposed by TfL to St Thomas Street. These works are aimed at improving the pedestrian and cyclist environment along St Thomas Street. The likely effects of the works are a growth in the number of pedestrians and cyclists in the area and improved access to London Underground and rail services.

Cumulative Effects

7.210 In accordance with the scope of the ES assessment, an additional assessment has been carried out to the transport effects of the Proposed Development in cumulation with the cumulative schemes local (see ***ES Chapter – EIA Methodology (Volume 1***).

Demolition and Construction

7.211 Cumulative future baseline road traffic flows for the Proposed Development peak demolition and construction year (2023) are summarised in **Tables 7.33 to 7.35** below and have been derived by adding the flows associated with the construction phases associated with the approved schemes at Capital House, Melior Street and the Edge scheme, and the proposed schemes at New City Court and the Sellar scheme (referred to earlier in this ES Chapter) to the Baseline (2018) traffic flows set out in **Table 7.13**.

7.212 The approach to assessing peak traffic flows for the demolition and construction phases of the other development schemes is consistent with the approach and methodology undertaken in the previous Main Assessment.

Table 7.33 AM Peak: Cumulative Future Baseline (2023) plus Proposed Development Construction Traffic

Link	Link Ref.	Cumulative Future Baseline (2023)		Cumulative Future Baseline (2023) plus Proposed Development Construction Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	31	25	37	29	6	4	19%	16%
St Thomas Street	B	35	26	41	30	6	4	17%	15%
Fenning Street	C	4	1	4	1	0	0	0%	0%
Melior Street	D	4	1	4	1	0	0	0%	0%
Weston Street	E	7	4	10	6	3	2	43%	50%
St Thomas Street	F	38	29	41	31	3	2	8%	7%
Snowsfields	G	131	23	131	23	0	0	0%	0%

Table 7.34 PM Peak: Cumulative Future Baseline (2023) plus Proposed Development Construction Traffic

Link	Link Ref.	Cumulative Future Baseline (2023)		Cumulative Future Baseline (2023) plus Proposed Development Construction Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	22	15	28	19	6	4	27%	27%
St Thomas Street	B	24	15	30	19	6	4	25%	27%
Fenning Street	C	1	0	1	0	0	0	0%	0%
Melior Street	D	1	0	1	0	0	0	0%	0%
Weston Street	E	4	3	7	5	3	2	75%	67%
St Thomas Street	F	27	18	30	20	3	2	11%	11%
Snowsfields	G	125	13	125	13	0	0	0%	0%

Table 7.35 DAILY: Cumulative Future Baseline (2023) plus Proposed Development Construction Traffic

Link	Link Ref.	Cumulative Future Baseline (2023)		Cumulative Future Baseline (2023) plus Proposed Development Construction Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	437	253	473	278	36	25	8%	10%
St Thomas Street	B	466	264	502	289	36	25	8%	9%
Fenning Street	C	66	21	66	21	0	0	0%	0%
Melior Street	D	66	21	66	21	0	0	0%	0%
Weston Street	E	96	51	114	64	18	13	19%	25%
St Thomas Street	F	496	294	514	306	18	12	4%	4%
Snowsfields	G	1653	249	1653	249	0	0	0%	0%

7.213 Demolition and construction traffic is invariably an important component of traffic flow on the strategic and local primary road network. This includes both through traffic and traffic with local destinations and will vary to some degree depending on where development is focussed at any time. The nature of such traffic is constantly changing with some construction activities ending or reducing and others starting or become more intense. This is a matter which is best considered strategically at a policy level and is difficult to consider in any detail on a scheme by scheme basis.

7.214 In summary, **Tables 7.33, 7.34 and 7.35** demonstrate that the daily increase across the assessment study area due to the total peak construction traffic will be no greater than 19%. Whilst the percentage increase in HDV traffic is up to around 10% on St Thomas Street, it is clear from the tables that the increases are from a very low base figure and the absolute increase in numbers resulting from the Proposed Development is very low.

7.215 As highlighted earlier in this ES Chapter, it is anticipated that construction traffic routeing for the Proposed Development will be via St Thomas Street. It is anticipated that the construction traffic routing associated with the approved developments at Capital House and the Edge scheme would be similar given the local traffic management regime. In addition, it is assumed that the planning applications that have been submitted and are pending determination, including Capital House and New City Court would use similar traffic routing arrangements owing to their locations and the local traffic management regime whilst the approved development at Melior Place and the pending Sellar scheme would utilise Snowsfields.

7.216 It is anticipated that the appointed construction contractors for the approved Capital House,Melior Place and the Edge schemes would be required to develop their own CEMP and therefore agree the management strategy and vehicular routes with LBS. Furthermore, the appointed construction contractor for the Proposed Development will liaise with local stakeholders and the appointed construction contractors for Capital House, Melior Place and the Edge scheme, when it is relevant to do so. The same is expected of the cumulative schemes for which planning applications have been submitted and are pending determination.

7.217 The appointed construction contractor will monitor and review the CEMP for the Proposed Development on an on-going basis to reflect the changing needs of the project and / or any changes to the local road network.

7.218 With reference to the Main Assessment (refer to **Tables 7.18 to 7.20**), the increases in total peak construction traffic and percentage increase in HDV (set out in **Tables 7.33, 7.34, and 7.35**) are not greater than the total peak construction traffic and percentage increase in HDV considered in the Main Assessment.

7.219 Overall, it is therefore considered that the anticipated cumulative effects on the network are expected to remain direct, temporary, short term and **negligible neutral** (not significant) for both Option 1 and Option 2.

Completed Development

7.220 In accordance with the scope of the ES assessment, and, as undertaken for the Demolition / Construction phase, an assessment has also been undertaken to consider the transport effects of the two development options that are proposed in cumulation with cumulative schemes which are yet to be permitted but are being considered as stated earlier on in this ES Chapter.

7.221 Cumulative future baseline road traffic flows for the operational year (2025) for the two development options are summarised in **Tables 7.36 to 7.41** below and have been derived by adding the flows associated with the operational phases associated with the approved schemes at Capital House, Melior Street and the Edge and the proposed scheme at New City Court and the Sellar scheme (referred to earlier in this ES Chapter) to the Baseline (2018) traffic flows set out in **Table 7.13.**

Table 7.36 AM Peak: Cumulative Future Baseline (2025) plus Proposed Development Option 1 Operational Traffic

Link	Link Ref.	Cumulative Future Baseline (2025)		Cumulative Future Baseline (2025) plus Proposed Development Option 1 Operational Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	27	13	33	13	6	0	22%	0%
St Thomas Street	B	24	14	25	14	1	0	4%	0%
Fenning Street	C	11	1	14	1	3	0	27%	0%
Melior Street	D	11	1	13	1	2	0	18%	0%
Weston Street	E	11	1	12	1	1		9%	0%
St Thomas Street	F	30	14	31	14	1	0	3%	0%
Snowsfields	G	133	17	138	19	5	2	4%	12%

Table 7.37 PM Peak: Cumulative Future Baseline (2025) plus Proposed Development Option 1 Operational Traffic

Link	Link Ref.	Cumulative Future Baseline (2025)		Cumulative Future Baseline (2025) plus Proposed Development Option 1 Operational Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	18	3	19	3	1	0	6%	0%
St Thomas Street	B	13	3	13	3	0	0	0%	0%
Fenning Street	C	8	0	11	0	3	0	38%	0%
Melior Street	D	8	0	11	0	3	0	38%	0%
Weston Street	E	8	0	10	0	2	0	25%	0%
St Thomas Street	F	19	3	21	3	2	0	11%	0%
Snowsfields	G	127	7	131	9	4	2	3%	29%

Table 7.38 DAILY: Cumulative Future Baseline (2025) plus Proposed Development Option 1 Operational Traffic

Link	Link Ref.	Cumulative Future Baseline (2025)		Cumulative Future Baseline (2025) plus Proposed Development Option 1 Operational Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	402	189	460	189	58	0	14%	0%
St Thomas Street	B	383	168	397	168	14	0	4%	0%
Fenning Street	C	123	55	165	55	42	0	34%	0%
Melior Street	D	132	58	174	58	42	0	32%	0%
Weston Street	E	117	43	142	43	25	0	21%	0%
St Thomas Street	F	416	184	441	184	25	0	6%	0%
Snowsfields	G	1687	212	1735	231	48	19	3%	9%

Table 7.39 AM Peak: Cumulative Future Baseline (2025) plus Proposed Development Option 2 Operational Traffic

Link	Link Ref.	Cumulative Future Baseline (2025)		Cumulative Future Baseline (2025) plus Proposed Development Option 2 Operational Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	27	13	29	13	2	0	7%	0%
St Thomas Street	B	24	14	24	14	0	0	0%	0%
Fenning Street	C	11	1	11	1	0	0	0%	0%
Melior Street	D	11	1	11	1	0	0	0%	0%
Weston Street	E	11	1	11	1	0	0	0%	0%
St Thomas Street	F	30	14	30	14	0	0	0%	0%
Snowsfields	G	133	17	136	18	3	1	2%	6%

Table 7.40 PM Peak: Cumulative Future Baseline (2025) plus Proposed Development Option 2 Operational Traffic

Link	Link Ref.	Cumulative Future Baseline (2025)		Cumulative Future Baseline (2025) plus Proposed Development Option 2 Operational Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	18	3	18	3	0	0	0%	0%
St Thomas Street	B	13	3	13	3	0	0	0%	0%
Fenning Street	C	8	0	9	0	1	0	13%	0%
Melior Street	D	8	0	9	0	1	0	13%	0%
Weston Street	E	8	0	9	0	1	0	13%	0%
St Thomas Street	F	19	3	20	3	1	0	5%	0%
Snowsfields	G	127	7	130	8	2	1	2%	14%

Table 7.41 DAILY: Cumulative Future Baseline (2025) plus Proposed Development Option 2 Operational Traffic

Link	Link Ref.	Cumulative Future Baseline (2025)		Cumulative Future Baseline (2025) plus Proposed Development Option 2 Operational Traffic		Increase (Numerical)		Increase (Percentage)	
		All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs	All Vehicles	HDVs
St Thomas Street	A	402	189	408	189	6	0	1%	0%
St Thomas Street	B	383	168	384	168	1	0	0%	0%
Fenning Street	C	123	55	129	55	6	0	5%	0%
Melior Street	D	132	58	138	58	6	0	5%	0%
Weston Street	E	117	43	121	43	4	0	3%	0%
St Thomas Street	F	416	184	420	184	4	0	1%	0%
Snowsfields	G	1687	212	1718	227	31	15	2%	7%

7.222 In summary, **Table 7.38** above indicates that Option 1 will result in daily total traffic and daily HDV increases of less than 30% on all assessed links, apart from on Fenning Street and Melior Street where daily total traffic will increase by 34% and 32%, respectively. However, the numerical increase in daily traffic flows on these links is less than 60. Therefore, the magnitude of impact of Option 1 on these links is 'low'. Therefore, given these links are judged to be receptors of negligible sensitivity the resultant scale of effect is considered to be **negligible adverse** (not significant) for Option 1.

7.223 **Table 7.41** above indicates that Option 2 will result in daily total traffic and daily HDV increases of less than 30% on all assessed links. Therefore, the magnitude of impact of Option 2 on these links is 'negligible'. Therefore, the resultant scale of effect is considered to be **negligible adverse** (not significant) for Option 2.

7.224 Notwithstanding, as highlighted in the TA[21], it is proposed that the Applicant will implement a Framework Travel Plan (to be secured by a suitably worded planning condition/ planning obligation) which will cover all employees based at the Proposed Development and visitors. The Travel Plan will contain a range of measures and targets to reduce travel by car and public transport and encourage shorter trips by foot and cycle.

7.225 In addition, as set out earlier in this ES Chapter, to reduce the impact of servicing and deliveries, a Delivery and Servicing Management Plan (DSMP) will be secured via suitably worded planning condition / planning obligation (as appropriate) which will set out how delivery and servicing activities will be managed, and where possible, reduced and scheduled outside of transport network peak periods.

7.226 With reference to the Future Baseline assessed in the Main Assessment (refer **Tables 7.25 to 7.30),** the increases in total operational traffic and percentage increase in HDV (set out in **Tables 7.36 to 7.41**) are not greater than the total completed development traffic and percentage increase in HDV considered in the Main Assessment.

7.227 In terms of the potential further cumulative effects on public transport users, there will be an increase in the number of person trips associated with the Proposed Development when compared with the further cumulative assessment baseline conditions, with an increase in the number of people travelling locally by public transport. However, as set out in the Main Assessment the anticipated cumulative effects on public transport users are expected to be **negligible adverse** (not significant) given the low sensitivity of the receptors.

COMPARISON OF EFFECTS

7.228 **Table 7.42 and Table 7.43** below presents the residual effects of the 2018 Proposed Development to allow for a comparison with the residual effects of the 2021 Proposed Development (of which the residual effects are the same for Option 1 and Option 2) (**Table 7.31 and Table 7.32**).

Table 7.42 DEMOLITION AND CONSTRUCTION - Summary of Residual Effects / 2018 Proposed Development

Receptor	Receptor Sensitivity	Residual Effect (Nature and Scale)	Effect Significance	D / I	P / T	St / Mt / Lt
Severance, Pedestrian and Cyclist Delay, Amenity, Fear and Intimidation	High	Negligible	Not Significant	D	T	Mt
Local Pedestrian and Cycle Networks	High	Negligible	Not Significant	D	T	Mt
Capacity of the Highway Network, Driver Delay, Accidents and Safety	Medium	Negligible	Not Significant	D	T	Mt
Capacity of the Public Transport Network, Public Transport Users	Low	Negligible	Not Significant	D	T	Mt

Notes:
D = Direct / I = Indirect
P = Permanent / T = Temporary
St = Short Term / Mt = Medium Term / Lt = Long Term

Table 7.43 COMPLETED DEVELOPMENT - Summary of Residual Effects / 2018 Proposed Development

Receptor	Receptor Sensitivity	Residual Effect (Nature and Scale)	Effect Significance	D / I	P / T	St / Mt / Lt
Severance, Pedestrian and Cyclist Delay, Amenity, Fear and Intimidation	High	Negligible	Not Significant	D	P	Lt
Local Pedestrian and Cycle Networks	High	Negligible	Not Significant	D	P	Lt
Capacity of the Highway Network, Driver Delay, Accidents and Safety	Medium	Negligible	Not Significant	D	P	Lt
Capacity of the Public Transport Network, Public Transport Users	Low	Negligible	Not Significant	D	P	Lt

Notes:
D = Direct / I = Indirect
P = Permanent / T = Temporary
St = Short Term / Mt = Medium Term / Lt = Long Term

7.229 **Table 7.31** and **Table 7.42** demonstrates that the residual demolition and construction effects to traffic and transport remain consistent between the 2018 Proposed Development and the 2021 Proposed Development taking into account both Option 1 and Option 2. No additional or different likely effects or likely significant effects have been identified as a result of the revised proposals.

7.230 **Table 7.32** and **Table 7.43** demonstrates that the residual completed development effects to traffic and transport remain consistent between the 2018 Proposed Development and the 2021 Proposed Development. No additional or different likely effects or likely significant effects have been identified as a result of the revised proposals.In addition, no additional or different likely cumulative effects or likely significant cumulative effects relating to traffic and transport have been identified as a result of the 2021 Proposed Development coming forward alongside the cumulative schemes when considering the cumulative assessment undertaken in respect of the 2018 Proposed Development.

[21] ES Volume 4, Appendix Traffic and Transport, Annex 1: Transport Assessment (TA) (dated October 2021) Section 5.

ANNEX A

LBS REVIEW

Summary of Matter Raised in Scoping Opinion	Reference in the ES Chapter / Application Documentation
Paragraph 1.40 The TA should be appended to the chapter and cross referenced where appropriate.	References to the TA are made throughout the Transport chapter to the ES. It has been assumed the TA will be appended to the ES.
Paragraph 1.41 The chapter will be prepared in line with IEMA Guidelines for the Environmental Assessment of Road Traffic 1993. This is appropriate.	References to the IEMA Guidelines are included within the Transport chapter to the ES. Extracts are included. It is considered that the assessment of transport related effects is in line with the relevant guidelines.
Paragraph 1.42 The ES chapter will consider: relevant policy; the baseline conditions; assessment of potential effects of both the construction and operational phases; cumulative effects; mitigation and residual effects. It is noted that mitigation and residual effects should be considered for both the construction and operational phases.	The Transport chapter refers to the policy documents that have been considered and points to the TA for the detailed consideration of local policy guidance. The chapter includes sections on baseline conditions, assessment of potential effects of both the construction and operational phases, cumulative effects, mitigation and residual effects (for both the construction and operational / completed development phases).
Paragraph 1.43 The proposed development does not include any vehicle parking however, the impact on public transport modes, walking and cycling should be assessed and delivery and servicing arrangements should be assessed as part of the operational phase.	The assessments consider the impact on public transport modes and the walking and cycling networks. The effect of taxi and delivery and servicing trips has been assessed in detail in the Transport chapter in line with IEMA guidelines.