January 2021

SYON GARDENS

HOMEBASE BRENTFORD SITE, TW7 5QE

Revised Healthy Streets Transport Assessment

Consultant: RHDHV

St Edward
Designed for life

Royal HaskoningDHV
Enhancing Society Together

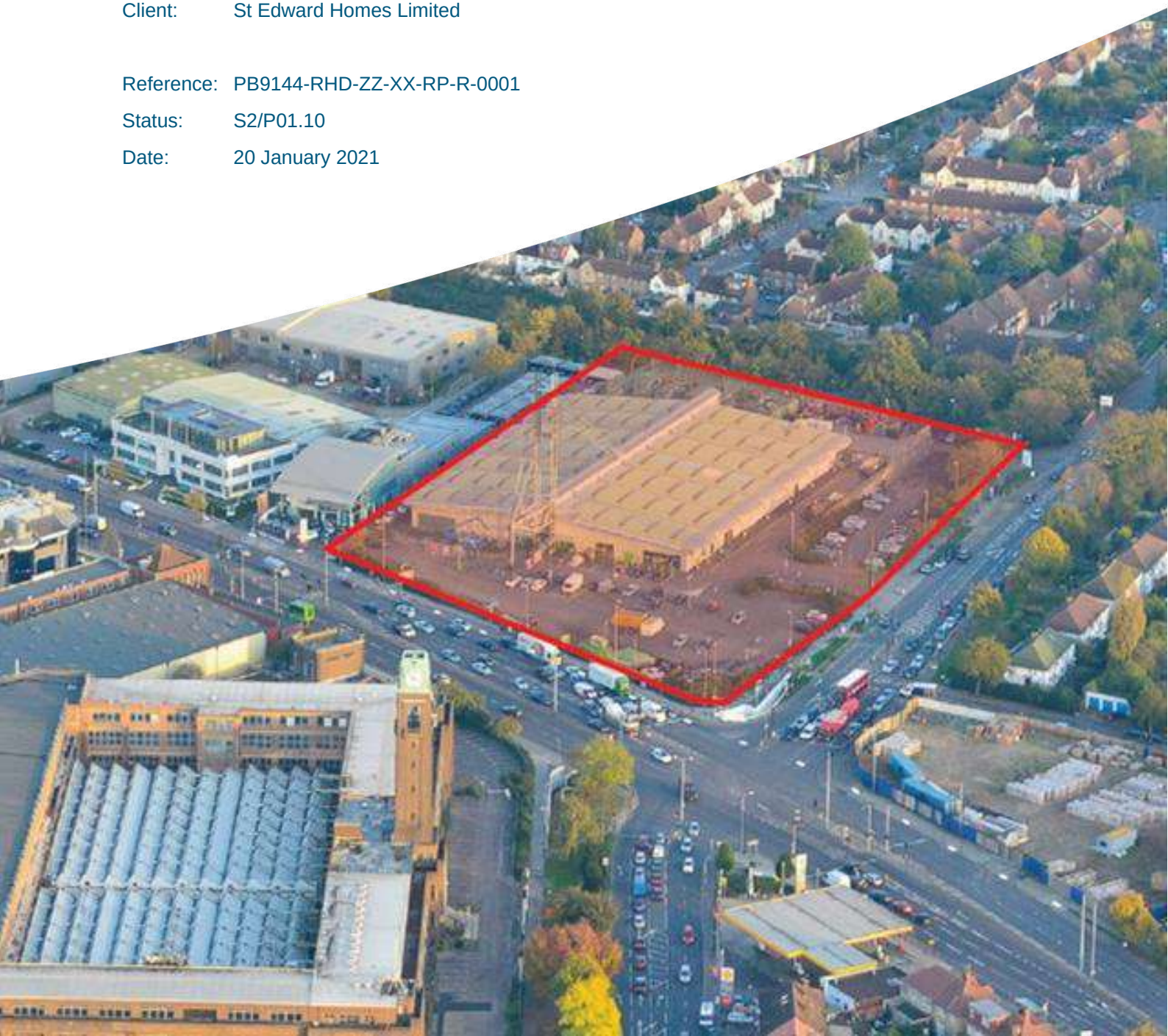
REPORT

Revised Healthy Streets Transport Assessment

Homebase Brentford, Syon Lane

Client: St Edward Homes Limited

Reference: PB9144-RHD-ZZ-XX-RP-R-0001
Status: S2/P01.10
Date: 20 January 2021



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Document title:	Revised Healthy Streets Transport Assessment
Document short title:	Homebase Brentford, Syon Lane
Reference:	PB9144-RHD-ZZ-XX-RP-R-0001
Status:	P01.10/S2
Date:	20 January 2021
Project name:	Homebase Site, Syon Lane, London Borough of Hounslow
Project number:	PB9144
Author(s):	TH / AF
Drafted by:	TH / AF /AW
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Date:	28th August 2020 - AW
Approved by:	Phil Marshall / Andy Ward
Date:	18th January 2021 - pm/aw

Classification
Project related

Royal HaskoningDHV

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Appendices

1 Synopsis

1.1.1 Royal HaskoningDHV has been commissioned by St Edward Homes Limited to prepare a Revised Transport Assessment (TA) associated with the proposed development of land at Syon Lane, Brentford, Isleworth TW7 5QE (the 'site'). The site is currently occupied by a Homebase retail store (4,180 sqm Gross Floor Area - GFA), and a surface level car park.

1.1.2 This 'Healthy Streets' Transport Assessment (TA) has been prepared in association with a "f*ull planning application for the demolition of the existing building and car park, and erection of buildings to provide residential units, a replacement retail foodstore, with additional commercial, business and service space, and a flexible community space, and ancillary plant, access, servicing and car parking, landscaping and associated works".*

1.1.3 In preparing this TA the Transport for London (TfL) Healthy Streets approach has been used and this report highlights, for discussion, any constraints on the local transport network that could have implications for access to the site. Subsequent and significant mitigation measures or improvements and benefits of the proposed development have been put forward as detailed within this TA.

1.1.4 As required by TfL, this document presents an Active Travel Zone (ATZ) assessment for the site that covers an area equivalent to a 20-minute cycle from the site's boundary. The purpose of the ATZ assessment is to establish what transport connections and local amenities would be accessible to future site residents and to establish whether the site is suitably located for residents to live a car free lifestyle. Where appropriate, mitigation measures/improvements have been proposed including significant improvements to the pedestrian environment within and around the site.

1.1.5 The site is located within the 'Great West Road Opportunity Area', an area designated for higher density development. To facilitate higher density development in the Opportunity Area, improvements to the local transport network are anticipated, and these include the development of:

- **The West London Orbital** - A new London Overground service that would run from Hounslow and Kew Bridge, towards Hendon and West Hampstead in the north.
- **Southall Rail Link** – A passenger train service, operating on an existing freight line, linking Brentford with the planned Crossrail station at Southall. A new station would be created at Transport Avenue, Brentford, close to the existing Sky campus, and this route could in due course be connected to Brentford station.
- **Improved and extended bus accessibility** to the area, which would include an extension of the existing E1 bus service. The development of the Homebase site plays an important role in securing the improved extension to the E1 bus service. The provision of a new E1 bus route 'turnaround' at Tesco Osterley would not be possible without Tesco being re-provided at Homebase, Brentford.
- **A substantial financial contribution** from the applicant to support improved bus services will also bring significant benefits for existing and proposed residents, Sky workers and other workers in the local area.
- **Improved cycle infrastructure** – this could comprise of Phase 2 of Cycleway 9 which

would route to the south of the site, along London Road, and the development of improved cycle routes alongside the A4 Great West Road.

- **Boston Manor Boardwalk** – A new pedestrian connection to Boston Manor Station.

1.1.6 Notwithstanding the above, this TA establishes that the site is already accessible to a certain extent by public transport services; the site being located within 100m of Syon Lane Station with bus stops located on the site's Syon Lane frontage (serving bus routes H28 and H91). Osterley Underground Station (Piccadilly Line) which is located approximately 2km from the site, is also within walking distance or accessible by bus (using bus route H91). The site has a Public Transport Accessibility Level (PTAL) rating of 2/3 which is described as moderate.

1.1.7 The Homebase site is a rectangular plot of land of approximately 1.4 hectares. The site is located on the southern side of the intersection of Syon Lane and the A4 Great West Road (Gillette Corner). The site's location is illustrated in **Insert 1.1**.

Insert 1.1: Site Location Plan

1.1.8 The proposed development would provide a new Tesco store at ground floor level with 473 residential units above. The Tesco store would be provided with 400 on-site customer car parking spaces, with the residential development provided with 105 on-site car parking spaces (including 2 dedicated car club parking spaces and 3 visitor parking spaces). Car parking would be located over two levels above the Tesco store, with some residential parking also provided in a basement.

1.1.9 At present the public realm in the area is car dominated, discouraging pedestrian trips. The proposal provides an opportunity to make significant improvements, with a particular focus on the Healthy Streets indicators "People choose to walk, cycle and use public transport", "Pedestrians from all walks of life", "Easy to cross" and "People feel safe". As a result, improvements are

proposed that seek to make the nearby roads easier to cross, ensuring that people feel safe while doing so.

1.1.10 Improvements will be made to the public realm, in terms of upgrades to footways, the underpass beneath the Great West Road and to the overall pedestrian environment and amenity. The pedestrian improvements will encourage walking and also improve the first/last leg of public transport trips. The proposed cycle infrastructure improvements will provide a continuous link (segregated from vehicular traffic) across the northern frontage of the site.

1.1.11 The site's primary vehicular access from Syon Lane will be improved via a new traffic signal control junction, located approximately 7 metres to the south of the existing Homebase vehicular entrance (centre to centre) to replace the existing priority controlled Homebase site access. As well as managing traffic flow the implementation of traffic signal control gives greater safety for pedestrians wishing to cross in this location with the implementation of dedicated crossing 'green man' signals for those on foot.

1.1.12 The site access incorporates improved pedestrian crossing facilities and has therefore been designed with reference to the reflect healthy streets design principles. It also gives greater safety for the existing high pedestrian demand that occurs from Syon Lane station to and from the Sky campus.

1.1.13 The proposed traffic signal control site access junction would be linked to the operation of the adjacent Syon Lane/ Great West Road (A4) traffic signal control junction (Gillette Corner) so that the two would operate with coordinated signal timings. This linkage will improve traffic flow and safety, again reflecting healthy streets principles.

1.1.14 To improve access into the new store, improvements will be made to the junction layout at Gillette Corner. These changes include an additional right turn lane from A4 eastbound into Syon Lane. This is detailed within 'Section 11 – Modelling' to mitigate the traffic impact of the development and give an overall nett benefit to junction capacity and reduce driver delay.

1.1.15 St Edward Homes Limited is bringing forward the redevelopment of both the Tesco Osterley and Homebase Brentford sites. The existing Tesco Osterley store would be re-provided on the Homebase site as part of a mixed-use development with residential above, which releases the opportunity to deliver a comprehensive residential-led mixed-use development on the Tesco site. The existing Tesco Osterley store has a floor area of circa 11,582sq.m GFA, a petrol filling station (PFS) and circa 625 surface-level customer parking spaces. The Tesco store is situated approximately 500 metres (m) to the north of the site. The location of the existing Tesco store is illustrated in **Insert 1.2**.

Insert 1.2: Homebase and Tesco Development Sites

1.1.16 A planning application for the proposed redevelopment of Tesco Osterley will be submitted to the London Borough of Hounslow (LBH) as a standalone planning application which will propose a residential-led mixed-use development, comprised of the following:

- 1,677 residential units;
- Between 3,000 sqm and 5,000 sqm of flexible non-residential floorspace comprising commercial, business and service space, and/ or learning and non-residential institution space, and/or local community space, and/or a public house/ drinking establishment, and/or mobility hub;
- Public open public space and public realm; and
- Up to 400 car parking spaces for use by site residents, including a minimum of 10 car club bays.

1.1.17 The redevelopment of Tesco Osterley would mean the removal of the existing PFS. The PFS would not be re-provided on the site as part of the development project. The removal of the PFS will result in the removal of some traffic from the local highway because a proportion of trips to the PFS are 'petrol only' and do not connect with the Tesco store. Some 'petrol only' trips will in future route away from the local area and would no longer impact on the operation of the Gillette Corner junction.

1.1.18 As a result of the development of the Homebase and Tesco sites, retail car parking provision in the area will reduce, significantly. Providing car parking for the new Tesco store at a level below the existing Tesco Osterley provision is in line with the approach of policy contained within the Publication London Plan, which states "*existing parking provision should be reduced to reflect the current approach and not be re-provided at previous levels where this exceeds the standards set out in this policy.*"

1.1.19 The proposed residential development would be 'low car' and would provide residential car parking at an average ratio of 0.21 spaces per unit. This level of provision is below the maximum car parking standards defined by the Publication London Plan (2020). These car parking proposals have been informed by the outcome of an Active Travel Zone (ATZ) assessment and by the future operational requirements of the foodstore.

1.1.20 With regard to cycling, the Homebase Brentford development would provide 204 spaces for use by site visitors and Tesco staff, and 854 spaces for use by site residents. This exceeds the minimum requirements of the Publication London Plan.

1.1.21 This TA has established that as a result of the proposed developments at Homebase Brentford and Tesco Osterley, an overall reduction in traffic numbers is anticipated when compared to existing development traffic attraction. This is caused by the removal of the Homebase store, the removal of the Tesco PFS, the reduced car parking capacity of the new Tesco store and the low car nature of the proposed residential development.

1.1.22 This reduction is particularly pronounced on Syon Lane north of the A4 Great West Road, which will experience an overall traffic reduction due to the relocation of the Tesco store to a site located south of the A4.

Insert 1.3: 2035, Predicted Changes to Traffic Flows as a result of Development

Location	Average Weekday (07:00 - 19:00)	Annual Average Daily Traffic Flow (AADT, (24 Hours, Mon- Sun)
1	-90	-78
2	-90	-78
3	-90	-78
4	-270	-234
5	-272	-236
6	-406	-374
7	-198	-152
8	-3362	-3924
9	-3362	-3924
10	-412	-439
11	-12	-13

1.1.23 Highway works are proposed at the Gillette Corner traffic signal control junction to support the development of the Homebase site and Tesco Osterley, with the works focused on providing adequate vehicular access to the new Tesco store on the Homebase site. The works include the provision of a second right turn lane for traffic approaching Gillette Corner from the west. In line with Healthy Streets TA guidance the necessary improvements (subject to the findings of this TA) will be put in place to ensure that the development is also accessible by active travel modes and public transport, including suitable pedestrian/cycle links between the two development sites and across the A4.

1.1.24 The development seeks to deliver a new ‘clean air route’ along the development’s southern boundary, on Syon Gate Way. The route will offer an alternative, parallel, pedestrian and cycle route to the A4 and will connect with a new thoroughfare on the site’s north-eastern boundary which will link with the Toucan crossing facility at the Great West Road/Harlequin Avenue junction. At its western end, the route will link to a wide shared surface pavement that will extend along the site’s south-western boundary. As the route turns into Syon Gate Way a minimum footway/cycleway width of 3m will be maintained

1.1.25 Section 11 of this TA presents the results of updated traffic modelling undertaken in January 2021. Results are presented for four design configurations of the Gillette Corner junction, each of which considers pedestrian connectivity across the junction in a different way. As a result of the work undertaken to date, it is concluded that the provision of a surface level crossing on the eastern side of the A4 can be achieved without adverse implications to highway operation.

1.1.26 Consideration has been given to options for improving pedestrian and cycling accessibility across the Great West Road junction. TfL has requested that the traffic modelling results are presented for four different options for new/improved pedestrian and cycling crossings around this junction in order to inform decision making on future improvements.

1.1.27 Across the course of a day, the cumulative effects of the developments are to reduce overall traffic on the local network. During peak hours, the assessment identifies a redistribution of traffic. The base option, with no additional crossings, demonstrates an improvement in the way the junction operates.

1.1.28 Design option 2 demonstrates that it is possible to improve north-south accessibility across the junction and to improve the way the junction operates, with journey time reductions in the weekday AM and PM peaks, and only a minor increase in the Saturday peak. The provision of an additional north-south crossing, as shown in Option 2, would more than mitigate the effects of the additional pedestrian/cyclist movements associated with the proposed developments. The main pedestrian movements associated with the developments are identified as being in a north-south direction, connecting new and existing residents on the north side of the Great West Road to Syon Lane station and the new Tesco store, and connecting residents on the south side of the Great West Road to the new spaces and facilities to be delivered on the Tesco Osterley site.

1.1.29 Design options 3 and 4 investigate the feasibility of additional crossings to bring wider improvements to pedestrian and cyclist movements, including east-west movements along the Great West Corridor. Whilst these options would deliver greater improvements pedestrian and cyclist movements, the traffic flow through the junction would not operate as well as with options 1 and 2, notably in the Saturday peak hour. It is concluded that design option 2 is the appropriate solution that is proportionate to the effects of the developments.

1.1.30 The Transport Assessment also contains plans identifying potential variations to options 3 and 4, with staggered crossings instead of straight crossings, that could be investigated in the future.

1.1.31 The TA concludes that the proposed development, and the development of Tesco Osterley, will combine to have a beneficial impact across all modes of transport. This includes greater capacity and infrastructure provision for pedestrians and cyclists, improvements to public transport services and capacity and betterment in terms of the operation of the local highway network.

2 Introduction

2.1 Overview

2.1.1 Royal HaskoningDHV has been commissioned by St Edward Homes Limited to prepare a TA associated with the proposed development of land at Syon Lane, Brentford, Isleworth TW7 5QE (the 'site'). The site is currently occupied by a Homebase retail store (4,180 sqm Gross Floor Area - GFA), and a surface level car park. The planning application seeks the following:

"Full planning application for the demolition of existing building and car park and erection of buildings to provide residential units, a replacement retail foodstore, with additional commercial, business and service space, and a flexible community space, and ancillary plant, access, servicing and car parking, landscaping and associated works"

2.1.2 Throughout this report 'the site' refers to the land located at the aforementioned address and the 'development' refers to the buildings that are proposed to be constructed in the future.

2.1.3 The proposed development would provide a new Tesco store at ground floor level with 473 residential units above. The Tesco store would be provided with 400 customer car parking spaces, with the residential development provided 105 dedicated car parking spaces. The proposed residential car parking provision includes 100 resident spaces, 3 spaces for use by site visitors and 2 spaces for use by Car Club vehicles.

2.1.4 The location of the proposed development site is indicated in **Insert 1.1**.

2.2 Parallel Application – Tesco Osterley Site

2.2.1 The Homebase site, Syon Lane, is being developed in parallel with redevelopment proposals for the Tesco Osterley site. The site's redevelopment would facilitate the relocation of the operational Tesco, Osterley store (circa 11,582sq.m GFA and circa 625 parking spaces) which is currently situated approximately 500m north of the site. The development of both sites is being progressed by St Edward Homes Limited and the proposals are intrinsically linked.

2.2.2 The Tesco Osterley site is a 5.45-hectare plot of land located along the northern side of Syon Lane. MacFarlane Lane and Grant Way bound the western and eastern sides of Tesco Osterley, respectively. The Sky campus and playing fields (including a five-a-side football complex) adjoin Tesco Osterley site's northern boundary.

2.2.3 Tesco Osterley is afforded vehicular access from Syon Lane via a roundabout junction that serves an internal road, from which access is taken to a bus stop and terminus (route H28), the Tesco customer car park, the Tesco service yard and the Tesco PFS.

2.2.4 The location of Tesco Osterley, in relation to the site, is presented in **Insert 1.2**.

2.2.5 The redevelopment of Tesco Osterley will be submitted to LBH as a standalone planning application for a residential-led mixed-use development, comprised of the following:

- Up to 1,677 residential units;
- Between 3,000 sqm and 5,000 sqm of flexible non-residential floorspace comprising commercial, business and service space, and/ or learning and non-residential institution

space, and/or local community space, and/or a public house/ drinking establishment, and/or mobility hub;
- Public open public space and public realm; and
- Up to 400 car parking spaces for use by site residents, including a minimum of 10 car club bays.

2.2.6 While the Tesco store would be re-provided from Tesco Osterley to the Homebase site, the PFS associated with the existing Tesco, and the existing Homebase use will not be re-provided as part of the proposed scheme at the site.

2.2.7 As outlined above, the proposed development scheme that forms the subject of this report (at the site) has been developed with consideration of the parallel application coming forward. In combination, the two sites currently provide in excess of 12,500sq.m of retail floor area (GFA) and over 900 retail car parking spaces. Both sites are currently operational and attract traffic movements throughout the day.

2.2.8 The implementation of the development sites would be phased so that a Tesco store is always open and operational, locally. This means that the new Tesco store would be constructed first, and would become operational on the site before the existing Tesco Osterley store is closed for redevelopment. The existing and proposed Tesco stores would not be open simultaneously at any time during the development.

2.2.9 It is anticipated that subject to the granting of planning consent, construction work will commence at the Homebase site in the third quarter of 2021. A six-year construction build programme is envisaged with completion of works on site by the third quarter of 2026.

2.2.10 Following the completion of the new Tesco store at the Homebase site, construction works will commence at the Tesco Osterley site in Quarter 2 2025. The construction of the proposed 1,677 residential units is anticipated to be undertaken with a five-phase, 10-year construction programme, with development completion anticipated by Quarter 2 2035.

2.3 Pre-application Consultation

2.3.1 This TA has been informed by pre-application consultation discussions with LBH and TfL. While the pre-application consultation has been undertaken with a focus on the site, the responses received by both LBH and TfL consider the wider development scenario whereby the existing Tesco store is relocated to the Homebase site, with the Tesco Osterley site being redeveloped for predominately residential purposes.

2.3.2 Initial pre-application correspondence from LBH, dated 20th December 2018, identified a need for a formal TfL pre-application process. This request was reiterated in TfL's Initial Screening Opinion, dated 7th March 2019. Further to these requests, a pre-application meeting was held with TfL and LBH on the 9th May 2019, and a follow up pre-application meeting was held with TfL on the 31st July 2019.

2.3.3 Formal pre-application comments were received from TfL in correspondence dated 3rd October 2019 and the key points raised with regard to the development proposals were as follows:

- ***Walking and Cycling Improvements****: The scheme should enhance safety and be developed to incorporate improvements to walking and cycling infrastructure, due to the expected future increases in pedestrian and cyclist traffic.*

- ***Vision Zero**: The TA should consider mitigation measures as a means to eliminate serious and fatal collisions on the transport network, and should demonstrate how the scheme will contribute towards TfL's Vision Zero approach.*
- ***Active Travel Zone Assessment (ATZ)**: Requirement for an ATZ assessment as part of the application submission - This assessment should cover key routes to the nearest rail stations, bus stops, parks and amenities and should identify deficiencies in the local pedestrian environment.*
- ***Cycle Parking**: All cycle parking is required to be designed and laid out in accordance with the guidance contained in Chapter 8 of the London Cycling Design Standards (LCDS).*
- ***Public transport accessibility**: TfL requires bus trip generation figures by time and by direction, with the peak hour indicated separately. TfL would use this information to assess the impact of the development on local bus services.*
- ***Residential Car parking provision**: A residential car parking ratio of 0.25 spaces per unit is deemed to be in accordance with the London Plan and Draft New London Plan.*
- ***Retail Car parking provision**: The proposed retail parking provision* [400 spaces] *is deemed to be in excess of the Draft New London Plan parking standards. TfL acknowledges that the car parking floors have been designed for future repurposing.*
- ***Car Park Access**: It is recommended that barrier controls are not used to access the car park, as they may increase the risk of 'blocking back'*
- ***Servicing**: The TA is required to present the trip generation analysis for servicing and delivery vehicles and demonstrate that the proposed loading bays are adequate to meet the needs of the development. A Delivery and Servicing Plan is requested as part of the application.*
- ***Construction**: The application must be accompanied by a Construction and Logistics Plan (CLP) that details construction programme, routes for HGVs; frequency of deliveries and loading/unloading locations.*
- ***Travel Planning**: A framework travel plan covering all elements of the development, which sets out the targets and the measures to be implemented, will need to be submitted as part of the application. TfL expects that the full travel plan will be secured and monitored as part of a Section 106 Agreement.*

2.3.4 TfL informed the applicant of emerging TfL schemes for addressing road safety and improving pedestrian and cycle facilities at Gillette Corner, including decommissioning of the A4 pedestrian underpass and introducing at grade crossings for pedestrians and cyclists. The proposed development will play a key role to deliver these types of improvements to the pedestrian and cycle environment within and around the site which could be provided in addition to retaining the underpass. The proposed development is expected to open up new clean air routes and the new pedestrian crossings on Grant Way and Syon Lane. The proposed development will provide improvements to pedestrian connections between the Tesco site and Homebase site (and Syon Lane station), including options for at grade crossings across the A4 to either replace or complement the existing A4 underpass facility.

2.3.5 Furthermore, it is noted that TfL is in the process of changing local bus routes in the area. Bus route E1 will be extended to serve the Tesco Osterley site and in doing so will serve the Homebase site vis a stop on the A4. TfL have requested that the applicant details specifically how the development will deliver these improvements to bus accessibility for the E1 service in relation to the site (notwithstanding the substantial financial contribution that will also be made by the applicant to increase the frequency of the local bus service).

2.3.6 The proposed structure and content of this TA has been developed with regard to TfL's most recent guidance on Transport Assessment preparation, and with reference to the comments made by TfL, referred to above.

2.3.7 Further to detailed discussions with LBH and TfL relating to transport, the following transport planning documents have been prepared by RHDHV in association with the proposed development, and these form part of the planning submission, presented as stand-alone documents:

- Transport Assessment Scoping Study (TASS);
- Residential Travel Plan (RTP);
- Framework Retail Travel Plan (FWTP);
- Delivery and Servicing Plan (DSP);
- Outline Construction Logistics Plan (CLP); and
- Car Park Management Plan (CPMP).

2.4 Revised Transport Assessment

2.4.1 This Revised TA has been prepared in response to comments made by Transport for London (TfL) and the London Borough of Hounslow (LBH) during the statutory consultation process for planning application P/2020/3199.

2.4.2 This report updates the September 2020 TA submitted with the planning application. Changes to the document include:

- An updated description of the site layout to reflect changes to the proposed public realm, particularly with regard to Syon Gate Way;
- An updated commentary on Design Options and junction modelling for the Gillette Corner junction, including;
  - The assessment of journey times within the VISSIM models, measured against revised journey time markers; and
  - An optioneering exercise that assesses the relative journey time impact of pedestrian and cycle infrastructure at the Gillette Corner junction.
- Updates to Active Travel Zone Assessments;
- The undertaking of a Healthy Streets Checklist for the applicant's preferred crossing design at Gillette Corner; and
- Details of a Station Capacity Assessment for Osterley Station.

2.5 Report Structure

2.5.1 As outlined above, this TA has been prepared in respect of TfL's suggested Healthy Streets

format, as set out within TfL's publication 'TfL Healthy Streets Transport Assessments Contents & Chapters' (last updated 17/06/2019). As such, following this introduction the TA is structured as follows:

- **Section 3** presents a review of relevant land use and transport planning policy;
- **Section 4** outlines the 'Site and Surroundings' and provides a description of the local context;
- **Section 5** considers 'Transport Planning for People' within the context of a defined Active Travel Zone (ATZ);
- **Section 6** provides a review of site accessibility by non-car modes of travel;
- **Section 7** describes the proposed development with reference to the site's proposed arrangements;
- **Section 8** presents the methodology and findings of a multi-modal trip generation exercise for the proposed development;
- **Section 9** outlines the methodology for, and presents the results, of capacity modelling, carried out in respect of the proposed scheme;
- **Section 10** discusses the transport impacts resulting from the operational phase of the proposed development;
- **Section 11** sets out proposed measures for mitigating residual transport impacts of the proposed scheme;
- **Section 12** presents considerations relating to the construction phase of the proposed development; and
- **Section 13** provides a summary and conclusion to the report.

3 Policy Review

3.1 Preface

3.1.1 This section provides an overview of the relevant national, regional and local policy requirements relevant to the proposed development.

3.2 National Policy

National Planning Policy Framework (June 2019)

3.2.1 The National Planning Policy Framework (NPPF) is defined as being the document that *''sets the Government's planning policies for England and how these are expected to be applied''*.

3.2.2 The NPPF is not a transport-specific document, rather it sets out the Government's general requirements for the planning system. The NPPF incorporates guidance for local planning authorities when defining their local plans and in determining planning applications. The purpose of the planning system, as identified in the NPPF, is to contribute to the achievement of sustainable development, with three 'dimensions' identified as supporting this:

- **An economic objective**: to help build a strong, responsive and competitive economy, by identifying and coordinating the provision of infrastructure.
- **A social objective**: to support strong, vibrant and healthy communities, by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being.
- **An environmental objective**: to contribute to protecting and enhancing our natural, built and historic environment.

3.2.3 With regard to transport considerations for new developments, the NPPF states that *"all developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed*". This should also take into account that:

- *''Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- *Safe and suitable access to the site can be achieved for all users; and*
- *Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.''*

3.2.4 With specific respects to planning decisions based on transport considerations, at paragraph 109 the NPPF states that:

"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."

3.3 Regional Policy

London Plan, March 2016

3.3.1 The London Plan is a statutory development strategy for Greater London that is published by the Greater London Authority (GLA). The current London Plan was published and adopted March 2016 and chapter six 'London's Transport' aims to address capital's transport challenges.

3.3.2 The sixth objective of the London Plan which relates to transport defines London's future as:

''A city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system which actively encourages more walking and cycling, makes better use of the Thames, and supports delivery of all the objectives of this Plan.''

3.3.3 Policy 6.3 ''*Assessing Effects of Development on Transport Capacity' requires new developments to "Development proposals should ensure that impacts on transport capacity and the transport network, at both a corridor and local level, are fully assessed. Development should not adversely affect safety on the transport network". "Transport assessments will be required in accordance with TfL's Transport Assessment Best Practice Guidance for major planning applications".*

3.3.4 Policy 6.9 *''Cycling' states "Developments should: a) provide secure, integrated, convenient and accessible cycle parking facilities in line with the minimum standards… and the guidance set out in the London Cycle Design Standards (or subsequent revisions); b) provide on-site changing facilities and showers for cyclists"*

3.3.5 Within the context of the above, the London Plan's minimum cycle parking standards are summarised in respect of the proposed land uses in **Table 3.1**.

Table 3.1: London Plan Cycle Parking Standards

Use Class		Long-stay	Short-stay
A1	Food retail	From a threshold of 100 sqm: 1 space per 175 sqm	From a threshold of 100 sqm: first 750 sqm: 1 space per 40 sqm thereafter: 1 space per 300 sqm
	Non-food retail	From a threshold of 100 sqm: first 1000 sqm: 1 space per 250 sqm thereafter: 1 space per 1000 sqm	From a threshold of 100 sqm: first 1000 sqm: 1 space per 125 sqm thereafter: 1 space per 1000 sqm
A2-A5	Cafes & restaurants / drinking establishments	From a threshold of 100 sqm: 1 space per 175 sqm	From a threshold of 100 sqm: 1 space per 40 sq.m
C3	Residential – dwellings	1 space per studio and 1 bedroom unit; 2 spaces per all other dwellings	1 space per 40 units

3.3.6 Further to the above, the London Plan states that *"cycle parking provided for staff should be suitable for long-stay parking, particularly in terms of location, security and protection from the elements".* In respect of short-stay parking the policy document states such facilities *"should be available for shoppers, customers, messengers and other visitors to a site, and should be convenient and readily accessible. Short-stay cycle parking should have step-free access and be located within 15 metres of the main site entrance, where possible."*

3.3.7 This TA, at **Section 0**, presents a schedule of proposed long-stay and short-stay cycle parking as allocated by land use.

3.3.8 In respect of car parking, the London Plan presents maximum standards for retail and residential uses as summarised in **Table 3.2** and **Table 3.3** respectively.

Table 3.2: London Plan Maximum Standards - Retail

Maximum standards for retail uses: space per sqm of gross floor space (GIA)		
Use	**PTAL 6 and 5**	**PTAL 4 and 2**
Food retail: up to 500 m^2	75	50-35
Food retail: up to 2500 m^2	45-30	30-20
Non-food retail	60-40	50-30

Table 3.3: London Plan Maximum Standards - Residential

Number of beds	4 or more	3	1-2
Parking spaces	Up to 2 per unit	Up to 1.5 per unit	Less than 1 per unit

Notes:

- *All developments in areas of good public transport accessibility in all parts of London should aim for significantly less than1 space per unit*
- *Adequate parking spaces for disabled people must be provided preferably on-site*
- *20 per cent of all spaces must be for electric vehicles with an additional 20 per cent passive provision for electric vehicles in the future.*

Publication London Plan (December 2020)

3.3.9 A Draft New London Plan was published in November 2017 and has been subject to public consultation. The consolidated suggested changes revision of the document were published in July 2019 and an 'Intend to Publish' version was published in December 2019. In December 2020 the Mayor of London approved the Intend to Publish London Plan and the document is now subject to approval by central government. The current version of the document is named the Publication London Plan (PLP).

3.3.10 When formally adopted the PLP will provide the context for development planning decisions in the Greater London region. Due to its advanced status and the lack of unresolved objections to the relevant policies referenced in this TA, significant weight can be given to the policies in the PLP.

3.3.11 The PLP identifies the 'Great West Corridor', a 2.5 mile stretch of the A4 Great West Road in which the site is located, as an Opportunity Area or Area of Intensification, and supports the growth of employment in the area by designating it as a potential 'Strategic Outer London Development Centre' and a 'Strategic Industrial Location'.

3.3.12 Transport policies are set out in Chapter 10 of the PLP document. Policy T1 of the document states that: *"Development Plans should support and development proposals should facilitate:*

- *The delivery of the Mayor's strategic target of 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041.*
- *All development should make the most effective use of land, reflecting its connectivity and accessibility by existing and future public transport, walking and cycling routes, and ensure that any impacts on London's transport networks and supporting infrastructure are mitigated.''*

''*The integration of land use and transport, and the provision of a robust and resilient public transport network are essential in realising and maximising growth and ensuring that different parts of the city are connected in a sustainable and efficient way. In order to help facilitate this, an integrated strategic approach to transport is needed, with an ambitious aim to reduce Londoners' dependency on cars in favour of increased walking, cycling and public transport use.''*

3.3.13 Policy T5 'Cycling' states: *''Development Plans and development proposals should help remove barriers to cycling and create a healthy environment in which people choose to cycle. This will be achieved through:*

- *supporting the delivery of a London-wide network of cycle routes, with new routes and improved infrastructure.*
- *securing the provision of appropriate levels of cycle parking which should be fit for purpose, secure and well-located. Developments should provide cycle parking at least in accordance with the minimum standards.''*

3.3.14 A key concept of the PLP is the Mayor's 'Healthy Streets Approach' which has been adopted to:

- improve health and reduce health inequalities;
- reduce car dominance, car ownership and use, road danger, severance, vehicle emissions and noise;
- increase walking, cycling and public transport use;
- improve street safety, comfort, convenience and amenity; and
- support these outcomes through sensitively designed freight facilities.

3.3.15 Policy T2 of the PLP requires all new developments to promote and demonstrate the application of Healthy Street and Active Travel approach, and this is discussed in further detail below.

3.3.16 The PLP provides a revision to cycle parking standards that currently form part of the adopted London Plan. In respect of retail land uses the there is no material change to the currently applicable standards, however, the minimum cycle parking requirements for residential development would increase as a result of the adoption of the PLP.

3.3.17 **Table 3.4** presents a summary of the PLP's minimum cycle parking standards in respect of retail land uses that are of relevance to the proposed development.

Table 3.4: PLP Minimum Cycle Parking Standards – Retail

Use Class	Description of use	Long-stay (e.g. for residents or employees)	Short-stay (e.g. for visitors or customers)
A1	Food retail	From a threshold of 100 sqm: 1 space per 175 sqm gross external area (GEA)	From a threshold of 100 sqm: First 750 sqm: 1 space per 20 sqm; thereafter: 1 space per 150 sqm (GEA)
	Non-food retail	From a threshold of 100 sqm: first 1,000 sqm: 1 space per 250 sqm. Thereafter: 1 space per 1,000 sqm (GEA)	From a threshold of 100sqm: First 1,000 sqm: 1 space per 60 sqm; thereafter: 1 space per 500 sq.m (GEA).
A2 - A5	Financial / professional services; cafés & restaurants; drinking establishments; takeaways	From a threshold of 100 sqm: 1 space per 175 sqm (GEA)	From a threshold of 100 sqm: 1 space per 20 sqm (GEA).

3.3.18 **Table 3.5** presents the PLP's minimum residential cycle parking standards.

Table 3.5: PLP Minimum Cycle Parking Standards - Residential

Use Class	Description of use	Long-stay (e.g. for residents)	Short-stay (e.g. for visitors)
C3-C4	Dwellings (all)	1 space per studio and 1 bedroom/1 person unit 1.5 spaces per 1-bedroom 2-person unit 2 spaces per all other dwellings	1 space per 40 units

3.3.19 Policy T6 of the PLP states that *"car parking should be restricted in line with levels of existing and future public transport accessibility and connectivity*." In relation to re-developed sites, it is stipulated that "*existing parking provision should be reduced to reflect the current approach and not be re-provided at previous levels where this exceeds the standards set out in this policy*."

3.3.20 Updated parking standards presented in the PLP, in respect of retail and residential uses are summarised at **Table 3.6** and **Table 3.7**.

Table 3.6: PLP Maximum Parking Standards - Retail

Location	Maximum parking provision
Inner London, Outer London Opportunity Areas, Outer London retail below 500 sqm	Up to 1 space per 75 sqm gross internal area (GIA)
Rest of outer London	Up to 1 space per 50 sqm (GIA)

Table 3.7: PLP Maximum Parking Standards - Residential

Location	Maximum parking provision
Outer London Opportunity Areas	Up to 0.5 spaces per unit

Healthy Streets for London (TfL, February 2017)

3.3.21 TfL's Healthy Streets for London document outlines their new approach to transport and land use planning, introducing a system of policies and strategies that prioritise walking, cycling and the use of public transport. The Healthy Streets approach provides the framework for putting human

health and experience at the heart of planning for the future of the city. It uses ten evidence-based indicators, as follows:

- *"**Pedestrians from all walks of life** - London's streets should be welcoming places for everyone to walk, spend time in and engage in community life.*
- ***People choose to walk, cycle and use public transport** - Walking and cycling are the healthiest and most sustainable ways to travel. This will only happen if we reduce the volume and dominance of motor traffic and improve the experience of being on our streets.*
- ***Clean air** - Improving air quality delivers benefits for everyone and reduces unfair health inequalities.*
- ***People feel safe** - The whole community should feel comfortable and safe on our streets at all times.*
- ***Not too noisy** - Reducing the noise impacts of motor traffic will directly benefit health.*
- ***Easy to cross** - Making streets easier to cross is important to encourage more walking and to connect communities. People prefer direct routes and being able to cross streets at their convenience. Physical barriers and fast moving or heavy traffic can make the streets difficult to cross.*
- ***Places to stop and rest** - A lack of resting places can limit mobility for certain groups of people.*
- ***Shade and shelter** - Providing shade and shelter from high winds, heavy rain and direct sun enables everybody to use our streets, whatever the weather.*
- ***People feel relaxed** - A wider range of people will choose to walk or cycle if our streets are not dominated by motorised traffic, and if pavements and cycle paths are not overcrowded, dirty, cluttered or in disrepair.*
- ***Things to see and do** - People are more likely to use our streets when their journey is interesting and stimulating, with attractive views, buildings, planting and street art and where other people are using the street. They will be less dependent on cars if the shops and services they need are within a short distance."*

3.3.22 Chapter 2 of Healthy Streets for London highlights that car ownership is the key factor that influences how often Londoners walk and cycle. The document states that car ownership has a bigger impact than gender, income, employment, ethnicity and disability on travel habits. The document establishes that most car trips made by Londoners could be undertaken on foot, or by cycle with nearly half of all trips made by London residents being possible by no more than a 10-minute cycle.

3.3.23 The Healthy Streets approach seeks to find design solutions to minimise road danger, delivering streets where everyone feels safe walking, cycling and using public transport. Road danger disproportionately affects the number of people travelling on foot, by cycle or by motorcycle. Adopting a Vision Zero approach (working towards the elimination of road traffic deaths by reducing the dominance of motor vehicles on our streets) will serve to put the needs of vulnerable road users first.

Transport for London, Vision Zero Action Plan (July 2018)

3.3.24 The Mayor of London aims to eliminate deaths and serious injuries from the transport network, by 2041. This Vision Zero approach is based on the fundamental conviction that loss of life and

serious injuries are neither acceptable nor inevitable. The Vision Zero ambition is inextricably linked to the Healthy Streets approach, which puts human health and experience at the heart of city planning.

3.3.25 The document identifies that Londoners face an even greater challenge to their health and wellbeing than that posed by traffic collisions. A lack of physical activity is now one of the biggest threats to our health, increasing the risk of developing a range of chronic diseases including diabetes, dementia, depression, heart disease and cancer. The Healthy Streets approach, alongside Vision Zero, seeks to tackle inactive lifestyles and encourage journeys to be made on foot or by cycle, in an environment that is conducive to these modes of travel.

3.3.26 The Vision Zero Action Plan goes on to detail strategies that target reducing the likelihood and severity of collisions, by lowering vehicle speeds and focusing action on the most dangerous locations, particularly junctions. In addition, the Action Plan employs a framework of interventions around five pillars of action, namely:

- Safe speeds;
- Safe streets;
- Safe vehicles;
- Safe behaviours; and
- Post-collision response.

3.3.27 The Development seeks to incorporate reasonable measures within its design to reduce risk to people, and in doing so it is intended that the Development will support TfL's Vision Zero Action Plan.

3.4 Local Policy

London Borough of Hounslow Local Plan 2015 to 2030 (September 2015)

3.4.1 The Borough's Local Plan (2015) sets out their adopted development control policies.

3.4.2 The Local Plan identifies that the Borough's over-arching transport objective is to ''*enable all those who live in or visit the area to travel safely and conveniently, whilst supporting environmentally sustainable economic growth and improving health''.*

3.4.3 Policy EC2 sets out the Borough's aims to develop an increasingly sustainable local transport network. This would be achieved by:

- *''Promoting 'car-free' or 'low car' development where appropriate, as well as car clubs and car-sharing schemes;*
- *Promoting the active management of car parking and travel demand in the borough*
- *Using the standards established in the London Plan for car parking, cycle parking, motorcycle parking, coach parking, and electric vehicle charging (or as updated by alterations to the London Plan).''*

3.4.4 New development proposals would need to:

- Demonstrate that they *"are located appropriately with regard to public transport accessibility and capacity, road capacity and access to good quality walking and cycling networks.*

- *Demonstrate that adverse impacts on the transport network are avoided.*
- *Developments should provide a minimum number of cycle parking spaces and an appropriate maximum number of car parking spaces consistent with the standards in the London Plan.*
- *Incorporate design measures and facilities to promote cycling, in line with the London Plan."*

Local Implementation Plan 2019-2041 (February 2019)

3.4.5 The Local Implementation Plan (LIP) is a statutory document that sets out how the borough proposes to deliver the Mayor's Transport Strategy (MTS)in its area, as well as contributing to other local and sub-regional goals.

3.4.6 The council's objectives are for a transport network that is healthy, clean and green, which can be achieved by:

- *"Reducing transport related emissions; improving the quality and accessibility of the public realm and maximising the opportunity for the transport system to improve health outcomes by removing barriers to the uptake of active travel;*
- *By reducing the number of people killed and seriously injured on our roads, contributing tothe Mayor's Vision Zero target;*
- *And by ensuring that the transport network operates in an efficient manner facilitating economic growth in the borough and unlocks space for new homes and jobs for all users, particularly through a shift from private to public transport."*

3.4.7 Hounslow's LIP also underlines how the borough plans on meeting growing demands on the public transport network. Key ambitions to improve public transport accessibility (and hence reduce reliance on single occupancy car journeys) include:

- *"05a. To work with TfL and other transport operators to improve bus and rail connectivity in those areas with the lowest PTAL and those with the highest potential for growth.*
- *05b. To work with TfL to improve bus connections to new strategic infrastructure such as the Crossrail (Elizabeth Line).*
- *05c. To work with TfL to enhance orbital and cross-borough bus services that provide residents access to employment and local services, including to Heathrow and health facilities, in a way that is competitive with the private car.*
- *05d. To work with train operators to ensure that the frequencies of services meet demand without excessive crowding."*

Draft Great West Corridor Local Plan Review (October 2017)

3.4.8 The Draft Great West Corridor Local Plan Review (2017), written by LBH, sets out the vision, objectives and options to help guide future development in the area over the next 15 years. It sets out a range of planning policies that will support housing delivery, job creation and the provision of new infrastructures to serve the local community and new development.

3.4.9 In reference to Policy GWC5 Transport and Connectivity, the Borough has outlined a number of key improvements in order to support sustainable development and growth along the Great West Corridor:

- *"Actively supporting and facilitating the delivery of new transport interchange sites. This could include safeguarding land for future station development proposed at: i. Golden Mile Station: Brentford - Mainline to Southall Crossrail Link ii. Lionel Road Station: Old Oak Common - Hounslow Overground Link.*
- *Improving cycling infrastructure throughout the area, specifically along the A315 (Cycle Superhighway 9) and other 'quietway' routes*
- *Working in partnership with TfL and bus service providers to improve the frequency and efficiency of the bus network to and through the Corridor*
- *Improving connectivity to the London Underground network through supporting the development of better links to the Piccadilly line, for example through the 'Boston Manor Boardwalk'.*
- *Actively encouraging walking and cycling through the provision of an attractive public realm that helps to link the Great West Corridor and surrounding neighbourhoods such as Brentford Town Centre, Brentford East and the River Brent Quarter better for those travelling on foot or by bike."*

3.4.1 The Plan also includes commitments to support the expansion of bus services along and across the corridor. A key issue noted is the existing reliance on limited bus services into the area, with the exception of Brentford, Chiswick and Brentford East town centres. Increased bus services would help to reduce private vehicle traffic and increase the Public Transport Accessibility Levels (PTAL).

Great West Corridor Masterplan and Capacity Study (March 2019)

3.4.2 The Great West Corridor Masterplan and Capacity Study (March 2019) sets out a vision and spatial framework for the Great West Corridor. Chapter 7 of the document considers 'transport and movement'.

3.4.3 The Masterplan has been produced with reference to the TfL Healthy Streets Approach and with reference to the healthy streets indicators.

3.4.4 To support the Masterplan two rail improvement projects have been identified which include:

- Golden Mile Rail Link – A link between the Crossrail station at Southall and a new station on the Great West Road.
- West London Orbital – A new overground service creating a route linking Crossrail and HS2. The route would serve Syon Lane and Brentford Station.

3.4.5 The Masterplan proposes significant improvements to bus services along the Great West Corridor.

3.4.6 Cycle improvements are also included within the Masterplan. The Masterplan proposes cycle improvements along the A4, which could include:

- Improved surfacing;
- Improved crossing facilities and cycle priority; and

- The use of planting or barriers to mitigate air/noise pollution.

3.4.7 The Masterplan sets out the need for all new streets and public realm to consider cycle routes and for secure cycle parking to be provided within areas of public realm.

3.4.8 To create places that are considered walkable, the Masterplan proposes to use the Healthy Streets approach. To improve walking connections along the Great West Corridor the following is proposed:

- Clean air routes parallel to the A4;
- New bridge links across the railway and River Brent;
- New walking route across the West Cross Quarter, linking the Golden Mile Station to Site A;
- New walking route from Boston Manor Station to the Sky campus;
- Better integration and enhancement of the Grand Union Canal Walk;
- New connection from the Grand Union Canal Walk with Boston Manor Station;
- Internal connections within the Brentford Stadium Quarter;
- Improved access into Gunnersbury Park from the Brentford Stadium Quarter.

3.5 Summary

3.5.1 A range of local, regional and national policy applies to the proposed development of the site. The design of the scheme has been informed by these policies, especially the Healthy Streets approach and associated indicators. This TA reflects the NPPF, setting out the opportunities available to promote sustainable travel, provide safe access for all, and establishing there are no severe residual impacts on the road network.

4 Site and Surroundings

4.1 Preface

4.1.1 The site is a rectangular plot of land located on the corner of Syon Lane and the Great West Road (A4), at Gillette Corner. It has an area of approximately 1.4 ha. The site is developed with a large single level Homebase store (4,180sqm), and a surface level car park which occupies the northern and western sides of the site. There is also an undercroft car park along the southern flank of the site. A total of circa 295 car parking spaces are currently provided at the site.

4.1.2 The site is bounded by the A4 Great West Road to the north and Syon Lane to the south-west. A car showroom is situated immediately to the east of the site, while a service road, Syon Gate Way, extends along the south-eastern boundary.

4.1.3 The surrounding area is comprised of a mix of uses, including commercial and residential development. There are semi-detached houses on the western side of Syon Lane, opposite the site. Along the Great West Road, there is a variety of commercial and industrial uses, as well as some residential properties, and further along Syon Lane the uses are predominantly residential.

4.1.4 Syon Lane Railway Station is situated approximately 100m to the south of the site, along Syon Lane. The station provides National Rail services that operate to London Waterloo, via locations including Brentford, Chiswick, Putney, Clapham Junction and Vauxhall. Destinations and journey times are detailed within **Section 6.5.** A traffic signal controlled crossing is provided on Syon Lane, to provide access to the station (**Insert 4.1**).

Insert 4.1: Syon Lane, Controlled Pedestrian Crossing at Syon Lane Station

4.1.5 Osterley Station provides access to the London Underground Piccadilly line service and is located within a 2km walk of the site.

4.1.6 The existing pedestrian network in the vicinity of the site predominantly caters for trips on foot across the northern and western frontages of the site, along Syon Lane and Great West Road footways respectively. At present, there is not the ability to move around the whole perimeter of the site (only two sides of the site, the A4 Great West Road and Syon Lane, are provided with publicly accessible footways).

4.1.7 Street lighting is provided throughout the surrounding area. Pedestrian connectivity to the southern frontage of the site is through a private access road (Syon Gate Way) whilst the eastern frontage is bound directly by the adjacent car showroom access road.

4.1.8 The public realm is generally in poor condition in the vicinity of Gillette Corner / at the northern boundary / north west corner of the site. In the context of Healthy Streets, the public realm currently detracts from all ten indicators:

- People choose to walk, cycle and use public transport;
- Pedestrians from all walks of life;
- Easy to cross;
- People feel safe;
- Things to see and do;
- Places to stop and rest;
- People feel relaxed;
- Not too noisy;
- Clean air; and
- Shade and shelter.

4.1.9 The development proposals will make significant improvements to the public realm in accordance with Healthy Streets principles. The specific issues include:

- the severing effect and dominance of the A4;
- the worn condition of footway / uneven surfaces;
- the wide uncontrolled pedestrian crossing of the existing Homebase site access;
- lack of tactile paving at the existing Homebase site access;
- off-road cycle lane ending / entering the busy A4 at an inappropriate / unsafe location; and
- the unsafe appearance / condition of the existing subway.

4.1.10 In summary, the local highway in this location does not accord with Healthy Streets objectives and is generally not provided to recognised design standards. This will be significantly improved as a result of the proposed development.

4.2 Local Highway Context

Syon Lane

4.2.1 Syon Lane is a local distributor road, which in the vicinity of the site has a north-west/ south-east alignment. Syon Lane is a single carriageway two-way road which extends between Osterley Park in the north and the A315 London Road at its southern extent. In the vicinity of the site, a 30 miles per hour (m.p.h.) speed restriction operates on Syon Lane.

4.2.2 The site is afforded a single point of vehicular access from Syon Lane.

4.2.3 In the vicinity of the site access, Syon Lane carriageway widens to around 13m in width. A turning lane for traffic turning right into the site from Syon Lane is provided, and two ahead traffic lanes are provided for northbound vehicles. North and southbound bus stops are provided in the vicinity of the access, and Syon Lane is sufficiently wide to allow a car to navigate around a waiting bus.

Insert 4.2: Syon Lane – Looking North towards Homebase Site Access

4.2.4 The Homebase site access is located between Syon Lane Station and the A4 Great West Road, which are separated by around 220m. In this section of Syon Lane carriageway, two traffic signal controlled pedestrian crossings are provided. A direct crossing is provided directly to the north of Syon Lane Station, approximately 100m from the site (refer to **Inserts 4.1** and **4.2**), and a staggered signalised pedestrian crossing is provided approximately 30m north of the Homebase site access junction (**Insert 4.3**).

Insert 4.3: Looking South towards Staggered Crossing and Homebase Site Access

4.2.5 The Homebase site access road provides a carriageway width of approximately 14m at its junction with Syon Lane and includes a central reservation segregating inbound and outbound traffic. Dropped kerbs and tactile paving are provided at the existing site access junction.

4.2.6 On the western side of Syon Lane, opposite the Homebase site, there is resident permit holder parking, operating from Monday – Friday, 9am-6pm. This is part of the Syon Lane South (SLS) Controlled Parking Zone (CPZ). There are 11 spaces, including a Blue Badge holder space, along the western edge of Syon Lane, located between Syon Gate Way and the signalised crossing adjacent to the existing Homebase access.

Great West Road (A4)

4.2.7 The A4 Great West Road is a two-way dual carriageway road, which forms part of the Transport for London Road Network (TLRN). The A4 Great West Road connects with the M4 at Brentford. and routes towards Central London to the east, and with Heathrow Airport to the west.

4.2.8 There are wide, level footways provided on both sides of the Great West Road. Both flanks of the A4 are provided with street lighting.

4.2.9 A segregated cycleway connects Osterley station to the junction of Syon Lane/Great West Road (Gillette Corner). A segregated cycleway is also provided on the southern side of the Great West Road, and these cycleways extend to the eastern side of the junction. While the cycleways are located to the east and west of Gillette Corner, the cycleways do not extend through Gillette Corner, and instead, they terminate and recommence either side of the junction.

4.2.10 Pedestrian crossing facilities are provided across the Great West Road at Gillette Corner. On the eastern side of the junction, an underpass is provided to allow pedestrians safe crossing. The underpass is illustrated in **Insert 4.4.**

Insert 4.4: A4 Great West Road, Pedestrian Underpass

4.2.11 A staggered toucan crossing is provided to the north-west of the site which facilitates a north-south crossing of the A4 for pedestrians and cyclists. The crossing is illustrated in **Insert 4.5**.

Insert 4.5: A4 Great West Road, Toucan Crossing

4.2.12 At the north-east corner of the site, at the junction of the Great West Road (A4) and Harlequin Avenue, a traffic signal junction is provided that incorporates a staggered traffic signal controlled Toucan crossing across the A4. This junction also incorporates a signalised pedestrian crossing for east-west movements at the northern side of the junction, across Harlequin Avenue.

4.2.13 Approximately 400m to the east of the site, a pedestrian footbridge with stepped access only is provided across the A4 Great West Road, providing access to Transport Avenue on the northern side of the carriageway.

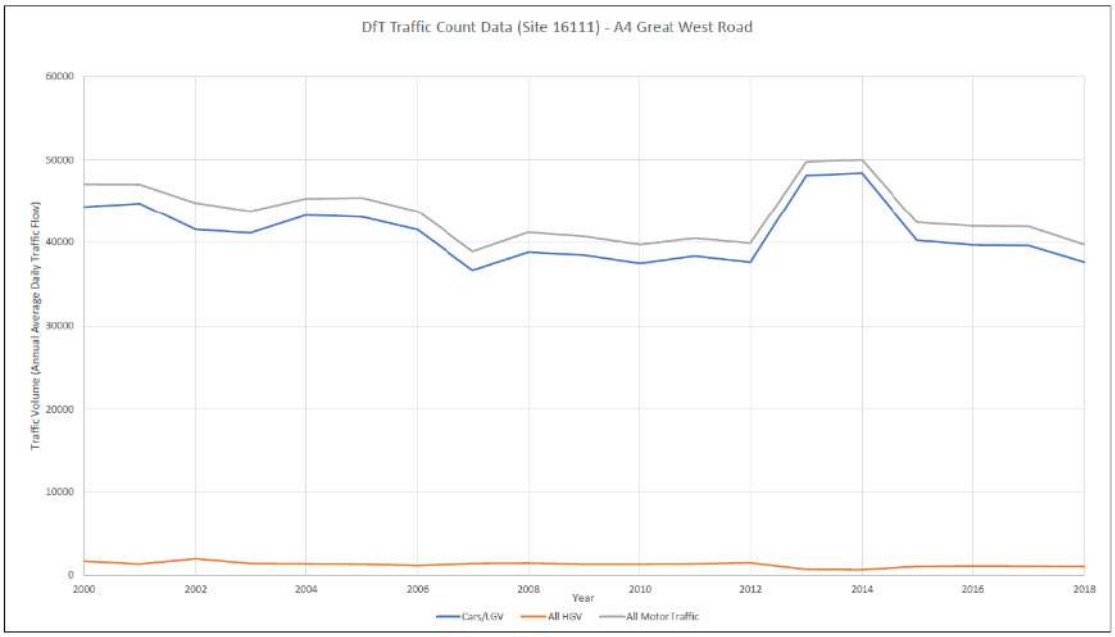
4.2.14 A 40m.p.h. speed limit operates at the A4 in the vicinity of the site.

4.2.15 In seeking to identify trends in local traffic growth, reference can be made to traffic count data published by the Department for Transport (DfT). The DfT publishes annual traffic counts for the A4 Great West Road and these data sets have been reviewed to establish changes in travel

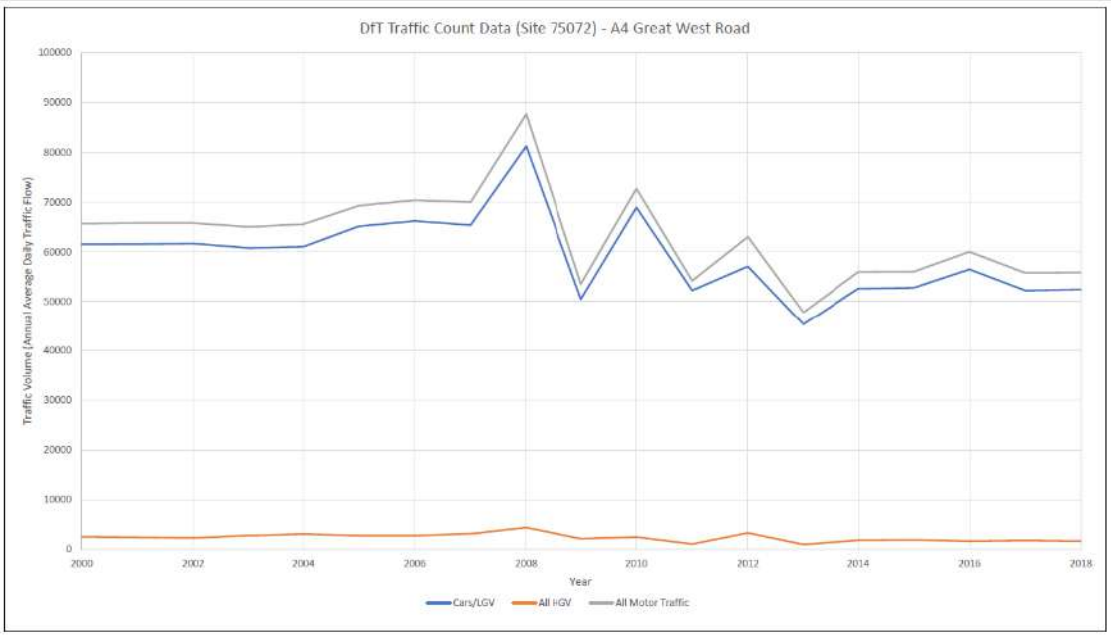
demand on this highway from 2000 to 2018, the most recent data set published.

4.2.16 **Inserts 4.6 and 4.7**, illustrate the trend in traffic volumes on the A4 Great West Road at DfT traffic count sites 16111 and 75072. The data is presented in the form of Annual Average Daily Traffic (AADT) flow, and the data sets indicate that overall traffic flows on the A4 have declined between the year 2000 and 2018. A summary of total traffic volumes, disaggregated in respect of all vehicles and heavy goods vehicles, is presented in **Appendix A**.

Insert 4.6: DfT Count Data, A4 Great West Road (Count Site 16111 – West of Syon Lane)



Insert 4.7: DfT Count Data, A4 Great West Road (Count Site 16111 – East of Syon Lane)



Syon Gate Way

4.2.17 Through the Mayor's Air Quality Fund, the Mayor has supported the Cleaner Air Better Business (CABB) project to develop an interactive map of London that provides a low pollution walking option for any given journey specified. CABB undertook monitoring of clean air routes which showed between 30-60 per cent lower air pollutant concentrations on the clean air walking routes compared to main street routes.

4.2.18 Syon Gate Way has been identified as a "clean air route" in connecting journeys between Syon Lane and the A4.

4.2.19 Syon Gate Way is a privately managed access road, with a typical carriageway width of around 5.5m, which routes along the southern perimeter of the site. This road provides access to parking facilities associated with commercial properties that are situated to the east of the site. There is currently no ability for pedestrians/cyclists to use the route without sharing space with commercial vehicular traffic (i.e. generally perceived as unsafe along Syon Gate Way with the associated commercial vehicular activity that takes place).

4.2.20 Syon Gate Way forms a junction with Syon Lane at a point approximately 90m south of the existing Homebase site access junction. The intersection of Syon Gate Way and Syon Lane forms a simple priority junction and is illustrated in **Insert 4.1**.

Northumberland Avenue

4.2.21 Northumberland Avenue is a two-way single carriageway road which forms a junction with Syon Lane on its western side, between Gillette Corner and the existing Homebase site access. Northumberland Avenue operates with a 20m.p.h. zone and incorporates on-street car parking, which are subject to CPZ restrictions. Keep Clear road markings are provided on Syon Lane at its junction with Northumberland Avenue, as shown in **Insert 4.8**.

4.2.22 There are wide, level footways provided on Northumberland Avenue. Both sides of the carriageway are provided with street lighting.

Insert 4.8: Northumberland Avenue junction with Syon Lane

London Road (A315)

4.2.23 The A315 London Road is an arterial road that routes with an approximate east-west alignment approximately 500m south of the site. To the east London Road connects to the A205 at Kew Bridge, and provides a connection with the M4 and A406 North Circular Road at Chiswick Roundabout. To the east, the A315 extends approximately 14km to Staines-upon-Thames and connects to the A30 and A308.

Car Dealership Access Road

4.2.24 A Skoda car dealership operates immediately to the east of the site, which is served by a two-way access from the A4, Great West Road. The access road flanks the eastern perimeter of the Homebase site. The access road forms a priority junction with the westbound carriageway of the A4 and operates as a left-in and left-out junction.

Insert 4.9: Car Dealership Access Road – Left-in/ Left-out Junction with A4

4.3 On-street Parking (Waiting) Restrictions

4.3.1 The site is surrounded by various categories of road, including strategic highway (A4), distributor road (Syon Lane) and residential access roads (Northumberland Avenue). Parking (waiting) restrictions are in place on some roads locally and these either prevent parking form taking place in areas that are not appropriate for this purpose, or they control who is permitted to park on-street.

4.3.2 The A4 Great West Corridor (GWC) forms part of TLRN and is therefore a ‘red route’ which is subject to ‘no stopping at any time’.

4.3.3 Syon Lane (B454), from the junction with A4 up to Northumberland Avenue, forms part of the A4 ‘red route’ and is hence subject to the same parking (waiting) restrictions as A4.

4.3.4 To the south-east of Northumberland Avenue, parking on Syon Lane is controlled by a mixture of double yellow line waiting restrictions, zig-zag markings associated with the pedestrian crossings, bus stops or defined parking bays in the residents parking zone SLS (on the westerns side of the carriageway only).

4.3.5 To the south, from the railway bridge, Syon Lane is not provided with on-street parking (waiting restrictions), however the carriageway width and traffic volume make it impractical to park on the carriageway during the day. No on-street car parking has been observed by RHDHV on this section of Syon Lane in the course of the preparation of this TA.

4.3.6 The Northumberland Estate road network; of which Northumberland Avenue forms its main distributing road, located to the south of the site from Syon Lane, is predominantly subject to single yellow line road markings that restrict waiting between the hours of 9:00am to 6:00pm Monday to Friday. Double yellow lines are provided to the entry of Northumberland Avenue and all its branches prohibiting waiting at any time.

4.3.7 Syon Gate Way, to the east of the site, is a private road and incorporates double yellow line-markings at its intersection with Syon Lane.

4.3.8 The site is not located within an existing Controlled Parking Zone (CPZ) but is situated within the immediate adjacencies of an existing CPZ which, combined with the red route restrictions operational at the A4 and Syon Lane, significantly limit opportunities for on-street (kerbside) parking in the vicinity of the site.

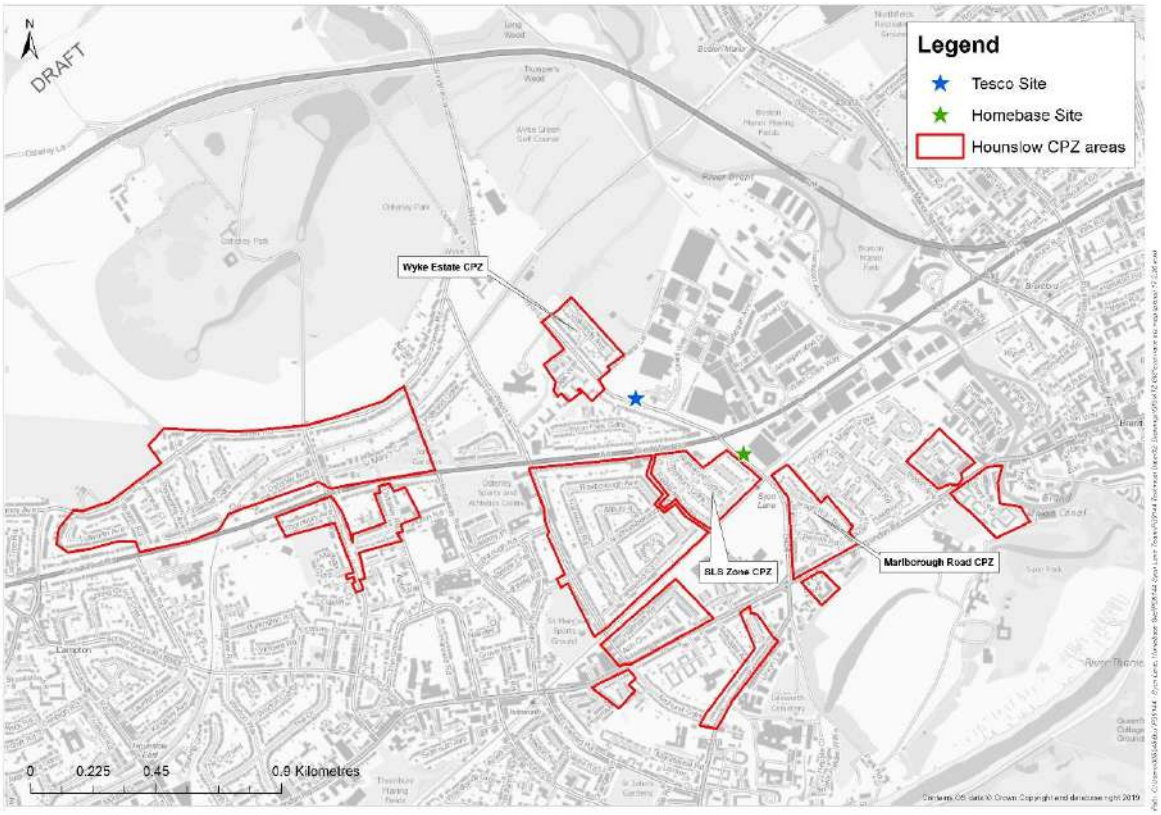
4.3.9 A CPZ (Zone SLS) is operated by Hounslow Council between 9:00am-6:00pm Monday to Friday on streets to the south of Syon Lane, within Northumberland Estate ‘area’. Parking within this zone consists of resident permit holder bays. On the western edge of Syon Lane, opposite the site, there is resident permit holder parking that forms part of the SLS CPZ.

4.3.10 A CPZ (Marlborough Road Zone) is enforced to the south of the site, in the area surround the southern section of Syon Lane. The hours of operation are Monday – Friday 9.30am-5.30pm.

4.3.11 A CPZ is also enforced at the Wyke Estate, between Tesco Osterley and Nishkam School. The hours of operation are Monday – Friday 9.30am-5:30pm.

4.3.12 There are also CPZs enforced in the area surrounding Osterley station. A map of relevant CPZ restrictions is shown in **Insert 4.10**.

Insert 4.10: Local CPZ Map



4.3.13 There is no on-street 'pay and display' parking scheme in operation in the vicinity of the site, and no public car parks are provided locally, other than those serving the Homebase and Tesco development sites.

4.3.14 Free parking for customers on-site at Homebase is restricted to a maximum of two hours, and free parking within the Tesco development is restricted to a maximum of three hours.

4.3.15 Overall, the provision and use of car parking at the site and in the wider area is highly controlled. As a result there is little opportunity for free or long-stay public car parking to take place in the vicinity of the site.

4.4 Loading and Weight Restrictions

4.4.1 Kerbside road markings (such as Traffic Signs Regulations and General Directions 2016 Diagram 1020.1 or 1019) that restrict loading are not provided on the streets surrounding the site.

4.4.2 An existing restriction on vehicles that weigh in excess of 5 tonnes is in operation on Syon Lane and Northumberland Avenue, between the hours of 6:30pm and 8am.

4.5 Existing Site Access

4.5.1 The site is provided with a dedicated site access from Syon Lane. The site access currently operates with priority control (a give-way junction) and two exit lanes are provided from Homebase, accommodating left and right turning movements respectively.

4.5.2 Pedestrian access to the Homebase site is also primarily taken from the site vehicular access at Syon Lane. Additionally, a pedestrian access point is available at the northern perimeter of the site which accommodates access from the footway on the Great West Road.

4.5.3 Service vehicles currently use the site's only vehicular access, sharing this access with customer traffic. Service vehicles are provided with a dedicated on-site service yard.

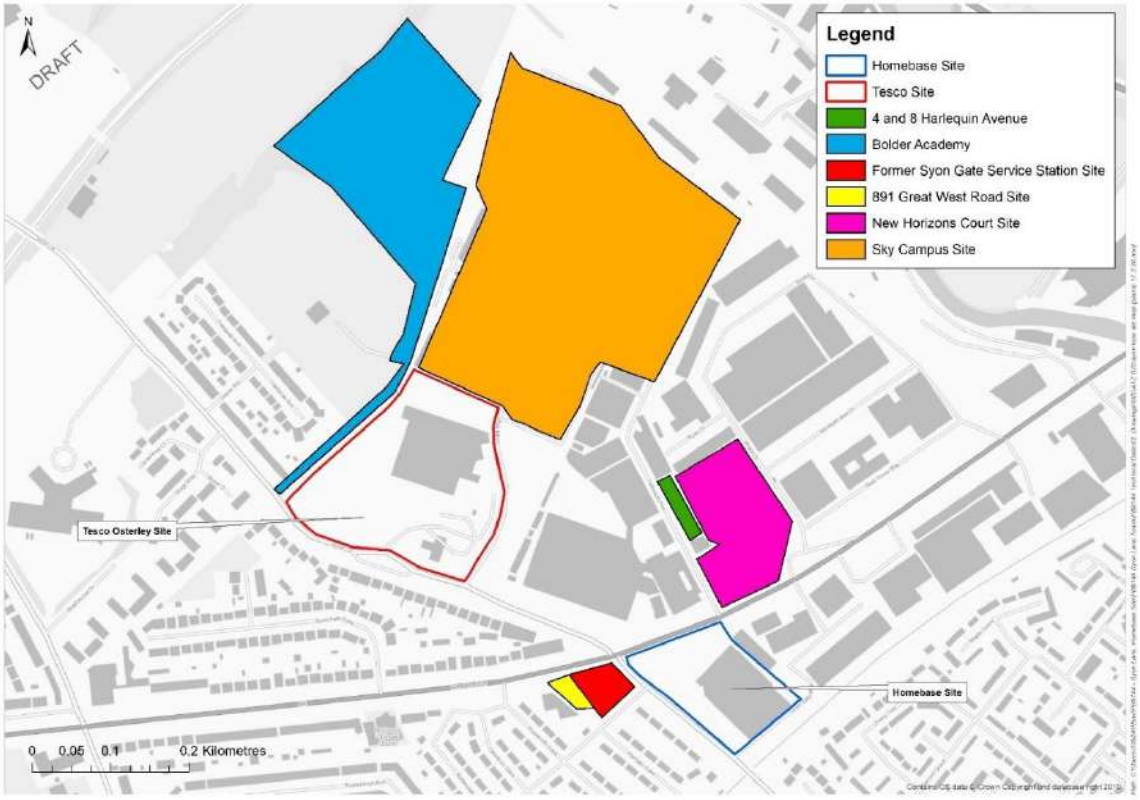
4.6 Local Emerging Developments

4.6.1 In consideration of the development project, a review has been undertaken of other emerging or committed development sites in the local area. These are developments that have received planning consent but are not constructed or those that are constructed but not fully occupied. LBH has advised on the committed development sites to be included in this assessment, and site details are provided in **Appendix B**. The committed development sites considered in this assessment are listed below. Reference is made here to the land use classes that related to the planning consent, rather than the land use classes that have been newly introduced.

- Former Syon Gate Service Station, Land at South of Gillette Corner, Great West Road, Isleworth TW7 5NP (Ref: 00505/AF/P28) – Erection of up to six storey building to provide Class B1 (Office) and Class B8 (self-storage) uses, with associated car parking and landscaping.
- New Horizons Court, Ryan Drive, Brentford, TW8 9EP (Ref: 02912/A/P1) – alterations and extensions to existing buildings – removal of café kiosk ad security hut; change of use of D8/9 to ancillary café and/or gym (classes A3/D2).
- 891 Great West Road, Isleworth London, TW7 5PD (Ref: 00505/891/P4) – Erection of four-storey building to provide 15 flats and associated landscaping.
- 4 and 8 Harlequin Avenue, Brentford, TW8 9EW (Ref: 00558/4-8/P1) – Construction of a six-storey building for Class B1b/B1c office use with car parking.
- Tesco Superstore, Syon Lane, Isleworth, TW7 5NZ (Ref: 01106/B/SCOPE1)
- Sky, Sites 6 & 7, Grant Way, Isleworth, TW7 5QD (Ref: 00558/A/P69) - Non material amendment to allow alterations to Sky Labs building by accommodating photovoltaic panels, increase in height of the gantry, removal of the basement, removal of the link between Sky Labs and BiBB, increase number of trees to be planted.
- Bolder Academy, 1 MacFarlane Lane, Isleworth, TW7 5PN (Ref: 01106/W/P9) Demolition of club house and associated car park and MUGA, construction of a new part 2 - part 4 storey secondary school.
- 1 Commerce Road, Brentford, London, TW8 8LE (Ref: 00297/H/P13) - Redevelopment to provide a five to seven-storey building comprising 76 flats and 138 square metres of square metres flexible industrial, research and development or office floorspace in use classes B1a, B1b, or B1c, with associated parking and landscaping.

4.6.2 For each committed development site, the associated planning application documentation has been reviewed and the associated traffic data extracted, in order that the associated traffic movements can be considered as part of the assessment of future traffic conditions on the highway. **Insert 4.11** details the locations of the identified committed development sites.

Insert 4.11: Committed Development Sites



4.6.3 The planning documentation for all emerging development projects detailed above shows a commitment to walking, cycling and public transport modes, in accordance with Healthy Streets principles. The provision of an attractive public realm is also a general theme that can provide improved connectivity for pedestrians and cyclists and generally strengthen the active travel network in the locality.

4.6.3.1 The Great West Corridor Opportunity Area

4.6.4 The 'Great West Corridor Opportunity Area is identified in the PLP as providing the potential for around 7,500 new homes and 14,000 new jobs. Both the site and Tesco Osterley are located within this Opportunity Area

4.6.5 The PLP states that "*The Mayor will provide the **support and leadership** to ensure Opportunity Areas deliver their growth potential for Londoners. He will promote and champion the areas as key locations for investment, and will intervene where required so that an ambitious, imaginative and inclusive approach is taken to accelerate and realise their growth and development.*"

4.6.6 It is therefore recognised that additional development sites, in addition to those detailed above, are likely to come forward in the area, in due course. All new development that comes forward as part of the Opportunity Area would be subject to individual planning application submission, which would include an assessment of development transport impacts.

4.6.7 To support the development of the Opportunity Area, transport infrastructure improvements are being considered by LBH and TfL, and these are summarised in **Section 8** of this report.

5 Transport Planning for People

5.1 Preface

5.1.1 The core principles of the 'Healthy Streets' Approach are putting people first, prioritising walking, cycling and public transport over private vehicles. This approach seeks to take account of the various classifications of people; their travel characteristics and their propensity to change their mode of travel over time.

5.1.2 Within the context of the above, in this Section reliance is made on the Transport Classification of Londoners (TCoL) multi-modal customer segmentation tool developed by TfL. The TCoL has been designed to categorise Londoners on the basis of the travel choices they make, and the motivations for making those decisions.

5.1.3 In total there are nine customer segments described in the TCoL report. The customers segments that are considered to be likely users of the development are listed below:

- **Suburban moderation –** Families with children, High car, some bus. Average level of change.
- **Settled suburbia –** Lower income families, high car. Below average level of change.
- **Family challenge –** Low income families, high bus, average others. Higher level of change.
- **Detached Retirement –** 'Empty Nest'/retired, very high car. Very low levels of change
- **Students and Graduates –** Students and young grads. Low car, high bus/walk. Average level of change.

5.1.4 The TfL classification tool assessment report suggests that the Borough has a mixed profile in terms of user types and transport usage. Car usage is generally high with an 'average' propensity towards change (i.e. mode shift).

5.1.5 Notwithstanding the above, in view of the significant emerging developments in the local area, both in terms of employment and transport options, there is potential for a change in attitudes towards sustainable transport options. This is particularly relevant for new development schemes, where car parking provision will be low and an emphasis will be placed on the ability for residents to live car free lifestyles.

5.2 Active Travel Zone

5.2.1 The purpose of an Active Travel Zone (ATZ) assessment is to establish what existing transport connections and local amenities would be accessible to future residents and employees at the site, and to establish whether these facilities would be sufficient for residents to live a 'car free' lifestyle.

5.2.2 The ATZ for the site is presented as a series of illustrated maps demonstrating how people of all abilities can make every day journeys from the site using the Active Travel network. The **ATZ Assessment** is contained within **Appendix C** of this document.

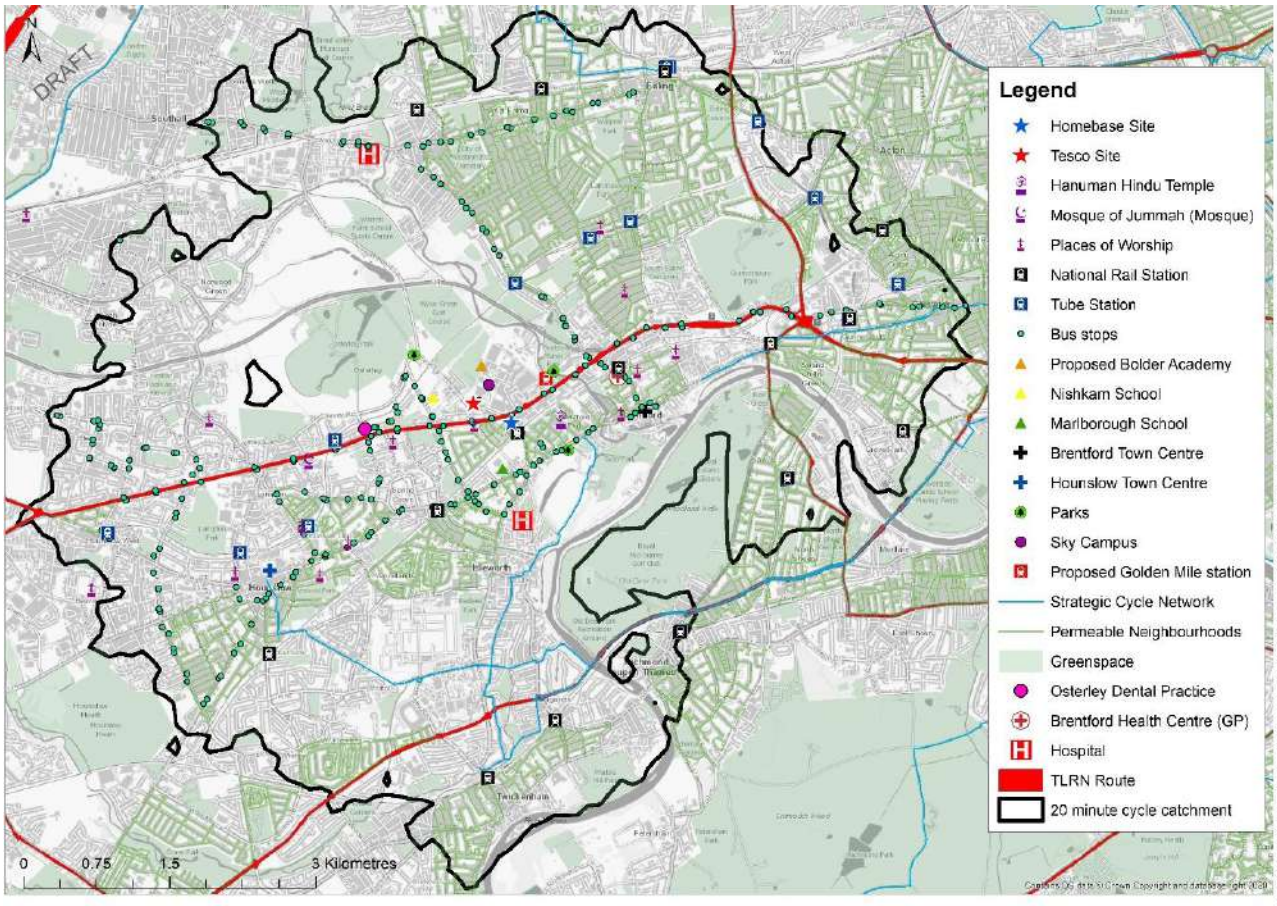
5.2.3 The ATZ assessment considers an area covered by a 20-minute cycle from the site, and considers pedestrian isochrones. The assessment considers access to local public transport connections, including bus stops and local stations.

5.2.4 **ATZ Map 1** illustrates a 20-minute cycle isochrone from the site, with the following key points of interest identified:

- London Underground stations;
- National Rail;
- Bus stops;
- Local Schools;
- Proposed Bolder Academy;
- Proposed Golden Mile Station;
- Healthcare facilities
- Places of Worship;
- Strategic Cycle Network;
- Transport for London Road Network (TLRN);
- London 2015 town centres; and
- Greenspace.

5.2.5 The **ATZ Map 1** underlines that a variety of services, amenities and local transports links are accessible within a 20-minute cycle catchment of the site. **ATZ Map 1** can be seen in **Insert 5.1,** and is provided at a higher resolution at **Appendix D**.

Insert 5.1: ATZ Map 1

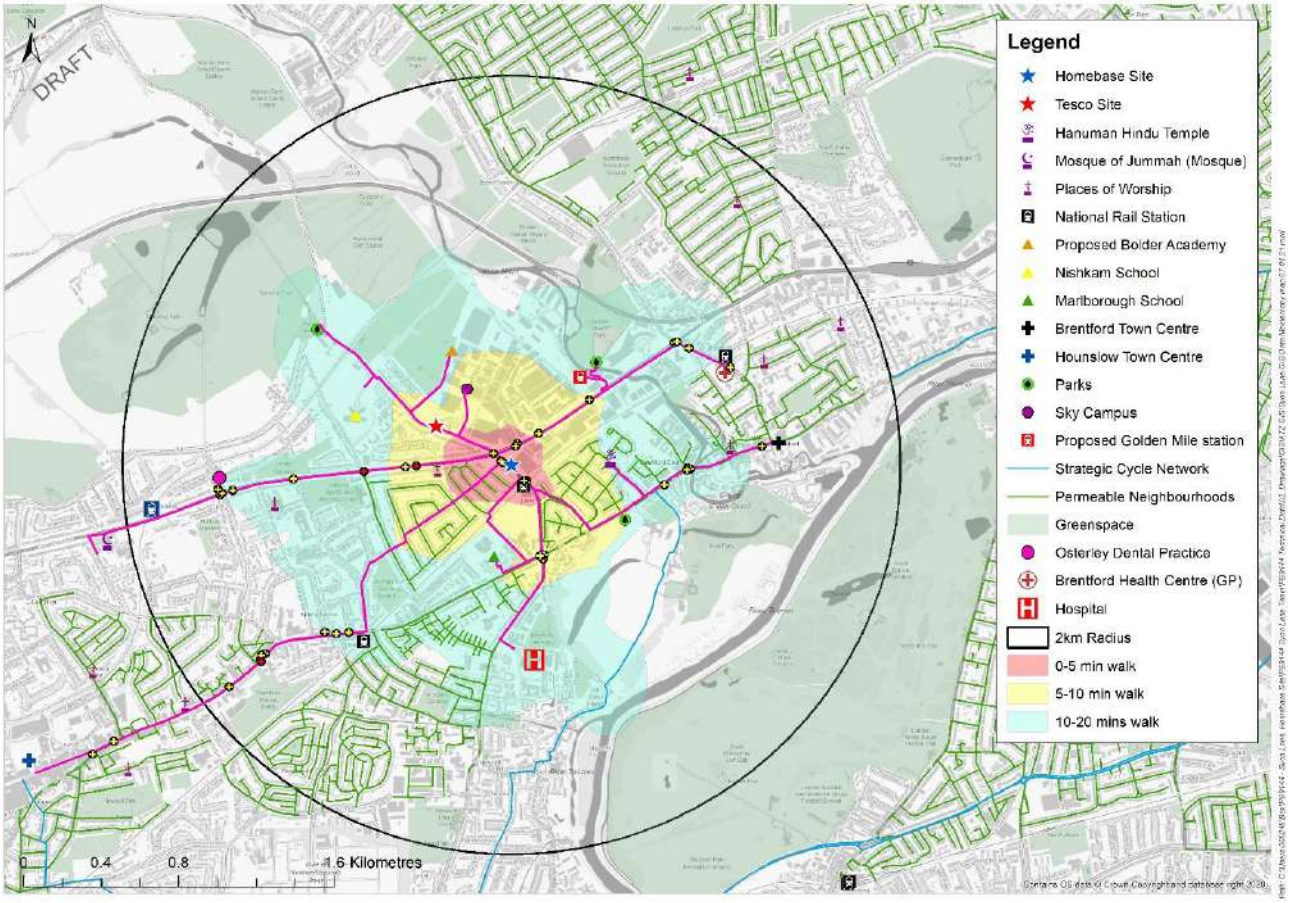


5.2.6 **ATZ Map 2** is a more localised map showing the closest and most convenient stations, bus stops, facilities, amenities and green spaces. Also shown on this plan are:

- Personal injury collision data derived from TfL;
- Routes to key destinations; and
- Local bus stops

5.2.7 **ATZ Map 2** can be found in **Insert 5.2** and **Appendix D.**

Insert 5.2: ATZ Map 2



5.2.8 A total of 16 Key Destination Routes have been identified within the ATZ study area. The key destinations and the routes to the destinations have been identified as:

1. Syon Lane Station and Bus Stops A/B – Syon Lane Station provides access to National Rail services direct to London Waterloo, Richmond and Weybridge. The station is approximately 100m south of the site;
2. Bus Stops X/W on London Road/Syon Park;
3. Brentford Town Centre/proposed C9 cycle route – Brentford Town Centre provides a range of services and amenties easily accessble to the site;
4. 5. Marlborough School;

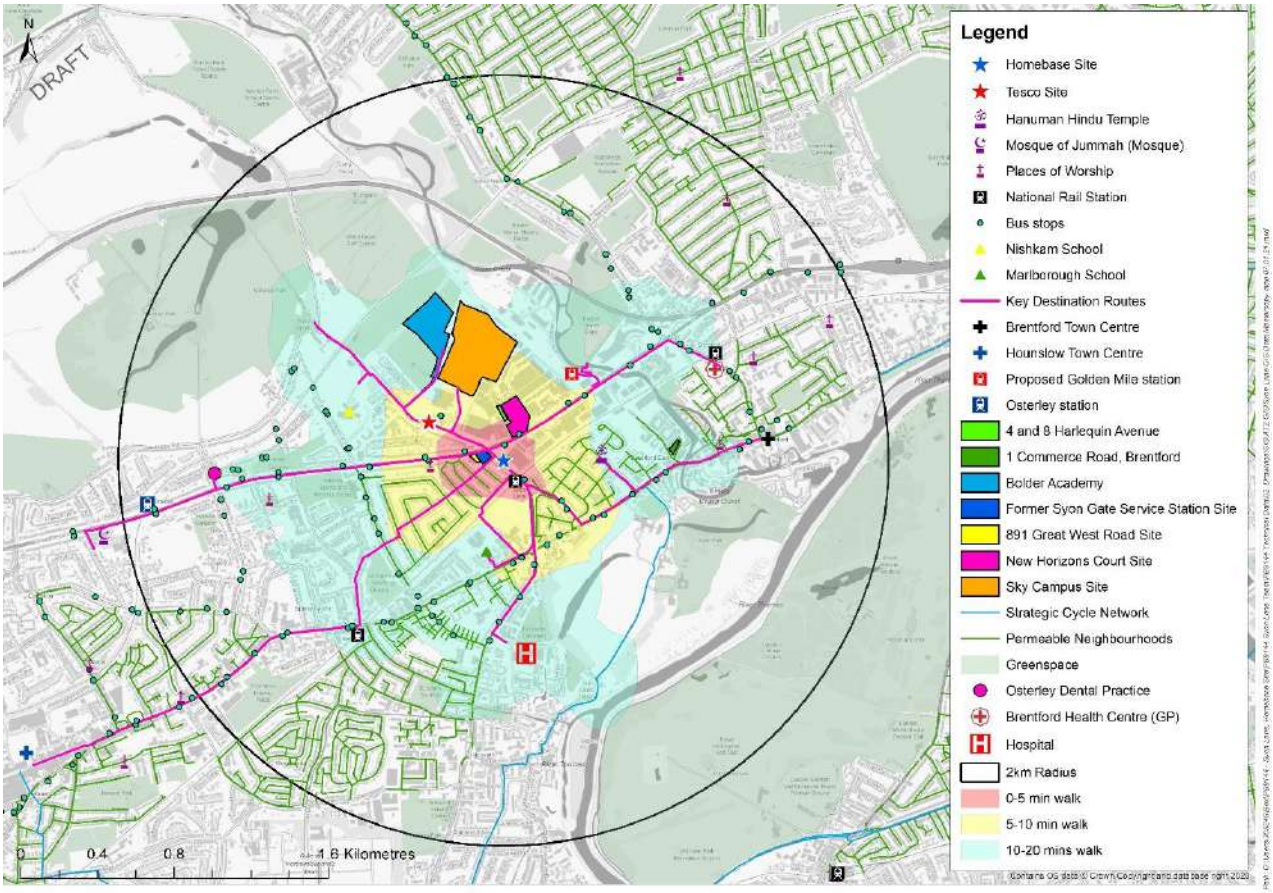
- Proposed Golden Mile Station - A link between the Crossrail station at Southall and a new station on the Great West Road and Boston Manor Park;
- Osterley Station/ Osterley Dental Practice/ St. Fransis of Assisi Church;
- Sky Campus – a key employment centre in the local area;

- Bolder Academy;
- Nishkam School;
- Osterley Park;
- West Middlesex Hospital;
- Mosque of Jummah Prayer;
- Hanuman Hindu Temple;
- Brentford Health GP Surgery; and
- Hounslow Town Centre.

5.2.9 **ATZ Map 3** depicts the area surrounding the site, the key walking routes, 5, 10 and 15 minute walking catchments, committed developments in the local area and TfL permeable neighbourhoods in the vicinity of the site.

5.2.10 **ATZ Map 3** can be seen in **Insert 5.3** and **Appendix D**.

Insert 5.3: ATZ Map 3



5.2.11 **ATZ Maps 2** and **3** establish that public transport connections are accessible on foot from the site. There are bus stops directly adjacent to the site on Great West Road and Syon Lane, within a 50m walk distance. Bus stops on London Road, adjacent to Syon Park, are also accessible to the site, approximately 600m to the south.

5.2.12 Syon Lane Station is located approximately 100m to the south of the site. Furthermore, Osterley

Underground Station provides access to the Piccadilly Line service and is within 2km of the site. The H91 service, to the west of the site along Great West Road, from Gillette Corner, provides a direct bus route to the station.

5.2.13 Within a 2km radius of the site there are a number of services and amenities. As noted throughout, Tesco Osterley is within a 500m distance of the site. There are shops and cafes available on Gillette Corner, on London Road, as well as towards Brentford High Street.

5.2.14 In respect of access to healthcare facilities, West Middlesex University Hospital sits within 1km to the south of the site.

5.2.15 Further to the above, there are a number of places of worship situated within a 1km distance from the site, including the St. Francis of Assisi Church, Mosque of Jummah Prayer and Hanuman Hindu Temple.

5.2.16 In summary, the maps demonstrate that the site is located within a walking distance of a number of local centres, public transport infrastructure, food, shopping, healthcare facilities and places of worship.

5.3 ATZ Neighbourhood Photography

5.3.1 A detailed site visit with neighbourhood photography, including 'point of view' (POV) photographs was undertaken in September 2019. The POV neighbourhood photography, taken at 150m intervals along the Key Destination Routes is provided within the ATZ Assessment report provided in **Appendix C**.

5.3.2 One of the key areas identified for improvement was the underpass at Gillette Corner, which provides a crossing of the A4 on the eastern side of the junction. This is observed to be a highly trafficked route.

5.3.3 The Key Destination Routes have been critiqued with references to TfL's ten Healthy Streets indicators and the full review is presented within the ATZ report in **Appendix C**.

Worst Journey Locations and Recommendations/Mitigation

5.3.1 The ATZ process requires assessors to identify the worst location on their journey. As part of the ATZ Assessment a number of 'worst journey locations' have been identified. The key 'worst journey' locations and the associated issues are summarised below. The full assessment is provided within **Appendix C**.

- **Key Destination Route 1 - A4/Syon Lane Underpass** – The underpass at Gillette Corner was observed to be an unpleasant journey location. As part of the proposed development, it is anticipated that the applicant will fund a surface level crossing on the A4 that would allow journeys to be undertaken to Syon Lane station at surface level.

- **Key Destination Route 2, Location 3** – The footway along the southern section of Syon Lane, south of the Homebase site is narrow and in disrepair. Levelling and resurfacing of the footway and cutting back of vegetation would improve safety and comfort for pedestrians.

- **The Key Destination Route 5, Location 4 – The footbridge between Quakers Lane**

and Rothbury Gardens. This location would be a route to Marlborough School and by controlling overgrowing vegetation and removing graffiti, this location would be more pleasant, allowing pedestrians to feel more relaxed.

- **Key Destination Route 3, Location 6 – A short section of cycle lane on London Road , which joins with the footway at a controlled pedestrian crossing**. This cycle infrastructure could lead to conflicted between cyclist and pedestrians. Cycle lane could be removed and re-provided on carriageway.

- **Key Destination Route 7, Location 11 – Osterley Station Underpass**. The underpass which provides a crossing of the A4 was poorly lit, litter and graffiti was present, which made it unpleasant for use. Improving the physical appearance of the underpass, including lighting, removal of litter and graffiti would allow pedestrians/cyclists to feel more relaxed along this route.

5.4 Highways Safety

5.4.1 The personal injury collision record for the local highway has been reviewed, with data obtained from TfL. The data covers a five-year period up to the 31st December 2018. An analysis of the Personal Injury Collision (PIC) data has been undertaken to ascertain If there are any highway safety issues on the local highway network in the vicinity in the site. The full data is contained within **Appendix E**.

5.4.2 For the purpose of this assessment, the study will focus on the ATZ Key Destination Routes. As a number of Key Destination Routes follow the same paths, these routes and their associated PICs have been evaluated together. A Key Destination Route along Quakers Lane (over the train line to Marlborough School has been omitted as the route is largely removed from the highway and also overlaps with Route 4.

Key Destination Routes 1, 2, 3 and 14

5.4.3 The following three Key Destination Routes are identified along with an anticipated desire to south and east of the site following Syon Lane south, and left onto London Road, towards Brentford.

- Key Destination 1: Syon Lane station and bus stops A/B;
- Key Destination 2, Syon Park, Bus stops X/W; and
- Key Destination 3, Brentford town centre/proposed C9 cycle route.
- Key Destination 14, Place of Worship (Hanuman Hindu Temple)

5.4.4 A total of 84 PICs were recorded on the route from the site to Brentford town centre. Of these PICs, 78 were recorded as slight severity incidents, while and 6 were identified as serious collisions. No fatal injuries were recorded on these routes. A summary of recorded collisions is presented in **Table 5.1**.

Table 5.1: Route 1,2,3 PIC Data

Cluster location	Accident severity			Total
	Slight	Serious	Fatal	
Syon Lane J/W Spur Road	11	3	0	14
Syon Lane J/W London Road	14	0	0	14
London Road J/W Beech Avenue	1	0	0	1
London Road J/W Field Lane/Brent Lea	13	1	0	14
London Road J/W Commerce Road	2	3	0	5
Brentford High Street (from The Ham to Alexandra Road)	35	1	0	36
Total	**77**	**6**	**0**	**83**

5.4.5 The recorded collisions can be summarised as followed:

- 16 PICs involved pedestrians (14/16 were slight, two were serious)
- 19 PICs involved cyclists (17/19 were slight, two were serious)
- 18/84 occurred when it was dark, 66/84 occurred during daylight

5.4.6 Of the eight serious PICs, two were recorded as incidents involving cyclists and two involved pedestrians. The description of these collisions is summarised below.

- A collision involving a pedestrian was recorded in April 2014. The location was at Syon Lane junction with (J/W) Spur Road. The incident occurred in daylight, the weather was fine and the road was dry. All three recorded serious PICs at this location resulted from this incident. The incident was described as a ***vehicle 1 stopping for a pedestrian at the pedestrian crossing, being hit from behind by vehicle 2, pushing vehicle 1 into the pedestrian.*** The cause of vehicle 2 colliding with vehicle 1 was noted as a combination of carelessness, recklessness, failure to judge speed and distraction outside the vehicle.
- A collision involving a pedestrian was recorded in February 2018. The location was at Commerce Road's J/W London Road. The conditions were daylight, the weather was fine and the road was dry. The collision was described as ***pedestrian hit at pelican crossing by a driver who failed to look properly***.
- A collision involving a cyclist was recorded in June 2018. The location was London Road J/W Brent Lea. The conditions were daylight, the weather was fine and the road dry. The only information regarding this incident was that the ***cyclist skidded***.
- A collision involving a cyclist was recorded in June 2018. The location was High Street J/W Alexandra Road. The conditions were recorded as daylight, the weather was fine and the road was dry. No description of the event has been logged.

5.4.7 Regarding highways infrastructure and safety for pedestrians and cyclists, there does not appear to be any common causality for collisions based on the existing highway layout.

5.4.8 Furthermore, no specific locations have been identified at these routes that demonstrate higher rates of PICs. It is noted that 11 of the 35 slight PICs recorded on Brentford High Street that to form a cluster were involved in a single incident involving a bus.

5.4.9 Improvements to crossing facilities on Syon Lane, adjacent to the station, appears to have also aided pedestrian safety. Of the 14 recorded PICs, 8 were recorded at this location, including the three serious incidents described at paragraph **5.4.6** occurred at the zebra crossing adjacent to Syon Lane station. A signal-controlled pelican crossing replaced the zebra crossing in 2016 and since then only a single slight PIC has been recorded at this location.

5.4.10 Due to the nature of the incidents described above and overall analysis of the PIC data, it can be concluded that there are no causal factors that the proposed development would exacerbate.

Key Destination Route 4

5.4.11 Key Destination Route 4, to Marlborough School, follows a desire line from Syon Lane, south along Spur Road, onto London Road, then turning right into Darcy Road towards the School. A total of 47 PICs were recorded on the route.

Of the 47 PICs, 41 were logged as being of slight severity and 4 were recorded as serious collisions. No fatal injuries were recorded within the study area. A summary of the recorded collisions is presented in **Table 5.2**.

Table 5.2: Route 4 PIC data

Cluster Location	Accident Severity			Total
	Slight	Serious	Fatal	
Syon Lane (from site) and Spur Road	15	3	0	18
Spur Road J/W London Road/Twickenham Road	17	3	0	20
London Road J/W Darcy/Turnpike/Teeside Road	9	0	0	9
Total	**41**	**6**	**0**	**47**

5.4.12 The recorded collisions can be summarised as follows:

- 10 PICs involved pedestrians (eight were slight, two were serious).
- 9 PICs involved cyclists (eight were slight, one was serious).
- Of the 47 PICs, 11 occurred when it was dark and 36 occurred during the hours of daylight.

5.4.13 Of the six recorded serious PICs, two involved pedestrians, one involved a cyclist. A description of these collisions was recorded:

- A collision involving a pedestrian was recorded in April 2014. The location was at Syon Lane junction with (J/W) Spur Road. The incident occurred in daylight, the weather was fine and the road was dry. All three recorded serious PICs at this location resulted from this incident. The incident was described as a ***vehicle 1 stopping for a pedestrian at the***

pedestrian crossing, being hit from behind by vehicle 2, pushing vehicle 1 into the pedestrian. The cause of vehicle 2 colliding with vehicle 1 was noted as a combination of carelessness, recklessness, failure to judge speed and distraction outside the vehicle. **NOTE:** This incident is also associated with Route 1, 2 and 3 discussed above.

- A collision involving a cyclist was recorded in 2015. The location of the incident was at the J/W London Road, Spur Road and Twickenham Road. The collision occurred during daylight hours when the weather was fine and the road was dry. The collision was described as a ***vehicle turning into a private entrance across the cyclist who had insufficient reaction time to stop***.
- A collision involving a pedestrian was recorded in 2017. The incident occurred at the J/W London Road, Spur Road and Twickenham Road. The collision occurred in daylight when the weather was fine and the road was dry. The description of this collision concluded that ***the pedestrian did not cross at provided signal crossing and failed to look properly***.

5.4.14 Five 'slight' cyclist PICs were recorded at the junction of London Road, Twickenham Road and Spur Road. Advanced stop lines for cyclists, which are currently provided on 3 of the 4 arms of the junction could be provided on the southern arm, to reduce risk of collision between cycles and cars.

5.4.15 Overall, with regard highway infrastructure and safety for pedestrians and cyclists, there does not appear to be any common causality for collisions based on existing highways design. Furthermore, as described in section **5.4.9**, amendments to the pedestrian crossing at Syon Lane J/W Spur Road has led to fewer PICs. Considering the relatively highly-trafficked junction of London Road, Twickenham Road and Spur Road and the nature of the incidents described, it can be concluded that there are no causal factors that the proposed development would exacerbate.

5.4.16 Key Destination Route 5 also offers an alternative route to Marlborough School which follows a desire line away from the highway, south from Quakers Lane. To conclude, there were no safety concerns which arose from analysis of PICs data along the route(s) from the site to Marlborough School.

Key Destination Route 6

5.4.17 Route 6 includes three Key Destinations in relation to the site; bus stops C/D, proposed Golden Mile Station and Boston Manor Park.

5.4.18 The proposed Golden Mile station (refer to **Section 7**) and Boston Manor Park both follow a desire line along Great West Road and are directly adjacent to one another. Boston Manor Park is accessed at Transport Avenue, where a path allows pedestrians to walk along the Grand Union Canal and over Boston Manor Footbridge to the park.

5.4.19 This desire line includes bus stops C/D adjacent to the site, which provide access to the H91 bus service. Stop D which serves the eastbound H91 service requires crossing the A4 at the signal-controlled crossing adjacent to the site. The closest and relevant study area for PICs at this location is at Harlequin Avenue J/W the A4. The PIC data further along this route is only relevant for access to the proposed Golden Mile Station and Boston Manor Park.

5.4.20 During the study period, 17 PICs were recorded along Route 6, 13 of which were identified as resulting in a 'slight' injury, while four were considered to result in a 'serious' injury. No fatal collisions were recorded on this route. A summary of recorded collisions is presented in **Table 5.3**.

Table 5.3: Route 6 PIC data

Cluster Location	Accident Severity			Total
	Slight	Serious	Fatal	
A4 J/W Harlequin Avenue	4	2	0	6
A4 J/W Shield Drive/West Cross Way	7	2	0	9
A4 J/W Transport Avenue	2	0	0	2
Total	**13**	**4**	**0**	**17**

5.4.21 The recorded collisions can be summarised as follows:

- One PICs involved a pedestrian, the incident was slight.
- Five PICs involved cyclists, of which all were slight.
- 14 of the 17 PICs occurred during daylight hours.
- The two serious PIC incidents, involving car driver and passenger, recorded at A4 J/W Harlequin Avenue occurred at night in wet weather. Car was travelling at excess speed and the driver lost control.

5.4.22 Regarding the cycling and pedestrian PICs, three of the five collisions involving cyclists were described as ***cyclists being clipped by vehicles entering or exiting Shield Drive, Harlequin Avenue or Transport Avenue***. It is considered that clear demarcation of the segregated cycle lanes, clear lane and stop sign markings, and a suitable indication of right of way could help reduce risk of cyclist incidents.

5.4.23 Given that the dual carriageway of the A4 Great West Road comprises seven lanes of 40m.p.h. traffic, safe crossing must be undertaken at defined points, which in this case would be at the junction of Syon Lane and Great West Road, or over the pedestrian footbridge provided close to Transport Avenue.

5.4.24 This is reflected by low frequency of pedestrian/cyclist PICs for the volume of traffic along this route. No serious or fatal PICs involving pedestrians were recorded along this route. Therefore, it can be concluded that this route is considered safe for active travel modes.

Key Destination Route 7, 13

5.4.25 This route has a number of Key Destinations along its desire line; Osterley Station, two local place of worship and Osterley Dental Practice.

5.4.26 Key Destination Route 7 connects the site with Osterley station, Osterley Dental Practice and St Francis of Assisi Church , which follows the desire line west from the site along Great West Road.

5.4.27 Key Destination Route 13 connects the site with the Mosque of Jummah Prayer, a local place of worship.

5.4.28 A local place of worship, St Francis of Assisi Church is also located along this desire line. In relation to this analysis, the place of worship is located in close proximity to the A4 J/W Syon Park Gardens. Therefore, any PICs which occur after this point are not relevant for this Key Destination.

5.4.29 Within the study's period of time, 62 PICs have been recorded along this Key Destination Route, of which 54 were slight, six were serious with two fatal collisions. A summary of recorded collisions is presented in **Table 5.4**

Table 5.4: Route 7 PIC data

Cluster Location	Accident Severity			Total
	Slight	Serious	Fatal	
A4 J/W Syon Park Gardens	7	1	1	9
A4 J/W Wood Lane	16	0	1	17
A4 J/W Ridgeway Road	7	1	0	8
A4 J/W St Mary's Crescent	2	0	0	2
St Mary's Crescent J/W Thornbury Road	2	0	0	2
A4 J/W Thornbury Road	15	4	0	19
A4 J/W Osterley Court/Station	7	0	0	7
A4 J/W Gresham Road	7	0	0	7
Total	**63**	**6**	**2**	**71**

5.4.30 The recorded PIC can be summarised as follows:

- Nine PICs involved pedestrians, six of which were slight, one serious and two were fatal collisions.
- Four PICs involved cyclists, all four of these collisions were deemed slight.
- 38 of the 71 PICs were recorded in daylight hours, with the remaining 33 taking place during hours of darkness.

5.4.31 The two fatal collisions both involved pedestrians, the description of these events is as follows:

- A collision occurred on the Great West Road J/W Wood Lane, in 2015. The collision took place at night, the weather was fine and the road was dry. It is understood that the collision was caused ***by a vehicle travelling on the wrong side of the road, colliding with a pedestrian stepping into the road.*** This collision took place at a pedestrian crossing. As a result. it is understood reckless driving, not highway design, was the cause of this PIC.
- A collision occurred on the Great West Road J/W Syon Gardens, in 2015. The collision took place at night when the weather was fine and the road surface was dry. It is understood that ***the incident took place as a result of two vehicles racing, which led to vehicle 1 colliding with a crossing pedestrian***.

5.4.32 While there is a cluster of collisions at the junction between Great West Road and Wood Lane,

only three involved pedestrians or cyclists. Other than the 'fatal' incident described above the other two incidents were defined as resulting in 'slight' injury. Of the 17 collisions at this junction, 12 involved cars. As a result, there does not appear to be any noticeable trend leaning towards any pedestrian/cycling safety issues at this junction.

5.4.1 It has been noted within the ATZ Assessment that the distance between the crossings at the Syon Lane/A4 junction and Wood Lane/A4 junction is approximately 600m. An additional crossing point between these locations could be implemented to improve connectivity between the northern and southern flank of the footway on the A4.

5.4.2 On the section of highway between Syon Lane and Wood Lane, where Great West Road intersects Syon Park Gardens, a relatively low frequency of PICs is observed.

5.4.3 In general, as noted in the collision descriptions, it is reckless driving, as opposed to highway layout, that is logged as the key causality for the serious/fatal incidents.

5.4.4 There were six serious collisions along this route, one of which involved a pedestrian. This incident is described below.

- The pedestrian collision occurred at Great West Road J/W Syon Park Gardens, in 2017. The collision occurred at night when the roads were wet. There was no collision description available for review, however, key contributing factors indicated that a ***pedestrian failed to look properly while crossing and was not using a formal crossing facility***.

5.4.5 Overall, this route has a relatively low frequency of pedestrian and cyclist PICs. While there have been serious and fatal incidents, the description of these events suggests that a failure to look properly, crossing the road/not at a crossing and reckless driving were the main causes of the collisions recorded at this Key Destination Route.

Key Destination Routes 8, 9, 10 and 11

5.4.6 Key Destination Routes 8, 9, 10 and 11 provides access to the Sky Campus, Proposed Bolder Academy, Nishkam School and Osterley Park respectively.

5.4.7 Key Destination Routes 8, 9, 10 and 11 all follow a desire line north along Syon Lane. There were no recorded PICs on Grant Way or Macfarlane Lane, on which the Sky campus and proposed Bolder Academy are or will be located.

5.4.8 Contained within the records of the studied period of time, 76 documented PICs were recorded, of which 73 were slight, three were serious and no fatal incidents were recorded. A summary of recorded PICs is presented in **Table 5.5**.

Table 5.5: Route 8,9,10,11 PIC Data

Cluster Location	Accident Severity			Total
	Slight	Serious	Fatal	
Syon Lane J/W Northumberland Avenue	7	2	0	9
Syon Lane/Great West Road Junction	43	1	0	44
Syon Lane J/W Grant Way	10	0	0	10
Syon Lane J/W Macfarlane Lane	6	0	0	6
Syon Lane J/W Windmill Lane/Jersey Road	7	0	0	7
Total	**74**	**3**	**0**	**76**

5.4.9 The PIC data can be summarised as follows:

- Seven PICs along these routes involved pedestrians, of which six were slight and one was a serious collision.
- Three PICs involved cyclists, of which all three were recorded as resulting in 'slight' injury.
- Of the 11 incidents, six collisions involving pedestrian or cyclists on this route occurred at the junction of Syon Lane and Great West Road.
- Three 'slight' active travel mode PICs were recorded at Grant Way.
- No active travel mode PICs were recorded at Macfarlane Lane, or in the vicinity of Nishkam School.
- One slight pedestrian PIC was recorded at the junction where Syon Lane J/W Jersey Lane, adjacent to Osterley Park.
- 24 of 76 PICs occurred at night, with the remaining 52 occurring in daylight hours.

5.4.10 There were three serious collisions along these four routes, of which one involved a pedestrian:

- The pedestrian collision occurred on the junction of Syon Lane and Great West Road, in 2015. The collision occurred in daylight when the weather was fine and the road was dry. The incident was described ***as the vehicle being unable to avoid drunken pedestrian wandering across live traffic north to south***.

5.4.11 Overall, the PIC data indicates that the route from the site north along Syon Lane is relatively safe for walking and cycling modes. Only one serious active travel mode collision was recorded during the study period and in this particular instance, it was a pedestrian who had their judgement impaired by alcohol.

5.4.12 Furthermore, while there is a large cluster of collisions recorded at the heavily trafficked Syon Lane/Great West Road junction, 38 of the 44 PICs involved motor vehicles. The crossing facilities at this junction, moving south to north, include a signal-controlled pelican crossing and an underpass. As a result conflict between pedestrians and motor vehicles is low.

It has been observed eight slight PICs at the A4/Syon Lane junction involved vehicles turning right northbound and southbound. Six of these incidents involved car drivers, while the remaining two involved motorcyclists. While this movement did not involve any pedestrians or cyclists, wider improvements to pedestrian and cycle infrastructure, including a pedestrian/cycle way along Syon Lane, as well as a surface-level crossing along the eastern arm of the A4, adjacent to the Homebase site.

5.4.13 On the remainder of the desire line, from Great West Road through to Osterley Park, along Syon Lane, there is only an additional four slight active travel mode PICs. As a result, there are no substantial concerns regarding pedestrian or cycle safety along this route.

Key Destination Route 12

5.4.14 Key Destination Route 12 provides a route from the site West Middlesex Hospital. The route follows a desire line south along Syon Lane/Spur Road, across London Road, then south along Twickenham Road towards the hospital.

5.4.15 Contained within the study period, 58 PICs were recorded, of which 52 were slight and 6 were serious incidents. No fatal PICs were recorded along this route. A summary of recorded PICs is shown in **Table 5.6**.

Table 5.6: Route 12 PIC Data

Cluster Location	Accident Severity		
	Slight	Serious	Fatal
Syon Lane (from site) and Spur Road	15	3	0
Spur Road J/W London Road/Twickenham Road	17	3	0
Twickenham Road J/W Park Road	7	0	0
Twickenham Road J/W Amhurst Gardens/Hospital Entrance	13	0	0
Total	**52**	**6**	**0**

5.4.16 Of the six recorded serious PICs, two were pedestrians, one was a cyclist. All of these incidents are described in section **5.4.13**, as the two routes follow the same desire line from the site.

5.4.17 In relation to PICs involving active travel modes at Twickenham J/W Park Lane and the Hospital entrance:

- At Park Lane three slight incidents were recorded, two involving cyclists, and one pedestrian incident. One incident involving a cyclist was caused by poor conditions – snow/fog/sleet, imparing judgment, leading to a collision. Another was caused by a stationary vehicle obstructing the view of the cyclist. The other incident did not have a desription.
- At the Hospital Entrance eight slight incidents were recorded, five cyclist PICs and three pedestrian PICs. From the eight collisions, five descriptions were available. The causes of the incidents include defect to vehicle, sudden braking/careless driving and

illness of driver, leading to a PIC.

5.4.18 Regarding highway infrastructure and safety for pedestrians and cyclists, there does not appear to be any common causality for collisions based on existing highways design. Furthermore, as described in section **5.4.9**, amendments to the pedestrian crossing at Syon Lane J/W Spur Road has led to fewer PICs.

5.4.19 At the relatively highly-trafficked junction of London Road, Twickenham Road and Spur Road, the cluster of 'slight' pedestrian and cyclist PICs appear largely to be caused by individual mistakes – four of the six incident records note pedestrians as stepping out unsafely onto the carriageway.

5.4.20 There were no serious PICs recorded between the London Road junction and West Middlesex Hospital. Of the 11 overall slight PICs, there were no common causalities leading to incidents. As a result there are no observable factors negatively affecting pedestrian/cyclist safety.

5.4.21 In conclusion due to the nature of the incidents described above and overall analysis of the PIC data (including a review of accident causation factors), it can be concluded that there are no observable accident trends that point to defects in the design of the highway that can be directly linked to negatively affecting highway safety. As such the evidence presented by the PIC data suggests that there are no causal factors that the proposed development would exacerbate. Notwithstanding this outcome, this report has set out ways in which the study area would be improved from a highway design perspective in order to further reduce the risk of PICs, and improve the "People feel safe" Healthy Streets indicator.

Key Destination Route 15

5.4.1 Key Destination Route 15 provides a route from the site to Boston Manor Health Centre, a local GP practice. The route follows a desire line east along the A4, before turning south along Boston Manor Road, on which the destination is located.

5.4.2 As the section of the route between the site and Transport Avenue follows the same desire line as Key Destination Route 6 (refer to **section 5.4.20**), this section will focus on the route after this location.

5.4.3 Contained within the study period, 50 PICs were recorded, of which 46 were slight and 4 were serious incidents. No fatal PICs were recorded along this route. A summary of recorded PICs is shown in **Table 5.7**.

Table 5.6: Key Destination Route 15 PIC Summary

Cluster Location	Accident severity			Total
	Slight	Serious	Fatal	
A4 J/W Boston Manor Road	41	3	0	44
Boston Manor Road J/W Windmill Road/The Dell	5	1	0	6
Total	**46**	**4**	**0**	**50**

5.4.4 The recorded collisions can be summarised as followed:

- 4 PICs involved pedestrians (3/4 were slight, one was serious)
- 3 PICs involved cyclists (2/3 were slight, one was serious)

5.4.1 Of the overall four recorded serious PICs, one involved a pedestrians and one was a cyclist.

5.4.2 In relation to PICs involving active travel modes at Boston Manor Road's junction with the A4 and between The Dell and Windmill Road, along Boston Manor Road, the following descriptions are provided:

- The first collision involved a pedestrian and was recorded in June 2015. The location was the between the Dell and Windmill Road, along Boston Manor Road. The conditions described as daylight, weather was fine and road dry. The incident was described as vehicle failing to stop at Pelican crossing, leading to collision with pedestrian.
- The second collision involved a cyclist and was recorded in December 2018. The location was the junction at which Boston Manor Road J/W A4. The conditions were daylight, the weather was raining and the road was wet. There is no description of the PIC.

5.4.3 It has been observed from the PIC data that incidents involving active travel modes along this route is low and there are no clusters of incidents evident. The serious pedestrian incident which occurred between the Dell and Windmill Road occurred at a pelican crossing, and was caused by careless driving. As a result, there does not appear to be any common causality for collisions based on existing highways design. As such the evidence presented by the PIC data suggests that there are no causal factors that the proposed development would exacerbate.

Key Destination Route 16

5.4.4 Key Destination Route 16 provides a route from the site to Hounslow Town Centre. The route follows a desire line east along the west along Northumberland Avenue, Musgrave Road, College Road, and London Road, towards High Street, Hounslow on which the destination is located.

5.4.5 Contained within the study period, in regard to active travel modes, 52 PICs were recorded, of which 42 were slight and 9 were serious incidents. One fatal PICs was recorded along this route. Information was extracted from TfL Collison Map (https://tfl.gov.uk/corporate/safety-and-security/road-safety/london-collision-map). A summary of recorded PICs is shown in **Table 5.8**.No PICs were recorded in this study area between Northumberland Avenue and College Road.

Table 5.7: Key Destination Route 16 Summary (Pedestrian and Cyclist PICs)

Cluster Location	Accident severity			Total
	Slight	Serious	Fatal	
College Road J/W London Road	4	0	0	4
The Avenue J/W London Road	0	1	0	1
The Grove J/W London Road	8	2	0	10
Thornbury Road/Spring Grove Road J/W London Road	11	2	1	14
Star Road J/W London Road	5	1	0	6
Kingsley Road/High Street J/W London Road	14	3	0	17
Total	**42**	**9**	**1**	**52**

5.4.6 Of the recorded PICs, nine serious incidents and one fatal incident were recorded during the study period. Three of the serious PICs involved cyclists, while the remained six involved pedestrians. The fatal PIC involved a pedestrian, which is summarised below:

- The PIC occurred in December 2015 on London Road at 22:51, 26m north east fthe junction with Thornbury Road. The incident involved a light goods vehicle and a pedestrian, in which a pedestrian was fatally injured.

5.4.7 The six recorded serious PICs involving pedestrians are summarised below:

- A collision was recorded in November 2014, at 01:00. The location was at Star Road J/W London Road. The incident involved a car and pedestrian at the junction, in which the pedestrian was seriously injured.
- A collision was recorded in December 2015 at 06:30. The location was 20m north east of Kingsley Road/High Street J/W London Road. The incident involved a car and pedestrian, in which the pedestrian was seriously injured.
- A collision was recorded in June 2016 at 13:15. The location was between the junctions of St John's Road and The Grove, along London Road. The incident involved a car and pedestrian, in which the pedestrian was seriously injured.
- A collision was recorded in July 2016 at 17:45. The location was at the junction of London Road and Avenue Road. The incident involved a car and pedestrian, in which the pedestrian was seriosuly injured.
- A collision was recorded in July 2017 at 07:50. The location was at the junction of Kingsley Road and High Street. The incident involved a LGV and pedestrian, in which the pedestrian was seriously injured.
- A collision was recorded in September 2018, The location was at The Grove J/W London Road. The incident involved a car and pedestrian, in which the pedestrian was seriously injured.

5.4.8 The three serious PICs involving cyclists are summarised below:

- A collision was recorded in January 2018 at 08:00. The location was at the High Street J/W London Road. The incident involved a pedal cycle, no other incident vehicle was

involved.

- A collision was recorded in May 2018 at 08:46. The location was 20m south of the junction with Pembroke Close, along London Road. The incident involved a car and cyclist, in which the cyclist was seriously injured.
- A collision was recorded in September 2018 at 22:30. The location was 40m north of the junction with Thornbury Road. involving a cyclist and a motorcycle. The cyclist was seriousuly injured.

5.4.9 While overall, it has been observed that pedestrian/cycle infrastructure is present, there are clusters of PICs involving pedestrians and cyclists have been recorded at The Grove, Thornbury Road/ Spring Grove, Star Road and Kingsley Road/High Street.

5.4.10 While it has been noted that cycle lanes are provided through stretches of London Road, additional cycle provision would improve overall safety of cyclists. For instance, cycle lanes, while present to the west of Kingsley Road, there are no cycle lanes on the east bound carriageway.

5.4.11 At the Kingsley Road/London Road junction, it has been observed that since 2019, pedestrian crossing, connecting the northern/southern flanks of the footway, has been upgraded with tactile paving and dropped kerbs.

5.4.12 Between Thornbury Road/Spring Grove, it has been noted that an additional crossing point and continuous cycle lanes, connecting to the wider cycle infrastructure would improve safety for active travel modes. Furthermore, tactile paving should be introduced at the crossing of The Grove, and east/west crossings, to improve pedestrian safety.

5.4.13 In summary, regarding highway infrastructure and safety for pedestrians and cyclists along this route, taking into consideration the busy nature of London Road, there does not appear to be any common causality for collisions based on existing highways design. while this is the case, potential improvements have been discussed.

5.4.14 In conclusion, due to the nature of the incidents described above and overall analysis of the PIC data (including a review of accident causation factors), it can be concluded that there are no observable accident trends that point to defects in the design of the highway that can be directly linked to negatively affecting highway safety. As such the evidence presented by the PIC data suggests that there are no causal factors that the proposed development would exacerbate. Notwithstanding this outcome, this report has set out ways in which the study area would be improved from a highway design perspective in order to further reduce the risk of PICs, and improve the “People feel safe” Healthy Streets indicator.

6 Non-car Modes of Travel – Baseline Provision

6.1 Preface

6.1.1 The planning process at the national and local level aims to ensure that development sites are accessible by a range of sustainable transport modes. Accessibility to attractive non-car modes is at the core of the Healthy Streets approach. In this instance, the site is well-positioned in terms of proximity to public transport services, as well as access to good pedestrian and cycle infrastructure.

6.2 Opportunities for Walking and Cycling

Opportunities to Walk

6.2.1 The Institution of Highways and Transportation guidance 'Providing for Journeys on Foot' (2000) sets out some suggested acceptable walk distances in relation to undertaking trips on foot between residential development and town centres, workplaces / schools and elsewhere where the *"acceptable"* distances are 400 metres, 1,000 metres and 800 metres respectively. Given the *"low car"* nature of the proposed development it is considered that the stated *"desirable"* distances are more appropriate, which are 200 metres, 500 metres and 400 metres respectively. In a worst-case scenario, the *"acceptable"* distances could be suitable, however it is recognised that for low car developments where residents have less choice of means of travel the need to design for walking and cycling is increased.

6.2.2 The National Travel Survey (NTS) (2017) guidance states that walking is particularly significant in urban areas due to close proximity to basic amenities. Walking statistics in London support this, as around 33% of all journeys are made on foot. This is largely due to high population density and low car-use in London, relative to the rest of the UK.

6.2.3 Syon Lane railway station is considered to be a key destination for pedestrians. The route to Syon Lane railway station is along Syon Lane, where approximate 2m wide street lit footways are located on both sides of the carriageway. Sections of the footway on Syon Lane are separated from the carriageway by a grass verge.

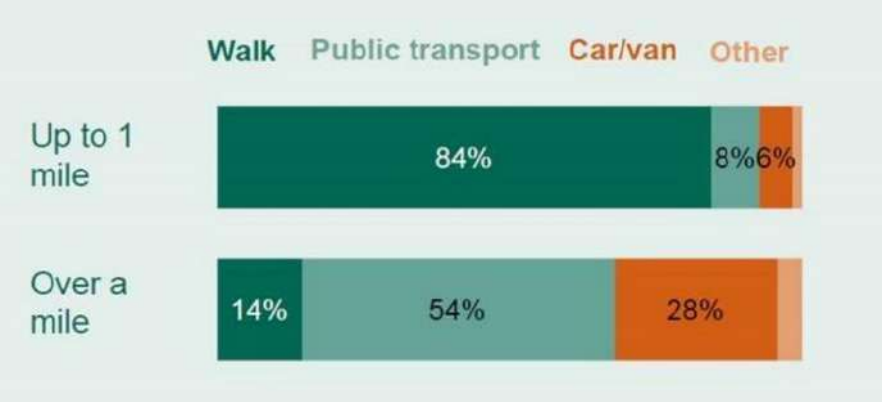
6.2.4 Signal Controlled crossings are present at the adjacent Syon Lane/A4 junction and in addition an underpass enables pedestrians to cross the carriageway without having to wait for traffic to stop. It is observed that the underpass is well used and the facility means that pedestrians can cross a busy carriageway without delay or intimidation from high volumes of fast moving traffic. The subway is not designed for cyclists and at a width of 1.8m it is quite narrow and not on a straight alignment, therefore users can't always see approaching pedestrians / cyclists. There is no cyclist dismount signage at either end of the subway. Whilst cyclists should dismount before entering the subway, some do decide to remain on their bicycle when passing through the subway.. A photograph of the subway is provided in **Insert 6.1**.

Insert 6.1: Existing Subway Provision

6.2.5 **Section 10.6** of this report considers the operation of the underpass in terms of pedestrian comfort levels. **Section 10.7** considers the pedestrian comfort levels of other footways on the route between Homebase, Syon Lane and Tesco Osterley.

6.2.6 In terms of access on foot to local stations, it is relevant to consider data published in the National Travel Survey (NTS) relating to multi-stage trips. A summary of that data is presented in **Insert 6.2** below and this confirms that 84% of trips of up to one mile (1,600m) to stations are undertaken on foot, with 14% of trips of over one mile also being undertaken on foot. In view of this and the Institution of Highways and Transportation guidance referenced above, it is considered that Osterley Underground Station, located approximately 1,800m west of the site along Great West Road, would be a feasible option for pedestrian access by some future residents and staff based at the site.

Insert 6.2: NTS Data –Journeys to Stations on Foot, as Part of a Multi-Stage Trip



6.2.7 Pedestrians routing northbound crossing the A4 Great West Road would use the underpass beneath the Great West Road. The underpass enables pedestrians to cross the carriageway without having to wait for traffic to stop. It is observed that the underpass is well used and the

facility means that pedestrians can cross a busy carriageway without delay or intimidation from high volumes of fast moving traffic. **Section 10.6** of this report considers the operation of the underpass in terms of pedestrian comfort levels.

6.2.8 Brentford is the closest town centre to the proposed development and is an approximate 1.5km walk distance away from the site. A number of local shops and services are located in Brentford and it is considered to be a key destination for future occupiers of the site.

6.2.9 There are a number of green spaces that are accessible on foot from the development sites and these are likely to be key destinations for pedestrians. Examples of green spaces within the vicinity of the sites include Syon Park and Osterley Park.

6.2.10 A summary of local services and facilities is provided within **Table 6.1**.

Table 6.1: Summary of Local Facilities

Facilities	Location	Approximate walking distance – metres (m)
Syon Lane Station	Syon Lane	100
St. Francis of Assisi Church	Great West Road	400
Sky Campus	Syon Lane	550
Syon Park	London Road	650
Hanuman Hindu Temple	Beech Avenue	650
Marlborough School	Syon Lane	800
Nishkam School	Syon Lane	850
West Middlesex Hospital	Twickenham Road	1,000
Brentford Family Practice (Health)	Boston Manor Road	1460
Brentford Town Centre	High Street	1500
Osterley Dental Practice	Thornbury Road	1550
Osterley Station	Great West Road	1,800
Mosque of Jummah Prayer	Gresham Road	2100

6.2.11 A key element of planning at a national and local level is to ensure that development is accessible by public transport, walking and cycling to a range of amenities. This includes food services, healthcare and places of worship for example. Access opportunities to these have been presented in the **ATZ maps** discussed in **Section 5**.

Opportunities to Cycle

6.2.12 A distance of 3.1 miles (5.0km) is considered a distance many people could substitute car trips for cycle trips (Table NTS0303 - of the National Travel Survey (NTS) identifies that the 'Average trip length' bicycle in England, in 2019 was 3.3 miles). Our observations are that there are many current and proposed opportunities for cyclists in the vicinity of the site.

6.2.13 Syon Lane operates under a 30m.p.h. speed limit and there is no existing dedicated cyclist infrastructure on this route south of the A4. However, there is dedicated cycling infrastructure alongside the A4, enabling links between the site and Osterley town centre to the west, and Boston Manor Park and Chiswick to the east.

6.2.14 A range of services can be accessed from the site by cyclists, as shown in **ATZ Map 1**, which depicts the key destinations within a 20-minute cycle of the site. Notwithstanding the results of the ATZ assessment (see **Appendix C**) there is a need for improved cycle access around the site frontages and across Syon Lane in order to encourage more cycling to the proposed new Tesco store. Infrastructure is therefore proposed, funded by the applicant, to support cycling and this would include an extension to the off-carriageway cycle route on the southern side of the A4, the provision of a wide shared surface footway/cycleway on the site's western frontage (Syon Lane) and the provision of segregated footway/cycleway on the frontage of the existing Tesco store.

6.2.15 On the southern boundary of the site the applicant will deliver the first section of a 'clean air route' which will be a minimum of 3m wide and accommodate and encourage pedestrians and cyclists travelling parallel to, but away from, the A4. It is the aspiration of LBH is to deliver a more comprehensive clean air route away from, but parallel to the A4, and the development scheme will deliver the first part of this route.

6.2.16 As part of the development proposals developer funding would be made available to improve the operation of the Gillette Corner junction. **Section 11** of this document provides details of the design options that have been considered for this junction, and these include the provision of new pedestrian and cycle crossings. It is, however, the case that the introduction of new pedestrian and cycle infrastructure at the Gillette Corner junction has a negative impact on the operation of the junction to accommodate traffic and a balance must be struck between accommodating vulnerable road users (pedestrians and cyclists) and traffic (including buses).

6.2.17 One of the design options for the proposed development is to provide a new surface level crossing on the eastern side of the A4 at Gillette Corner, which would accommodate both pedestrian and cycle movement in a north-south direction, avoiding the need for cyclist to use the underpass (see Section 11 – Design Option 2). The introduction of a direct traffic signal-controlled crossing to accommodate east-west movement on the northern and southern side of the junction (see Section 11 – Design Option 3) would have a significant detrimental impact on traffic conditions that would be adverse for all users of the junction.

6.2.18 Local improvements to cycle infrastructure would be developer funded through a s278 (highway works) agreement with the highway authority, or through financial contribution secured in the application's s106.

6.2.19 Brentford neighbourhood centre is considered to be a key destination for cyclists and the main route towards Brentford, along London Road, has cycle lanes and cycle/bus lanes present, separating cyclists from traffic. London Road could, in future, form part of Cycleway 9, the first section of which is due to be complete by 2021 to provide a 7 kilometre (km) section of cycleway between Kensington Olympia and Brentford. The new cycleway would support journeys by cycle from the development sites towards Central London, however, the route is currently unfunded to the west of Brentford Town Centre. (refer to **Section 7**). A segregated cycle route would be provided along the north of the site to extend Cycleway 9.

6.2.20 Furthermore, a cycle track from Syon Lane to Boston Manor Road is proposed (refer to **Section 7**). The changes are intended to improve safety for all road users and make cycling a safer and more appealing travel option for employees and local residents of the area. Dedicated cycle lanes have been constructed on Boston Manor Road and the link between Syon Lane and Boston Manor Road is along off-carriageway cycle tracks alongside the A4.

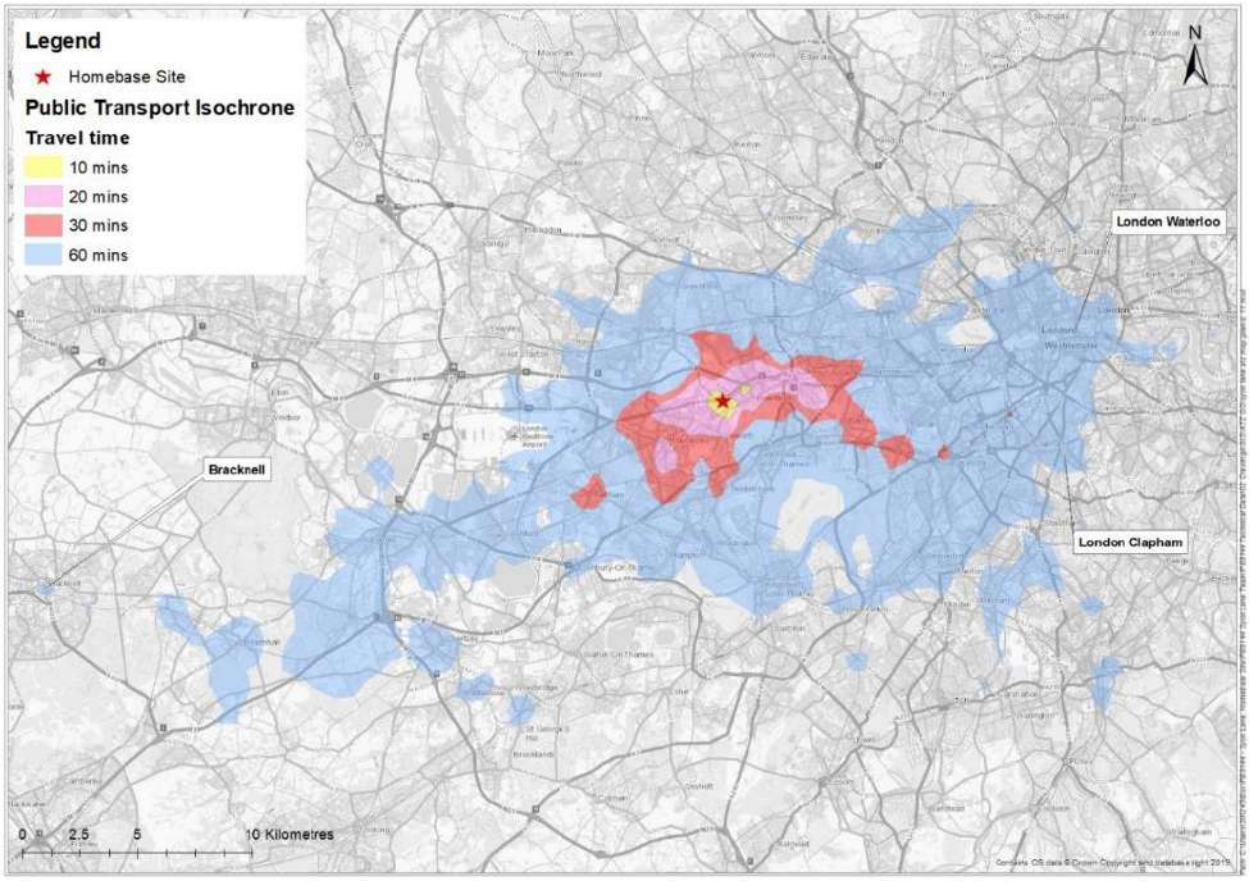
6.2.21 A traffic signal controlled crossing at the A4/ Harlequin Avenue junction incorporates an aspect for cyclists and provides a crossing point on the A4 for cyclists travelling north-east.

6.3 Public Transport Connectivity

6.3.1 The site is well-positioned to be accessed by public transport, due to its proximity to Syon Lane station, Osterley Station and a number of frequent bus services.

6.3.2 An assessment of the public transport accessibility has been undertaken using TRACC software. The analysis determines areas that can be reached from the site within a 10, 20, 30 and 60 minute journey time using public transport. A map showing the result of the assessment is shown in **Insert 6.3** and in **Appendix G**.

Insert 6.3: Public Transport Accessibility Map



6.3.3 The public transport accessibility map demonstrates that the site is accessible from large parts west and central London within a commuting distance. Westminster and Waterloo are located within a 60 minute journey time of the site. This assessment does not account for any emerging rail and bus proposals which are planned in the Golden Mile opportunity area, which would improve accessibility to the site (refer to **Section 7**).

6.4 Bus

6.4.1 There are a number of bus stops close to the site. The key stops and their destinations are presented in **Table 6.3.**

Table 6.2: Key Local Bus Services (Frequency per hour – ph.)

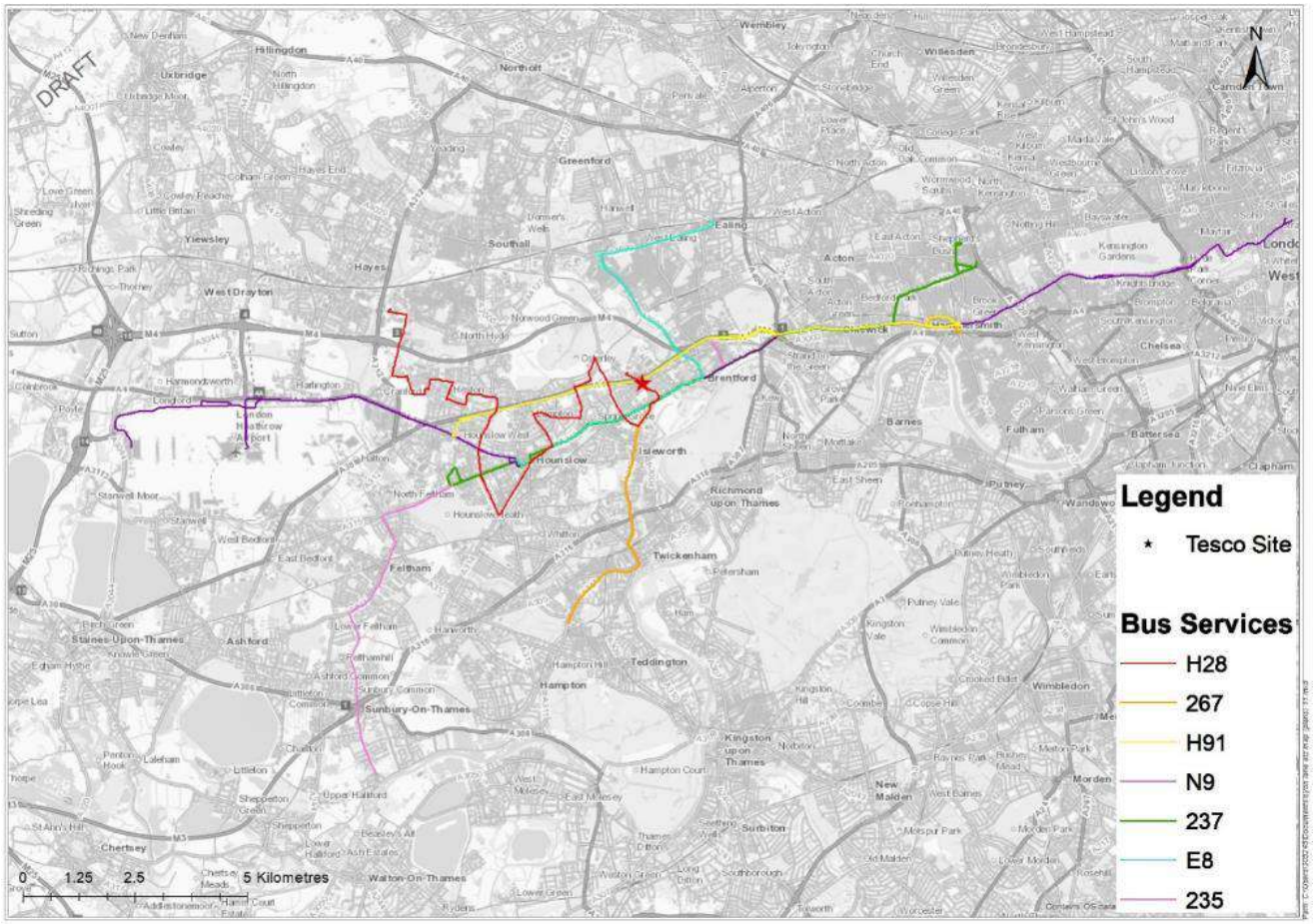
Service	Route	Direction (Towards)	First Bus	Last Bus	AM Peak	PM Peak	Sat	Sun
H91 (Great West Road)	Hounslow West Station – Osterley Station – Wood Lane – Gillette Corner – West Cross Centre – Boston Manor Road – Gunnersbury Station – Hammersmith Bus Station	Hounslow West Station	05.10	23.50	6ph	6ph	5ph	4ph
		Hammersmith Bus Station	05.00	23:40	6ph	6ph	5ph	4ph
H28 (Syon Lane)	Bulls Bridge Tesco – Beaufort Gardens – Bath Road – Hounslow High Street – Hounslow East Station – Thornbury Avenue/Great West Road – West Middlesex Hospital – Syon Lane Station – Tesco Osterley	Bulls Bridge Tesco	05:50	23:30	3ph	3ph	3ph	2ph
		Tesco Osterley	05:50	23:30	3ph	3ph	3ph	2ph
235 (London Road)	Three Fishes – Sunbury Station – Feltham Tesco – Hounslow High Street – Thornbury Road – Isleworth Station – Wood Lane – Syon Lane -Brentford County Court – Great West Quarter	Three Fishes	05.05	00.00	7ph	7ph	6ph	5ph
		Great West Quarter	05:05	00:05	7ph	7ph	6ph	5ph
237 (London Road)	Frampton Road – Hounslow High Street – Isleworth Station – Syon Lane – Brentford County Court – Kew Bridge Station – Shepherd's Bush Green – White City Bus Station	Frampton Road	04.55	00.25	7ph	7ph	7ph	5ph
		White City Bus Station	05.05	23:55	7ph	7ph	7ph	5ph
267 (London Road)	Hammersmith Bus Station – Gunnersbury Station – Kew Bridge Station – Brentford County Court – Syon Lane – West Middlesex Hospital – Fullwell Bus Station	Hammersmith Bus Station	05:01	23:41	5ph	5ph	5ph	4ph
		Fullwell Bus Station	05:49	00:31	5ph	5ph	5ph	4ph
E8 (London Road)	The Bell – Isleworth Station – Syon Lane – Brentford Station – Boston Manor Station – Ealing Broadway Station	The Bell	04:00	00:50	7ph	7ph	7ph	7ph
		Ealing Broadway Station	04:50	01:15	7ph	7ph	7ph	6ph
N9 (London Road)	Heathrow T5 – Hounslow West Station – Wood Lane – Syon Lane – Brentford County Court – Gunnersbury Station – Hammersmith Station – High Street Kensington – Hyde Park Corner – Charing Cross Station – Aldwych	Heathrow T5	23:55	04:55	3ph	3ph	3ph	3ph
		Aldwych	23:30	05:20	3ph	3ph	3ph	3ph

6.4.2 There are seven regular bus services within walking distance of the site. The H28 bus route runs along Syon Lane and stops and turns around at Tesco Osterley. The H91 can be accessed from the A4 at bus stops K/C respectively, while the 235, 237, 267, E8 and N9 bus routes can be accessed from London Road, at bus stops X/W. All routes provide at least three services per

hour, while the most frequent services, routes 235, 237 and E8, provide seven services per hour.

6.4.3 A map showing the buses and their routes accessible from the site is provided in **Insert 6.4 and Appendix H.**

Insert 6.4: Bus Catchment Map



6.5 Rail

6.5.1 Syon Lane Station provides National Rail services direct to London Waterloo, via Brentford, Putney, Clapham Junction and Vauxhall. To the west, the service connects with Windsor and Eton.

6.5.2 Syon Lane railway station is on the Brentford loop of the South Western Railway network. At Syon Lane Station, there is a frequent service connecting the site with Central London. There are approximately seven trains per hour to London Waterloo and Mortlake. There are three trains per hour towards Weybridge.

6.5.3 Clapham Junction is a major railway station on the South Western Railway network and is accessible via a train journey of approximately 20 minutes from Syon Lane. Clapham Junction is served by London Overground, Southern and Gatwick Express services.

6.5.4 A summary of rail connection from Syon Lane is described in **Table 6.3**.

Table 6.3: Syon Lane Station Rail Links

Destination	First Train	Last Train	Frequency	Journey time
Waterloo	05:36	23:21	7ph	35 mins
Mortlake	05.36	23:21	3ph	33 mins
Weybridge	05:36	23:55	3ph	44 mins

6.5.5 Osterley Station provides access to the Piccadilly Line service and is within 2km of the site. Bus service H91 provides a connection from the site to the station.

6.5.6 At Osterley Station, the Piccadilly line has a peak frequency of 12 trains per hour in each direction, with trains timetabled approximately every 5 minutes.

6.6 Public Transport Accessibility

Public Transport Accessibility Levels (PTAL)

6.6.1 The Public Transport Accessibility Level (PTAL) methodology has been adopted by the GLA and TfL as a means of quantifying and comparing accessibility by public transport for a given site. It takes into account the time taken to access the public transport network, including:

- The walk time to various public transport services;
- The average waiting time for each service; and,
- The reliability of each service.

6.6.2 The methodology is based on a walking speed of 4.8km/h and considers Underground and rail stations within a 12-minute walk (960m) and bus stops within an 8-minute walk (640m), with the PTAL assessment being undertaken using the AM peak hour operating patterns of existing public transport services.

6.6.3 An Equivalent Doorstep Frequency (EDF) is calculated for each of the public transport services accessible from the site based on the criteria described above. These individual EDF values are then weighted to provide an accessibility index (AI) value for each service accessible from the Site. The sum of the AI's for each mode is then aggregated to provide a single measure of accessibility.

6.6.4 The total AI value is then compared against the PTAL bands given in **Table 6.2.** A summary of the assessment is provided in **Appendix F**.

Table 6.3: PTAL Banding

PTAL Score	Range of Index (AI)	Description
1a	0.01-2.50	Very Poor
1b	2.51-5.00	Very Poor
2	5.01-10.00	Poor
3	10.01-15.00	Moderate
4	15.01-20.00	Good
5	20.01-25.00	Very Good
6a	25.01-40.00	Excellent
6b	>40.01	Excellent

6.6.5 Based on the TfL PTAL calculator, the site has a **'Poor to Moderate' public transport accessibility of 2/3**. The southern part of the site falls into a PTAL 3 area due to its proximity to bus service on London Road.

6.6.6 It should be noted that PTAL is only one measure of public transport accessibility. The PTAL methodology does not take account of the interchange opportunities provided by local routes, nor the catchment of the routes. Furthermore, research has proven that commuters will travel further than the prescribed PTAL cut off distances to reach public transport. In the case of the site, public transport accessibility is considered good, due to a combination of the frequency of services, and the destinations served by those services. Proposed improvements to the local public transport network, which could increase the site's PTAL rating, are detailed in the next section.

7 Proposed Public Transport Improvements

7.1 Preface

7.1.1 A number of proposals have been put forward by the GLA and LBH to enhance the non-car accessibility of the Opportunity Area. These are referred to in the Mayor's adopted Transport Strategy (March 2018) and/or the Borough's adopted Local Implementation Plan (February 2019).

7.1.2 The proposed measures include improved rail connections, bus routes and cycleways. As a result of the proposals, the PTAL for the site and its surrounds is likely to increase, and the measures being considered as a means to improve the connectivity of the area by non-car modes is summarised below.

7.2 Proposed Walking and Cycling Improvements

Syon Lane, Gillette Corner

7.2.1 A number of enhancements to the public realm are proposed as result of the Homebase and Tesco, Osterley site developments. These are summarised below and further details are provided in **Section 9**:

- Improved pedestrian connections alongside Syon Lane, to and from Syon Lane Station, south of the A4, supported by significant public realm improvements and planting;
- The creation of a 'clean air route' on the southern side of the Homebase site that allows pedestrians and cyclists to access the entire perimeter of the site safely, via a high quality route;
- An extension to the off-carriageway cycleway on the southern side of the A4;
- New dropped kerbs and tactile paving is to be added at Syon Lane/Northumberland Road and Syon Lane/Syon Gate Way junctions.
- A wide new pedestrian crossing point will be provided on Grant Way to support the pedestrian and cycle connection between Homebase site and the Tesco site; and
- A segregated pedestrian/cycle path would be provided along the Tesco Osterley site's Syon Lane frontage to connect with infrastructure promoted by the Bolder Academy development.

7.2.2 These proposals would supplement measures to be implemented through the Bolder Academy development.

7.2.3 The retention of the underpass beneath the A4, which is referred to in the ATZ Assessment as the worst location on the active travel routes to / from the site**,** has been the subject of review as part of an optioneering exercise that has been undertaken to establish the extent of pedestrian and cycle improvements that could be implemented at the Gillette Corner junction (refer to **Section 11**). Should the underpass be removed (at the applicant's expense), then a surface level crossing would be provided in its place to accommodate pedestrian and cycle movement. This proposal is referred to as Design Option 2 within Section 11. A variation of this design (Design Option 2a), is also appended to this document, which would provide a new surface level crossing on the A4 and

retain the underpass. Should TfL and LBH agree that Option 2a is their preferred solution, then this option would increase the capacity of crossing points north-south, across the A4, significantly. **Section 11** identifies that a new surface level on the A4 crossing can be provided without significant implications to traffic movement.

7.2.4 If the Borough and TfL conclude that the existing underpass is retained, the underpass would be subject to improvement and repair, including repairing/cleaning lights and mirrors and installing corduroy tactile paving at subway steps. These works would be funded by the applicant.

7.2.5 **Appendix A4** compares the existing and future pedestrian/cycle infrastructure provision, as proposed by the applicant (including some works proposed, but not yet implemented, associated with the Bolder Academy). The drawing includes a new surface level crossing at the Gillette Corner junction, which takes the form of Design Option 2 (refer to **Section 11**).

7.2.6 Any changes to the public highway associated with the proposed development will require the developer to enter into a section 278 Agreement under the Highways Act 1980, with TfL and/or Hounslow council.

Syon Lane to Boston Manor Road Cycle Track

7.2.7 Amendments to the A4 Great West Road cycle track and footway were proposed by TfL and LBH in 2017 and these would run between Syon Lane and Boston Manor Road (albeit these are not yet funded or programmed). On review of collision data (refer to **Section 5**) it was found that there were a number of collisions and near misses involving cyclists and motor vehicles along this stretch of the A4, especially where shared-use areas of segregated cycle track passed through a junction. The changes are intended to improve safety for all road users and make cycling a safer, and more appealing, travel option for employees and local residents.

7.2.8 The cycle track changes were informed by the Mayor's Transport Strategy and the Healthy Streets Approach, which aim to encourage walking, cycling and using public transport to make London greener, healthier and more pleasant.

7.2.9 In the immediate vicinity of the site the following is proposed:

- Syon Lane / Shield Drive Junction
- Resurface existing raised table
- Build out the existing footway
- Convert the cycle paths to a shared-use footway
- Proposed traffic island reconstruction.

7.2.10 Details of this proposal are provided in **Appendix I**.

7.2.11 The development scheme will support the delivery of improved cycle infrastructure on the development site's frontage, on both the A4 and on Syon Lane. In doing so the development will improve cycle infrastructure between Syon Lane and Boston Manor Road.

Cycleway 9

7.2.12 It is intended that Cycleway 9, proposed by TfL, would provide improvements for all road users, offering a clearer and safer route for people to cycle in west London, making it easier to cross busy roads and removing through traffic on some residential streets. Cycleway 9 would form part of the emerging network of cycle routes, in line with TfL's Healthy Streets Approach.

7.2.13 Cycleway 9 would route between Kensington Olympia and Brentford, connecting through town centres in Hammersmith and Chiswick. Plans were consulted on in autumn 2017, with two new parts (Kew Bridge to Wellesley Road and Duke Road to Chiswick High Road), were consulted on in winter 2019. The route to Brentford has now been approved by Hounslow Council.

7.2.14 Phase 2 of the route, from Brentford to Hounslow, will be subject to a future public consultation and would extend the route along London Road, to the south of the site. However C9 to the west of Brentford is currently unfunded and not programmed. This would be a key link between the site and Brentford and Hounslow town centres.

7.2.15 A plan of Cycleway 9, including the proposed route from Brentford to Hounslow, is shown in **Insert 7.1**.

Insert 7.1: Cycleway 9 Route

7.2.16 Complementary work includes, as part of the Hounslow Priority Cycle Network programme, analysis of Cycleway 9 with the aim of providing connecting routes north into Brentford and Chiswick residential areas and on to Ealing. The project will also ensure that cyclists can join Cycleway 9 safely and quickly.

7.2.17 The LBH LIP outlines a number of Priority Cycle Networks which would improve cycle accessibility across the borough. Route 10, Syon Lane to Ealing, is one of the proposed routes and would connect the future CS9 to Ealing via Osterley on primarily off-road or Quietway level provision, running parallel to Syon Lane. The route would run through the western extent of the Great West Corridor and continue northward towards Ealing.

7.2.18 A key challenge exists in adapting and/or rebuilding the Quaker Lane footbridge over the Piccadilly

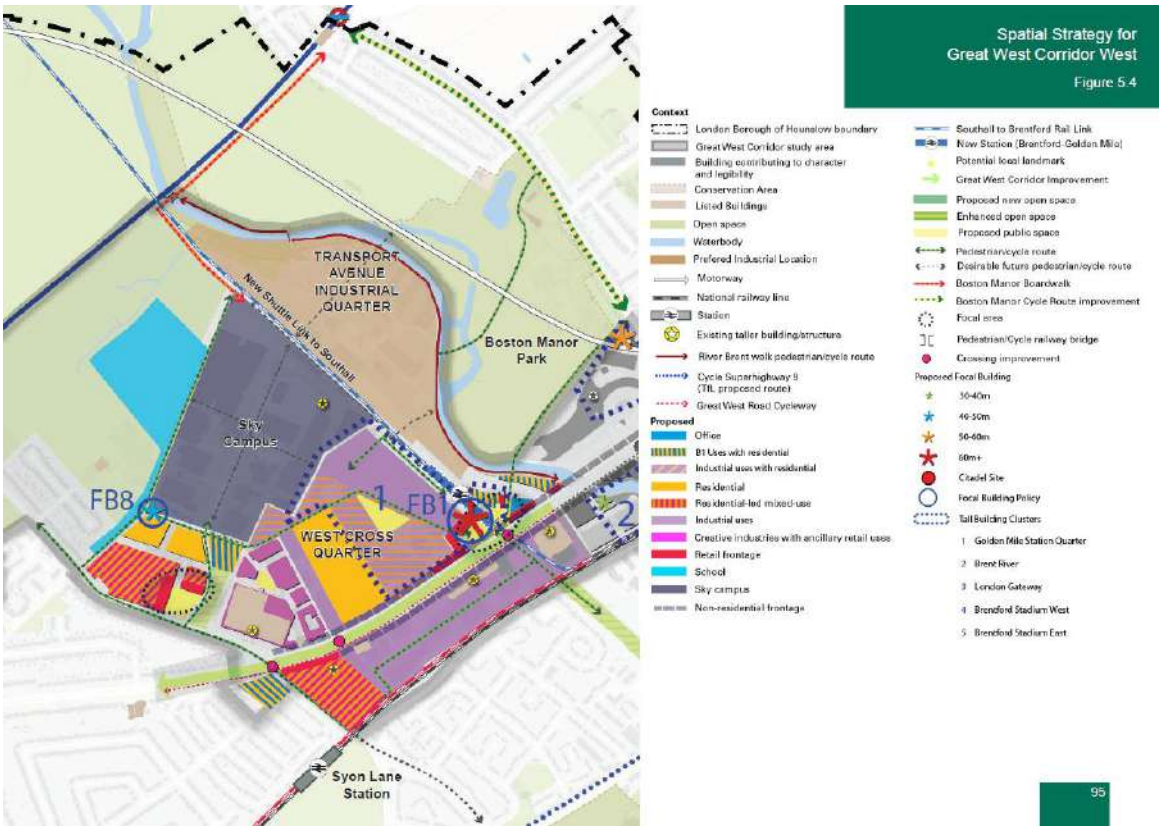
Line to make it suitable for cyclists.

Boston Manor Boardwalk

7.2.19 The Boston Manor Link would use a boardwalk to provide a direct pedestrian and cycle link of approximately 1km to the Great West Corridor from Boston Manor station (Piccadilly Line). This would improve access between the areas of River Brent, London Gateway and Boston Manor Park.

7.2.20 The red arrow on **Insert 7.2** overleaf indicates the location of the proposed Boston Manor Boardwalk.

Insert 7.2: Boston Manor Boardwalk



7.3 Proposed Bus Improvements

7.3.1 Bus routes are not static and can be altered to suit new demand. By working with TfL and using developer contributions, north-south bus routes can be improved. These bus improvements cannot come forward without the proposed development at the Osterley Tesco Site.

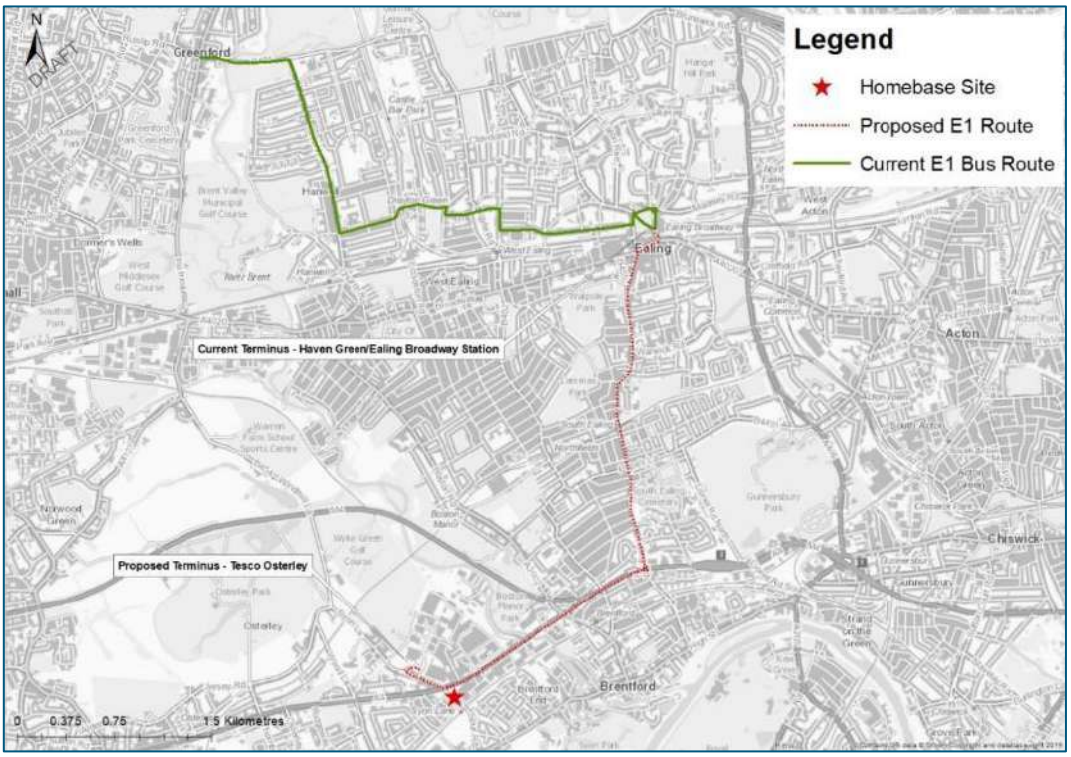
7.3.2 A proposed increase in the capacity of the Piccadilly and District Lines in the next 3 years, and the implementation of the Elizabeth Line, create the opportunity to expand bus links and active travel infrastructure to stations.

7.3.3 The West London section of the Elizabeth Line, which is due to open in the first half of 2022, would offer opportunities for new rail connections from the borough; from Heathrow and Reading in the west, to Central London, Abbey Wood and Shenfield in the East.

7.3.4 An additional E1 service is proposed to serve the area and this service will stop on the A4, in the vicinity of the site. This service would be an extension of the existing service which currently runs between Greenford and Ealing. This service provides an additional 6 buses an hour and A map depicting the re-routing of this service can be seen in **Insert 7.3** and **Appendix J**.

7.3.5 Importantly, the extension of the E1 bus service will directly benefit from the redevelopment of the Tesco, Osterley site , which would, when developed, would deliver new bus stops, bus standing and driver welfare facilities either on site, or within Grant Way. In turn, the redevelopment of Tesco, Osterley is dependent on the redevelopment of Homebase Syon Lane.

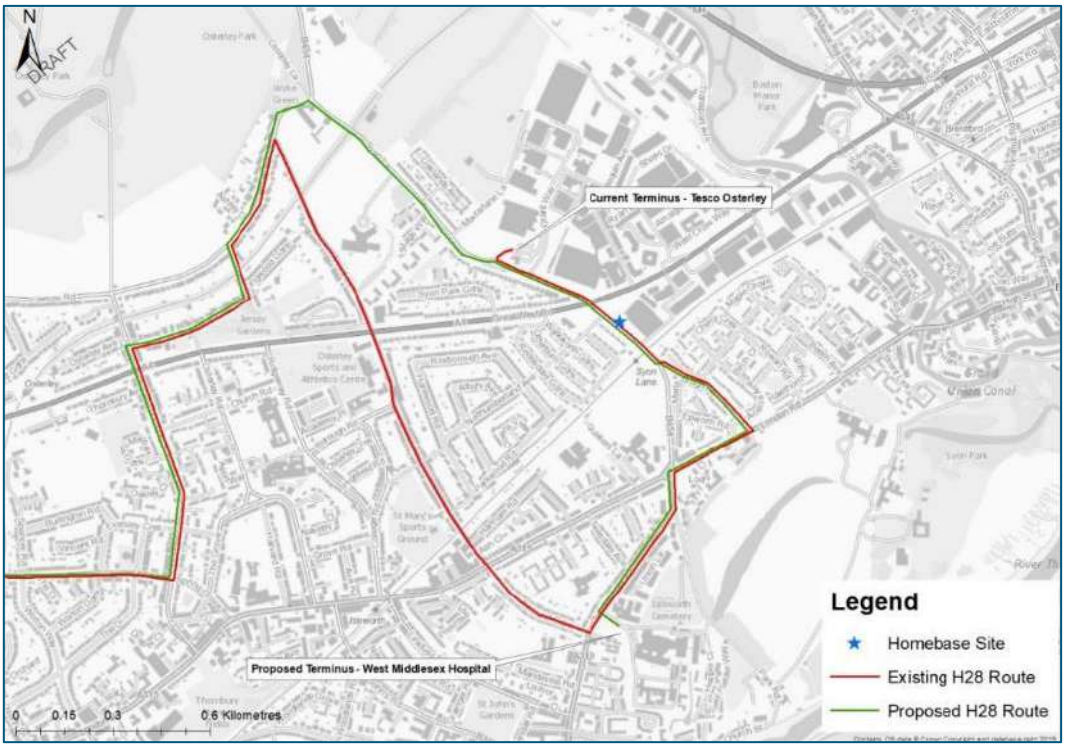
Insert 7.3: Proposed E1 Bus Route



7.3.6 TfL proposed to re-route H28 bus service, making it a more practical school service, servicing Nishkam School and the proposed Bolder Academy more directly. A map of planned route changes can be seen in **Insert 7.4** and **Appendix J**.

7.3.7 In addition to supporting the extension of the E1 bus service, the Tesco Osterley development would deliver new bus stops to serve the H28 route.

Insert 7.4: Proposed H28 Bus Route



7.3.8 Proposals for a Bus Rapid Transit (BRT) scheme have been outlined within the GWC Strategic Transport Study. This scheme would use standard London buses, but would operate a service with high reliability, fast journey time, operating within dedicated road space not shared with private vehicles. This would also allow the extension of the existing 195 and 235 bus services.

7.3.9 BRT option 1 assumes provision of a dedicated two-way bus lane in the centre of Great West Road, between Syon Lane and Gunnersbury Avenue. Option 2 covers the same study area, but bus lanes would be provided in the outside lanes of the Great West Road.

7.4 Proposed Rail Improvements

Southall Rail Link (Golden Mile station at Transport Avenue)

7.4.1 LBH is supporting plans to create a new rail line that would connect a new station in Brentford's 'Golden Mile' on the A4 Great West Road, to Southall Station, in the London Borough of Ealing.

7.4.2 Under the proposals, a new station would be built on the 'Golden Mile's' Transport Avenue (TW8) in Brentford, which would allow passenger services to be restored from Southall Station on an existing line currently used to transport freight. This would:

- Provide a strategic interchange to Transport for London's (TfL) Elizabeth Line. Under the proposals, the borough would have a direct rail link to the Elizabeth Line at Southall Station where onward destinations include Heathrow Airport, Central London, Reading and Shenfield.
- Provide a strategic interchange to the Great Western Mainline. The borough would have a direct rail link to Southall Station which is served by Great Western Railway and provides services to London Paddington, Reading and Swindon and the south-west.

7.4.3 The Southall Rail Link is currently at the options assessment stage. Network Rail is due to report on a preferred option to take forward in autumn 2020.

7.4.4 The council is investigating a number of funding streams to support the proposal including public sector borrowing, the introduction of a workplace car parking levy and developer contributions.

Southern Rail Access to Heathrow Airport

7.4.5 Part of the DfT's long-term plan to develop the UK's rail infrastructure is the delivery of a new rail link that connects the south and south-west more directly to Heathrow Airport.

7.4.6 The LBH support proposals for a new rail line to Heathrow Airport that includes a new station serving Bedfont, connecting to Feltham and London Waterloo.

7.4.7 Direct journey times from London Waterloo to Heathrow T5 would take between 43 and 56 minutes, and journeys from Bedfont to Heathrow T5 would take approximately 9 minutes.

West London Orbital (WLO) Railway – (Overground line expansion)

7.4.8 Proposal 88 of the Mayor's Transport Strategy states that TfL, the West London Alliance Boroughs and Network Rail, will work towards the delivery of a new London Overground 'West London Orbital' line, connecting Hounslow with Cricklewood and Hendon via Old Oak, Neasden and Brent Cross.

7.4.9 The WLO would become a new Overground service creating a route linking Crossrail and HS2. The route would serve Syon Lane and Brentford Stations. LBH also support a proposal to create a rail link that would see passenger services restored to the Dudding Hill Line and the Kew-Acton Link (currently used to transport occasional rail freight/chartered trains), and a new station built at Lionel Road (TW8) in Brentford.

7.4.10 Proposed WLO stations include Hounslow, Isleworth, Syon Lane and Brentford, with potential stations extending to Lionel Road and Kew Bridge. Operations are forecasted to start in 2026 (phase 1) and 2029 (phase 2).

7.4.11 The WLO scheme will result in improved PTALs at the site due to the increased frequency of services. It will also provide further direct and connecting journey opportunities. Public Transport Accessibility will increase around the new station at Lionel Road (currently rated by TfL as 'very low'), leading to an increased level of regeneration and accommodating the predicted population and employment growth in the area.

7.4.12 The provision of new public transport connectivity could deliver benefits to the wider transport system. The WLO could encourage mode shift to active, efficient and sustainable modes which would help to reduce congestion. The scheme would also provide crowding relief on some of the busiest rail lines in the sub-region, such as the Piccadilly line.

London Underground Services

7.4.13 Proposed improvements to the Piccadilly Line's signalling systems, and new stock, would allow reduced journey times, increases in capacity and a higher service frequency. At the time of writing, the Piccadilly Line upgrade has, however, been postponed.

7.4.14 The Elizabeth Line will increase London's rail network capacity by 10 per cent, cutting journey times substantially and relieving congestion on other rail and Tube lines, particularly the Piccadilly

line. It is currently anticipated that the Elizabeth Line will be operational in the first half of 2022.

7.4.15 Four-line modernisation (surface tube lines) – Up to 32 trains per hour on Circle, District, Hammersmith and city and Metropolitan lines. The TfL Business Plan 2019-24 states this will increase service by 33% and will be in service by 2024.

7.5 Improved Public Transport Accessibility

7.5.1 As a result of the emerging transport connectivity in the local area, the PTAL rating of the site will increase.

7.5.2 The proposed changes would increase the PTAL score for the site and this is confirmed in the anticipated future PTAL levels summarised in the Great West Corridor Strategic Transport Study, Full Report (May 2019) – this is a joint LBH and TfL document. In discussing both bus and rail public transport capacity improvement options, the report says that *"both packages are effective in reducing bus and rail crowding levels and in improving public transport connectivity and accessibility levels (PTAL) in the GWC area. The level of increase in PTAL achieved with each package is very similar in the central and western sectors - levels increase from 2 to 3 in the 2015 base year to 3 to 4 with both intervention packages."*

7.5.3 The report suggests the following changes to PTAL levels in the area would take place, based on bus and rail improvement packages (dependent on the measures in the packages coming forward.)

Insert 7.5: PTAL Level Upgrade Plan

Figure 36: PTAL Site Locations

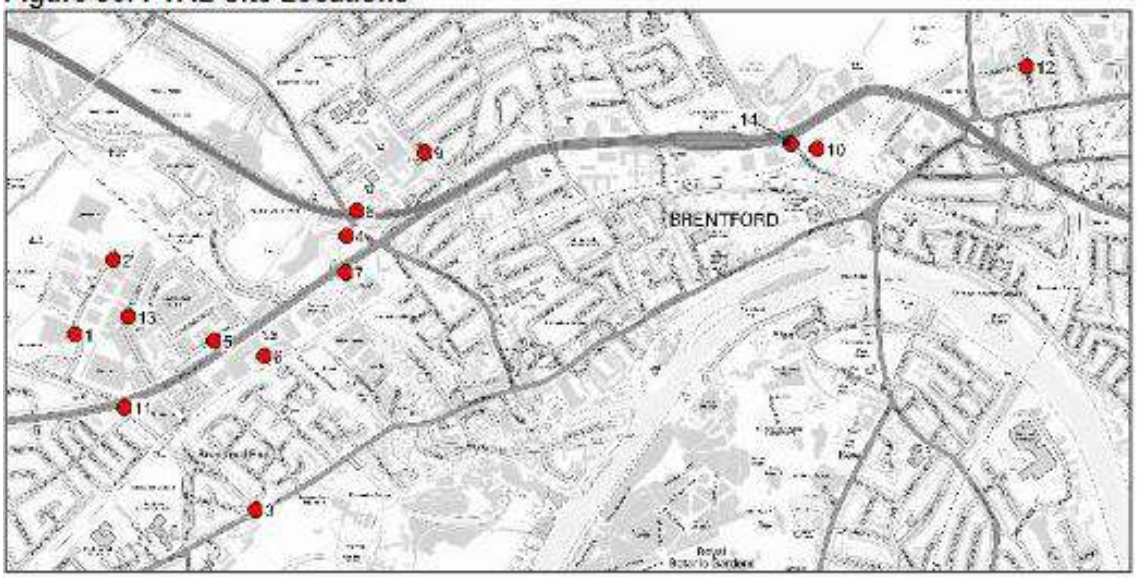


Table 13: Impact of intervention packages on PTAL at selected site locations

Site ID	Site Name	2015 Base	Package 1 (Bus)	Package 2 (Rail)
Eastern sector				
10	Lionel Road station	3	3	5
12	Power Road	4	4	5
14	GW Rd/Lionel Rd South	2	3	5
Central sector				
4	GSK	2	4	4
7	Riverbank Way	3	4	4
8	University of West London	3	4	4
9	Junction of Windmill Rd and Reynard Way	3	4	4
Western sector				
1	Tesco	2	3	3
2	Sky Campus	1b	3	3
3	Site 3 - Syon Lane	3	4	4
5	West Cross	2	4	4
6	Safestore site	2	5	5
11	Syon Lane/GWR	2	4	4
13	Harlequin Ave	1b	3	3

7.5.4 The table and plan above infer a future PTAL level of 3 for the Tesco site. However, we are aware that bus improvements are to be implemented (E1 and H28) and the rail service improvement also has potential to come forward. The combined bus and rail improvements could further inflate PTAL rates for the Tesco site above those referred to above.

7.5.5 Therefore, this should be considered a conservative estimate of prospective PTAL improvement, as other emerging public transport improvements which do not have details of hourly service figures have not been included in this calculation.

8 Existing Travel Patterns

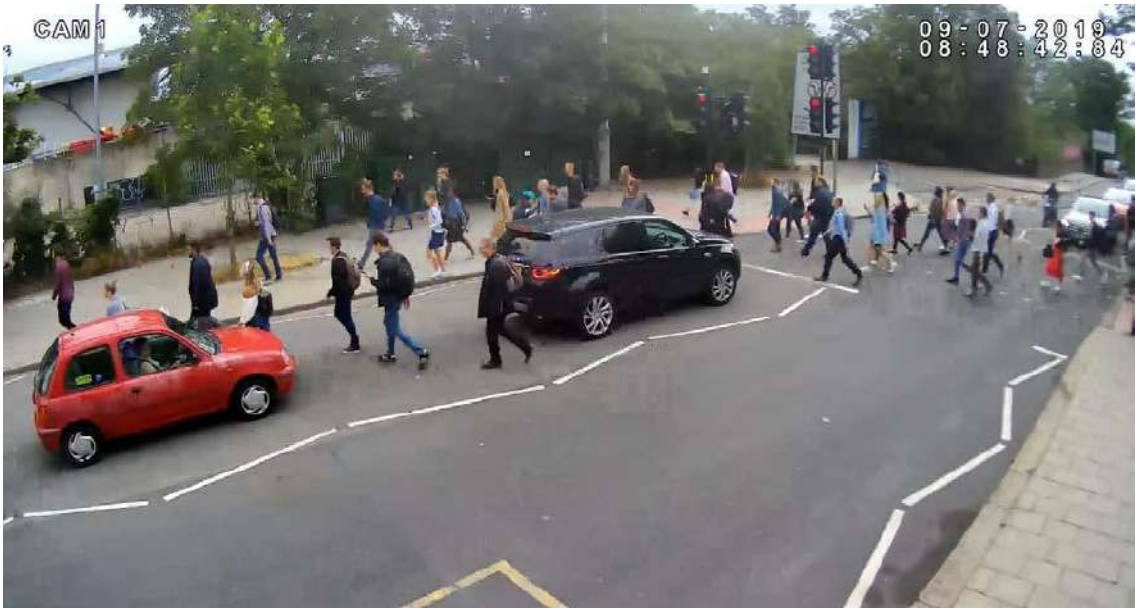
8.1 Pedestrian Demand

8.1.1 Pedestrian surveys were undertaken in the vicinity of the site on Tuesday 9th July 2019 between the hours of 07:00-10:00 and 15:00-19:00. The results of the surveys have been summarised and assessed in order to gain an appreciation of the existing peak hour pedestrian footfall. The survey methodology and survey outputs are provided in **Appendix K**.

Syon Lane (Western Frontage)

8.1.2 In and around the weekday morning peak hour, the surveys identify platoons of pedestrians crossing Syon Lane, in the vicinity of Syon Lane station. It is understood that the majority of these platoons are workers alighting trains at the station walking towards the Sky Campus. Peak demand takes place from 08:45 to 09:00, when 346 pedestrians were observed to cross Syon Lane from the direction of the station and walk northbound, on the eastern side of the Syon Lane carriageway, heading towards the Homebase site access and the A4. **Insert 8.1** depicts the extent of pedestrian footfall during the AM peak across the pedestrian crossing adjacent to Syon Lane Station.

Insert 8.1: Signalised Crossing Pedestrian Demand, South of the Site Access - AM Peak



8.1.3 In the opposite direction, peak pedestrian movements occur in the early evening from 17:45 to 18:00, at which time 139 pedestrians cross the carriageway routing towards Syon Lane station.

8.1.4 Comparatively few pedestrians cross the carriageway at the existing staggered signal control crossing in the vicinity of Northumberland Avenue. From 07:00 to 10:00 (a 3-hour period) on a weekday morning, 35 pedestrians crossed the Syon Lane carriageway in this location. From 16:00 to 19:00, 137 pedestrians crossed the carriageway in this location.

Gillette Corner

8.1.5 The underpass, beneath the A4, is observed to be well used. On a weekday morning, from 08:45 to 09:00 (15 minute period), 206 pedestrians were observed to exit the underpass on the northern side of the A4. In the same time period, nine pedestrians routed across the A4 via the surface crossing, located on the western side of the A4/ Syon Lane junction.

Great West Road (Northern Frontage)

8.1.6 The Toucan crossing situated at the north-western corner, connecting the site with Harlequin Avenue has been observed to accommodate 173 northbound pedestrian movements and one southbound movement during the 08:45-09:00 peak period of demand.

8.1.7 In the afternoon, the 15-minute periods of 17:30-17:45 and 17:45-18:00 are observed to experience the largest flows of 109 and 107 southbound, and 10 and seven northbound movements, respectively.

8.2 Homebase Development Traffic Attraction

8.2.1 In order to obtain an understanding of the traffic volumes and movement profile in the vicinity of the site, traffic surveys have been undertaken at the site from Wednesday 3rd July 2019 to Tuesday 9th July 2019. A summary of the survey outputs is provided in **Appendix L**. **Table 8.1** provides a summary of total traffic movements observed to and from the Homebase car park.

8.2.2 Over the course of the week-long survey, it was established that between 1% and 2% of vehicle movements could be described as a Heavy Goods Vehicle (HGV) movement.

8.2.3 In terms of parking demand, the following maximum parking accumulations have been identified from the surveys. Parking survey outputs are provided in full at **Appendix L**.

- Thursday 4th July 2019 – **82 cars** at 12:15
- Saturday 6th July – **63 cars** at 09:45
- Tuesday 9th July – **97 cars** at 14:15

8.2.4 As a result of the site's redevelopment, existing Homebase trips would be removed from the local highway network.

Royal HaskoningDHV

Table 8.1: Homebase Traffic Attraction

Time Period	Wed 3rd July 2019		Thurs 4th July 2019		Fri 5th July 2019		Sat 6th July 2019		Sun 7th July 2019		Mon 8th July 2019		Tues 9th July 2019	
	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs	Arrivals	Arrivals	Departs	Arrivals
00:00-01:00	0	0	0	1	1	1	0	0	1	1	0	0	1	1
01:00-02:00	0	0	2	2	0	0	0	0	0	0	1	1	0	0
02:00-03:00	1	0	0	0	0	0	0	0	0	0	0	0	1	1
03:00-04:00	0	1	1	1	1	1	1	1	0	0	0	0	0	0
04:00-05:00	0	0	1	1	1	1	0	0	1	1	0	0	0	0
05:00-06:00	0	0	0	0	0	0	2	0	1	1	1	0	2	1
06:00-07:00	3	1	2	3	0	1	2	3	0	0	5	2	6	5
07:00-08:00	14	9	13	6	6	8	6	2	1	1	14	12	21	14
*07:45-08:45**	*30*	*17*	*23*	*13*	*28*	*19*	*44*	*23*	*1*	*2*	*24*	*18*	*32*	*22*
08:00-09:00	27	19	23	15	29	22	54	31	3	1	20	14	28	25
09:00-10:00	52	40	44	35	47	33	77	41	14	6	72	52	58	36
10:00-11:00	69	57	75	60	80	64	75	84	67	57	65	66	70	62
11:00-12:00	78	70	77	78	80	82	104	102	90	82	67	61	83	80
12:00-13:00	74	85	89	89	86	87	90	110	115	100	81	88	81	86
13:00-14:00	79	81	79	85	67	77	92	99	111	104	85	67	76	74
14:00-15:00	73	75	74	81	76	67	101	98	134	126	80	83	78	72
15:00-16:00	69	73	60	65	72	75	90	94	123	142	76	78	62	64
16:00-17:00	64	66	52	55	55	54	82	89	32	68	61	72	69	81
17:00-18:00	60	56	67	51	56	64	64	73	8	12	67	69	53	57
18:00-19:00	54	70	54	65	63	71	61	61	6	7	67	72	49	59
19:00-20:00	45	55	40	57	39	46	31	39	3	3	48	69	43	54
20:00-21:00	13	17	15	17	16	22	10	12	7	7	11	15	8	15
21:00-22:00	2	2	6	7	8	7	3	1	2	3	4	4	6	5
22:00-23:00	0	0	0	0	4	6	2	3	1	1	2	1	5	5
23:00-24:00	5	4	1	1	4	4	0	0	1	1	0	1	1	2
23:00 - 07:00	9	6	7	9	7	8	5	4	4	4	7	4	11	10
07:00 - 19:00	713	701	707	685	717	704	896	884	704	706	755	734	728	710
07:00 - 23:00	773	775	768	766	784	785	942	939	717	720	820	823	790	789
06:00 – 24:00	781	780	771	770	788	790	944	942	718	721	825	826	797	796
24-Hour	782	781	775	775	791	793	947	943	721	724	827	827	801	799

**AM Weekday Network Peak*

8.3 Tesco Development Traffic Attraction

8.3.1 In addition to carrying out surveys at the existing Homebase store, surveys have been undertaken at the existing Tesco Osterley site. These surveys provide guidance on the future travel demand to the new Tesco store proposed for the Homebase site. **Table 8.2** provides a summary of total traffic movements observed to and from the Tesco customer car park. This data set, therefore, excludes buses that access the site but do not access the Tesco car park and excludes traffic that visits the Tesco petrol filling station without visiting the Tesco store.

8.3.2 While Homebase has a relatively low traffic attraction in and around the traditional weekday morning peak period of travel demand, traffic attraction to the Tesco store is at a higher level for the majority of the day.

8.3.3 As part of the development proposals, Tesco commissioned parking accumulation surveys in

November/December of 2018. RHDHV, on behalf of St Edward Limited, commissioned further parking surveys in June/July. A comparison of the outputs can be seen below. Existing parking demand for the Tesco Osterley car park is summarised below. Parking survey outputs are provided in full at **Appendix L**.

- Saturday 29th June 2019 – **420 cars** at 10:30
- Thursday 4th July 2019 – **414 cars** at 11:30
- Saturday 6th July 2019 – **415 cars** at 14:30
- Tuesday 9th July 2019 – **499 cars** at 11:15

8.3.4 For comparison purposes, surveyed parking accumulations counted at Tesco Osterley in November 2018 are were as follows:

- Tuesday 27th November 2018 – **469 cars** at 11:30
- Saturday 1st December 2018 – **495 cars** at 15:00

Table 8.2: Tesco Osterley Traffic Attraction

Time Period	Wed 3rd July 2019		Thurs 4th July 2019		Fri 5th July 2019		Sat 6th July 2019		Sun 7th July 2019		Mon 8th July 2019		Tues 9th July 2019	
	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs	Arrivals	Arrivals	Departs	Arrivals
00:00-01:00	0	0	1	0	2	2	0	1	0	0	0	0	0	0
01:00-02:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0
02:00-03:00	4	0	8	5	4	1	2	1	0	0	4	0	4	0
03:00-04:00	6	4	0	0	2	2	0	0	3	3	4	1	1	0
04:00-05:00	6	7	6	6	4	1	3	3	4	2	5	8	6	5
05:00-06:00	10	4	13	5	10	7	15	4	3	0	11	6	9	3
06:00-07:00	32	22	37	15	40	21	39	10	10	6	33	17	36	13
07:00-08:00	189	116	152	96	134	96	160	92	17	9	172	123	148	95
*07:45-08:45**	*252*	*198*	*230*	*165*	*252*	*176*	*244*	*172*	*15*	*13*	*236*	*170*	*252*	*179*
08:00-09:00	253	209	249	177	287	197	269	179	15	15	277	175	282	183
09:00-10:00	431	223	387	227	439	284	378	312	206	22	426	237	407	212
10:00-11:00	346	310	383	330	380	355	489	393	517	330	383	295	368	280
11:00-12:00	359	328	392	368	437	426	522	507	555	535	375	402	354	370
12:00-13:00	414	476	407	476	430	452	503	496	587	588	444	501	430	484
13:00-14:00	404	426	386	385	445	442	481	481	579	579	416	466	403	445
14:00-15:00	398	360	376	391	402	425	489	484	533	563	436	394	413	389
15:00-16:00	360	433	394	396	357	382	417	472	468	600	375	448	376	412
16:00-17:00	358	407	366	428	377	418	413	420	70	305	399	421	349	435
17:00-18:00	380	383	338	357	429	398	382	425	10	24	383	418	381	386
18:00-19:00	351	428	357	365	385	412	346	400	0	2	422	406	345	410
19:00-20:00	343	353	324	353	296	349	319	358	1	1	348	421	328	344
20:00-21:00	271	326	302	331	313	350	247	292	2	1	236	316	222	281
21:00-22:00	160	230	174	278	172	260	134	243	19	13	147	190	165	228
22:00-23:00	17	74	23	79	16	78	15	52	7	5	17	69	15	57
23:00-24:00	0	0	0	0	2	1	1	3	3	2	0	0	1	0
23:00 - 07:00	58	37	65	31	64	35	60	23	23	13	57	32	57	21
07:00 - 19:00	4243	4099	4187	3996	4502	4287	4849	4661	3557	3572	4508	4286	4256	4101
07:00 - 23:00	5034	5082	5010	5037	5299	5324	5564	5606	3586	3592	5256	5282	4986	5011
06:00 – 24:00	5066	5104	5047	5052	5341	5346	5604	5619	3599	3600	5289	5299	5023	5024
24-Hour	5092	5119	5075	5068	5363	5359	5624	5629	3609	3605	5313	5314	5043	5032

**AM Weekday Network Peak*

8.3.5 **Table 8.2** includes traffic that would visit the Tesco car park before or after visiting the Tesco PFS. However, surveys of the PFS access, undertaken on Saturday 6th July and Tuesday 9th July 2019, identify that the PFS attracts independent traffic movements, not visiting the Tesco store. The development scheme would not re-provide a PFS on the Homebase site and therefore it can be expected that a proportion of these existing 'PFS only' trips would be removed from the local highway network as a result of the two linked development projects.

8.3.6 PFS only trips are summarised in **Table 8.3**.

Table 8.3: Tesco Osterley – PFS Only Traffic Attraction

Day/ Time Period		Arrivals	Departures	Total
Weekday	07:00-08:00	86	79	165
	07:45-08:45	*79*	*71*	*150*
	08:00-09:00	79	80	159
	09:00-10:00	86	77	163
	16:00-17:00	97	85	182
	17:00-18:00	91	92	183
	18:00-19:00	91	85	176
Saturday	10:00-11:00	104	112	216
	11:00-12:00	116	102	218
	12:00-13:00	87	86	173
	13:00-14:00	111	103	214
	14:00-15:00	104	102	206
	15:00-16:00	116	96	212

8.3.7 In addition to traffic surveys, a multi-modal survey has been undertaken for the existing Tesco, Osterley store. The results are presented in full in **Appendix X**, and **Table 8.4** provides a summary of the results.

Table 8.4: Tesco Osterley – Multi-modal Trip Attraction (Tesco Foodstore)

Mode of Travel	Saturday 6th July 2020			Tuesday 9th July 2020		
	Arrivals	Departures	Modal Split	Arrivals	Departures	Modal Split
Pedestrian	936	821	10.9%	1428	1298	18.8%
Cycle	46	55	0.6%	44	42	0.6%
Bus (H28)	104	100	1.3%	82	79	1.1%
Vehicle Driver	4849	4661	58.8%	4256	4101	57.8%
Vehicle Passenger	2295	2253	28.1%	1589	1570	21.7%
Motorcycle	27	29	0.3%	20	26	0.3%
Total	**8257**	**7919**	**100%**	**7419**	**7116**	**100%**

8.4 Homebase and Tesco Traffic Distribution

8.4.1 The traffic distribution for Homebase and Tesco traffic has been obtained from traffic (registration plate) surveys commissioned by the applicant.

8.4.2 For the traffic periods reviewed in the preparation of this report, between 66% and 75% of Tesco traffic approaches the site from the south, from the direction of the A4 Great West Road. Similarly, for the Homebase site, between 73% and 78% of site traffic approaches the side from the north, from the direction of the A4, Great West Road.

8.5 On-street Car Parking Demand

8.5.1 Lambeth style car parking beat surveys have been undertaken to establish on-street parking demand, in the vicinity of the Homebase site. For an approximate 200m walk distance from the sites, on-street parking demand data has been obtained for all local streets. The kerbside parking beat surveys were carried out at Wednesday 3rd and Thursday 4th July 2019. As required by the Lambeth methodology, the surveys were undertaken overnight, at times when resident car parking can be expected to be at its peak. The survey data including on-street car parking restrictions plan is included in **Appendix P**.

8.5.2 **Table 8.5** presents the car parking capacity for local streets in the study area, located to the south of the A4, Great West Road. **Table 8.6** presents the observed parking demand and **Table 8.7** presents the parking stress (% occupation). This analysis excludes the B454 Syon Way, which is considered separately beneath these tables.

Table 8.5: On-street Parking Capacity (Length of On-Street Parking / Maximum Car Parking Capacity)

Street	Syon Lane		Brambles Close		B454 Spur Road		Marlborough Road		Northumberland Avenue		Hexham Gardens		Rothbury Gardens		Redesdale Gardens		Warkworth Gardens		Otterburn Gardens		All Streets	
Restriction /	Length (m)	Capacity (Veh)	Length (m)	Capacity (Veh)	Length (m)	Capacity (Veh)	Length (m)	Capacity (Veh)	Length (m)	Capacity (Veh)	Length (m)	Capacity (Veh)	Length (m)	Capacity (Veh)	Length (m)	Capacity (Veh)	Length (m)	Capacity (Veh)	Length (m)	Capacity (Veh)	Length (m)	Capacity (Veh)
Red Route Clearway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
Zigzag Lines	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
Pedestrian Crossing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
Double Yellow	-	-	11	1	-	-	2.7	-	100	14	13	2	16	2	63	9	54	8	40	6	**0**	**0**
Bus Stop / Bus Stand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
Unrestricted	164	32	128	22	496	98	261	44	-	-	-	-	-	-	-	-	1.5	-	-	-	**1049**	**196**
Narrow	164	32	147	27	-	-	212	42	-	-	137	26	199	37	341	62	235	36	242	39	**1677**	**301**
Drop Kerb	-	-	31	2	-	-	31	2	70	10	5	-	44	7	33	4	48	7	17	3	**274**	**35**
Single Yellow	-	-	-	-	-	-	-	-	20	2	-	-	15	2	10	1	19	3	16	3	**80.5**	**11**
White Line / Drop Kerb	-	-	11	1	-	-	5.4	1	5.6	1	-	-	-	-	-	-	-	-	5.5	1	**27.4**	**4**
Parking Bay	-	-	-	-	-	-	65	12	-	-	-	-	-	-	-	-	-	-	-	-	**65**	**12**
Disabled Bay	-	-	-	-	-	-	26	4	5.4	1	-	-	-	-	-	-	-	-	6.1	1	**37.4**	**6**
Resident Permit Holders	-	-	-	-	-	-	-	-	154	26	103	20	145	26	261	49	193	36	164	31	**1020**	**188**
Red Route Parking Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
Double Red	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
Single Red	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
Total	**328**	**64**	**328**	**53**	**496**	**98**	**604**	**105**	**356**	**54**	**259**	**48**	**419**	**74**	**708**	**125**	**551**	**90**	**490**	**84**	**4230**	**753**

Table 8.6: On-street Parking Demand (Number of cars parked during survey)

Street	Syon Lane		Brambles Close		B454 Spur Road		Marlborough Road		Northumberland Avenue		Hexham Gardens		Rothbury Gardens		Redesdale Gardens		Warkworth Gardens		Otterburn Gardens		All Streets	
Restriction / Survey Day (T- Tues, W – Wed)	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W
Red Route Clearway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Zigzag Lines	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Pedestrian Crossing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Double Yellow	-	-	0	0	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus Stop / Bus Stand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Unrestricted	0	0	19	21	0	0	25	25	-	-	-	-	-	-	-	-	-	-	-	-	44	46
Narrow	0	0	1	1	-	-	0	0	-	-	0	0	0	0	1	0	1	2	2	1	5	4
Drop Kerb	-	-	0	0	-	-	1	1	0	0	-	-	0	0	0	0	0	0	0	0	1	1
Single Yellow	-	-	-	-	-	-	-	-	0	0	-	-	0	0	0	0	2	1	1	1	3	2
White Line / Drop Kerb	-	-	0	0	-	-	0	0	0	0	-	-	-	-	-	-	-	-	0	0	0	0
Parking Bay	-	-	-	-	-	-	6	5	-	-	-	-	-	-	-	-	-	-	-	-	6	5
Disabled Bay	-	-	-	-	-	-	4	4	0	0	-	-	-	-	-	-	-	-	1	1	5	5
Resident Permit Holders	-	-	-	-	-	-	-	-	22	20	17	15	19	18	42	41	30	29	25	26	155	149
Red Route Parking Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Double Red	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Single Red	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Total	**0**	**0**	**20**	**22**	**0**	**0**	**36**	**35**	**22**	**20**	**17**	**15**	**19**	**18**	**43**	**41**	**33**	**32**	**29**	**29**	**219**	**212**

Table 8.7: On-street Parking Occupancy (Street Stress % during survey)

Street	Syon Lane		Brambles Close		B454 Spur Road		Marlborough Road		Northumberland Avenue		Hexham Gardens		Rothbury Gardens		Redesdale Gardens		Warkworth Gardens		Otterburn Gardens		All Streets	
Restriction / Survey Day (T- Tues, W – Wed)	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W
Red Route Clearway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zigzag Lines	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrian Crossing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Double Yellow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bus Stop / Bus Stand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unrestricted	0%	0%	86%	95%	0%	0%	57%	57%	-	-	-	-	-	-	-	-	-	-	-	-	22%	23%
Narrow	0%	0%	4%	4%	-	-	0%	0%	-	-	0%	0%	0%	0%	2%	0%	3%	6%	5%	3%	2%	1%
Drop Kerb	-	-	0%	0%	-	-	50%	50%	0%	0%	-	-	0%	0%	0%	0%	0%	0%	0%	0%	3%	3%
Single Yellow	-	-	-	-	-	-	-	-	0%	0%	-	-	0%	0%	0%	0%	67%	33%	33%	33%	27%	18%
White Line / Drop Kerb	-	-	0%	0%	-	-	0%	0%	0%	0%	-	-	-	-	-	-	-	-	0%	0%	0%	0%
Parking Bay	-	-	-	-	-	-	50%	42%	-	-	-	-	-	-	-	-	-	-	-	-	50%	42%
Disabled Bay	-	-	-	-	-	-	100%	100%	0%	0%	-	-	-	-	-	-	-	-	100%	100%	83%	83%
Resident Permit Holders	-	-	-	-	-	-	-	-	85%	77%	75%	75%	73%	69%	86%	84%	83%	81%	81%	84%	82%	79%
Red Route Parking Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Double Red	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Red	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

8.5.3 Resident permit holder parking bays have been observed to operate with a parking stress of 79% to 82%. It can be concluded that the surveys demonstrate a 'moderate' level of kerbside parking stress, indicating some available spare capacity of on-street visitor parking associated with the residential units. A detailed analysis of proposed measures to control parking at the development site can be found in **Section 0**.

8.6 Summary

8.6.1 This section has provided a study of existing pedestrian movements on the local highway network which has been used to inform the design of the proposed development, both in terms of access to the proposed development itself (proposed new signal junction replacing the old Homebase priority control access on Syon Lane), and the associated proposed off-site highway improvements. This section also provides a study of existing traffic movements to the existing Osterley Tesco and the Homebase sites which have been used later in this report (Sections 10 and 11) to assess / model the nett changes in traffic on the local highway network resulting from the proposed development. A study of existing on street car parking stress has also been undertaken within this section which shows a moderate level of kerbside parking stress; however the development proposals are not likely to impact on this. Car parking for the proposed development will be provided in line with London Plan standards.

9 Development Description

9.1 Overview

9.1.1 The proposed development forms the topic of a planning application that seeks permission for the following:

"The demolition of existing building and car park and erection of buildings to provide residential units, a replacement retail foodstore, with additional commercial, business and service space, and a flexible community space, and ancillary plant, access, servicing and car parking, landscaping and associated works"

9.1.2 Specifically, the application includes:

- Delivery of 473 high quality homes;
- 38% affordable housing (on a habitable room basis);
- A new and modern Tesco retail store of circa 10,550 sqm (GIA);
- Community space of 200 sqm;
- 137 sqm (GIA) of flexible commercial, business and service space;
- 400 retail car parking spaces;
- 100 residential car parking spaces;
- 3 residential visitor car parking spaces and 2 car club spaces;
- 204 retail cycle parking spaces;
- 896 residential cycle parking spaces;
- Building heights include a four-storey podium with blocks ranging up to seventeen storeys;
- Communal residential amenity space with biodiverse podium gardens including open space and children's play space;
- New active frontages and improved, safer public realm along Syon Lane and the Great West Road;
- Dedicated new pedestrian and cycle friendly 'clean air' route provided between Syon Lane Station and the Great West Road via Syon Gate Way and new eastern street, Syon Gate Lane.

9.1.3 The development's architectural plans are provided in **Appendix N**.

9.1.4 It is noted that the existing Tesco store, on the Tesco, Osterley site, is 11,582 sq.m GIA, and is therefore circa 1,000sq.m larger than the proposed Tesco store. While the size of the replacement store on the Homebase, Brentford site is smaller than existing, the assessment contained in this document does not discount trips as a result of the floor area reduction, and instead reassigns existing Tesco trips to the new site. The assessment contained in this document can therefore be considered a worst-case assessment of future Tesco travel demand.

9.1.5 The scheme has been designed in accordance with Healthy Streets principles, prioritising pedestrian and cycle movement (more details regarding these principles are provided in **Section 3**). Public realm improvements are proposed at the Syon Lane and the A4 Great West Road frontages of the site, whilst improving pedestrian / cycle infrastructure and creating a new route

along the southern side of the site (Syon Gate Way) and the eastern side of the site (Syon Gate Lane). The proposed improvements incorporate enhancements to existing cycle infrastructure in the vicinity of the site by providing a continuous cycle lane link across the northern frontage of the site. This is in line with the proposed Syon Lane to Boston Manor Road Cycle Track (refer to **Section 7**).

9.2 Proposed Site Access Strategy

9.2.1 The proposed development has been developed to consider access opportunities at all frontages, to create active streetscape with natural surveillance. The focal point for the Tesco store access is provided at the north-western corner of the site, adjacent to Gillette Corner. The prominent retail site frontages would be on Syon Lane and Great West Road.

9.2.2 Syon Gate Way provides a quieter and more controlled environment for servicing access, whilst the formation of an emergency access route at the eastern perimeter of the site would allow for further permeability within the adjacencies of the proposed development.

9.2.3 The key access functions of the site frontages are summarised as follows:

- Syon Lane (western frontage):
  a. Car park vehicular access;
  b. Tesco Store pedestrian access;
  c. Pedestrian access to three residential cores);
  d. Café access (via Tesco entrance);
  e. Retail unit pedestrian access; and
  f. Concierge.
- Great West Road (northern frontage):
  a. Tesco Store pedestrian access (northern approach);
  b. Pedestrian access to two residential cores; and
  c. Means of escape.
- Syon Gate Way (southern frontage):
  a. On-site Tesco service yard vehicular access;
  b. Pedestrian access to a residential core;
  c. Refuse collection; and
  d. Basement ramped access.
- Proposed Syon Gate Lane (eastern frontage):
  a. Pedestrian access to two residential cores; and
  b. Means of escape.

Pedestrian Access

9.2.4 The main focal point for pedestrian access to the site will be at the north-western frontage of the site at the junction of Syon Lane and Great West Road (Gillette Corner), at the entrance to the Tesco store.

9.2.5 For site residents, however, the main pedestrian access route to the site will vary depending on their access core. Pedestrian access routes will include the proposed clean air route on the southern and south-eastern sides of the development (see **Section 9.3** for more details).

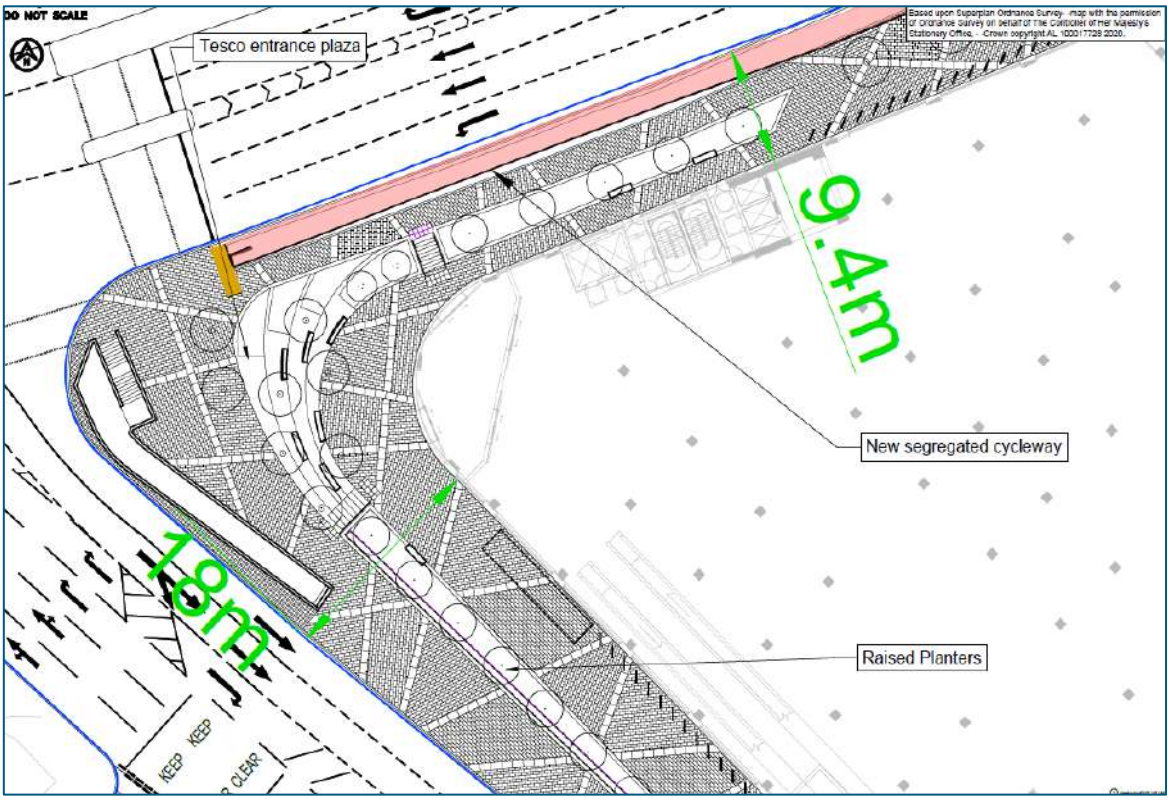
9.2.6 Stepped and ramped approaches would be provided on both the Syon Lane and Great West Road frontages, and these would route to the Tesco customer access. Planters will define the route to

the store door and would create parallel pedestrian and cycle routes that separate cyclists from customers as they enter and exit the building.

9.2.7 Pedestrians accessing and passing the site and will benefit from a planting scheme along the site's Great West Road and Syon Lane frontages.

9.2.8 **Insert 9.1** details the public realm improvements proposed on the north-west corner of the site. The design presented in **Insert 9.1** retains the pedestrian underpass beneath the A4 and illustrates a surface level controlled crossing on the eastern arm of the A4. Should the underpass be retained and the surface level crossing provided, the capacity of the junction to accommodate pedestrian demand from Syon Lane station would increase, significantly. The final scheme design for the Gillette Corner junction is subject to the review of the design optioneering exercise, presented in **Section 11**.

Insert 9.1: Public Realm Improvements at the Tesco Customer Access



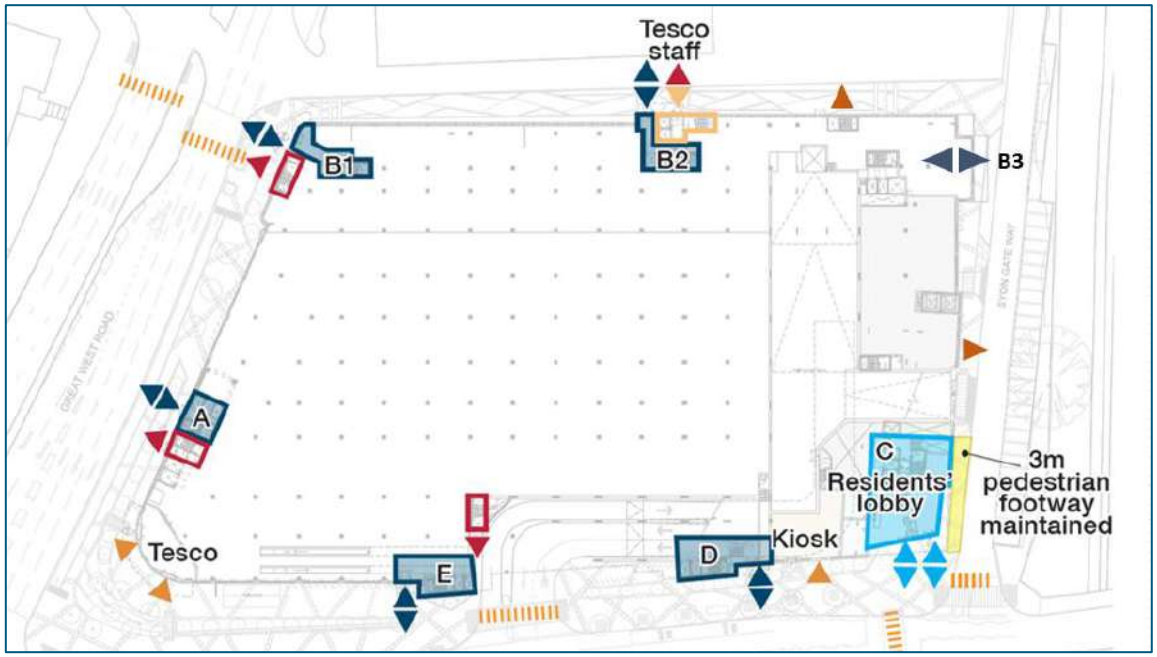
9.2.9 Pedestrian access routes to the proposed residential cores will be provided at all four frontages, distributing pedestrian access/egress patterns across the peripheries of the site (**Insert 9.2**):

- Syon Lane (western frontage):
  a. Pedestrian Core C north of Syon Gate Way;
  b. Pedestrian Core D south of vehicle ramp;
  c. Pedestrian Core E north of the vehicle ramp.
- Great West Road (northern frontage):
  a. Pedestrian Core A east of the Tesco store access;
  b. Pedestrian Core B1 east of the Tesco store access.
- Syon Gate Way (southern frontage):
  a. Pedestrian Core B3 east of the service yard access

- Syon Gate Lane (eastern frontage):
  a. Pedestrian Core B2

9.2.10 **Insert 9.2** details the location of the site's residential lobby, located on the corner of Syon Lane and Syon Gate Way.

Insert 9.2: Residential Site Access



9.2.11 The development's vehicular access to the car parking area will be (broadly) taken from the location of the existing Homebase site access junction, from Syon Lane. A two-way ramp will serve a two-storey car park. It is proposed that the junction of main vehicular access with Syon Lane will take the form of a three-arm signalised junction.

9.2.12 It is proposed that the Tesco store would be provided with 400 customer car parking spaces, with the residential development provided with 105 car parking spaces (including 2 dedicated car club spaces and 3 visitor parking spaces). A taxi drop off / pick up facility will be located within the car park at Level 1 close to the Tesco travellators / foyer area.

9.2.13 Proposed on-site servicing facilities are located at the southern perimeter of the site. Additionally, a servicing layby is proposed at the site interface with Syon Gate Way.

Vehicular Site Access

9.2.14 Retaining vehicular access from Syon Lane, from a point close to the location of the existing Homebase site access, is considered to be the best location for the site in terms of highway design.

9.2.15 Locating the access as proposed (circa 7m to the south of the existing Homebase access, centre to centre) means that there is a degree of separation from the strategic road network (the A4, Great West Road) and a turning lane can be incorporated into the site access junction for traffic approaching Tesco from the south. The access does not create a crossroads with Northumberland Avenue and the access junction can (if required) incorporate the existing Syon Lane staggered pedestrian crossing.

9.2.16 The need to accommodate the Syon Lane staggered pedestrian crossing into the site access junction design is dependent on the preferred Design Option for the Gillette Corner junction, which could provide an alternative crossing location, subject the agreement of LBH and TfL (refer to **Section 11**).

9.2.17 **Insert 9.3** details the proposed vehicular site access junction (including the Syon Lane staggered crossing). The arrangement would retain the kerb line on the eastern side of Syon Lane and amend the kerb to the west. In some places the kerb would build out and in some places the kerb would pull in. The proposed kerb line is highlighted in blue in the image below, with existing in green.

Insert 9.3: Proposed Syon Lane Vehicular Site Access

9.2.18 The access junction would be controlled by traffic signals and would retain two lanes of traffic in both north and southbound directions. The junction would include a turning lane for traffic approaching Tesco from the south.

9.2.19 The access would be delivered while retaining Syon Lane bus stops in their existing locations. The existing Pelican crossing, located close to Syon Lane Station would also be retained, as existing.

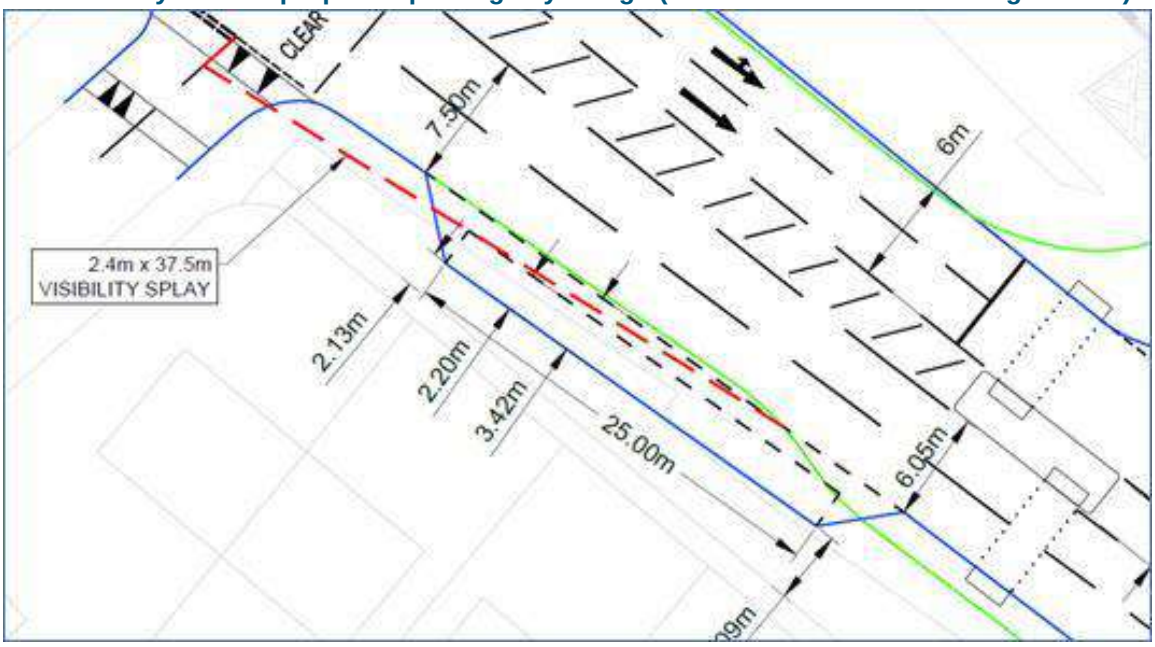
9.2.20 With reference to the proposed site access solutions, a Stage 1 Road Safety Audit (RSA) has been undertaken. This is provided in **Appendix Y** of this document alongside the Designer's Response to the Audit.

9.2.21 As a consequence of introducing traffic signal control at the site access junction, the on-street car parking arrangement in the vicinity of the access (on the western side of Syon Lane) would be required to change. It is proposed that the existing single car parking bay would be split into two areas, located either side of the junction.

9.2.22 The Stage 1 RSA recommended that any relocated car parking layby on Syon Lane was located

away from the car driver visibility splay for Northumberland Avenue. This has been achieved as illustrated in **Insert 9.4**.

Insert 9.4: Syon Lane proposed parking bay design (amended as a result of Stage 1 RSA)



9.2.23 In view of the notable levels of pedestrian movement observed across the site access on Syon Lane (discussed in **Section 8**), and in accordance with the requirements of the Healthy Streets approach, the design of the proposed site access has been developed with due consideration of safe pedestrian crossing to provide suitable pedestrian capacity for users of all abilities.

9.2.24 During pre-application discussions with LBH, the local authority expressed a preference for the provision of a direct 'straight-across' pedestrian facility at the site access arm of the junction and this is therefore incorporated into the design. The straight across signalised crossing design was considered within the Stage 1 RSA and no 'problems' were raised with reference to this facility.

Connectivity between Homebase Site and Tesco, Osterley Site

9.2.25 The development will be connected to the current Tesco, Osterley site and Syon Lane station with improved pedestrian and cycle infrastructure.

9.2.26 The Bolder Academy development (planning reference: 01106/W/P9) will be accessed from MacFarlane Lane and will be operational from September 2021. Highway works are proposed at the Tesco, Osterley site to support the Academy's development and these include the provision of an improved pedestrian and cycle connection on Syon Lane to the north of the A4.

9.2.27 The Tesco, Osterley site applicant proposes to fund a further improvement to the Bolder Academy pedestrian/cycle link with the provision of a 4m wide segregated pedestrian/cycle route on the development site's Syon Lane frontage. This route would link to a new crossing on Grant Way and this in turn would link to the 4m segregated footway/cycleway proposed by the Bolder Academy between Grant Way and the A4.

9.2.28 **Section 11** of the TA details Design Options for the Gillette Corner Junction that have been subject to VISSIM Microsimulation modelling. Four Design Options have been modelled, of which three include the provision of a surface level crossing on the eastern side of the A4, Great West Road. It is envisaged that the applicant would deliver a surface level crossing and the possible removal of the underpass (subject to discussions with LBH) as a means to encourage a higher pedestrian modal share.

9.2.29 On the southern side of the A4 and along Syon Lane further south of the A4 junction, significant changes to the pedestrian and cycling environment are proposed in connection with the redevelopment of Homebase. These changes include the provision of a widened shared footway/cycleway would enable cyclists to continue south from the Gillette Corner junction towards Syon Lane station, off-carriageway. Cyclists would be required to re-join the Syon Lane carriageway at Syon Gate Way.

9.2.30 A diagram showing the width of existing pavements compared to proposed widths is included in **Appendix A4** which shows that the proposals significantly improve and widen the footways and quality of the public realm for trips on foot**.** An assessment of how the proposed pavement widths accommodate estimated pedestrian demands (commuters, sky employees) travelling in both directions in the future development scenario is assessed in **Sections 10.7** and **10.8** of this TA.

9.3 Proposed Clean Air Route via Syon Gateway

9.3.1 The development seeks to deliver a ‘clean air route’ along the development’s southern boundary, on Syon Gate Way and Syon Gate Lane, which is an aspiration of LBH and local policy. The route will offer an alternative, parallel, pedestrian and cycle route to the A4 and will connect with a new thoroughfare on the site’s north-eastern boundary which will link with the Toucan crossing facility at the Great West Road/Harlequin Avenue junction.

9.3.2 Pre-application consultation with the LBH has identified that the route must be a minimum of 3m wide, and this is achieved throughout with most of the route exceeding 3m.

9.3.3 At its western end, the route will link to a wide shared surface pavement that will extend along the site’s south-western boundary.

9.3.4 Along Syon Gate Way a minimum footway/cycleway width of 3m will be maintained as illustrated in **Insert 9.5**. As the route continues north-eastbound the route will widen to around 5m at the south-east corner of the site.

9.3.5 Vehicular site access is to be taken at two locations from the ‘clean air route’ along Syon Gate Way, with both accesses lightly trafficked (see **Insert 9.5** and **Insert 9.6**). The access to the Tesco service yard will be demarcated on the ground with tactile paving and the building will be chamfered at the Tesco access to create pedestrian visibility to maximise highway safety. A 0.5m wide kerbed buffer would be provided on the Tesco access to encourage vehicles to stay clear of the access’s walled boundary, and these will add to the pedestrian visibility splay at the Tesco access.

9.3.6 As also shown in **Insert 9.5** (and following comments received application P/2020/3099), it is now proposed to widen Syon Gate Way at its junction with Syon Lane to ensure that two-way working can be maintained at the junction when Tesco delivery lorries are operating.

9.3.7 Servicing trips to the proposed Tesco store are estimated based on surveys of the currently

operating Tesco, Osterley store and it is expected that 22 vehicular trips would be undertaken to and from the Tesco service yard over the course of a day each day.

9.3.8 Beyond the Tesco access is an access to the proposed basement car park. The basement car park would accommodate 34 car parking spaces for use by site residents, car club vehicles and visitors, and a bay for use by residential home delivery vehicles. Based on the analysis within this TA it is estimated that the access would accommodate around 63 vehicles would enter and depart the basement over the course of a typical day

Insert 9.5: Syon Lane/ Syon Gate Way

9.3.9 The 'clean air route' will not accommodate a loading bay for use by a waiting refuse vehicle and would not be used as a presentation area for refuse bins, prior to their collection.

9.3.10 A change to the building design means that the residential bin store is now directly accessible from Syon Gate Way, removing the need for the bins to be moved by electric tow to an external collection point. The residential waste collection vehicle would wait on Syon Gate Way to collect bins, directly adjacent to the bin store. This enables off street refuse collection and improves circulation along the clean air route

9.3.11 The kerb line to the Tesco service yard has been amended at its junction with Syon Gate Way in order to guide Tesco vehicles to and from Syon Lane, and to create additional space for the refuse collection vehicle to wait and for bins to be loaded from the rear of the vehicle.

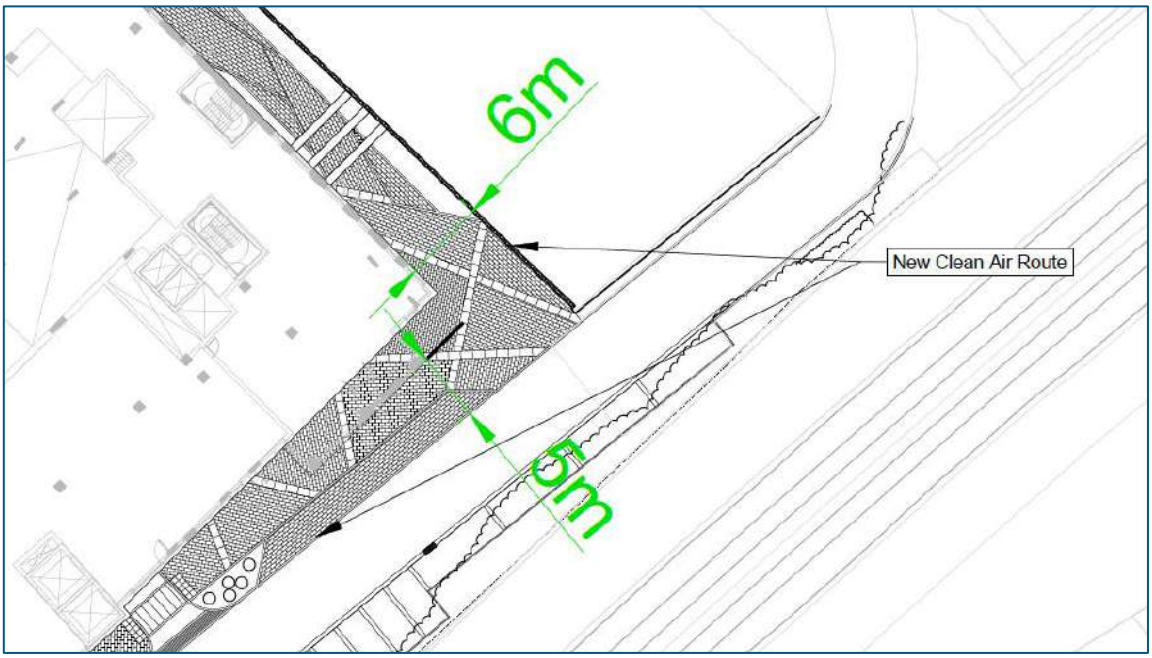
9.3.12 Along Syon Gate Lane (north-eastern boundary of the site), no through traffic would be permitted between Syon Gate Lane and the A4 Great West Road, other than for emergency service vehicles in an emergency. On a day to day basis this route would therefore be used by pedestrians and cyclists only and would create an alternative clean air route and connection with pedestrian and cycle infrastructure alongside the A4. **Insert 9.6** illustrates the interchange between Syon Gate Way and Syon Gate Lane.

9.3.13 The use of the clean air route will be convenient for employees that commute to the Sky Campus (and adjacent employment), via Harlequin Avenue.

9.3.14 The proposed development would provide public realm improvements in the adjacencies of the site, which would result in an attractive pedestrian environment for future site and residents, as well as pedestrians that traverse the site frontages as part of local access routes.

9.3.15 The public realm improvements have also been proposed with consideration of the wider aspirations presented within the Great West Corridor Local Plan which, as referenced in **Section 7**, encourage designers and developers to *"actively encouraging walking and cycling through the provision of an attractive public realm"*.

Insert 9.6: Syon Gate Way/ Syon Gate Lane



9.4 Great West Road - Proposed Cycle Infrastructure

9.4.1 The existing segregated pedestrian/cycle route on the southern side of the A4 terminates to the east of Syon Clinic to become a shared footway/cycleway. The segregated route terminates before the route crosses the Clinic's vehicular access. The shared path then continues past the Skoda garage and crosses the garage's vehicular access before reaching the staggered Toucan crossing that is incorporated in the A4/Harlequin Avenue junction. Beyond the crossing cyclists are invited to re-join the carriageway to travel westbound through the Gillette Corner junction.

9.4.2 The proposed development would deliver an extension to the off-carriageway cycle along the development site frontage, and it is currently proposed that the route segregation re-starts to the west of the Harlequin Avenue Toucan crossing. The reason that the segregation recommences to the west of the crossing is:

- the segregation must be broken to create a shared space either side of the Toucan crossing; and
- the adjacent vehicular accesses to the Skoda garage and the Syon Clinic encourage the

existing shared surface to remain between these points of access.

9.4.3 This can be reviewed as part of the s278 (highway works) detailed design process and if during the technical design it is considered that the existing segregation can be extended to the west, closer to the existing Toucan crossing than is currently shown, then this revised scheme would be implemented and funded by the applicant. As the scheme is taken through the technical approval process, the proposals would be subject to a Stage 2 RSA.

9.5 Great West Road – Layby Bus Stop

9.5.1 To accommodate the extended off-road cycle lane on the site's northern frontage it is proposed to relocate the existing layby bus stop further east. The bus stop that fronts the site accommodates the H91 service and TfL have agreed in-principle to this relocation, as the bus stop would in future need to accommodate both the H91 and E1 bus services – the E1 bus service would need to access the bus stop before moving across the A4 carriageway to turn right into Syon Lane (North). It is proposed that the bus stop is moved to the east to a location fronting onto Syon Clinic.

9.5.2 The detailed design of the bus stop will still need to be agreed with TfL. Any costs associated with relocating the bus stop, including the provision of a new shelter, will need to be fully funded by the applicant.

9.6 Proposed Car Parking

9.6.1 Car parking at the development would be provided in the form of a two storey car park above the Tesco store, together with further residential parking within a separate basement facility.

9.6.2 The proposed Tesco store would be provided with 400 customer car parking spaces, which is the minimum required by Tesco. The site's residential development would be provided with up to 105 parking spaces (including 2 dedicated car club spaces and 3 visitor parking spaces).

Tesco Car Parking

9.6.3 The customer car parking at Tesco will be made up of:

- 12 'Parent and Child' spaces
- 24 spaces for disabled badge holders; and
- 364 spaces for general users.

9.6.4 The proposed quantum of on-site car parking (400 spaces) would result in a net reduction of 225 car parking spaces when compared to the existing Tesco Osterley store.

9.6.5 The current adopted London Plan (2016) would permit the Tesco store to be provided with in excess of 500 customer car parking spaces. The proposed level of provision (400 spaces) falls well below the adopted London Plan's maximum permissible number.

9.6.6 The PLP parking standards for an Outer London Opportunity Area (PTAL rating 2-4) require a reduced level of parking in comparison to the adopted London Plan. The application of the PLP parking standards to a food retail site of 10,550 sqm (GIA) would result in a maximum parking provision of 141 parking spaces, which is well below the car parking provision that is considered in this application.

9.6.7 However, with consideration of the removal of the Tesco Osterley site (circa 625 car parking

spaces) and the existing Homebase car parking, the proposed retail car parking provision accords with the principle of the PLP which states that "*existing parking provision should be reduced to reflect the current approach and not be re-provided at previous levels where this exceeds the standards set out in this policy*."

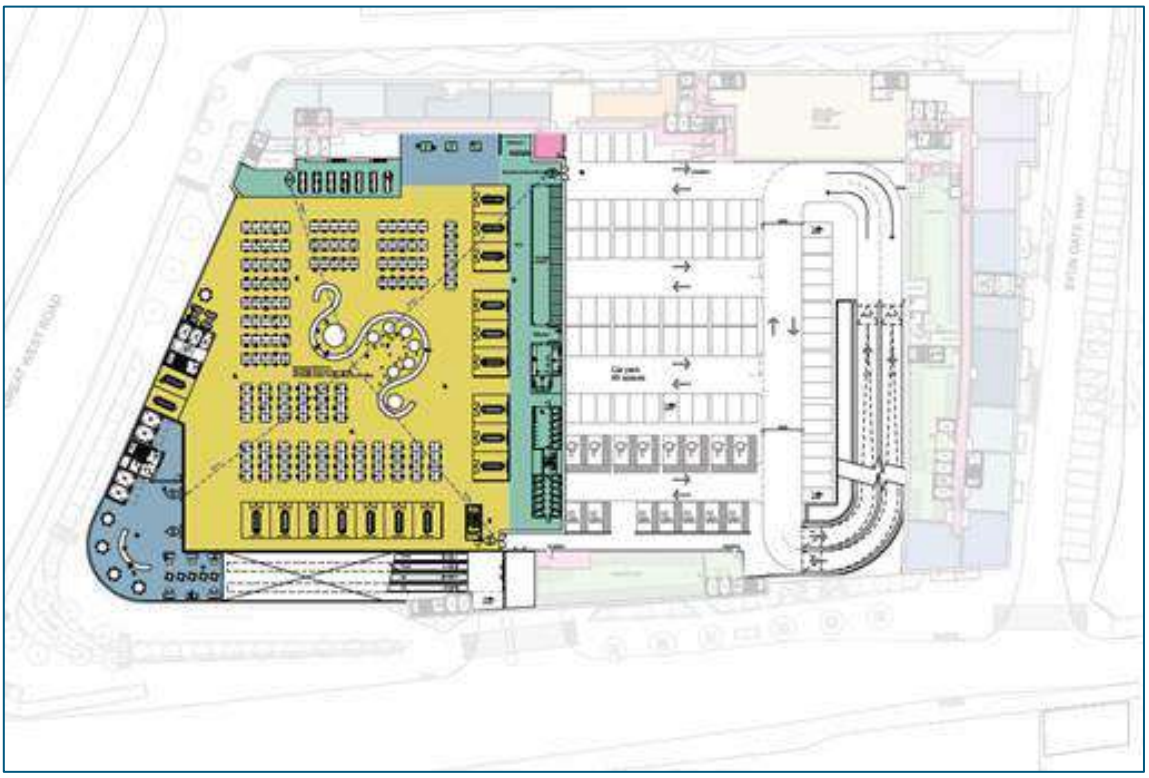
9.6.8 With regard to management and monitoring of the car parking facility, as set out in the introduction, a dedicated Car Parking Management Plan (CPMP) has been prepared by RHDHV that accompanies this application as a stand-alone document. The CPMP includes measures and initiatives that aim to limit car park use to short stay parking associated with the development site, only. The measures considered within the CPMP are also supported by standalone Travel Plan documents that have been prepared for the development's proposed retail and residential uses.

9.6.9 Within the context of the above, it is noted that hourly car parking demand at Tesco Osterley exceeds 400 spaces on a daily basis (refer to **Section 8**), which is the proposed quantum of Tesco car parking as part of this application. A reduction of 225 spaces (36% reduction) compared to Tesco's existing provision will act to constrain car driver trips and encourage a shift towards non-car modes. This approach is in accordance with the sustainable travel principles underpinning PLP policy.

9.6.10 In seeking to further align the proposals with the emerging PLP policies, it is acknowledged and agreed in principle with TfL that a flexible approach to car parking provision will be considered, whereby further retail parking spaces can be repurposed at a later date in tandem with improvements to local public transport services and measures to encourage trips by walking and cycling.

9.6.11 **Insert 9.7** below provides an indicative plan for the potential repurposing of part of the Tesco car park at first floor level. The sketch plan shows around 79 parking spaces on the first floor, a reduction of around 129 car parking spaces compared to the current proposed first floor parking design. This plan does not assess in detail the design that would be required under this scenario for a full car park circulation and should therefore be considered as an indicative view of what could be achieved to reduce car parking in the future.

Insert 9.7: Indicative D&A Plan to Demonstrate Potential for re-purposed Car Parking



9.6.12 Electric vehicle car charge points will be provided for 10% of all customer parking spaces on first site occupation, with passive provision made such that all car parking on-site could have access to an electric car charge point in the future if required.

9.6.13 In summary, the proposed provision of 400 Tesco customer parking spaces is in excess of the PLP's maximum permissible provision, however, this number is a minimum requirement for Tesco and meets the standards contained in the currently adopted standards of the London Plan (2016).

9.6.14 The proposed capacity of the car park represents a significant reduction compared to Tesco's existing provision and is less than the typical daily maximum parking demand experienced at Tesco, Osterley. The car parking proposal will therefore require an element of modal shift to take place in order for the car park to operate efficiently.

9.6.15 The development has 'built-in' the ability to repurpose customer car parking at an appropriate time in the future, so that car parking capacity can be reduced in the future.

9.6.16 In the short term, given that the reduction in car parking spaces is lower than current levels of demand, means to ensure that customers do not queue to get into the car park. This is likely to require monitoring through CPMP, signage and will be agreed via a planning condition.

Residential Car Parking

9.6.17 With regard to residential parking at the site, the proposed development has been designed with consideration of maximum standards contained within the PLP. **Table 3.7** summarises the relevant standards of no more than 0.5 spaces per dwelling. The provision of 105 car parking spaces (including visitor and Car Club parking) provides a parking ratio of 0.22 spaces per dwelling.

9.6.18 The 105 residential car parking spaces will be made up of:

- 2 Car Club Bays (basement)
- 3 Visitor parking bays (basement)
- 26 Disabled badge holder bays
- 74 Standards residential parking bays

9.6.19 In accordance with PLP, 20% of car parking spaces will be provided with an electric car charge point on first occupation, with all remaining parking spaces to be provided with passive car charge provision.

9.6.20 This low car environment will be supported by local on-street car parking controls. Parking in the local area is managed through the LBH operated Controlled Parking Zone SLS, which allows permit holders only to park on-street in defined areas from 09:00 to 18:00, Monday to Friday. Residents living at the proposed development will not be eligible to obtain an on-street car parking permit and this will be secured by legal agreement.

9.6.21 The CPMP discussed above considers the management of residential car parking spaces and considers that the allocation of parking spaces to residents will be considered in line with the requirements of the PLP, which stipulate:

- All parking spaces to be leased rather than sold;
- Disabled persons parking bays associated with residential development not to be allocated to specific dwellings;
- At least one designated disabled persons parking bay per dwelling, for 3% of all dwellings, to be available from the outset; and
- The provision one designated disabled persons parking bay per dwelling, for 10% of all dwellings, to be made available if or when required.

On Street Car Parking

9.6.22 The introduction of the site's traffic signal-controlled site access junction will conflict with on-street parking that exists opposite the site, on Syon Lane. Currently space exists for 11 cars to park on Syon Lane opposite the site, within controlled car parking zone SLS. This includes one space reserved for a disabled badge holder As a consequence of the development, it is proposed that space for seven or eight cars is retained on Syon Lane within defined car parking bays (subject to the Design Option selected for Gillette Corner - refer to **Section 11**). These bays would be retained within CPZ zone SLS.

9.6.23 To make up the shortfall in parking spaces, it is proposed that a minimum of three additional defined parking spaces are provided in Northumberland Avenue, in the vicinity of its junction with Syon Lane. These spaces would be on-street and would form part of car parking zone SLS.

9.6.24 The proposed location of these spaces, and spaces retained on Syon Lane, is detailed in **Appendix O**. As a consequence of this provision, a minimum of 11 car parking spaces would be provided in place of the 11 spaces that currently exist.

9.6.25 It is worthy of note that on-street car parking surveys of streets within car parking zone SLS identified that some local streets retain a car parking reserve capacity, meaning that cars displaced from Syon Lane have the ability to park elsewhere, within a short walk distance of the existing

parking provision.

9.6.26 In summary, impact on on-street car parking located opposite the site on Syon Lane can be adequately mitigated as part of the development proposals. Any changes to the location of on-street car parking provision would be made subject to the changes to the local traffic regulation order.

9.7 Proposed Cycle Parking

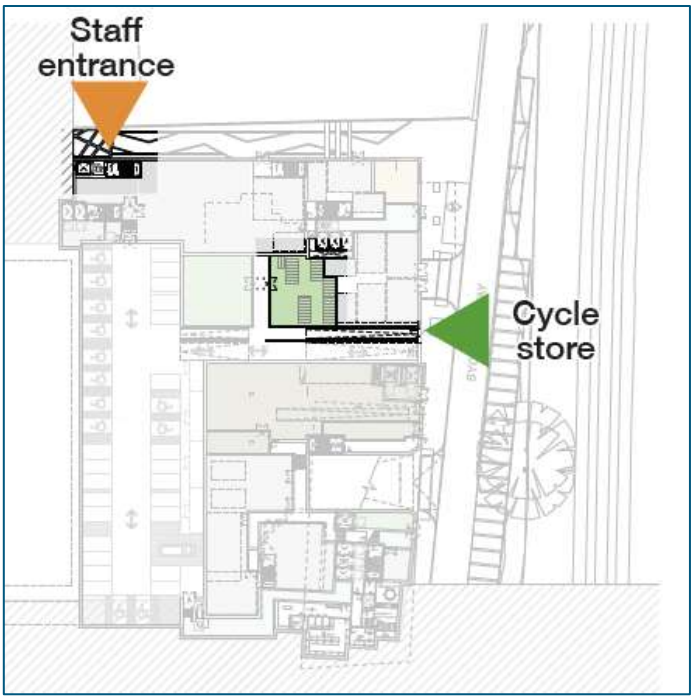
Tesco Cycle Parking

9.7.1 The proposed development will provide 4 Sheffield standards and 40 double stackers cycle stands (80 spaces) for use by the site's commercial occupier. This means that Tesco will be provided with 88 cycle parking spaces in total at a ratio of around 1 space per 120sq.m.

9.7.2 Tesco cycle parking would be accessed directly from Syon Gate Way (**Insert 9.8**).

9.7.3 In addition to the above, 58 Sheffield Stands would be provided externally to the development, providing a total of 116 short terms cycle parking spaces for use by visitors to the Tesco store and the residential development above. Short term cycle parking would be provided on the site's Syon Lane and Great West Road frontages, within the public realm and exceeds the minimum PLP requirement.

Insert 9.8: Tesco Long Stay Cycle Store (Lower Ground Floor)



9.7.4 Staff facilities, including lockers and changing areas are provided in a designated 'staff area', accessed from Syon Gate Lane. The staff entrance is indicated above.

9.7.5 In respect of the kiosk/flexible retail and café uses that are considered as part of the proposed development it is noted that long-stay cycle parking provisions will need to be incorporated into the internal design of the relevant unit. The PLP cycle parking standard for non-food retail (kiosk) is 1 space per 250sq.m. Given the relatively small area involved, the kiosk will only require 1 cycle

parking space. Alternatively, commercial long stay cycle parking within the development overall already exceeds the minimum standards required by the PLP. An opportunity therefore exists to allocate long stay cycle parking space, related to the Kiosk, elsewhere in the development scheme.

Residential Cycle Parking

9.7.6 Long stay residential cycle parking will be located on the southern side of the building. The scheme would provide 896 cycle parking spaces located as follows (**Insert 9.9**).

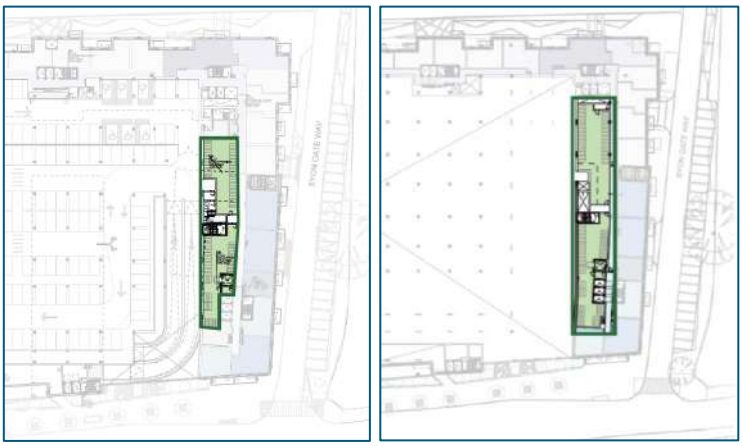
- Lower Ground Floor: 21 Sheffield stands (42 spaces)
- Mezzanine Level: 44 double stackers (88 spaces)
- Level 1: 87 + 69 = 156 double stackers (312 spaces)
- Level 2: 49 + 53 = 102 double stackers (204 spaces)
- Level 3: 56 + 69 = 125 double stackers (250 spaces)
- **TOTAL: 896 spaces**

9.7.7 Cycle parking on the upper levels can be accessed by a dedicated cycle lift and the car park access ramp from Syon Way. The cycle lift (car) measures 1400mm x 2400mm.

9.7.8 In terms of compliance, the level of provision exceeds the required minimum of 826 spaces. The applicant is aware that LBH have requested additional Sheffield stand parking and this can be achieved subject to a reduction in the overall number of cycle parking spaces.

Insert 9.9: Residential Cycle Parking Provision

Lower ground Floor | **Mezzanine Level** | **First Floor**

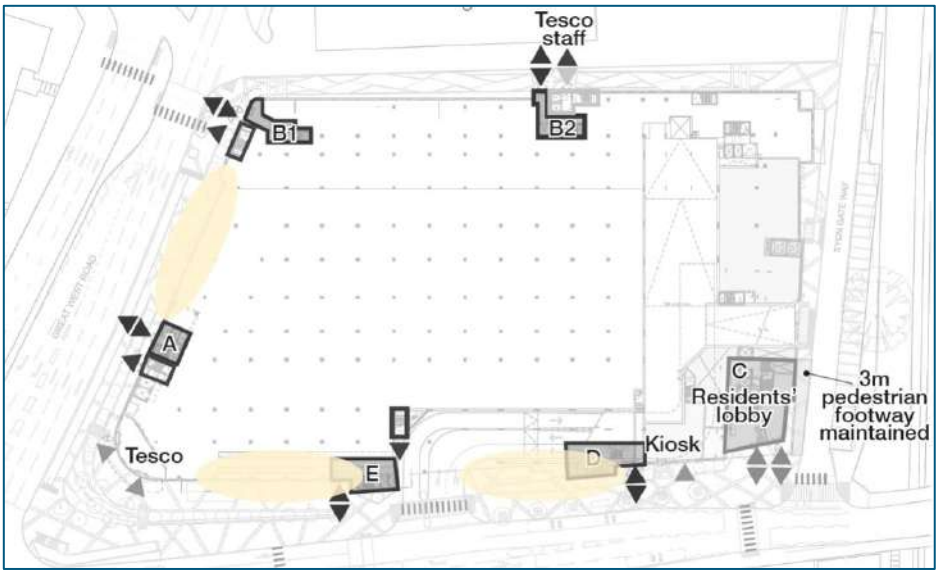


Second Floor | Third Floor

9.7.9 With access from the clean air route, the site's main cycle parking areas will be directly accessible from a defined cycle route.

9.7.10 Externally, shot stay cycle parking is located in three areas as highlighted in **Insert 9.10**. All area are over sailed by the building above and are therefore sheltered and all areas are provided with passive surveillance from the adjoining highways.

Insert 9.10: Short Stay Cycle Parking Locations



9.8 Site Servicing

Tesco Servicing Access

9.8.1 Tesco would be provided with their own dedicated service yard on-site, with all vehicles able to enter and exit the site in a forward gear.

9.8.2 All food retail deliveries and collections will be undertaken from the dedicated servicing yard. The service yard is afforded internal access to the Tesco back-of-house (BOH) areas and, as such, all deliveries will be accepted and managed through the building interior.

9.8.3 Given that Tesco deliveries will be carried out by pre-approved and established suppliers there is scope for efficient implementation of scheduling procedures. Where practicable, deliveries will be subject to a suitably even temporal distribution such as to allow sufficient spare service yard capacity for residential deliveries that will be more sporadic and unpredictable by nature.

9.8.4 Tesco staff will attend all deliveries and accept all goods for dissemination through the BOH areas. Internal procedures will be established such as to ensure that the service yard is not obstructed by delivered goods that are to be transferred to appropriate stocking locations.

9.8.5 It should be noted that the service yard has been designed to allow capacity for vehicles awaiting loading or unloading to wait off street, to avoid issues with parking or blocking back onto the public highway.

9.8.6 The Tesco store will have arrangements for private refuse to be undertaken. The refuse will be collected from within their proposed service yard with vehicles entering and exiting in a forward gear.

9.8.7 Given that the Tesco store will commission a private refuse collection contractor it is reasonably feasible to ensure their refuse collections are scheduled such as to avoid any conflicts with other deliveries, whilst avoiding peak traffic hours and adhering to TfL's 'Code of Practice for quieter deliveries' (TfL, May 2018).

9.8.8 In view of the above, it is possible for the refuse generated by the store to be collated, compacted and consolidated in allocated BOH locations prior to scheduled collection times. Tesco staff will oversee the refuse collection process and ensure that wheeled bins are rearranged such as to avoid obstruction of manoeuvring and procedural logistics for other uses at the service yard.

9.8.9 **Appendix O** demonstrates that a maximum legal articulated vehicle (16.5m) can access Syon Gate Way and the proposed Tesco service yard and depart the site in forward gear. The appendix demonstrates that the proposed service yard provides sufficient clearance for up to three. maximum legal articulated vehicle (16.5m) to access, load/unload and egress in forward gear independently of each other.

9.8.10 It is proposed that the entry to Syon Gate Way is widened, to allow vehicles to wait at the junction with Syon Lane while a 16.5m articulated vehicle accesses the site. The associated drawing (PB9144-RHD-GE-SW-DR-R-0126) is contained within **Appendix O**.

Residential Servicing Access

9.8.11 The residential development would be serviced from Syon Gate Way, or from an on-site delivery bay located in the Lower Ground Floor.

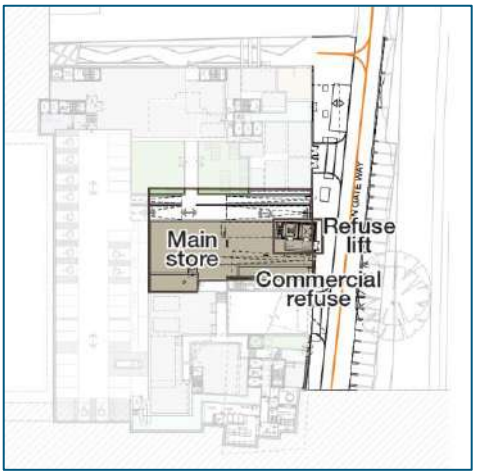
9.8.12 It is proposed that residential refuse vehicles would stop adjacent to the main bin store which would be accessible directly from Syon Gate Way. All waste containers would be moved to this bin store by the site's management team prior to collection. Refuse vehicles would turn and exit as indicated in **Insert 9.11**.

9.8.13 It is envisaged that bins of specific waste streams (cardboard, plastics, paper, cans/aerosols, glass, food and residual waste can be rotated to the forefront of the bin store prior to collection (by the internal management team) reducing travel distances for the LBH collection operatives and reducing collection time.

9.8.14 A commercial refuse storage area is located next to the residential bin store and this would accommodate waste generated from the site's ancillary residential facilities and from the site's kiosk. Waste collection would be undertaken from Syon Gate Way.

Insert 9.11: Residential Servicing Arrangements

Lower Ground Loading Bay (Residential Home Deliveries)



Main Residential Bin Store, Adjacent to Syon Gate Way

9.8.15 The proposed development has been designed with consideration of the Local Authority waste collection services attending the site on a weekly basis. To enable this to take place the site's waste collection stores have been designed with reference to the guidance contained within BS5906 (2005).

9.8.16 The residential bin store would accommodate 74 x 1100l Eurobins, 36 x 360l bins and 31 x 240l bins. The duration of stay of a refuse vehicle on Syon Gate Way will depend on the frequency of collection, the number of personnel undertaking the collection and whether residual and recyclable waste is collected at the same time.

9.8.17 Full details of refuse collection are provided within the Waste Management Plan accompanying the planning application, prepared by AECOM.

9.8.18 The site's home delivery bay is located at Lower Ground Floor level in a location that makes it convenient for a driver to deliver a parcel to the site's concierge

9.8.19 **Appendix O** presents the swept path assessment of a large refuse vehicle entering Syon Gate Way and turning to exit the site in forward gear.

9.8.20 Drawing PB9144-RHD-GE-SW-DR-R-0129, within **Appendix O,** shows that residential refuse vehicles stopping on the Syon Gate way carriageway would not obstruct vehicle movements along Syon Gate Way.

9.8.21 **Appendix O** presents swept path analysis for a large home delivery vehicle accessing the basement.

9.8.22 Based on general servicing requirements, the majority of items delivered to the residential development will be in the form of mail and small packages that can be posted into the mailboxes on the ground level of each residential building. Suppliers delivering mail and small packages will be allowed to access the ground floor of each residential core to access the post boxes by the site management staff via video intercom. In order to keep the building secure, access to the lifts,

stairs and upper floors will not be permitted except for residents and accompanied guests. Deliveries of larger parcels, food and takeaways will be made to the ground floor reception area where the resident will collect their delivery at ground level.

9.8.23 The development scheme has been designed to include a residential reception area which will allow parcels to be delivered to site at times when residents may not be at home. This will avoid the need for delivery companies to make return journeys to the site in association with the delivery of a single parcel. The site management staff will store these items within either an automatic locker (for residents to self-collect) or a locked storeroom for larger deliveries.

9.8.24 For deliveries to the site concierge, delivery vehicles would route to the basement, where there is a servicing bay located adjacent to the lobby. Predominantly, deliveries would route to the concierge via the basement. The basement will have a 3.25m height restriction which will allow home delivery vehicle access.

9.8.25 Deliveries of larger items such as furniture will require the site management staff to supervise access to the resident's apartment at a prearranged time. Vehicles that are unable to service from basement would be required to service from Syon Gate Way.

Service Vehicle Management

9.8.26 No delivery vehicles would be permitted to park on Syon Lane. The zig-zag markings associated with the Syon Lane station pedestrian crossing, and the adjacent bus stop markings, would prevent delivery vehicles from making use of the site's Syon Lane frontage.

9.8.27 Delivery vehicles associated with the site's ancillary retail uses (kiosk) would be required to service the from kerbside on Syon Gate Way.

9.8.28 A comprehensive review of proposed delivery and servicing arrangements is presented within the Delivery and Servicing Plan which accompanies the planning application as a stand-alone document.

10 Multi-modal Trip Generation and Attraction

10.1 Preface

10.1.1 This section of the report details the trip generation exercise that provides an estimate of the anticipated travel patterns for the operational phase of the development, providing the basis for assessing the impact of the proposed development. The primary sources of trip generation and attraction at the proposed development is the provision of 473 residential units, a replacement Tesco foodstore of 10,550sqm (GIA) and 135sqm of flexible commercial, business and service floorspace. The trips associated with these proposed uses are considered within the context of trips that will be removed or reassigned as a result of the removal of the following:

- Existing Homebase operating at the proposed development site.
- Tesco Osterley store (circa 11,582sq.m GFA and circa 625 parking spaces);
- The associated Petrol Filling Station (PFS)

10.1.2 The new Tesco store at the Homebase site would be provided with 400 customer car parking spaces, with the residential element of the scheme providing 105 parking spaces. Overall, the new Tesco would be provided with significantly fewer car parking spaces than the existing Tesco Osterley store; resulting in a reduction of approximately 225 parking spaces.

10.1.3 As part of a parallel planning application, it is understood that the Tesco Osterley site would be developed to provide around 1,677 residential units, with some local commercial development at ground floor level and up to 400 on-site residential car parking spaces. Any proposed commercial/retail offer at the Tesco Osterley site's would be effectively car free.

10.1.4 Within the context of the above, **Table 10.1** below provides a summary of the trips that will be added, reassigned or removed as a result of the proposed applications at the Homebase Brentford (this application) and Tesco Osterley (parallel application) sites.

Table 10.1: Additional, Removed and Re-Assigned Trips Summary

Development Site	Proposed Removal	Proposed Addition
Homebase Site (this planning application)	Homebase Store (4,180sq.m GFA) – 295 car parking spaces	Tesco Store 10,550sqm (GIA) – 400 Car Parking Spaces 473 residential units – 105 car parking spaces (Inc. Car Club and visitor parking) 135sqm flexible retail/office floor space
Tesco Osterley Site (parallel planning application)	Tesco store 8,412sq.m GFA – 625 car parking spaces; and Petrol Filling Station	1,677 residential units – up to 400 car parking spaces Ancillary commercial use

10.1.5 **Table 10.1** shows that as a result of the development of the Homebase and Tesco Osterley sites, overall / total car parking will reduce slightly from 920 to 909 spaces. Retail car parking provision specifically will reduce significantly from 920 to 400 spaces.

10.1.6 Despite the proposed developments at the Homebase Brentford and Tesco Osterley sites forming separate planning applications, due to the relatively close proximity of the sites, and the inherent inter-relation between the removal and re-provision of the Tesco use, the trip generation exercise herein relies on the estimation of trips relating to both proposals.

10.1.7 Supporting calculations and TRICS analysis and reporting output are contained in **Appendix Q**.

10.2 Retail Vehicle Trip Attraction

10.2.1 As outlined earlier in this Section, the proposed development will result in a significant net reduction in retail car parking provisions at the proposed development site and the site of the parallel planning application at Tesco Osterley. To this end, this section provides an estimate of the reduction in trips associated with the reduced parking resulting from the re-provision of the Tesco store at the proposed development site.

10.2.2 Further to the above, this trip generation/attraction exercise will quantify existing Homebase traffic that will be removed from the network and those relating to the PFS at the Tesco Osterley site that will not be re-provided as part of the proposed development or parallel application.

Tesco Trips

10.2.3 Given the relatively proximity of the Tesco Osterley site to the proposed development site, it is anticipated that the current customer patronage would broadly transfer over to the Tesco store that will be provided at the Homebase site.

10.2.4 The proposed Tesco store makes provision of significantly fewer car parking spaces than the existing Tesco Osterley site and, as such, the development of both sites would result in a reduction in car parking spaces from circa 625 to 400 car parking spaces. Given that the availability of car parking directly influences customer propensity towards driving to/from the store, it is considered that the reduction in car parking will reduce the quantum of car trips that can be feasibly attracted during the peak hours where the car park will commonly operate close to, or at, capacity.

10.2.5 Within the context of the above, it is noted that customer car parking space turnover rates will vary meaning that the reduction in vehicle trips is not necessarily a direct function of the reduction in car parking spaces. It is likely that the main modal shift will occur at times of peak car park demand.

10.2.6 In seeking to derive a suitable estimate of the impact of reducing the Tesco car parking capacity from circa 625 to 400 (a 36% reduction) reliance has been made on surveys of the arrivals and departures at the existing Tesco Osterley car park. The hourly inbound and outbound trips have been used to carry out a parking accumulation exercise which caps the car parking capacity at 400 vehicles.

10.2.7 **Table 10.2** presents the results of the trip generation exercise in respect of the proposed 400 space capacity Tesco car park. The data is based on a 7-day average across the surveyed data and is included in **Appendix Q**.

Table 10.2: Tesco Daily Trip Rates – Existing and Proposed

Time	Existing Tesco Trips	Proposed Tesco Trips	Net Change
07:00-08:00	228	228	0
08:00-09:00	395	395	0
09:00-10:00	599	598	0
10:00-11:00	737	687	-50
11:00-12:00	847	778	-69
12:00-13:00	955	911	-44
13:00-14:00	905	860	-45
14:00-15:00	865	856	-8
15:00-16:00	841	833	-8
16:00-17:00	738	738	0
17:00-18:00	671	671	0
18:00-19:00	661	661	0
19:00-20:00	591	591	0
20:00-21:00	499	499	0
21:00-22:00	345	345	0
23:00 - 07:00	82	82	0
07:00 - 19:00	8443	8218	-226
07:00 - 23:00	9953	9727	-226
06:00 – 24:00	10002	9776	-226
24-Hour	10035	9809	-226

10.2.8 In summary, over the course of an average day, the proposed Tesco site would provide fewer parking spaces and attract 226 fewer dedicated car/vehicle trips. This is considered a conservative estimate of the trip reduction, equating to only 2% of total trips. It is anticipated that these trips would be redistributed amongst other modes, as part of a wider shift away from car journeys, in accordance with policy. It is note that this assessment will not assume any modal shift away from car use in the weekday AM and PM peak traffic periods.

Homebase Traffic

10.2.9 As a result of the development proposals, the existing Homebase traffic would be removed from the local highway network. The potential traffic attraction of a new retail occupier within the existing Homebase unit would also be removed as a consequence of the proposed development. The quantum of traffic to be removed from the existing site is detailed in **Table 8.1** of this report.

10.2.10 Based on the surveyed data, over a 12-hour period, there are approximately 1,478 retail trips associated with the existing Homebase use that will be removed from the local highway as a result of the development of the proposed scheme.

PFS Traffic

10.2.11 The existing Tesco petrol filling station will not be re-provided as part of the proposed development or parallel application.

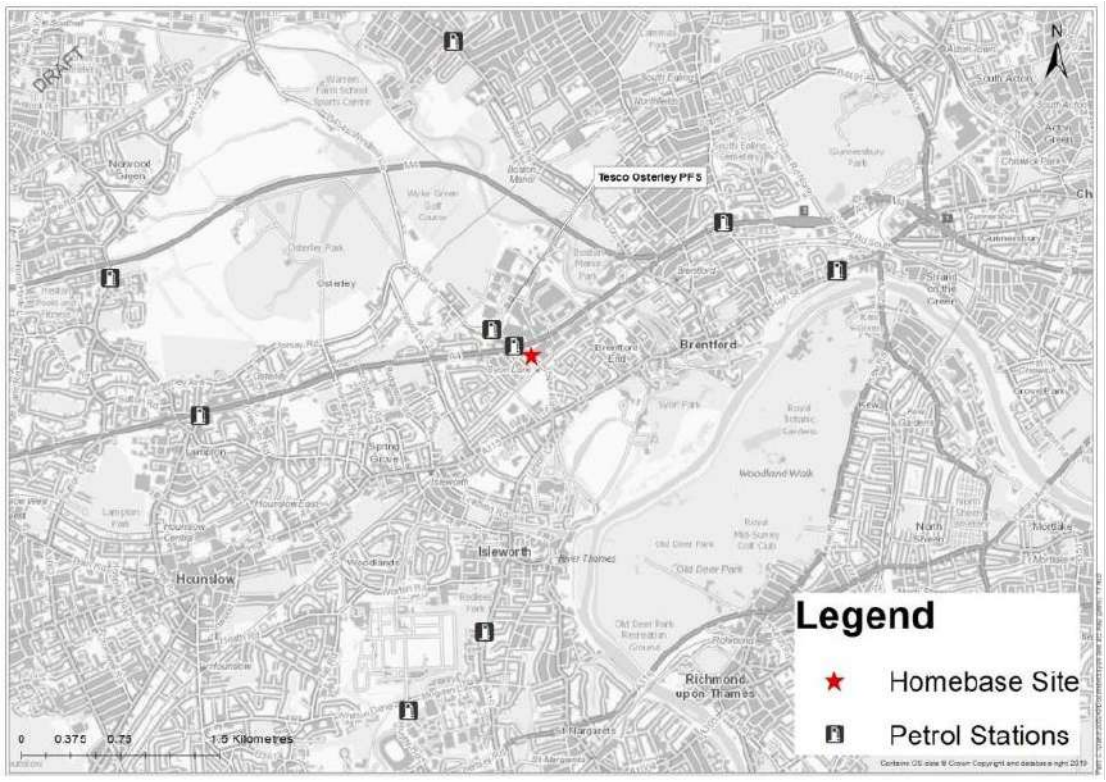
10.2.12 A 'Petrol Filling Stations Research' document was prepared in association with the inquiry into the anticipated merger between Sainsbury's and ASDA supermarket chains, by 'djs research' in February 2019. The research established that a high proportion of supermarket PFS customers were purchasing fuel but not visiting the associated foodstore. A large proportion of customers who were purchasing fuel and undertaking a supermarket shop stated that the PFS closure would mean they would divert their fuel spend but not their supermarket spend.

10.2.13 In practice, the trips associated with the PFS will be either removed or reassigned to another nearby PFS. The existing Tesco Osterley survey data has been interrogated in respect of the proportion of trips that enter the site to access the PFS and depart without accessing the Tesco car park; these would represent 'PFS Only' trips.

10.2.14 Inspection of the survey data indicates that the reduction in traffic movements that could result from the removal of the PFS would be in the order of 80 to 100 two-way 'PFS only' traffic movements observed to take place in and around the traditional peak hours of weekday travel demand with approximately 120 two-way trips being reduced during the Saturday lunchtime peak hour. The removal of this traffic represents the potential desire of Tesco PFS customers to utilise stations that offer petrol and diesel at a reduced rate. It is also recognised that some customers would prefer to shop at a foodstore that provides both a retail outlet and a PFS.

10.2.15 As presented at **Insert 10.1** there are a number of petrol filling stations in the surrounding area which would uptake the trips lost by removing the station at Tesco Osterley.

Insert 10.1: PFS location plan



10.2.16 Based on the 2019 research conducted in association with ASDA and Sainsbury's operated petrol stations traffic movements in the vicinity of Tesco, Osterley are likely to reduce as a result of the removal of the Tesco petrol station. It is anticipated that:

- The diversion behaviour likely to result from the closure of the existing Tesco PFS would mean 10% to 14% of linked PFS and foodstore linked trips (**12%** average) would divert to an alternative foodstore location, and would no longer route through the local highway network; and
- In the order of **19%** of the customers who undertake a fuel only shop at the existing Tesco PFS would in future route to an alternative PFS site, located greater than 10 minutes away from the existing store, and would therefore no longer route through the local highway network.

10.2.17 Based on the proportions identified above it is anticipated that the total traffic diversion from the local highway resulting from the closure of the Tesco PFS would be as detailed in **Table 11.5**.

Table 10.3 PFS Traffic Diversion from Local Highway

Time Period	Total Traffic Diversion from Local Highway		
	Arrivals	Departures	Total Traffic
*Weekday 07:45-08:45**	*16*	*15*	*31*
Weekday 17:00-18:00	23	22	46
Saturday 13:00-14:00	28	26	54

**Weekday AM Peak hour considered for the purpose of traffic modelling*

10.2.18 Trips to the PFS originating from the A4 are assumed to continue straight on, not turning onto Syon Lane. In the AM peak, this equates to 76% of trips continuing along the A4, as opposed to turning onto Syon Lane. this figure is 71% in the PM peak and 73% on the weekend peak.

10.2.19 The existing PFS trips originating from Syon Lane, either coming from the north or the south would continue on this route, either stopping at the PFS at Gillette Corner or continuing straight on.

Retail Vehicle Trip Generation - Summary

10.2.20 In summary, over the course of a 12-hour day, it can be expected that relocation of the Tesco store and removal of PFS and Homebase sites would result in approximately 2,783 fewer retail trips on the local highways.

10.2.21 Importantly, Tesco traffic already exists on the local highway network and while the relocation of the Tesco store onto the Homebase site would result in a reassignment of trips locally, it is anticipated that the relocation of the Tesco store would result in an overall net decrease in traffic movements in and around the Syon Lane/ Great West Road (A4) junction.

10.2.22 In summary, the relocation of the Tesco store, with 225 fewer parking spaces will lead to a reduction in overall retail vehicle trips. In addition to this, removal of the existing Homebase site and PFS will lead to further reductions in traffic on the local highway. On this basis, the development proposals would act to reduce retail traffic movements on the local highway network.

10.3 Residential Person Trip Generation

10.3.1 The development will include up to 473 residential units, with car parking to be provided at a ratio of around 0.21 spaces per dwelling. This, in combination with local on-street parking controls, will act to restrict car travel to and from the site.

10.3.2 The 'low car' approach has been developed in accordance with Policy T6.1 of the draft London Plan, which prescribes a maximum provision of 0.5 spaces per dwelling for development sites located in an Outer London Opportunity area.

10.3.3 In order to derive a realistic estimate of trip generation for the residential element of the proposed development, in the first instance, reliance has been made on surveys of residential sites contained within the TRICS database. A review of the TRICS database has not identified any residential (flatted units) sites in Outer London that include a car parking provision that is similar to the proposed scheme.

10.3.4 In light of the above, in seeking to establish a suitable means of estimating trip generation for such sites, reference has been made to TfL's 'Residential Car Parking' document which formed part of the London Plan evidence base, which concludes that there is a relationship between car ownership, car parking provision and car use. In this regard, a study of 'trips generated per car parking space', for a range of residential developments located in Greater London, as contained within the TRICS database, has been carried out. Based on this exercise it can be expected that in the order of one weekday peak hour traffic movement would be generated for every five residential car parking spaces provided at the sites.

10.3.5 In consultation with TfL and LBH, it has however been agreed that this assessment will consider that during the peak hour of travel demand each car parking space would generate 0.33 two-way car trips. This assessment is therefore likely to overestimate residential travel demand by car and this provides some assurance that the transport impact of the development would be within the bounds of this assessment.

10.3.6 In order to assess the residential trip generation of the sites by non-car modes, the following methodology is proposed:

- Residential person trips are to be generated from the 'included' TRICS sites listed in **Appendix Q**. This methodology assumes that site location, and access to public transport services, does not influence the frequency of residents entering and leaving their homes.
- The 2011 'Method of Travel to Work' Census data for the local area is used to distribute trips by non-car modes of travel.

10.3.7 In terms of the Method of Travel to Work Census data, the assessment makes reference to travel patterns for existing residential development in the local area, specifically development located in the following lower layer super output areas: Hounslow 006E, Hounslow 009B, Hounslow 009C and Hounslow 014D. These areas encompass the Homebase and Tesco sites and would allow a focused assessment of existing travel patterns to be undertaken. The boundaries of these Census areas is provided in **Appendix Q**. The modal split for the assessed data is summarised in **Table 10.4**.

10.3.8 The trip generation assessment is therefore primarily based on TRICS data with a separate assessment for car drivers for trips per car parking spaces (0.33 trips per car parking space). The trips by all other modes has been distributed based on the percentage census data modal split. Car driver trips estimated by the assessment are therefore lower than for existing residential development in the local area given the nature of the proposed development (flats with low level parking) compared to the current area which is largely family dwellings with high car ownership. The outcome of the assessment is also that more trips have been assigned to buses etc than the census data would allow for if taken on its own as the basis to calculate all trips.

Table 10.4: Local Census Method of Travel to Work – Modal Split

Mode of Travel	Mode Share* (%)
Underground, metro, light rail, tram	20%
Train	21%
Bus, minibus or coach	23%
Taxi	1%
Motorcycle, scooter or moped	2%
A passenger in a car or van	4%
Bicycle	6%
On foot	15%
Other methods of travel to work	1%

10.3.9 The assessment of trip generation is presented in full in **Appendix Q** and is summarised in **Table 10.5**. The assessment is based on 473 residential units and 105 associated car parking spaces, which includes three visitor parking spaces and two Car Club parking spaces provided on-site.

Table 10.5: Homebase Site Residential Trips (473 Units/ 105 Parking Spaces, inc. Car Club parking)

Mode of Travel	Weekday 08:00-09:00		Weekday 17:00-18:00		Weekday 07:00-19:00		Saturday Peak*	
	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs
Underground, metro, light rail, tram	10	54	33	17	184	213	21	35
Train	11	58	35	18	199	231	23	38
Bus, minibus or coach	12	62	38	19	213	247	25	41
Taxi	0	2	1	1	7	8	1	1
Motorcycle, scooter or moped	1	6	4	2	20	23	2	4
Driving a car or van	6	29	23	12	106	122	14	20
Passenger in a car or van	2	11	7	4	39	45	5	7
Bicycle	3	17	10	5	59	68	7	11
On foot	8	41	25	13	142	165	17	27
Other method of travel to work	1	4	2	1	12	14	1	2
Total	**54**	**285**	**179**	**92**	**981**	**1134**	**116**	**188**

10.3.10 It is estimated that the development of 473 residential units would generate some 339 and 270 two-way person trips during the weekday AM and PM peak hours, respectively. In both the AM and PM peak periods, 35 two-way trips would be made by car.

Pedestrian Demand

10.3.11 **Table 10.4** of this report provides the 'main mode' of travel for journeys to work for future site residents, and this modal split can be considered representative of travel patterns at times when the adjacent transport network is operating at its peak.

10.3.12 It is however recognised that many journeys to and from the site would be multi-modal and would start by a journey on foot. **Table 10.6** provides an estimate of the journeys on foot to and from the site, based on a proportion of site residents walking to and from Syon Lane station, Osterley station and local bus services. Parts of a multi-modal journey made on foot are in addition to journeys whose 'main mode' of travel would be on foot.

Table 10.6: Homebase Site Residential Trips – Journeys on Foot

Mode of Travel	Weekday 08:00-09:00		Weekday 17:00-18:00		Weekday 07:00-19:00		Saturday Peak*	
	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs
Underground (Osterley Station)	5	27	16	8	92	106	11	18
Train (Syon Lane Station)	11	58	35	18	199	231	23	38
Bus	12	62	38	19	213	247	25	41
Taxi	-	-	-	-	-	-	-	-
Motorcycle, scooter or moped	-	-	-	-	-	-	-	-
Driving a car or van	-	-	-	-	-	-	-	-
Passenger in a car or van	-	-	-	-	-	-	-	-
Bicycle	-	-	-	-	-	-	-	-
On foot	8	41	25	13	142	165	17	27
Other method of travel to work	1	4	2	1	12	14	1	2
Total Pedestrian Trips	37	192	117	60	658	762	77	126

NOTE: The assessment assumes:
- *All residents routing to and from Syon Lane station do so on foot;*
- *All journeys made to or from a mainline rail station route to and from Syon Lane station;*
- *All journeys made to or from an Underground station route to and from Osterley station;*
- *All passengers of bus services E1, H28 and H91 connect with the service on foot;*
- *50% of Passengers that use London Underground service at Osterley station, connect on foot*

10.3.13 The majority of pedestrian journeys are expected to route to and from public transport services.

10.3.14 Based on a two-way weekday pedestrian demand of 1,420 trips (07:00-19:00), journeys on foot would represent approximately 67% of journeys made at the development site boundary.

Impact on Bus Services

10.3.15 For the purpose of the assessment, it has been assumed that all development related bus trips will route, in the first instance, on bus services E1, H28 or service H91.

10.3.16 While the impact of development related bus trips has been assessed with regard to three bus services only, it should be recognised that the site will not be fully constructed and occupied until 2026 and it can be expected that additional (or higher frequency) bus services could become operational locally to support the development of the Opportunity Area. This assessment is therefore likely to overestimate development related impact on any one of the three bus services referred to above.

10.3.17 This assessment has assumed that development related bus trips will include some connecting journeys to local mainline railway and underground stations. Specifically, this assessment assumes that 50% of journeys made to Osterley Underground station would be made by bus.

10.3.18 The distribution of trips, by bus service, has been determined by Census data, presented in **Appendix R**. The results of the bus impact assessment are summarised in **Table 10.7**.

Table 10.7: Bus Travel Demand – Homebase Site Development

Service Used	Direction of Travel	%e Split	Weekday 08:00-09:00		Weekday 17:00-18:00		Weekday 07:00-19:00		Saturday Peak Hour	
			Arrivals	Departs	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs
E1	East	8.4%	1	8	5	2	26	30	3	5
H28	North	40.3%	7	36	22	11	124	144	14	24
H28	South	12.9%	2	12	7	4	40	46	5	8
H91	East	28.8%	5	26	16	8	89	103	10	17
H91	West	9.6%	2	9	5	3	30	34	3	6
Total	**-**	**100.0%**	**17**	**90**	**55**	**28**	**308**	**357**	**36**	**59**

NOTE: The assessment assumes:

- *50% of journeys made to or from an Underground station route to and from Osterley station (via service H28);*
- *A nominal impact is predicted on service E1 to support connections to rail services further afield;*
- *All other bus journeys route in directions indicated by 'travel to work' Census data (refer to **Appendix R**)*
- *It is recognised that this assessment includes an element of double counting with pedestrian trips, and this is included to ensure the resident related travel demand would fall within the bounds of this assessment.*

10.3.19 Based on a two-way weekday bus journey travel demand of 665 trips (07:00-19:00), a journey by bus would form all (or part) of approximately 31% of all journeys made to and from the development site.

10.3.20 The development will deliver a new bus stop on the A4, in the vicinity of the site, which will accommodate the extended bus service E1 and H91. Further to site occupation, bus service H28 will continue to route on Syon Lane, on the development site frontage.

10.3.21 A bus contribution of £1,700,000 will be required from the developer to mitigate the impact on bus capacity for the combined Homebase and Tesco, Osterley sites. This is in addition to the new bus infrastructure that would be delivered as part of the proposed development at the existing Tesco, Osterley site.

Impact on Rail Services

10.3.22 Due to the location of services it can be assumed that the majority of rail trips would route to and from the site via Syon Lane Station, and the majority of underground trips would route to and from Osterley Station.

10.3.23 Table **10.8** provides a summary of the associated travel demand.

Table 10.8: Rail Travel Demand – Homebase Site Development

Mode of Travel	Weekday 08:00-09:00		Weekday 17:00-18:00		Weekday 07:00-19:00		Saturday Peak*	
	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs	Arrivals	Departs
Underground (Osterley Station)	10	54	33	17	184	213	21	35
Train (Syon Lane Station)	11	58	35	18	199	231	23	38
Total	**21**	**112**	**68**	**35**	**383**	**443**	**45**	**73**

10.3.24 **Appendix A5** to this document presents a standalone Station Capacity Assessment for Osterley Station. The assessment has been undertaken with reference to TfL's:

- Transport for London's Station Capacity Planning document (revision A7);
- Transport for London (TfL) Open Data; and
- a site visit undertaken on Monday 11th January 2021.

10.3.25 For Syon Lane Station, TfL have confirmed that *"Syon Lane Station and the trains which serve it are operated by South Western Railway (SWT). During the peak hours there are currently a total of 6 trains per hour towards central London and Mortlake. It will be for Network Rail and SWT to comments on the potential impact of the development on Syon Lane Station and the train services which operate through it. However, it is noted that Syon Lane Station is identified within the GWC Strategic Transport Study, as having existing capacity constraints during peak times. Step free access has recently been provided at this station."*

Future Changes to Travel Patterns

10.3.26 This assessment has considered the impact of development related trips on existing transport infrastructure. It is however worthy of note that the development is not scheduled to be constructed and fully occupied until 2026, and significant changes to transport infrastructure could take place locally to support the development of the Opportunity Area.

10.3.27 This document has discussed transport proposals to support the development of the Opportunity Area, including new bus and rail connections that could influence the modal spilt of journeys. The development of infrastructure to support the Opportunity Area would also act to reduce the development impact on any one public transport service.

10.3.28 Furthermore, the delivery of Cycleway 9 and subsequent connections to and from this route, would encourage a greater proportion of residents to cycle.

10.3.29 The Mayor's Transport Strategy (2018) includes *"a bold aim for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041."* Based on the assessment provides above, 5,326 two-way trips would enter and exit the site boundary (weekday 07:00-19:00) on foot

or by cycle and this represents approximately 73% of all trips to be undertaken. As high quality alternative public transport connections are made locally, and cycle infrastructure is provided, it might be expected that the proportion of pedestrian and cycle trips to and from the site boundary would increase, with 80 percent trips to be undertaken on foot or by cycle by 2041 being a genuine possibility, in accordance with the Mayor's Transport Strategy. It is expected that the Mayor's target for number of journeys made by active travel and public transport will form a target within the travel plans for both development sites.

10.4 Servicing and Delivery Trips

10.4.1 This Section presents an assessment of service vehicle trip attraction for the proposed development in order to provide a baseline estimate of the typical daily servicing activity at the site once the scheme is fully operational.

10.4.2 This assessment considers all proposed land uses, based on the following schedule of development:

- Residential development – 473 units;
- Tesco Food Retail Store – 10,550sqm (GIA);
- Flexible commercial, business and service space – 137 sqm.

10.4.3 Given the fact that the exact nature of the flexible use is unknown, in the interest of carrying out a robust service vehicle trip attraction exercise, this proposed floorspace is included within the food retail offer.

10.4.4 Reliance has been made on surveys of the existing Tesco Osterley and Homebase Brentford sites in estimating servicing trips generated by these uses.

10.4.5 The assessment is further informed by surveys of sites that include a record of service vehicle trips as contained in the TRICS database. The TRICS database has been interrogated in respect of food retail and residential sites in order to derive suitably representative trip generation rates that can be applied to the proposed development.

Residential Servicing Trips

10.4.6 Through the interrogation of the TRICS database in respect of surveys of residential developments with similar locational and accessibility characteristics to the development site, four sites were identified as being suitably representative of the residential element of the proposed scheme. These site surveys have been used to determine the likely residential service vehicle demand for the proposed 473 residential flats on-site.

10.4.7 The TRICS data used in this assessment is provided in **Appendix Q**, and this is associated with traffic surveys undertaken from 2016.

10.4.8 The estimated number of service trips associated with the residential element of the proposed development, by vehicle type, is presented in **Table 10.9**.

Table 10.9: Proposed Residential Servicing Trips

Time	INBOUND					OUTBOUND				
	Car	LGV	OGV1	OGV2	**Total**	Car	LGV	OGV1	OGV2	**Total**
07:00-08:00	0	1	0	0	**1**	0	1	0	0	**1**
08:00-09:00	1	1	1	0	**3**	1	1	0	0	**1**
09:00-10:00	1	1	1	1	**3**	1	2	1	0	**3**
10:00-11:00	0	2	3	0	**4**	0	2	1	1	**3**
11:00-12:00	1	3	1	0	**4**	0	2	3	0	**5**
12:00-13:00	1	3	0	0	**4**	1	3	1	0	**4**
13:00-14:00	1	0	0	0	**1**	1	1	0	0	**2**
14:00-15:00	0	2	1	0	**2**	0	1	1	0	**2**
15:00-16:00	0	2	1	0	**2**	0	1	0	0	**1**
16:00-17:00	1	0	0	0	**1**	1	1	1	0	**3**
17:00-18:00	2	1	0	0	**3**	2	2	0	0	**3**
18:00-19:00	1	2	0	0	**2**	1	2	0	0	**2**
19:00-20:00	0	2	0	0	**2**	0	2	0	0	**2**
20:00-21:00	0	0	0	0	**0**	0	0	0	0	**0**
Total	**6**	**17**	**6**	**1**	**29**	**6**	**17**	**6**	**1**	**29**

10.4.9 The servicing trip generation exercise identifies that the proposed 473 unit residential development could attract in the order of 29 service vehicle arrivals over the course of a typical day (07:00-21:00). Of these, the majority will be Light Goods Vans (LGVs) or cars. The peak times of residential deliveries are shown to be between 10:00-13:00, which does not coincide with the wider network traffic peaks. In this time period (10:00-13:00), on average, the site would attract four deliveries per hour.

10.4.10 In this case, residential development is located above a large supermarket that will sell both comparison and convenience goods. As such, it is not expected that residential development will attract as many home shopping trips as other less well served locations.

10.4.11 Notwithstanding the above a sensitivity test has been undertaken at the request of LBH Officers to assess the robustness of the above servicing vehicle trip rates with reference to the most recently surveyed London based residential development sites in TRICS.

10.4.12 Using the 'Servicing Vehicles' trip rate category within the 'Flats Privately Owned' section of TRICS it is evident that new surveys have been undertaken of flatted development in London. Using traffic surveys undertaken in 2019 and 2020 only (pre-Covid lockdown), for sites located in Greater London, data stored in the TRICS database estimates that the service vehicle travel demand for a 473 unit residential development would be as summarised in **Table 10.10**. The associated TRICS data is included in **Appendix A3** .

Table 10.10: Proposed Residential Development Servicing Trips – Sensitivity Test

Time	INBOUND		OUTBOUND	
	Servicing Vehicles*	Motorcycles	Servicing Vehicles*	Motorcycles
07:00-08:00	1	0	1	0
08:00-09:00	4	0	1	1
09:00-10:00	6	0	4	0
10:00-11:00	3	2	4	1
11:00-12:00	5	0	5	0
12:00-13:00	3	1	3	1
13:00-14:00	4	1	5	1
14:00-15:00	3	1	3	1
15:00-16:00	3	1	5	1
16:00-17:00	4	2	3	2
17:00-18:00	2	2	1	3
18:00-19:00	0	6	1	4
Total	**38**	**16**	**36**	**18**

*Servicing Vehicles (minus Motorcycles) – Motorcycle servicing trips listed separately

10.4.13 The sensitivity test version of the servicing trip generation exercise identifies that the proposed 473 unit residential development could attract in the order of 38 service vehicles (excluding motorcycles) arrivals over the course of a typical day (07:00-19:00). On average, this would equate to three deliveries per hour. While it is recognised that there is growth in home delivery servicing trips to residential development, this assessment has identified a difference of 1 delivery per hour (on average) compared to the original assessment (**Table 10.9**).

10.4.14 The majority of residential servicing trips will be by cars and light goods vehicles. with short dwell times (<15 minutes) and therefore it is considered that the proposed basement servicing facilities will be suitable to accommodate the estimated demand. Nonetheless, management measures set out in the DSP will be of significance in ensuring the efficient operation of the proposed scheme.

Retail Development

10.4.15 As discussed throughout this report, the proposed Tesco Superstore will be similar in scale to the existing store at the Tesco Osterley, which will be closed following the opening of the store at Homebase Syon Lane. With specific reference to service trips, it is however noted that the proposed Tesco use, unlike the existing use at the Osterley site, will not include vehicles servicing online deliveries.

10.4.16 Servicing trips to the proposed Tesco store have been identified from a traffic survey of movements to the current Tesco Osterley operation, on the 9th July 2019. **Table 10.11** summarised the surveyed traffic movements.

Table 10.11: Proposed Tesco Servicing Trip

Time Period	Arrivals		Departures	
	Car/LGV	HGV	Car/LGV	HGV
06:00 - 07:00	1	1	1	0
07:00 - 08:00	0	0	1	0
08:00 - 09:00	2	0	2	0
09:00 - 10:00	2	0	3	0
10:00 - 11:00	0	2	0	2
11:00 12:00	2	1	2	1
12:00 - 13:00	1	0	2	1
13:00 - 14:00	0	0	0	0
14:00 - 15:00	0	0	0	0
15:00 - 16:00	0	0	0	1
16:00 - 17:00	0	0	1	0
17:00 - 18:00	1	0	1	0
18:00 - 19:00	0	0	1	0
19:00 - 20:00	0	1	1	1
20:00 - 21:00	0	0	0	0
21:00 - 22:00	0	1	0	0
Total	**9**	**6**	**15**	**6**

**It is noted that some car parking is provided at Tesco, Osterley on the immediate approach to the Tesco service yard. Some car trips identified in the survey above may not access the service yard and might instead wait in a car parking space adjacent to the service yard access.*

10.4.17 The survey establishes that service vehicle movements are spread throughout the day. Based on the table above, the proposed Tesco store could attract in the order of 21 vehicle arrivals over the course of a typical day (06:00-22:00), averaging 1 or 2 vehicle arrivals an hour. Of these, 6 would be large heavy goods vehicles (HGVs).

10.4.18 The proposed Tesco service yard can accommodate access by 3 no. maximum legal articulated service vehicles at any one time. The survey data indicates that at no time were 3 large HGVs located on-site together and based on the survey the proposed service yard would retain a reserve capacity, at all times.

10.4.19 A standalone Delivery and Servicing Plan (DSP) has been prepared with regard to the development scheme. Measures presented within the DSP to manage the number and timing of service vehicle movements. These include the adoption of a scheduling system that could support the transfer of Tesco servicing trips to times that do not coordinate with peak periods of traffic demand.

10.4.20 Other measures designed to reduce the impact of servicing trips, such as consolidating and back-loading deliveries, are presented in the DSP for the site.

10.5 Net Development Traffic Impact

10.5.1 The development is not coming forward in isolation, and this TA assesses the cumulative effects of both the Tesco and Homebase developments.

10.5.2 The cumulative impact of the Homebase, Brentford and Tesco, Osterley and developments has therefore been assessed both at times of peak traffic demand and over the course of a typical day. What is evident is that over the course of a typical day, the combination of the removal of Homebase store traffic from the road network, the removal of some Tesco Petrol Filling Station traffic from the road network and the reduction in customer car parking numbers for Tesco would in combination act to reduce traffic flows, overall. The assessment of the change in daily traffic flows at defined locations on the highway is presented in **Insert 10.2** below.

10.5.3 The reduction in daily traffic movements is particularly pronounced on Syon Lane to the north of the A4 Great West Road, which will experience an overall traffic reduction due to the relocation of the Tesco store to a site located south of the A4. This results in a significant reduction in trips for points 8 and 9 in **Insert 10.1**. Minor changes to daily traffic flows are anticipated on other links locally as a result of the combined developments.

Insert 10.2: 2035, Predicted Changes to Traffic Flows as a result of Development (Daily)

Location	Average Weekday (07:00 - 19:00)	Annual Average Daily Traffic Flow (AADT, (24-Hours, Mon- Sun)
1	-90	-78
2	-90	-78
3	-90	-78
4	-270	-234
5	-272	-236
6	-406	-374
7	-198	-152
8	-3362	-3924
9	-3362	-3924
10	-412	-439
11	-12	-13

10.5.4 The reductions in traffic flows are not as pronounced at peak times of traffic demand, times at which residential (commuter) traffic movements are at their peak.

10.5.5 Peak hour traffic flows for the highway network, before and after the development are provided in **Appendix T** and **Table 10.12** summarises these changes below. What is evident is that even at peak times of residential traffic demand, a traffic reduction would still be experienced on Syon Lane, north of the A4, between Grant Way and the Great West Road. Despite the removal of Homebase and the Tesco PFS, **Table 10.12** identifies that traffic on Syon Lane (South) and on the A4 would increase at peak times of demand following the development of Tesco Osterley and Homebase, Syon Lane.

Table 10.12: 2035, Predicted Changes to Peak Hour Traffic Flows as a result of Development

Site No. (ref: Insert 10.1)	AM Peak	PM Peak	Saturday Peak
5	31	15	-42
6	44	11	-12
7	22	24	21
8	-109	-204	-367
9	-121	-218	-396
10	81	3	-85
11	0	-1	-2

10.5.6 The above table shows minor increases in traffic during the peak hours at sites 5, 6, 7 and 10. **Section 11** of this documents will consider the combined traffic impact of Tesco and Homebase development schemes on the operation of wider highway network focusing on the operation of the Gillette Corner junction.

10.6 Pedestrian Comfort – A4 Underpass

10.6.1 A pinch point for pedestrian movement locally is the existing underpass beneath the A4, at the Gillette corner junction. This underpass provides a connection between the development and Syon Lane station. This pedestrian comfort assessment has been prepared to establish if development-related pedestrian movements would result in a material impact on the operation of the underpass.

10.6.2 The assessment has been undertaken in accordance with TfL's 'Pedestrian Comfort Guidance for London' guidance document. The document is accompanied by a spreadsheet which allows anyone involved in the planning of London's streets (in this case consultants assessing the impact of development proposals) to calculate the comfort level for a given pedestrian route based on the width of the route and pedestrian flow.

10.6.3 A Pedestrian Comfort Level (PCL) has been calculated for the underpass for the existing and proposed number of pedestrians using this route (i.e. with and without the proposed development). For the purposes of the assessment the following assumptions have been made:

- The width of the underpass route remains the same between the existing and proposed scenario assessments;
- The width of the underpass is 1.8 metres, as measured on the access ramp; and
- Baseline pedestrian demand through the underpass is as surveyed in 2019 (reference Section 8.1).
- Existing infrastructure is in place for both the existing and proposed pedestrian flow scenarios (i.e. baseline infrastructure conditions with no new at grade crossings in place).

10.6.4 The surveyed pedestrian flows for the underpass beneath the A4 at Gillette Corner have been utilised based on pedestrian demand in the busiest surveyed hour, and in the peak 15 minutes of

demand within that peak hour. It is noted that the directional pedestrian flows through the underpass are tidal, as workers cross between Syon Lane station and the Sky campus (and adjacent employment destinations). The impact of additional pedestrian movement generated by the proposed development has then been added to both the peak hour and peak 15 minute assessments in order to determine the existing and future PCL.

10.6.5 This assessment considers potential pedestrian demand from both the Tesco, Osterley and Homebase sites. For the purposes of this assessment it has been assumed that:

- 100% of pedestrian trips, where a journey on foot is the main mode of travel, undertaken by residents of the Homebase site would in future utilise the underpass;
- 10% of pedestrian trips, where a journey on foot is the main mode of travel, undertaken by residents of the Tesco, Osterley site would in future utilise the underpass;
- The majority of rail journeys undertaken by residents of the Tesco, Osterley development connect to the station via the underpass; and
- Some bus passengers for both the Tesco, Osterley development site and the Homebase development site connect to services via the underpass.

10.6.6 This assessment considers peak pedestrian demand in the Weekday AM and Weekday PM peak periods of demand. The full PCL assessment is included at **Appendix M**.

10.6.7 In summary the existing / surveyed pedestrian underpass route at Gillette Corner scores a PCL ranging between B- and A- both for the peak hour and for the peak 15 minute assessments.

10.6.8 The PCL score range lowers to between C- and B+ for the proposed peak hour and peak 15 minute assessments once development related trips are included.

10.6.9 The TfL guidance notes that with regard to the PCL at peak hour flow during the proposed scenario that the underpass *"should be comfortable for its intended use at most times. However, you may need to reassess the site in future."* In regard to the PCL at times of maximum activity the impact assessment notes that *"this level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites."*

10.6.10 As such it is concluded that the A4 underpass would remain fit for purpose in the proposed development scenario.

10.6.11 As such it is concluded that the A4 underpass would remain fit for purpose in the proposed development scenario. However, the assessment does not take into account more general considerations about increased pedestrian movements in an enclosed space. Further sensitivity tests on the appropriateness on this route is provided in **Section 10.8.**

10.6.12 It is worthy of note that the consideration is being given to the retention of the A4 underpass and the provision of a parallel at-grade crossing to support the Homebase and Tesco Osterley developments (refer to Design Option 2 and 2a within **Section 11**). The dual effect of both an underpass and an at-grade crossing would have a significant benefit to the capacity of the A4 crossing.

10.7 Pedestrian Comfort – All other routes

10.7.1 All other routes for pedestrian movement between the two sites have also been assessed in accordance with TfL's 'Pedestrian Comfort Guidance for London' guidance document. The location of the routes is set out in **Insert 10.3** (the underpass already assessed in **Section 10.6** is location 3).

Insert 10.3: Pedestrian Comfort Level Assessment Locations

10.7.2 A Pedestrian Comfort Level (PCL) has been calculated for the existing and proposed number of pedestrians using these routes (i.e. with and without the proposed development). For the purposes of the assessment the following assumptions have been made:

- Baseline pedestrian demand as surveyed in 2019 (reference Section 8.2);
- The full development-related pedestrian trips added to all locations in order to be robust; and
- No redistribution of existing pedestrian trips in the future scenario except to those currently routing through the Homebase car park (also to be robust);
- Existing infrastructure is in place for both the existing and proposed pedestrian flow scenarios (i.e. baseline infrastructure conditions with no new at grade crossings).

10.7.3 Some pedestrians currently route through the Homebase car park as an informal short cut to the crossing at A4/Harlequin Avenue. In the future, this cut through is expected to route along Syon Gateway, which will be developed as a clean air route. Therefore, for the 'proposed' scenario, the baseline pedestrian flows at site 5 have been reduced to equal site 4 (to account for pedestrians re-routing).

10.7.4 The surveyed pedestrian flows have been utilised based on pedestrian demand in the busiest surveyed hour, and in the peak 15 minutes of demand within that peak hour as shown in **Table 10.13** (AM Peak) and **Table 10.14** (PM Peak).

Table 10.13: Base (surveyed) pedestrian counts – AM Peak

Time	Syon Lane, North of Grant Way (1)		Syon Lane, Gillette Corner Building (2)		Syon Lane, South of Underpass (4)		Syon Lane, South of Homebase Access (5)		Syon Lane, Near Station (6)	
	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
07:00	0	2	5	22	2	10	2	21	8	15
07:15	2	0	5	11	9	23	9	90	24	89
07:30	3	1	5	35	4	25	3	26	16	21
07:45	5	1	3	5	3	51	9	99	23	109
08:00	1	1	1	74	1	24	7	51	17	47
08:15	3	0	5	124	5	162	7	312	32	329
08:30	3	1	2	159	3	100	6	104	31	103
08:45	4	3	5	180	2	201	4	369	14	367
09:00	1	1	2	117	0	108	0	196	7	198
09:15	0	4	2	89	4	74	5	138	5	145
09:30	4	2	3	59	3	52	4	124	7	133
09:45	3	3	7	45	1	43	2	51	7	51
Total	28	19	45	920	37	873	58	1581	191	1607

Table 10.14: Base (surveyed) pedestrian counts – PM Peak

Time	Syon Lane, North of Grant Way (1)		Syon Lane, Gillette Corner Building (2)		Syon Lane, South of Underpass (4)		Syon Lane, South of Homebase Access (5)		Syon Lane, Near Station (6)	
	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
15:00	3	3	18	3	10	6	15	5	16	4
15:15	0	0	10	9	10	14	25	22	25	22
15:30	1	0	12	9	10	4	11	24	17	27
15:45	3	0	9	13	10	8	16	8	14	15
16:00	1	0	32	9	28	2	37	8	53	14
16:15	3	2	29	7	31	4	44	1	52	6
16:30	2	3	50	4	34	3	45	11	75	10
16:45	2	4	54	4	45	2	56	8	77	18
17:00	11	5	65	6	54	5	75	6	123	10
17:15	2	12	92	15	88	6	102	14	156	23
17:30	4	1	122	12	100	9	107	4	180	19
17:45	3	4	110	12	124	6	156	17	242	26
18:00	1	3	73	10	105	4	111	10	138	18
18:15	1	8	46	13	56	7	82	16	95	22
18:30	0	7	42	17	43	6	50	9	81	20
18:45	4	2	50	9	41	9	46	13	63	15
Total	41	54	814	152	789	95	978	176	1407	269

10.7.5 The impact of additional pedestrian movement generated by the proposed development has been added to both the peak hour and peak '15 minute' assessments in order to determine the future scenario PCL. The full PCL assessment is included at **Appendix A1**.

10.7.6 In summary, the locations 1 to 6 score a PCL ranging between B and A+ both for the peak hour flows and for the peak 15-minute assessments under the baseline scenario.

10.7.7 The PCL score range lowers to between C- and A for the proposed peak hour flows and peak 15-minute assessments once development related trips are included.

10.7.8 When including 'with development' pedestrian flows the PCL at 'peak hour flow levels' on all routes / locations is as a minimum, **B+**, which is described as *"…comfortable for its intended use at most times. However, you may need to reassess the site in future."*

10.7.9 When including 'with development' pedestrian flows the PCL at 'average of maximum activity' on all routes / locations is as a minimum, **C-**, which is described as *"appropriate for periods of additional stress in Office and Retail and Transport Interchange sites."*

10.7.10 As such it is concluded that the pedestrian route locations 1 to 6 would remain fit for purpose when 'with development' pedestrian flows are included on the pedestrian network.

10.8 Pedestrian Comfort – Sensitivity Test

10.8.1 A sensitivity test of the PCL has been undertaken using additional trips associated with local schools that would form part of the future base and future base with development scenario i.e. these are committed development pedestrian flows (**Table 10.15** and **Table 10.16**). For the sensitivity assessment, these additional trips have therefore been added to the flows previously provided in Tables 10.10 and 10.11.

10.8.2 The dataset below has been generated from information provided in the planning applications (Transport Assessments) for the Bolder Academy and Nishkam School planning applications.

Table 10.15: School Pedestrian Trips (Bolder Academy and Nishkam Schools) – AM Peak

Time	Syon Lane, North of Grant Way (1)		Syon Lane, Gillette Corner Building (2)		A4 Underpass (3)		Syon Lane, South of Underpass (4)		Syon Lane, South of Homebase Access (5)		Syon Lane, Near Station (6)	
	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
07:00	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	11	0	18	0	18	0	13	0	13	0	4
08:00	0	20	0	32	0	32	0	23	0	23	0	6
08:15	0	48	0	77	0	77	0	55	0	55	0	10
08:30	0	114	0	183	0	183	0	130	0	130	0	16
08:45	0	112	0	180	0	180	0	127	0	127	0	14
09:00	0	7	0	12	0	12	0	8	0	8	0	1
09:15	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	314	0	502	0	502	0	358	0	358	0	51

Table 10.16: School Pedestrian Trips (Bolder Academy and Nishkam Schools) – PM Peak

Time	Syon Lane, North of Grant Way (1)		Syon Lane, Gillette Corner Building (2)		A4 Underpass (3)		Syon Lane, South of Underpass (4)		Syon Lane, South of Homebase Access (5)		Syon Lane, Near Station (6)	
	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
15:00	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0
15:30	103	0	166	0	166	0	117	0	117	0	13	0
15:45	108	0	174	0	174	0	124	0	124	0	17	0
16:00	12	0	19	0	19	0	14	0	14	0	2	0
16:15	12	0	19	0	19	0	14	0	14	0	2	0
16:30	12	0	19	0	19	0	14	0	14	0	2	0
16:45	12	0	19	0	19	0	14	0	14	0	2	0
17:00	12	0	19	0	19	0	14	0	14	0	2	0
17:15	12	0	19	0	19	0	14	0	14	0	2	0
17:30	12	0	19	0	19	0	14	0	14	0	2	0
17:45	12	0	19	0	19	0	14	0	14	0	2	0
18:00	5	0	8	0	8	0	6	0	6	0	4	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0
Total	314	0	502	0	502	0	358	0	358	0	51	0

10.8.3 For the Pedestrian Comfort Level (PCL) sensitivity test, it has been assumed that 50% of all 'park and stride, rail and walk-in' trips originate from the south, and travel to the schools via the Syon Lane footways. It has been assumed that a proportion of Bolder Academy school trips would route through the Tesco, Osterley site rather than continue on Syon Lane for access via McFarlane Lane. It has also been assumed that a proportion of Nishkam School trips will route to the school on the footway on the western side of Syon Lane.

10.8.4 The impact of additional pedestrian movement generated by the Bolder Academy and Nishkam Schools has been added to both the peak hour and peak 15-minute PCL assessments in order to determine the future sensitivity test scenario PCL. The full PCL sensitivity assessment is included at **Appendix A2**.

10.8.5 In summary, the locations 1 to 6 score a PCL rating of at least **C+** at peak hour flow levels with reference to the sensitivity test's pedestrian demand.

10.8.6 When considering 'with development' pedestrian demand in addition to the sensitivity test baseline flows the PCL assessment can be considered a worst-case scenario as it assumes no new pedestrian infrastructure is put in place. Proposed development Design Option 2 (**Section 11**) includes the provision of a new at grade crossing on the A4 that could improve pedestrian comfort levels above what is calculated by this assessment.

10.8.7 The PCL rating for location 2 (Syon Lane, Gillette Building frontage) at 'average of maximum activity' falls to **D** under the baseline + proposed development AM peak scenario, with the guidance stating *"This footway is likely to be very uncomfortable. If possible, the footway width should be increased. If this is not possible, it is important that the footway is kept as clear as possible." In this location, the width of the hardstanding would be 4m (2m footway and 2m cycleway).* The PCL assessment refers to a 2m footway width only and as such there would be room for people to walk that is in addition to the 2m width included in the PCL assessment. If TfL or LBH require additional width on this section of the route which would accommodate visitors to the Sky Campus and those routing towards the Bolder Academy school, then additional widening could be provided in the verge adjacent to the Gillette Building.

10.8.8 The PCL rating for location 3 at 'average of maximum activity' falls to **D / E** under the 'baseline' and 'baseline + development' AM peak scenarios. The guidance therefore recommends that this footway width should be increased with or without the proposed development. Although location 3 is the A4 underpass which cannot be widened. Design Options 2 to 4 for the Gillette Corner junction, as detailed in **Section 11**, propose a new surface level crossing of the A4 in replacement of, or in addition to the underpass. Should TfL and LBH confirm that the surface level crossing is required to support the development then this provides an opportunity to improve accessibility across the A4.

10.8.9 Design Option 2 within **Section 11** includes a surface level crossing on the A4 in place of the existing underpass. Design Option 2a includes a new surface level crossing on the A4 and retains the exiting underpass, and in doing so provides significantly more capacity for pedestrian movement north-south across the Great West Road.

10.9 Summary

10.9.1 A comprehensive trip generation exercise has been undertaken. This exercise has carefully and conservatively considered the impacts of the proposed development. To conduct a robust assessment, limited account has been made of the modal shift at the new Tesco store, despite the more sustainable location, increased local population from the dwellings above and Healthy Streets approach taken. It is likely that a greater modal shift will be achieved; the Travel Plans accompanying this document set out measures to achieve this and these details will be reviewed and secured through the reserved matters stage.

10.9.2 It is estimated that the development of 473 residential units at the Homebase, Syon Lane would generate some 329 and 271 two-way person trips during the weekday AM and PM peak hours respectively. In each of the AM and PM peaks, 35 two-way trips would be made by car.

10.9.3 The Mayor's Transport Strategy (2018) includes *"a bold aim for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041."* Based on the assessment provided above, 1,547 two-way trips would enter and exit the site boundary (weekday 07:00-19:00) on foot or by cycle and this represents approximately 73% of all trips to be undertaken.

10.9.4 Based on a two-way weekday bus journey travel demand of 665 trips (07:00-19:00), a journey by bus would form all (or part) of approximately 31% of all journeys made to and from the development site, 10% above the proportion of bus users identified in the 2011 Census for the local area.

10.9.5 Over the course of a 12-hour weekday (07:00-19:00) 826 two-way residential trips would be undertaken by Underground service or by mainline rail.

10.9.6 With regard to site servicing, for the residential element of the scheme it is estimated that 29 service vehicle trips would arrive and depart the site over the course of a typical day. The average dwell time on-site for residential home deliveries will be short, being less than 15 minutes. A sensitivity test undertaken based on 2019/2020 survey data indicates that these trips could increase to 38 arrivals and departures over the curse of a day (excluding motorcycles).

10.9.7 For the site's Tesco development, it is estimated that 21 service vehicles could arrive over course of a typical weekday (06:00-22:00). Service vehicle demand for non-residential and non-Tesco development (kiosk and ancillary residential) would be infrequent.

10.9.8 The majority of service vehicle demand to the site would take the form of cars or light goods vans.

10.9.9 On-site loading facilities are provided to support the site's Tesco and residential developments.

10.9.10 Management measures associated with site servicing is set out in a **Delivery and Servicing Plan** which will be of significance in ensuring the efficient operation of the proposed scheme.

10.9.11 As a result of the development, and the associated development of Tesco Osterley, an overall reduction in car trips is predicted locally. This reduction is significant on Syon Lane, north of the A4, where the reduction in trips is as a result of the Tesco store being relocated to the south of the A4.

10.9.12 Despite the removal of Homebase and the Tesco PFS, **Table 10.12** identifies that traffic on Syon Lane (South) and on the A4 would increase at peak times of demand following the development of Tesco Osterley and Homebase, Syon Lane.

10.9.13 A PCL assessment has established that with the addition of school trips on Syon Lane, the A4 underpass should be increased in width. Consideration of the pedestrian crossing facilities on the A4 is now considered in **Section 11**, including the potential introduction of a surface level crossing in place of, or in parallel to, the existing A4 underpass.

11 Modelling

11.1 Preface

11.1.1 A traffic model has been developed to assess the impact of the combined proposed developments at Homebase, Syon Lane and Tesco, Osterley. While traffic flows will reduce significantly to and from Tesco Osterley site as a result of the development, a proportion of this traffic will redistribute to the Homebase site, where the replacement Tesco store will be developed.

11.1.2 The scope of the traffic modelling exercise has been agreed with TfL and the LBH in advance of this planning submission. It has been agreed that the highway network illustrated in **Insert 11.1** will be modelled using the microsimulation package VISSIM and that the VISSIM model will consider the operation of the local highway network in the following periods:

- Weekday AM Peak 07:45-08:45
- Weekday PM Peak: 17:00-18:00
- Saturday Peak: 13:00-14:00

11.1.3 The model has sought to consider traffic conditions in 2035, the year during which both Homebase, Syon Lane and Tesco, Osterley would be fully occupied and operational.

11.1.4 The network of traffic signals modelled using the VISSIM software would be operated by SCOOT (Split Cycle Offset Optimisation Technique) software. SCOOT is a real-time adaptive traffic control system that adjusts junction cycle times, green times and traffic signal off-sets, depending on traffic demand, to make the traffic signal network operate as efficiently as possible. The Transport Research Laboratory (TRL) states that SCOOT can offer typical delay reductions of up to 15%. The VISSIM model results presented in this report are based on the requirements of TfL's Model Audit Process (MAP). MAP requires the proposed traffic signal network to be modelled using a surveyed traffic profile, which means that traffic demand fluctuates within the VISSIM model over the course of the modelled peak hours in a way that seeks to replicate what happens on the ground. It is important to recognise that the VISSIM software does not, however, adjust junction cycle times, green times or traffic signal off-sets to cater for these fluctuations and as such the model does not fully replicate the way the traffic signals would operate. For this reason, the model results presented in this report can be considered a worse case in terms of driver delays.

11.2 Study Area

11.2.1 The VISSIM model covers an area between Osterley and Brentford, and its boundaries are generally the Osterley Tesco Extra Superstore to the north, Spur Road to the south, Wood Lane to the west and Harlequin Avenue to the east. The VISSIM model study area includes the following junctions:

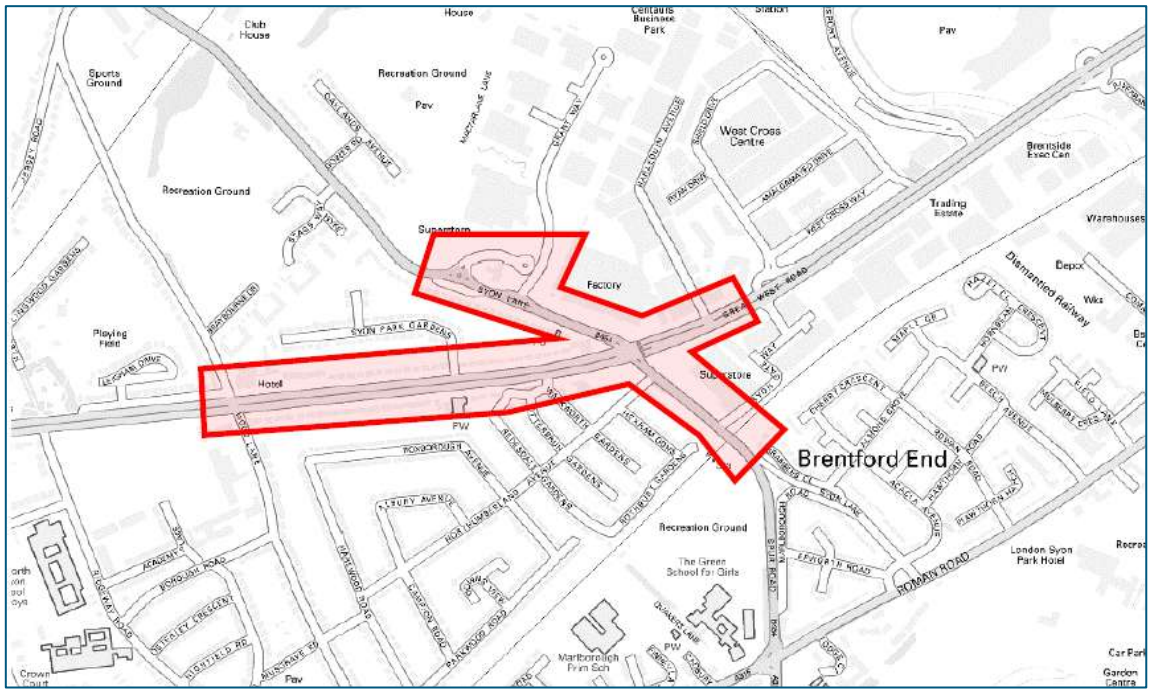
- Junction 02-013 – A4 Great West Road - B454 Syon Lane
- Junction 02-287 – A4 Great West Road - B454 Syon Lane Exit Westbound
- Junction 02-286 – A4 Great West Road – Harlequin Avenue
- Junction 02-287 – A4 Great West Road - Harlequin Avenue Westbound Exit Peds
- Junction 02-014 – A4 Great West Road – Wood Lane.

This junction is not part of the model but has been included at the request of TfL in order to provide the correct arrival pattern of vehicles on the eastbound approach of junction 02/013.

- Junction 01-156 – Syon Lane by Northumberland Avenue Southbound
- Junction 01-157 – Syon Lane by Northumberland Avenue Northbound

11.2.2 The model's extent can be seen in **Insert 11.1** within the red line boundary.

Insert 10.2*: VISSIM Model study Area*



11.3 Transport for London Model Audit Process

11.3.1 The VISSIM Model has been prepared with reference to TfL's VISSIM Model Audit Process (VMAP). The VMAP process requires base traffic models (existing traffic conditions) to be prepared and submitted to TfL, to ensure that the basis of the model validates against existing traffic conditions.

11.3.2 Further to the agreement of base traffic conditions within the traffic model, the applicant is required to agree on the methodology for the assessment of traffic in the proposed design year, in this case, 2035.

11.3.3 TfL has requested that background traffic flows in the design year 2035 would be higher than existing and have asked the applicant to make reference to TfL's London Highway Assignment model (LoHAM).

11.3.4 TfL also requested that residential trip distribution is assessed with reference to the outputs of LoHAM.

11.4 Background Traffic Growth

11.4.1 **Inserts 4.10** and **4.11** identify that traffic volumes on the A4 Great West Road have fluctuated year on year since 2000, however, the DfT data suggests that no material traffic growth has been experienced on the A4 in the last 20-years.

11.4.2 Notwithstanding the above, it is recognised that the development sites are now located in an Opportunity Area, where higher density development is encouraged. Traffic growth estimates have therefore been applied to 2019 traffic survey data, based on LoHAM.

11.5 LoHAM Strategic Model

11.5.1 LoHAM (London Highway Assignment Model) is a TfL strategic model that represents vehicle routing and congestion on London's highway network. TfL describe the model as follows:

"LoHAM takes information on the number of trips and their expected origins and destinations from LTS and calculates their routes through the highway network based on journey times and distance. It is used to provide an overall impression of the impact of major highway schemes or large residential or employment developments. The model splits highway users into different vehicle types including car, taxi, light goods vehicles and other goods vehicles. There are also representations of buses and cycles included to make sure that the road space required by these users is taken into account".

11.5.2 LoHAM considers traffic growth from 2012 to 2031, and this data forms the basis of traffic growth estimates for both the A4 Great West Road and Syon Lane.

11.5.3 In summary, the methodology adopted for the application of background traffic growth is as follows.

- LoHAM Traffic growth rates have been applied to the 2019 surveyed traffic flows on the highway network. The growth rates assume a design year of 2031, which is the future year of LoHAM . TfL has agreed that no additional background traffic growth should be applied from 2031 to 3035.
- All 'committed development' traffic, including school staff trips, has been catered for within the LoHAM traffic growth rates, with the exception of school Park and Stride trips, which have been applied to base traffic flows in addition to the LoHAM traffic growth rates.
- The LoHAM model splits traffic growth rates by vehicle type. Within the VISSIM model vehicle types are not split in the same way and it is therefore proposed that the LoHAM growth rates for cars, taxis and LGVs are combined to create a single growth rate that is suitable for application within the VISSIM model's 'cars/LGV' classification. A separate LoHAM growth rate has been applied to Heavy Goods Vehicles (HGVs).
- School 'Park and Stride' trips that are not currently on the highway network have been added to the local road network and assigned to routes based on the traffic distribution provided in school related Transport Assessments.
- The applied Park and Stride traffic flows assume that future year Travel Plan targets are achieved, with these targets taken from the associated school planning application documentation. For the Nishkam School, this means that only a small increase in Park

and Stride trips is anticipated over and above the existing Park and Stride demand at Tesco, Osterley.

- The 'future base' traffic model assumes all Park and Stride trips are undertaken to the existing Tesco customer car park. This reflects existing conditions in relation to the Nishkam School. This takes into account Nishkam School being fully operational.
- It is understood that Tesco would not enter into an agreement with Nishkam School or the Bolder Academy to permit 'Park and Stride' trips to utilise their car park when they relocate to the Homebase site. For the 'with development' traffic models all Park and Stride trips have therefore been distributed to the Garden Centre car park on Windmill Lane and not to the proposed Tesco store car park. It should be noted that this is not the most efficient distribution of traffic for the operation of the Gillette Corner traffic signal junction because it requires traffic from Syon Lane (South) to route through the junction. If it was in the future assumed that some Park and Stride traffic did route to the new Tesco store car park, then this should improve network performance.

11.5.4 What is evident from the data is that overall, at the A4/Syon Lane (Gillette Corner) junction the LoHAM traffic model predicts an overall increase in traffic flow from 2019 to 2031. Within this overall traffic growth rate, the LoHAM model's rates vary by vehicle type and by traffic movement. The agreed background traffic growth rates applied to the 2019 surveys traffic flows for the junction are as detailed in **Tables 11.1** to **11.3**.

Table 10.10: Car/ Taxi and LGV, Combined Traffic Growth (2019-2031) – Weekday AM Peak

From	**To**	**Car**	**Taxi**	**LGV**	**Total**	**Car**	**Taxi**	**LGV**	**Total**	
A4 (West)	Syon Lane (North)	89	0	4	93	96	0	7	104	11.1%
	A4 (East)	1044	18	150	1211	1000	6	207	1213	0.2%
	Syon Lane (South)	60	1	11	71	92	1	19	112	57.0%
Syon Lane (North)	A4 (East)	451	2	91	544	493	2	104	599	10.0%
	Syon Lane (South)	188	1	29	218	229	1	46	276	26.5%
	A4 (West)	34	0	3	37	46	0	6	52	42.6%
A4 (East)	Syon Lane (South)	184	0	22	206	129	0	14	143	-30.6%
	A4 (West)	1375	7	123	1505	1465	7	187	1658	10.2%
	Syon Lane (North)	183	3	27	213	221	3	43	267	25.2%
Syon Lane (South)	A4 (West)	46	1	4	51	44	1	4	49	-3.9%
	Syon Lane (North)	216	0	20	236	249	0	54	304	28.8%
	A4 (East)	325	4	24	353	255	3	31	288	-18.3%
Totals		**4194**	**36**	**507**	**4738**	**4319**	**24**	**721**	**5064**	**6.9%**

Table 10.11: Car/ Taxi and LGV, Combined Traffic Growth (2019-2031) – Weekday PM Peak

From	**To**	**Car**	**Taxi**	**LGV**	**Total**	**Car**	**Taxi**	**LGV**	**Total**	
A4 (West)	Syon Lane (North)	72	0	1	74	85	0	5	90	22.1%
	A4 (East)	945	34	80	1059	921	30	112	1063	0.3%
	Syon Lane (South)	90	3	12	105	119	3	20	142	35.3%
Syon Lane (North)	A4 (East)	436	6	60	502	462	6	79	546	8.9%
	Syon Lane (South)	238	0	16	255	222	0	26	247	-2.8%
	A4 (West)	49	0	3	53	42	0	5	48	-8.5%
A4 (East)	Syon Lane (South)	188	1	22	212	145	1	23	170	-19.9%
	A4 (West)	1568	10	197	1775	1481	10	272	1763	-0.6%
	Syon Lane (North)	159	1	44	204	140	1	40	180	-11.7%
Syon Lane (South)	A4 (West)	107	0	13	120	123	0	18	141	17.9%
	Syon Lane (North)	250	1	35	286	268	1	64	333	16.7%
	A4 (East)	216	3	21	240	197	3	30	230	-4.1%
Totals		**4319**	**60**	**504**	**4882**	**4204**	**55**	**695**	**4954**	**1.5%**

11.5.5 Traffic growth rates have been applied to surveyed traffic flow, by turning movement, as identified by the TfL LoHAM data.

11.5.6 The VISSIM model considers traffic conditions for a Weekday AM Peak traffic period, a Weekday PM Peak traffic period and a Saturday Peak traffic period. The LoHAM model does not provide traffic growth data for a Saturday. It has been agreed that traffic growth for a Saturday should be an average of the growth rates from the Weekday AM and PM Peak LoHAM data. This methodology would result in the following traffic growth rates for cars, taxis and LGVs.

11.5.7 The full derivation of traffic growth is provided in **Appendix S**.

Table 10.12: Car/ Taxi and LGV, Combined Traffic Growth (2019-2031) – Saturday Peak

From	**To**	**Car**	**Taxi**	**LGV**	**Total**	**Car**	**Taxi**	**LGV**	**Total**	
A4 (West)	Syon Lane (North)	81	0	3	83	90	0	6	97	15.9%
	A4 (East)	994	26	115	1135	961	18	159	1138	0.2%
	Syon Lane (South)	75	2	11	88	106	2	19	127	44.1%
Syon Lane (North)	A4 (East)	443	4	76	523	477	4	91	572	9.5%
	Syon Lane (South)	213	0	23	236	226	0	36	262	10.7%
	A4 (West)	41	0	3	45	44	0	6	50	12.6%
A4 (East)	Syon Lane (South)	186	1	22	209	137	1	19	156	-25.2%
	A4 (West)	1472	8	160	1640	1473	8	229	1711	4.3%
	Syon Lane (North)	171	2	36	208	180	2	41	223	7.2%
Syon Lane (South)	A4 (West)	77	0	8	85	83	0	11	95	11.4%
	Syon Lane (North)	233	1	27	261	258	1	59	319	22.2%
	A4 (East)	271	4	22	296	226	3	31	259	-12.6%
Totals		**4256**	**48**	**506**	**4810**	**4261**	**40**	**708**	**5009**	**4.1%**

11.5.8 For HGV traffic, LoHAM suggests the following traffic growth rates should be applied:

- Weekday AM Peak, 2019-2031: +12.7% traffic growth
- Weekday PM Peak, 2019-2031: +18.6% traffic growth
- Saturday Peak, 2019-2031: +14.6% traffic growth

11.5.9 No ‘Park and Stride’ traffic associated with local schools has been applied to the Saturday data.

11.6 Redistribution of Tesco Trips

11.6.1 It is proposed that the existing Tesco Osterley store will be decanted onto Homebase site so that the operation of the superstore will not cease at any point throughout the proposed redevelopment of the sites. In order to establish the traffic impact of the relocation of the Tesco use, surveyed traffic movements for the existing Tesco Osterley store have been redistributed from the existing Tesco site to its proposed location at Homebase.

11.6.2 The origin-destination data for the existing peak hour Tesco trips, as derived from the ANPR surveys of the existing Tesco use, have been used to identify an estimated directional distribution of arrival and departure trips on the A4 and on Syon Lane.

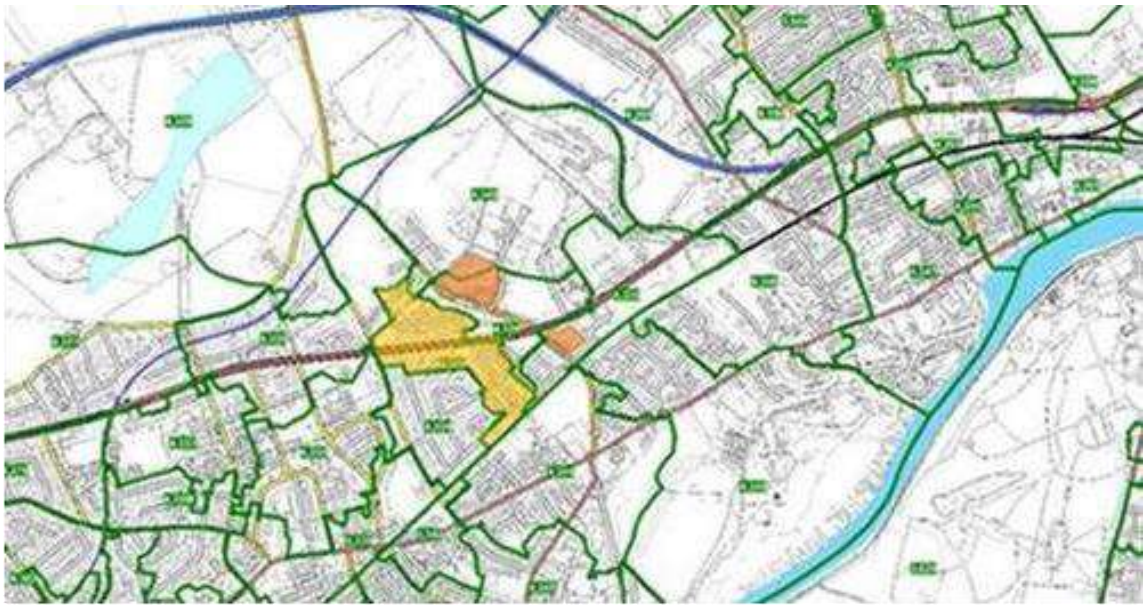
11.6.3 This surveyed traffic distribution has been used to reassign the existing Tesco trips to the Homebase site.

11.7 Distribution of Residential Trips

11.7.1 The LoHAM model has been used to establish a residential traffic distribution for a defined residential zone.

11.7.2 An extract of the TfL model (LoHAM) zonal plan is provided in **Insert 11.2**, with the two development sites (Tesco and Homebase) defined by orange shading. The zones in which the development sites are located predominately contain commercial development and it is understood that LoHAM cannot differentiate between commercial and residential development. We cannot, therefore, obtain a residential only traffic distribution from LoHAM for the zones in which the development sites are located. The closest and most relevant zone (no. 60124) straddles the A4 and is highlighted in Error! Reference source not found. below.

Insert 10.3: Homebase and Tesco Development Sites, and LoHAM Zone 60124



11.7.3 The LoHAM traffic distribution output for zone 60124 has been adopted within the VISSIM model to distribute residential car trips. **Table 11.4** presents the associated traffic distribution data.

Table 10.13: Residential Development Trip Rate Analysis (LoHAM Model, Zone 60124)

A4 East	104	36.8%	152	30.0%	256	32.4%
A4 West	60	21.4%	181	35.7%	242	30.6%
Syon Lane (N)	21	7.5%	57	11.3%	79	9.9%
Syon Lane (S)	97	34.3%	116	23.0%	214	27.0%
Total	**283**	**100.0%**	**507**	**100.0%**	**790**	**100.0%**

**LoHAM does not provide distribution data for a Saturday – the VMAP Stage 5 model for a Saturday, therefore, uses an average traffic distribution, based on the Weekday AM and PM peak hour periods.*

11.8 Distribution of Homebase Trips – Removed from Network

11.8.1 The origin-destination data for the existing peak hour Homebase trips, as derived from the ANPR surveys of the existing use at the proposed development site, have been used to identify the directional distribution of arrival and departure trips.

11.8.2 The existing Homebase trips have been removed from the modelled junctions for the 'full development' modelling scenario in accordance with the above-mentioned distribution/assignment methodology.

11.9 Distribution of Existing PFS Trips – Removed from Network

11.9.1 The existing Tesco PFS would be removed as a result of the proposed developments and would not be replaced on the Homebase site.

11.9.2 It is recognised that some existing Tesco 'PFS' car trips would remain on the local highway network after the existing Tesco PFS has been removed, to use other local PFS facilities. However, for other Tesco customers, the combined offer of a foodstore and a PFS is the attraction of the current Tesco site. This is evidenced by data stored in the TRICS database and in other research papers.

11.9.3 Based on the 2019 research conducted in association with ASDA and Sainsbury's operated PFS's; traffic movements in the vicinity of Tesco, Osterley are likely to reduce as a result of the removal of the Tesco PFS station. It is anticipated that:

- The diversion behaviour likely to result from the closure of the existing Tesco PFS would mean 10% to 14% of linked PFS and foodstore linked trips (**12%** average) would divert to an alternative foodstore location, and would no longer route through the local highway network; and
- In the order of **19%** of the customers who undertake a fuel only shop at the existing Tesco PFS, would in future route to an alternative PFS site, located greater than 10 minutes away from the existing store, and would therefore no longer route through the local highway network.

11.9.4 Based on the proportions identified above it is anticipated that the total traffic diversion from the local highway resulting from the closure of the Tesco PFS would be as detailed in Error! Reference source not found..

Table 10.14: PFS Traffic Diversion from Local Highway

	Arrivals	Departures	Total Traffic
*Weekday 07:45-08:45**	*16*	*15*	*31*
Weekday 17:00-18:00	23	22	46
Saturday 13:00-14:00	28	26	54

**Weekday AM Peak hour considered for the purpose of traffic modelling*

11.10 Resultant Traffic Flows - 2035

11.10.1 **Appendix T** presents the derivation of 2035 'future base' traffic flows. These are baseline flows, including traffic growth to 2035 based on the LoHAM model growth rates. This scenario assumes that Tesco, Homebase and the PFS all operate as existing.

11.10.2 **Appendix T** also presents the derivation of future 'operational traffic flows, that assumes both development sites are implemented and occupied.

11.10.3 **Tables 11.6** to **11.8** set out the modelled traffic flows for the morning and evening network peaks respectively. From the peak flow data it is possible to derive the net change in traffic flows, both between the 2019 and 2035 Baselines, and also between 2035 Baseline and 2035 with Development scenarios. It is apparent that there is an overall reduction in traffic at the Gillette Corner junction as a consequence of the scheme. Syon Lane North experiences the greatest reduction in traffic, with smaller changes in flow on the other junction approaches.

Table 11.6: Net Change In Traffic Flows – Weekday Morning Peak Hour

5	Syon Lane South	1621	1652	31	1.9%
6	A4 East	4342	4386	44	1.0%
7	A4 West	3405	3427	22	0.6%
8	Syon Lane North	1953	1844	-109	-5.6%
9	Syon Lane North	1977	1856	-121	-6.1%
10	Syon Lane North	1648	1730	81	4.9%
11	Northumberland Av	270	270	0	0.0%

Table 11.7: Net Change In Traffic Flows – Weekday Evening Peak Hour

5	Syon Lane South	1360	1375	15	1.1%
6	A4 East	4010	4022	11	0.3%
7	A4 West	3446	3470	24	0.7%
8	Syon Lane North	1693	1489	-204	-12.1%
9	Syon Lane North	1629	1411	-218	-13.4%
10	Syon Lane North	1309	1311	3	0.2%
11	Northumberland Av	250	249	-1	-0.4%

Table 11.8: Net Change In Traffic Flows – Weekday Saturday Peak Hour

5	Syon Lane South	1701	1658	-42	-2.5%
6	A4 East	3355	3343	-12	-0.3%
7	A4 West	2543	2563	21	0.8%
8	Syon Lane North	1757	1390	-367	-20.9%
9	Syon Lane North	1742	1346	-396	-22.7%
10	Syon Lane North	1253	1168	-85	-6.8%
11	Northumberland Av	157	155	-2	-1.3%

11.11 Proposed Highway Layout

11.11.1 The 'operational' traffic models have been based on the proposed future layout for the Gillette Corner junction and the provision of a new traffic signal controlled site access to serve the new Tesco store and residential development on the Homebase site.

11.11.2 Proposed junction layout options for Gillette Corner and the access to the new Tesco store (Homebase site) have been derived from a preliminary 'sifting' of design options, to ensure that design options tested through the TfL VMAP process are likely to accommodate traffic demands.

11.11.3 This report presents Design Options for the Gillette Corner junction, and recommends the implementation of Design Option 2, which is discussed later in this Section.

11.11.4 At the time of writing four design options have been considered in detail, of which three have been approved by TfL thought their VMAP process. A VMAP submission to TfL for Design Option 4 has now been submitted to TfL for their approval, with the assessment of this additional design option requested by TfL following their review of the Design Options 1 to 3. The Design Option 4 VISSIM model is based on the approved models prepared for Design Options 1 to 3.

11.11.5 Highway layout Design Options 1 to 4 provide different level of pedestrian and cycle connectivity the Gillette Corner junction. It is both TfL and LBH's intention to create a highway layout that is navigable on foot and by cycle, however, it is also recognised that any changes to the highway arrangement should not have a significant detriment to the operation of general traffic and bus services. LBH have also identified a need to ensure that any change to the highway layout does not have a significant negative impact on the operation of traffic using Syon Lane and Northumberland Avenue.

11.11.6 The four design options for which VAMP submissions to TfL have been made are summarised below and are detailed in **Appendix U**.

11.11.7 For all design options considered, the VISSIM traffic models assume that the new site access junction to Homebase would be linked to and coordinated with the operation of the Gillette Corner junction. It is also assumed that the Gillette Corner junction links to the operation of the A4 Great West Road/ Harlequin Avenue junction, located to the east.

11.11.8 Furthermore, for all design options, the pedestrian crossing located on Syon Lane, in the vicinity of Syon Lane Station, is retained.

Design Option 1

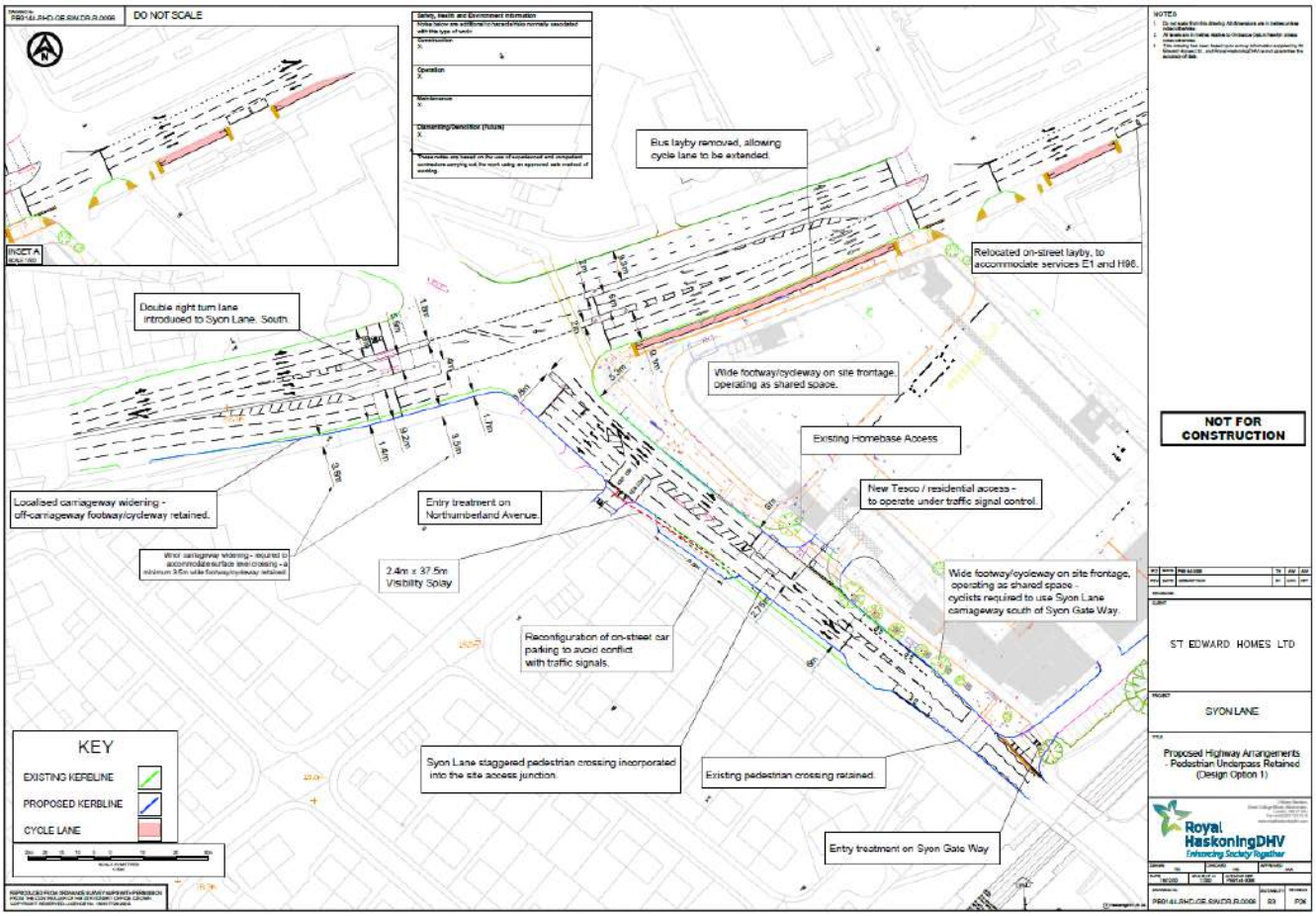
11.11.9 Design Option 1 is illustrated in **Insert 11.3** and includes:

- A new traffic signal control junction on Syon Lane to the Homebase site – the site access being located approximately 7 metres (centre to centre to the south of the existing Homebase access). The new junction would incorporate the staggered traffic signal controlled pedestrian crossing that exists adjacent to Northumberland Avenue and would provide a traffic signal controlled crossing across the new development site access.
- The addition of a second right turning lane on the A4 for traffic turning into Syon Lane (towards the new Homebase site access) from the west.
- The proposed removal of the existing bus stop layby on the A4 Great West Road (Westbound), located on the Homebase site frontage, to allow the pedestrian footway to be widened and the A4's off-carriageway cycle lane extended in the vicinity of the new Tesco store frontage. The bus stop would be relocated to the east to better facilitate the operation of the H91 and the extended E1 bus services.
- This design option would retain the existing pedestrian underpass, beneath the A4.

11.11.10 It is understood that both TfL and LBH consider Design Option 1 as the baseline option, insofar as it does not offer improvements to existing pedestrian connectivity or provide improved provision for pedestrian movements that would be generated by the Tesco and Homebase development projects. The results of the associated VISSIM modelling are, however, included below for completeness and to provide a comparison to the assessments undertaken for alternative highway layout designs.

11.11.11 For Design Option 1, reference can be made to the PCL assessments provided in **Sections 10.6** to **10.8** which assesses the suitability of the existing pedestrian connectivity / infrastructure across the A4 under the existing and proposed levels of pedestrian movements.

Insert 11.3: Gillette Corner and Homebase Access Highway Proposal (Design Option 1)



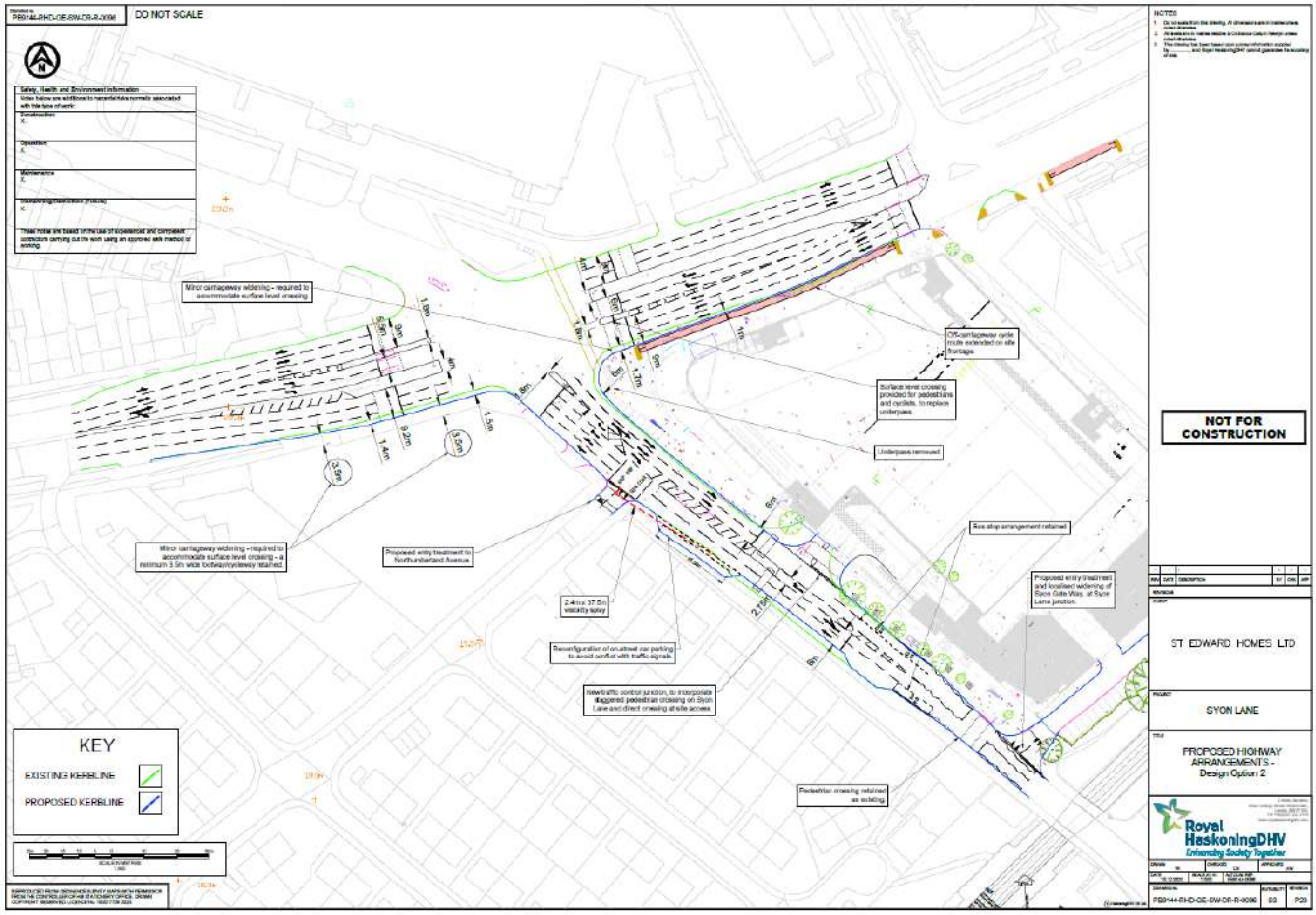
Design Option 2

11.11.12 Design Option 2 is illustrated in **Insert 11.4** and includes:

- A new traffic signal control junction on Syon Lane to the Homebase site – the site access being located approximately 7 metres (centre to centre to the south of the existing Homebase access). The new junction would incorporate the staggered traffic signal controlled pedestrian crossing that exists adjacent to Northumberland Avenue and would provide a traffic signal controlled crossing across the new development site access.
- The addition of a second right turning lane on the A4 for traffic turning into Syon Lane (towards the new Homebase site access) from the west.
- The removal of the pedestrian underpass beneath the A4 and the provision of a new staggered surface level crossing suitable for use by pedestrians and cyclists. The provision of the staggered crossing requires minor widening of the A4 carriageway on its southern side. This Design Option would provide an improved pedestrian connection across the A4, which would also be to the benefit of cyclists. The crossing would act to mitigate the effects of increased pedestrian and cycle movement across the A4 and would support access to the new Tesco store, which would attract trips from the Tesco, Osterley site.

- The proposed removal of the existing bus stop layby on the A4 Great West Road (Westbound), located on the Homebase site frontage, to allow the pedestrian footway to be widened and the A4's off-carriageway cycle lane extended in the vicinity of the new Tesco store frontage. The bus stop would be relocated to the east to better facilitate the operation of the H91 and the extended E1 bus services.

Insert 11.4: Gillette Corner and Homebase Access Highway Proposal (Design Option 2)



Design Option 2a

11.11.13 Recognising that a high volume of pedestrian movement takes place north-south across the A4 at Gillette Corner, a variation of Design Option 2 has been developed. Design Option 2a would operate with the same stopline positions and junction staging arrangement as Option 2 and would therefore retain an equivalent level of highway capacity. Design Option 2a, however, retains the pedestrian underpass while also providing a surface level crossing on the eastern side of the A4.

11.11.14 By retaining the underpass it is not possible to widen the A4 carriageway. Therefore, to provide a parallel staggered surface level crossing a compromise is required to the width of the central pedestrian refuge island, which can be no more than 3m wide. A further compromise in lane width is required and in this scenario it is assumed that the two right turn lanes from the A4 (East) to Syon Lane (North), are 2.75m each. However, while some minor design compromises are required to facilitate the scheme the capacity of the junction to accommodate pedestrian demand would increase significantly in comparison to Design Option 2.

Design Option 3

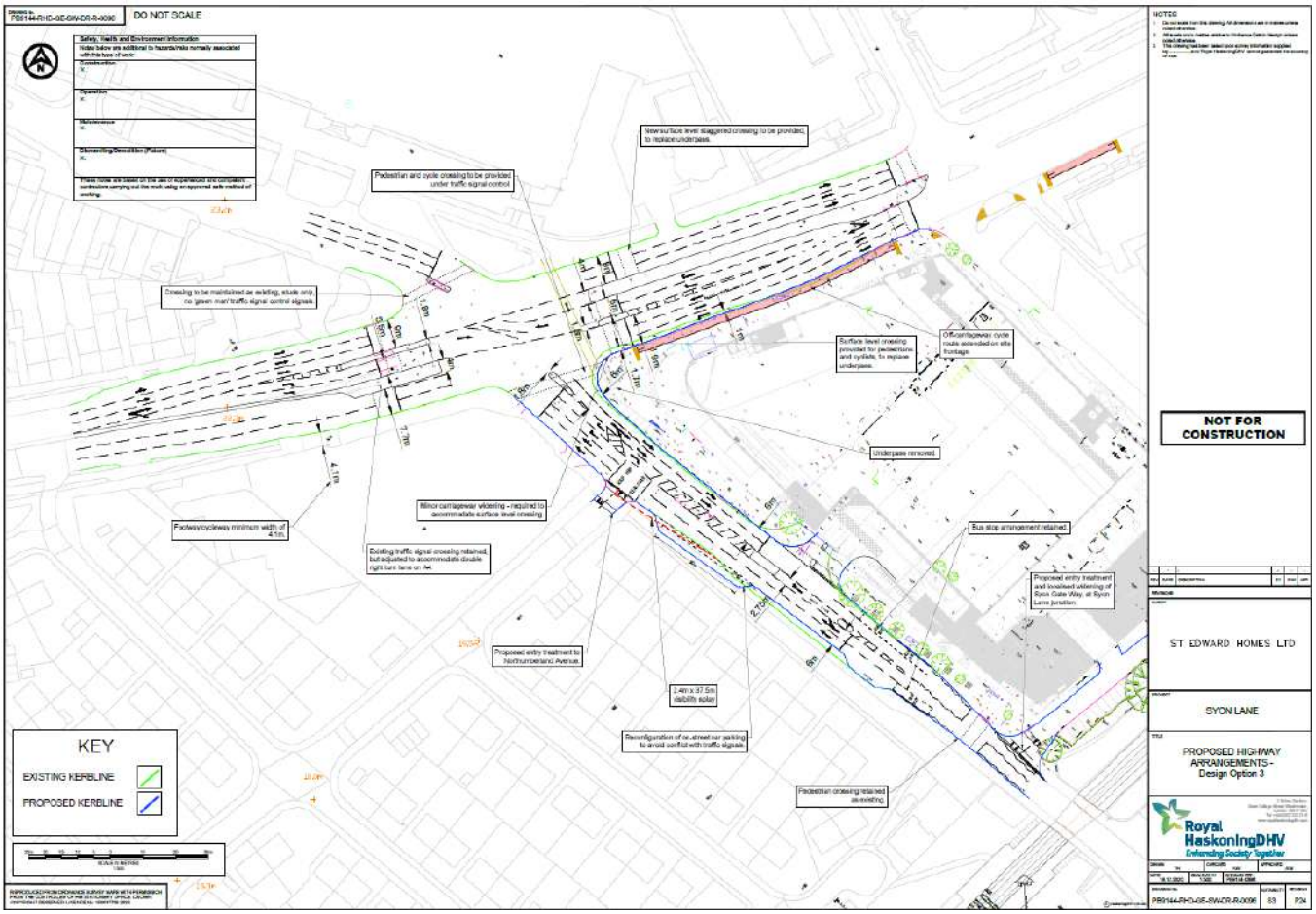
11.11.15 Design Option 3 is illustrated in **Insert 11.5**. This Design Option investigates the feasibility of additional crossings to bring wider improvements to pedestrian and cyclist movements, including east-west movements along the Great West Corridor. Specifically, the design includes the provision of direct pedestrian and cycle crossing across Syon Lane, to the north and south of Gillette Corner.

11.11.16 Design Option 3 is illustrated in **Insert 11.5** and includes:

- A new traffic signal control junction for the Homebase site – the site access being located approximately 7 metres (centre to centre to the south of the existing Homebase access). The new junction would provide a traffic signal controlled crossing across the new development site access.
- The addition of a second right turning lane on the A4 for traffic turning into Syon Lane (towards the new Homebase site access) from the west.
- The removal (or preferably retention) of the pedestrian underpass beneath the A4 and a new staggered surface level crossing suitable for use by pedestrians and cyclists. The provision of the staggered crossing requires minor widening of the A4 carriageway on its southern side.
- The removal of the staggered pedestrian crossing on Syon Lane adjacent to Northumberland Avenue, and it's replacement with a direct pedestrian and cycle crossing on Syon Lane, to be incorporated within the Gillette Corner junction. The crossing would be provided on the desire line to the new Tesco store customer entrance and would create a continuous route alongside the southern side of the A4 for pedestrian and cyclist movement.
- Currently, a crossing is marked on-street across Syon Lane on the northern side of the Gillette Corner junction; however, the crossing is not incorporated into the traffic signal control. This means that pedestrians and cyclists are required to cross the carriageway in gaps observed in the traffic stream. Design Option 3 incorporates the provision of traffic signal control for pedestrian and cycle movements on the northern side of the Gillette Corner junction.
- The proposed removal of the existing bus stop layby on the A4 Great West Road (Westbound), located on the Homebase site frontage, to allow the pedestrian footway to be widened and the A4's off-carriageway cycle lane extended in the vicinity of the new Tesco store frontage. The bus stop would be relocated to the east to better facilitate the operation of the H91 and the extended E1 bus services.

NOTE: Consideration to retaining the underpass in Design Option 3 can be given, without a material impact to the results of junction modelling, subject to the same design compromise described above under Option 2a.

Insert 11.5: Gillette Corner and Homebase Access Highway Proposal (Design Option 3)



Design Option 4

11.11.17 Design Option 4 is illustrated in **Insert 11.6**. As with the preceding design, the Design Option investigates the feasibility of additional crossings at Gillette Corner with the intention of bringing wider improvements to pedestrian and cyclist movements, including east-west movements along the southern side of the Great West Corridor. Specifically, the design retains the underpass, provides a parallel surface level crossing on the A4 and includes the provision of direct pedestrian and cycle crossing across Syon Lane on its southern side.

11.11.18 Design Option 4 is illustrated in **Insert 11.6** and includes:

- A new traffic signal control junction for the Homebase site – the site access being located approximately 7 metres (centre to centre to the south of the existing Homebase access). The new junction would provide a traffic signal controlled crossing across the new development site access.
- The addition of a second right turning lane on the A4 for traffic turning into Syon Lane (towards the new Homebase site access) from the west.
- The retention of the pedestrian underpass beneath the A4 and the creation of a staggered surface level crossing suitable for use by pedestrians and cyclists. To retain the underpass

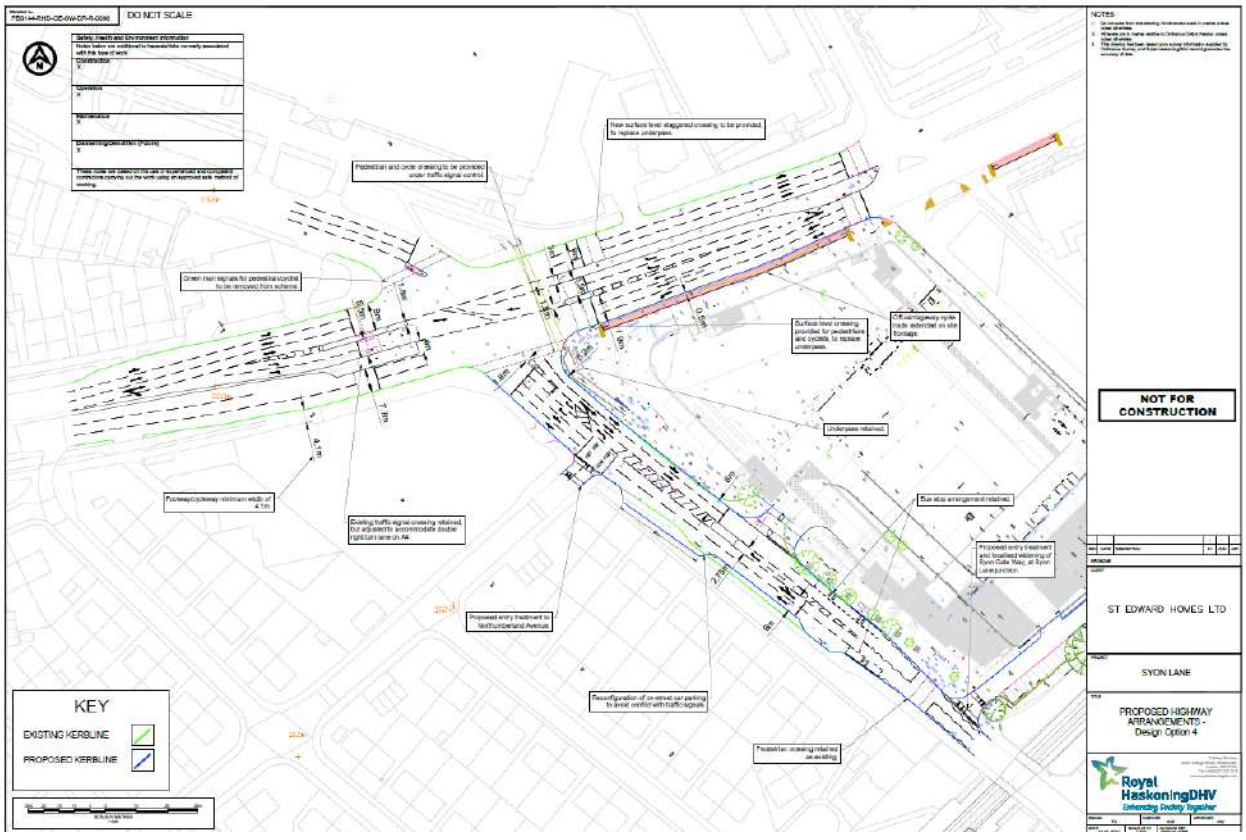
it is not possible to widen the A4 carriageway and therefore to provide a parallel staggered surface level crossing a compromise is required to the width the central refuge island, which can be no more than 3m wide. A further compromise in lane width is required and in this scenario it is assumed that the two right turn lanes from the A4 (East) to Syon Lane (North), are 2.75m each.

- The removal of the staggered pedestrian crossing on Syon Lane adjacent to Northumberland Avenue, and it's replacement with a direct pedestrian and cycle crossing on Syon Lane, to be incorporated within the Gillette Corner junction. The crossing would be provided on the desire line to the new Tesco store customer entrance and would create a continuous route alongside the southern side of the A4 for pedestrian and cyclist movement.

- The proposed removal of the existing bus stop layby on the A4 Great West Road (Westbound), located on the Homebase site frontage, to allow the pedestrian footway to be widened and the A4's off-carriageway cycle lane extended in the vicinity of the new Tesco store frontage. The bus stop would be relocated to the east to better facilitate the operation of the H91 and the extended E1 bus services.

11.11.19 The difference between Design Options 3 and 4 is that Design Option 4 does not include the provision of traffic signal control for pedestrians and cyclists on the northern side of the Gillette Corner junction, with this crossing retained as existing, requiring pedestrians and cyclists to cross in gaps observed in the traffic. This is being reviewed as an option and investigated at a later stage in unison with LBH and TFL. Design Option 3 did not seek to retain the pedestrian subway.

Insert 11.6: Gillette Corner and Homebase Access Highway Proposal (Design Option 4)



11.12 VISSIM Model Assessments, Journey Time Markers (all vehicles)

11.12.1 The results of the VISSIM models, for all Design Options, are presented below in terms of travel journey times through the study area. **Insert 11.7** provides a plan which identifies the journey time markers within the VISSIM models. At the request of TfL and LBH officers, the location of journey time markers has been revised and moved further from the Gillette Corner junction compared to those reported in the original Transport Assessment, to ensure that all traffic delays incurred at the junction are reported.

Insert 10.7: VISSIM Travel Time Section Plan

11.12.2 The results of the VISSIM model, for 2035, are presented in **Tables 11.9, 11.10 and 11.11** below. These tables compare journey times through the network for the 'future base' and the 'operational' traffic conditions. The tables highlight where journey time savings are likely as a result of the development schemes.

11.12.3 For clarity, the 'future base' and 'operational' scenarios are described below:

- **Future Base** – Existing highway layout with traffic growth to 2035 (LoHAM model growth rates) and Tesco, the Tesco PFS and Homebase all operating as existing.
- **Operational** – Design Options 1 to 4, with traffic growth to 2035 (LoHAM model growth rates) and development schemes fully operational.

11.12.4 Recognising that a SCOOT system would operate and manage the traffic signal control network in a way that continually optimises the traffic signal control network, it can be expected that the journey times detailed in **Tables 11.9 to 11.1**1 would improve on implementation. It can be expected that neither the journey time reductions or the journey time additions would be as extreme as identified in the tables, with SCOOT acting to balance the operation of the network throughout each peak period of travel demand.

11.12.5 Where it is practical to do so, the various Design Options have been modelled with a set of green-

times that allow a direct comparison to be made between the traffic models. However, it should be recognised that as additional pedestrian and cycle crossings are included in the network of junctions, the staging arrangement and the optimisation of the traffic signal control network will change to some extent.

Table 11.9: VISSIM Model Journey Times – Weekday AM Peak

Movement through the network		Future Base VISSIM (s)	Design Option 1			Design Option 2			Design Option 3			Design Option 4		
			Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)
W to F	Syon Lane (North) to A4 (East)	296	297	1	0.2%	304	8	2.8%	274	-22	-7.5%	251	-45	-15.2%
W to I	Syon Lane (North) to Syon Lane (South)	336	443	107	32.0%	441	106	31.5%	356	20	6.0%	318	-17	-5.1%
W to D	Syon Lane (North) to A4 (West)	324	424	100	30.8%	417	92	28.4%	373	49	15.0%	315	-10	-2.9%
X to I	A4 (East) to Syon Lane (South)	167	216	49	29.6%	215	48	28.9%	237	71	42.4%	321	155	92.9%
X to D	A4 (East) to A4 (West)	141	152	12	8.4%	154	13	9.3%	123	-17	-12.4%	146	5	3.8%
X to A	A4 (East) to Syon Lane (North)	359	306	-53	-14.7%	304	-55	-15.3%	187	-172	-48.0%	202	-157	-43.6%
Y to A	Syon Lane (South) to Syon Lane (North)	189	193	3	1.7%	198	9	4.7%	173	-17	-8.9%	170	-19	-10.0%
Y to F	Syon Lane (South) to A4 (East)	187	193	7	3.7%	203	17	9.1%	178	-9	-4.7%	190	4	2.0%
Y to D	Syon Lane (South) to A4 (West)	154	162	9	5.7%	167	14	9.0%	143	-11	-7.2%	137	-17	-11.0%
Z to A	A4 (West) to Syon Lane (North)	445	226	-220	-49.3%	224	-221	-49.6%	739	293	65.9%	356	-89	-20.1%
Z to F	A4 (West) to A4 (East)	435	219	-216	-49.7%	219	-216	-49.7%	692	257	59.1%	341	-95	-21.7%
Z to I	A4 (West) to Syon Lane (South)	649	320	-329	-50.7%	320	-328	-50.6%	717	69	10.6%	424	-225	-34.6%
***Average**			-	***-41***	-	-	***-39***	-	-	***+39***	-	-	***-39***	-
1 to 2	[+]Northumberland Av. Northbound	250	111	-139	-55.4%	115	-135	-53.9%	191	-59	-23.6%	157	-93	-37.1%
2 to 1	[+]Northumberland Av. Northbound	210	80	-129	-61.7%	83	-127	-60.4%	173	-37	-17.4%	148	-62	-29.6%

**The average journey time saving is indicative of network performance and does not account for traffic volumes using each route – average excludes Northumberland Av.*
[+]Journey times include turning movement to and from Syon Lane

11.12.6 The VISSIM journey time comparison for the modelled weekday AM Peak hour indicates that Design Options 1, 2 and 4 are likely to result in overall journey time savings as a result of the proposed interventions. However, Design Option 3 would result in an overall journey time extension, with eastbound journeys on the A4 experiencing significant additional delay.

11.12.7 For Design Options 1, 2 and 4, significant journey time savings are identified for traffic on the A4 travelling eastbound and it could be expected that a balanced SCOOT network would act to reduce the journey time savings for A4 traffic in favour of traffic using Syon Lane, both north and south of the A4.

11.12.8 Traffic travelling to and from Northumberland Avenue would experience substantial journey time savings for all modelled scenarios.

11.12.9 The change in journey times has arisen from the reassignment of traffic through the junction, the implementation of improved highway capacity on the A4 for traffic turning sounthbound into Syon Lane and the adjustment of traffic signal timings in order to optimise the operation of the junction

to minimise the delay to traffic on all junction approaches.

11.12.10 The AM peak traffic models assume that the site access junction to the Tesco store operates with a single cycle, with a cycle time of 112 seconds. It is recognised that LBH have requested that consideration is given to doubling the Tesco site access junction in the Weekday AM peak period as a means to increase the pedestrian connectivity across the junction. Double cycling the Tesco access junction results in additional lost time to traffic, with set intergreen periods stopping traffic each time a Stage change at the junction takes place. Double cycling the junction doubles the number of Stage changes and as a consequence this negatively impacts on the operation of the traffic signal network to the extent that journey times increase on Syon Lane, significantly.

11.12.11 Importantly, the junction's staging arrangement includes an all-red to traffic phase. Double cycling the junction to a 56 second cycle time (112 / 2), including an all red to traffic stage has a significant impact on the green time that can be allocated to traffic. For this reason, double cycling the Tesco access junction has not been included in the models reported in this document.

11.12.12 Subject to which Gillette Corner Design solution is implemented, pedestrian routing in the local area could change. Currently the A4 underpass is a destination for many leaving Syon Lane station and heading north. The proposed development of a clean air route along Syon Gate Way and the possible closure of the A4 underpass (and its replacement with a surface level crossing) might encourage fewer pedestrian trips to route on Syon Lane's eastern footway. With the introduction of a pedestrian crossing at the new Tesco access, the desire line for pedestrians crossing the A4 could change for some users, with the existing crossing on the western side of the A4 becoming more attractive.

Table 11.10: VISSIM Model Journey Times – Weekday PM Peak

Movement through the network		Future Base VISSIM (s)	Design Option 1			Design Option 2			Design Option 3			Design Option 4		
			Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)
W to F	Syon Lane (North) to A4 (East)	160	140	-20	-12.5%	142	-18	-11.0%	150	-10	-6.3%	151	-9	-5.7%
W to I	Syon Lane (North) to Syon Lane (South)	177	160	-16	-9.3%	157	-19	-10.9%	167	-9	-5.3%	154	-22	-12.7%
W to D	Syon Lane (North) to A4 (West)	273	162	-111	-40.7%	158	-115	-42.1%	167	-106	-38.8%	161	-112	-41.0%
X to I	A4 (East) to Syon Lane (South)	158	221	62	39.3%	222	64	40.2%	344	186	117.3%	286	127	80.5%
X to D	A4 (East) to A4 (West)	132	167	36	27.0%	166	34	26.1%	195	63	47.8%	183	52	39.2%
X to A	A4 (East) to Syon Lane (North)	196	196	0	-0.1%	194	-2	-1.0%	217	21	10.7%	212	15	7.8%
Y to A	Syon Lane (South) to Syon Lane (North)	170	181	10	6.1%	183	12	7.2%	191	21	12.1%	189	18	10.8%
Y to F	Syon Lane (South) to A4 (East)	151	164	14	9.0%	166	16	10.5%	183	33	21.9%	174	24	15.8%
Y to D	Syon Lane (South) to A4 (West)	129	150	21	16.6%	151	23	17.6%	161	33	25.5%	158	29	22.9%
Z to A	A4 (West) to Syon Lane (North)	189	170	-18	-9.6%	170	-18	-9.7%	217	28	15.0%	181	-8	-4.0%
Z to F	A4 (West) to A4 (East)	167	153	-14	-8.4%	153	-14	-8.2%	179	11	6.8%	197	29	17.6%
Z to I	A4 (West) to Syon Lane (South)	348	240	-108	-30.9%	241	-107	-30.8%	235	-113	-32.5%	352	4	1.1%
***Average**		-	-	***-11***	-	-	***-11***	-	-	***+12***	-	-	***+11***	-
1 to 2	[+]Northumberland Av. Northbound	81	99	19	23.0%	102	21	26.2%	123	43	52.7%	113	32	40.1%
2 to 1	[+]Northumberland Av. Northbound	52	67	15	28.2%	70	18	34.5%	94	42	79.8%	91	38	73.2%

**The average journey time saving is indicative of network performance and does not account for traffic volumes using each route – average excludes Northumberland Av.*
[+]Journey times include turning movement to and from Syon Lane

11.12.13 For the weekday evening peak traffic period, the VISSIM models for Design Options 1 and 2 indicate that overall journey time savings are likely to occur as a result of the proposed interventions. These journey time savings are particularly notable for traffic travelling eastbound on the A4 and southbound on Syon Lane. Overall, for Design Options 1 and 2 seven of the 14 journey time measurements summarised in **Table 11.10** are predicted to reduce as a result of the proposed interventions.

11.12.14 The VISSIM model outputs Design Options 3 and 4 are likely to result in moderate overall journey time extensions, with westbound journeys on the A4 experiencing the most notable additional delay.

11.12.15 Traffic travelling to and from Northumberland Avenue would experience a moderate increase to driver delay for all Design Options, with an additional delay being most notable in Design Option 3.

Table 11.11: VISSIM Model Journey Times – Saturday Peak

Movement through the network		Future Base VISSIM (s)	Design Option 1			Design Option 2			Design Option 3			Design Option 4		
			Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)
W to F	Syon Lane (North) to A4 (East)	167	143	-23	-13.9%	144	-23	-13.8%	132	-35	-20.7%	115	-51	-30.8%
W to I	Syon Lane (North) to Syon Lane (South)	186	178	-7	-4.0%	177	-9	-4.8%	257	71	38.3%	165	-21	-11.3%
W to D	Syon Lane (North) to A4 (West)	310	188	-122	-39.4%	185	-125	-40.2%	266	-44	-14.1%	169	-141	-45.6%
X to I	A4 (East) to Syon Lane (South)	153	208	55	35.9%	206	53	34.9%	527	374	244.7%	375	222	145.0%
X to D	A4 (East) to A4 (West)	130	131	1	0.7%	131	1	0.9%	306	176	135.1%	199	69	52.7%
X to A	A4 (East) to Syon Lane (North)	176	175	-1	-0.8%	174	-2	-1.1%	343	167	94.9%	233	57	32.5%
Y to A	Syon Lane (South) to Syon Lane (North)	147	191	44	29.9%	189	42	28.2%	183	36	24.3%	179	32	21.6%
Y to F	Syon Lane (South) to A4 (East)	136	187	51	37.1%	185	48	35.5%	201	65	47.6%	200	64	46.8%
Y to D	Syon Lane (South) to A4 (West)	112	166	54	48.2%	164	52	46.5%	153	41	36.9%	149	38	33.6%
Z to A	A4 (West) to Syon Lane (North)	175	169	-6	-3.4%	169	-6	-3.3%	204	29	16.8%	175	0	0.0%
Z to F	A4 (West) to A4 (East)	156	152	-4	-2.9%	152	-4	-2.9%	172	16	10.0%	171	15	9.3%
Z to I	A4 (West) to Syon Lane (South)	202	218	17	8.2%	219	17	8.4%	256	55	27.1%	220	18	8.9%
***Average**			-	***+4***	-	-	***+3***	-	-	***+73***	-	-	***+23***	-
1 to 2	[+]Northumberland Av. Northbound	71	83	12	17.0%	82	11	14.9%	82	11	15.8%	82	11	15.1%
2 to 1	[+]Northumberland Av. Northbound	54	81	27	49.6%	80	26	47.1%	83	29	52.6%	85	30	55.6%

**The average journey time saving is indicative of network performance and does not account for traffic volumes using each route – average excludes Northumberland Av.*
[+]Journey times include turning movement to and from Syon Lane

11.12.16 The VISSIM journey time comparison results for the modelled Saturday Peak hour identify that minor journey time extensions could be expected as a result of the proposals for Design Options 1 and 2. For both Design Options 1 and 2, seven of the 14 journey time movements reported in **Table 11.11** are reductions. The journey time reduction is most notable for traffic travelling from Syon Lane (North) to the A4 (West), movement W to D.

11.12.17 As with the preceding peak hour traffic models it is expected that a balanced SCOOT network would act to reduce the journey time savings for Syon Lane (North) and A4 (West) in favour of traffic using Syon Lane (South) and the A4 (East).

11.12.18 For Design Option 3, the average journey times through the study area are predicted to increase, with significant delays anticipated for traffic travelling westbound on the A4, towards Syon Lane (South) – movement X to I.

11.12.19 For Design Option 4, the average journey times through the study area are predicted to increase, although the average journey time increase is more moderate than for Design Option 3.

VISSIM Results Summary

11.12.20 Overall, of the Design Options tested, Design Options 1 and 2 operate with the most traffic

capacity. On average, journey time reductions are anticipated through the network for both Design Options in the weekday AM and PM peak traffic periods. A minor average journey time increase is anticipated on a Saturday for these design options. Recognising that a SCOOT system would operate the traffic signal control network in a way that continually optimises the signal control network, it is expected that neither the journey time reductions or the journey time additions would be as extreme as identified in the above tables and both Design Options could be implemented without a material detriment to highway operations. In the weekday AM and PM peak traffic periods, Design Options 1 and 2 are likely to result in an overall benefit to highway operation.

11.12.21 Design Option 2 demonstrates that it is possible to improve north-south accessibility across the junction and to improve the way the junction operates, with journey time reductions in the weekday AM and PM peaks, and only a minor increase in the Saturday peak. The provision of an additional north-south crossing, as shown in Option 2a, and the retention of the A4 underpass would more than mitigate the effects of the additional pedestrian/cyclist movements associated with the proposed developments.

11.12.22 Design options 3 and 4 investigate the feasibility of additional crossings to bring wider improvements to pedestrian and cyclist movements, including east-west movements along the Great West Corridor. Whilst these options would deliver greater improvements pedestrian and cyclist movements, the traffic flow through the junction would not operate as well as with options 1 and 2, notably in the Saturday peak hour. It is concluded that design option 2 is the appropriate solution that is proportionate to the effects of the developments.

11.12.23 In comparison to Design Option 3, Design Option 4 is an improvement. For this scenario, an overall journey time reduction for traffic is anticipated in the Weekday AM peak hour and moderate average journey time additions are expected in the Weekday PM peak and on a Saturday. The exception is for traffic travelling westbound on the A4 towards Syon Lane (South) during the Saturday peak, where journey time increases are predicted to be significant.

11.12.24 TfL and LBH will review the results of the VISSIM model assessments with a view to encouraging the implementation of a Design Option that maximises pedestrian and cycle accessibility through the study area, while minimising the impact of design interventions on the operation of bus services. The operation of bus services in the VISSIM model is summarised below.

11.13 VISSIM Model Assessments – Bus Journey Time Comparison

11.13.1 Following extensive discussions and liaison with TfL and LBH, it has been agreed that taking a Healthy Streets approach to highway design means minimising delay to bus journey times as this encourages sustainable travel choices within the locality of the sites.

11.13.2 The VISSIM models have been considered with respect to bus service operations in the area, as the highway works will not be permitted to result in a significant delay to bus operations. **Tables 11.12 to 11.14** below summarise future bus journey times through the network for service numbers E1 and H91.

11.13.3 The H91 bus service routes through the Gillette Corner junction from the A4 East to A4 West.

11.13.4 The E1 bus service is indicated in **Appendix J** and would connect the Tesco Osterley site to Ealing Broadway station via the A4 (East). The proposed removal and relocation of the bus layby on A4 East as indicated in the highway layout plan (refer to Insert A of **Insert 11.3**), would serve to reduce

delay to the E1 bus service in turning right to Syon Lane North. The on-carriageway bus stop would also reduce delay to H91 bus services in the westbound direction.

Table 11.12: VISSIM Model Bus Journey Times – Weekday AM Peak

Movement through the network		Future Base VISSIM (s)	Design Option 1			Design Option 2			Design Option 3			Design Option 4		
			Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)
H91	Wood Lane to West Cross Way	431	375	-55	-12.9%	374	-57	-13.1%	380	-51	-11.8%	531	100	23.3%
	West Cross Way to Wood Lane	237	257	20	8.4%	257	19	8.2%	243	6	2.4%	262	25	10.6%
E1	West Cross Way to Syon Lane	438	413	-25	-5.8%	405	-34	-7.6%	272	-167	-38.0%	309	-130	-29.5%
	Syon Lane to West Cross Way	405	289	-117	-28.8%	301	-104	-25.6%	297	-109	-26.9%	278	-128	-31.5%

Table 11.13: VISSIM Model Bus Journey Times – Weekday PM Peak

Movement through the network		Future Base VISSIM (s)	Design Option 1			Design Option 2			Design Option 3			Design Option 4		
			Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)
H91	Wood Lane to West Cross Way	298	295	-3	-1.0%	295	-3	-1.0%	304	6	2.1%	325	27	9.1%
	West Cross Way to Wood Lane	309	309	0	0.0%	310	1	0.4%	359	50	16.1%	332	23	7.6%
E1	West Cross Way to Syon Lane	236	300	64	27.3%	287	52	21.9%	327	91	38.8%	317	82	34.6%
	Syon Lane to West Cross Way	259	229	-30	-11.6%	231	-29	-11.0%	238	-21	-8.3%	242	-17	-6.4%

Table 11.14: VISSIM Model Bus Journey Times – Saturday Peak

Movement through the network		Future Base VISSIM (s)	Design Option 1			Design Option 2			Design Option 3			Design Option 4		
			Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)	Journey Time (s)	Difference (s)	Difference (%)
H91	Wood Lane to West Cross Way	268	260	-8	-3.0%	260	-8	-2.9%	270	2	1%	269	1	0.4%
	West Cross Way to Wood Lane	272	262	-10	-3.7%	261	-11	-4.0%	558	286	105%	408	136	49.9%
E1	West Cross Way to Syon Lane	209	291	82	39.0%	287	78	37.4%	657	448	214%	421	212	101.3%
	Syon Lane to West Cross Way	222	183	-39	-17.5%	184	-38	-17.1%	198	-24	-11%	167	-55	-24.9%

11.13.11 For Design Options 1 and 2 the results demonstrate that the H91 service would experience a minor journey time increase westbound of up to 20 seconds in the weekday AM Peak hour, while eastbound a saving of up to 57 seconds has been recorded. Bus journey time savings are also identified during the weekday PM Peak and Saturday Peak periods. Overall, Design Options 1 and 2 offer journey time reductions for bus service H91.

11.13.12 Design Options 1 and 2 also result in journey time savings for bus route E1 in the Weekday AM peak traffic period in both direction of travel. In the AM peak hour a substantial time saving of over 100 seconds is predicted for buses routing away from the Tesco, Osterley site towards West Cross Way. In the Weekday PM and Saturday peak traffic periods, a time saving for eastbound E1 bus services is offset by a journey time increase for services routing westbound on the A4, towards the Tesco Osterley site. An aggregate journey time increase of up to 43 seconds is predicted for this service in the Weekday PM and Saturday peak traffic periods for Design Options 1 and 2. It

should be recognised that journey times for the E1 service are not only influenced by highway capacity at the Gillette Corner junction but also by changes to the location of bus standing and bus stops at the Tesco, Osterley site.

11.13.13 For Design Option 3 substantial journey time savings are reported in the Weekday AM peak period for both bus services H91 and E1. Design Option 3 would, however, result in a journey time increases in the Weekday PM peak period and a substantial increase in bus journey times in the Saturday peak period.

11.13.14 For Design Option 4 substantial journey time savings are reported in the Weekday AM peak period for bus service E1, with some journey time increases reported in association with service H91 for the same peak hour. In the Weekday PM and Saturday peak traffic periods Design Option 4 would result in a journey time saving for the E1 bus service for buses travelling away from Tesco Osterley site, however, some substantial journey time increases are reported for the E1 service in the opposite direction. Journey time increases are also identified in the Weekday PM and Saturday peak periods for bus service H91.

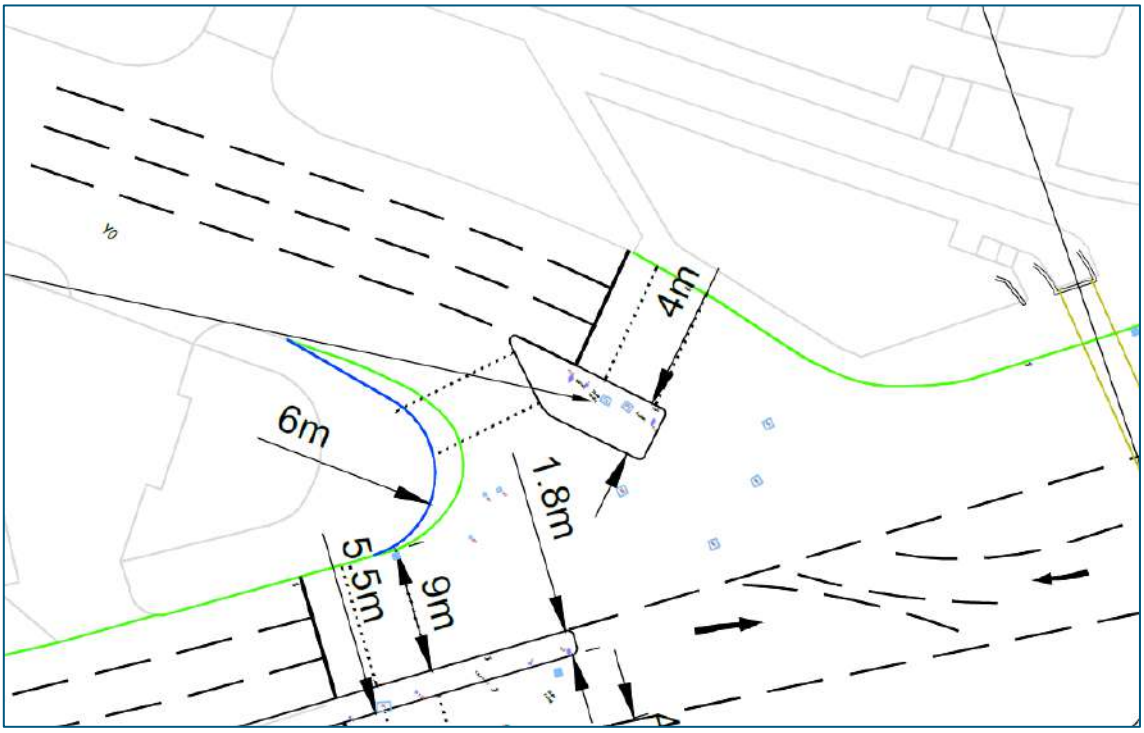
11.14 Design Option Variation - Option 5 (Feasibility Review)

11.14.1 In recognition that TfL and LB Hounslow may in the future want to delivering wider improvements to pedestrian and cyclist movements, including east-west movements along the Great West Corridor, RHDHV have identified potential variations to Design Option 4, with staggered crossing on the northern side of Gillette Corner instead of a direct crossing.

11.14.2 It is proposed that the investigation and assessment of this variation could be secured through obligations in the s106 agreement for the Tesco Osterley development site.

11.14.3 Design Option 4 modelled a direct pedestrian crossings across Syon Lane (North), meaning that pedestrians and cyclists would cross both north and southbound traffic lanes in one movement. A staggered crossing would require pedestrians and cyclists to cross in two parts and therefore requires a traffic island to be located centrally within the Syon Lane carriageway. A staggered arrangement is less convenient than a direct crossing for pedestrians and cyclists and in this case would be awkward to deliver due to the angle of approach of Syon Lane to the A4. However, despite the angle of approach it is possible to accommodate a 4m wide island within the junction for pedestrian and cycle use and this is illustrated in **Insert 11.8** below.

Insert 11.8: Design Option 5 – Syon Lane North Staggered Pedestrian/Cycle Crossing



11.14.4 It is envisaged that the implementation of a staggered crossing on Syon Lane, north of Gillette Corner, would be reviewed as part of the reserved matters application for the Tesco, Osterley site. An obligation would be secured in the s106 for the site to review this option through the reserved matters submissions. For the purpose of this report, this design variation will be referred to as Design Option 5.

11.14.5 The indicative layout of the staggered crossing, and associated vehicle tracking, is provided in **Appendix V** of this report.

11.15 Design Option Variation - Option 6 (Feasibility Review)

11.15.1 In recognition that TfL and LB Hounslow may in the future want to deliver wider improvements to pedestrian and cyclist movements without detriment to highway capacity along the Great West Corridor, RHDHV have identified a potential variation to Design Option 3, with a staggered crossing provided on Syon Lane (South) instead of a direct crossing.

11.15.2 Design Option 3 sought to provide a greater level of pedestrian connectivity than Design Options 1 and 2. The design worked well, in part, but did not perform well on a Saturday and journey time impacts on bus services were significant in some peak traffic periods. Consideration has therefore been given to how Design Option 3 could be adjusted to reflect the junction model results of Design Option 2.

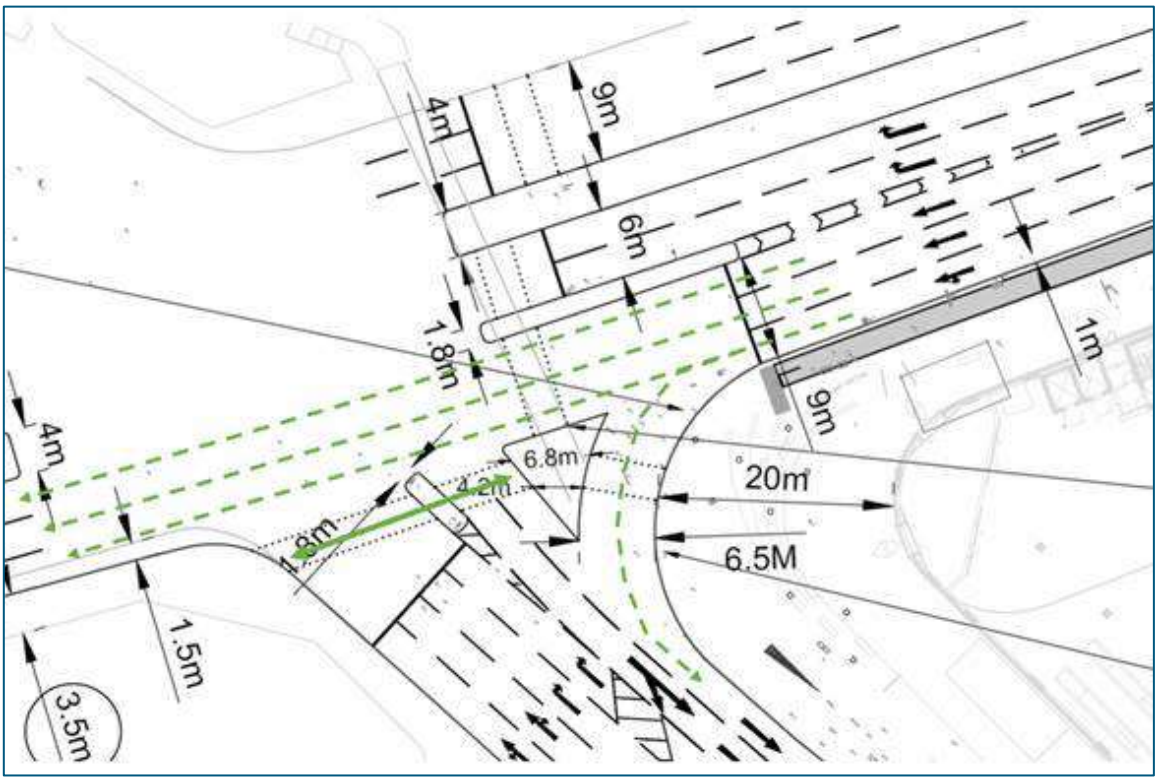
11.15.3 Design Option 3 dedicates the left hand lane of the A4 (East) to left turn movements, meaning that only traffic turning left into Syon Lane (South) would use this lane. This allowed A4 ahead traffic to receive a green signal while pedestrians cross Syon Lane (South). This supported a direct crossing on Syon Lane but with reduced capacity on the A4, and this capacity reduction is

significant enough for additional journey times to be experienced on a Saturday.

11.15.4 An option exists to run the junction with the staging arrangement of Design Option 2 and provide a crossing on the southern arm of the A4 at Gillette Corner, however, this would require a reduction in footway width on the corner of the A4/Syon Lane, near the Tesco customer entrance and a reduction to public realm improvements. This footway reduction would allow a left turn filter lane to be provided from the A4, meaning that pedestrians and cyclists could cross the Syon Lane carriageway to a traffic island while all three A4 westbound traffic lanes are moving. The sketch below (and contained within **Appendix V**) is referred to as Design Option 6 in this report. All movements highlighted with green arrows in **Insert 11.9** could receive a green traffic signal at the same time.

11.15.5 The sketch below pulls the kerb line back by around 8m at the corner of the A4/Syon Lane and this leaves a 20m distance from the new kerb to the store door. In this sketch the pedestrian refuge island created measures between 4.2m and 6.8m at the point that pedestrians cross in an east-west direction.

Insert 11.9: Design Option 6 – Syon Lane South Staggered Pedestrian/Cycle Crossing



11.15.6 This Design Option could perform with the same staging arrangement as Design Option 2 and is likely to perform in a similar manner, albeit the junction is likely to run with slightly extended intergreens to account for the A4 (East) stop line being set further back from the junction.

11.15.7 It is proposed that an obligation would be included in the Homebase, Syon Lane development's s106 agreement that requires Design Option 6 to be reviewed in detail prior to the implementation of the Homebase scheme.

11.16 Modelling Summary

11.16.1 A VISSIM microsimulation traffic model has been developed to assess the traffic impact of the proposed development. The model has been developed in accordance with TfL's guidelines and has utilised outputs from TfL's LoHAM strategic model. The VISSIM Model for Design Options 1, 2 and 3 has been approved by TfL through their VMAP process and a VMAP Stage 5 submission has been made to TfL in relation to Design Option 4.

11.16.2 TfL and LBH are to review the results of all VISSIM modelling to determine which solution they consider is acceptable for detailed design and implementation. This decision making process will be undertaken with reference to the ability to create additional pedestrian and cycle connectivity across the Great West Road, and with reference to the impact of the proposals would have on bus service movements.

11.16.3 The model results reveal a series of positive and negative changes in journey times as a consequence of each scheme. A separate assessment of bus movements reveals that Design Options 1 and 2 do not result in a material detriment to bus journey times, with substantial journey time savings for buses reported for the Weekday AM peak traffic period. Overall the assessment demonstrates that the residual cumulative impact of the development on the road network would not be severe for these Design Options.

11.16.4 Design Option 2 provides an improved connection across the A4, which would be to the benefit of both pedestrians and cyclists. The crossing would act to more than mitigate the effects of increased pedestrian and cycle movement across the A4 and would support access to the new Tesco store, which would attract trips from the Tesco, Osterley site. Given the favourable VISSIM model outputs for this option, and the additional pedestrian connectivity benefits that this option provides, Design Option 2 is now proposed by the applicant.

11.16.5 While Design Option 3 provides the greatest pedestrian and cycle connectivity across the Gillette Corner junction, the traffic impact of this option is potentially prohibitive to its implementation, as the VISSIM model results indicate a severe impact to traffic capacity.

11.16.6 Design Option 4 operates with improved performance when compared with Design Option 3, and provides a more balanced approach between highway capacity and pedestrian connectivity at the Gillette Corner junction. Design Option 4 performs less well during the Saturday peak hour of traffic demand, with journey time increases identified for general traffic and for buses.

11.16.7 The work undertaken recognises a desire to provide a pedestrian/cycle crossing on the northern side of the Gillette Corner junction and an outline design for a staggered crossing has been developed for review prior to the implementation of the Tesco Osterley development.

11.16.8 It is proposed that an obligation would be included in the Homebase, Syon Lane development's s106 agreement that requires Design Option 6 to be reviewed prior to the implementation of the Homebase scheme, meaning that this design option could be developed in a way that supports both the Homebase and Tesco Osterley development sites, should TfL and LBH be agreeable, prior to development occupation.

11.16.9 Recognising that a SCOOT system would operate and manage the traffic signal control network in a way that continually optimises the traffic signal control network, it can be expected that the journey times detailed in **Tables 11.9 to 11.1**4 would improve on implementation. It can be

expected that neither the journey time reductions or the journey time additions would be as extreme as identified in the tables, with SCOOT acting to balance the operation of the network throughout each peak period of travel demand.

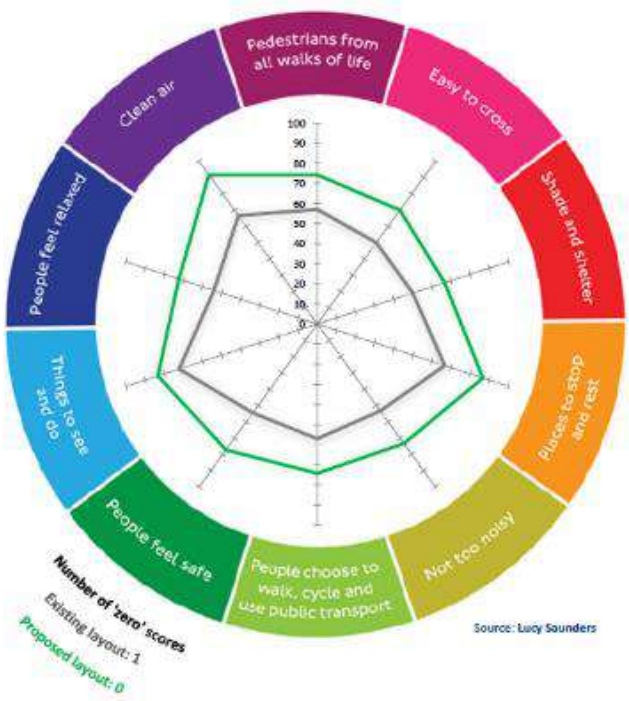
11.16.10 TfL and LBH will review the model journey times presented in this report to identify which Design Option they consider could be implemented. The cost associated with the implementation of the preferred the scheme would be met by the applicant.

11.17 Healthy Streets Check for Designers

11.17.1 TfL have requested that the favoured Design Option for Gillette Corner is subject to a Healthy Streets Designer Check, based on the TfL adopted assessment tool. The tool uses 31 assessment metrics against which a scheme can be scored. The assessment is undertaken with reference to the existing and future scheme designs so that a comparison can be made. **Appendix A6** provides the assessment in full, which has been undertaken with reference to Design Option 2. A summary of the assessment output is provided in **Insert 11.9**.

11.17.2 The assessment has sought to score the route from Tesco Osterley to the Homebase site where the new Tesco store will be constructed. Overall, the assessment shows an improved Healthy Streets score as a result of the development and associated off-site interventions.

Insert 11.9: Heathy Streets Designer's Check Summary



Healthy Streets Indicator scores (%)
(Results will only display once all metrics have been scored)

	Existing layout	Proposed layout
Pedestrians from all walks of life	57	74
Easy to cross	50	70
Shade and shelter	50	67
Places to stop and rest	67	87
Not too noisy	53	73
People choose to walk, cycle and use public transport	57	74
People feel safe	55	77
Things to see and do	72	83
People feel relaxed	54	72
Clean air	67	92
Overall Healthy Streets Check score	57	75
Number of 'zero' scores	1	0

12 Construction

12.1 Preface

12.1.1 Full consideration of the construction phase of the development is given in an associated Outline Construction Logistics Plan (CLP) and the key outcomes of the Outline CLP document are summarised below.

12.1.2 It is anticipated that subject to the granting of planning consent, The anticipated start date for the construction works is the third quarter of 2021, with completion envisaged for the third quarter of 2026. An outline construction programme for the proposed development at the Homebase site is shown in **Table 12.1**.

Table 12.1: Outline Construction Programme

Phase	Development	Anticipated Commencement of Phase	Anticipated Completion of Phase
1	Vacant Possession/Demolition of Homebase	Q3 2021	Q2 2023
2	Construction of Tesco	Q3 2021	Q2 2023
3	Construction of Block C	Q2 2023	Q4 2024
4	Construction of Block D	Q2 2023	Q1 2025
5	Construction of Block B	Q4 2023	Q1 2026
6	Construction of Block E	Q2 2024	Q2 2026
7	Construction of Block A	Q2 2024	Q3 2026

12.2 Construction Vehicle Access

12.2.1 In order that the construction traffic associated with the Homebase site circulates the development in an efficient manner, it is proposed that construction traffic would enter Syon Gate Way from Syon Lane, and route around the development site one-way to exit onto the A4 Great Western Road. All construction activity would be subject to Construction Management Plan controls and best practice as a means to manage potential vehicle, pedestrian and cycle conflicts.

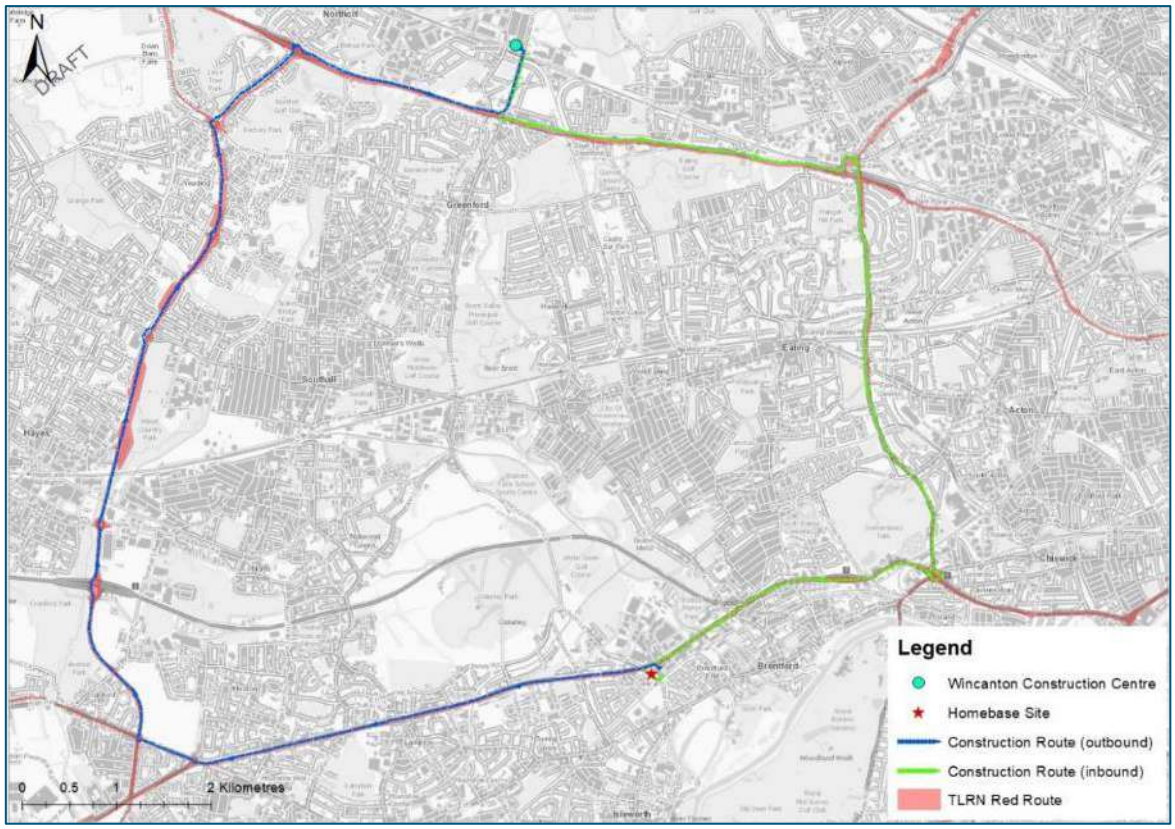
12.2.2 The key principle will be ensuring freight drivers use the Transport for London Road Network red route and Strategic Road Network (SRN) routes, where the design for road safety with freight use has been considered.

12.2.3 In general, suppliers and contractors will be advised to approach the site from the north (i.e. via the A4), unless the practicality of such would result in a detrimental impact on-site access efficiency, or notably greater amount of distance travelled.

12.2.4 Any routeing instructions that are instructed to suppliers and contractors will include notice of the weight restriction on vehicles above 5 tonnes that operates along Syon Lane between 6pm and 8:30am.

12.2.5 For phases and work packages where the consolidation of trips can be undertaken (in particular practicable for demolition and any excavation works), construction vehicles would be routed from the closest Construction Consolidation Centre (CCC), where bulk material would be stored and transported. The Wincanton Greenford Consolidation Centre was established as the closest centre in relation to the site. **Insert 12.1** details the proposed construction vehicles arrival and departure routes along the TLRN red route. The plans can also be found in **Appendix W.**

Insert 12.1: Construction route (Inbound/Outbound)



12.2.6 It is envisaged that the construction programme will extend for 260 working weeks, with works being undertaken from 08:00 to 18:00, Monday to Friday, and from 08:00 to 13:00 on a Saturday.

12.2.7 The number of HGVs that can be held on-site will vary through different stages of construction. The CLP presents a series of access configurations that are proposed in respect of various constraints that will be imposed by elements of the on-site works. For each access configuration, there will be opportunities for holding some vehicles on-site and a vehicle call up procedure will therefore be in operation that will be informed by, and coordinated with, the available on-site capacity. If required, HGVs will be held at Heston Services prior to being called to Site.

12.3 Construction Vehicle Trips

12.3.1 In addition to the estimated trips after the completion of the development at the Homebase site, construction vehicle trips are also to be considered.

12.3.2 It is understood that the construction phase would be carried out over a five-year period.

12.3.3 The TRICS 'Construction Traffic – Research Report' states that a *"The varieties of activities that may take place during construction require the use of a wide range of vehicle types. These may be identified and grouped according to their size".* Based on the content of this document it is estimated that 71.56% of construction trips to site would be undertaken by HGV.

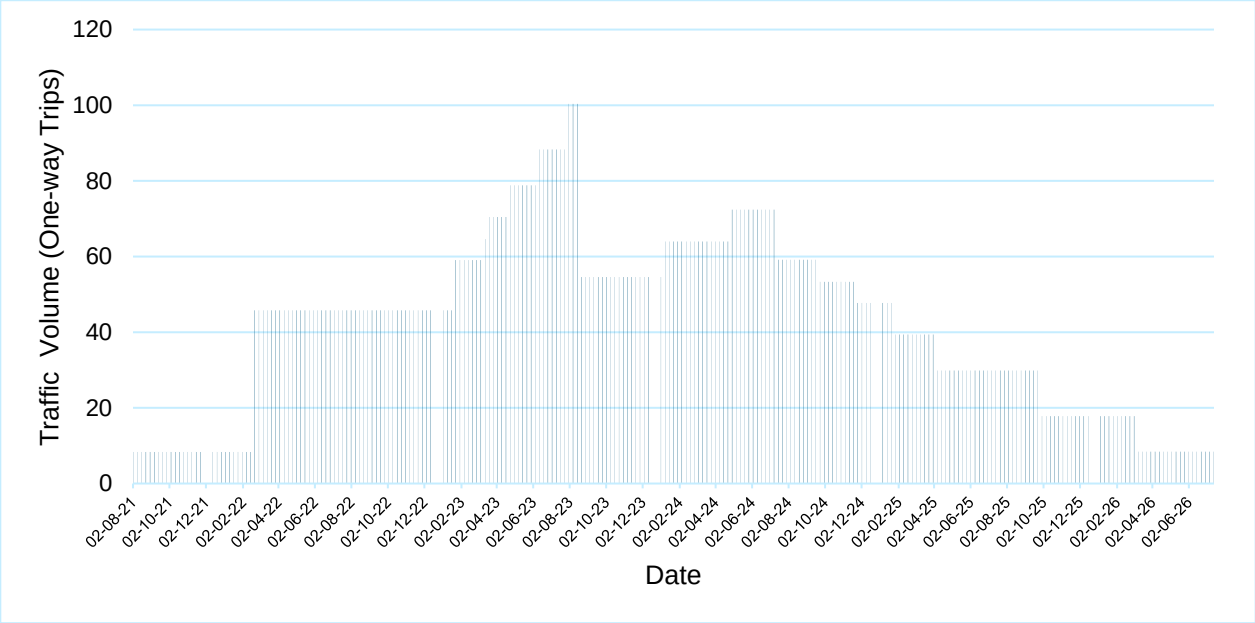
12.3.4 The estimated number of construction vehicle trips by development block is summarised in **Table 12.2**.

Table 12.2 : Construction Vehicle trips

Activity	Weeks	Days	Units	One-way Trips	One-way Trips HGV	Trips per day	Trips per day - HGV
Enabling Works	5.0	27.5	N/A	230	164	8	6
Demolition	22.0	121.0	N/A	1011	723	8	6
Basement to Podium	76.0	418.0	N/A	19136	13694	46	33
Tesco Works	86.4	475.2	N/A	3970	2841	8	6
Block A	89.4	491.7	69	4666	3339	9	7
Block B1	107.1	589.1	105	7100	5081	12	9
Block B2	107.3	590.2	82	5545	3968	9	7
Block B3	110.8	609.4	76	5139	3678	8	6
Block C	73.2	402.6	79	5342	3823	13	9
Block D	73.6	404.8	35	2367	1694	6	4
Block E	75.0	412.5	34	2299	1645	6	4
Totals	**n/a**	**n/a**	**480**	**56804**	**40649**	**n/a**	**n/a**

12.3.5 Based on the construction programme **Insert 12.1** shows the profile of construction trips anticipated to and from the Homebase site.

Insert 12.1: Homebase Site Construction Traffic Profile



12.3.6 **Insert 12.1.** shows that for the majority of the construction programme, the number of one-way construction traffic movements will be in the region of 50 vehicles or less per day. Assuming a 10 hour working day, this would equate to approximately five construction vehicles an hour which is less than the vehicle trips associated with the existing Homebase use of the site (if operational). (Table 8.1 of this report shows that the traffic attraction of the existing Homebase use ranges between 700 – 900 one way vehicle movements per day).

12.4 Highway Safety and Considerate Behaviour

12.4.1 The appointed contractor will prioritise sustainable modes of transport for contractors to visit the site. Lockers will be provided for staff who wish to travel by public transport and need to store tools on site.

12.4.2 Contractors will be informed that parking will not be permitted along the adjacent roads. Where parking is essential, contractors will park within the site compound. The site compound will be gated and remain locked at all times to ensure pedestrians cannot enter the live construction site. The site must be a safe place to work on and also a safe place for pedestrians to pass by.

12.4.3 All construction deliveries must take place from within the site. Special arrangements for abnormal loads, cranes and other heavy lifting equipment deliveries will be made separately by the appointed Contractor with LBH. The key principles of the routing, access and loading points are outlined above, noise implications will be considered by the appointed Contractor.

12.4.4 Engines of vehicles must be switched off wherever practicable when the vehicle is not in use, to ensure unnecessary noise is kept to a minimum. The contractor will ensure wheel washing facilities are provided within the site to minimise the carry of dust, mud and debris to the public highway.

12.4.5 Where possible, multiple deliveries will be consolidated into fewer vehicles in order to reduce the number of times vehicles will be accessing the site. Contractors must not store goods or other construction materials on the public highway at any time.

13 Summary and Conclusion

13.1 Summary

13.1.1 This TA has been prepared on behalf of St Edward Homes Limited in relation to the proposed development of the Homebase Brentford site located to the east of Syon Lane and to the south of the A4 Great West Road. This report has provided a comprehensive review of any implications the proposed development may have on people in terms of highways and transport. The proposals seek to develop the site in order to provide a new Tesco store at ground floor level with 400 parking spaces, and 473 residential units above served by 105 parking spaces (including 2 Car Club spaces and 3 visitor parking spaces). A summary of the positive outcomes resulting from the TA is provided within **Table 13.1**.

Table 13.1: Summary of Positive Outcomes

Chapter	Key transport Impacts/issues	Solutions/Mechanisms
Proposed Development	The current retail stores have considerable car parking and are perceived as car orientated	• The new Tesco store will be located adjacent to Gillette Corner, a busy pedestrian route. • The public realm in the vicinity of the site will be significantly upgraded, creating an attractive / widened / enhanced pedestrian footway environment • Option for a new at grade crossing of the A4. • Deliver an extension to the off-carriageway cycle route along the development's northern / A4 frontage. • A new 'clean air route' along the development's southern / eastern boundary, on Syon Gate Way and Syon Gate Lane. The route will offer an alternative, parallel, pedestrian and cycle route to the A4 and will connect with a new thoroughfare on the site's north-eastern boundary which will link with the Toucan crossing facility at the Great West Road/Harlequin Avenue junction. • Visitor cycle parking will be provided at convenient locations within the public realm, to London Plan standards. • The scheme removes the Homebase store and would not re-provide the Tesco PFS, and there would be associated traffic reductions. • The development would not re-provide car parking at the level of the existing Tesco, Osterley site and overall the development of the site, and the Tesco, Osterley site, would result in a significant reduction in retail car parking numbers.
Site and Surroundings	The existing Tesco site is car dominated and there are a number of emerging developments in the area.	• It is recognised that a high pedestrian demand exists to/from Syon Lane station, towards the Sky Campus in the morning and evening peak periods of travel demand. As a consequence the existing underpass beneath the A4 is well used. • All emerging developments discussed show a commitment to walking, cycling and public transport modes. These

Chapter	Key transport Impacts/issues	Solutions/Mechanisms
		developments look to provide ample cycle parking provision, both on-site and in the public realm. • There are a number of public transport and pedestrian/cycle infrastructure improvements committed in the local area. This includes the proposed Golden Mile Station, an extension of the West London Orbital rail line, as well as improvements to Piccadilly and Southern rail services. These commitments will improve the PTAL rating of the site to a level 4. These measures are likely to come forward to support the Opportunity Area, regardless of the outcome of the planning application to which this report relates. • Improved pedestrian and cycle routes, including the Boston Manor Boardwalk and CS9, will encourage active travel modes in the area. • As a result of the development, and the associated redevelopment of Homebase, Brentford, an overall reduction in traffic movements can be expected. This reduction would be particularly pronounced on Syon Lane north of the A4 Great West Road, where the reduction in traffic can be expected to be in excess of 3000 trips over the course of a typical day. • The proposed Tesco foodstore will be provided with a floor area of circa 1,000sq.m less than the existing store at Tesco, Osterley.
Transport Planning for People	The development supports the Healthy Streets approach of putting people at the heart of the development. TfL classification tool suggests the borough has a mixed profile in terms of transport usage. Car usage remains high and attitude towards change appears to be average.	• The ATZ assessment has concluded that there is good access to public transport and local services and facilities from the site. This indicates a potential for the majority of trips to/from the site to be undertaken by sustainable modes. • However, considering the significant emerging developments in the local area, both in terms of employment and transport options, there is potential to change the mindset towards sustainable transport options.
London-wide Network	The site is on the border of PTAL 2/3	• While the site falls in an area of PTAL 2/3 there are a number of bus services, rail and tube within walking distance of the site. Furthermore, London road, within 500m of the site has pockets of PTAL 4. • In addition to this, there are significant public transport improvements emerging in the local area associated with the Golden Mile masterplan. This includes the new Golden Mile station and wider improvements to local bus and rail services. Consequently, the site's public transport accessibility will improve over time to a PTAL 4.
Multi-modal Trip Generation and Attraction	Changes to traffic volumes as a result of the combined	• It is estimated that the development of 473 residential units at the Homebase site would generate some 339 and 270 two-way person trips during the weekday AM and PM peak hours

Chapter	Key transport Impacts/issues	Solutions/Mechanisms
	development of Tesco, Osterley and Homebase, Brentford	respectively. In the AM and PM peaks, 35 two-way trips would be made by car. • The Mayor's Transport Strategy (2018) includes *"a bold aim for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041."* Based on the assessment provides above, 4,186 two-way trips would enter and exit the site boundary (weekday 07:00-19:00) on foot or by cycle and this represents approximately 67% of all trips to be undertaken. In the context of significant proposed improvements to the public transport infrastructure to support the Opportunity Area, the ability to meet TfL's 2041 target of 80% of trips to be made on foot or by cycle is feasible. • Based on a two-way weekday bus journey travel demand of 665 trips (07:00-19:00), a journey by bus would form all (or part) of approximately 31% of all journeys made to and from the development site. • Over the course of a 12-hour week day (07:00-19:00) 826 two-way residential trips would be undertaken by Underground service or by mainline rail. • On-site loading facilities are provided to support the site's residential and non-residential development, with provision made to a level that would accommodate the estimated demand. • As a result of the development, and the associated development of Tesco, Osterley, an overall reduction in car trips is predicted locally. This reduction is significant on Syon Lane, north of the A4, where the reduction in trips is as a result of the Tesco store being relocated to the south of the A4.
Modelling	The 2035 future year baseline provided by TfL reveals increases in background traffic growth	• Proposals have been put forward to increase traffic capacity at the Gillette Corner junction to account for the redistribution of trips that would result from a new Tesco store being developed to the south of the A4. • Traffic models have been prepared with reference to the guidelines published by TfL and the model is subject to TfL's Model Audit (MAP) process. • At the request of TfL, the assessment considers background traffic growth on the highway, to 2035, based on data published in LoHAM. LoHAM data has also been used to determine the distribution of residential traffic movements. • While traffic growth has been applied within the model to surveyed traffic flows, it is noted that DfT data for the A4 has not identified any material traffic growth on the A4 since 2000. • The methodology for the assessment of a defined traffic network, centred on the Gillette Corner junction, has been

Chapter	Key transport Impacts/issues	Solutions/Mechanisms
		discussed and agreed with TfL in advance of the planning submission. • VISSIM models have been prepared for four Design Options at Gillette Corner. The applicant's preferred Design (Design Option 2) identifies that there would be average journey time reductions in the Weekday AM and PM peak hours, and only a minor increase in the average journey time on a Saturday. • Overall, for Design Option 2 the journey time analysis reveals that the junction of Syon Lane with the Great West Road would not be adversely affected and overall there would be a positive effect on how the junction operates at peak times of operation on a weekday. • Design Option 2 would facilitate a surface level crossing on the A4, to the east of Syon Lane and would introduce the provision of a second right hand turn from the A4 (west) to Syon Lane (south). • The assessment of Design Option 2 forms part of an optioneering process that has been undertaken to establish a preferred junction layout for Gillette Corner. • Design Option 2 has been the subject of VISSIM modelling and the associated model has been approved by TfL through their VMAP process. • While alternative layouts for Gillette Corner have been tested that promote additional pedestrian and cycle connectivity, none operate with the efficiency of Design Option 2. • Notwithstanding the above, the applicant would consent to design variations (Design Options 5 and 6) being tested through the VMAP process prior to development occupation; the purpose being to ascertain whether additional controlled pedestrian crossings could be implemented at Gillette Corner across Syon Lane, both north and south of the junction.
Construction	Increased HGV and construction vehicle traffic during the construction phase	• The key principle of will be ensuring that freight drivers stick to the TLRN red route, where the design for road safety with freight use has been considered. • The appointed contractor will prioritise sustainable modes of transport for contractors to visit the site. • An Outline Construction and Logistics Plan has been developed and this highlights the use of a consolidation centre as a means to reduce the number of construction trips.

13.2 Conclusion

13.2.1 The development scheme has incorporated a Healthy Streets approach to development planning and in doing so accords with the Publication London Plan.

13.2.2 This document has identified that the development would not result in an adverse transport impact and the development is therefore supported by transport planning policies at a national, regional and local level. Specifically, this document has demonstrated that:

- Significant improvements will be made to the local pedestrian and cycling environment in line with the latest Healthy Streets guidance which ensures that the development proposals have been designed to prioritise cyclists and pedestrians, including:
  - Significantly upgraded public realm adjacent to the site, creating an attractive / widened / enhanced pedestrian footway environment.
  - Extension to the off-carriageway cycle route along the development's northern / A4 frontage.
  - Option(s) for a new at grade crossing of the A4.
  - A new 'clean air route' along the development's southern / eastern boundary, on Syon Gate Way and Syon Gate Lane offering an alternative, parallel, pedestrian and cycle route to the A4, connecting with a new thoroughfare on the site's north-eastern boundary which will link with the Toucan crossing facility at the Great West Road/Harlequin Avenue junction.
- The scheme will provide cycle parking in accordance with the Publication London Plan standards.
- The site already has connectivity to public transport and further improvements are planned, which will increase the PTAL to 4.
- Significant improvements will be made to the local bus services, including the provision of a bus route extension and a substantial financial contribution from the applicant towards increasing the level of bus services more generally.
- In conjunction with the Tesco Osterley development the total amount of retail car parking will reduce significantly.
- The trip generation / attraction calculations show a decrease in vehicle trips overall.
- The modelling shows that there would not be a severe residual impact in terms of junction capacity and delay to vehicles on the local highway network.

13.2.3 The National Planning Policy Framework (June 2019) paragraph 109 states that "*Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.*" This report has established that there would not be a severe impact.

13.2.4 In light of the above and the preceding assessment, it is concluded that the development proposals are in accordance with the principles of sustainable development set out within the National Planning Policy Framework, and are therefore fully acceptable in transport planning terms.