ARUP

Legal & General

Harefield Road, Uxbridge

Transport Assessment

Reference: 294516-00

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Job number 294516-00

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1. Introduction

1.1 Background

Ove Arup & Partners Ltd. ('Arup') has been appointed by Legal & General to support the proposals at Units 1 and 2, Harefield Road, Uxbridge (the 'Site'). The Site is located within the London Borough of Hillingdon (LBH) and accommodates two retail units. The retail units were formerly Wickes (Unit 1) and Halfords (Unit 2). The two retail units are currently vacant and the land is used as a temporary car park.

1.2 Site location

The location of the Site in relation to its wider surroundings within Uxbridge is shown in **Figure 1**. The Site is located around 500m to the north of Uxbridge London Underground Station, which is served by the Metropolitan and Piccadilly lines. It is a short walk (around 120m) from Uxbridge High Street / Town Centre, which has a range of retail / Town Centre uses and is also served by multiple bus routes. The Site has a Public Transport Accessibility Level (PTAL) of 5.

Figure 1: Site location

1.3 Planning history

The planning permission for the existing use (application reference: 16299/R/93/0504) was granted in January 1994. The planning permission has the following description of development: *"Redevelopment of site with two units for non-food retail purposes including service and access from Warwick Place and public access via Harefield Road"*. The following restrictive condition was attached to the original planning permission: *"The premises shall not be used except as two separate units for non-food retail purposes"*.

Planning permission was refused in 2018 (application reference: 16299/APP/2018/1849) on the site for 264 residential dwellings (as private rented accommodation) and 332 sqm of combined commercial space.

Planning permission was granted (application reference: 16299/APP/2020/3313) on the Site on 6 May 2022 for the comprehensive redevelopment of the Site comprising demolition of existing buildings to provide residential care accommodation (Use Class C2) with ancillary uses and commercial unit at ground floor level (Use Class E) in buildings up to seven storeys with car parking, landscaping, and associated works. However, this is no longer proposed to be progressed.

1.4 Proposed development

Two planning applications are being submitted for the Site. A Non-Material Amendment (Section 96a) application is being made to vary the description of the development, and a Minor Material Amendment (Section 73) application is being made to vary Condition 23 of the existing planning permission. The applications will enable the sale of food from the two retail units on-site. Further details of the existing Site are provided in **Chapter 2** and details of the proposals are provided below and in **Chapter 3.**

1.4.1 Non-Material Amendment (Section 96a)

The existing use on the current Site is restricted by the description of development on the original planning permission (16299/R/93/0504) on the Site. The current description is as follows:

"Redevelopment of site with two units for non-food retail purposes including service and access from Warwick Place and public access via Harefield Road"

The following amendment of the description of development is proposed:

"Redevelopment of site ~~with two units~~ for ~~non-food~~ retail purposes including service and access from Warwick Place and public access via Harefield Road"

1.4.2 Minor Material Amendment (Section 73)

Planning application decision 16299/R/93/0504 includes a total of 23 conditions. The application proposes the following amendments to these conditions.

Condition 23 attached to 16299/R/93/0503 states that:

"The premises shall not be used except as two separate units for non-food retail purposes"

The reason for attaching this condition is:

"To ensure that adequate car parking facilities are provided and to safeguard pedestrian and vehicle safety and for the free flow of traffic"

As part of this submission, it is proposed to vary Condition 23 in the proposed manner:

"The premises shall not be used except ~~as two separate units~~ for ~~non-food~~ retail purposes"

The above changes will enable the building to be re-occupied by either a comparison goods retailer (as currently consented) or a convenience goods retailer.

1.5 Relevant planning policies and guidance

The National, Regional and Local policy and guidance documents shown in **Table 1** have informed the preparation of this TA and supplementary documents.

Table 1: Relevant planning policy and guidance

Policy Level	Document
National	National Planning Policy Framework (NPPF) (Ministry of Housing, Communities & Local Government (MHCLG), 2023)
	Planning Practice Guidance (MHCLG, 2014 as amended)
	Inclusive Mobility (Department for Transport (DfT), 2005) (reviewed in 2018)
	Manual for Streets 1 & 2 (DfT, 2007 & 2010)
	The Equality Act (Act of Parliament, 2010)
Regional	The London Plan (Greater London Authority (GLA), 2021)
	Mayor's Transport Strategy (GLA, 2018)
	TfL's Healthy Streets Transport Assessment Guidance (TfL, 2019)
	Healthy Streets for London (TfL, 2017)
	Vision Zero Action Plan (TfL, 2018)
	Walking Action Plan (TfL, 2018)
	London Cycle Design Standards (TfL, 2014)
	Delivery and Servicing Plan Guidance (TfL, 2020)
Local	LB Hillingdon's Local Plan Part 1: Strategic Policies (2012)
	LB Hillingdon's Local Plan Part 2: Development Management Policies (2020)

1.6 Consultation

A pre-application meeting was held on 3 August 2023 with LBH Planning and Highways Officers. A response letter from this meeting was received on 27 September 2023, which included comments from the LBH Highways Officer (contained in **Appendix A**). Comments received have been taken into account in the preparation of this report, including undertaking an Active Travel Zone assessment and the provision of supplementary transport reports which are included in the appendices.

1.7 Report purpose and structure

This TA has been produced with reference to Transport for London's (TfL) Healthy Streets TA guidance and follows written pre-application advice from LBH Highways Officers. This report is structured as follows:

- **Chapter 2: Baseline conditions** – provides a description of the existing Site and local transport networks.
- **Chapter 3: Proposed development** – provides a summary of the development proposals.
- **Chapter 4**: **Active Travel Zone** – contains a review of the key Active Travel routes serving the Site that have been identified.
- **Chapter 5: Travel demand** – sets out the extant and forecast multi-modal trip attraction of the Site.
- **Chapter 6**: **Impact assessment** – sets out the impact assessment for the Site on the local highway, public transport and active travel networks.
- **Chapter 7**: **Car Parking Management Plan** – provides a summary of the car parking proposals and management measures.
- **Chapter 8**: **Summary and conclusion** – provides a summary and conclusion to this report.

The following supplementary reports are contained in the appendices:

- **Appendix B –** Framework Travel Plan.
- **Appendix C –** Outline Delivery and Servicing Plan.
- **Appendix D –** Outline Construction Logistics Plan.

2. Baseline conditions

2.1 Existing Site

2.1.1 Site location and existing use

The Site is bounded to the west by Harefield Road, to the north by residential dwellings, to the east by Penfield Estate and to the south by Uxbridge Police Station. The Site is located within Uxbridge Town Centre, as identified in the Hillingdon Local Plan.

The Site comprises two retail units ('Unit 1' and 'Unit 2') with a total floor area of 3,406 sqm Gross Internal Area (GIA) and a 150 space car park. Unit 1 was formerly a Wickes and has a GIA of 2,401 sqm, and Unit 2 was formerly a Halfords and has a floor area of 1,005 sqm. The two retail units are currently vacant and could be re-occupied by similar retailers. The existing service yard is located at the south-east corner of the Site.

The main access to the Site is from Harefield Road. A priority junction with a dedicated right-turn lane provides access for vehicles. A footway is provided into the Site on the northern side of the access. There is a separate secondary egress for servicing vehicles to the south onto Warwick Place. The access arrangements are shown in **Figure 2**.

Figure 2: Site access plan

2.2 Walking and cycling

Pedestrian facilities are generally of good quality in the local area. Close to the Site, footways are provided on both sides of Harefield Road. A footway continues on the northern side of the Site access road.

In the wider area, footways and street lighting are provided on local streets, and there are convenient connections available to local public transport stations and other amenities in the area. Junctions in the area are equipped with pedestrian crossing facilities (a mixture of zebra and signalised), which have dropped kerbs and tactile paving to support users from all walks of life.

The Site is located around 400m for National Cycle Network (NCN) Route 6. This runs from Colham Green (to the south of Uxbridge), north towards Rickmansworth and Watford. NCN Route 6 runs on traffic-free routes through Uxbridge. Away from Uxbridge, it runs on a mixture of traffic-free and lightly trafficked routes.

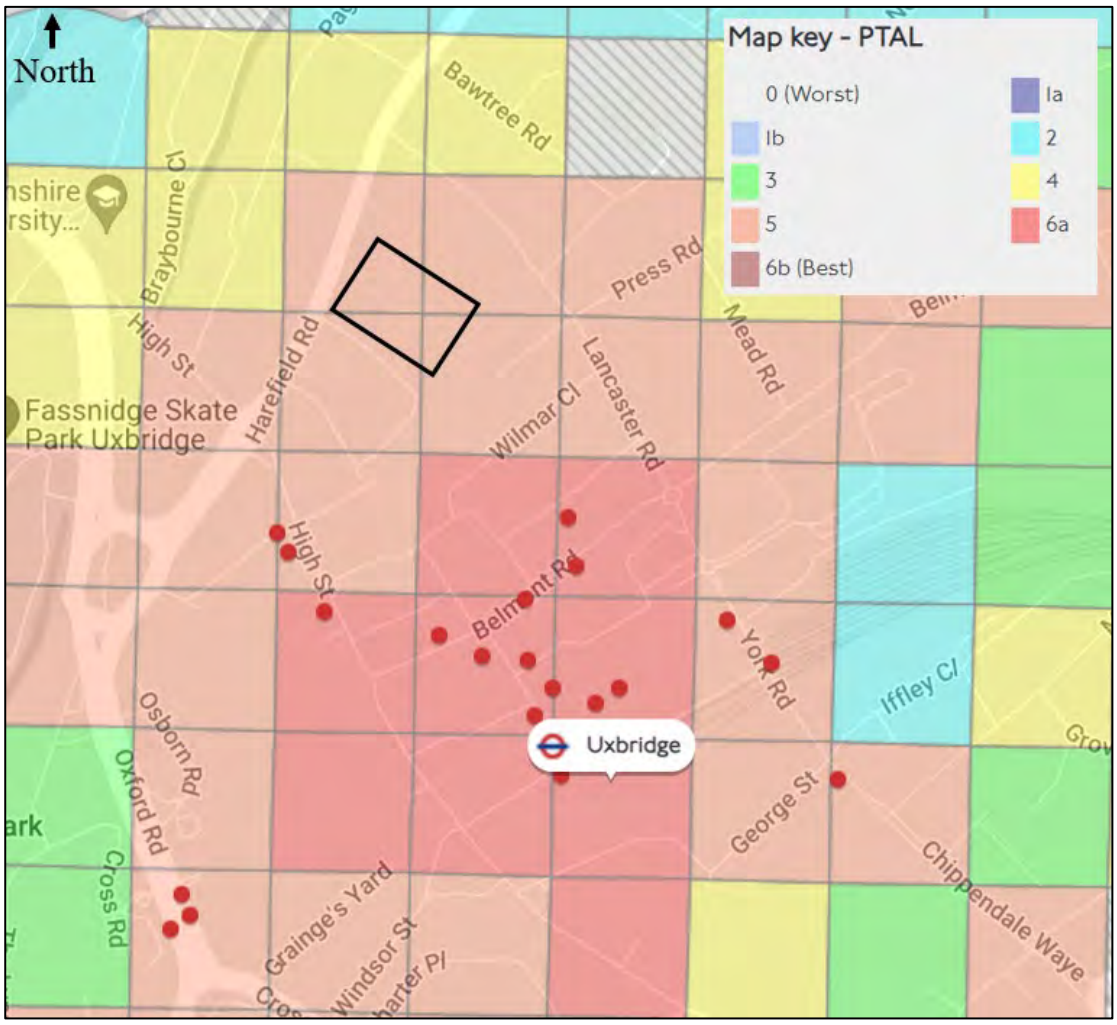
2.3 Public transport

2.3.1 Public Transport Accessibility Level (PTAL)

The Site is well located to the public transport with a range of services within easy walking distance. The Public Transport Accessibility Level (PTAL) of the Site has been calculated using TfL's WebCAT online database. This assumes a walk speed of 4.8kph and includes all rail stations within a 12-minute walk (960m) of a site and all bus stops within an eight-minute walk (640m) of a site.

Based on TfL's WebCAT online database, the Site's PTAL is 5, meaning it has a 'very good' level of public transport accessibility. This is on a scale of 0 to 6b, where 0 is the lowest and 6b is the highest. The output from TfL's WebCAT is shown in **Figure 3**.

Figure 3: Existing PTAL



2.3.2 London Underground

The nearest London Underground station is Uxbridge Station, which is located approximately 500m to the south of the Site. The station is served by the Metropolitan line and Piccadilly line. Step-free access from street to platform is available at the station. A summary of the London Underground services available at Uxbridge Station is provided in **Table 2**.

Table 2: London Underground services and frequencies (trains per hour)

Line	Destination	AM peak hour frequency (trains per hour)	PM peak hour frequency (trains per hour)	Saturday daytime frequency (trains per hour)
Metropolitan line	Towards Aldgate Underground Station	10	9	8
Piccadilly line	Towards Cockfosters Underground Station	4	4	3
Total		**14**	**13**	**11**

2.3.3 Buses

The nearest bus stops are located on High Street ('Stop A' and 'Stop B'), which are approximately 175m to the south of the Site. These are served by both TfL and non-TfL bus routes, providing access to a variety of destinations in London and areas to the west of London. A summary of the bus services operating from these stops and their frequencies is provided in **Table 3**. During peak times, around 45 buses are available in an hour in each direction, which equates to a bus every one to two minutes. Note that some of the services operate with low frequencies, and therefore do not operate during the peak hours shown.

Table 3: Bus services and frequencies (buses per hour in each direction)

Operator	Route	Destination	AM peak hour frequency (buses per hour)	PM peak hour frequency (buses per hour)	Saturday daytime frequency (buses per hour)
First	3	Slough	1	1	2
Carousel	101 Chiltern Hundreds	High Wycombe	1	0	1
Carousel	102 Chiltern Hundreds	High Wycombe	1	1	1
Carousel	104 Chiltern Hundreds	High Wycombe	0	1	1
Transport for London	222	Hounslow	6	6	5
Transport for London	331	Ruislip	3	3	3
Transport for London	427	Southall	7	7	8
Carousel	581	Denham	0	0	0
Carousel	583	Iver	0	0	1
Transport for London	U1	West Drayon	4	4	4
Transport for London	U3	Heathrow Central	5	5	6

Operator	Route	Destination	AM peak hour frequency (buses per hour)	PM peak hour frequency (buses per hour)	Saturday daytime frequency (buses per hour)
Transport for London	U4	Hayes	6	6	5
Transport for London	U5	Hayes & Harlington Station	5	5	5
Transport for London	U7	Lombardy Retail Park	2	2	2
Transport for London	U9	Harefield Hospital	3	3	3
Transport for London	U10	Glenhurst Avenue	1	1	1
Total			**45**	**45**	**48**

2.4 Highway network

2.4.1 Site access

Access to the Site's car park (for entry and egress) and access for delivery and servicing vehicles (for entry only) takes place via a priority T-junction with Harefield Road, which is shown in **Figure 4**. A dedicated right turn ghost island is available at the junction for access into the Site. This measures approximately 25m which is equivalent to approximately four Passenger Car Units (PCUs) The Site access road is one lane entry and one lane exit (with a flare) and leads directly the car park and service yard. This junction has been modelled and the results are shown in **Section 6.2.1**.

Figure 4: Site access junction (looking north along Harefield Road)

Access to the Site's service yard is via the car park access junction described above. Delivery and servicing vehicles drive through the southern side of the car park towards the service yard, which is accessed through a gate. Exiting vehicles do so via Warwick Place to the south of the Site, which has a priority junction with Harefield Road around 50m to the south of the car park access junction. The arrangements are shown in **Figure 5**.

Figure 5: Delivery and servicing arrangements

Collision data for the most recent available three year period (June 2020 to June 2023) has been obtained from TfL, covering the extent of the ATZ assessment including the Site access junction on Harefield Road. No collisions have been reported at the Site access junction during that period of time. The nearest reported collisions on Harefield Road (both slight) are at the junction with Fairfield Road, around 325m to the north. Collision data is contained in **Appendix E.**

2.4.2 Local highway network

Harefield Road is a two-way road running north-south with a single lane in each direction. Around 90m to the south of the Site's access point, Harefield Road forms a priority junction with the High Street. This is also a two-way street with a single lane in each direction and is one of the main retail destinations in Uxbridge. Around 105m to the south of this, Harefield Road forms a signalised roundabout junction with the A4020 Oxford Road. The A4020 is main road with two lanes in each direction, providing connections to further afield including Hillingdon, West Drayton and the M40.

Both Harefield Road and the High Street are subject to 30mph speed limits. The A4020 has a 40mph speed limit. LBH is the Highway Authority for all the roads in the surrounding area.

2.4.3 Ultra Low Emissions Zone

The Ultra Low Emission Zone (ULEZ) is a scheme that aims to improve air quality in London by setting and enforcing new emission standards for all vehicles and deterring the use of the most polluting vehicles by freight operators. Since August 2023 the ULEZ has expanded to operate across the whole of London, not including the M25. Harefield Road is located within the boundary of the ULEZ.

Most vehicles driving in the ULEZ must be met tight emission standards or pay the daily charge of £12.50 to drive inside the zone. The ULEZ is in effect 24 hours a day, 7 days a week, all year round (except Christmas Day).

2.4.4 Baseline traffic flows

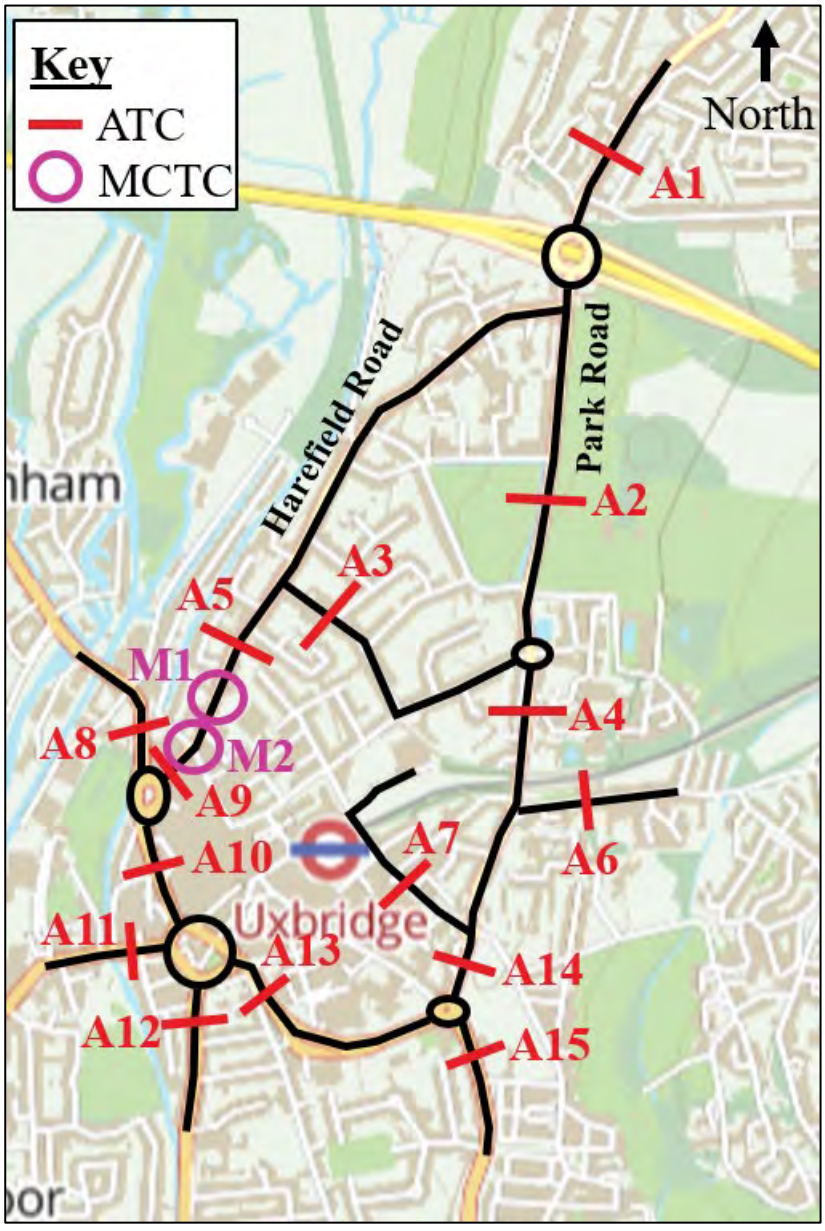
A series of traffic surveys were undertaken in October 2023 in the local area to obtain baseline traffic flows. The locations of the traffic surveys are shown in **Figure 6**. Surveys were undertaken as follows:

- Manual Classified Turning Counts (MCTCs) at two locations – undertaken for 12 hours (7am – 7pm) on Thursday 19 October 2023 and Saturday 21 October 2023. The locations are the Site access junction (M1) and the Harefield Road / High Street junction (M2) to the south.
- Automatic Traffic Counts (ATCs) at 15 locations – undertaken for seven days between Monday 16 October 2023 and Sunday 22 October 2023. Owing to issues with the originally installed ATC tubes, the northbound counts at location A15 were instead undertaken for seven days between Saturday 4 November 2023 and Friday 10 November 2023. The ATCs cover the likely extent of redistributed traffic (further details in **Chapter 6)** and is used to inform the air quality assessment.

From the traffic surveys, the following peak hours have been identified:

- Weekday AM peak hour: 08:00 – 09:00.
- Weekday PM peak hour: 16:45 – 17:45.
- Saturday daytime peak hour: 13:00 – 14:00.

Figure 6: Locations of traffic surveys



Peak hour surveyed traffic flows from the MCTCs at two junctions are shown in **Table 4**. Traffic flow diagrams for the survey and forecast scenarios (with the development) are contained in **Appendix F.** As can be seen, AM and PM peak hour traffic flows are generally higher than Saturday daytime peak hour traffic flows.

Table 4: Manual Classified Turning Counts - surveyed flows

Road	Turn	AM peak hour flows (08:00 – 09:00)	PM peak hour flows (16:45 – 17:45)	Saturday daytime flows (13:00 – 14:00)
Site Access (M1)				
Harefield Road southbound	Ahead	336	270	206
	Left	11	1	9
Site Access	Left	1	13	16
	Right	1	5	4
Harefield Road northbound	Ahead	368	389	263
	Right	9	3	18
Total		**726**	**681**	**516**
Harefield Road / High Street (M2)				
Harefield Road southbound	Ahead	308	267	199
	Left	33	27	27
High Street westbound	Left	264	370	343
Harefield Road northbound	Left	105	79	37
	Ahead	396	362	274
	Right	265	251	255
High Street eastbound	Left	9	23	9
	Ahead	17	13	4
	Right	40	75	26
Total		**1,437**	**1,467**	**1,174**

Peak hour surveyed traffic flows from the ATCs at 15 locations in the area are shown in **Table 5**. Traffic flow diagrams for the survey and forecast scenarios (with the development) are contained in **Appendix F.** Similar to above, AM and PM peak hour traffic flows are generally higher than Saturday daytime peak hour traffic flows.

Table 5: Automatic Traffic Counts - surveyed flows (vehicles)

Location Ref.	Location	Direction	AM peak hour flows (08:00 – 09:00)	PM peak hour flows (16:45 – 17:45)	Saturday daytime flows (13:00 – 14:00)
A1	Swakeleys Road	Northbound	931	1,250	1,039
		Southbound	1,137	1,038	1,151
A2	Park Road	Northbound	707	553	835
		Southbound	1,347	840	904
A3	Fairfield Road	Eastbound	69	42	48
		Westbound	52	55	38
A4	Park Road	Northbound	793	821	783
		Southbound	1,024	872	773
A5	Harefield Road (north of Site)	Northbound	371	399	272
		Southbound	343	265	217
A6	Honeycroft Hill	Eastbound	255	647	398
		Westbound	783	350	332
A7	York Road	Eastbound	297	614	634
		Westbound	600	489	654
A8	Oxford Road	Eastbound	875	695	671
		Westbound	620	772	623
A9	Harefield Road (south of Site)	Northbound	741	674	570
		Southbound	605	701	560
A10	Oxford Road	Eastbound	1,059	961	874
		Westbound	967	1,169	807
A11	New Windsor Street	Eastbound	594	556	392
		Westbound	726	640	528
A12	Cowley Road	Northbound	853	847	679
		Southbound	662	690	765
A13	Hillingdon Road	Eastbound	674	784	754
		Westbound	684	950	628
A14	Park Road	Northbound	1,105	1,349	1,130

Location Ref.	Location	Direction	AM peak hour flows (08:00 – 09:00)	PM peak hour flows (16:45 – 17:45)	Saturday daytime flows (13:00 – 14:00)
		Southbound	1,387	1,129	1,026
A15	Hillingdon Road	Northbound	1,068	1,102	1,009
		Southbound	1,169	1,217	902

2.5 Car parking

The Site currently has an associated car park with 150 spaces. Six of the car parking spaces are marked as being for wheelchair users.

The car park is managed by Euro Car Parks. When the retail park was occupied by the Wickes and Halfords, the car park was subject to duration of stay controls to prevent longer term commuter parking and allow use for retail customers. The car park had a maximum duration of stay of one hour and no return within two hours. The Site currently operates a temporary car park for the town centre given its central location, with charges applying depending on the length of stay.

The Site sits in a LBH Controlled Parking Zone, with the hours of control being 9am – 5pm Monday to Saturday.

3. Proposed development

As set out in **Section 1.3**, the existing Site is only permitted for non-food retail. The Highways Authority noted in the original planning permission that the existing condition that prohibits the sale of food was imposed *"To ensure that adequate car parking facilities are provided and to safeguard pedestrian and vehicle safety and for the free flow of traffic"*.

Two planning applications are being submitted for the Site to enable the sale of food from the two retail units on-site. A Non-Material Amendment (Section 96a) application is being made to vary the description of the development, and a Minor Material Amendment (Section 73) application is being made to vary Condition 23 of the existing planning permission.

No changes are proposed to the overall total retail floor area. Minor changes are proposed to be made internally to the two units, as shown in **Table 6**.

Table 6: Existing and proposed floor areas

Scenario	Unit 1	Unit 2	Total
Existing	2,401 sqm GIA	1,005 sqm GIA	**3,406 sqm GIA**
Proposed	1,988 sqm GIA	1,418 sqm GIA	**3,406 sqm GIA**
Net change	-413 sqm GIA	+413 sqm GIA	**No change**

The anticipated occupiers of the retail units are as follows:

- Unit 1 will be occupied by a discount food retailer.
- The occupier of Unit 2 is not known at this stage. It could be occupied by another food retailer (likely to be a high-end retailer) or a non-food retailer.

For flexibility, the applications will enable the sale of food for both units, however both units could be re-occupied by non-food retailers like the existing Site.

The existing access arrangements, layout, car parking and delivery and servicing arrangements, as set out in **Chapter 2**, will remain unchanged.

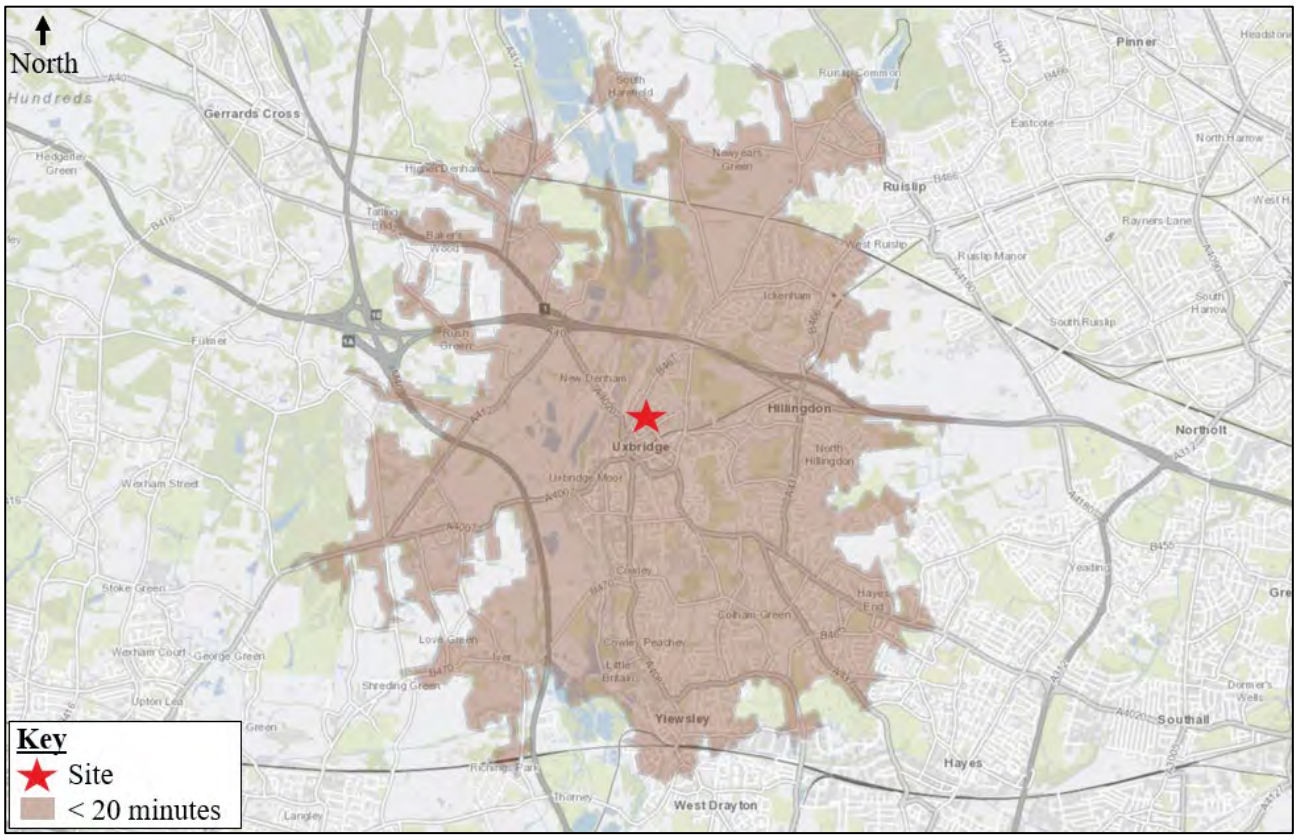
4. Active Travel Zone

4.1 Background

The Active Travel Zone (ATZ) assessment is an important component of TfL's Healthy Streets approach. Its purpose is to appraise the most important active travel routes to and from a location to nearby public transport interchanges and key destinations, and identify where gaps or shortcomings exist.

The ATZ is initially defined as a 20-minute cycle distance from a location, representing a comfortable and realistic time people might be willing to travel without the use of a car. **Figure 7** presents the 20-minute cycling catchment from the Site. Given the presence of other food retail stores in Uxbridge, in reality the catchment area of the Site for walking and cycling is expected to be smaller than the area shown on the figure below. As such, the key active travel routes that have been identified are more local to the Site.

Figure 7: 20-minute cycling catchment area



4.2 Key destinations

In line with the categories set out in TfL guidance, the most relevant key destinations in vicinity of the Site are identified in **Table 7**. Given the retail-nature of the Site, it is considered that the most relevant key destinations are public transport stops, public transport stations and the local Town Centre (which contains other retail uses). However at least one of each key destination categories have been included in the key active travel routes that have been assessed (described below).

Table 7: Key destinations

Categories	Key destinations
Public transport stops	Uxbridge High Street (Stop A), Uxbridge High Street (Stop B), Belmont Road (Stop D), Uxbridge Station (Stop O), Uxbridge Station, Belmont Road (Stop E), York Road (Stop W), York Road (Stop V), Crown Walk (Stop Q), Crown Walk (Stop R), Crown Walk (Stop P)
Public transport stations	Uxbridge London Underground Station
London's current and future London-wide strategic cycle network	NCN Route 6
Town Centres	Uxbridge Town Centre
Parks	Uxbridge Common, Fassnidge Park, Dowding Park, Rockingham Recreation Ground, Manor Waye Recreation Ground
Schools / colleges	St Mary's Catholic Primary School, Orchard Hill College & Academy Trust, St Andrew's C of E Primary School, Hermitage Primary School, Uxbridge College, Whitehall Infant School, Whitehall Junior School
Hospitals / doctors	Central Uxbridge Surgery, Belmont Medical Centre
Places of worship	Christ Church, Our Lady of Lourdes and Saint Michael Church, St Margaret's Church, Muslim Community Centre Uxbridge

4.3 Key Active Travel routes

Based on the key destinations outlined in Section 4.2, five key routes have been identified to capture the key destinations that are most likely to attract active travel trips by users of the Site for the ATZ assessment. These are shown in **Figure 8** and are summarised in **Table 8**.

Figure 8: Key active travel routes and attractors

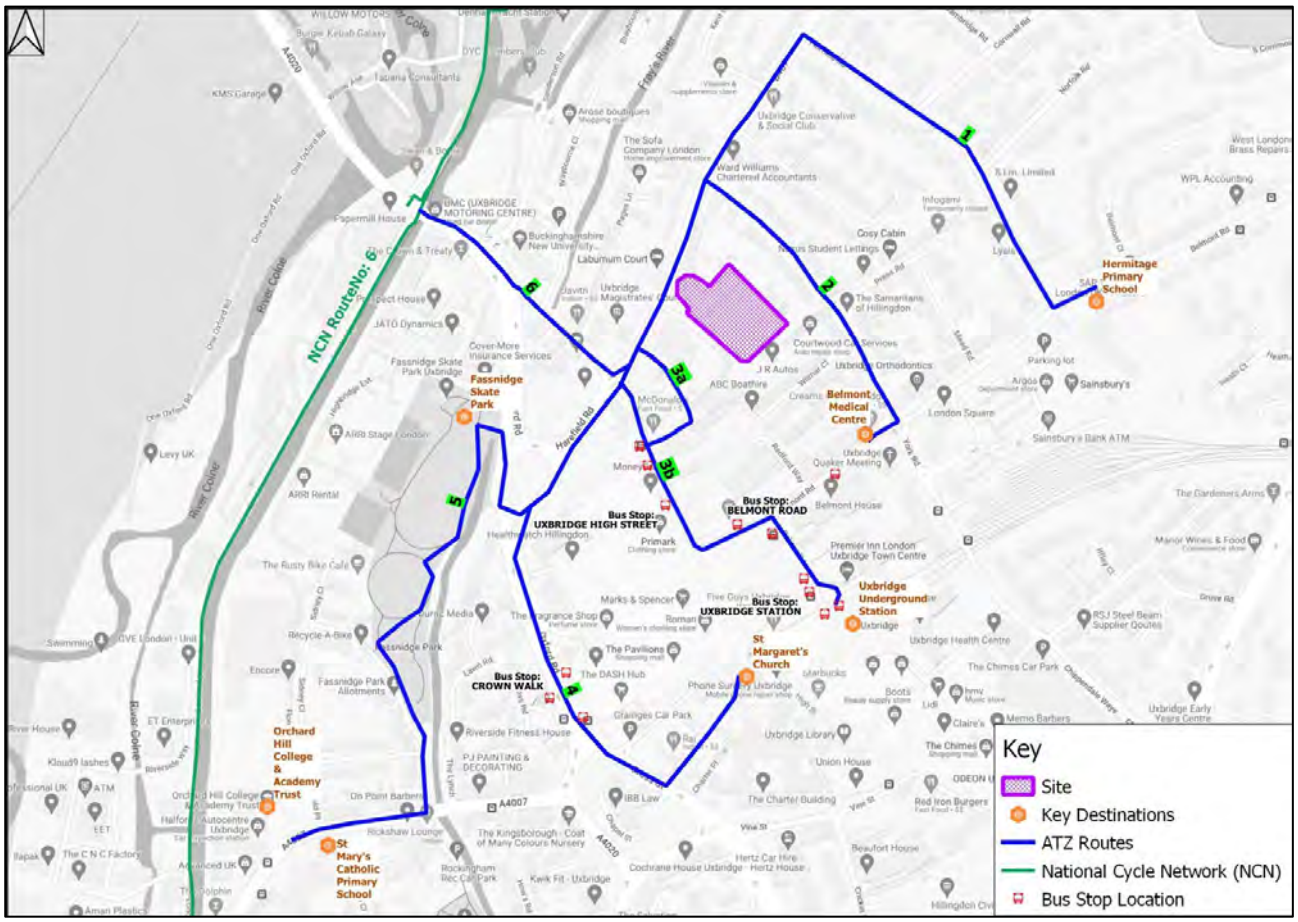


Table 8: Key active travel routes and attractors

Route no.	Key destinations
1	Hermitage Primary School
2	Belmont Medical Centre
3	Uxbridge High Street (Stop A), Uxbridge High Street (Stop B), Belmont Road (Stop D), Uxbridge Station (Stop O), Uxbridge London Underground Station
4	Crown Walk (Stop Q), Crown Walk (Stop P), St Margaret's Church
5	Fassnidge Park, St Mary's Catholic Primary School, Orchard Hill College & Academy Trust
6	NCN Route 6

Of the routes highlighted above and as stated in **Section 4.2**, the most likely walking route utilised by customers from the Site is likely to be Route 3 connecting with the Town Centre.

4.4 ATZ assessment

The ATZ assessment in this Section outlines a series of observations and where relevant recommendations as to how conditions for active travel can be improved on the five identified routes. It should be noted that any recommendations identified are opportunities for the relevant local planning or highway authorities and future developments to deliver. They are not specifically linked to the development but could assist in improving the local conditions for active travel.

4.4.1 Route 1 – towards Hermitage Primary School

Route 1 runs north-east from the Site to Hermitage Primary School via Harefield Road, Fairfield Road and Belmont Road. The area the route passes through is residential in nature.

Both Harefield Road and Belmont Road are relatively busy vehicle corridors and are the two busiest roads on this route. Both streets generally benefit from good quality pedestrian facilities, including wide footways and dropped kerbs / tactile paving at junctions. Fairfield Road is a quieter residential street with a 20mph speed limit.

ATZ Route 1 and the key locations are shown in **Figure 9**. Key photos, observations and recommendations are shown in **Table 9**.

Figure 9: ATZ Route 1

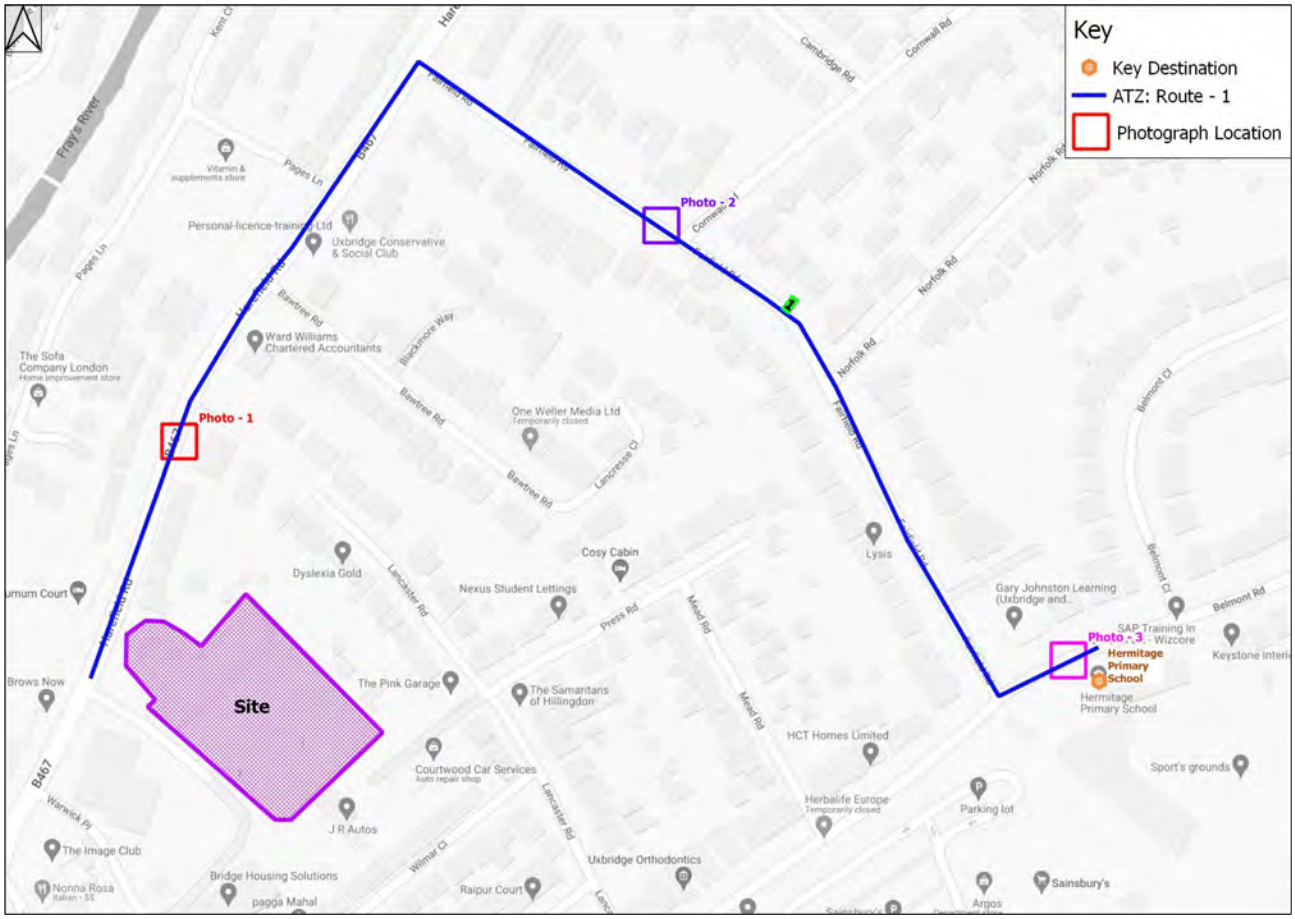


Table 9: Photos, observations and recommendations for ATZ Route 1

Photograph 1: Harefield Road 	**Observations:** Whilst it was observed the quality of footway is generally good, it was noted on-site that a few sections along this road are also obstructed by tree branches and have damaged footway. **Healthy Streets Indicators:** People feel safe People choose to walk, cycle and use public transport Pedestrians from all walks of life Easy to cross **Opportunities for improvement:** Periodic maintenance and trimming of trees along footway to avoid damaged or obstructed footway.
Photograph 2: Fairfield Road 	**Observations:** Lack of tactile paving and dropped kerbs at Cornwall Road and Norfolk Road junctions which may cause difficulty to cross for people with mobility impairments, including those with buggies and wheelchair users. **Healthy Streets Indicators:** People feel safe People choose to walk, cycle and use public transport Pedestrians from all walks of life Easy to cross **Opportunities for improvement:** Consider the provision of tactile paving and dropped kerbs at all crossing points to cater for people from all walks of life.
Photograph 3: Belmont Road 	**Observations:** It was observed on-site that there were fallen leaves which made the footway slippery when wet, although not untypical for the time of year when the site visit was undertaken. **Healthy Streets Indicators:** People feel safe People choose to walk, cycle and use public transport Pedestrians from all walks of life **Opportunities for improvement:** Maintenance and cleaning of footway to avoid any slippery conditions when wet.

4.4.2 Route 2 – towards Belmont Medical Centre

Route 2 towards Belmont Medical Centre runs north-east via Harefield Road, Lancaster Road and Belmont Road. The section between Harefield Road and Lancaster Road is connected by a pedestrian and cyclist only route via 5 steps with long treads and shallow risers. Lancaster Road is residential in nature and for the most part has footways on both sides. Belmont Road is within the main Town Centre and has footways on both sides.

ATZ Route 2 and the key locations are shown in **Figure 10**. Key photos, observations and recommendations are shown in **Table 10**.

Figure 10: ATZ Route 2

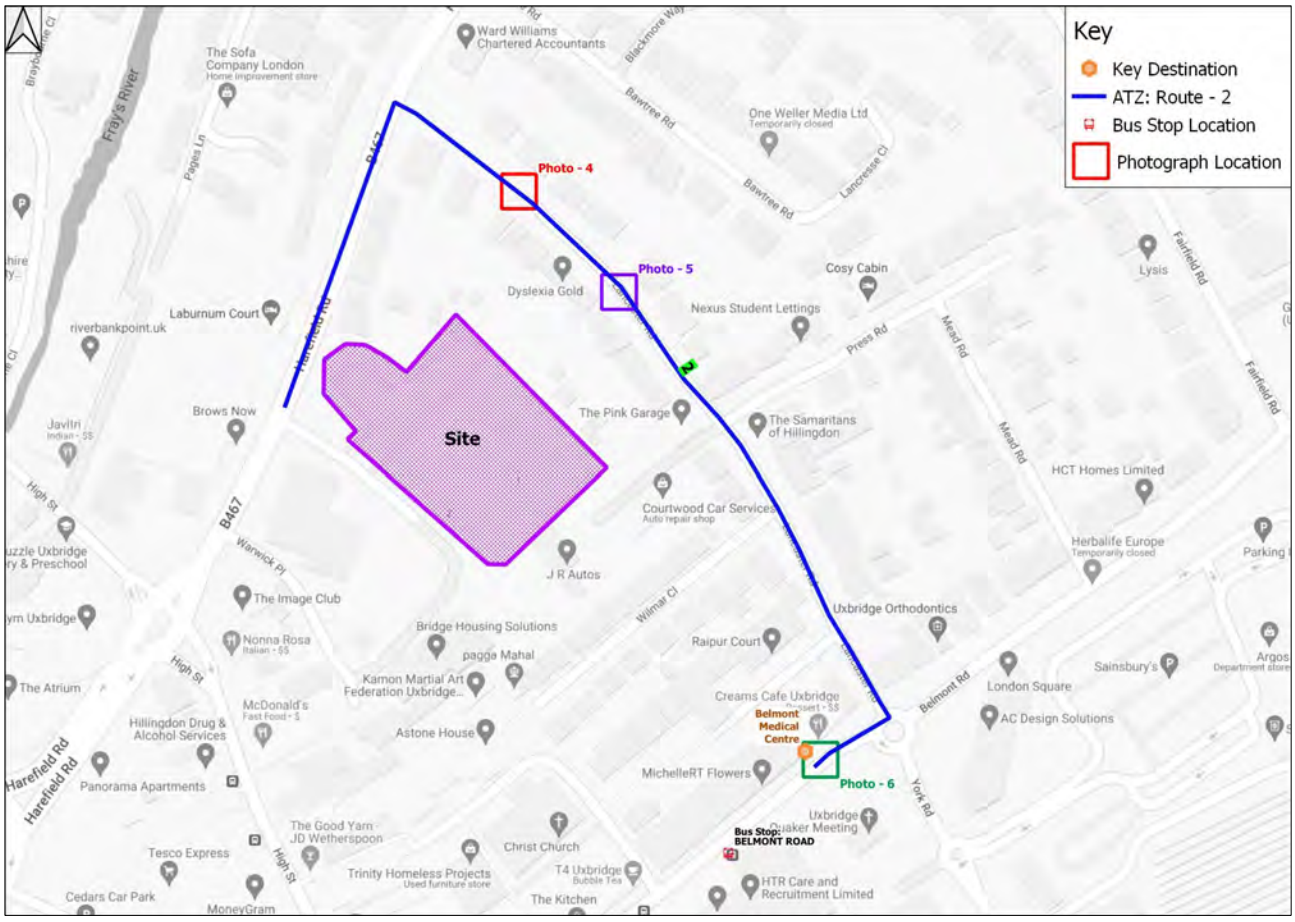
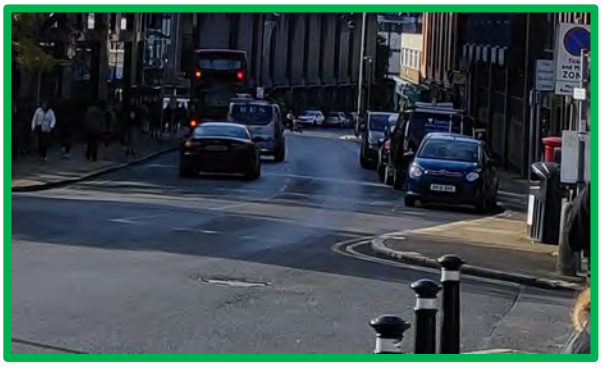


Table 10: Photos, observations and recommendations for ATZ Route 2

Photograph 4: Access from Harefield Road to Lancaster Road  	**Observations:** The passage is for pedestrians and cyclists only. Street lighting is present which helps make the passage feel safer to use at night. The passage has overgrown vegetation on both the sides may affect the easy movement of some pedestrians. Steps with long tread and low riser have been designed to allow push chairs and wheelchairs to negotiate but is not ideal. **Healthy Streets Indicators:** People feel safe People choose to walk, cycle and use public transport Pedestrians from all walks of life **Opportunities for improvement:** Consider ensuring that planting is well maintained do not obstruct routes. Consider whether re-grading steps is possible in future associated with any changes to adjoining properties.
Photograph 5: Lancaster Road (between press Road and Harefield Road) 	**Observations:** The northern footway is narrower along Lancaster Road between Press Road and Harefield Road with no footway on the other side of the street. Most of the footway is obstructed by parked vehicles and street clutter, which results in pedestrians having to walk in the carriageway. However, due to low vehicle flow and cul-de-sac nature, the usage of carriageway to walk in may be acceptable for most pedestrians. **Healthy Streets Indicators:** Easy to cross People choose to walk Not too noisy **Opportunities for improvement:** Where possibly, ensure that appropriate restrictions are in place so that parked vehicles do not obstruct footways.
Photograph 6: Belmont Road 	**Observations:** There are no direct formal pedestrian crossings in the vicinity of the Belmont Medical Centre. It was observed on-site that some pedestrians cross the carriageway away from formal pedestrian crossings, or are required to walk a distance to the nearest crossing to access the Medical Centre / other side of the street. **Healthy Streets Indicators:** People choose to walk, cycle and use public transport People choose to walk Pedestrians from all walks of life Easy to cross **Opportunities for improvement:** Ensure that desire lines are appropriately met by providing regular pedestrian crossing facilities where possible.

4.4.3 Route 3 – towards Uxbridge London Underground Station and St Margaret's Church

Route 3 includes bus stops on Uxbridge High Street and Belmont Road , Uxbridge London Underground Station and St Margaret's Church. Pedestrians can use Harefield Road to reach the High Street, however there is also a route via Warwick Place and a gated passageway (open during daytime) to reach the High Street.

The entire route has footway on both sides, and the key junctions long this route is provided with tactile paving and marked crossings. Elements of the High Street further to the south are for pedestrians and cyclists only.

ATZ Route 3 and the key locations are shown in **Figure 11**. Key photos, observations and recommendations are shown in **Table 11**.

Figure 11: ATZ Route 3

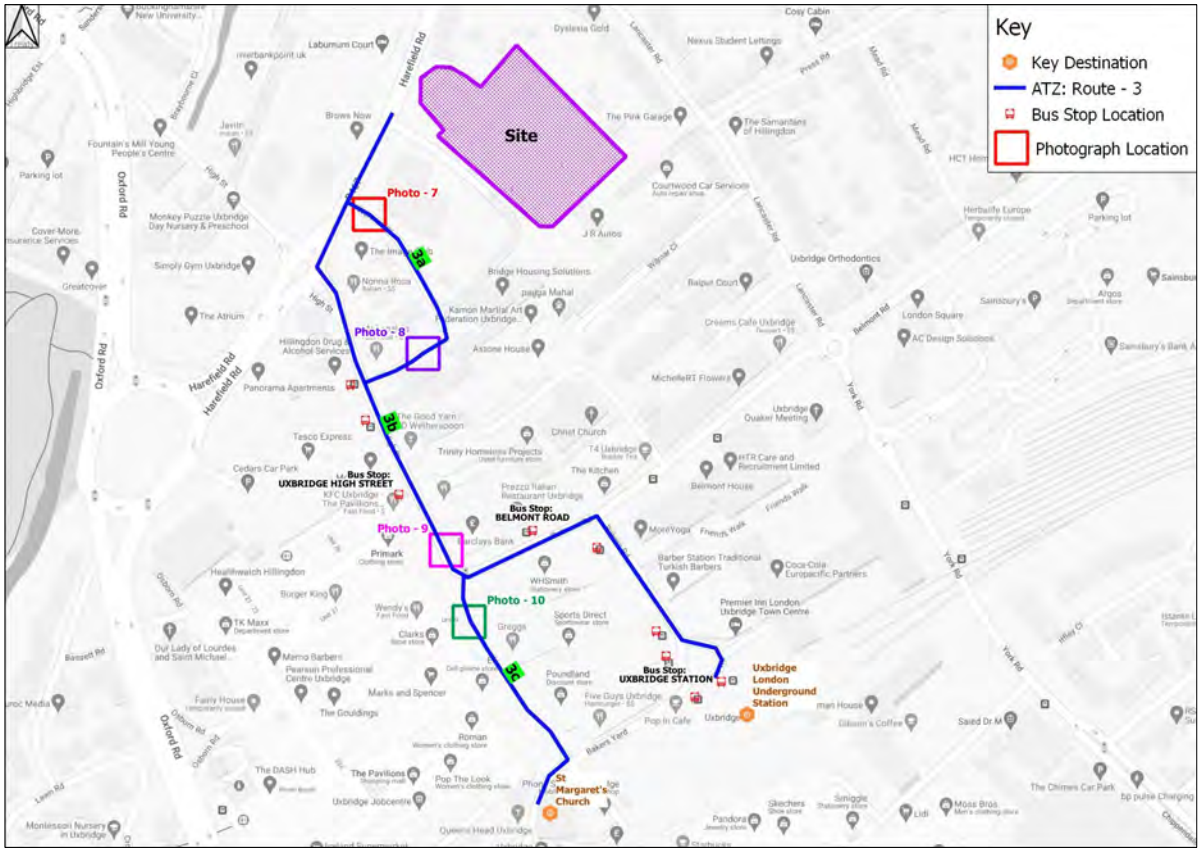


Table 11: Photos, observations and recommendations for ATZ Route 3

Photograph 7: Warwick Place 	**Observations:** Footway is available on both the sides and observed to have a few cracks on the pavement causing uneven surfaces. **Healthy Streets Indicators:** People choose to walk, cycle and use public transport People feel safe Easy to cross **Opportunities for improvement:** Ensure that footway surfaces are maintained to avoid uneven surfaces which may cause difficulties for people with mobility impairments.
Photograph 8: Passage connecting Warwick Place and High Street 	**Observations:** The passage is generally well maintained and well-lit which makes the walking feel safer at all times. Vegetation is well maintained. The passage is not accessible during all times of the day as it is privately owned. **Healthy Streets Indicators:** People choose to walk, cycle and use public transport Pedestrians from all walks of life People feel safe Places to stop and rest Shade and shelter Things to do and see People feel relaxed **Opportunities for improvement:** The presence of more vegetation or public realm improvements could create attractive and inviting environment. Given the proximity to the High Street, places to stop and rest could also be beneficial, in keeping with TfL Healthy Streets principles.
Photograph 9: High Street 	**Observations:** Wide footways are available on both sides to accommodate pedestrian flows, and signalised pedestrian crossings are located to meet key desire lines. Some short-stay cycle parking is provided which was observed to be well used. **Healthy Streets Indicators:** People choose to walk, cycle and use public transport People feel safe Places to stop and rest Shade and shelter Easy to cross Things to do and see **Opportunities for improvement:** Consideration could be given, as per the areas of the High Street to the south, to improving public realm / landscaping and adding additional cycle parking (which was observed to be well used).

Photograph 10: Passage between High Street and Windsor Street	**Observations:** This is a well used pedestrian and cyclist only route, with place to sit and relax under the shade. Cyclists are allowed to use this route, although it was observed on-site that this can cause conflicts with pedestrian movements, particularly when footfall is at its highest. **Healthy Streets Indicators:** People choose to walk, cycle and use public transport Pedestrians from all walks of life People to stop and rest People feel relaxed **Opportunities for improvement:** Ensure necessary signage is displayed to warn of potential conflicts between different users.

4.4.4 Route 4 – to St Mary's Catholic Primary School

Route 4 towards Fassnidge Park and St Mary's Catholic Primary School runs south from the Site via Harefield Road, Fassnidge Park, Rockingham Parade and Rockingham Road. Fassnidge Park provides shared pedestrian and cyclist routes. Rockingham Parade is a lightly trafficked residential cul-de-sac with a footway on one side and a path along the Fray's River on the other side. Rockingham Road is a busier road with footways on both sides and a zebra crossing close to the junction with Rockingham Parade.

ATZ Route 4 and the key locations are shown in **Figure 12**. Key photos, observations and recommendations are shown in **Table 12**.

Figure 12: ATZ Route 4

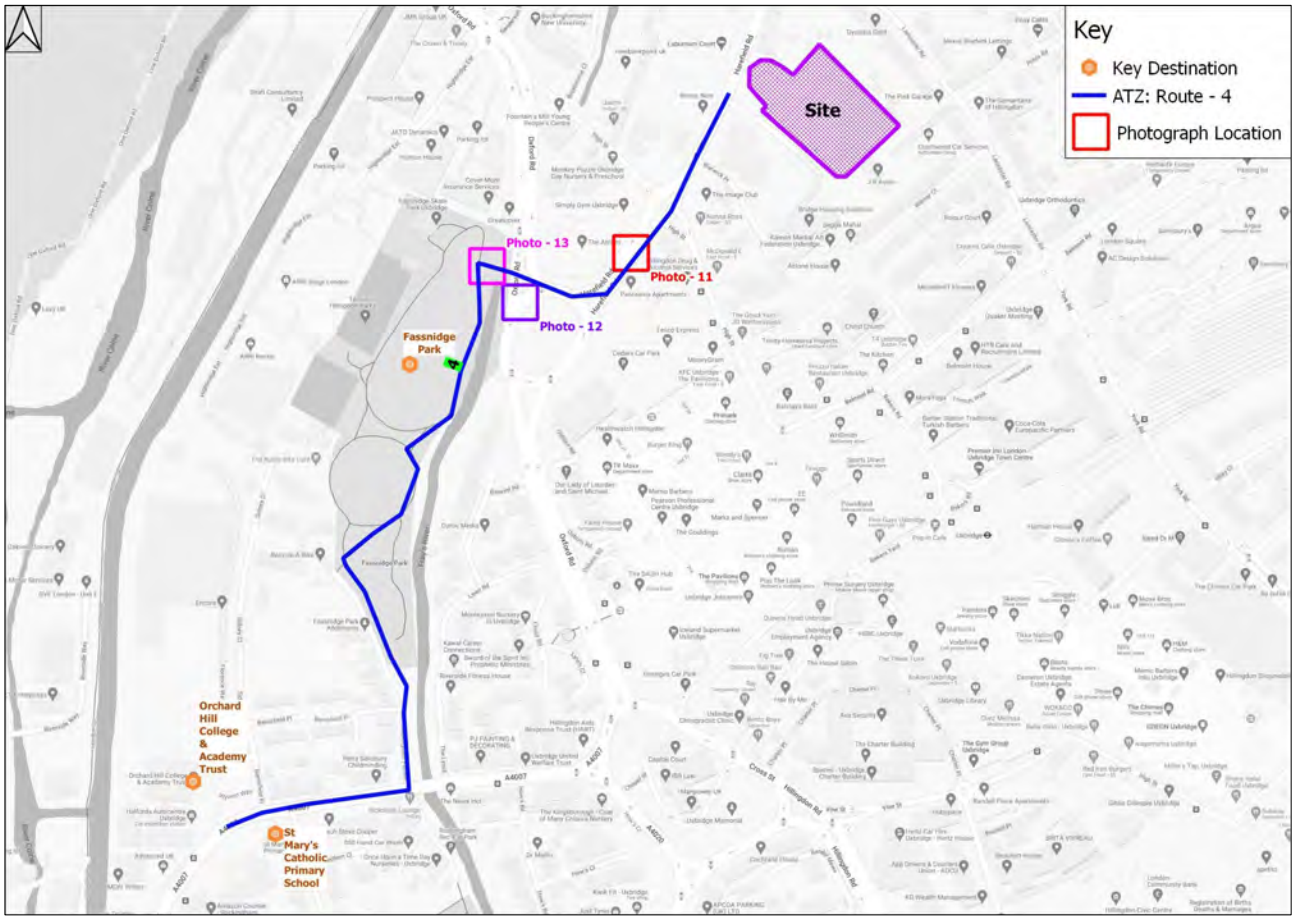


Table 12: Photos, observations and recommendations for ATZ Route 4

Photograph 11: Harefield Road 	**Observations:** The southern section of Harefield Road close to the junction with Oxford Road carries high levels of traffic and has two lanes in each direction. Although footways are provided on both sides, street furniture is present, particularly on the eastern side which narrows the effective footway width. It is generally an unattractive street which does not accord with TfL's Healthy Streets approach. **Healthy Streets Indicators:** People choose to walk, cycle and use public transport Pedestrians from all walks of life People feel safe People feel relaxed **Opportunities for improvement:** Consideration should be given to measures to improve the road in line with the Healthy Streets approach where possible – for example planting / greenery, street trees and benches. This would be subject to land ownership and feasibility studies.
Photograph 12: Harefield Road / Oxford Road junction 	**Observations:** This is a large junction carrying a high level of traffic movements. Signalised pedestrian crossings with tactile paving and dropped kerbs are provided at various locations at the junction to enable crossing. Painted cycle lanes are present, although these are not continuous through the junction and the paint is faded in places. **Healthy Streets Indicators:** People choose to walk, cycle and use public transport People feel safe People feel relaxed **Opportunities for improvement:** Ensure road markings are clear and well maintained. Consider ensuring continuous provision of any cycle lanes.
Photograph 13: Fassnidge Park 	**Observations:** Internal routes within Fassnidge Park are shared between pedestrians and cyclists. Whilst flows are generally low, this can cause conflicts between users at busier times. **Healthy Streets Indicators:** People choose to walk, cycle and use public transport People feel safe People feel relaxed **Opportunities for improvement:** Ensure that adequate signs are placed to warn the pedestrian and cyclist using shared routes.

4.4.5 Route 5 – towards NCN (Route 6)

Route 5 towards NCN (Route 6) runs west of the Site via Harefield Road, High Street and Oxford Road. Pedestrians and cyclist have direct access to Oxford Road with dedicated cycle lane from High Street. The High Street connects to Oxford Road near the Sanderson Road junction which is signal controlled. The walking and cycling facilities at this junction are observed to generally be of high quality, including the provision of signalised crossings with tactile paving and marked cycle lanes along Oxford Road.

ATZ Route 5 and the key locations are shown in **Figure 13**. Key photos, observations and recommendations are shown in **Table 13**.

Figure 13: ATZ Route 5

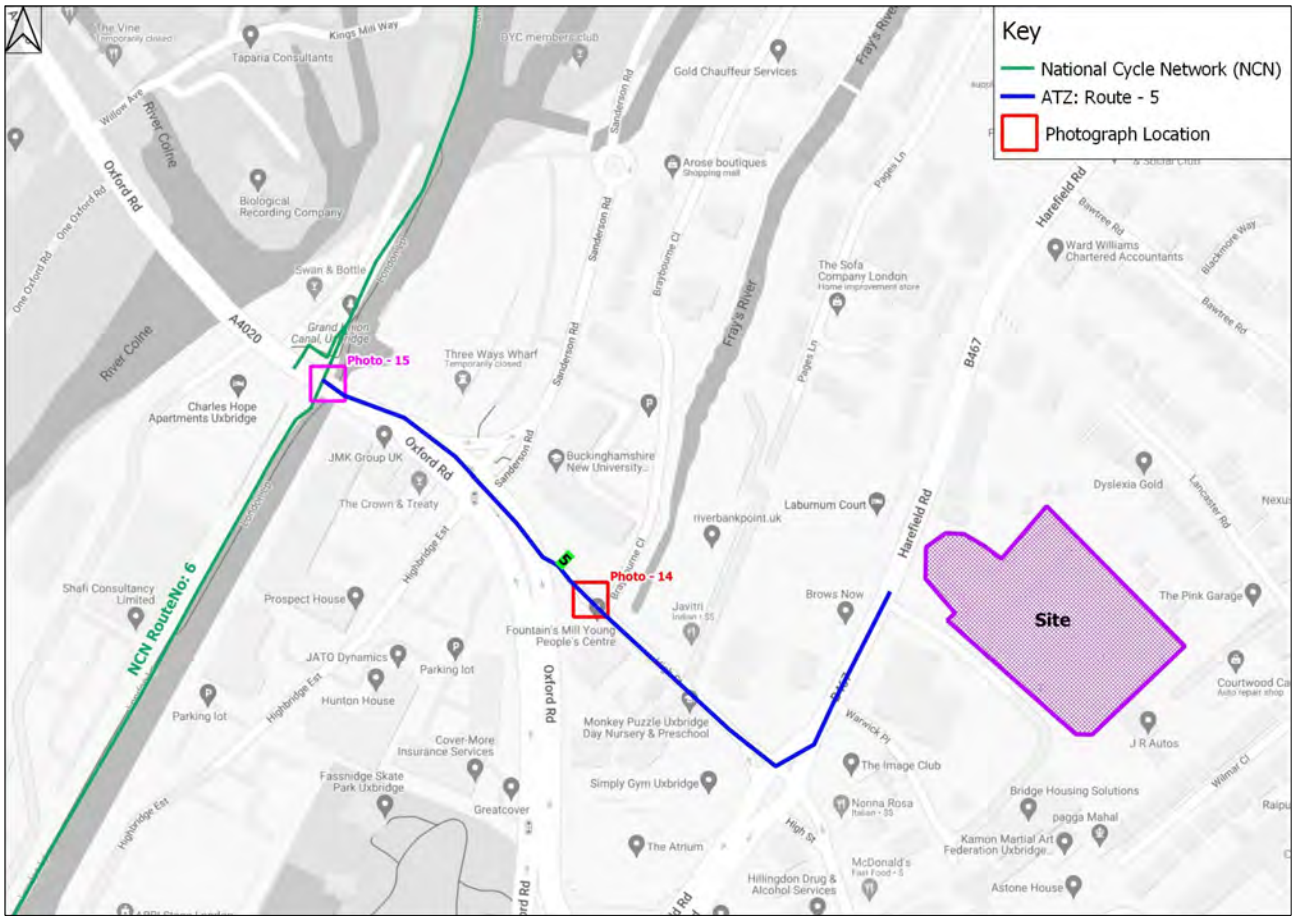


Table 13: Photos, observations and recommendations for ATZ Route 5

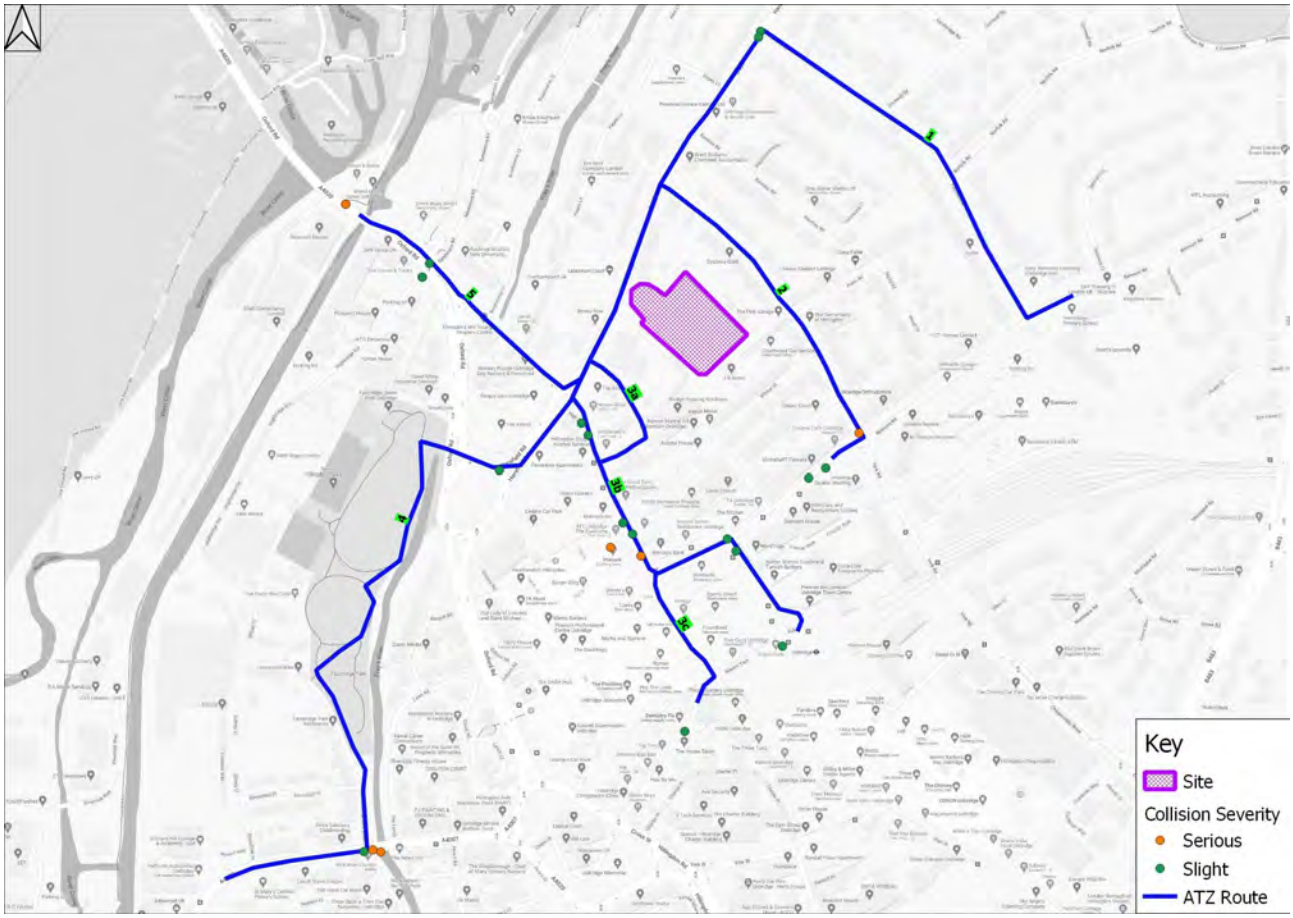
Photograph 14: High Street 	**Observations:** Although some marked cycle lanes are present, it was observed that the paint for these is very faded in places which may make them tricky to see for cyclists or other road users. **Healthy Streets Indicators:** People choose to walk, cycle and use public transport People feel safe People feel relaxed **Opportunities for improvement:** Ensure road markings are clear and well maintained.
Photograph 15: NCN Route 6 	**Observations:** The access route to NCN Route 6 from Oxford Road has some overgrown vegetation, which can make it tricky to navigate past for cyclists or two-way movements of pedestrians / cyclists.. **Healthy Streets Indicators:** People choose to walk, cycle and use public transport People feel safe People feel relaxed **Opportunities for improvement:** Consider ensuring that planting is well maintained so as to not obstruct routes.

4.5 Vision Zero

The Mayor's Transport Strategy focuses on achieving Vision Zero objectives which seek to eliminate all deaths and serious injuries from London's transport network by 2041. In accordance with TfL guidance, Personal Injury Accident (PIA) data has been obtained from TfL for the most recent three-year period (up to June 2023) covering the extent of the five ATZ routes. **Appendix E** contains the data.

The data has been analysed to seek to draw out any clusters or patterns, particularly by location or mode. In accordance with TfL guidance, clusters of collisions (meaning one or more killed and / or two or more serious injuries) have been identified. **Figure 14** shows the location of collisions, by severity, recorded over the three-year period up to the end of June 2023 along the five ATZ routes.

Figure 14: Locations of collisions along ATZ routes



The collision data analysis along the selected five ATZ routes has shown that a total of 22 collisions were recorded over the most recent three-year period, resulting in a total of 24 casualties. Of these, six resulted in serious injuries and 16 resulted in slight injuries. No fatal injuries have been recorded. The summary of collisions is presented in **Table 14.**

Table 14: Summary of collisions by severity and type of casualty

Mode	Serious	Slight	Total
Pedestrian	4	5	9
Pedal Cycle	0	3	3
Two-wheeler (Mopeds)	0	4	4
Car	2	4 (resulting in 6 casualties)	6
Total	**6**	**16**	**22**

Based on the analysis, two clusters of serious collisions (both with two collisions) have been identified. These occurred along the High Street and Rockingham Road which are on ATZ Route 3 and 4, respectively. This reflects the higher level of movement by all modes on these streets. Based on **Figure 14**, clusters of 'serious' collisions can be identified as follows:

- **High Street (Route 3)** – Two serious collisions were report on the same day near / at the High Street / Belmont Road junction, involving serious injuries to pedestrians in both the cases. These appear to be separate incidents. These collisions occurred during the daylight involving one car and pedestrian for the first and one minibus and pedestrian for the second. Descriptions of how the collisions occurred are not available, however one was attributed to a vehicle blind spot due to stationary or parked vehicle, whereas during the second the carriageway was found to be slippery due to wet weather. It is not apparent whether the stationary vehicle was parked illegally or not.
- **Rockingham Road (Route 4)** –Two serious collisions were reported near the zebra crossing, both to pedestrians. Both the collisions occurred between one car and pedestrians along Rockingham Road where one was 5m west of the junction with The Lynch and the other at the Rockingham Parade junction. One of these collisions was attributed to inadequate or masked signs / road markings, issues with the road layout and a failure to look properly. The other serious collision was attributed to a slippery road because of wet weather. The detailed descriptions of how the collisions occurred are not available.

This section has reviewed the collisions that occurred in the most recent three-year period within the study area. There is limited availability of detailed descriptions of how collisions occurred, although several were attributed to human error or wet / slippery roads. One of the collisions on Rockingham Road was attributed to issues with the road layout, although no detailed descriptions are available regarding this and there have been no other reported collisions in the same location that have been attributed to issues with the road layout. No patterns of collisions have been identified as part of the review undertaken in this section.

The ATZ assessment highlighted some areas where road markings were faded. Opportunities to address instances of human error in relation to making illegal turns / disobeying traffic signals / failing to look properly through the provision of new or reinforced road markings could be considered by the relevant Highway Authority. However, no issues highlighted in this chapter are considered to result in unacceptable impacts to pedestrians or cyclists if left unaddressed.

5. Travel Demand

5.1 Approach to trip attraction

The existing Site provides two retail units which can be re-occupied by non-food retailers. The approach to trip attraction undertaken in this Chapter is to estimate the volume of trips when the former Wickes and Halfords were operational and compare this against the trip attraction for the proposed development.

Assessments have been carried out for the weekday AM, PM and Saturday daytime peak hours. The peak hours that have been assessed are 08:00 – 09:00 (AM), 17:00 – 18:00 (PM) and 13:00 – 14:00 (Saturday), which most closely align with the observed local highway network peak hours.

All outputs from TRICS that are referred to in this chapter are contained in **Appendix G.** A summary of the trip attraction methodology for vehicles and other modes is provided below.

5.1.1 Vehicle trip attraction

The TRICS database has been examined for the extant and proposed development and the resulting approach is as follows:

- Extant development (Wickes and Halfords) – there is a lack of comparable sites in TRICS, especially for a Saturday. Therefore, to avoid overestimating the extant use trips and to provide a more Site-specific extant trip attraction, traffic surveys were undertaken at similar sites in London and trip rates derived from these surveys have been used.
- Proposed development – vehicle trips associated with the proposals have been forecast using the industry standard TRICS database. The available data from TRICS is multi-modal enabling a consistent mode share split to be derived.

5.1.2 Multi-modal trip attraction

Given the nature of the Site and proposals, it is expected that the greatest impact would be on the local highway network, however it is acknowledged that trips by other modes (particularly walking by local residents) would be attracted by the development too. Pre-application comments received from LBH also requested that a multi-modal trip attraction assessment is undertaken.

The industry standard TRICS database has limited availability of multi-modal surveys of retail uses in London. Multi-modal trip rates are available for the discount food retail land use that has formed the basis of the assessment for the proposed development. However as noted above there is limited survey data to assess non food retail uses. Whilst vehicle travel demand surveys have been undertaken for similar non-food sites, it was not possible to undertake multi modal surveys.

In order to assess the non-car mode share for the non-food uses the mode share from the multi modal TRICS surveys for food retail uses has been utilised. This therefore provides a consistent approach with same multi-modal mode shares for all retail land use types that are assessed in this chapter (for both the extant and proposed development). This is considered to provide an appropriate representation of multi-modal trips for all potential retail uses. The number of vehicle driver trips has remained fixed based on the vehicle trip rate assessment that has been undertaken for each of the retail land use types, with this number and the corresponding vehicle driver mode share used to derive the number of trips for other modes.

For reference, the multi-modal mode shares which have been applied throughout are shown in **Table 15** for the AM, PM and Saturday peak hours. These have been derived from the TRICS surveys of discount food retail stores. Further details of these surveys are provided in **Section 5.3.2** and **Table 20**. As can be seen, the majority of trips are expected to be car-borne. For robustness, all rail passenger trips from the TRICS survey are assumed to use the London Underground given the proximity of the Site to Uxbridge London Underground Station.

Table 15: Multi-modal mode shares

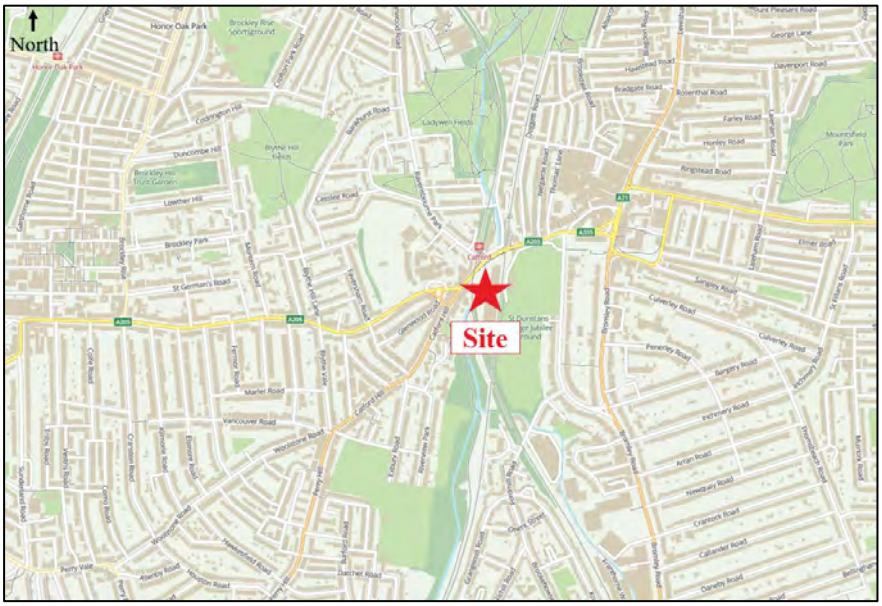
Mode	AM peak hour	PM peak hour	Saturday peak hour
Underground	0%	0%	2%
Bus	7%	19%	13%
Vehicle Passenger	22%	15%	22%
Vehicle Driver	41%	27%	45%
Cycling	0%	0%	4%
Walking	29%	40%	14%
Total	**100%**	**100%**	**100%**

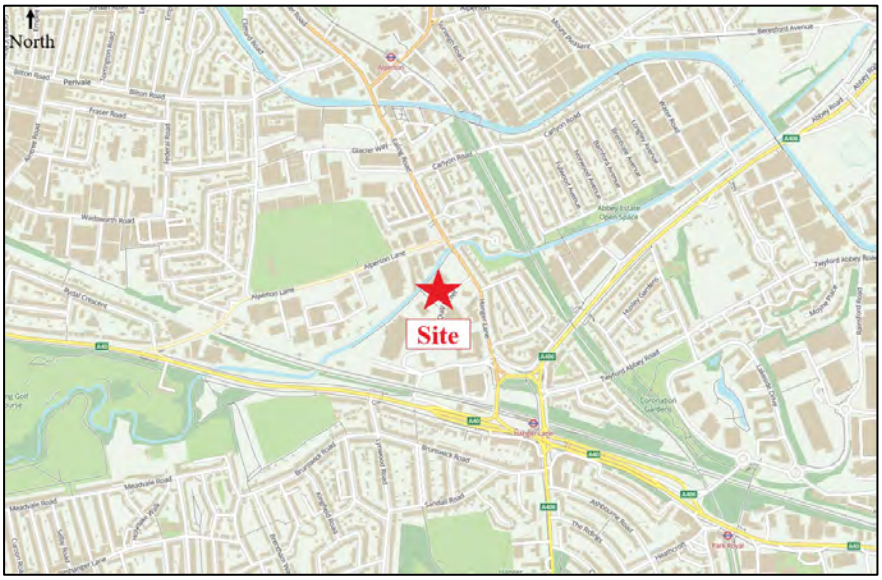
5.2 Extant trip attraction

5.2.1 Vehicle trips

Two comparable sites containing a Wickes and Halfords in London have been identified, and car park entry and exit counts were undertaken at these on Thursday 19 October 2023 and Saturday 21 October 2023 between 7am and 7pm (12 hours). The two sites are located in Catford (Lewisham) and Alperton (Ealing). Both sites are in or near to Town Centres, have similar floor areas to the extant Wickes and Halfords, and have similar number of car parking spaces as the Site. Both sites attracted very similar trips and trip rates and therefore considered to provide a reasonable reflection of vehicle travel patterns of the extant Wickes and Halfords. Details of the two sites are provided in **Table 16**.

Table 16: Comparable adjacent Wickes and Halfords sites

Location	Information	Details
Catford Hill, Catford (Lewisham)	Total floor area	4,772 sqm
	Car parking spaces	136
	Site PTAL	4 – 6a
	Site location	

Location	Information	Details
Quill Street, Alperton (Ealing)	Total floor area	3,935 sqm
	Car parking spaces	150
	Site PTAL	3 – 5
	Site location	

The weekday AM, PM and Saturday vehicle trip rates from the two surveys, and the weighted average trip rates are shown in **Table 17**. The two sets of trip rates are comparable to each other, and therefore the weighted average of the two sets of trip rates is considered to be appropriate to use.

Table 17: Surveyed vehicle trip rates (Catford and Alperton)

Day	Time Period	Vehicle trip rate (per 100 sqm)		
		In	Out	Total
Catford				
Weekday	08:00-09:00	1.257	1.090	2.347
	17:00-18:00	1.006	1.383	2.389
Saturday	13:00-14:00	1.970	1.488	3.458
Alperton				
Weekday	08:00-09:00	0.839	0.813	1.652
	17:00-18:00	1.042	0.940	1.982
Saturday	13:00-14:00	2.109	2.211	4.320
Weighted average				
Weekday	08:00-09:00	1.068	0.965	2.033
	17:00-18:00	1.022	1.183	2.205
Saturday	13:00-14:00	2.033	1.815	3.847

Applying the weighted average vehicle trip rates to the existing area of the two retail units (3,406 sqm) results in the vehicle trips for the extant development shown in **Table 18**.

Table 18: Extant vehicle trips

Day	Time Period	Vehicle trip rate (per 100 sqm)		
		In	Out	Total
Weekday	08:00-09:00	36	33	69
	17:00-18:00	35	40	75
Saturday	13:00-14:00	69	62	131

5.2.2 Multi-modal trips

The multi-modal trip attraction for the extant development is set out in **Table 19** below.

Table 19: Extant multi-modal trips

Mode	AM peak hour (08:00-09:00)			PM peak hour (17:00-18:00)			Saturday peak hour (13:00-14:00)		
	In	Out	Total	In	Out	Total	In	Out	Total
Underground	0	0	0	0	0	0	3	3	6
Bus	7	6	13	24	27	51	21	18	39
Vehicle Passenger	20	18	38	19	21	40	34	31	65
Vehicle Driver (fixed based on above assessment)	36	33	69	35	40	75	69	62	131
Cycling	0	0	0	0	0	0	6	5	11
Walking	26	24	50	50	58	108	22	19	41
Total	**90**	**81**	**171**	**128**	**148**	**276**	**155**	**139**	**294**

Note that figures may not sum due to rounding

5.3 Proposed trip attraction

5.3.1 Scenarios

The following forecast trip attraction of two scenarios have been considered:

- Scenario A – Unit 1 is discount food retail, Unit 2 is non-food retail.
- Scenario B – Unit 1 is discount food retail, Unit 2 is other high-end food retail.

These are considered to be the two most realistic end-state scenarios for the Site, given that it is highly unlikely that two discount food retail stores would be provided next to each other. The proposed trip attraction takes into account the minor changes in floor area as set out in **Table 6**.

Vehicle trip rates for a discount food store and other high-end food store are set out below. The trip assessment of a non-food retail store for Scenario A is based on the trip rates for the extant use.

5.3.2 Food retail vehicle trip rates

Discount food store vehicle trip rates

The TRICS database has a range of discount food stores, and multi-modal surveys which are within London have been reviewed. The following selection criteria have been used:

- **Land use and category:** 01 Retail; C Discount Food Stores.
- **Regions:** Greater London.
- **Survey type:** Multi-modal.
- **Survey date range:** January 2015 – Present (TRICS default date range).

The use of the above criteria returns the weekday and Saturday surveys shown in **Table 20.** Some of these surveys have been removed from the selection (highlighted in pink) for the reasons given in column six. The remaining surveys have been used to form the basis of the vehicle trip attraction assessment. These surveys have also been used to form the multi-modal mode shares shown in **Table 15**.

Table 20: TRICS sites for discount food store

TRICS site reference	Development	Location	PTAL	Gross floor area (sqm)	Reason for non-selection
Weekday					
BE-01-C-01	Lidl	Bexley	2	2,145	-
BM-01-C-01	Aldi	Bromley	4	1,018	Survey undertaken in 2021 during Covid-19 pandemic
IS-01-C-01	Iceland	Islington	6a	1,200	Limited customer car parking
MR-01-C-01	Lidl	Merton	4	2,400	-
Saturday					
HG-01-C-02	Aldi	Haringey	5	1,468	-
RB-01-C-01	Aldi	Redbridge	3	1,662	No on-site car parking
WF-01-C-01	Aldi	Waltham Forest	2	2,099	-

The AM, PM and Saturday peak hour vehicle trip rates using the above selected TRICS surveys are set out in **Table 21**.

Table 21: Discount food store vehicle trip rates

Day	Time Period	Vehicle trip rate (per 100 sqm)		
		In	Out	Total
Weekday	08:00-09:00	2.332	1.364	3.696
	17:00-18:00	2.750	2.332	5.082
Saturday	13:00-14:00	5.915	5.915	11.830

Food store (non-discount) vehicle trip rates

The TRICS database has a range of non-discount high-end food stores (e.g. Waitrose, M&S), and multi-modal survey which are within London have been reviewed. The following selection criteria have been used:

- **Land use and category:** 01 Retail; A Food Superstore. These have been filtered manually to only include high-end food stores.
- **Regions:** Greater London.
- **Survey type:** Multi-modal.
- **Survey date range:** January 2015 – Present (TRICS default date range).

The use of the above criteria returns the weekday and Saturday surveys shown in **Table 22.** Some of these surveys have been removed from the selection (highlighted in pink) for the reasons given in column six. The remaining surveys have been used to form the basis of the vehicle trip attraction assessment.

Table 22: TRICS sites for non-discount food store

TRICS site reference	Development	Location	PTAL	Gross floor area (sqm)	Reason for non-selection
Weekday					
HG-01-A-02	M&S Food Hall	Haringey	4	1,707	Staff car parking available only
IS-01-A-02	Waitrose	Islington	6a	1,625	Staff car parking available only
IS-01-A-03	Waitrose	Islington	6a	1,813	-
Saturday					
RD-01-A-01	Waitrose	Richmond	6a	3,175	-

The AM, PM and Saturday peak hour vehicle trip rates using the above TRICS surveys are set out in **Table 23**.

Table 23: Non-discount food store vehicle trip rates

Day	Time Period	Vehicle trip rate (per 100 sqm)		
		In	Out	Total
Weekday	08:00-09:00	1.324	0.386	1.710
	17:00-18:00	0.662	1.103	1.765
Saturday	13:00-14:00	4.535	3.969	8.504

5.3.3 Scenario A trip attraction (Unit 1 is discount food retail, Unit 2 is non-food retail)

Vehicle trips

Scenario A assesses discount food retail in Unit 1 (1,988 sqm) and non-food retail in Unit 2 (1,418 sqm). The discount food retail trip rates set out above have been utilised, and the non-food trip rates used are the same as those for the extant development. The forecast vehicle trips for Scenario A are provided in **Table 24**.

Table 24: Scenario A forecast vehicle trip attraction

Time period		Unit 1 (discount food retail)			Unit 2 (non-food retail)			Total		
		In	Out	Total	In	Out	Total	In	Out	Total
Weekday	08:00-09:00	46	27	73	15	14	29	62	41	102
	17:00-18:00	55	46	101	14	17	31	69	63	132
Saturday	13:00-14:00	118	118	235	29	26	55	146	143	290

Note that figures may not sum due to rounding

Multi-modal trips

The multi-modal trip attraction for Scenario A is set out in **Table 25** below.

Table 25: Scenario A forecast multi-modal trip attraction

Mode	AM peak hour (08:00-09:00)			PM peak hour (17:00-18:00)			Saturday peak hour (13:00-14:00)		
	In	Out	Total	In	Out	Total	In	Out	Total
Underground	0	0	0	0	0	0	7	7	14
Bus	11	8	19	47	43	90	44	43	87
Vehicle Passenger	34	23	57	37	34	71	73	71	144
Vehicle Driver (fixed based on above assessment)	62	41	102	69	63	132	146	143	290
Cycling	0	0	0	0	0	0	12	12	24
Walking	45	30	75	100	92	192	46	45	91
Total	**152**	**101**	**253**	**254**	**231**	**485**	**328**	**321**	**649**

Note that figures may not sum due to rounding

5.3.4 Scenario B trip attraction (Unit 1 is discount food retail, Unit 2 is other food retail)

Vehicle trips

Scenario B assesses discount food retail in Unit 1 (1,988 sqm) and high-end food retail in Unit 2 (1,418 sqm). The discount food retail trip rates used are the same as Scenario A, and the other food retail trip rates are based on the trip rates described above. The forecast vehicle trips for Scenario B are provided in **Table 26**.

Table 26: Scenario B forecast vehicle trip attraction

Time period		Unit 1 (discount food retail)			Unit 2 (high-end food retail)			Total		
		In	Out	Total	In	Out	Total	In	Out	Total
Weekday	08:00-09:00	46	27	73	19	5	24	65	33	98
	17:00-18:00	55	46	101	9	16	25	63	62	126
Saturday	13:00-14:00	118	118	235	64	56	121	182	174	356

Note that figures may not sum due to rounding

Multi-modal trips

The multi-modal trip attraction for Scenario B is set out in **Table 27** below.

Table 27: Scenario B forecast multi-modal trip attraction

Mode	AM peak hour (08:00-09:00)			PM peak hour (17:00-18:00)			Saturday peak hour (13:00-14:00)		
	In	Out	Total	In	Out	Total	In	Out	Total
Underground	0	0	0	0	0	0	9	9	18
Bus	12	6	18	44	42	86	54	52	106
Vehicle Passenger	36	18	54	34	33	67	91	87	178
Vehicle Driver (fixed based on above assessment)	65	33	98	63	62	126	182	174	356
Cycling	0	0	0	0	0	0	15	14	29
Walking	47	24	71	93	90	183	57	55	112
Total	**161**	**80**	**241**	**235**	**227**	**462**	**408**	**390**	**798**

Note that figures may not sum due to rounding

5.3.5 Summary

A summary of the vehicle trips and total trips that have been forecast to be attracted in Scenario A and Scenario B is provided in **Table 28**. Both scenarios are forecast to attract a similar volume of trips in the weekday AM and PM peak hours, and Scenario B is forecast to attract more trips in the Saturday peak hour.

Table 28: Summary of vehicle trips and total trips for Scenario A and Scenario B

Time period		Scenario A			Scenario B		
		In	Out	Total	In	Out	Total
Vehicle trips							
Weekday	08:00-09:00	62	41	102	65	33	98
	17:00-18:00	69	63	132	63	62	126
Saturday	13:00-14:00	146	143	290	182	174	356
Total trips							
Weekday	08:00-09:00	**152**	**101**	**253**	**161**	**80**	**241**
	17:00-18:00	**254**	**231**	**485**	**235**	**227**	**462**
Saturday	13:00-14:00	**328**	**321**	**649**	**408**	**390**	**798**

It can also be seen that there is very little difference between the AM and PM vehicle trips for each scenario. Given the higher volume of trips forecast to be attracted in the Saturday peak hour by Scenario B, for robustness this has been used as the basis for the net change assessment (described below) and the impact assessment which is set out in **Chapter 6**.

5.4 Net change

5.4.1 Vehicles net change

The net change in vehicle trips between Scenario B and the extant development are shown in **Table 29**. The assessment shows that Scenario B is forecast to result in a maximum of 225 additional two-way vehicle trips (113 in and 112 out). These net increases in vehicle trips are subject to further assessment into trip type (primary and secondary) which is set out in **Section 6.2**.

Table 29: Net change in vehicle trips (Scenario B compared to extant)

Time Period		Net change in vehicle trips		
		In	Out	Total
Weekday	08:00-09:00	29	0	29
	17:00-18:00	29	22	51
Saturday	13:00-14:00	113	112	225

5.4.2 Multi-modal net change

The net change in multi-modal trips between Scenario B and the extant development are shown in **Table 30**.

Table 30: Net change in multi-modal trips (Scenario B compared to extant)

Mode	AM peak hour (08:00-09:00)			PM peak hour (17:00-18:00)			Saturday peak hour (13:00-14:00)		
	In	Out	Total	In	Out	Total	In	Out	Total
Underground	0	0	0	0	0	0	6	6	12
Bus	5	0	5	20	15	35	34	33	67
Vehicle Passenger	16	0	16	16	12	27	56	56	112
Vehicle Driver (fixed based on above assessment)	29	0	29	29	22	51	113	112	225
Cycling	0	0	0	0	0	0	9	9	18
Walking	21	0	21	42	31	74	36	35	71
Total	**71**	**0**	**71**	**107**	**80**	**187**	**253**	**251**	**504**

Note that figures may not sum due to rounding

5.5 Delivery and servicing trips

A discount food retailer occupying a store the size of Unit 1 would typically expect to receive three to four delivery and servicing vehicles per day, which would largely be made by Heavy Goods Vehicles (HGV). Waste collection would also typically occur once or twice per week. The delivery and servicing trips would generally be for the following:

- Three HGVs delivering fresh produce.
- One MGV delivering milk.

The future occupier of Unit 2 is not yet known. Given the size of Unit 2, a future food retail would be expected to receive a similar number of daily deliveries (three to four) as set out above. Based on experience, a non-food retailer would typically be expected to receive a lower number of delivery trips than a food retailer. Assuming the Site in future accommodates two food retailers, around six to eight daily delivery and servicing trips could therefore be expected, which would largely be made by HGVs. It is noted that the extant Wickes and Halfords would have received delivery and servicing trips also made by HGVs.

Delivery and servicing trips for food retailers typically occur before store opening times between 05:00 – 07:00, which is away from highway network peak hours. The Site has a designated off-street service yard to accommodate delivery and servicing vehicles, which was used when the Wickes and Halfords were operational. A vehicle booking system (or similar) is expected to be in place to manage and control arrivals of delivery and servicing vehicles, to ensure that these do not coincide with each other and occur outside of highway network peak hours. Given the number and timings of delivery and servicing vehicles, no further assessment is considered necessary in this report.

An Outline Delivery and Servicing Plan has been submitted in support of the planning application (in **Appendix C**), which sets out further details of the proposed management and monitoring of delivery and servicing activity.

5.6 Staff trips

Pre-application comments received from LBH requested that trips undertaken by staff and customers are considered. The TRICS surveys and commissioned car park entry and exit counts do not disaggregate trips by type. Both customer and staff trips would therefore have already been captured as part of the trip attraction assessment set out above. Notwithstanding this, staff trips for a retail store would usually arrive before the store opening times and after the store closing times, which would be earlier (in the AM) and later (in the PM) than the highway network peak hours that have been assessed above.

6. Impact assessment

6.1 Background

This Chapter sets out details of the highway network distribution assumptions and the impact assessment of the proposals on the local highway, public transport and active travel networks. A review of car parking demand is also provided.

6.2 Highway network trip distribution

It is widely accepted that retail uses, in particular food stores, do not wholly attract trips that are new to the local highway network. Many trips that are attracted to retail uses already exist on the highway network, and are attracted to retail stores either from another destination nearby or directly pass retail stores on roads adjacent to them. This section sets out details of how the different types of net vehicle trips (primary, linked and pass-by) have been assigned to the local highway network to inform the impact assessment.

A research report produced by TRICS (*TRICS Research Report 14/1 Pass-By & Diverted Trips*) sets out the various types of trips that are generally attracted to retail stores, which can be summarised as follows:

- Primary:
    - New – these are trips that are new to the highway network (i.e. do not currently exist on the highway network).
    - Transferred – these are trips which travel to a similar nearby retail store and alter their habits to travel to a new retail store instead.
- Secondary:
    - Linked (also known as diverted) – these are trips that are travelling to destinations in the local area (e.g. Uxbridge Town Centre) and alter their journeys to also travel to a new retail store instead. In this case, linked trips would come from Oxford Road to the south and from accesses into the residential areas from Harefield Road for journeys to the north.
    - Pass-by – these are trips which are already present on the highway network directly passing by the location of the retail store (in this case, Harefield Road).

The TRICS research report sets out a range of studies which have reviewed proportions of primary and secondary trips attracted to retail sites. The studies cited by the report include a variety of primary and secondary trip proportions, with pass-by proportions ranging from 6% to 72%, combined pass-by / linked trip proportions ranging from 57% to 67% and average linked trips proportions within Town Centres / District Centres ranging from 46% to 60%. The TRICS report therefore notes that *"It is recognised that there is no simple answer in determining the percentage of trips to a site that are pass-by or diverted. It is therefore recommended that a site-by-site approach is taken in assessing the prevalence of pass-by and diverted trips"*. However, the report does reference a number of factors which can influence the proportion of pass-by and linked trips, as follows:

1. **Site location** – as a store's proximity to a Town Centre increases, the potential percentage of pass-by / linked trips also increases.
2. **Facilities** – a higher number of facilities provided as part of a store (e.g. café / restaurant, homeware, petrol station, pharmacy etc) increases the potential proportion of pass-by / linked trips.
3. **Floor area** – convenience stores (under 4,000 sqm) are more likely to attract pass-by trips whereas comparison stores (over 4,000 sqm) are more likely to attracted linked trips with a larger catchment area.
4. **Proximity to infrastructure** – the closer to other 'infrastructure' (e.g. workplaces, residential areas, other commercial areas, competition sites, public transport interchanges etc) the more likely to attract pass-by / linked trips.

5. **Click and collect** – having click and collect as part of a development is likely to increase the proportion of pass-by / linked trips.

Given the location of the Site (within a Town Centre), the proximity to infrastructure / other retail uses within the Town Centre and the nature of the Site (with two units providing a range of facilities), the Site is considered likely to attract a reasonable proportion of pass-by / linked trips in future.

6.2.1 Retail catchment

The location of existing food retail stores in the wider area has been reviewed, and is shown in **Figure 15**. A range of retail stores are available nearby in Uxbridge, as well as in the wider area, in particular to the south. Other than stores within Uxbridge Town Centre, there are limited food retail stores within the anticipated catchment area to the north and east.

Figure 15: Existing food retail stores

6.2.2 Proposed trip types

The trip types for the Site have been based on the characteristics of the Site, the surveyed baseline traffic flows on Harefield Road / Oxford Road / Park Road, and research that has been undertaken for other similar planning applications in London.

- Primary – it is assumed that all Primary trips have transferred away from alternative retailers in Uxbridge. This is a reasonable assumption given the availability of other retailers nearby in Uxbridge Town Centre. During the AM and PM peak hours, customers are likely to largely be travelling to work, likely to be more time constrained and traffic flows and congestion is often higher. Therefore in the AM and PM peaks a lower proportion of primary trips has been assumed than the Saturday peak hour when customers are likely to have more free time for shopping activities and traffic flows (and thereby congestion) offers less of a deterrent.
- Secondary (linked and pass-by) – the remaining proportion of trips are assumed to be pass-by and linked, coming from Harefield Road (pass-by) and Oxford Road (linked) together with trips accessing residential streets from Harefield Road north (linked) that do not pass the Site.

The proposed trip types are summarised in **Table 31**.

Table 31: Proposed trip types

Trip type	AM peak hour	PM peak hour	Saturday peak hour
Primary – Transferred	40%	40%	70%
Secondary – Linked (Oxford Road and north on Harefield Road)	30%	30%	15%
Secondary – Pass-by (Harefield Road)	30%	30%	15%
Total	**100%**	**100%**	**100%**

The proportion of trip types set out in **Table 31** has been applied to the net vehicle trips for Scenario B shown in **Table 29**. The resulting net vehicle trips by type of trip are shown in **Table 32**.

Table 32: Net vehicle trips by type of trip

Mode	AM peak hour (08:00-09:00)			PM peak hour (17:00-18:00)			Saturday peak hour (13:00-14:00)		
	In	Out	Total	In	Out	Total	In	Out	Total
Primary (Transfer)	12	0	12	12	9	21	79	78	157
Secondary – Linked (Oxford Road and north on Harefield Road)	9	0	9	9	7	16	17	17	34
Secondary – Pass-by (Harefield Road)	9	0	9	9	7	16	17	17	34
Total	**29**	**0**	**29**	**29**	**22**	**51**	**113**	**112**	**225**

Note that figures may not sum due to rounding

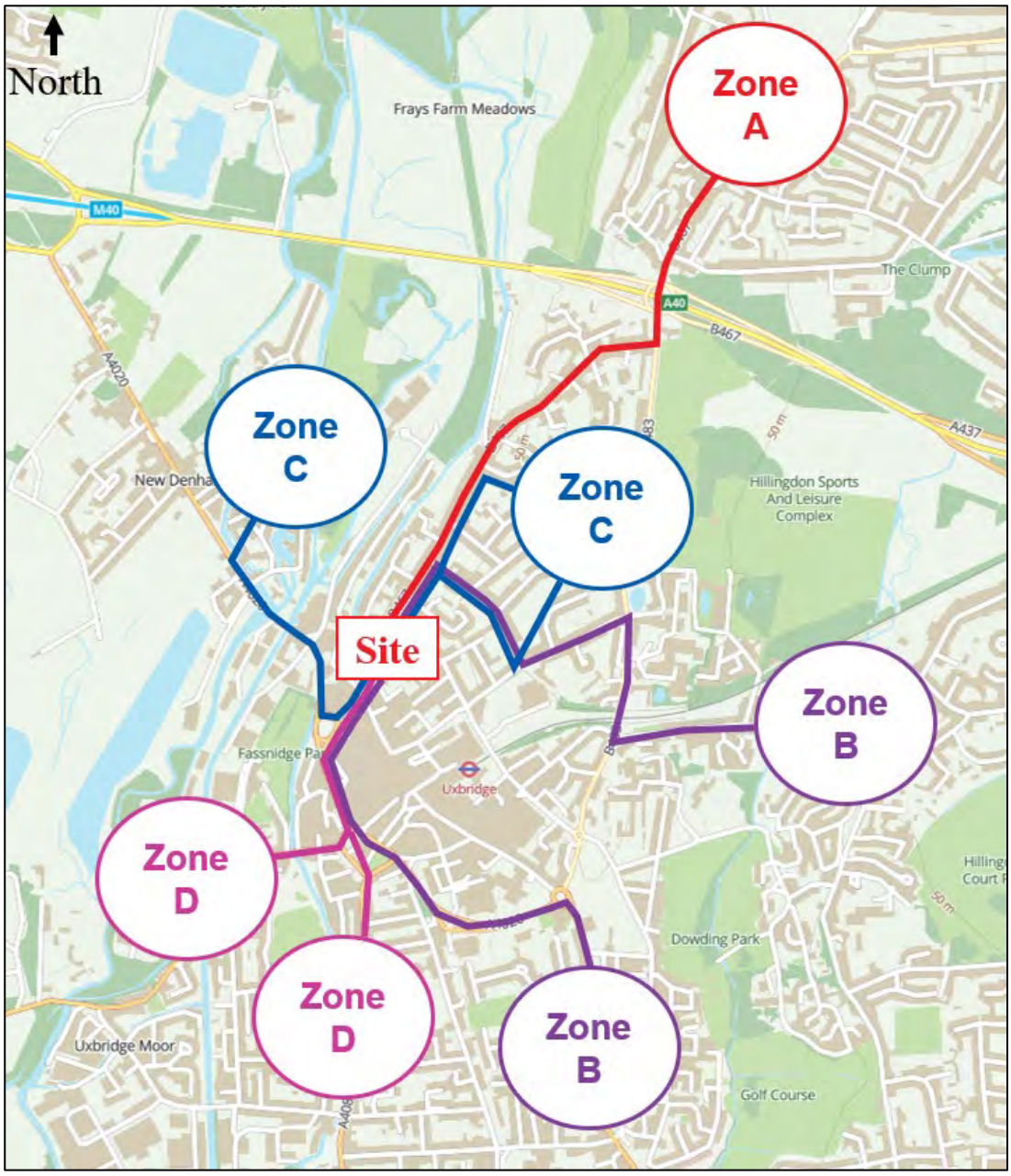
The largest number of trips are forecast to be undertaken by car. A similar assessment has therefore not been undertaken for other modes of transport, however it is reasonable to assume that other modes would also be made up of a mixture of primary and secondary (linked and pass-by trips).

6.2.3 Primary trips

Primary (transfer) trips have been split north, east, south, west and central Uxbridge based on the potential directions that customers to the Site would be travelling from within the likely catchment. Areas to the north, east, south and west are all residential in nature and could attract transfer trips from other retail stores. Trips for the proposed development have been assumed to transfer away from the Sainsbury's and other Town Centre food retailers within Uxbridge. Trips for the existing Site (Wickes & Halfords) are assumed to transfer away from other DIY retailers close to Uxbridge Town Centre (located to the south on Cowley Road and St John's Road). The locations of these zones and routes are shown in **Figure 16** and the distribution adopted is as follows:

- Zone A (north) = 30%.
- Zone B (east) = 30%.
- Zone C (central and west) = 20%.
- Zone D (south) = 20%.

Figure 16: Primary trip zones



6.2.4 Linked trips

Linked (also known as linked diverted) trips are those which would divert to the Site from nearby in the local area. In this case, it is assumed that linked trips would divert from both north and south of the Site. Around 200m to the south of the Site Oxford Road forms a junction with Harefield Road and drivers from both directions of Oxford Road (eastbound and westbound), could divert to the Site (the proportions have been based on the prevailing traffic flow in these directions) before returning onto their journey.

To the north of the Site, there will be a number of vehicle movements into and out of the residential streets along Harefield Road that do not pass the Site access but travel to and from the north for another journey purpose. These vehicles would divert to the Site for a shopping trip before returning on their journey (for example, a resident on their way home from school drop off or from work, diverting to the store before returning home).

6.2.5 Pass-by trips

Pass-by trips are those already directly passing or in the vicinity of the Site on Harefield Road. Increases in trips would therefore only be experienced at the Site access junction.

6.3 Highway network impact assessment

6.3.1 Background

This Section sets out the highway network impact assessment. The assessments in this Section cover the Site access junction (which would experience the largest changes in traffic flows) as well as the wider road network. At the time of the traffic surveys undertaken in October 2023, the Wickes and Halfords were not open. For the purposes of the assessments on the wider road network, the total trips associated with the existing Site (Wickes & Halfords) and proposals have been distributed across the highway network, and the net change between the two scenarios has been considered. The assumptions outline above in terms of the primary, linked and pass-by trip proportions have been applied to both scenarios (with the only difference being the location that primary trips are transferring away from).

Traffic flow diagrams for the 2023 survey + Wickes & Halfords and 2023 survey + development scenarios are contained in **Appendix F.**

6.3.2 Site access junction capacity

The largest impact in terms of changes in traffic flows would occur at the Site access junction on Harefield Road. The junction was surveyed in October 2023, with details of observed traffic flows provided in **Table 4**. At the time of the survey, the Wickes and Halfords within the Site were vacant. Although the car park was open at the time, the observed flows going in and out were lower than those that would have been attracted by the extant Wickes and Halfords when they were open. Three scenarios have therefore been considered and assessed for the Site access junction:

1. 2023 surveyed traffic flows.
2. Extant traffic flows (as per scenario 1 but with traffic flows associated with the extant Wickes and Halfords turning in / out of the car park). This provides an indication of how the junction operated when the extant Wickes and Halfords were open.
3. Extant traffic flows + development net change (as per scenario 2 but with the development's net change in traffic flows included).

The traffic flows for each scenario are shown in **Table 33**.

Table 33: Site access junction - traffic flows (PCUs)

Road	Turn	AM peak hour flows (08:00 – 09:00)	PM peak hour flows (16:45 – 17:45)	Saturday daytime flows (13:00 – 14:00)
1 – 2023 surveyed traffic flows				
Harefield Road southbound	Ahead	342	275	211
	Left	11	1	9
Site Access	Left	1	13	16
	Right	1	5	4
Harefield Road northbound	Ahead	378	393	269
	Right	9	3	18
Total		**742**	**690**	**527**
2 – Extant traffic flows (Wickes and Halfords)				
Harefield Road southbound	Ahead	330	262	183
	Left	20	21	41
Site Access	Left	15	16	25
	Right	18	24	37
Harefield Road northbound	Ahead	367	382	245
	Right	16	14	28
Total		**766**	**719**	**559**
3 – Extant traffic flows + development net change				
Harefield Road southbound	Ahead	326	257	174
	Left	36	38	108
Site Access	Left	15	24	70
	Right	18	37	104
Harefield Road northbound	Ahead	363	378	237
	Right	29	25	73
Total		**787**	**759**	**766**

The Site access junction has been modelled using TRL Junctions 10 (PICADY). Surveyed and forecast PCU flows (as shown in the table above) have been modelled.

The modelled results for all three scenarios and all three assessed time periods are summarised in **Table 34**, in terms of queues, delay (seconds) and Ratio of Flow to Capacity (RFC) on the Site access arm and Harfield Road northbound (right turn) arm. Full model outputs are provided in **Appendix H**.

Table 34: Site access junction modelling results

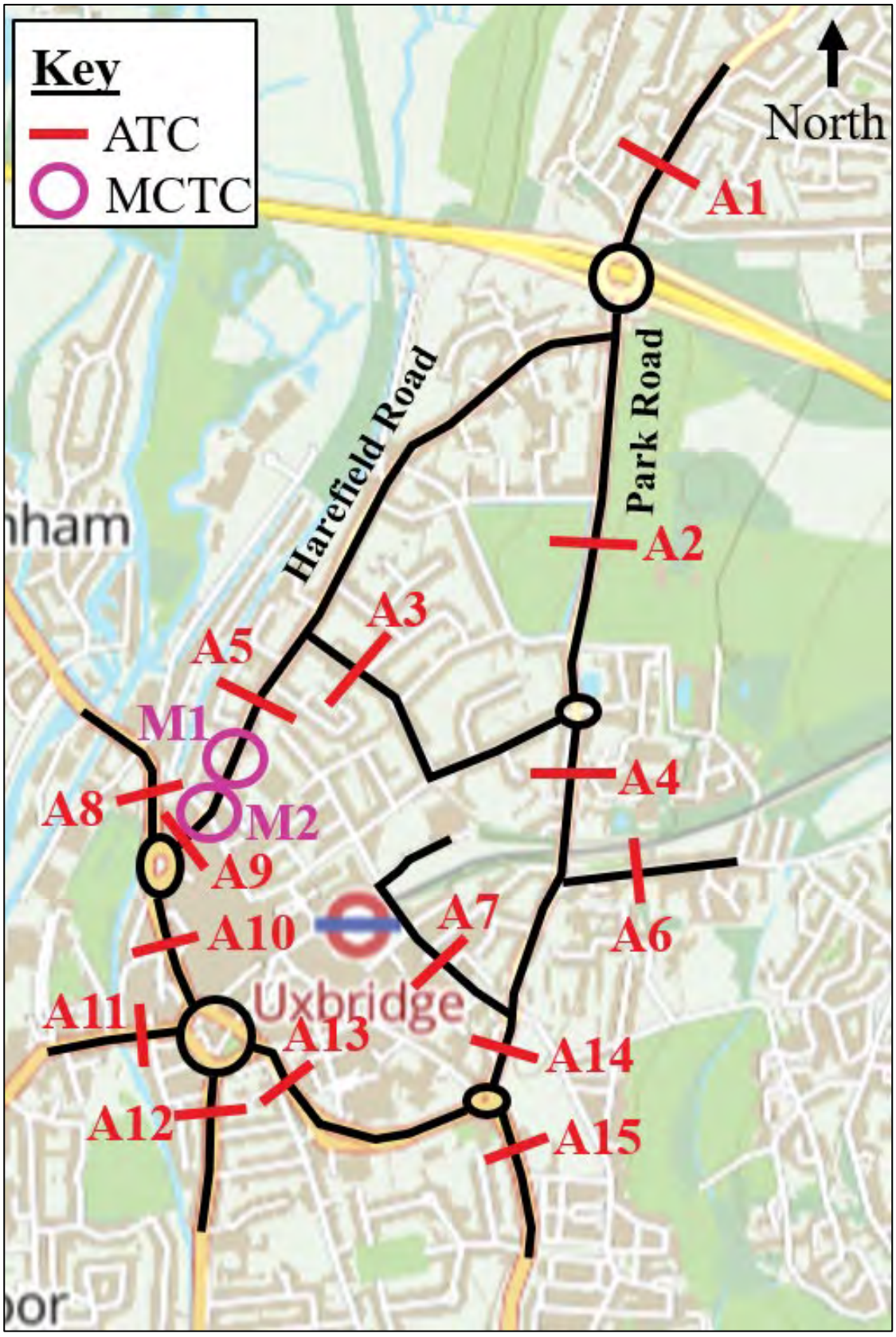
Arm	AM peak hour (08:00 – 09:00)			PM peak hour (16:45 – 17:45)			Saturday peak hour (13:00 – 14:00)		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
1 – 2023 surveyed traffic flows									
Site access	0.0	0.00	0.00	0.0	7.18	0.04	0.0	6.52	0.03
Harefield Road NB (right)	0.0	6.79	0.02	0.0	6.46	0.01	0.0	6.39	0.03
2 – Extant traffic flows (Wickes and Halfords)									
Site access	0.1	8.80	0.08	0.1	8.81	0.10	0.1	8.31	0.13
Harefield Road NB (right)	0.0	6.88	0.03	0.0	6.63	0.03	0.0	6.52	0.05
3 – Extant traffic flows + development net change									
Site access	0.1	8.89	0.08	0.2	9.46	0.15	0.6	11.78	0.36
Harefield Road NB (right)	0.1	7.12	0.06	0.1	6.82	0.05	0.1	7.30	0.13

As can be seen, whilst queues, delays and RFC increase in scenario 2 compared to scenario 1, and in scenario 3 compared to scenario 2, overall they remain low and the junction operates with ample spare capacity throughout, with a maximum RFC of 0.36 (occurring in the Saturday peak hour in scenario 3). The maximum queue (0.6 PCU) occurs in the Saturday peak hour in scenario 3 on the Site access arm, although this is less than one PCU. Delays on Harefield Road increase by less than one second between scenario 1 and scenario 3 in all time periods, which is considered to be a negligible increase. Based on this assessment, the proposals are not considered to result in any adverse highways impacts at the Site access junction on Harefield Road.

6.3.3 Wider highway network

The net vehicle trips associated with the Wickes & Halfords and with the development have been distributed onto the wider highway network based on the assumptions outlined in **Section 6.2**. The locations are shown in **Figure 17**.

Figure 17: Locations of traffic surveys



Total traffic flows on the wider network for the existing Site (with the Wickes & Halfords) are shown in **Table 35**. Changes compared to surveyed traffic flows are shown in brackets. With the assumption that primary trips transfer away from similar retail uses close to Uxbridge, some links experience decreases in flows and some experience increases.

Table 35: Total traffic flows – 2023 survey + Wickes & Halfords (vehicles)

Location Ref.	Location	Direction	AM peak hour flows (08:00 – 09:00)	PM peak hour flows (16:45 – 17:45)	Saturday daytime flows (13:00 – 14:00)
M2	Harefield Road	Southbound	344 (+5)	299 (+5)	225 (-1)
	Harefield Road	Northbound	771 (+3)	694 (+2)	570 (+4)
	High Street	Westbound	264 (0)	370 (0)	343 (0)
	High Street	Eastbound	66 (0)	111 (0)	39 (0)
A1	Swakeleys Road	Northbound	931 (0)	1,250 (0)	1,039 (0)
		Southbound	1,137 (0)	1,038 (0)	1,151 (0)
A2	Park Road	Northbound	707 (0)	553 (0)	835 (0)
		Southbound	1,347 (0)	840 (0)	904 (0)
A3	Fairfield Road	Eastbound	71 (+2)	46 (+4)	56 (+8)
		Westbound	55 (+3)	58 (+3)	47 (+9)
A4	Park Road	Northbound	796 (+3)	824 (+3)	792 (+9)
		Southbound	1,026 (+2)	876 (+4)	781 (+8)
A5	Harefield Road (north of Site)	Northbound	378 (+7)	409 (+10)	284 (+12)
		Southbound	351 (+8)	273 (+8)	231 (+14)
A6	Honeycroft Hill	Eastbound	255 (0)	647 (0)	398 (0)
		Westbound	783 (0)	350 (0)	332 (0)
A7	York Road	Eastbound	297 (0)	614 (0)	634 (0)
		Westbound	600 (0)	489 (0)	654 (0)
A8	Oxford Road	Eastbound	875 (0)	695 (0)	671 (0)
		Westbound	620 (0)	772 (0)	623 (0)
A9	Harefield Road (south of Site)	Northbound	746 (+5)	676 (+2)	574 (+4)
		Southbound	608 (+3)	706 (+5)	559 (-1)
A10	Oxford Road	Eastbound	1,056 (-3)	958 (-3)	864 (-10)
		Westbound	965 (-2)	1,165 (-4)	801 (-6)
A11	New Windsor Street	Eastbound	589 (-5)	550 (-6)	377 (-15)
		Westbound	721 (-5)	635 (-5)	511 (-17)
A12	Cowley Road	Northbound	850 (-3)	843 (-4)	668 (-11)

Location Ref.	Location	Direction	AM peak hour flows (08:00 – 09:00)	PM peak hour flows (16:45 – 17:45)	Saturday daytime flows (13:00 – 14:00)
		Southbound	658 (-4)	687 (-3)	753 (-12)
A13	Hillingdon Road	Eastbound	672 (-2)	780 (-4)	746 (-8)
		Westbound	681 (-3)	947 (-3)	619 (-9)
A14	Park Road	Northbound	1,103 (-2)	1,345 (-4)	1,122 (-8)
		Southbound	1,384 (-3)	1,126 (-3)	1,017 (-9)
A15	Hillingdon Road	Northbound	1,068 (0)	1,102 (0)	1,009 (0)
		Southbound	1,169 (0)	1,217 (0)	902 (0)

Total traffic flows on the wider network for the proposals are shown in **Table 36**. Changes compared to surveyed traffic flows are shown in brackets (note this is not a comparison in the extant consented position which is reflected later in this Chapter). With the assumption that primary trips transfer away from similar retail uses in Uxbridge Town Centre, some links experience decreases in flows and some experience increases.

Table 36: Total traffic flows – 2023 survey + proposed development (vehicles)

Location Ref.	Location	Direction	AM peak hour flows (08:00 – 09:00)	PM peak hour flows (16:45 – 17:45)	Saturday daytime flows (13:00 – 14:00)
M2	Harefield Road	Southbound	351 (+10)	311 (+17)	284 (+58)
	Harefield Road	Northbound	784 (+18)	709 (+17)	620 (+54)
	High Street	Westbound	263 (-1)	369 (-1)	337 (-6)
	High Street	Eastbound	66 (0)	111 (0)	39 (0)
A1	Swakeleys Road	Northbound	931 (0)	1,250 (0)	1,039 (0)
		Southbound	1,137 (0)	1,038 (0)	1,151 (0)
A2	Park Road	Northbound	703 (-4)	546 (-7)	798 (-37)
		Southbound	1,339 (-8)	832 (-8)	866 (-38)
A3	Fairfield Road	Eastbound	70 (+1)	46 (+4)	64 (+16)
		Westbound	56 (+4)	60 (+5)	55 (+17)
A4	Park Road	Northbound	798 (+5)	827 (+6)	806 (+23)
		Southbound	1,026 (+2)	878 (+6)	795 (+22)
A5	Harefield Road (north of Site)	Northbound	384 (+13)	425 (+26)	362 (+90)
		Southbound	369 (+26)	292 (+27)	311 (+94)
A6	Honeycroft Hill	Eastbound	255 (0)	647 (0)	398 (0)
		Westbound	783 (0)	350 (0)	332 (0)
A7	York Road	Eastbound	290 (-7)	602 (-12)	573 (-61)
		Westbound	587 (-13)	476 (-13)	590 (-64)
A8	Oxford Road	Eastbound	875 (0)	695 (0)	671 (0)
		Westbound	620 (0)	772 (0)	623 (0)
A9	Harefield Road (south of Site)	Northbound	756 (+15)	691 (+17)	624 (+54)
		Southbound	614 (+9)	717 (+16)	612 (+52)
A10	Oxford Road	Eastbound	1,063 (+4)	968 (+7)	913 (+39)
		Westbound	975 (+8)	1,176 (+7)	848 (+41)
A11	New Windsor Street	Eastbound	594 (0)	556 (0)	392 (0)
		Westbound	726 (0)	650 (0)	528 (0)
A12	Cowley Road	Northbound	853 (0)	847 (0)	679 (0)

Location Ref.	Location	Direction	AM peak hour flows (08:00 – 09:00)	PM peak hour flows (16:45 – 17:45)	Saturday daytime flows (13:00 – 14:00)
		Southbound	662 (0)	690 (0)	765 (0)
A13	Hillingdon Road	Eastbound	670 (-4)	781 (-3)	743 (-11)
		Westbound	685 (+1)	947 (-3)	619 (-9)
A14	Park Road	Northbound	1,097 (-8)	1,342 (-7)	1,089 (-41)
		Southbound	1,383 (-4)	1,122 (-7)	987 (-39)
A15	Hillingdon Road	Northbound	1,068 (0)	1,102 (0)	1,009 (0)
		Southbound	1,169 (0)	1,217 (0)	902 (0)

The net change in flows as a result of the proposals on the wider highway network is shown **Table 37**. The percentage change in flows (compared to the Wickes & Halfords scenario) is also displayed.

Table 37: Wider highway network - net change in vehicle trips

Location Ref.	Location	Direction	AM peak hour flows (08:00 – 09:00)		PM peak hour flows (16:45 – 17:45)		Saturday daytime flows (13:00 – 14:00)	
			Net change	% change	Net change	% change	Net change	% change
M2	Harefield Road	Southbound	+6	+2%	+12	+4%	+59	+26%
	Harefield Road	Northbound	+13	+2%	+14	+2%	+51	+9%
	High Street	Westbound	-1	0%	-1	0%	-6	-2%
	High Street	Eastbound	0	0%	0	0%	0	0%
A1	Swakeleys Road	Northbound	0	0%	0	0%	0	0%
		Southbound	0	0%	0	0%	0	0%
A2	Park Road	Northbound	-4	-1%	-7	-1%	-37	-4%
		Southbound	-8	-1%	-8	-1%	-38	-4%
A3	Fairfield Road	Eastbound	-1	-2%	+1	+1%	+8	+14%
		Westbound	+1	+3%	+1	+2%	+8	+17%
A4	Park Road	Northbound	+2	0%	+3	0%	+14	+2%
		Southbound	0	0%	+2	0%	+14	+2%
A5	Harefield Road (north of Site)	Northbound	+6	+2%	+16	+4%	+77	+27%
		Southbound	+18	+5%	+19	+7%	+80	+35%
A6	Honeycroft Hill	Eastbound	0	0%	0	0%	0	0%
		Westbound	0	0%	0	0%	0	0%
A7	York Road	Eastbound	-7	-2%	-12	-2%	-61	-1-%
		Westbound	-13	-2%	-13	-3%	-64	-10%
A8	Oxford Road	Eastbound	0	0%	0	0%	0	0%
		Westbound	0	0%	0	0%	0	0%
A9	Harefield Road (south of Site)	Northbound	+10	+1%	+14	+2%	+51	+9%
		Southbound	+6	+1%	+11	+2%	+53	+10%
A10	Oxford Road	Eastbound	+7	+1%	+9	+1%	+49	+6%
		Westbound	+10	+1%	+11	+1%	+47	+6%
A11	New Windsor Street	Eastbound	+5	+1%	+6	+1%	+15	+4%
		Westbound	+5	+1%	+5	+1%	+17	+3%
A12	Cowley Road	Northbound	+3	0%	+4	0%	+11	+2%

Location Ref.	Location	Direction	AM peak hour flows (08:00 – 09:00)		PM peak hour flows (16:45 – 17:45)		Saturday daytime flows (13:00 – 14:00)	
			Net change	% change	Net change	% change	Net change	% change
		Southbound	+4	+1%	+3	+1%	+12	+2%
A13	Hillingdon Road	Eastbound	-1	0%	0	0%	-3	0%
		Westbound	+3	0%	0	0%	0	0%
A14	Park Road	Northbound	-6	-1%	-3	0%	-33	-3%
		Southbound	-2	0%	-4	0%	-30	-3%
A15	Hillingdon Road	Northbound	0	0%	0	0%	0	0%
		Southbound	0	0%	0	0%	0	0%

The largest increase in vehicles is forecast to occur on Harefield Road (to the north of the Site access point, location A5), with an additional 77 vehicles forecast northbound and 80 vehicles forecast southbound on the Saturday. This equates to approximately one additional vehicle every minute per direction (a 27% - 35% increase). However although the percentage increase is higher on a Saturday, the Saturday flows are lower in absolute terms than weekday peak flows. Therefore, the total two-way flow on a Saturday is still less in absolute terms than the existing flows in the weekday peak hours.

Away from Harefield Road, the largest percentage increase in flows is forecast to occur on Fairfield Road (location A3), with increase of 14% - 17% in the Saturday peak hour. The absolute increase in vehicles is eight in each direction, which equates to an increase of around one vehicle every eight minutes per direction. This is considered to be a negligible increase in absolute terms, which would not be noticeable on the ground. There is an increase of 47 – 49 vehicles per direction on Oxford Road (location A10), however in percentage terms this equates to just a 6% increase in vehicles. Away from these locations, the increase in vehicles would be minimal in both absolute and percentage terms.

6.4 Public transport impact assessment

6.4.1 London Underground

The net multi-modal trip attraction assessment indicated that the proposals would give rise to an additional 12 two-way London Underground trips in the Saturday peak hour (six in and six out). The Site is located around 500m from Uxbridge Underground Station, which is served by 11 departing services and 11 arriving services during the Saturday peak hour. The forecast increase in London Underground trips would equate to less than one additional passenger per service and is therefore considered to have a negligible impact on London Underground services.

6.4.2 Bus

The net multi-modal trip attraction assessment indicated that the proposals would give rise to an additional five two-way bus trips in the AM peak hour (five in), 35 additional two-way bus trips in the PM peak hour (20 in, 15 out), and 67 additional two-way bus trips in the Saturday peak hour (34 in, 33 out). The Site is located around 175m away from two bus stops on the High Street (Stop A and Stop B), which are served by 45 buses in the AM and PM peak hours, and 48 buses in the Saturday peak hours. Additional bus stops and services can also be accessed nearby on Belmont Road and York Road. The forecast increase in bus trips would equate to less than one additional passenger per service in all three assessed peak hours and is therefore considered to have a negligible impact on local bus services.

6.5 Active travel impact assessment

The net multi-modal trip attraction assessment indicated that the proposals would give rise to an additional 21 two-way walking trips in the AM peak hour (21 in), 74 additional two-way walking trips in the PM peak hour (42 in, 31 out), and 71 additional two-way walking trips in the Saturday peak hour (36 in, 35 out). The proposals have also been forecast to give rise to an additional 18 two-way cycling trips in the Saturday peak hour (nine in, nine out). It is reasonable to assume that some of these trips, particularly undertaken by pedestrians, would be linked with other trips already taking place in the Town Centre / local area or passing by on Harefield Road, and would therefore not be new trips on the local pedestrian network.

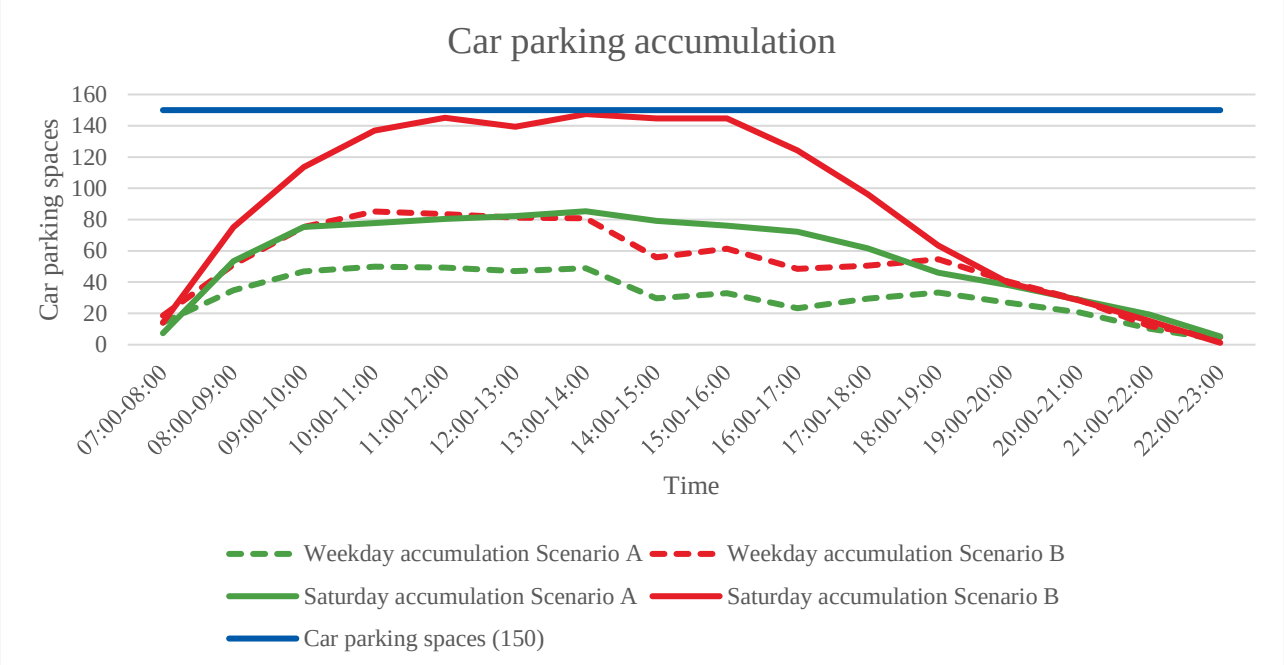
The Site is located in a well-established area, close to Uxbridge Town Centre. Connections are available for pedestrians and cyclists in the surrounding area, with pedestrian routes provided with appropriate footway and facilities at junctions. A review of the local walking and cycling network was undertaken as part of the ATZ in **Chapter 4**. This did not highlight any issued which, if left unaddressed, would result in unacceptable impacts to pedestrians or cyclists in the local area. Any increase in pedestrian and cyclist trips would be suitably accommodated by existing networks and facilities in the local area.

6.6 Car parking

It was noted by LBH's Highways Officer in pre-application discussions that the existing condition that prohibits the sale of food was imposed '*to ensure that adequate car parking facilities are provided and to safeguard pedestrian and vehicle safety and for the free flow of traffic*'. The highways impact assessment provided in **Section 6.3** demonstrates that the proposals would not result in adverse impacts to the free flow of traffic on the local highway network.

The potential future car park demand and accumulation has been reviewed for the Scenario A and B trip attraction assessments, based on the profile of vehicle trips from the TRICS surveys and car park entry and exit counts described in **Chapter 5**. The daily car park accumulation profile for Scenario A and Scenario B is shown in **Figure 18**. As can be seen, 150 spaces is sufficient to accommodate future demand for car parking under both scenarios, including during the busiest times at weekends.

Figure 18: Potential car parking accumulation - Scenario A and Scenario B



7. Car Parking Management Plan

7.1 Background

This Chapter details the Car Parking Management Plan (CPMP) for the proposals, outlining how the car parking is expected to be managed.

This Chapter has been prepared following pre-application comments received from LBH and in accordance with the *London Plan* (2021) Policy T6(J), which states that: "*A Parking Design and Management Plan should be submitted alongside all applications which include car parking provision, indicating how the car parking will be designed and managed, with reference to Transport for London guidance on parking management and parking design*".

At the time of preparation of this report, TfL guidance on PDMPs has not been published. This CPMP should be read in conjunction with the full body of the TA.

7.2 Car parking proposals

7.2.1 Car parking provision

The proposals involve the retention of 150 car parking spaces on-site, with the same layout and access arrangements as existing. As highlighted above, the 150 car parking spaces are considered to be suitable to accommodate future car parking demand for the Site.

7.2.2 Disabled car parking

The proposals involve the retention of the six car parking spaces which are currently marked out for wheelchair users. These would remain in the same place as the existing spaces, close to the entrances to the two retail units.

7.3 Car parking management

Prior to the closure of the Wickes and Halfords, the car park was for short stay designed to serve customers of the retail park and avoid commuter and business parking. Similar controls will be in place in future when the two retail units are re-occupied. Controls will limit the duration of stay and may require proof of use of the two retail units on-site. A private parking enforcement company (Parking Eye) will manage on-site car parking. The enforcement company would be responsible for monitoring car parking on a regular basis and issuing penalty tickets when required.

8. Summary and conclusion

8.1 Summary

This TA has been prepared to support the proposals for Units 1 & 2, Harefield Road, Uxbridge, within the London Borough of Hillingdon. The Site currently contains two retail units, which were formerly a Wickes and Halfords. There is an existing restriction for the retail units to be non-food only.

The Site is located within Uxbridge Town Centre. It is a short walk (around 120m) from Uxbridge High Street, which has a range of retail / Town Centre uses and is also served by multiple bus routes. Uxbridge London Underground Station, which is served by the Metropolitan and Piccadilly lines, is located around 500m to the south of the Site. The Site has a PTAL of 5.

Two planning applications are being submitted for the Site. A Non-Material Amendment (Section 96a) application is being made to vary the description of the development, and a Minor Material Amendment (Section 73) application is being made to vary Condition 23 of the existing planning permission. The applications will enable the sale of food from the two retail units on-site. Minor changes will be made internally to the two units, however the overall floor area of the two units combined will remain the same as the existing (3,406 sqm GIA). Access arrangements to the Site by all modes will remain the same as the existing arrangements.

The future occupier of Unit 1 is expected to be a discount food retailer. The future occupier of Unit 2 is not known, but it is expected to be a non-food retailer or a high-end food retailer. For a robust assessment, the proposal has been assessed on the basis that both units will be food retail which is forecast to attract a higher volume of trips than with the second unit being a non-food retailer.

A net multi-modal trip attraction assessment has been undertaken. The proposals have been forecast to result in a net increase of up to 225 additional two-way vehicle trips during the Saturday peak hour. These trips have been considered in terms of pass-by, linked and primary. This results in increases in vehicle trips being relatively limited to the local area. Away from Harefield Road, the forecast increase in vehicle trips is low in absolute and percentage terms. The Site access junction has been modelled which indicates that it would operate with ample spare capacity and with minimal queuing and delays in future with the proposed changes to the Site. Based on these assessments, the proposals are not anticipated to result in any adverse highways impacts.

Increases in trips have also been forecast across other modes. These are negligible in the context of existing public transport services and would be suitably accommodated by existing walking and cycling facilities in the local area. A review of the potential future car parking accumulation indicates that the current 150 spaces provided on-site would be suitable to accommodate future car parking demand.

8.2 Conclusion

When assessing planning applications, the *National Planning Policy Framework* (2023) Paragraph 111 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"*.

Assessments of the highway impact of the proposals at the Site access junction and on the wider local highway network have not indicated that the proposals would result in any adverse highways impacts. Modelling of the Site access junction indicates that it would operate with ample spare capacity and with minimal queuing or delays in future, and the increase in vehicles on roads on the wider local highway network would be minimal. A review of collision data in the local area has also been undertaken as part of the ATZ assessment. This review has not identified any patterns or common causes of collisions. No collisions have been reported at the Site access junction in the supplied three-year period of collision data. It has also been demonstrated that there is sufficient car parking on site to accommodate demand which was a key element of the reason for Condition 23 in the first place.

Based on the assessments undertaken in this report, the proposals are considered to be acceptable from a transport and highways perspective.

Appendix A

Pre-application comments

increased sense of enclosure and loss of outlook."

Paragraph 5.41 of the Hillingdon Local Plan: Part 2 (2020) states:
"The Council will aim to minimise the impact of the loss of daylight and sunlight and unacceptable overshadowing caused by new development on habitable rooms, amenity space and public open space. The Council will also seek to ensure that the design of new development optimises the levels of daylight and sunlight. The Council will expect the impact of the development to be assessed following the methodology set out in the most recent version of the Building Research Establishments (BRE) "Site layout planning for daylight and sunlight: A guide to good practice".

The proposal does not involve an extension to the building which could result in a loss of daylight or sunlight for neighbouring residents. The minor alterations to the building frontage would also not give rise to impact upon local residential amenity. Any potential application should be supported by a Noise Impact Assessment which provides details demonstrating that local residents will not be subject to unacceptable levels of noise generated by the development.

4. Highways

Paragraph 111 of the NPPF (2021) states that development should only be 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.

Policy T4 of the London Plan (2021) states that development proposals should not increase road danger. Policy T6 of the London Plan (2021) states that car parking should be restricted in line with levels of existing and future public transport accessibility and connectivity.

Policy DMT 1 of the Hillingdon Local Plan: Part 2 (2020) states:
A) Development proposals will be required to meet the transport needs of the development and address its transport impacts in a sustainable manner. In order for developments to be acceptable they are required to:
i) be accessible by public transport, walking and cycling either from the catchment area that it is likely to draw its employees, customers or visitors from and/or the services and facilities necessary to support the development;
ii) maximise safe, convenient and inclusive accessibility to, and from within developments for pedestrians, cyclists and public transport users;
iii) provide equal access for all people, including inclusive access for disabled people;
iv) adequately address delivery, servicing and drop-off requirements; and
v) have no significant adverse transport or associated air quality and noise impacts on the local and wider environment, particularly on the strategic road network.
B) Development proposals will be required to undertake a satisfactory Transport Assessment and Travel Plan if they meet or exceed the appropriate thresholds. All major developments that fall below these thresholds will be required to produce a satisfactory Transport Statement and Local Level Travel Plan. All these plans should demonstrate how any potential impacts will be mitigated and how such measures will be implemented.

Policy DMT 2 of the Hillingdon Local Plan: Part 2 (2020) states: Development proposals must ensure that:
i) safe and efficient vehicular access to the highway network is provided to the Council's standards;
ii) they do not contribute to the deterioration of air quality, noise or local amenity or safety of all road users and residents;
iii) safe, secure and convenient access and facilities for cyclists and pedestrian are satisfactorily accommodated in the design of highway and traffic management schemes;
iv) impacts on local amenity and congestion are minimised by routing through traffic by the most direct means to the strategic road network, avoiding local distributor and access roads; and
v) there are suitable mitigation measures to address any traffic impacts in terms of capacity and functions of existing and committed roads, including along roads or through junctions which are at

capacity.

Policy DMT 5 Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states that development proposals will be required to ensure that safe, direct and inclusive access for pedestrians and cyclists is provided on the site connecting it to the wider network, including the provision of cycle parking in accordance with Appendix C, Table 1 or, in agreement with the Council.

Policy DMT 6 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) requires that proposals comply with the Council's parking standards in order to facilitate sustainable development and address issues relating to congestion and amenity.

The Highway Officer has provided the following comments on the proposals:

"This pre-application highway advice refers to a proposal to amend the description of development and planning conditions pertaining to the former Wickes and Halfords site, Harefield Road, Uxbridge. The letter from Avison Young, reference 02C205645, 17th March 2023 explains that the applicant is seeking to vary the condition relating to the range of goods that can be sold to allow the sale of food. The Highway Authority notes that the existing condition that prohibits the sale of food was imposed "to ensure that adequate car parking facilities are provided and to safeguard pedestrian and vehicular safety and for the free flow of traffic". The letter confirms that the application does not propose to change the access, layout, car parking and delivery servicing arrangements/hours and opening hours of the existing units. However, more recently a plan (Ref: 16401-1-011) has been provided that shows the total number of car parking spaces would reduce from 150no. to 122no. These comments refer to this most recent plan.

As the applicant will be aware, planning law requires that applications for planning permission be determined in accordance with the development plan which comprised of the following:-
- The Local Plan: Part 1 - Strategic Policies (2012)
- The Local Plan: Part 2 - Development Management Policies (2020)
- The Local Plan: Part 2 - Site Allocations and Designations (2020)
- The West London Waste Plan (2015)
- The London Plan (2021)

As the application site has a PTAL ranking of 5, the London Plan Policy T6.3 Retail Parking, Table 10.5 - Maximum retail parking standards, requires that the proposal is car-free with the exception of disabled persons parking. Table 10.5 also includes a standard for the "Rest of London" of up to 1no. space per 50sq.m (GIA), this would allow a maximum of 65no. spaces. By contrast the Hillingdon Local Plan: Part 2 Development Management Policies (2020) would allow the provision of up to 86no. car parking spaces. However, the Highway Authority notes that there are currently 150no. car parking spaces on-plot all of which could be put back into use if the former Wicks and Halfords unit were to be reoccupied, this could take place without necessarily needing planning permission.

The above parking standards complement the National Planning Policy Framework as they contribute towards the achievement of sustainable development. Taking this into account the Highway Authority would not support the amended description of development together with a revised car parking layout that would provide 122no. spaces - a number far in excess of the Development Plans maximum standards.

The applicant is advised that 6% of all car parking spaces, should be designated disabled persons parking spaces with a further 4% being enlarged bays, this is to be in accordance with the London Plan Policy T6.5 Non-residential disabled persons parking. The Hillingdon Local Plan requires that the minimum dimensions of a disabled bay must be 2400mm x 4800mm plus shared 1200mm transfer zone. The transfer zone provides the occupants with more room to get out of the vehicle. Disabled bays that are side by side to one another can share the 1200mm transfer zone to save space.

Provision should be made for rapid electric vehicle charging and as a minimum 5% percent of all car parking spaces should have active fast electric vehicle charge points with a further 5% passive provision. The applicant will be aware that the sale of new petrol and diesel cars will in the future be prohibited, in response the demand for electric vehicle charging will increase substantially, to future proof the development the Highway Authority advises a far higher standard of provision than the Development Plan demands.

London Plan Policy T5 Cycling requires that the development provides 19no. long-stay cycle parking spaces and 27no. short-stay. The long-stay spaces should be accessible, covered and secure and compliant with the London Cycle Design Standards, for the short-stay parking Sheffield stands would be appropriate. The London Plan Policy T5 requires that this cycle parking caters for larger cycles including adapted bicycles for disabled people.

The Local Plan allows spaces for motorcycles, mopeds and scooters to be provided at the rate of 5% of car parking spaces. London Plan Policy T6 Car Parking states that where provided each motorcycle parking space should count towards the maximum of car parking spaces. These motorcycle parking space should be provided with anchor points.

The Highway Authority can confirm that any forthcoming planning application should include a Transport Statement containing an audit and appraisal of existing site information. This should set out the means of access for all modes, car parking numbers by type (disabled persons parking etc), cycle parking, drop off and servicing and delivery provision. The document should then contain baseline traffic data namely trip generation and mode split for customers, staff and servicing and deliveries. The Transport Statement should then set out the same information with the proposal in operation so that the net level of change in traffic flows and composition can been assessed. The TRICS database can be a reference for this information. The Transport Statement should highlight how development contributes towards the Mayor of London's road safety Vision Zero. The Highway Authority would be pleased to meet with the applicant to scope the requirements of this document.

The Highway Authority would require that an Active Travel Zone (ATZ) assessment of the site is provided. This involves mapping all key destinations around the site - to be agreed by the Highway Authority such as public car parks, bus stops, railway stations and cycle docking stations and then assessing the routes to them against the ten Healthy Street indicators. The purpose of the ATZ should then identify locations where the Healthy Streets indicators are not met and suggest ways that these could be overcome. The ATZ should include schedule of works that overcome existing barriers to active and sustainable travel thereby allowing the development to be self-sufficient in transport terms even with minimal on-plot car parking. In accordance with the London Plan Policy T9 Funding transport infrastructure through planning the outcome of this work would form the basis for developer contribution discussions.

The applicant is advised that the Highway Authority would require that a Travel Plan is provided to support the proposal. This should contain include targets for reducing the number of car trips that the development generates and should set out those measures that will be implemented to achieve these targets.

The Highway Authority requires that the dimensions of parking spaces, carriageway and footway widths, pedestrian visibility splays and cycle bays and refuse collection and storage points etc should be shown and annotated on the deposited plans. Swept path track drawings would be required to support the design and layout of the vehicle accesses and internal road layout. These should confirm that large vehicles can manoeuvre within the site and enter and leave in forward gear. Copies of all plans should be provided printable to scale at A3.

The Highway Authority would require that a Construction Logistics Plan, Service and Delivery Plan are

submitted for approval; these documents should be produced based on the guidance produced by TfL tailored to the development and local circumstances. This is a requirement of the London Plan Policy T7.

To be in accordance with London Plan Policy T6 Car Parking the Highway Authority would also require that a Parking Design and Management Plan is provided alongside any forthcoming planning application. This should clarify whether the proposal would serve as a base for internet shopping deliveries and offer a click and collect service. It should also detail how the car park would be managed- maximum length of stay, pricing, "Car Park Full" signs etc to ensure that the number of car parking spaces available is sufficient to always cater for demand. The developer should note that any works on Council owned highway land would be subject to Section 278 of the Highways Act 1980 (as amended) and secured by a Section 106 agreement of the 1990 Town & Country Planning Act.

To summarise, the Highway Authority could not support the proposed amended description of development with the revised car parking provision. As presented the development would be contrary to the London Plan Policies T1 Healthy Streets, T4 Assessing and Mitigating Transport Impacts, T6.3 Retail Parking and the Local Plan Policy DMT 1: Managing Transport Impacts, DMT 2: Highway Impacts, and DMT 6: Vehicle Parking. Comments made at this stage in the process are entirely without prejudice to the views of the Planning Authority or advice that may be provided at a formal submission."

As noted in the design section of this report the applicant should consider increasing the level of soft landscaping which would reduce the overall quantum of car parking. Notwithstanding the Highway Officer's concerns regarding the level of car parking provision proposed, if minded to submit a formal application the applicant will need to submit an Transport Assessment which justifies the level of parking proposed. This would need to be assessed by Case Officers who will consider the benefits of the scheme against any potential harm.

5. Other

AIR QUALITY

The proposal is for an amendment to the description and conditions of the current consented development to enable food sales from the units. The development is within the Air Quality Management Area (AQMA) and within the Uxbridge Air Quality Focus Area. Focus Areas are defined as places where the pollution levels are already elevated and therefore improvements are required.

The Planning Statement acknowledges that the site is within an AQMA and has identified that the submission of an Air Quality Assessment will be required. The Assessment must also include an Air Quality Neutral Assessment. It is noted that the change of use to food sales may be accompanied by an uplift in traffic movements with the potential for creating increased air quality impacts. The Transport Assessment will, therefore, provide key inputs into the air quality assessment.

To be compliant with policy the development must demonstrate:
- it is at least air quality neutral. Please note, as the development will impact an Air Quality Focus Area, more stringent mitigation may be required;
- it includes sufficient mitigation to ensure that any demolition, construction phase and operational phases to do not impact on relevant local receptors;
- that any demolition and construction phases are carried out in accordance with the relevant Mayor of London guidance including the use of NRMM compliant machinery;
- that the design aspects have been assessed to provide a clean by design development including suitable protection from pollution sources including the use of measures such as design layout, use of green infrastructure, use of low/zero technologies for energy and for any associated traffic.

The operational development impacts on an Air Quality Focus Area, therefore it must be not only be at least air quality neutral, as it is in an area where pollution levels are already elevated, any excess emissions will be required to be mitigated. Where, after appropriate on-site mitigation measures have

Appendix B

Framework Travel Plan

ARUP

Legal & General

Harefield Road, Uxbridge

Framework Travel Plan

Reference: 294516-00

V2 | 19 December 2023

Job number 294516-00

Ove Arup & Partners Limited
8 Fitzroy Street
London
W1T 4BJ
United Kingdom
arup.com

Contents

Tables

Figures

1. Introduction

1.1 Background

Ove Arup & Partners Ltd. ('Arup') has been appointed by Legal & General to support the proposals at Units 1 and 2, Harefield Road, Uxbridge (the 'Site'). The Site is located within the London Borough of Hillingdon (LBH) and accommodates two retail units. The retail units were formerly Wickes (Unit 1) and Halfords (Unit 2). The two retail units are currently vacant and the land is used as a temporary car park.

1.2 Site location

The location of the Site in relation to its wider surroundings within Uxbridge is shown in **Figure 1**. The Site is located around 500m to the north of Uxbridge London Underground Station, which is served by the Metropolitan and Piccadilly lines. It is a short walk (around 120m) from Uxbridge High Street / Town Centre, which has a range of retail / Town Centre uses and is also served by multiple bus routes. The Site has a Public Transport Accessibility Level (PTAL) of 5.

Figure 1: Site location

1.3 Proposed development

Two planning applications are being submitted for the Site. A Non-Material Amendment (Section 96a) application is being made to vary the description of the development, and a Minor Material Amendment (Section 73) application is being made to vary Condition 23 of the existing planning permission. The applications will enable the sale of food from the two retail units on-site. Further details of the existing Site are provided in **Chapter 3** and details of the proposals are provided in **Chapter 4.**

1.4 Report purpose

The provision of a Framework Travel Plan (FTP) was requested by LBH during pre-application discussions. This FTP has been prepared for the two units on-site. The primary focus of this FTP is on staff travel, however some of the measures outlined in this report will be applicable to customer travel too. In accordance with Transport for London (TfL) guidance, this FTP sets out a long term management strategy which will support sustainable and active travel for the proposed development.

This FTP covers the planning phase of the development and will form the basis of the Full Travel Plan which is expected to be prepared by the management of the Site prior to occupation. Once construction has been completed and the Site is re-occupied by the new retailers, responsibility for the Travel Plan will be held by the occupier(s) and the appointed Travel Plan Co-ordinator(s).

This FTP should be read in conjunction with the Transport Assessment (TA) for the proposed development, prepared by Arup.

1.5 Contacts

The current information regarding the overall responsibility for the Travel Plan is set out below:

- **Organisation name:**

Legal & General

- **Organisation address:**

1 Coleman Street, London, EC2R 5AA.

- **Local Planning Authority:**

London Borough of Hillingdon.

- **Address of development:**

Units 1&2, Harefield Road, Uxbridge, UB8 1JS.

- **Framework Travel Plan prepared by:**

Arup, 8 Fitzroy Street, London, W1T 4BJ.

- **Responsibility:**

Until appointment of the Travel Plan Co-ordinator, this Travel Plan will be responsibility of a named individual at Legal & General.

1.6 Report structure

The remainder of this report is structured as follows:

- **Chapter 2: Aims and objectives** – sets out the overarching aims and objectives of this Travel Plan.
- **Chapter 3: Baseline conditions** – provides a description of the existing Site and local transport networks.
- **Chapter 4: Proposed development** – provides a summary of the development proposals.
- **Chapter 5: Baseline mode splits and targets** – sets out the baseline and future year target mode splits.
- **Chapter 6: Measures** – sets out the proposed Travel Plan measures.
- **Chapter 7: Management** – outlines how the Travel Plan will be managed in future.
- **Chapter 8: Monitoring, securing and enforcing** – sets out how the Travel Plan will be monitored, secured and enforced.
- **Chapter 9: Action Plan** – outlines the proposed indicative set of actions that will be undertaken to deliver the Travel Plan targets.

2. Aims and objectives

The overarching aim of the Travel Plan for the Site is to encourage the use of sustainable transport modes, including walking, cycling and public transport instead of private car use. The primary objectives of this Travel Plan are therefore:

- Increase the awareness and use of environmentally sustainable modes of transport (public transport, walking and cycling) amongst staff.
- Introduce a package of measures that will help to facilitate staff travel by sustainable modes of transport.
- Reduce single occupancy vehicle use by staff.

To support the realisation of these primary objectives, a set of aims has also been developed as follows:

- Minimise the impact of traffic associated with the proposed development.
- Reduce adverse effects on health associated with increased car use.
- Reduce air pollution and the consumption of fossil fuels by encouraging travel by non-car modes.
- Increase the attractiveness, and as a result the proportion, of journeys made to and from the Site by sustainable travel modes (public transport, walking and cycling).
- Promote the benefits of sustainable travel to staff.
- Reduce perceived safety risks associated with walking and cycling.

The aims and objectives set out above will be realised by and are supported by a set of target future mode shares (**Chapter 5)**, measures (**Chapter 6**), proposed management arrangements (**Chapter 7**), future monitoring (**Chapter 8)** and an Action Plan **(Chapter 9)**.

3. Baseline conditions

3.1 Existing Site

The Site is bounded to the west by Harefield Road, to the north by residential dwellings, to the east by Penfield Estate and to the south by Uxbridge Police Station. The Site is located within Uxbridge Town Centre, as identified in the Hillingdon Local Plan.

The Site comprises two retail units ('Unit 1' and 'Unit 2') with a total floor area of 3,406 sqm Gross Internal Area (GIA) and a 150 space car park. Unit 1 was formerly a Wickes and has a GIA of 2,401 sqm, and Unit 2 was formerly a Halfords and has a floor area of 1,005 sqm. The two retail units are currently vacant and could be re-occupied by similar retailers. The existing service yard is located at the south-east corner of the Site.

The main access to the Site is from Harefield Road. A priority junction with a dedicated right-turn lane provides access for vehicles. A footway is provided into the Site on the northern side of the access. There is a separate secondary egress for servicing vehicles to the south onto Warwick Place. The access arrangements are shown in **Figure 2**.

Figure 2: Site access plan

3.2 Walking and cycling

Pedestrian facilities are generally of good quality in the local area. Close to the Site, footways are provided on both sides of Harefield Road. A footway continues on the northern side of the Site access road.

In the wider area, footways and street lighting are provided on local streets, and there are convenient connections available to local public transport stations and other amenities in the area. Junctions in the area are equipped with pedestrian crossing facilities (a mixture of zebra and signalised), which have dropped kerbs and tactile paving to support users from all walks of life.

The Site is located around 400m for National Cycle Network (NCN) Route 6. This runs from Colham Green (to the south of Uxbridge), north towards Rickmansworth and Watford. NCN Route 6 runs on traffic-free routes through Uxbridge. Away from Uxbridge, it runs on a mixture of traffic-free and lightly trafficked routes.

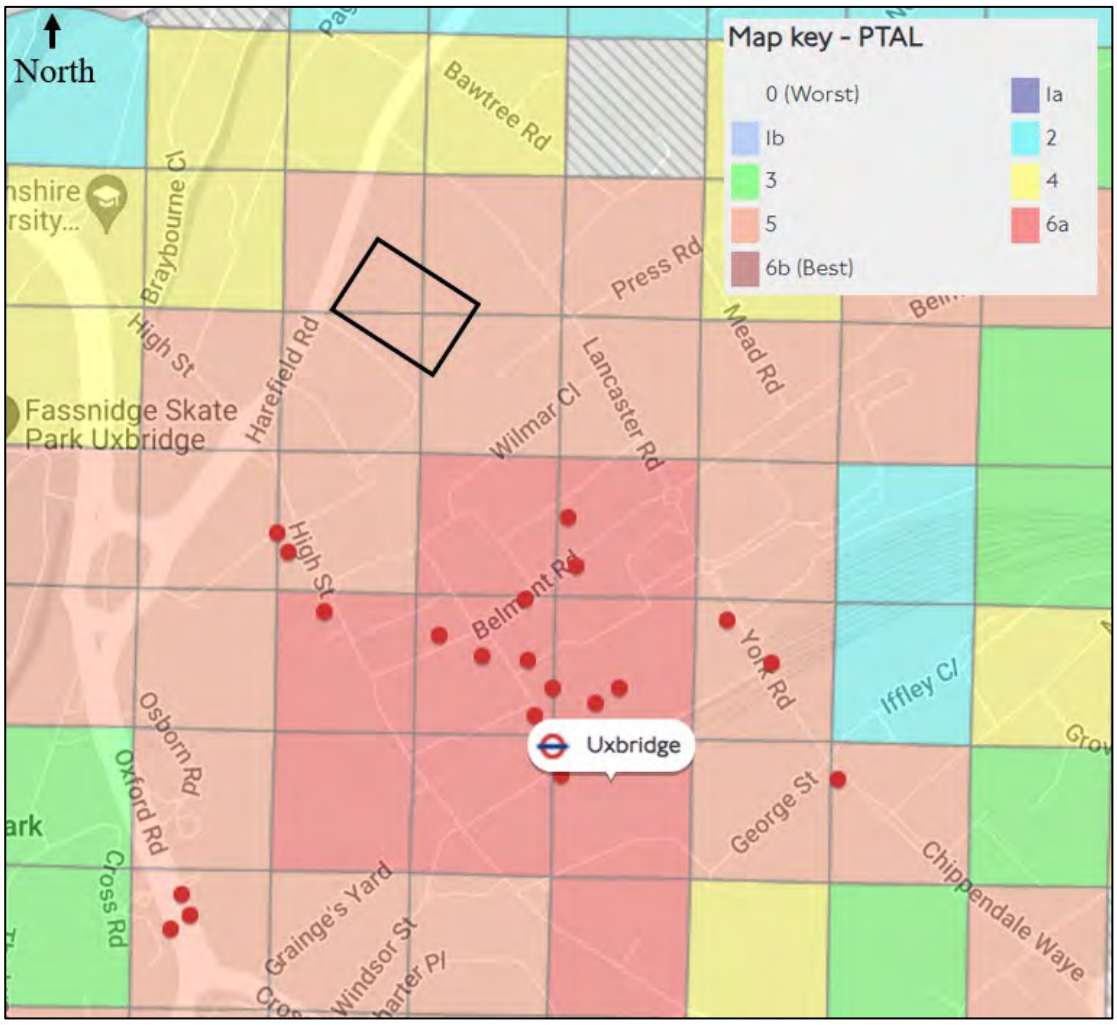
3.3 Public transport

3.3.1 Public transport accessibility

The Site is well located to the public transport with a range of services within easy walking distance. The Public Transport Accessibility Level (PTAL) of the Site has been calculated using TfL's WebCAT online database. This assumes a walk speed of 4.8kph and includes all rail stations within a 12-minute walk (960m) of a site and all bus stops within an eight-minute walk (640m) of a site.

Based on TfL's WebCAT online database, the Site's PTAL is 5, meaning it has a 'very good' level of public transport accessibility. This is on a scale of 0 to 6b, where 0 is the lowest and 6b is the highest. The output from TfL's WebCAT is shown in **Figure 3**.

Figure 3: Existing PTAL



3.3.2 London Underground

The nearest London Underground station is Uxbridge Station, which is located approximately 500m to the south of the Site. The station is served by the Metropolitan line and Piccadilly line. Step-free access from street to platform is available at the station. A summary of the London Underground services available at Uxbridge Station is provided in **Table 1**.

Table 1: London Underground services and frequencies (trains per hour)

Line	Destination	AM peak hour frequency (trains per hour)	PM peak hour frequency (trains per hour)	Saturday daytime frequency (trains per hour)
Metropolitan line	Towards Aldgate Underground Station	10	9	8
Piccadilly line	Towards Cockfosters Underground Station	4	4	3
Total		**14**	**13**	**11**

3.3.3 Buses

The nearest bus stops are located on High Street ('Stop A' and 'Stop B'), which are approximately 175m to the south of the Site. These are served by both TfL and non-TfL bus routes, providing access to a variety of destinations in London and areas to the west of London. A summary of the bus services operating from these stops and their frequencies is provided in **Table 2**. During peak times, around 45 buses are available in an hour in each direction, which equates to a bus every one to two minutes. Note that some of the services operate with low frequencies, and therefore do not operate during the peak hours shown.

Table 2: Bus services and frequencies (buses per hour in each direction)

Operator	Route	Destination	AM peak hour frequency (buses per hour)	PM peak hour frequency (buses per hour)	Saturday daytime frequency (buses per hour)
First	3	Slough	1	1	2
Carousel	101 Chiltern Hundreds	High Wycombe	1	0	1
Carousel	102 Chiltern Hundreds	High Wycombe	1	1	1
Carousel	104 Chiltern Hundreds	High Wycombe	0	1	1
Transport for London	222	Hounslow	6	6	5
Transport for London	331	Ruislip	3	3	3
Transport for London	427	Southall	7	7	8
Carousel	581	Denham	0	0	0
Carousel	583	Iver	0	0	1
Transport for London	U1	West Drayon	4	4	4
Transport for London	U3	Heathrow Central	5	5	6

Operator	Route	Destination	AM peak hour frequency (buses per hour)	PM peak hour frequency (buses per hour)	Saturday daytime frequency (buses per hour)
Transport for London	U4	Hayes	6	6	5
Transport for London	U5	Hayes & Harlington Station	5	5	5
Transport for London	U7	Lombardy Retail Park	2	2	2
Transport for London	U9	Harefield Hospital	3	3	3
Transport for London	U10	Glenhurst Avenue	1	1	1
Total			**45**	**45**	**48**

3.4 Local highway network

Harefield Road is a two-way road running north-south with a single lane in each direction. Around 90m to the south of the Site's access point, Harefield Road forms a priority junction with the High Street. This is also a two-way street with a single lane in each direction and is one of the main retail destinations in Uxbridge. Around 105m to the south of this, Harefield Road forms a signalised roundabout junction with the A4020 Oxford Road. The A4020 is main road with two lanes in each direction, providing connections to further afield including Hillingdon, West Drayton and the M40.

Both Harefield Road and the High Street are subject to 30mph speed limits. The A4020 has a 40mph speed limit. LBH is the Highway Authority for all the roads in the surrounding area.

3.4.1 Ultra Low Emission Zone

The Ultra Low Emission Zone (ULEZ) is a scheme that aims to improve air quality in London by setting and enforcing new emission standards for all vehicles and deterring the use of the most polluting vehicles by freight operators. Since August 2023 the ULEZ has expanded to operate across the whole of London, not including the M25. Harefield Road is located within the boundary of the ULEZ.

Most vehicles driving in the ULEZ must meet tight emission standards or pay the daily charge of £12.50 to drive inside the zone. The ULEZ is in effect 24 hours a day, 7 days a week, all year round (except Christmas Day).

3.5 Car parking

The Site currently has an associated car park with 150 spaces. Six of the car parking spaces are marked as being for wheelchair users.

The car park is managed by Euro Car Parks. When the retail park was occupied by the Wickes and Halfords, the car park was for customers of the retail park only. The car park was subject to controls, with a maximum duration of stay of one hour and no return within two hours. The Site currently operates a temporary car park for the town centre, with charges applying depending on the length of stay.

The Site sits in a LBH Controlled Parking Zone, with the hours of control being 9am – 5pm Monday to Saturday.

4. Proposed development

The existing Site is only permitted for non-food retail. The Highways Authority noted in the original planning permission that the existing condition that prohibits the sale of food was imposed "*to ensure that adequate car parking facilities are provided and to safeguard pedestrian and vehicle safety and for the free flow of traffic*".

Two planning applications are being submitted for the Site to enable the sale of food from the two retail units on-site. A Non-Material Amendment (Section 96a) application is being made to vary the description of the development, and a Minor Material Amendment (Section 73) application is being made to vary Condition 23 of the existing planning permission.

No changes are proposed to the overall total retail floor area. Minor changes are proposed to be made internally to the two units, as shown in **Table 3**.

Table 3: Existing and proposed floor areas

Scenario	Unit 1	Unit 2	Total
Existing	2,401 sqm GIA	1,005 sqm GIA	**3,406 sqm GIA**
Proposed	1,988 sqm GIA	1,418 sqm GIA	**3,406 sqm GIA**
Net change	-413 sqm GIA	+413 sqm GIA	**No change**

The anticipated occupiers of the retail units are as follows:

- Unit 1 will be occupied by a discount food retailer.
- The occupier of Unit 2 is not known at this stage. It could be occupied by another food retailer (likely to be a high-end retailer) or a non-food retailer.

For flexibility, the applications will enable the sale of food for both units, however both units could be re-occupied by non-food retailers like the existing Site.

The existing access arrangements, layout, car parking and delivery and servicing arrangements, as set out in **Chapter 3**, will remain unchanged.

5. Baseline mode splits and targets

5.1 Background

Indicative targets have been set which allow for assessment of the Travel Plan's measures and data. Such targets, according to TfL guidance, need to be SMART (Specific, Measurable, Achievable, Realistic and Time-Bound) to ensure that targets for modal shift can be achieved. Monitoring of the Travel Plan will be undertaken throughout its duration and, if necessary, changes to the implementation of the Travel Plan or type of measures that it includes can be made to ensure that the overall targets are achieved within the timeframe set.

The targets outlined herein are preliminary targets until the baseline survey of actual travel behaviour is undertaken. The baseline travel survey is expected to take place within one year of first occupation (subject to agreement with LBH), with targets adjusted as necessary following the baseline survey and future surveys. Further details of this are provided in **Section 8.2**.

As the FTP is an evolving document, these initial targets will be continually reviewed should it be evident that the set targets are not wholly relevant to the Site.

5.2 Baseline mode splits

Baseline staff mode splits have been developed using 2011 Census method of travel to work by workday population data for the middle layer super output area in which the Site is located (Hillingdon 015). This is considered to provide a reasonable representation of employee travel patterns. Although 2021 Census data is available, this was undertaken during a Covid-19 pandemic lockdown during which travel restrictions and a requirement to work from home were in place, therefore the use of 2011 data is considered to be appropriate. For the purposes of the baseline mode splits and indicative targets set out below, no adjustments have been made to the 2011 Census data.

5.3 Targets

The Travel Plan targets an increase in public transport, walking and cycling trips, and a decrease in private motorised trips. Public transport is the most likely mode to replace longer distance trips undertaken by private motorised transport. However for shorter and medium distance trips which could be undertaken by walking and cycling, a shift away from private motorised travel and public transport is also encouraged. The shift towards active travel trips aligns with the *Mayor's Transport Strategy* aspiration for all Londoners to do at least 20 minutes of active travel a day by 2041.

The baseline mode split and initial mode split targets are shown in **Table 4**. The targets relate directly to the aims and objectives described in **Chapter 2**. The baseline mode splits and targets will be reviewed at a later stage to establish the extent to which an additional mode shifts can be realised. Much depends on the location of future travel origins, as it is recognised that some workplaces are beyond reasonable walking and cycling distances which the Travel Plan measures would be unable to influence.

Table 4: Indicative mode split targets

Mode	Baseline (2011 Census)	One year	Three years	Five years
Public Transport	27%	28%	30%	32%
Private motorised (car, taxi, motorcycle)	61%	58%	54%	50%
Cycling	2%	3%	4%	5%
Walking	10%	11%	12%	13%
Total	**100%**	**100%**	**100%**	**100%**

6. Measures

6.1 Background

This Chapter sets out details of the proposed measures which will help to encourage and facilitate sustainable travel patterns by staff of the proposed development. This includes 'hard' measures related to the Site location and its accessibility, and 'Soft' initiatives that could be implemented by the Travel Plan Co-ordinator.

6.2 'Hard' measures – related to Site location and accessibility

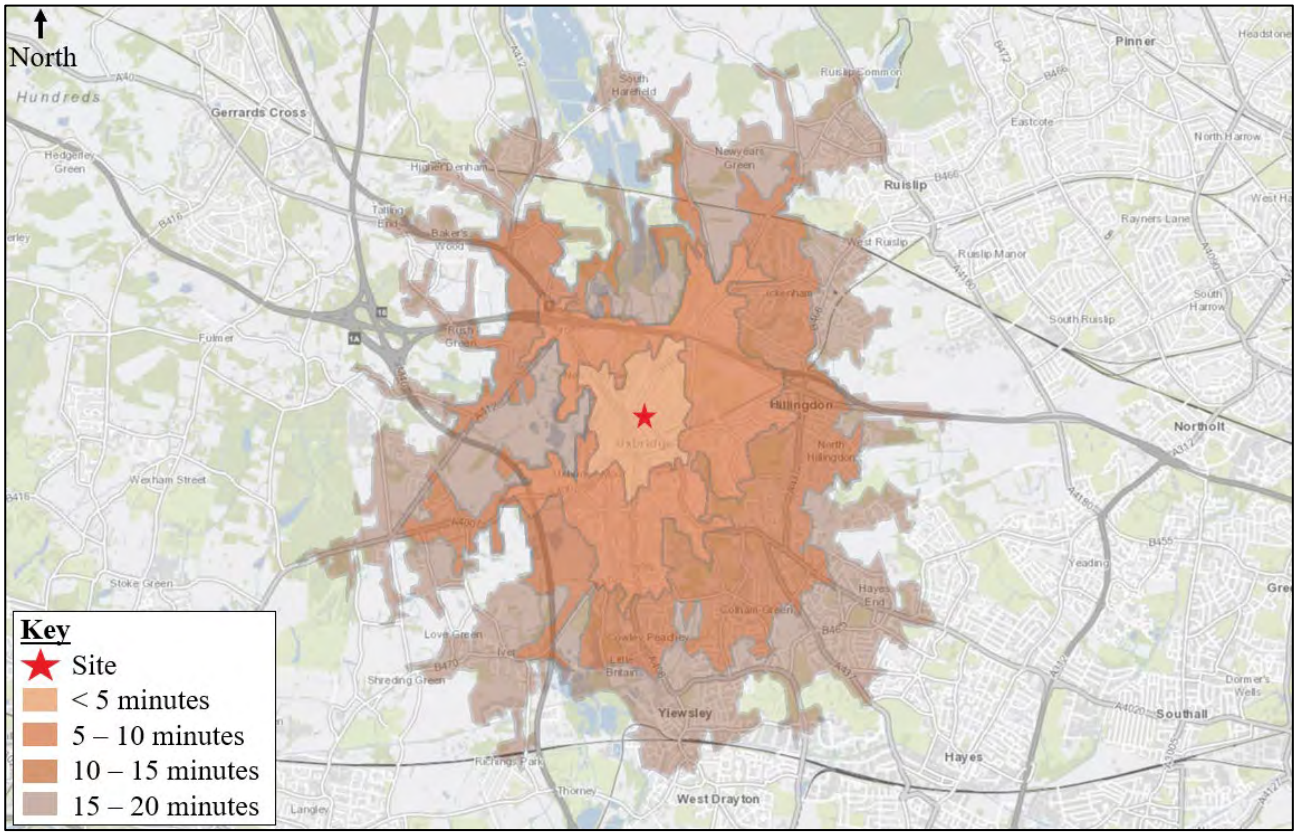
6.2.1 Pedestrian access

As outlined in **Section 3.2**, the Site is in an area with a comprehensive network of footways and crossings, which will support measures to promote walking. The Site is located close to residential areas within Uxbridge, Uxbridge Town Centre, and various other amenities and facilities all of which are accessible on-foot from the Site.

6.2.2 Cycling access

The 20-minute cycle catchment area from the Site is shown in **Figure 4**. Areas within Uxbridge and areas in all directions further afield, including Ickenham, West Ruislip and Yiewsley are all accessible within a 20-minute cycle ride of the Site. Staff living within this medium-distance catchment area will be encouraged to cycle or use public transport rather than travel by private motorised transport to reach the Site.

Figure 4: 20-minute cycle catchment

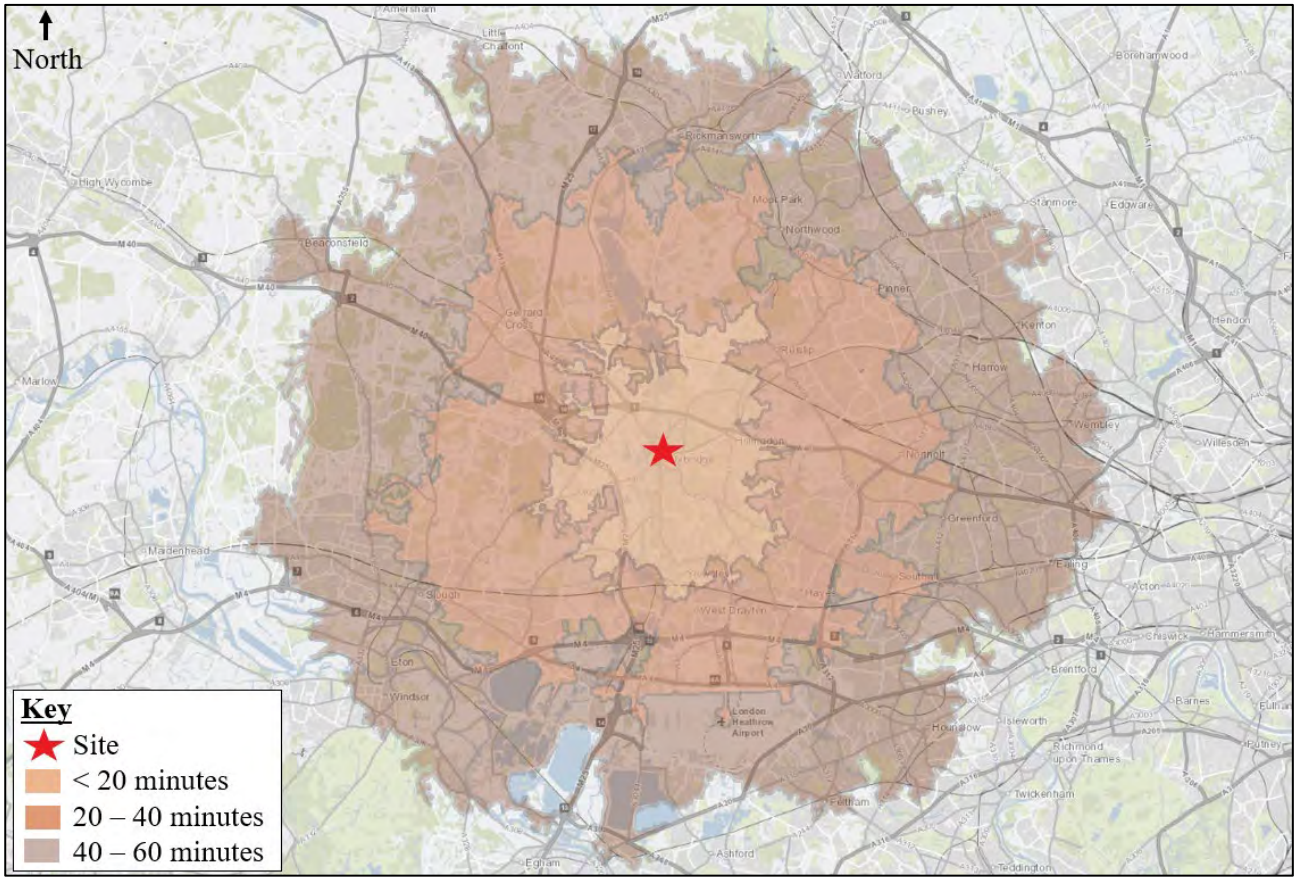


6.2.3 Public transport access

The Site is located close to bus stops on the High Street, which provide access to multiple destinations in West London as well as the wider area outside of London to the west of the Site. The Site is also located around 500m from Uxbridge London Underground, which provides access to Metropolitan and Piccadilly line services to other areas of West London and Central London.

The 60-minute public transport catchment area from the Site is shown in **Figure 4**. Much of West London and other areas to the west, including Slough and Beaconsfield, are accessible within a 60-minute public transport journey of the Site. Staff living within this longer-distance catchment area will be encouraged to use public transport rather than travel by private motorised transport to reach the Site.

Figure 5: 60-minute public transport catchment



6.3 'Soft' measures – Travel Plan initiatives

The following measures will be investigated to encourage the use of sustainable means of transport and could be promoted by the future Travel Plan Co-ordinator(s) of the Site. At this stage, the measures are indicative, and details of the final proposed measures would be contained in the Full Travel Plan prior to occupation of the Site.

6.3.1 Measures to provide information and options

Measures that will be considered to provide travel information and options for employees on-site include:

- A Welcome Pack will be given to new employees and will contain a copy of the Travel Pack providing information on walking and cycling routes. It will also contain web addresses to travel websites such as the TfL journey planner and smart phone applications. The contents of the pack will develop as the needs and requirements of the employees are understood further.
- The website and / or app for the proposed development will be augmented to provide Travel Plan information and information regarding local transport facilities and services. Details on how to access the information online will be highlighted in the Welcome Packs and the induction process.

- Maps and relevant travel information for the immediate local area will be provided on notice boards. These could be displayed in prominent locations that are accessible to employees of the proposed development. The notice boards could also be placed in positions such that they are visible to customers as well as staff. These will identify locations of walking routes, cycle routes and public transport services. They will also be used to inform employees of any new travel initiatives or events organised by the Travel Plan Co-ordinator.

6.3.2 Measures to facilitate walking

Measures that will be considered to facilitate and encourage walking amongst employees on-site include:

- Consider employing locally, so that employees' journey to work is sufficiently short to be undertaken by walking or cycling.
- Raise and promote awareness of the health benefits of walking through events or activities such as lunchtime walks.
- Payment of a walking mileage allowance for employees who walk to work.
- Have a pool of umbrellas available, encouraging walking trips in all weather.
- Make personal alarms available to employees who may have concerns with issues of personal safety.
- Ensure staff are provided with secure locker facilities for the storage of wet clothes, umbrellas etc.
- Promote events such as Walk to Work Week to employees.

6.3.3 Measures to facilitate cycling

Measures that will be considered to facilitate and encourage cycling amongst employees on-site include:

- Consider employing locally, so that employees' journey to work is sufficiently short to be undertaken by walking or cycling.
- Interest-free cycle loans to enable staff to purchase cycles and spread the payments out over a period of time. This could be in the form of the Government's 'Cycle to Work' scheme, or a scheme administered through a private sector provider.
- Negotiation of discounts with local cycle shops for staff purchases and maintenance.
- Payment of a cycle mileage allowance for employees who cycle to work.
- Organise cycle training and maintenance classes for employees, either through LBH's 'Dr Bike' training sessions or an appropriate private sector provider.
- The provision of cycle security, marking and registration with the Metropolitan Police.
- Ensure staff are provided with secure locker facilities for the storage of wet clothes etc.
- Promote events such as Cycle to Work Week to employees.

6.3.4 Car sharing

Although the objectives of this Travel Plan are to reduce private motorised travel in favour of sustainable travel, consideration will also be given to implementing a car sharing scheme for staff. This would have the benefit of reducing single occupancy car travel for staff who have to drive to the Site, by linking up staff who live close together who can then travel to the Site together in one car.

7. Management

7.1 Background

To maximise the Travel Plan's success, it is important to have a clear implementation strategy, identifying roles and responsibilities to maintain the momentum of the Travel Plan. Details of the future management of the Travel Plan are provided below.

7.2 Travel Plan Co-ordinator

Prior to the occupation, a Travel Plan Co-ordinator(s) (TPC) will be appointed for the proposed development to oversee the implementation and monitoring of the Travel Plan. It is expected that both units on-site will have their own TPC.

7.2.1 Responsibilities

The role and responsibilities of the TPC(s) will include:

- Overseeing the implementation of the Travel Plan measures in a timely manner.
- Identifying key milestones, deliverables and a programme to oversee the development and implementation of specific initiatives and measures.
- Developing and disseminating appropriate marketing / information materials, considering the use of social media and smartphone / tablet applications.
- Undertaking appropriate monitoring of the Travel Plan including any appropriate annual reviews and revisions to the Travel Plan.
- Reviewing the targets on a yearly basis, including once the travel survey data has been collected and the Site-specific travel patterns are fully appreciated, before being passed on to LBH.
- Assessing which measures have been effective and which ineffective, following collection and analysis of the travel survey data (for example, if by the end of a particular year, the data collected indicates modal shifts are not following the desired patterns).
- If need be, and in consultation with LBH, making further decisions with regards to which measures to maintain and which to revise or replace with alternatives.
- Regularly liaising with appropriate groups / organisations (e.g. LBH's Travel Plan officers) to ensure co-ordinated working and notably to agree new, bespoke targets to be set as appropriate, following collection and review of the travel survey results.
- Monitoring and reviewing progress and identify targets for taking the Travel Plan forward on a yearly basis.
- Ensuring that work on the Travel Plan is co-ordinated with other activities of the proposed development.

7.3 Marketing

It is recognised that a marketing and communications strategy is key to the success of the Travel Plan. The marketing strategy will aim to raise awareness of the key services and facilities implemented as part of the Travel Plan and disseminate travel information and notification of events and facilities provided. Full details of the marketing strategy for the Site are contained within the individual measures chapters for the Travel Plan. The marketing activities to be undertaken include:

- Links to relevant journey planning information and timetable information for public transport services on TfL's website will be provided within promotional material distributed to staff and if relevant customers.
- Using noticeboards to display up-to-date travel information and provide details of new Travel Plan initiatives or events for staff.

8. Monitoring, securing and enforcing

8.1 Background

A programme of monitoring and review will be agreed with LBH including the collection and collation of information by which the success of the Travel Plan can be evaluated. This will establish whether the agreed targets are being met. Monitoring and review will be the responsibility of the TPC. Regular monitoring and reviewing will help to gauge progress towards achieving targets and objectives, and if necessary, allow the Travel Plan to be refined and adapted in order to improve outcomes. This Chapter sets out the indicative approach to monitoring, reviewing, securing and enforcing. Exact details will be agreed with LBH.

8.2 Monitoring surveys

The initial baseline travel survey will be carried out within 12 months of first occupation. Subsequently, travel surveys will be undertaken one year later (Year one) and then in Years three and five. The travel surveys will be analysed against a number of indicators in order to establish how well the measures are achieving the aims of the Travel Plan and if any modifications are required to meet these objectives more effectively. If the future mode split targets are achieved early further monitoring may not be required, subject to agreement from LBH.

If by the end of a particular year, the data collected indicates that mode shifts are not following the desired pattern set out in **Chapter 5**, the TPC(s) will assess which measures have been effective and which ineffective. They will then make further decisions with regards to which measures to maintain and which to replace with alternatives. Likewise, if it appears that targets are not sufficiently challenging, or are too challenging, the TPC(s) will revise these in consultation with LBH.

8.2.1 Travel survey methodology

Travel surveys will be the responsibility of the TPC. The travel surveys will be carried out by an independent field company. Based on TfL guidance, the travel surveys will include the following elements as a minimum:

- Multi-modal counts of all trips undertaken to and from the Site.
- On-site disabled parking and delivery and servicing vehicle counts.
- Uptake of the travel planning measures.

Travel survey questionnaires will be distributed to Site users at the Proposed Development. This will ask questions about how staff currently travel to and from the Site, how they would prefer to travel to and from the Site, any travel related issues they are encountering, and their attitudes towards sustainable travel.

8.3 Reviewing

The TPC will report the survey results to LBH within one month of each survey. Borough officers and the TPC will then review the results and, if appropriate, revise the targets accordingly. The results of the travel survey and revised targets will be included in any subsequent revision of the Travel Plan.

8.4 Securing and enforcing

8.4.1 Securing

It is anticipated that details of the Travel Plan implementation, monitoring and review will be secured via a planning condition or through the Section 106 agreement.

The Applicant is committed to promoting collaborative working with other organisations to meet sustainable travel objectives.

8.4.2 Enforcing

The TPC(s) will seek support and guidance as necessary from LBH Travel Plan officers, in addition to reporting on Travel Plan reviews, to ensure that the Travel Plan is effective in meeting its objectives.

9. Action Plan

The programme for the development and implementation of the Travel Plan will be dependent on clear communications with residents and employees on Site and a thorough understanding of travel issues relevant to the Proposed Development. It is highly dependent on the ability of the TPC(s) to liaise efficiently with all parties concerned. An indicative Action Plan for the proposed development is shown in **Table 5**.

Table 5: Indicative Action Plan

Theme	Objectives	Measure	Action / status	Responsibility	Timing	Monitoring progress towards target
Travel Plan Management	To encourage travel by sustainable modes	Travel Plan Co-ordinator(s)	To be appointed	Applicant	Prior to occupation	Successful implementation of Travel Plan
		Detailed funding mechanisms	Identify costs of individual measures and secure approval	Travel Plan Co-ordinator(s) / Applicant	Upon appointment	Successful implementation of Travel Plan
		Initial baseline travel surveys	Undertake the surveys and analyse their results	Travel Plan Co-ordinator(s)	Within 12 months of first occupation	Successful implementation of Travel Plan
		Revised mode split targets	Revise mode split targets based on the results of the initial baseline travel surveys	Travel Plan Co-ordinator(s)	Upon completion of the initial baseline travel surveys	Successful implementation of Travel Plan
		Subsequent travel surveys	Undertake the subsequent travel surveys and analyse their results	Travel Plan Co-ordinator(s)	One, Three and Five years after first occupation	Successful implementation of Travel Plan
		Monitoring Reports	Produce Monitoring Reports following travel surveys in Years one, three and give	Travel Plan Co-ordinator(s)	Upon completion of the future travel surveys	Successful implementation of Travel Plan
		Update of the Travel Plan	Update the Travel Plan to reflect the results of the travel surveys, revised measures, updated Action Plan and remedial measures (if relevant)	Travel Plan Co-ordinator(s)	Within six months of completion of the travel surveys	Successful implementation of Travel Plan
Promotion / marketing	To raise awareness of sustainable transport modes	Staff Welcome Packs	Design and distribute the Staff Welcome Packs	Travel Plan Co-ordinator(s) / Applicant	Prior to occupation and ongoing	Successful implementation of Travel Plan
		Staff notice boards	Set up notice boards displaying travel and community information to staff, potentially being visible to customers as well	Travel Plan Co-ordinator(s) / Applicant	Prior to occupation and ongoing	Successful implementation of Travel Plan

Theme	Objectives	Measure	Action / status	Responsibility	Timing	Monitoring progress towards target
		Website / intranet information	Design and maintain a website for the Travel Plan if the operational development has a website and / or on an internal intranet site for staff	Travel Plan Co-ordinator(s) / Applicant	Prior to occupation and ongoing	Successful implementation of Travel Plan
Walking	To encourage travel by walking and increase mode split	Employing locally	Considering employing locally so that employees' journey to work is sufficiently short to be undertaken by walking	Travel Plan Co-ordinator(s) / Applicant	Prior to occupation and ongoing	Progress towards mode split target
		Promotion of benefits	Promotion of the health and other benefits of walking through the Welcome Pack, notice boards or other forms of communication	Travel Plan Co-ordinator(s)	Prior to occupation and ongoing	Progress towards mode split target
		Financial incentives	Payment of a walking mileage allowance for staff who walk to work	Travel Plan Co-ordinator(s) / Applicant	Prior to occupation and ongoing	Progress towards mode split target
		Umbrellas	Provision of a pool of umbrellas for use by staff	Travel Plan Co-ordinator(s)	Prior to occupation and ongoing	Progress towards mode split target
		Personal alarms	Provision of personal alarms for staff who walk to work	Travel Plan Co-ordinator(s)	Prior to occupation and ongoing	Progress towards mode split target
		Facilities	Provision of on-site facilities for staff to store wet clothes, umbrellas etc	Travel Plan Co-ordinator(s) / Applicant	Prior to occupation and ongoing	Progress towards mode split target
		Promotion of events	Promotion of walking events through the Welcome Pack, notice boards or other forms of communication	Travel Plan Co-ordinator(s)	Prior to occupation and ongoing	Progress towards mode split target
Cycling	To encourage travel by cycling and increase mode split	Employing locally	Considering employing locally so that employees' journey to work is sufficiently short to be undertaken by cycling	Travel Plan Co-ordinator(s) / Applicant	Prior to occupation and ongoing	Progress towards mode split target
		Interest-free loans	Payment of interest-free loans to enable staff to purchase cycles	Travel Plan Co-ordinator(s)	Prior to occupation and ongoing	Progress towards mode split target

Theme	Objectives	Measure	Action / status	Responsibility	Timing	Monitoring progress towards target
		Local cycle shop discounts	Liaise with local cycle shops to enable discounts for staff purchases and maintenance	Travel Plan Co-ordinator(s)	Prior to occupation and ongoing	Progress towards mode split target
		Financial incentives	Payment of a cycling mileage allowance for staff who cycle to work	Travel Plan Co-ordinator(s) / Applicant	Prior to occupation and ongoing	Progress towards mode split target
		Cycle training and skills course	Arrange cycle training and skills classes through LBH or an alternative private provider	Travel Plan Co-ordinator(s)	Prior to occupation and ongoing	Progress towards mode split target
		Cycle security, marking and registration schemes with the Metropolitan Police	Promote use by making staff aware of local schemes through the Welcome Pack, notice boards, or other forms of communication	Travel Plan Co-ordinator(s)	Prior to occupation and ongoing	Progress towards mode split target
		Facilities	Provision of on-site facilities for staff to store wet clothes etc	Travel Plan Co-ordinator(s) / Applicant	Prior to occupation and ongoing	Progress towards mode split target
		Promotion of events	Promotion of walking events through the Welcome Pack, notice boards or other forms of communication	Travel Plan Co-ordinator(s)	Prior to occupation and ongoing	Progress towards mode split target
Car sharing	To reduce single occupancy private motorised travel	Car sharing scheme	Consider setting up a car sharing scheme for staff who live close to each other	Travel Plan Co-ordinator(s)	Prior to occupation and ongoing	Progress towards mode split target

Appendix C

Outline Delivery and Servicing Plan

ARUP

Legal & General

Harefield Road, Uxbridge

Outline Delivery and Servicing Plan

Reference: 294516-00

V2 | 19 December2023

Job number 294516-00

Ove Arup & Partners Limited
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Contents

Tables

Figures

1. Introduction

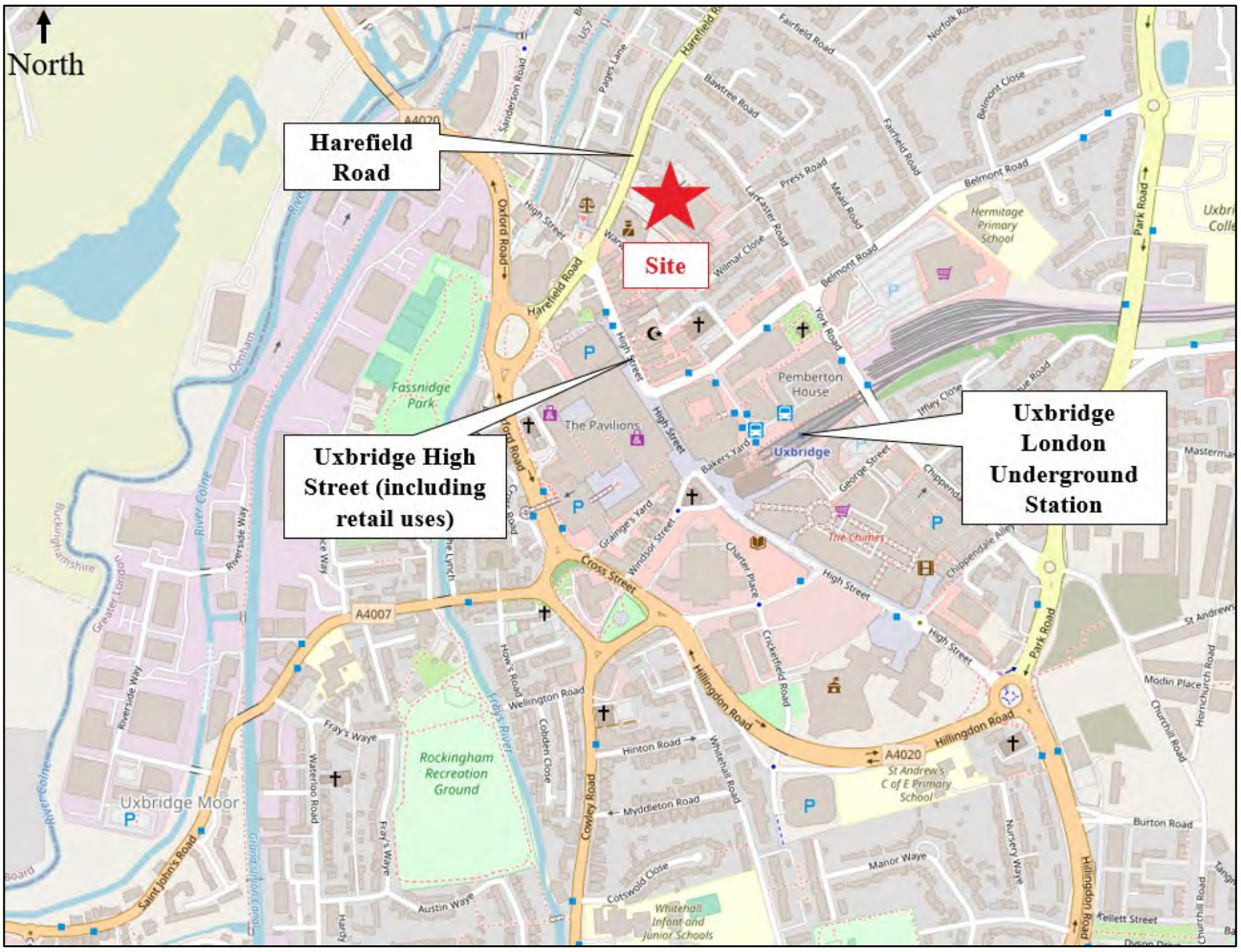
1.1 Background

Ove Arup & Partners Ltd. ('Arup') has been appointed by Legal & General to support the proposals at Units 1 and 2, Harefield Road, Uxbridge (the 'Site'). The Site is located within the London Borough of Hillingdon (LBH) and accommodates two retail units. The retail units were formerly Wickes (Unit 1) and Halfords (Unit 2). The two retail units are currently vacant and the land is used as a temporary car park.

1.2 Site location

The location of the Site in relation to its wider surroundings within Uxbridge is shown in **Figure 1**. The Site is located around 500m to the north of Uxbridge London Underground Station, which is served by the Metropolitan and Piccadilly lines. It is a short walk (around 120m) from Uxbridge High Street / Town Centre, which has a range of retail / Town Centre uses and is also served by multiple bus routes. The Site has a Public Transport Accessibility Level (PTAL) of 5.

Figure 1: Site location



1.3 Proposed development

Two planning applications are being submitted for the Site. A Non-Material Amendment (Section 96a) application is being made to vary the description of the development, and a Minor Material Amendment (Section 73) application is being made to vary Condition 23 of the existing planning permission. The applications will enable the sale of food from the two retail units on-site.

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The anticipated occupiers of the retail units are as follows:

- Unit 1 will be occupied by a discount food retailer.
- The occupier of Unit 2 is not known at this stage. It could be occupied by another food retailer (likely to be a high-end retailer) or a non-food retailer.

For flexibility, the applications will enable the sale of food for both units, however both units could be re-occupied by non-food retailers like the existing Site.

1.4 Report purpose

The provision of a Delivery and Servicing Plan (DSP) was requested by LBH during pre-application discussions. This Outline DSP has been prepared with reference to Transport for London's *Delivery and Servicing Plan Guidance* (2020). It sets out details of the proposed delivery and servicing arrangements, the forecast delivery and servicing movements including types of vehicles, measures to manage delivery and servicing activity, indicative future targets and future monitoring of delivery and servicing activity.

This Outline DSP covers the planning phase of the development. It is expected that a Full DSP will be secured prior to occupation.

This Outline DSP should be read in conjunction with the Transport Assessment (TA) for the proposed development, prepared by Arup.

1.5 Report structure

The remainder of this report is structured as follows:

- **Chapter 2: Site characteristics** – provides details of the Site's access arrangements and the proposed delivery and servicing strategy.
- **Chapter 3: Objectives and measures** – sets out the objectives of this DSP and measures that will be implemented to meet these objectives.
- **Chapter 4: Servicing trips** – provides details of the forecast number of delivery and servicing trips.
- **Chapter 5**: **Monitoring the DSP** – sets out how the implementation of this DSP will be monitored.

2. Site characteristics

2.1 Background

This Chapter sets out details of the Site's access arrangements and the proposed delivery and servicing arrangements.

2.2 Site access overview

The Site is bounded to the west by Harefield Road, to the north by residential dwellings, to the east by Penfield Estate and to the south by Uxbridge Police Station. The Site is located within Uxbridge Town Centre, as identified in the Hillingdon Local Plan.

The main access to the Site is from Harefield Road. A priority junction with a dedicated right-turn lane provides access for vehicles. A footway is provided into the Site on the northern side of the access. There is a separate secondary egress for servicing vehicles to the south onto Warwick Place. The access arrangements are shown in **Figure 2**.

Figure 2: Site access plan

2.2.1 Local highway network

Harefield Road is a two-way road running north-south with a single lane in each direction. Around 90m to the south of the Site's access point, Harefield Road forms a priority junction with the High Street. This is also a two-way street with a single lane in each direction and is one of the main retail destinations in Uxbridge. Around 105m to the south of this, Harefield Road forms a signalised roundabout junction with the A4020 Oxford Road. The A4020 is main road with two lanes in each direction, providing connections to further afield including Hillingdon, West Drayton and the M40.

Both Harefield Road and the High Street are subject to 30mph speed limits. The A4020 has a 40mph speed limit. LBH is the Highway Authority for all the roads in the surrounding area.

2.2.2 Ultra Low Emissions Zone

The Ultra Low Emission Zone (ULEZ) is a scheme that aims to improve air quality in London by setting and enforcing new emission standards for all vehicles and deterring the use of the most polluting vehicles by freight operators. Since August 2023 the ULEZ has expanded to operate across the whole of London, not including the M25. Harefield Road is located within the boundary of the ULEZ.

Most vehicles driving in the ULEZ must be met tight emission standards or pay the daily charge of £12.50 to drive inside the zone. The ULEZ is in effect 24 hours a day, 7 days a week, all year round (except Christmas Day).

2.3 Proposed delivery and servicing arrangements

The proposed delivery and servicing arrangements will remain the same as the existing arrangements, through the use of the on-site dedicated service yard. The arrangements are described in detail below.

2.3.1 Overview

Access to the Site's service yard is via the car park access junction on Harefield Road. Delivery and servicing vehicles drive through the southern side of the car park towards the service yard, which is accessed through a gate. Exiting vehicles do so via Warwick Place to the south of the Site, which has a priority junction with Harefield Road around 50m to the south of the car park access junction. The arrangements are shown in **Figure 3**. The same arrangements are used for waste collection, which is undertaken by waste collection vehicles from the Site's service yard.

Figure 3: Delivery and servicing arrangements

Access arrangements within the Site are shown in **Figure 4**. The service yard is shared between the two units on-site. Direct connections are provided from the service yard to the two units. The service yard also has storage space and contains the waste bins for the two units.

Figure 4: Internal delivery and servicing arrangements

2.3.2 Harefield Road access

Access for delivery and servicing vehicles (for entry only) and access to the Site's car park (for entry and exit) takes place via a priority T-junction with Harefield Road, which is shown in **Figure 5**. A dedicated right turn ghost island is available at the junction for access into the Site. This measures approximately 25m which is equivalent to approximately four Passenger Car Units (PCUs) The Site access road is one lane entry and one lane exit (with a flare), and leads directly the service yard and car park.

Figure 5: Site access junction (looking north along Harefield Road)

2.3.3 Service yard access

Within the Site, there is a gated access from the car park to the service yard. All vehicles accessing the service yard pass through this gated access. This is shown in **Figure 6**.

Figure 6: Gated access within Site

2.3.4 Service yard egress

A gated egress from the service yard is present on Warwick Place. Vehicles turn right from here to travel towards the junction with Harefield Road, which is located around 75m to the north. This gated egress is shown in **Figure 7**.

Figure 7: Gated egress onto Warwick Place

2.3.5 Warwick Place junction

Warwick Place forms a priority T-junction with Harefield Road, which is shown in **Figure 8**. From here, exiting delivery and servicing vehicles re-join the wider road network.

Figure 8: Warwick Place junction (looking north along Harefield Road)

3. Objectives and measures

3.1 Background

This Chapter sets out the proposed objectives of the DSP and the measures that will be adopted to meet the objectives.

3.2 Objectives

The objectives of this DSP consider the following policies at the National, Regional and Local scale.

3.2.1 National

- The National Planning Policy Framework (2023) Paragraph 112 – *"Applications for development should…allow for the efficient delivery of goods, and access by service and emergency vehicles"*.

3.2.2 Regional

- London Plan (2021) Policy D3 'Optimising site capacity through the design-led approach' – *"Development proposals should facilitate efficient servicing and maintenance of buildings and the public realm, as well as deliveries, that minimise negative impacts on the environment, public realm and vulnerable road users"*.
- London Plan (2021) Policy T7 'Optimising site capacity through the design-led approach' – *"Development proposals should facilitate efficient servicing and maintenance of buildings and the public realm, as well as deliveries, that minimise negative impacts on the environment, public realm and vulnerable road users"*.
- Mayor's Transport Strategy (2018) Proposal 15 – *"The Mayor, through TfL, will work with the boroughs, businesses and the freight and servicing industry to reduce the adverse impacts of freight and service vehicles on the street network. The Mayor aims to reduce the number of lorries and vans entering central London in the morning peak by 10 per cent by 2026"*.

3.2.3 Local

- Local Plan Part 2 (2020) Policy DMT 1 'Managing Transport Impacts – *"In order for developments to be acceptable they are required to…adequately address delivery, servicing and drop-off requirements."*

3.2.4 DSP objectives

This DSP seeks to achieve the following objectives:

- Demonstrate that goods and services can be delivered, and waste removed, in a safe, efficient and environmentally friendly way.
- Reduce the impact of freight activity on local residents and the local highway network.

3.3 Measures

The DSP measures have been identified in terms of physical infrastructure and operational efficiency. The measures reflect the objectives stated above. As noted previously, the proposed delivery and servicing arrangements remain the same as the arrangements used by Wickes and Halfords when they were operational.

3.3.1 Physical infrastructure

Servicing and delivery facilities

The service yard has sufficient space to accommodate Heavy Goods Vehicles (HGVs) and other vehicles visiting the Site. The service yard also has storage space and contains waste bins for the two units on-site. The use of the service yard means that all delivery and servicing activity will take place off-street, away from the public highway. Direct access from the service yard into both of the units on-site is available.

Waste storage and management

Waste collection will take place from the dedicated service yard. Sufficient waste storage will be provided for the two units, and sufficient space will be provided for waste vehicles to collect waste. Waste will be collected by either LBH or a private contractor.

3.3.2 Operational efficiency

Booking in system

A booking in system (or similar) is expected to be in place and used by the two tenants. This will create time slots in which delivery and servicing vehicles will be on-site. This will help to ensure that multiple vehicles do not arrive on-site at once.

The two tenants will seek to avoid booking in delivery and servicing vehicles during highway network peak hours. Deliveries to retail uses are typically received before store opening hours, and are therefore generally expected to occur between around 05:00 – 07:00.

Management of deliveries

The delivery procedures in operation on the Site will be communicated to the occupiers of the two units and to their suppliers. The following measures are expected to be adopted:

- The two tenants and their suppliers will be provided with written instructions on how to book deliveries and the procedures to be adopted wherever possible.
- Where practical, the two tenants will work together to consolidate deliveries, so as to minimise the number of arrivals per day.
- The tenants will ensure that delivery vehicles remain on-site no longer than required and that vehicle engines are switched off while stationary.

Alternative fuelled vehicles

Logistics providers and companies are increasingly using electric vehicles and cycles for last mile deliveries. In terms of measures that could be implemented by the tenants of the two units, the following will be considered:

- Using alternatively fuelled delivery vehicles wherever possible (either by the two tenants or their suppliers).
- Choosing a courier company for outgoing mail that uses alternatively fuelled vehicles.
- Using the procurement system within the development to encourage purchasing managers to buy from suppliers actively using alternatively fuelled vehicles in their supply chain.

- Using the vehicle management system to offer optimum delivery slots (i.e. early morning) to suppliers with alternatively fuelled vehicles

Safe freight

Tenants of the two units will be encouraged to demonstrate best practice in safety and efficient. Examples of schemes include:

- Fleet Operators Recognition Scheme (FORS) – an industry-led, free membership scheme to help van and lorry operators in London become safer, more efficient and more environmentally-friendly.
- Safe Urban Driving (SUD) – a training scheme for commercial drivers operating Heavy Goods Vehicles (HGVs) regularly in the urban environment and where there are high volumes of vulnerable road users, such as pedestrians and cyclists.

4. Servicing trips

4.1 Background

This Chapter sets out details of the forecast delivery and servicing trips for the proposed development, including details of the expected types of vehicles and indicative delivery and servicing targets.

4.2 Forecast delivery and servicing trips

4.2.1 Types of vehicles

As a commercial development selling food from at least one of the two units, the majority of vehicles visiting the Site are likely to be Heavy Goods Vehicles (HGVs), Medium Goods Vehicles (MGVs) and waste collection vehicles. A summary of these types of vehicles is provided in **Table 2**.

Table 2: Types of delivery and servicing vehicles

Vehicle type	Vehicle	Characteristics	Turnaround time (minutes)
Medium Goods Vehicle (MGV)		7.5t – 17t, vehicle length 8m	25
Heavy Goods Vehicle (HGV)		17t – 25t, vehicle length 10m	30
Articulated Heavy Goods Vehicle (HGV)		44t, vehicle length up to 16.5m	45
Waste collection vehicle		26t, vehicle length 10m	15 – 25

4.2.2 Delivery and servicing trips

A discount food retailer occupying a store the size of Unit 1 would typically expect to receive three to four delivery and servicing vehicles per day, which would largely be made by HGVs. Waste collection would also typically occur once or twice per week. The delivery and servicing trips would generally be for the following:

- Three HGVs delivering fresh produce.
- One MGV delivering milk.

The future occupier of Unit 2 is not yet known. Given the size of Unit 2, a future food retail would be expected to receive a similar number of daily deliveries (three to four) as set out above. Based on experience, a non-food retailer would typically be expected to receive a lower number of delivery trips than a food retailer. Assuming the Site in future accommodates two food retailers, around six to eight daily delivery and servicing trips could therefore be expected, which would largely be made by HGVs. It is noted that the extant Wickes and Halfords would have received delivery and servicing trips also made by HGVs.

Delivery and servicing trips for food retailers typically occur before store opening times between 05:00 – 07:00, which is away from highway network peak hours. The Site has a designated off-street service yard to accommodate delivery and servicing vehicles, which was used when the Wickes and Halfords were operational. A vehicle booking system (or similar) is expected to be in place to manage and control arrivals of delivery and servicing vehicles, to ensure that these do not coincide with each other and occur outside of highway network peak hours.

4.2.3 Summary

A summary of the delivery and servicing trips for both units (assume they are both food retail) is provided in **Table 3**. As noted above, if Unit 2 is a non-food retailer then it would be expected to receive fewer delivery and servicing trips than a food retailer.

Table 3: Delivery and servicing trips summary

Type	Unit 1	Unit 2
HGV – Fresh Produce	3 per day	3 per day
MGV – Milk	1 per day	1 per day
Waste collection	1 – 2 per week	1 – 2 per week

4.3 Targets

In accordance with TfL guidance, targets are required to reduce delivery trips and their impacts over time. TfL guidance states that targets should be SMART: Specific, Measurable, Achievable, Realistic and Timely.

The indicative targets are:

- Tenants of the two units to use their own low or no emission vehicles (or low / no emission vehicles used by suppliers) and encouraging the use of non-motorised vehicles for deliveries to the Site (e.g. cargo cycles). The implementation of the ULEZ and general trend towards the use of low or no emission vehicles is likely to support this. A target of 10% low or no emission vehicles using the Site over five years.
- Encourage common procurement between the two tenants to consolidate deliveries where possible. A target reduction of 5% deliveries on a typical weekday over five years.

5. Monitoring the DSP

5.1 Background

It is anticipated that provision of a Full DSP will be secured through planning condition or a Section 106 obligation, to be agreed with LBH. The DSP will be implemented by the Applicant and delivery and servicing activities will be monitored against objectives set out in this document, making adjustments as necessary to address issues and improve operation. This is in accordance with TfL guidance.

5.2 Monitoring surveys

It is proposed that monitoring of deliveries will take place, and will capture information including:

- Date and arrival / departure time.
- Vehicle types and type and volume of carried goods.
- Company.

The monitoring surveys will be used to capture trends in deliveries, such as vehicle type, frequencies and dwell times, and a review of emerging policies will also be considered. Where necessary, changes to the DSP will be made to reflect the findings of the monitoring surveys.

Appendix D

Outline Construction Logistics Plan

ARUP

Legal & General

Harefield Road, Uxbridge

Outline Construction Logistics Plan

Reference: 294516-00

V2 | 19 December 2023

Job number 294516-00

Ove Arup & Partners Limited
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Appendices

1. Introduction

1.1 Background

Ove Arup & Partners Ltd. ('Arup') has been appointed by Legal & General to support the proposals at Units 1 and 2, Harefield Road, Uxbridge (the 'Site'). The Site is located within the London Borough of Hillingdon (LBH) and accommodates two retail units. The retail units were formerly Wickes (Unit 1) and Halfords (Unit 2). The two retail units are currently vacant and the land is used as a temporary car park.

Information regarding the Site is provided in **Table 1**. Camford Construction Management Limited will act as the Principal Contractor for the project, and their details are provided in **Table 1.**

Table 1: Site details

Site details	
Development name:	Harefield Road, Uxbridge
Landowner:	Legal & General
Site address:	Units 1&2, Harefield Road, Uxbridge
Site postcode:	UB8 1JS
Contractor details:	Camford Construction Management Limited 205 Fort Dunlop Fort Parkway Birmingham B24 9FD

1.2 Site location

The location of the Site in relation to its wider surroundings within Uxbridge is shown in **Figure 1**. The Site is located around 500m to the north of Uxbridge London Underground Station, which is served by the Metropolitan and Piccadilly lines. It is a short walk (around 120m) from Uxbridge High Street / Town Centre, which has a range of retail / Town Centre uses and is also served by multiple bus routes. The Site has a Public Transport Accessibility Level (PTAL) of 5.

Figure 1: Site location

1.3 Site context

The Site is bounded to the west by Harefield Road, to the north by residential dwellings, to the east by Penfield Estate and to the south by Uxbridge Police Station. The Site is located within Uxbridge Town Centre, as identified in the Hillingdon Local Plan.

The Site comprises two retail units ('Unit 1' and 'Unit 2') with a total floor area of 3,406 sqm Gross Internal Area (GIA) and a 150 space car park. Unit 1 was formerly a Wickes and has a GIA of 2,401 sqm, and Unit 2 was formerly a Halfords and has a floor area of 1,005 sqm. The two retail units are currently vacant and could be re-occupied by similar retailers. The existing service yard is located at the south-east corner of the Site.

The main access to the Site is from Harefield Road. A priority junction with a dedicated right-turn lane provides access for vehicles. A footway is provided into the Site on the northern side of the access. There is a separate secondary egress for servicing vehicles to the south onto Warwick Place. The access arrangements are shown in **Figure 2**.

Figure 2: Site access plan

1.4 Development proposals

Two planning applications are being submitted for the Site. A Non-Material Amendment (Section 96a) application is being made to vary the description of the development, and a Minor Material Amendment (Section 73) application is being made to vary Condition 23 of the existing planning permission. The applications will enable the sale of food from the two retail units on-site.

No changes are proposed to the overall total retail floor area. Minor changes are proposed to be made internally to the two units, as shown in **Table 2**.

Table 2: Existing and proposed floor areas

Scenario	Unit 1	Unit 2	Total
Existing	2,401 sqm GIA	1,005 sqm GIA	**3,406 sqm GIA**
Proposed	1,988 sqm GIA	1,418 sqm GIA	**3,406 sqm GIA**
Net change	-413 sqm GIA	+413 sqm GIA	**No change**

The anticipated occupiers of the retail units are as follows:

- Unit 1 will be occupied by a discount food retailer.
- The occupier of Unit 2 is not known at this stage. It could be occupied by another food retailer (likely to be a high-end retailer) or a non-food retailer.

For flexibility, the applications will enable the sale of food for both units, however both units could be re-occupied by non-food retailers like the existing Site.

1.5 Report purpose

The provision of a Construction Logistics Plan (CLP) was requested by LBH during pre-application discussions. This Outline CLP has been prepared with reference to Construction Logistics and Community Safety's (CLOCS) *Construction Logistics Plan (CLP) Guidance* (2021). It sets out details of the CLP's objectives, the construction methodology and programme, access arrangements, estimated vehicle movements, and measures to manage and mitigate any impacts during the construction process.

Camford Construction Management Limited will act as the Principal Contractor for the project. Construction information contained in this document has been provided by Camford Construction Management Limited. This Outline CLP covers the planning phase of the development. It is expected that a Detailed CLP will be secured prior to occupation.

Given the scale and nature of the proposals, the project is considered to have a 'Medium' level of impact, as defined by CLOCS CLP guidance (change of use of 1,000+ sqm of floorspace). Given the works are limited to internal changes to the two retail units only, the construction impact is expected to be minimal.

1.6 CLP objectives

The overall objectives of this Outline CLP are to:

- Lower emissions associated with construction activities.
- Enhance safety through improved vehicle and road user safety.
- Reduce congestion through reduction in overall construction related movements, especially in the network peak periods.

Several sub-objectives have been identified to realise these overall objectives, including:

- Encouraging construction workers to travel to the Site by non-car modes.
- Encouraging the use of greener vehicles.

- Managing the on-going development and delivery of the CLP with construction contractors.
- Communication of Site delivery and servicing facilities to workers and suppliers.
- Encouraging the most efficient use of construction freight vehicles.

1.7 Report structure

The remainder of this report is structured as follows:

- **Chapter 2: Context, considerations and challenges** – sets out the policy context, local access including highway, public transport, cycling and walking, and location of any sensitive receptors such as schools, colleges and residents.
- **Chapter 3: Construction programme and methodology** – sets out the indicative construction programme and construction phasing.
- **Chapter 4: Vehicle routing and site access** – sets out the proposed arrangement for Site access and indicative construction routes.
- **Chapter 5: Strategies to reduce impacts** – provides the policies and procedures to be in place for construction to reduce impact.
- **Chapter 6: Estimated vehicle movements** – sets out the construction traffic profile during the demolition and construction programme.
- **Chapter 7: Implementation, monitoring and updating** – provides the details for managing, monitoring and reviewing the CLP.

2. Context, considerations and challenges

2.1 Policy context

This section provides an overview of National, Regional and Local CLP-related policy and guidance.

2.1.1 National

National Planning Policy Framework (2023)

The National Planning Policy Framework (NPPF) (2023) promotes the use of sustainable transport throughout the UK in the interest of contributing to national economic, social and environmental benefits. The NPPF also highlights the benefit of safe road design in creating a high-quality built environment, and the efficient delivery of goods and services to aid economic growth.

The Traffic Management Act (2004)

Part 2 of the *Traffic Management Act (2004)* highlights the duty of local traffic authorities in managing road networks within their ownership, including efficient use of the local network as well as their ability to adopt measures necessary to avoid the occurrence of heavy traffic congestion. Part 5 outlines the same responsibility but highlights the extent to which Local Authorities in Greater London should seek to avoid, eliminate and reduce disruptions which can provide implications for neighbouring authorities. Local Authorities within London are encouraged to plan and act on their management duties in the interest of ensuring that traffic can move freely and smoothly through their roads, and onwards to the roads of neighbouring traffic authorities without overwhelming the network. This includes the role that Transport for London (TfL) holds in managing the TLRN.

2.1.2 Regional

The London Plan (2021)

The *London Plan* was adopted in 2021. It is part of the statutory development plan and aims to ensure that London's transport is easy, safe, and convenient for everyone and actively encourages more walking and cycling as well as use of the River Thames. Policy T7(A) on Deliveries, servicing and construction highlights that development proposals should facilitate sustainable freight movement by rail, waterways and road.

Policy T7(G) states that Construction Logistics Plans and Delivery and Servicing Plans will be required and should be developed in accordance with TfL guidance and in a way which reflects the scale and complexities of developments. Paragraph 10.7.4 refers to the use of non-road vehicle modes and requests that as part of Construction Logistics Plans, developments have taken all reasonable endeavours to use alternative modes of transport.

The Mayor's Transport Strategy (2018)

The *Mayor's Transport Strategy* (2018) validates the importance of CLPs by noting their ability to enhance efficiency and promote environmental safety and benefits during the construction period. The strategy also highlights the need to submit CLPs in accordance with TfL's best practice guidance to prove that the Proposed Development complies with transport policies in the London Plan, whilst including packages of measures to identify and address potential impacts on the surrounding transport network as a result of the development.

2.1.3 Local

The Hillingdon Local Plan Part 2 (2020)

The *Hillingdon Local Plan* Part 2 (2020) Policy DMT 6 notes that "proposals should include, where relevant, delivery and servicing plans (DSP) and construction and logistic plans (CLP) as part of the transport appraisal and travel plan requirement. These plans should aim for the efficient and consolidated movement of goods with minimum disruption to local amenity".

2.2 Context maps

In accordance with CLOCS guidance on CLPs, **Appendix A** contains the following drawings:

- Regional plan at 1:15,000 scale.
- Local plan between 1:2,000 and 1,3000 scale.
- Site boundary plan.

2.3 Local access

2.3.1 Highways

Harefield Road is a two-way road running north-south with a single lane in each direction. Around 90m to the south of the Site's access point, Harefield Road forms a priority junction with the High Street. This is also a two-way street with a single lane in each direction and is one of the main retail destinations in Uxbridge. Around 105m to the south of this, Harefield Road forms a signalised roundabout junction with the A4020 Oxford Road. The A4020 is main road with two lanes in each direction, providing connections to further afield including Hillingdon, West Drayton and the M40.

Both Harefield Road and the High Street are subject to 30mph speed limits. The A4020 has a 40mph speed limit. LBH is the Highway Authority for all the roads in the surrounding area.

Ultra Low Emissions Zone

The Ultra Low Emission Zone (ULEZ) is a scheme that aims to improve air quality in London by setting and enforcing new emission standards for all vehicles and deterring the use of the most polluting vehicles by freight operators. Since August 2023 the ULEZ has expanded to operate across the whole of London, not including the M25. Harefield Road is located within the boundary of the ULEZ.

Most vehicles driving in the ULEZ must be met tight emission standards or pay the daily charge of £12.50 to drive inside the zone. The ULEZ is in effect 24 hours a day, 7 days a week, all year round (except Christmas Day).

2.3.2 Public Transport

The nearest bus stops are located on High Street ('Stop A' and 'Stop B'), which are approximately 175m to the south of the Site. These are served by both TfL and non-TfL bus routes, providing access to a variety of destinations in London and areas to the west of London. The stops are currently served by a total of 45 buses during peak hours.

The nearest London Underground station is Uxbridge Station, which is located approximately 500m to the south of the Site. The station is served by the Metropolitan line and Piccadilly line. These services provide access to destinations such as Aldgate and Cockfosters. Step-free access from street to platform is available at the station. A total of 14 trains are available in the peak hours at this station.

Based on TfL's WebCAT online database, the Site's Public Transport Accessibility Level (PTAL) is 5, (on a scale of 0 to 6, with 0 being the lowest and 6 being the highest), indicating a 'very good' level of public transport accessibility.

2.3.3 Walking and cycling

Pedestrian facilities are generally of good quality in the local area. Close to the Site, footways are provided on both sides of Harefield Road. A footway continues on the northern side of the Site access road.

In the wider area, footways and street lighting are provided on local streets, and there are convenient connections available to local public transport stations and other amenities in the area. Junctions in the area are equipped with pedestrian crossing facilities (a mixture of zebra and signalised), which have dropped kerbs and tactile paving to support users from all walks of life.

The Site is located around 400m for National Cycle Network (NCN) Route 6. This runs from Colham Green (to the south of Uxbridge), north towards Rickmansworth and Watford. NCN Route 6 runs on traffic-free routes through Uxbridge. Away from Uxbridge, it runs on a mixture of traffic-free and lightly trafficked routes.

2.3.4 Waterways

The nearest waterways to the Site are Fray's River (c.200m to the west of the Site), the Grand Union Canal (c.500m to the west of the Site) and the River Colne (c.550m to the west of the Site).

2.4 Community considerations

The following local community facilities and considerations have been identified with the aim to minimise any potential negative impacts of construction logistics activity:

- **Uxbridge residential areas** – areas to the north of the Site are predominantly residential in nature. Construction vehicle routes are expected to be along strategic routes and Harefield Road, therefore would be away from the residential areas and quieter streets to the north of the Site.
- **High Street and Uxbridge Town Centre** – the High Street and Uxbridge Town Centre experience relatively high pedestrian footfall. Construction vehicles are not expected to route along the High Street or through Uxbridge Town Centre.
- **Day Nursery & Pre-School and University** – a Day Nursery & Pre-School are located on the High Street (western section), around 140m from the Site. Part of Buckinghamshire New University is also located close to the at the western end of the High Street / Oxford Road. This section of the High Street is not expected to be a route used by construction vehicles, as it does not provide a through route for vehicles to the strategic road network.

These community considerations are shown in the Local Plan in **Appendix A.**

2.4.1 Public relations

A Community Liaison Officer will be appointed to mitigate and resolve any concerns arising in the local community relating to works. The Site Manager will take on the role of the Community Liaison Officer during the construction phase of the development. This will then be transferred to the Store Manager once operational. A key aspect of the success of this project will be establishing and maintaining a good relationship with all surrounding neighbours. This CLP serves to identify and prevent potential issue, however any difficulties encountered during construction will be reported / recorded in a full log and resolved through the use of a 24 hour-manned telephone line. Newsletter and community gatherings will deal with issues such as late-night works, construction vehicle congestion and general community issues.

3. Construction programme and methodology

3.1 Construction programme

The main construction activities for the proposed development will be associated with the internal reconfiguration of the units to reflect the proposed floor areas for Units 1 and 2 (as set out in **Table 2**), and fitting out of the two stores.

At this stage, it is expected that the construction programme will be in the region of 26 weeks (approximately 6.5 months), with the following key stages expected:

- Strip out works / demolition – Weeks 1 to 6.
- Construction works – Weeks 6 to 18.
- Fit out – Weeks 14 to 26 weeks.

3.2 Construction methodology

3.2.1 Construction hours

Working hours would be agreed with LBH, but are expected to be:

- 08:00 to 18:00 hours Monday to Friday.
- 08:00 to 13:00 hours Saturday.
- No working on Sundays or Bank Holidays.

All work which is intended outside of these hours, excluding emergencies, would be subject to prior agreement, and / or reasonable notice to LBH.

3.2.2 Hoarding, gates and scaffolding

The Site will be made secure prior to the commencement of any construction work. It is expected that hoarding will be installed at the access points and gates, with temporary fencing used for other areas of the perimeter where there are landscaping and raised walls. The existing temporary car park would not be in operation during construction works. Welfare facilities would be provided within the Site.

4. Vehicle routing and site access

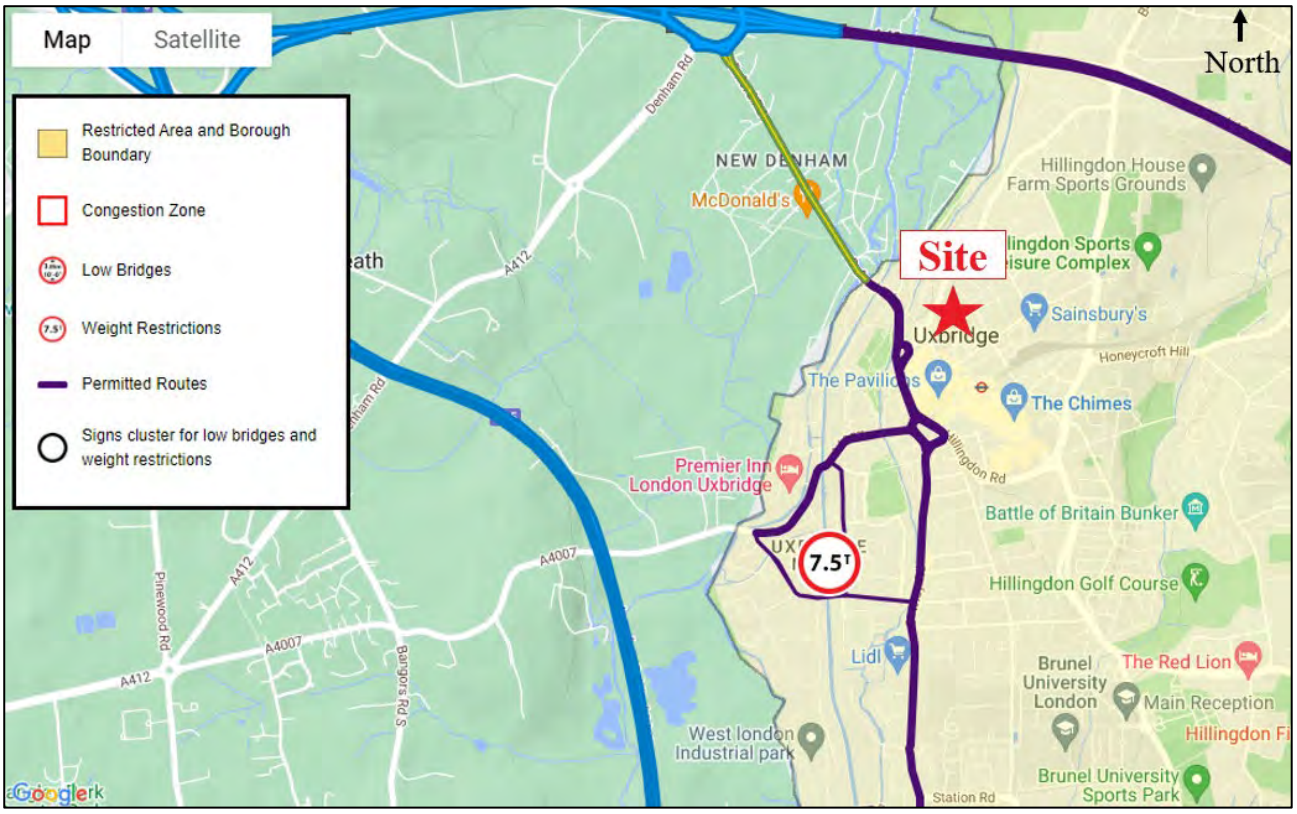
4.1 Construction routes

The likely primary construction access and egress route to the Site for demolition and construction vehicles has been considered to reduce the impact of vehicle movements on the local community and road networks.

In line with CLOCS's CLP guidance, construction vehicles will be routed along major vehicle corridors (the Transport for London Road Network and Strategic Road Network) as they are best suited to heavy traffic, and less likely to create congestion or disrupt local communities. Other local routes may be used at time if necessary.

The routes in the area surrounding the Site have been checked against London Councils Lorry Control Scheme permitted routes. Aside from a weight restriction limit to the south of Uxbridge Town Centre away from the Site, there are no restrictions in the local area. Strategic roads in the area, namely the A4020 Oxford Road and A40 Western Avenue are permitted routes. Restrictions and permitted routes for Heavy Goods Vehicles (HGVs) are shown in **Figure 3**.

Figure 3: Local road network restrictions and permitted routes

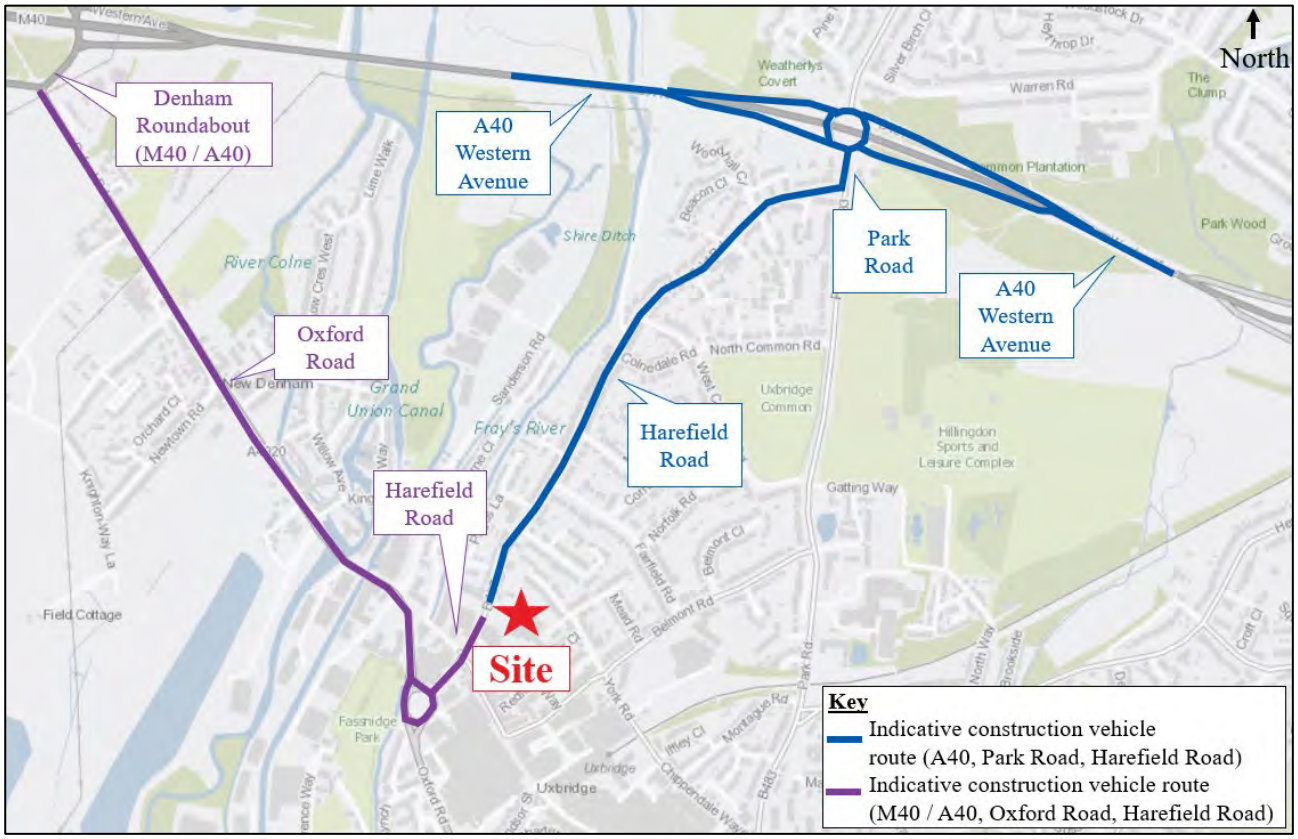


Source: London Councils Lorry Control Scheme (https://lcspermits.com/#schememap)
Note: Green indicates routes outside of London, blue indicates the M25 and M40.

Two construction vehicle routes are expected to be used, either via the A40 Western Avenue and Harefield Road, or via the M40 / A40, Oxford Road and Harefield Road. The first route from the A40 Western Avenue forms a roundabout to the north of the Site with Park Road and Swakeleys Road. From here, vehicles would use Park Road then Harefield Road to travel to the Site. Alternatively, vehicles would travel from the junction formed by the M40 / A40 (Denham Roundabout) to the north-west of the Site, then travel via Oxford Road and Harefield Road to travel to the Site.

The A40 and M40 provide good connections to the wider strategic road network and are well suited for use by construction vehicles. Whilst the majority of vehicles would likely use the A40 and M40, the use of these would be subject to locations of origins / destinations. The indicative construction vehicle routes are shown in **Figure 4**.

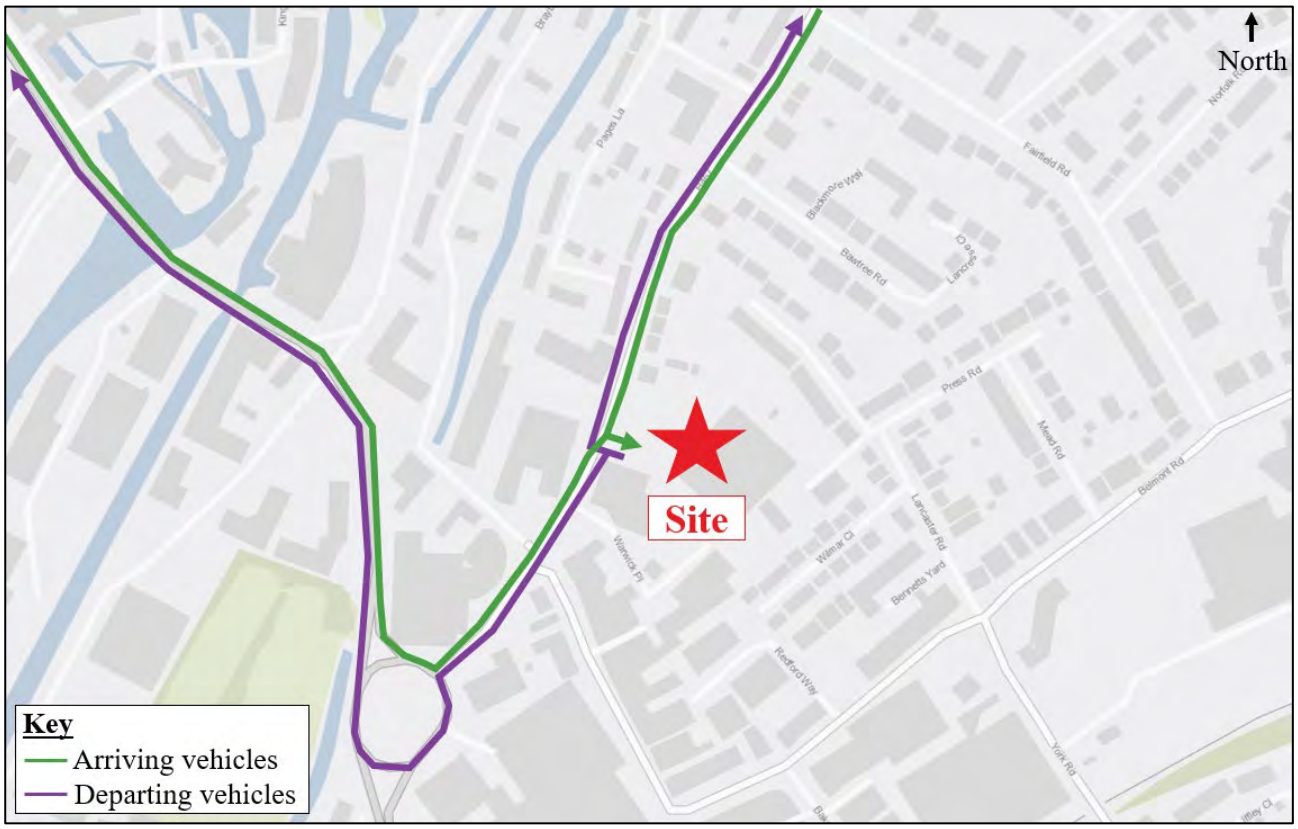
Figure 4: Indicative construction vehicle routing



4.2 Site access

Construction vehicles are expected to enter and exit the Site via the Site access priority T-junction with Harefield Road. Any required reversing movements will take place on-site, away from the public highway. The construction vehicle routing to and from the Site is shown in **Figure 5**.

Figure 5: Construction vehicle Site access



The priority T-junction from which construction vehicles would enter and exit the Site is shown in **Figure 6**.

Figure 6: Site access junction (looking north along Harefield Road)

5. Strategies to reduce impacts

5.1 Background

A number of mitigation measures and strategies are planned to reduce the impacts of construction on the local area. The planned measures can be categorised as follows:

- Committed – measures that will be implemented as part of the CLP.
- Proposed – measures that are feasible and likely to be implemented. These measures will be studied further and confirmed by the Applicant as part of the Detailed CLP.
- Considered – measures that are unlikely to be implemented or feasible but could be investigated or become relevant in the future.

The measures shown in **Table 3** have been identified to help the Principal Contractor achieve the objectives of the CLP. These measures are based on those that would be expected of 'medium' impact sites according to CLOCS's CLP guidance. Further details are provided below the table.

Table 3: Indicative planned measures checklist

Measure	Committed	Proposed	Considered
Measures influencing construction vehicles and deliveries			
Safety and environmental standards and programmes	X		
Adherence to designated routes	X		
Delivery scheduling		X	
Re-timing of out-of-peak deliveries		X	
Re-timing of out-of-hours deliveries		X	
Use of holding areas and vehicle call off areas		X	
Use of logistics and consolidation centres		X	
Vehicles choice			X
Measures to encourage sustainable freight			
Freight by Water			X
Freight by Rail			X
Material procurement measures			
DfMA and off-site manufacture			X
Re-use of material on site			X
Smart procurement		X	
Other measures			
Collaboration with other sites in the area			X

5.2 Measures influencing construction vehicles and deliveries

5.2.1 Safety and environmental standards and programmes

The Principal Contractor will follow all guidance given in Construction Logistics and Community Safety Guide – Managing Work Related Road Risk in Contracts. The following will be included in every tender and subcontract order and is contained within the Project Specific Requirements of the Tender Documents:

> *Delivery Standards; FORS & CLOC*
>
> *Loading and unloading from all vehicles should be planned to eliminate the need to access the vehicle or be carried out using proprietary access equipment and adequate edge protection.*
>
> *The following hierarchy regarding deliveries to site must be followed as far as reasonably practicable:*
>
> *1) Pre-slung loads to eliminate the need to access the load bed.*
>
> *2) Mechanical means of loading / unloading to eliminate the need to access the load bed.*
>
> *3) Vehicle based (collective fall protection) system (guard rails if access to the load bed is required, a fixed ladder access point / fitted step must be provided).*
>
> *4) Site based (collective fall protection) systems (e.g. air bags).*
>
> *5) Site based (fall arrest) systems (e.g. overhead systems).*
>
> *Where working environments are not maintained by the Contractor, clear up notices will be issued.*
>
> *The above is applicable to all delivery vehicles (including smaller vans and pickup trucks) and under no circumstances are delivery drivers to carry out any form of activity at height without suitable and adequate protection measures in place to prevent falls in line with the above mitigation controls.*
>
> *The Contractor is to specify the method of unloading within a specific section within the RAMS.*
>
> *All vehicles attending the site must be 'Construction Logistics and Cyclist Safety' (CLOCS) compliant or 'Fleet Operator Recognition Scheme' (FORS) Gold (as a minimum) accredited.*
>
> *Failure to comply with this standard will result in vehicles being turned away from site without unloading. No loss of time claims will be entertained for such an event.*

Every vehicle which arrives at the Site will be checked for CLOCS and FORS compliance and any vehicle not complying will be refused entry and directed to exit safely.

5.2.2 Adherence to designated routes

Monitoring will take place to check that construction vehicles are adhering to the designated routes. If an alternative construction traffic route is required, this will be agreed in advance with LBH.

5.2.3 Delivery scheduling

The Principal Contractor will adopt an on-line delivery booking and tracking system. The Contractor will track all deliveries to the project including vehicle type, source and destination to allow CO2 emission calculations to be completed and checked against Key Performance Indicators (KPIs).

All deliveries and collections to / from the Site will be co-ordinated, and ensure that as far as reasonably possible:

- Prior to delivery or collection, if required, hauliers will notify the relevant authorities (TfL, Police, Highways Authority etc.) in accordance with the Road Vehicles (Authorisation of Special Types) (General) Order 2003.
- Liaison will be undertaken with occupants of adjacent buildings to avoid delays to service deliveries due to construction vehicles.

- Deliveries will be made on a ‘just in time’ basis.

Larger vehicle movements will be scheduled to avoid peak hours on the local road network, so far as reasonably practicable.

5.2.4 Use of holding areas and consolidation centres

The use of holding areas and off-site consolidation centres will be investigated as part of the Detailed CLP and will form part of the overall delivery and waste removal strategy for the Site so far as reasonably practicable.

5.2.5 Vehicle choice

Fuel efficient and low emission (or electric) vehicles will be sought where vehicles used on-site and for movement of goods and waste to and from the Site require replacement and renewal as cost-neutral improvements.

5.3 Measures to encourage sustainable freight

As the Site is not immediately adjacent to a navigable water body or a rail line capable of offloading freight, and given the relatively low number of forecast construction vehicles, it is not considered practicable or efficient to receive construction deliveries by modes other than road.

5.4 Material procurement measures

5.4.1 Design for manufacture and off-site manufacture

Off-site manufacture will be investigated, although given the nature of the construction works the extent to which this could be done may be limited.

5.4.2 Re-use of material on-site

The Site will aim to optimise the efficient use of material resources such as soils and demolition materials. The possible means to enhance material resource efficiency include:

- Maximising the material recovered from the internal changes of the existing buildings.
- Implementing Site Waste Management Plans to minimise the waste generated and maximise the materials recovered, reused and recycled in the construction works.
- Exceeding a threshold proportion of recycled and reclaimed content in the products and materials used in the construction works.

As much waste as possible will be recycled and, where possible, the total number of trips will be reduced by making sure vehicles delivering materials to the Site leave with waste.

5.4.3 Smart procurement

The strategy for procurement will be set out in the Detailed CLP, and it is intended that a plan to maximise smart procurement will be developed as far as reasonably practical.

5.4.4 Review of design to standardise material sizes

Review of design to standardise material sizes will be explored, although given the nature of the construction works the extent to which this could be done may be limited.

5.5 Other measures

5.5.1 Collaboration with other sites in the area

The Principal Contractor will consult with TfL / LBH and other contractors / developers in the area to minimise disruption as much as possible. Further collaboration and opportunities to reduce vehicle movements and minimise impact will be explored throughout the construction programme. This includes giving consideration to:

- Combining and consolidating deliveries between sites.
- Common procurement.
- Combined waste management strategies.

6. Estimated vehicle movements

The estimated number of vehicle movements by construction activity is shown in **Table 4**. An average of around three to four HGV movements are expected per day (equating to six to eight two-way movements). In the context of existing traffic flows on the local highway network and the flows that would have been attracted to the Site when it was occupied by the Wickes & Halfords, the daily number of construction vehicles trips would be negligible.

Table 4: Estimated construction vehicle movements

Activity	Estimated loads per day (maximum, one-way)
Strip out / demolition (Weeks 1 – 6)	2
Construction works (Weeks 6 – 18)	5
Fit out (Weeks 14 – 26)	4
Total period of activities	**Maximum: 5** **Average: 3**

7. Implementation, monitoring and updating

7.1 Management of the CLP

The Principal Contractor's Project Director will be the CLP Co-ordinator and will take responsibility for the day to day management of the CLP and will be the first point of contact for Site issues.

The Project Director will oversee the effectiveness of the CLP and prepare regular updates to key stakeholders (including the Local Planning / Highway Authority) when requested.

The CLP Co-ordinator will be named ahead of construction commencing of the project, and LBH / TfL will be notified of this.

7.2 Raising awareness of the CLP

Construction workers and suppliers will be made aware of the information contained within this CLP. The Contractor will ensure that they are clear about:

- What the purpose and function of the CLP is.
- The importance of the CLP in understanding freight movement and impacts.
- What can be done to help encourage the use of sustainable freight to and from the Site.

To increase awareness of the CLP, relevant workers and suppliers will be given information on the CLP and encouraged to make sustainable travel choices to and from the Site. For Site workers, this will be done through the induction process, where they will also be informed about the travel options available to them. The Contractor's Handbook will support this.

7.3 CLP monitoring and review

The following information will be collected, reviewed and reported on:

- Vehicle movements to site:
    - Total vehicle movements.
    - Vehicle type / size / age.
    - Time spent on-site.
    - Consolidation centre utilisation (if relevant).
    - Origin and destination of vehicle arriving at or leaving Site.
    - Delivery/collection accuracy compared to schedule.
    - Breaches and complaints.
- Community concerns about construction activities:
    - Vehicle routing.
    - Unacceptable queuing or parking.
    - Adherence to safety & environmental standards & programmes.
    - Low Emission Zone (LEZ) Ultra Low Emissions Zone (ULEZ) compliance.
    - Anti-idling.
- Safety:

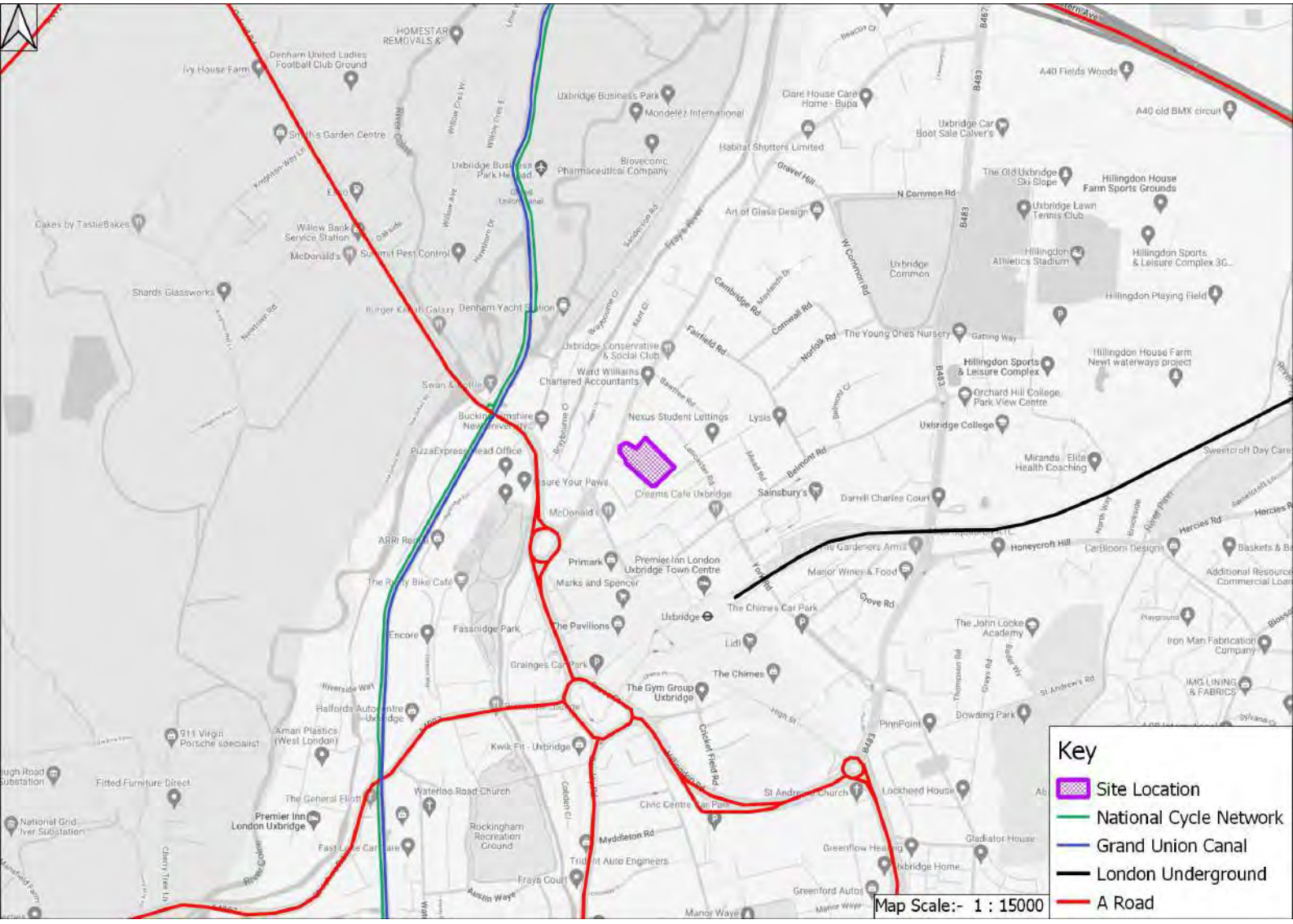
- Logistics-related incidents.
- Record of associated fatalities and serious injuries.
- Methods staff are travelling to the Site.
- Vehicles and operators not meeting safety requirements.
- Personal safety surrounding the Site.

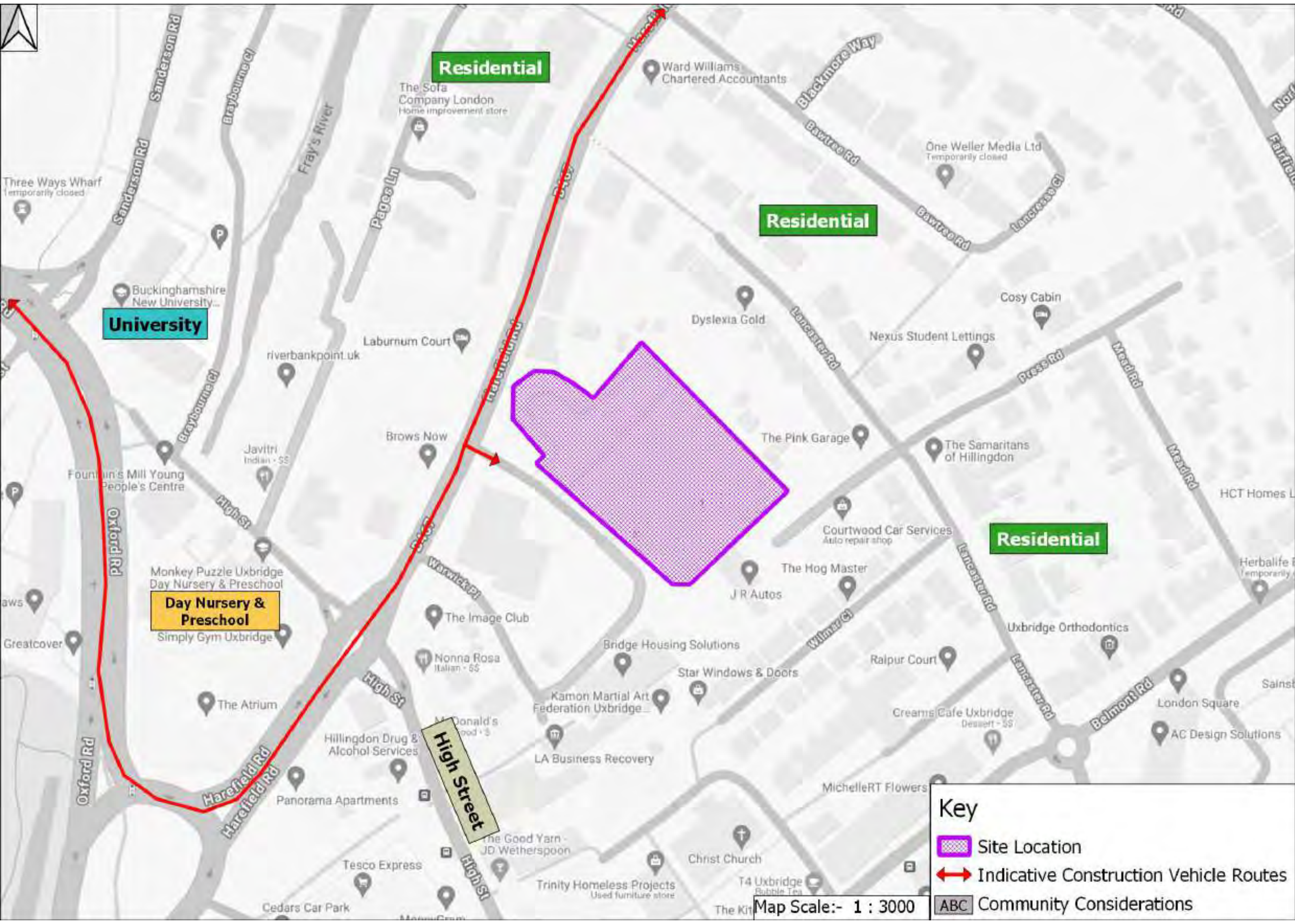
7.4 Detailed CLP

A Detailed CLP is expected to be required prior to works commencing on-site. As the construction activities are being monitored, the CLP will be reviewed and updated periodically where required.

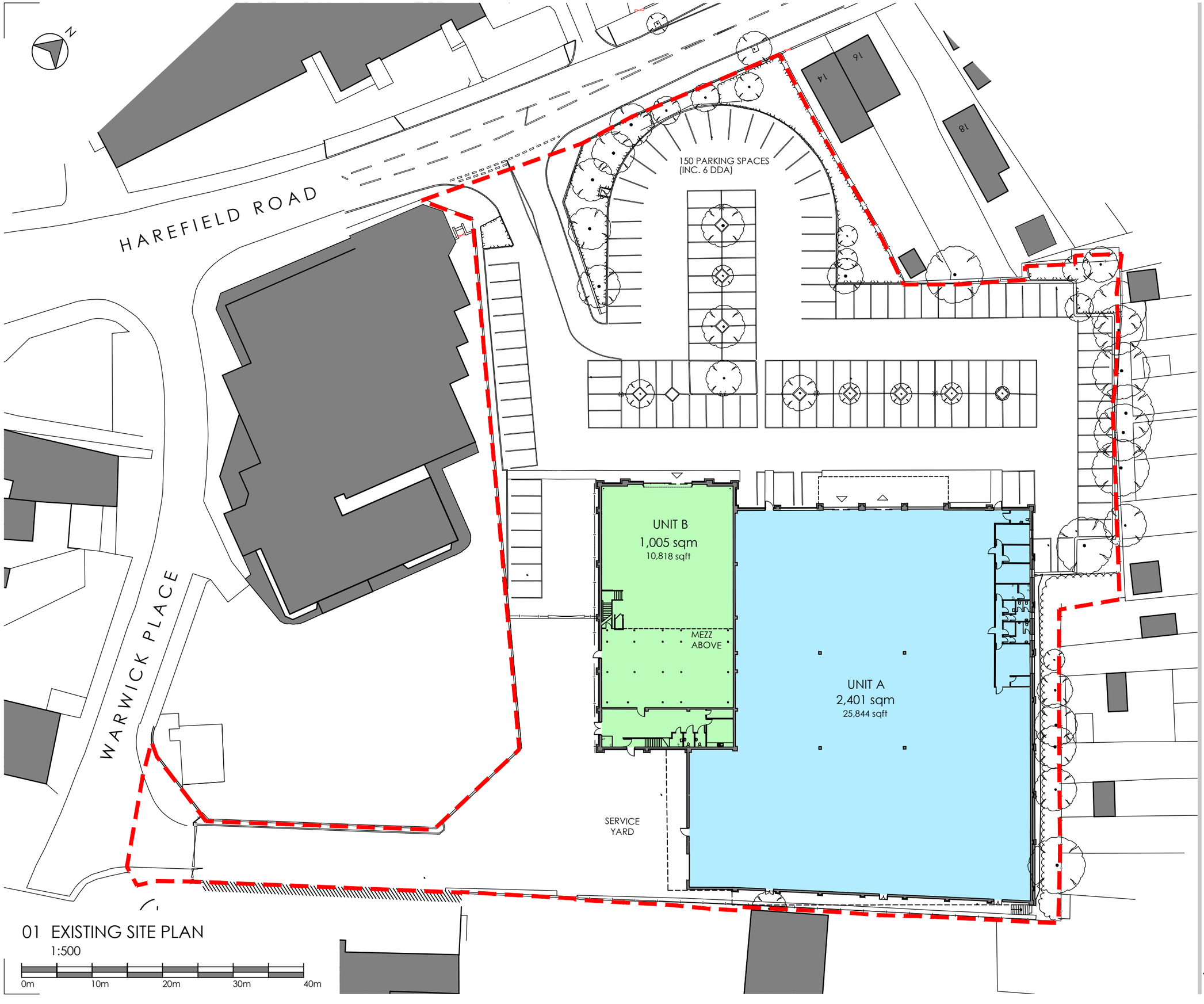
Appendix A

Context maps


Key
Site Location
National Cycle Network
Grand Union Canal
London Underground
A Road
Map Scale:- 1 : 15000
Nexus Student Lettings
Creams Cafe Uxbridge
Uxbridge
Uxbridge Business Park
Mondelēz International
Uxbridge Common
Hillingdon Sports & Leisure Complex
Uxbridge College
Hillingdon Playing Field
Hillingdon House Farm Sports Grounds
Uxbridge Lawn Tennis Club
Hillingdon Athletics Stadium
Orchard Hill College Park View Centre
Denham Yacht Station
Uxbridge Conservative & Social Club
Ward Williams Chartered Accountants
Premier Inn London Uxbridge Town Centre
Marks and Spencer
Primark
Sainsbury's
The Chimes Car Park
The Pavilions
Fassnidge Park
Grainges Car Park
The Gym Group Uxbridge
Lidl
The Chimes
Waterloo Road Church
Rockingham Recreation Ground
Civic Centre Car Park
St Andrew's Church
Lockheed House
Gladiator House
Uxbridge Home
Trident Auto Engineers
Frays Court
Premier Inn London Uxbridge
Halfords Autocentre Uxbridge
Kwik Fit - Uxbridge
Amari Plastics (West London)
911 Virgin Porsche specialist
Fitted Furniture Direct
The General Elliott
Dowding Park
PinnPoint
The John Locke Academy
Iron Man Fabrication Company
Darrell Charles Court
Miranda - Elite Health Coaching
Orchard Hill College Park View Centre
Hillingdon House Farm Newt waterways project
Sweetcroft Day Care
Honeycroft Hill
Major Wines & Food
The Gardeners Arms
Cardboom Designs
Baskets & Bo
Additional Resource Commercial Loan
The Old Uxbridge Ski Slope
A40 Fields Woods
A40 old BMX circuit
Uxbridge Car Boot Sale Calver's
Clare House Care Home - Bupa
Habitat Shutters Limited
Bioveconic Pharmaceutical Company
Art of Glass Design
The Young Ones Nursery
Swan & Castle
Bucks New University
PizzaExpress Head Office
Leisure Your Paws
McDonald's
ARRI Rental
The Rugby Bike Cafe
Encore
Willow Bank Service Station
Summit Pest Control
Shards Glassworks
Cakes by TastieBakes
Ivy House Farm
Denham United Ladies Football Club Ground
Smith's Garden Centre
HOMESTAR REMOVALS &
Uxbridge Business Park Hedgerow
Grand Union Canal
River Colne
Frays River
Willow Ave
Willow Cres W
Willow Cres E
Knighton Way Ln
Newdigate Rd
Sandersfield Rd
Waybourne Cl
Kent Cl
Cambridge Rd
Fairfield Rd
Cornwall Rd
Norfolk Rd
Belmont Rd
Lancaster Rd
Bakehouse Rd
Oxford Rd
Riverside Way
Austin Way
Manor Way
Cricket Field Rd
Myddleton Rd
Caddish Cl
Cherry Tree Ln
Thompsen Rd
Grays Rd
Bessie Way
St Andrew's Rd
High St
Grove Rd
Honeycroft Hill
Hercies Rd
North Way
Brookside
River Pinn
Gatting Way
Belmont Cl
Fowlds
Beacon Cl
B483
B467
W Common Rd
N Common Rd
Gravel Hill
Oakwoods
Hawthorn Dr
Newdigate Rd
Chiltern Ave
Uxbridge Cl
Lysis
Baseline Rd
Boundary Rd
Thorney Mill Rd
Bridge Rd
Riverside Way
Halfords Autocentre Uxbridge
Rugby Road Substation
National Grid Iver Substation
Iver Substation
Fast Lane Car Care
Greenflow Heating
Greenford Autos
Playground
Sylvana Cl
IMG LINING & FABRICS



Residential
Residential
Residential
University
Day Nursery & Preschool
High Street
Key
Site Location
Indicative Construction Vehicle Routes
ABC Community Considerations
Map Scale:- 1 : 3000



01 EXISTING SITE PLAN
1:500

Rev	Date	Description	Drawn	Chk'd
-	-	-	-	-

SITE AREA	2.30 acres
EXISTING CUSTOMER SPACES	150 TOTAL SPACES (INC. 6 DDA)

UNIT A	
GROSS INTERNAL AREA	2,401 sqm

UNIT B	
GROSS INTERNAL AREA	1,005 sqm
GROUND FLOOR	692 sqm
MEZZANINE	313 sqm

PLANNING DRAWING

This drawing has been prepared for submission to the relevant Local Authority as part of a Planning Application. It is not intended to assist with the pricing of any elements.

For Structural details refer to the Structural & Civil Engineers detailed design drawings & specifications.

For M&E information, refer to the M&E Engineers and sub contractor's design drawings & specifications.

Do not scale from this drawing. Verify all dimensions and setting out on site. Notify any discrepancies to the architect.

For Health & Safety information, refer to the Designers Risk Assessments. This drawing is copyright and may not be reproduced in whole or part without written authority.

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101 London Road, Reading, RG1 5BY

LONDON - T. 020 7409 1215
10 Gees Court, St Christopher's Place, London, W1U 1JJ

Client
LEGAL & GENERAL

Project Title
PROPOSED DEVELOPMENT

HAREFIELD ROAD
UXBRIDGE
UB8 1JS

Drawing Title
EXISTING SITE PLAN

Drawn	Checked	Scale @A3	Status	Date
JT	DRW	1:500	N/A	11/23

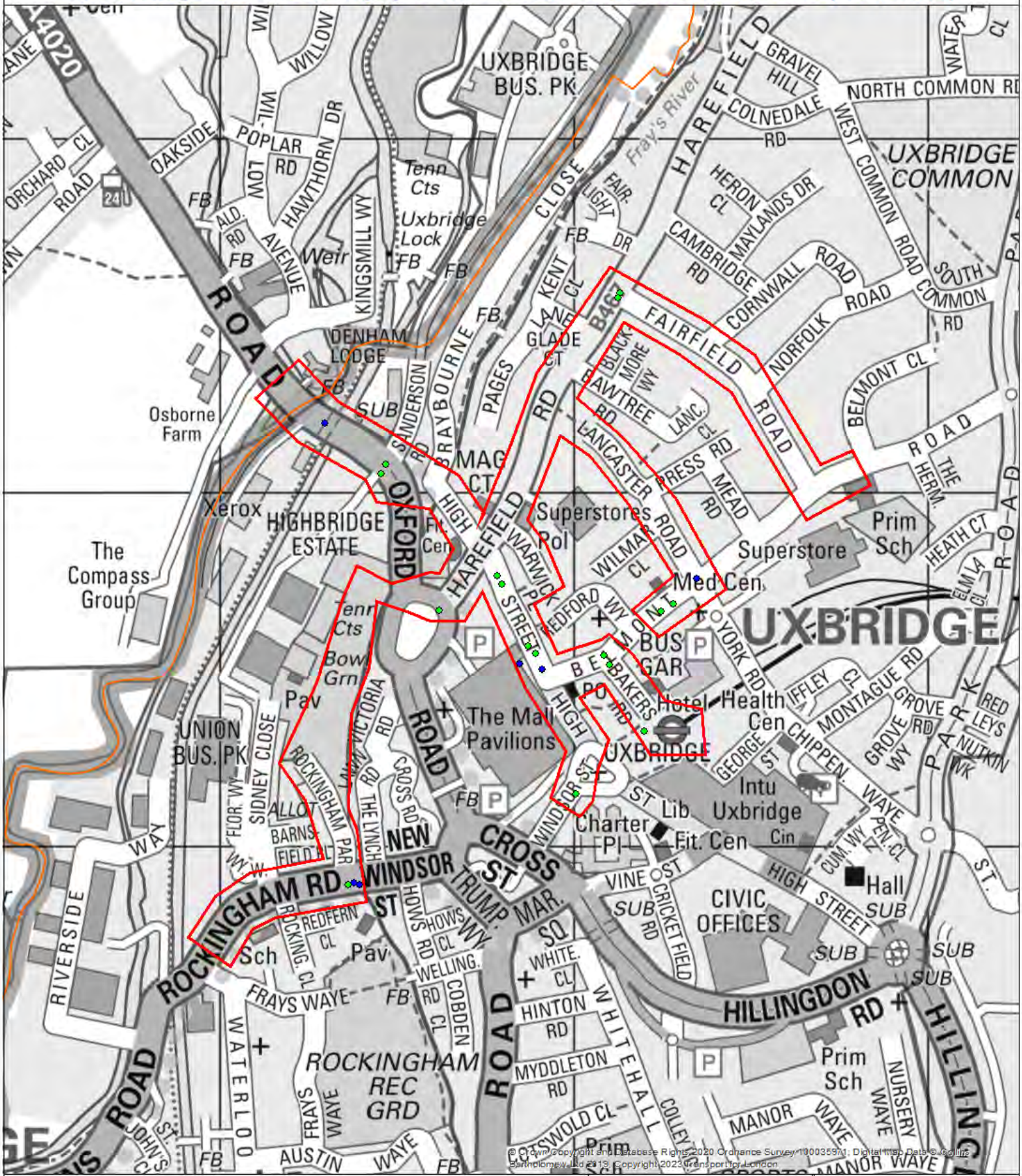
Drawing Status	Rev.	THP Project No
PLANNING	-	16401-1

Project No.	Originator	Volume	Level	Type	Role	Number
16401-1	THPR	XX	00	DR	A	1003

Appendix E

Collision data

B26 Uxbridge Site Personal Injury Collisions 36 months to end of June 2023 (Provisional)



Severity of collision

	1	2	3	4	5
Slight	1 (16)	2 (0)	3 (0)	4 (0)	5 (0)
Serious	1 (6)	2 (0)	3 (0)	4 (0)	5 (0)
Fatal	1 (0)	2 (0)	3 (0)	4 (0)	5 (0)

N

0 0.1 0.2 Km

PRINTED BY:
COLLSTATS 3 - TfL City Planning

DATE:
03/11/2023

B26 Uxbridge Site Personal Injury Collisions 36 months to end of June 2023 (Provisional)

SUMMARY OF COLLISIONS SELECTED

SITE REFERENCE AND DESCRIPTION	DATE PERIOD	COLLISION COUNT
TOPIC BASED QUERY		22

THE DESCRIPTION OF HOW THE COLLISION OCCURRED AND THE CONTRIBUTORY FACTORS ARE THE REPORTING OFFICER'S OPINION AT THE TIME OF REPORTING AND MAY NOT BE THE RESULT OF EXTENSIVE INVESTIGATION. NOTE THAT SELF-REPORTED COLLISIONS (INTRODUCED IN SEPTEMBER 2016) MAY HAVE LIMITED INFORMATION. DESCRIPTIONS HAVE BEEN AUTOMATICALLY REDACTED TO REMOVE ALL PERSONALLY IDENTIFIABLE INFORMATION, BUT SHOULD YOU RECEIVE ANY IN ERROR PLEASE INFORM THE COLLISIONS DATA TEAM AS SOON AS PRACTICAL. SELF-REPORTED COLLISIONS INTRODUCED IN SEPTEMBER 2016 MAY HAVE LIMITED INFORMATION AND TEND TO BE LOWER IN QUALITY THAN POLICE REPORTS. THE INTRODUCTION OF ONLINE SELF-REPORTING HAS MADE IT EASIER FOR MEMBERS OF THE PUBLIC TO REPORT COLLISIONS TO THE POLICE. THERE HAVE BEEN YEAR ON YEAR INCREASES IN SELF-REPORTS SINCE THIS WAS INTRODUCED. THIS HAS CONTRIBUTED TO AN OVERALL INCREASE IN THE NUMBER OF CASUALTIES REPORTED ON LONDON'S ROADS.

TOPIC BASED QUERY

1

01200261779	THU 13/08/2020 07:55		LIGHT	HAREFIELD RD, NR JUNCT WTH OXFORD RD.			26 NODE 160	505308/184335
POLICE - AT SCENE		ROAD-WET	RAINING	ROUNDABOUT	ROUNDABOUT	GIVEWAY /UNCONT	CNTL REFUGE N/O CTRLS	NONE IN 50M

NOT KNOWN HOW COLLISION OCCURRED

CASUALTY	001 (002)	(30 YRS - F - REDA)	SLIGHT	DRIVER/RIDER			
VEHICLE	001 (000)	CAR BT - NOT REQ	(18 YRS - M - REDACT)		G/AHEAD - OTHER	(N TO S) FRONT HIT FIRST	JCT MID
VEHICLE	002 (000)	PED CYCLE BT - N/A	(30 YRS - F - REDACT)		G/AHEAD - OTHER	(N TO S) BACK HIT FIRST	COMMUTING JCT MID

V002	B	103 (SLIPPERY ROAD (DUE TO WEATHER))	V001	A	707 (RAIN, SLEET, SNOW OR FOG)
V001	A	407 (TOO CLOSE TO CYCLIST, HORSE RIDER OR PEDESTRIAN)			

2

01200277843	TUE 27/10/2020 15:15		LIGHT	HIGH ST, NR JUNCT WTH BELMONT RD.			26 LINK 156-157	505434/184285
SELF-REPORTED		ROAD-DRY	WEATHER-FINE	SINGLE CWY	UNKNOWN S/R	UNKNOWN S/R	UNKNOWN S/R	UNKNOWN S/R

NOT KNOWN HOW COLLISION OCCURRED

CASUALTY	001 (001)	(66 YRS - M - REDA)	SLIGHT	PEDESTRIAN	STILL	UNKNOWN/OTHER	
VEHICLE	001 (000)	CAR BT - DRV NOT CONTACTED	(? YRS - UNKNOWN - REDACT)	UNKNOWN S/R	UNKNOWN S/R	(MOVE UNKN) UNKNOWN S/R	J/P - UNKN UNKNOWN S/R

3

01200284033	FRI 11/12/2020 12:42		LIGHT	BAKERS RD, NR JUNCT WTH BELMONT RD.			26 LINK 157-159	505549/184259
POLICE - AT SCENE		ROAD-WET	RAINING	SINGLE CWY	T/STAG JUN	GIVEWAY /UNCONT	NO XING FACIL IN 50M	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(73 YRS - M - REDA)		SLIGHT	PEDESTRIAN	SE BOUND	FROM DRIVERS O/SIDE	
VEHICLE	001 (000)	VAN/GOODS => 3.5T BT - NOT REQ		(38 YRS - M - REDACT)		TURNING RIGHT	(W TO SE) FRONT HIT FIRST	JOURNEY P/O WORK JCT CLEARED

V001	B	103 (SLIPPERY ROAD (DUE TO WEATHER))	V001	A	405 (FAILED TO LOOK PROPERLY)
V001	A	710 (VEHICLE BLIND SPOT)	C001	A	802 (FAILED TO LOOK PROPERLY)
V001	B	703 (ROAD LAYOUT (EG. BEND, WINDING ROAD, HILL CREST)	V001	A	403 (POOR TURN OR MANOEUVRE)

4

01210292259	WED 10/02/2021 17:10		LIGHT	HARFIELD RD, NR JUNCT WTH FAIRFIELD RD.			26 LINK 156-194	505563/184783
POLICE - AT SCENE		ROAD-DRY	WEATHER-FINE	SINGLE CWY	T/STAG JUN	GIVEWAY /UNCONT	NO XING FACIL IN 50M	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (002)	(44 YRS - M - REDA)		SLIGHT	DRIVER/RIDER			
VEHICLE	001 (000)	VAN/GOODS => 3.5T BT - NOT REQ		(27 YRS - M - REDACT)		WAITING - TURN LEFT	(W TO NE) O/S HIT FIRST	L/MAIN RD
VEHICLE	002 (000)	M/C 51-125CC BT - NOT REQ		(44 YRS - M - REDACT)		G/AHEAD - OTHER	(N TO S) FRONT HIT FIRST	JOURNEY P/O WORK JCT APP

V001	B	406 (FAILED TO JUDGE OTHER PERSON'S PATH OR SPEED)

5

01210293531	TUE 16/02/2021 11:50		LIGHT	ROCKINGHAM RD, NR JUNCT WTH ROCKINGHAM PARADE.			26 LINK 119-143	505179/183948
POLICE - AT SCENE		ROAD-WET	WEATHER-FINE	SINGLE CWY	OTHER JUN	GIVEWAY /UNCONT	ZEBRA XING	NONE IN 50M

NOT KNOWN HOW COLLISION OCCURRED

CASUALTY	001 (002)	(36 YRS - M - REDA)	SLIGHT	DRIVER/RIDER			
VEHICLE	001 (000)	CAR BT - DRV NOT CONTACTED	(52 YRS - F - REDACT)		TURNING RIGHT	(N TO SW) O/S HIT FIRST	J/P - UNKN E/MAIN RD
VEHICLE	002 (000)	PED CYCLE BT - N/A	(36 YRS - M - REDACT)		G/AHEAD - OTHER	(W TO E) FRONT HIT FIRST	JCT APP
V001	A	405 (FAILED TO LOOK PROPERLY)					

6

01210299980	THU 01/04/2021 19:00		LIGHT	HIGH ST, NR JUNCT WTH HAREFIELD RD.			26 LINK 156-160	505397/184372
SELF-REPORTED		ROAD-DRY	WEATHER-FINE	SINGLE CWY	M ROUNDABOUT	GIVEWAY /UNCONT	UNKNOWN S/R	NONE IN 50M

NOT KNOWN HOW COLLISION OCCURRED

CASUALTY	001 (001)	(19 YRS - M - REDA)	SLIGHT	DRIVER/RIDER			
VEHICLE	001 (000)	M/C 51-125CC BT - DRV NOT CONTACTED	(19 YRS - M - REDACT)		UNKNOWN S/R	(MOVE UNKN) FRONT HIT FIRST	UNKNOWN S/R
VEHICLE	002 (000)	CAR BT - DRV NOT CONTACTED	(? YRS - UNKNOWN - REDACT)		UNKNOWN S/R	(MOVE UNKN) FRONT HIT FIRST	J/P - UNKN UNKNOWN S/R

7

01210306105	FRI 07/05/2021 23:45		DARK	OXFORD RD, NR JUNCT WTH GRAND UNION CANAL.			26 LINK 160-739	505147/184600
POLICE - AT SCENE		ROAD-DRY	WEATHER-OTHER	SINGLE CWY	OTHER JUN	GIVEWAY /UNCONT	NO XING FACIL IN 50M	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(45 YRS - M - REDA)		SERIOUS	DRIVER/RIDER			
CASUALTY	002 (002)	(20 YRS - M - REDA)		SLIGHT	DRIVER/RIDER			
VEHICLE	001 (000)	PHV - LICENCED BT - NOT REQ		(45 YRS - M - REDACT)		G/AHEAD - OTHER	(NW TO SE) FRONT HIT FIRST	JCT CLEARED
VEHICLE	002 (000)	CAR BT - NOT REQ		(20 YRS - M - REDACT)		G/AHEAD - OTHER	(SE TO NW) O/S HIT FIRST	J/P - UNKN JCT APP
V002	A	999 (OTHER - PLEASE SPECIFY BELOW)						

8

01210308858	SAT 22/05/2021 12:30		LIGHT	WINDSOR ST, 25 METRES SOUTH OF JUNCT WTH UXBRIDGE HIGH ST .			26 CELL 505500/184000	505501/184076
POLICE - AT SCENE		ROAD-DRY	WEATHER-FINE	SINGLE CWY	NO JUN IN 20M		NO XING FACIL IN 50M	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(75 YRS - M - REDA)		SLIGHT	PEDESTRIAN	E BOUND	FROM DRIVERS O/SIDE	
VEHICLE	001 (000)	CAR BT - NOT REQ		(55 YRS - M - REDACT)		REVERSING	(S TO W) BACK HIT FIRST	J/P - UNKN
C001	A	802 (FAILED TO LOOK PROPERLY)						

9

01210313978	WED 16/06/2021 10:55		LIGHT	HAREFIELD RD, NR JUNCT WTH FAIRFIELD RD.			26 LINK 156-194	505561/184777
SELF-REPORTED		ROAD-DRY	WEATHER-FINE	SINGLE CWY	T/STAG JUN	GIVEWAY /UNCONT	NO XING FACIL IN 50M	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(49 YRS - M - REDA)		SLIGHT	DRIVER/RIDER			
VEHICLE	001 (000)	PED CYCLE BT - N/A		(49 YRS - M - REDACT)	UNKNOWN S/R	G/AHEAD - OTHER	(N TO S) BACK HIT FIRST	JCT CLEARED
VEHICLE	002 (000)	CAR BT - DRV NOT CONTACTED		(? YRS - M - REDACT)		TURNING RIGHT	(S TO E) FRONT HIT FIRST	J/P - UNKN JCT APP

10

01210328012	FRI 27/08/2021 15:22		LIGHT	BELMONT RD, 20 METRES NORTH OF JUNCT WTH UB8 1QS.			26 LINK 157-159	505540/184271
SELF-REPORTED		ROAD-DRY	WEATHER-FINE	SINGLE CWY	UNKNOWN S/R	UNKNOWN S/R	UNKNOWN S/R	UNKNOWN S/R
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(59 YRS - M - REDA)		SLIGHT	DRIVER/RIDER			
VEHICLE	001 (000)	TAXI/PHV BT - DRV NOT CONTACTED		(59 YRS - M - REDACT)		UNKNOWN S/R	(MOVE UNKN) FRONT HIT FIRST	UNKNOWN S/R
VEHICLE	002 (000)	CAR BT - DRV NOT CONTACTED		(? YRS - UNKNOWN - REDACT)		UNKNOWN S/R	(MOVE UNKN) FRONT HIT FIRST	J/P - UNKN UNKNOWN S/R

11

01210346121	FRI 26/11/2021 00:25		DARK	HIGH ST, 140 METRES SOUTH OF JUNCT WTH HAREFIELD RD.. NREST CLASSIFIED RD WAS B467			26 LINK 156-157	505444/184274
POLICE - AT SCENE		ROAD-DRY	WEATHER-FINE	SINGLE CWY	NO JUN IN 20M		PELICAN OR SIML	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(21 YRS - F - REDA)		SLIGHT	PEDESTRIAN	W BOUND	FROM DRIVERS N/SIDE - MASKED	
VEHICLE	001 (000)	LONDON BUS BT - NOT REQ		(48 YRS - M - REDACT)	SLOWING/STOPPING		(N TO S) N/S HIT FIRST	
C001	A	801 (CROSSING ROAD MASKED BY STATIONARY OR PARKED VEHICLE)			C001	A	808 (CARELESS, RECKLESS OR IN A HURRY)	

12

01220365841	THU 17/03/2022 10:10		LIGHT	OXFORD RD, NR JUNCT WTH SANDERSON RD.			26 LINK 160-739	505233/184542
SELF-REPORTED		ROAD-DRY	WEATHER-OTHER	DUAL CWY	T/STAG JUN	AUTO SIG	PELICAN OR SIML	UNKNOWN S/R
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(36 YRS - M - REDA)		SLIGHT	DRIVER/RIDER			
VEHICLE	001 (000)	CAR BT - DRV NOT CONTACTED		(36 YRS - M - REDACT)		UNKNOWN S/R	(MOVE UNKN) BACK HIT FIRST	J/P - UNKN UNKNOWN S/R
VEHICLE	002 (000)	TAXI/PHV BT - DRV NOT CONTACTED		(? YRS - UNKNOWN - REDACT)		UNKNOWN S/R	(MOVE UNKN) FRONT HIT FIRST	J/P - UNKN UNKNOWN S/R

13

01220373101	WED 27/04/2022 13:25		LIGHT	LANCASTER RD, NR JUNCT WTH BELMONT RD.			26 LINK 157-159	505671/184380
POLICE - AT SCENE		ROAD-DRY	WEATHER-FINE	ROUNDABOUT	ROUNDABOUT	GIVEWAY /UNCONT	NO XING FACIL IN 50M	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (002)	(45 YRS - M - REDA)		SERIOUS	DRIVER/RIDER			
VEHICLE	001 (000)	CAR BT - NOT REQ		(32 YRS - M - REDACT)		MOVING OFF	(N TO S) O/S HIT FIRST	
VEHICLE	002 (000)	MOB SCOOTER BT - DRV NOT CONTACTED		(45 YRS - M - REDACT)		G/AHEAD - OTHER	(N TO S) O/S HIT FIRST	J/P - UNKN L/ROUNDABOUT
V001	A	405 (FAILED TO LOOK PROPERLY)						

14

01220375664	WED 11/05/2022 07:25		LIGHT	BELMONT RD, 53 METRES NORTH OF JUNCT WTH REDFORD WAY.			26 LINK 157-159	505621/184334
POLICE - AT SCENE		ROAD-DRY	WEATHER-FINE	SINGLE CWY	NO JUN IN 20M		ZEBRA XING	CTRL - SCH XING PTRL
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(34 YRS - M - REDA)		SLIGHT	PEDESTRIAN	E BOUND	FROM DRIVERS N/SIDE	
VEHICLE	001 (000)	CAR BT - DRV NOT CONTACTED		(? YRS - UNKNOWN - REDACT)		G/AHEAD - OTHER	(N TO S) FRONT HIT FIRST	J/P - UNKN
V001	A	601 (AGGRESSIVE DRIVING)						

15

01220380553	MON 06/06/2022 10:27		LIGHT	OXFORD RD, NR JUNCT WTH SANDERSON RD.			26 LINK 160-739	505226/184528
POLICE - AT SCENE		ROAD-WET	WEATHER-FINE	DUAL CWY	CROSSROADS	AUTO SIG	PEDN PHASE ATS	CTRL - AUTH PERSON
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(31 YRS - F - REDA)		SLIGHT	DRIVER/RIDER			
CASUALTY	002 (002)	(36 YRS - F - REDA)		SLIGHT	DRIVER/RIDER			
VEHICLE	001 (000)	CAR BT - NOT REQ		(31 YRS - F - REDACT)		TURNING RIGHT	(S TO E) BACK HIT FIRST	L/MAIN RD
VEHICLE	002 (000)	CAR BT - NOT REQ		(36 YRS - F - REDACT)		G/AHEAD - L-HAND BEND	(S TO N) BACK HIT FIRST	JCT MID
V001	A	403 (POOR TURN OR MANOEUVRE)						

16

01220398503	FRI 09/09/2022 14:25		LIGHT	HIGH ST, 1 METRES EAST OF JUNCT WTH UXBRIDGE HIGH ST .			26 NODE 157	505422/184260
POLICE - AT SCENE		ROAD-WET	RAINING	ONE-WAY ST	OTHER JUN	AUTO SIG	PEDN PHASE ATS	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(84 YRS - M - REDA)		SERIOUS	PEDESTRIAN	N BOUND	UNKNOWN/OTHER	
VEHICLE	001 (000)	MINIBUS 8-15 PAX BT - NOT REQ		(36 YRS - M - REDACT)		SLOWING/STOPPING	(N TO S) O/S HIT FIRST	J/P - UNKN JCT CLEARED
V001	B	103 (SLIPPERY ROAD (DUE TO WEATHER))						

17

01220398504	FRI 09/09/2022 14:40		LIGHT	HIGH ST, NR JUNCT WTH BELMONT RD.			26 NODE 157	505453/184252
POLICE - AT SCENE		ROAD-WET	WEATHER-OTHER	SINGLE CWY	T/STAG JUN	AUTO SIG	PELICAN OR SIML	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(13 YRS - F - REDA)		SERIOUS	PEDESTRIAN	UNKNOWN	FROM DRIVERS N/SIDE	
VEHICLE	001 (000)	CAR BT - NOT REQ		(39 YRS - F - REDACT)		WAITING - HELD UP	(N TO S) FRONT HIT FIRST	JCT APP
V001	B	701 (STATIONARY OR PARKED VEHICLE(S))				V001 B	710 (VEHICLE BLIND SPOT)	

18

01220412132	TUE 22/11/2022 18:45		DARK	ROCKINGHAM RD, 5 METRES WEST OF JUNCT WTH LYNCH.			26 LINK 119-143	505196/183948
POLICE - AT SCENE		ROAD-DRY	WEATHER-FINE	SINGLE CWY	T/STAG JUN	GIVEWAY /UNCONT	ZEBRA XING	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(27 YRS - M - REDA)		SERIOUS	PEDESTRIAN	S BOUND	FROM DRIVERS N/SIDE	
VEHICLE	001 (000)	CAR BT - POS		(27 YRS - F - REDACT)		G/AHEAD - OTHER	(W TO E) FRONT HIT FIRST	COMMUTING JCT APP
V001	B	104 (INADEQUATE OR MASKED SIGNS OR ROAD MARKINGS)				V001 A	405 (FAILED TO LOOK PROPERLY)	
V001	B	703 (ROAD LAYOUT (EG. BEND, WINDING ROAD, HILL CREST)						

19

01230430084	THU 02/03/2023 15:55		LIGHT	BELMONT RD, NR JUNCT WTH YORK RD.			26 LINK 157-159	505638/184344
SELF-REPORTED		ROAD-DRY	WEATHER-FINE	SINGLE CWY	CROSSROADS	GIVEWAY /UNCONT	NO XING FACIL IN 50M	NONE IN 50M

NOT KNOWN HOW COLLISION OCCURRED

CASUALTY	001 (001)	(37 YRS - M - REDA)	SLIGHT	DRIVER/RIDER			
VEHICLE	001 (000)	M/C 51-125CC BT - DRV NOT CONTACTED	(37 YRS - M - REDACT)		UNKNOWN S/R	(MOVE UNKN) FRONT HIT FIRST	JOURNEY P/O WORK UNKNOWN S/R
VEHICLE	002 (000)	VAN/GOODS => 3.5T BT - DRV NOT CONTACTED	(? YRS - UNKNOWN - REDACT)		UNKNOWN S/R	(MOVE UNKN) BACK HIT FIRST	J/P - UNKN UNKNOWN S/R

20

01230430377	THU 02/03/2023 18:13		DARK	BAKERS RD, NR JUNCT WTH BELMONT RD.			26 CELL 505500/184000	505598/184164
SELF-REPORTED		ROAD-DRY	WEATHER-OTHER	ONE-WAY ST	OTHER JUN	UNKNOWN S/R	ZEBRA XING	UNKNOWN S/R

NOT KNOWN HOW COLLISION OCCURRED

CASUALTY	001 (001)	(30 YRS - F - REDA)	SLIGHT	DRIVER/RIDER			
VEHICLE	001 (000)	M/C 51-125CC BT - DRV NOT CONTACTED	(30 YRS - F - REDACT)		UNKNOWN S/R	(MOVE UNKN) UNKNOWN S/R	COMMUTING UNKNOWN S/R
VEHICLE	002 (000)	CAR BT - DRV NOT CONTACTED	(? YRS - UNKNOWN - REDACT)		UNKNOWN S/R	(MOVE UNKN) BACK HIT FIRST	J/P - UNKN UNKNOWN S/R

21

01230431300	THU 09/03/2023 18:14		DARK	ROCKINGHAM RD, NR JUNCT WTH ROCKINGHAM PARADE.			26 LINK 119-143	505188/183950
POLICE - AT SCENE		ROAD-WET	RAINING	SINGLE CWY	T/STAG JUN	GIVEWAY /UNCONT	ZEBRA XING	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(64 YRS - F - REDA)		SERIOUS	PEDESTRIAN	S BOUND	FROM DRIVERS O/SIDE	
VEHICLE	001 (000)	CAR BT - NEG		(44 YRS - M - REDACT)		G/AHEAD - OTHER	(E TO W) FRONT HIT FIRST	JCT APP
V001	B	103 (SLIPPERY ROAD (DUE TO WEATHER))				V001	A	405 (FAILED TO LOOK PROPERLY)

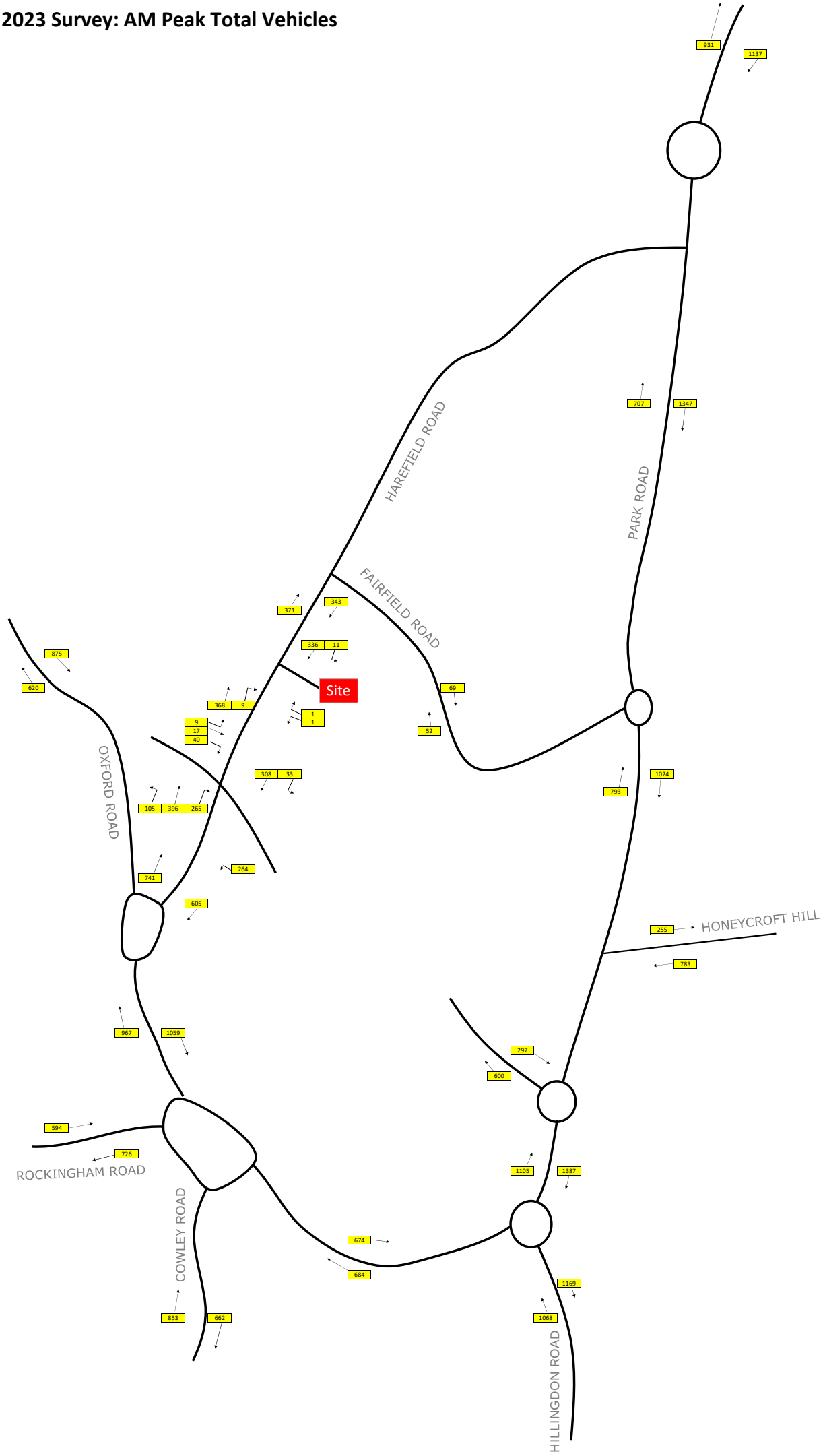
22

01230432762	SUN 26/02/2023 15:00		LIGHT	HIGH ST, NR JUNCT WTH HAREFIELD RD.			26 NODE 156	505390/184384
SELF-REPORTED		ROAD-DRY	WEATHER- FINE	ROUNDABOUT	ROUNDABOUT	AUTO SIG	NO XING FACIL IN 50M	UNKNOWN S/R
NOT KNOWN HOW COLLISION OCCURRED								
CASUALTY	001 (001)	(34 YRS - F - REDA)		SLIGHT	DRIVER/RIDER			
VEHICLE	001 (000)	CAR BT - DRV NOT CONTACTED		(34 YRS - F - REDACT)		UNKNOWN S/R	(MOVE UNKN) O/S HIT FIRST	UNKNOWN S/R
VEHICLE	002 (000)	M/C ? CC BT - DRV NOT CONTACTED		(? YRS - UNKNOWN - REDACT)		UNKNOWN S/R	(MOVE UNKN) UNKNOWN S/R	J/P - UNKN UNKNOWN S/R

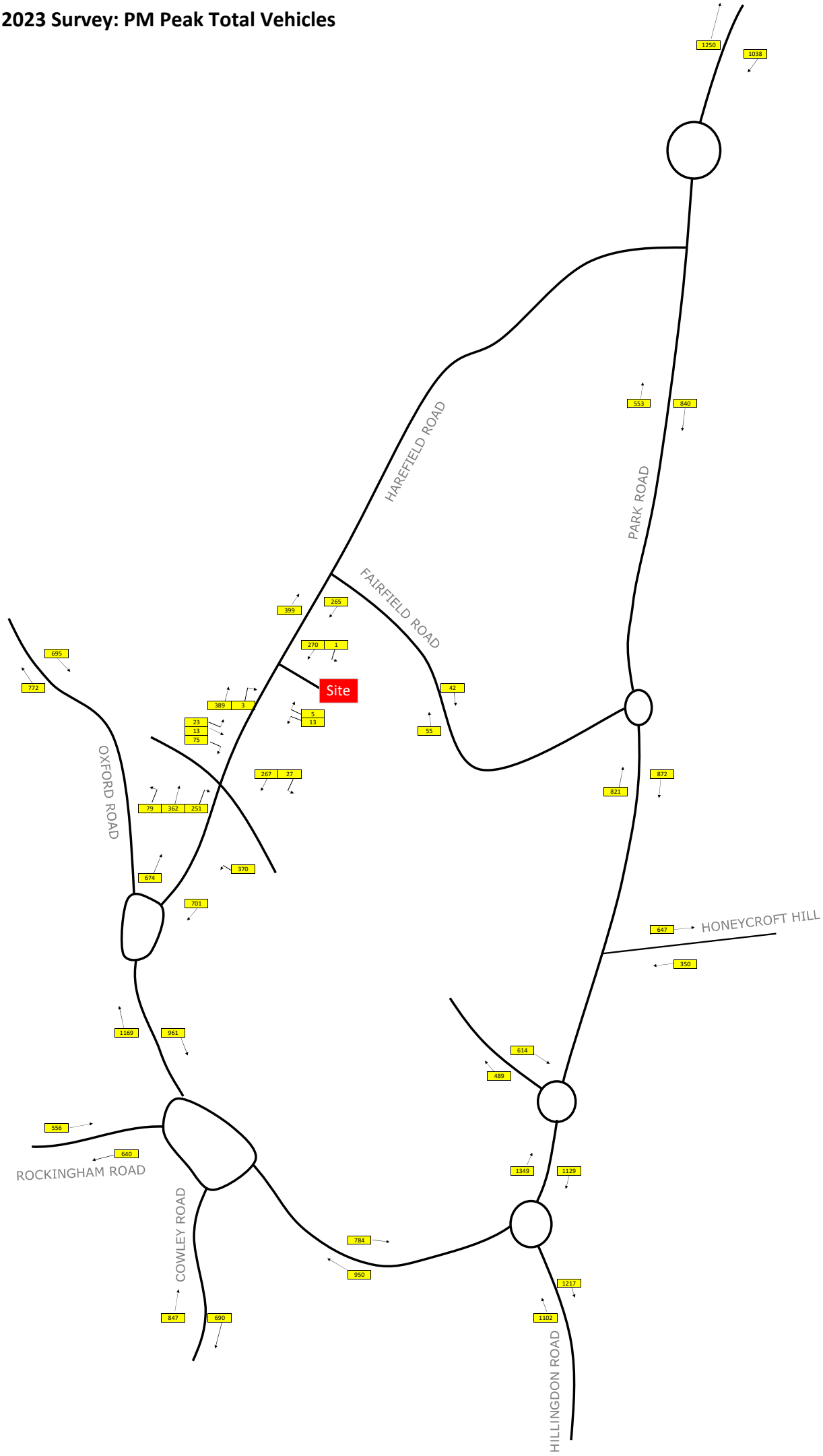
Appendix F

Traffic flow diagrams

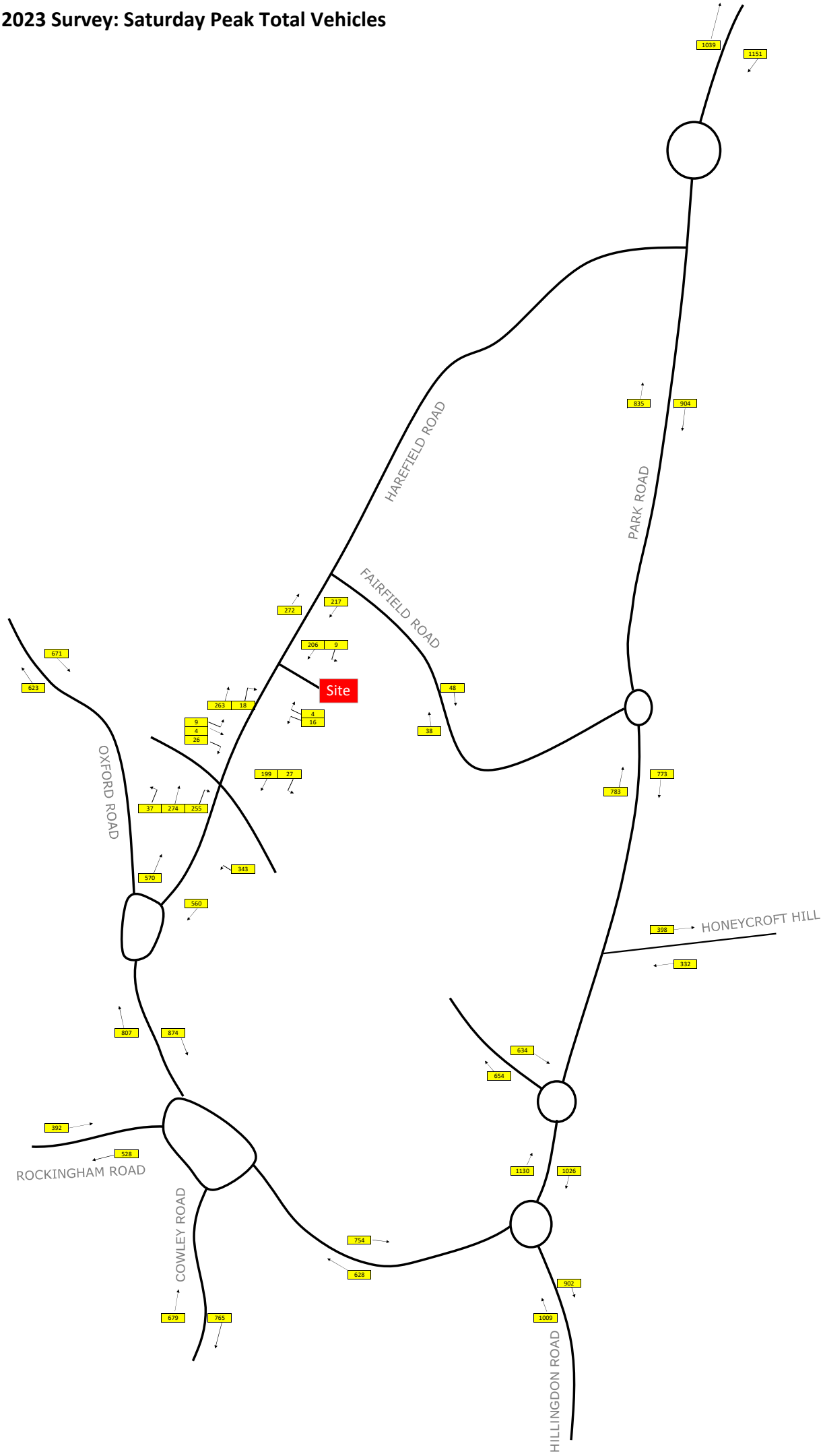
2023 Survey: AM Peak Total Vehicles



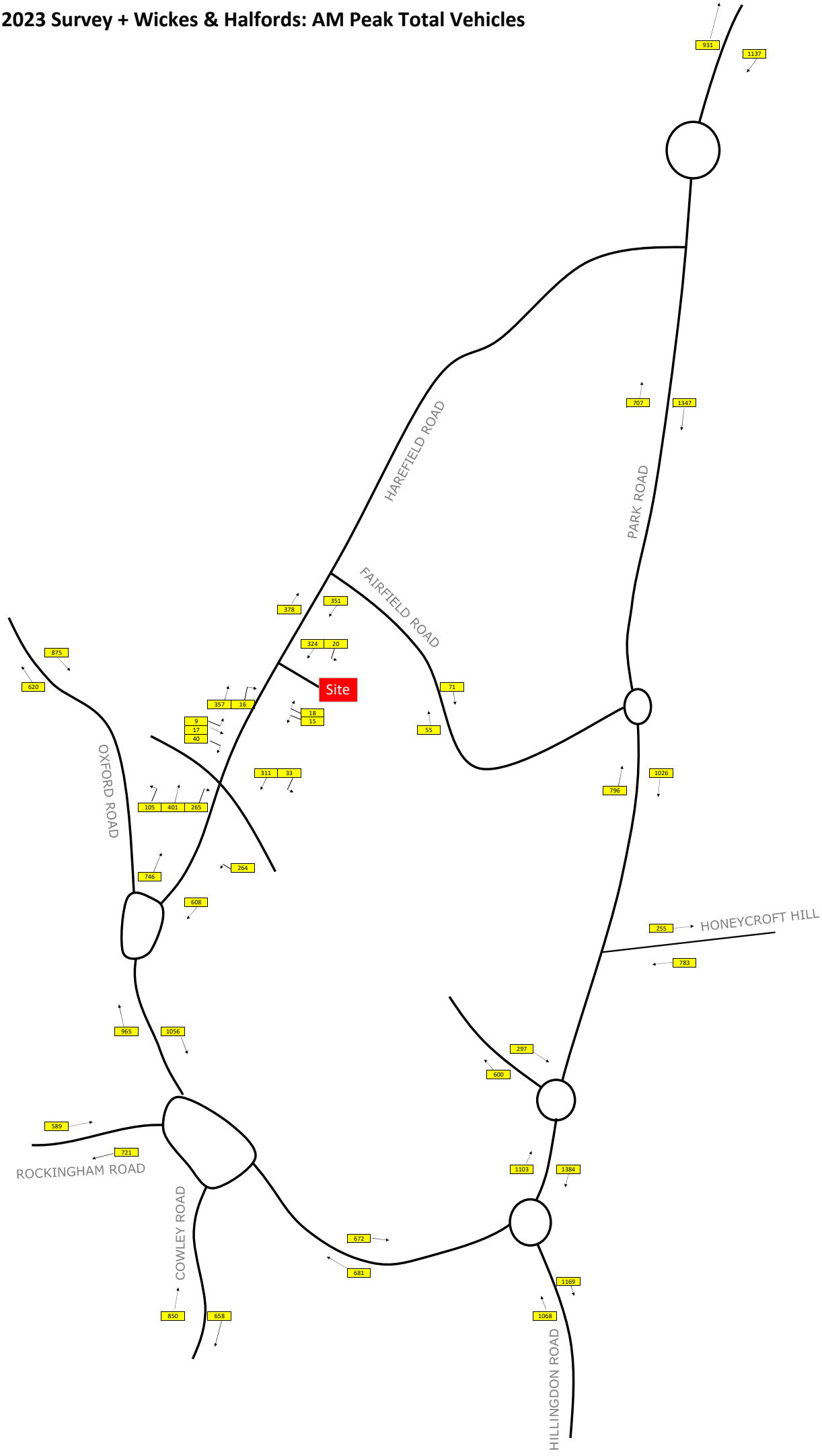
2023 Survey: PM Peak Total Vehicles



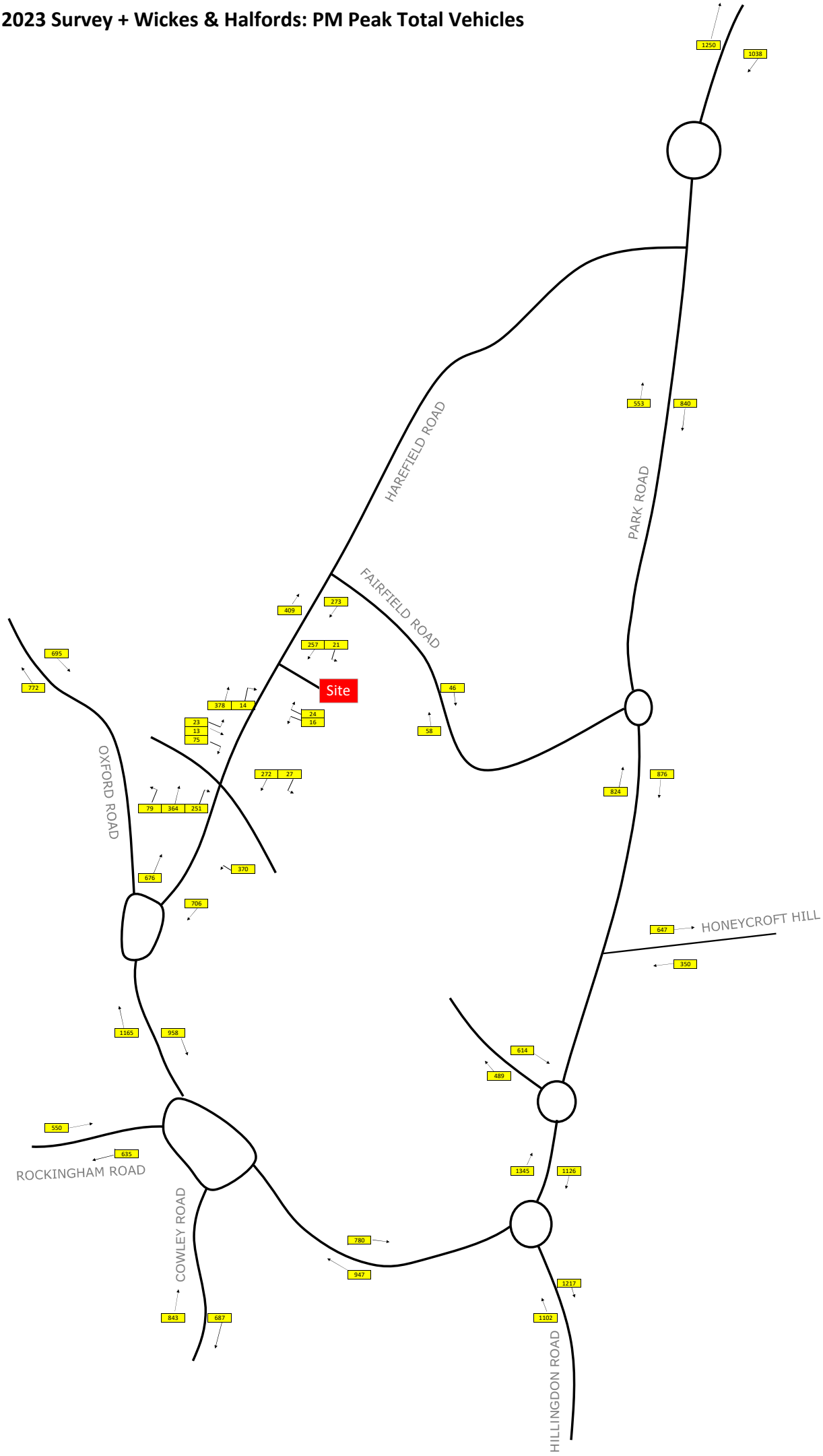
2023 Survey: Saturday Peak Total Vehicles



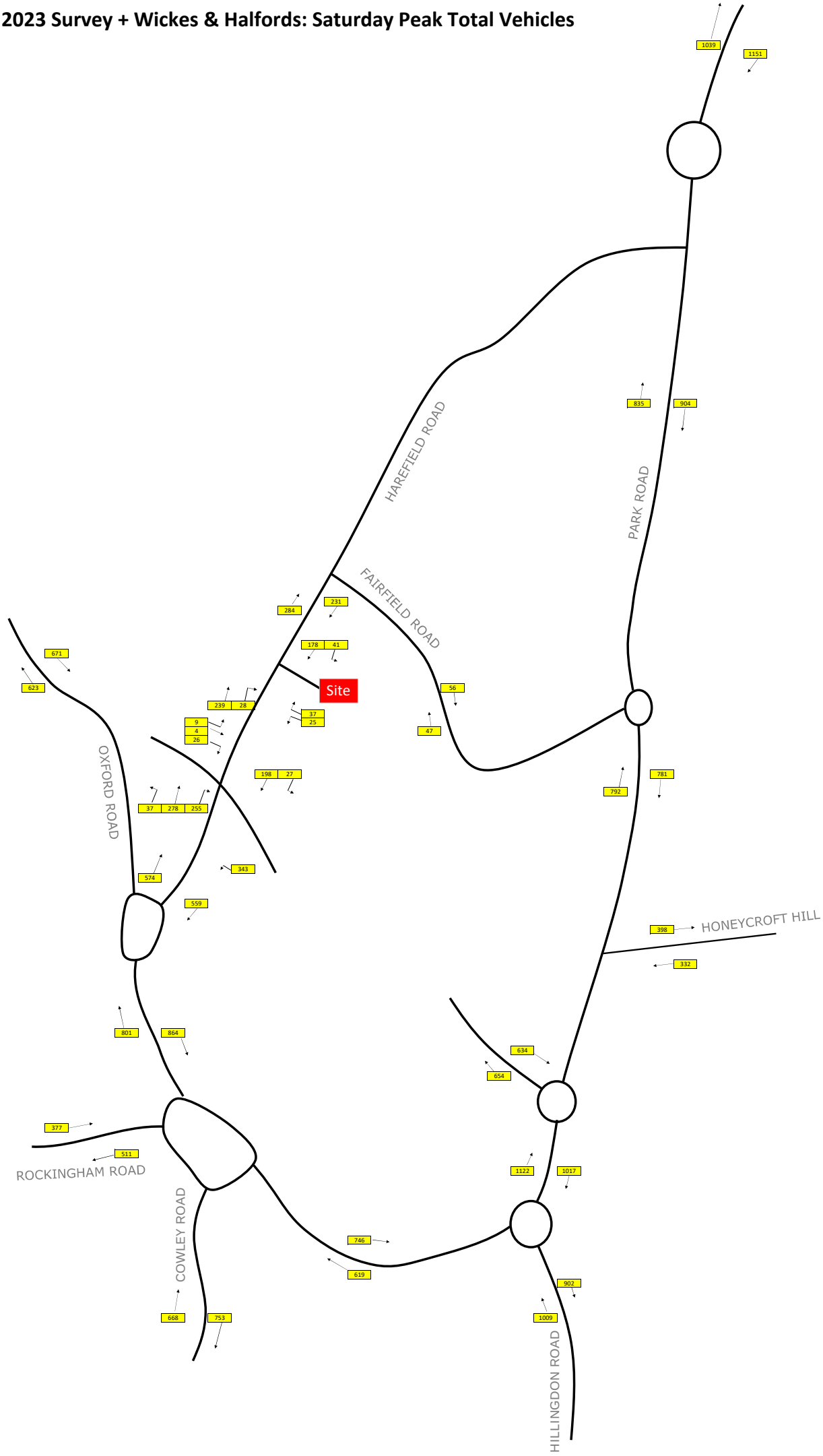
2023 Survey + Wickes & Halfords: AM Peak Total Vehicles



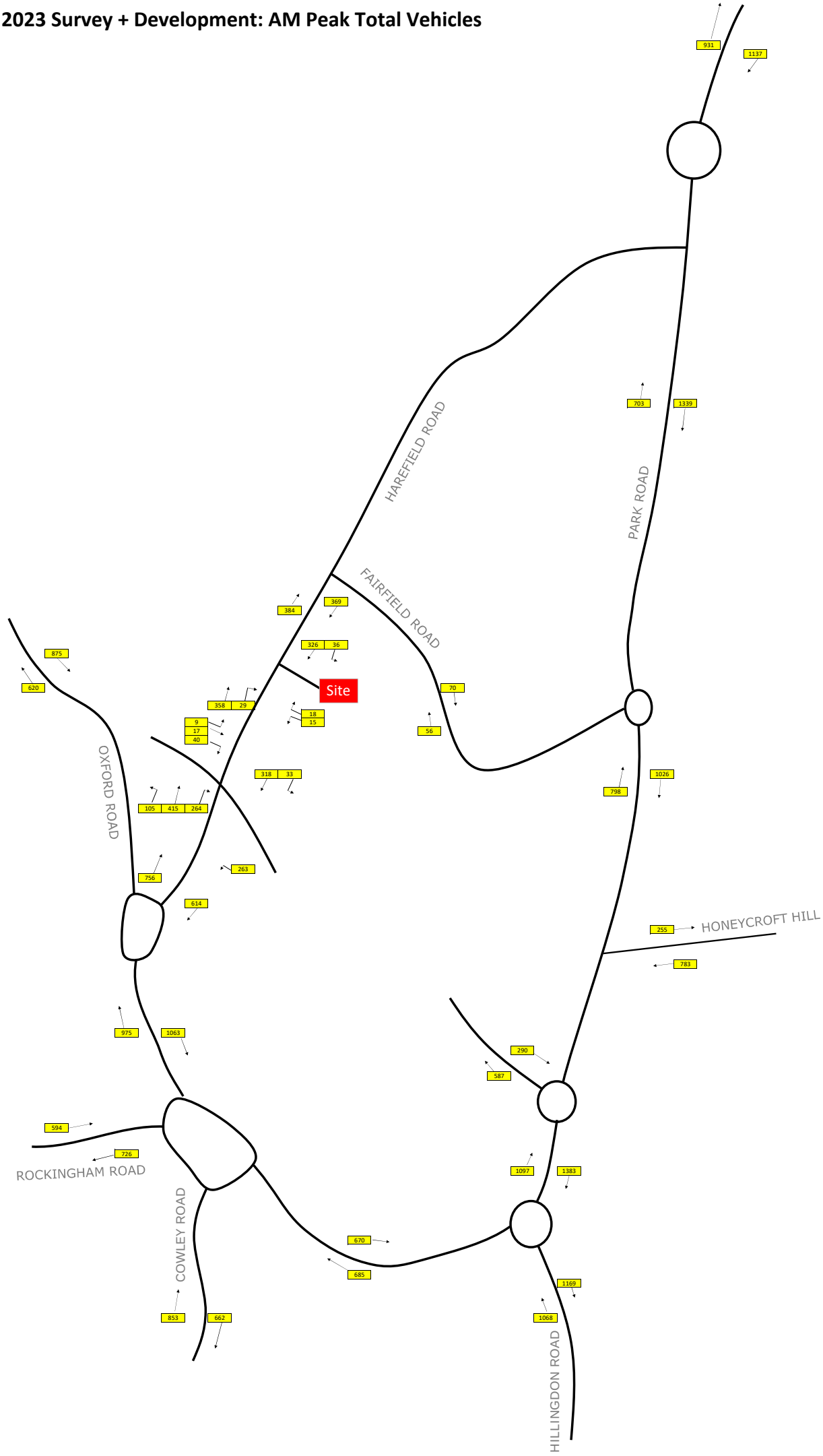
2023 Survey + Wickes & Halfords: PM Peak Total Vehicles



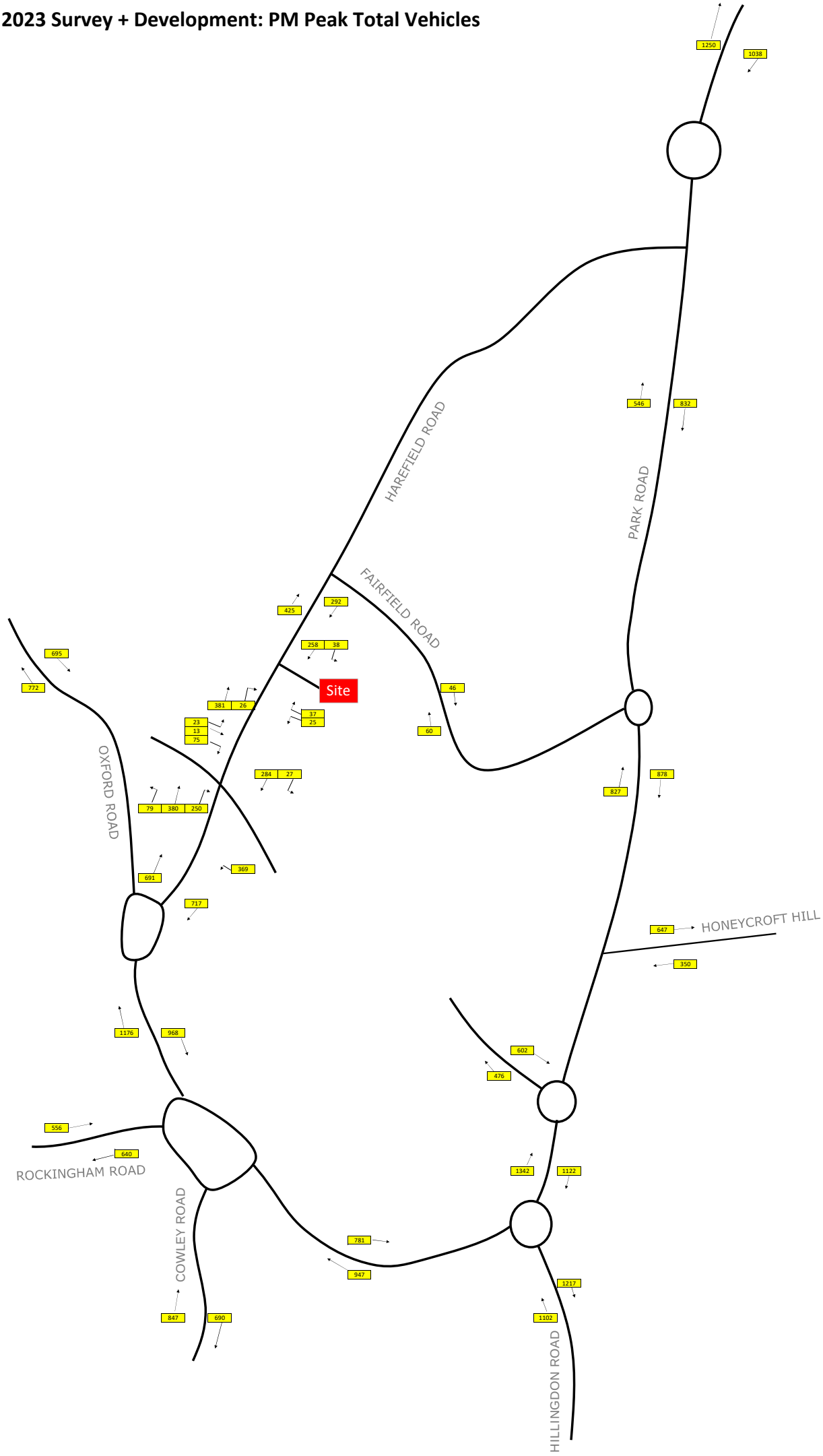
2023 Survey + Wickes & Halfords: Saturday Peak Total Vehicles



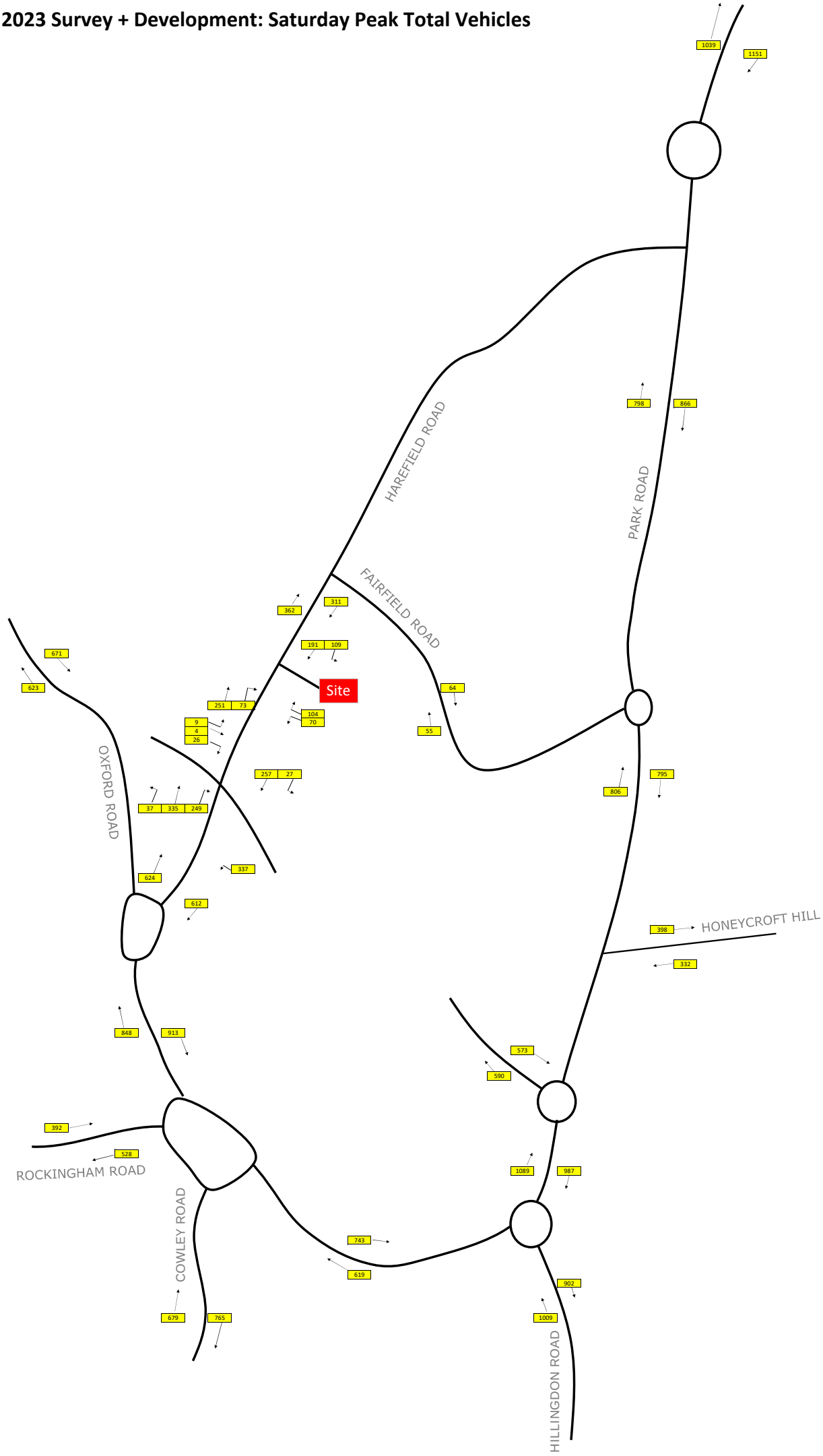
2023 Survey + Development: AM Peak Total Vehicles



2023 Survey + Development: PM Peak Total Vehicles



2023 Survey + Development: Saturday Peak Total Vehicles



Appendix G

TRICS outputs

Calculation Reference: AUDIT-701001-231215-1240

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : C - DISCOUNT FOOD STORES
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	BE	BEXLEY	1 days
	MR	MERTON	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter:	Gross floor area
Actual Range:	2145 to 2400 (units: sqm)
Range Selected by User:	1018 to 2400 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 24/05/21

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Wednesday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Edge of Town	1
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	1
Residential Zone	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	2 days - Selected
Servicing vehicles Excluded	2 days - Selected

Secondary Filtering selection:

Use Class:

E(a)	2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included
Population within 1 mile:

15,001 to 20,000	1 days
50,001 to 100,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Secondary Filtering selection (Cont.):

Population within 5 miles:

500,001 or More	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	2 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No	2 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

2 Poor	1 days
4 Good	1 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 BE-01-C-01 LIDL BEXLEY
CLYDESDALE WAY
BELVEDERE

Edge of Town
Industrial Zone
Total Gross floor area: 2145 sqm
Survey date: WEDNESDAY 06/11/19 Survey Type: MANUAL

2 MR-01-C-01 LIDL MERTON
STREATHAM ROAD
MITCHAM

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Gross floor area: 2400 sqm
Survey date: WEDNESDAY 06/11/19 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BM-01-C-01	Survey undertaken during Covid-19 pandemic
IS-01-C-01	Limited customer car parking

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 3.19

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	2273	0.726	2	2273	0.264	2	2273	0.990
08:00 - 09:00	2	2273	2.332	2	2273	1.364	2	2273	3.696
09:00 - 10:00	2	2273	2.288	2	2273	1.782	2	2273	4.070
10:00 - 11:00	2	2273	2.442	2	2273	2.376	2	2273	4.818
11:00 - 12:00	2	2273	2.002	2	2273	2.046	2	2273	4.048
12:00 - 13:00	2	2273	2.222	2	2273	2.332	2	2273	4.554
13:00 - 14:00	2	2273	2.684	2	2273	2.552	2	2273	5.236
14:00 - 15:00	2	2273	1.826	2	2273	2.926	2	2273	4.752
15:00 - 16:00	2	2273	2.310	2	2273	1.914	2	2273	4.224
16:00 - 17:00	2	2273	2.398	2	2273	2.728	2	2273	5.126
17:00 - 18:00	2	2273	2.750	2	2273	2.332	2	2273	5.082
18:00 - 19:00	2	2273	2.728	2	2273	2.486	2	2273	5.214
19:00 - 20:00	2	2273	1.760	2	2273	2.090	2	2273	3.850
20:00 - 21:00	2	2273	1.540	2	2273	1.848	2	2273	3.388
21:00 - 22:00	2	2273	1.320	2	2273	1.848	2	2273	3.168
22:00 - 23:00	2	2273	0.132	2	2273	0.484	2	2273	0.616
23:00 - 24:00									
Total Rates:			31.460			31.372			62.832

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	2145 - 2400 (units: sqm)
Survey date date range:	01/01/15 - 24/05/21
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
08:00 - 09:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
09:00 - 10:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
10:00 - 11:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
11:00 - 12:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
12:00 - 13:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
13:00 - 14:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
14:00 - 15:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
15:00 - 16:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
16:00 - 17:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
17:00 - 18:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
18:00 - 19:00	2	2273	0.000	2	2273	0.022	2	2273	0.022
19:00 - 20:00	2	2273	0.000	2	2273	0.022	2	2273	0.022
20:00 - 21:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
21:00 - 22:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
22:00 - 23:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
23:00 - 24:00									
Total Rates:			0.000			0.044			0.044

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	2273	0.946	2	2273	0.440	2	2273	1.386
08:00 - 09:00	2	2273	3.542	2	2273	2.200	2	2273	5.742
09:00 - 10:00	2	2273	3.608	2	2273	2.838	2	2273	6.446
10:00 - 11:00	2	2273	4.158	2	2273	4.048	2	2273	8.206
11:00 - 12:00	2	2273	2.970	2	2273	2.860	2	2273	5.830
12:00 - 13:00	2	2273	3.520	2	2273	3.696	2	2273	7.216
13:00 - 14:00	2	2273	4.752	2	2273	4.598	2	2273	9.350
14:00 - 15:00	2	2273	2.816	2	2273	3.938	2	2273	6.754
15:00 - 16:00	2	2273	3.322	2	2273	2.794	2	2273	6.116
16:00 - 17:00	2	2273	3.806	2	2273	4.290	2	2273	8.096
17:00 - 18:00	2	2273	4.048	2	2273	3.740	2	2273	7.788
18:00 - 19:00	2	2273	4.202	2	2273	3.894	2	2273	8.096
19:00 - 20:00	2	2273	2.706	2	2273	3.190	2	2273	5.896
20:00 - 21:00	2	2273	2.332	2	2273	2.706	2	2273	5.038
21:00 - 22:00	2	2273	2.266	2	2273	2.750	2	2273	5.016
22:00 - 23:00	2	2273	0.220	2	2273	0.770	2	2273	0.990
23:00 - 24:00									
Total Rates:			49.214			48.752			97.966

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MULTI-MODAL PEDESTRIANS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	2273	0.550	2	2273	0.308	2	2273	0.858
08:00 - 09:00	2	2273	1.496	2	2273	1.188	2	2273	2.684
09:00 - 10:00	2	2273	2.948	2	2273	2.156	2	2273	5.104
10:00 - 11:00	2	2273	2.794	2	2273	2.398	2	2273	5.192
11:00 - 12:00	2	2273	2.794	2	2273	2.464	2	2273	5.258
12:00 - 13:00	2	2273	2.266	2	2273	2.684	2	2273	4.950
13:00 - 14:00	2	2273	2.838	2	2273	2.574	2	2273	5.412
14:00 - 15:00	2	2273	3.344	2	2273	2.882	2	2273	6.226
15:00 - 16:00	2	2273	2.926	2	2273	3.410	2	2273	6.336
16:00 - 17:00	2	2273	3.190	2	2273	3.894	2	2273	7.084
17:00 - 18:00	2	2273	3.696	2	2273	3.674	2	2273	7.370
18:00 - 19:00	2	2273	3.300	2	2273	3.498	2	2273	6.798
19:00 - 20:00	2	2273	2.024	2	2273	2.398	2	2273	4.422
20:00 - 21:00	2	2273	1.408	2	2273	1.716	2	2273	3.124
21:00 - 22:00	2	2273	0.836	2	2273	1.078	2	2273	1.914
22:00 - 23:00	2	2273	0.022	2	2273	0.286	2	2273	0.308
23:00 - 24:00									
Total Rates:			36.432			36.608			73.040

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	2273	0.264	2	2273	0.132	2	2273	0.396
08:00 - 09:00	2	2273	0.462	2	2273	0.220	2	2273	0.682
09:00 - 10:00	2	2273	0.484	2	2273	0.528	2	2273	1.012
10:00 - 11:00	2	2273	0.704	2	2273	0.638	2	2273	1.342
11:00 - 12:00	2	2273	0.770	2	2273	0.638	2	2273	1.408
12:00 - 13:00	2	2273	0.506	2	2273	0.660	2	2273	1.166
13:00 - 14:00	2	2273	0.880	2	2273	1.144	2	2273	2.024
14:00 - 15:00	2	2273	1.364	2	2273	1.496	2	2273	2.860
15:00 - 16:00	2	2273	1.430	2	2273	1.276	2	2273	2.706
16:00 - 17:00	2	2273	1.760	2	2273	1.430	2	2273	3.190
17:00 - 18:00	2	2273	1.716	2	2273	1.738	2	2273	3.454
18:00 - 19:00	2	2273	2.046	2	2273	2.112	2	2273	4.158
19:00 - 20:00	2	2273	1.056	2	2273	1.188	2	2273	2.244
20:00 - 21:00	2	2273	0.858	2	2273	0.814	2	2273	1.672
21:00 - 22:00	2	2273	0.418	2	2273	0.418	2	2273	0.836
22:00 - 23:00	2	2273	0.000	2	2273	0.110	2	2273	0.110
23:00 - 24:00									
Total Rates:			14.718			14.542			29.260

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
08:00 - 09:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
09:00 - 10:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
10:00 - 11:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
11:00 - 12:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
12:00 - 13:00	2	2273	0.022	2	2273	0.000	2	2273	0.022
13:00 - 14:00	2	2273	0.000	2	2273	0.022	2	2273	0.022
14:00 - 15:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
15:00 - 16:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
16:00 - 17:00	2	2273	0.022	2	2273	0.022	2	2273	0.044
17:00 - 18:00	2	2273	0.022	2	2273	0.000	2	2273	0.022
18:00 - 19:00	2	2273	0.066	2	2273	0.022	2	2273	0.088
19:00 - 20:00	2	2273	0.022	2	2273	0.022	2	2273	0.044
20:00 - 21:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
21:00 - 22:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
22:00 - 23:00	2	2273	0.000	2	2273	0.000	2	2273	0.000
23:00 - 24:00									
Total Rates:			0.154			0.088			0.242

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Calculation Reference: AUDIT-701001-231215-1247

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : C - DISCOUNT FOOD STORES
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	HG	HARINGEY	1 days
	WF	WALTHAM FOREST	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter:	Gross floor area
Actual Range:	1468 to 2099 (units: sqm)
Range Selected by User:	1018 to 2400 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 24/05/21

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Saturday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Centre	1
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	1
High Street	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	1 days - Selected
Servicing vehicles Excluded	2 days - Selected

Secondary Filtering selection:

Use Class:

E(a)	2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included
Population within 1 mile:

50,001 to 100,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Secondary Filtering selection (Cont.):

Population within 5 miles:

500,001 or More	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	2 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No	2 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

2 Poor	1 days
5 Very Good	1 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 HG-01-C-02 ALDI HARINGEY
HIGH ROAD
TOTTENHAM

Town Centre
High Street
Total Gross floor area: 1468 sqm
Survey date: SATURDAY *14/03/20* *Survey Type: MANUAL*

2 WF-01-C-01 ALDI WALTHAM FOREST
HEYBRIDGE WAY
LEYTON
HATCH LANE
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Gross floor area: 2099 sqm
Survey date: SATURDAY *07/03/20* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
RB-01-C-01	No on-site car parking

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 2.21

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	1784	0.561	2	1784	0.252	2	1784	0.813
08:00 - 09:00	2	1784	3.476	2	1784	1.290	2	1784	4.766
09:00 - 10:00	2	1784	4.458	2	1784	3.504	2	1784	7.962
10:00 - 11:00	2	1784	5.691	2	1784	5.691	2	1784	11.382
11:00 - 12:00	2	1784	6.728	2	1784	6.700	2	1784	13.428
12:00 - 13:00	2	1784	6.672	2	1784	6.504	2	1784	13.176
13:00 - 14:00	2	1784	5.915	2	1784	5.915	2	1784	11.830
14:00 - 15:00	2	1784	5.887	2	1784	6.027	2	1784	11.914
15:00 - 16:00	2	1784	5.299	2	1784	5.663	2	1784	10.962
16:00 - 17:00	2	1784	5.046	2	1784	5.018	2	1784	10.064
17:00 - 18:00	2	1784	4.401	2	1784	4.822	2	1784	9.223
18:00 - 19:00	2	1784	4.177	2	1784	4.794	2	1784	8.971
19:00 - 20:00	2	1784	3.504	2	1784	3.897	2	1784	7.401
20:00 - 21:00	2	1784	3.224	2	1784	3.701	2	1784	6.925
21:00 - 22:00	2	1784	2.299	2	1784	2.775	2	1784	5.074
22:00 - 23:00	2	1784	0.336	2	1784	1.037	2	1784	1.373
23:00 - 24:00									
Total Rates:			67.674			67.590			135.264

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	1468 - 2099 (units: sqm)
Survey date date range:	01/01/15 - 24/05/21
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	2
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	1784	0.028	2	1784	0.000	2	1784	0.028
08:00 - 09:00	2	1784	0.477	2	1784	0.252	2	1784	0.729
09:00 - 10:00	2	1784	0.505	2	1784	0.421	2	1784	0.926
10:00 - 11:00	2	1784	0.673	2	1784	0.505	2	1784	1.178
11:00 - 12:00	2	1784	0.505	2	1784	0.477	2	1784	0.982
12:00 - 13:00	2	1784	0.561	2	1784	0.673	2	1784	1.234
13:00 - 14:00	2	1784	0.449	2	1784	0.505	2	1784	0.954
14:00 - 15:00	2	1784	0.421	2	1784	0.364	2	1784	0.785
15:00 - 16:00	2	1784	0.336	2	1784	0.392	2	1784	0.728
16:00 - 17:00	2	1784	0.449	2	1784	0.449	2	1784	0.898
17:00 - 18:00	2	1784	0.280	2	1784	0.252	2	1784	0.532
18:00 - 19:00	2	1784	0.196	2	1784	0.336	2	1784	0.532
19:00 - 20:00	2	1784	0.252	2	1784	0.252	2	1784	0.504
20:00 - 21:00	2	1784	0.224	2	1784	0.421	2	1784	0.645
21:00 - 22:00	2	1784	0.168	2	1784	0.196	2	1784	0.364
22:00 - 23:00	2	1784	0.000	2	1784	0.028	2	1784	0.028
23:00 - 24:00									
Total Rates:			5.524			5.523			11.047

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	1784	0.701	2	1784	0.224	2	1784	0.925
08:00 - 09:00	2	1784	4.962	2	1784	1.458	2	1784	6.420
09:00 - 10:00	2	1784	6.056	2	1784	4.710	2	1784	10.766
10:00 - 11:00	2	1784	7.990	2	1784	7.906	2	1784	15.896
11:00 - 12:00	2	1784	9.167	2	1784	8.999	2	1784	18.166
12:00 - 13:00	2	1784	8.971	2	1784	9.195	2	1784	18.166
13:00 - 14:00	2	1784	8.887	2	1784	8.831	2	1784	17.718
14:00 - 15:00	2	1784	8.971	2	1784	8.747	2	1784	17.718
15:00 - 16:00	2	1784	7.682	2	1784	8.186	2	1784	15.868
16:00 - 17:00	2	1784	7.597	2	1784	7.485	2	1784	15.082
17:00 - 18:00	2	1784	6.420	2	1784	7.065	2	1784	13.485
18:00 - 19:00	2	1784	6.280	2	1784	7.289	2	1784	13.569
19:00 - 20:00	2	1784	5.130	2	1784	5.663	2	1784	10.793
20:00 - 21:00	2	1784	4.766	2	1784	5.691	2	1784	10.457
21:00 - 22:00	2	1784	3.364	2	1784	4.233	2	1784	7.597
22:00 - 23:00	2	1784	0.364	2	1784	1.402	2	1784	1.766
23:00 - 24:00									
Total Rates:			97.308			97.084			194.392

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MULTI-MODAL PEDESTRIANS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	1784	0.084	2	1784	0.056	2	1784	0.140
08:00 - 09:00	2	1784	1.262	2	1784	0.841	2	1784	2.103
09:00 - 10:00	2	1784	2.103	2	1784	1.962	2	1784	4.065
10:00 - 11:00	2	1784	1.906	2	1784	1.990	2	1784	3.896
11:00 - 12:00	2	1784	2.271	2	1784	2.271	2	1784	4.542
12:00 - 13:00	2	1784	2.159	2	1784	2.159	2	1784	4.318
13:00 - 14:00	2	1784	1.794	2	1784	1.934	2	1784	3.728
14:00 - 15:00	2	1784	1.766	2	1784	1.906	2	1784	3.672
15:00 - 16:00	2	1784	1.682	2	1784	1.374	2	1784	3.056
16:00 - 17:00	2	1784	1.878	2	1784	1.486	2	1784	3.364
17:00 - 18:00	2	1784	1.654	2	1784	1.570	2	1784	3.224
18:00 - 19:00	2	1784	1.234	2	1784	1.458	2	1784	2.692
19:00 - 20:00	2	1784	1.177	2	1784	1.346	2	1784	2.523
20:00 - 21:00	2	1784	0.813	2	1784	0.897	2	1784	1.710
21:00 - 22:00	2	1784	0.785	2	1784	0.897	2	1784	1.682
22:00 - 23:00	2	1784	0.028	2	1784	0.196	2	1784	0.224
23:00 - 24:00									
Total Rates:			22.596			22.343			44.939

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	1784	0.168	2	1784	0.028	2	1784	0.196
08:00 - 09:00	2	1784	1.065	2	1784	0.561	2	1784	1.626
09:00 - 10:00	2	1784	1.822	2	1784	1.794	2	1784	3.616
10:00 - 11:00	2	1784	2.075	2	1784	1.962	2	1784	4.037
11:00 - 12:00	2	1784	1.906	2	1784	1.878	2	1784	3.784
12:00 - 13:00	2	1784	1.402	2	1784	1.710	2	1784	3.112
13:00 - 14:00	2	1784	1.850	2	1784	1.682	2	1784	3.532
14:00 - 15:00	2	1784	1.682	2	1784	1.626	2	1784	3.308
15:00 - 16:00	2	1784	1.598	2	1784	1.598	2	1784	3.196
16:00 - 17:00	2	1784	1.486	2	1784	1.598	2	1784	3.084
17:00 - 18:00	2	1784	1.430	2	1784	1.794	2	1784	3.224
18:00 - 19:00	2	1784	1.318	2	1784	1.121	2	1784	2.439
19:00 - 20:00	2	1784	1.121	2	1784	1.121	2	1784	2.242
20:00 - 21:00	2	1784	0.785	2	1784	0.897	2	1784	1.682
21:00 - 22:00	2	1784	0.421	2	1784	0.617	2	1784	1.038
22:00 - 23:00	2	1784	0.000	2	1784	0.196	2	1784	0.196
23:00 - 24:00									
Total Rates:			20.129			20.183			40.312

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	1784	0.364	2	1784	0.000	2	1784	0.364
08:00 - 09:00	2	1784	0.196	2	1784	0.084	2	1784	0.280
09:00 - 10:00	2	1784	0.280	2	1784	0.196	2	1784	0.476
10:00 - 11:00	2	1784	0.280	2	1784	0.308	2	1784	0.588
11:00 - 12:00	2	1784	0.224	2	1784	0.421	2	1784	0.645
12:00 - 13:00	2	1784	0.224	2	1784	0.252	2	1784	0.476
13:00 - 14:00	2	1784	0.224	2	1784	0.364	2	1784	0.588
14:00 - 15:00	2	1784	0.336	2	1784	0.392	2	1784	0.728
15:00 - 16:00	2	1784	0.449	2	1784	0.505	2	1784	0.954
16:00 - 17:00	2	1784	0.364	2	1784	0.392	2	1784	0.756
17:00 - 18:00	2	1784	0.364	2	1784	0.505	2	1784	0.869
18:00 - 19:00	2	1784	0.364	2	1784	0.392	2	1784	0.756
19:00 - 20:00	2	1784	0.308	2	1784	0.252	2	1784	0.560
20:00 - 21:00	2	1784	0.252	2	1784	0.308	2	1784	0.560
21:00 - 22:00	2	1784	0.056	2	1784	0.084	2	1784	0.140
22:00 - 23:00	2	1784	0.000	2	1784	0.000	2	1784	0.000
23:00 - 24:00									
Total Rates:			4.285			4.455			8.740

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

ARUP 13 FITZROY STREET LONDON Licence No: 701001

Calculation Reference: AUDIT-701001-231215-1241

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : A - FOOD SUPERSTORE
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	IS	ISLINGTON	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 1813 to 1813 (units: sqm)
Range Selected by User: 820 to 9394 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 15/06/22

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:
Wednesday 1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual count 1 days
Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:
Town Centre 1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:
High Street 1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:
Servicing vehicles Included 5 days - Selected
Servicing vehicles Excluded 4 days - Selected

Secondary Filtering selection:

Use Class:
E(a) 1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included
Population within 1 mile:
50,001 to 100,000 1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Secondary Filtering selection (Cont.):

Population within 5 miles:
500,001 or More 1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:
0.6 to 1.0 1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Petrol filling station:
PFS is present at the site and is included in the count 0 days
PFS is present at the site but is excluded from the count 0 days
There is no PFS at the site 1 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:
No 1 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:
6a Excellent 1 days

This data displays the number of selected surveys with PTAL Ratings.

TRIP RATE for Land Use 01 - RETAIL/A - FOOD SUPERSTORE
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 3.94

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	1813	0.717	1	1813	0.055	1	1813	0.772
08:00 - 09:00	1	1813	1.324	1	1813	0.386	1	1813	1.710
09:00 - 10:00	1	1813	1.600	1	1813	0.607	1	1813	2.207
10:00 - 11:00	1	1813	1.269	1	1813	0.662	1	1813	1.931
11:00 - 12:00	1	1813	0.717	1	1813	0.772	1	1813	1.489
12:00 - 13:00	1	1813	0.883	1	1813	0.883	1	1813	1.766
13:00 - 14:00	1	1813	0.772	1	1813	0.993	1	1813	1.765
14:00 - 15:00	1	1813	0.827	1	1813	1.048	1	1813	1.875
15:00 - 16:00	1	1813	0.827	1	1813	0.993	1	1813	1.820
16:00 - 17:00	1	1813	0.772	1	1813	1.213	1	1813	1.985
17:00 - 18:00	1	1813	0.662	1	1813	1.103	1	1813	1.765
18:00 - 19:00	1	1813	0.827	1	1813	0.883	1	1813	1.710
19:00 - 20:00	1	1813	0.496	1	1813	1.048	1	1813	1.544
20:00 - 21:00	1	1813	0.552	1	1813	0.938	1	1813	1.490
21:00 - 22:00	1	1813	0.221	1	1813	0.662	1	1813	0.883
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			12.466			12.246			24.712

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	1813 - 1813 (units: sqm)
Survey date date range:	01/01/15 - 15/06/22
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	8

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

ARUP 13 FITZROY STREET LONDON Licence No: 701001

Calculation Reference: AUDIT-701001-231215-1234

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : A - FOOD SUPERSTORE
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	RD	RICHMOND	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 3175 to 3175 (units: sqm)
Range Selected by User: 820 to 9394 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 15/06/22

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:
Saturday 1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual count 1 days
Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:
Town Centre 1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:
High Street 1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:
Servicing vehicles Included 1 days - Selected
Servicing vehicles Excluded X days - Selected

Secondary Filtering selection:

Use Class:
E(a) 1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included
Population within 1 mile:
25,001 to 50,000 1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Secondary Filtering selection (Cont.):

Population within 5 miles:
500,001 or More 1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:
0.6 to 1.0 1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Petrol filling station:
PFS is present at the site and is included in the count 0 days
PFS is present at the site but is excluded from the count 0 days
There is no PFS at the site 1 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:
No 1 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:
6a Excellent 1 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	RD-01-A-01 SHEEN ROAD RICHMOND	WAITROSE	RICHMOND

Town Centre
High Street
Total Gross floor area: 3175 sqm
Survey date: SATURDAY *02/07/16* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 01 - RETAIL/A - FOOD SUPERSTORE
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 4.77

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	3175	0.693	1	3175	0.126	1	3175	0.819
08:00 - 09:00	1	3175	2.047	1	3175	0.819	1	3175	2.866
09:00 - 10:00	1	3175	3.780	1	3175	2.394	1	3175	6.174
10:00 - 11:00	1	3175	4.724	1	3175	3.087	1	3175	7.811
11:00 - 12:00	1	3175	5.827	1	3175	5.291	1	3175	11.118
12:00 - 13:00	1	3175	4.283	1	3175	4.913	1	3175	9.196
13:00 - 14:00	1	3175	4.535	1	3175	3.969	1	3175	8.504
14:00 - 15:00	1	3175	4.031	1	3175	4.031	1	3175	8.062
15:00 - 16:00	1	3175	4.787	1	3175	4.283	1	3175	9.070
16:00 - 17:00	1	3175	3.276	1	3175	4.756	1	3175	8.032
17:00 - 18:00	1	3175	2.488	1	3175	3.874	1	3175	6.362
18:00 - 19:00	1	3175	1.701	1	3175	3.150	1	3175	4.851
19:00 - 20:00	1	3175	1.354	1	3175	2.488	1	3175	3.842
20:00 - 21:00	1	3175	0.693	1	3175	0.819	1	3175	1.512
21:00 - 22:00	1	3175	0.094	1	3175	0.346	1	3175	0.440
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			44.313			44.346			88.659

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	3175 - 3175 (units: sqm)
Survey date date range:	01/01/15 - 15/06/22
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	1
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix H

Modelling outputs

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.2.1574

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: Site Access Junction.j10
Path: J:\294000\294516-00 Uxbridge Site\4 Internal Project Data\4-10 Traffic Modelling\Site Access
Report generation date: 18/12/2023 18:33:19

Summary of junction performance

	AM					PM					Sat				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2023 Survey														
Stream B-AC	D1	0.0	0.00	0.00	A	D2	0.0	7.18	0.04	A	D3	0.0	6.52	0.03	A
Stream C-AB		0.0	6.79	0.02	A		0.0	6.46	0.01	A		0.0	6.39	0.03	A
	Survey + Wickes & Halfords														
Stream B-AC	D4	0.1	8.80	0.08	A	D5	0.1	8.81	0.10	A	D6	0.1	8.31	0.13	A
Stream C-AB		0.0	6.88	0.03	A		0.0	6.63	0.03	A		0.1	6.52	0.05	A
	Survey + Development														
Stream B-AC	D7	0.1	8.89	0.08	A	D8	0.2	9.46	0.15	A	D9	0.6	11.78	0.36	B
Stream C-AB		0.1	7.12	0.06	A		0.1	6.82	0.05	A		0.1	7.30	0.13	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

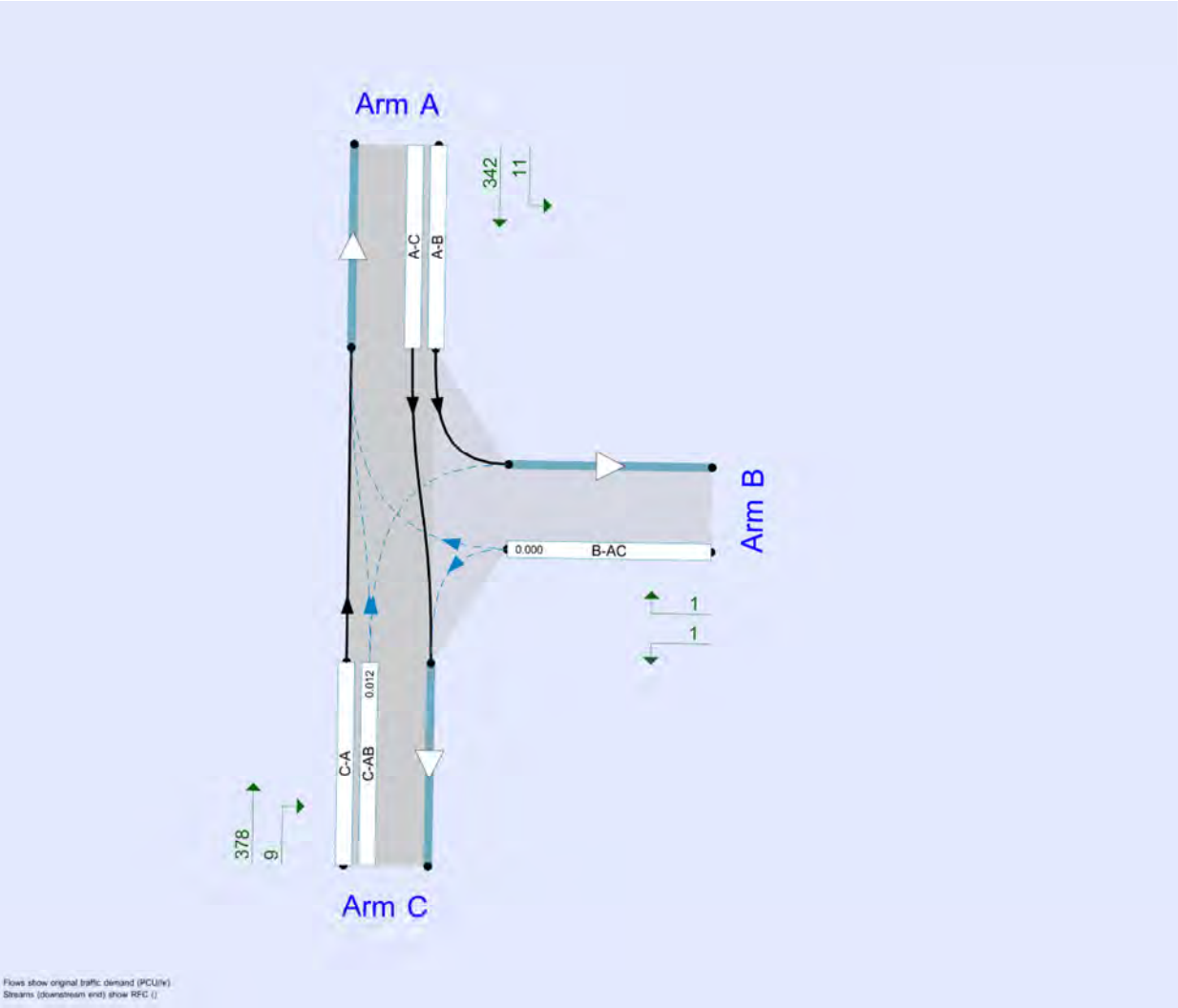
File summary

File Description

Title	Harefield Road, Uxbridge
Location	Harefield Road / Site Access Junction
Site number	
Date	18/12/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	294516-00
Enumerator	GLOBAL\Duncan.Lawrence
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2023 Survey	AM	ONE HOUR	07:45	09:15		15
D2	2023 Survey	PM	ONE HOUR	16:30	18:00		15
D3	2023 Survey	Sat	FLAT	12:45	14:15	90	15
D4	Survey + Wickes & Halfords	AM	ONE HOUR	07:45	09:15		15
D5	Survey + Wickes & Halfords	PM	ONE HOUR	16:30	18:00		15
D6	Survey + Wickes & Halfords	Sat	FLAT	12:45	14:15	90	15
D7	Survey + Development	AM	ONE HOUR	07:45	09:15		15
D8	Survey + Development	PM	ONE HOUR	16:30	18:00		15
D9	Survey + Development	Sat	FLAT	12:45	14:15	90	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2023 Survey, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harefield Road / Site Access Junction	T-Junction	Two-way	Two-way	Two-way		0.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.08	A

Arms

Arms

Arm	Name	Description	Arm type
A	Harefield Road (North)		Major
B	Site Access		Minor
C	Harefield Road (South)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.40		✓	2.40	80.0	✓	4.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.60	25	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	528	0.094	0.239	0.150	0.341
B-C	678	0.102	0.258	-	-
C-B	634	0.241	0.241	-	-

The slopes and intercepts shown above include custom intercept adjustments only.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	353	100.000
B			2	100.000

		✓		
C		✓	387	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	11	342
	B	1	0	1
	C	378	9	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	0	0	0
	C	5	0	0

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (PCU/hr)	Demand in PCU (PCU/hr)
A	07:45-08:00	266	266
	08:00-08:15	318	318
	08:15-08:30	389	389
	08:30-08:45	389	389
	08:45-09:00	318	318
	09:00-09:15	266	266
B	07:45-08:00	0	0
	08:00-08:15	0	0
	08:15-08:30	0	0
	08:30-08:45	0	0
	08:45-09:00	0	0
	09:00-09:15	0	0
C	07:45-08:00	291	291
	08:00-08:15	348	348
	08:15-08:30	426	426
	08:30-08:45	426	426
	08:45-09:00	348	348
	09:00-09:15	291	291

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.02	6.79	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	7	570	0.012	7	0.0	6.395	A

C-A	285			285			
A-B	8			8			
A-C	258			258			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	479	0.000	0	0.0	0.000	A
C-AB	8	557	0.015	8	0.0	6.555	A
C-A	340			340			
A-B	10			10			
A-C	308			308			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	452	0.000	0	0.0	0.000	A
C-AB	10	540	0.018	10	0.0	6.790	A
C-A	416			416			
A-B	12			12			
A-C	377			377			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	452	0.000	0	0.0	0.000	A
C-AB	10	540	0.018	10	0.0	6.790	A
C-A	416			416			
A-B	12			12			
A-C	377			377			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	479	0.000	0	0.0	0.000	A
C-AB	8	557	0.015	8	0.0	6.555	A
C-A	340			340			
A-B	10			10			
A-C	308			308			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	7	570	0.012	7	0.0	6.397	A
C-A	285			285			
A-B	8			8			
A-C	258			258			

2023 Survey, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harefield Road / Site Access Junction	T-Junction	Two-way	Two-way	Two-way		0.22	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.22	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Survey	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	276	100.000
B		✓	18	100.000
C		✓	396	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	1	275
	B	5	0	13
	C	393	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	7	0	0

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (PCU/hr)	Demand in PCU (PCU/hr)
A	16:30-16:45	208	208
	16:45-17:00	248	248
	17:00-17:15	304	304
	17:15-17:30	304	304

	17:30-17:45	248	248
	17:45-18:00	208	208
B	16:30-16:45	14	14
	16:45-17:00	16	16
	17:00-17:15	20	20
	17:15-17:30	20	20
	17:30-17:45	16	16
	17:45-18:00	14	14
C	16:30-16:45	298	298
	16:45-17:00	356	356
	17:00-17:15	436	436
	17:15-17:30	436	436
	17:30-17:45	356	356
	17:45-18:00	298	298

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.04	7.18	0.0	A
C-AB	0.01	6.46	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	556	0.024	13	0.0	6.632	A
C-AB	2	584	0.004	2	0.0	6.191	A
C-A	296			296			
A-B	0.75			0.75			
A-C	207			207			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	16	542	0.030	16	0.0	6.848	A
C-AB	3	574	0.005	3	0.0	6.301	A
C-A	354			354			
A-B	0.90			0.90			
A-C	247			247			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	20	521	0.038	20	0.0	7.175	A
C-AB	3	560	0.006	3	0.0	6.461	A
C-A	433			433			
A-B	1			1			
A-C	303			303			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	20	521	0.038	20	0.0	7.175	A
C-AB	3	560	0.006	3	0.0	6.461	A
C-A	433			433			
A-B	1			1			
A-C	303			303			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-AC	16	542	0.030	16	0.0	6.852	A
C-AB	3	574	0.005	3	0.0	6.304	A
C-A	354			354			
A-B	0.90			0.90			
A-C	247			247			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	556	0.024	14	0.0	6.633	A
C-AB	2	584	0.004	2	0.0	6.191	A
C-A	296			296			
A-B	0.75			0.75			
A-C	207			207			

2023 Survey, Sat

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harefield Road / Site Access Junction	T-Junction	Two-way	Two-way	Two-way		0.47	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.47	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2023 Survey	Sat	FLAT	12:45	14:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	220	100.000
B		✓	20	100.000
C		✓	287	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	9	211
	B	4	0	16
	C	269	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	0	0	0
	C	3	0	0

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (PCU/hr)	Demand in PCU (PCU/hr)
A	12:45-13:00	220	220
	13:00-13:15	220	220
	13:15-13:30	220	220
	13:30-13:45	220	220

	13:45-14:00	220	220
	14:00-14:15	220	220
B	12:45-13:00	20	20
	13:00-13:15	20	20
	13:15-13:30	20	20
	13:30-13:45	20	20
	13:45-14:00	20	20
	14:00-14:15	20	20
C	12:45-13:00	287	287
	13:00-13:15	287	287
	13:15-13:30	287	287
	13:30-13:45	287	287
	13:45-14:00	287	287
	14:00-14:15	287	287

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.03	6.52	0.0	A
C-AB	0.03	6.39	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	20	572	0.035	20	0.0	6.522	A
C-AB	18	581	0.031	18	0.0	6.392	A
C-A	269			269			
A-B	9			9			
A-C	211			211			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	20	572	0.035	20	0.0	6.525	A
C-AB	18	581	0.031	18	0.0	6.395	A
C-A	269			269			
A-B	9			9			
A-C	211			211			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	20	572	0.035	20	0.0	6.525	A
C-AB	18	581	0.031	18	0.0	6.395	A
C-A	269			269			
A-B	9			9			
A-C	211			211			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	20	572	0.035	20	0.0	6.525	A
C-AB	18	581	0.031	18	0.0	6.395	A
C-A	269			269			
A-B	9			9			
A-C	211			211			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-AC	20	572	0.035	20	0.0	6.525	A
C-AB	18	581	0.031	18	0.0	6.395	A
C-A	269			269			
A-B	9			9			
A-C	211			211			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	20	572	0.035	20	0.0	6.525	A
C-AB	18	581	0.031	18	0.0	6.395	A
C-A	269			269			
A-B	9			9			
A-C	211			211			

Survey + Wickes & Halfords, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harefield Road / Site Access Junction	T-Junction	Two-way	Two-way	Two-way		0.52	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.52	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	Survey + Wickes & Halfords	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	350	100.000
B		✓	33	100.000
C		✓	383	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	20	330
	B	18	0	15
	C	367	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	0	0	0
	C	5	0	0

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (PCU/hr)	Demand in PCU (PCU/hr)
A	07:45-08:00	263	263
	08:00-08:15	315	315
	08:15-08:30	385	385
	08:30-08:45	385	385

	08:45-09:00	315	315
	09:00-09:15	263	263
B	07:45-08:00	25	25
	08:00-08:15	30	30
	08:15-08:30	36	36
	08:30-08:45	36	36
	08:45-09:00	30	30
	09:00-09:15	25	25
C	07:45-08:00	288	288
	08:00-08:15	344	344
	08:15-08:30	422	422
	08:30-08:45	422	422
	08:45-09:00	344	344
	09:00-09:15	288	288

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.08	8.80	0.1	A
C-AB	0.03	6.88	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	491	0.051	25	0.1	7.714	A
C-AB	12	570	0.021	12	0.0	6.448	A
C-A	276			276			
A-B	15			15			
A-C	248			248			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	30	472	0.063	30	0.1	8.137	A
C-AB	14	558	0.026	14	0.0	6.623	A
C-A	330			330			
A-B	18			18			
A-C	297			297			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	445	0.082	36	0.1	8.800	A
C-AB	18	541	0.033	18	0.0	6.879	A
C-A	404			404			
A-B	22			22			
A-C	363			363			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	445	0.082	36	0.1	8.804	A
C-AB	18	541	0.033	18	0.0	6.879	A
C-A	404			404			
A-B	22			22			
A-C	363			363			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-AC	30	472	0.063	30	0.1	8.143	A
C-AB	14	558	0.026	14	0.0	6.626	A
C-A	330			330			
A-B	18			18			
A-C	297			297			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	491	0.051	25	0.1	7.724	A
C-AB	12	570	0.021	12	0.0	6.451	A
C-A	276			276			
A-B	15			15			
A-C	248			248			

Survey + Wickes & Halfords, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harefield Road / Site Access Junction	T-Junction	Two-way	Two-way	Two-way		0.62	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.62	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	Survey + Wickes & Halfords	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	283	100.000
B		✓	40	100.000
C		✓	396	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	21	262
	B	24	0	16
	C	382	14	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	7	0	0

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (PCU/hr)	Demand in PCU (PCU/hr)
A	16:30-16:45	213	213
	16:45-17:00	254	254
	17:00-17:15	312	312
	17:15-17:30	312	312

	17:30-17:45	254	254
	17:45-18:00	213	213
B	16:30-16:45	30	30
	16:45-17:00	36	36
	17:00-17:15	44	44
	17:15-17:30	44	44
	17:30-17:45	36	36
	17:45-18:00	30	30
C	16:30-16:45	298	298
	16:45-17:00	356	356
	17:00-17:15	436	436
	17:15-17:30	436	436
	17:30-17:45	356	356
	17:45-18:00	298	298

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.10	8.81	0.1	A
C-AB	0.03	6.63	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	30	493	0.061	30	0.1	7.762	A
C-AB	11	582	0.018	10	0.0	6.294	A
C-A	288			288			
A-B	16			16			
A-C	197			197			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	476	0.075	36	0.1	8.173	A
C-AB	13	572	0.022	13	0.0	6.429	A
C-A	343			343			
A-B	19			19			
A-C	236			236			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	452	0.097	44	0.1	8.811	A
C-AB	15	559	0.028	15	0.0	6.626	A
C-A	421			421			
A-B	23			23			
A-C	288			288			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	452	0.097	44	0.1	8.814	A
C-AB	15	559	0.028	15	0.0	6.626	A
C-A	421			421			
A-B	23			23			
A-C	288			288			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-AC	36	476	0.076	36	0.1	8.180	A
C-AB	13	572	0.022	13	0.0	6.432	A
C-A	343			343			
A-B	19			19			
A-C	236			236			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	30	493	0.061	30	0.1	7.774	A
C-AB	11	582	0.018	11	0.0	6.297	A
C-A	288			288			
A-B	16			16			
A-C	197			197			

Survey + Wickes & Halfords, Sat

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harefield Road / Site Access Junction	T-Junction	Two-way	Two-way	Two-way		1.25	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.25	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D6	Survey + Wickes & Halfords	Sat	FLAT	12:45	14:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	224	100.000
B		✓	62	100.000
C		✓	273	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	41	183
	B	37	0	25
	C	245	28	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	0	0	0
	C	3	0	0

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (PCU/hr)	Demand in PCU (PCU/hr)
A	12:45-13:00	224	224
	13:00-13:15	224	224
	13:15-13:30	224	224
	13:30-13:45	224	224

	13:45-14:00	224	224
	14:00-14:15	224	224
B	12:45-13:00	62	62
	13:00-13:15	62	62
	13:15-13:30	62	62
	13:30-13:45	62	62
	13:45-14:00	62	62
	14:00-14:15	62	62
C	12:45-13:00	273	273
	13:00-13:15	273	273
	13:15-13:30	273	273
	13:30-13:45	273	273
	13:45-14:00	273	273
	14:00-14:15	273	273

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.13	8.31	0.1	A
C-AB	0.05	6.52	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	495	0.125	61	0.1	8.285	A
C-AB	28	580	0.048	28	0.1	6.521	A
C-A	245			245			
A-B	41			41			
A-C	183			183			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	495	0.125	62	0.1	8.307	A
C-AB	28	580	0.048	28	0.1	6.523	A
C-A	245			245			
A-B	41			41			
A-C	183			183			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	495	0.125	62	0.1	8.307	A
C-AB	28	580	0.048	28	0.1	6.523	A
C-A	245			245			
A-B	41			41			
A-C	183			183			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	495	0.125	62	0.1	8.307	A
C-AB	28	580	0.048	28	0.1	6.523	A
C-A	245			245			
A-B	41			41			
A-C	183			183			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-AC	62	495	0.125	62	0.1	8.307	A
C-AB	28	580	0.048	28	0.1	6.523	A
C-A	245			245			
A-B	41			41			
A-C	183			183			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	495	0.125	62	0.1	8.307	A
C-AB	28	580	0.048	28	0.1	6.523	A
C-A	245			245			
A-B	41			41			
A-C	183			183			

Survey + Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harefield Road / Site Access Junction	T-Junction	Two-way	Two-way	Two-way		0.64	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.64	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	Survey + Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	362	100.000
B		✓	33	100.000
C		✓	392	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	36	326
	B	18	0	15
	C	363	29	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	0	0	0
	C	5	0	0

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (PCU/hr)	Demand in PCU (PCU/hr)
A	07:45-08:00	273	273
	08:00-08:15	325	325
	08:15-08:30	399	399
	08:30-08:45	399	399

	08:45-09:00	325	325
	09:00-09:15	273	273
B	07:45-08:00	25	25
	08:00-08:15	30	30
	08:15-08:30	36	36
	08:30-08:45	36	36
	08:45-09:00	30	30
	09:00-09:15	25	25
C	07:45-08:00	295	295
	08:00-08:15	352	352
	08:15-08:30	432	432
	08:30-08:45	432	432
	08:45-09:00	352	352
	09:00-09:15	295	295

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.08	8.89	0.1	A
C-AB	0.06	7.12	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	489	0.051	25	0.1	7.757	A
C-AB	22	568	0.038	22	0.0	6.587	A
C-A	273			273			
A-B	27			27			
A-C	245			245			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	30	469	0.063	30	0.1	8.195	A
C-AB	26	555	0.047	26	0.0	6.801	A
C-A	326			326			
A-B	32			32			
A-C	293			293			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	441	0.082	36	0.1	8.887	A
C-AB	32	538	0.059	32	0.1	7.117	A
C-A	400			400			
A-B	40			40			
A-C	359			359			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	441	0.082	36	0.1	8.890	A
C-AB	32	538	0.059	32	0.1	7.117	A
C-A	400			400			
A-B	40			40			
A-C	359			359			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-AC	30	469	0.063	30	0.1	8.202	A
C-AB	26	555	0.047	26	0.0	6.805	A
C-A	326			326			
A-B	32			32			
A-C	293			293			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	488	0.051	25	0.1	7.766	A
C-AB	22	568	0.038	22	0.0	6.591	A
C-A	273			273			
A-B	27			27			
A-C	245			245			

Survey + Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harefield Road / Site Access Junction	T-Junction	Two-way	Two-way	Two-way		0.98	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.98	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	Survey + Development	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	295	100.000
B		✓	61	100.000
C		✓	403	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	38	257
	B	37	0	24
	C	378	25	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	7	0	0

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (PCU/hr)	Demand in PCU (PCU/hr)
A	16:30-16:45	222	222
	16:45-17:00	265	265
	17:00-17:15	325	325
	17:15-17:30	325	325

	17:30-17:45	265	265
	17:45-18:00	222	222
B	16:30-16:45	46	46
	16:45-17:00	55	55
	17:00-17:15	67	67
	17:15-17:30	67	67
	17:30-17:45	55	55
	17:45-18:00	46	46
C	16:30-16:45	303	303
	16:45-17:00	362	362
	17:00-17:15	444	444
	17:15-17:30	444	444
	17:30-17:45	362	362
	17:45-18:00	303	303

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.15	9.46	0.2	A
C-AB	0.05	6.82	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	46	490	0.094	46	0.1	8.090	A
C-AB	19	580	0.032	19	0.0	6.409	A
C-A	285			285			
A-B	29			29			
A-C	193			193			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	55	472	0.116	55	0.1	8.616	A
C-AB	22	570	0.039	22	0.0	6.576	A
C-A	340			340			
A-B	34			34			
A-C	231			231			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	448	0.150	67	0.2	9.448	A
C-AB	28	555	0.050	27	0.1	6.818	A
C-A	416			416			
A-B	42			42			
A-C	283			283			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	448	0.150	67	0.2	9.456	A
C-AB	28	555	0.050	28	0.1	6.818	A
C-A	416			416			
A-B	42			42			
A-C	283			283			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-AC	55	472	0.116	55	0.1	8.627	A
C-AB	22	570	0.039	23	0.0	6.580	A
C-A	340			340			
A-B	34			34			
A-C	231			231			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	46	490	0.094	46	0.1	8.109	A
C-AB	19	580	0.032	19	0.0	6.415	A
C-A	285			285			
A-B	29			29			
A-C	193			193			

Survey + Development, Sat

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harefield Road / Site Access Junction	T-Junction	Two-way	Two-way	Two-way		3.37	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.37	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D9	Survey + Development	Sat	FLAT	12:45	14:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	282	100.000
B		✓	174	100.000
C		✓	310	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	108	174
	B	104	0	70
	C	237	73	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	0	0	0
	C	3	0	0

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (PCU/hr)	Demand in PCU (PCU/hr)
A	12:45-13:00	282	282
	13:00-13:15	282	282
	13:15-13:30	282	282
	13:30-13:45	282	282

	13:45-14:00	282	282
	14:00-14:15	282	282
B	12:45-13:00	174	174
	13:00-13:15	174	174
	13:15-13:30	174	174
	13:30-13:45	174	174
	13:45-14:00	174	174
	14:00-14:15	174	174
C	12:45-13:00	310	310
	13:00-13:15	310	310
	13:15-13:30	310	310
	13:30-13:45	310	310
	13:45-14:00	310	310
	14:00-14:15	310	310

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.36	11.78	0.6	B
C-AB	0.13	7.30	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	174	480	0.363	172	0.6	11.610	B
C-AB	73	566	0.129	72	0.1	7.285	A
C-A	237			237			
A-B	108			108			
A-C	174			174			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	174	480	0.363	174	0.6	11.779	B
C-AB	73	566	0.129	73	0.1	7.304	A
C-A	237			237			
A-B	108			108			
A-C	174			174			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	174	480	0.363	174	0.6	11.782	B
C-AB	73	566	0.129	73	0.1	7.304	A
C-A	237			237			
A-B	108			108			
A-C	174			174			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	174	480	0.363	174	0.6	11.782	B
C-AB	73	566	0.129	73	0.1	7.304	A
C-A	237			237			
A-B	108			108			
A-C	174			174			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-AC	174	480	0.363	174	0.6	11.782	B
C-AB	73	566	0.129	73	0.1	7.304	A
C-A	237			237			
A-B	108			108			
A-C	174			174			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	174	480	0.363	174	0.6	11.782	B
C-AB	73	566	0.129	73	0.1	7.304	A
C-A	237			237			
A-B	108			108			
A-C	174			174			