

Appendix S – Traffic Growth

REPORT

Traffic Growth

Homebase and Tesco Osterley Development Sites,
London Borough of Hounslow

Client: Berkeley Homes Limited

Reference: PB9144-RHD-ZZ-XX-RP-R-0023

Status: Final/P01.01

Date: 04 May 2020



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Project-related



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1 Introduction

1.1.1 Royal HaskoningDHV (RHDHV) has been commissioned by St Edward Homes Ltd to prepare a Technical Note (TN) that presents the anticipated level of background traffic growth on the highway network adjacent to development sites at Tesco, Osterley and Homebase, Syon Lane. The development site locations are illustrated in **Insert 1.1** below.

Insert 1.1: Homebase and Tesco Development Sites



1.1.2 This TN has been prepared to support Stage 5 of the VISSIM Model Audit Process (VAMP) which will be undertaken to establish the traffic impacts of the development proposals on the local highway network.

1.1.3 Traffic growth would be applied to surveyed traffic flows on the A4 (Great West Road) and Syon Lane as part of 'future base' and 'future development' traffic model scenarios. The resultant traffic flows are to be input into a VISSIM model which will assess highway operation for the design year 2031.

1.1.4 This assessment of background traffic growth has been undertaken following a review of traffic demand associated with locally committed development sites and a review of traffic growth data provided by Transport for London (TfL), generated by their strategic London Highway Assignment Model (LoHAM) model.

2 Scope of VISSIM Model

2.1.1 The VISSIM model covers an area between Osterley and Brentford, and its boundaries are generally the Osterley Tesco Extra Superstore to the north, Spur Road to the south, Wood Lane to the west and Harlequin Avenue to the east. The VISSIM model study area includes the following junctions:

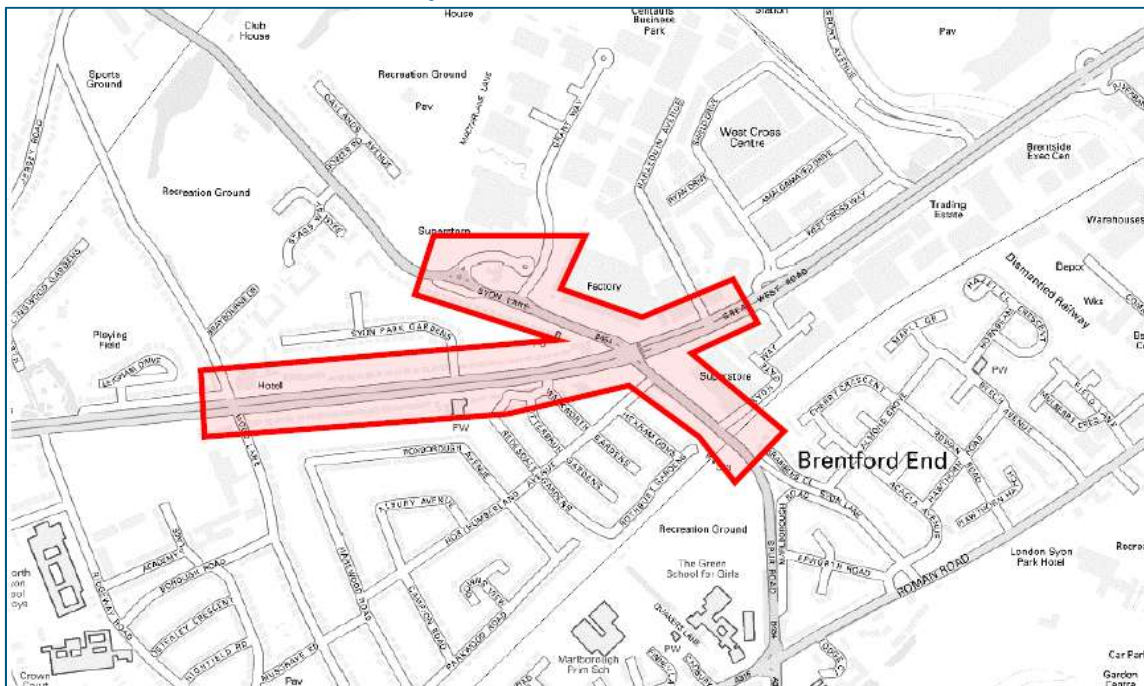
- Junction 02-013 – A4 Great West Road - B454 Syon Lane
- Junction 02-287 – A4 Great West Road - B454 Syon Lane Exit Westbound
- Junction 02-286 – A4 Great West Road – Harlequin Avenue

- Junction 02-287 – A4 Great West Road - Harlequin Avenue Westbound Exit Peds
- Junction 01-156 – Syon Lane by Northumberland Avenue Southbound
- Junction 01-157 – Syon Lane by Northumberland Avenue Northbound
- Junction 02-014 – A4 Great West Road – Wood Lane.

Junction 02-014 is not part of the model but has been included at the request of TfL to provide the correct arrival pattern of vehicles on the eastbound approach of junction 02/013.

2.1.2 The model extent can be seen in **Insert 1.2** within the red line boundary.

Insert 1.2: VISSIM Model Boundary



2.1.3 This TN will consider the potential for traffic growth to take place within the VISSIM model area, for the A4 (Great West Road) and Syon Lane, both north and south of the A4.

3 Committed Development Sites

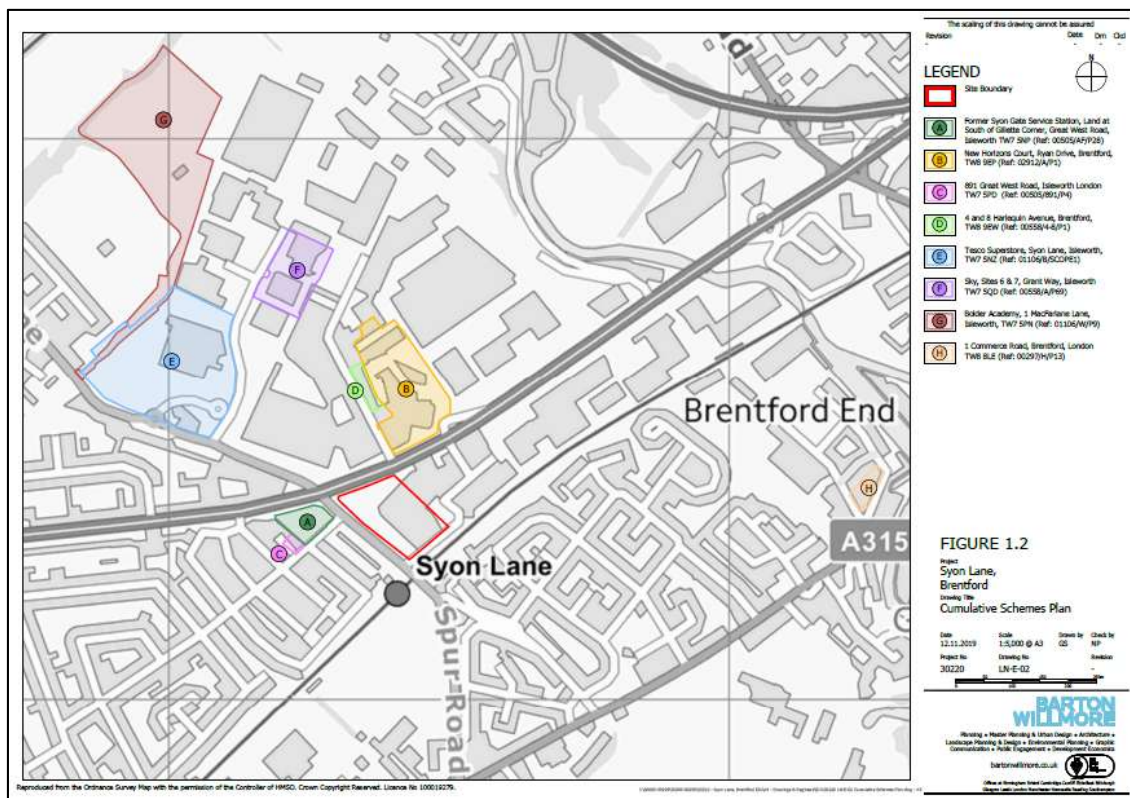
3.1.1 The London Borough of Hounslow (LBH) has advised on the committed development sites to be included in this assessment. The committed development sites that LBH have requested are included in the assessment are listed below.

- Former Syon Gate Service Station, Land at South of Gillette Corner, Great West Road, Isleworth TW7 5NP (Planning ref: 00505/AF/P28)
- New Horizons Court, Ryan Drive, Brentford, TW8 9EP (Planning ref: 02912/A/P1)
- 891 Great West Road, Isleworth London, TW7 5PD (Planning ref: 00505/891/P4)
- 4 and 8 Harlequin Avenue, Brentford, TW8 9EW (Planning ref: 00558/4-8/P1)
- Tesco Superstore, Syon Lane, Isleworth, TW7 5NZ (Planning ref: 01106/B/SCOPE1)
- Sky, Sites 6 & 7, Grant Way, Isleworth, TW7 5QD (Planning ref: 00558/A/P69)

- Bolder Academy, 1 MacFarlane Lane, Isleworth, TW7 5PN (Planning ref: 01106/W/P9)
- 1 Commerce Road, Brentford, London, TW8 8LE (Planning ref: 00297/H/P13)

3.1.2 For each committed development site, the associated planning application documentation has been reviewed and the associated traffic demand data extracted. This has been undertaken so that the associated traffic movements can be considered as part of the assessment of future traffic conditions on the highway. **Insert 1.3** below details the locations of the identified committed development sites.

Insert 1.3: Committed Development Sites



3.1.3 It is noted that the list of committed development sites includes Tesco, Osterley, for which no planning application has yet been submitted. This report will inform the planning application for the Tesco, Osterley site.

3.1.4 It should also be noted that the list of committed development sites excludes Nishkam School, which is located to the north of the Tesco Osterley site and on the western side of Syon Lane. While this development is now operational, the school is not currently operating at its full capacity. The assessment of committed development traffic flows included in this document will consider the traffic attraction of the Nishkam school based on future anticipated pupil and staff numbers.

3.1.5 **Appendices 1 and 2** of this TN presents the predicted traffic generation rates of the identified committed development sites.

3.1.6 **Appendices 1 and 2** establish that the majority of the identified committed development sites are low car developments that would result in either no impact, or a minor traffic impact, on the local highway network.

- 3.1.7 The Appendices identify that for most of the development sites identified in **Insert 1.3** any associated traffic flow is unlikely to be perceptible to existing road users. The exception to this is future traffic flows associated with the Nishkam School and the proposed Bolder Academy School, which is to be developed on land accessed from McFarlane Lane. These development sites will result in some pupils and teaching staff arriving by car.
- 3.1.8 The Nishkam School is located to the west of Syon Lane, approximately 270 metres to the north of Tesco, Osterley. The school is not yet fully occupied and as part of the school's strategy for pupil access a 'Park and Stride' system is in operation. This means that the school allow parents to park in designated locations and walk the remaining part of their journey to school, as a means to avoid parents from parking or dropping children on the highway, in places that are not appropriate for this purpose. Currently, the Tesco Osterley car park is being used by Nishkam School parents for 'Park and Stride' purposes.
- 3.1.9 A survey of 'Park and Stride' movements at the Tesco Osterley car park identified 94 children arrive by car between the hours of 07:45 and 08:45, the highway network's morning peak traffic period.
- 3.1.10 The planning application submission for the Nishkam School identifies that when fully occupied it is expected that 107 children of primary school age and 84 pupils of secondary school age will Park and Stride to school – a total of 191 children¹. The Travel Plan for the school sets targets to reduce the Park and Stride travel demand to 96 pupils by Year 5 of site operation².
- 3.1.11 The proposed Bolder Academy school, to be located with access from MacFarlane Lane, will also operate a 'Park and Stride' policy as a means to avoid school parents from using MacFarlane Lane on a day to day basis. Given the location of the Tesco Osterley car park, it is anticipated that under base conditions all 'Park and Stride' trips associated with the Bolder Academy would use this facility.
- 3.1.12 Based on the data provided as part of the Bolder Academy school planning application it is anticipated that 178 of the school's 1150 pupils would Park and Stride³. The Travel Plan for the school sets targets to reduce car-borne travel and suggested that pupil arriving by car would reduce by circa 43% as a result of Travel Plan measures⁴.
- 3.1.13 Based on the planning documentation, Travel Plan targets for the Schools would be reached by 2031, and therefore the future 'Park and Stride' car trips assessed would be those that will result from the Travel Plans' implementation.
- 3.1.14 Park and Stride car tips associated with the Bolder Academy and Nishkam Schools are presented in **Appendices 3 and 4** of this TN, respectively.
- 3.1.15 It is understood that Tesco would not enter into an agreement with Nishkam School or the Bolder Academy to permit 'Park and Stride' trips to utilise their car park when they relocate to the Homebase site. It is therefore intended that all Park and Stride trips are directed to the garden centre car park, accessed from Windmill Lane. This trip distribution would be incorporated into any future VISSIM modelling,

¹ Sanderson Associates, *Transport Assessment, Addendum to the Technical Note, Table 27*

² Sanderson Associates, *Travel Plan (October 2015)*

³ Local Transport Projects, *Transport Assessment, Table 10 (March 2017)*

⁴ Local Transport Projects, *Travel Plan, Table 5 (July 2017)*

4 Transport for London LoHAM Model

- 4.1.1 The TfL LoHAM model provides predicted changes to traffic growth on the A4 and Syon Lane from 2012 to 2031.
- 4.1.2 Background traffic surveys were undertaken to support the Tesco, Osterley and Homebase Syon Lane projects in 2019, and therefore the theoretical traffic growth figures from the LoHAM model should not apply in full.
- 4.1.3 To assess traffic growth from 2019 to 2031 the LoHAM model data has been reviewed and traffic growth figures extrapolated to identify traffic growth, year on year, from 2012 to 2031. This assessment is provided in **Appendix 5**. Breaking down the LoHAM data in this way allows a growth rate from 2019 to 2031 to be calculated.
- 4.1.4 The LoHAM data provides different traffic growth rates for cars, taxis, light goods vehicles (LGV) and heavy goods vehicles. What is evident from the data is that overall, at the A4/Syon Lane (Gillette Corner) junction the LoHAM traffic model predicts an overall increase in traffic flow from 2019 to 2031. Within this overall traffic growth rate, the LoHAM model's rates vary by vehicle type, as follows:

Weekday AM Peak, 2019-2031

- Car, +3.0% traffic growth
- Taxi, -35.0% traffic growth
- LGV, +42.1% traffic growth
- HGV, +12.7% traffic growth
- Overall, +7.1% traffic growth

Weekday PM Peak, 2019-2031

- Car, -2.7% traffic growth
- Taxi, -7.5% traffic growth
- LGV, +37.9% traffic growth
- HGV, +18.6% traffic growth
- Overall, +1.7% traffic growth

5 Proposed Application of Traffic Growth rates to VISSIM Model

- 5.1.1 The LoHAM strategic traffic model assesses travel demand from destinations beyond the local highway and given the strategic nature of the A4 Great West Road, which will carry through traffic, the LoHAM traffic growth rates will be incorporated in the 2031 VISSIM model. In addition, traffic associated with 'Park and Stride' trips to the Nishkam and Bolder Academy schools will be applied to the 'future base' and 'future development' traffic scenarios, based on the traffic flows predicted following the implementation of their Travel Plans.
- 5.1.2 For the assessment, it will be assumed that all other 'committed development' traffic, including school staff trips, will have been catered for within the LoHAM traffic growth rates.
- 5.1.3 The LoHAM model splits traffic growth rates by vehicle type. Within the VISSIM model vehicle types are not split in the same way and it is therefore proposed that the LoHAM growth rates for cars, taxis and LGVs are combined to create a single growth rate suitable for application to the VISSIM model's 'cars/LGV' classification. This combined growth rate is calculated in **Tables 1.1** and **1.2** overleaf.

Table 1.1: Car/ Taxi and LGV, Combined Traffic Growth (2019-2031) – Weekday AM Peak

A4/Syon Lane Junction		Predicted Flows, 2019				Predicted Flows, 2031				Traffic Growth (cars, taxis, LGV)
From	To	Car	Taxi	LGV	Total	Car	Taxi	LGV	Total	
A4 (West)	Syon Lane (North)	89	0	4	93	96	0	7	104	11.1%
	A4 (East)	1044	18	150	1211	1000	6	207	1213	0.2%
	Syon Lane (South)	60	1	11	71	92	1	19	112	57.0%
Syon Lane (North)	A4 (East)	451	2	91	544	493	2	104	599	10.0%
	Syon Lane (South)	188	1	29	218	229	1	46	276	26.5%
	A4 (West)	34	0	3	37	46	0	6	52	42.6%
A4 (East)	Syon Lane (South)	184	0	22	206	129	0	14	143	-30.6%
	A4 (West)	1375	7	123	1505	1465	7	187	1658	10.2%
	Syon Lane (North)	183	3	27	213	221	3	43	267	25.2%
Syon Lane (South)	A4 (West)	46	1	4	51	44	1	4	49	-3.9%
	Syon Lane (North)	216	0	20	236	249	0	54	304	28.8%
	A4 (East)	325	4	24	353	255	3	31	288	-18.3%
Totals		4194	36	507	4738	4319	24	721	5064	6.9%

Table 1.2: Car/ Taxi and LGV, Combined Traffic Growth (2019-2031) – Weekday PM Peak

A4/Syon Lane Junction		Predicted Flows, 2019				Predicted Flows, 2031				Traffic Growth (cars, taxis, LGV)
From	To	Car	Taxi	LGV	Total	Car	Taxi	LGV	Total	
A4 (West)	Syon Lane (North)	72	0	1	74	85	0	5	90	22.1%
	A4 (East)	945	34	80	1059	921	30	112	1063	0.3%
	Syon Lane (South)	90	3	12	105	119	3	20	142	35.3%
Syon Lane (North)	A4 (East)	436	6	60	502	462	6	79	546	8.9%
	Syon Lane (South)	238	0	16	255	222	0	26	247	-2.8%
	A4 (West)	49	0	3	53	42	0	5	48	-8.5%
A4 (East)	Syon Lane (South)	188	1	22	212	145	1	23	170	-19.9%
	A4 (West)	1568	10	197	1775	1481	10	272	1763	-0.6%
	Syon Lane (North)	159	1	44	204	140	1	40	180	-11.7%
Syon Lane (South)	A4 (West)	107	0	13	120	123	0	18	141	17.9%
	Syon Lane (North)	250	1	35	286	268	1	64	333	16.7%
	A4 (East)	216	3	21	240	197	3	30	230	-4.1%
Totals		4319	60	504	4882	4204	55	695	4954	1.5%

5.1.4 Traffic growth would be applied, by turning movement, as identified by the TfL LoHAM model data. These individual growth rates are defined in Tables 1.1 and 1.2, above.

5.1.5 The VISSIM model considers traffic conditions on a:

- Weekday AM Peak traffic period;
- Weekday PM Peak traffic period;
- Saturday Peak traffic period;

5.1.6 The LoHAM model does not provide traffic growth data for a Saturday. It has previously been proposed that traffic generation rates for the proposed residential development are created by averaging the rates for the weekday AM and PM peak traffic periods as there is evidence that this methodology provides an appropriate estimate of Saturday residential traffic generation. For background traffic growth on a Saturday the same methodology will be applied. An average traffic growth rate will be taken from the Weekday AM and PM Peak LoHAM model data. This methodology would result in the following traffic growth rates for cars, taxis and LGVs.

Table 1.3: Car/ Taxi and LGV, Combined Traffic Growth (2019-2031) – Saturday Peak

A4/Syon Lane Junction		Predicted Flows, 2019				Predicted Flows, 2031				Traffic Growth (cars, taxis, LGV)
From	To	Car	Taxi	LGV	Total	Car	Taxi	LGV	Total	
A4 (West)	Syon Lane (North)	81	0	3	83	90	0	6	97	15.9%
	A4 (East)	994	26	115	1135	961	18	159	1138	0.2%
	Syon Lane (South)	75	2	11	88	106	2	19	127	44.1%
Syon Lane (North)	A4 (East)	443	4	76	523	477	4	91	572	9.5%
	Syon Lane (South)	213	0	23	236	226	0	36	262	10.7%
	A4 (West)	41	0	3	45	44	0	6	50	12.6%
A4 (East)	Syon Lane (South)	186	1	22	209	137	1	19	156	-25.2%
	A4 (West)	1472	8	160	1640	1473	8	229	1711	4.3%
	Syon Lane (North)	171	2	36	208	180	2	41	223	7.2%
Syon Lane (South)	A4 (West)	77	0	8	85	83	0	11	95	11.4%
	Syon Lane (North)	233	1	27	261	258	1	59	319	22.2%
	A4 (East)	271	4	22	296	226	3	31	259	-12.6%
Totals		4256	48	506	4810	4261	40	708	5009	4.1%

5.1.7 The average growth rates for heavy goods vehicles (HGVs) to be adopted on a Saturday (2019-2031) would be +14.6%.

5.1.8 No 'Park and Stride' traffic associated with local schools would be applied to the Saturday data.

6 Summary

- 6.1.1 Royal HaskoningDHV (RHDHV) has been commissioned by St Edward Homes Ltd to prepare a Technical Note (TN) that presents the anticipated level of background traffic growth on the highway network adjacent to development sites at Tesco, Osterley and Homebase, Syon Lane.
- 6.1.2 Traffic growth would be applied to the VISSIM traffic model being prepared to assess the traffic impact of the Tesco, Osterley and Homebase, Syon Lane. Development projects.
- 6.1.3 The London Borough of Hounslow (LBH) has identified local 'committed development' sites that could generate traffic movements prior to the Tesco Osterley and Homebase Syon Lane sites being developed and occupied. On review of the associated planning application submission documents, it is evident that these 'committed development' sites would not result in a material impact on the future operation of the local highway network. The exception to this is traffic associated with the Nishkam School and the Bolder Academy.
- 6.1.4 It is understood that Tesco would not enter into an agreement with Nishkam School or the Bolder Academy to permit 'Park and Stride' trips to utilise their car park when they relocate to the Homebase site. It is therefore intended that all Park and Stride trips are directed to the garden centre car park, accessed from Windmill Lane. This trip distribution would be incorporated into any future VISSIM modelling,
- 6.1.5 TfL's LoHAM model provides traffic growth data for the highway network to 2031. It is proposed to utilise the LoHAM traffic growth data, and it will be assumed that any traffic associated with the 'committed developments' defined by LBH is incorporated within the LoHAM predictions. The exception will be the application of school 'Park and Stride' trips that will be added to background flows in addition to the LoHAM traffic growth rates. For the assessment, it will be assumed that Park and Stride rates would be the target rates defined within the Travel Plan documents submitted as part of the relevant school planning submissions.

Appendix 1

Committed Development Traffic - Weekday AM Peak

Site Location: Access Self Storage Limited – Gillette South, 871 Great West Road

System Reference: P/2018/4691

Planning Reference: 00505/AF/P28

	All traffic
	HGV Only

Arrivals

14	1
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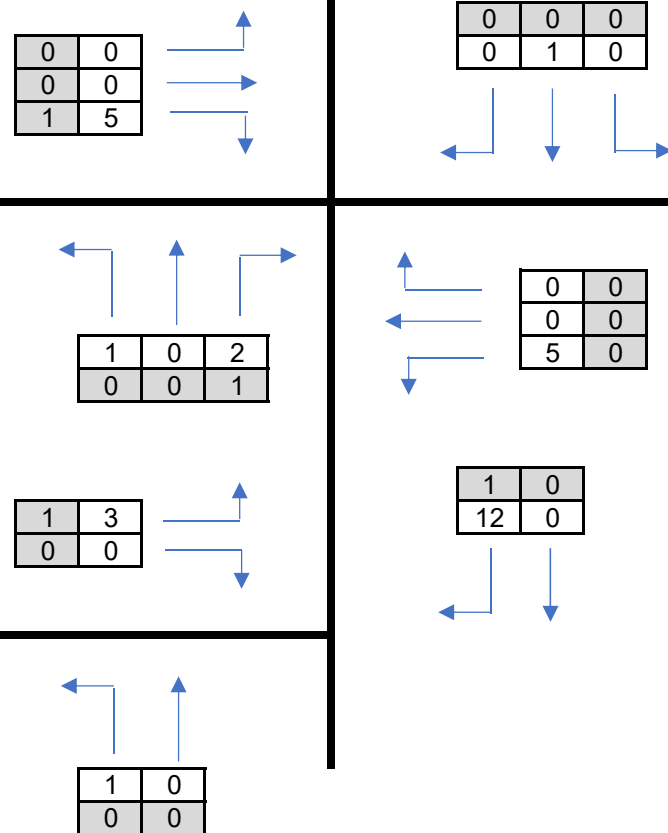
 Departures

4	1
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(TA traffic distribution)

A4 Great West Road

Northumberland Avenue



Committed Development Traffic - Weekday AM Peak

Site Location: New Horizons Court, Ryan Drive, Brentford, TW8 9EP

System Reference: P/2017/0535

Planning Reference: 02912/A/P1

All traffic
 HGV Only

Arrivals

9	0
1	0

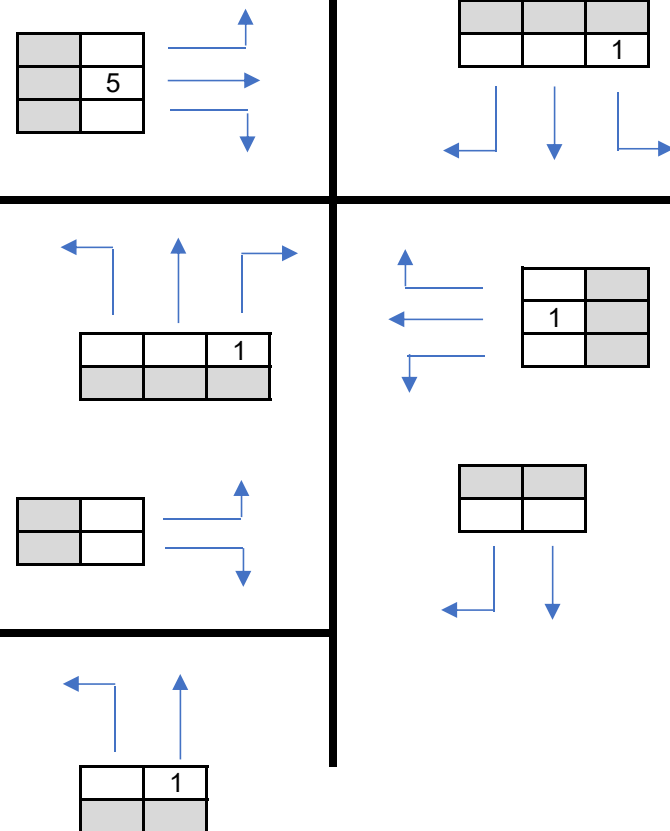
Departures

1	0
1	0

(assumed distribution - majority of trips route through Gillette Corner)

A4 Great West Road

Northumberland Avenue



Committed Development Traffic - Weekday AM Peak

Site Location: 891 Great West Road, Isleworth London, TW7 5PD

System Reference: P/2017/5069

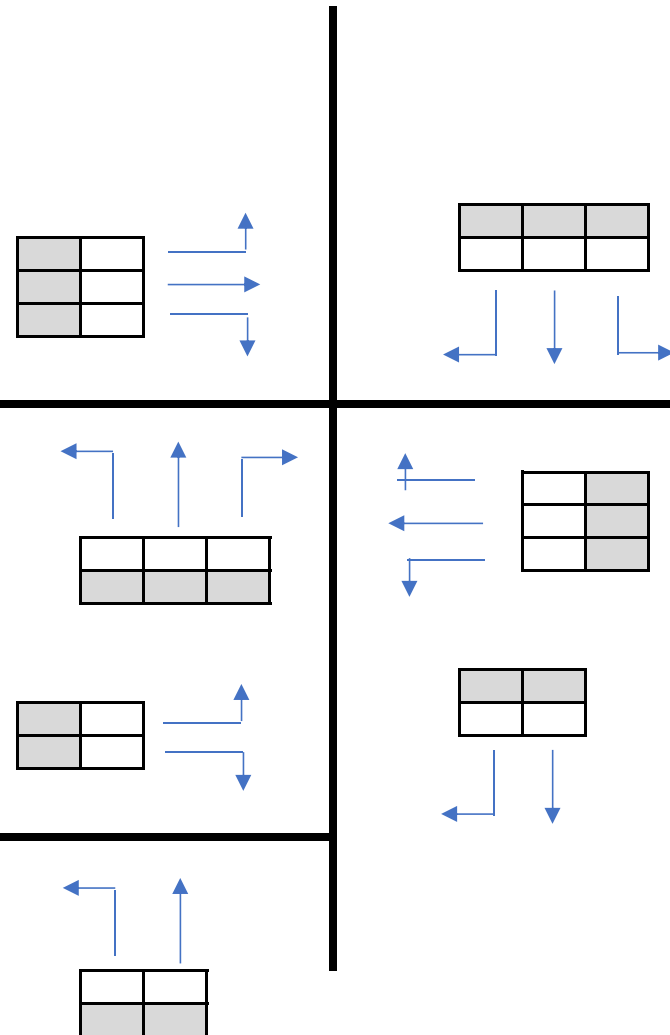
Planning Reference: 00505/891/P4 The proposed development is car free - Transport Statement states 0 vehicle movements in the AM peak

All traffic
 HGV Only

Arrivals	0	0
Departures	0	0

A4 Great West Road

Northumberland Avenue



Committed Development Traffic - Weekday AM Peak

Site Location: 4 and 8 Harlequin Avenue, Brentford, TW8 9EW

System Reference: P/2017/5358

Planning Reference: 00558/4-8/P1

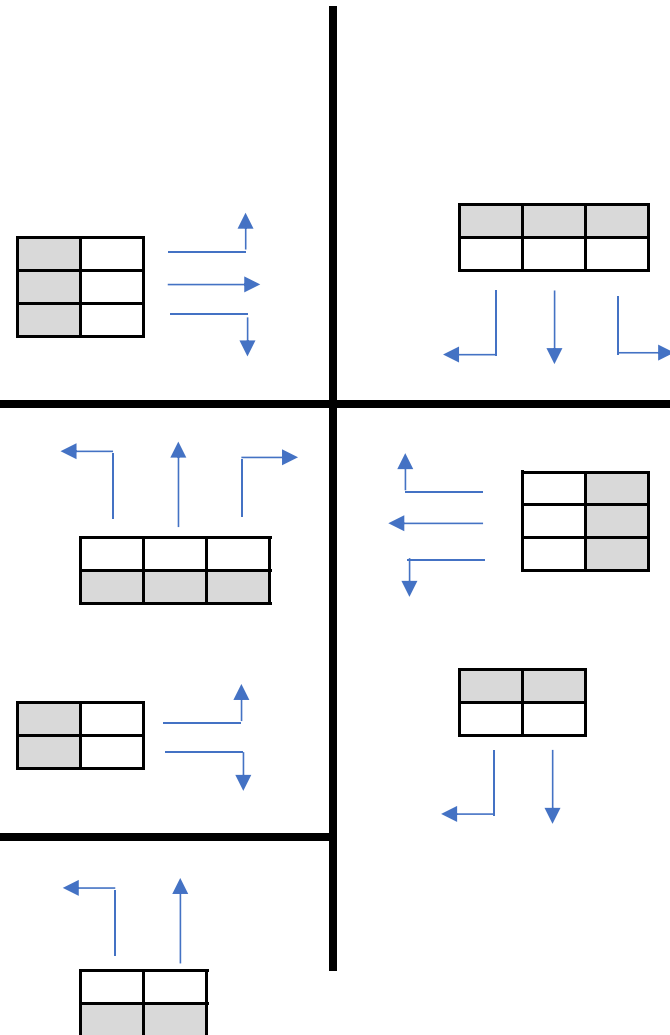
The number of on-site employees is not anticipated to increase as a result of the site, no increase in car parking

All traffic
 HGV Only

Arrivals	0	0
Departures	0	0

A4 Great West Road

Northumberland Avenue



Committed Development Traffic - Weekday AM Peak

Site Location: Sky, Sites 6 & 7, Grant Way, Isleworth, TW7 5QD

System Reference: P/2019/1931

Planning Reference: 00558/A/P69

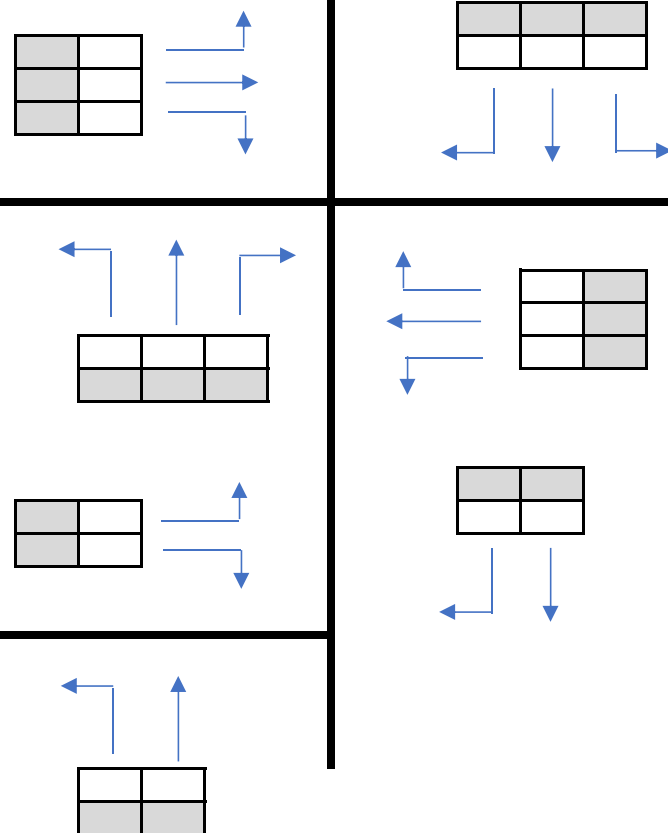
All traffic
 HGV Only

Arrivals	0	0
Departures	0	0

A4 Great West Road

NOTE: The Transport Assessment says "The Sky Lab will provide working space for up to 700 employees. The majority of employees who will be based within the building will be relocated from elsewhere within the Campus, including Sky 6 and 7 buildings that are to be demolished. As such, existing travel patterns are unlikely to change. There is not expected to be a significant net increase in employee or visitor trips."

Northumberland Avenue



Committed Development Traffic - Weekday AM Peak

Site Location: 1 Commerce Road, Brentford, London, TW8 8LE

System Reference: P/2018/2011

Planning Reference: 00297/H/P13

	All traffic
	HGV Only

Arrivals

0	0
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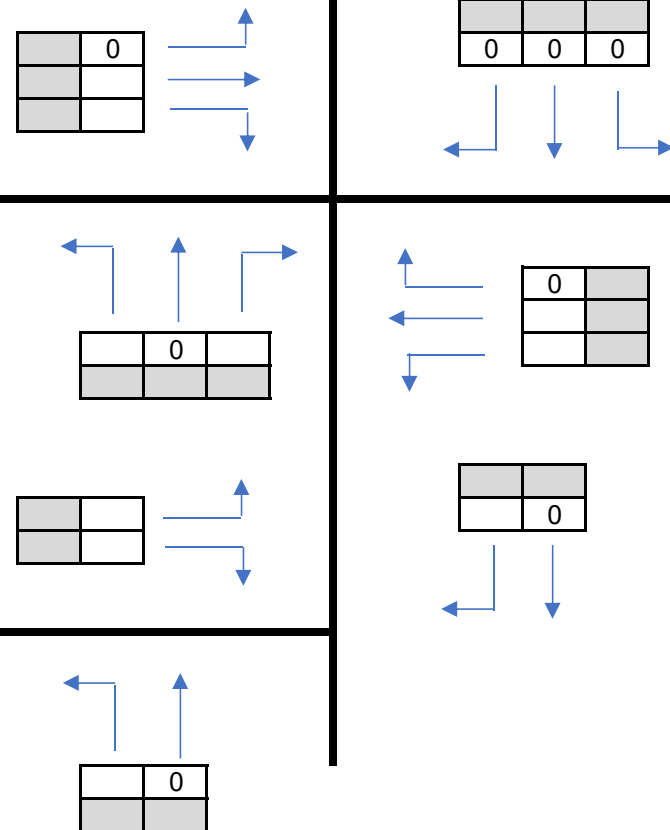
 Departures

0	0
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A4 Great West Road

NOTE: The Transport Assessment says, "there is a net reduction of both 21 vehicle movements during the morning peak and 14 during the evening peak. This will therefore result in the development being a betterment compared to that of the existing use as the highway network is at its most congested during these periods." Given the site's location, it is assumed that this development will have no impact on the operation of the Gillette Corner junction, or on Syon Lane.

Northumberland Avenue



Committed Development Traffic - Weekday AM Peak

Site Location: Bolder Academy, 1 MacFarlane Lane, Isleworth, TW7 5PN

System Reference: P/2017/1417

Planning Reference: 01106/W/P9

	All traffic
	HGV Only

Refer to Appendix C for full calculation

Arrivals

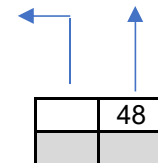
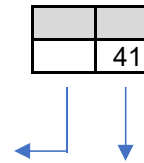
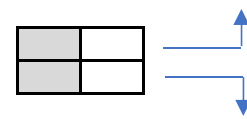
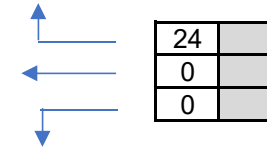
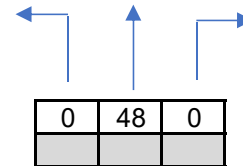
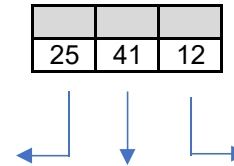
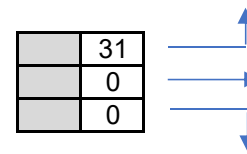
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 Departures

-	
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A4 Great West Road

Northumberland Avenue



Committed Development Traffic - Weekday AM Peak

Site Location: Nishkam School, Syon Lane

System Reference: P/2015/2516

Planning Reference: 01106/152/P3

	All traffic
	HGV Only

Refer to Appendix D for full calculation

Arrivals

-	-
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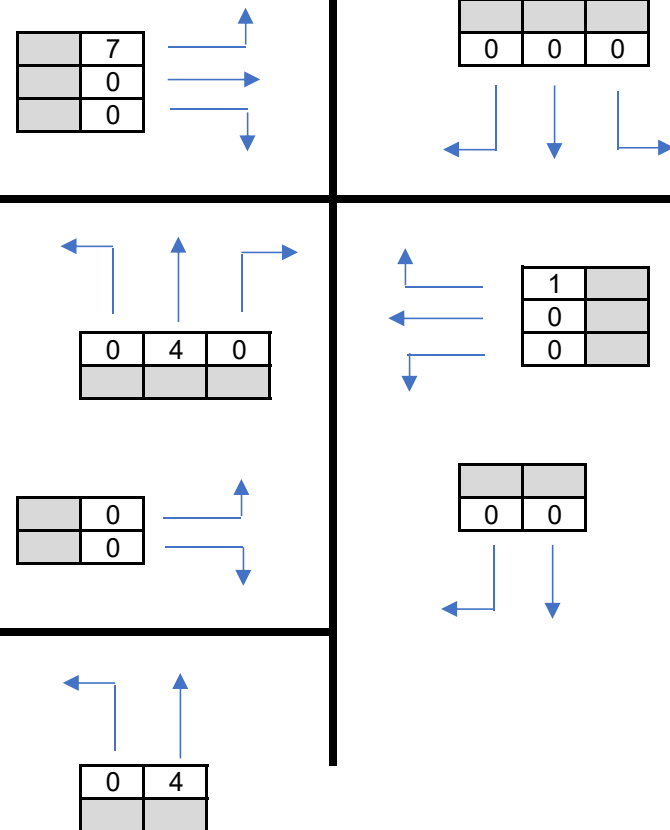
 Departures

-	-
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A4 Great West Road

NOTE: The assessment considers the additional trips that could take place to the Nishkam School, when the school becomes fully occupied (1400 children).

Northumberland Avenue



Committed Development Traffic - Weekday AM Peak

TOTAL COMMITTED DEVELOPMENT TRAFFIC

System Reference: -

Planning Reference: -

	All traffic
	HGV Only

Arrivals

-	-
-	-

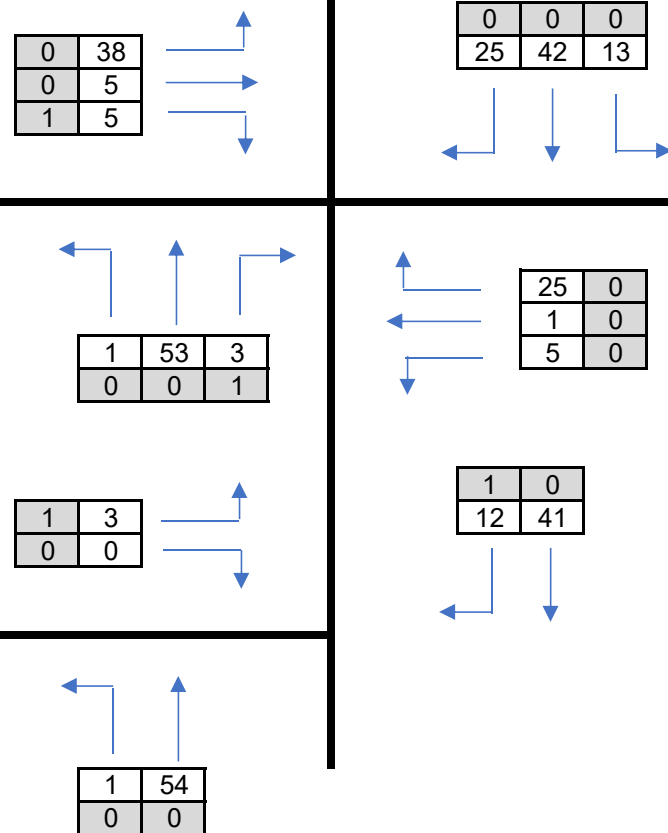
 Departures

-	-
-	-

A4 Great West Road

NOTE: The assessment considers the additional trips that could take place to the Nishkam School, when the school becomes fully occupied (1400 children).

Northumberland Avenue



Appendix 2

Committed Development Traffic - Weeday PM Peak

Site Location: Access Self Storage Limited – Gillette South, 871 Great West Road

System Reference: P/2018/4691

Planning Reference: 00505/AF/P28

	All traffic
	HGV Only

Arrivals

2	1
---	---

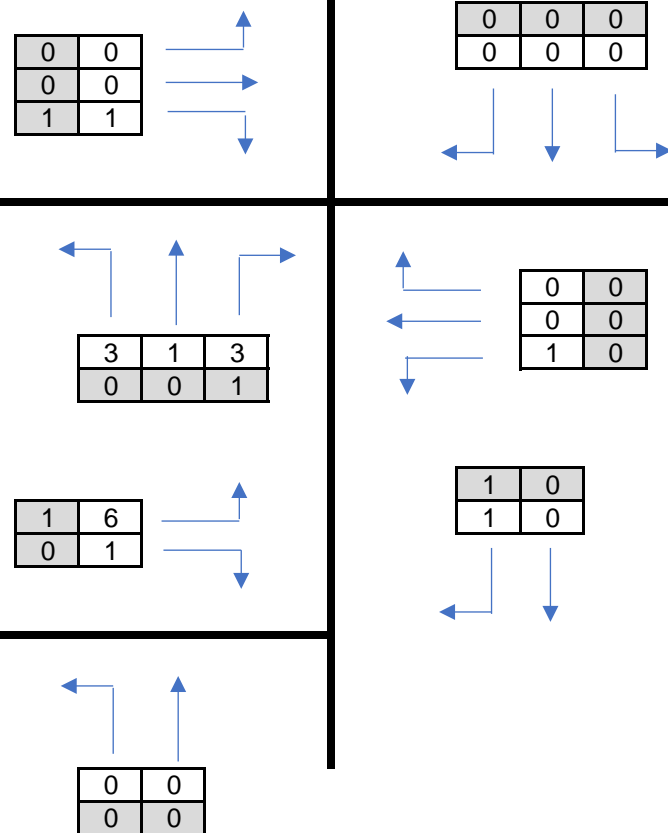
 Departures

7	1
---	---

(TA traffic distribution)

A4 Great West Road

Northumberland Avenue



Committed Development Traffic - Weeday PM Peak

Site Location: New Horizons Court, Ryan Drive, Brentford, TW8 9EP

System Reference: P/2017/0535

Planning Reference: 02912/A/P1

All traffic
 HGV Only

Arrivals

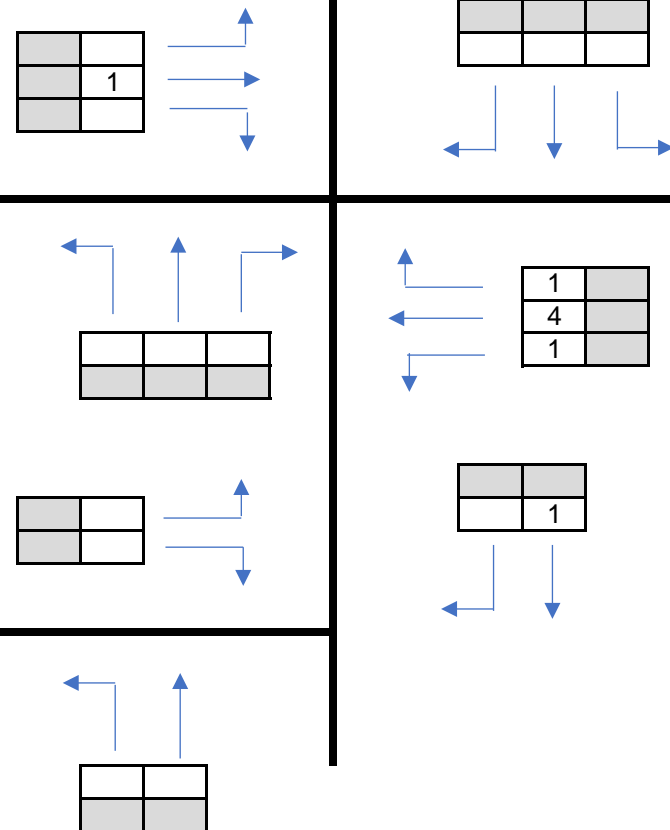
1	0
7	0

Departures

(assumed distribution - majority of trips route through Gillette Corner)

A4 Great West Road

Northumberland Avenue



Committed Development Traffic - Weeday PM Peak

Site Location: 891 Great West Road, Isleworth London, TW7 5PD

System Reference: P/2017/5069

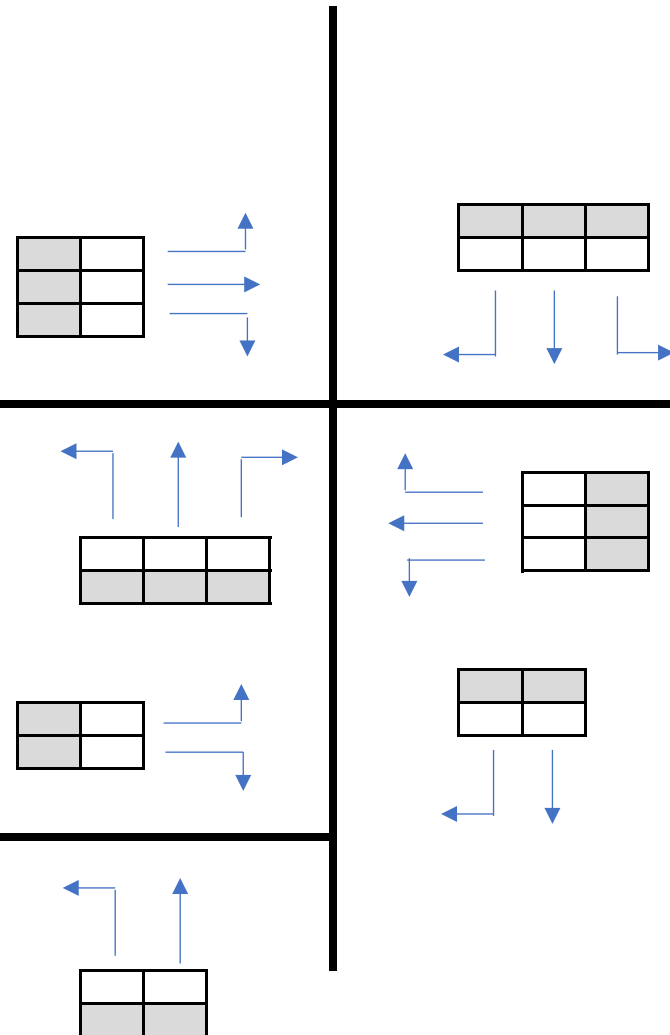
Planning Reference: 00505/891/P4 The proposed development is car free - Transport Statement states 0 vehicle movements in the PM peak

All traffic
 HGV Only

Arrivals	0	0
Departures	0	0

A4 Great West Road

Northumberland Avenue



Committed Development Traffic - Weeday PM Peak

Site Location: 4 and 8 Harlequin Avenue, Brentford, TW8 9EW

System Reference: P/2017/5358

Planning Reference: 00558/4-8/P1

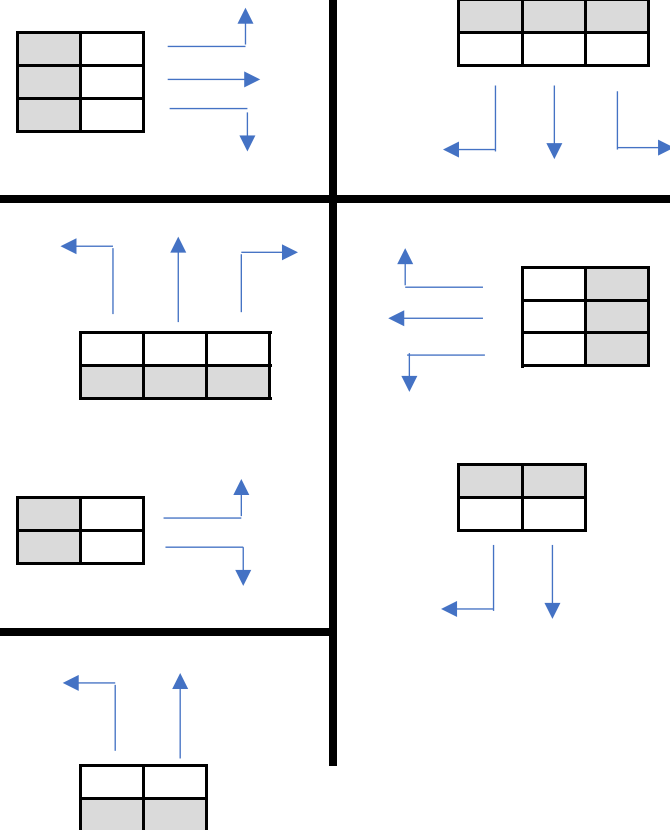
The number of on-site employees is not anticipated to increase as a result of the site, no increase in car parking

All traffic
 HGV Only

Arrivals	0	0
Departures	0	0

A4 Great West Road

Northumberland Avenue



Committed Development Traffic - Weeday PM Peak

Site Location: Sky, Sites 6 & 7, Grant Way, Isleworth, TW7 5QD

System Reference: P/2019/1931

Planning Reference: 00558/A/P69

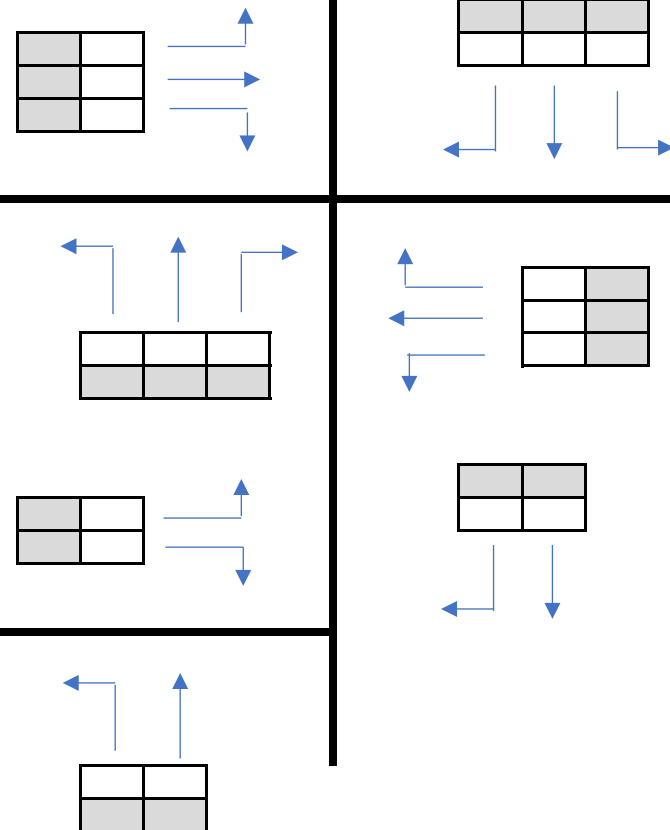
All traffic
 HGV Only

Arrivals	0	0
Departures	0	0

A4 Great West Road

NOTE: The Transport Assessment says "The Sky Lab will provide working space for up to 700 employees. The majority of employees who will be based within the building will be relocated from elsewhere within the Campus, including Sky 6 and 7 buildings that are to be demolished. As such, existing travel patterns are unlikely to change. There is not expected to be a significant net increase in employee or visitor trips."

Northumberland Avenue



Committed Development Traffic - Weeday PM Peak

Site Location: 1 Commerce Road, Brentford, London, TW8 8LE

System Reference: P/2018/2011

Planning Reference: 00297/H/P13

	All traffic
	HGV Only

Arrivals

-	-
---	---

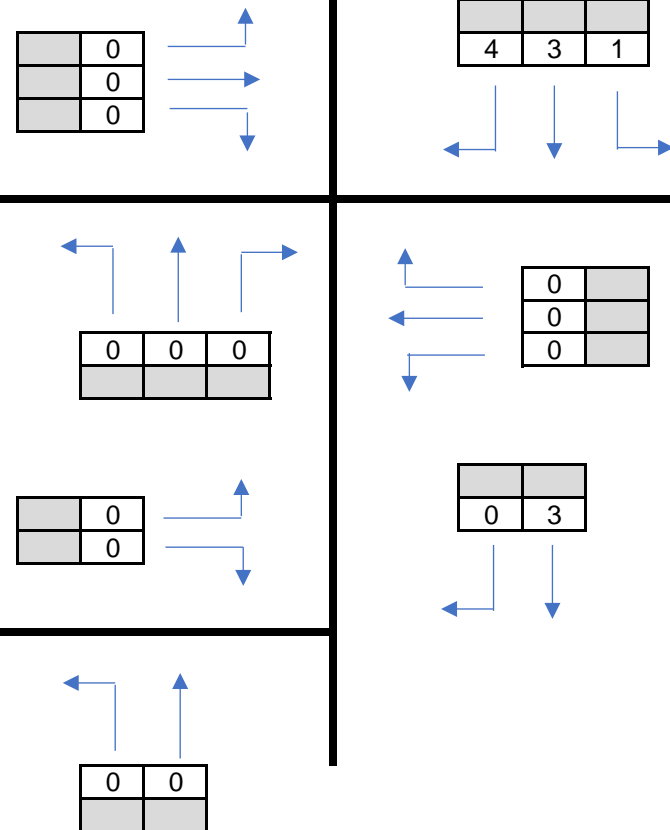
 Departures

-	-
---	---

A4 Great West Road

NOTE: The assessment considers the additional trips that could take place to the Nishkam School, when the school becomes fully occupied (1400 children).

Northumberland Avenue



Committed Development Traffic - Weeday PM Peak

Site Location: Bolder Academy, 1 MacFarlane Lane, Isleworth, TW7 5PN

System Reference: P/2017/1417

Planning Reference: 01106/W/P9

	All traffic
	HGV Only

Refer to Appendix C for full calculation

Arrivals

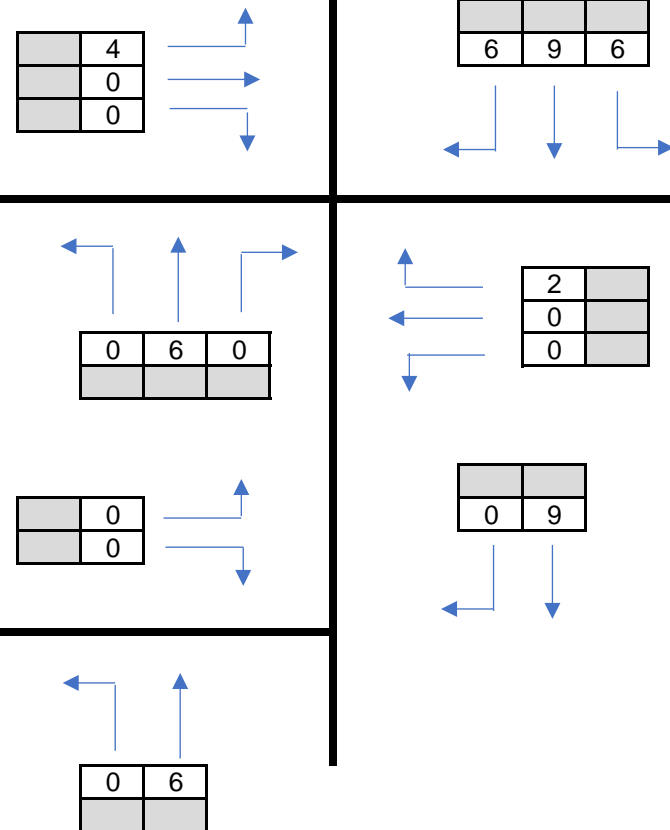
-	-
-	-

 Departures

-	-
-	-

A4 Great West Road

Northumberland Avenue



Committed Development Traffic - Weeday PM Peak

Site Location: Nishkam School, Syon Lane

System Reference: P/2015/2516

Planning Reference: 01106/152/P3

	All traffic
	HGV Only

Refer to Appendix D for full calculation

Arrivals

-	-
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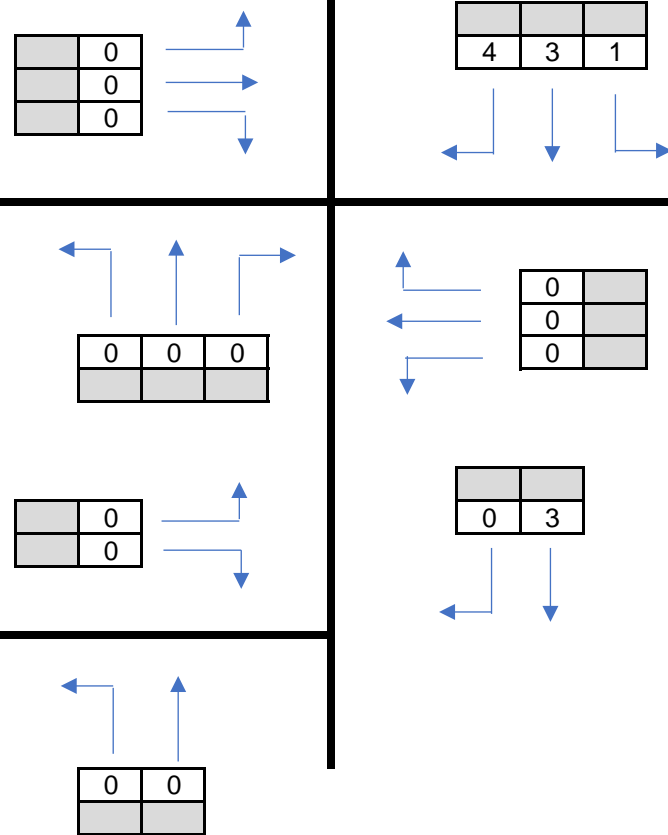
 Departures

-	-
---	---

A4 Great West Road

NOTE: The assessment considers the additional trips that could take place to the Nishkam School, when the school becomes fully occupied (1400 children).

Northumberland Avenue



Committed Development Traffic - Weeday PM Peak

TOTAL COMMITTED DEVELOPMENT TRAFFIC

System Reference: -

Planning Reference: -

	All traffic
	HGV Only

Arrivals

-	-
-	-

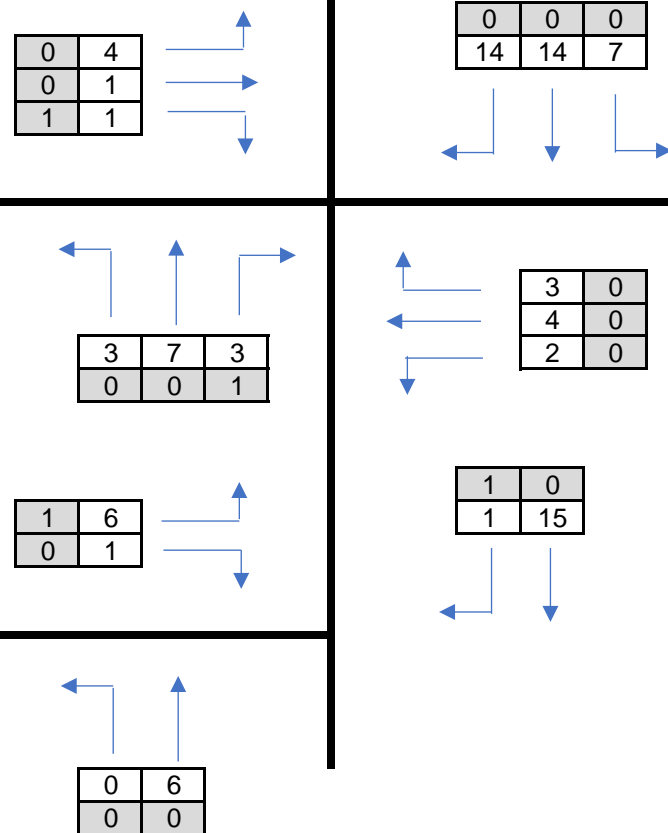
 Departures

-	-
-	-

A4 Great West Road

NOTE: The assessment considers the additional trips that could take place to the Nishkam School, when the school becomes fully occupied (1400 children).

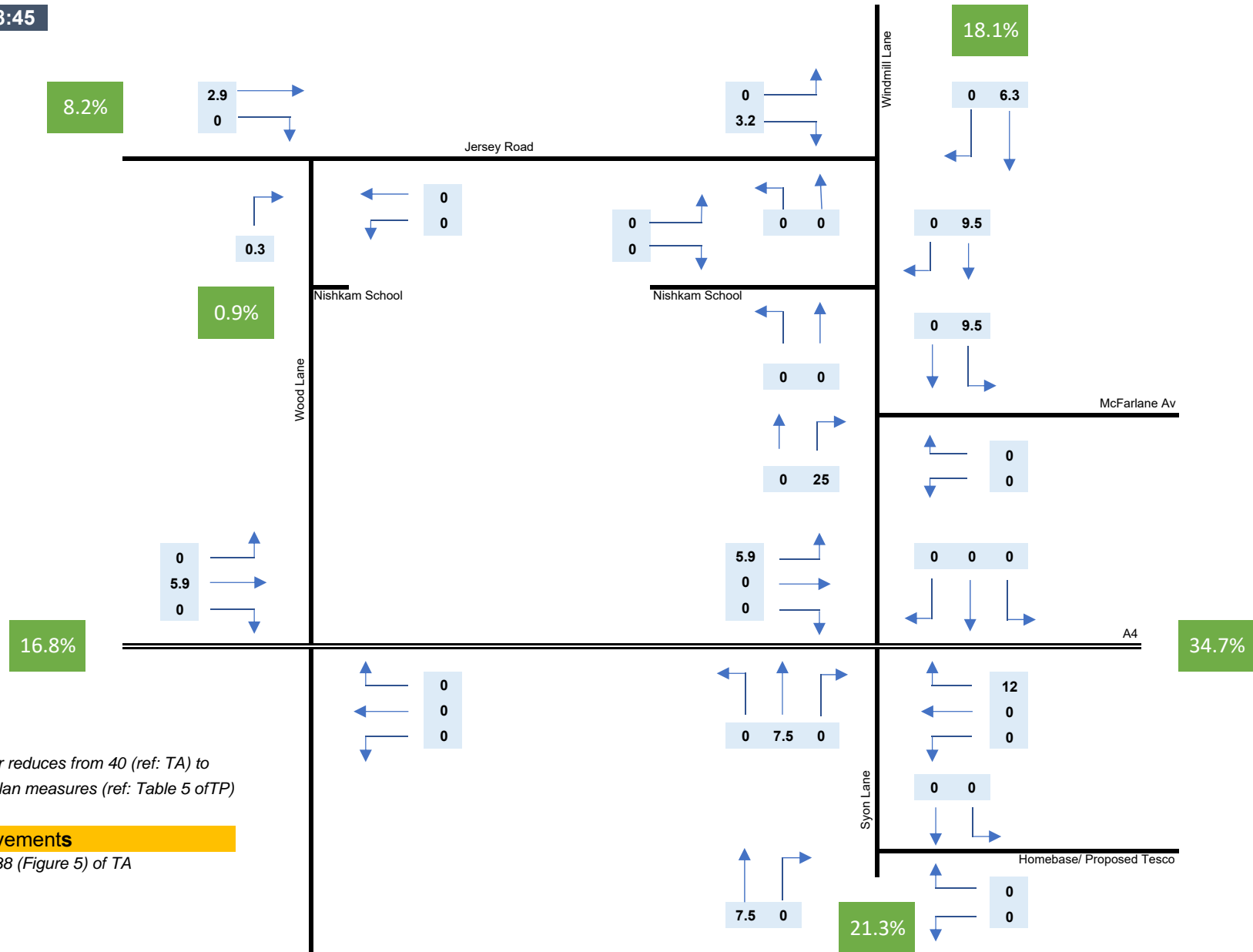
Northumberland Avenue



Appendix 3

Bolder Academy Traffic Attraction

AM Peak: 07:45-08:45



Bolder Academy Traffic Attraction

AM Peak: 07:45-08:45

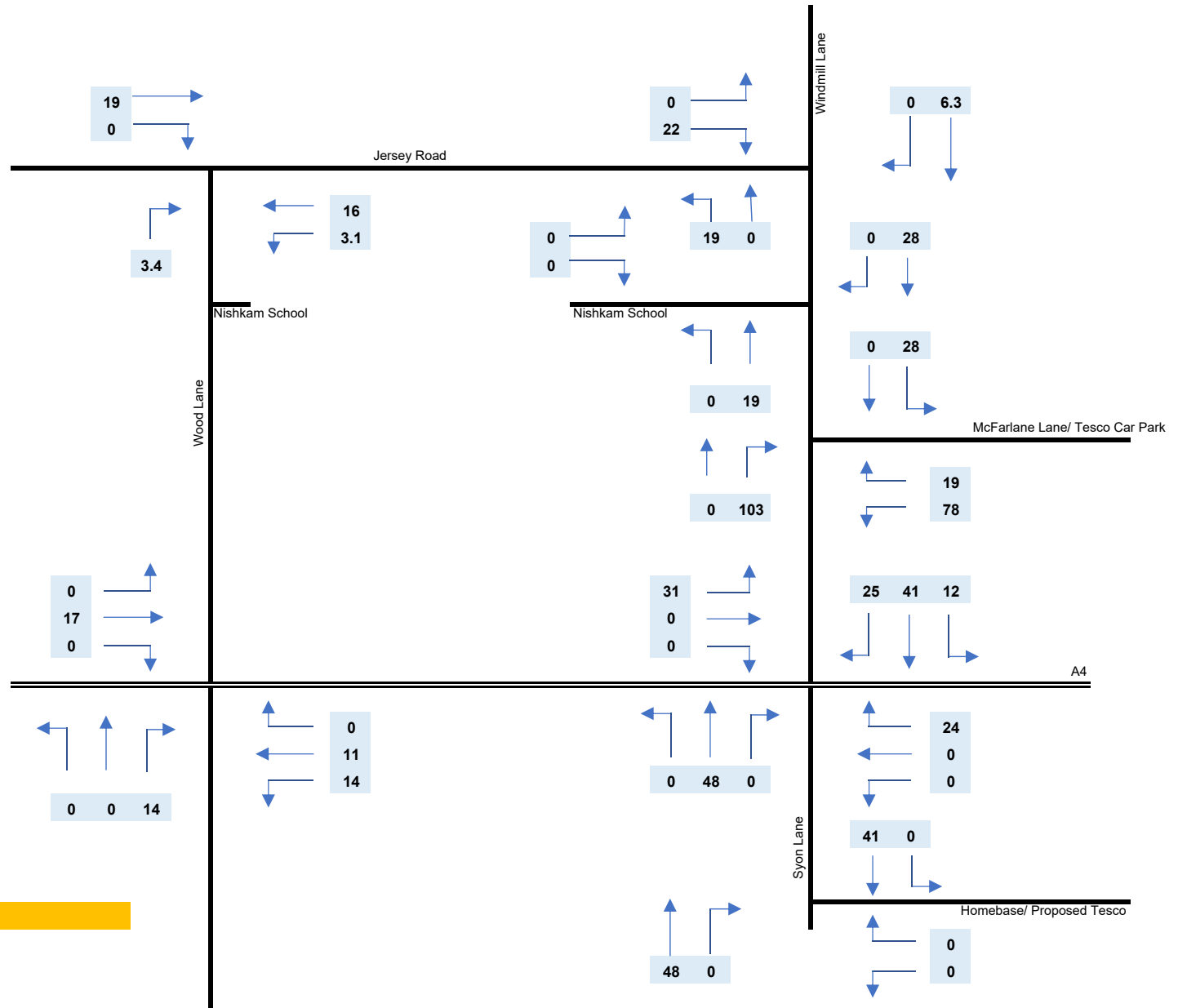


Figure 3: Total School Traffic

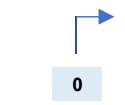
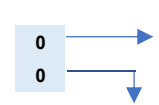
Arrivals: 131

Departures: 96

Bolder Academy Traffic Attraction

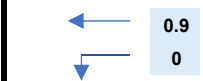
PM Peak: 17:00-18:00

8.2%



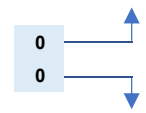
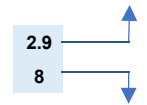
0.9%

Wood Lane



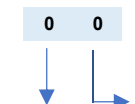
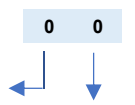
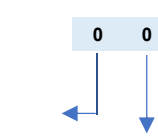
Jersey Road

2.9
8



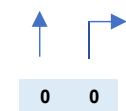
Windmill Lane

18.1%

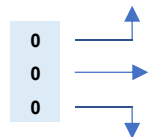


Nishkam School

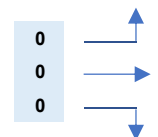
Nishkam School



McFarlane Av

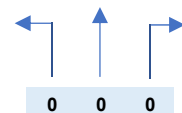
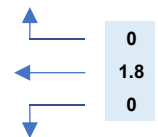


16.8%



A4

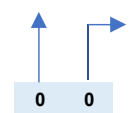
34.7%



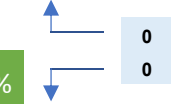
Syon Lane



Homebase/ Proposed Tesco



21.3%



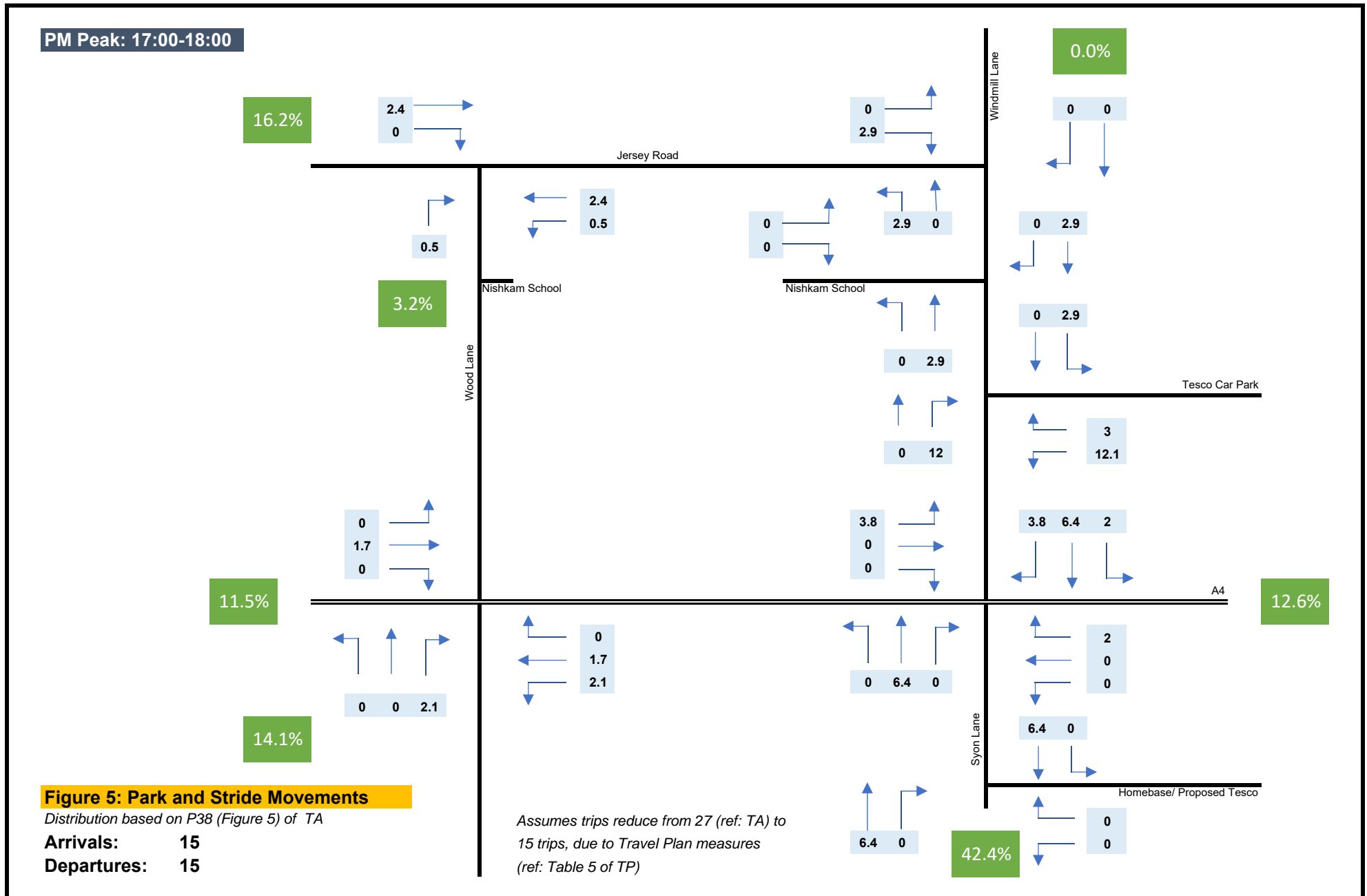
Assumes Staff car driver reduces from 13 (ref: TA) to 11 trips, due to Travel Plan measures (ref: Table 5 ofTP)

Figure 4: Staff Movements

Distribution based on P38 (Figure 5) of TA

Arrivals: 0
Departures: 11

Bolder Academy Traffic Attraction



Bolder Academy Traffic Attraction

PM Peak: 17:00-18:00

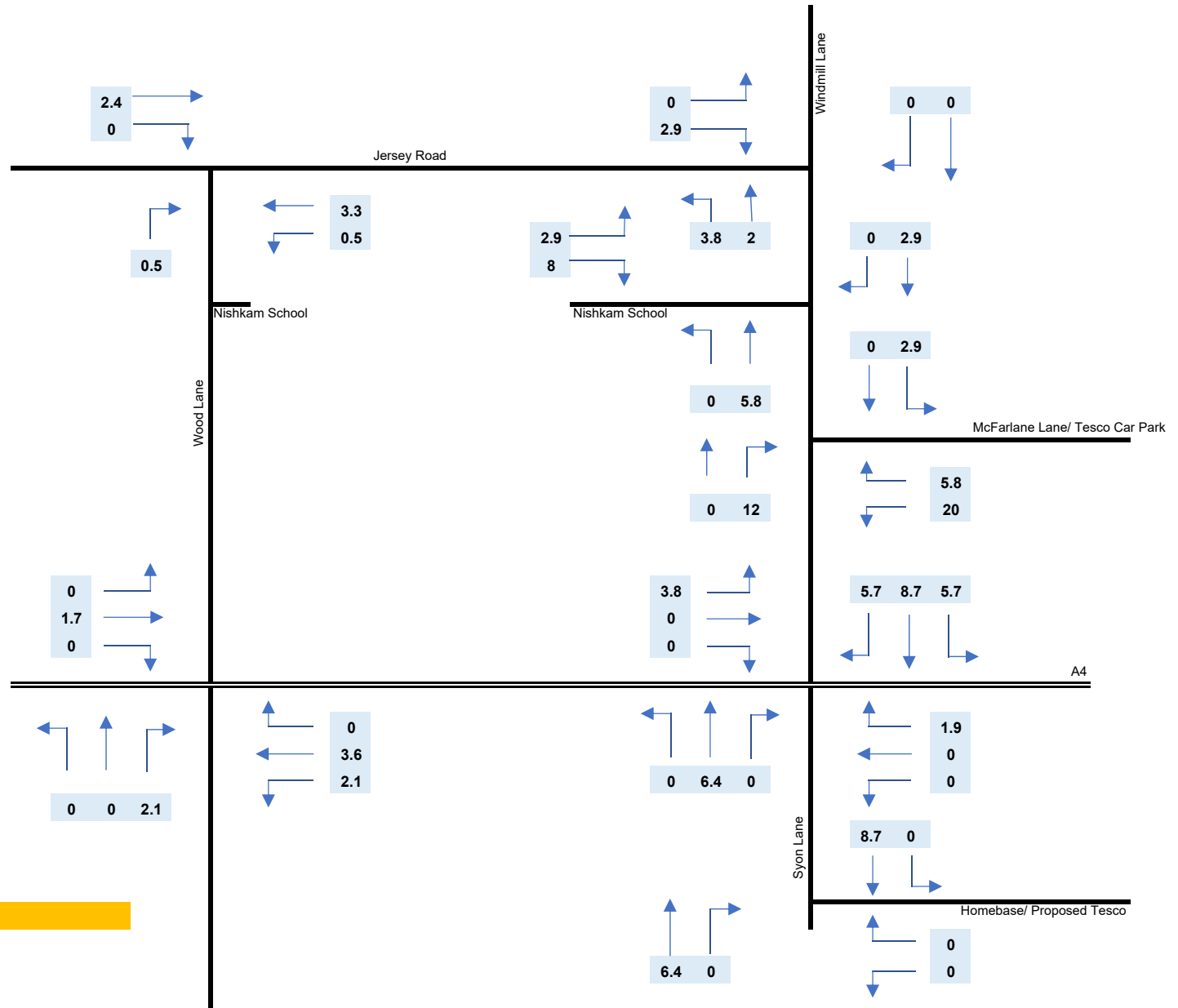


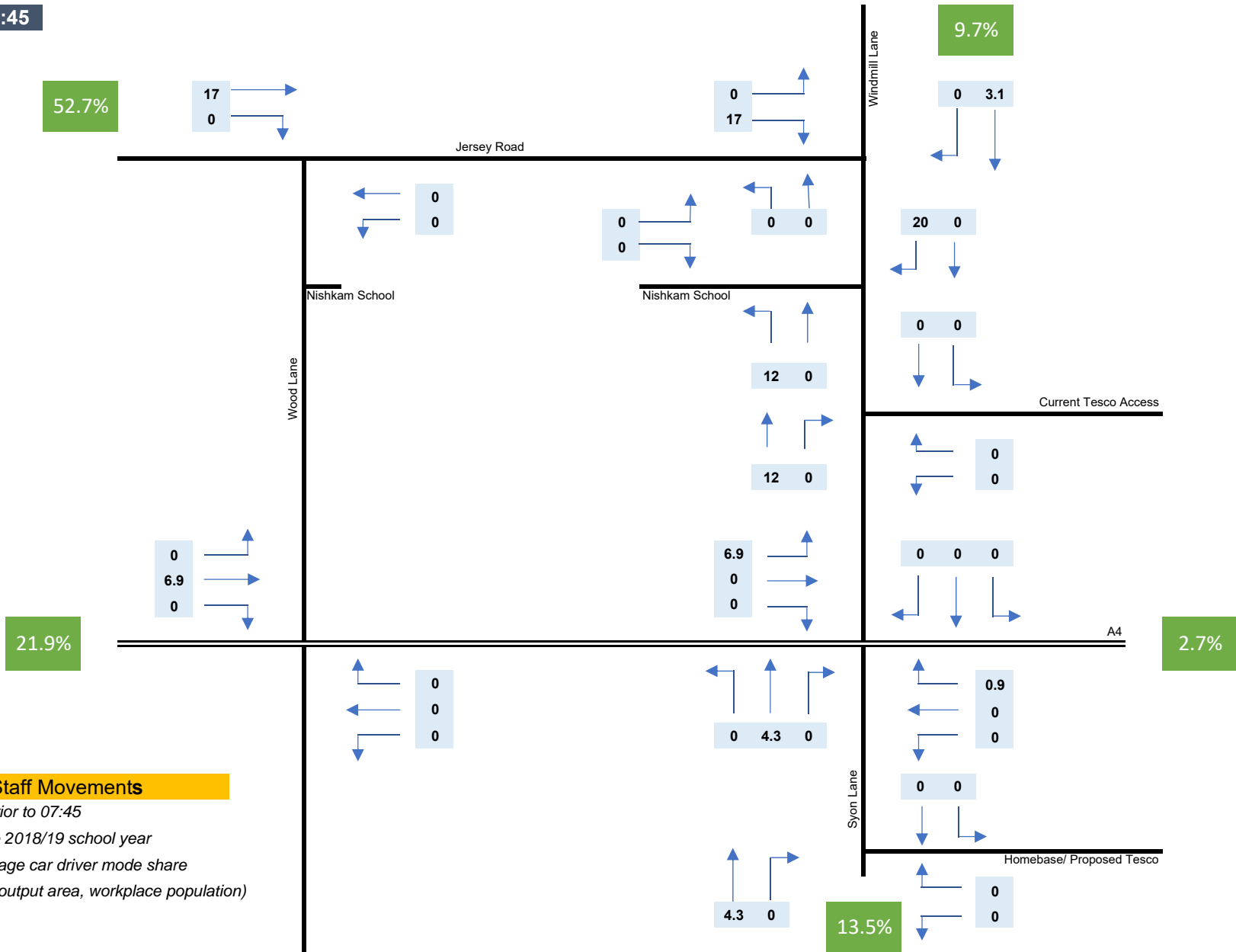
Figure 6: Total School Traffic

Arrivals: 15
 Departures: 26

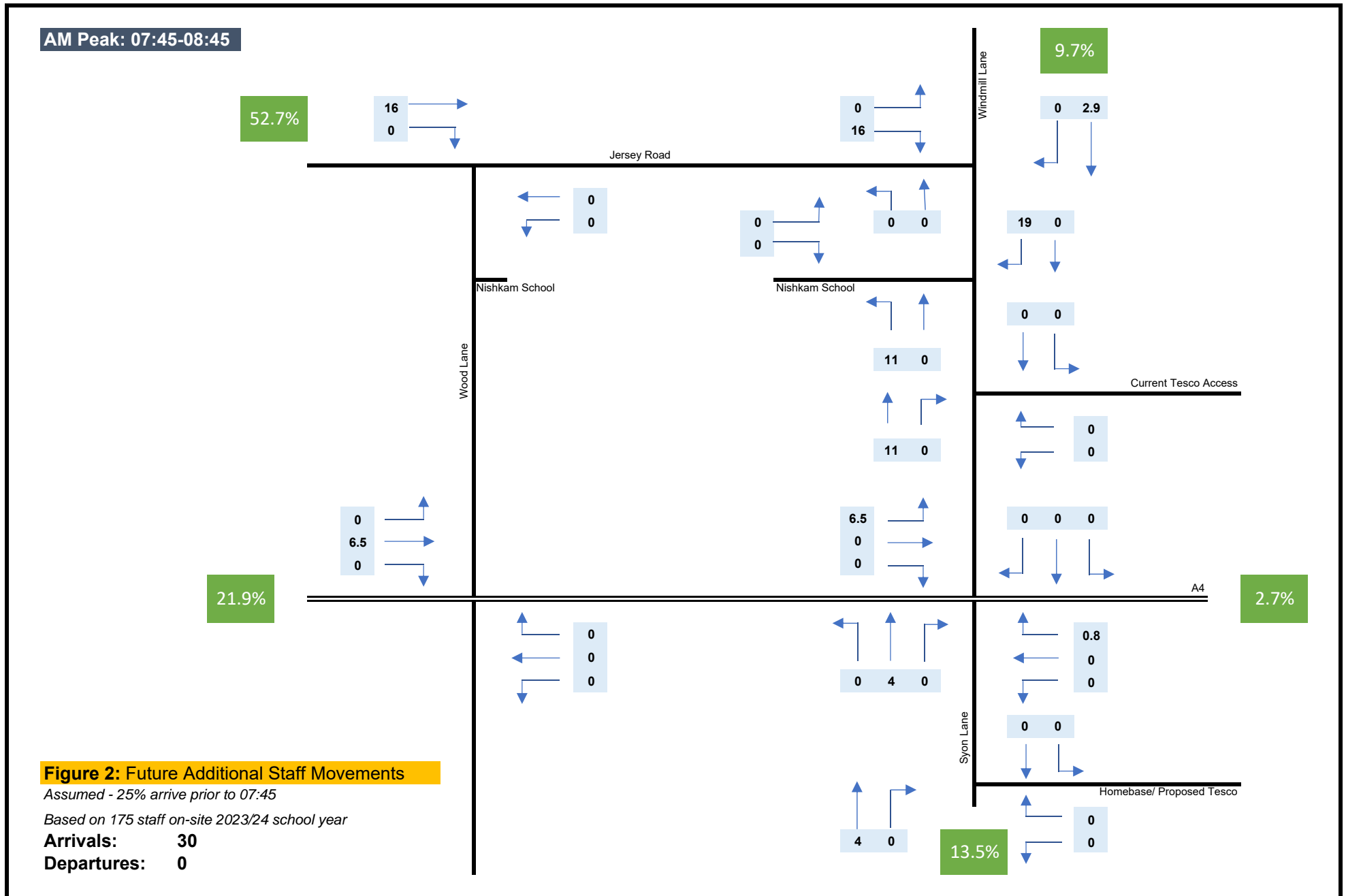
Appendix 4

Nishkam School Traffic Attraction

AM Peak: 07:45-08:45



Nishkam School Traffic Attraction



Nishkam School Traffic Attraction

AM Peak: 07:45-08:45

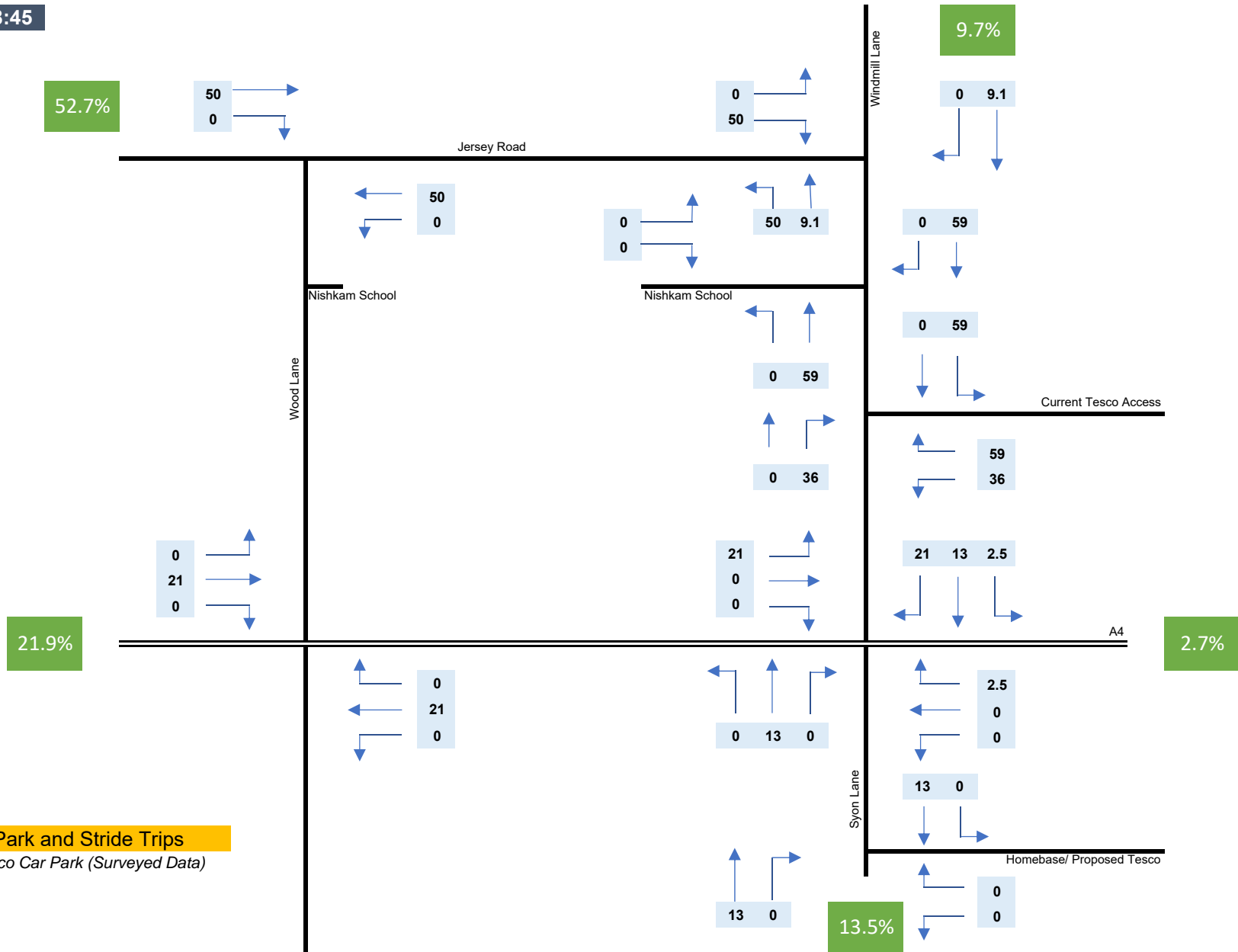


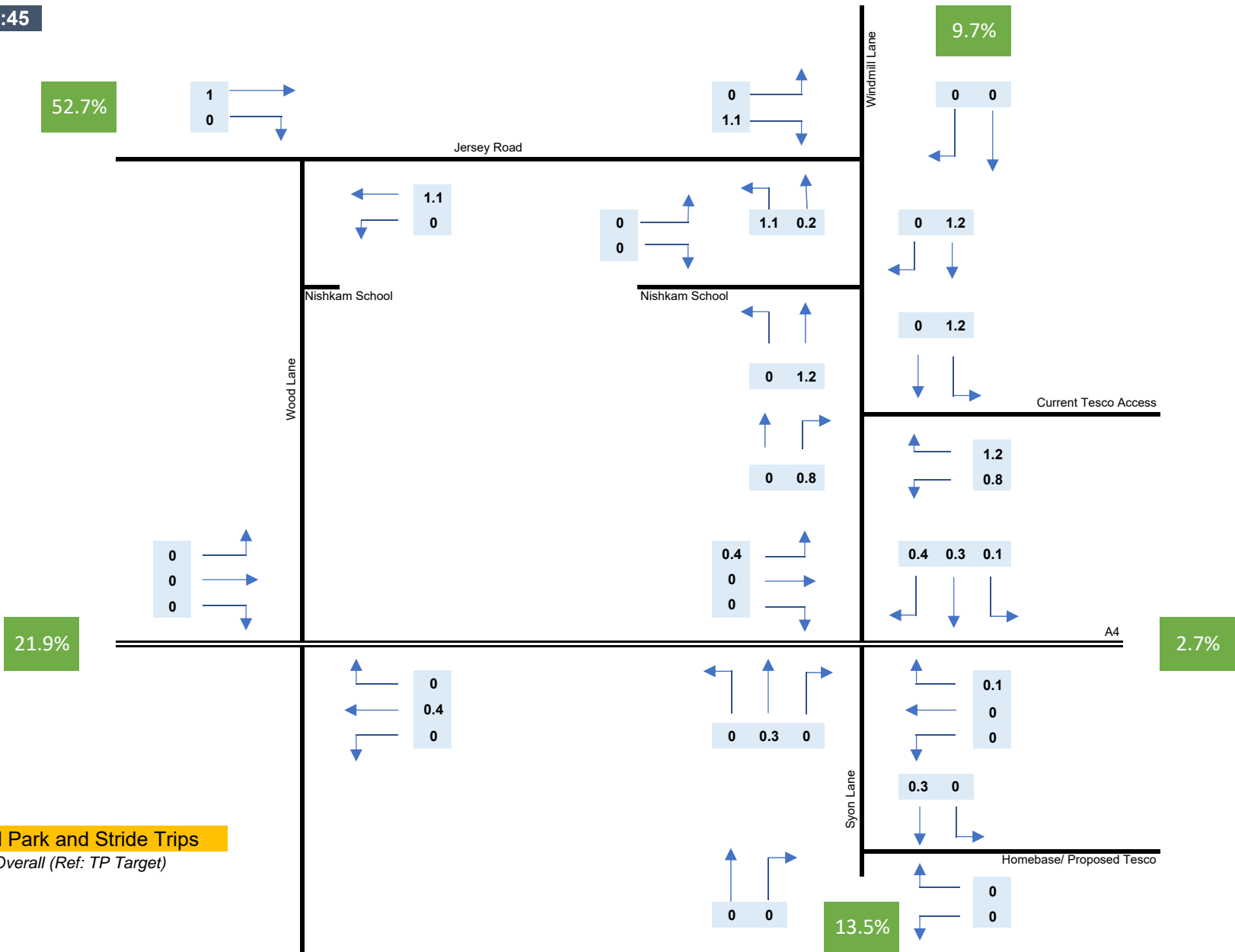
Figure 3: Existing Park and Stride Trips

Assumed all trips to Tesco Car Park (Surveyed Data)

Arrivals: 94
 Departures: 94

Nishkam School Traffic Attraction

AM Peak: 07:45-08:45



Nishkam School Traffic Attraction

AM Peak: 07:45-08:45

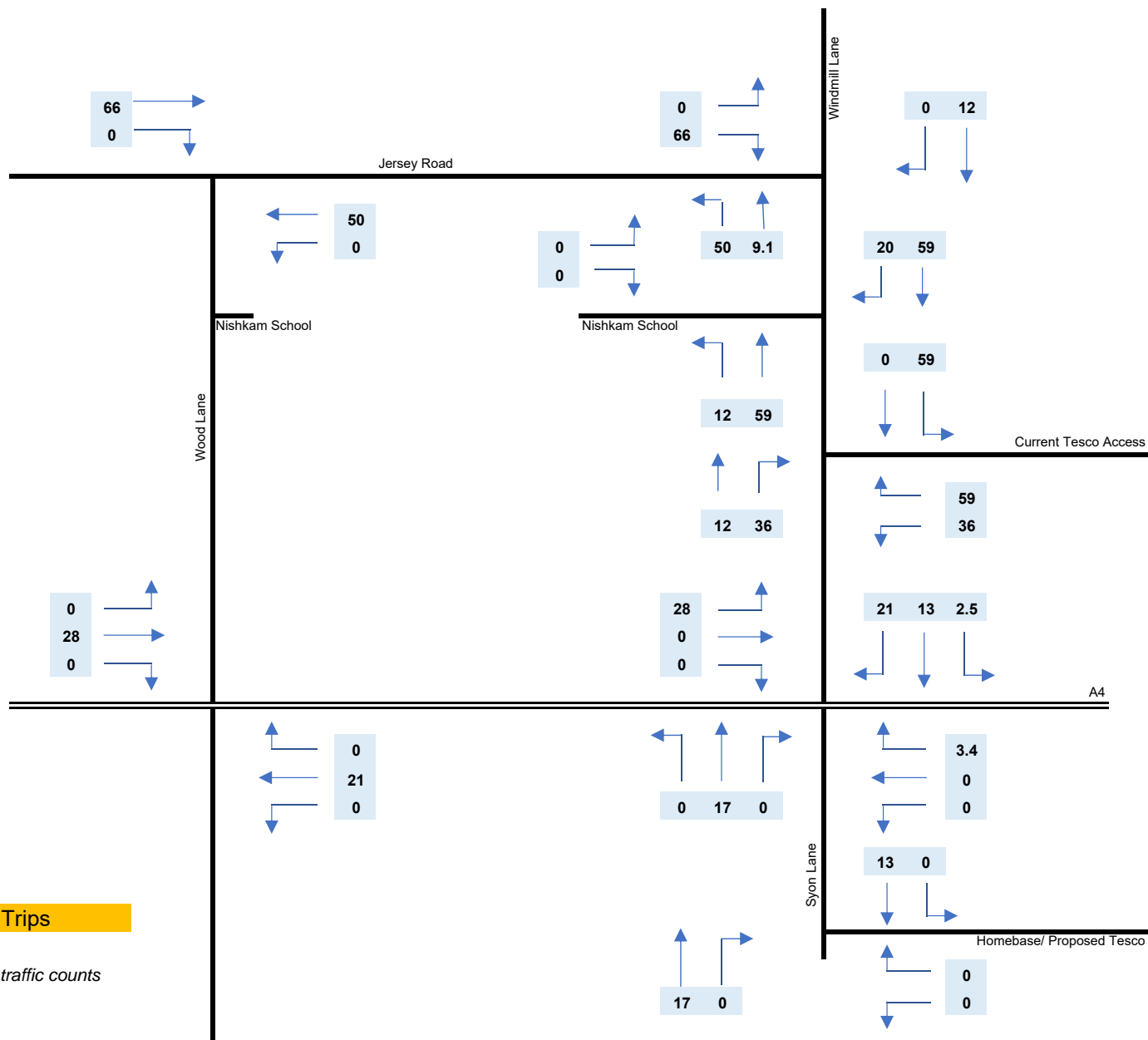


Figure 5: Total Existing School Trips

Figure 2 + Figure 4

These trips are included in the baseline traffic counts

Arrivals: 126

Departures: 94

Nishkam School Traffic Attraction

AM Peak: 07:45-08:45

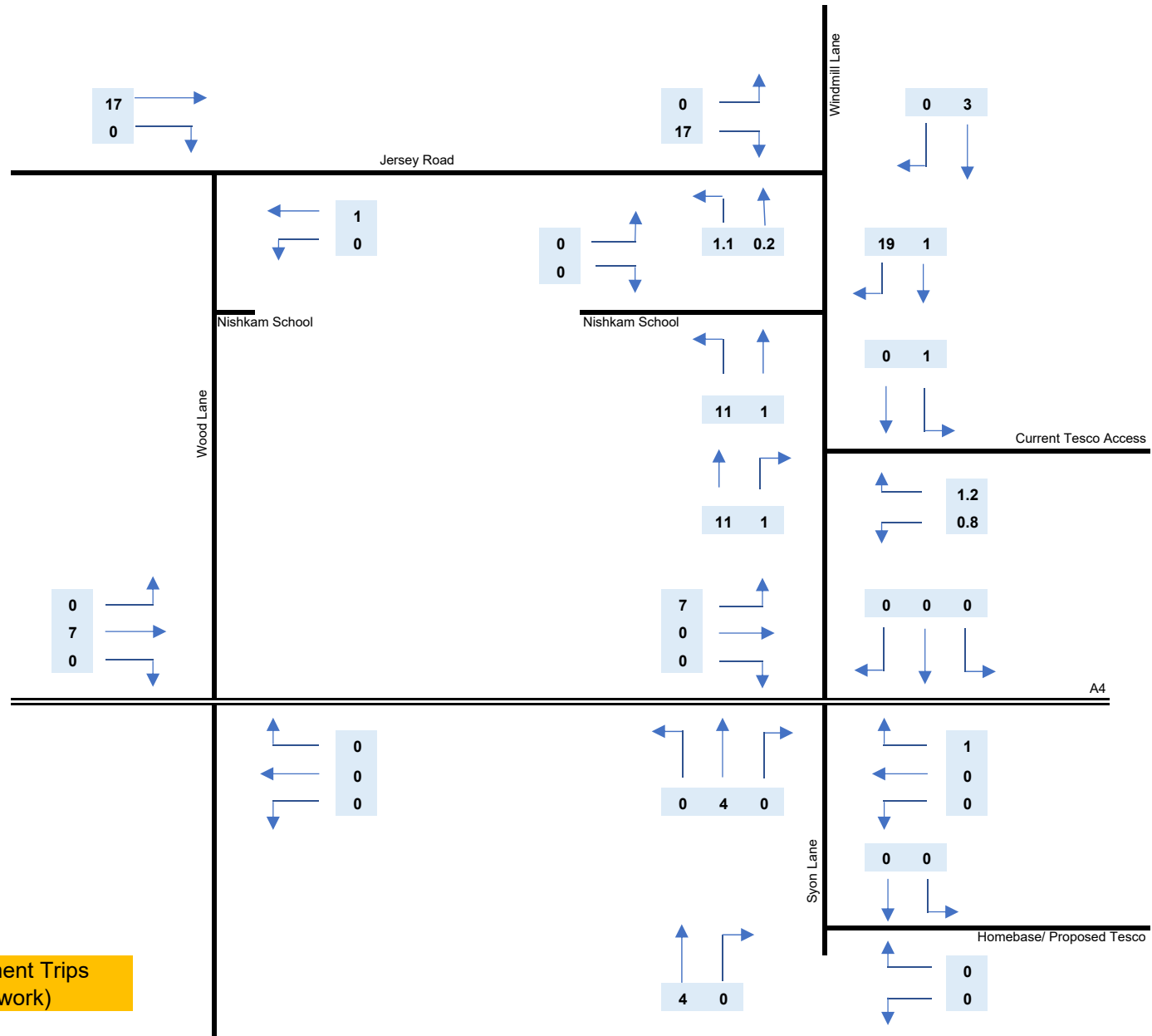
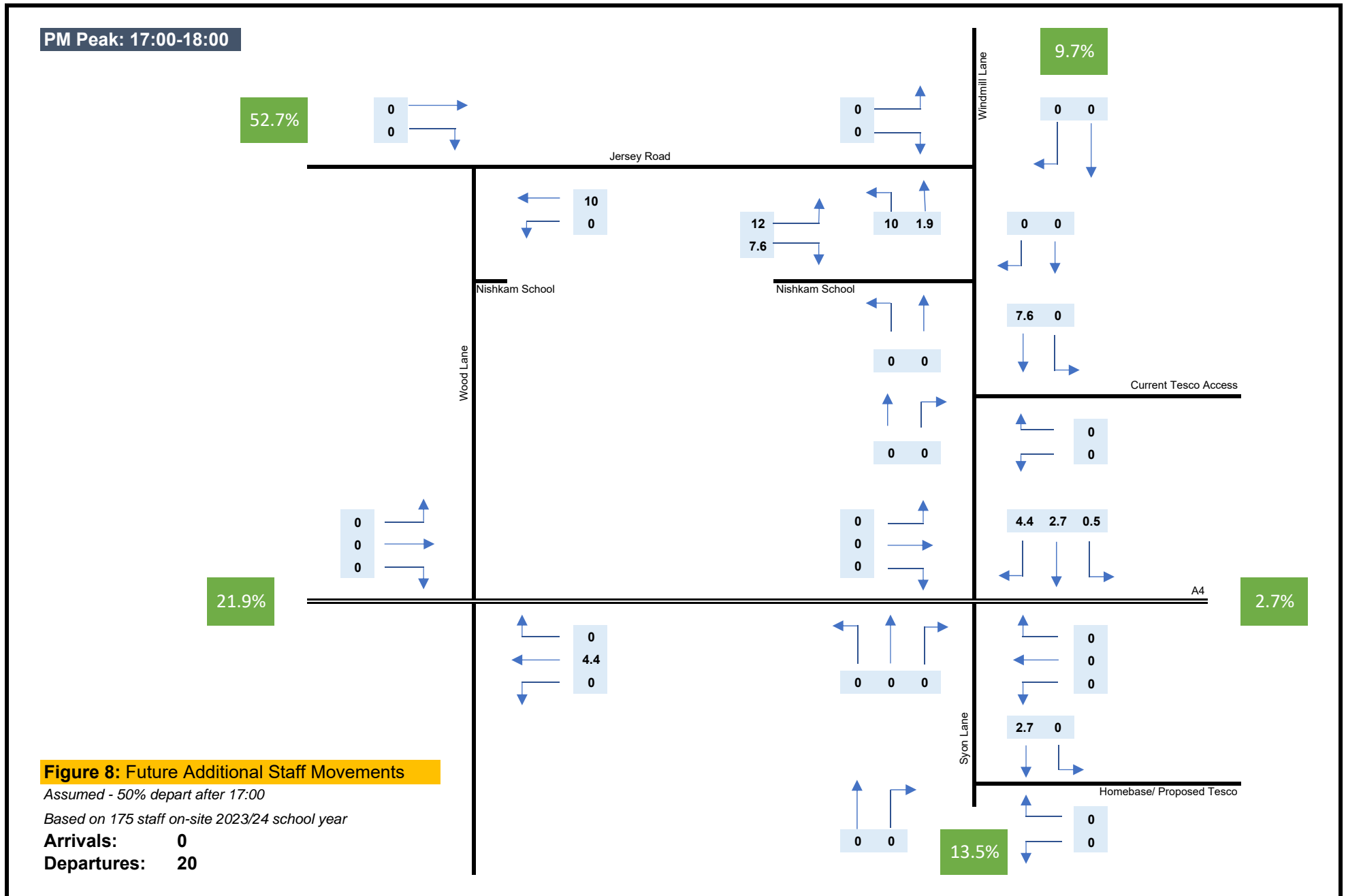


Figure 6: Committed Development Trips
(School trips, not yet on the network)

Figure 2 + Figure 4

Nishkam School Traffic Attraction



Nishkam School Traffic Attraction

PM Peak: 17:00-18:00

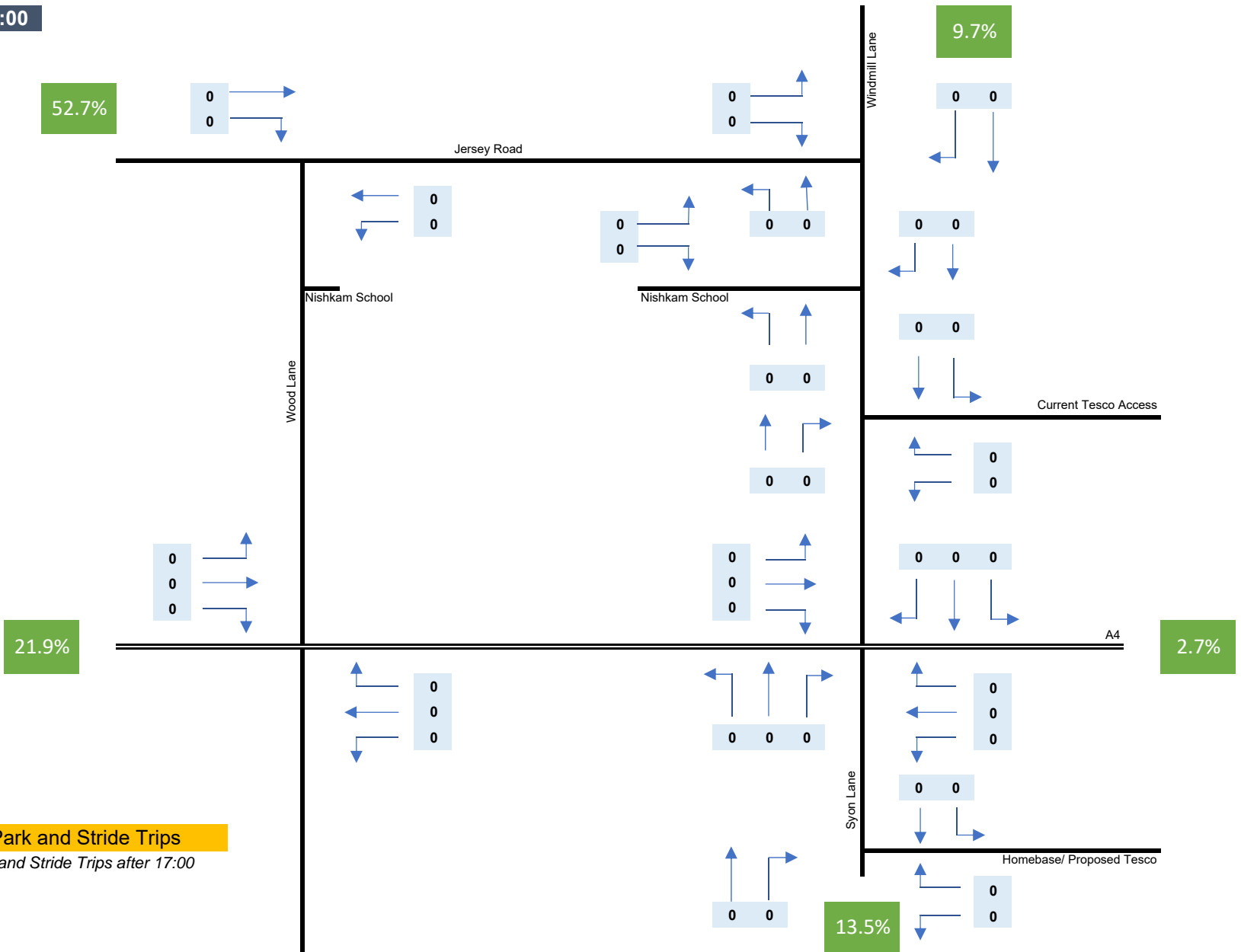


Figure 9: Existing Park and Stride Trips

2019 Surveys - No Park and Stride Trips after 17:00

Arrivals: 0
 Departures: 0

Nishkam School Traffic Attraction

PM Peak: 17:00-18:00

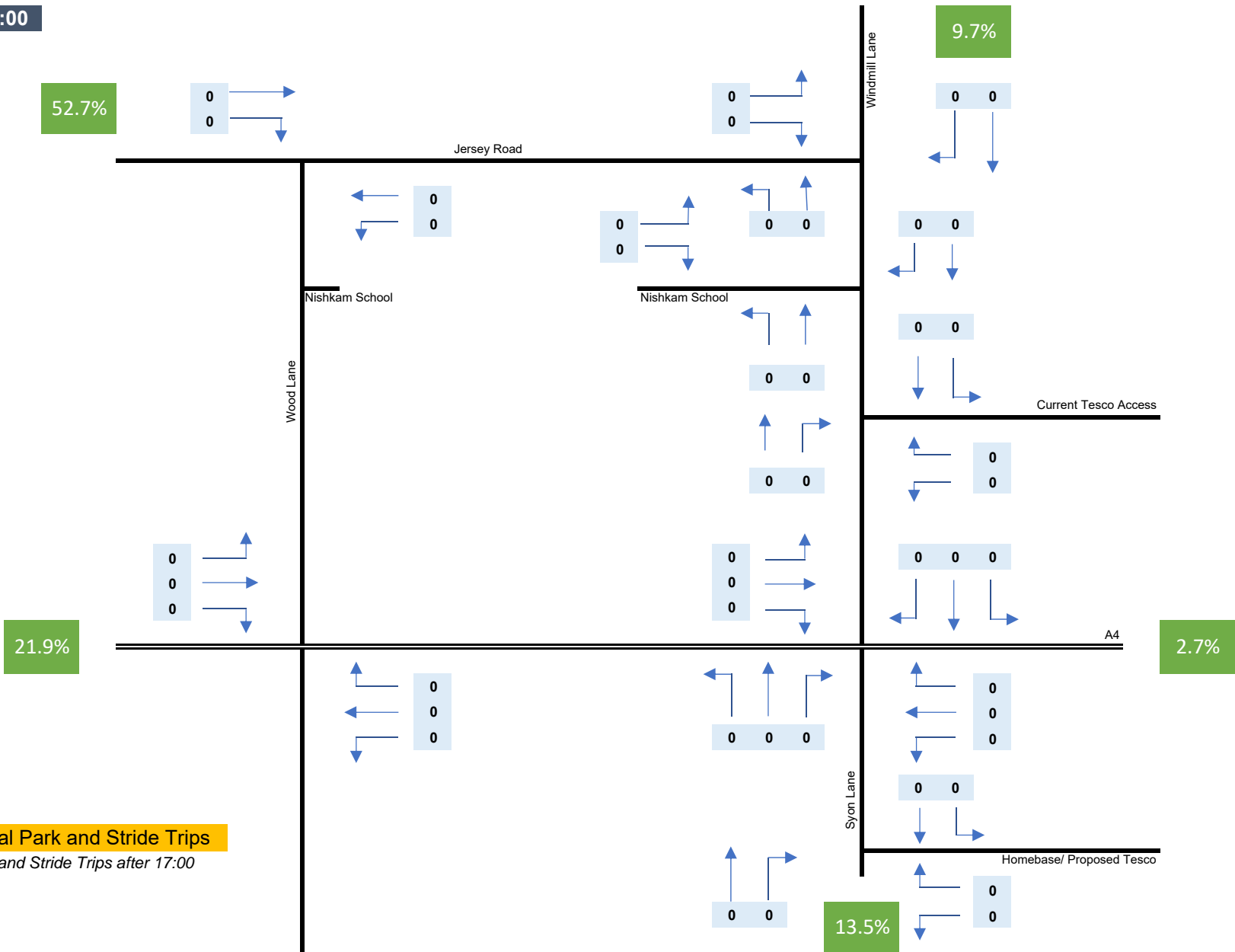


Figure 10: Additional Park and Stride Trips

2019 Surveys - No Park and Stride Trips after 17:00

Arrivals: 0
 Departures: 0

Nishkam School Traffic Attraction

PM Peak: 17:00-18:00

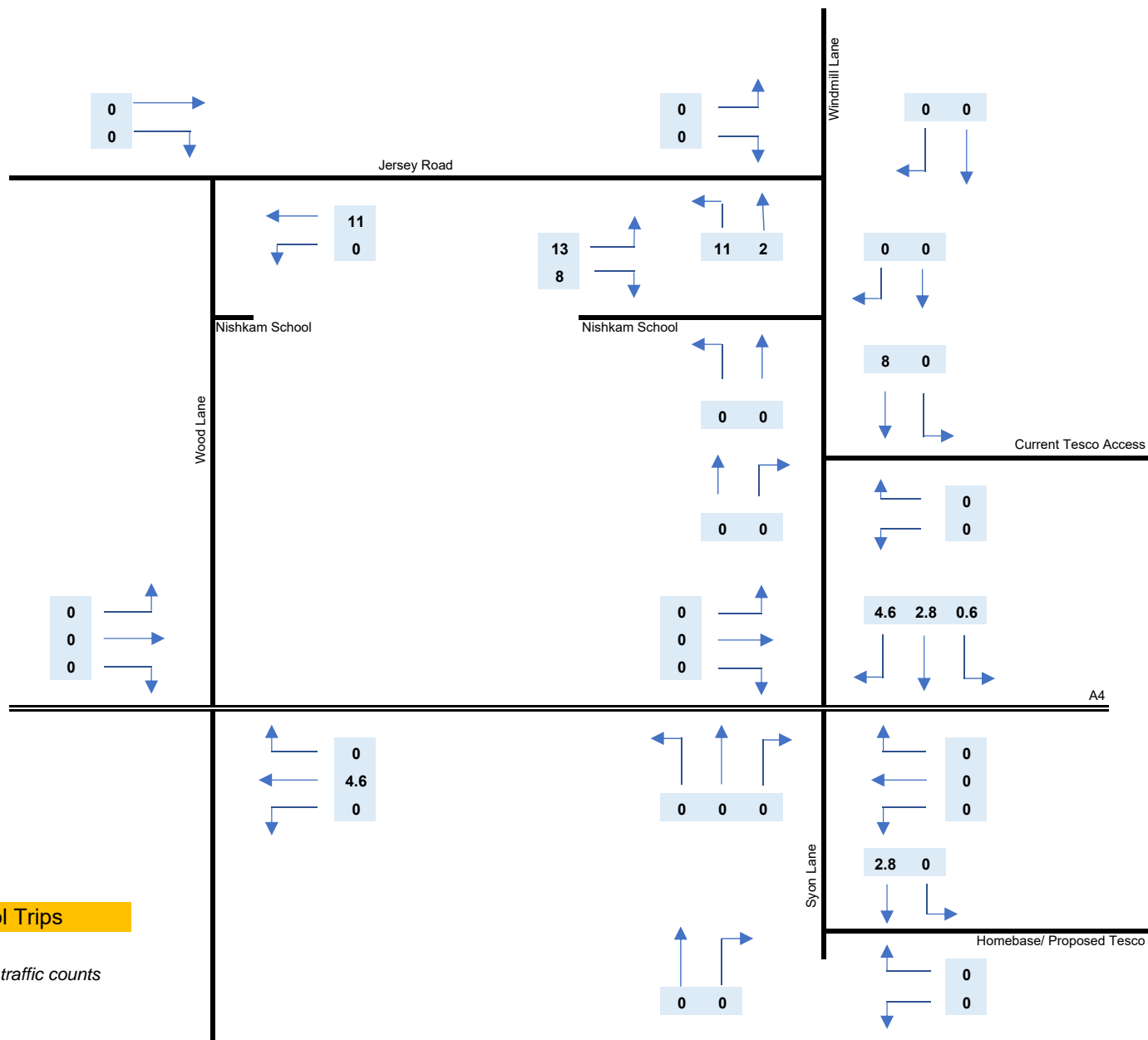


Figure 11: Total Existing School Trips

Figure 14 + Figure 16

These trips are included in the baseline traffic counts

Arrivals: 0
Departures: 21

Nishkam School Traffic Attraction

PM Peak: 17:00-18:00

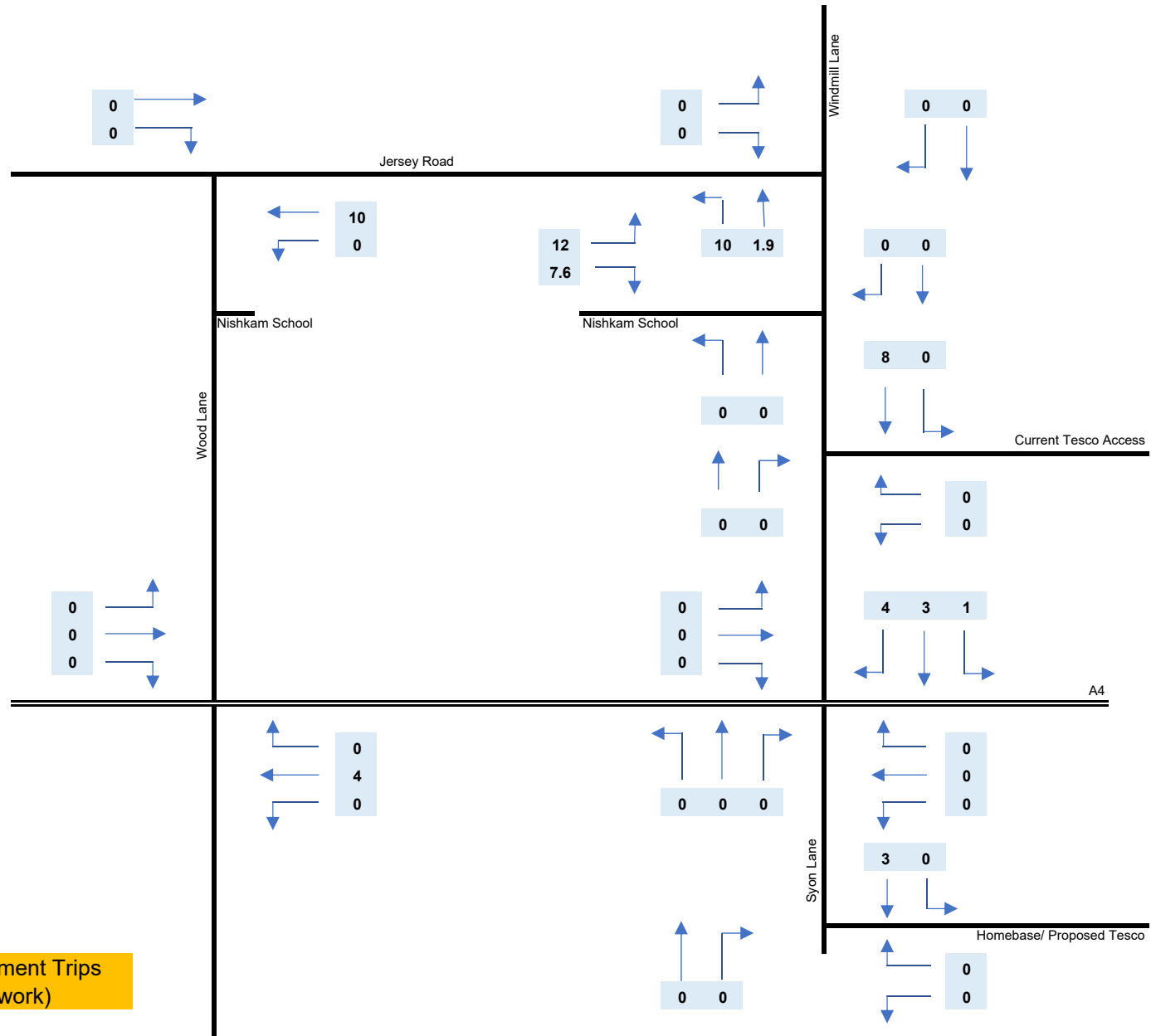


Figure 12: Committed Development Trips (School trips, not yet on the network)

Figure 8 + Figure 10

Appendix 5

TfL Strategic Model - Traffic Growth Estimate Summary

Gillette Corner - AM Peak

A4/Syon Lane Junction Turning Counts		2012 Base (Actual) Flows (veh/h)					2031 Syon Lane/A4 Great West Road (Source: LoHAM 3.10)					2012 - 2031 Percentage Change				
From	To	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total
A4 (West)	Syon Lane (North)	85	0	3	4	92	96	0	7	3	106	12%	-27%	183%	-26%	15%
	A4 (East)	1,070	33	124	59	1,286	1,000	6	207	58	1,271	-6%	-81%	67%	-2%	-1%
	Syon Lane (South)	46	1	8	1	56	92	1	19	7	119	100%	-1%	139%	486%	112%
Syon Lane (North)	A4 (East)	428	2	85	3	518	493	2	104	10	609	15%	3%	22%	190%	17%
	Syon Lane (South)	167	1	23	2	193	229	1	46	4	280	37%	-9%	101%	75%	45%
	A4 (West)	28	0	2	1	31	46	0	6	1	53	65%	28%	233%	-25%	70%
A4 (East)	Syon Lane (South)	227	0	28	9	264	129	0	14	7	150	-43%	-42%	-50%	-24%	-43%
	A4 (West)	1,325	6	97	33	1,461	1,465	7	187	47	1,705	10%	2%	93%	45%	17%
	Syon Lane (North)	164	3	21	3	191	221	3	43	6	273	35%	5%	107%	113%	43%
Syon Lane (South)	A4 (West)	48	1	4	3	54	44	1	4	1	49	-8%	0%	16%	-79%	-10%
	Syon Lane (North)	198	0	11	2	211	249	0	54	8	312	26%	-16%	388%	385%	48%
	A4 (East)	375	5	20	22	422	255	3	31	9	298	-32%	-44%	51%	-57%	-29%
Totals		4,162	52	424	142	4,780	4,319	24	721	162	5,226	4%	-55%	70%	14%	9%

A4/Syon Lane Junction - Link Counts		2012 Base (Actual) Flows (veh/h)					2031 Syon Lane/A4 Great West Road (Source: LoHAM 3.10)					2012 - 2031 Percentage Change				
From	To	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total
A4 (West) east of Wood Lane	Eastbound	1,166	34	132	63	1,395	1,134	7	225	67	1,432	-3%	-78%	70%	5%	3%
	Westbound	1,333	6	95	34	1,469	1,444	6	186	46	1,681	8%	1%	95%	34%	14%
Syon Lane (at MacFarlane Lane)	Southbound	672	3	107	4	786	847	3	153	14	1,017	26%	9%	43%	250%	29%
	Northbound	209	1	25	1	236	348	1	84	11	445	67%	41%	231%	846%	89%
A4 (East) west of River Brent	Westbound	1,716	10	145	45	1,916	1,814	10	244	61	2,128	6%	2%	67%	35%	11%
	Eastbound	1,529	36	216	71	1,852	1,396	7	309	63	1,776	-9%	-80%	43%	-11%	-4%
Spur Road (north of London Road)	Northbound	473	4	29	18	525	402	2	70	13	487	-15%	-55%	141%	-28%	-7%
	Southbound	335	0	45	11	390	346	0	63	12	422	3%	153%	42%	18%	8%
Totals		7,434	93	794	247	8,568	7,731	36	1,334	287	9,388	4%	-61%	68%	16%	10%

Key

Traffic reduction

Traffic increase 0% to 10%

Traffic increase 10% to 25%

Traffic increase > 25%

Traffic increase > 100%

TfL Strategic Model - Traffic Growth Estimate Summary

Gillette Corner - PM Peak

A4/Syon Lane Junction		2012 Base (Actual) Flows (veh/h)					2031 Syon Lane/A4 Great West Road (Source: LoHAM 3.10)					2012 - 2031 Percentage Change				
From	To	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total
A4 (West)	Syon Lane (North)	66	0	1	0	67	85	0	5	0	90	30%	18%	601%	27%	35%
	A4 (East)	959	37	66	18	1,080	921	30	112	20	1,083	-4%	-18%	70%	12%	0%
	Syon Lane (South)	77	3	8	1	89	119	3	20	1	143	55%	-22%	144%	78%	60%
Syon Lane (North)	A4 (East)	421	6	52	1	480	462	6	79	3	550	10%	1%	53%	161%	15%
	Syon Lane (South)	249	0	12	1	262	222	0	26	1	249	-11%	0%	108%	163%	-5%
	A4 (West)	54	0	2	0	56	42	0	5	0	48	-21%	420%	134%	84%	-14%
A4 (East)	Syon Lane (South)	220	1	21	5	247	145	1	23	5	174	-34%	-8%	11%	3%	-29%
	A4 (West)	1,621	10	163	24	1,818	1,481	10	272	33	1,797	-9%	8%	67%	40%	-1%
	Syon Lane (North)	172	1	47	3	222	140	1	40	3	183	-19%	4%	-16%	23%	-17%
Syon Lane (South)	A4 (West)	98	0	10	1	110	123	0	18	1	142	25%	17%	77%	4%	29%
	Syon Lane (North)	240	1	24	1	266	268	1	64	3	337	12%	-4%	168%	305%	27%
	A4 (East)	228	4	17	10	258	197	3	30	11	241	-13%	-29%	79%	2%	-7%
Totals		4,404	63	424	64	4,954	4,204	55	695	83	5,037	-5%	-12%	64%	29%	2%

A4/Syon Lane Junction		2012 Base (Actual) Flows (veh/h)					2031 Syon Lane/A4 Great West Road (Source: LoHAM 3.10)					2012 - 2031 Percentage Change				
From	To	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total
A4 (West) east of Wood Lane	Eastbound	1,017	39	72	19	1,146	1,004	32	130	22	1,187	-1%	-19%	81%	14%	4%
	Westbound	1,687	10	169	23	1,889	1,584	11	290	33	1,918	-6%	12%	71%	43%	2%
Syon Lane (at MacFarlane Lane)	Southbound	388	4	56	1	448	447	4	85	3	539	15%	1%	51%	241%	20%
	Northbound	817	3	78	2	899	912	3	115	5	1,035	12%	-3%	48%	145%	15%
A4 (East) west of River Brent	Westbound	2,012	12	231	31	2,285	1,766	12	335	41	2,154	-12%	6%	45%	33%	-6%
	Eastbound	1,801	51	143	27	2,021	1,807	44	250	33	2,135	0%	-13%	75%	23%	6%
Spur Road (north of London Road)	Northbound	413	5	38	6	462	398	4	78	9	488	-4%	-22%	106%	40%	6%
	Southbound	412	5	31	5	452	361	3	51	6	421	-12%	-26%	62%	31%	-7%
Totals		8,545	127	818	114	9,604	8,279	113	1,333	153	9,877	-3%	-11%	63%	34%	3%

Key

Traffic reduction
Traffic increase 0% to 10%
Traffic increase 10% to 25%
Traffic increase > 25%
Traffic increase > 100%

Syon Lane Development Sites, TfL Strategic Model Traffic Growth Calculation - AM Peak, 2019 to 2031

Junction Turning Counts

A4/Syon Lane Junction		2012 Base (veh/h)					2031 Predicted (Source: LoHAM 3.10)					Predicted Flows, 2013					Predicted Flows, 2014					Predicted Flows, 2015				
From	To	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total
A4 (West)	Syon Lane (North)	85	0	3	4	92	96	0	7	3	106	86	0	3	4	93	86	0	3	4	93	87	0	3	4	94
	A4 (East)	1,070	33	124	59	1,286	1,000	6	207	58	1,271	1,066	30	127	59	1,282	1,062	28	131	59	1,280	1,059	25	134	59	1,277
	Syon Lane (South)	46	1	8	1	56	92	1	19	7	119	48	1	8	1	58	50	1	9	2	61	52	1	9	2	63
Syon Lane (North)	A4 (East)	428	2	85	3	518	493	2	104	10	609	431	2	86	4	522	434	2	87	4	527	438	2	88	4	531
	Syon Lane (South)	167	1	23	2	193	229	1	46	4	280	170	1	24	2	197	173	1	24	2	200	176	1	25	3	204
	A4 (West)	28	0	2	1	31	46	0	6	1	53	29	0	2	1	32	29	0	2	1	33	30	0	2	1	34
A4 (East)	Syon Lane (South)	227	0	28	9	264	129	0	14	7	150	220	0	27	9	257	214	0	26	9	249	207	0	25	9	242
	A4 (West)	1,325	6	97	33	1,461	1,465	7	187	47	1,705	1,332	6	100	33	1,472	1,339	6	104	34	1,484	1,346	6	107	35	1,495
	Syon Lane (North)	164	3	21	3	191	221	3	43	6	273	167	3	21	3	194	169	3	22	3	198	172	3	23	3	201
Syon Lane (South)	A4 (West)	48	1	4	3	54	44	1	4	1	49	48	1	4	2	54	47	1	4	2	54	47	1	4	2	53
	Syon Lane (North)	198	0	11	2	211	249	0	54	8	312	200	0	12	2	215	203	0	13	2	218	205	0	14	2	222
	A4 (East)	375	5	20	22	422	255	3	31	9	298	367	5	21	21	414	360	5	21	20	406	353	4	22	19	398
Total		4,162	52	424	142	4,780	4,319	24	721	162	5,226	4,165	50	435	142	4,791	4,168	47	446	142	4,802	4,172	44	457	142	4,815

A4/Syon Lane Junction		Predicted Flows, 2016					Predicted Flows, 2017					Predicted Flows, 2018					Predicted Flows, 2019					Predicted Flows, 2020				
From	To	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total
A4 (West)	Syon Lane (North)	88	0	3	4	95	88	0	3	4	95	89	0	4	4	96	89	0	4	3	97	90	0	4	3	97
	A4 (East)	1055	23	138	59	1275	1051	21	142	59	1273	1047	20	146	59	1271	1044	18	150	59	1271	1040	16	154	59	1269
	Syon Lane (South)	53	1	9	2	66	55	1	10	2	68	58	1	10	2	71	60	1	11	2	74	62	1	11	3	77
Syon Lane (North)	A4 (East)	441	2	88	4	536	444	2	89	4	540	448	2	90	5	545	451	2	91	5	549	454	2	92	5	554
	Syon Lane (South)	179	1	26	3	208	182	1	27	3	212	185	1	28	3	216	188	1	29	3	221	191	1	31	3	225
	A4 (West)	31	0	2	1	35	32	0	2	1	36	33	0	3	1	37	34	0	3	1	38	34	0	3	1	39
A4 (East)	Syon Lane (South)	201	0	24	9	235	195	0	23	9	228	190	0	23	9	221	184	0	22	8	215	179	0	21	8	208
	A4 (West)	1354	6	111	35	1507	1361	6	115	36	1518	1368	6	119	37	1530	1375	7	123	38	1542	1382	7	128	38	1555
	Syon Lane (North)	175	3	24	3	205	177	3	25	4	209	180	3	26	4	213	183	3	27	4	217	186	3	28	4	221
Syon Lane (South)	A4 (West)	47	1	4	2	53	47	1	4	2	53	47	1	4	2	52	46	1	4	1	52	46	1	4	1	52
	Syon Lane (North)	208	0	15	2	226	210	0	17	3	230	213	0	18	3	235	216	0	19	3	239	218	0	22	3	244
	A4 (East)	346	4	22	18	390	339	4	23	17	383	332	4	23	17	376	325	4	24	16	368	319	4	24	15	362
Totals		4177	42	469	142	4830	4182	40	481	143	4846	4188	38	494	143	4863	4194	36	507	144	4882	4201	35	521	144	4902

A4/Syon Lane Junction		Predicted Flows, 2021					Predicted Flows, 2022					Predicted Flows, 2023					Predicted Flows, 2024					Predicted Flows, 2025				
From	To	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total
A4 (West)	Syon Lane (North)	90	0	4	3	98	91	0	5	3	99	91	0	5	3	100	92	0	5	3	100	92	0	5	3	101
	A4 (East)	1036	15	158	58	1268	1033	14	162	58	1267	1029	13	167	58	1266	1025	12	171	58	1266	1022	11	176	58	1267
	Syon Lane (South)	64	1	12	3	80	67	1	12	3	83	69	1	13	4	86	72	1	14	4	90	74	1	14	4	94
Syon Lane (North)	A4 (East)	458	2	93	6	558	461	2	94	6	563	465	2	95	6	568	468	2	96	7	573	472	2	97	7	578
	Syon Lane (South)	194	1	32	3	229	198	1	33	3	234	201	1	34	3	239	204	1	35	3	243	208	1	37	3	248
	A4 (West)	35	0	3	1	40	36	0	3	1	41	37	0	4	1	42	38	0	4	1	44	39	0	4	1	45
A4 (East)	Syon Lane (South)	174	0	20	8	202	168	0	20	8	196	164	0	19	8	190	159	0	18	8	185	154	0	18	8	179
	A4 (West)	1390	7	132	39	1567	1397	7	137	40	1580	1404	7	142	41	1593	1412	7	147	41	1606	1419	7	152	42	1619
	Syon Lane (North)	189	3	29	4	225	192	3	30	4	229	195	3	31	5	234	198	3	33	5	238	201	3	34	5	243
Syon Lane (South)	A4 (West)	46	1	4	1	52	46	1	4	1	51	46	1	4	1	51	45	1	4	1	51	45	1	4	1	51
	Syon Lane (North)	221	0	24	4	248	223	0	26	4	253	226	0	28	4	259	229	0	30	5	264	232	0	33	5	270
	A4 (East)	312	4	25	15	355	306	4	25	14	349	300	3	26	13	343	294	3	27	13	336	288	3	27	12	330
Totals		4209	33	536	145	4923	4217	32	551	146	4947	4226	31	567	147	4971	4236	30	583	149	4997	4246	29	601	150	5025

A4/Syon Lane Junction		Predicted Flows, 2026					Predicted Flows, 2027					Predicted Flows, 2028					Predicted Flows, 2029					Predicted Flows, 2030				
From	To	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total
A4 (West)	Syon Lane (North)	93	0	6	3	102	94	0	6	3	103	94	0	6	3	104	95	0	7	3	105	95	0	7	3	105
	A4 (East)	1018	10	181	58	1267	1015	9	186	58	1267	1011	8	191	58	1268	1007	7	196	58	1269	1004	7	201	58	1270
	Syon Lane (South)	77	1	15	5	97	80	1	16	5	102	83	1	16	6	106	86	1	17	6	110	89	1	18	7	115
Syon Lane (North)	A4 (East)	475	2	98	7	583	479	2	99	8	588	482	2	100	8	593	486	2	102	9	598	489	2	103	9	603
	Syon Lane (South)	211	1	38	3	253	215	1	40	4	258	218	1	41	4	263	222	1	43	4	269	226	1	44	4	274
	A4 (West)	40	0	4	1	46	41	0	5	1	47	43	0	5	1	49	44	0	5	1	50	45	0	6	1	52
A4 (East)	Syon Lane (South)	150	0	17	8	174	145	0	16	7	169	141	0	16	7	164	137	0	15	7	159	133	0	15	7	155
	A4 (West)	1427	7	157	43	1633	1434	7	163	44	1647	1442	7	168	45	1661	1449	7	174	46	1676	1457	7	180	46	1690
	Syon Lane (North)	204	3	35</																						

Syon Lane Development Sites, TfL Strategic Model Traffic Growth Calculation - PM Peak, 2019 to 2031

Junction Turning Counts

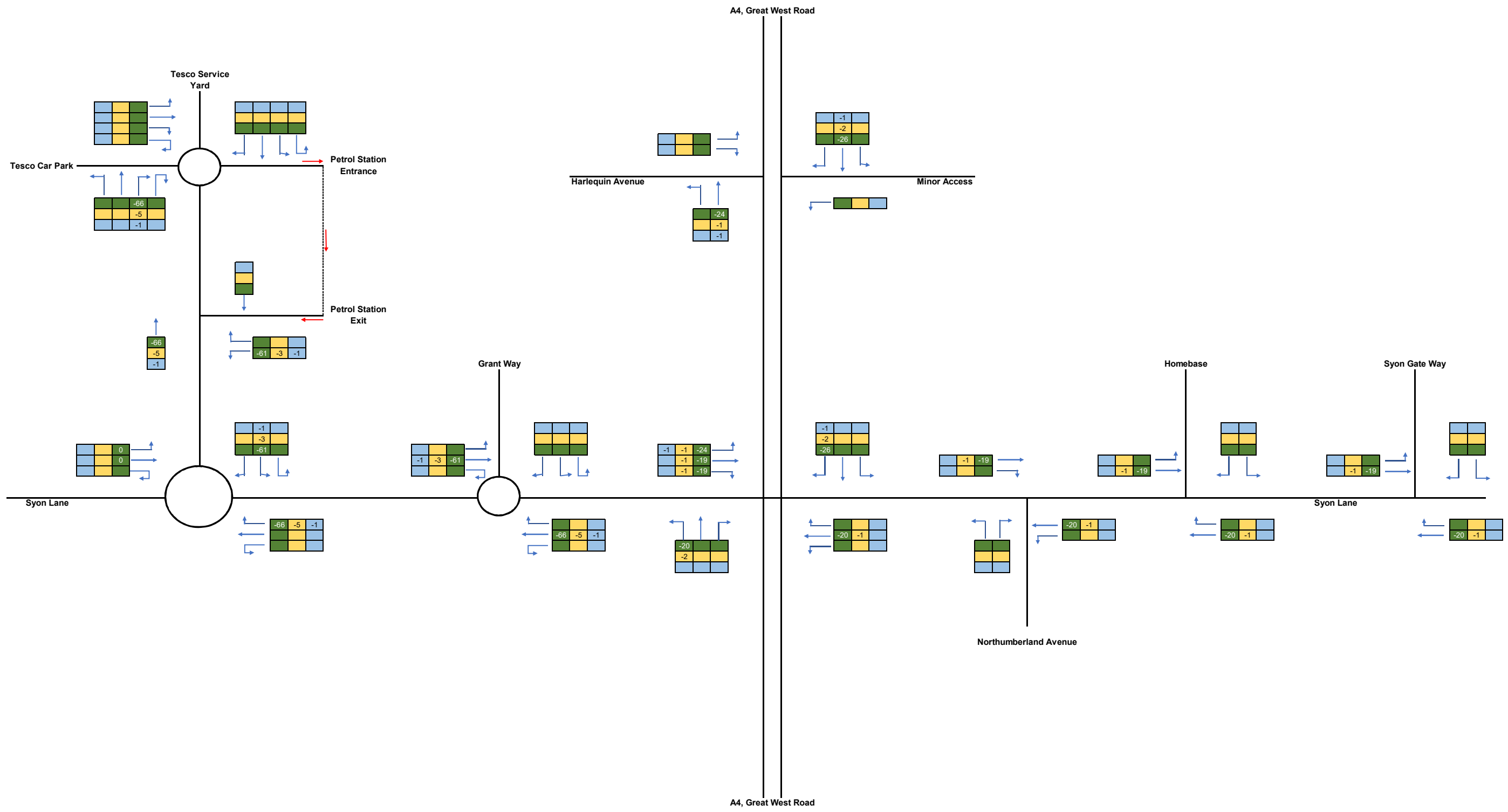
A4/Syon Lane Junction		2012 Base (veh/h)					2031 Predicted (Source: LoHAM 3.10)					Predicted Flows, 2013					Predicted Flows, 2014					Predicted Flows, 2015				
From	To	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total
A4 (West)	Syon Lane (North)	66	0	1	0	67	85	0	5	0	90	66	0	1	0	68	67	0	1	0	69	68	0	1	0	70
	A4 (East)	959	37	66	18	1,080	921	30	112	20	1,083	957	36	68	18	1,080	955	36	70	18	1,079	953	35	72	18	1,079
	Syon Lane (South)	77	3	8	1	89	119	3	20	1	143	78	3	9	1	91	80	3	9	1	93	82	3	10	1	96
Syon Lane (North)	A4 (East)	421	6	52	1	480	462	6	79	3	550	423	6	53	1	483	425	6	54	1	487	427	6	55	2	490
	Syon Lane (South)	249	0	12	1	262	222	0	26	1	249	247	0	13	1	261	246	0	13	1	260	244	0	14	1	259
	A4 (West)	54	0	2	0	56	42	0	5	0	48	53	0	2	0	56	52	0	3	0	55	52	0	3	0	55
A4 (East)	Syon Lane (South)	220	1	21	5	247	145	1	23	5	174	215	1	21	5	242	210	1	21	5	237	206	1	21	5	233
	A4 (West)	1,621	10	163	24	1,818	1,481	10	272	33	1,797	1,614	10	167	24	1,815	1,606	10	172	25	1,812	1,598	10	177	25	1,810
	Syon Lane (North)	172	1	47	3	222	140	1	40	3	183	170	1	47	3	220	168	1	46	3	217	166	1	46	3	215
Syon Lane (South)	A4 (West)	98	0	10	1	110	123	0	18	1	142	100	0	11	1	111	101	0	11	1	113	102	0	11	1	114
	Syon Lane (North)	240	1	24	1	266	268	1	64	3	337	241	1	25	1	269	243	1	27	1	272	244	1	28	1	274
	A4 (East)	228	4	17	10	258	197	3	30	11	241	226	4	17	10	257	224	4	18	10	256	222	3	18	10	255
Total		4,404	63	424	64	4,954	4,204	55	695	83	5,037	4,391	62	434	65	4,952	4,378	62	445	66	4,950	4,366	62	456	66	4,949

A4/Syon Lane Junction		Predicted Flows, 2016					Predicted Flows, 2017					Predicted Flows, 2018					Predicted Flows, 2019					Predicted Flows, 2020				
From	To	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total
A4 (West)	Syon Lane (North)	69	0	1	0	71	70	0	1	0	72	71	0	1	0	73	72	0	1	0	74	73	0	2	0	75
	A4 (East)	951	35	74	19	1,079	949	35	76	19	1,078	947	34	78	19	1,078	945	34	80	19	1,073	943	34	82	19	1,078
	Syon Lane (South)	84	3	10	1	98	86	3	11	1	101	88	3	11	1	103	90	3	12	1	106	92	3	12	1	108
Syon Lane (North)	A4 (East)	429	6	56	2	493	431	6	58	2	497	434	6	59	2	500	436	6	60	2	504	438	6	62	2	507
	Syon Lane (South)	243	0	14	1	258	241	0	15	1	257	240	0	16	1	256	238	0	16	1	255	237	0	17	1	255
	A4 (West)	51	0	3	0	54	50	0	3	0	54	50	0	3	0	53	49	0	3	0	53	49	0	3	0	52
A4 (East)	Syon Lane (South)	201	1	22	5	229	197	1	22	5	224	193	1	22	5	220	188	1	22	5	216	184	1	22	5	212
	A4 (West)	1591	10	182	26	1,808	1583	10	187	26	1,805	1576	10	192	26	1,804	1568	10	197	27	1,802	1561	10	202	27	1,800
	Syon Lane (North)	164	1	45	3	213	163	1	45	3	211	161	1	45	3	209	159	1	44	3	207	157	1	44	3	205
Syon Lane (South)	A4 (West)	103	0	12	1	116	104	0	12	1	117	106	0	12	1	119	107	0	13	1	121	108	0	13	1	122
	Syon Lane (North)	245	1	30	1	277	247	1	31	1	280	248	1	33	1	284	250	1	35	1	287	251	1	36	1	290
	A4 (East)	221	3	19	10	254	219	3	20	10	253	218	3	20	10	251	216	3	21	10	250	214	3	22	10	249
Totals		4353	61	467	67	4949	4341	61	479	68	4949	4330	60	491	69	4950	4319	60	504	70	4952	4308	59	517	71	4955

A4/Syon Lane Junction		Predicted Flows, 2021					Predicted Flows, 2022					Predicted Flows, 2023					Predicted Flows, 2024					Predicted Flows, 2025				
From	To	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total
A4 (West)	Syon Lane (North)	74	0	2	0	76	75	0	2	0	78	76	0	2	0	79	77	0	2	0	80	78	0	3	0	81
	A4 (East)	941	33	85	19	1,078	939	33	87	19	1,078	937	33	90	19	1,078	935	32	92	19	1,078	933	32	95	20	1,079
	Syon Lane (South)	94	3	13	1	111	96	3	13	1	114	99	3	14	1	117	101	3	15	1	120	103	3	15	1	123
Syon Lane (North)	A4 (East)	440	6	63	2	511	442	6	64	2	514	444	6	66	2	518	446	6	67	2	522	448	6	69	3	526
	Syon Lane (South)	236	0	17	1	254	234	0	18	1	253	233	0	19	1	252	231	0	20	1	252	230	0	20	1	251
	A4 (West)	48	0	3	0	52	47	0	4	0	51	47	0	4	0	51	46	0	4	0	51	46	0	4	0	50
A4 (East)	Syon Lane (South)	180	1	22	5	208	176	1	22	5	205	173	1	22	5	201	169	1	23	5	197	165	1	23	5	194
	A4 (West)	1553	10	208	28	1,799	1546	10	213	28	1,798	1539	10	219	29	1,797	1531	10	225	29	1,796	1524	10	231	30	1,795
	Syon Lane (North)	156	1	43	3	203	154	1	43	3	201	152	1	43	3	199	151	1	42	3	197	149	1	42	3	195
Syon Lane (South)	A4 (West)	109	0	14	1	124	111	0	14	1	126	112	0	14	1	127	113	0	15	1	129	114	0	15	1	131
	Syon Lane (North)	253	1	38	1	294	254	1	40	2	297	256	1	43	2	301	257	1	45	2	305	259	1	47	2	309
	A4 (East)	213	3	22	10	248	211	3	23	10	247	209	3	24	10	247	208	3	24	10	246	206	3	25	10	245
Totals		4297	59	531	72	4958	4286	59	545	73	4962	4276	58	559	74	4967	4266	58	574	75	4972	4256	58	590	76	4977

A4/Syon Lane Junction		Predicted Flows, 2026					Predicted Flows, 2027					Predicted Flows, 2028					Predicted Flows, 2029					Predicted Flows, 2030				
From	To	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total	Car	Taxi	LGV	HGV	Total
A4 (West)	Syon Lane (North)	79	0	3	0	83	80	0	3	0	84	82	0	4	0	86	83	0	4	0	87	84	0	4	0	89
	A4 (East)	931	32	97	20	1,079	929	31	100	20	1,080	927	31	103	20	1,080	925	31	106	20	1,081	923	30	109	20	1,082
	Syon Lane (South)	106	3	16	1	126	108	3	17	1	129	111	3	18	1	132	113	3	18	1	136	116	3	19	1	139
Syon Lane (North)	A4 (East)	451	6	70	3	530	453	6	72	3	533	455	6	74	3	537	457	6	75	3	541	459	6	77	3	546
	Syon Lane (South)	229	0	21	1	251	227	0	22	1	250	226	0	23	1	250	224	0	24	1	249	223	0	25	1	249
	A4 (West)	45	0	4	0	50	45	0	5	0	50	44	0	5	0	49	43	0	5	0	49	43	0	5	0	49
A4 (East)	Syon Lane (South)	162	1	23	5	190	158	1	23	5	187	155	1	23	5	184	151	1	23	5	180	148	1	23	5	177
	A4 (West)	1517	10	238	31	1,795	1510	10	244	31	1,795	1503	10	251	32	1,795	1495	10	258	32	1,795	1488	10	265	33</	

Appendix T – 2035 ‘Future Base and ‘Operational’ Traffic Flows



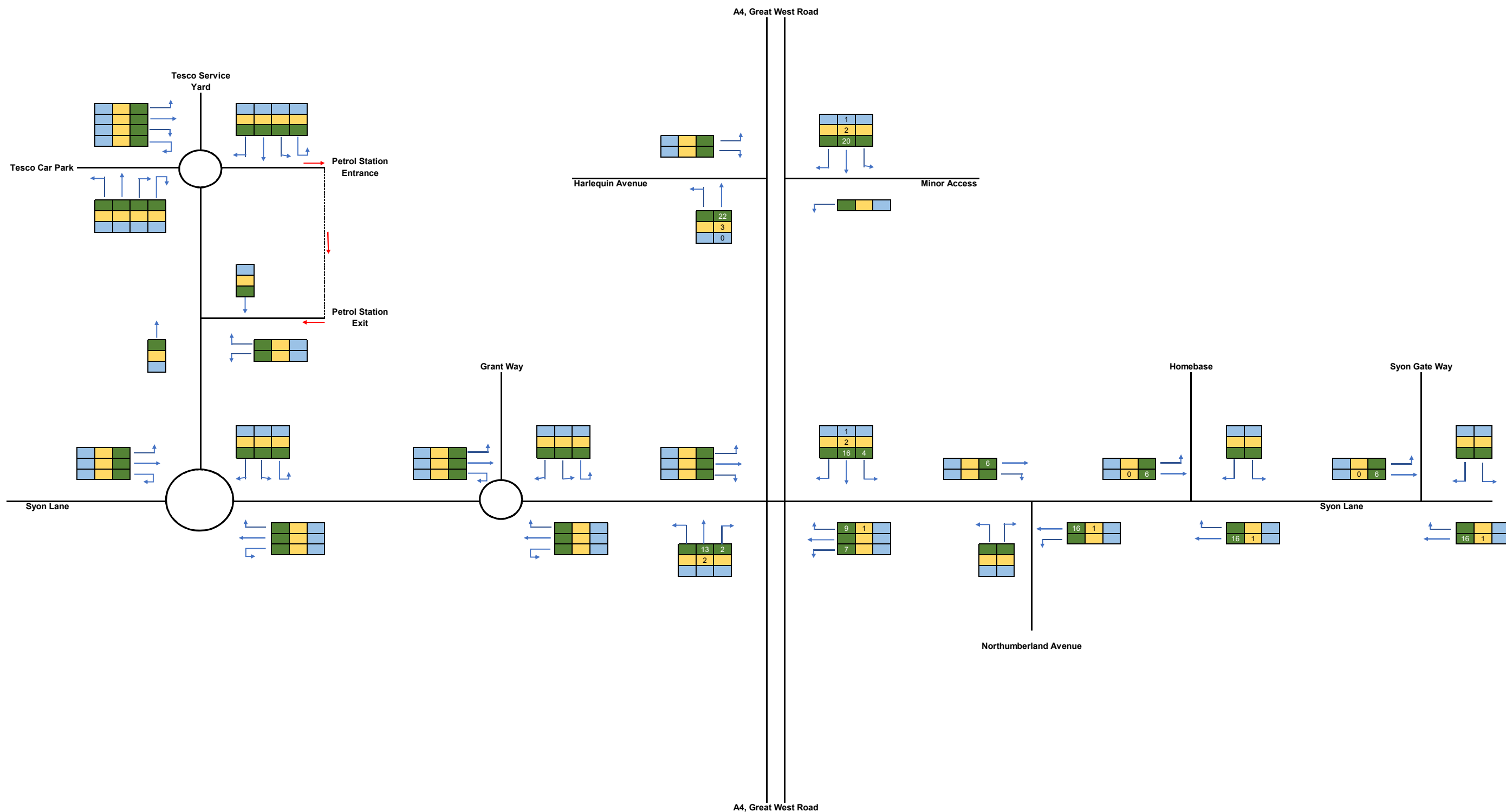
Project:
 Syon Lane Development Sites -
 Proposed Residential and Tesco
 Development

Figure Title:
 Petrol Filling Station Only Trips
 Removed, Weekday AM Peak, 07:45-
 08:45

Project Number:
 PB9144

Date:
 May 2020

Figure No.:
 21a



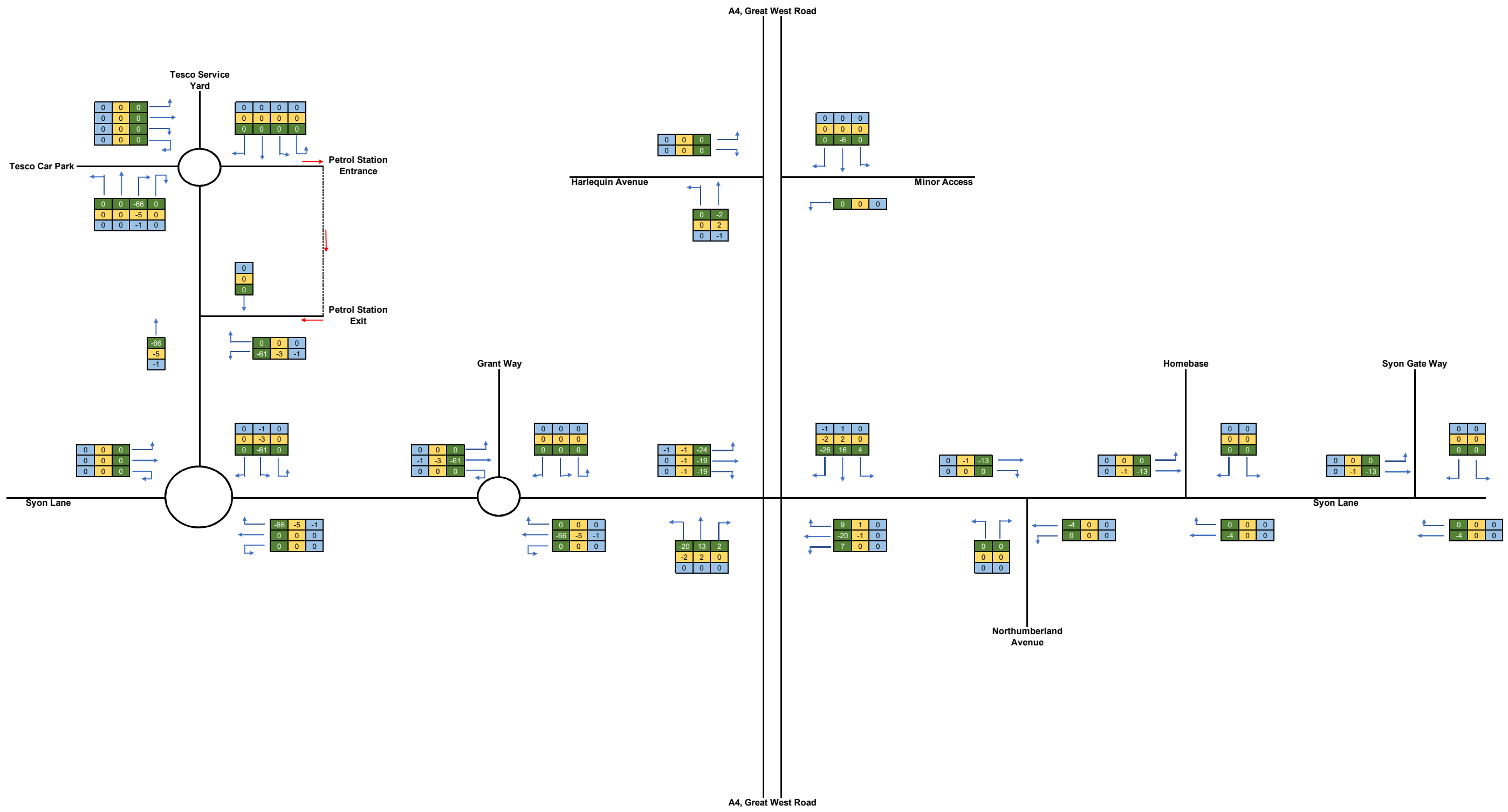
Project:
 Syon Lane Development Sites -
 Proposed Residential and Tesco
 Development

Figure Title:
 Petrol Filling Station Only Trips
 Reintroduced, Weekday AM Peak,
 07:45-08:45

Project Number:
 PB9144

Date:
 May 2020

Figure No.:
 21b



Key
 .xx Car/Light Goods Vehicle (LGV)
 .xx Heavy Goods Vehicle (HGV)
 .xx Buses

15 PFS only trips removed from study area as a result of the PFS removal



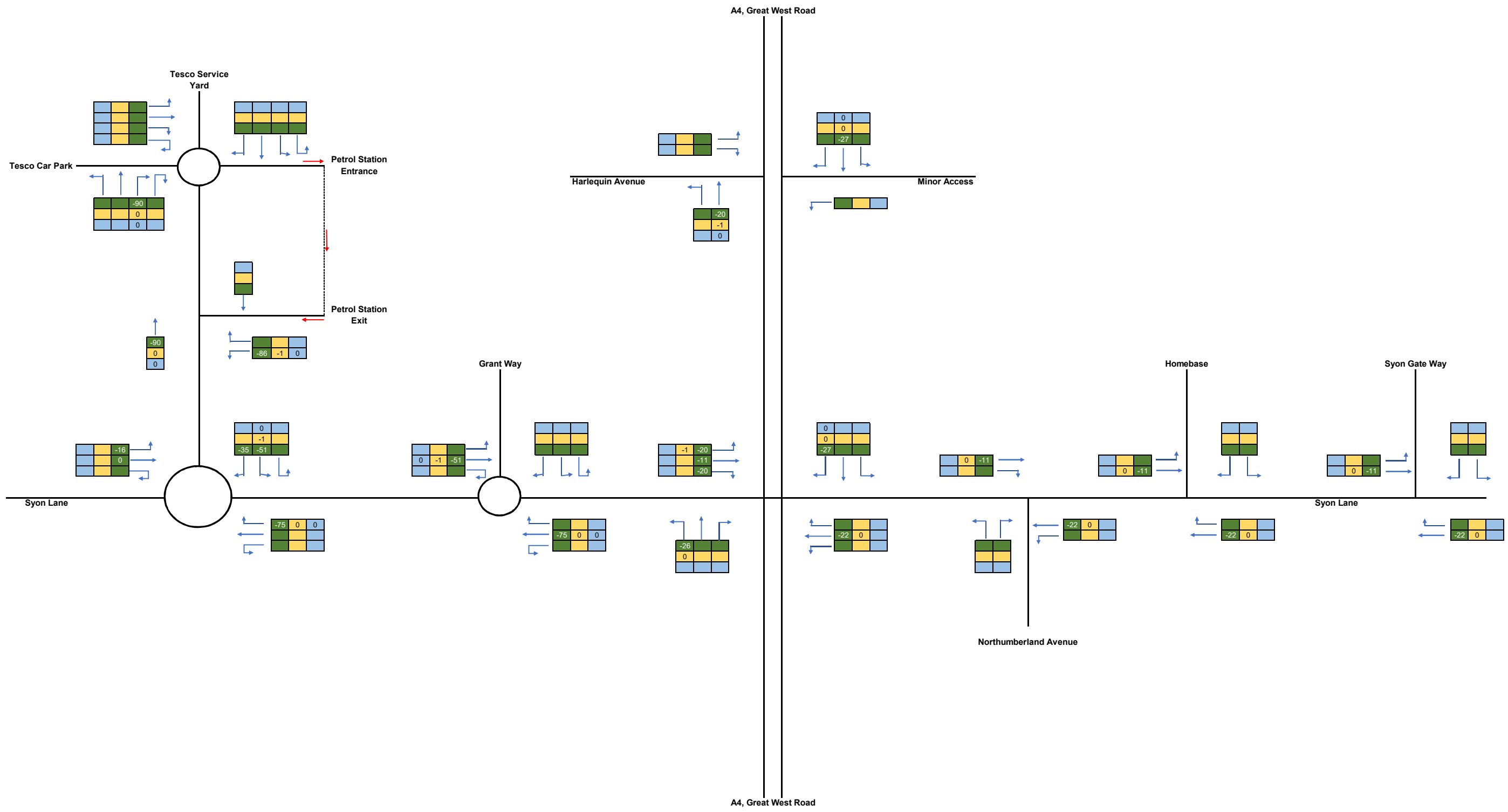
Project:
 Syon Lane Development Sites -
 Proposed Residential and Tesco
 Development

Figure Title:
 Petrol Filling Station Only Trips
 Redistribution and Reduction,
 Weekday AM Peak, 07:45-08:45

Project Number:
 PB9144

Date:
 May 2020

Figure No.:
 21



Key
 xx Car/Light Goods Vehicle (LGV)
 xx Heavy Goods Vehicle (HGV)
 xx Buses



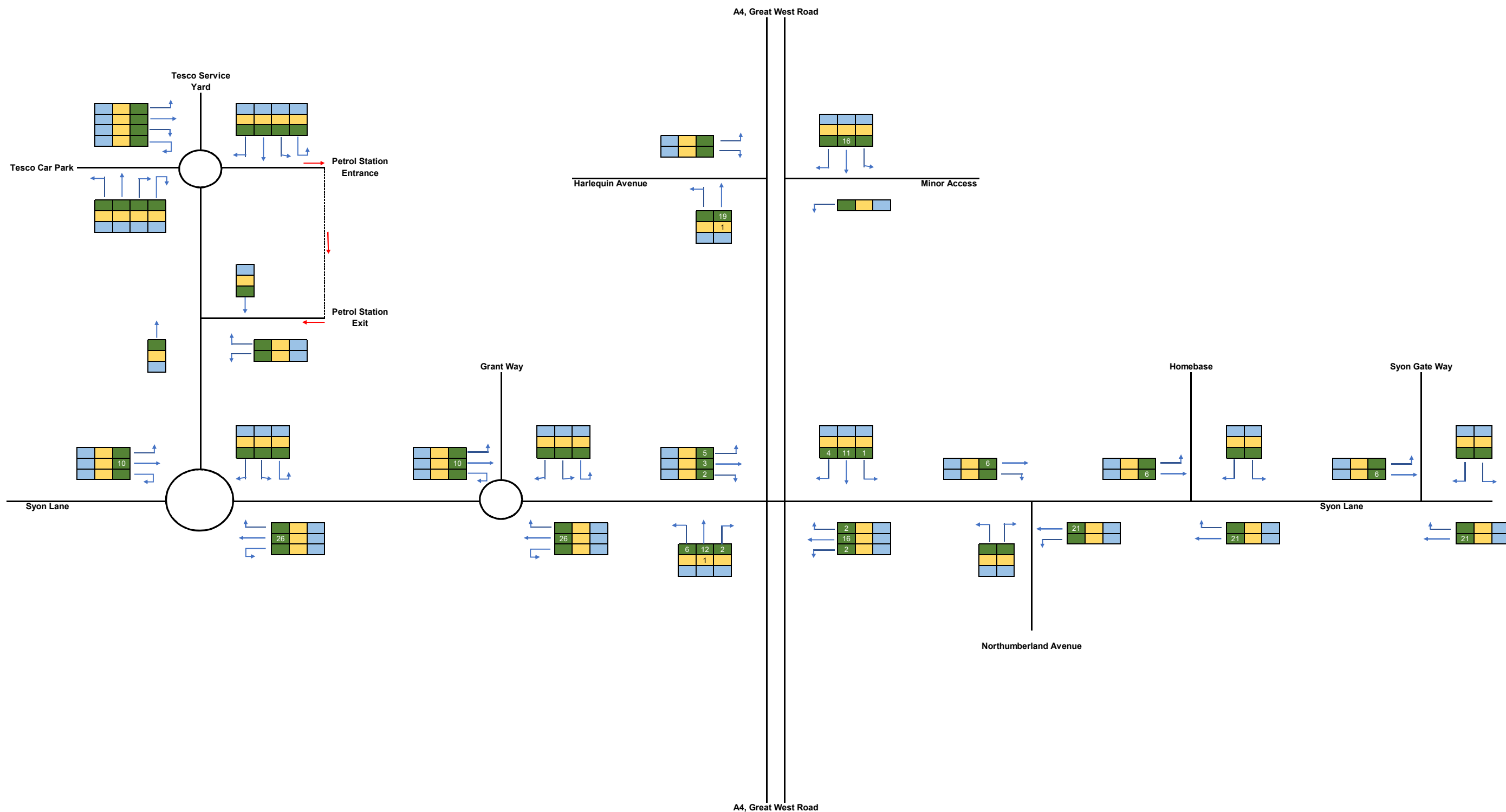
Project:
 Syon Lane Development Sites -
 Proposed Residential and Tesco
 Development

Figure Title:
 Petrol Filling Station Only Trips
 Removed, Weekday PM Peak, 17:00-
 18:00

Project Number:
 PB9144

Date:
 May 2020

Figure No.:
 22a



Key
 xx Car/Light Goods Vehicle (LGV)
 xx Heavy Goods Vehicle HGV
 xx Buses



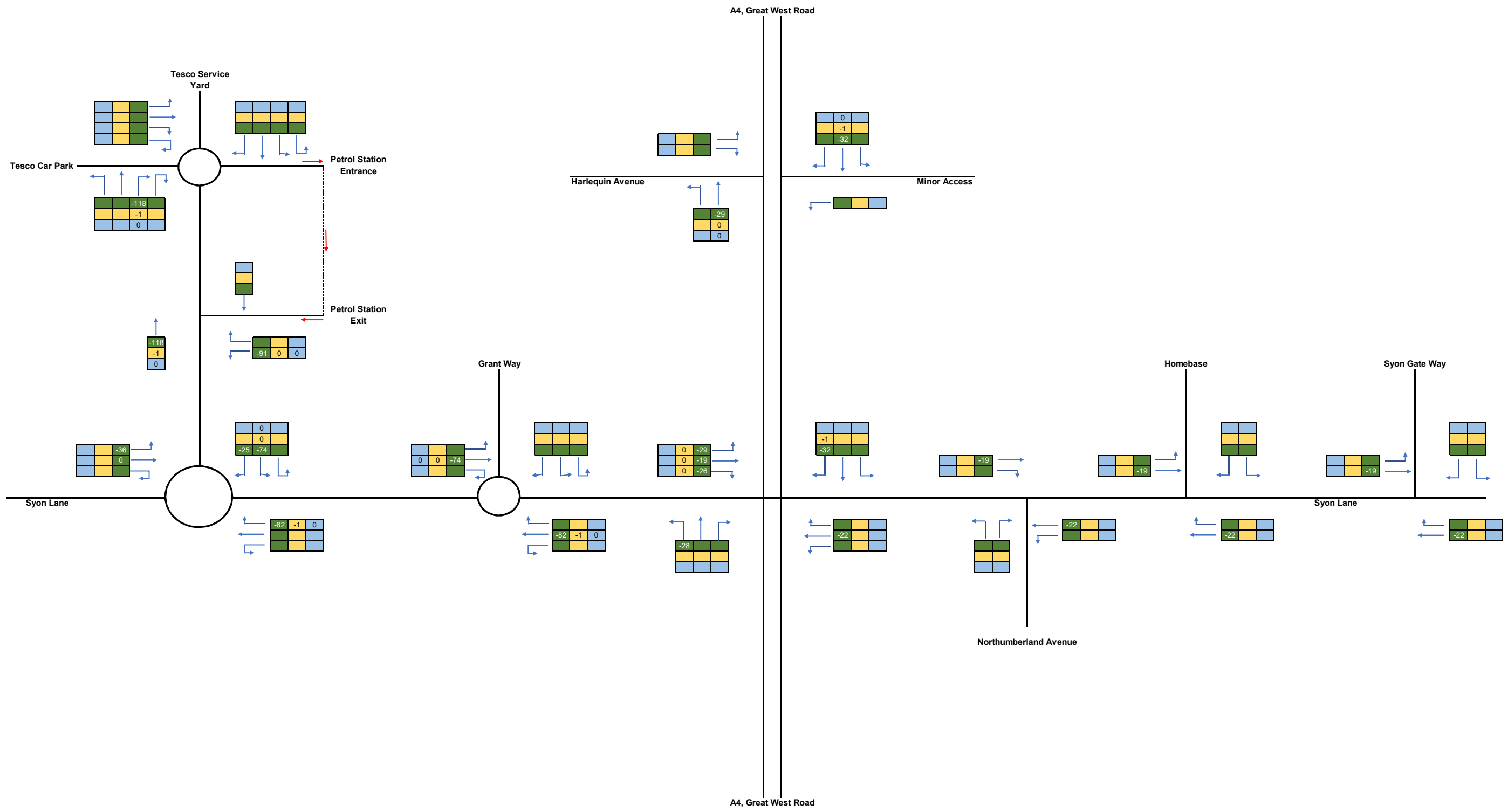
Project:
 Syon Lane Development Sites -
 Proposed Residential and Tesco
 Development

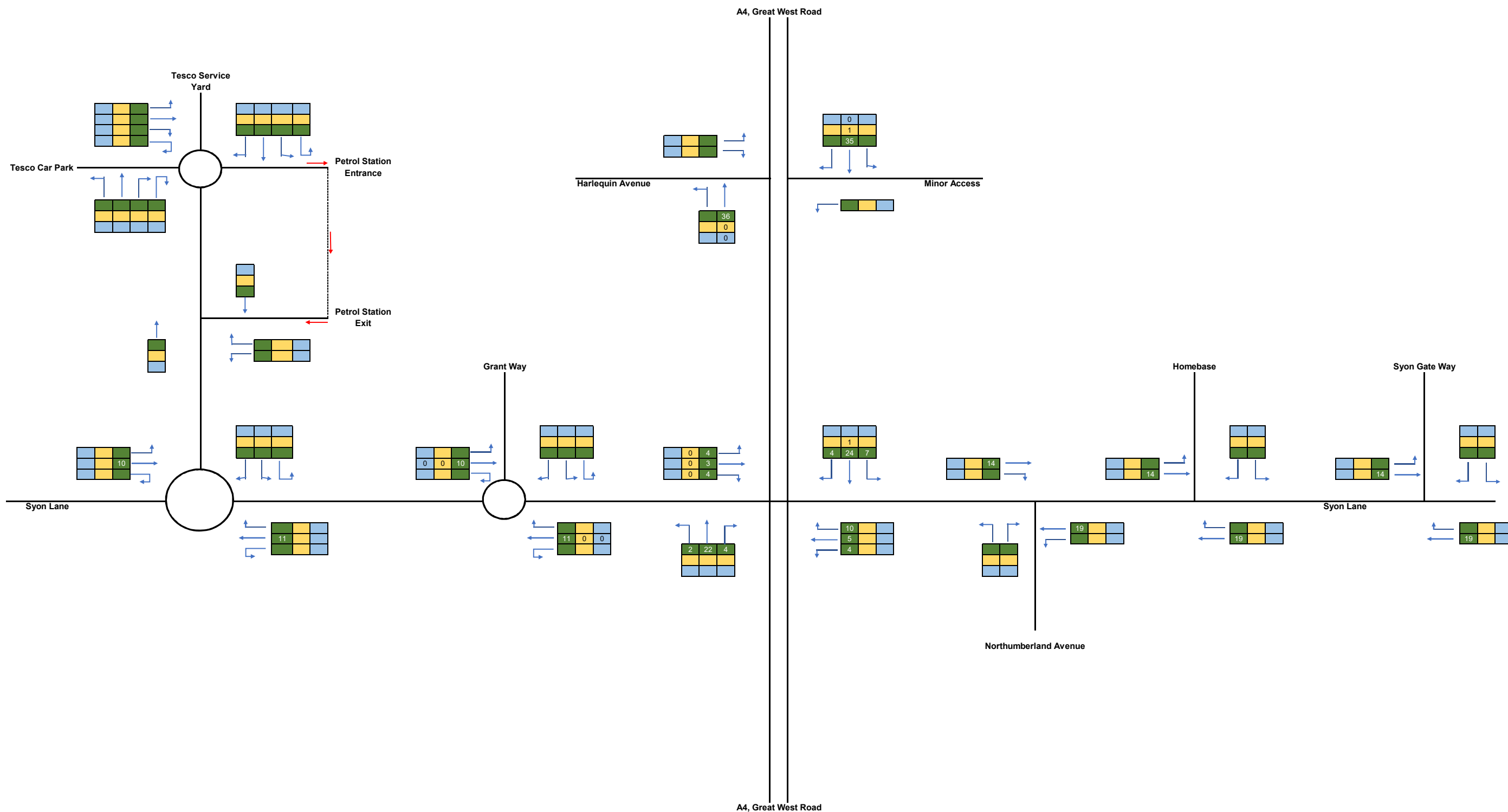
Figure Title:
 Petrol Filling Station Only Trips
 Reintroduced, Weekday PM Peak,
 17:00-18:00

Project Number:
 PB9144

Date:
 May 2020

Figure No.:
 22b





Key

- Car/Light Goods Vehicle (LGV)
- Heavy Goods Vehicle (HGV)
- Buses



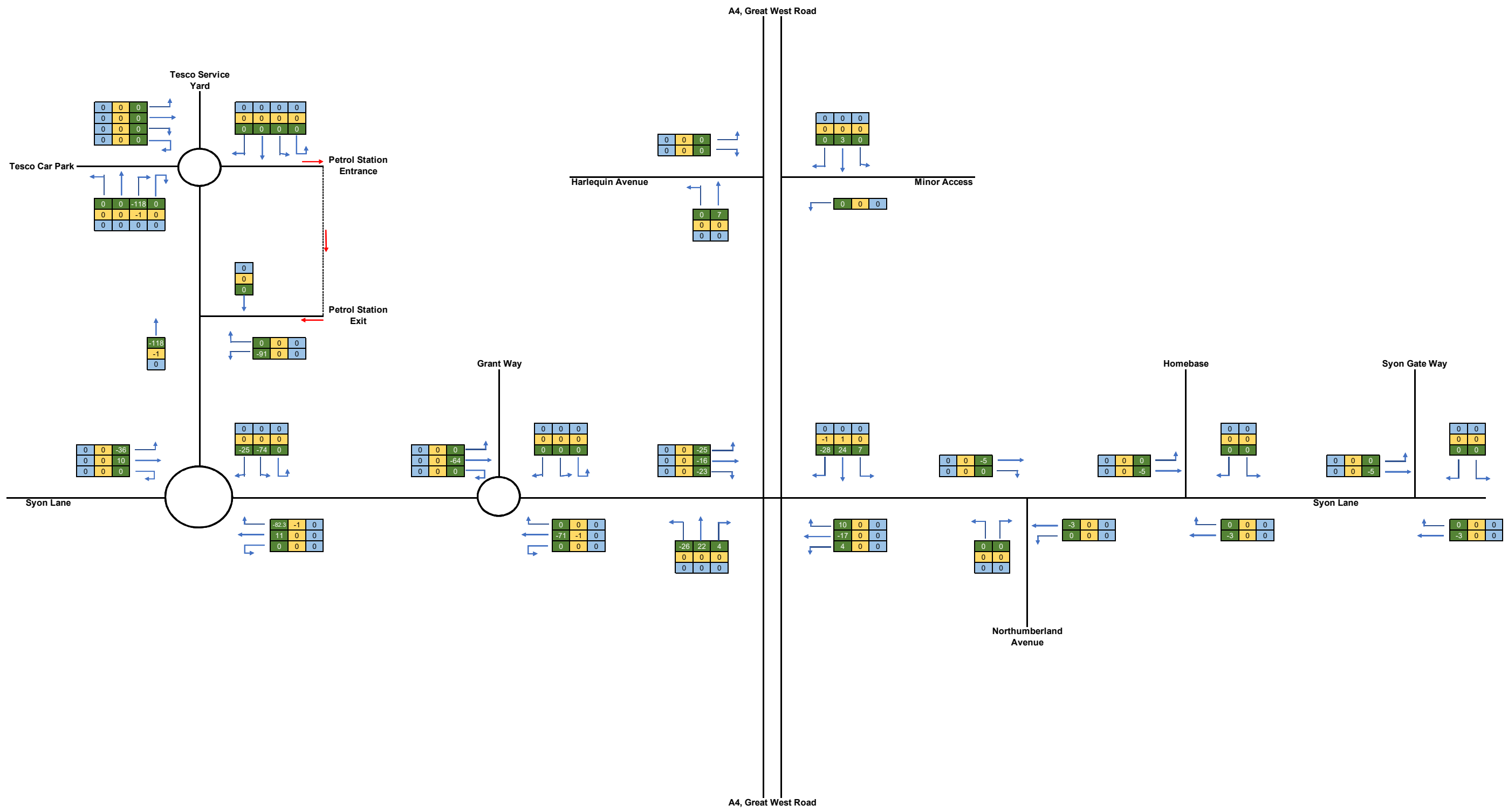
Project:
 Syon Lane Development Sites -
 Proposed Residential and Tesco
 Development

Figure Title:
 Petrol Filling Station Only Trips
 Reintroduced, Saturday Peak, 13:00-
 14:00

Project Number:
 PB9144

Date:
 May 2020

Figure No.:
 23b



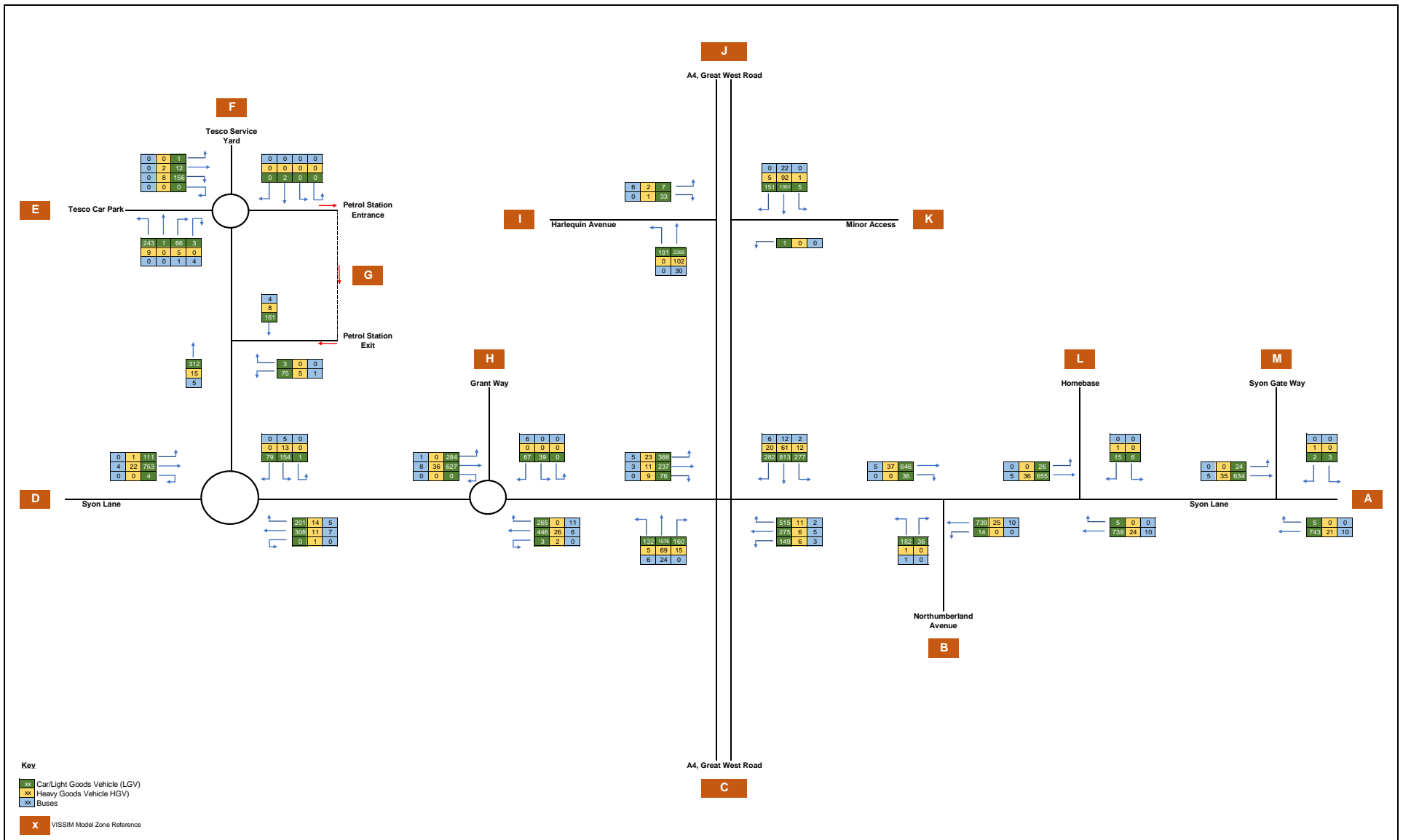
Project:
 Syon Lane Development Sites -
 Proposed Residential and Tesco
 Development

Figure Title:
 Petrol Filling Station Only Trips
 Redistribution and Reduction,
 Saturday Peak, 13:00-14:00

Project Number:
 PB9144

Date:
 May 2020

Figure No.:
 23



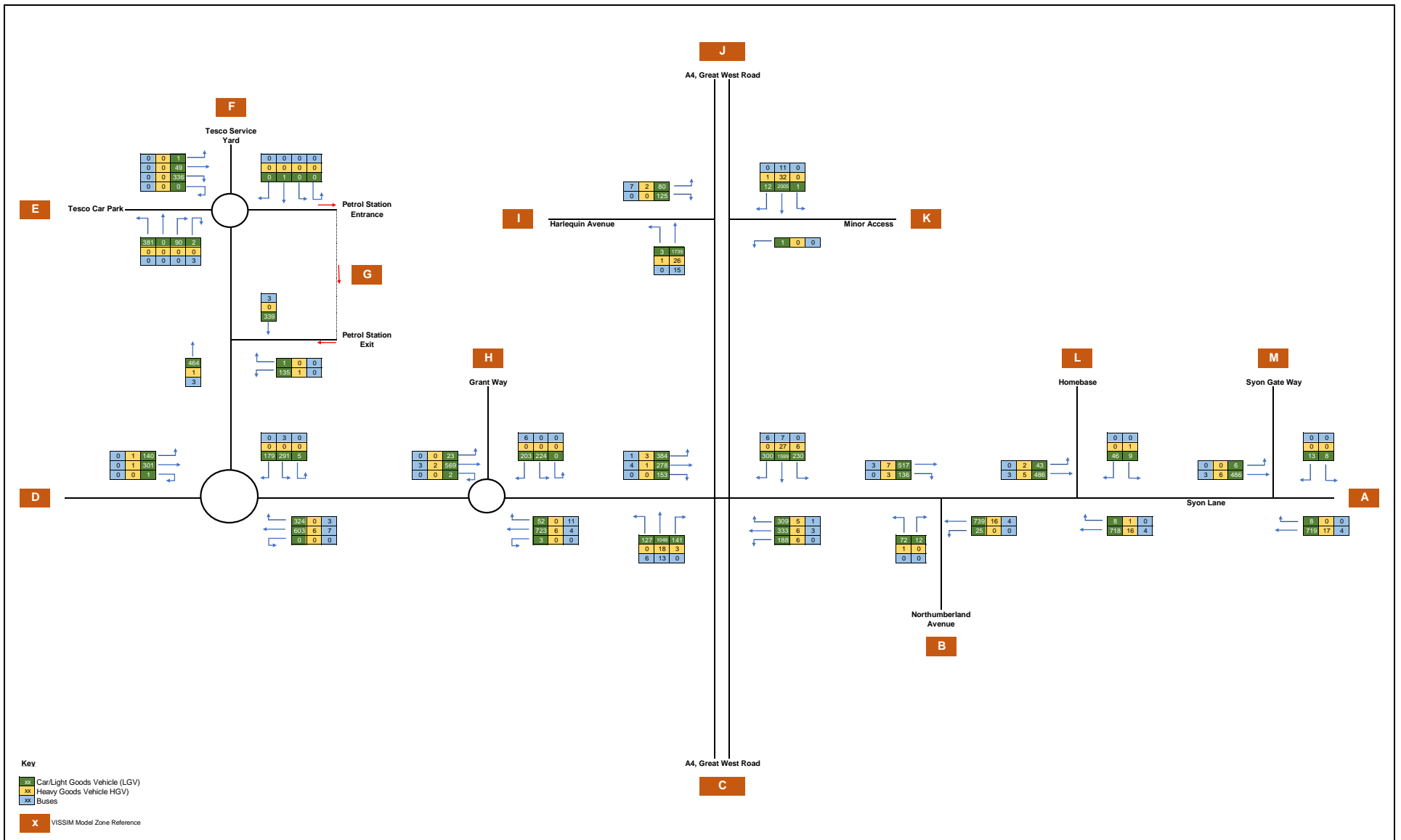
Project:
Syon Lane Development Sites -
Proposed Residential and Tesco
Development

Figure Title:
2019 Surveyed Traffic Flows -
Weekday AM Peak Hour, 07:45-
08:45

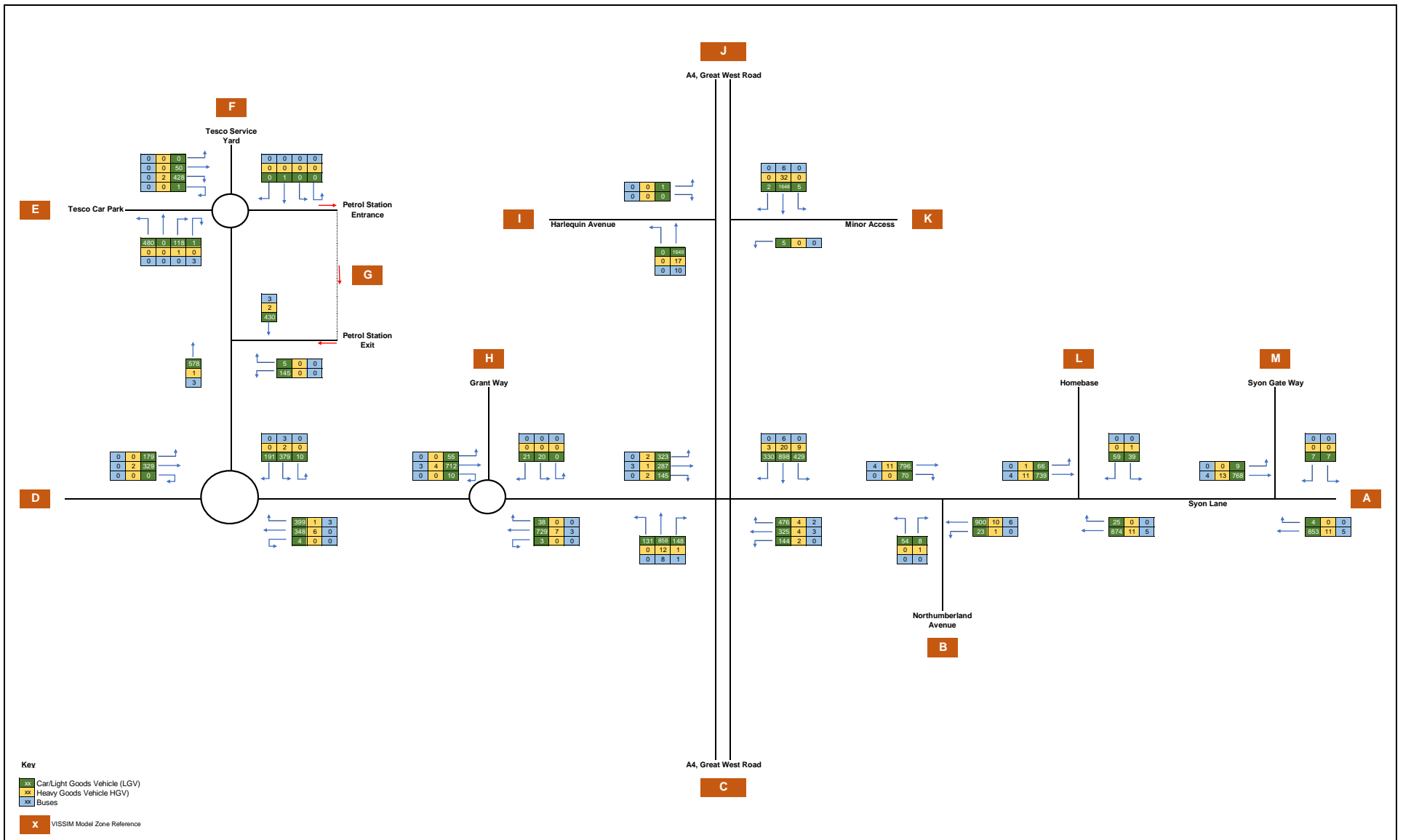
Project Number:
PB9144


Date:
May 2020

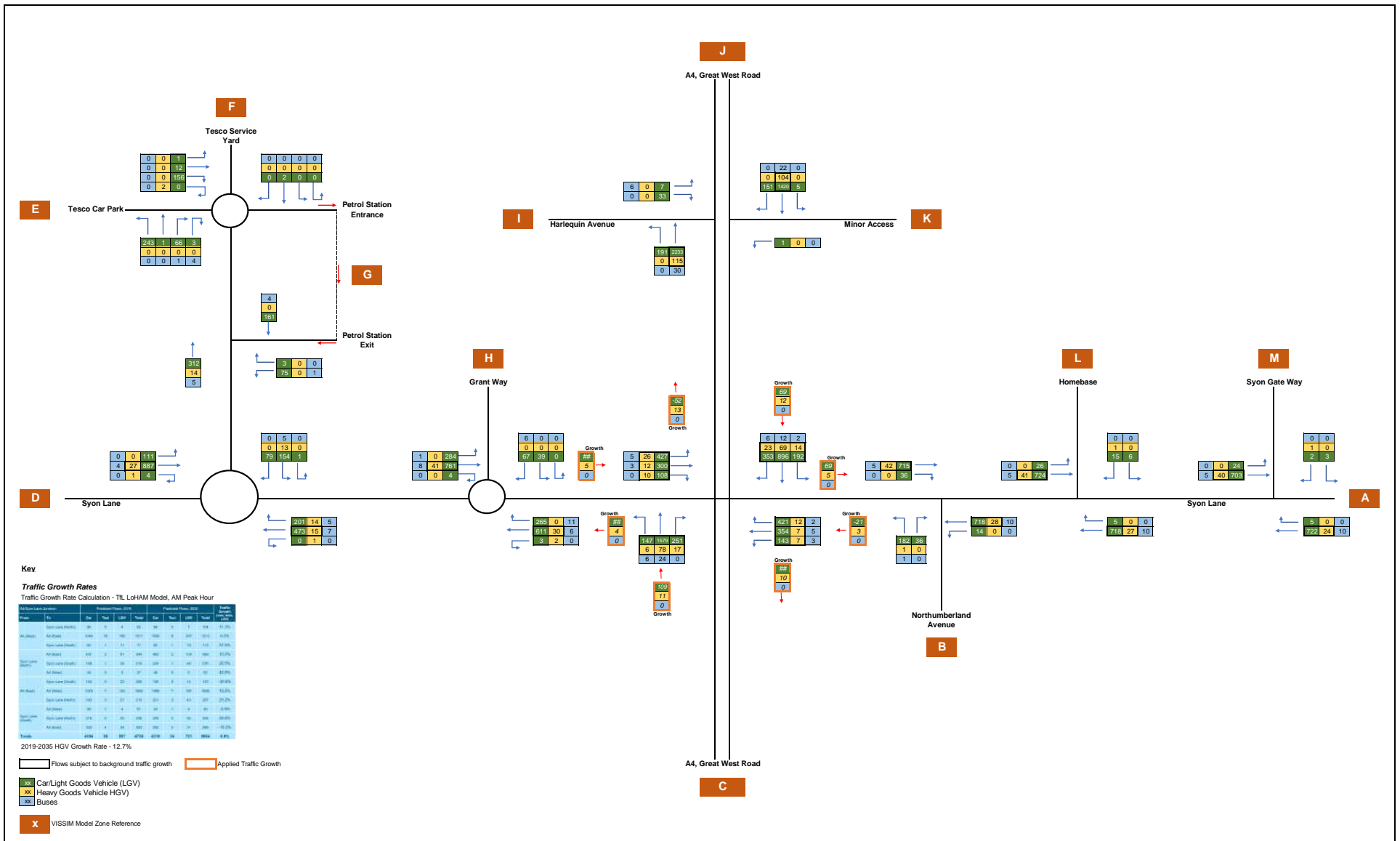
Figure No.:
FB1



	Project: Syon Lane Development Sites - Proposed Residential and Tesco Development	Figure Title: 2019 Surveyed Traffic Flows - Weekday PM Peak Hour, 17:00-18:00	Project Number: PB9144	Date: May 2020	Figure No.: FB2
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 <p>Royal HaskoningDHV Enhancing Society Together</p>	<p>Project: Syon Lane Development Sites - Proposed Residential and Tesco Development</p>	<p>Figure Title: 2019 Surveyed Traffic Flows - Saturday Peak Hour, 13:00-14:00</p>	<p>Project Number: PB9144</p>	<p>Date: May 2020</p>	<p>Figure No.: FB3</p>
---	---	---	--	----------------------------------	-----------------------------------



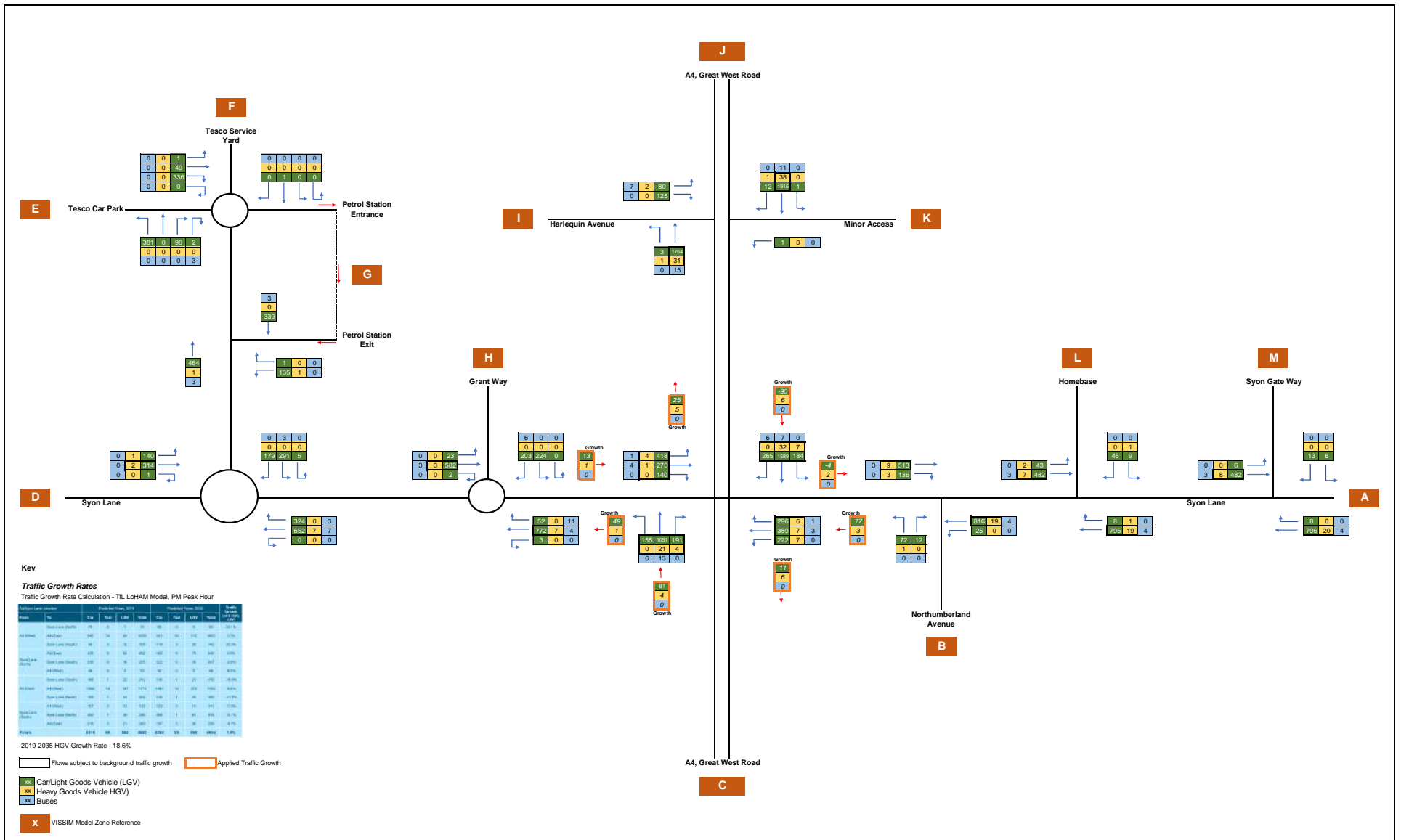
Project:
Syon Lane Development Sites - Proposed Residential and Tesco Development

Figure Title:
Weekday AM Peak Hour 07:45-08:45, with LoHAM Traffic Growth, 2019 to 2035

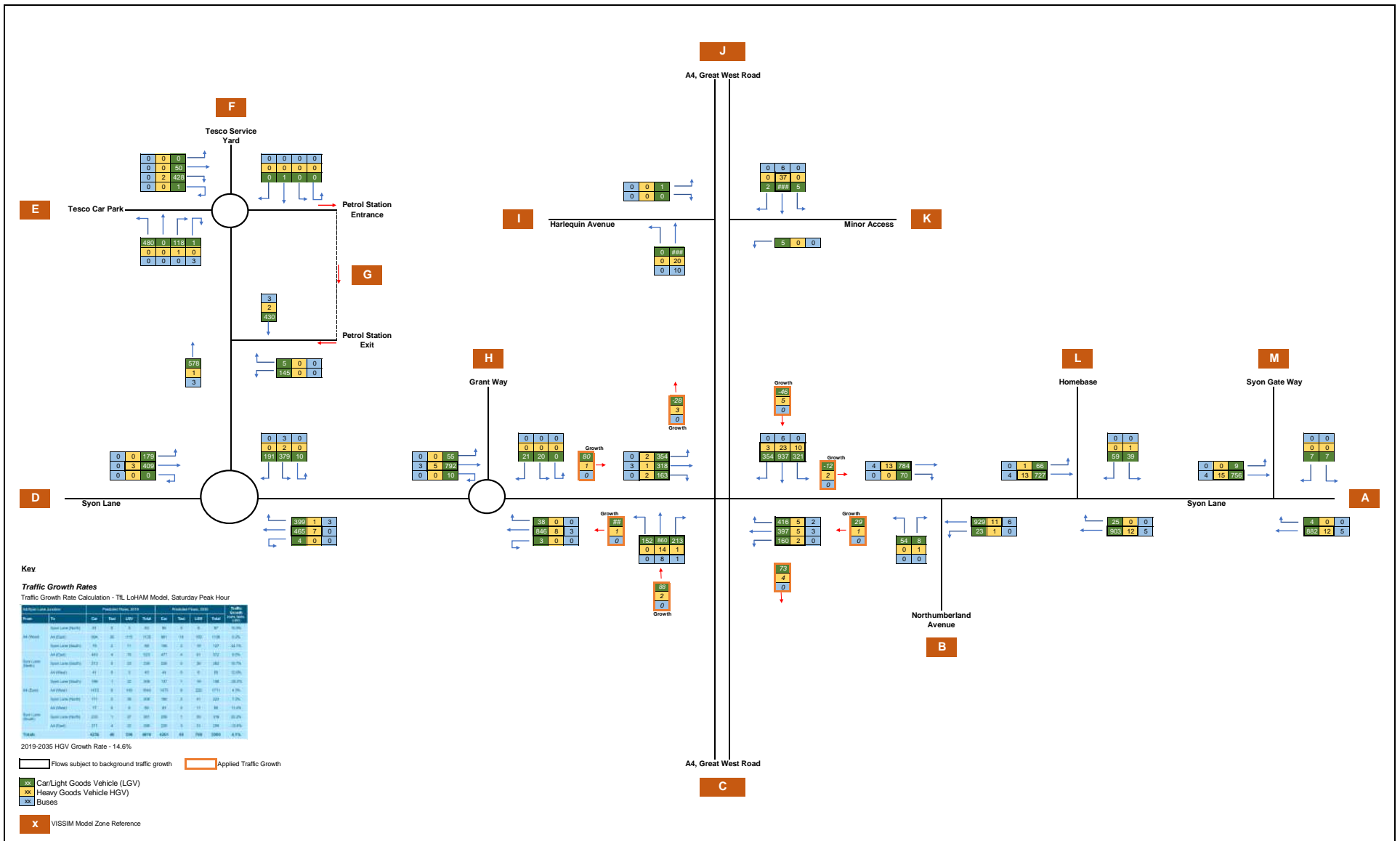
Project Number:
PB9144

Date:
May 2020

Figure No.:
FB4



<p>Royal HaskoningDHV Enhancing Society Together</p>	<p>Project: Syon Lane Development Sites - Proposed Residential and Tesco Development</p>	<p>Figure Title: Weekday PM Peak Hour 17:00-18:00, with LoHAM Traffic Growth, 2019 to 2035</p>	<p>Project Number: PB9144</p>	<p>Date: May 2020</p>	<p>Figure No.: FB5</p>
--	---	---	--	----------------------------------	-----------------------------------



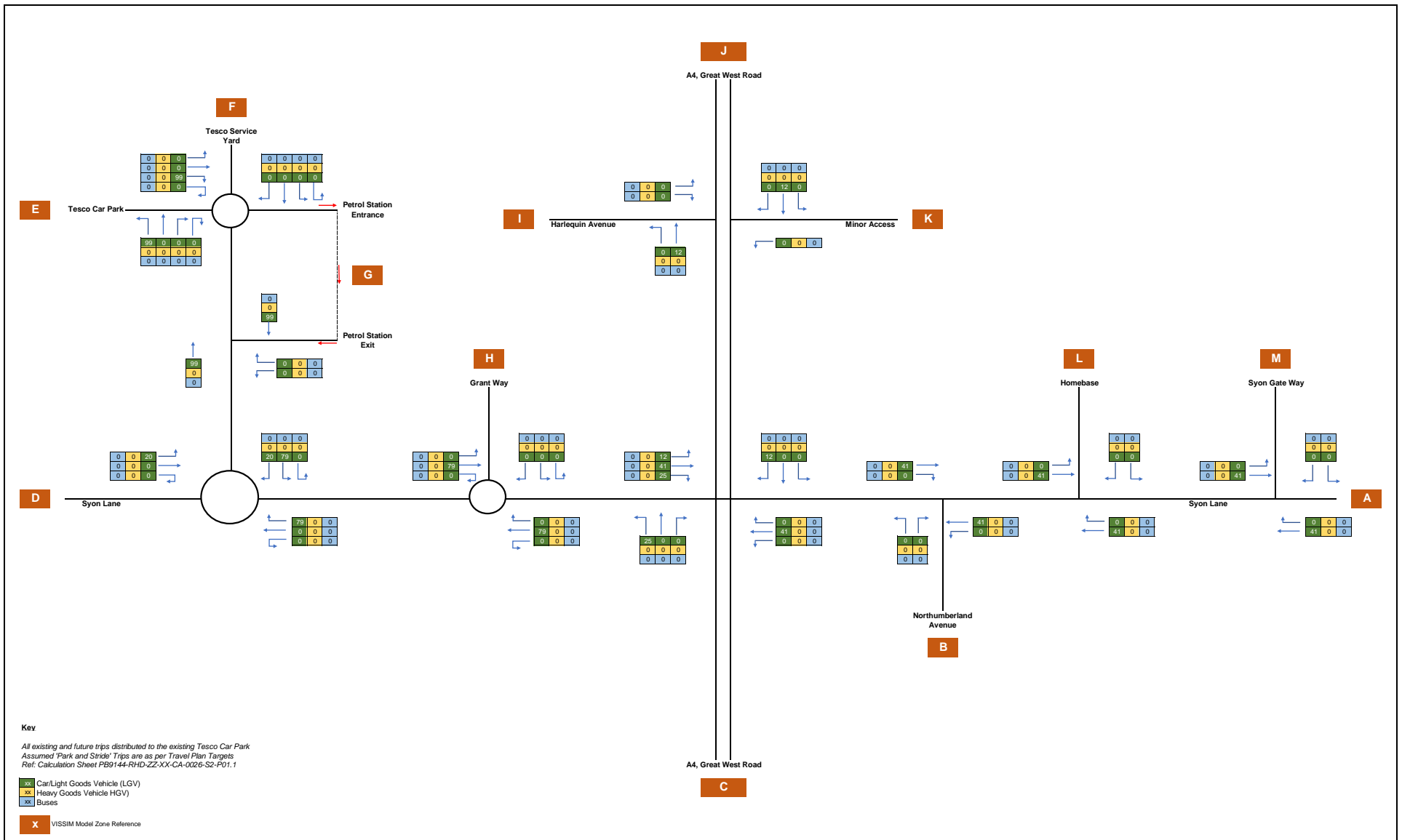
Project:
Syon Lane Development Sites - Proposed Residential and Tesco Development


Figure Title:
Saturday Peak Hour 13:00-14:00, with LoHAM Traffic Growth, 2019 to 2035

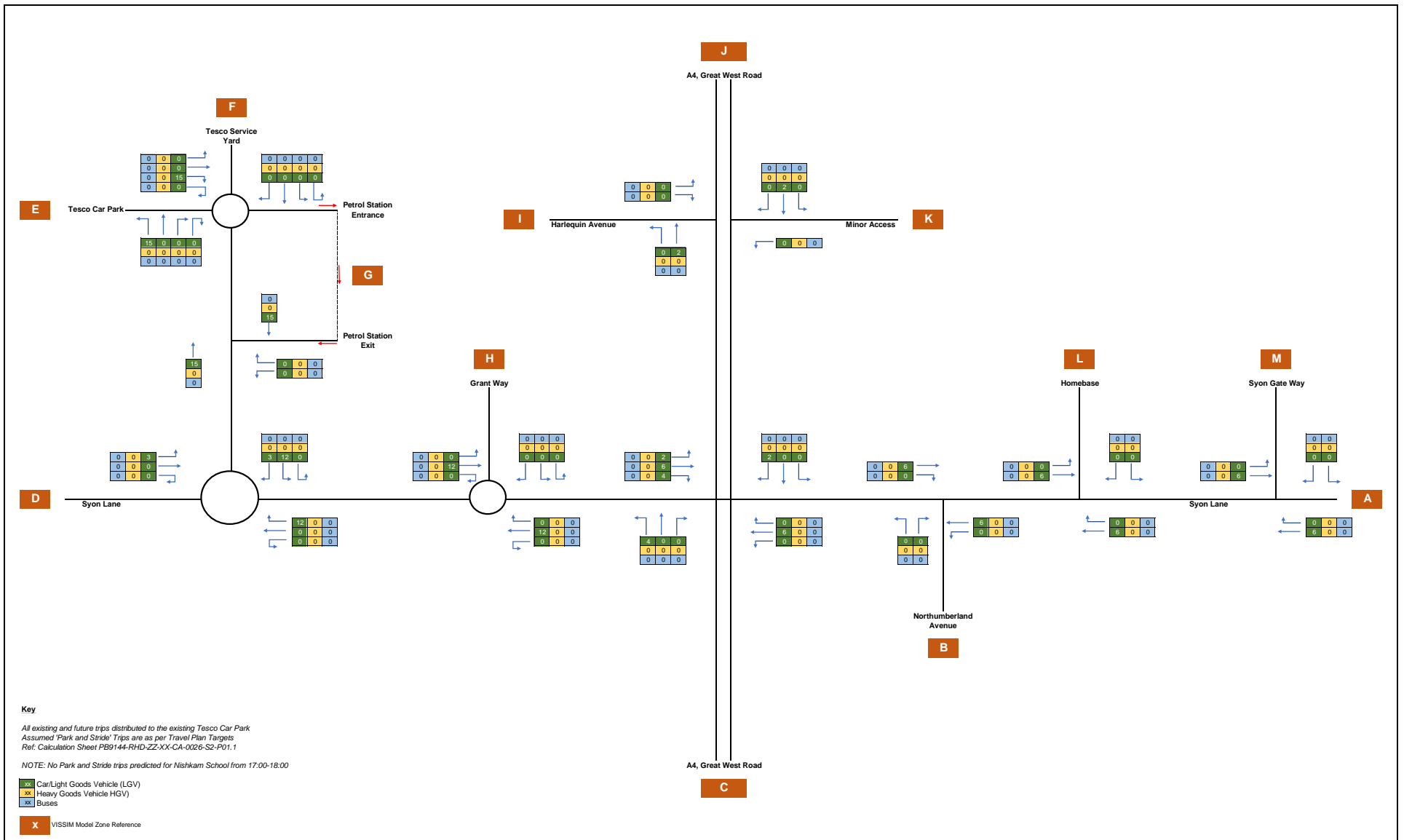
Project Number:
PB9144

Date:
May 2020

Figure No.:
FB6



 <p>Royal HaskoningDHV Enhancing Society Together</p>	<p>Project: Syon Lane Development Sites - Proposed Residential and Tesco Development</p>	<p>Figure Title: Weekday AM Peak Hour 07:45-08:45, Park and Stride Trips (Nishkam School and Bolder Academy)</p>	<p>Project Number: PB9144</p>	<p>Date: May 2020</p>	<p>Figure No.: FB7</p>
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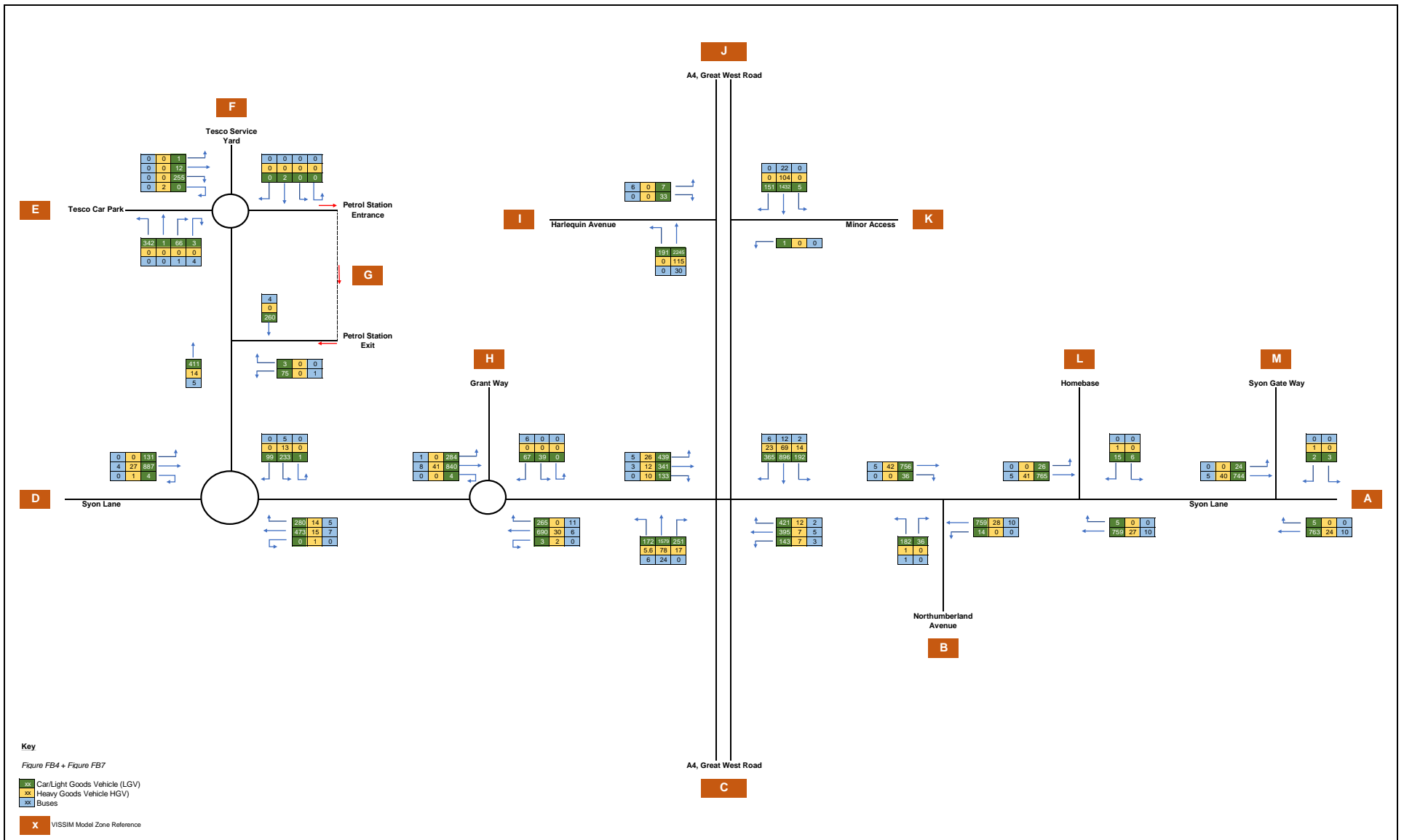
Project:
 Syon Lane Development Sites -
 Proposed Residential and Tesco
 Development


Figure Title:
 Weekday PM Peak Hour 17:00-
 18:00, Park and Stride Trips
 (Nishkam School and Bolder
 Academy)

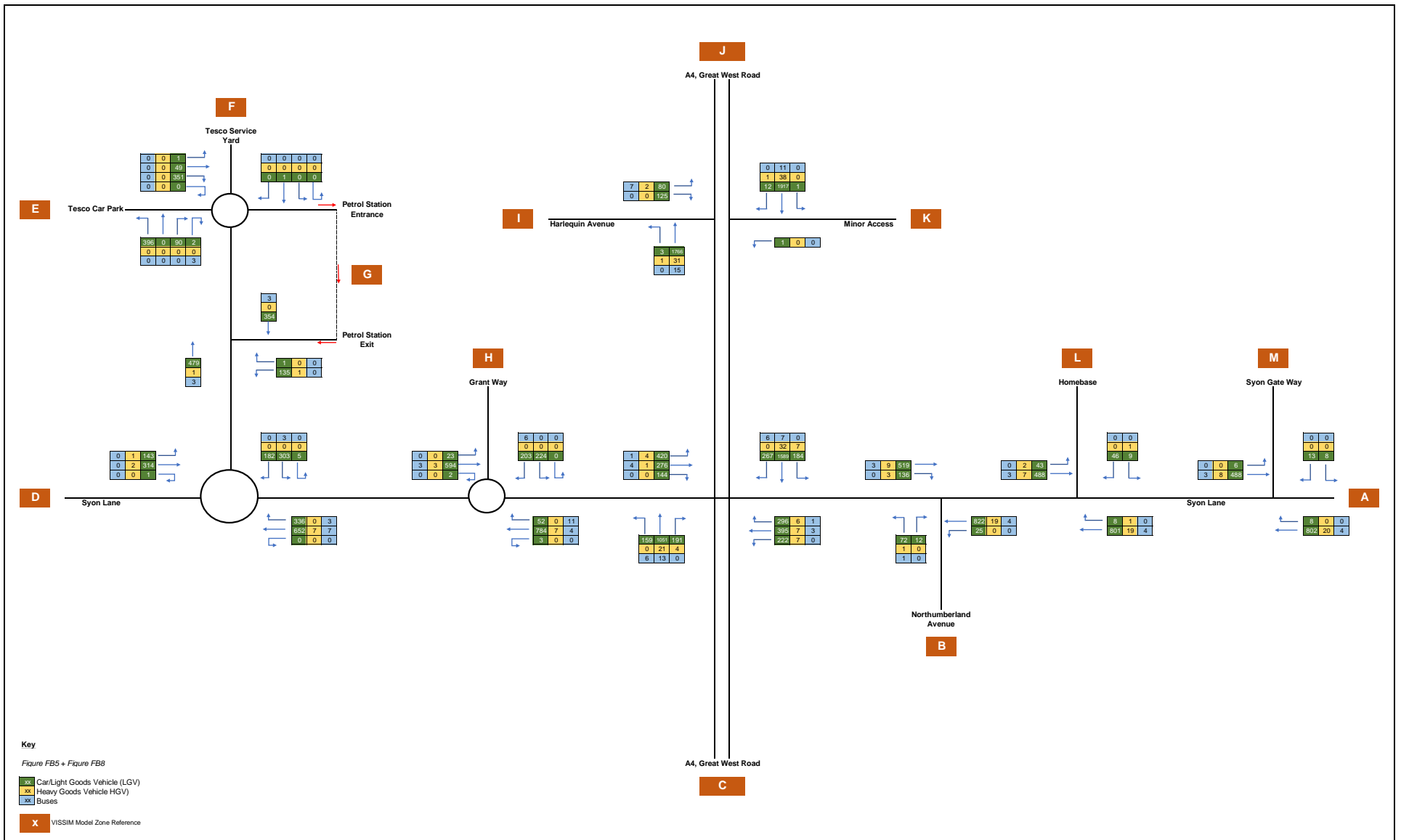
Project Number:
 PB9144


Date:
 May 2020

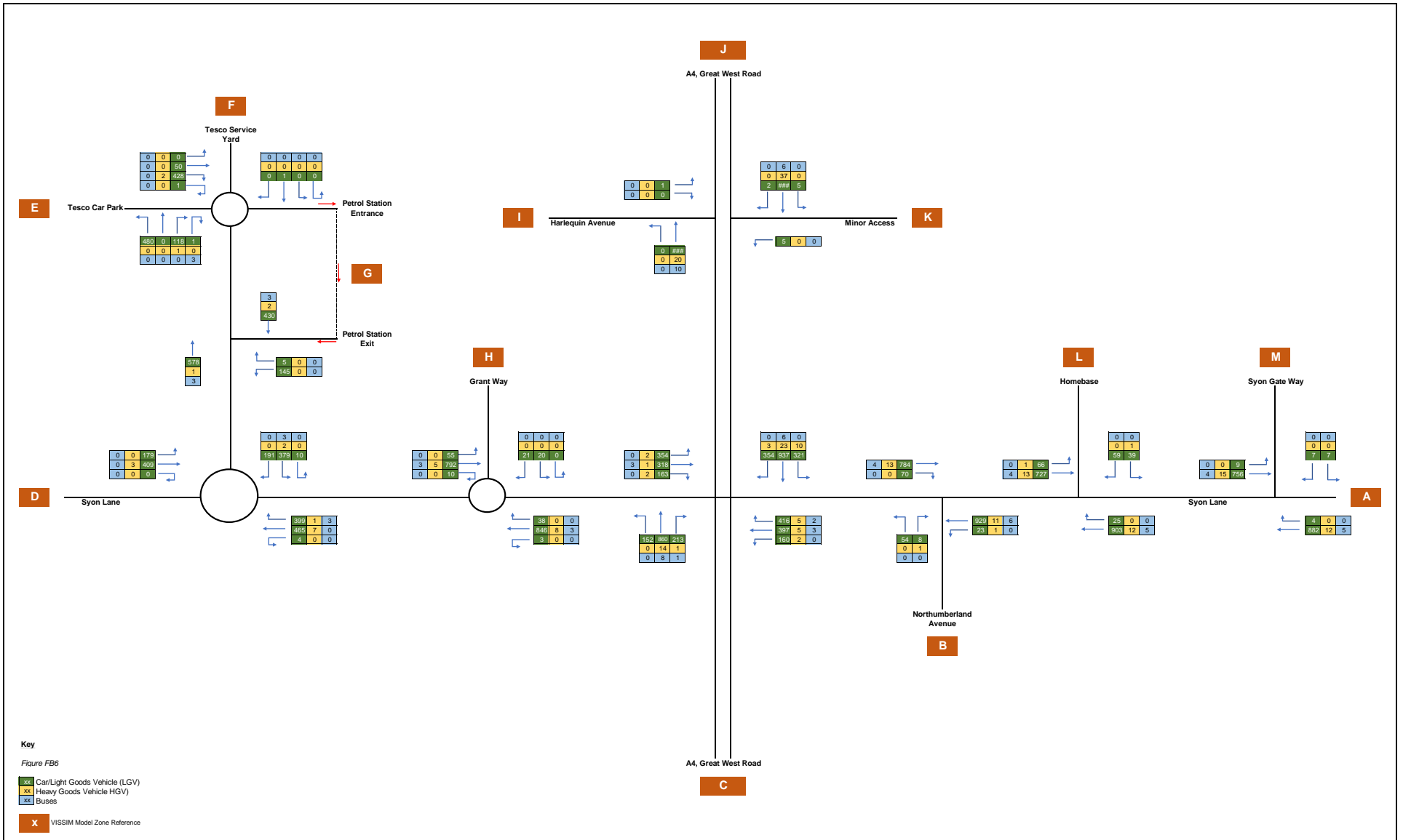
Figure No.:
 FB8




 <p>Royal HaskoningDHV Enhancing Society Together</p>	<p>Project: Syon Lane Development Sites - Proposed Residential and Tesco Development</p>	<p>Figure Title: 2035 Future Base - Weekday AM Peak Hour, 07:45-08:45</p>	<p>Project Number: PB9144</p>	<p>Date: May 2020</p>	<p>Figure No.: FB9</p>
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 <p>Royal HaskoningDHV Enhancing Society Together</p>	<p>Project: Syon Lane Development Sites - Proposed Residential and Tesco Development</p>	<p>Figure Title: 2035 Future Base - Weekday PM Peak Hour, 17:00-18:00</p>	<p>Project Number: PB9144</p>	<p>Date: May 2020</p>	<p>Figure No.: FB10</p>
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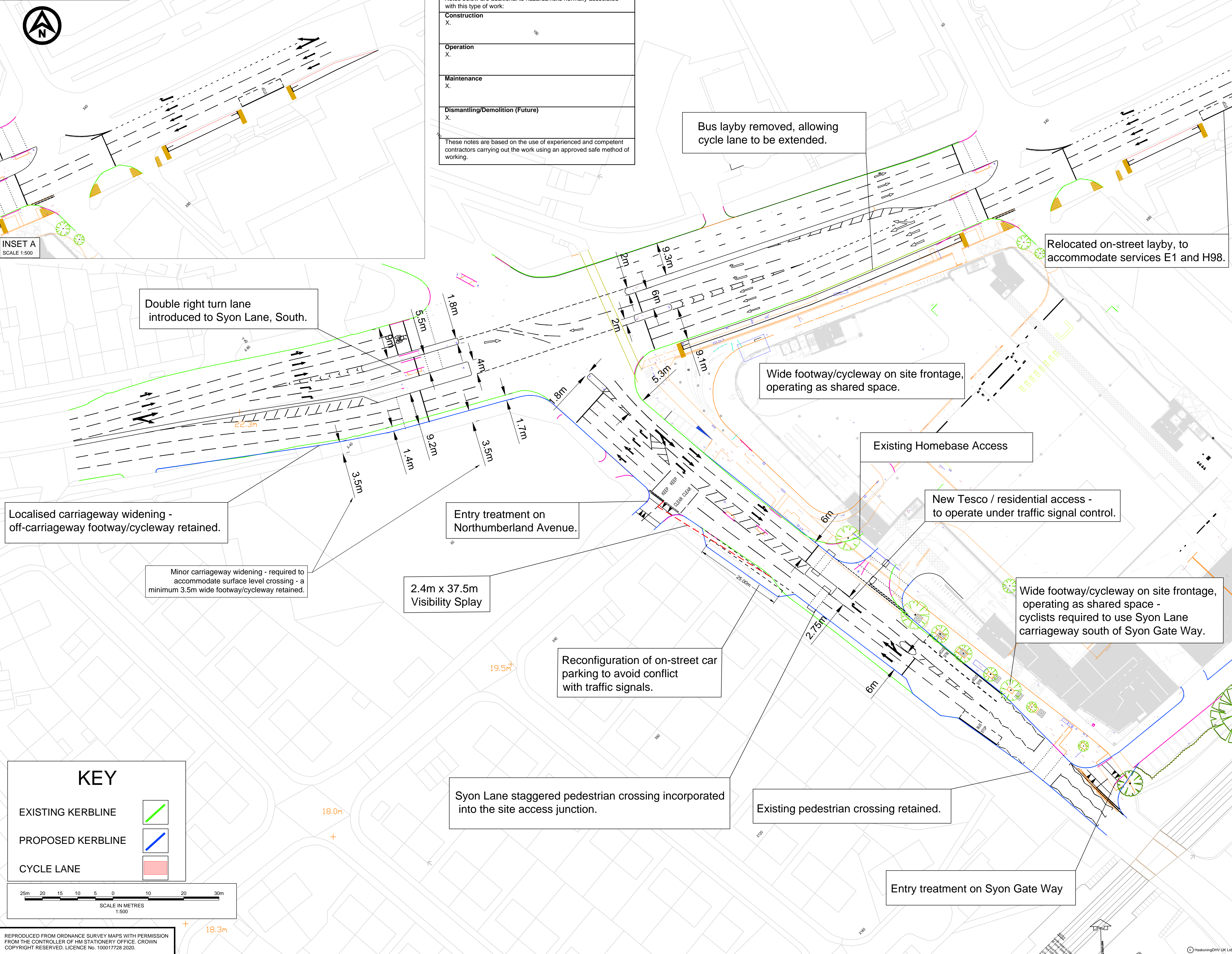


 <p>Royal HaskoningDHV Enhancing Society Together</p>	<p>Project: Syon Lane Development Sites - Proposed Residential and Tesco Development</p>	<p>Figure Title: 2035 Future Base - Saturday Peak Hour, 13:00-14:00</p>	<p>Project Number: PB9144</p>	<p>Date: May 2020</p>	<p>Figure No.: FB11</p>
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Appendix U – Gillette Corner Design Options 1-4

Safety, Health and Environment Information	
Notes below are additional to hazards/risks normally associated with this type of work:	
Construction	X.
Operation	X.
Maintenance	X.
Dismantling/Demolition (Future)	X.
These notes are based on the use of experienced and competent contractors carrying out the work using an approved safe method of working.	

- NOTES
1. Do not scale from this drawing. All dimensions are in metres unless noted otherwise.
 2. All levels are in metres relative to Ordnance Datum Newlyn unless noted otherwise.
 3. This drawing has been based upon survey information supplied by St Edward Homes Ltd., and Royal HaskoningDHV cannot guarantee the accuracy of data.



INSET A
SCALE 1:500

NOT FOR CONSTRUCTION

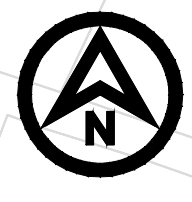
KEY

- EXISTING KERBLINE
- PROPOSED KERBLINE
- CYCLE LANE

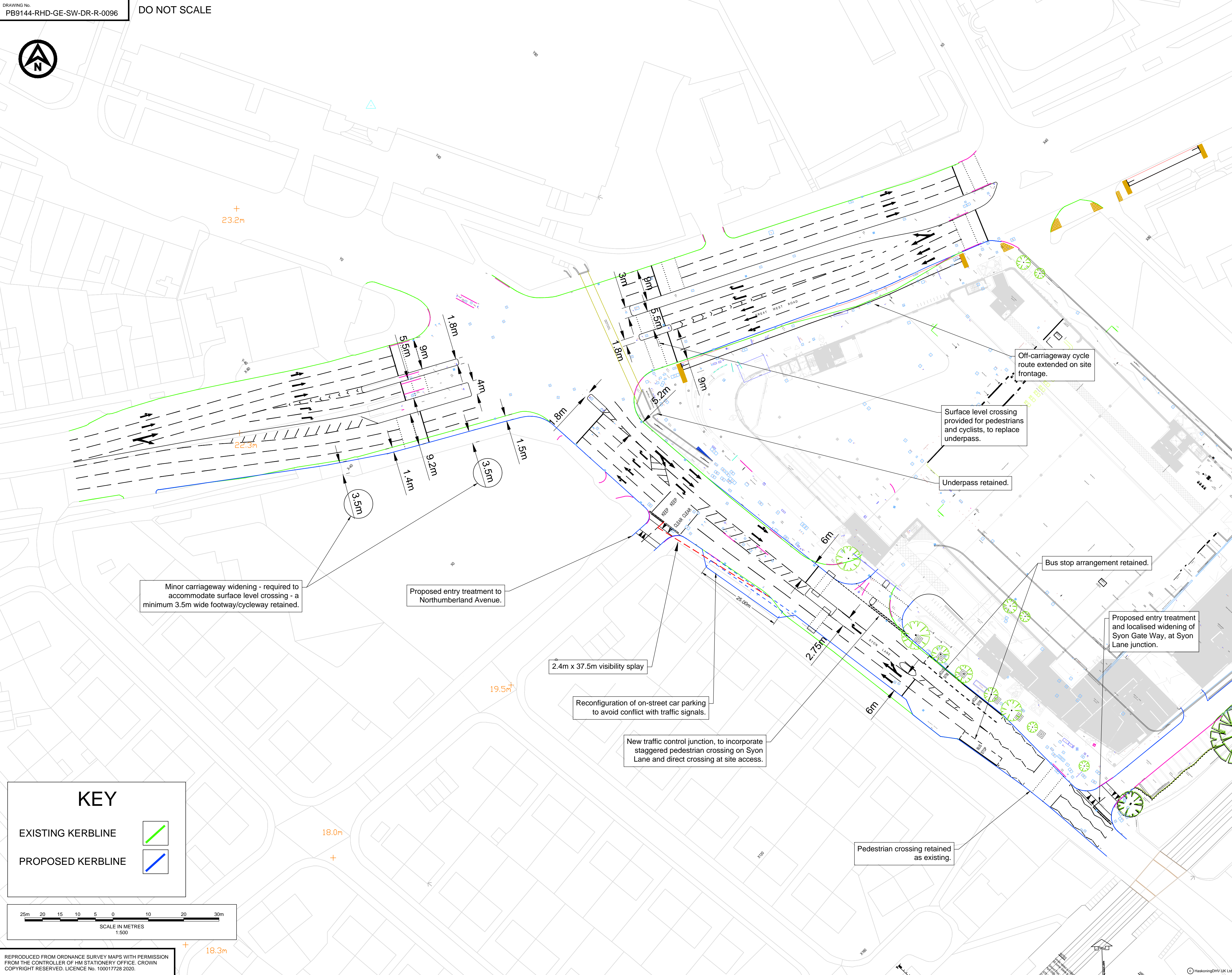
25m 20 15 10 5 0 10 20 30m
SCALE IN METRES
1:500

PI17	28/07/20	PB9144-0096	TH	AW	AW
REV	DATE	DESCRIPTION	BY	CHK	APP
REVISIONS					
CLIENT					
ST EDWARD HOMES LTD					
PROJECT					
SYON LANE					
TITLE					
Proposed Highway Arrangements - Pedestrian Underpass Retained (Design Option 1)					
DRAWN					
TR	CHECKED	CS	APPROVED	AW	
DATE	SCALE AT A1	AUTOCAD REF.	PB9144-0096		
18/12/20	1:500				
DRAWING No.					
PB9144-RHD-GE-SW-DR-R-0096			SUITABILITY	REVISION	
			S3	P26	





- NOTES**
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 2. All levels are in metres relative to Ordnance Datum Newlyn unless noted otherwise.
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NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	BY	CHK	APP
REVISIONS					

CLIENT
ST EDWARD HOMES LTD

PROJECT
SYON LANE

TITLE
PROPOSED HIGHWAY ARRANGEMENTS - Design Option 2A (Underpass Retained)

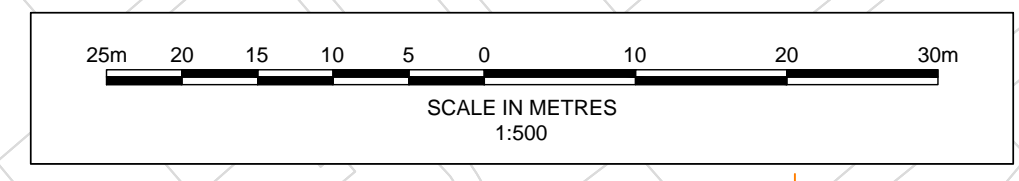


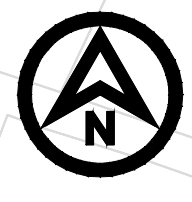
DRAWN	TH	CHECKED	CS	APPROVED	AW
DATE	15.01.2021	SCALE AT A1	1:500	AUTOCAD REF.	PB9144-0096
DRAWING No.	PB9144-RHD-GE-SW-DR-R-0096			SUITABILITY	REVISION
				S3	P30

KEY

EXISTING KERBLINE

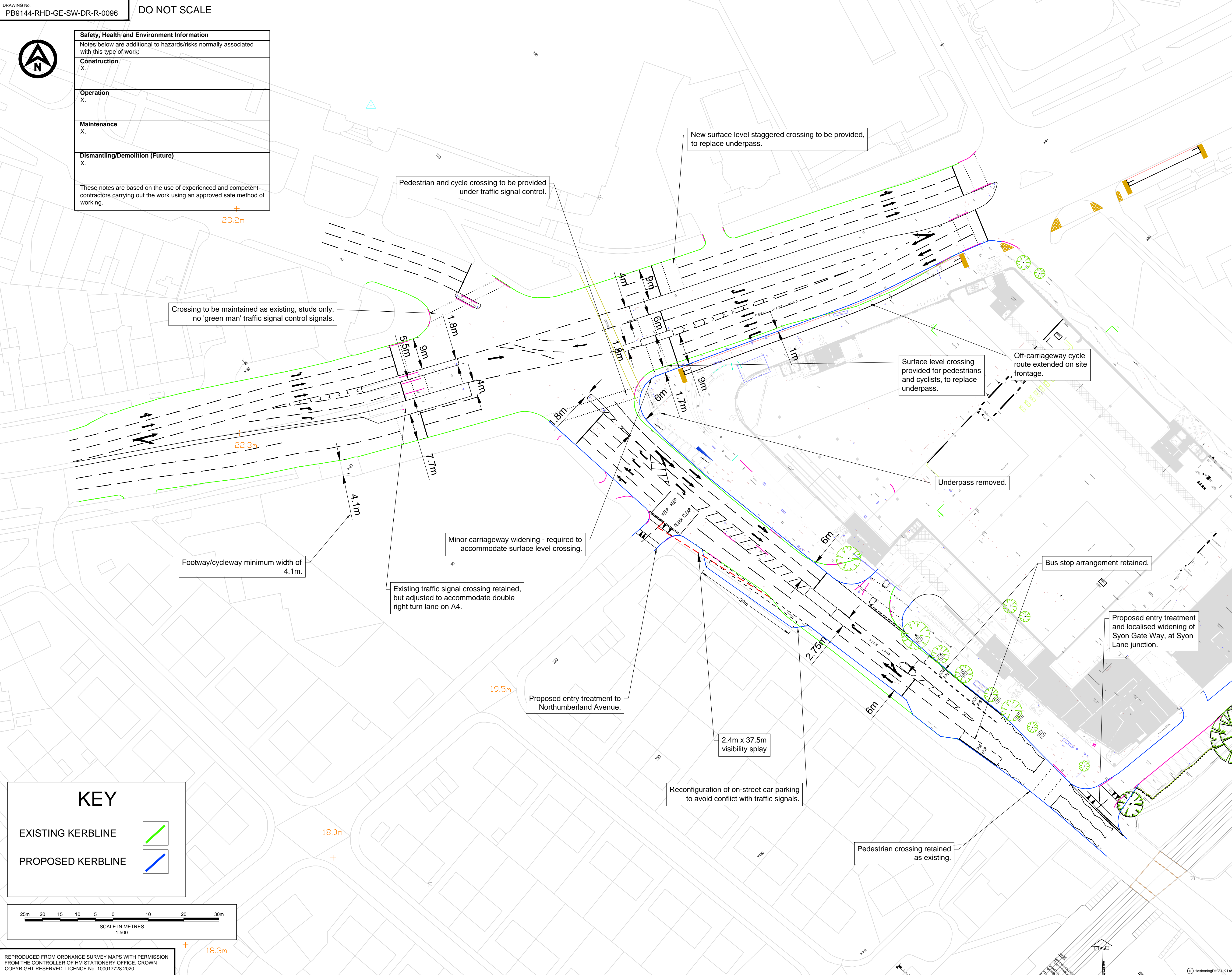
PROPOSED KERBLINE





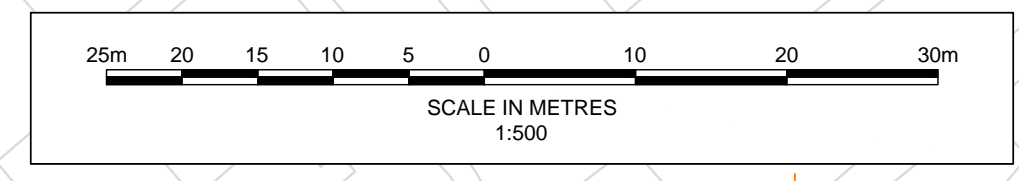
Safety, Health and Environment Information	
Notes below are additional to hazards/risks normally associated with this type of work:	
Construction	X.
Operation	X.
Maintenance	X.
Dismantling/Demolition (Future)	X.
These notes are based on the use of experienced and competent contractors carrying out the work using an approved safe method of working.	

- NOTES**
1. Do not scale from this drawing. All dimensions are in metres unless noted otherwise.
 2. All levels are in metres relative to Ordnance Datum Newlyn unless noted otherwise.
 3. This drawing has been based upon survey information supplied by....., and Royal HaskoningDHV cannot guarantee the accuracy of data.



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KEY	
EXISTING KERBLINE	
PROPOSED KERBLINE	



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REV	DATE	DESCRIPTION	BY	CHK	APP

CLIENT

ST EDWARD HOMES LTD

PROJECT

SYON LANE

TITLE

PROPOSED HIGHWAY ARRANGEMENTS - Design Option 3

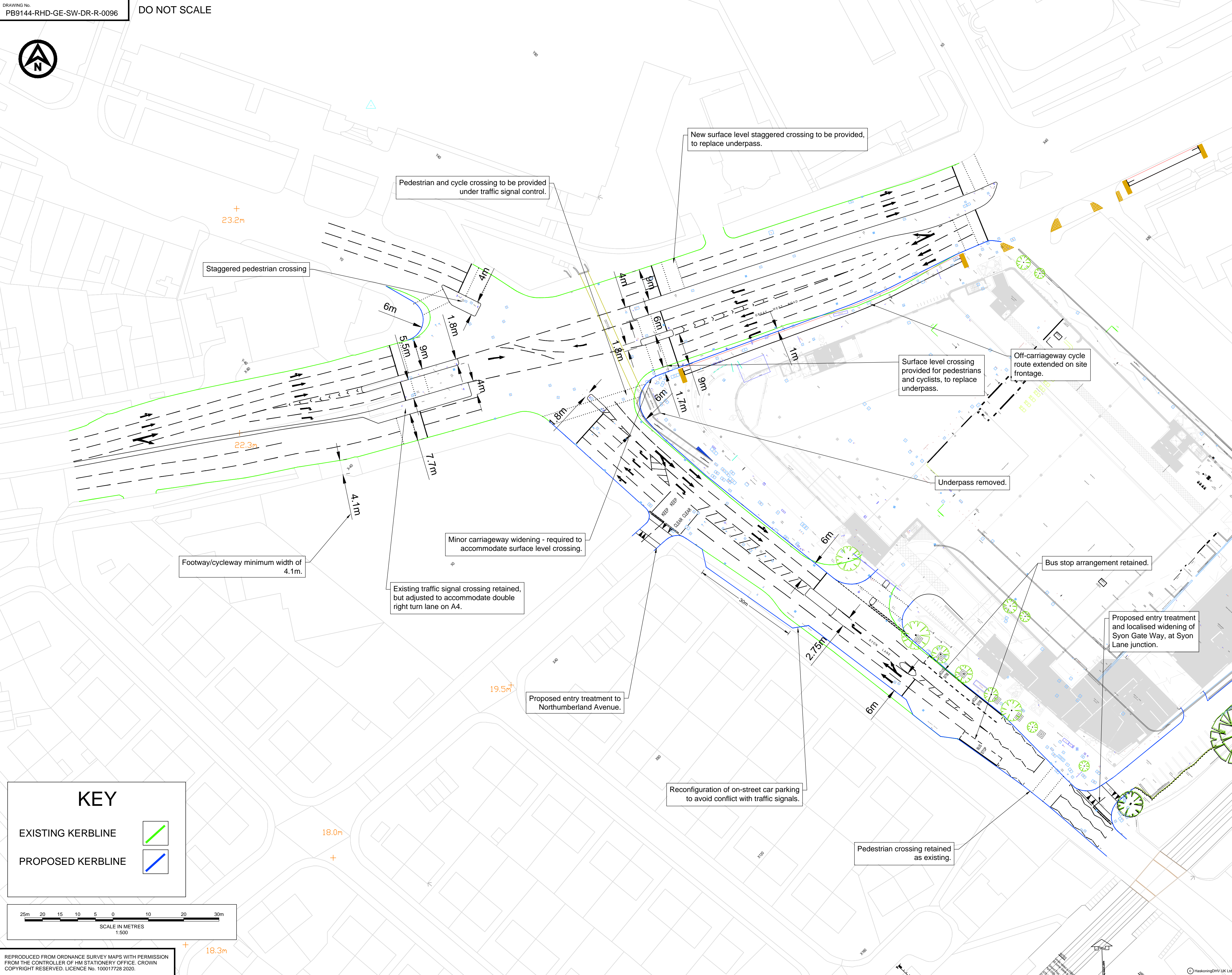


DRAWN	TH	CHECKED	AW	APPROVED	AW
DATE	18.12.2020	SCALE AT A1	1:500	AUTOCAD REF.	PB9144-0096
DRAWING No.	PB9144-RHD-GE-SW-DR-R-0096			SUITABILITY	REVISION
				S3	P24

Appendix V – Gillette Corner Design Option 5-6

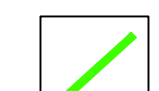


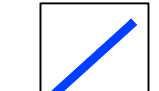
- NOTES**
1. Do not scale from this drawing. All dimensions are in metres unless noted otherwise.
 2. All levels are in metres relative to Ordnance Datum Newlyn unless noted otherwise.
 3. This drawing has been based upon survey information supplied by....., and Royal HaskoningDHV cannot guarantee the accuracy of data.

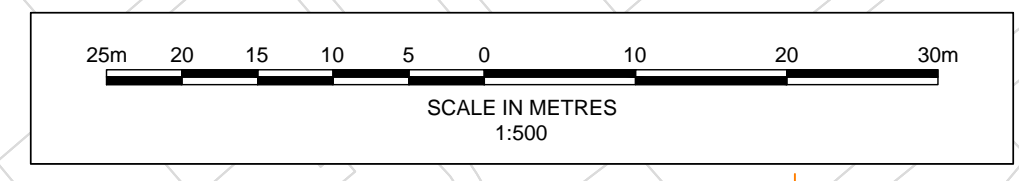


NOT FOR CONSTRUCTION

KEY

EXISTING KERBLINE 

PROPOSED KERBLINE 



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REV	DATE	DESCRIPTION	BY	CHK	APP
REVISIONS					

CLIENT
ST EDWARD HOMES LTD

PROJECT
SYON LANE

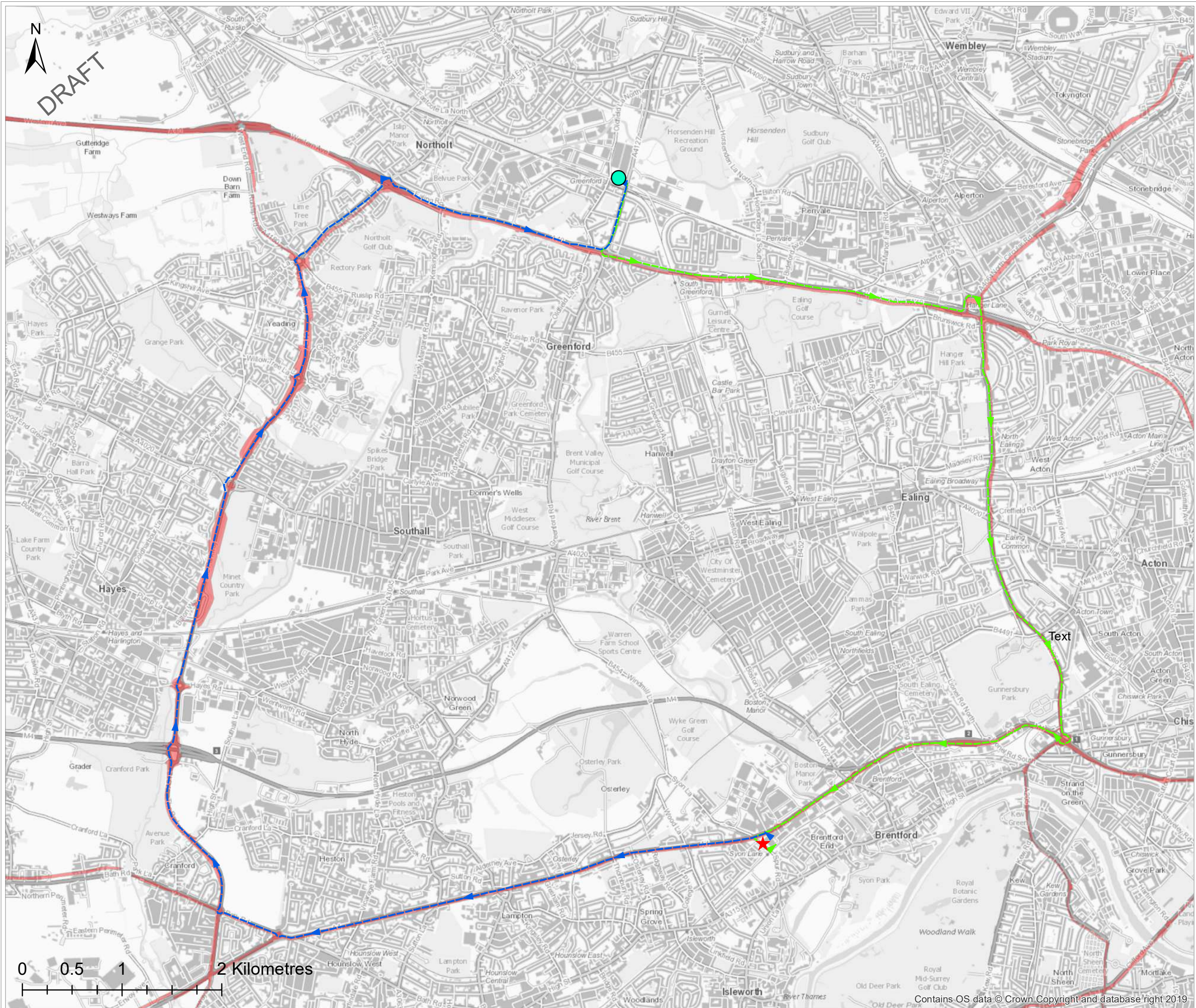
TITLE
PROPOSED HIGHWAY ARRANGEMENTS - Design Option 5

Royal HaskoningDHV
Enhancing Society Together

DRAWN	KM	CHECKED	AW	APPROVED	AW
DATE	21.12.20	SCALE AT A1	1:500	AUTOCAD REF.	PB9144-0096
DRAWING No.	PB9144-RHD-GE-SW-DR-R-0096			SUITABILITY	REVISION
				S3	P01

Appendix W – Construction Route Plan

DRAFT



Legend

- Wincanton Construction Centre
- ★ Homebase Site
- Construction Route (out)
- Construction Route (in)
- TLRN Red Route

Title
Construction route plan

Project
Homebase site, Syon Lane

Client
St Edward Homes Ltd

Date 02/10/2019	Scale 1:35000
---------------------------	-------------------------

Figure
12.1

Checked by CheckedBy	Number 1
--------------------------------	--------------------



Appendix X – Multi-Modal Count, Tesco Osterley

Tesco, Osterley - Site Survey Data, Tuesday 9th July 2019

Time Period	Total Tesco Person Trips													
	Pedestrian Trips*		Cycle Trips		Bus Trips (Service H28)		Vehicle Drivers		Vehicle Passenger*		Motorcycle Trips		Total Person Trips	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
07:00-07:15	8	11	0	0	1	4	21	18	5	4	0	1	35	38
07:15-07:30	5	6	0	2	0	1	32	25	7	6	0	0	44	40
07:30-07:45	9	7	1	0	0	0	31	25	7	6	0	0	48	38
07:45-08:00	4	9	2	0	2	0	64	27	14	6	1	0	87	42
08:00-08:15	11	7	1	1	0	0	80	31	22	9	2	1	116	49
08:15-08:30	14	11	0	1	2	0	42	62	12	17	0	2	70	93
08:30-08:45	11	11	1	1	0	0	66	59	18	17	1	0	97	88
08:45-09:00	21	19	1	1	2	2	94	31	26	9	0	0	144	62
09:00-09:15	9	27	0	0	1	0	114	43	36	14	0	1	160	85
09:15-09:30	17	37	0	0	0	0	98	48	31	15	1	1	147	101
09:30-09:45	15	34	0	0	3	0	117	59	37	19	0	0	172	112
09:45-10:00	17	41	0	0	2	1	78	62	25	20	0	0	122	124
10:00-10:15	13	26	0	0	0	0	89	60	31	21	0	0	133	107
10:15-10:30	25	27	2	0	4	3	85	61	30	21	0	0	146	112
10:30-10:45	20	16	1	1	4	1	94	66	33	23	0	0	152	107
10:45-11:00	14	17	1	1	1	1	100	93	35	32	1	0	152	144
11:00-11:15	19	14	0	0	0	3	71	90	28	36	0	2	118	145
11:15-11:30	29	27	1	1	2	1	103	69	41	27	0	0	176	125
11:30-11:45	33	14	1	0	2	1	81	102	32	40	0	0	149	157
11:45-12:00	43	19	1	1	0	2	99	109	39	43	0	0	182	174
12:00-12:15	71	26	1	1	3	1	110	122	40	44	0	0	225	194
12:15-12:30	62	45	2	1	4	4	112	125	41	46	1	0	222	221
12:30-12:45	64	45	0	1	4	4	88	123	32	45	1	1	189	219
12:45-13:00	60	67	1	1	1	3	120	114	44	41	0	1	226	227
13:00-13:15	56	49	0	2	0	0	112	99	42	37	0	0	210	187
13:15-13:30	63	49	2	1	2	2	98	112	37	42	0	0	202	206
13:30-13:45	56	84	0	0	4	0	107	116	40	44	1	0	208	244
13:45-14:00	25	34	1	3	0	4	86	118	33	45	1	0	146	204
14:00-14:15	39	46	1	1	4	1	85	104	34	42	0	1	163	195
14:15-14:30	27	28	2	1	3	1	89	94	36	38	1	1	158	163
14:30-14:45	23	18	2	2	1	1	128	88	51	35	0	1	205	145
14:45-15:00	23	16	0	1	0	4	111	103	45	41	0	0	179	165
15:00-15:15	40	30	0	1	2	1	78	139	32	58	0	0	152	229
15:15-15:30	28	21	0	1	3	0	97	104	40	43	0	1	168	170
15:30-15:45	23	15	2	0	0	1	99	65	41	27	0	0	165	108
15:45-16:00	16	28	0	0	0	1	102	104	42	43	1	0	161	176
16:00-16:15	35	15	0	0	5	1	78	112	33	48	1	1	152	177
16:15-16:30	31	28	1	1	0	0	108	125	46	53	0	1	186	208
16:30-16:45	25	20	0	0	4	8	87	90	37	38	2	1	155	157
16:45-17:00	18	26	2	0	2	6	76	108	32	46	0	0	130	186
17:00-17:15	33	30	0	1	1	2	111	80	46	33	1	2	192	148
17:15-17:30	32	21	1	1	2	1	82	98	34	41	0	1	151	163
17:30-17:45	45	23	4	2	2	2	93	107	39	45	1	0	184	179
17:45-18:00	39	33	4	2	1	1	95	101	40	42	0	1	179	180
18:00-18:15	46	28	5	4	1	4	102	97	42	40	0	0	196	173
18:15-18:30	38	27	0	2	3	0	89	110	36	45	2	1	168	185
18:30-18:45	36	30	0	2	4	4	80	119	33	49	1	3	154	207
18:45-19:00	37	36	0	0	0	2	74	84	30	34	0	1	141	157
Total	1428	1298	44	42	82	79	4256	4101	1589	1570	20	26	7419	7116
Total Two-way	2726		86		161		8357		3159		46		14535	
Modal Split	18.8%		0.6%		1.1%		57.5%		21.7%		0.3%		100.0%	

*Vehicle passengers, estimated, based on TRICS Surveys of comparable sites

* Pedestrin trips include rail passengers and bus trips, other than those associated with bus service H28

Tesco, Osterley - Site Survey Data, Saturday 6th July 2019

Time Period	Total Tesco Person Trips													
	Pedestrian Trips*		Cycle Trips		Bus Trips (Service H28)		Vehicle Drivers		Vehicle Passenger*		Motorcycle Trips		Total Person Trips	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
07:00-07:15	5	5	0	1	3	2	32	4	8	1	1	2	49	15
07:15-07:30	1	3	0	2	0	4	35	16	9	4	0	0	45	29
07:30-07:45	5	0	2	0	0	1	43	33	11	8	0	0	61	42
07:45-08:00	12	3	1	1	4	1	50	39	12	10	0	1	79	55
08:00-08:15	7	5	0	0	0	2	58	33	17	10	0	0	82	50
08:15-08:30	5	11	0	0	3	1	64	47	19	14	0	0	91	73
08:30-08:45	11	6	0	0	1	0	72	53	21	16	0	0	105	75
08:45-09:00	7	9	2	0	5	3	75	46	22	14	0	0	111	72
09:00-09:15	9	10	0	1	2	2	89	65	34	25	0	0	134	103
09:15-09:30	15	6	0	0	1	2	88	75	33	28	0	0	137	111
09:30-09:45	13	12	0	2	2	0	101	77	38	29	1	0	155	120
09:45-10:00	20	18	0	0	0	3	100	95	38	36	0	1	158	153
10:00-10:15	11	15	0	0	3	1	105	93	46	40	0	0	165	149
10:15-10:30	22	11	1	0	1	3	123	74	53	32	1	0	201	120
10:30-10:45	15	13	1	0	4	3	138	112	60	49	0	1	218	178
10:45-11:00	15	13	0	1	1	2	123	114	53	49	0	0	192	179
11:00-11:15	23	12	0	1	1	2	133	123	66	61	0	0	223	199
11:15-11:30	30	13	1	1	7	3	116	108	58	54	0	0	212	179
11:30-11:45	14	15	1	2	1	4	138	138	69	69	0	0	223	228
11:45-12:00	19	13	0	1	0	4	135	138	67	69	0	0	221	225
12:00-12:15	29	20	0	0	2	1	124	120	61	59	1	0	217	200
12:15-12:30	15	23	0	0	4	4	129	136	64	67	1	0	213	230
12:30-12:45	18	16	0	0	3	0	124	123	61	61	0	1	206	201
12:45-13:00	28	16	3	2	0	3	126	117	62	58	3	0	222	196
13:00-13:15	36	37	1	1	5	4	119	120	59	60	0	2	220	224
13:15-13:30	17	28	0	1	4	5	123	123	61	61	2	2	207	220
13:30-13:45	23	19	1	0	0	1	122	115	61	57	1	1	208	193
13:45-14:00	31	32	2	0	7	3	117	123	58	61	0	0	215	219
14:00-14:15	30	20	2	1	1	3	133	115	69	60	0	1	235	200
14:15-14:30	41	32	1	1	5	5	115	135	60	70	2	0	224	243
14:30-14:45	20	31	1	3	0	0	134	111	69	57	0	1	224	203
14:45-15:00	19	25	4	1	0	3	107	123	55	64	0	0	185	216
15:00-15:15	22	21	1	3	1	2	110	125	59	67	0	2	193	220
15:15-15:30	20	23	3	2	4	1	94	117	50	62	2	0	173	205
15:30-15:45	19	22	2	1	2	1	103	125	55	67	1	1	182	217
15:45-16:00	25	18	0	3	1	2	110	105	59	56	0	2	195	186
16:00-16:15	25	21	1	0	6	1	103	104	57	58	0	0	192	184
16:15-16:30	22	18	3	2	4	6	95	102	53	56	2	1	179	185
16:30-16:45	22	21	0	1	1	0	115	107	64	59	2	1	204	189
16:45-17:00	12	17	2	0	0	0	100	107	55	59	2	2	171	185
17:00-17:15	31	16	0	2	0	1	88	115	47	61	1	1	167	196
17:15-17:30	26	15	1	2	2	2	94	116	50	62	1	1	174	198
17:30-17:45	24	23	2	5	2	3	106	98	56	52	0	1	190	182
17:45-18:00	23	29	0	8	1	2	94	96	50	51	0	1	168	187
18:00-18:15	25	29	1	0	0	3	92	115	44	55	3	0	165	202
18:15-18:30	18	13	4	0	3	1	78	110	37	52	0	2	140	178
18:30-18:45	29	19	1	0	1	0	89	87	42	41	0	1	162	148
18:45-19:00	27	24	1	3	6	0	87	88	41	42	0	0	162	157
Total	936	821	46	55	104	100	4849	4661	2295	2253	27	29	8257	7919
Total Two-way	1757		101		204		9510		4548		56		16176	
Modal Split	10.9%		0.6%		1.3%		58.8%		28.1%		0.3%		100.0%	

*Vehicle passengers, estimated, based on TRICS Surveys of comparable sites

* Pedestrin trips include rail passengers and bus trips, other than those associated with bus service H28

Appendix Y – Stage 1 Road Safety Audit and Designer's Response

London Borough of Hounslow

Syon Lane Development Sites, Homebase Site

Stage 1 Road Safety Audit

Ref: PB9411-RHD-XX-ZZ-RP-X-0002

Prepared for:

St Edward Homes Ltd

By:

Royal HaskoningDHV

Prepared by: Sam Taylor, Audit Team Leader

Checked by: Vicky Seaton, Audit Team Member

Approved by: Sam Taylor

Version	Status	Date
A	Audit report issued to Client	03.08.2020



1.0 INTRODUCTION

1.1 Commission

- 1.1.1 This report results from a Stage 1 Road Safety Audit carried out on the proposed highway works for the redevelopment of the Homebase Site as part of the wider proposed Syon Lane Development Sites.
- 1.1.2 The Audit was undertaken by Royal HaskoningDHV in accordance with the Audit Brief issued by the Client Organisation on 14th July 2020. It took place at the via 'Teams' the 21st July 2020 and comprised an examination of the documents provided as listed in **Appendix A**.
- 1.1.3 Due to the ongoing COVID-19 pandemic, a site visit was not carried out in association with the scheme proposals. The Audit Team used made use of online mapping and Google Streetview images from 2019 in the determination of the scheme.

1.2 Terms of Reference

- 1.2.1 The Terms of Reference of this Audit are as described in TfL Procedure SQA-0170 dated May 2014. The Audit Team has examined and reported only on the road safety implications of the scheme as presented and how it impacts on all road users and has not examined or verified the compliance of the designs to any other criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem the Audit Team may, on occasion, have referred to a design standard without touching on technical audit. An absence of comment relating to specific road users / modes in Section 3 of this report does not imply that they have not been considered; instead the Audit Team feels they are not adversely affected by the proposed changes.
- 1.2.2 This Safety Audit is not intended to identify pre-existing hazards which remain unchanged due to the proposals; hence they will not be raised in Section 3 of this report as they fall outside the remit of Road Safety Audit in general as specified in the procedure SQA-0170 dated May 2014. Safety issues identified during the Audit and site visit that are considered to be outside the Terms of Reference, but which the Audit Team wishes to draw to the attention of the Client Organisation, are set out in Section 4 of this report.
- 1.2.3 Nothing in this Audit should be regarded as a direct instruction to include or remove a measure from within the scheme. Responsibility for designing the scheme lies with the Designer and as such the Audit Team accepts no design responsibility for any changes made to the scheme as a result of this Audit.
- 1.2.4 In accordance with TfL Procedure SQA-0170 dated May 2014, this Audit has a maximum shelf life of 2 years. If the scheme does not progress to the next stage in its development within this period, then the scheme should be re-audited.
- 1.2.5 Unless general to the scheme, all comments and recommendations are referenced to the detailed design drawings and the locations have been indicated on the plan located in **Appendix B**.
- 1.2.6 It is the responsibility of the Design Organisation to complete the Designer's response section of this Audit report. Where applicable and necessary it is the responsibility of the Client Organisation to complete the Client comment section of this Audit report. Signatures from both the Design Organisation and Client Organisation must be added within Section 5 of this Audit report. A copy of which must be returned to the Audit Team.

1.3 Main Parties to the Audit

1.3.1 Client Organisation

Client contact details: St Edward Homes Ltd

1.3.2 Design Organisation

Design contact details: Andy Ward, Royal HaskoningDHV

1.3.3 Audit Team Approval

The Audit Team specified in 1.3.4 below were given approval to undertake this Audit by Andrew Coventry of TfL Road Safety Audit on 18th May 2020.

1.3.4 Audit Team

2 Audit Team Leader: Sam Taylor – Royal HaskoningDHV

Audit Team Member: Vicky Seaton – Royal HaskoningDHV

2.0.1 Other Specialist Advisors

Specialist Advisor Details: No specialist advisors were consulted.

2.1 Purpose of the Scheme

2.1.1 The purpose of the scheme is to provide access into a proposed residential-led mixed use development on the site of an existing Tesco foodstore and petrol filling station. The Tesco foodstore would be relocated to the site of an existing Homebase site off Syon Lane, although the petrol filling station. This Audit refers only to the proposed highway works associated with the relocation of the Tesco to the existing Homebase site.

2.2 Special Considerations

2.2.1 The Audit Team was unable to visit the site due to restrictions resulting from the ongoing Covid-19 pandemic. The Audit Team has undertaken the Audit based on what could be observed from online mapping and Google Streetview images from 2019.

2.0 ITEMS RAISED IN PREVIOUS ROAD SAFETY AUDITS

The Audit Team is not aware of any other Audits having been carried out on the proposals.

3.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

This section should be read in conjunction with Paragraphs 1.2.1, 1.2.2 and 1.2.3 of this report.

3.1 VISIBILITY

3.1.1 PROBLEM 1

Location: Proposed parking bay to the east of Northumberland Avenue.

Summary: The location of the proposed parking bay could obstruct forward visibility of oncoming vehicles potentially leading to collisions.

A proposed parking bay is shown to the east of Northumberland Avenue. Taller vehicles (such as a 'transit van') parked within the layby could obscure forward of vehicles approaching from the east. Reduced visibility could result in drivers pulling out of Northumberland Avenue into the path of an oncoming vehicle, leading to the potential for side impact collisions.

RECOMMENDATION

Relocate or amend the design of the proposed parking bay to ensure that visibility for drivers exiting Northumberland Avenue is not compromised.

Design Organisation Response	Accepted / Part Accepted / Rejected
------------------------------	-------------------------------------

Paragraph 7.8.5 of Manual for Streets, states that *“Parking in visibility splays in built-up areas is quite common, yet it does not appear to create significant problems in practice. Ideally, defined parking bays should be provided outside the visibility splay. However, in some circumstances, where speeds are low, some encroachment may be acceptable.”*

Notwithstanding the above, a design change is proposed to ensure that cars do not park in the Northumberland Avenue visibility splay. This is achieved by setting back the parking aisle, as illustrated below.



Client Organisation Comments

3.2 LAYOUT

3.2.1 PROBLEM 2

Location: Proposed new Tesco / residential access to Syon Lane.

Summary: Constrained highway geometry at the junction of Syon Lane and the proposed new access could lead to collisions between right turning vehicles.

Two lanes are proposed to allow vehicles to turn right from the new Tesco / residential access onto Syon Lane. The Audit Team are concerned that larger vehicles occupying the nearside lane may need to sweep out into the offside lane to avoid colliding with the central pedestrian crossing refuge. This could lead to side impact collisions between vehicles or with the vehicle colliding with the pedestrian crossing refuge.

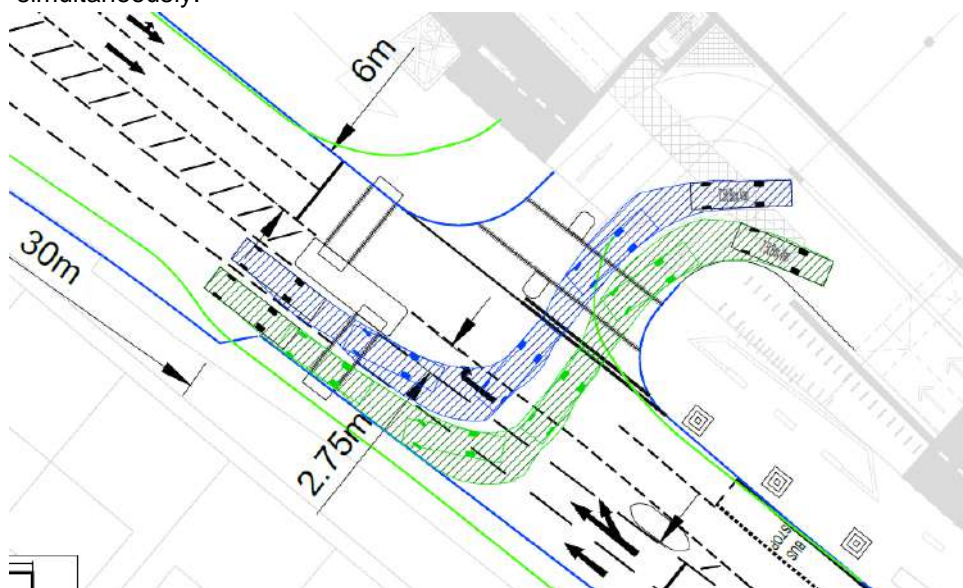
RECOMMENDATION

Swept path drawings should be prepared for a range of vehicle types demonstrating that two vehicles can simultaneously turn right from the proposed new access onto Syon Lane. If this manoeuvre is not possible the junction layout should be amended.

Design Organisation Response

Accepted / Part Accepted / Rejected

It should be noted that the proposed Tesco access is a customer vehicle and residential visitor vehicle access only. Vehicles using this access would be limited in size and this control could be imposed with a height restriction. The diagram below shows two 8m lorries exiting the site together. In reality this size of vehicle would not be use this egress and the tracking is shown simply to demonstrate that two large vehicle can exit the site simultaneously.



Client Organisation Comments

3.2.2 PROBLEM 3

Location: Southwestern corner of the junction of Syon Lane and the A4.

Summary: Constrained highway geometry at the junction of Syon Lane and the A4 could lead to collisions between right turning vehicles.

The proposed amendments to the junction of Syon Lane and the A4 would reduce the nearside radius. Large vehicles wishing to turn left from Syon Lane on to the A4 may therefore either sweep out into the path of vehicles going ahead (leading to side impact collisions) or overrun the inside footway/ cycleway, potentially leading to collisions with pedestrians or cyclists.

RECOMMENDATION

Swept path drawings should be prepared for a range of vehicle types demonstrating that vehicles can turn left from Syon Lane onto the A4 within their lane. If this manoeuvre is not possible the junction layout should be amended.

Design Organisation Response	Accepted / Part Accepted / Rejected
-------------------------------------	--

Agreed – The junction layout would ensure that the kerb radius is retained as existing to avoid any potential conflict. For the junction Design Options where the kerb alignment would change, the kerb is set back from existing providing more room to make a turn. No design option for the junction seeks to tighten this turn.

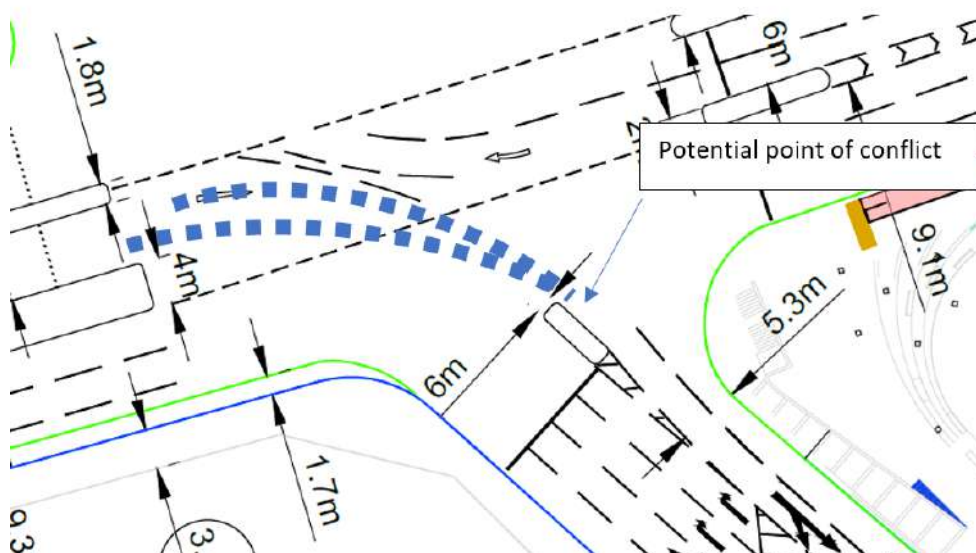
Client Organisation Comments

3.2.3 PROBLEM 4

Location: Right turn from the A4 to Syon Lane.

Summary: Constrained highway geometry at the junction of Syon Lane and the A4 could lead to collisions between right turning vehicles.

Two lanes are proposed to allow vehicles to turn right from the A4 onto Syon Lane. The proposed markings appear to guide vehicles from the nearside lane (on the A4) to the offside lane on Syon Lane. This arrangement could lead to side impact collisions between turning vehicles, or vehicles colliding with the central refuge island.



Extract demonstrating potential point of conflict between right turning vehicles.

RECOMMENDATION

Lane markings should be provided (similar to those currently provided for vehicles right turning) to guide vehicles.

Design Organisation Response	Accepted / Part Accepted / Rejected
Agreed - Lane markings and the geometry of proposed markings at the centre of junction can be provided to guide the turn. Image below shows a large car and Box Van turning together with the pedestrian underpass retained	
Client Organisation Comments	

3.2.4 PROBLEM 5

Location: Right turn from the A4 to Syon Lane.

Summary: Constrained highway geometry at the junction of Syon Lane and the A4 could lead to collisions between right turning vehicles.

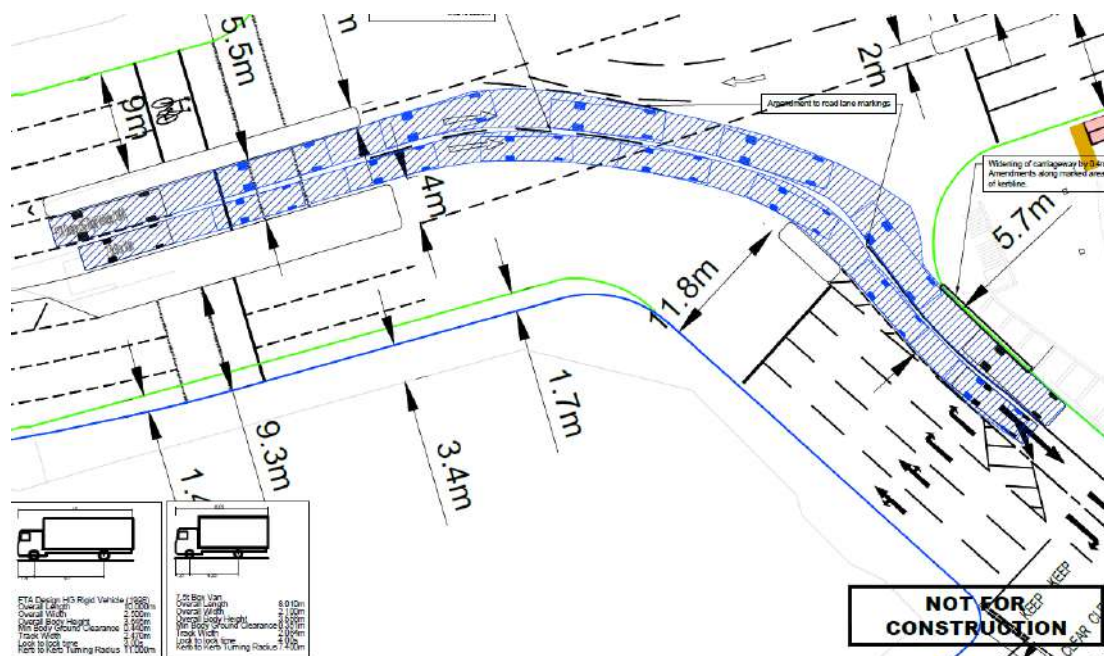
Two lanes are proposed to allow vehicles to turn right from the A4 onto Syon Lane. The geometry of Syon Lane close to the junction with the A4 is shown at 5.3m. The Audit Team are concerned that the proposed geometry does not provide sufficient space for two vehicles (especially larger vehicles) to right turn simultaneously. Constrained width at the junction could lead to side impact collisions between turning vehicles or vehicles colliding with the central refuge island or nearside kerb line.

RECOMMENDATION

Swept path drawings should be prepared for a range of vehicle types demonstrating that two vehicles can simultaneously turn right from the A4 on to Syon Lane. If this manoeuvre is not possible the junction layout should be amended.

Design Organisation Response	Accepted / Part Accepted / Rejected
------------------------------	-------------------------------------

At 10m rigid vehicle and 7.5t box van are able to turn right from the A4 west onto Syon Lane south without conflict. For A Design Option that includes the removal of the A4 pedestrian underpass additional room would be available to make this turn. The double right turn is 5.5m wide. It is suggested that a narrow off-side lane is provided (2.5m) to encourage larger vehicles to use the nearside lane only.



Client Organisation Comments

3.3 TRAFFIC SIGNALS

3.3.1 PROBLEM 6

Location: Proposed new Tesco / residential access with Syon Gateway.

Summary: Insufficient forward visibility of traffic signal heads could lead to sudden braking resulting in rear end shunt type collisions.

No stop line or signal heads are shown on the proposed layout (drawing PB9144-RHD-GE-SW-DR-R-0096). The Audit Team are concerned that the sharp left turn at the site access may compromise forward visibility of the signal head. Insufficient forward visibility of the primary signal heads could lead to late braking and rear end shunt type collisions.

RECOMMENDATION

The primary traffic signal heads should be located to ensure sufficient forward visibility.

Design Organisation Response	Accepted / Part Accepted / Rejected
Agreed - Proposed signal heads to be located to allow approaching vehicle drivers driving down the ramp to see the signal head. Consideration can be given to introducing measures that ensure drivers travel down the ramp at an appropriately slow speed. The required level of inter-visibility between the stop line at the site access and the stop lines on Syon Lane East and Syon Lane West can be achieved at the junction.	
Client Organisation Comments	

3.4 PEDESTRIANS AND CYCLISTS

3.4.1 PROBLEM 7

Location: Northern side of Syon Lane between the A4 and Syon Gateway.

Summary: Failure to provide a safe transition from off-road to on road cycling could lead to collisions with passing vehicles.

The proposals would create a new shared use footway/ cycleway along the northern side of Syon Lane, from its junction with the A4 continuing east towards the junction Syon Gateway. Drawing PB9144-RHD-GE-SW-DR-R-0096 S3 P16 notes that cyclists are 'required to use Syon Lane carriageway south of Syon Gate Way'. No details have been provided at this stage however, of how cyclists wishing to continue east along Syon Lane would transition from off-road to on road cycling. Failure to provide a safe transition from the off-road cycleway back onto the road could lead to cyclists re-joining into the path of passing vehicles, leading to side impact type collisions.

RECOMMENDATION

Provide a suitable transition to allow cyclists to safely transition from off-road to on-road cycling.

Design Organisation Response	Accepted / Part Accepted / Rejected
Agreed - It is proposed that cyclists would use Syon Gate Way as a transition zone from the proposed shared surface, flanking the Homebase site along Syon Lane, in accessing onto the carriageway for on-road cycling. The entrance to Syon Gate Way would be treated to form a raised table with the shared surface pedestrian footway. The proximity to the pedestrian crossing would also offer an opportunity for cyclists to enter the carriageway whilst vehicles are stationary.	

Client Organisation Comments

3.4.2 PROBLEM 8

Location: Proposed bus stop along the southern side of the A4.

Summary: Bus passengers could step off the bus into the path of cyclists.

The proposals show that the proposed cycle lane would terminate either side of the proposed bus stop, cyclists are however likely to continue straight through. Passengers getting off the bus may not be aware of the potential for cyclists to be on the footway which could lead to collisions.

RECOMMENDATION

In the vicinity of the bus stop, relocate the footway to the front, nearest the carriageway, and cycleway to the back to create a 'floating' bus stop arrangement.

Design Organisation Response	Accepted / Part Accepted / Rejected
The bus stop design should minimise the opportunity for pedestrians and cyclists to collide. The cycleway would however be retained adjacent to the A4 and this is to tie in with the remainder of the off-carriageway cycle route along the A4. The bus stop layout and shelter would follow the design of existing stops further along the A4. It is anticipated that a bus shelter would be provided, and consequently it is unlikely that passengers exiting the bus would conflict with the desire line of cyclists at this location. The final design would be subject to s278 highway approvals and a Stage 2 Road Safety Audit.	

Client Organisation Comments

3.4.3 PROBLEM 9

Location: Proposed cycleway along the southern side of the A4

Summary: Failure to provide a safe transition from off-road to on road cycling could lead to collisions with passing vehicles.

The proposals would extend the existing cycleway along the southern side of the A4 to the junction with Syon Lane. No details have been provided of how cyclists wishing to continue west along the A4 (past Syon Lane) transition safely on to and then off the A4 back on the cycleway to the west of Syon Lane.

Failure to provide a safe transition from the off-road cycleway back onto the road and vice versa could lead to cyclists re-joining into the path of passing vehicles leading to side impact type collisions or cyclists falling whilst trying to bump up/ down a kerb.



Extract of drawing PB9144-RHD-GE-SW-DR-R-0096 S3 P16 showing cycle movement across Syon Lane/ A4 junction

RECOMMENDATION

Provide a transition to allow cyclists to safely transition from off-road to on-road cycling. In addition, provide an advanced cycle stop line to allow cyclists to re-join the road ahead to traffic.

Design Organisation Response	Accepted / Part Accepted / Rejected
<p>Agreed – The removal of the bus layby on the A4 (Westbound) in the immediate vicinity of the sit frontage would permit the off-road cycleway to be extended, before tying back in to the carriageway. A transition section with dropped kerbs would be provided. The provision of ASL would be investigated at the detailed design stage to provide cyclists with greater segregation from vehicles on the A4 carriageway. However, if a Design Option for the junction changed and pedestrian/cycle crossing is provided on the southern side of the junction, across Syon Lane, it is envisaged that a merge back onto the A4 would no longer be required.</p>	<p>Accepted</p>
Client Organisation Comments	

End of list of problems identified and recommendations offered in this Stage 1 Road Safety Audit

4.0 ISSUES IDENTIFIED DURING THE STAGE 1 ROAD SAFETY AUDIT THAT ARE OUTSIDE THE TERMS OF REFERENCE

The Audit Team has no issues to raise within this section.

5.0 SIGNATURES AND SIGN-OFF

5.1 AUDIT TEAM STATEMENT

We certify that we have examined the drawings and documents listed in Appendix A. to this Safety Audit report. The Road Safety Audit has been carried out in accordance with TfL Procedure SQA-0170 dated May 2014, with the sole purpose of identifying any feature that could be removed or modified in order to improve the safety of the measures. The problems identified have been noted in this report together with associated suggestions for safety improvements that we recommend should be studied for implementation.

No one on the Audit Team has been involved with the design of the measures.

AUDIT TEAM LEADER:

Name: Sam Taylor
BEng (Hons), MCIHT, MSoRSA

Signed: 

Position: Associate Transport Planner

Date: 03.08.2020

Organisation: Royal HaskoningDHV

Address: Royal HaskoningDHV, Rightwell House
Bretton, Peterborough, PE3 8DW

Contact: sam.taylor@rhdhv.com

AUDIT TEAM MEMBER:

Name: Vicky Seaton
BSc (Hons), MCIHT, MSoRSA

Signed: 

Position: Principal Transport Planner

Date: 03.08.2020

Organisation: Royal HaskoningDHV

Address: Royal HaskoningDHV, 5th Floor Newater House, 11 Newhall Street,
Birmingham, B3 3NY

Contact: vicky.seaton@rhdhv.com

5.2 DESIGN TEAM STATEMENT

In accordance with SQA-0170 dated May 2014, I certify that I have reviewed the items raised in this Stage 1 Safety Audit report. I have given due consideration to each issue raised and have stated my proposed course of action for each in this report. I seek the Client Organisations endorsement of my proposals.

Name:

Position:

Organisation:

Signed:

Dated:

5.3 CLIENT ORGANISATION STATEMENT

I accept these proposals by the Design Organisation.

Name:

Position:

Organisation:

Signed:

Dated:

5.4 SECONDARY CLIENT ORGANISATION STATEMENT (where appropriate)

I accept these proposals by the Design Organisation.

Name:

Position:

Organisation:

Signed:

Dated:

APPENDIX A

Documents Forming the Audit Brief

DRAWING NUMBER

PB9144-RHD-GE-SW-DR-R-0096

DRAWING TITLE

Proposed Highway Arrangements – Underpass
Retained

DOCUMENTS

- Safety Audit Brief
- Site Location Plan
- Traffic signal details
- TfL signal safety checklist
- Departures from standard
- Previous Road Safety Audits
- Previous Designer Responses
- Collision data
- Collision plot
- Traffic flow / modelling data
- Pedestrian flow / modelling data
- Speed survey data
- Other documents

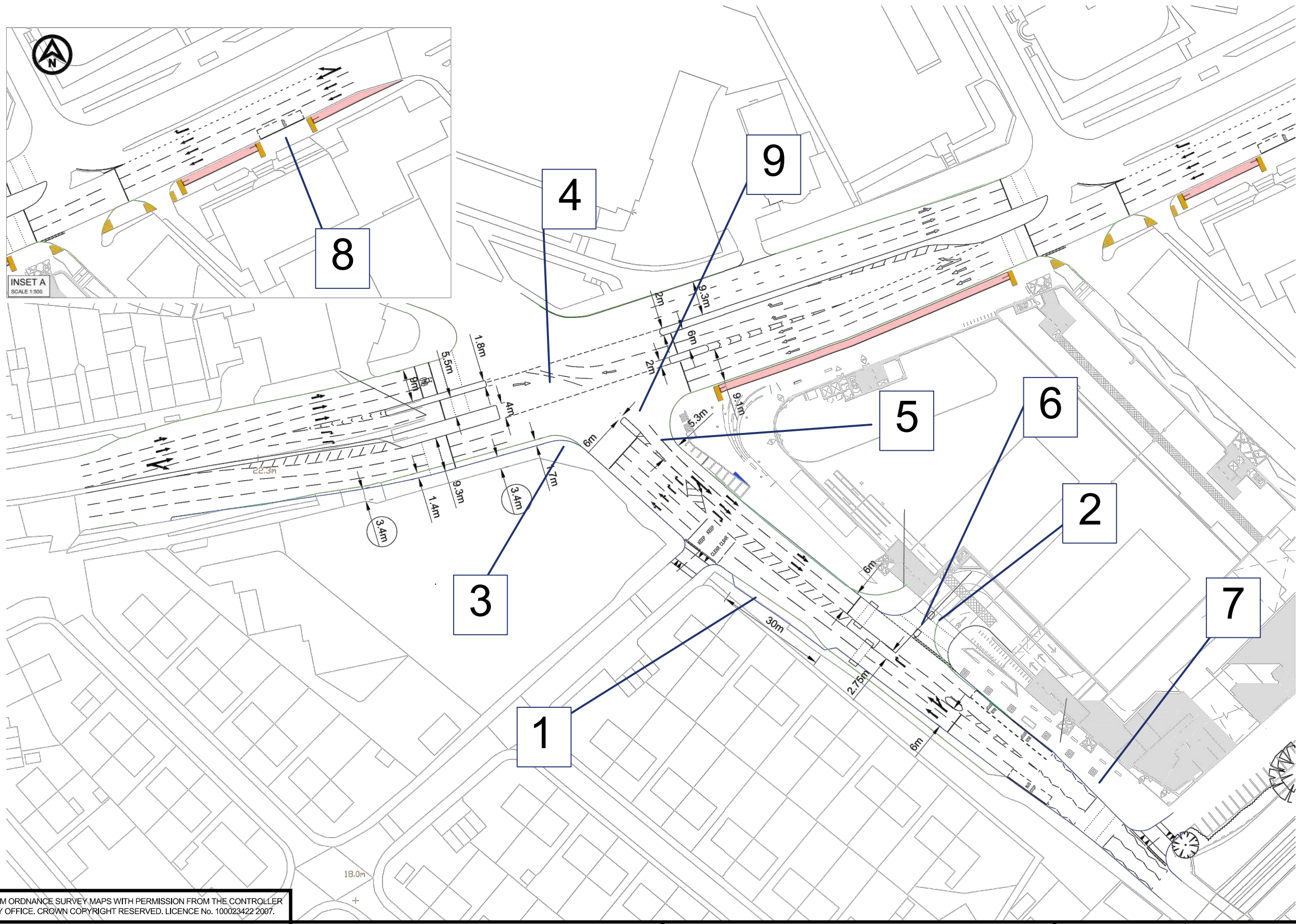
DETAILS (where appropriate)

Stage 1 Road Safety Audit Briefing Note
Within the Stage 1 Road Safety Audit Briefing Note

n/a
n/a
Within the Stage 1 Road Safety Audit Briefing Note
Within the Stage 1 Road Safety Audit Briefing Note
Within the Stage 1 Road Safety Audit Briefing Note
Within the Stage 1 Road Safety Audit Briefing Note

APPENDIX B

Problem Locations



REPRODUCED FROM ORDNANCE SURVEY MAPS WITH PERMISSION FROM THE CONTROLLER OF HM STATIONERY OFFICE. CROWN COPYRIGHT RESERVED. LICENCE No. 100023422 2007.

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TITLE	PROJECT
PROBLEM LOCATION PLAN	SYON LANE STAGE 1 ROAD SAFETY AUDIT



DRAWN	JJ	CHECKED	VS	APPROVED	VS
DATE	03.08.2020	SCALE	NTS	REF.	-
DRAWING No.	APPENDIX B				REVISION

DRAWN	JJ	CHECKED	VS	APPROVED	VS
DATE	03.08.2020	SCALE	NTS	REF.	-
DRAWING No.	APPENDIX B				REVISION

Appendix Z - BLANK

Appendix A1 - Pedestrian Comfort Level Assessment (All Locations)

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	1 Surveyed AM Peak Hour	1 Surveyed AM Peak 15 Mins	1 Proposed AM Peak Hour	1 Proposed AM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	16	19	368	371
	Peak Hour Flow (PPH)	19	28	375	384
	Total Footway Width	2m	2m	2m	2m
	Clear Footway Width	2m	2m	2m	2m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A+ : 0 ppm	A+ : 0 ppm	A : 3 ppm	A : 3 ppm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A+ : 0 ppm	A+ : 0 ppm	B+ : 9 ppm	B+ : 9 ppm
	Total Width Required for PCL B+	1.50	1.50	1.54	1.55
	Clear Width Required For PCL B+	1.50	1.50	1.54	1.55
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date	
	Reviewed By		Date	

Summary Info	Location Name
	Location Type
	Area Type
	Average Flow (PPH)
	Peak Hour Flow (PPH)
	Total Footway Width
	Clear Footway Width
	Total Street Furniture Impact

Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)
	Total Width Required for PCL B+
	Clear Width Required For PCL B+

Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)
	Total Width Required for PCL B+
	Clear Width Required For PCL B+

Impact	Pedestrian Comfort at Peak Hour Flow
--------	--------------------------------------

Impact	Pedestrian Comfort at Average of Maximum Activity
--------	---

Impact	Notes
--------	-------

Impact	Mitigation
--------	------------

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	1 Surveyed PM Peak Hour	1 Surveyed PM Peak 15 Mins	1 Proposed PM Peak Hour	1 Proposed PM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	24	42	310	328
	Peak Hour Flow (PPH)	42	64	330	352
	Total Footway Width	2m	2m	2m	2m
	Clear Footway Width	2m	2m	2m	2m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A+ : 0 ppmm	A+ : 1 ppmm	A : 3 ppmm	A : 3 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A+ : 1 ppmm	A+ : 1 ppmm	A- : 8 ppmm	A- : 8 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	2 Surveyed AM Peak Hour	2 Surveyed AM Peak 15 Mins	2 Proposed AM Peak Hour	2 Proposed AM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	322	556	674	908
	Peak Hour Flow (PPH)	556	740	912	1,096
	Total Footway Width	2.3m	2.3m	2m	2m
	Clear Footway Width	2.3m	2.3m	2m	2m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 4 ppmm	A : 5 ppmm	A- : 8 ppmm	B+ : 9 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.53
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.53
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A- : 7 ppmm	B : 12 ppmm	B- : 17 ppmm	C : 23 ppmm
	Total Width Required for PCL B+	1.50	2.32	2.81	3.79
	Clear Width Required For PCL B+	1.50	2.32	2.81	3.79
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	2 Surveyed PM Peak Hour	2 Surveyed PM Peak 15 Mins	2 Proposed PM Peak Hour	2 Proposed PM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	242	446	528	732
	Peak Hour Flow (PPH)	446	536	734	824
	Total Footway Width	2.3m	2.3m	2m	2m
	Clear Footway Width	2.3m	2.3m	2m	2m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 3 ppm	A : 4 ppm	A- : 6 ppm	A- : 7 ppm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A : 5 ppm	B+ : 10 ppm	B : 13 ppm	C+ : 18 ppm
	Total Width Required for PCL B+	1.50	1.86	2.20	3.06
	Clear Width Required For PCL B+	1.50	1.86	2.20	3.06
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	3 Surveyed AM Peak Hour	3 Surveyed AM Peak 15 Mins	3 Proposed AM Peak Hour	3 Proposed AM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	312	599	664	951
	Peak Hour Flow (PPH)	599	836	955	1,192
	Total Footway Width	1.8m	1.8m	1.8m	1.8m
	Clear Footway Width	1.8m	1.8m	1.8m	1.8m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A- : 6 ppmm	A- : 8 ppmm	B+ : 9 ppmm	B+ : 11 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.66
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.66
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	B+ : 9 ppmm	B- : 17 ppmm	C+ : 18 ppmm	C- : 26 ppmm
	Total Width Required for PCL B+	1.50	2.50	2.77	3.97
	Clear Width Required For PCL B+	1.50	2.50	2.77	3.97
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	3 Surveyed PM Peak Hour	3 Surveyed PM Peak 15 Mins	3 Proposed PM Peak Hour	3 Proposed PM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	228	446	514	732
	Peak Hour Flow (PPH)	446	524	734	812
	Total Footway Width	1.8m	1.8m	1.8m	1.8m
	Clear Footway Width	1.8m	1.8m	1.8m	1.8m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 4 ppmm	A : 5 ppmm	A- : 7 ppmm	A- : 8 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A- : 6 ppmm	B : 12 ppmm	B : 14 ppmm	C+ : 20 ppmm
	Total Width Required for PCL B+	1.50	1.86	2.15	3.06
	Clear Width Required For PCL B+	1.50	1.86	2.15	3.06
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.
Impact	Notes				
Impact	Mitigation				

Sign Off		Assessed By		Date					
		Reviewed By		Date					
Summary Info	Location Name	4 Surveyed AM Peak Hour		4 Surveyed AM Peak 15 Mins		4 Proposed AM Peak Hour		4 Proposed AM Peak 15 Mins	
	Location Type	Full Footway Width		Full Footway Width		Full Footway Width		Full Footway Width	
	Area Type	High Street		High Street		High Street		High Street	
	Average Flow (PPH)	303		581		655		933	
	Peak Hour Flow (PPH)	581		812		937		1,168	
	Total Footway Width	3.2m		3.2m		9m		9m	
	Clear Footway Width	3.2m		3.2m		9m		9m	
	Total Street Furniture Impact	0m		0m		0m		0m	
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 3 ppmm		A : 4 ppmm		A+ : 2 ppmm		A+ : 2 ppmm	
	Total Width Required for PCL B+	1.50		1.50		1.50		1.63	
	Clear Width Required For PCL B+	1.50		1.50		1.50		1.63	
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A : 5 ppmm		B+ : 9 ppmm		A : 4 ppmm		A : 5 ppmm	
	Total Width Required for PCL B+	1.50		2.43		2.74		3.89	
	Clear Width Required For PCL B+	1.50		2.43		2.74		3.89	
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.		The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.		The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.		The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.		Even when under additional stress, the footway on this site should be comfortable.		Even when under additional stress, the footway on this site should be comfortable.		Even when under additional stress, the footway on this site should be comfortable.	
Impact	Notes								
Impact	Mitigation								

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	4 Surveyed PM Peak Hour	4 Surveyed PM Peak 15 Mins	4 Proposed PM Peak Hour	4 Proposed PM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	221	442	507	728
	Peak Hour Flow (PPH)	442	520	730	808
	Total Footway Width	3.2m	3.2m	9m	9m
	Clear Footway Width	3.2m	3.2m	9m	9m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A+ : 2 ppm	A : 3 ppm	A+ : 1 ppm	A+ : 1 ppm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A : 3 ppm	A- : 7 ppm	A : 3 ppm	A : 4 ppm
	Total Width Required for PCL B+	1.50	1.85	2.12	3.04
	Clear Width Required For PCL B+	1.50	1.85	2.12	3.04
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.
Impact	Notes				
Impact	Mitigation				

Sign Off		Assessed By		Date					
		Reviewed By		Date					
Summary Info	Location Name	5 Surveyed AM Peak Hour		5 Surveyed AM Peak 15 Mins		5 Proposed AM Peak Hour		5 Proposed AM Peak 15 Mins	
	Location Type	Full Footway Width		Full Footway Width		Full Footway Width		Full Footway Width	
	Area Type	High Street		High Street		High Street		High Street	
	Average Flow (PPH)	546		998		898		1,350	
	Peak Hour Flow (PPH)	998		1,492		1,354		1,848	
	Total Footway Width	5.4m		5.4m		6m		6m	
	Clear Footway Width	5.4m		5.4m		6m		6m	
	Total Street Furniture Impact	0m		0m		0m		0m	
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 3 ppm		A : 5 ppm		A : 4 ppm		A : 5 ppm	
	Total Width Required for PCL B+	1.50		2.08		1.89		2.57	
	Clear Width Required For PCL B+	1.50		2.08		1.89		2.57	
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A : 5 ppm		B+ : 9 ppm		A- : 7 ppm		B+ : 11 ppm	
	Total Width Required for PCL B+	2.28		4.16		3.75		5.63	
	Clear Width Required For PCL B+	2.28		4.16		3.75		5.63	
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.		The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.		The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.		The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.		Even when under additional stress, the footway on this site should be comfortable.		Even when under additional stress, the footway on this site should be comfortable.		Even when under additional stress, the footway on this site should be comfortable.	
Impact	Notes								
Impact	Mitigation								

Sign Off		Assessed By		Date	
		Reviewed By		Date	
Summary Info	Location Name	5 Surveyed PM Peak Hour	5 Surveyed PM Peak 15 Mins	5 Proposed PM Peak Hour	5 Proposed PM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	289	521	575	807
	Peak Hour Flow (PPH)	521	692	809	980
	Total Footway Width	5.4m	5.4m	6m	6m
	Clear Footway Width	5.4m	5.4m	6m	6m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A+ : 2 ppmm	A+ : 2 ppmm	A+ : 2 ppmm	A : 3 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A : 3 ppmm	A : 5 ppmm	A : 5 ppmm	A- : 7 ppmm
	Total Width Required for PCL B+	1.50	2.18	2.40	3.37
	Clear Width Required For PCL B+	1.50	2.18	2.40	3.37
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	6 Surveyed AM Peak Hour	6 Surveyed AM Peak 15 Mins	6 Proposed AM Peak Hour	6 Proposed AM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	546	998	898	1,350
	Peak Hour Flow (PPH)	998	1,492	1,354	1,848
	Total Footway Width	3m	3m	3m	3m
	Clear Footway Width	3m	3m	3m	3m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A- : 6 ppmm	A- : 8 ppmm	A- : 8 ppmm	B+ : 10 ppmm
	Total Width Required for PCL B+	1.50	2.08	1.89	2.57
	Clear Width Required For PCL B+	1.50	2.08	1.89	2.57
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	B+ : 9 ppmm	B- : 17 ppmm	B- : 15 ppmm	C : 23 ppmm
	Total Width Required for PCL B+	2.28	4.16	3.75	5.63
	Clear Width Required For PCL B+	2.28	4.16	3.75	5.63
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	6 Surveyed PM Peak Hour	6 Surveyed PM Peak 15 Mins	6 Proposed PM Peak Hour	6 Proposed PM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	419	802	705	1,088
	Peak Hour Flow (PPH)	802	1,072	1,090	1,360
	Total Footway Width	3m	3m	3m	3m
	Clear Footway Width	3m	3m	3m	3m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 4 ppmm	A- : 6 ppmm	A- : 6 ppmm	A- : 8 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.52	1.89
	Clear Width Required For PCL B+	1.50	1.50	1.52	1.89
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A- : 7 ppmm	B : 13 ppmm	B : 12 ppmm	C+ : 18 ppmm
	Total Width Required for PCL B+	1.75	3.35	2.94	4.54
	Clear Width Required For PCL B+	1.75	3.35	2.94	4.54
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.
Impact	Notes				
Impact	Mitigation				

Appendix A2 - Pedestrian Comfort Level Assessment (Sensitivity Test)

Sign Off		Assessed By		Date	
		Reviewed By		Date	
Summary Info	Location Name	1 Base AM Peak Hour	1 Base AM Peak 15 Mins	1 Proposed AM Peak Hour	1 Proposed AM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	120	310	472	662
	Peak Hour Flow (PPH)	310	476	666	832
	Total Footway Width	2m	2m	2m	2m
	Clear Footway Width	2m	2m	2m	2m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 3 ppmm	A : 4 ppmm	A- : 6 ppmm	A- : 7 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A : 3 ppmm	A- : 8 ppmm	B : 12 ppmm	B- : 17 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.97	2.76
	Clear Width Required For PCL B+	1.50	1.50	1.97	2.76
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress for all Area Types
Impact	Notes				
Impact	Mitigation				

Sign Off		Assessed By		Date	
		Reviewed By		Date	
Summary Info	Location Name	1 Base PM Peak Hour	1 Base PM Peak 15 Mins	1 Proposed PM Peak Hour	1 Proposed PM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	102	245	388	531
	Peak Hour Flow (PPH)	245	444	533	732
	Total Footway Width	2m	2m	2m	2m
	Clear Footway Width	2m	2m	2m	2m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A+ : 2 ppmm	A : 4 ppmm	A : 4 ppmm	A- : 6 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A : 3 ppmm	A- : 6 ppmm	B+ : 10 ppmm	B : 13 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.62	2.22
	Clear Width Required For PCL B+	1.50	1.50	1.62	2.22
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types
Impact	Notes				
Impact	Mitigation				

Sign Off		Assessed By		Date	
		Reviewed By		Date	
Summary Info	Location Name	2 Base AM Peak Hour	2 Base AM Peak 15 Mins	2 Proposed AM Peak Hour	2 Proposed AM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	489	1,046	841	1,398
	Peak Hour Flow (PPH)	1,046	1,460	1,402	1,816
	Total Footway Width	2.3m	2.3m	2m	2m
	Clear Footway Width	2.3m	2.3m	2m	2m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A- : 8 ppmm	B+ : 11 ppmm	B : 12 ppmm	B- : 15 ppmm
	Total Width Required for PCL B+	1.50	2.03	1.95	2.53
	Clear Width Required For PCL B+	1.50	2.03	1.95	2.53
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	B+ : 11 ppmm	C : 23 ppmm	C : 21 ppmm	D : 35 ppmm
	Total Width Required for PCL B+	2.04	4.36	3.51	5.83
	Clear Width Required For PCL B+	2.04	4.36	3.51	5.83
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	Location width should be increased. If this is not possible, it is important that the footway is kept as clear as possible.	Location width should be increased. If this is not possible, it is important that the footway is kept as clear as possible.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.	This footway is likely to be very uncomfortable. If possible, the footway width should be increased. If this is not possible, it is important that the footway is kept as clear as possible.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	2 Base PM Peak Hour	2 Base PM Peak 15 Mins	2 Proposed PM Peak Hour	2 Proposed PM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	367	511	653	797
	Peak Hour Flow (PPH)	511	784	799	1,072
	Total Footway Width	2.3m	2.3m	2m	2m
	Clear Footway Width	2.3m	2.3m	2m	2m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 4 ppmm	A- : 6 ppmm	A- : 7 ppmm	B+ : 9 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A- : 8 ppmm	B+ : 11 ppmm	B- : 16 ppmm	C+ : 20 ppmm
	Total Width Required for PCL B+	1.53	2.13	2.72	3.33
	Clear Width Required For PCL B+	1.53	2.13	2.72	3.33
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	3 Base AM Peak Hour	3 Base AM Peak 15 Mins	3 Proposed AM Peak Hour	3 Proposed AM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	479	1,051	831	1,403
	Peak Hour Flow (PPH)	1,051	1,556	1,407	1,912
	Total Footway Width	1.8m	1.8m	1.8m	1.8m
	Clear Footway Width	1.8m	1.8m	1.8m	1.8m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	B+ : 10 ppmm	B : 14 ppmm	B : 13 ppmm	C+ : 18 ppmm
	Total Width Required for PCL B+	1.50	2.17	1.96	2.66
	Clear Width Required For PCL B+	1.50	2.17	1.96	2.66
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	B : 13 ppmm	D : 29 ppmm	C : 23 ppmm	E : 39 ppmm
	Total Width Required for PCL B+	2.00	4.38	3.47	5.85
	Clear Width Required For PCL B+	2.00	4.38	3.47	5.85
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	Location width should be increased. If this is not possible, it is important that the footway is kept as clear as possible.	Location width should be increased. If this is not possible, it is important that the footway is kept as clear as possible.	Location width should be increased. If this is not possible, it is important that the footway is kept as clear as possible. If this is a retail area, note that visitors will start to think about avoiding the area.
Impact	Pedestrian Comfort at Average of Maximum Activity	This level of comfort is appropriate for periods of additional stress for all Area Types	This footway is likely to be very uncomfortable. If possible, the footway width should be increased. If this is not possible, it is important that the footway is kept as clear as possible.	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.	This footway is likely to be extremely uncomfortable. If possible, the footway width should be increased. If this is not possible, it is important that the footway is kept as clear as possible.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	3 Base PM Peak Hour	3 Base PM Peak 15 Mins	3 Proposed PM Peak Hour	3 Proposed PM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	353	511	639	797
	Peak Hour Flow (PPH)	511	780	799	1,068
	Total Footway Width	1.8m	1.8m	1.8m	1.8m
	Clear Footway Width	1.8m	1.8m	1.8m	1.8m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 5 ppm	A- : 7 ppm	A- : 7 ppm	B+ : 10 ppm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	B+ : 10 ppm	B : 14 ppm	C+ : 18 ppm	C : 22 ppm
	Total Width Required for PCL B+	1.50	2.13	2.67	3.33
	Clear Width Required For PCL B+	1.50	2.13	2.67	3.33
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	4 Base AM Peak Hour	4 Base AM Peak 15 Mins	4 Proposed AM Peak Hour	4 Proposed AM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	422	901	774	1,253
	Peak Hour Flow (PPH)	901	1,320	1,257	1,676
	Total Footway Width	3.2m	3.2m	9m	9m
	Clear Footway Width	3.2m	3.2m	9m	9m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 5 ppm	A- : 7 ppm	A+ : 2 ppm	A : 3 ppm
	Total Width Required for PCL B+	1.50	1.84	1.75	2.33
	Clear Width Required For PCL B+	1.50	1.84	1.75	2.33
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A- : 7 ppm	B : 14 ppm	A : 4 ppm	A- : 7 ppm
	Total Width Required for PCL B+	1.76	3.76	3.23	5.23
	Clear Width Required For PCL B+	1.76	3.76	3.23	5.23
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	4 Base PM Peak Hour	4 Base PM Peak 15 Mins	4 Proposed PM Peak Hour	4 Proposed PM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	311	490	597	776
	Peak Hour Flow (PPH)	490	576	778	864
	Total Footway Width	3.2m	3.2m	9m	9m
	Clear Footway Width	3.2m	3.2m	9m	9m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 3 ppm	A : 3 ppm	A+ : 1 ppm	A+ : 2 ppm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A : 5 ppm	A- : 8 ppm	A : 3 ppm	A : 4 ppm
	Total Width Required for PCL B+	1.50	2.05	2.49	3.24
	Clear Width Required For PCL B+	1.50	2.05	2.49	3.24
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	5 Base AM Peak Hour	5 Base AM Peak 15 Mins	5 Proposed AM Peak Hour	5 Proposed AM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	665	1,318	1,017	1,670
	Peak Hour Flow (PPH)	1,318	2,000	1,674	2,356
	Total Footway Width	5.4m	5.4m	6m	6m
	Clear Footway Width	5.4m	5.4m	6m	6m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 4 ppmm	A- : 6 ppmm	A : 5 ppmm	A- : 7 ppmm
	Total Width Required for PCL B+	1.84	2.78	2.33	3.28
	Clear Width Required For PCL B+	1.84	2.78	2.33	3.28
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A- : 6 ppmm	B : 12 ppmm	A- : 8 ppmm	B : 14 ppmm
	Total Width Required for PCL B+	2.78	5.50	4.24	6.96
	Clear Width Required For PCL B+	2.78	5.50	4.24	6.96
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	5 Base PM Peak Hour	5 Base PM Peak 15 Mins	5 Proposed PM Peak Hour	5 Proposed PM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	378	569	664	855
	Peak Hour Flow (PPH)	569	748	857	1,036
	Total Footway Width	5.4m	5.4m	6m	6m
	Clear Footway Width	5.4m	5.4m	6m	6m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A+ : 2 ppmm	A+ : 2 ppmm	A+ : 2 ppmm	A : 3 ppmm
	Total Width Required for PCL B+	1.50	1.50	1.50	1.50
	Clear Width Required For PCL B+	1.50	1.50	1.50	1.50
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A : 4 ppmm	A : 5 ppmm	A- : 6 ppmm	A- : 7 ppmm
	Total Width Required for PCL B+	1.58	2.38	2.77	3.57
	Clear Width Required For PCL B+	1.58	2.38	2.77	3.57
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.	Even when under additional stress, the footway on this site should be comfortable.
Impact	Notes				
Impact	Mitigation				

Sign Off	Assessed By		Date		
	Reviewed By		Date		
Summary Info	Location Name	6 Surveyed AM Peak Hour	6 Surveyed AM Peak 15 Mins	6 Proposed AM Peak Hour	6 Proposed AM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	563	1,039	915	1,391
	Peak Hour Flow (PPH)	1,039	1,548	1,395	1,904
	Total Footway Width	3m	3m	3m	3m
	Clear Footway Width	3m	3m	3m	3m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A- : 6 ppm	B+ : 9 ppm	A- : 8 ppm	B+ : 11 ppm
	Total Width Required for PCL B+	1.50	2.16	1.94	2.65
	Clear Width Required For PCL B+	1.50	2.16	1.94	2.65
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	B+ : 9 ppm	B- : 17 ppm	B- : 15 ppm	C : 23 ppm
	Total Width Required for PCL B+	2.35	4.33	3.82	5.80
	Clear Width Required For PCL B+	2.35	4.33	3.82	5.80
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.
Impact	Notes				
Impact	Mitigation				

Sign Off		Assessed By		Date	
		Reviewed By		Date	
Summary Info	Location Name	6 Base PM Peak Hour	6 Base PM Peak 15 Mins	6 Proposed PM Peak Hour	6 Proposed PM Peak 15 Mins
	Location Type	Full Footway Width	Full Footway Width	Full Footway Width	Full Footway Width
	Area Type	High Street	High Street	High Street	High Street
	Average Flow (PPH)	432	812	718	1,098
	Peak Hour Flow (PPH)	812	1,080	1,100	1,368
	Total Footway Width	3m	3m	3m	3m
	Clear Footway Width	3m	3m	3m	3m
	Total Street Furniture Impact	0m	0m	0m	0m
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 5 ppm	A- : 6 ppm	A- : 6 ppm	A- : 8 ppm
	Total Width Required for PCL B+	1.50	1.51	1.53	1.91
	Clear Width Required For PCL B+	1.50	1.51	1.53	1.91
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A- : 7 ppm	B : 14 ppm	B : 12 ppm	C+ : 18 ppm
	Total Width Required for PCL B+	1.80	3.39	2.99	4.58
	Clear Width Required For PCL B+	1.80	3.39	2.99	4.58
Impact	Pedestrian Comfort at Peak Hour Flow	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.	The footway on this site should be comfortable for its intended use at most times. However, you may need to reassess the site in future.
Impact	Pedestrian Comfort at Average of Maximum Activity	Even when under additional stress, the footway on this site should be comfortable.	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress for all Area Types	This level of comfort is appropriate for periods of additional stress in Office and Retail and Transport Interchange sites.
Impact	Notes				
Impact	Mitigation				

Appendix A3 - Servicing Vehicle Trips (Sensitivity Test)

Calculation Reference: AUDIT-703101-210112-0100

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
MULTI-MODAL MOTOR CYCLES

Selected regions and areas:

01	GREATER LONDON	
	HG HARINGEY	1 days
	HM HAMMERSMITH AND FULHAM	1 days
	IS ISLINGTON	1 days
	RD RICHMOND	1 days
	SK SOUTHWARK	1 days
	TH TOWER HAMLETS	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: No of Dwellings
Actual Range: 73 to 255 (units:)
Range Selected by User: 20 to 493 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/19 to 14/11/19

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:

Tuesday	3 days
Wednesday	1 days
Thursday	2 days
Friday	1 days

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

Selected survey types:

Manual count	7 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 undertaken using machines.

Selected Locations:

Town Centre	1
Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	1
Neighbourhood Centre (PPS6 Local Centre)	3

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:

Development Zone	2
Residential Zone	3
Built-Up Zone	1
No Sub Category	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.

Secondary Filtering selection:

Use Class:

C3 7 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 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 2 days

50,001 to 100,000 3 days

100,001 or More 2 days

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

Population within 5 miles:

125,001 to 250,000 1 days

500,001 or More 6 days

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

Car ownership within 5 miles:

0.5 or Less 2 days

0.6 to 1.0 5 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.

Travel Plan:

Yes 4 days

No 3 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:

1a (Low) Very poor 1 days

1b Very poor 1 days

5 Very Good 3 days

6a Excellent 1 days

6b (High) Excellent 1 days

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

LIST OF SITES relevant to selection parameters

1	HG-03-C-01 BREAM CLOSE TOTTENHAM HALE	BLOCKS OF FLATS		HARINGEY
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings: 255 <i>Survey date: TUESDAY 18/06/19</i>			
2	HM-03-C-02 GLENTHORNE ROAD HAMMERSMITH	BLOCKS OF FLATS		HAMMERSMITH AND FULHAM
	Town Centre Built-Up Zone Total No of Dwellings: 194 <i>Survey date: TUESDAY 30/04/19</i>			
3	IS-03-C-07 CITY ROAD ISLINGTON	BLOCK OF FLATS		ISLINGTON
	Edge of Town Centre Development Zone Total No of Dwellings: 185 <i>Survey date: THURSDAY 06/06/19</i>			
4	RD-03-C-04 BESSANT DRIVE KEW	BLOCKS OF FLATS		RICHMOND
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 170 <i>Survey date: WEDNESDAY 15/05/19</i>			
5	SK-03-C-03 MARITIME STREET SURREY QUAYS	BLOCKS OF FLATS		SOUTHWARK
	Neighbourhood Centre (PPS6 Local Centre) Development Zone Total No of Dwellings: 233 <i>Survey date: THURSDAY 14/11/19</i>			
6	TH-03-C-04 LEVEN ROAD POPLAR ABERFELDY VILLAGE	BLOCK OF FLATS		TOWER HAMLETS
	Neighbourhood Centre (PPS6 Local Centre) No Sub Category Total No of Dwellings: 83 <i>Survey date: FRIDAY 21/06/19</i>			
7	WF-03-C-01 ERSKINE ROAD WALTHAMSTOW	BLOCKS OF FLATS		WALTHAM FOREST
	Edge of Town Centre Residential Zone Total No of Dwellings: 73 <i>Survey date: TUESDAY 05/11/19</i>			

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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
 MULTI-MODAL MOTOR CYCLES
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	7	170	0.000	7	170	0.000	7	170	0.000
08:00 - 09:00	7	170	0.001	7	170	0.003	7	170	0.004
09:00 - 10:00	7	170	0.000	7	170	0.000	7	170	0.000
10:00 - 11:00	7	170	0.004	7	170	0.003	7	170	0.007
11:00 - 12:00	7	170	0.000	7	170	0.001	7	170	0.001
12:00 - 13:00	7	170	0.002	7	170	0.003	7	170	0.005
13:00 - 14:00	7	170	0.002	7	170	0.002	7	170	0.004
14:00 - 15:00	7	170	0.002	7	170	0.002	7	170	0.004
15:00 - 16:00	7	170	0.003	7	170	0.003	7	170	0.006
16:00 - 17:00	7	170	0.004	7	170	0.005	7	170	0.009
17:00 - 18:00	7	170	0.004	7	170	0.007	7	170	0.011
18:00 - 19:00	7	170	0.012	7	170	0.009	7	170	0.021
19:00 - 20:00	6	156	0.014	6	156	0.014	6	156	0.028
20:00 - 21:00	6	156	0.005	6	156	0.006	6	156	0.011
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.053			0.058			0.111

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.*

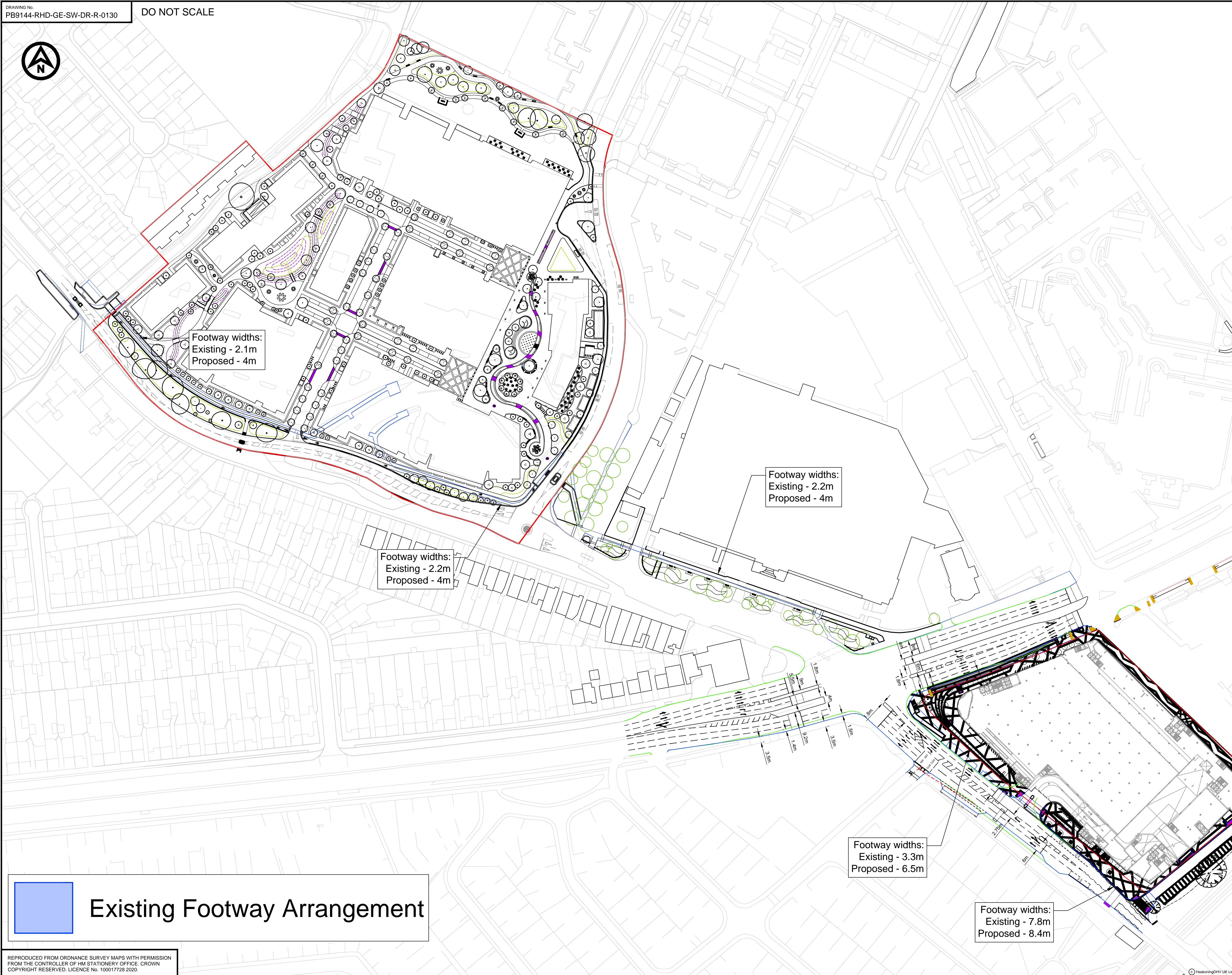
TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
 MULTI-MODAL Servicing Vehicles
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	7	170	0.003	7	170	0.003	7	170	0.006
08:00 - 09:00	7	170	0.009	7	170	0.005	7	170	0.014
09:00 - 10:00	7	170	0.013	7	170	0.008	7	170	0.021
10:00 - 11:00	7	170	0.011	7	170	0.011	7	170	0.022
11:00 - 12:00	7	170	0.011	7	170	0.011	7	170	0.022
12:00 - 13:00	7	170	0.008	7	170	0.010	7	170	0.018
13:00 - 14:00	7	170	0.010	7	170	0.013	7	170	0.023
14:00 - 15:00	7	170	0.009	7	170	0.008	7	170	0.017
15:00 - 16:00	7	170	0.009	7	170	0.013	7	170	0.022
16:00 - 17:00	7	170	0.013	7	170	0.012	7	170	0.025
17:00 - 18:00	7	170	0.008	7	170	0.009	7	170	0.017
18:00 - 19:00	7	170	0.011	7	170	0.011	7	170	0.022
19:00 - 20:00	6	156	0.014	6	156	0.014	6	156	0.028
20:00 - 21:00	6	156	0.005	6	156	0.007	6	156	0.012
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.134			0.135			0.269

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.*

Appendix A4 - Existing and Proposed Footway Widths - Tesco Osterley to Homebase



- NOTES
1. Do not scale from this drawing. All dimensions are in metres unless noted otherwise.
 2. All levels are in metres relative to Ordnance Datum Newlyn unless noted otherwise.
 3. This drawing has been based upon survey information supplied by St Edward Homes Ltd, and Royal HaskoningDHV cannot guarantee the accuracy of data.

NOT FOR
CONSTRUCTION

PO1	12/01/21	PROPOSED FOOTWAY/CYCLEWAY PLAN	TH	AW	AW
REV	DATE	DESCRIPTION	BY	CHK	APP

REVISIONS

CLIENT

ST EDWARD HOMES LTD

PROJECT

SYON LANE

TITLE

EXISTING AND PROPOSED
FOOTWAY/CYCLEWAY
ARRANGEMENT PLAN

Royal HaskoningDHV
Enhancing Society Together

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Great College Street, Westminster
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DRAWN	TH	CHECKED	AW	APPROVED	AW
DATE	SCALE AT A1	AUTOCAD REF	PB9144-RHD-GE-SW-DR-R-0130		
12/01/21	1:1000				

DRAWING No.	SUITABILITY	REVISION
PB9144-RHD-GE-SW-DR-R-0130	SUIT	P01

Appendix A5 - Station Capacity Assessment, Osterley Station

REPORT

Station Capacity Assessment - Osterley Station

Tesco Osterley Site, Syon Lane

Client: St Edward Homes Limited

Reference: PB9283-RHD-ZZ-XX-RP-Z-0033

Status: 0.1/S3

Date: 12 January 2021

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Document title: Station Capacity Assessment - Osterley Station

Document short title: Station Capacity Assessment
Reference: PB9283-RHD-ZZ-XX-RP-Z-0033
Status: 0.1/S3
Date: 12 January 2021
Project name: Tesco Osterley, Syon Lane, London Borough of Hounslow
Project number: PB9283
Author(s): Karina Mudjahid

Drafted by: Karina Mudjahid

Checked by: Sathish Nama

Date: 14/01/2021 - sn

Approved by: Andy Ward

Date: 14/01/2021 - aw

Classification

Project related

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1 Introduction

1.1.1 This assessment has been undertaken to support two proposed developments at two sites of land at Syon Lane, Isleworth, TW7 5NZ consisting of an existing Homebase Site and a Tesco Site (application ref: 00505/H/P19 and 01106/B/P137). This assessment has also been undertaken at the request of Transport for London (TfL) Officers.

1.1.2 **Table 1.1** details the two parallel development schemes and the proposed land uses

Table 1.1: Proposed Development Schemes

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

1.1.3 This Station Capacity Assessment has been informed by:

- Transport for London's Station Capacity (revision A7);
- Transport for London Open Data; and
- a site visit undertaken on Friday 8th January 2021.

1.1.4 Osterley Station is located to the north of the A4 Great West Road and is located approximately 2km from the Tesco Osterley site.

1.1.5 A bus stop is located outside the station which provides access to the H91 bus service. There is also a 24-hour car park to the rear of the station which contains circa 130 car park spaces.

1.1.6 Station facilities available at the station include:

- Bridge
- Toilets
- Payphone
- Wifi
- Ticket Halls
- Waiting Room
- Gates
- Circa 130-space car park

- 1.1.7 This assessment will refer to the development-related trips associated with both development schemes at Syon Lane, as detailed in **Table 1.2**. The derivation of the trips is included within the trip generation sections of the associated Transport Assessments for both development sites. The sum of the development-related trips calculated in each of the TAs is presented in **Table 1.2**.
- 1.1.8 Both 15-minute and 5-minute customer flows have been calculated from peak hour travel demands, based on the factors presented in TfL's Station Capacity Planning document.
- 1.1.9 It is noted that due to the location of rail services in relation to the two development sites, it is predicted that the majority of rail trips would be undertaken from Syon Lane station, while the majority of London Underground trips would be undertaken from Osterley station.

Table 1.2: Development Related Customer Demand

Arrivals	Departures	Arrivals	Departures
Weekday 08:00 – 09:00		Weekday 17:00 – 18:00	
46	243	148	76
AM Peak – 15-minute (factor applied to 1-hour demand, 0.27)		PM Peak – 15-minute (factor applied to 1-hour demand, 0.26)	
12	66	38	20
AM Peak – 5-minute (factor applied to 15-minute demand, 0.4)		PM Peak – 5-minute (factor applied to 15-minute demand, 0.4)	
5	26	15	8

- 1.1.10 This report will focus on the capacity of Osterley station, concerning:
- Station entry;
 - Concourse area;
 - Ticket gate line;
 - Platform width;
 - Stairwell capacity; and
 - Train capacity
- 1.1.11 **Appendix 1** of this document presents measurements taken on-site to support this assessment.

2 Station Entry

- 2.1.1 TfL's Station Capacity Planning document identifies that station entrance width requirements are based on the following calculation:

$$\text{Entrance / Exit width per ticket hall} = \left(\frac{\text{No. of Gates} \times 50}{80} + (\text{No. of Entrances} \times 2 \times 0.3) \right) \text{ m}$$

- 2.1.2 Osterley station serves the London Underground network and is part of the Piccadilly Line. The station is provided with a single point of entry, which is provided with four barriers for entry and exit (refer to **Appendix 2**). The entry width calculation requirement for the station is based on:
- 4 x entry/exit gates
 - 1 x point of entry to the station, from the A4 Great West Road.

- 2.1.3 Based on the calculation provided within TfL's Station Capacity Planning document the required entry width to the station is **3.1m** $((4 \times 50 / 80) + (1 \times 2 \times 0.3))$
- 2.1.4 To the rear of the concourse there is a door which leads directly to Osterley Station Car Park, however, as this is not a main station entry, it has not been included within this calculation.
- 2.1.5 The entry width to Osterley station is restricted due to the station entrance being split into two double doors (which are kept open) as shown in **Insert 2.1**.

Insert 2.1: Entrance to Osterley Station



- 2.1.6 At the time of writing, due to the Covid-19 Pandemic, the two entry doors are separated into entry and exit only, however both doors are normally used as two-way access. The total width of the two doors which act as the main entry to the station, is **3.4m**, with each doorway having a 1.7m width.
- 2.1.7 The measured entry width exceeds the width required by the TfL Station Capacity Planning document.

3 Concourse Area

- 3.1.1 TfL requires that the 'unpaid' side of the ticket hall is sufficient to accommodate a minimum of 1.0sqm per customer for the forecast average flow per minute, over the peak 15-minute period of customer demand.
- 3.1.2 TfL adopts the following calculation to determine the required concourse area:

$$\text{Concourse Area} = \left(\frac{\text{Peak 15-minute flow}}{15} \right) \times 1.0\text{m}^2$$

- 3.1.3 Within the concourse area there is a bench, an information board, and a building column as shown in **Insert 3.1**. To the east of the concourse there is a small shop with some item racks protrude out onto the concourse. The measurements for the concourse area have been undertaken by site measurement and the total concourse area, excluding the space lost by various items within the concourse, measures approximately 58.9sqm.

Insert 3.1: Station Concourse



3.1.4 Station entry and exit counts have been extracted from the TfL Open Data for Osterley station, and the busiest 15-minute period at the station is detailed in **Table 3.1**. Development related trips have then been added to the total forecast customer demand to assess the required capacity of the concourse area.

Table 3.1: Entry/Exit Counts at Osterley Station

Day of Week	Period of Peak Demand	Peak Passenger Demand (Entry and Exit)	Applied Development Related Customer Demand	Total Future Customer Demand
Mon – Thurs	08:00 – 08:15	259	78*	337
Friday	08:00 – 08:15	235	78*	313
Saturday	18:15 – 18:30	106	58*	164
Sunday	17:15 – 17:30	76	58*	134

*Applied development-related AM peak travel demand (Table 1)
*Applied development-related PM peak travel demand (Table 1)

3.1.5 Based on **Table 3.1**, the total station demand at peak times would require 22.5sqm of concourse area (337/15*1.0sqm)

3.1.6 The concourse area defined in **Insert 3.1** is therefore substantially above the requirements of TfL’s Station Capacity Planning document.

4 Ticket Gate Lines

4.1.1 TfL's Station Capacity Planning document provides a formula to calculate the required number of Underground Ticketing System (UTS) gates at a station ticket gate line; this calculation is shown below.

$$\left(\text{Roundup} \left(\frac{5 \text{ min Entry Flow}}{25 \times 5} \right) + \text{Roundup} \left(\frac{\text{Total Number of Existing Customers}}{25 \times 2} \right) \right) + X$$

Note: X is 1 where 10 or fewer entry gates are provided

4.1.2 Currently, four entry and exit gates are provided at Osterley station.

4.1.3 To obtain 5-minute entry and exit flows, a factor of 0.4 has been applied to the peak 15-minute peak entry and exit counts at the station. The peak periods of station demand are those identified in **Table 3.1**. Entry and exit counts are then factored up by 1.2 to cater for future customer demand, and development-related customer demand has then been added on top of background growth.

4.1.4 **Table 4.1** presents the entry and exit count data and the required number of entry/exit gates, based on the Station Capacity Planning documents calculation.

Table 4.1: Entry/Exit Gate Requirements

Day of Week	Time Period	15-min Customer Counts		5-min Customer Counts (factor 0.4)		5-min Customer Counts + Growth (factor 1.2)		Development Trips		Total Future Entry / Exit		X	Required No. Gates
		Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit		
Mon – Thurs	08:00 – 08:15	197	62	79	25	95	30	26	5	121	35	1	3
Fri	08:00 – 08:15	175	60	70	24	84	29	26	5	110	34	1	3
Sat	18:15 – 18:30	42	64	17	26	20	31	8	15	28	46	1	3
Sun	17:15 – 17:30	24	52	10	21	12	25	8	15	20	40	1	3

**It can be expected that 1 or 2 trains would arrive at the station peak times of demand, over a 5-minute period, in each direction of travel. Total future exit demand has been factored up based on a 25% uplift on 50% of existing customers.*

4.1.5 The assessment concludes that three gates are required for Osterley station at peak times of demand. The station is currently provided with four entry and exit gates which exceeds TfL's requirement.

5 Platform Width

5.1.1 The required platform width is calculated by the following formula:

$$\text{Platform Width} = \left(\frac{\text{Platform per headway} \times P \times 0.93\text{m}^2}{\text{Platform length} \times 0.25} \right) + 1\text{m}$$

Where P = the proportion of the platform load

5.1.2 'Platform load per headway' is calculated with reference to average platform load per minute and train service headway. **Table 5.1** provides the calculation for 'Platform load per headway'. For robustness, the calculation assumes that up to 75% of passengers will use a single platform. Of note, origin and destination data published as part of the TfL Open Data indicates there would be a predominance of trips from Osterley to the east in the AM peak hour, representing circa 65% of customer trips. In the PM peak hour, trips eastbound represent circa 42% of customer trips.

Table 5.1: Calculation of Platform Load per Headway, Osterley station

3-Hour Station Customer Flow	3-Hour Station Customer Flow (x1.2)	Factor to 1-Hour Customer Flow	1-Hour Customer Flow	Factor to 15-minute Customer Flow	15-minute Customer Flow	Develop't Customer Flow	Total 15-minute Customer Flow	Proportion of Customers on Platform	Customers per Platform	Average Customers per minute	Train Service Headway	Platform Load per Headway
2092 (07:00 – 10:00)	2510	0.48	1205	0.27	325	78	403	1	403	26.87	5	134.35
1976 (16:00 – 19:00)	2371	0.39	925	0.26	241	58	299	1	299	19.93	5	99.65

Notes:

- Calculations refer to a platform length of 100m
- Calculations refers to a service frequency of 12 trains per hour through each platform in the peak hours, which considers the worst case in terms of service frequency.

5.1.3 Based upon 75% of all passengers using a single platform, and a maximum passenger load per headway of 134.35 (**Table 5.1**), the required platform width for Osterley station is **1.75m**. The measured platform width is **2.7m** (**Appendix 1**) and the platform width, therefore exceeds customer demand requirements.

6 Stairways

6.1.1 A footbridge over the railway line which acts as a passageway connects platforms 1 and 2 to the ticket concourse

6.1.2 There are two stairwells which lead to each platform. The stairwells are identical, and each stair width has been measured as **2.4m**, which is identified in TfL's Station Capacity Planning document as being the minimum required width for a two-way stair.

6.1.3 The required capacity of a two-way passageway is defined by TfL as being:

$$\text{Two-way Passageway Width} = \left(\frac{\text{Average Flow per Minute}}{40} \right) + (2 \times 0.3)\text{m}$$

6.1.4 **Table 5.1** estimates peak customer flow per minute as being 26.87. Based on this, the required two-way passageway width is **1.27m**. The current passageway width **2.71m** (**Appendix 1**) which is well above the standards within TfL's Station Capacity Planning document and would accommodate any future customer demand as well as development-related customer trips.

6.1.5 At the time of writing, Osterley station currently has no step-free access, however work has commenced on providing step-free access which was originally due to be completed in 2020.

7 Train Capacity

- 7.1.1 In addition to Station Capacity, an assessment of train capacity has also been undertaken, to understand whether the predicted increase in demand for services can be catered for by the Piccadilly Line underground trains.
- 7.1.2 TfL Open Data provides line loading information from 2019 for Osterley station (to the west) and from Osterley to Boston Manor station (to the east). This data is presented in **Table 7.1** and has been factored up by 1.2 to cater for future customer demand.

Table 7.1: Link Loading Data – Osterley station

Direction of travel	2019 AM Peak Hour	2019 PM Peak Hour	Factored AM Peak Hour (x1.2)	Factored PM Peak Hour (x1.2)
Osterley to Hounslow East (westbound)	6145	10663	7374	12796
Osterley to Boston Manor (eastbound)	11600	7668	13920	9202

- 7.1.3 **Table 7.2** presents the development impact on underground services and assumes that peak demand from the proposed development sites would coincide with peak line loading from Osterley station.

Table 7.2: Development Impact on Link Loading

Direction of travel	Development Customer Trips – AM Peak	Development Customer Trips – PM Peak	Future Base + Development – AM Peak	Future Base + Development – PM Peak	Development Impact % – AM Peak	Development Impact % – PM Peak
Osterley to Hounslow East (westbound)	85	44	7459	12840	+1.14%	+0.34%
Osterley to Boston Manor (eastbound)	158	32	14078	9234	+1.12%	+0.34%

- 7.1.4 The impact of development-related trips on services routing through Osterley station is very small, with a slighter greater development impact in the AM peak than the PM peak. Demand is predominately to and from the east, and development related trips equate to no more than 1.14% of this predicted demand. It is anticipated that this level of demand would not be perceptible to existing users of Osterley station.

8 Summary and Conclusion

- 8.1.1 This assessment has been undertaken to support two proposed developments at two sites of land at Syon Lane, Isleworth, TW7 5NZ consisting of an existing Homebase Site, and a Tesco Site (application ref: 00505/H/P19 and 01106/B/P137). This assessment has also been undertaken at the request of Transport for London (TfL) Officers.
- 8.1.2 This report has reviewed the development-related impact on the operation of Osterley station, with specific reference to:
- Station entry;
 - Concourse area;
 - Ticket gate line;
 - Platform width;
 - Stairwell capacity; and
 - Train capacity
- 8.1.3 With this assessment, reference has been made to TfL's Station Capacity Planning document (revision A7), which refers specifically to the capacity of London Underground stations.
- 8.1.4 In summary, this report has established that:
- The station entry width meets the capacity criteria defined in TfL's station Capacity Planning document;
 - The station concourse area meets the criteria required by TfL's Station Capacity criteria;
 - Both platform widths are sufficient to cater for peak customer demand;
 - The passageway and the stairwells that route to Platforms 1 and 2 meet with TfL's minimum width requirements; and
 - Train capacity from Osterley station, in both east-and westbound directions would not be adversely impacted by the development proposals.
- 8.1.5 In conclusion, the rail trips associated with the developments at Syon Lane which route through Osterley station will not result in a material impact on the operation of Osterley station. No detrimental impact to Osterley station is anticipated as a result of these developments.



Appendix 1

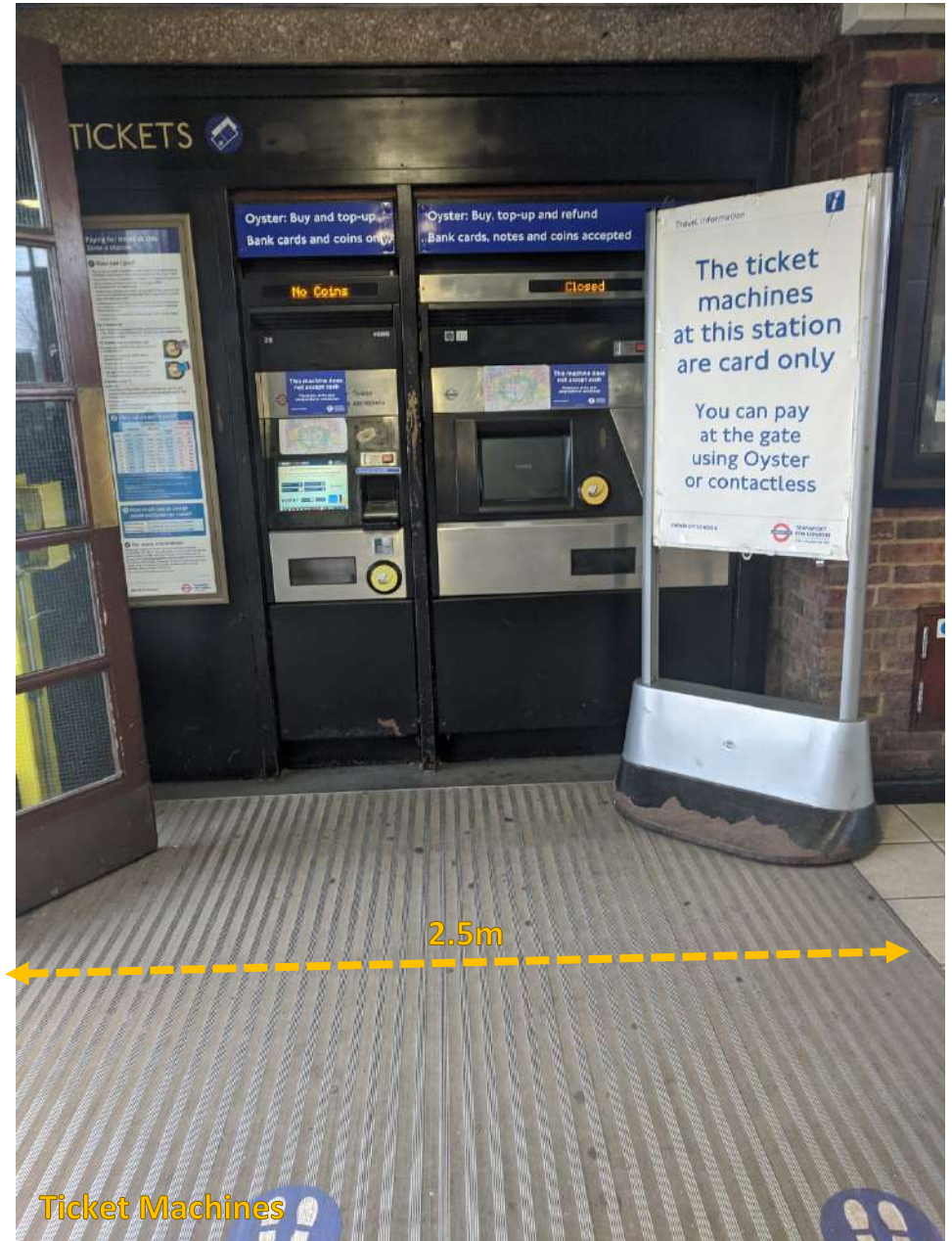
Osterley Station



Station Entrance



Station Entrance Doorway

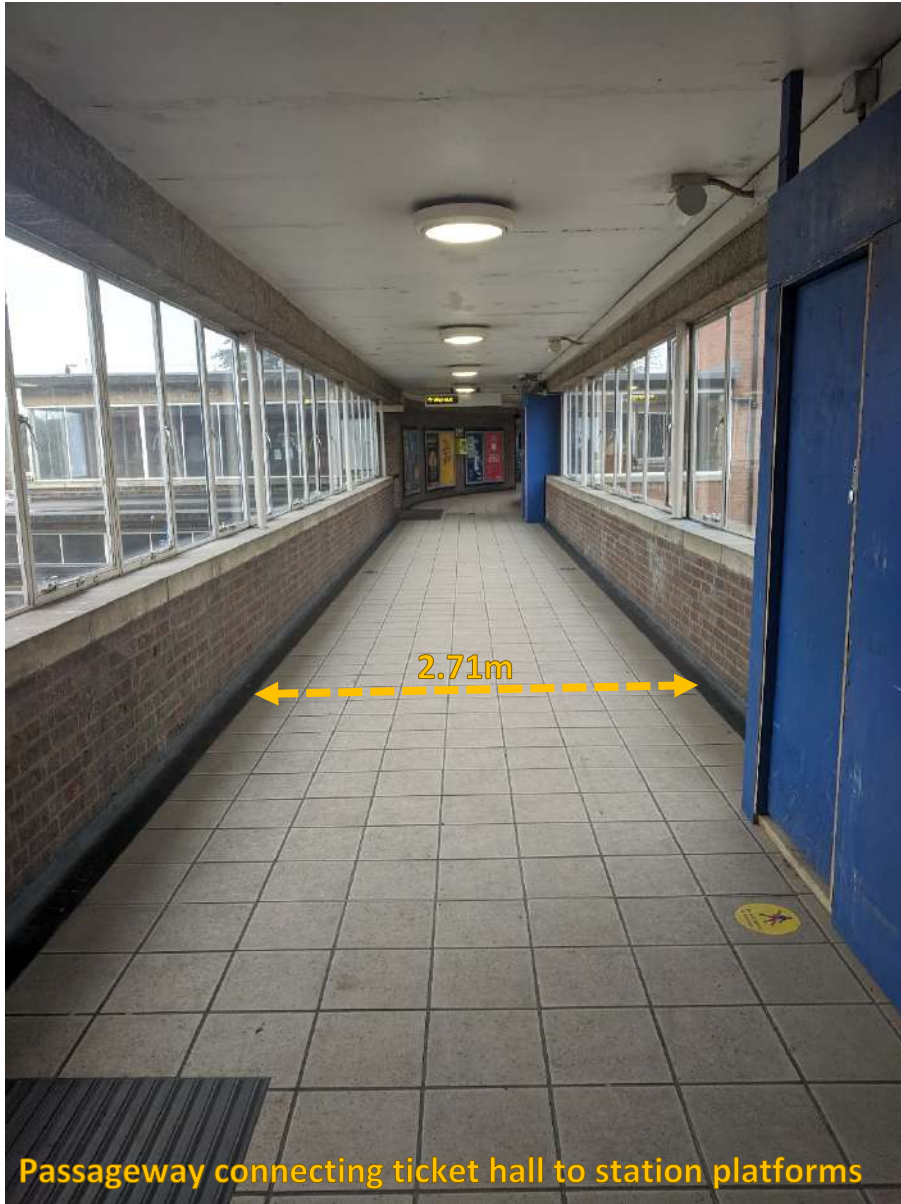


Ticket Machines

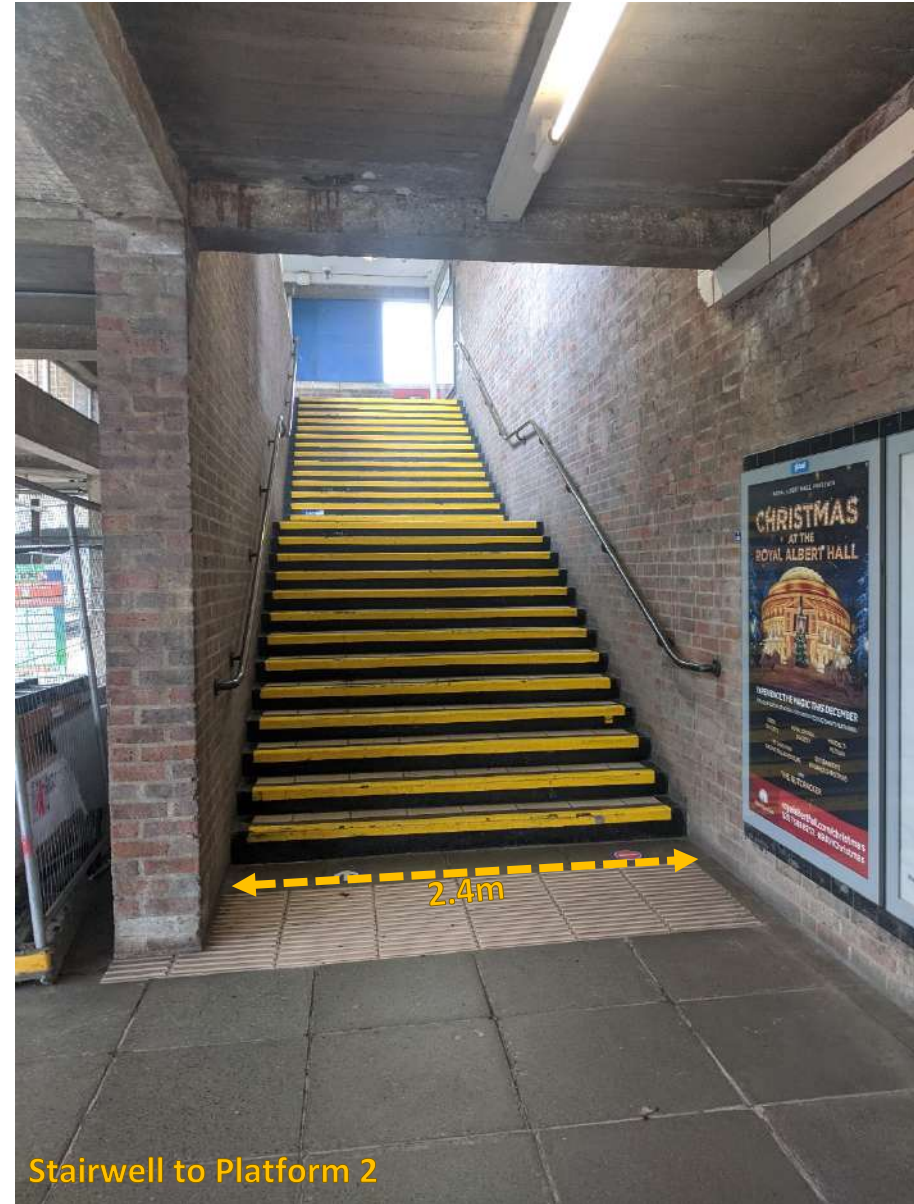
Osterley Station



Osterley Station

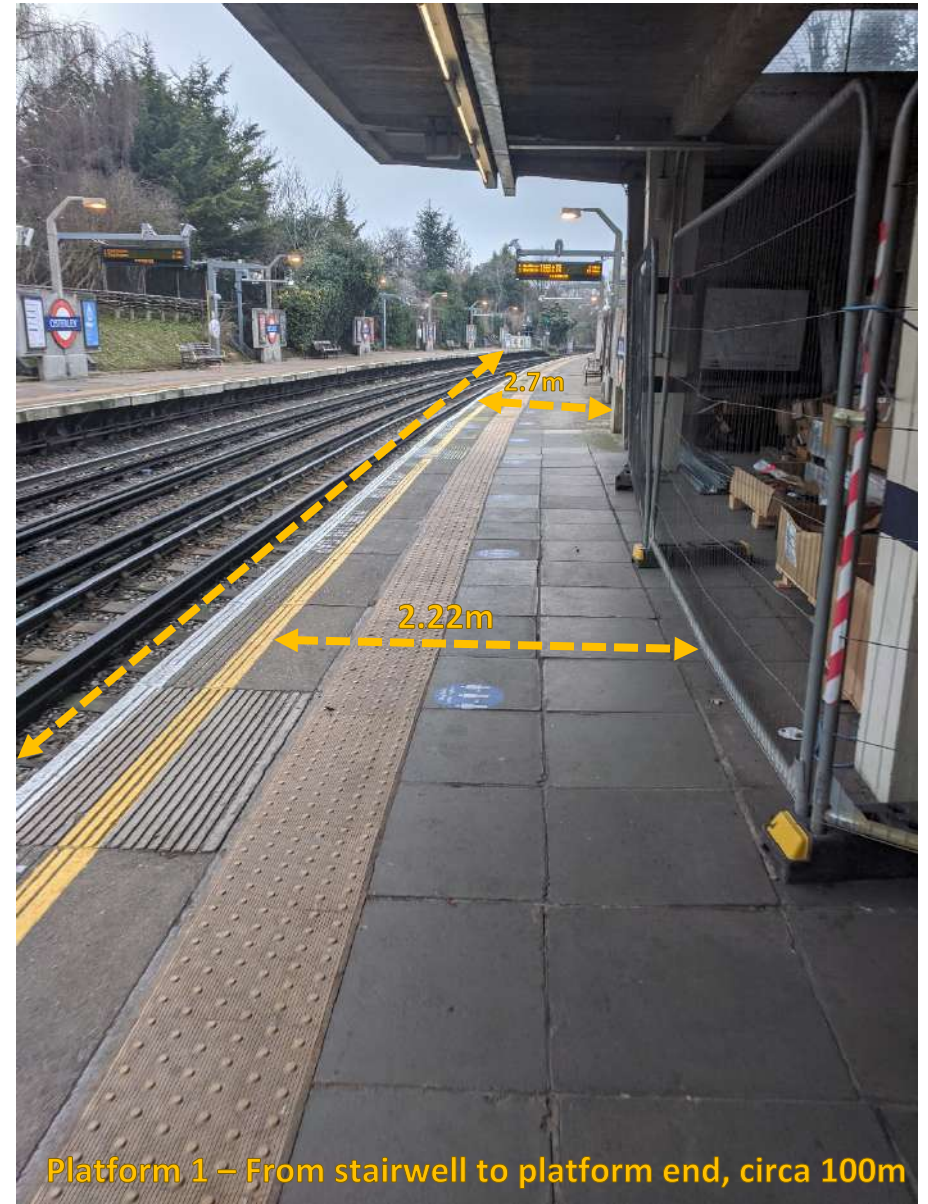


Passageway connecting ticket hall to station platforms



Stairwell to Platform 2

Osterley Station



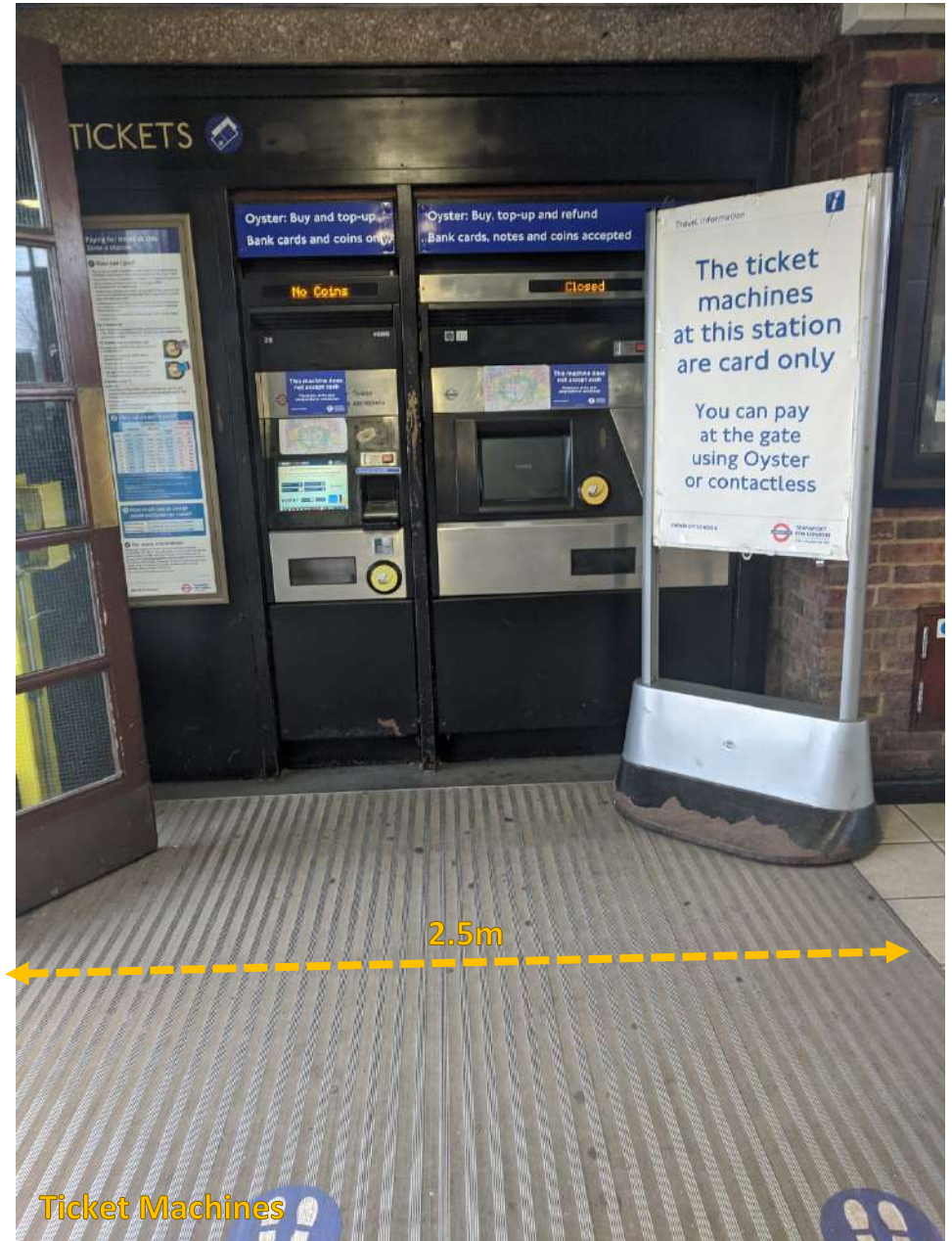
Osterley Station



Station Entrance



Station Entrance Doorway

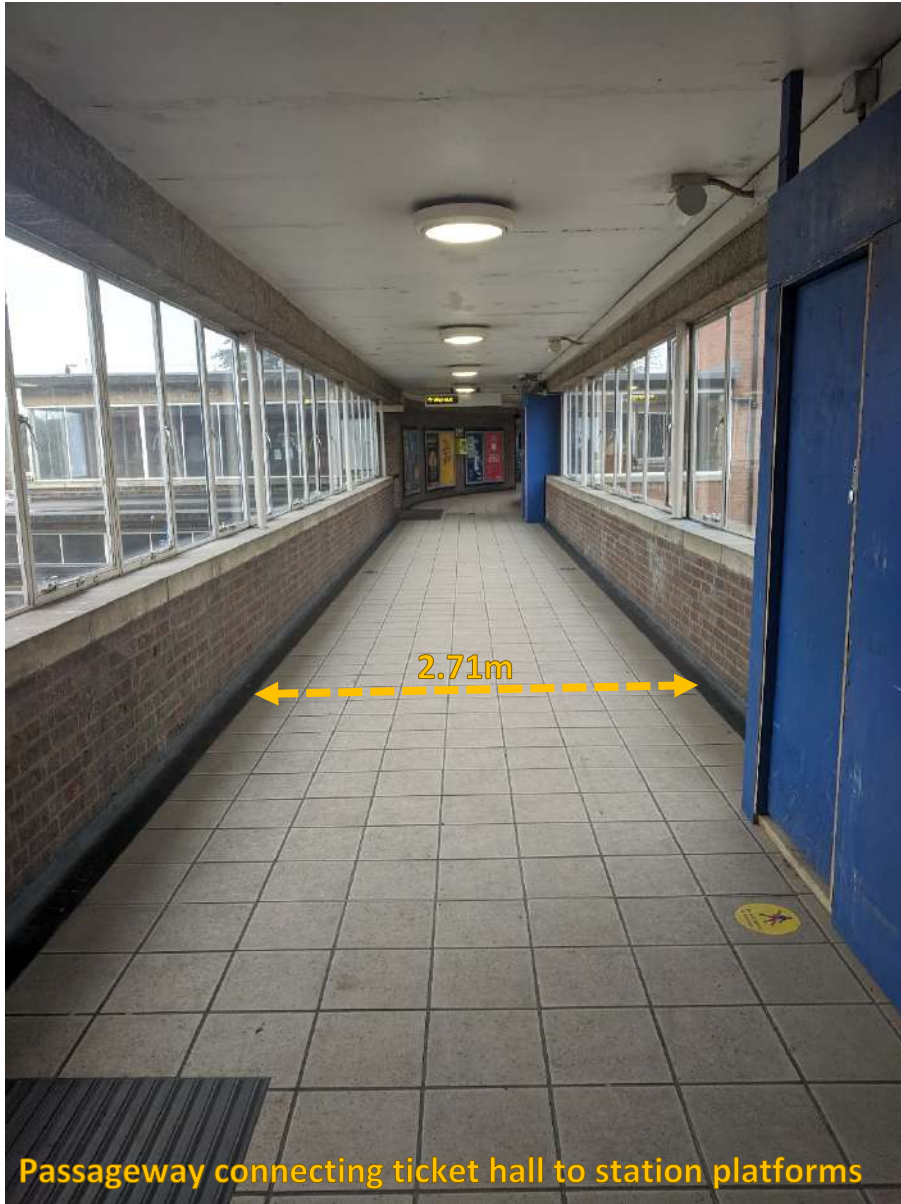


Ticket Machines

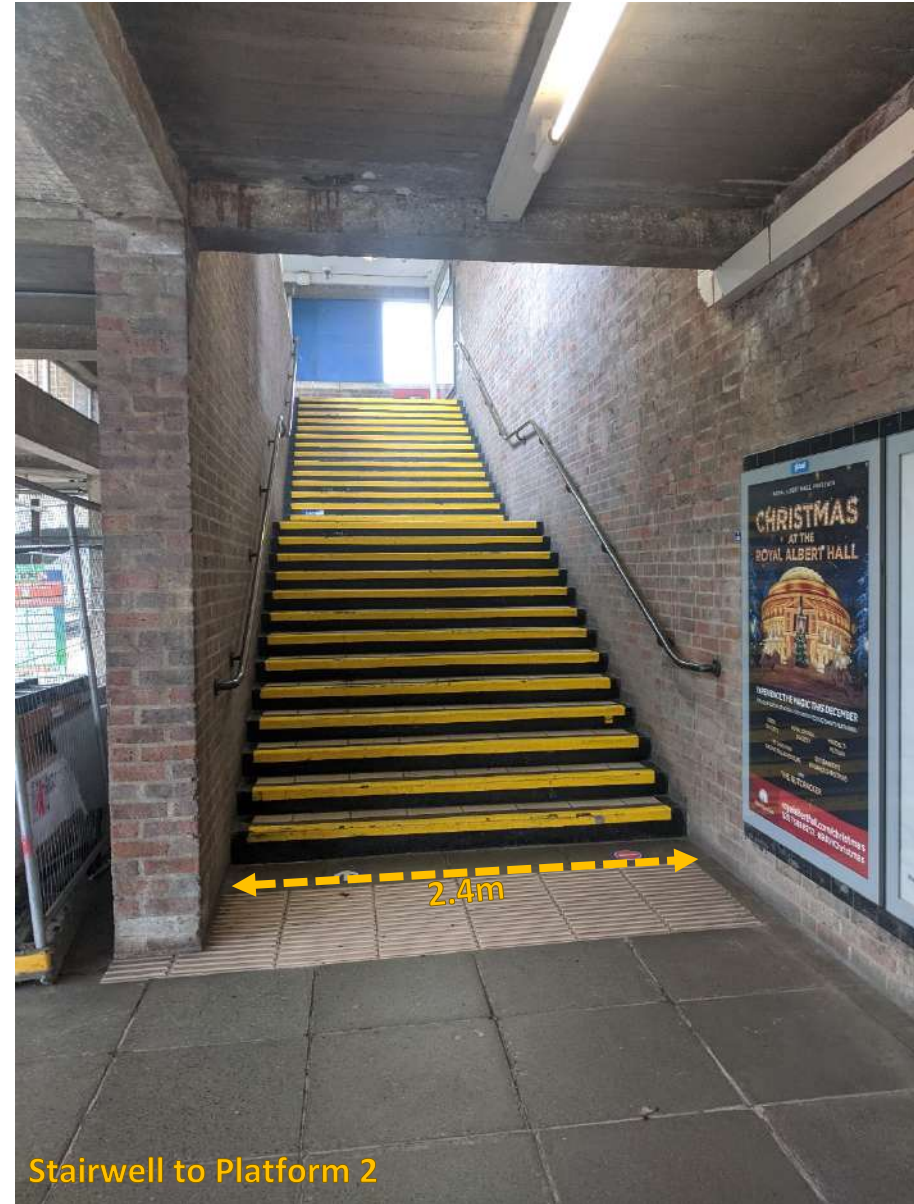
Osterley Station



Osterley Station



Passageway connecting ticket hall to station platforms



Stairwell to Platform 2

Appendix A6 – Health Streets Checklist

Healthy Streets Check for Designers

[Start the Check >](#)

[Further information >](#)



Healthy Streets Check for Designers

The objective

The Healthy Streets Approach puts people and their health at the centre of decisions about how we design, manage and use public spaces. It aims to make our streets healthy, safe and welcoming for everyone. The Approach is based on the 10 Healthy Streets Indicators which focus on the experience of people using streets.

To support practitioners in delivering this Approach, guidance and tools are being produced by Transport for London (TfL). The Healthy Streets Check for Designers (HSCD) is one of these tools. It has been developed to:

- Support designers be they in TfL, the London Boroughs or the private sector, to ensure their proposed designs for new schemes deliver improvements, in the round, against the 10 Healthy Streets Indicators (compared with the existing conditions on that street).
- Inform the public how changes to the way streets are laid out and used are delivering improvements in line with the Healthy Streets Approach.

The Check holds no formal status in guidance and decision making, but advises designers and decision makers on the alignment of a project with the Healthy Streets Approach.

How the Check is applied

The Check is a technical tool that is primarily aimed at traffic engineers and urban designers who will have been trained by TfL to use it. The Check can be applied to any scheme, but provides the greatest value when applied to schemes that expect to make a significant change to people's experience of the street environment.

The Check is an excel spreadsheet of 31 technical metrics against which, a street can be scored. A user manual is embedded within the spreadsheet for easy reference to more detailed guidance on its application. In general:

- The tool is applied to sections of street with uniform form and function.
- Routes, areas or networks will be divided into sections that have uniform form and function and the Check applied to each.
- The Check is undertaken on the existing and proposed arrangements so that a comparison can be carried out.
- The street is assessed for its weakest point against each of the technical metrics. This may result in modest scores for some schemes but enables a consistent and fair evaluation, while ensuring that issues that cannot be designed out are identified.
- Once a street has been rated for the metrics in the Check these are converted into a score against each of the 10 Healthy Streets Indicators in a radar plot. This makes it easy to see at a glance the Healthy Street Indicator improvements that the new design will deliver against the current situation on-street.

Who should use this?

The tool is for use by people involved in the design of street environments; primarily traffic engineers and urban designers. It is a technical tool that requires a good understanding of street engineering and traffic management to use it. With training and experience, the Check results for a given street should not vary significantly from practitioner to practitioner.

When should the Check be applied?

The Healthy Streets Check can be applied to existing streets and to designs of proposed street layouts.

The optimal time to consider using the Check is during option assessment where the benefits of individual options can be compared against the existing conditions.

Where should you use the Healthy Streets Check?

The Healthy Streets Check is suitable for application to a segment of street that has a uniform character and at least one junction.

The Healthy Streets Check should not be applied to segments of street with varying form and function.

Each segment should include at least one junction.

For large schemes affecting a long stretch of street or several streets, the Healthy Streets Check should be applied to a series of segments. When assessing a segment, if it is a minor road, you assess the minor road junctions on it; you do not assess any junctions with major roads. If there is a junction between a minor road and a major road, the junction should be assessed as part of the major road's segment.

Before you begin

To complete the Healthy Streets Check you will need the following data/material:

- Highway layout drawings which can be printed to scale or with dimensions on them.
- Urban design layout with material choice.
- Classified traffic counts, including turning movements.
- Pedestrian data to estimate pedestrian level of service and pedestrian desire lines.
- 85th percentile traffic speed data.
- Traffic light stages and timing.
- NO2 concentrations derived from TfL's air quality model.

It is imperative to be able to accurately measure some elements of the street's design (through CAD drawings or with a scale ruler). New kerb lines should always be shown clearly on drawings and text boxes should always indicate any change to the existing condition.

Every effort should be made to gather the data/drawings listed above prior to completing the Check. However, if not available, the assessor should make estimates based on the best information available.

It is strongly advised to carry-out on-site visits as some elements of the Check cannot be completed by looking at a drawing or other data (e.g. defects on the walking/cycling surface, spacing between tree canopies).

Some metrics are scored based on data for which values vary by time of day (e.g. traffic volume and speed, HGV traffic). In these cases, the scheme should be assessed based on peak hour data.

Start the check



Project Summary

Name of scheme*

Syon Lane/A4 Public Realm Improvements

Segment number*

Where multiple segments are being assessed for a scheme, please attach an overview plan as part of your submission, showing the areas defined for each segment.

Segment description*

Syon Lane between the existing Tesco Osterley site and the Homebase site

From (Side Street)*

McFarlane Lane

To (Side Street)*

Syon Gateway

Client name and organisation*

Tom Fox - St Edward (Berkeley Homes)

Designer name and organisation*

Andy Ward - RHDHV

Drawing number reference*

PB9144-RHD-GE-SW-DR-R-0096 -S3-P23

Check originator*

Date*

Check moderator*

Date*

Complete the Check >

Healthy Streets Check

		Scoring System					Enter score here		Notes Please supplement your answers with detailed notes where possible
		3	2	1	0	More info on each question	Existing layout	Proposed layout	
1	Total volume of two way motorised traffic	There are fewer than 500 vehicles per hour at peak.	There are 500 to 1000 vehicles per hour at peak.	There are more than 1000 vehicles per hour at peak, where people cycling are separated from motorised traffic.	There are more than 1000 vehicles per hour at peak, where people cycling are mixed with motorised traffic.		1	1	There is an existing off-carriageway cycle lane present on the A4 that would be retained within the proposed layout. Syon Lane does not provide off-carriageway cycle lanes as existing. A cycleway measuring 3m in width is proposed in association with the Bolter Academy development site. The proposed layout would increase the existing footways from 2.2m to 4m to provide a shared pedestrian footway/cycleway.
2	Interaction between large vehicles and people cycling	No large vehicles are using the street, or cycle traffic is separated from motorised traffic.	The proportion of large vehicles is less than 2% of motorised traffic, 7am to 7pm.	The proportion of large vehicles is 2% to 5% of motorised traffic, 7am to 7pm. <u>or</u> The proportion of large vehicles is greater than 5% of motorised traffic, 7am to 7pm, and people are cycling either: - in a nearside general traffic lane or bus lane at least 4.5m wide, or - in a cycle lane where the combined width of the cycle lane and the next general traffic lane is at least 4.5m.	The proportion of large vehicles is greater than 5% of motorised traffic, 7am to 7pm, and people are cycling either: - in a nearside general traffic lane or bus lane less than 4.5m wide, or - in a cycle lane where the combined width of the cycle lane and the next general traffic lane is less than 4.5m.		0	1	
3	Speed of motorised traffic	85th percentile speed is less than 20mph. <u>or</u> Existing 85th percentile speed is 20 to 25 mph, but there are some proposals to reduce speed further. <u>or</u> Existing 85th percentile speed is over 25 mph but a complete redesign of the street environment should reduce this to below 20mph.	85th percentile speed is 20 to 25mph. <u>or</u> Existing 85th percentile speed is 25 to 30 mph, but there are some proposals to reduce speed further.	85th percentile speed is 25 to 30mph. <u>or</u> Existing 85th percentile speed is greater than 30 mph, but there are some proposals to reduce speed further.	85th percentile speed is greater than 30mph. <u>or</u> Existing 85th percentile speed is greater than 30 mph, and there are no proposals to reduce this speed.		1	1	Review with respect to Gilette Corner modelling results - vehicle speeds
4	Traffic noise based on peak hour motorised traffic volumes	There are fewer than 55 vehicles per hour (c. <58 DB).	There are 55 to 450 vehicles per hour (c. 58-70 DB).	There are more than 450 vehicles per hour (c. >70 DB).	-		1	1	
5	Noise from large vehicles	The proportion of large vehicles is less than 5% (c. +0 to +3DB).	The proportion of large vehicles is 5 to 10% (c. +3 to +5 DB).	The proportion of large vehicles is greater than 10% (c. +5 DB and over).	-		2	2	

6	NO2 concentration (from London Atmospheric Emission Inventory)	<p>If assessing existing: The NO2 concentration is less than 32µg/m3.</p> <p>If assessing proposal: The existing NO2 concentration is less than 32µg/m3 or the existing concentration is 32 to 40µg/m3 with local traffic volume reduction measures proposed.</p>	<p>If assessing existing: The NO2 concentration is 32 to 40µg/m3.</p> <p>If assessing proposal: The existing NO2 concentration is 32 to 40µg/m3 with no proposal to reduce local traffic volume or the existing NO2 concentration is greater than 40µg/m3 with local traffic volume reduction measures proposed.</p>	<p>If assessing existing: The NO2 concentration is greater than 40µg/m3 (legal limit value).</p> <p>If assessing proposal: The existing NO2 concentration is greater than 40µg/m3 with no proposal to reduce local traffic volume.</p>	-	①	3	3	Refer to Table 11.12 of the Homebase Air Quality ES Chapter
7	Reducing private car use	There is no through-movement for motorised traffic, with access limited to local residents, deliveries and public service vehicles.	There are some time or movement restrictions for motorised traffic.	There are no access restrictions for motorised traffic.	-	①	1	2	Both development sites would provide low or reduced (compared to the existing provision) parking provision which would serve to restrict car movements within the local highway network. The Tesco Osterley site development would typically restrict vehicle movements to local access only and access by buses and service vehicles.
8	Ease of crossing side roads for people walking	Side roads are closed to motor traffic. or Side roads are one-way out for motor vehicles and have features to encourage drivers to turn cautiously.	Side roads are two-way or one-way in for motor vehicles, and have features to encourage drivers to turn cautiously.	Side roads have dropped kerbs only.	Side roads have no dropped kerbs.	①	1	2	Entry treatments proposed to Northumberland Avenue and McFarlane Lane
9	Mid-link crossings, to meet pedestrian desire lines	All main pedestrian desire lines are provided for with crossings.	Only some of the main pedestrian desire lines are provided for with crossings.	No main pedestrian desire lines are provided for with pedestrian crossings.	-	①	2	3	At grade crossing of the A4 Great West Road proposed to replace the pedestrian underpass. Syon Gateway pedestrian infrastructure to include a dedicated 3m wide pedestrian footway and "clean air route" which would serve to meet the main pedestrian desire line from Syon Lane station to the Sky campus and Bolder Academy
10	Type and suitability of pedestrian crossings away from junctions	Crossing is uncontrolled, with conflicting traffic volume less than 200 vehicles per hour. or A Zebra or parallel crossing is provided. or Crossing is signalised so that people crossing the main carriageway have priority, while traffic on the main carriageway has on-demand green.	Crossing is uncontrolled, with conflicting traffic volume between 200 and 1000 vehicles per hour. or Crossing is signalised and straight-across where the distance to cross is less than 15m or greater than 15m in a 20mph speed limit. or Crossing is signalised and staggered where the distance to cross is greater than 15m in a 30mph+ speed limit.	Crossing is uncontrolled, with conflicting traffic volume greater than 1000 vehicles per hour. or Crossing is signalised and straight-across where the distance to cross is greater than 15m in a 30mph+ speed limit.	-	①	1	2	Please see notes above with respect to proposed A4 at-grade pedestrian crossing.
11	Technology to optimise efficiency of movement (pedestrians, cyclists, buses and general motor traffic)	All appropriate detection and optimisation technology has been applied to traffic signals.	Some detection and optimisation technology has been applied to traffic signals.	No detection and optimisation technology applied to traffic signals.	-	①	3	3	
12	Additional features to support people using controlled crossings	Controlled crossings have many additional features to enhance their quality (please see scoring guidance).	Controlled crossings have some additional features to enhance their quality (please see scoring guidance).	Controlled crossings have no additional features to enhance their quality (please see scoring guidance). or There is no step-free access at the crossing point and/or there is no physical delineation between the footway and carriageway away from crossing points.	-	①	2	3	At-grade crossings of A4 to be designed as toucan crossings, permitting both pedestrians and cyclists to utilise the crossings. Drop kerbs and tactile paving to be provided as a minimum on all priority controlled junctions connecting to pedestrian footways/cycleways.

13	Width of clear continuous walking space	<p>There is 2m or more clear width for walking in quiet locations (flows of <600 pedestrians an hour).</p> <p>or</p> <p>There is 2.5m or more clear width for walking in moderately busy locations (flows of 600-1200 pedestrians an hour).</p> <p>or</p> <p>There is 3m or more in busy locations (flows of >1200 pedestrians an hour).</p>	<p>There is 2m to 2.5m clear width for walking in moderately busy locations (flows of 600-1200 pedestrians an hour).</p> <p>or</p> <p>There is 2.5m to 3m in busy locations (flows of >1200 pedestrians an hour).</p>	<p>There is 1.5m to 2m clear width for walking in quiet and moderate locations (flows of <1200 pedestrians an hour).</p> <p>or</p> <p>There is 2m to 2.5m clear width for walking in busy locations (flows of >1200 pedestrians an hour).</p>	<p>There is less than 1.5m clear width for walking.</p>	<p>ⓘ</p>	<p>2</p>	<p>2</p>	<p>Please refer to drawing PB9144-RHD-GE-SW-DR-R-0130</p>
14	Sharing of footway with people cycling	<p>No part of the footway is designated as shared use for walking and cycling.</p>	<p>Part or all of a footway wider than 3m with fewer than 200 pedestrians per hour is designated as shared use.</p> <p>or</p> <p>Part or all of a footway less than 3m wide is designated as shared use.</p>	<p>Part or all of a footway used by more than 200 pedestrians per hour is designated as shared use.</p> <p>or</p> <p>Part or all of a footway less than 3m wide is designated as shared use.</p>	<p>–</p>	<p>ⓘ</p>	<p>2</p>	<p>1</p>	<p>As part of the Bolder Academy development, a shared 3m wide footway/cycleway to be provided along the northern section of Syon Lane, widening the existing footway from 2.2m to 3m.</p>
15	Collision risk between people cycling and turning motor vehicles	<p>Side roads are closed to motorised traffic, or turning movements by motor vehicles are minimised.</p> <p>and</p> <p>At signal-controlled junctions, all conflicting movements between cycle traffic and turning motor traffic are separated.</p>	<p>Some measures are in place to reduce turning movements by motor vehicles at priority junctions.</p> <p>and</p> <p>At signal-controlled junctions, cycle movements are not separated and fewer than 5% of turning vehicle movements are made by larger vehicles but mitigation measures are in place.</p>	<p>There are no restrictions on turning movements by motor vehicles at side roads and other uncontrolled accesses.</p> <p>and</p> <p>At signal-controlled junctions, cycle movements are not separated and more than 5% of turning vehicle movements are made by larger vehicles but mitigation measures are in place.</p>	<p>At signal-controlled junctions, cycle movements are not separated, more than 5% of turning vehicle movements are made by larger vehicles and there are no mitigation measures in place.</p>	<p>ⓘ</p>	<p>1</p>	<p>2</p>	<p>As part of the Tesco Osterley site development proposals, the existing roundabout with Syon Lane would be removed. A simple priority junction would be constructed to serve the residential site. Vehicle movements within the site would be restricted to minimise through movements, with some links serving as bus and service vehicle only.</p>
16	Effective width for cycling	<p>Where cycles are separated from other traffic, the width of the lane or track is 2.2m or more (one-way) or 3.5m or more (two-way).</p> <p>Otherwise:</p> <p>Width of the nearside general traffic lane (where there is no cycle lane) or width of the cycle lane plus adjacent general traffic lane is 4.5m or more.</p>	<p>Where cycles are separated from other traffic, the width of the lane or track is 1.5m to 2.2m (one-way) or 2.5m to 3.5m (two-way).</p> <p>Otherwise:</p> <p>Width of the nearside general traffic lane (where there is no cycle lane) or width of the cycle lane plus adjacent general traffic lane is between 4m and 4.5m.</p>	<p>Where cycles are separated from other traffic, the width of the lane or track is less than 1.5m (one-way) or less than 2.5m (two-way).</p> <p>Otherwise:</p> <p>Width of the nearside general traffic lane (where there is no cycle lane) or width of the cycle lane plus adjacent general traffic lane is less than 3.2m.</p>	<p>Width of the nearside general traffic lane (where there is no cycle lane) or width of the cycle lane plus adjacent general traffic lane is between 3.2m and 3.9m.</p>	<p>ⓘ</p>	<p>2</p>	<p>2</p>	<p>Please refer to drawing PB9144-RHD-GE-SW-DR-R-0130. This assumes that the Bolder Academy proposals form a basis for the existing base scenario.</p>
17	Impact of kerbside activity on cycling	<p>There is no kerbside activity.</p> <p>or</p> <p>People cycling are physically separated from parking or loading facilities.</p>	<p>There is occasional kerbside activity, and people cycling can keep at least 1.0m clearance to vehicles parked or loading.</p>	<p>There is frequent or continuous kerbside activity, and people cycling can keep at least 1.0m clearance to vehicles parked or loading.</p>	<p>People cycling cannot maintain at least 1.0m clearance from vehicles parked or loading.</p>	<p>ⓘ</p>	<p>2</p>	<p>2</p>	

18	Quality of carriageway surface	The carriageway surface is even and smooth, with sufficient skid resistance. <u>or</u> There are defects but resurfacing of the whole carriageway is proposed.	There are a few minor defects in the carriageway surface (please see scoring guidance).	There are many minor defects in the carriageway surface (please see scoring guidance).	There are major defects in the carriageway surface (please see scoring guidance).	ⓘ	2	3	Carriageway to be resurfaced and defects removed as part of the overall highway layout proposals at Gillette Corner
19	Quality of footway surface	There is an even and level surface for walking on footways. <u>or</u> There are defects but resurfacing of the whole footway is proposed.	There are a few minor defects in the footway surface (please see scoring guidance).	There are many minor defects in the footway surface (please see scoring guidance).	There are major defects in the footway surface (please see scoring guidance).	ⓘ	1	3	Footway to be resurfaced where appropriate and defects remedied as part of the overall highway layout proposals
20	Surveillance of public spaces	There is constant surveillance – because mixed use buildings overlook the street or space, or because there are many people using the space or walking through.	There is intermittent surveillance – because surrounding buildings are single-use or do not completely overlook the street, or because there are few people using the space or walking through.	There is poor surveillance – because few buildings overlook the street or space, there is little activity.	–	ⓘ	2	3	The development proposals will increase overall activity within the two sites leading to greater surveillance of public spaces
21	Lighting	Street lighting meets the British Standard 5489:2003 and the European Standard CEN/TR 13201. <u>and</u> Lighting of off-carriageway facilities for walking or cycling exceeds the same standards.	Street lighting meets the British Standard 5489:2003 and the European Standard CEN/TR 13201 but lighting of off-carriageway spaces for walking or cycling does not.	Street lighting does not meet the British Standard 5489:2003 and the European Standard CEN/TR 13201.	–	ⓘ	2	3	
22	Provision of cycle parking	Cycle parking exceeds existing demand and is accessible by all.	Cycle parking meets existing demand and is accessible by all.	Cycle parking does not meet existing demand. <u>or</u> Cycle parking meets existing demand but is not accessible by all.	–	ⓘ	1	3	Cycle parking would be provided in line with the New London Plan and far exceed the existing provision of cycle parking within the two sites.
23	Street trees	If assessing existing: There are multiple trees, with canopies spaced less than 15m apart on average. If assessing proposal: All existing trees are to be retained and the street is already tree-lined with less than 15m between tree canopies. <u>or</u> All existing trees are to be retained, with planting of new trees designed to reduce the average canopy spacing to less than 15m.	If assessing existing: There are multiple trees, with canopies spaced more than 15m apart on average. If assessing proposal: Not all existing trees are to be retained, however new planting will ensure the overall number of trees is maintained or increased. <u>or</u> All existing trees are to be retained, however the canopy spacing will remain more than 15m on average.	If assessing existing: There are no trees, or only one tree. If assessing proposal: There are no existing or proposed trees. <u>or</u> The number of trees has been reduced.	–	ⓘ	2	3	Please refer to Landscaping plans provided by Murdoch Wickham

24	Planting at footway-level (excluding trees)	<p>If assessing existing: There is substantial planting in good condition designed to create or improve social space and/or act as a connection between other green spaces (eg pocket park, rain garden, community garden area).</p> <p>If assessing proposal: Existing greenery is to be enhanced with integrated SuDS features or new planting or new areas of greenery are proposed.</p>	<p>If assessing existing: There is some planting, eg shrubs, verges, hedges, ornamental flower beds, or adaptation for some animal species.</p> <p>If assessing proposal: Existing standalone greenery is to be retained.</p>	<p>If assessing existing: There is no planting, or existing planting is in a poor condition.</p> <p>If assessing proposal: No green infrastructure is proposed, or the size of existing greenery is to be reduced.</p>	-	①	2	3		
25	Walking distance between resting points (benches and other informal seating)	There is less than 50m between resting points.	There is between 50m and 150m between resting points.	There is more than 150m between resting points.	-	①	2	2	The landscaping proposals will ensure a greater provision of benches and other places to rest along the frontage of both sites.	
26	Walking distance between sheltered areas protecting from rain. Including fixed awning or other shelter provided by buildings/infrastructure	There is less than 50m between sheltered areas.	There is between 50m and 150m between sheltered areas.	There is more than 150m between sheltered areas.	-	①	1	1		
Are there any bus services running on this street? (Y/N) If not, do not complete metrics 27-28								Y	Y	An answer is required here in order to generate results
27	Factors influencing bus passenger journey time	There are positive influences on bus journey time, e.g. bus lanes, and/or exemptions for buses from movement bans for general traffic.	Buses are mixed with traffic but not significantly delayed.	There are negative influences on bus journey time, e.g. unclear markings, narrow lane width, parking/loading issues, short cage length, mixing with congested traffic.	-	①	1	2	Existing bus layby on A4 Great West Road at the Homebase site frontage to be removed and replaced with an on-carriageway bus cage, reducing delay to buses remerging onto the carriageway.	
28	Bus stop accessibility	Bus stop is wheelchair accessible, there is clear space for boarding and alighting and there is a clearway in place at the bus stop.	Bus stop is wheelchair accessible but either there is limited clear space around the bus stop for boarding and alighting or, for borough roads, there is no clearway in place.	Bus stop is not wheelchair accessible, ie the kerb height is less than 100mm.	-	①	3	3	All bus stops on Syon Lane and A4 Great West Road would be upgraded to ensure they are wheelchair accessible	
Are there any rail/underground/bus stations accessible from this street? (Y/N) If not, do not complete metrics 29-31								Y	Y	An answer is required here in order to generate results
29	Bus stop connectivity with other public transport services	The bus stop is within sight of another service – less than 50m away.	The bus stop is between 50m and 150m away from another service.	The bus stop is more than 150m away from another service.	-	①	3	3	Bus stops on Syon Lane are located within 50 metres of Syon Lane rail station. The bus stop on A4 Great West Road is served by the H91. As part of the development proposals, bus infrastructure would be delivered to facilitate the additional E1 service that would provide	
30	Street-to-station step-free access	All entry points to the station are step-free.	The main entry point to the station is not step-free but step-free alternatives are provided.	There is no step-free access to the station.	-	①	3	3	South Western Railway has implemented the provision of lifts at Syon Lane station giving step-free access to both platforms making the station fully accessible.	
31	Support for interchange between cycling and underground/rail	Secure cycle parking is provided close to station access points, and exceeding existing demand.	Cycle parking is available close to station access points that meets existing demand.	There is insufficient cycle parking to meet demand, or cycle parking is poorly located for station access points.	-	①	1	1	There are 30 cycle parking spaces at Syon Lane station	

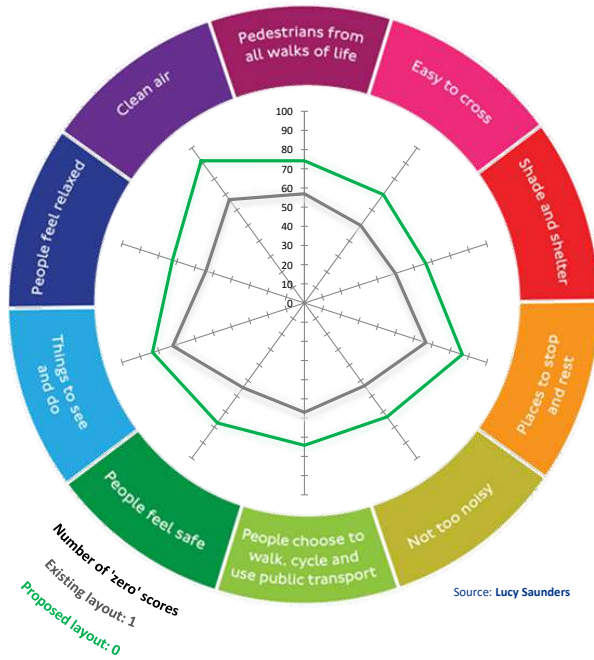
Healthy Streets Check Summary Results

Indicators explained >

An overview of how each metric aligns with different Indicators

Interpreting results >

A summary of how to use and improve on your results



If 'zero' scores (known road danger issues) remain, please explain why opposite:

1 0

Insert design response for 'zero' scores here

Healthy Streets Indicator scores (%)

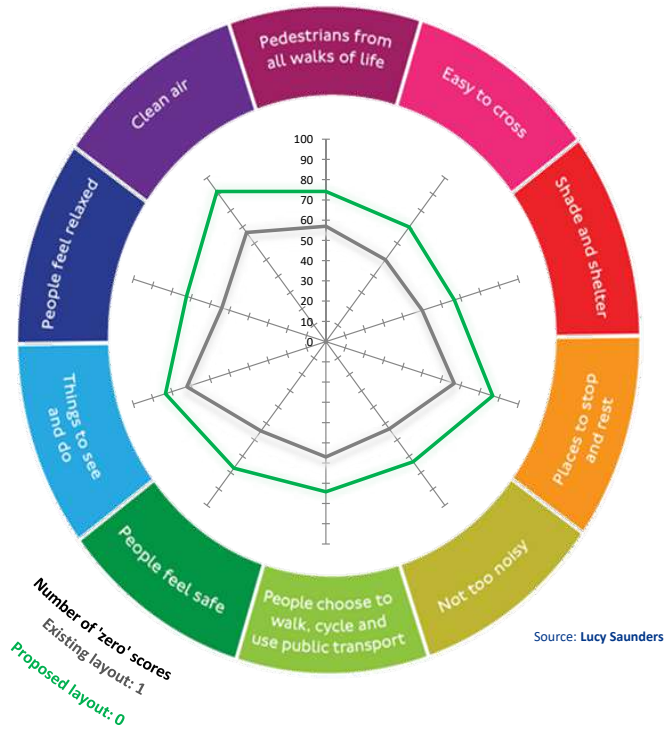
(Results will only display once all metrics have been scored)

	Existing layout	Proposed layout
Pedestrians from all walks of life	57	74
Easy to cross	50	70
Shade and shelter	50	67
Places to stop and rest	67	87
Not too noisy	53	73
People choose to walk, cycle and use public transport	57	74
People feel safe	55	77
Things to see and do	72	83
People feel relaxed	54	72
Clean air	67	92
Overall Healthy Streets Check score	57	75
Number of 'zero' scores	1	0

Name of scheme
Segment number

Syon Lane/A4 Public Realm Improvements

0



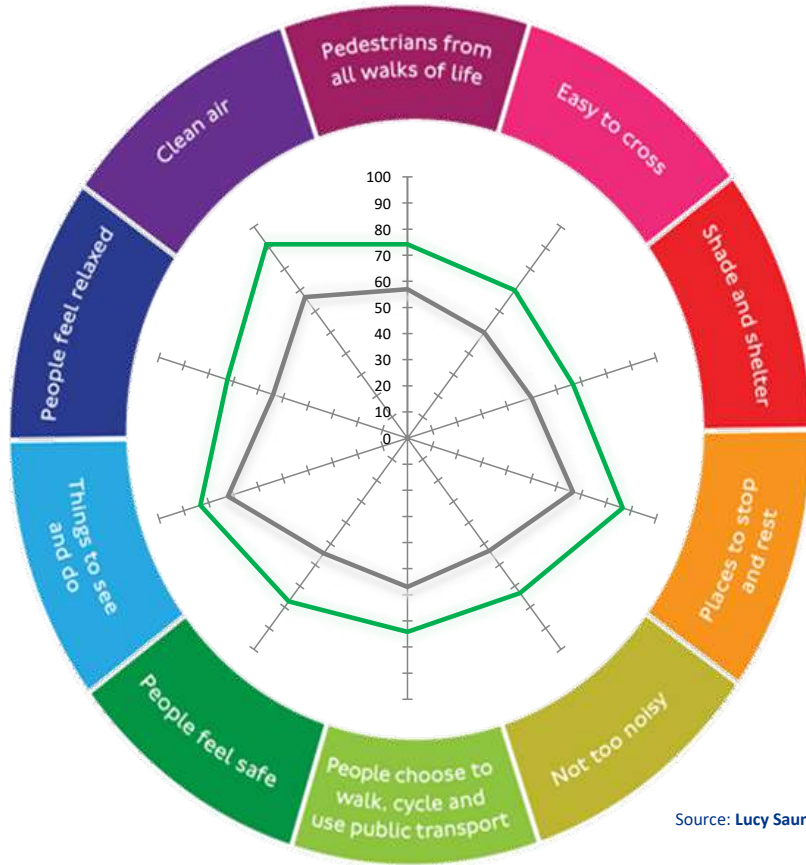
Healthy Streets Indicators' scores (%)

(Results will only display once all metrics have been scored)

	Existing layout	Proposed layout
Pedestrians from all walks of life	57	74
Easy to cross	50	70
Shade and shelter	50	67
Places to stop and rest	67	87
Not too noisy	53	73
People choose to walk, cycle and use public transport	57	74
People feel safe	55	77
Things to see and do	72	83
People feel relaxed	54	72
Clean Air	67	92
Overall Healthy Streets Check score	57	75
Number of 'zero' scores	1	0

Name of scheme
Segment number

Syon Lane/A4 Public Realm Improvements
0



Source: Lucy Saunders

	Existing layout	Proposed layout	% point change
Overall Healthy Streets Check score	57	75	19