

APPENDIX 9.3 DRIVER AND BUS DELAY ASSOCIATED WITH DESIGN OPTION 2

Introduction

- 9.1 This Appendix to ES Chapter 9A reports on the likely significant Transport and Accessibility effects that could arise in association with an alternative junction **Design Option 2** for Gillette Corner (A4 Great West Road and Syon Lane).
- 9.2 This Appendix will consider the effects of the alternative junction design on 'Driver Delay' and 'Bus Delay', only. In all other respects, the 'Transport and Accessibility' assessment of effects remain as detailed in Chapter 9A.
- 9.3 During the statutory consultation process for the planning application, Transport for London (TfL) and the London Borough of Hounslow (LBH) requested updated and additional traffic modelling to be undertaken for a number of design options for Gillette Corner. The design options include variations to the pedestrian and cycle connectivity across the junction. The highway works would be delivered as part of the Homebase development.
- 9.4 The following design solutions have been subject to traffic modelling, with the traffic modelling reported in Appendix 9.1A (Revised Transport Assessment):
- Design Option 1: No additional pedestrian/cyclist crossings;
 - Design Option 2: A new surface level north-south pedestrian/cyclist crossing on the eastern side of the junction; and in this option the surface level crossing would replace the underpass;
 - Design Option 3: A new pedestrian/cyclist crossing on the northern, eastern and southern sides of the junction; and in this option the surface level crossing would replace the underpass;
 - New Design Option 4: New north-south pedestrian crossing on the eastern side of the junction on the eastern side of the junction, and a new east-west crossing on the southern side of the junction (to replace the existing staggered crossing by the existing access to the Homebase site) This option will seek to keep the existing A4 underpass and provide a parallel surface crossing.
- 9.5 All modelled junction layouts include the provision of a new second right turn lane from the A4 into Syon Lane South.

- 9.6 The effects of Design Option 1 was considered in Chapter 9 of the ES, (September 2020) and within the Transport Assessment (TA) submitted with the planning application (September 2020 – provided as Appendix 9.1A). In their statutory consultation responses to the application TfL and LBH have stated that Design Option 1 would make insufficient provision for pedestrian and cycle movement across the Gillette Corner junction.
- 9.7 VISSIM traffic modelling was scoped out of the assessment for the 'Demolition and Construction' stage and this Appendix to ES Chapter 9A therefore reports the effects associated with **Design Option 2** for the Completed Development scenario, only.
- 9.8 The assessment methodology, the assessment criteria and the assessment scope for 'Driver Delay' and 'Bus Delay' described in the Chapter 9A remain valid for this Appendix.

Assessment of Effects

Driver Delay

- 9.9 Driver delay (and bus service delay) is considered within 'peak hour' VISSIM micro-simulation models prepared to assess the traffic impact of the proposed development. TfL and the LBH have requested that the VISSIM model is prepared for the 2035 design year, and should adopt the '2035 future baseline (including cumulative schemes) + cumulative development (Homebase development) + proposed development' traffic scenario for the Weekday AM peak (07:45-08:45), the weekday PM peak (17:00-18:00) and a Saturday peak (13:00-14:00) – traffic Scenario 4.
- 9.10 Within the model traffic Scenario 4 is compared against future baseline conditions - Scenario 2.
- 9.11 The model incorporates the new traffic signal control site access junction to the Homebase development and associated pedestrian crossing facility on Syon Lane, south of the A4 Great West Road.
- 9.12 Following submission of the application TfL and Highway Officers at the LBH requested that a number of design solutions for the Gillette Corner junction be modelled in VISSIM. This is to establish a design solution that offers both traffic capacity and pedestrian/cycle connectivity. Four Design Options have been modelled and all results are presented in the Revised TA (Appendix 9.1A).

9.13 This Appendix presents the results of **Design Option 2**, which can be described as follows:

- A new traffic signal control junction on Syon Lane to the Homebase site – the site access being located approximately 7 metres (centre to centre to the south of the existing Homebase access). The new junction would incorporate the staggered traffic signal controlled pedestrian crossing that exists adjacent to Northumberland Avenue and would provide a traffic signal controlled crossing across the new development site access;
- The addition of a second right turning lane on the A4 for traffic turning into Syon Lane (towards the new Homebase site access) from the west;
- The removal of the pedestrian underpass beneath the A4 and the provision of a new staggered surface level crossing suitable for use by pedestrians and cyclists. The provision of the staggered crossing requires minor widening of the A4 carriageway on its southern side. This Design Option would provide an improved pedestrian connection across the A4, which would also be to the benefit of cyclists. The crossing would act to mitigate the effects of increased pedestrian and cycle movement across the A4 and would support access to the new Tesco store on the Homebase site, which would attract trips from the Tesco, Osterley site; and
- The proposed removal of the existing bus stop layby on the Great West Road (Westbound), located on the Homebase site frontage, to allow the pedestrian footway to be widened and the Great Western Road's off-carriageway cycle lane to be extended in the vicinity of the new Tesco store frontage. The bus stop would be relocated to the east to better facilitate the operation of the H91 and an extended E1 bus services.

Table 9.20A: Driver Delay – Journey Times (Seconds) and Magnitude of Impact

Turning movement/ Link		Weekday AM Peak			Weekday PM Peak			Saturday Peak			
		2035 Baseline	2035 Baseline + Cum. + PD	Change (- / +)	2035 Baseline	2035 Baseline + Cum. + PD	Change (- / +)	2035 Baseline	2035 Baseline + Cum. + PD	Change (- / +)	
From Syon Lane North	to A4 West	324	417	92	273	158	-115	310	185	-125	
	to A4 East	296	304	8	160	142	-18	167	144	-23	
	to Syon Lane south	336	441	106	177	157	-19	186	177	-9	
From A4 East	to Syon Lane - North	189	198	9	170	183	12	147	189	42	
	to A4 West	154	167	14	129	151	23	112	164	52	
	to A4 East	187	203	17	151	166	16	136	185	48	
From Syon Lane South	to Syon Lane - North	445	224	-221	189	170	-18	175	169	-6	
	to A4 East	435	219	-216	167	153	-14	156	152	-4	
	to Syon Lane - south	649	320	-328	348	241	-107	202	219	17	
From A4 West	to Syon Lane - south	167	215	48	158	222	64	153	206	53	
	to A4 West	141	154	13	132	166	34	130	131	1	
	to Syon Lane - North	359	304	-55	196	194	-2	176	174	-2	
Average Delay		-	-	-39	-	-	-11	-	-	+3	
Key Magnitude of Effect		Negligible									
		Minor									
		Moderate									
		Substantial									

- 9.14 In terms of driver and bus delay, the impact of the combined Tesco and Homebase developments would result in a range of effects, depending on the route taken through the study area.
- 9.15 The VISSIM model's methodology is presented in the TA and the results are summarised in Tables 9.16A and 9.17A.
- 9.16 For general traffic (Table 7.20A), the only turning movements where a 'moderate' magnitude of impact is identified is from Syon Lane (North) to the A4 (West) and Syon Lane (South) in the weekday AM peak period, only. The only 'minor' magnitude of impact is associated with traffic turning from the A4 (East) to Syon Lane (South), in the weekday PM peak. All other turning movements, for all time periods modelled, result in a negligible magnitude of impact. Overall, an average journey time saving is anticipated through the study area for the modelled weekday AM and PM peak traffic periods, and a small (+3 second) increase is anticipated on a Saturday.
- 9.17 Where a 'medium' Driver Delay takes place, this involves traffic travelling from a link of 'medium' sensitivity and the effect can therefore be described as direct, long term, permanent **Minor to Moderate Adverse** during the weekday AM peak hour. The effect would not be significant.
- 9.18 Where a 'minor' Driver Delay takes place, this involves traffic travelling from a link of 'low' sensitivity and the effect can therefore be described as direct, long term, permanent **Negligible Adverse** during the weekday PM peak hour. The effect would not be significant.
- 9.19 For all other turning movements and in all other peak hours a 'negligible' magnitude of impact is identified. The effect on driver delay for these turning movements can be described as direct, long term, permanent **Negligible Beneficial** where journey times are reduced and **Negligible Adverse** where journey times increase. The effects would not be significant.

Bus Journey Delay

- 9.20 For bus operations, Table 7.21A presents the associated journey time impact.

Table 9.21A: Bus Journey Delay – Journey Times (Seconds) and Magnitude of Impact

Bus Service	Direction of Travel	Weekday AM Peak			Weekday PM Peak			Saturday Peak		
		2035 Baseline	2035 Baseline + Cum.+ PD	Change (- / +)	2035 Baseline	2035 Baseline + Cum.+ PD	Change (- / +)	2035 Baseline	2035 Baseline + Cum.+ PD	Change (- / +)
H91	A4 West to A4 East	431	374	-57	298	295	-3	268	260	-8
	A4 East to A4 West	237	257	19	309	310	1	272	261	-11
	Two-way Operation	648	631	-38	607	605	-2	540	521	-19
E1	A4 East to Syon Lane North	438	405	-34	236	287	52	209	287	78
	Syon Lane North to A4 West	405	301	-104	261	231	-29	222	184	-38
	Two-way Operation	843	706	-138	495	518	-23	431	471	40
Key Magnitude of Effect	Negligible									
	Minor									
	Moderate									
	Substantial									

- 9.21 Table 7.21A identifies that for the users of bus service H91 the magnitude of impact can be described as negligible. The resulting effect is identified as direct, long term, permanent **Negligible Adverse** where journey times increase and **Negligible Beneficial** where journey times reduce. The effects would not be significant.
- 9.22 Table 7.21A identifies that for the users of bus service E1 journey time reduction is expected in the weekday AM peak. A 'moderate' increase in journey time is predicted for buses routing from the A4 (West) to Syon Lane (North) in the weekday PM peak and a 'substantial' magnitude of impact is predicted for this turning movement on a Saturday. A reduced journey time is predicted for bus service E1 in the weekday PM and Saturday peak periods for buses turning from Syon Lane into the A4.
- 9.23 Where a 'substantial' magnitude of impact occurs the Bus Journey Delay is associated with queuing on a link (A4 - East) with 'low' sensitivity and this therefore results in a direct, long term, permanent **Minor to Moderate Adverse** for bus service E1 on a Saturday. In the weekday PM peak, the 'moderate' magnitude of effect would result in a direct, long term, permanent **Minor Adverse** effect. The effects would not be significant. Overall, based on two-way flow, Design Option 2 would result in a 'minor' magnitude of effect on service E1 on the Saturday peak hour resulting in a **Minor Adverse** effect in this peak period. For all other time periods and bus movements, the effects can be described as being direct, long term, permanent **Negligible Adverse** where journey times increase and **Negligible Beneficial** where journey times reduce. The effects of the proposal on bus service E1 would not be significant.

Mitigation Measures

- 9.24 No additional mitigation measures are available or proposed in relation to driver (and bus) delay.
- 9.25 The following best practice measures will be implemented to support the Development.

Operational Development Phase

- 9.26 While no mitigation is proposed to reduce the environmental effect of the operational Development, it remains the ambition of the Applicant, TfL and LBH to minimise road traffic and the impact of the Development on the highway network.

- 9.27 For this reason, the operational Development will be supported by Residential and Commercial Travel Plans, and a Delivery and Servicing Plan, and these documents have been submitted as part of the planning application.
- 9.28 The purpose of the Travel Plans is to set out a long-term strategy for reducing dependence on travel by private car. Its objective is to reduce private car mileage in favour of more sustainable modes of travel, which reflects current Government policy objectives in respect of transport. The Delivery and Servicing Plan would seek to minimise the impact of service and home delivery vehicles on the operation of the highway.
- 9.29 The Travel Plans refer to the introduction of a Car Club that will be accessible by Site residents.
- 9.30 The Travel Plans contain a commitment to monitoring Site travel patterns and enforcement measures designed to ensure the Development's traffic is within the bounds of this assessment.

Residual Effects

- 9.31 These mitigation measures would act to reduce the effect of construction traffic on severance, driver (and bus) delay, pedestrian amenity, pedestrian (and cyclist) delay, fear and intimidation and road safety. As a result of these mitigation measures, the magnitude of impact would not be significant for the 'demolition and construction' and 'operational' phases of development.

Cumulative Effects

- 9.32 This Appendix has assessed the cumulative effects of the site, the impact of committed development sites (through LoHAM) and the Osterley Site development, on Driver and Bus Delay. The use of LoHAM in establishing future baseline traffic flows means that the potential impacts of development in the wider Opportunity Area is considered.
- 9.33 Accordingly, the effects presented in this Appendix also represents the cumulative effects.

Summary

- 9.34 This assessment considers the operation of **Design Option 2** for Gillette Corner. Table 9.19A contains a summary of the likely effects of the Development with **Design Option 2**.

Table 9.19A: Table of Significance – Transport and Access (with Design Option 2 for Gillette Corner)

Potential Effect	Nature of Effect (Permanent /Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)	Mitigation / Enhancement Measures	Geographical Importance*							Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)
				I	UK	E	R	C	B	L	
Demolition and Construction											
Severance	Temporary	Negligible	Implementation of CLP, including vehicle routing strategy.							X	Negligible
Pedestrian Amenity	Temporary	Negligible								X	Negligible
Fear and Intimidation	Temporary	Negligible								X	Negligible
Pedestrian (and cyclist) Delay	Temporary	Negligible								X	Negligible
Road Safety	Temporary	Negligible								X	Negligible
Driver (and bus) Delay	Temporary	Negligible								X	Negligible
Operational Development											
Severance	Permanent	Negligible	Implementation of Commercial and Residential Travel Plans and a Delivery and Servicing Plan							X	Negligible
Pedestrian Amenity	Permanent	Negligible								X	Negligible
Fear and Intimidation	Permanent	Negligible								X	Negligible
Pedestrian (and cyclist) Delay	Permanent	Negligible								X	Negligible
Road Safety	Permanent	Negligible								X	Negligible
Bus Delay	Permanent	Negligible Beneficial to Moderate Adverse								X	Negligible Beneficial to Moderate Adverse
Driver Delay	Permanent	Negligible Beneficial to Moderate Adverse								X	Negligible Beneficial to Moderate Adverse
Cumulative Effects											
<i>Construction</i>	Temporary	Negligible	Implementation of CLP, including vehicle routing strategy.						X		Negligible
<i>Operation</i>	Permanent	Negligible	Implementation of Commercial and residential Travel Plans						X		Negligible

*** Geographical Level of Importance**

I = International; UK = United Kingdom; E = England; R = Regional; C = County; B = Borough; L = Local

REFERENCES