MARKIDES ASSOCIATES

Wickhurst Green Broadbridge Heath

Transport Assessment Addendum

29 October 2025

Prepared for Vistry Homes Ltd

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Vistry Homes Ltd

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Project Number: 24069
Doc Number: 24069-MA-XX-XX-RP-D-R02-P02 Transport Assessment Addendum

Rev	Issue Purpose	Author	Reviewed	Approved	Date
P01	FINAL	LL	LL	MH	24.10.25
P02	FINAL v2	LL	LL	MH	28.10.25

Contents

Sections

Tables

Appendices

1. Introduction

1.1 Overview

1.1.1 This Transport Assessment Addendum (TAA) has been prepared by Markides Associates on behalf of Vistry Homes Ltd [hereafter referred to as "the Applicant"] to accompany a submission which provides a series of amendments to the planning application for full planning permission that has previously been submitted to the Horsham District Council (HDC) for the Wickhurst Green School Site development (hereafter referred to as "the site") within Broadbridge Heath, Horsham.

1.1.2 The site formed part of the Land South of Broadbridge Heath development. Much of the Overall Site has been developed for housing, but there remains a parcel of land within the Overall Site that is allocated as a primary school. However, it has been confirmed by the local authority, West Sussex County Council (WSCC), will not require the site for a new school.

1.2 Proposed Amendments

1.2.1 The Applicant submitted a planning application to HDC for the development of the site in June 2025 [LPA Ref: DC/25/0894], accompanied by a Transport Assessment (TA) prepared by Markides Associates dated May 2025 [Doc Ref: 24069-MA-XX-XX-RP-D-R01 Transport Assessment] and hereafter referred to as the "May 2025 TA"].

1.2.2 For the purposes of this TAA, the Proposed Amendments comprise:

"Erection of 92no. residential dwellings comprising dwellings (53no.) and apartments (39no.), 36% affordable homes, creation of new vehicular access on to Sergent Way, provision of public open space, landscaping and drainage solutions. Part of Carter Drive has also now been included within site's red line."

1.2.3 The Proposed Amendments are broadly consistent with the initial planning application. The inclusion of Carter Drive, which is now included within the site boundary has, been made specifically at the request of HDC to enable an increase in density across the Site.

1.2.4 The Proposed Amendments described above result in changes to the overall number of dwellings, as described further in this document. This TAA has been prepared to assess the impact of the Proposed Amendments upon the original conclusions of the June 2025 TA.

1.3 Additional Information

1.3.1 In addition to assessing the impact of the Proposed Amendments, this TAA also seeks to provide additional information that was not available to be submitted as part of the June 2025 TA, notably:

- VISSIM Modelling – the VISSIM model from the Former Highways Depot Scheme (Planning Ref: DC/23/1133) has been obtained and used to assess the Proposed Amendments' impacts on the Broadbridge Way Roundabout/Proposed Mini-roundabout junctions; and

- Road Safety Audit – which has now been undertaken, considering the safety aspects of the proposed highway improvements detailed within the June 2025 TA.

1.3.2 As such, the TAA takes the opportunity to formally submit these elements to align with the Proposed Amendments.

Document Structure

1.3.3 For clarity, this TAA has been prepared to mirror the sections of the June 2025 TA, noting only where changes have occurred between the submission of the TA and this TAA.

1.3.4 As such, the remainder of this TAA is structured as follows, with this section serving as the introduction.

- **Section 2** describes the existing site and surrounding transport conditions;
- **Section 3** provides a review of the relevant transport planning policy;
- **Section 4** outlines the proposed development in detail, encompassing access, parking, and servicing strategies;
- **Section 5** summarises the trip generation associated with the development proposals;
- **Section 6** examines the transport impact of the proposed development and provides the results of the junction modelling exercises that were undertaken; and
- **Section 7** provides a summary of the TAA and the overall conclusions of the Proposed Amendments in comparison to those of the June 2025 TA.

2. Existing Conditions

2.1 Overview

2.1.1 This section of the June 2025 TA outlined the existing details of the ite to set a baseline against which the wider elements of the Proposed Amendments will be assessed.

2.2 Proposed Amendments

2.2.1 This section of the June 2025 TA is not considered to have changed within the context of the Proposed Amendments and therefore remains valid requiring no further information.

3. Planning Policy

3.1 Overview

3.1.1 This section of the June 2025 TA outlined the current relevant national and local transport planning policy.

3.2 Proposed Amendments

3.2.1 This section of the June 2025 TA is not considered to have changed within the context of the Proposed Amendments and therefore remains valid requiring no further information.

4. Development Proposals

4.1 Overview

4.1.1 This section of the June 2025 TA provided a detailed overview of the Proposed Development. The Proposed Amendments result in minor changes to the Proposed Development that are assessed within the June 2025 TA and are therefore detailed further in this section.

4.2 Proposed Amendments

4.2.1 **Table 4.1** provides a comparison of the Proposed Development assessed in the June 2025 TA and those of the Proposed Amendments detailed within this TAA.

Table 4.1 Comparison of Proposed Amendments

Dwelling Type	June 2025 TA		Proposed Amendments		Difference (+/-)	
	Affordable Units	Market Units	Affordable Units	Market Units	Affordable Units	Market Units
1 Bedroom	11	3	11	3	0	0
2 Bedroom	17	26	18	24	+1	-2
3 Bedroom	2	26	2	30	0	+4
4 Bedroom	2	2	2	2	0	0
Total	**32**	**57**	**33**	**59**	**+1**	**+2**

4.2.2 As shown in **Table 4.1**, the Proposed Amendments result in 3 additional residential dwellings (1 x Affordable dwelling and 2 x Market dwellings).

4.2.3 The increase in residential dwellings associated with the Proposed Amendments upon the local transport networks are considered further in Section 5.

4.3 Access

4.3.1 The primary access for the site will remain via a new access off Sargent Way, however, as part of the Proposed Amendments, the site can also be accessed via the existing Cater Drive, which runs parallel to Sargent Way to the east.

Cycle Infrastructure

4.3.2 **Table 4.2** provides a breakdown of the Proposed Amendments' cycle parking provision as required by the WSCC standards.

Table 4.2 Development Cycle Parking Provision Summary

Unit Mix	No. Dwellings	Cycle Parking Provision
1 Bed Apartment	14	8
2 Bed Apartment	21	11
1 & 2 bedroom house	21	21
3+ bedroom house	36	72
	Total	**112**

Car Parking

4.3.3 The maximum car parking in accordance with WSCC guidance on parking for new developments (2020) is provided in **Table 4.3**.

Table 4.3 Proposed Maximum Car Parking Provision

No. of Bedrooms	No. Dwellings	Car Parking Provision
1 Bed	14	22
2 Bed	42	79
3 Bed	32	75
4 Bed	4	12
	Total	**188**

4.3.4 It is proposed to provide 147 plot parking spaces, which are provided in a variety of forms, and 24 visitor spaces (including the layby relocated from Sargent Way). These include on-plot parking, perpendicular parking, flexible parking and combination parking with some courtyard parking.

4.3.5 In line with WSCC Guidance and expected planning timeframes, 53% of spaces will be provided with 'active' Electric Vehicle (EV) charging infrastructure, with the remaining 47% providing 'passive' provision. However, to meet Building Regulations, one EV space per dwelling would be provided.

Delivery and Servicing Strategy

4.3.6 The delivery and servicing strategy has not changed within the context of the Proposed Amendments, and all tracking relating to the Proposed Amendments can be found in **Appendix A.**

4.4 Road Safety Audit

4.4.1 An independent Stage 1 Road Safety Audit (RSA) has been undertaken to provide a thorough review (undertaken by an independent auditor) of the proposed highway improvements outlined in the June 2025 TA.

4.4.2 As is typical in response to the RSA and further consultation with WSCC Highways, the proposed highway improvements have been subject to the following adjustments to respond to the comments provided:

- Provision of dropped kerb and tactile paving at the site access junction and Sargent Way (south of the proposed site access junction) to aid pedestrian movements; and
- Provision of a single crossing facility across Broadbridge Way at a location where visibility splays to and from the crossing are not compromised. A parallel crossing is proposed to provide segregation between pedestrians and cyclists.

4.4.3 The above amendments are shown in Drawing 24069-MA-XX-XX-DR-C-0201-P04, which is provided in **Appendix A** to this document.

4.4.4 The above is considered a sufficient level of detail to reflect the comments made within the RSA, emphasising that further opportunities for refinement would be undertaken as part of any future Section 278 (S278) Agreement and detailed highway design. The RSA with a full Designer's Response is provided in **Appendix B**.

4.5 Summary

4.5.1 The RSA, alongside the adjustments made in response to the RSA and further consultation with WSCC Highways, is considered to demonstrate that the proposed highway improvements are feasible, noting that they would be subject to further detailed design (and subject to two further stages of RSA) as part of a future S278 Agreement between the Applicant and WSCC/HDC.

5. Trip Generation And Distribution

5.1 Overview

5.1.1 This section of the TAA outlined the trip generation and distribution methodology. This section considers any changes of the Proposed Amendments to the forecast trip generation forecasts considered as the basis for assessments within the June 2025 TA.

5.2 Proposed Residential Trip Generation

5.2.1 The June 2025 TA proposed residential vehicle trip generation forecasts are shown below in **Table 5.1.**

Table 5.1 June 2025 Proposed Residential (Vehicle) Trip Generation

Type	AM Peak			PM Peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Trip Rates per Dwelling (Houses Privately Owned)	6	17	23	15	7	22
Trip Rates per Dwelling (Flats Privately Owned)	3	7	11	6	3	9
TOTAL	**10**	**24**	**34**	**21**	**10**	**31**

5.2.2 Utilising the same methodology and trip rates as outlined in the June 2025 TA, **Table 5.2** shows the revised October 2025 proposed residential vehicle trip generation forecasts reflecting the Proposed Amendments.

Table 5.2 October 2025 Proposed Residential (Vehicle) Trip Generation

Type	AM Peak			PM Peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Trip Rates per Dwelling (Houses Privately Owned)	6	18	24	15	8	23
Trip Rates per Dwelling (Flats Privately Owned)	4	8	12	7	3	10
TOTAL	**10**	**26**	**36**	**22**	**11**	**33**

5.2.3 As shown in **Table 5.2**, the Proposed Amendments result in an increase of two additional vehicle trips in both the AM and PM peaks.

5.3 Traffic Flow Scenarios

5.3.1 Utilising the same methodology outlined in the June 2025 TA, the 2027 and 2031 *with Full Development* traffic flows reflecting the Proposed Amendments are shown in **Appendix C.**

6. Junction Modelling

6.1 Overview

6.1.1 This section of the TAA assessed the impact of the Proposed Amendments proposals upon the local transport network.

6.1.2 In addition to the above, this section also considers the VISSIM Modelling that has been undertaken in the intervening period between June 2025 and October 2025.

6.2 Broadbridge Way/Wickhurst Lane Roundabout & Proposed Retail Park Access

6.2.1 The VISSIM model used to assess the now consented Former Highways Depot (LPA Ref: DC/23/1133) and hereafter referred to as the 'Former Highways Depot Consented Scheme') to the east of the site has been obtained and used to assess the Proposed Amendments' impacts on the Broadbridge Way Roundabout/Proposed Mini-roundabout junctions. This modelling effectively replaced the roundabouts (Junction 9) modelling outlined within the June 2025 TA and is therefore not re-provided here.

6.2.2 The full details of the VISSIM modelling undertaken, including the assessment years, methodology and flow scenarios tested, can be found within the VISSIM Modelling Technical Note in **Appendix D**.

6.2.3 The VISSIM modelling undertaken confirms that the additional traffic forecast by the Proposed Amendments has a negligible effect on the average queues under the Former Highways Depot Consented Scheme in all scenarios modelled. As a result, the operation of the roundabout, as given planning permission as part of the Former Highways Depot Consented Scheme, is not considered to change when also taking into account the Proposed Amendments.

6.3 Site Access/Sargent Way Access

6.3.1 The VISSIM model discussed in Section **6.2** above effectively supercedes the modelling of the Broadbridge Way/Wickhurst Lane Roundabout junction. This subsection provides an assessment of the Proposed Site Access on Sargent Way, taking into account the Proposed Amendments.

6.3.2 The assessment of the Site access/Sargent Way Access junction within the June 2025 TA is shown in **Table 6.1**.

Table 6.1 June 2025 Site access/Sargent Way Access – PICADY results

Movement	2027				2031			
	AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Site Access right/left turnout	0.06	0.1	0.03	0	0.06	0.1	0.03	0
Sargent Way right turn in	0.01	0	0.01	0	0.01	0	0.01	0

6.3.3 Utilising the model used in the June 2025 TA, **Table 6.2** shows the revised model reflecting the Proposed Amendments. The full modelling outputs can be found in **Appendix E**.

Table 6.2 October 2025 Site access/Sargent Way Access – PICADY results

Movement	2027				2031			
	AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Site Access right/left turnout	0.06	0.1	0.03	0	0.06	0.1	0.03	0
Sargent Way right turn in	0.01	0	0.01	0	0.01	0	0.01	0

6.3.4 As shown in **Table 6.2**, the proposed site access onto Sargent Way, incorporating the Proposed Amendments, will operate within capacity under the '2027 with Dev' scenario during the AM and PM peak periods, with RFCs below 0.85 and minimal queuing taking place. It can also be seen from the table that the proposed junction will continue to operate within capacity in 2031 during the AM and PM peak periods, with RFCs below 0.85 and minimal queuing taking place. The impact of the Proposed Amendments is not, therefore, considered to be of any significance.

6.4 Summary

6.4.1 The increase in dwellings associated with the Proposed Amendments is shown to result in a negligible change to the overall number of trips.

6.4.2 The revised junction modelling associated with the Proposed Amendments for the proposed Site Access has demonstrated that the junction will operate within capacity in under both 2027 and 2031 during the AM and PM peak periods with minimal queuing taking place.

6.4.3 Since the production of the June 2025, further VISSIM modelling has been undertaken for the Broadbridge Way/Wickhurst Lane Roundabout and the proposed Retail Park mini-roundabout, and the modelling clearly demonstrates that there is no discernible change to the operation of the roundabouts in terms of queue lengths from that assessed and approved as part of the Former Highways Depot Consented Scheme.

6.4.4 As a result, the impact of the Proposed Amendments upon the local highway network is considered to be negligible, and the conclusions of the June 2025 TA are considered to remain valid and robust.

7. Conclusion

7.1 Overview

7.1.1 This Transport Assessment Addendum has been prepared by Markides Associates on behalf of Vistry Homes Ltd to accompany a submission which provides a series of amendments to the planning application for full planning permission that has previously been submitted to the Horsham District Council for the Wickhurst Green School Site development within Broadbridge Heath, Horsham.

7.1.2 The Proposed Amendments result in an increase in three dwellings which, when assessed using the same methodology as that employed in the June 2025 TA results in an increase in two additional vehicle trips in both the AM and PM peak periods. The proposed uplift in dwellings would result in increases to the car parking and cycle parking provisions aligned with the approaches adopted in the June 2025 TA.

7.1.3 It has been demonstrated that the uplift in dwellings would result in a negligible increase in development traffic within the AM and PM peaks. This includes a thorough and detailed assessment of the Broadbridge Way Roundabout/Proposed Mini-roundabout junctions in future scenarios incorporating the Former Highways Depot Consented Scheme where the VISSIM model used shows no significant change to the operation, capacity and queuing of the junction as already consented.

7.1.4 Accordingly, the Proposed Amendments are not considered to have any material highway impact and do not result in any change to the conclusions of the June 2025 TA. The impact of the Proposed Amendments in terms of trips is therefore considered to be negligible.

7.1.5 In summary, the Proposed Amendments being sought by the Applicant do not materially impact the conclusions of the June 2025 Transport Assessment and those conclusions are considered to remain valid and robust.

APPENDICES

Appendix A – Swept Path Analysis & Drawings
Appendix B – Road Safety Audit & Designer's Response
Appendix C – Full Development flows
Appendix D – VISSIM Modelling Technical Note
Appendix E – Junction Capacity Analysis

APPENDIX A – SWEPT PATH ANALYSIS & DRAWINGS

DO NOT SCALE OFF THIS DRAWING

NOTES

1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography, location of statutory services, detailed design and traffic modelling.
2. This drawing is based upon 24.1945.1000AD Wickhurst Green - Proposed Site Layout WIP supplied by FINC Architects Ltd and Markides Associates shall not be liable for any inaccuracies or deficiencies.
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4. Any swept path analysis has been undertaken using Autodesk vehicle tracking software (AutoTRACK) and Markides Associates shall not be liable for any inaccuracies or deficiencies.

Standard Design Vehicle (SDV)	
Overall Length	4.800m
Overall Width	2.000m
Overall Body Height	1.950m
Min Body Ground Clearance	0.100m
Track Width	2.000m
Lock to lock time	4.00s
Wall to Wall Turning Radius	6.000m

KEY

VEHICLE BODY LINE

VEHICLE WHEEL LINE

REVERSE GEAR

Revision History					
P05	FOR INFORMATION	HCT	LL	LL	20.10.25
P04	FOR INFORMATION	NB	LL	LL	15.04.25
P03	FOR INFORMATION	BRG	LL	LL	07.03.25
P02	FOR INFORMATION	BRG	MH	MH	21.02.25
P01	FOR INFORMATION	NB	LL	LL	12.07.24
Rev.	Comment	By	Chkd	Appr	Date
Current Revision					
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Rev	Comment	By	Chkd	Appr	Date

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Project

WICKHURST GREEN
BROADBRIDGE HEATH

Drawing Title

SWEPT PATH ANALYSIS
SDV

Markides Associates reference: 24069 1:400 @ A1

24069-MA-XX-XX-DR-C-7000 - P05

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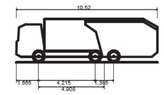

Phoenix 2-23W (with Elite 2 6x4 chassis)	
Overall Length	10.520m
Overall Width	2.530m
Overall Body Height	3.211m
Min Body Ground Clearance	0.416m
Track Width	2.530m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.950m

KEY

VEHICLE BODY LINE

VEHICLE WHEEL LINE

REVERSE GEAR

Revision History					
P05	FOR INFORMATION	HCT	LL	LL	20.10.25
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BROADBRIDGE HEATH

Drawing Title

SWEPT PATH ANALYSIS
REFUSE VEHICLE

Markides Associates reference: 24069 1:400 @ A1

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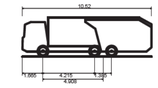

Phoenix 2-23W (with Elite 2 6x4 chassis)

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Overall Width	2.530m
Overall Body Height	3.211m
Min Body Ground Clearance	0.416m
Track Width	2.526m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.950m

KEY

- VEHICLE BODY LINE
- VEHICLE WHEEL LINE
- REVERSE GEAR

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WICKHURST GREEN
BROADBRIDGE HEATH

Drawing Title

SWEPT PATH ANALYSIS
REFUSE VEHICLE
DRAWING TWO OF THREE

Markides Associates reference: 24069 1:400 @ A1

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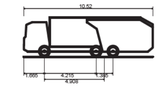

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WICKHURST GREEN
BROADBRIDGE HEATH

Drawing Title

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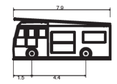

Pumping Appliance	
Overall Length	7.900m
Overall Width	2.500m
Overall Body Height	3.300m
Min Body Ground Clearance	0.140m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.750m

KEY

VEHICLE BODY LINE

VEHICLE WHEEL LINE

REVERSE GEAR

Revision History					
P03	FOR INFORMATION	HCT	LL	LL	20.10.25
P02	FOR INFORMATION	NB	LL	LL	15.04.25
P01	FOR INFORMATION	BRG	LL	LL	07.03.25
Rev.	Comment	By	Chkd	Appr	Date
Current Revision					
P03	FOR INFORMATION	HCT	LL	LL	20.10.25
Rev	Comment	By	Chkd	Appr	Date

S2 - FOR INFORMATION

VISTRY

MARKIDES ASSOCIATES
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E: enquiries@markidesassociates.co.uk
W: www.markidesassociates.co.uk

Project

WICKHURST GREEN
BROADBRIDGE HEATH

Drawing Title

SWEPT PATH ANALYSIS
FIRE TENDER

Markides Associates reference: 24069 1:400 @ A1

24069-MA-XX-XX-DR-C-7004 - P03

Scale 1:400 @ A1 - 1:800 @ A3

8m 0 8m 16m 24m 32m 40m

N:\24069 - Wickhurst Green Horsham - Planning\06 CAD-BIM\06.01 CAD\A Preliminary\24069-MA-XX-XX-DR-C-7000 - 7004.SPA - P05.dwg

DO NOT SCALE OFF THIS DRAWING

NOTES

1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography, location of statutory services, detailed design and traffic modelling.
2. This drawing is based upon drawing number 24.1945.1000P Wickhurst Green - Proposed Site Layout.dwg supplied by FINC Architects Ltd and Markides Associates shall not be liable for any inaccuracies or deficiencies.
3. Markides Associates accept no responsibility for any unauthorised amendments to this drawing. Do not rely on dimensions scaled from this plan.
4. Any swept path analysis has been undertaken using Autodesk vehicle tracking software (AutoTRACK) and Markides Associates shall not be liable for any inaccuracies or deficiencies.

KEY:

- Site Boundary
- Carriageway
- Proposed Footway
- Proposed Raised Table
- Infilled With Vegetation

Revision History

Rev	Comment	By	Chkd	Appr	Date
P04	FOR INFORMATION	HCT	LL	LL	22.10.25
P03	FOR INFORMATION	HCT	LL	LL	20.10.25
P02	FOR INFORMATION	NB	LL	LL	14.08.25
P01	FOR INFORMATION	BRG	LL	LL	14.03.25
Rev	Comment	By	Chkd	Appr	Date
Current Revision					
P04	FOR INFORMATION	HCT	LL	LL	22.10.25
Rev	Comment	By	Chkd	Appr	Date

S2 - FOR INFORMATION

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Project

WICKHURST GREEN
BROADBRIDGE HEATH

Drawing Title

HIGHWAY PROPOSALS
GENERAL OVERVIEW

Markides Associates reference: 24069

1:400 @ A1

24069-MA-XX-XX-DR-C-201 - P04

Scale 1:400 @ A1 - 1:800 @ A3

8m 0 8m 16m 24m 32m 40m

N:\24069 - Wickhurst Green Haywards - Planning\06 - CAD\-BIM\06.01-CAD\A_Preliminary\24069-MA-XX-XX-DR-C-0200-P04 Proposed Highway Updates for public consultation NB_LL.dwg

APPENDIX B – ROAD SAFETY AUDIT & DESIGNER'S RESPONSE

RKS Associates Limited
11 Falconer Road
Bushey Village
Bushey
Herts
WD23 3AQ

[redacted]

Our Ref: **VRP1943 RSA 1-DR-01-L1**

13th May 2025

Louis Lau

Markides Associates Ltd.
81 Southwark Bridge Road,
London,
SE1 0NQ

Dear Louis,

Stage 1 RSA - Land South of Broadbridge Way, Broadbridge Heath, Horsham - Designer's Response

Thank you for sending us a copy of your Designer's Response to the Stage 1 Road Safety Audit for the highway works associated with the development proposals on land south of Broadbridge Way, Broadbridge Heath in Horsham.

We have reviewed the Designers Response and the updated drawings and can confirm that the Audit Team accept the Designers Response to the Stage 1 Road Safety Audit.

In any event we recommend that the Designers Response together with the respective drawing are forwarded to the Local Highway Authority for their approval and sign off in accordance with highway standards.

Please contact me if you require any further assistance.

Yours sincerely

[redacted]

Vimal Patel,
BEng (Hons), GMICE, FIHE, HE Cert Comp, Reg RSA (IHE)

Enc.

Designers Response to Stage 1 RSA - Land South of Broadbridge Way, Broadbridge Heath, Horsham;
Markides Associates Drawing Numbers:

24069-MA-XX-XX-DR-C-200 Revision P01 – Highway Proposals Junction & Pedestrian Visibility Splays; and
24069-MA-XX-XX-DR-C-201 Revision P01 – Highway Proposals General Overview.

LAND TO THE SOUTH OF BROADBRIDGE WAY, BROADBRIDGE HEATH, HORSHAM

PROPOSED HIGHWAY WORKS

STAGE 1

ROAD SAFETY AUDIT REPORT

REQUESTED BY:
MARKIDES ASSOCIATES

April 2025

RKS Associates

Project:	Land to the South of Broadbridge Way, Broadbridge Heath, Horsham Proposed Highway Works
Client:	Markides Associates
Document:	Stage 1 Road Safety Audit
RKS Associates Ref:	VRP1943 - RSA 1
Issue date:	30th April 2025
Status:	Final
Authorised by:	VP/BN

RKS
Associates

Contents

Appendices

1 INTRODUCTION

1.1 This report results from a Stage 1 Road Safety Audit carried out on the proposed highway works associated with the redevelopment of land to the south of Broadbridge Way, Horsham in West Sussex. . The proposed development forms part of the land south of Broadbridge Heath development with the proposed site originally allocated for Wickhurst Green Primary School. However, the local authority has confirmed that a new school is not required and as a result the proposed development seeks to provide up to 80 residential units of mixed tenure.

1.2 The highway works subject to this Stage 1 Road Safety Audit involve the provision of a new access onto Sargent Way to serve the proposed development; the proposed junction takes the form of simple priority junction. The proposed access is 5.5m wide with 6m junction radii with a 2m footway either side of access road that connects with the existing pedestrian infrastructure on Sargent Way. The highway works also include the provision of a 3m shared footway/cycleway east of Sargent Way linking to Broadbridge Way, two zebra crossing along Broadbridge Way and the infilling of the existing hatching along the southern side of Broadbridge Way and replacing it with landscaping/vegetation.

1.3 Sargent Way in the vicinity of the proposed development access is a two-way single residential road aligned in a north to south direction. The carriageway is lit and is locally subject to a 30mph speed limit with pedestrian footpaths and on-street parking bays on either side of the carriageway. Sargent Way continues in a northerly direction where it traverses a right hand bend and continues as Broadbridge Way a two-way single road aligned in an east to west direction. Broadbridge Way is subject to a 30mph speed limit, it is lit with continuous wide shared use facility set back form the carriageway by a grass verge along its northern side and a grass verge along it southern side.

1.4 The main parties to this Road Safety Audit include the following:

Road Safety Audit Team Leader	Vimal Patel BEng (Hons), GMICE, FIHE, HE Cert Comp, Reg RSA (IHE)
Road Safety Audit Team Member	Beth Newiss MCIHT, MSoRSA, NH Cert Comp
Client/Overseeing Organisation	West Sussex County Council
Design Organisation	Markides Associates

1.5 Markides Associates has supplied the following information upon which this Stage 1 RSA is based:

- Transport Assessment Scoping Note prepared by Markides Associates Reference: 24069-MA-XX-XX-RP-D-TN01 (January 2025);
- Markides Associates Drawing Numbers:
  - 24069-MA-XX-XX-DR-C-200 Revision P01 – Highway Proposals General overview;
  - 24069-MA-XX-XX-DR-C-201 Revision P01 – Junction & Pedestrian Visibility Splays; and
  - 24069-MA-XX-XX-DR-C-202 Revision P01 – Highway Boundary.

1.6 The Audit has been undertaken following examination of the submitted documents, including a site visit carried out on Friday 25th April 2025 between the hours of 2:30pm and 3:30pm. The weather was sunny and the road surface was dry, observations during the site inspection noted low traffic, cycle and pedestrian flows along Sargent Way and Broadbridge Way with on-street car parking noted along Sargent Way.

Terms of Reference

1.7 The Audit Team is independent of the project design team and has no other involvement with the project. The extent of this Road Safety Audit relates to the proposed layout contained in Appendix A, it has been undertaken in accordance with the relevant sections of GG-119, part of the Design Manual for Roads and Bridges (DMRB).

1.8 The Safety Audit Team has examined only matters relating to road safety implications of the scheme and has not verified compliance of the design to any other criteria. The Audit Team have not been made aware of any Departures from Standard or previous road safety audits undertaken on the scheme proposals.

1.9 All of the problems identified in this report are considered by the Audit Team to require action in order to improve the safety of the scheme and to minimise accident occurrence for all users. The location of the problems identified in this Safety Audit is shown in **Appendix A** where the reference numbers relate to the problems identified in this report.

1.10 The recommendations in this report are aimed at addressing the identified road safety problems; however, there may be other alternative acceptable ways to overcome a specific problem when other practical issues are considered. The recommendations contained herein do not absolve the Designer of his/her responsibilities. The Auditors would be pleased to discuss the acceptability of alternative solutions to problems identified during the Audit and would encourage the Designer to consult them on this matter.

1.11 The Designer is advised to prepare a Road Safety Audit Decision Log, a template for which is included in **Appendix B**. This enables the Designers and Overseeing Organisations Response to the Audit to be documented along with an agreed RSA Action.

Collision Data

1.12 Publicly available collision information contained within West Sussex County Council collision database has been reviewed for the five year period up to 28th February 2025. The collision data indicates that one collision has been recorded where Sargent Way connects with Broadbridge Way. The collision involved a single vehicle and result in a slight injury.

Traffic Data

1.13 The Transport Assessment Scoping Note Transport provided by the design engineers provides details of the trip generation assessment. The trip generation assessment indicates that the proposed development when compared to the consented scheme is likely to generate 42 and 16 vehicle trips during the AM and PM peak periods respectively.

2 ITEMS RAISED AT STAGE 1 ROAD SAFETY AUDIT

2.1 **Problem:**
Summary: Potential collisions due to standing water or service covers
Location: Throughout

No details have been provided in respect of surface water drainage or other services and it is therefore not possible to ascertain whether there will be any safety implications. The absence of surface water drainage may result in the collection of surface water on the local highway which could increase the risk of loss of control collisions.

Recommendation:
Ensure that surface water drainage is provided to mitigate the risk of collection of surface water on the carriageway.

2.2 **Problem**
Summary: Potential vehicle collisions due to inadequate road space
Location: Proposed access

No details of vehicle swept path assessments have been provided. It is acknowledged that proposed vehicle crossover has been designed in accordance with local highway authority standards. There is concern that insufficient width to allow two opposing vehicles to pass each other may increase the risk of a collision between vehicles entering/exiting the development simultaneously or alternatively result in a vehicle stopping suddenly or reversing out onto Sargent Way where the risk of collision with other road users travelling along Sargent Way will be greater.

Recommendation
Ensure that vehicle swept path assessments are provided to demonstrate that sufficient width is provided to facilitate two-way traffic movements, alternatively ensure that there is sufficient inter-visibility between approaching drivers to prevent drivers entering the access when opposed by other vehicles.

2.3 **Problem**
Summary: Potential risk of pedestrians trips/fall injuries
Location: Pedestrian crossing facilities across development access

No details relating to the provision of dropped kerbs and tactile paving associated with an uncontrolled pedestrian crossing across the proposed development access have been provided. The absence of dropped kerbs and tactile paving may lead to a greater risk of trip or fall injuries to pedestrians as they attempt to negotiate full height kerbs or encourage pedestrians to cross the development access at unsafe locations where the risk of being struck by passing/turning traffic will be greater.

Recommendation
Ensure that an uncontrolled crossing facility incorporating dropped kerbs and tactile paving is provided across the development access.

2.4 **Problem:**

Summary: Potential risk of collisions associated with inconsiderate parking
Location: On-street parking along Sargent Way

Observations during the site inspection noted that on-street car parking was prevalent on both sides of the carriageway along Sargent Way with vehicles parked across/adjacent to the proposed development access. The absence of parking restrictions may result in inconsiderate parking which could restrict visibility to and from the proposed access. Obstructions caused by inconsiderate parking may lead to an increase risk of vehicle turning collisions, or damage only incidents at the proposed development access.

Recommendation:

Ensure that parking restrictions are provided along Sargent Way in the vicinity of the proposed development access, they should be should be extended to cover visibility splays to and from the proposed development access.

2.5 **Problem:**

Summary: Potential risk of loss of control collisions associated with flush edge of carriageway kerbing
Location: Northern side of Broadbridge Way

Observations during the site inspection noted that edge of carriageway kerbs along the northern side of Broadbridge Way were flush with the carriageway. There is concern that the flush kerbs particularly on the outside of the bend may result in vehicles overrunning the grass verge. This may result in an increased risk of loss of control collisions as vehicles inadvertently overrun the grass verge.

Recommendation:

Review the layout, the flush edge of carriageway kerbing along the northern side of Broadbridge Way should be reinstated as full height kerbs.

2.6 **Problem**

Summary: Potential risk of pedestrian collisions associated with multiple crossing facilities
Location: Proposed zebra crossing facilities on Sargent Way and Broadbridge Way

The scheme proposals introduce zebra crossing facilities on Sargent Way and Broadbridge Way that are a short distance apart. There is concern that the multiple crossing facilities may increase the risk of motorists failing to stop at the respective zebra crossing facilities allow users of the crossing facility to cross the carriageway. This may lead to a greater risk pedestrian struck by errant motorists or encourage pedestrians to cross Broadbridge Way between the crossing points where the risk of them brisk of being struck by passing traffic will be greater.

Recommendation

It would be more appropriate to provide a single zebra crossing facility across Broadbridge Way at a location where visibility splays to and from the crossing are not compromised. The crossing facility should be amended to provide a segregation between pedestrians and cyclists.

2.7 **Problem**

Summary: Potential risk of pedestrians/cycle collisions associated with unclear layout
Location: Pedestrians footway approach to shared use facility on approach to proposed zebra crossing facility at Sargent Way/Broadbridge Way

The proposals seek to provide a short section of footway on the northern side of Broadbridge Way to connect to the proposed shared use facility leading up to the zebra crossing at Sargent Way/Broadbridge Way junction. However, no details relating to the provision of corduroy tactile paving associated signs informing non-motorised users of the shared use facility may lead to a greater risk of collisions between non-mortised users.

Recommendation

Ensure that corduroy tactile paving associated signs informing non-motorised users of the change from a footway to a shared use facility are provided.

3 AUDIT TEAM STATEMENT

3.1 We certify that this audit has been carried out in accordance with GG-119 of Design Manual for Roads & Bridges Volume 5 Section 2 - Road Safety Audits. Its sole purpose is to identify features of the scheme that could be removed or modified to improve safety. No member of the Audit Team has been involved in the scheme design.

Audit Team Leader

Vimal Patel
BEng (Hons), GMICE, FIHE, Reg RSA (IHE), NH Cert Comp

Signed: [redacted]

Date: 30h April 2025

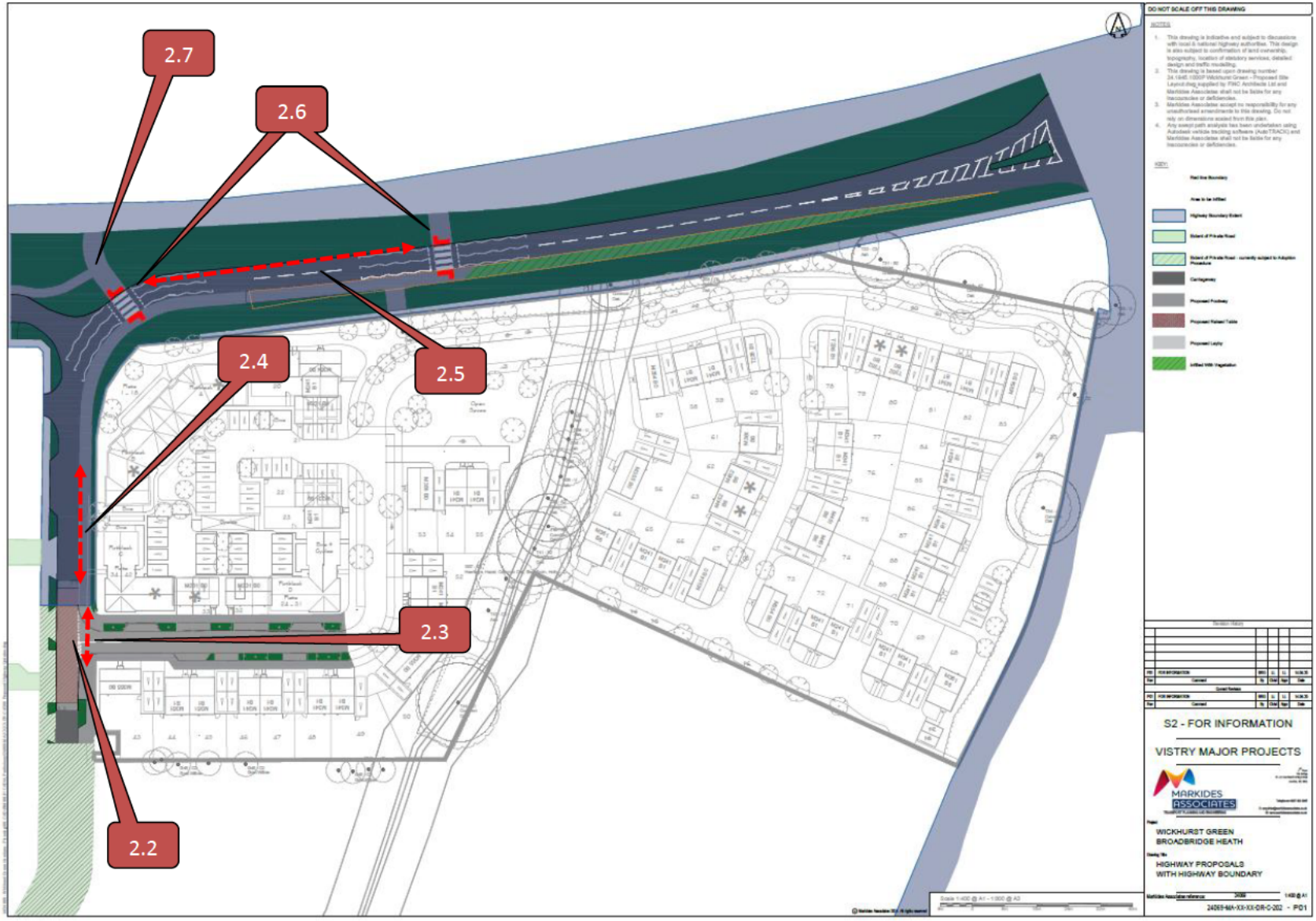
Audit Team Member

Beth Newiss
MCIHT, MSoRSA, NH Cert Comp

Signed: [redacted]

Date: 30th April 2025

Appendix A

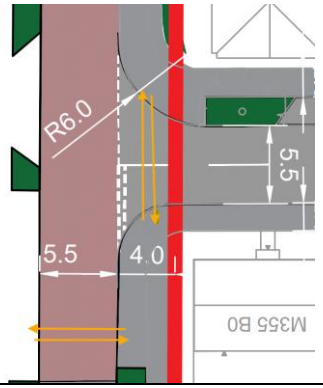


2.1

General Point

Appendix B

Issue No	RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
2.1	No details have been provided in respect of surface water drainage or other services and it is therefore not possible to ascertain whether there will be any safety implications. The absence of surface water drainage may result in the collection of surface water on the local highway which could increase the risk of loss of control collisions.	Ensure that surface water drainage is provided to mitigate the risk of collection of surface water on the carriageway.	Agree - A full drainage design for the development will be in place to ensure the surface water drainage is provided to mitigate the risk of surface water on the carriageway.		
2.2	No details of vehicle swept path assessments have been provided. It is acknowledged that proposed vehicle crossover has been designed in accordance with local highway authority standards. There is concern that insufficient width to allow two opposing vehicles to pass each other may increase the risk of a collision between vehicles entering/exiting the development simultaneously or alternatively result in a vehicle stopping suddenly or reversing out onto Sargent Way where the risk of collision with other road users travelling along Sargent Way will be greater.	Ensure that vehicle swept path assessments are provided to demonstrate that sufficient width is provided to facilitate two-way traffic movements, alternatively ensure that there is sufficient inter-visibility between approaching drivers to prevent drivers entering the access when opposed by other vehicles.	Agree - The existing carriageway width for Sargent Way will be maintained as part of the development proposals. Vehicle swept paths within Drawing No. 24069-MA-XX-XX-DR-C-7000 have demonstrated that Sargent Way has sufficient width to allow two opposing standard design vehicles to pass each other. Drawing No. 24069-MA-XX-XX-DR-C-200 has demonstrated that the junction visibility of 2.4m x 43m can be achieved at the proposed site access hence there is sufficient inter-visibility between approaching drivers to prevent drivers entering the access when opposed by other vehicles.		

2.3	No details relating to the provision of dropped kerbs and tactile paving associated with an uncontrolled pedestrian crossing across the proposed development access have been provided. The absence of dropped kerbs and tactile paving may lead to a greater risk of trip or fall injuries to pedestrians as they attempt to negotiate full height kerbs or encourage pedestrians to cross the development access at unsafe locations where the risk of being struck by passing/turning traffic will be greater.	Ensure that an uncontrolled crossing facility incorporating dropped kerbs and tactile paving is provided across the development access.	Agree - Dropped kerb and tactile paving will be provided at the site access junction and Sargent Way to aid pedestrian movements (see proposed dropped kerb and tactile paving locations below).  		

2.4	Observations during the site inspection noted that on-street car parking was prevalent on both sides of the carriageway along Sargent Way with vehicles parked across/adjacent to the proposed development access. The absence of parking restrictions may result in inconsiderate parking which could restrict visibility to and from the proposed access. Obstructions caused by inconsiderate parking may lead to an increased risk of vehicle turning collisions, or damage only incidents at the proposed development access.	Ensure that parking restrictions are provided along Sargent Way in the vicinity of the proposed development access, they should be should be extended to cover visibility splays to and from the proposed development access.	Disagree - The Designer's view is that the proposed residential development will provide 141 on plot car parking spaces and 24 visitor car parking spaces therefore the proposed development is unlikely to add to car parking demand along Sargent Way. It should also be noted that the existing layby to the north of the proposed site access on the eastern side of Sargent Way will be relocated within the proposed development to improve the visibility to the north from the proposed site access. The developer of the South Broadbridge Heath Masterplan (SBHM) worked closely with the Highway Authority and it was decided not to implement any parking restrictions within the SBHM area. Simple landscaping features have been implemented within the SBHM to manage forward visibility and increase driver awareness of the urban area being entered.		

2.5	Observations during the site inspection noted that edge of carriageway kerbs along the northern side of Broadbridge Way were flush with the carriageway. There is concern that the flush kerbs particularly on the outside of the bend may result in vehicles overrunning the grass verge. This may result in an increased risk of loss of control collisions as vehicles inadvertently overrun the grass verge.	Review the layout, the flush edge of carriageway kerbing along the northern side of Broadbridge Way should be reinstated as full height kerbs.	Disagree - The Designer's view is that as part of the SBHM, a new A264 dual carriageway (to the southern edge of the SBHM) with a speed limit of 40mph has been constructed. The provision of the new A264 east-west link has significantly reduced traffic levels along the Broadbridge Way. The flush kerbs on the north side has been in place before the downgrading of Broadbridge Way and the Highway Authority has not raised any issues with the developer during or after the implementation of the SBHM.		

2.6	The scheme proposals introduce zebra crossing facilities on Sargent Way and Broadbridge Way that are a short distance apart. There is concern that the multiple crossing facilities may increase the risk of motorists failing to stop at the respective zebra crossing facilities allow users of the crossing facility to cross the carriageway. This may lead to a greater risk pedestrian struck by errant motorists or encourage pedestrians to cross Broadbridge Way between the crossing points where the risk of them brisk of being struck by passing traffic will be greater.	It would be more appropriate to provide a single zebra crossing facility across Broadbridge Way at a location where visibility splays to and from the crossing are not compromised. The crossing facility should be amended to provide a segregation between pedestrians and cyclists.	Agree - The Designer's view is that during the pre-application process, the Highway Authority has requested the developer to provide two zebra crossings along Broadway Way. It is anticipated the proposed western zebra crossing would be used by commuters to/from the existing eastbound bus stop to the north of the community hub and will mainly be in use during the morning and evening peak periods. It is anticipated that the proposed eastern zebra crossing would be used by leisure users during the weekday off peak period and weekends to get the recreation ground to the north of Broadbridge Way. It can be seen from Drawing No. 24069-MA-XX-XX-DR-C-200 that the proposed western zebra crossing, the minimum distances for visibility of 2.5m x 31m (85th percentile speed of 25mph) have been met. It can also be seen from Drawing No. 24069-MA-XX-XX-DR-C-200 that the proposed eastern zebra crossing, the		

			minimum distances for visibility of 2.5m x 51m (85th percentile speed of 35mph) have been met. It is anticipated that the 2 zebra crossings will be used by different users during different time periods; it is unlikely that any vehicle will have to stop at both crossings. The zebra crossings proposed would also act as traffic calming features to reduce vehicle speeds on the existing Broadbridge Way and make it a friendlier environment for pedestrians and cyclists and deter strategic traffic movements to utilise more appropriate routes (i.e. the A264 by-pass to the south). Since the Designer's Response, a meeting was held with the local highway authority and agreed that a single parallel crossing is to be provided along Broadbridge Way.		

2.7	The proposals seek to provide a short section of footway on the northern side of Broadbridge Way to connect to the proposed shared use facility leading up to the zebra crossing at Sargent Way/Broadbridge Way junction. However, no details relating to the provision of corduroy tactile paving associated signs informing non-motorised users of the shared use facility may lead to a greater risk of collisions between non-mortised users.	Ensure that corduroy tactile paving associated signs informing non-motorised users of the change from a footway to a shared use facility are provided.	Agree - Corduroy tactile paving and associated signs informing non-motorised users of the change from a footway to a shared use facility will be provided at the detailed design stage if the crossing proposals receive planning consent.		

APPENDIX C – FULL DEVELOPMENT FLOWS

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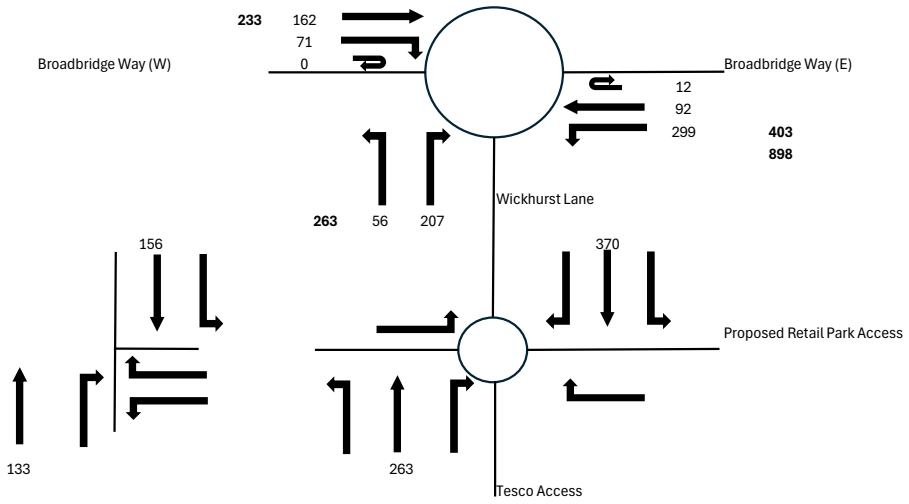

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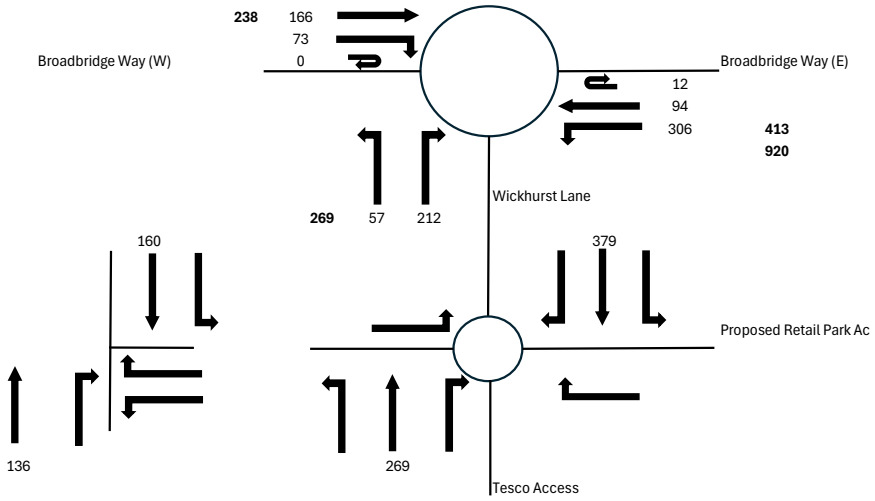
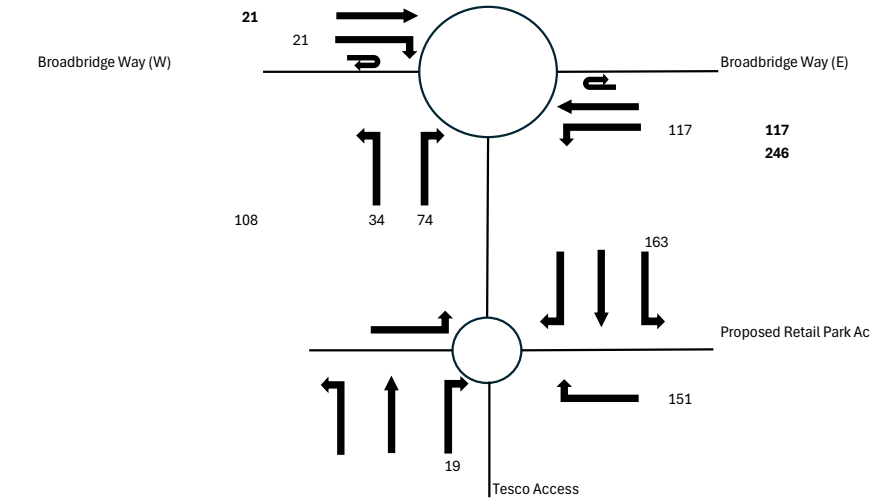


Committed Dev AM



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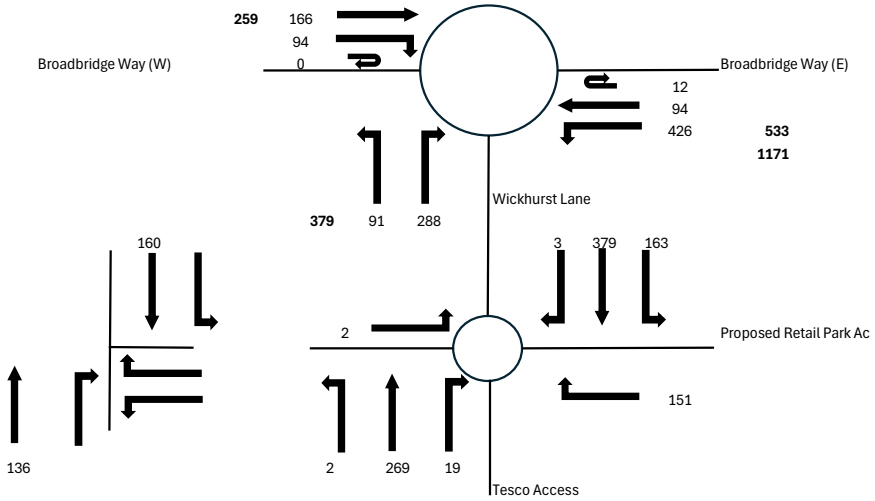

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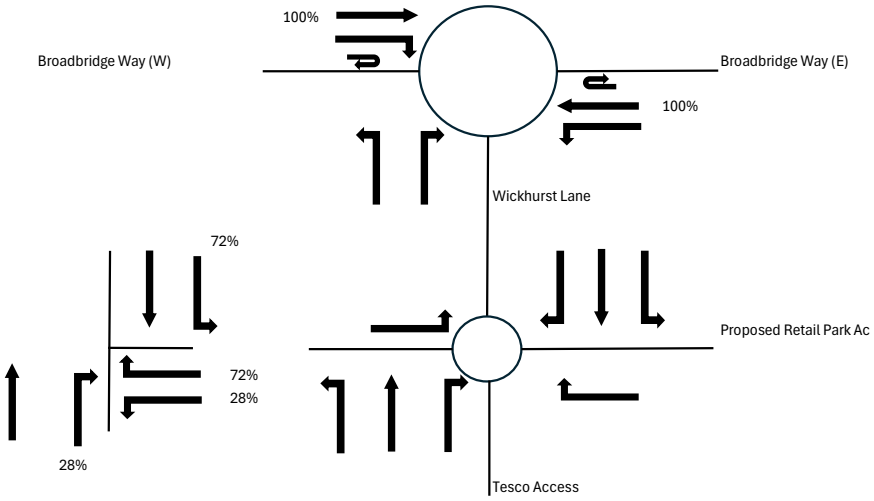

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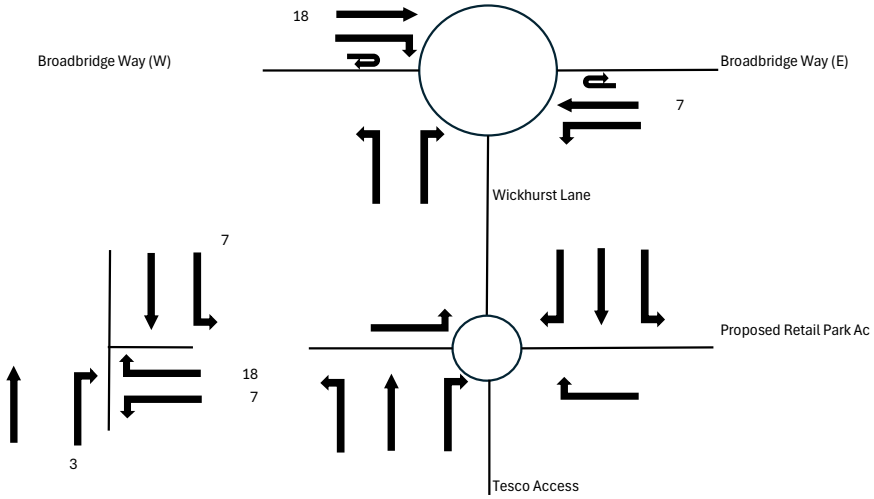

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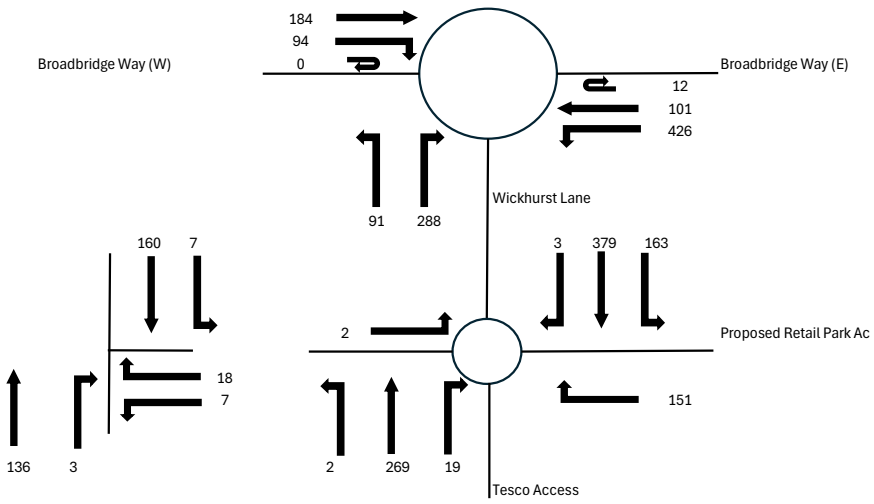
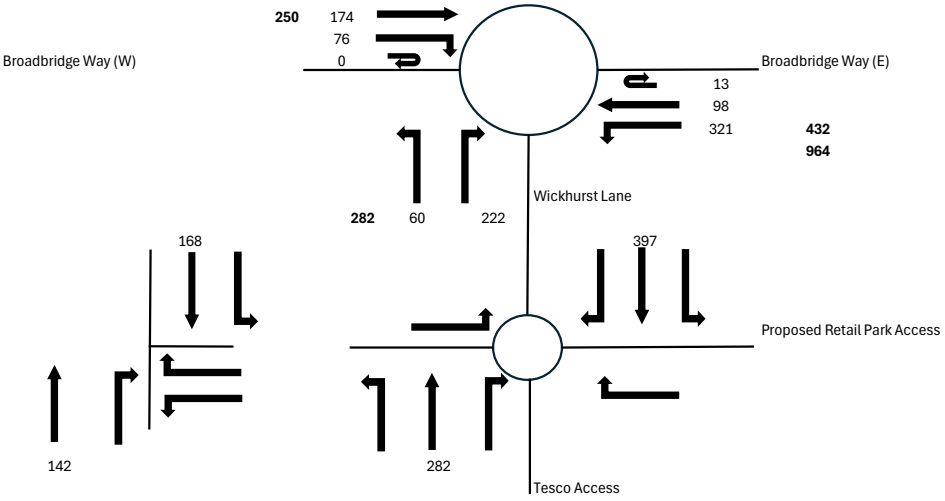
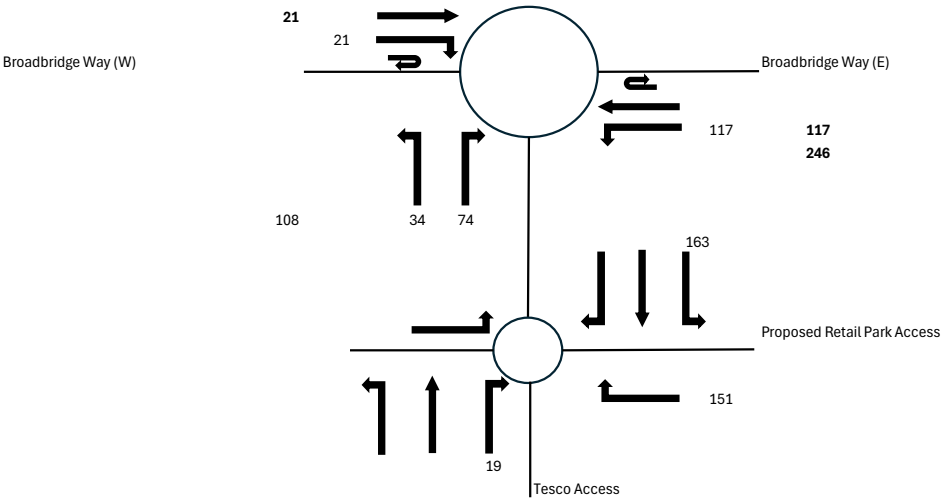


Base 2031 AM - PCUs



Committed Dev AM



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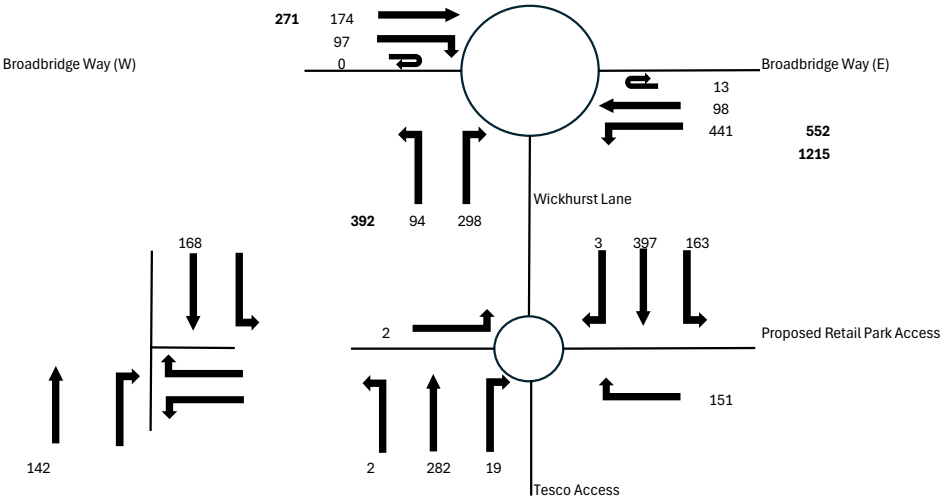

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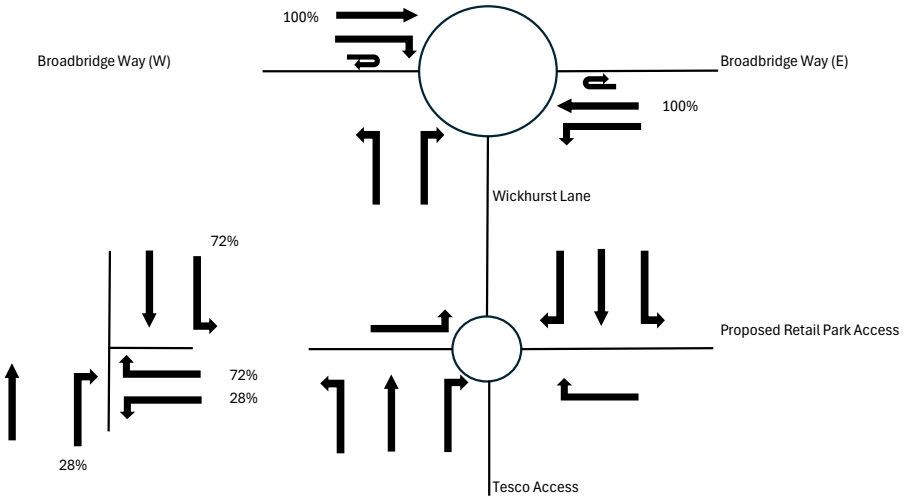
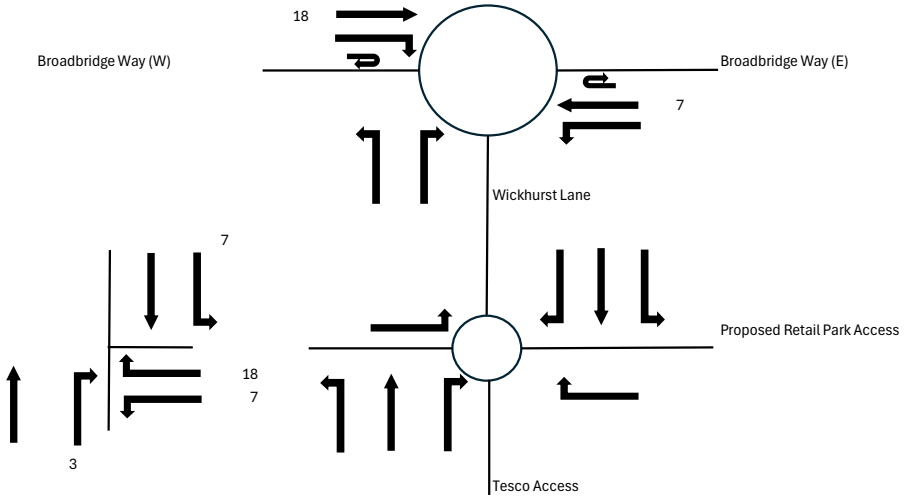


Dev AM



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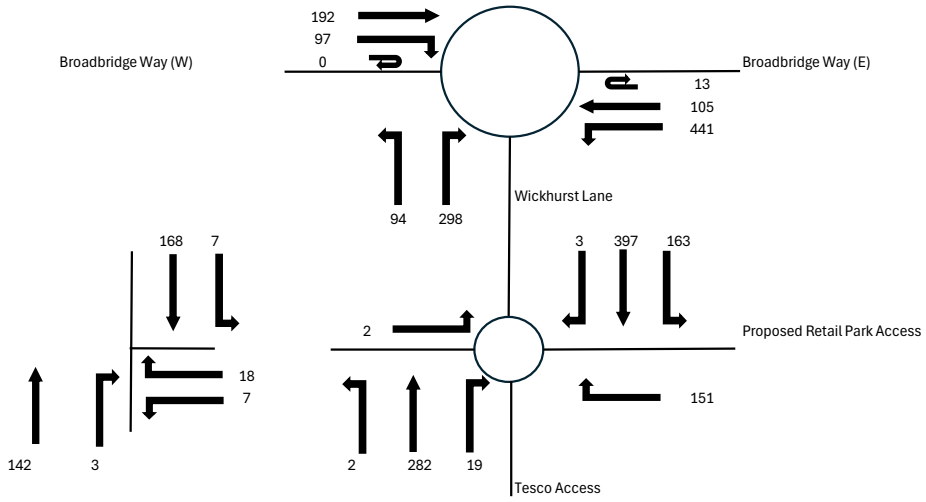
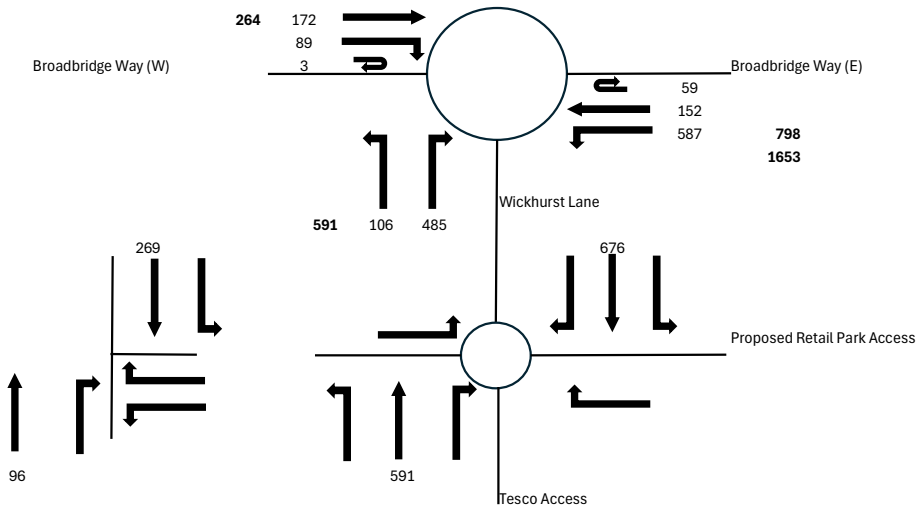
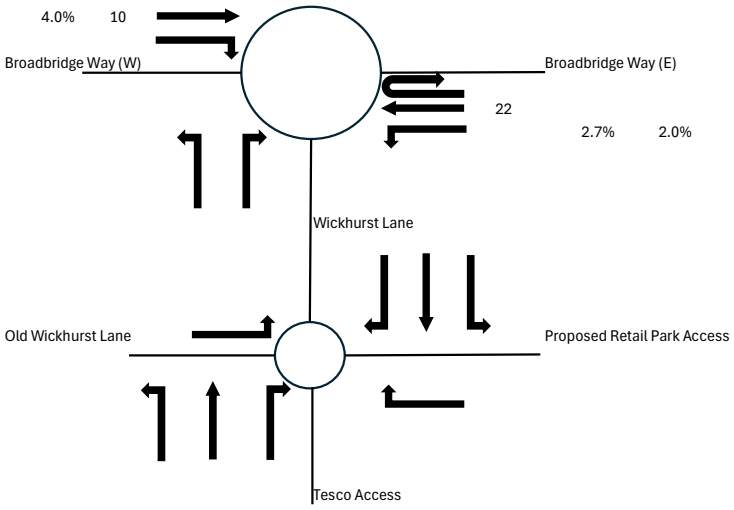


Base 2025 PM - PCUs



Wickhurst Green Dev PM



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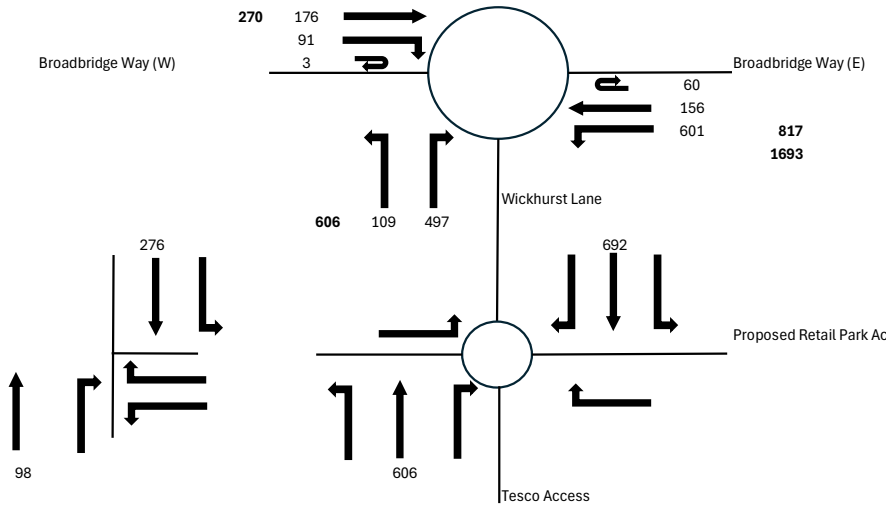

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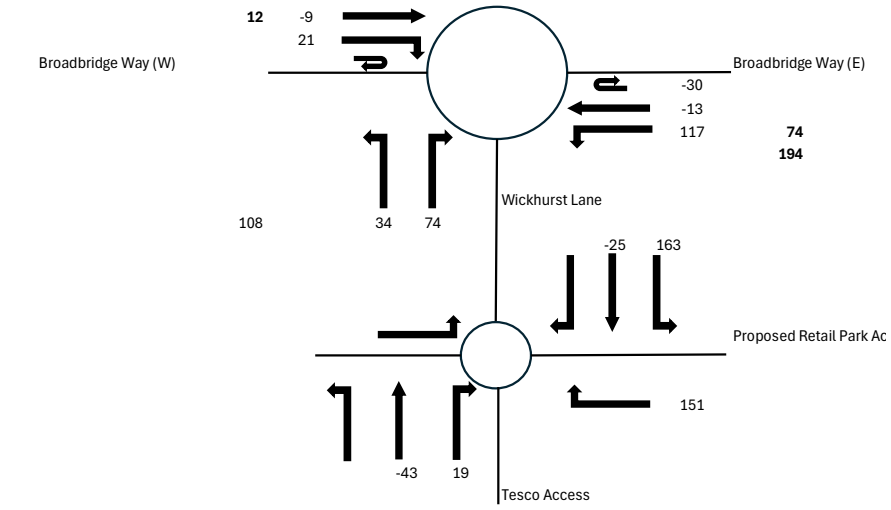

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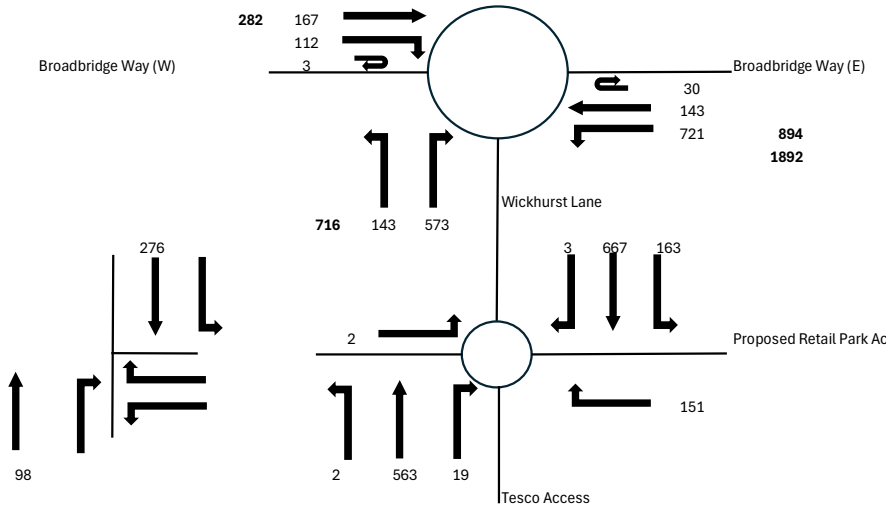

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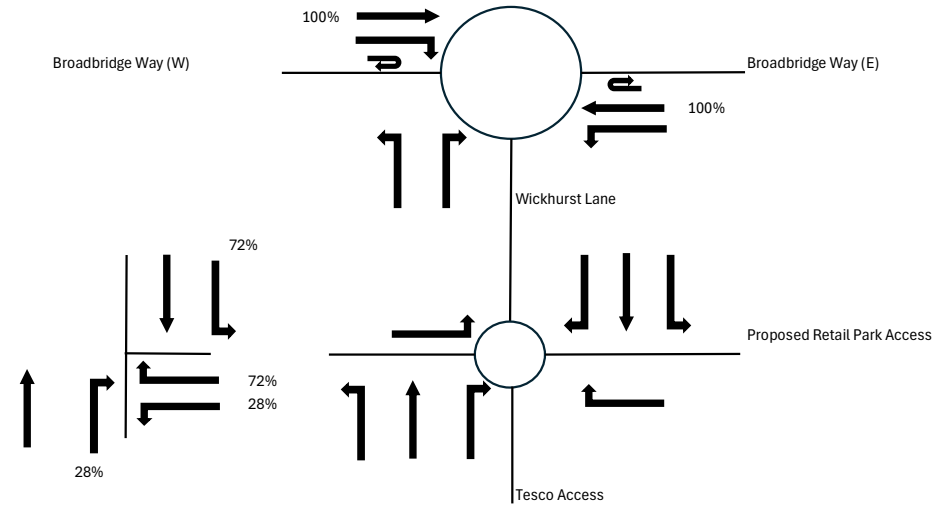

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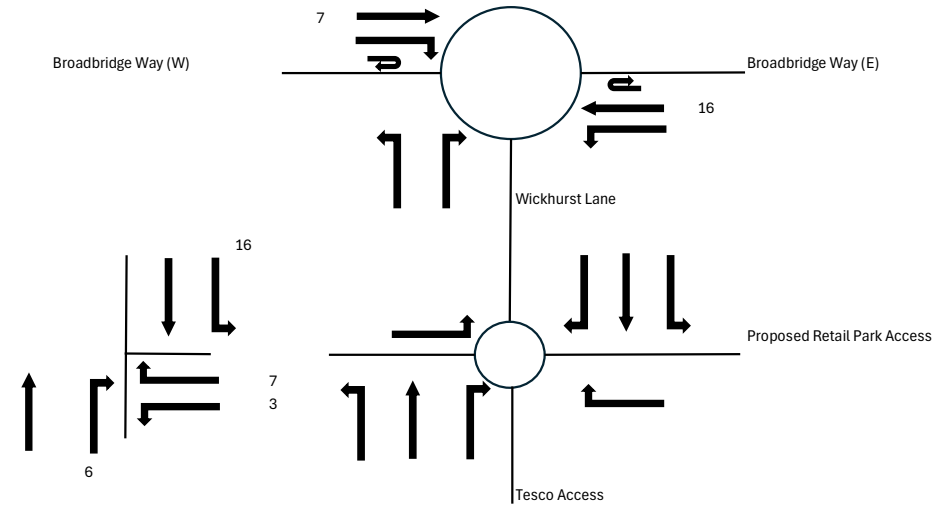
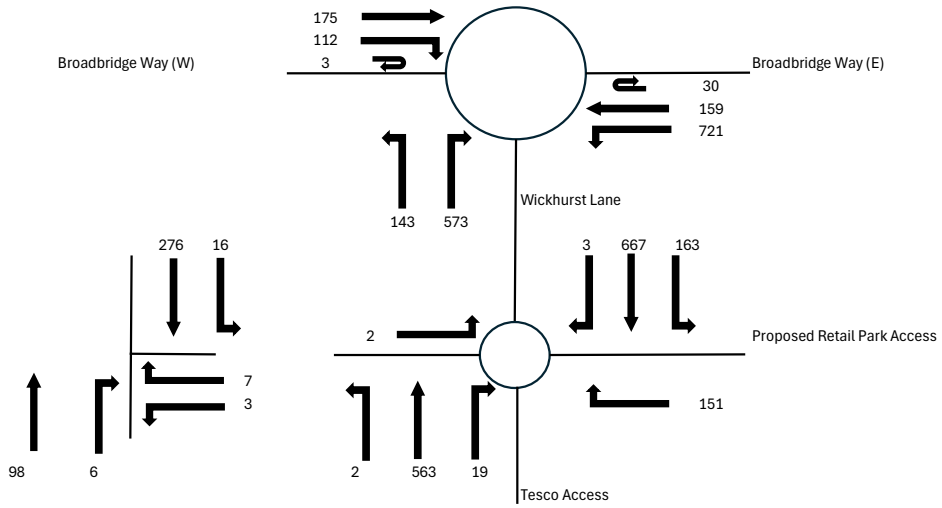


Base + ComDev PM+Dev PM



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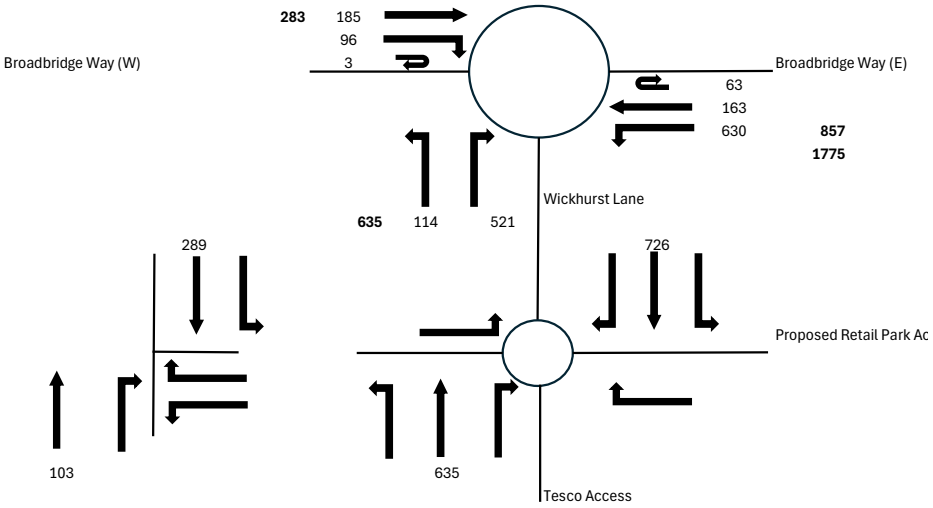

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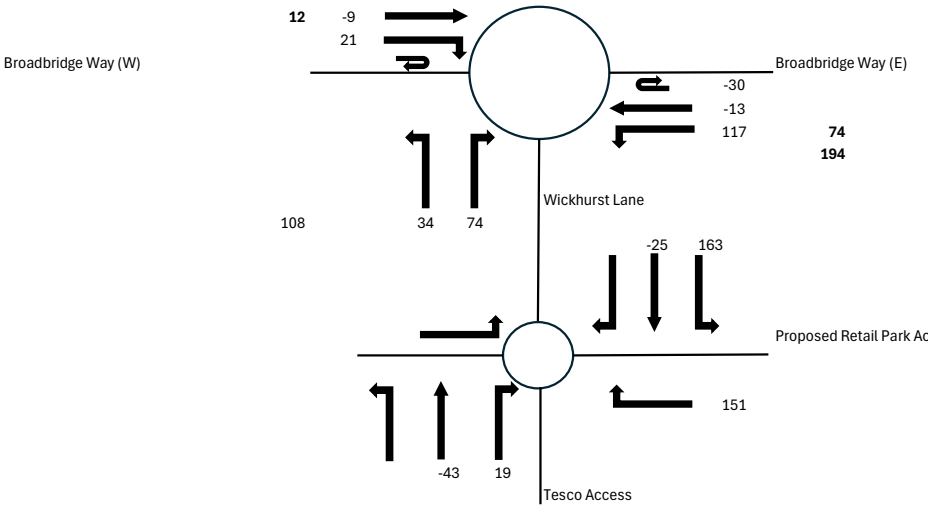

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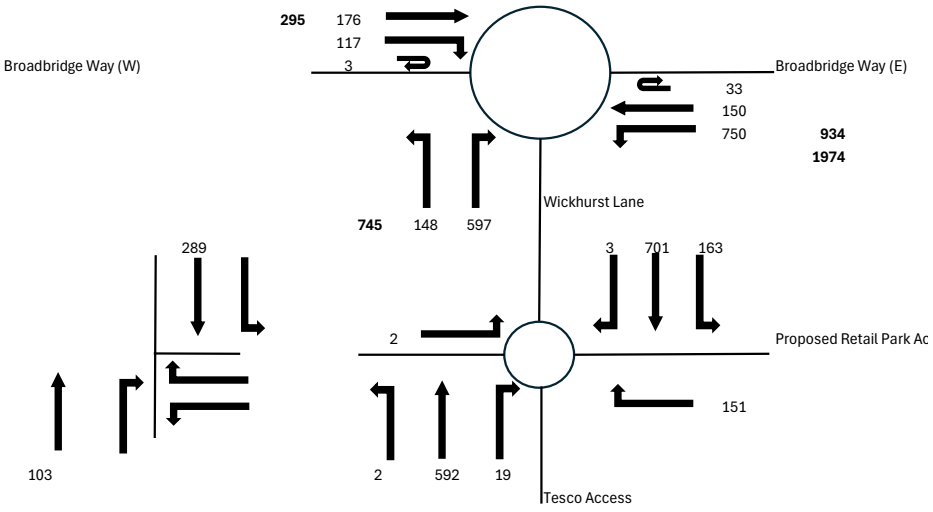

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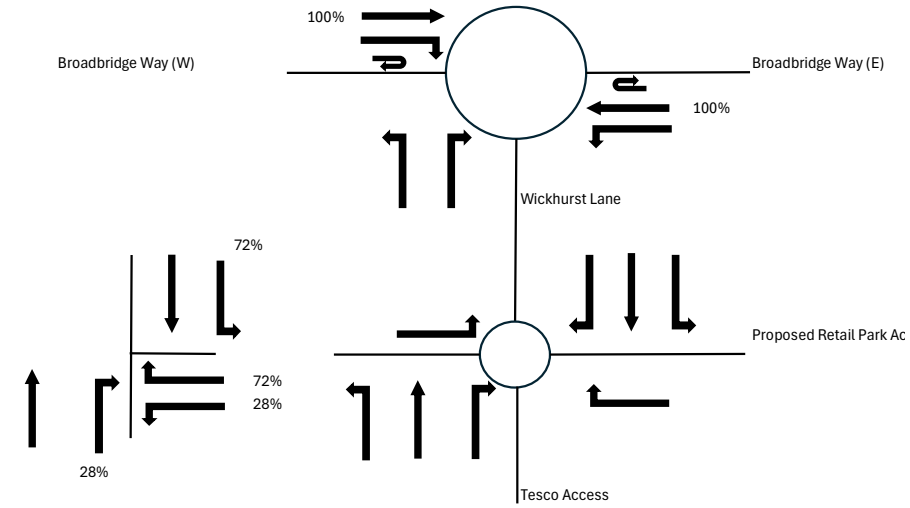

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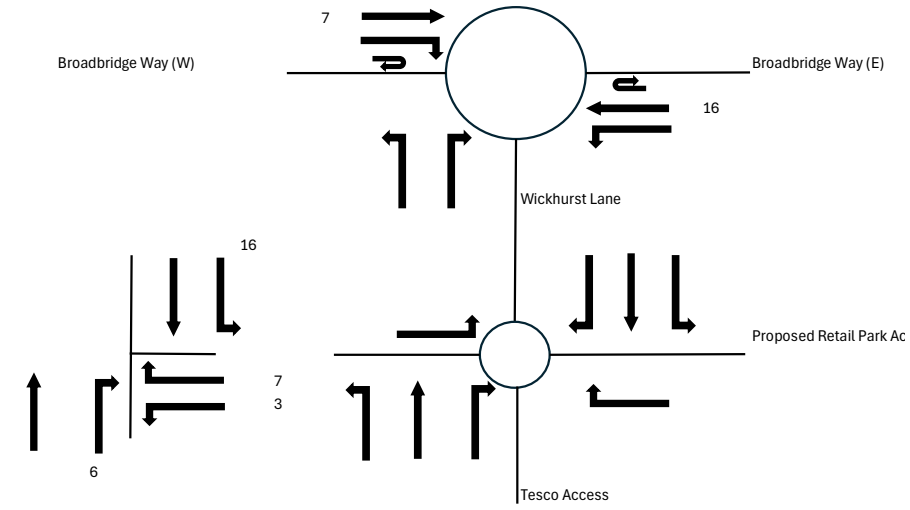
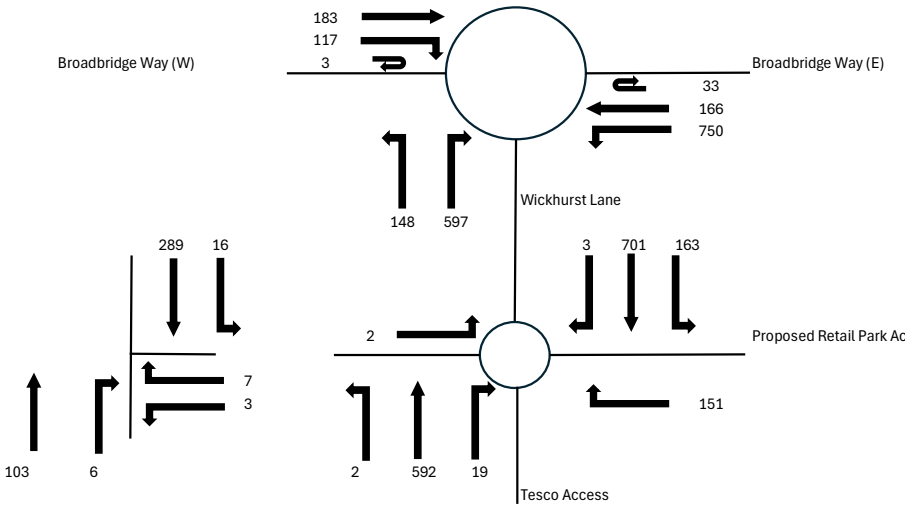


Base + ComDev PM+Dev PM



APPENDIX D – VISSIM MODELLING TECHNICAL NOTE

Technical Note
VISSIM Modelling
Wickhurst Green Broadbridge Heath

Project Number: 24069
Doc Number: 24069-MA-XX-XX-RP-D-TN04 Vissim Modelling
Prepared for: Vistry Major Projects

24 October 2025

Rev	Issue Purpose	Author	Reviewed	Approved	Date
P01	FINAL	CC	MH/LL	MH	24.10.25

1. Introduction

1.1 Overview

1.1.1 Markides Associates have been appointed by Vistry Major Projects (hereafter referred to as "the Applicant"), to provide transport planning advice in support of the development of the Wickhurst Green School Site (hereafter referred to as "the site") within Broadbridge Heath, Horsham.

1.1.2 This Technical Note (TN) is provided as an Appendix to the October 2025 Transport Assessment Addendum (TAA) which is submitted following amendments to the scheme and beyond that of those submitted as part of the original planning application in June 2025. The June 2025 planning submission was submitted by a Transport Assessment (TA) [hereafter referred to as the 'June 2025 TA']. In response to the June 2025 TA, West Sussex County Council (WSCC) requested the further use of a microsimulation model to assess the impact of the Proposed Development. This modelling has been undertaken incorporating the proposals submitted as part of the Proposed Amendments and is therefore prepared back-to-back with the October 2025 TAA for absolute robustness.

1.1.3 The purpose of the TN is to confirm the completion of the microsimulation modelling using VISSIM. This report outlines the approach taken to develop the model, summarises the forecast traffic flows applied, and presents the modelling results that demonstrate how the junction would operate at full occupancy of development opening in 2031.

1.2 Scheme Summary

1.2.1 The proposed development, referred to as the Proposed Amendments, comprises:

"Erection of 92no. residential dwellings comprising dwellings (53no.) and apartments (39no.), 36% affordable homes, creation of new vehicular access on to Sergent Way, provision of public open space, landscaping and drainage solutions."

1.3 Report Structure

1.3.1 Following this introduction, the remainder of the TN is structured as follows:

- **Section 2** outlines the trip generation and distribution assessment completed in support of the proposals;
- **Section 3** assesses the impact of the proposals on the local highway network utilising traffic modelling outputs; and
- **Section 4** provides a summary and conclusion.

2. Development Trip Generation and Forecast

2.1 Introduction

2.1.1 Extensive dialogue was previously undertaken with WSCC during the pre-application consultation for the submitted planning application, resulting in agreement on the trip generation and distribution assumptions for the proposed development.

2.1.2 The baseline traffic for this assessment has been factored to 2031 to provide a robust representation of traffic conditions when the development is fully occupied.

2.2 Development Vehicle Trip Rates

2.2.1 The agreed vehicle trip rate per dwelling was derived from TRICS, the relevant PM peak total vehicle trip rates for houses privately owned and flats privately owned, which have been agreed and approved by WSCC, are outlined in **Table 2.1**. The resultant trip generation based on the proposed 92 dwellings is outlined in **Table 2.2**.

2.2.2 As agreed with WSCC, the modelling has been undertaken for the PM peak period only as the Former Highways Depot Consented Scheme is a retail development. Therefore, the PM peak was considered the only relevant period for analysis.

Table 2.1 Proposed Residential (Vehicle) Trip Rates

Type	PM Peak		
	IN	OUT	TOTAL
Trip Rates per Dwelling (Houses Privately Owned)	0.374	0.168	0.542
Trip Rates per Dwelling (Flats Privately Owned)	0.200	0.087	0.287

Table 2.2 Proposed Residential (Vehicle) Trip Generation

Type	PM Peak		
	IN	OUT	TOTAL
Trip Rates per Dwelling (Houses Privately Owned)	15	7	22
Trip Rates per Dwelling (Flats Privately Owned)	6	3	9
TOTAL	**21**	**10**	**31**

2.3 Traffic Growth

2.3.1 The growth factors used to determine the traffic flow levels in 2031 (end of Local Plan year) have been derived from TEMPro v8.1. The Horsham local authority area has been utilised for the assessment, reviewing growth rates for all roads. The 'Core' TEMPro growth scenario has

been used for this development proposal. No alternative assumptions have been applied to TEMPro, with the full housing and job growth being considered. Growth factors for the PM peak are shown in **Table 2.3**.

2.3.2 The year 2031 has been adopted as the assessment year, as it represents the end of the current Local Plan period. This approach ensures that the modelling reflects the full extent of forecast growth and traffic demand within the adopted planning period.

2.3.3 The growth factor has been applied to the 2021 base year, as this corresponds to the year in which the traffic survey data was collected for the original VISSIM model.

Table 2.3 TEMPro Factors

Growth Period	PM Peak
2021 to 2031	1.0964

3. VISSIM Modelling Results

3.1 Overview

3.1.1 This section of the TN provides a summary of the VISSIM modelling assessment. The VISSIM microsimulation model used is the same model used for assessing the Former WSCC Highways Depot at Broadbridge Heath, which had been prepared for WSCC (HDC Ref: DC/23/1133 and hereafter referred to as the "Former Highways Depot Consented Scheme"). The Former Highways Depot Consented Scheme was consented by HDC in March 2025 on the basis of the VISSIM Model being acceptable.

3.1.2 The Applicant has purchased the VISSIM Model used to assess the Former Highways Depot Consented Scheme from the transport and highways consultant and has been hereafter used to assess the impact of the Proposed Amendments. This approach has been agreed with WSCC as suitable for assessing the proposed development, and the 2024 Base Model and Former Highways Depot Consented Scheme will be adopted as the base model for this assessment. The weekday PM peak serves as the only assessment period as has also been agreed with WSCC.

3.2 Forecast Scenarios

3.2.1 The following scenarios have been modelled as agreed with WSCC:

- PM 2024 Base with Former Highways Depot Consented Scheme and Proposed Development;
- PM Peak 2031 Future Base with Former Highways Depot Consented Scheme; and
- PM Peak 2031 Future Base with Former Highways Depot Consented Scheme and Proposed Development.

3.2.2 While the Proposed Development is anticipated to open in 2027, the 2031 scenario has been adopted for the assessment to align with the end of the Local Plan period.

3.3 Assessment Parameters

3.3.1 The assessment parameters are based on queue data, which indicates the operational performance of each modelled arm during the different scenarios. The queue lengths refer to the average and maximum number of vehicles waiting to pass through the junction during the modelled period.

3.3.2 VISSIM defines the average and maximum queue lengths as follows:

- Queue Length: *Mean of all average queue lengths in a node. Vissim automatically generates queue counters in a node to detect queue lengths. Vissim calculates the average queue length detected by queue counters in a node and then calculates their mean.*
- Queue Length (Maximum): *Maximum queue length. The result depends on the attribute consider adjacent lanes.*

3.3.3 There is no specific threshold or percentage increase that defines a significant impact regarding change in queue length.

3.4 Modelled Network

3.4.1 The VISSIM microsimulation model includes the following junctions:

- Existing Roundabout between Broadbridge Way and Wickhurst Lane; and
- Proposed mini-roundabout between Wickhurst Lane, Old Wickhurst Lane, the Site Access to the Former Highways Depot, and Tesco Access.

3.4.2 The approach arms for each roundabout are defined as follows:

Existing Roundabout (Broadbridge Way / Wickhurst Lane):

- East: Broadbridge Way East
- South: Wickhurst Lane (northbound)
- West: Broadbridge Way West

Proposed mini-roundabout (Wickhurst Lane / Former Highways Depot Access / Tesco Access / Old Wickhurst Lane)

- North: Wickhurst Lane (southbound)
- East: Former Highways Depot Access
- South: Tesco Access
- West: Old Wickhurst Lane

3.5 2024 Base with Depot Redevelopment and Proposed Development

3.5.1 The VISSIM model for the Former Highways Depot Consented has been updated with the 2024 forecast traffic flow from the Proposed Amendments to assess the impact of the residential development. **Table 3.1** and **Table 3.2** show the queue data for the PM 2024 Base with depot redevelopment and PM 2024 Base with depot redevelopment and Proposed Amendments in the hour covered by the models.

Table 3.1 VISSIM Queue Results - 2024 Base + Depot Redevelopment

Location	VISSIM Modelling Queueing Results			
	Average Queue	Highest Average Queue	Average Maximum Queue (m)	Highest Maximum Queue (m)
Former Highways Depot Access	0.14m	0.34m	15.66m	22.11m
Tesco	1.86m	3.48m	26.61m	39.22m
Old Wickhurst Lane	0	0	0	0
Wickhurst Lane Southbound	0.55m	0.9m	43.56m	50.21m
Wickhurst Lane Northbound	4.41m	7.08m	59.65m	71.31m
Broadbridge Way West	1.95m	2.76m	36.61m	54.22m
Broadbridge Way East	0.55m	0.96m	47.20m	68.46m

3.5.2 The modelling results are from the pre-application Transport Note, which has been outlined above in Section 3.1, attached in Appendix A.

3.5.3 The average maximum queue results indicate that queueing will exceed the capacity of Wickhurst Lane between the two roundabouts in both directions, due to the connecting carriageway between the two roundabouts being approximately 25m.

3.5.4 However, the blocking back clears quickly within the model and is not considered a significant issue. WSCC, as highways authority, provided the following response in relation to the results of the modelling as part of the Committee Report[1] to the Former Highways Depot Consented Scheme:

> *"Development Impact*
> *Traffic Surveys (undertaken in Nov 2021 and growthed to 2024) and junction modelling acceptable for use and fit for purpose. 2021 base scenario shows maximum queues of 19 vehicles on Broadbridge Way East and 9 vehicles on Broadbridge Way East arms in the Friday PM peak periods.*
>
> *Friday Peak*
> *Highest maximum queues would block back between the two roundabouts and result in queues of 8 vehicles towards Tesco, 13 vehicles along Broadbridge Way West and 15 along Broadbridge Way East.*
> *Saturday Lunchtime Peak*
> *Highest maximum queues would block back between the two roundabouts and result in queues of 9 vehicles towards Tesco, 13 along Broadbridge Way West and 17 along Broadbridge Way East.*

[1] Para 3.1 of the Committee Report
https://iawpa.horsham.gov.uk/PublicAccess_LIVE/Document/ViewDocument?id=6840FED2636E4682995FA7CB44E64B0E

As identified impacts with a single lane approach assessed and considered acceptable, application not dependent on delivery of two-lane approach.

Whilst development may increase the level of queuing vehicles in peak periods, level would not be considered severe in line with NPPF para 111."

3.5.5 HDC Planning Committee approved the Former Highways Depot Consented Scheme on the basis of the above. It is therefore reasonable to consider that these traffic conditions are acceptable to both HDC and WSCC.

3.5.6 **Table 3.2** shows the VISSIM modelled queue results when incorporating the Proposed Development into the 2024 Base and Consented Former Highways Depot development.

Table 3.2 VISSIM Queue Results - 2024 Base + Depot Redevelopment + Proposed Amendments

Location	VISSIM Modelling Queueing Results			
	Average Queue	Highest Average Queue	Average Maximum Queue (m)	Highest Maximum Queue (m)
Former Highways Depot Access	0.10m	0.21m	11.46m	19.25m
Tesco	2.37m	3.14m	37.35m	42.24m
Old Wickhurst Lane	0	0	0.00	0.00
Wickhurst Lane Southbound	0.79m	1.06m	45.77m	50.28m
Wickhurst Lane Northbound	4.77m	6.18m	58.98m	63.33m
Broadbridge Way West	3.04m	5.41m	42.15m	52.08m
Broadbridge Way East	0.64m	1.50m	47.69m	61.62m

3.5.7 Similar to the conditions in the 2024 Base with the depot redevelopment only, the highest maximum queue and the average maximum queue along Wickhurst Lane Northbound and Southbound exceeds the capacity of the road, and there is blocking back onto both modelled roundabout junctions. However, this is anticipated to clear quickly and presents no significant issue to the overall capacity of the roundabout junctions.

3.5.8 **Table 3.3** compares the 2024 scenarios and shows the results below:

Table 3.3 VISSIM Queue Results - 2024 Base + Depot Redevelopment vs 2024 Base + Depot Redevelopment + Proposed Amendments

Location	VISSIM Modelling Queueing Results			
	Average Queue	Highest Average Queue	Average Maximum Queue (m)	Highest Maximum Queue (m)
Former Highways Depot Access	-0.04m	-0.13m	-4.20m	-2.86m
Tesco	0.51m	-0.34m	10.74m	3.02m
Old Wickhurst Lane	0	0	0	0
Wickhurst Lane Southbound	0.24m	0.16m	2.21m	0.07m
Wickhurst Lane Northbound	0.36m	-0.90m	-0.67m	-7.98m
Broadbridge Way West	1.09m	2.65m	5.54m	-2.14m
Broadbridge Way East	0.09m	0.54m	0.49m	-6.84m

3.5.9 The table above shows that there is a very minimal fluctuation in average and highest average queue when incorporating the Proposed Amendments. The highest average queue increase is seen on Broadbridge Way, which increased by 2.65m, less than 1 vehicle in length.

3.5.10 The highest maximum queues show only minimal fluctuations, Broadbridge Way / Wickhurst Lane roundabout showing slight improvements as the highest maximum queue decreases by 7.98m on Wickhurst Lane northbound and 6.84m on Broadbridge Way East, approximately 1-2 vehicles in length.

3.5.11 The Tesco Access Arm experienced the largest increase, with the average maximum queue rising by 10.74m and the highest maximum queue by 3.02m. This increase is not expected to affect the operational performance of the roundabout junction.

3.5.12 The impact of the Proposed Amendments is expected to be insignificant, and no traffic-related issues are anticipated for the 2024 scenarios.

3.6 2031 Base with Depot Redevelopment and Proposed Amendments

3.6.1 The VISSIM model has been updated with the 2031 forecast traffic flow from the Proposed Amendments to assess the impact of the residential development. **Table 3.4** and **Table 3.5** show the queue data for the PM 2031 Future Base with depot redevelopment and PM 2031 Future Base with depot redevelopment and Proposed Amendments in the hour covered by the models.

Table 3.4 VISSIM Queue Results - 2031 Future Base + Depot Redevelopment

Location	VISSIM Modelling Queueing Results			
	Average Queue	Highest Average Queue	Average Maximum Queue (m)	Highest Maximum Queue (m)
Former Highways Depot Access	0.12m	0.30m	14.28m	25.43m
Tesco	2.35m	3.26m	38.67m	48.47m
Old Wickhurst Lane	0	0	0	0
Wickhurst Lane Southbound	0.79m	1.01m	47.82m	51.14m
Wickhurst Lane Northbound	4.30m	6.07m	59.58m	66.19m
Broadbridge Way West	3.00m	4.97m	47.79m	60.13m
Broadbridge Way East	0.83m	1.81m	53.38m	92.07m

3.6.2 The modelling results above show that the highest maximum queues are observed on the Broadbridge Way East Arm, which reaches 92.07m. However, this is not considered significant in terms of capacity and does not extend back to the next junction to the east.

3.6.3 The Wickhurst Lanes Northbound and Southbound Arms continue to block back onto the roundabout junctions. As with in the 2024 scenarios, the queues clear relatively quickly and do not present an issue to the capacity of the roundabout junctions.

3.6.4 The average queues remain relatively minimal across all arms, with the highest observed on Wickhurst Lane northbound at 4.30m.

Table 3.5 VISSIM Queue Results - 2031 Base + Depot Redevelopment + Proposed Amendments

Location	VISSIM Modelling Queueing Results			
	Average Queue	Highest Average Queue	Average Maximum Queue (m)	Highest Maximum Queue (m)
Former Highways Depot Access	0.12m	0.38m	15.49m	30.57m
Tesco	2.60m	3.69m	37.16m	47.24m
Old Wickhurst Lane	0	0	0	0
Wickhurst Lane Southbound	0.73m	1.18m	44.44m	50.85m
Wickhurst Lane Northbound	5.39m	6.92m	63.12m	86.00m
Broadbridge Way West	3.10m	5.58m	46.20m	60.83m
Broadbridge Way East	0.60m	1.52m	46.37m	84.51m

3.6.5 As with the Future Base 2031 scenario, the average queue on all the arms is minimal when assessing the impact of the additional Proposed Amendments' traffic. The highest average

queues are recorded on Wickhurst Lane northbound (6.92m) and Broadbridge Way West (5.58m).

3.6.6 However, queues on Wickhurst Lane northbound and southbound are expected to extend back to each roundabout. These queues clear quickly and do not present a capacity issue during the PM peak hour.

3.6.1 **Table 3.6** compares the 2031 scenarios, with the results shown.

Table 3.6 VISSIM Queue Results – 2031 Future Base + Depot Redevelopment Vs 2031 Future Base + Depot Redevelopment + Proposed Development

Location	VISSIM Modelling Queueing Results			
	Average Queue	Highest Average Queue	Average Maximum Queue (m)	Highest Maximum Queue (m)
Former Highways Depot Access	0.00m	0.08m	1.21m	5.14m
Tesco	0.25m	0.43m	-1.51m	-1.23m
Old Wickhurst Lane	0	0	0	0
Wickhurst Lane Southbound	-0.06m	0.17m	-3.38m	-0.29m
Wickhurst Lane Northbound	1.09m	0.85m	3.54m	19.81m
Broadbridge Way West	0.10m	0.61m	-1.59m	0.70m
Broadbridge Way East	-0.23m	-0.29m	-7.01m	-7.56m

3.6.2 When comparing the two 2031 scenarios, the average queue results indicate that the additional Proposed Amendments traffic has a minimal effect on the modelled average queues. The highest increase is 1.09m on Wickhurst Lane Northbound, which is less than 1 vehicle in length.

3.6.3 Whilst the highest maximum queue increases by approximately 3 vehicles on the Wickhurst Lane Northbound Arm, this is only a momentary peak across the assessed peak period. Hence, it is reasonable to assume, as per the Former Highways Consented Scheme, that this would dissipate quickly and have minimal impact on the overall junction capacity.

3.6.4 There is also a decrease in the average maximum queue and highest maximum queue for the Tesco access, Wickhurst Lane southbound, and Broadbridge Way East. This indicates that these arms are expected to experience slightly lower vehicle build-ups when compared to the 2031 baseline scenario.

3.6.5 It is also emphasised that this reflects the expected absolute worst case of impact of the Proposed Amendments and the Former Highways Depot Consented Scheme combined. It can be reaosnable expected that the impacts would be substantially lower in all other periods, particularly the AM Peak which is the period of highest traffic generation associated with the Proposed Development / Proposed Amendments.

3.6.6 Therefore, the Proposed Amendments is expected to have minimal impact on the overall junction capacity. No traffic-related issues have been identified as a result of the Proposed Amendments.

4. Summary and Conclusions

4.1.1 Markides Associates have been appointed by Vistry Major Projects, to provide transport planning advice in support of the development of the Wickhurst Green School Site within Broadbridge Heath, Horsham.

4.1.2 Following pre-application discussions with WSCC, the VISSIM microsimulation model prepared for the proposed redevelopment of the former WSCC highways depot at Broadbridge Heath (Ref: DC/23/1133) has been obtained and agreed with WSCC as suitable. The 2024 Base Model and depot redevelopment scenario has been adopted as the base model for this assessment.

4.1.3 Based on the previously agreed trip generation and distribution methodology, we have developed an appropriate traffic scenario for assessing the impact of the Proposed Amendments traffic to the 2024 scenario and 2031 scenario, as this year aligns with the ned of the Local Plan.

4.1.4 The results indicate that despite the slight increase in traffic from the Proposed Amendments, the results show no significant impact on queueing in the 2024 and 2031 scenarios and that therefore it is reasonable to draw the same conclusions as WSCC drew from the result of very similar modelling results in the Former Highways Depot Consented Scheme Committee Report – that "the queues are shown in the modelling to dissipate quickly" and that *"whilst development may increase the level of queuing vehicles in peak periods, level would not be considered severe in line with NPPF para 111."*[2]

4.1.5 We therefore conclude that there is no requirement for improvements to the local network to mitigate the impact of the Proposed Amendments and that the Proposed Amendments result in no significant change to the impact on the Broadbridge Way/Wickhurst Lane Roundabout and the Proposed Retail Park Access as already assessed and deemed acceptable by both HDC and WSCC as part of the Former Highways Depot Consented Scheme.

[2] Para 3.1 and 6.90 of the Committee Report - https://iawpa.horsham.gov.uk/PublicAccess_LIVE/Document/ViewDocument?id=6840FED2636E4682995FA7CB44E64B0E

APPENDIX E – JUNCTION CAPACITY ANALYSIS

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: 24069-MA-J9-X-PI01-P02- Site Access.j9
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Report generation date: 22/10/2025 14:22:38

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2027									
Stream B-AC	D1	0.1	8.39	0.06	A	D2	0.0	8.54	0.03	A
Stream C-AB		0.0	5.54	0.01	A		0.0	5.97	0.01	A
	2031									
Stream B-AC	D3	0.1	8.45	0.06	A	D4	0.0	8.63	0.03	A
Stream C-AB		0.0	5.53	0.01	A		0.0	5.96	0.01	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	
Location	
Site number	
Date	09/05/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MARKIDES\Markides Associates
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2027	AM	ONE HOUR	07:45	09:15	15	✓
D2	2027	PM	ONE HOUR	16:45	18:15	15	✓
D3	2031	AM	ONE HOUR	07:45	09:15	15	✓
D4	2031	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2027, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.70	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	5.50			69.3	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.70	21	32

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	485	0.090	0.228	0.144	0.326
B-C	625	0.098	0.247	-	-
C-B	614	0.243	0.243	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2027	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	167	100.000
B		ONE HOUR	✓	25	100.000
C		ONE HOUR	✓	139	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	7	160
	B	18	0	7
	C	136	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.06	8.39	0.1	A	23	34
C-AB	0.01	5.54	0.0	A	3	5
C-A					124	186
A-B					6	10
A-C					147	220

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	476	0.040	19	0.0	0.0	7.871	A
C-AB	3	0.67	653	0.004	3	0.0	0.0	5.539	A
C-A	102	25			102				
A-B	5	1			5				
A-C	120	30			120				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	6	468	0.048	22	0.0	0.1	8.084	A
C-AB	3	0.83	661	0.005	3	0.0	0.0	5.478	A
C-A	122	30			122				
A-B	6	2			6				
A-C	144	36			144				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	7	457	0.060	27	0.1	0.1	8.389	A
C-AB	4	1	672	0.006	4	0.0	0.0	5.394	A
C-A	149	37			149				
A-B	8	2			8				
A-C	176	44			176				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	7	457	0.060	28	0.1	0.1	8.391	A
C-AB	4	1	672	0.006	4	0.0	0.0	5.397	A
C-A	149	37			149				
A-B	8	2			8				
A-C	176	44			176				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	6	468	0.048	23	0.1	0.1	8.087	A
C-AB	3	0.83	661	0.005	3	0.0	0.0	5.478	A
C-A	122	30			122				
A-B	6	2			6				
A-C	144	36			144				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	476	0.040	19	0.1	0.0	7.877	A
C-AB	3	0.67	653	0.004	3	0.0	0.0	5.541	A
C-A	102	25			102				
A-B	5	1			5				
A-C	120	30			120				

2027, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.31	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2027	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	292	100.000
B		ONE HOUR	✓	10	100.000
C		ONE HOUR	✓	104	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	16	276
	B	7	0	3
	C	98	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.03	8.54	0.0	A	9	14
C-AB	0.01	5.97	0.0	A	6	10
C-A					89	133
A-B					15	22
A-C					253	380

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	2	460	0.016	7	0.0	0.0	7.953	A
C-AB	5	1	611	0.008	5	0.0	0.0	5.941	A
C-A	73	18			73				
A-B	12	3			12				
A-C	208	52			208				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	2	448	0.020	9	0.0	0.0	8.192	A
C-AB	6	2	611	0.010	6	0.0	0.0	5.953	A
C-A	87	22			87				
A-B	14	4			14				
A-C	248	62			248				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	432	0.025	11	0.0	0.0	8.545	A
C-AB	8	2	612	0.013	8	0.0	0.0	5.968	A
C-A	106	27			106				
A-B	18	4			18				
A-C	304	76			304				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	432	0.025	11	0.0	0.0	8.545	A
C-AB	8	2	612	0.013	8	0.0	0.0	5.969	A
C-A	106	27			106				
A-B	18	4			18				
A-C	304	76			304				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	2	448	0.020	9	0.0	0.0	8.193	A
C-AB	6	2	611	0.010	6	0.0	0.0	5.954	A
C-A	87	22			87				
A-B	14	4			14				
A-C	248	62			248				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	2	460	0.016	8	0.0	0.0	7.956	A
C-AB	5	1	611	0.008	5	0.0	0.0	5.941	A
C-A	73	18			73				
A-B	12	3			12				
A-C	208	52			208				

2031, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.67	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2031	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	175	100.000
B		ONE HOUR	✓	25	100.000
C		ONE HOUR	✓	145	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	7	168
	B	18	0	7
	C	142	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.06	8.45	0.1	A	23	34
C-AB	0.01	5.53	0.0	A	3	5
C-A					130	194
A-B					6	10
A-C					154	231

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	474	0.040	19	0.0	0.0	7.905	A
C-AB	3	0.67	654	0.004	3	0.0	0.0	5.525	A
C-A	106	27			106				
A-B	5	1			5				
A-C	126	32			126				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	6	465	0.048	22	0.0	0.1	8.127	A
C-AB	3	0.84	663	0.005	3	0.0	0.0	5.461	A
C-A	127	32			127				
A-B	6	2			6				
A-C	151	38			151				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	7	454	0.061	27	0.1	0.1	8.446	A
C-AB	4	1	674	0.006	4	0.0	0.0	5.374	A
C-A	155	39			155				
A-B	8	2			8				
A-C	185	46			185				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	7	454	0.061	28	0.1	0.1	8.447	A
C-AB	4	1	674	0.006	4	0.0	0.0	5.376	A
C-A	155	39			155				
A-B	8	2			8				
A-C	185	46			185				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	6	465	0.048	23	0.1	0.1	8.130	A
C-AB	3	0.84	663	0.005	3	0.0	0.0	5.462	A
C-A	127	32			127				
A-B	6	2			6				
A-C	151	38			151				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	474	0.040	19	0.1	0.0	7.913	A
C-AB	3	0.68	654	0.004	3	0.0	0.0	5.527	A
C-A	106	27			106				
A-B	5	1			5				
A-C	126	32			126				

2031, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.30	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2031	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	305	100.000
B		ONE HOUR	✓	10	100.000
C		ONE HOUR	✓	109	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	16	289
	B	7	0	3
	C	103	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.03	8.63	0.0	A	9	14
C-AB	0.01	5.96	0.0	A	7	10
C-A					93	140
A-B					15	22
A-C					265	398

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	2	457	0.016	7	0.0	0.0	8.001	A
C-AB	5	1	612	0.008	5	0.0	0.0	5.938	A
C-A	77	19			77				
A-B	12	3			12				
A-C	218	54			218				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	2	445	0.020	9	0.0	0.0	8.253	A
C-AB	6	2	612	0.010	6	0.0	0.0	5.949	A
C-A	92	23			92				
A-B	14	4			14				
A-C	260	65			260				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	428	0.026	11	0.0	0.0	8.628	A
C-AB	8	2	612	0.013	8	0.0	0.0	5.963	A
C-A	112	28			112				
A-B	18	4			18				
A-C	318	80			318				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	428	0.026	11	0.0	0.0	8.628	A
C-AB	8	2	612	0.013	8	0.0	0.0	5.964	A
C-A	112	28			112				
A-B	18	4			18				
A-C	318	80			318				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	2	445	0.020	9	0.0	0.0	8.254	A
C-AB	6	2	612	0.010	6	0.0	0.0	5.951	A
C-A	92	23			92				
A-B	14	4			14				
A-C	260	65			260				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	2	457	0.016	8	0.0	0.0	8.004	A
C-AB	5	1	612	0.008	5	0.0	0.0	5.941	A
C-A	77	19			77				
A-B	12	3			12				
A-C	218	54			218				

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