

## TN3 Supplementary Highways Statement

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**Project Number:** T19562

**Project:** Land North of Camp Road, Heyford Park

**Title:** Response to David Frisby Rebuttal

**Date:** 29<sup>th</sup> November 2023

**Prepared By:** James Parker

**Revision:** A

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### Background

- 1.1 This Supplementary Highways Statement sets out a response following receipt of the Highways Rebuttal provided by David Frisby regarding Land North of Camp Road, Heyford Park (Appeal ref. APP/C3105/W23/3326761).
- 1.2 The analysis included within this note is provided as a direct response to Table DJF 010: Summary of build trajectory and impact triggers, included on page 16 of Mr Frisby's rebuttal.
- 1.3 In addition, I have also taken into account the build trajectory Mr Frisby appends to his rebuttal at Appendix J.
- 1.4 It is important to note that I have only been able to provide this additional statement now, on the basis that Mr Frisby's rebuttal was the first time that he had provided the Dorchester Land (DL) Hybrid application build trajectory in evidence, which includes both the residential and employment trajectory.
- 1.5 Therefore, this is the first opportunity that I have had to be able to provide any analysis of that information in relation to the Appeal site.
- 1.6 I am currently seeking to agreed common ground with Mr Frisby, but it is apparent from his rebuttal that the issues between us have narrowed significantly since the preparation of our proofs of evidence.
- 1.7 My understanding from his rebuttal is that Mr Frisby accepts that the impact of the Appeal site on its own is acceptable, i.e. without PV5 and the associated mitigation; and that the impact of the Appeal site with PV5 and the associated mitigation is also acceptable.
- 1.8 Therefore, it appears that Mr Frisby takes issue with the Appeal site traffic impact at only three junctions, for a limited time period, and over for a very short timeframe.
- 1.9 I also provide a short response to the other issue raised in Mr Frisby's rebuttal, primarily to clarify the position.

### Additional Junction Modelling

- 1.10 At Table DJF 010, Mr Frisby sets out that three junctions – Chilgrove Drive, B430/Minor Road and Ardley/Bucknell – will be over capacity for a period of between 12 and 18 months, prior to the agreed S278 packages coming forward as part of the DL Hybrid application in 2028.

## TN3 Supplementary Highways Statement

1.11 This is shown below:

Table DJF 010: Summary of build trajectory and impact triggers

Package	DL Commitment date	Richborough date	Comments
Chilgrove Drive (Package A)	2028	2027	Over capacity for 1 year
B430/Minor Road (Package C)	2028	2026/2027	Over capacity for 18 months
Ardley/Bucknell (Package D)	2028	2026/2027	Over capacity for 18 months
Hopcrofts Holt (Package E)	2028	2028	No impact

1.12 Table DJF 010 also indicates that there will be no issues with the impact of the Appeal site at the Hopcrofts Holt junction prior to the agreed S278 package for that junction (Package E) coming forward.

1.13 However, in respect of the first three junctions in the table, Mr Frisby has stated that they will be “*over capacity*”, but has not sought to demonstrate that this will be the case; there is no capacity analysis provided within his rebuttal, but rather just the following statement:

### 4.3 Highway Impacts

4.3.1 As it can be seen from the above, the introduction of Richborough, should the Appeal be allowed, will mean that S278 packages A, C and D will need to come forward 12 to 18 months in advance of when they are currently forecast to be delivered.

4.3.2 If they do not, then it is reasonable to conclude that for that period, of between 12 to 18 months, the impact on the highway network will be considered “severe” as that is the point when Oxfordshire County Council have previously concluded that the mitigation should be implemented to ensure that the network continues to operate satisfactorily.

1.14 Therefore, I have prepared additional analysis for the first three junctions, using the same junction modelling parameters as that provided within my own Proof of Evidence to the Inquiry (CD E16); Mr Frisby did not take issue with the modelling provided in my evidence within his rebuttal.

1.15 In order to understand the impact of the Appeal site in 2026 and 2027, i.e. prior to the introduction of the S278 mitigation packages in 2028, I have utilised Mr Frisby’s build trajectory provided as Appendix J to his rebuttal.

1.16 In particular, I have taken into account the table entitled ‘Heyford Park Annual Trips’.

1.17 This table indicates that in 2026 there will be an additional 355 trips on the highway network from the PV5 residential development up to that point.

## TN3 Supplementary Highways Statement

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- 1.18 In 2027, the table indicates there will be an additional 777 trips on the highway network; of these trips, 485 relate to PV5 residential development, and 292 relate to PV5 employment development (B1/B2/B8).
- 1.19 In order to determine how many of the above PV5 trips pass through the three junctions in question, I have utilised the traffic assignment from the PBA TA report that supported the DL Hybrid application (Table 6.17 of Core Document L3).
- 1.20 Taking the above assignments and applying them to the trips for each of the residential and employment uses for PV5, results in the following additional vehicle trips through the three junctions in the AM peak hour:
- Chilgrove Drive (Package A):
    - 2026 (residential only): Inbound = 61; Outbound = 181
    - 2027 (residential and employment): Inbound = 249; Outbound = 277
  - B430/Minor Road (Package C):
    - 2026 (residential only): Inbound = 37; Outbound = 112
    - 2027 (residential and employment): Inbound = 161; Outbound = 172
  - B430/Ardley Road (Package D):
    - 2026 (residential only): Inbound = 37; Outbound = 112
    - 2027 (residential and employment): Inbound = 161; Outbound = 172
- 1.21 I have only assessed the AM peak hour as this is the basis upon which the trigger formula is derived, as set out in Mr Frisby's Appendix J to his rebuttal, and also as set out by OCC in their Regulation 122 Compliance Statement at paragraph 5.2.3 (CD E28) as shown below:
- 5.2.3 For the smaller application sites within PV5, it has been agreed that they should make a proportionate financial contribution. With the exception of the public transport contribution, which is based proportionately on dwellings, the contribution amounts have been calculated on a trip generation basis, taking into account the employment element of PV5, by predicting the expected morning peak hour vehicle trip generation for each site (it is the morning peak that creates most pressure on the network).*
- 1.22 The traffic flow diagrams for these three junctions are provided as **Appendix A** to this note; these set out the following:
- 2026 Base flows;
  - 2027 Base flows;
  - 2026 PV5 flows;
  - 2027 PV5 flows;
  - 2026 Appeal site flows (50 dwellings);
  - 2027 Appeal site flows (100 dwellings);
  - 2026 Base + PV5 flows;
  - 2027 Base + PV5 flows;

## TN3 Supplementary Highways Statement

- 2026 Base + PV5 + Appeal site flows;
- 2027 Base + PV5 + Appeal site flows.

1.23 It is worth noting that the Appeal site flows assumed above, whilst being the same as those I provided in my Proof of Evidence, are higher than the build rate set out in Mr Frisby's Appendix J to his rebuttal, as he has assumed 40 dwellings per annum; therefore, my assumed build trajectory for the appeal site is considered to be robust.

1.24 In addition, it is also worth noting that the build rates for PV5 set out in Mr Frisby's Appendix J are higher than those set out in the Cherwell District Council (CDC) Annual Monitoring Report 2023 (dated December 2023); therefore, the testing undertaken within this note is considered to represent a robust assessment of these junctions in both 2026 and 2027, prior to the S278 mitigation packages being delivered in 2028.

1.25 The results of the assessment work are set out below for each junction.

### Camp Road/Chilgrove Drive

1.26 The results for the Camp Road/Chilgrove Drive junction are shown in the table below and the modelling outputs are provided as **Appendix B** to this note.

Approach	AM Peak 08:00-09:00		
	RFC	Queue	Delay (s)
<b>2026 Base + PV5 (DL)</b>			
Unnamed Road (E) RT	0.52	1	17
Unnamed Road (E) LT	0.14	0	9
Camp Road (S) RT	0.08	0	6
<b>2026 Base + PV5 (DL) + 50 dwellings</b>			
Unnamed Road (E) RT	0.53	1	18
Unnamed Road (E) LT	0.14	0	9
Camp Road (S) RT	0.08	0	6
<b>2027 Base + PV5 (DL)</b>			
Unnamed Road (E) RT	0.87	6	60
Unnamed Road (E) LT	0.41	1	37
Camp Road (S) RT	0.09	0	6
<b>2027 Base + PV5 (DL) + 100 dwellings</b>			
Unnamed Road (E) RT	0.90	7	72
Unnamed Road (E) LT	0.57	1	66
Camp Road (S) RT	0.09	0	6

1.27 The results of the analysis show that the addition of the 50 dwellings in 2026 and the 100 dwellings in 2027 make a negligible difference to the operation of the Camp Road/Chilgrove Drive junction in the AM peak hour.



## TN3 Supplementary Highways Statement

- 1.28 Only one approach arm will operate above practical capacity in the AM peak hour, but will remain well below theoretical capacity, with an RFC of 0.90, and a negligible increase in queue and delay of 1 PCU and 12 seconds respectively.
- 1.29 It is worth noting that, whilst I do not agree with the assessment methodology (as I set out in my own rebuttal statement), Mr Frisby's own evidence at paragraph 3.3.4 sets out his position in respect of this junction:
- 3.3.4 It is generally accepted that RFC of 0.90 or Deg Sat of 90% are the threshold for junctions to be operating satisfactorily; with increases in traffic flow beyond this point having a detrimental impact on the efficiency of flow through a junction, in fact beyond this point the reliability of the model's outputs significantly diminishes.
- 1.30 As such, based on Mr Frisby's own evidence to this Inquiry, the Camp Road junction with Chilgrove Drive/Unnamed Road is operating satisfactorily with both the DL/PV5 development and the Appeal site.
- 1.31 It should also be noted that the RFC of 0.90 occurs only for one 15-minute period within the 90-minute period AM peak modelled, as shown on page 14 of **Appendix B**.
- 1.32 It is also worth reiterating that this is a worst-case assessment of the junction, combining the higher PV5 build rate set out in Mr Frisby's rebuttal (compared to CDC's projected build rates), with a higher build rate of 50 dwellings per annum for the Appeal site.
- 1.33 On the basis of the above analysis, I do not agree that the junction impacts are sufficient to warrant a Grampian condition preventing the Appeal site from coming forward until the Package A S278 works are complete; any impacts that do occur are not only negligible, but they occur along only one approach to this junction, for only a limited part of the AM peak period.

### *B430/Unnamed Road*

- 1.34 The results for the B430/Unnamed Road junction are shown in the table below and the modelling outputs are provided as **Appendix C** to this note.

Approach	AM Peak 08:00-09:00		
	RFC	Queue	Delay (s)
<b>2026 Base + PV5 (DL)</b>			
Unnamed Road LT	0.49	1	10
Unnamed Road RT	0.02	0	14
B430 (N) RT	0.42	1	9
<b>2026 Base + PV5 (DL) + 50 Dwellings</b>			
Unnamed Road LT	0.50	1	11
Unnamed Road RT	0.02	0	14
B430 (N) RT	0.42	1	9

## TN3 Supplementary Highways Statement

2027 Base + PV5 (DL)			
Unnamed Road LT	0.58	2	13
Unnamed Road RT	0.02	0	18
B430 (N) RT	0.59	2	13
2027 Base + PV5 (DL) + 100 Dwellings			
Unnamed Road LT	0.61	2	14
Unnamed Road RT	0.02	0	18
B430 (N) RT	0.60	2	13

- 1.35 The results of the analysis show that the addition of the 50 dwellings in 2026 and the 100 dwellings in 2027 make a negligible difference to the operation of the B430/Unnamed Road junction in the AM peak hour.
- 1.36 Again, it is worth reiterating that this is a worst-case assessment of the junction, combining the higher PV5 build rate set out in Mr Frisby's rebuttal (compared to CDC's projected build rates), with a higher build rate of 50 dwellings per annum for the Appeal site.
- 1.37 On the basis of the above analysis, I do not agree that the junction impacts are sufficient to warrant a Grampian condition preventing the Appeal site from coming forward until the Package C S278 works are complete.

### B430/Ardley Road

- 1.38 The results for the B430/Ardley Road junction are shown in the table below and the modelling outputs are provided as **Appendix D** to this note.

Approach	AM Peak 08:00-09:00		
	RFC	Queue	Delay (s)
2026 Base + PV5 (DL)			
Ardley Road (E) RT	0.49	1	29
Ardley Road (E) LT	0.23	0	11
B430 (N) RT	0.07	0	9
Ardley Road (W) RT	0.37	1	21
Ardley Road (W) LT	0.07	0	7
B430 (S) RT	0.31	1	7
2026 Base + PV5 (DL) + 50 Dwellings			
Ardley Road (E) RT	0.50	1	29
Ardley Road (E) LT	0.23	0	11
B430 (N) RT	0.07	0	9
Ardley Road (W) RT	0.38	1	21
Ardley Road (W) LT	0.07	0	7
B430 (S) RT	0.32	1	7

## TN3 Supplementary Highways Statement

2027 Base + PV5 (DL)			
Ardley Road (E) RT	0.61	2	45
Ardley Road (E) LT	0.29	0	14
B430 (N) RT	0.08	0	10
Ardley Road (W) RT	0.44	1	26
Ardley Road (W) LT	0.07	0	7
B430 (S) RT	0.38	2	7
2027 Base + PV5 (DL) + 100 Dwellings			
Ardley Road (E) RT	0.62	2	48
Ardley Road (E) LT	0.30	0	14
B430 (N) RT	0.08	0	10
Ardley Road (W) RT	0.45	1	28
Ardley Road (W) LT	0.07	0	8
B430 (S) RT	0.39	2	7

- 1.39 The results of the analysis show that the addition of the 50 dwellings in 2026 and the 100 dwellings in 2027 make a negligible difference to the operation of the B430/Unnamed Road junction in the AM peak hour.
- 1.40 As with the other two junctions, it is worth reiterating that this is a worst-case assessment of the junction, combining the higher PV5 build rate set out in Mr Frisby's rebuttal (compared to CDC's projected build rates), with a higher build rate of 50 dwellings per annum for the Appeal site.
- 1.41 On the basis of the above analysis, I do not agree that the junction impacts are sufficient to warrant a Grampian condition preventing the Appeal site from coming forward until the Package D S278 works are complete.

### Other Issues

- 1.42 As set out at the start of this supplementary statement, I can also provide some further clarification regarding the remaining issue raised in Mr Frisby's rebuttal.
- 1.43 In respect of the pedestrian and cycle connectivity through the hedgerows to the east and west of the site, a letter has been prepared by Ramm Sanderson addressing the impacts of this provision.
- 1.44 In addition, I have received a copy of a letter from David Wilson Homes Southern confirming that the Appeal site will be connected to the west into the adjacent development site (and vice-versa).
- 1.45 These letters are provided as **Appendix E**.
- 1.46 I do not provide any further comment on these issues other than my understanding of the content of those two letters being that they confirm that these connections are deliverable.

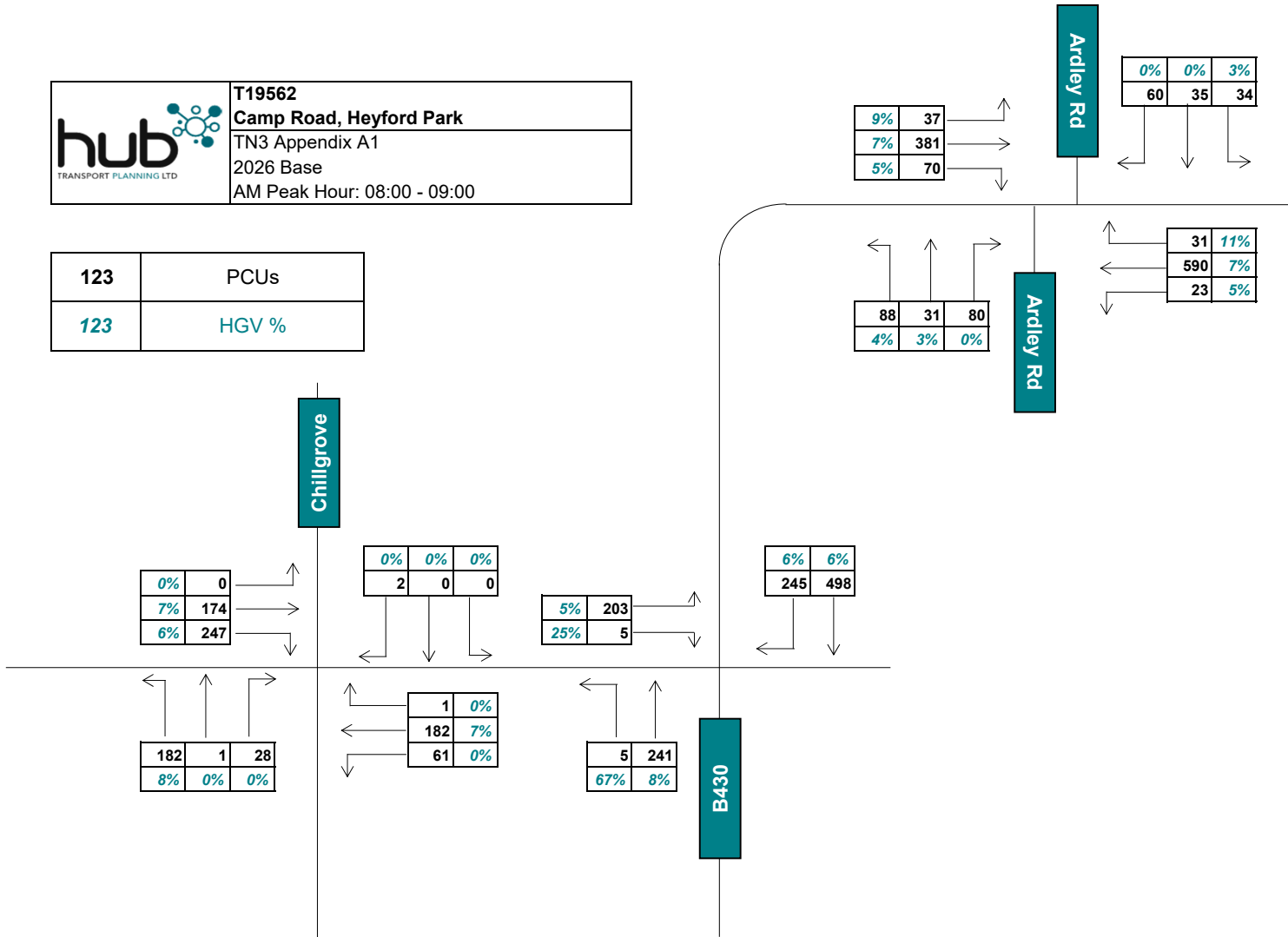
## Appendix A

### Traffic Flow Diagrams



**T19562**  
**Camp Road, Heyford Park**  
 TN3 Appendix A1  
 2026 Base  
 AM Peak Hour: 08:00 - 09:00

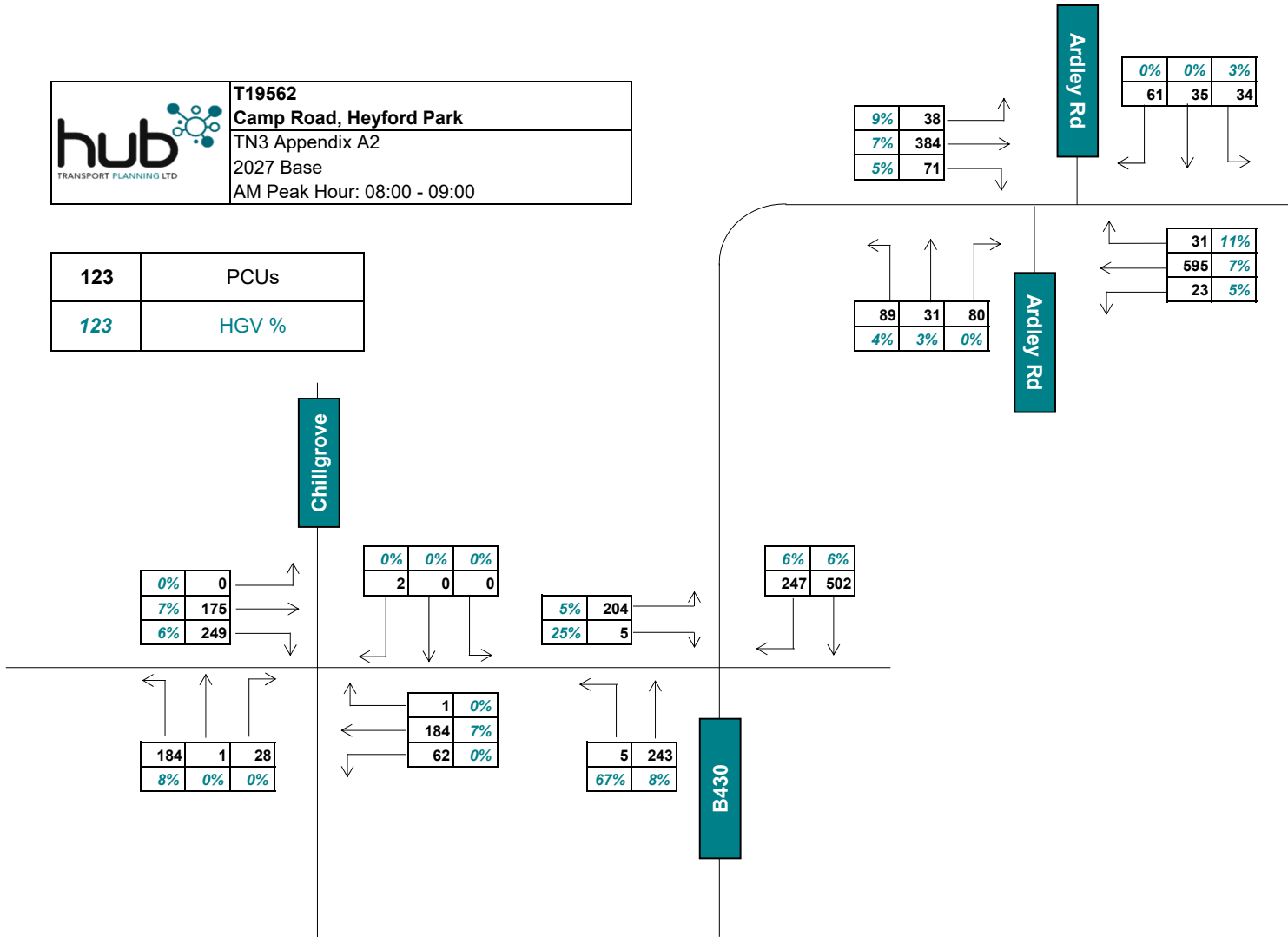
123	PCUs
123	HGV %





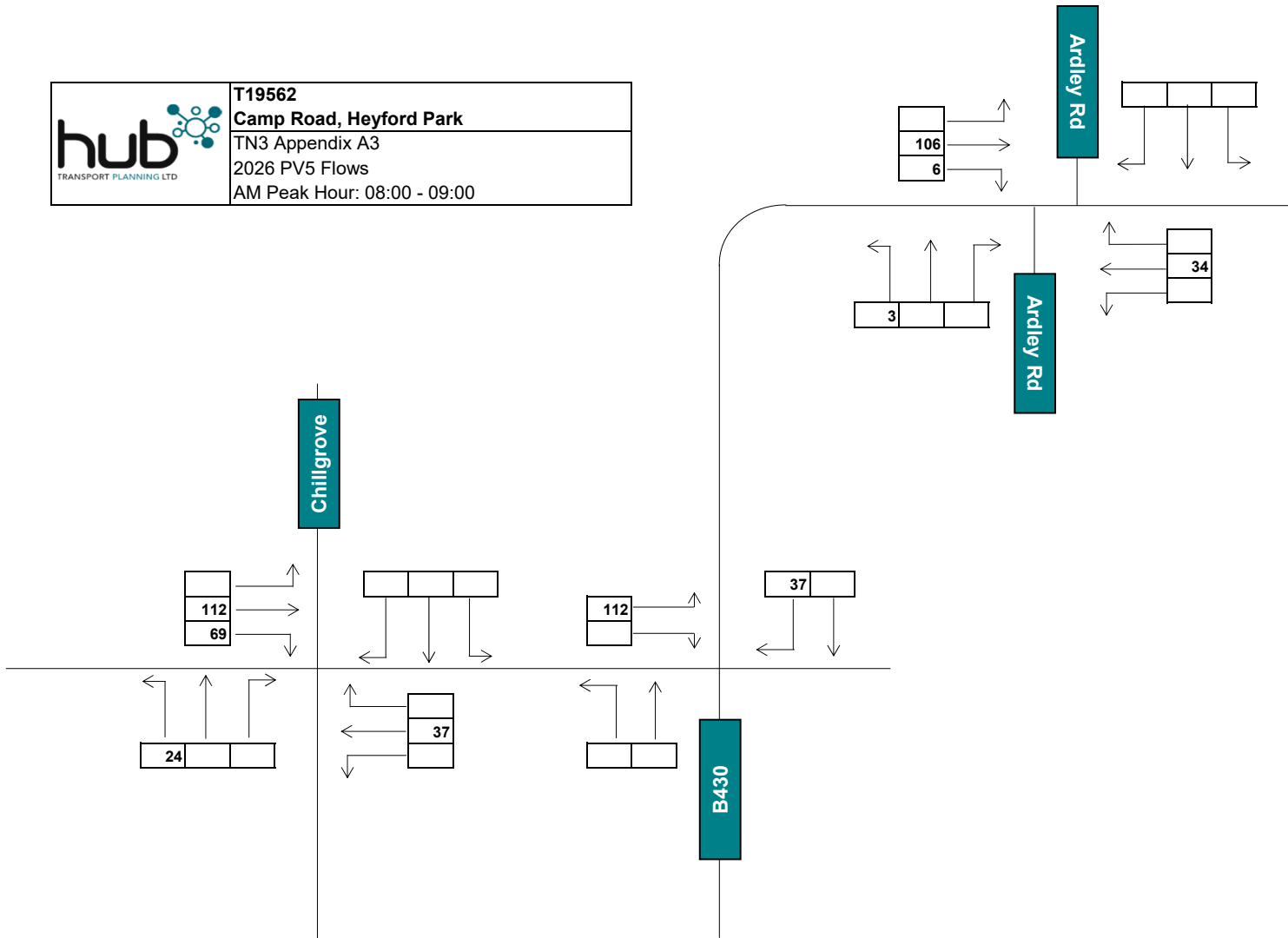
**T19562**  
**Camp Road, Heyford Park**  
 TN3 Appendix A2  
 2027 Base  
 AM Peak Hour: 08:00 - 09:00

123	PCUs
123	HGV %



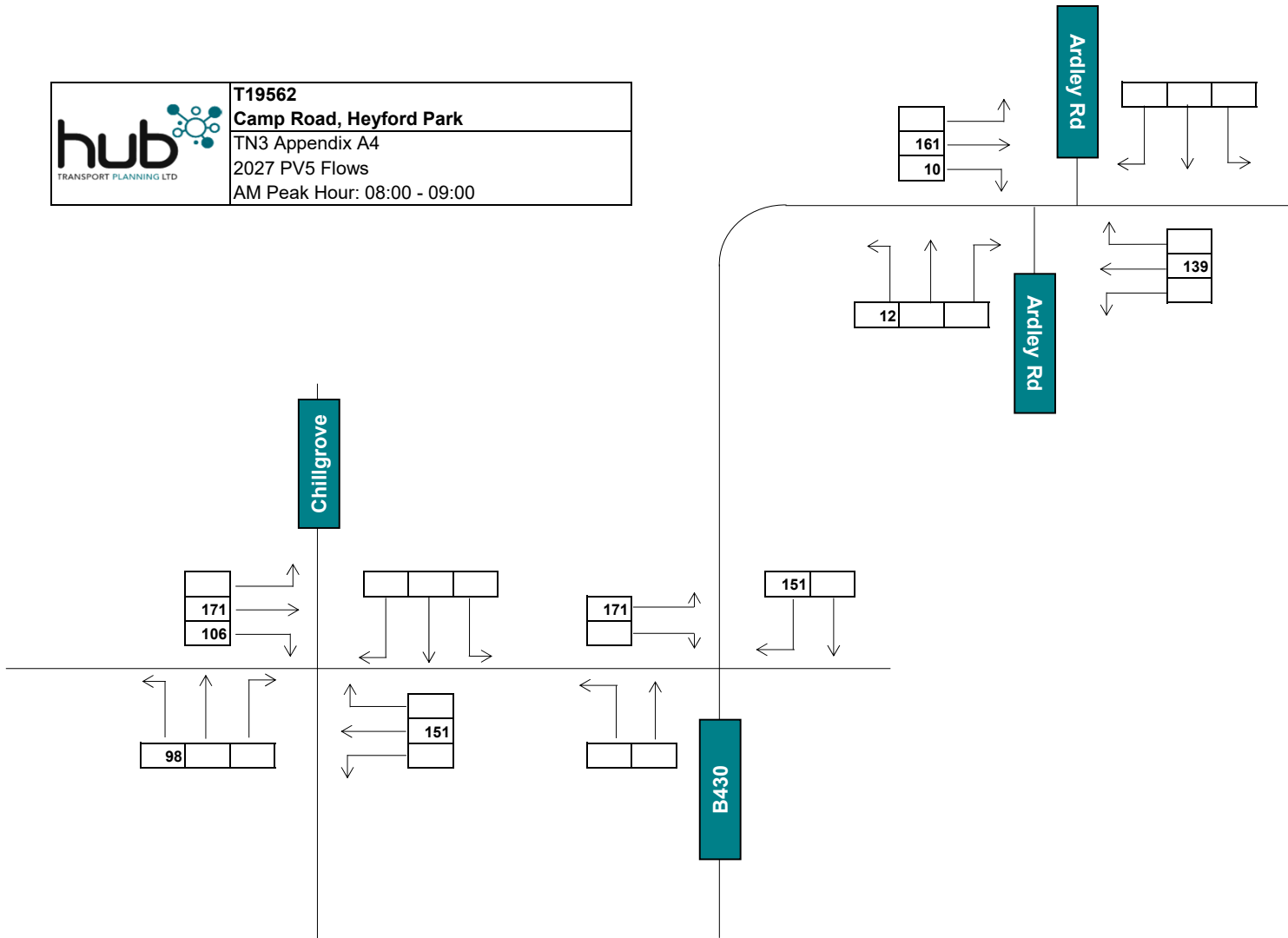


**T19562**  
**Camp Road, Heyford Park**  
TN3 Appendix A3  
2026 PV5 Flows  
AM Peak Hour: 08:00 - 09:00





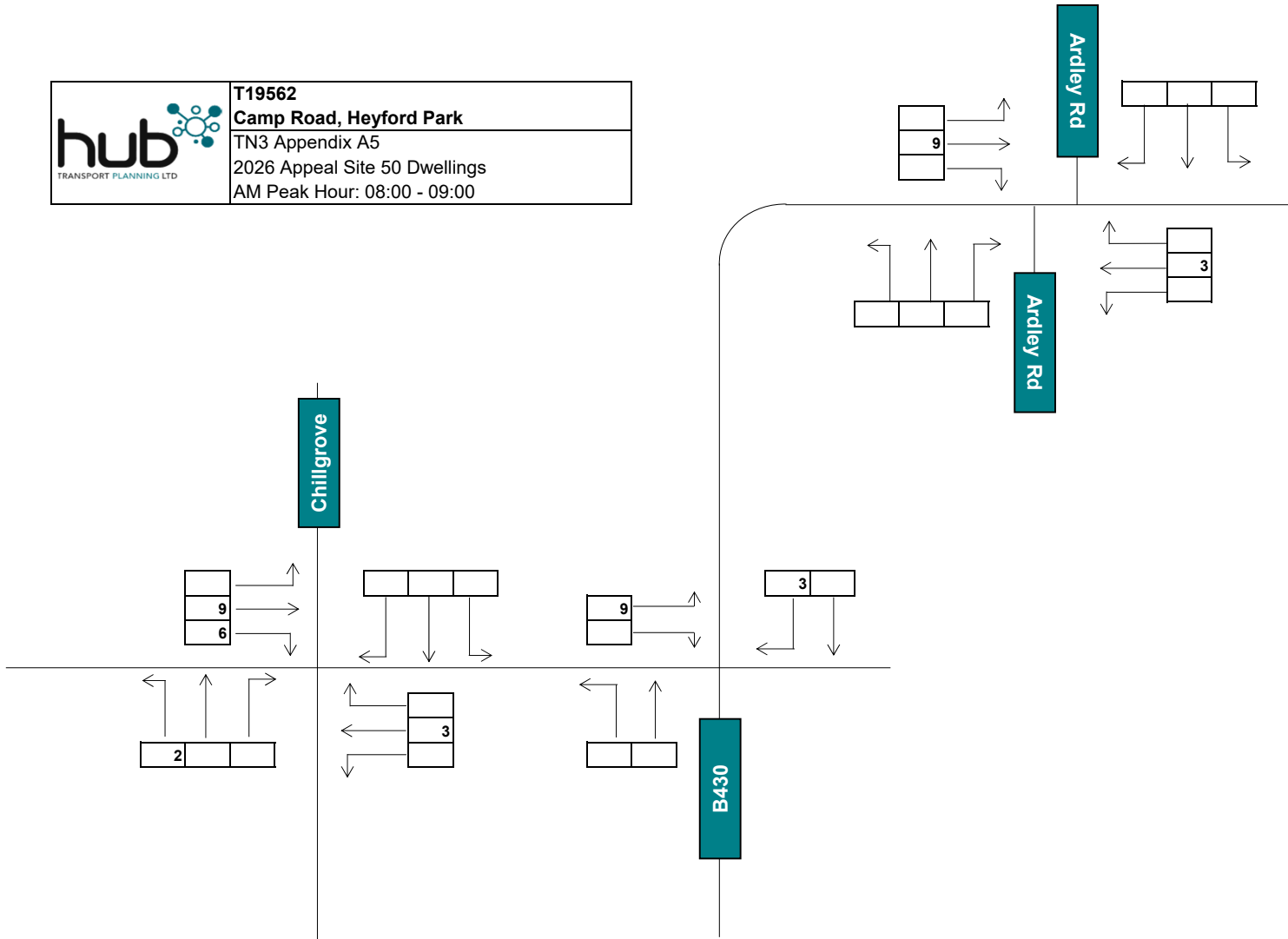
**T19562**  
**Camp Road, Heyford Park**  
TN3 Appendix A4  
2027 PV5 Flows  
AM Peak Hour: 08:00 - 09:00





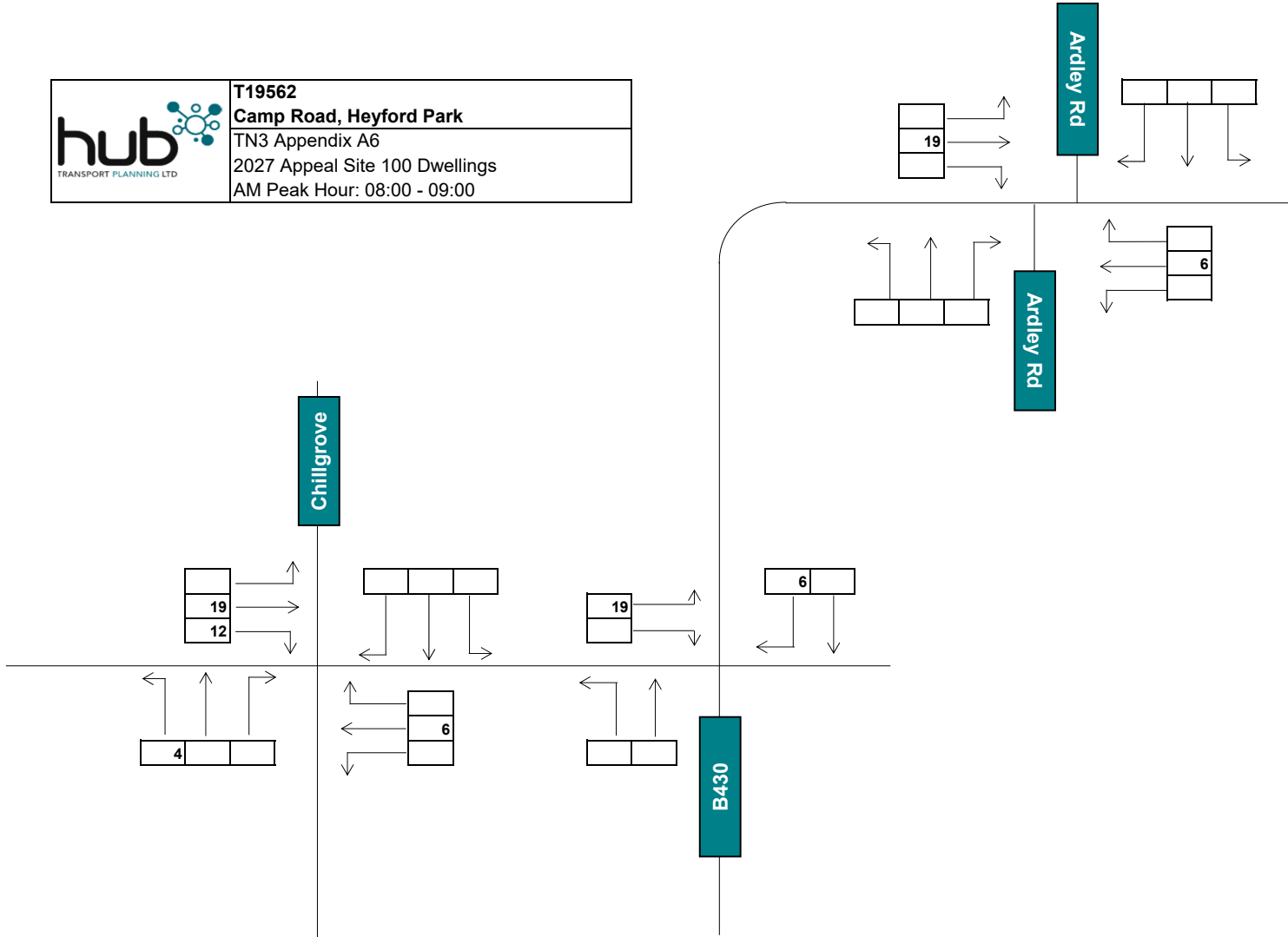


**T19562**  
**Camp Road, Heyford Park**  
TN3 Appendix A5  
2026 Appeal Site 50 Dwellings  
AM Peak Hour: 08:00 - 09:00





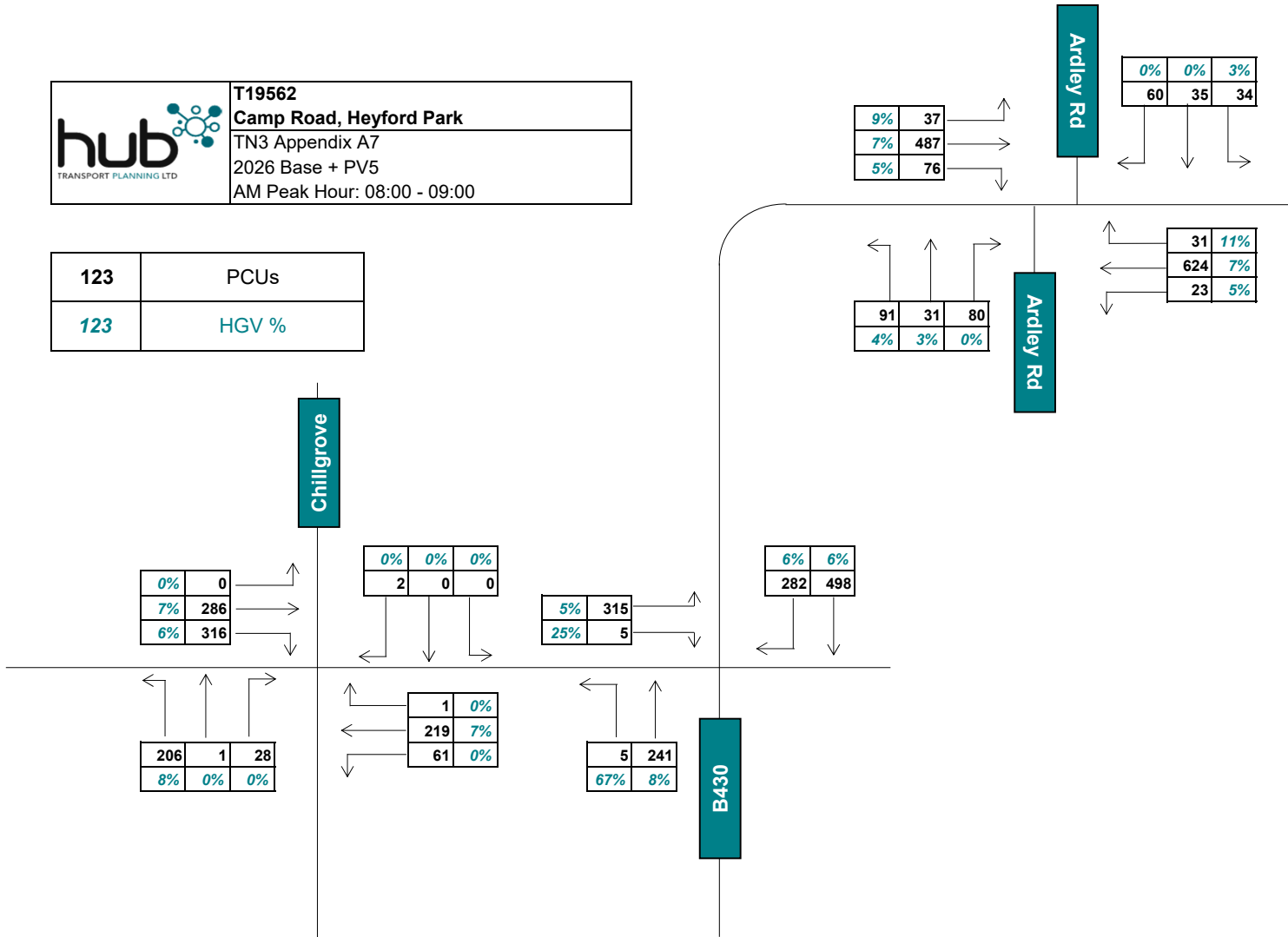
**T19562**  
**Camp Road, Heyford Park**  
TN3 Appendix A6  
2027 Appeal Site 100 Dwellings  
AM Peak Hour: 08:00 - 09:00





**T19562**  
**Camp Road, Heyford Park**  
 TN3 Appendix A7  
 2026 Base + PV5  
 AM Peak Hour: 08:00 - 09:00

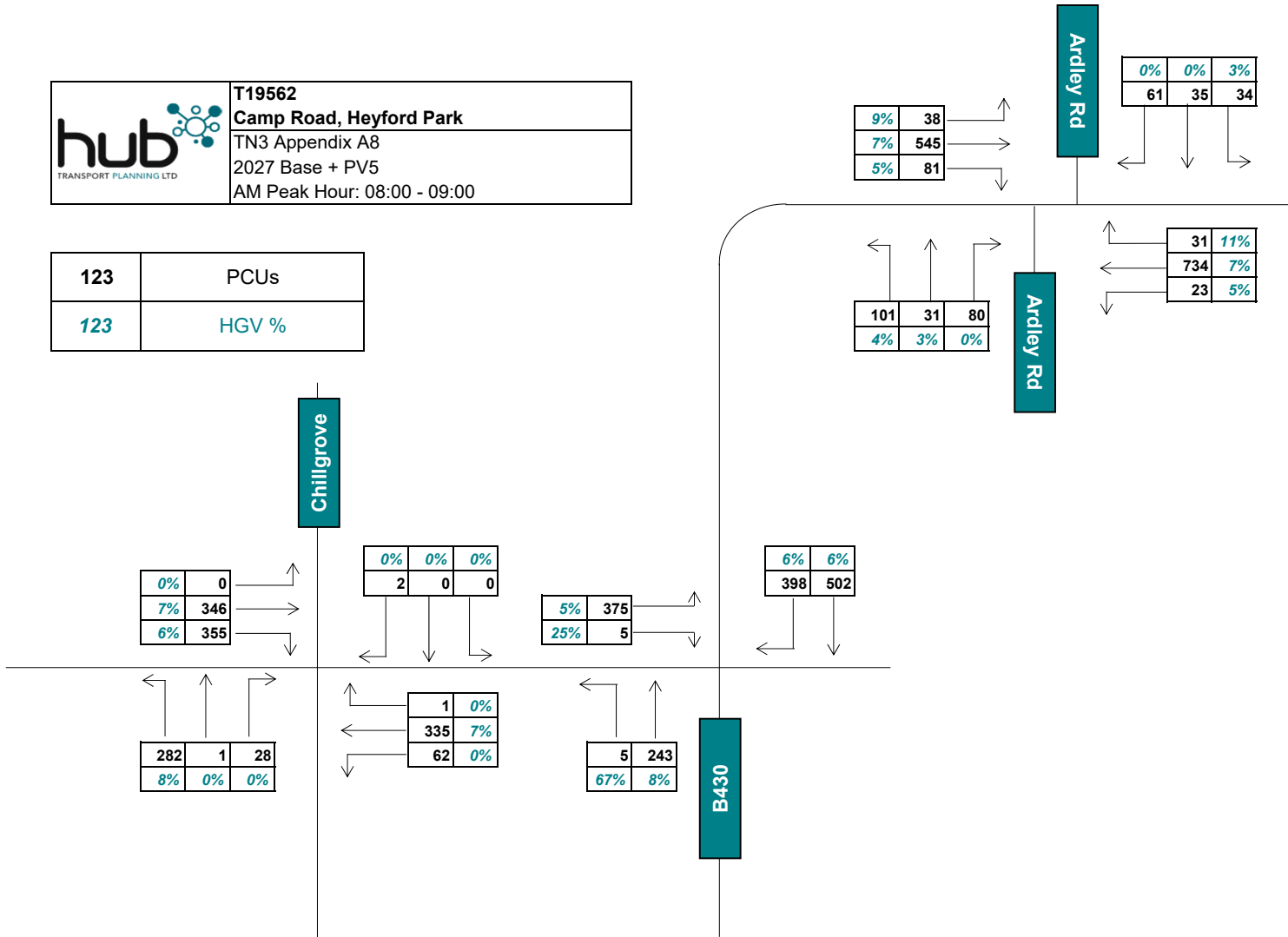
123	PCUs
123	HGV %





**T19562**  
**Camp Road, Heyford Park**  
 TN3 Appendix A8  
 2027 Base + PV5  
 AM Peak Hour: 08:00 - 09:00

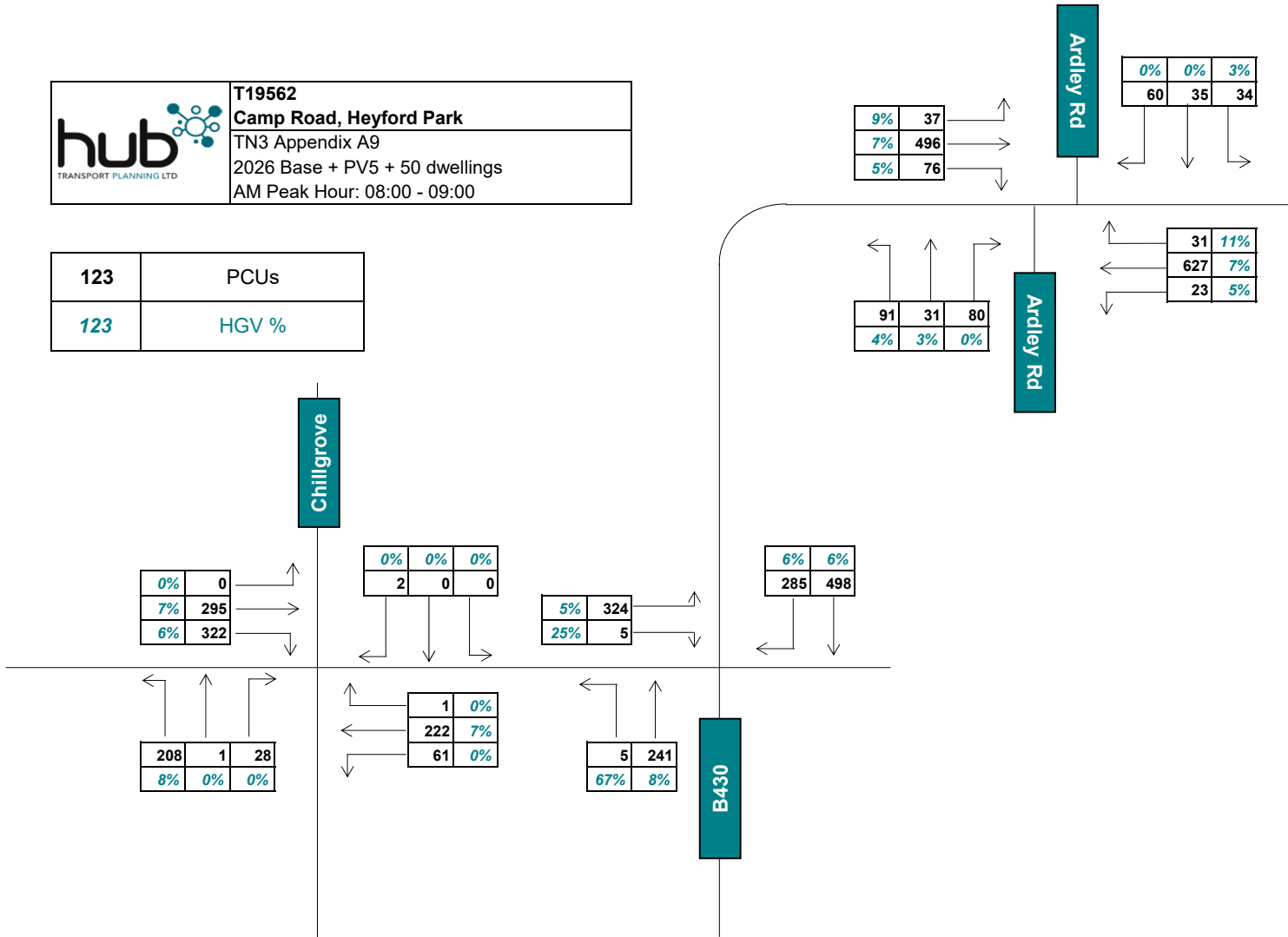
123	PCUs
123	HGV %





**T19562**  
**Camp Road, Heyford Park**  
 TN3 Appendix A9  
 2026 Base + PV5 + 50 dwellings  
 AM Peak Hour: 08:00 - 09:00

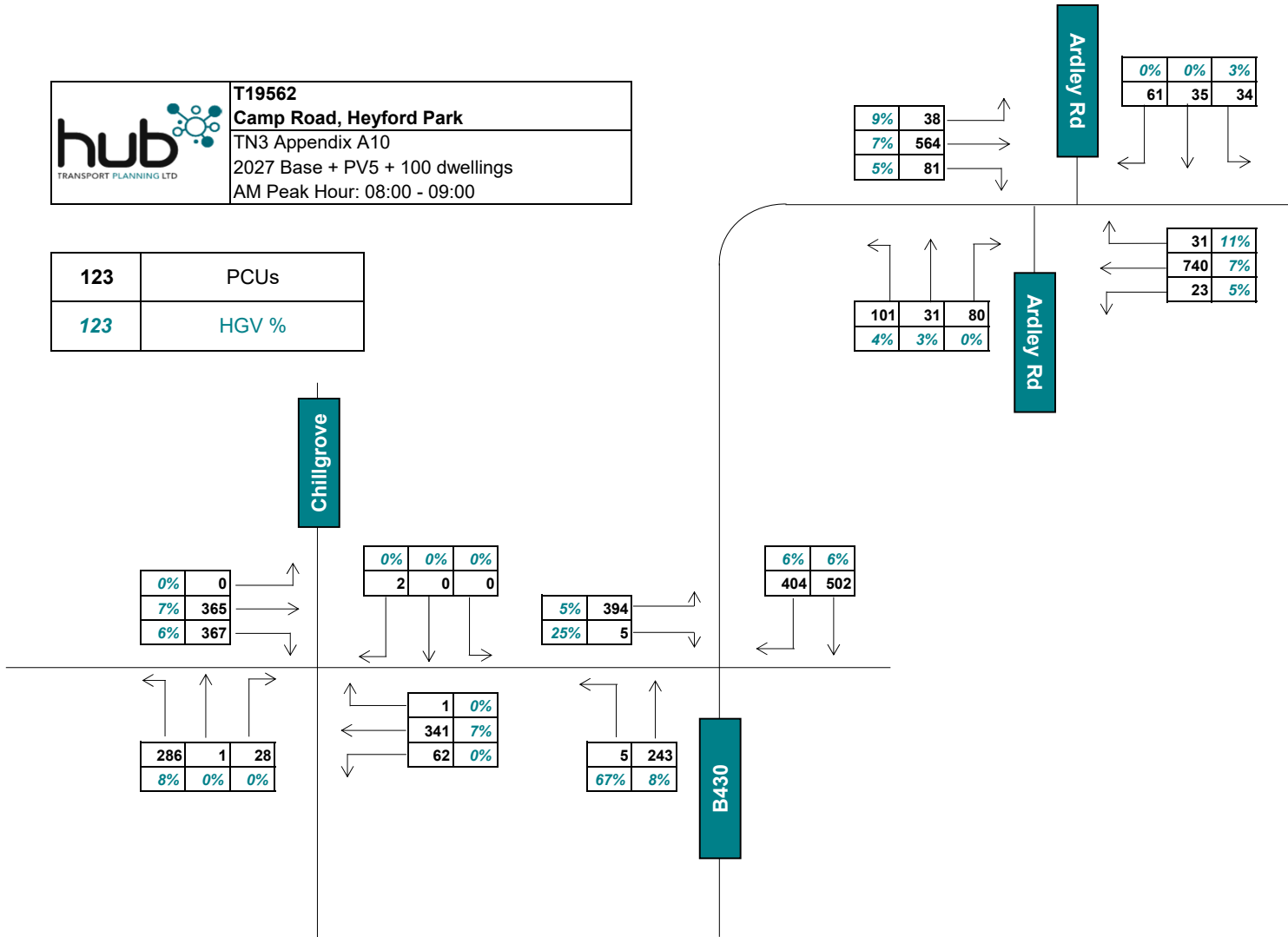
123	PCUs
123	HGV %





**T19562**  
**Camp Road, Heyford Park**  
 TN3 Appendix A10  
 2027 Base + PV5 + 100 dwellings  
 AM Peak Hour: 08:00 - 09:00

123	PCUs
123	HGV %



## **Appendix B**

### **Junctions 10 Output Chilgrove Drive**

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.1.0.1820 © Copyright TRL Software Limited, 2023
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

**Filename:** T19562 - Camp Rd-Chilgrove Drive Priority with DL Test.j10  
**Path:** C:\Users\JamesParker\Hub Transport Planning Ltd\Hub Transport Planning - General\Projects\2019\T19562 Heyford Park\Junction Assessments\Picady\With DL Build-Out Test  
**Report generation date:** 27/11/2023 18:09:46

- »2026 + DL, AM
- »2026 + DL + 50dw, AM
- »2027 + DL, AM
- »2027 + DL + 100dw, AM

**Summary of junction performance**

AM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
2026 + DL						
Stream B-A	D3	1.1	17.26	0.52	C	4.11
Stream C-AB		0.1	6.33	0.08	A	
Stream B-C		0.2	8.53	0.14	A	
2026 + DL + 50dw						
Stream B-A	D5	1.2	17.81	0.53	C	4.21
Stream C-AB		0.2	6.35	0.08	A	
Stream B-C		0.2	8.73	0.14	A	
2027 + DL						
Stream B-A	D7	5.7	59.71	0.87	F	16.08
Stream C-AB		0.2	6.06	0.09	A	
Stream B-C		0.7	36.59	0.41	E	
2027 + DL + 100dw						
Stream B-A	D9	7.0	72.49	0.90	F	20.14
Stream C-AB		0.2	6.11	0.09	A	
Stream B-C		1.2	65.75	0.57	F	

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.*



## File summary

### File Description

Title	Camp Road/Chilgrove Drive Priority
Location	Heyford Park
Site number	
Date	28/11/2023
Version	
Status	(new file)
Identifier	
Client	Richborough/Lonestar
Jobnumber	T19582
Enumerator	James Parker
Description	Updated Test to include DL Build Trajectory

### 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	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	38.00	20.00		500

### 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
D3	2026 + DL	AM	ONE HOUR	07:45	09:15	15	✓
D5	2026 + DL + 50dw	AM	ONE HOUR	07:45	09:15	15	✓
D7	2027 + DL	AM	ONE HOUR	07:45	09:15	15	✓
D9	2027 + DL + 100dw	AM	ONE HOUR	07:45	09:15	15	✓

### Analysis Set Details

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

# 2026 + DL, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Camp Road/Chilgrove	T-Junction	Two-way	Two-way	Two-way		4.11	A

### Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.11	A

## Arms

### Arms

Arm	Name	Description	Arm type
A	Camp Road (W)		Major
B	Unnamed Road (E)		Minor
C	Camp Road (S)		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.20			90.0	✓	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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	5.90	4.00	3.40	3.10	✓	1.00	30	249

## 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	672	0.121	0.307	0.193	0.438
B-C	791	0.120	0.304	-	-
C-B	626	0.240	0.240	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2026 + DL	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	602	100.000
B		ONE HOUR	✓	282	100.000
C		ONE HOUR	✓	235	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To		
	A	B	C
A	0	285	316
B	221	0	61
C	206	29	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

From	To		
	A	B	C
A	0	7	6
B	7	0	0
C	8	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-A	0.52	17.26	1.1	C	203	304
C-A					177	285
C-AB	0.08	6.33	0.1	A	39	58
A-B					282	394
A-C					290	435
B-C	0.14	8.53	0.2	A	56	84

### 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-A	166	42	533	0.312	164	0.0	0.5	10.407	B
C-A	148	37			148				
C-AB	29	7	628	0.046	29	0.0	0.1	6.122	A
A-B	215	54			215				
A-C	238	59			238				
B-C	46	11	622	0.074	46	0.0	0.1	6.242	A

#### 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-A	199	50	505	0.393	198	0.5	0.7	12.498	B
C-A	174	44			174				
C-AB	37	9	630	0.059	37	0.1	0.1	6.194	A
A-B	257	64			257				
A-C	284	71			284				
B-C	55	14	574	0.096	55	0.1	0.1	6.930	A

#### 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-A	243	61	466	0.522	242	0.7	1.1	16.999	C
C-A	209	52			209				
C-AB	50	12	635	0.079	50	0.1	0.1	6.311	A
A-B	315	79			315				
A-C	348	87			348				
B-C	67	17	491	0.137	67	0.1	0.2	8.482	A

#### 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-A	243	61	466	0.522	243	1.1	1.1	17.256	C
C-A	209	52			209				
C-AB	50	12	635	0.079	50	0.1	0.1	6.329	A
A-B	315	79			315				
A-C	348	87			348				
B-C	67	17	489	0.137	67	0.2	0.2	8.535	A

#### 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-A	199	50	505	0.393	200	1.1	0.7	12.714	B
C-A	174	44			174				
C-AB	37	9	630	0.059	37	0.1	0.1	6.232	A
A-B	257	64			257				
A-C	284	71			284				
B-C	55	14	572	0.096	55	0.2	0.1	6.973	A



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-A	166	42	533	0.312	167	0.7	0.5	10.563	B
C-A	148	37			148				
C-AB	29	7	628	0.046	29	0.1	0.1	6.143	A
A-B	215	54			215				
A-C	238	59			238				
B-C	46	11	620	0.074	46	0.1	0.1	6.271	A

# 2026 + DL + 50dw, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Camp Road/Chilgrove	T-Junction	Two-way	Two-way	Two-way		4.21	A

### Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.21	A

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 + DL + 50dw	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	617	100.000
B		ONE HOUR	✓	285	100.000
C		ONE HOUR	✓	237	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	295	322
	B	224	0	61
	C	208	29	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	7	6
	B	7	0	0
	C	8	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-A	0.53	17.81	1.2	C	206	308
C-A					179	268
C-AB	0.08	6.35	0.2	A	39	58
A-B					271	406
A-C					295	443
B-C	0.14	8.73	0.2	A	56	84

### 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-A	169	42	531	0.318	167	0.0	0.5	10.534	B
C-A	149	37			149				
C-AB	29	7	626	0.046	29	0.0	0.1	6.139	A
A-B	222	56			222				
A-C	242	61			242				
B-C	46	11	618	0.074	46	0.0	0.1	6.289	A

#### 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-A	201	50	502	0.401	201	0.5	0.7	12.726	B
C-A	176	44			176				
C-AB	37	9	629	0.059	37	0.1	0.1	6.214	A
A-B	265	66			265				
A-C	289	72			289				
B-C	55	14	568	0.097	55	0.1	0.1	7.008	A

#### 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-A	247	62	483	0.533	245	0.7	1.2	17.518	C
C-A	211	53			211				
C-AB	50	13	633	0.079	50	0.1	0.1	6.336	A
A-B	325	81			325				
A-C	355	89			355				
B-C	67	17	482	0.139	67	0.1	0.2	8.667	A

#### 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-A	247	62	483	0.533	247	1.2	1.2	17.808	C
C-A	211	53			211				
C-AB	50	13	633	0.079	50	0.1	0.2	6.353	A
A-B	325	81			325				
A-C	355	89			355				
B-C	67	17	480	0.140	67	0.2	0.2	8.726	A

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-A	201	50	502	0.401	203	1.2	0.7	12.983	B
C-A	176	44			176				
C-AB	37	9	629	0.059	37	0.2	0.1	6.253	A
A-B	265	68			265				
A-C	289	72			289				
B-C	55	14	566	0.097	55	0.2	0.1	7.053	A

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-A	169	42	530	0.318	170	0.7	0.5	10.702	B
C-A	149	37			149				
C-AB	29	7	626	0.047	29	0.1	0.1	6.162	A
A-B	222	56			222				
A-C	242	61			242				
B-C	46	11	616	0.075	46	0.1	0.1	6.322	A



# 2027 + DL, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Camp Road/Chilgrove	T-Junction	Two-way	Two-way	Two-way		16.08	C

### Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	16.08	C

## 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
D7	2027 + DL	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	701	100.000
B		ONE HOUR	✓	399	100.000
C		ONE HOUR	✓	311	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	346	355
	B	337	0	62
	C	282	29	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	7	6
	B	7	0	0
	C	8	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-A	0.87	59.71	5.7	F	309	484
C-A					241	381
C-AB	0.09	6.06	0.2	A	45	67
A-B					317	476
A-C					328	489
B-C	0.41	36.59	0.7	E	57	85

### 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-A	254	63	510	0.497	250	0.0	1.0	14.577	B
C-A	202	50			202				
C-AB	32	8	653	0.050	32	0.0	0.1	5.944	A
A-B	280	65			280				
A-C	287	67			287				
B-C	47	12	520	0.090	46	0.0	0.1	7.593	A

#### 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-A	303	76	476	0.636	300	1.0	1.8	21.478	C
C-A	237	59			237				
C-AB	42	11	661	0.064	42	0.1	0.1	5.977	A
A-B	311	78			311				
A-C	319	80			319				
B-C	56	14	414	0.135	56	0.1	0.2	10.045	B

#### 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-A	371	93	428	0.867	358	1.8	5.0	48.117	E
C-A	283	71			283				
C-AB	59	15	675	0.088	59	0.1	0.2	6.037	A
A-B	381	95			381				
A-C	391	98			391				
B-C	68	17	197	0.346	67	0.2	0.5	27.339	D

#### 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-A	371	93	427	0.868	368	5.0	5.7	59.714	F
C-A	283	71			283				
C-AB	59	15	675	0.088	59	0.2	0.2	6.058	A
A-B	381	95			381				
A-C	391	98			391				
B-C	68	17	165	0.413	68	0.5	0.7	36.589	E

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-A	303	78	476	0.637	318	5.7	2.0	26.307	D
C-A	237	59			237				
C-AB	43	11	661	0.064	43	0.2	0.1	6.017	A
A-B	311	78			311				
A-C	319	80			319				
B-C	58	14	384	0.145	58	0.7	0.2	11.101	B

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-A	254	63	510	0.498	257	2.0	1.1	15.465	C
C-A	202	50			202				
C-AB	32	8	663	0.050	33	0.1	0.1	5.970	A
A-B	260	65			260				
A-C	267	67			267				
B-C	47	12	511	0.091	47	0.2	0.1	7.763	A

# 2027 + DL + 100dw, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Camp Road/Chilgrove	T-Junction	Two-way	Two-way	Two-way		20.14	C

### Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	20.14	C

## 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
D9	2027 + DL + 100dw	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	732	100.000
B		ONE HOUR	✓	405	100.000
C		ONE HOUR	✓	315	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	365	367
	B	343	0	62
	C	286	29	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	7	6
	B	7	0	0
	C	8	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-A	0.90	72.49	7.0	F	315	472
C-A					244	386
C-AB	0.09	6.11	0.2	A	45	68
A-B					335	502
A-C					337	505
B-C	0.57	65.75	1.2	F	57	85

### 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-A	258	65	505	0.511	254	0.0	1.1	15.101	C
C-A	204	51			204				
C-AB	33	8	650	0.050	32	0.0	0.1	5.976	A
A-B	275	69			275				
A-C	276	69			276				
B-C	47	12	509	0.092	46	0.0	0.1	7.780	A

#### 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-A	308	77	470	0.656	305	1.1	1.9	22.861	C
C-A	240	60			240				
C-AB	43	11	658	0.065	43	0.1	0.1	6.013	A
A-B	328	82			328				
A-C	330	82			330				
B-C	56	14	395	0.141	55	0.1	0.2	10.587	B

#### 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-A	378	94	420	0.899	362	1.9	5.9	55.011	F
C-A	286	72			286				
C-AB	60	15	672	0.090	60	0.1	0.2	6.087	A
A-B	402	100			402				
A-C	404	101			404				
B-C	68	17	161	0.424	66	0.2	0.7	37.210	E

#### 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-A	378	94	419	0.901	373	5.9	7.0	72.486	F
C-A	286	72			286				
C-AB	60	15	672	0.090	60	0.2	0.2	6.109	A
A-B	402	100			402				
A-C	404	101			404				
B-C	68	17	119	0.573	66	0.7	1.2	65.746	F

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-A	308	77	489	0.657	328	7.0	2.2	30.228	D
C-A	240	60			240				
C-AB	43	11	658	0.065	43	0.2	0.1	6.056	A
A-B	328	82			328				
A-C	330	82			330				
B-C	56	14	356	0.157	60	1.2	0.2	12.319	B

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-A	258	65	505	0.512	262	2.2	1.2	16.163	C
C-A	204	51			204				
C-AB	33	8	650	0.050	33	0.1	0.1	6.001	A
A-B	275	69			275				
A-C	276	69			276				
B-C	47	12	499	0.094	47	0.2	0.1	7.977	A

## Appendix C

### Junctions 10 Output B430/Unnamed Road

<b>Junctions 10</b>
<b>PICADY 10 - Priority Intersection Module</b>
Version: 10.1.0.1820 © Copyright TRL Software Limited, 2023
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**Filename:** T19562 - B430-unnamed road with DL Test.j10  
**Path:** C:\Users\JamesParker\Hub Transport Planning Ltd\Hub Transport Planning - General\Projects\2019\T19562 Heyford Park\Junction Assessments\Picady\With DL Build-Out Test  
**Report generation date:** 27/11/2023 18:11:13

- »2026 + DL, AM
- »2026 + DL + 50dw, AM
- »2027 + DL, AM
- »2027 + DL + 100dw, AM

**Summary of junction performance**

AM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2026 + DL					
Stream B-C	D3	1.0	10.48	0.49	B
Stream B-A		0.0	14.23	0.02	B
Stream C-AB		0.8	8.84	0.42	A
2026 + DL + 50dw					
Stream B-C	D5	1.1	10.78	0.50	B
Stream B-A		0.0	14.35	0.02	B
Stream C-AB		0.8	8.91	0.42	A
2027 + DL					
Stream B-C	D7	1.5	12.87	0.58	B
Stream B-A		0.0	17.51	0.02	C
Stream C-AB		1.5	12.56	0.59	B
2027 + DL + 100dw					
Stream B-C	D9	1.6	13.86	0.61	B
Stream B-A		0.0	18.09	0.02	C
Stream C-AB		1.6	12.83	0.60	B

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	B430 - Unnamed Road
Location	Heyford Park
Site number	
Date	28/11/2023
Version	
Status	(new file)
Identifier	
Client	Richborough/Lonestar
Jobnumber	T19562
Enumerator	James Parker
Description	Updated Test to include DL Build Trajectory

## 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

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

## Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 + DL	AM	ONE HOUR	07:45	09:15	15
D5	2026 + DL + 50dw	AM	ONE HOUR	07:45	09:15	15
D7	2027 + DL	AM	ONE HOUR	07:45	09:15	15
D9	2027 + DL + 100dw	AM	ONE HOUR	07:45	09:15	15

## Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2026 + DL, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	B430 - Unnamed Road	T-Junction	Two-way	Two-way	Two-way		4.38	A

### Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.38	A

## Arms

### Arms

Arm	Name	Description	Arm type
A	B430 (S)		Major
B	Unnamed Road	Unnamed Road leading to Chilgrove Drive	Minor
C	B430 (N)		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.00		✓	3.50	250.0	✓	12.00

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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	10.00	6.17	3.90	3.25		3.00	97	99

## 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	600	0.100	0.252	0.159	0.380
B-C	785	0.110	0.278	-	-
C-B	820	0.290	0.290	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 + DL	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	246	100.000
B		✓	320	100.000
C		✓	780	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	5	241
	B	5	0	315
	C	498	282	0

## Vehicle Mix

### Heavy Vehicle %

	To			
	A	B	C	
From	A	0	67	8
	B	25	0	5
	C	6	6	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.49	10.48	1.0	B
B-A	0.02	14.23	0.0	B
C-AB	0.42	8.84	0.8	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	237	732	0.324	235	0.5	7.578	A
B-A	4	416	0.009	4	0.0	10.913	B
C-AB	212	787	0.277	211	0.4	6.844	A
C-A	375			375			
A-B	4			4			
A-C	181			181			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	283	722	0.392	282	0.7	8.591	A
B-A	4	378	0.012	4	0.0	12.056	B
C-AB	254	756	0.335	253	0.5	7.574	A
C-A	448			448			
A-B	4			4			
A-C	217			217			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	347	707	0.490	346	1.0	10.411	B
B-A	6	322	0.017	5	0.0	14.204	B
C-AB	310	742	0.419	310	0.8	8.809	A
C-A	548			548			
A-B	6			6			
A-C	265			265			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	347	707	0.490	347	1.0	10.481	B
B-A	6	322	0.017	6	0.0	14.227	B
C-AB	310	742	0.419	310	0.8	8.844	A
C-A	548			548			
A-B	6			6			
A-C	265			265			

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	283	722	0.392	284	0.7	8.670	A
B-A	4	377	0.012	5	0.0	12.079	B
C-AB	254	756	0.335	254	0.5	7.618	A
C-A	448			448			
A-B	4			4			
A-C	217			217			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	237	732	0.324	238	0.5	7.659	A
B-A	4	415	0.009	4	0.0	10.942	B
C-AB	212	767	0.277	213	0.4	6.895	A
C-A	375			375			
A-B	4			4			
A-C	181			181			



# 2026 + DL + 50dw, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	B430 - Unnamed Road	T-Junction	Two-way	Two-way	Two-way		4.49	A

### Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.49	A

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 + DL + 50dw	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	246	100.000
B		✓	329	100.000
C		✓	783	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	5	241
	B	5	0	324
	C	498	285	0

## Vehicle Mix

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	87	8
	B	25	0	5
	C	6	6	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.50	10.78	1.1	B
B-A	0.02	14.35	0.0	B
C-AB	0.42	8.91	0.8	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	244	732	0.333	242	0.5	7.679	A
B-A	4	415	0.009	4	0.0	10.941	B
C-AB	215	767	0.280	213	0.4	6.872	A
C-A	375			375			
A-B	4			4			
A-C	181			181			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	291	722	0.404	291	0.7	8.751	A
B-A	4	376	0.012	4	0.0	12.107	B
C-AB	256	756	0.339	256	0.5	7.615	A
C-A	448			448			
A-B	4			4			
A-C	217			217			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	357	707	0.504	355	1.0	10.698	B
B-A	6	320	0.017	5	0.0	14.327	B
C-AB	314	742	0.423	313	0.8	8.876	A
C-A	548			548			
A-B	6			6			
A-C	265			265			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	357	707	0.504	357	1.1	10.778	B
B-A	6	319	0.017	6	0.0	14.352	B
C-AB	314	742	0.423	314	0.8	8.912	A
C-A	548			548			
A-B	6			6			
A-C	265			265			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	291	722	0.404	293	0.7	8.838	A
B-A	4	375	0.012	5	0.0	12.134	B
C-AB	258	756	0.339	257	0.5	7.680	A
C-A	448			448			
A-B	4			4			
A-C	217			217			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	244	732	0.333	245	0.5	7.767	A
B-A	4	414	0.009	4	0.0	10.971	B
C-AB	215	767	0.280	215	0.4	6.924	A
C-A	375			375			
A-B	4			4			
A-C	181			181			



# 2027 + DL, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	B430 - Unnamed Road	T-Junction	Two-way	Two-way	Two-way		6.49	A

### Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.49	A

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2027 + DL	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	248	100.000
B		✓	380	100.000
C		✓	900	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	5	243
	B	5	0	375
	C	502	398	0

## Vehicle Mix

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	87	8
	B	25	0	5
	C	6	6	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.58	12.87	1.5	B
B-A	0.02	17.51	0.0	C
C-AB	0.59	12.58	1.5	B
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	282	732	0.386	280	0.7	8.320	A
B-A	4	382	0.010	4	0.0	11.903	B
C-AB	300	786	0.391	297	0.7	8.088	A
C-A	378			378			
A-B	4			4			
A-C	183			183			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	337	721	0.468	336	0.9	9.794	A
B-A	4	334	0.013	4	0.0	13.647	B
C-AB	358	756	0.473	357	0.9	9.537	A
C-A	451			451			
A-B	4			4			
A-C	218			218			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	413	706	0.585	411	1.4	12.703	B
B-A	6	284	0.021	5	0.0	17.421	C
C-AB	439	743	0.591	437	1.5	12.388	B
C-A	552			552			
A-B	6			6			
A-C	268			268			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	413	706	0.585	413	1.5	12.873	B
B-A	6	282	0.021	6	0.0	17.512	C
C-AB	439	743	0.591	439	1.5	12.557	B
C-A	552			552			
A-B	6			6			
A-C	268			268			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	337	721	0.468	339	0.9	9.955	A
B-A	4	333	0.014	5	0.0	13.718	B
C-AB	358	756	0.473	360	1.0	9.694	A
C-A	451			451			
A-B	4			4			
A-C	218			218			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	282	731	0.386	283	0.7	8.457	A
B-A	4	380	0.010	4	0.0	11.959	B
C-AB	300	766	0.391	301	0.7	8.219	A
C-A	378			378			
A-B	4			4			
A-C	183			183			

# 2027 + DL + 100dw, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	B430 - Unnamed Road	T-Junction	Two-way	Two-way	Two-way		6.91	A

### Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.91	A

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2027 + DL + 100dw	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	248	100.000
B		✓	399	100.000
C		✓	906	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	5	243
	B	5	0	394
	C	502	404	0

## Vehicle Mix

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	87	8
	B	25	0	5
	C	6	6	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.61	13.88	1.6	B
B-A	0.02	18.09	0.0	C
C-AB	0.60	12.83	1.6	B
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	297	732	0.405	294	0.7	8.582	A
B-A	4	379	0.010	4	0.0	11.988	B
C-AB	304	766	0.397	301	0.7	8.162	A
C-A	378			378			
A-B	4			4			
A-C	183			183			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	354	721	0.491	353	1.0	10.240	B
B-A	4	330	0.014	4	0.0	13.826	B
C-AB	363	756	0.481	362	1.0	9.664	A
C-A	451			451			
A-B	4			4			
A-C	218			218			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	434	706	0.614	431	1.6	13.625	B
B-A	6	256	0.022	5	0.0	17.981	C
C-AB	446	743	0.600	444	1.5	12.647	B
C-A	552			552			
A-B	6			6			
A-C	268			268			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	434	706	0.614	434	1.6	13.858	B
B-A	6	254	0.022	6	0.0	18.094	C
C-AB	446	743	0.600	446	1.6	12.830	B
C-A	552			552			
A-B	6			6			
A-C	268			268			



08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	354	721	0.491	357	1.0	10.444	B
B-A	4	328	0.014	5	0.0	13.909	B
C-AB	363	766	0.481	366	1.0	9.834	A
C-A	451			451			
A-B	4			4			
A-C	218			218			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	297	731	0.406	298	0.7	8.741	A
B-A	4	377	0.010	4	0.0	12.046	B
C-AB	304	766	0.397	305	0.7	8.299	A
C-A	378			378			
A-B	4			4			
A-C	183			183			

## Appendix D

### Junctions 10 Output B430/Ardley Road



<b>Junctions 10</b>
<b>PICADY 10 - Priority Intersection Module</b>
Version: 10.1.0.1820 © Copyright TRL Software Limited, 2023
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Filename: T19562 - B430-Ardley Rd with DL Test.j10

Path: C:\Users\JamesParker\Hub Transport Planning Ltd\Hub Transport Planning - General\Projects\2019\T19562 Heyford Park\Junction Assessments\Picady\With DL Build-Out Test

Report generation date: 27/11/2023 18:12:08

- »2026 + DL, AM
- »2026 + DL + 50dw, AM
- »2027 + DL, AM
- »2027 +DL + 100dw, AM

**Summary of junction performance**

AM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2026 + DL					
Stream B-C	D3	0.3	10.96	0.23	B
Stream B-AD		0.9	28.66	0.49	D
Stream A-BCD		0.1	9.14	0.07	A
Stream D-A		0.1	7.01	0.07	A
Stream D-BC		0.6	20.50	0.37	C
Stream C-ABD		1.1	6.63	0.31	A
2026 + DL + 50dw					
Stream B-C	D5	0.3	11.04	0.23	B
Stream B-AD		1.0	29.28	0.50	D
Stream A-BCD		0.1	9.20	0.07	A
Stream D-A		0.1	7.06	0.07	A
Stream D-BC		0.6	20.86	0.38	C
Stream C-ABD		1.1	6.61	0.32	A
2027 + DL					
Stream B-C	D7	0.4	13.79	0.29	B
Stream B-AD		1.5	46.01	0.61	E
Stream A-BCD		0.1	9.51	0.08	A
Stream D-A		0.1	7.44	0.07	A
Stream D-BC		0.8	26.37	0.44	D
Stream C-ABD		1.6	7.08	0.36	A
2027 +DL + 100dw					
Stream B-C	D9	0.4	14.14	0.30	B
Stream B-AD		1.5	47.71	0.62	E
Stream A-BCD		0.1	9.62	0.08	A
Stream D-A		0.1	7.55	0.07	A
Stream D-BC		0.8	27.72	0.45	D
Stream C-ABD		1.7	7.07	0.39	A

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

## File summary

### File Description

Title	B430-Ardley Rd
Location	Heyford Park
Site number	
Date	26/11/2023
Version	
Status	(new file)
Identifier	
Client	Richborough/Lone Star
Jobnumber	T19562
Enumerator	James Parker
Description	Updated Test to include DL Build Trajectory

## 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

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

## Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 + DL	AM	ONE HOUR	07:45	09:15	15
D5	2026 + DL + 50dw	AM	ONE HOUR	07:45	09:15	15
D7	2027 + DL	AM	ONE HOUR	07:45	09:15	15
D9	2027 +DL + 100dw	AM	ONE HOUR	07:45	09:15	15

## Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2026 + DL, AM

## Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		4.97	A

### Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.97	A

## Arms

### Arms

Arm	Name	Description	Arm type
A	B430 (N)		Major
B	Ardley Road (E)		Minor
C	B430 (S)		Major
D	Ardley Road (W)		Minor

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.40		✓	2.20	120.0	✓	3.00
C	6.60				0.0	✓	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 (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare			10.00	8.20	5.05	2.65	2.40		3.00	60	104
D	Two lanes	5.00	3.50								76	115

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	643	-	-	-	0.245	0.245	0.245	-	0.245	-	-
B-AD	574	0.102	0.257	-	-	-	0.162	0.368	0.162	0.102	0.257
B-C	735	0.110	0.277	-	-	-	-	-	-	0.110	0.277
C-B	574	0.217	0.217	-	-	-	-	-	-	0.217	0.217
D-A	836	-	-	-	0.318	0.126	0.318	-	0.126	-	-
D-BC	588	0.167	0.167	0.380	0.266	0.105	0.266	-	0.105	-	-

*The slopes and intercepts shown above include custom intercept adjustments only.*

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

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 + DL	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	678	100.000
B		✓	202	100.000
C		✓	600	100.000
D		✓	129	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	23	624	31
	B	80	0	91	31
	C	487	76	0	37
	D	34	35	60	0

## Vehicle Mix

### Heavy Vehicle %

		To			
		A	B	C	D
From	A	0	5	7	11
	B	0	0	4	3
	C	7	5	0	9
	D	3	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.23	10.96	0.3	B
B-AD	0.49	28.66	0.9	D
A-BCD	0.07	9.14	0.1	A
A-B				
A-C				
D-A	0.07	7.01	0.1	A
D-BC	0.37	20.50	0.6	C
C-ABD	0.31	6.63	1.1	A
C-D				
C-A				



### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	69	552	0.124	68	0.1	7.721	A
B-AD	83	352	0.237	82	0.3	13.381	B
A-BCD	23	526	0.044	23	0.1	7.936	A
A-B	17			17			
A-C	470			470			
D-A	26	661	0.039	26	0.0	5.836	A
D-BC	72	379	0.189	71	0.2	11.656	B
C-ABD	121	748	0.162	119	0.4	6.075	A
C-D	24			24			
C-A	307			307			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	82	511	0.160	82	0.2	8.711	A
B-AD	100	309	0.323	99	0.5	17.310	C
A-BCD	28	503	0.055	28	0.1	8.403	A
A-B	20			20			
A-C	561			561			
D-A	31	623	0.049	31	0.1	6.262	A
D-BC	86	338	0.254	85	0.3	14.237	B
C-ABD	171	789	0.217	170	0.6	6.198	A
C-D	26			26			
C-A	342			342			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	100	444	0.226	100	0.3	10.853	B
B-AD	122	249	0.491	120	0.9	27.867	D
A-BCD	34	472	0.073	34	0.1	9.123	A
A-B	25			25			
A-C	687			687			
D-A	38	568	0.066	38	0.1	6.994	A
D-BC	105	281	0.373	104	0.6	20.198	C
C-ABD	265	848	0.313	263	1.1	6.583	A
C-D	28			28			
C-A	368			368			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	100	442	0.227	100	0.3	10.958	B
B-AD	122	248	0.491	122	0.9	28.665	D
A-BCD	34	471	0.073	34	0.1	9.144	A
A-B	25			25			
A-C	687			687			
D-A	38	566	0.066	38	0.1	7.015	A
D-BC	105	280	0.374	105	0.6	20.498	C
C-ABD	266	849	0.314	266	1.1	6.633	A
C-D	28			28			
C-A	367			367			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	82	509	0.161	82	0.2	8.787	A
B-AD	100	308	0.323	101	0.5	17.705	C
A-BCD	28	502	0.056	28	0.1	8.428	A
A-B	20			20			
A-C	561			561			
D-A	31	621	0.049	31	0.1	6.289	A
D-BC	86	336	0.254	87	0.3	14.460	B
C-ABD	172	790	0.218	174	0.6	6.265	A
C-D	26			26			
C-A	341			341			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	69	550	0.124	69	0.1	7.776	A
B-AD	83	352	0.237	84	0.3	13.606	B
A-BCD	23	526	0.044	23	0.1	7.958	A
A-B	17			17			
A-C	470			470			
D-A	26	659	0.039	26	0.0	5.857	A
D-BC	72	378	0.190	72	0.2	11.794	B
C-ABD	122	749	0.163	123	0.4	6.135	A
C-D	23			23			
C-A	306			306			

# 2026 + DL + 50dw, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		5.01	A

### Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.01	A

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 + DL + 50dw	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	681	100.000
B		✓	202	100.000
C		✓	609	100.000
D		✓	129	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	23	627	31
	B	80	0	91	31
	C	496	76	0	37
	D	34	35	60	0

## Vehicle Mix

### Heavy Vehicle %

		To			
		A	B	C	D
From	A	0	5	7	11
	B	0	0	4	3
	C	7	5	0	9
	D	3	0	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.23	11.04	0.3	B
B-AD	0.50	29.28	1.0	D
A-BCD	0.07	9.20	0.1	A
A-B				
A-C				
D-A	0.07	7.06	0.1	A
D-BC	0.38	20.86	0.6	C
C-ABD	0.32	6.61	1.1	A
C-D				
C-A				

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	69	551	0.124	68	0.1	7.736	A
B-AD	84	351	0.238	82	0.3	13.467	B
A-BCD	23	525	0.044	23	0.1	7.962	A
A-B	17			17			
A-C	472			472			
D-A	26	659	0.039	25	0.0	5.855	A
D-BC	72	377	0.190	71	0.2	11.732	B
C-ABD	123	753	0.163	121	0.4	6.045	A
C-D	23			23			
C-A	313			313			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	82	510	0.160	82	0.2	8.736	A
B-AD	100	307	0.325	99	0.5	17.432	C
A-BCD	28	501	0.056	28	0.1	8.437	A
A-B	21			21			
A-C	564			564			
D-A	31	620	0.049	31	0.1	6.289	A
D-BC	85	335	0.255	85	0.3	14.378	B
C-ABD	174	794	0.219	173	0.6	6.168	A
C-D	26			26			
C-A	348			348			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	100	442	0.227	100	0.3	10.925	B
B-AD	122	246	0.496	120	0.9	28.425	D
A-BCD	34	470	0.073	34	0.1	9.173	A
A-B	25			25			
A-C	690			690			
D-A	37	564	0.066	37	0.1	7.039	A
D-BC	105	278	0.376	104	0.6	20.544	C
C-ABD	270	855	0.316	268	1.1	6.557	A
C-D	28			28			
C-A	373			373			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	100	439	0.228	100	0.3	11.035	B
B-AD	122	246	0.497	122	1.0	29.275	D
A-BCD	34	469	0.073	34	0.1	9.195	A
A-B	25			25			
A-C	690			690			
D-A	37	563	0.067	37	0.1	7.060	A
D-BC	105	277	0.378	105	0.6	20.660	C
C-ABD	271	856	0.317	271	1.1	6.608	A
C-D	28			28			
C-A	372			372			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	82	507	0.161	82	0.2	8.817	A
B-AD	100	306	0.326	102	0.5	17.904	C
A-BCD	28	500	0.056	28	0.1	8.463	A
A-B	21			21			
A-C	564			564			
D-A	31	618	0.049	31	0.1	6.314	A
D-BC	85	334	0.256	86	0.4	14.613	B
C-ABD	175	796	0.220	177	0.7	6.233	A
C-D	26			26			
C-A	347			347			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	69	549	0.125	69	0.1	7.794	A
B-AD	84	350	0.239	84	0.3	13.699	B
A-BCD	23	524	0.045	23	0.1	7.984	A
A-B	17			17			
A-C	472			472			
D-A	26	657	0.039	26	0.0	5.874	A
D-BC	72	376	0.190	72	0.2	11.873	B
C-ABD	124	754	0.164	125	0.4	6.104	A
C-D	23			23			
C-A	311			311			

# 2027 + DL, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		6.28	A

### Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.28	A

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2027 + DL	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	788	100.000
B		✓	213	100.000
C		✓	664	100.000
D		✓	130	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	23	734	31
	B	80	0	101	31
	C	545	81	0	38
	D	34	35	61	0

## Vehicle Mix

### Heavy Vehicle %

		To			
		A	B	C	D
From	A	0	5	7	11
	B	0	0	4	3
	C	7	5	0	9
	D	3	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.29	13.79	0.4	B
B-AD	0.61	45.01	1.5	E
A-BCD	0.08	9.51	0.1	A
A-B				
A-C				
D-A	0.07	7.44	0.1	A
D-BC	0.44	26.37	0.8	D
C-ABD	0.38	7.08	1.6	A
C-D				
C-A				

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	76	532	0.143	75	0.2	8.187	A
B-AD	84	320	0.262	83	0.4	15.186	C
A-BCD	24	516	0.046	23	0.1	8.115	A
A-B	17			17			
A-C	553			553			
D-A	26	645	0.040	26	0.0	5.989	A
D-BC	72	353	0.205	71	0.3	12.736	B
C-ABD	142	768	0.185	140	0.5	6.097	A
C-D	23			23			
C-A	334			334			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	483	0.188	91	0.2	9.532	A
B-AD	100	271	0.370	99	0.6	21.040	C
A-BCD	28	490	0.057	28	0.1	8.645	A
A-B	21			21			
A-C	660			660			
D-A	31	602	0.051	31	0.1	6.489	A
D-BC	86	307	0.281	86	0.4	16.251	C
C-ABD	206	814	0.254	205	0.8	6.310	A
C-D	25			25			
C-A	365			365			



**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	111	389	0.286	111	0.4	13.391	B
B-AD	123	203	0.605	120	1.4	41.960	E
A-BCD	35	456	0.076	34	0.1	9.477	A
A-B	25			25			
A-C	808			808			
D-A	38	539	0.070	38	0.1	7.396	A
D-BC	106	243	0.434	104	0.7	25.648	D
C-ABD	333	881	0.377	330	1.5	6.996	A
C-D	26			26			
C-A	372			372			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	111	383	0.291	111	0.4	13.793	B
B-AD	123	202	0.607	123	1.5	45.008	E
A-BCD	35	455	0.076	35	0.1	9.512	A
A-B	25			25			
A-C	808			808			
D-A	38	536	0.071	38	0.1	7.436	A
D-BC	106	242	0.437	106	0.8	28.375	D
C-ABD	335	883	0.379	335	1.6	7.083	A
C-D	26			26			
C-A	370			370			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	478	0.190	91	0.2	9.701	A
B-AD	100	270	0.371	104	0.6	22.195	C
A-BCD	28	488	0.058	28	0.1	8.686	A
A-B	21			21			
A-C	660			660			
D-A	31	599	0.052	31	0.1	6.533	A
D-BC	86	305	0.283	88	0.4	16.683	C
C-ABD	208	816	0.255	211	0.8	6.409	A
C-D	25			25			
C-A	363			363			

**09:00 - 09:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	76	529	0.144	76	0.2	8.288	A
B-AD	84	320	0.263	85	0.4	15.544	C
A-BCD	24	514	0.046	24	0.1	8.144	A
A-B	17			17			
A-C	553			553			
D-A	26	643	0.040	26	0.0	6.013	A
D-BC	72	352	0.205	73	0.3	12.930	B
C-ABD	144	769	0.187	145	0.5	6.171	A
C-D	23			23			
C-A	333			333			

# 2027 +DL + 100dw, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		6.47	A

### Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.47	A

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2027 +DL + 100dw	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	794	100.000
B		✓	212	100.000
C		✓	683	100.000
D		✓	130	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	23	740	31
	B	80	0	101	31
	C	564	81	0	38
	D	34	35	61	0

## Vehicle Mix

### Heavy Vehicle %

		To			
		A	B	C	D
From	A	0	5	7	11
	B	0	0	4	3
	C	7	5	0	9
	D	3	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.30	14.14	0.4	B
B-AD	0.62	47.71	1.5	E
A-BCD	0.08	9.62	0.1	A
A-B				
A-C				
D-A	0.07	7.55	0.1	A
D-BC	0.45	27.72	0.8	D
C-ABD	0.39	7.07	1.7	A
C-D				
C-A				

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	76	533	0.143	75	0.2	8.170	A
B-AD	84	334	0.250	82	0.3	14.324	B
A-BCD	23	512	0.046	23	0.1	8.169	A
A-B	17			17			
A-C	557			557			
D-A	26	640	0.040	25	0.0	6.032	A
D-BC	72	349	0.207	71	0.3	12.932	B
C-ABD	146	778	0.188	144	0.5	6.036	A
C-D	23			23			
C-A	345			345			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	481	0.189	91	0.2	9.574	A
B-AD	100	267	0.374	99	0.6	21.489	C
A-BCD	28	486	0.057	28	0.1	8.718	A
A-B	21			21			
A-C	665			665			
D-A	31	596	0.051	31	0.1	6.551	A
D-BC	86	301	0.286	86	0.4	16.650	C
C-ABD	213	826	0.258	212	0.8	6.253	A
C-D	25			25			
C-A	376			376			



08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	111	384	0.290	110	0.4	13.867	B
B-AD	122	198	0.618	119	1.5	44.137	E
A-BCD	34	451	0.076	34	0.1	9.588	A
A-B	25			25			
A-C	815			815			
D-A	37	531	0.070	37	0.1	7.505	A
D-BC	108	237	0.447	104	0.8	28.862	D
C-ABD	347	898	0.388	343	1.6	6.973	A
C-D	28			28			
C-A	380			380			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	111	376	0.296	111	0.4	14.138	B
B-AD	122	197	0.620	122	1.5	47.712	E
A-BCD	34	449	0.076	34	0.1	9.624	A
A-B	25			25			
A-C	815			815			
D-A	37	529	0.071	37	0.1	7.549	A
D-BC	108	235	0.449	106	0.8	27.717	D
C-ABD	349	899	0.388	349	1.7	7.085	A
C-D	25			25			
C-A	378			378			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	476	0.191	92	0.2	9.760	A
B-AD	100	286	0.375	103	0.6	22.798	C
A-BCD	28	484	0.058	28	0.1	8.763	A
A-B	21			21			
A-C	665			665			
D-A	31	593	0.052	31	0.1	6.599	A
D-BC	88	299	0.288	88	0.4	17.133	C
C-ABD	215	829	0.260	219	0.9	6.354	A
C-D	25			25			
C-A	373			373			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	76	528	0.144	76	0.2	8.289	A
B-AD	84	316	0.265	85	0.4	15.765	C
A-BCD	23	511	0.046	23	0.1	8.197	A
A-B	17			17			
A-C	557			557			
D-A	26	638	0.040	26	0.0	6.080	A
D-BC	72	347	0.208	73	0.3	13.142	B
C-ABD	148	779	0.190	149	0.5	6.113	A
C-D	23			23			
C-A	343			343			

## Appendix E

# RammSanderson and David Wilson Homes Southern Correspondence

29<sup>th</sup> November 2023

RammSanderson Ecology Ltd  
East Midlands (Head) Office  
Osprey House, Merlin Way  
Quarry Hill Industrial Estate  
Ilkeston, DE7 4RA  
T: 0115 930 2493

By email only, FAO Mr James Parker.

**APPEAL REF: APP/C3105/W/23/3326761**

**OS Parcel 1570 adjoining and west of Chilgrove Drive, and adjoining and north of Camp Road, Heyford Park**

Dear James,

Thank you for providing RammSanderson Ecology with Mr David Frisby's Highways Rebuttal Proof of evidence (DF HRPoE) for the above appeal. In section 3.3 of his rebuttal proof Mr Frisby refers to various routes connecting to and from the Appellants' site ("the connections"). He states that there may be "*unassessed ecological reasons why this point of pedestrian access [also] cannot be achieved*" (DF HRPoE at [3.3.8], the same point is made at [3.3.4]). This letter responds to Mr Frisby's comments<sup>1</sup>. Appended to this letter is Figure H3 (also Mr Frisby's Appendix G) which for ease of reference labels the hedgerows and gives each connection a number. Connection 1 (blue) is the only new connection. Connections 2 – 6 (green) have previously been assessed. Connection 7 (orange) is a potential future connection. We address each connection in turn below.

#### Connection 1

The hedgerow through which connection 1 will pass has been thoroughly reviewed by RammSanderson. The hedgerow is listed as H5 (identified on Phase 1 habitat plan, pg 62 of 100 of RammSanderson 2021, CD 17). This hedgerow is listed as a native hedgerow with trees with description provided within RammSanderson 2021 pg 72 (Section 16.1.16 paragraph xx) with a DEFRA habitat condition assessment made on Page 97-98. Under the conditions scores, this hedgerow was graded as 'Good' condition.

H5 does not qualify as a species rich hedgerow. We can advise that loss of a 3m section to facilitate a new footpath / cycle connection is likely to have negligible ecological impact. Small losses <5m in width would not be detrimental to terrestrial or avian fauna that occur locally as this would not cause a severance impact. Hedgerow unit gains are currently an 8.8 unit gain under the DEFRA metric which represents 38.26% significantly above national and local policy requirements. Loss of 3m would result in a change of 0.07 units to this position. A net significant positive impact still results, and the change is negligible.

In respects to the adjacent brook running parallel to the hedgerow at this location, the brook was similarly found to be low ecological value with no water vole recorded (Page 21 and page 29 of RammSanderson 2021). We are confident that a bridge could/would be designed with no impact on the watercourse zone and therefore no watercourse encroachment applies. For completeness we applied a precautionary approach and considered encroachment within the riparian zone. The bridge required would be small with localised footprint we would consider this a 'Minor' encroachment (footprint occupying 0-10% of the length within 4-10m of bank top or anything within 8-10m of bank top). The ecological impact of connection 1 on the river is negligible.

#### Connection 2 and 3

The hedgerow through which connection 2 and 3 will pass has been thoroughly reviewed by RammSanderson. The hedgerow is listed as H1 (identified on Phase 1 habitat plan, pg 62 of 100 of RammSanderson 2021, CD 17). This hedgerow is listed as a native hedgerow with description provided within RammSanderson 2021 pg 71 (Section 16.1.14 paragraph xv) with a DEFRA habitat condition assessment made on Page 95. Under the conditions scores, this hedgerow was graded as 'Good' condition. H1 does not qualify as a species rich hedgerow. We can advise that loss of two 3m sections to facilitate new footpath / cycle connections is likely to have

<sup>1</sup> RammSanderson Ecology have provided ecological support in respects to the above scheme. RammSanderson documents can be found at CD17-20.



negligible ecological impact. Small losses <5m each in width would not be detrimental to terrestrial or avian fauna that occur locally as this would not cause a severance impact.

#### Connection 4

The hedgerow through which connection 4 will pass has been thoroughly reviewed by RammSanderson. The hedgerow is listed as H1 (identified on Phase 1 habitat plan, pg 62 of 100 of RammSanderson 2021, CD 17). This hedgerow is listed as a native hedgerow with description provided within RammSanderson 2021 pg 71 (Section 16.1.14 paragraph xv) with a DEFRA habitat condition assessment made on Page 95. Under the conditions scores, this hedgerow was graded as 'Good' condition. Connection 4 will be where a gap in the hedgerow currently exists approximately 10m wide, no further hedgerow removal will be required to facilitate this connection, therefore the ecological impacts are negligible.

#### Connection 5

The hedgerow through which connection 5 will pass has been thoroughly reviewed by RammSanderson. The hedgerow is listed as H2 (identified on Phase 1 habitat plan, pg 62 of 100 of RammSanderson 2021, CD 17). This hedgerow is listed as a native hedgerow with trees with description provided within RammSanderson 2021 pg 71 (Section 16.1.15 paragraph xvi) with a DEFRA habitat condition assessment made on Page 95 and 96. Under the conditions scores, this hedgerow was graded as 'Moderate' condition. Connection 5 will be where a gap in the hedgerow currently exists approximately 20m wide, including an existing access gate to the field. No further hedgerow removal will be required to facilitate this connection, therefore the ecological impacts are negligible.

#### Connection 6

The area through which connection 6 will pass has been thoroughly reviewed by RammSanderson. Connection 6 does not pass through any existing hedgerows, this new pedestrian/ cycle connection will follow an existing gated access route, the ecological impacts are negligible.

#### Connection 7

The hedgerow through which connection 7 will pass has been thoroughly reviewed by RammSanderson. The hedgerow is listed as H3 (identified on Phase 1 habitat plan, pg 62 of 100 of RammSanderson 2021, CD 17). This hedgerow is listed as a native hedgerow with trees with description provided within RammSanderson 2021 pg 72 (Section 16.1.16 paragraph xviii) with a DEFRA habitat condition assessment made on Page 96. Under the conditions scores, this hedgerow was graded as 'Good' condition.

H3 does not qualify as a species rich hedgerow. We can advise that loss of a 3m section to facilitate a new footpath / cycle connection is likely to have negligible ecological impact. Small losses <5m in width would not be detrimental to terrestrial or avian fauna that occur locally as this would not cause a severance impact.

#### Conclusion

The ecological impact of the connections is considered to be neutral. The impact has been assessed with reference to the river and the hedgerow, as set out above. There is no ecological impediment to providing the proposed connections in the identified locations.

I trust this is to your satisfaction. Should you have any queries, or require any clarifications, please do not hesitate to call me directly.

Yours sincerely,

Nick Sanderson BSc MSc CEcol MCIEEM  
Director

For and on behalf of RammSanderson Ecology Ltd.

Enclosures:

Appendix 1: Connections Plan

## 1: Connections Plan





Not to Scale  
Heyford Park

Figure H3  
Pedestrian and Cycle Access Plan



Pedestrian



Pedestrian/Cycle Route



Route to Boundary for potential future connection

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**Telephone** 01488 687600

Mr. A. Wilkins  
Chief Executive  
Lone Star Land Ltd  
50 High Street  
Henley in Arden  
B95 5AN

By Email [Andy@lonestarland.co.uk](mailto:Andy@lonestarland.co.uk)

29<sup>th</sup> November 2023

Subject to Contract

Dear Mr Wilkins

**Re: Land Lying South and East of Letchmere Farm, Upper Heyford**

Further to our recent correspondence I can confirm that David Wilson Homes Southern (part of BDW Trading Limited), known as DWHS, are due to complete the purchase the land known as Land North of Camp Road now the expiry of the Judicial Review challenge period of the following planning permission permissions has expired;

- 15-01357-F (89 units)
- 21-03523-OUT (31 units)

It is DWHS's intention to commence development works on Land North of Camp Road as soon as possible with our first legal completion expected in January 2025.

DWHS are able to confirm that we have formally agreed with the landowners (the Holfords) of the Land Lying South and East of Letchmere Farm to provide legal rights for a pedestrian/cycle route through our development at Land North of Camp Road to the shared eastern boundary to provide connectivity between the two development sites. The points of connection are points; A-B, C-D and E-F as annotated on the attached drawing ref: 2099.16/01G. This is currently being legally documented between the two parties' solicitors.

Should you have any further queries then please do not hesitate to contact the undersigned.

Yours sincerely,



Sian Keeling  
Development Director  
**for and on behalf of**  
**DAVID WILSON HOMES SOUTHERN (a trading name of BDW TRADING LIMITED)**

E-mail [sian.keeling@dwh.co.uk](mailto:sian.keeling@dwh.co.uk)

Encs. General Arrangement Drawing







Ponds



Note: Total area of public open space = 0.717ha

KEY		Proposed features	
	Site boundary		Extra heavy standard tree
	Trees or vegetation to be removed		Selected standard tree
	Trees or vegetation to be retained		Hoggin Footpath
			Bow top Fence
			Informal Footpath
			Single-species hedgerow
			Native shrub planting
			Ornamental planting
			Bund
			Amenity grass
	Swale and Associated Planting		Seat/ bench (Not to scale)
			Wildflower meadow
			Recommend Lighting Column Location and 10m Offset (Not to scale)

CLIENT:  
David Wilson Homes Southern Ltd

PROJECT:  
Letchmere Farm, Upper Heyford LS

TITLE:  
General Arrangement

SCALE AT A3:  
1:1,000

DATE:  
October 2023

2099.16 / 01G

Based on Ordnance Survey mapping with permission of Her Majesty's Stationary Office  
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Landscape Architecture  
Masterplanning  
Ecology