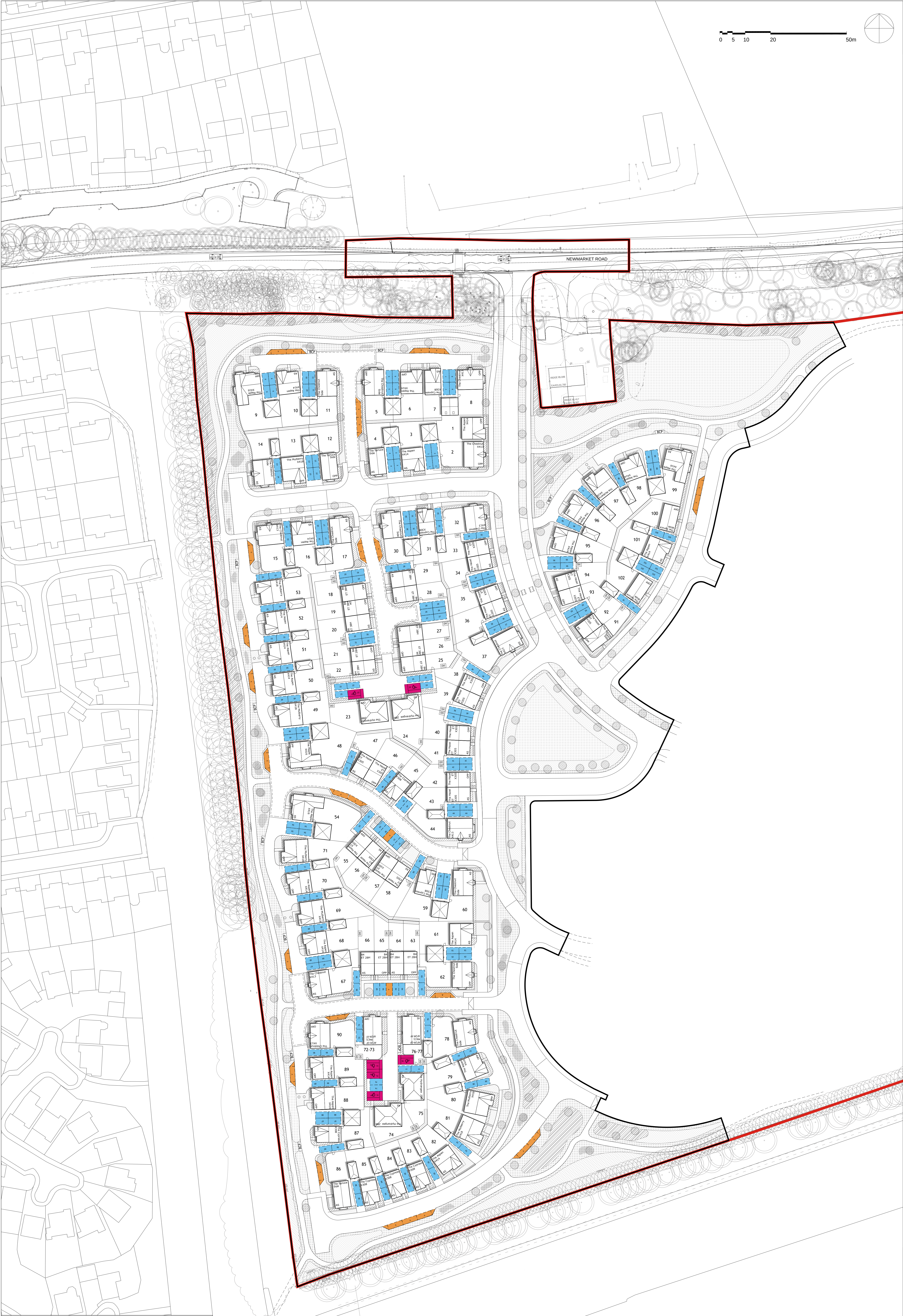


APPENDIX G – FULL EXTENT CAR PARKING ALLOCATON



Key - Parking Strategy

- Allocated parking spaces
- Unallocated parking bays (28)
- M4(3) parking spaces (6)

Notes:
The contractor must verify all dimensions on site before commencing any work on shop drawings. do not scale from this drawing
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P1	Issued for planning	28.03.2024	PV	EC
Rev	Rev Description	Rev Date	Drawn By	Reviewed By
PV	EC			POR
Drawn By	Reviewed by			Approved by
62523	FEB 2024			1:500 @ A0
McB Number	Date created			Scale @ A0

McBains
McBains Ltd
201 FL 26 Finsbury Square London EC2A 1DS
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mc@mc.co.uk

Client
Vistry Group

Project
PHASE 1
LAND AT NEWMARKET ROAD
ROYSTON

Drawing Title
PARKING STRATEGY PLAN

ARCHITECTURE					Drawing / Document Reference		Status	
ROY01	MCB	ZZ	ZZ	DR	A	0235	D5	P1
Project Idem	Originator	Proj	Spr	Form	Discipline	Number	Suitability	Revision

APPENDIX H – FULL EXTENT REFUSE ACCESS

APPENDIX I - FULL EXTENT FIRE ACCESS



GENERAL

1. DO NOT SCALE THIS DRAWING. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED. ANY DISCREPANCIES ARE TO BE RECORDED AND REPORTED TO THE ENGINEERS IMMEDIATELY.

2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER ENGINEERS AND ARCHITECTS DRAWINGS AND THE SPECIFICATION.

3. ANY EXISTING DETAILS WHICH ARE SHOWN ON THIS DRAWING ARE FOR GUIDANCE ONLY AND ARE TO BE CHECKED ON SITE BY THE CONTRACTOR. ANY VARIATIONS ARE TO BE RECORDED AND REPORTED TO THE ENGINEER IMMEDIATELY.

FIRE TENDER VEHICLE NOTES

BUILDING REGULATIONS APPROVED DOCUMENT B – FIRE SAFETY REQUIREMENT B5: ACCESS AND FACILITIES FOR THE FIRE SERVICE. SECTION 13: VEHICLE ACCESS, DETAILS.

1. FOR DWELLING HOUSES, ACCESS FOR A PUMPING APPLIANCE SHOULD BE PROVIDED TO WITHIN 45M OF ALL POINTS INSIDE THE DWELLING HOUSE (13.1).

2. THERE SHOULD BE A MINIMUM CARRIAGEWAY WIDTH OF 3.7M BETWEEN KERBS (TABLE 13.1).

3. THE ROAD BASE SHOULD BE DESIGNED TO A MINIMUM OF 12.5 TONNE CAPACITY (TABLE 13.1).

4. FIRE SERVICE VEHICLES SHOULD NOT HAVE TO REVERSE MORE THAN 20M (13.4, DIAG 13.1).

5. ACCESS FOR FIRE TENDER ARE TO REMAIN CLEAR WITH VERTICAL GRADIENTS NOT EXCEEDING 1IN12.

FIRE TENDER TRACKING KEY

VEHICLE OVER HANG ————
VEHICLE FRONT TYRES ————
VEHICLE REAR TYRES ————

Vehicle name
Description: FIRE-TRUCK
Overall length (m): 8.100
Overall width (m): 2.900
Maximum track width (m): 2.450
Wail to wail radius (m): 9.000

FIRE-TRUCK
HERTS PUMPING APPLIANCE 8.1m

8.100
2.900
2.450
9.000

AREAS OF PRIVATE / SHARED DRIVES WHICH REQUIRE UPGRADED CONSTRUCTION FOR INCREASED VEHICLE LOADING. (HEAVY DUTY CONSTRUCTION) SEE DETAILS BELOW.

SHARE PRIVATE DRIVE (BLOCK PAVED)
SCALE 1:20

80MM THICK PERMEABLE BLOCK PAVING
50MM THICK BEDDING COURSE SHARP SAND TO BS 7533-3 CATEGORY II OF ANNEX D.
80MM THICK DENSE BITUMEN MACADAM (100 PEN) WITH 0/32MM SIZE AGGREGATE.
BULLNOSED KERB – REFER TO DETAIL.
ROAD LEVEL
325MM TYPE 1 GRANULAR SUB BASE MATERIAL AS TABLE 2. SUBGRADE TO BE PROOF ROLLED AND ANY SOFT SPOTS REMOVED AND BACKFILLED WITH WELL COMPACTED TYPE 1 MATERIAL.

SHARED PRIVATE DRIVE (PERMEABLE PAVING)
SCALE 1:20

80MM THICK PERMEABLE BLOCK PAVING
50MM THICK BEDDING COURSE USING 2/6.3MM SIZE AGGREGATES TO BS EN 13242.
80MM THICK DENSE BITUMEN MACADAM (100 PEN) WITH 0/32MM SIZE AGGREGATE, PUNCTURED WITH 30-50MM DIAMETER HOLES AT 1 METRE CENTRES FILLED WITH BEDDING COURSE MATERIAL.
BULLNOSED KERB – REFER TO DETAIL.
ROAD LEVEL
325MM THICK SUB BASE USING OPEN GRADED CRUSHED ROCK OR OPEN GRADED CRUSHED GRAVEL WITH 10/20MM SIZE AGGREGATES TO BS EN 13242.

Rev: Revision Notes: Dwn: Appd: Date:

INGENT
CONSULTING ENGINEERS
Unit 1a Greenwood Court, Skyliner Way, Bury St Edmunds, IP32 7GY.
Tel: 01284 245024 — www.ingent.co.uk — email: info@ingent.co.uk

worksafe consultant **SSIP** **COMS**
www.smasistd.com

STRATEGY

Project:
NEWMARKET ROAD
ROYSTON, HERTFORDSHIRE

Drawing Title:
FIRE TENDER
SWEEP PATH ANALYSIS
PHASE 1

Client:
VISTRY

Date:
MAR 2024

Drawn:
MRF

Designed:
MRF

Checked:
KK

Approved:
KK

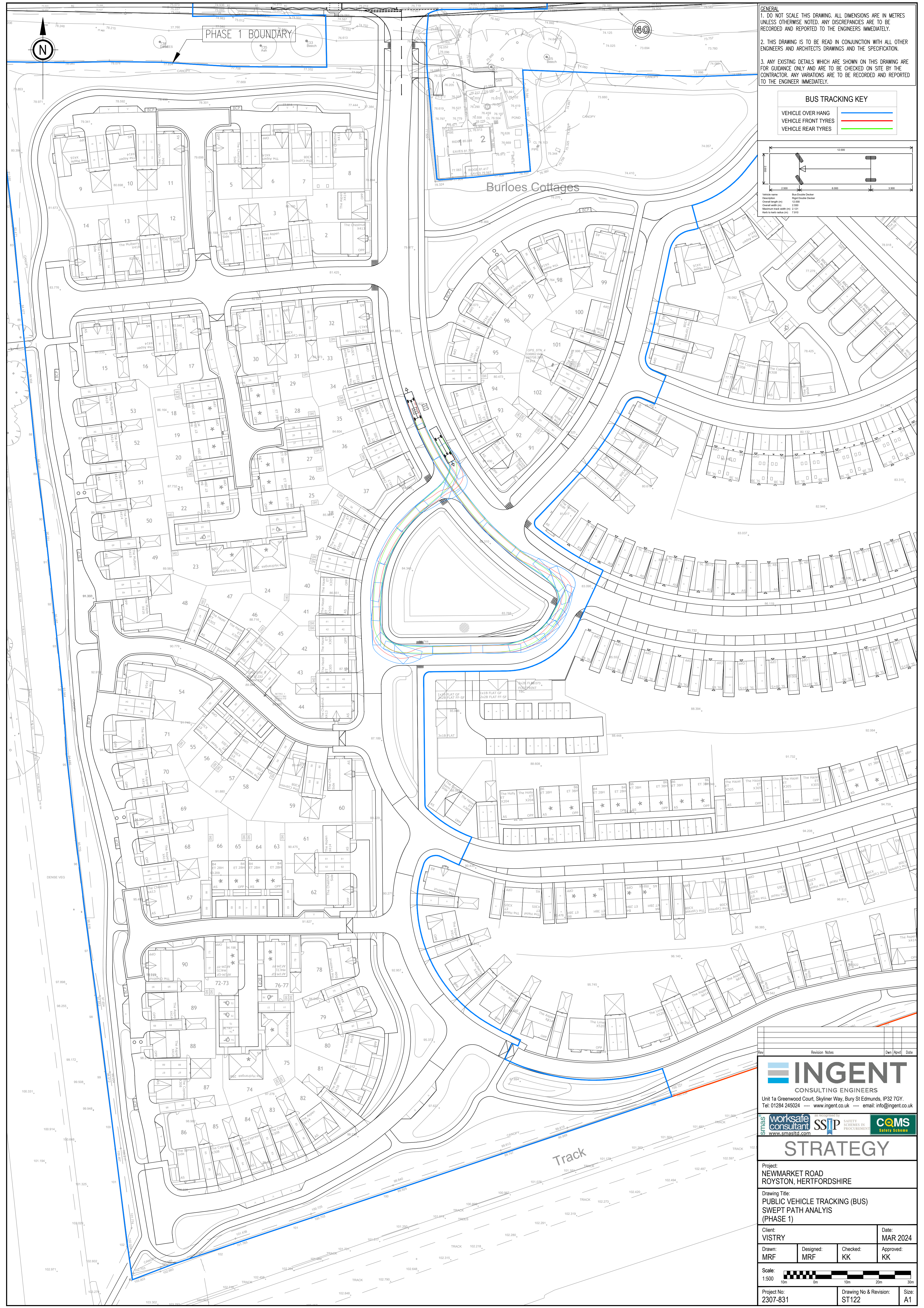
Scale:
1:500

Project No:
2307-831

Drawing No & Revision:
ST120

Size:
A1

APPENDIX J – FULL EXTENT BUS ACCESS



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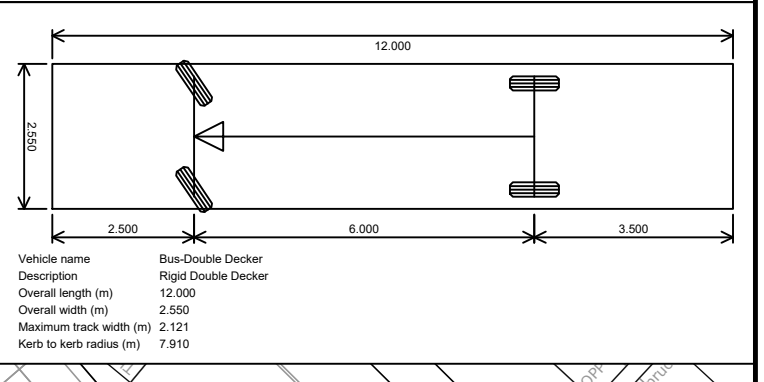
GENERAL

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3. ANY EXISTING DETAILS WHICH ARE SHOWN ON THIS DRAWING ARE FOR GUIDANCE ONLY AND ARE TO BE CHECKED ON SITE BY THE CONTRACTOR. ANY VARIATIONS ARE TO BE RECORDED AND REPORTED TO THE ENGINEER IMMEDIATELY.

BUS TRACKING KEY	
VEHICLE OVER HANG	—
VEHICLE FRONT TYRES	—
VEHICLE REAR TYRES	—



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www.smasitd.com

STRATEGY

Project: **NEWMARKET ROAD ROYSTON, HERTFORDSHIRE**

Drawing Title: **PUBLIC VEHICLE TRACKING (BUS) SWEEP PATH ANALYSIS (PHASE 1)**

Client: VISTRY	Date: MAR 2024		
Drawn: MRF	Designed: MRF	Checked: KK	Approved: KK

Scale:

Project No: 2307-831	Drawing No & Revision: ST122	Size: A1
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APPENDIX K - TRICS OUTPUTS

Calculation Reference: AUDIT-860401-240126-0125

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	2 days
	HF HERTFORDSHIRE	1 days
	KC KENT	4 days
	SC SURREY	1 days
	WB WEST BERKSHIRE	1 days
	WS WEST SUSSEX	3 days
03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	2 days
	NF NORFOLK	7 days
05	EAST MIDLANDS	
	DY DERBY	1 days
	LE LEICESTERSHIRE	1 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
08	NORTH WEST	
	AC CHESHIRE WEST & CHESTER	1 days
09	NORTH	
	DH DURHAM	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 75 to 456 (units:)
 Range Selected by User: 75 to 500 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/15 to 04/07/23

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

Selected survey days:

Monday	5 days
Tuesday	6 days
Wednesday	5 days
Thursday	6 days
Friday	5 days

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

Selected survey types:

Manual count	24 days
Directional ATC Count	3 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	18
Neighbourhood Centre (PPS6 Local Centre)	8

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

Selected Location Sub Categories:

Residential Zone	18
Village	7
Out of Town	1
No Sub Category	1

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	14 days - Selected
Servicing vehicles Excluded	74 days - Selected

Secondary Filtering selection:

Use Class:

C3 27 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	8 days
5,001 to 10,000	9 days
10,001 to 15,000	6 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days

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

Population within 5 miles:

5,001 to 25,000	8 days
25,001 to 50,000	4 days
50,001 to 75,000	3 days
75,001 to 100,000	4 days
100,001 to 125,000	1 days
125,001 to 250,000	5 days
250,001 to 500,000	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	6 days
1.1 to 1.5	17 days
1.6 to 2.0	4 days

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

Travel Plan:

Yes	15 days
No	12 days

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

PTAL Rating:

No PTAL Present	26 days
2 Poor	1 days

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

LIST OF SITES relevant to selection parameters

1	AC-03-A-06 COMMON LANE NEAR CHESTER WAVERTON Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 99 Survey date: FRIDAY 29/04/22	DETACHED HOUSES	CHESHIRE WEST & CHESTER	Survey Type: MANUAL
2	CA-03-A-06 CRAFT'S WAY NEAR CAMBRIDGE BAR HILL Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 207 Survey date: FRIDAY 22/06/18	MIXED HOUSES	CAMBRIDGESHIRE	Survey Type: MANUAL
3	CA-03-A-08 GIDDING ROAD SAWTRY Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 83 Survey date: THURSDAY 13/10/22	DETACHED & SEMI-DETACHED	CAMBRIDGESHIRE	Survey Type: MANUAL
4	DH-03-A-02 LEAZES LANE BISHOP AUCKLAND ST HELEN AUCKLAND Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings: 125 Survey date: MONDAY 27/03/17	MIXED HOUSES	DURHAM	Survey Type: MANUAL
5	DV-03-A-02 MILLHEAD ROAD HONITON Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 116 Survey date: FRIDAY 25/09/15	HOUSES & BUNGALOWS	DEVON	Survey Type: MANUAL
6	DY-03-A-01 RADBOURNE LANE DERBY Edge of Town Residential Zone Total No of Dwellings: 371 Survey date: TUESDAY 10/07/18	MIXED HOUSES	DERBY	Survey Type: MANUAL
7	EX-03-A-02 MANOR ROAD CHIGWELL GRANGE HILL Edge of Town Residential Zone Total No of Dwellings: 97 Survey date: MONDAY 27/11/17	DETACHED & SEMI-DETACHED	ESSEX	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	EX-03-A-03 KESTREL GROVE RAYLEIGH	MIXED HOUSES	ESSEX
	Edge of Town Residential Zone Total No of Dwellings:	123	
	Survey date: MONDAY	27/09/21	Survey Type: MANUAL
9	HF-03-A-03 HARE STREET ROAD BUNTINGFORD	MIXED HOUSES	HERTFORDSHIRE
	Edge of Town Residential Zone Total No of Dwellings:	160	
	Survey date: MONDAY	08/07/19	Survey Type: MANUAL
10	KC-03-A-04 KILN BARN ROAD AYLESFORD DITTON	SEMI-DETACHED & TERRACED	KENT
	Edge of Town Residential Zone Total No of Dwellings:	110	
	Survey date: FRIDAY	22/09/17	Survey Type: MANUAL
11	KC-03-A-07 RECULVER ROAD HERNE BAY	MIXED HOUSES	KENT
	Edge of Town Residential Zone Total No of Dwellings:	288	
	Survey date: WEDNESDAY	27/09/17	Survey Type: MANUAL
12	KC-03-A-08 MAIDSTONE ROAD CHARING	MIXED HOUSES	KENT
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings:	159	
	Survey date: TUESDAY	22/05/18	Survey Type: MANUAL
13	KC-03-A-10 HEADCORN ROAD STAPLEHURST	MIXED HOUSES	KENT
	Edge of Town Residential Zone Total No of Dwellings:	106	
	Survey date: TUESDAY	09/05/23	Survey Type: MANUAL
14	LE-03-A-02 MELBOURNE ROAD IBSTOCK	DETACHED & OTHERS	LEICESTERSHIRE
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings:	85	
	Survey date: THURSDAY	28/06/18	Survey Type: MANUAL
15	NF-03-A-29 BEAUFORT WAY GREAT YARMOUTH BRADWELL	MIXED HOUSES	NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:	456	
	Survey date: WEDNESDAY	22/09/21	Survey Type: DIRECTIONAL ATC COUNT
16	NF-03-A-31 BRANDON ROAD SWAFFHAM	MIXED HOUSES	NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:	321	
	Survey date: THURSDAY	22/09/22	Survey Type: DIRECTIONAL ATC COUNT

LIST OF SITES relevant to selection parameters (Cont.)

17	NF-03-A-33 LONDON ROAD ATTLEBOROUGH	MIXED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		143	
	Survey date: THURSDAY		29/09/22	Survey Type: MANUAL
18	NF-03-A-34 NORWICH ROAD SWAFFHAM	MIXED HOUSES		NORFOLK
	Edge of Town Out of Town Total No of Dwellings:		80	
	Survey date: TUESDAY		27/09/22	Survey Type: MANUAL
19	NF-03-A-36 LONDON ROAD WYMONDHAM	MIXED HOUSES		NORFOLK
	Edge of Town No Sub Category Total No of Dwellings:		75	
	Survey date: THURSDAY		29/09/22	Survey Type: MANUAL
20	NF-03-A-39 HEATH DRIVE HOLT	MIXED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		212	
	Survey date: TUESDAY		27/09/22	Survey Type: MANUAL
21	NF-03-A-44 MILL LANE NEAR NORWICH HORSFORD Neighbourhood Centre (PPS6 Local Centre) Village	MIXED HOUSES		NORFOLK
	Total No of Dwellings:		125	
	Survey date: WEDNESDAY		21/09/22	Survey Type: DIRECTIONAL ATC COUNT
22	SC-03-A-05 REIGATE ROAD HORLEY	MIXED HOUSES		SURREY
	Edge of Town Residential Zone Total No of Dwellings:		207	
	Survey date: MONDAY		01/04/19	Survey Type: MANUAL
23	ST-03-A-07 BEACONSIDE STAFFORD MARSTON GATE Edge of Town Residential Zone Total No of Dwellings:	DETACHED & SEMI-DETACHED		STAFFORDSHIRE
	Survey date: WEDNESDAY		22/11/17	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

24	WB-03-A-03 DORKING WAY READING CALCOT Edge of Town Residential Zone Total No of Dwellings: Survey date: FRIDAY	MIXED HOUSES 108 09/09/22	WEST BERKSHIRE Survey Type: MANUAL
25	WS-03-A-08 ROUNDSTONE LANE ANGMERING Edge of Town Residential Zone Total No of Dwellings: Survey date: THURSDAY	MIXED HOUSES 180 19/04/18	WEST SUSSEX Survey Type: MANUAL
26	WS-03-A-14 TODDINGTON LANE LITTLEHAMPTON WICK Edge of Town Residential Zone Total No of Dwellings: Survey date: WEDNESDAY	MIXED HOUSES 117 20/10/21	WEST SUSSEX Survey Type: MANUAL
27	WS-03-A-15 HILLAND ROAD BILLINGSHURST Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: Survey date: TUESDAY	MIXED HOUSES 380 23/11/21	WEST SUSSEX Survey Type: MANUAL

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
ES-03-A-03	flats
ES-03-A-05	flats
ES-03-A-07	flats
ES-03-A-08	flats
HC-03-A-24	flats
HC-03-A-26	covid
HC-03-A-32	flats
KC-03-A-11	flats
NF-03-A-32	flats
NF-03-A-35	flats
NF-03-A-47	flats
SC-03-A-09	flats
SF-03-A-09	covid
SF-03-A-10	covid
WS-03-A-12	covid
WS-03-A-13	covid
WS-03-A-17	flats
WS-03-A-18	flats
WS-03-A-19	flats

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	27	177	0.072	27	177	0.284	27	177	0.356
08:00 - 09:00	27	177	0.134	27	177	0.337	27	177	0.471
09:00 - 10:00	27	177	0.127	27	177	0.168	27	177	0.295
10:00 - 11:00	27	177	0.120	27	177	0.143	27	177	0.263
11:00 - 12:00	27	177	0.126	27	177	0.138	27	177	0.264
12:00 - 13:00	27	177	0.151	27	177	0.140	27	177	0.291
13:00 - 14:00	27	177	0.142	27	177	0.141	27	177	0.283
14:00 - 15:00	27	177	0.163	27	177	0.168	27	177	0.331
15:00 - 16:00	27	177	0.239	27	177	0.144	27	177	0.383
16:00 - 17:00	27	177	0.241	27	177	0.155	27	177	0.396
17:00 - 18:00	27	177	0.326	27	177	0.150	27	177	0.476
18:00 - 19:00	27	177	0.262	27	177	0.143	27	177	0.405
19:00 - 20:00	1	97	0.062	1	97	0.052	1	97	0.114
20:00 - 21:00	1	97	0.031	1	97	0.021	1	97	0.052
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	2.196			2.184			4.380		

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

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

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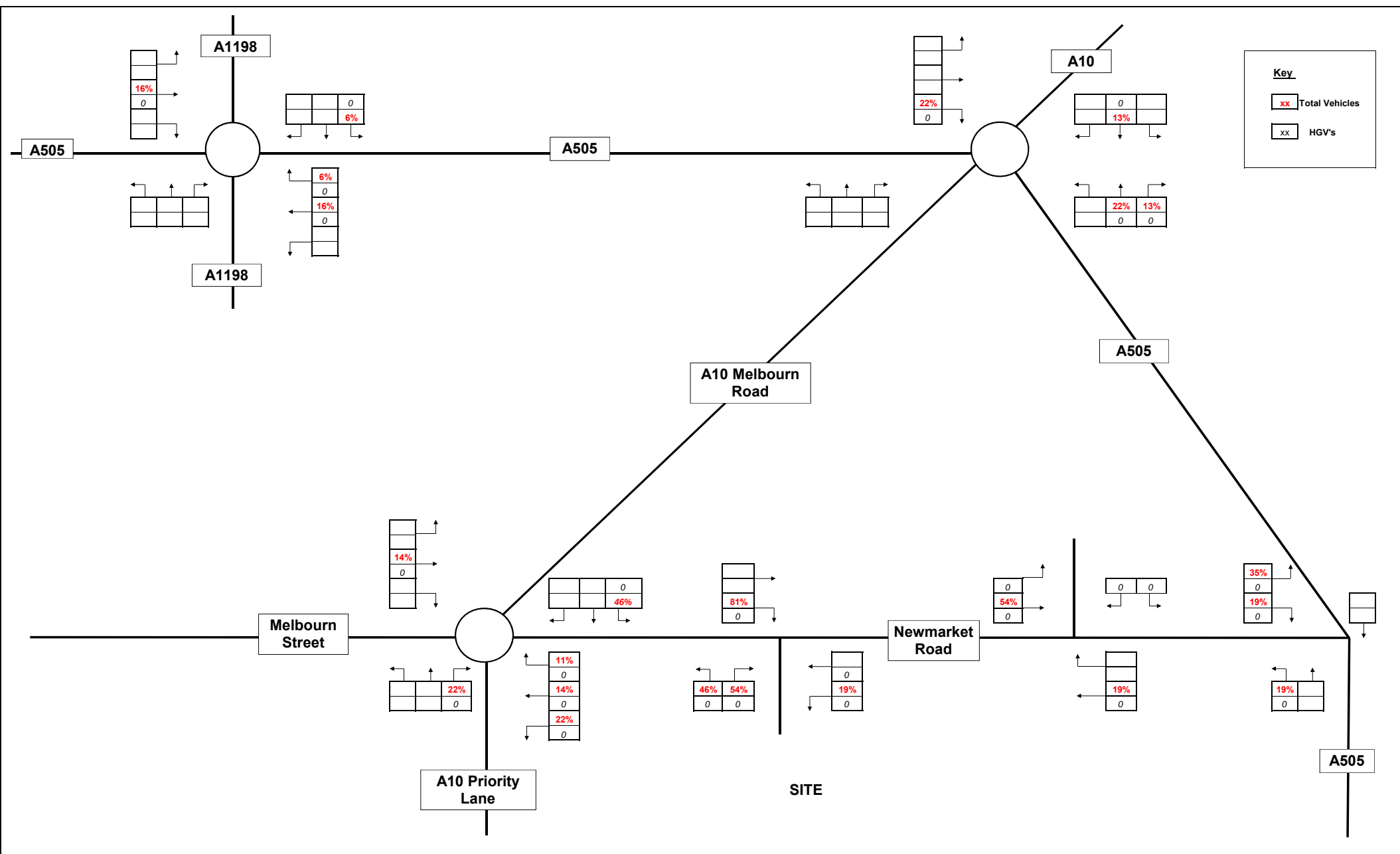
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Parameter summary

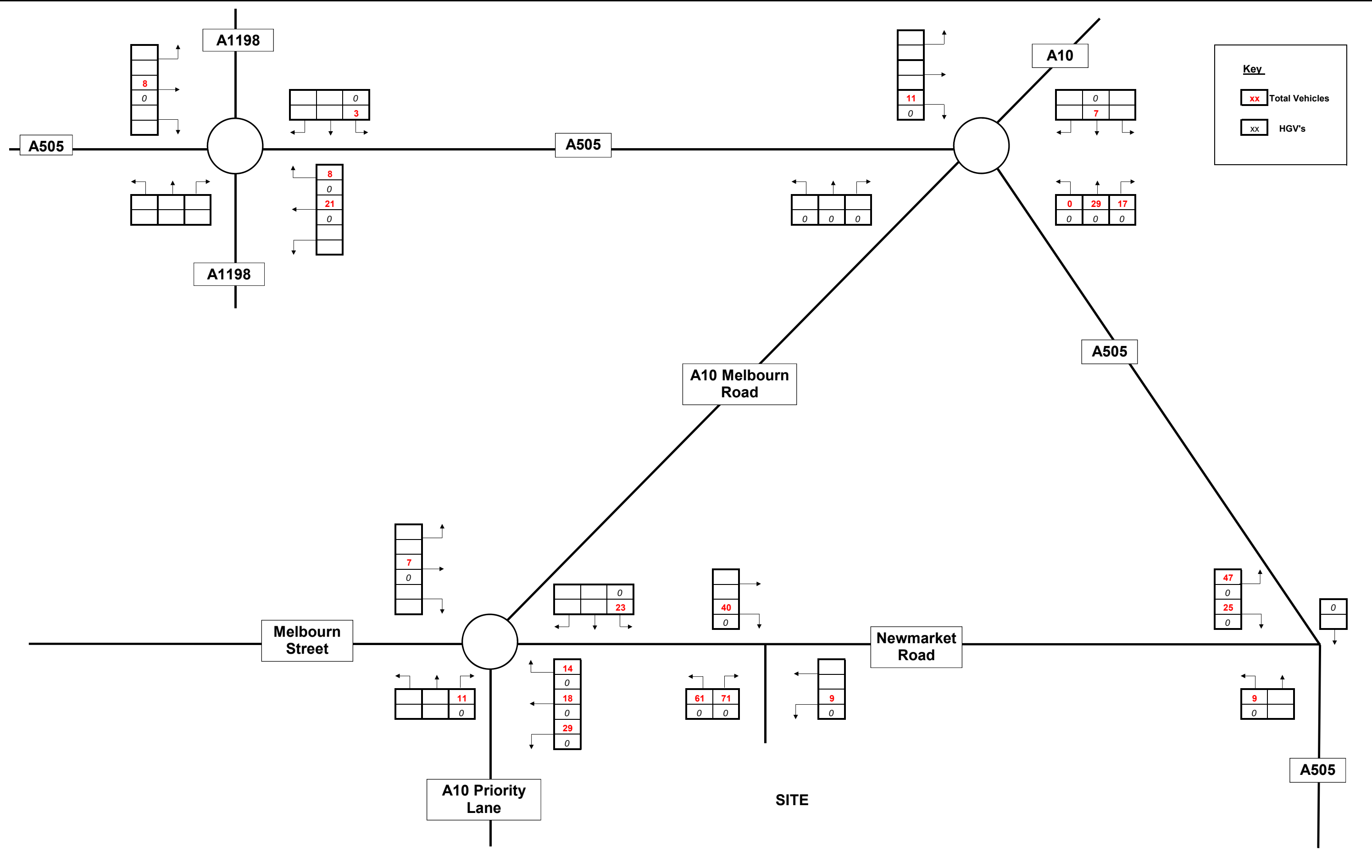
Trip rate parameter range selected:	75 - 456 (units:)
Survey date range:	01/01/15 - 04/07/23
Number of weekdays (Monday-Friday):	27
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	42
Surveys manually removed from selection:	19

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

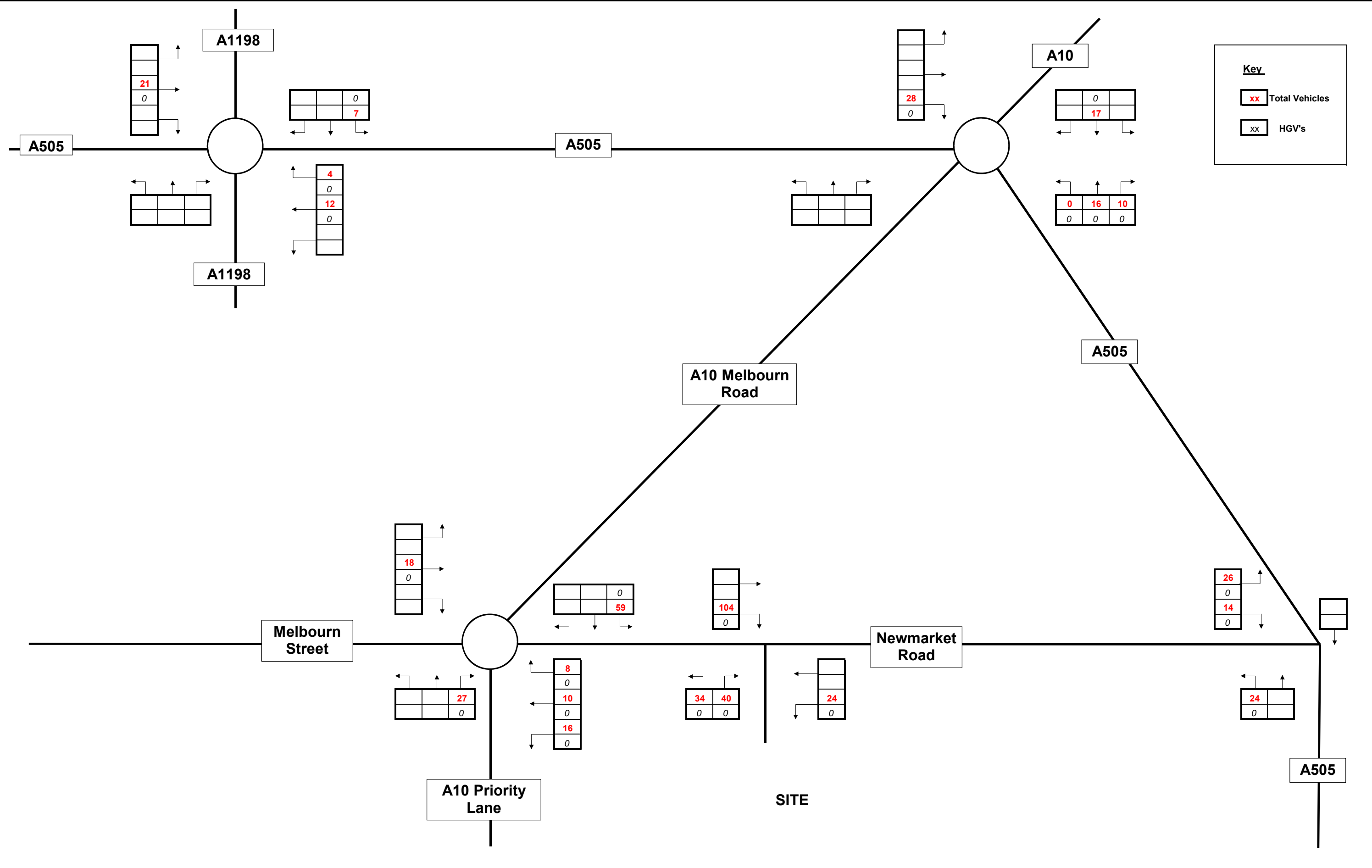
APPENDIX L– AM/PM PEAK TRAFFIC DISTRIBUTION



Drawing Title: FIGURE 5.1 - DEVELOPMENT DISTRIBUTION	Job Title: NEWMARKET ROAD , ROYSTON Client: COUNTRYSIDE PROPERTIES	Job No: 16028-01 Date: DEC' 16	 MARKIDES ASSOCIATES 9th Floor, The Tower Building London, SE1 7NX T: 020 7442 2225 E: enquiries@markidesassociates.co.uk W: www.markidesassociates.co.uk



Drawing Title:			 9th Floor, The Tower Building London, SE1 7NX T: 020 7442 2225 E: enquiries@markidesassociates.co.uk W: www.markidesassociates.co.uk
	Job Title:	NEWMARKET ROAD , ROYSTON	Job No: 16028-01
	Client:	COUNTRYSIDE PROPERTIES	Date: DEC' 16



APPENDIX M– APPLICATION 21/00765/OP HCC RESPONSE

Mark Youngman
Development Management Group Manager
Hertfordshire County Council
Postal Point CHO242
County Hall
Pegs Lane
Hertford
SG13 8DE

Response to Planning application from Hertfordshire County Council (T and CP GDP Order 2015)

Director of Planning North Hertfordshire District Council Council Offices Gernon Road Letchworth Garden City Hertfordshire SG6 3JF	District ref: HCC ref: HCC received: Area manager: Case officer:	21/00765/OP NH/6208/2021 20 May 2021 James Dale Adrian McHale
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Location

LAND OFF BARKWAY ROAD, NORTH OF FLINT HALL, ROYSTON, SG8 9NB

Application type

Outline

Proposal

Outline Planning Application for Residential Development (including affordable housing) with all matters reserved except for access, which is to be taken from Barkway Road, green infrastructure, including public open space, landscape boundaries and SUDS.

Decision

Notice is given under article 18 of the Town and Country Planning (Development Management Procedure) (England) Order 2015 that the Hertfordshire County Council as Highway Authority does not wish to restrict the grant of permission subject to the following conditions:

(1) Prior to the first occupation / use of the development hereby permitted the vehicular access shall be provided and thereafter retained at the position shown on the approved plan drawing number (JS32-5129-PS-008 Rev -) and constructed to the specification of the Highway Authority and the Local Planning Authority's satisfaction. Prior to the first use of the development hereby permitted arrangement shall be made for surface water to be intercepted and disposed of separately so that it does not discharge onto the highway carriageway. Prior to the construction of the aforesaid access the results of Stage 2 (Detail Design) Road Safety Audit needs to be presented to and approved by HCC.

Reason: To ensure satisfactory and safe access into the site and avoid the carriage of extraneous material or surface water onto the highway in accordance with Policy 5 and 17 of Hertfordshire's Local Transport Plan (adopted 2018).

(2) No development shall commence until full details have been submitted to and approved in writing by the Local Planning Authority in relation to the proposed arrangements for future management and maintenance of the proposed streets within the development. (The streets shall thereafter be maintained in accordance with the approved management and maintenance details until such time as an agreement has been entered into under Section 38 of the Highways Act 1980 or a Private Management and Maintenance Company has been established).

Reason: To ensure satisfactory development and to ensure estate roads are managed and maintained thereafter to a suitable and safe standard in accordance with Policies 5 and 22 of Hertfordshire's Local Transport Plan (adopted 2018)

(3) No development shall commence until plans have been submitted to and approved in writing by the Local Planning Authority to illustrate the roads, footways, foul and surface water drainage.

Reason: To ensure satisfactory development of the site and a satisfactory standard of highway design and construction in accordance with Policy 5 of Hertfordshire's Local Transport Plan (adopted 2018).

(4) Prior to the first occupation of the development hereby permitted sufficient space shall be provided within the site to enable a standard size family car / servicing / delivery / emergency vehicle to park, turn and re-enter the highway in a forward gear. This area shall be levelled, surfaced and drained in accordance with a detailed scheme submitted to and approved in writing by the Local Planning Authority and retained thereafter available for that specific use.

Reason: To ensure construction of a satisfactory development and in the interests of highway safety in accordance with Policy 5 of Hertfordshire's Local Transport Plan (adopted 2018).

(5) Prior to the first occupation / use of the development hereby permitted a visibility splay shall be provided in full accordance with the details indicated on the approved plan number (JS32-5129-PS-008 Rev -). The splay shall thereafter be maintained at all times free from any obstruction between 600mm and 2m above the level of the adjacent highway carriageway.

Reason: To ensure construction of a satisfactory development and in the interests of highway safety in accordance with Policy 5 of Hertfordshire's Local Transport Plan (adopted 2018).

(6) Prior to the occupation of the development hereby permitted, each residential garage shall incorporate an Electric Vehicle ready domestic charging point.

Reason: To ensure construction of a satisfactory development and to promote sustainable development in accordance with Policies 5, 19 and 20 of Hertfordshire's Local Transport Plan (adopted 2018).

(7) Prior to the first occupation /use of the development hereby permitted a scheme for the parking of cycles including details of the design, level and siting of the proposed parking shall be submitted to and approved in writing by the Local Planning Authority The approved scheme shall be fully implemented before the development is first occupied or brought into use and thereafter retained for this purpose.

Reason: To ensure the provision of adequate cycle parking that meets the needs of occupiers of the proposed development and in the interests of encouraging the use of sustainable modes of transport in accordance with Policies 1, 5 and 8 of Hertfordshire's Local Transport Plan (adopted 2018)

(8) No development shall commence until a Construction Management Plan (or Construction Method Statement) has been submitted to and approved in writing by the Local Planning Authority.

Thereafter the construction of the development shall only be carried out in accordance with the approved Plan. The Construction Management Plan / Statement shall include details of:

- a. Construction vehicle numbers, type, routing;
- b. Access arrangements to the site;
- c. Traffic management requirements
- d. Construction and storage compounds (including areas designated for car parking, loading / unloading and turning areas);
- e. Siting and details of wheel washing facilities;
- f. Cleaning of site entrances, site tracks and the adjacent public highway;
- g. Timing of construction activities (including delivery times and removal of waste) and to avoid school pick up/drop off times;
- h. Provision of sufficient on-site parking prior to commencement of construction activities;
- i. Post construction restoration/reinstatement of the working areas and temporary access to the public highway;
- j. where works cannot be contained wholly within the site a plan should be submitted showing the site layout on the highway including extent of hoarding, pedestrian routes and remaining road width for vehicle movements.

Reason: In order to protect highway safety and the amenity of other users of the public highway and rights of way in accordance with Policies 5, 12, 17 and 22 of Hertfordshire's Local Transport Plan (adopted 2018).

(9a) Notwithstanding the details indicated on the submitted drawings no on-site works above slab level shall commence until a detailed scheme for the off-site highway improvement works as indicated on drawing number (JS32-5129-PS-005 Rev B) have been submitted to and approved in writing by the Local Planning Authority.

Reason: To ensure construction of a satisfactory development and that the highway improvement works are designed to an appropriate standard in the interest of highway safety and amenity and in accordance with Policy 5, 7, 13 and 21 of Hertfordshire's Local Transport Plan (adopted 2018).

(9b) Prior to the first occupation of the development hereby permitted the off-site highway improvement works referred to in Part a of this condition shall be completed in accordance with the approved details.

Reason: To ensure construction of a satisfactory development and that the highway improvement works are designed to an appropriate standard in the interest of highway safety and amenity and in accordance with Policy 5, 7, 13 and 21 of Hertfordshire's Local Transport Plan (adopted 2018).

(10) Prior to the first occupation of the development hereby permitted a scheme for the parking of cycles including details of the design, level and siting of the proposed parking shall be submitted to and approved in writing by the Local Planning Authority. The approved scheme shall be fully implemented before the development is first occupied or brought into use and thereafter retained for this purpose.

Reason: To ensure the provision of adequate cycle parking that meets the needs of occupiers of the proposed development and in the interests of encouraging the use of sustainable modes of transport in accordance with Policies 1, 5 and 8 of Hertfordshire's Local Transport Plan (adopted 2018)

(11a) Notwithstanding the details indicated on the submitted drawings no works shall commence on site unless otherwise agreed in writing until a Rights of Way Improvement Plan for the off-site and on-site Rights of Way improvement works has/have been submitted to and approved in writing by the Local Planning Authority.

Reason: To ensure that the highway improvement works are designed to an appropriate standard in the interest of highway safety and to protect the environment of the local highway corridor and in accordance with Policy 5 and 21 of Hertfordshire's Local Transport Plan (adopted 2018).

(11b) Prior to the first occupation of the development hereby permitted the off-site and on-site Rights of Way improvement plan works (including any associated highway works) referred to in Part A of this condition shall be completed to the written satisfaction of the Local Planning Authority.

Reason: To ensure that the highway network is adequate to cater for the development proposed and in accordance with Policy 5 and 21 of Hertfordshire's Local Transport Plan (adopted 2018).

(12) At least 3 months prior to the first occupation of the approved development a detailed Travel Plan for the site, based upon the Hertfordshire Council document 'Hertfordshire's Travel Plan Guidance', shall be submitted and approved in writing by the Local Planning Authority. The approved Travel Plan shall be implemented at all times.

Reason: To ensure that sustainable travel options associated with the development are promoted and maximised to be in accordance with Policies 3, 5, 7, 8, 9 and 10 of Hertfordshire's Local Transport Plan (adopted 2018).

(13) No development shall commence until a monitoring programme to assess the level of traffic generation at defined intervals of occupancy shall be submitted to and approved in writing by the Local Planning Authority. The monitoring programme shall be implemented as agreed.

Reason: To ensure that agreed traffic levels are not breached and thus highway network is adequate to cater for the development proposed to be in accordance with Policies 5 and 12 of Hertfordshire's Local Transport Plan (adopted 2018).

HIGHWAY INFORMATIVES

HCC as Highway Authority recommends inclusion of the following Advisory Note (AN) / highway informative to ensure that any works within the highway are carried out in accordance with the provisions of the Highway Act 1980:

AN1) General Works Within the Highway (S278) - Construction Standards; Construction standards for works within the highway.

The applicant is advised that in order to comply with this permission it will be necessary for the developer of the site to enter into an agreement with Hertfordshire County Council as Highway Authority under Section 278 of the Highways Act 1980 to ensure the satisfactory completion of the access and associated road improvements. The construction of such works must be undertaken to the satisfaction and specification of the Highway Authority, and by a contractor who is authorised to work in the public highway. Before works commence the applicant will need to apply to the Highway Authority to obtain their permission and requirements. Further information is available via the website:

<https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/business-and-developer-information/development-management/highways-development-management.aspx>

AN2) Storage of materials: The applicant is advised that the storage of materials associated with the construction of this development should be provided within the site on land which is not public highway, and the use of such areas must not interfere with the public highway. If this is not possible, authorisation should be sought from the Highway Authority before construction works commence. Further information is available via the website

<https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/business-and-developer-information/business-licences/business-licences.aspx> or by telephoning 0300 1234047.

AN3) Obstruction of public highway land: It is an offence under section 137 of the Highways Act 1980 for any person, without lawful authority or excuse, in any way to wilfully obstruct the free passage along a highway or public right of way. If this development is likely to result in the public highway or public right of way network becoming routinely blocked (fully or partly) the applicant must contact the Highway Authority to obtain their permission and requirements before construction works commence. Further information is available via the website

<https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/business-and-developer-information/business-licences/business-licences.aspx> or by telephoning 0300 1234047.

AN4) Road Deposits: It is an offence under section 148 of the Highways Act 1980 to deposit mud or other debris on the public highway, and section 149 of the same Act gives the Highway Authority powers to remove such material at the expense of the party responsible. Therefore, best practical means shall be taken at all times to ensure that all vehicles leaving the site during construction of the development are in a condition such as not to emit dust or deposit mud, slurry or other debris on the highway. Further information is available via the website

<https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/highways-roads-and-pavements.aspx> or by telephoning 0300 1234047.

AN5) Construction standards for new/amended vehicle access: Where works are required within the public highway to facilitate the new or amended vehicular access, the Highway Authority require the construction of such works to be undertaken to their satisfaction and specification, and by a contractor who is authorised to work in the public highway. If any of the works associated with the construction of the access affects or requires the removal and/or the relocation of any equipment, apparatus or structures (e.g. street name plates, bus stop signs or shelters, statutory authority equipment etc.) the applicant will be required to bear the cost of such removal or alteration.

Before works commence the applicant will need to apply to the Highway Authority to obtain their permission, requirements and for the work to be carried out on the applicant's behalf. Further information is available via the website

<https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/changes-to-your-road/dropped-kerbs/dropped-kerbs.aspx> or by telephoning 0300 1234047.

AN6) Travel Plan

A Travel Plan (TP) for the development consisting of a written agreement with the County Council which sets out a scheme to encourage, regulate, and promote green travel measures for owners, occupiers, and visitors to the Development in accordance with the provisions of the County Council's 'Travel Plan Guidance for Business and Residential Development', which is subject to an overall sum of £6,000 payable before occupation of the development. This 'evaluation and support contribution' is to cover the County Council's costs of administering and monitoring the objectives of the TP and engaging in any TP Review. Indexation of this figure will be based on the Consumer Price Index from the date planning is granted to the date the contribution is paid. The applicant's attention is drawn to Hertfordshire County Council's guidance on residential/commercial Travel Plans:

<https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/business-and-developer-information/development-management/highways-development-management.aspx#travelplans>

Our Travel Plan team can provide further advice at travelplan@hertfordshire.gov.uk.

AN7) Developer Contributions

North Hertfordshire District Council has not yet adopted CIL; therefore, contributions would be sought via the S106 agreement using the HCC's Planning Obligations Toolkit. HCC's Planning Obligation Guidance (2008) implements a two-strand approach to planning obligations in order to address the immediate impacts of the new development (first strand), and the cumulative impacts of all development on non-car networks (second strand).

In accordance with the HCC Planning Obligations Guidance, contributions are sought on a unit rate basis and are pooled where appropriate. For residential use the charge is based on the number of bedrooms. This is calculated based on the site's accessibility zone (3 and 4).

Although the exact classification of house types is not known at this stage, assuming 284 x 3 bedrooms a second strand contribution of approximately £319,500 in 2006 prices would be attributed to the following:

- £1,200 pa for 5 years (£6,000 total) would be attributed to travel plan monitoring;
- The provision of the proposed bus stops on Barkway Road under S278;
- The provision of the proposed Market Hill crossing under S278;
- £150,000 towards Package PK15 (and its sub program PR79) of the North Central Growth and Transport Plan aimed at promoting sustainable travel within Royston; and
- Possible contributions to Real Time Passenger Information (RTPI) where homes are further than 400m from the proposed bus stops on Barkway Road.

COMMENTS

In March 2021 MODE Transport Planning produced a Transport Assessment (TA) and a residential Travel Plan (TP) to support the application by Landhold Capital (LC) to build up to 280 homes on a site located to south of Royston land off Barkway Road, Flint Hall Farm, Royston. HCC Highways responded to this application on the 17 March 2021 initially recommending refusal due to insufficient information at the time. MODE have subsequently responded with a Transport Assessment Addendum (TAA, May 2021) to which this note responds.

Motorised Vehicle Access

The application site is located immediately south of the existing residential area of Royston and takes access from the eastern side of Barkway Road via a priority junction with a ghost island facility. Barkway Road at this location is subject to the national speed limit (60mph). A recent traffic survey by mode found the maximum 85th percentile speed to be 46.2mph and it was agreed with HCC that the junction be designed to a speed of 50mph and the preliminary junction design was acceptable subject to the findings of independent stage 1 Road Safety Audit (RSA). A recent RSA1 was completed by MODE's London office independent to their designers in their Birmingham office. Having reviewed the RSA which has recommended relocating the proposed Barkway Road bus stops to improve pedestrian visibility and the provision of a pedestrian refuge to make it easier to access the southbound stop on the eastern side of Barkway Road HCC highways accept the access arrangements shown on the drawing JS32-5129-PS-008 Rev -. The drawing also shows upgrade of the western Barkway Road footway from an upgraded Public Right of Way (ROYSTON 016) to the existing built up area.

Pedestrian / Cycle Access

The proposal site is traversed north to south by the PROW's ROYSTON 010 & 016 and ROYSTON 009 joins the site's north western border.

The developer has agreed to enhancing the Public Right of Way (ROYSTON 010) through the centre of the site to provide a pedestrian and cycle route in line with the guidance set out in LTN 1/20 towards Royston town centre.

HCC considers that in order to make the site compliant with the policies laid out in Local Transport Note (LTN) 4, aimed at ensuring sustainable development, that the provision of an PROW10 creating an attractive sustainable link for all is essential to encourage active travel and achieve LTN1/20 compliance. As indicated in the Scoping response, HCC require that ROYSTON 010 which is to be upgraded to a multi-user (walking and cycling) route is widened to a 6m corridor (which can incorporate both stone and natural surfaces). The HCC PROW team indicates that ROYSTON 010 is defined by a hedge on one side but considers that the route could be widened on the other side.

The scoping discussions the developer (through MODE) also committed to:

- providing a footway link towards the existing bus stop provision along Barkway Road (via the existing PROW network within the site) (ROYSTON 016);

HCC are satisfied with the connection towards the existing bus stops on Barkway Road. HCC also note the provision of bus stops to the north of the proposed access road. The TA shows that the existing bus stops are within 400m 'as the crow flies'. Actual walk distances to facilities should be shown and in particular it should be demonstrated that the proposed bus stops are within 400m walk of each home. Where this is not possible S106 contribution to Real Time Information (RTI) screens at new bus stops is required.

The scoping discussions also identified the presence of PROW ROYSTON 009 along the north western boundary of the site and it is proposed by LC to enhance the route within the site boundary. HCC Highways recognises that this link despite the limitations of the PROW will provide a useful informal connection towards Royston Hospital and an alternative route towards Royston town centre.

The TAA also details measures to upgrade the existing zebra crossing A10 Market Hill/ Barkway Street to a signalised pedestrian crossing as per the preliminary drawing J32-5129-PS-005 Rev B. HCC welcomes this improvement which it considers is in line with the policies promoted in LTP4 aimed at promoting sustainable travel.

Site Layout

In HCC's pre application response it was indicated that where an emergency access was not possible the road layout should form a circuit with a connection, at the shortest practical section, to the site access junction and wider road network. Prior to commencement on site as per condition (3) above 'No development shall commence until plans have been submitted to and approved in writing by the Local Planning Authority to illustrate the roads, footways, foul and surface water drainage'.

Further guidance can be found within the emerging Hertfordshire Place and Movement Design Guide, which when adopted will supersede Roads in Hertfordshire (RiH) (in particular Part 17 – Appendix R – Master Planning)

<https://democracy.hertfordshire.gov.uk/mgAi.aspx?ID=4499#mgDocuments>.

Servicing

MODE have demonstrated within their original TA (J32-5129-PS-004 Rev C) that servicing vehicles (a NHDC refuse vehicle) can safely navigate the Barkway Road access junction. Whilst it appears there is sufficient space given the relocation of the proposed bus stops on Barkway Road this requires to be updated prior to detailed design of the access. Once the site layout is finalised also it must be demonstrated that the site can be effectively serviced also and that vehicles can exit the development in forward gear.

Car/ Cycle Parking

The TA indicates that parking will be assessed against the standards set out within Vehicle Parking at New Development Supplementary Planning Document (NHDC, September 2011).

As indicated in scoping HCC can confirm that the NHDC standards are appropriate, however additional visitor parking does not appear to be mentioned by the MODE TA and whilst HCC Highways does not consider this to be problematic, NHDC may want to consider this.

As per the NHDC standards the TA indicates that cycle parking, the proposal will provide secure cycle parking for the development within the curtilage of each dwelling this is considered appropriate by HCC Highways.

Electric Vehicles (EV's)

Within the TA MODE recommend that all dwellings should provide electric vehicle charging facilities in line with current policy. HCC Highways support this recommendation also.

Travel Plan

The HCC Sustainable Travel Team consider the TP is broadly acceptable at this stage. However, prior to final acceptance the following are required:

- Details of a travel plan co-ordinator (TPC) need to be included, once appointed;
- The details of a secondary contact need to be provided to HCC, once a TPC has been appointed;
- Statement of senior commitment to implementation of TP;
- Details required for whether the developer or a management company will oversee the implementation of the TP;
- TP should state that high speed broadband will be provided to the development, facilitating home working and home delivery services, while also reducing the need to travel;
- Baseline mode split data to be updated, once initial survey carried out (within 3 months of 90% occupation, as stated);
- Modal shift targets should be updated following baseline results; and
- Site Monitoring via TRICS SAM Survey should happen 3 months post occupation of the site and on anniversary of the first monitoring for the next five years and the plan be subject to annual review based on questionnaire surveys.

Base Data

MODE have collected the data and analysed the junctions discussed with HCC Highways in pre application scoping. Junction turning count and queue length surveys were undertaken on Wednesday 9 December 2021 by an independent count contractor at:

- The Barkway Road/ A10 Gyratory;
- A10/ Melbourn St/ Newmarket Rd Roundabout;
- Melbourn St/ Kneesworth St/ Baldock St Signalised Junction;
- Baldock St/ Princes Mews Mini Roundabout;
- Baldock Rd/ A505 Roundabout;
- Newmarket Road/ A505 Priority Junction;
- A10/ A505 Roundabout; and
- Old N Rd/ A505 Roundabout.

MODE indicated that the counts identified network peaks of 07:45-08:45 and 16:00-17:00. This is slightly different to the traditional network peaks 08:00-09:00 and 17:00-18:00. However, MODE supplied their analysis to HCC on request which demonstrated pm peak spreading (with 16:00-17:00 being slightly busier than 17:00-18:00) and it is agreed that the analysed peaks are appropriate for further analysis.

Covid 19 Adjustment

As agreed with HCC Highways the traffic counts were then uplifted slight as per HCC observations of traffic flow in Hertfordshire so that they represented a typical base in non Covid 19 period.

Growth

As agreed in scoping with officers of HCC traffic was subsequently growthed to 2022 and 2027 using the UK governments predicted growth for Royston (North Hertfordshire 002). However, as indicated in HCC scoping response with the release of TEMPro 7.2b (October 2019) the AF15 dataset is now superseded by the RTF18 dataset. The TEMPro 7.2b release notes indicate that:

“Appraisals that depend on the TEMPro NTM Traffic Growth Calculations from RTF15 have now been superseded. If possible, they should be updated to use the NTM Traffic Growth Calculations from RTF18, otherwise, a sensitivity test should be used to demonstrate that the revised traffic growth forecasts do not materially impact on the validity of the assessment.”

Interrogation of the RTF18 dataset however, has revealed that predicted growth rates have reduced therefore the utilised AF15 are considered by HCC as robust but this should be demonstrated in a response.

Tempro v7.2c has just been released (February 2021) but does not contain material changes from 7.2b and continues to use the RTF18 dataset.

Committed Development

As agreed with officers of HCC in scoping the TA considers a number of developments which at the time of pre application discussions had planning permission but were not fully built out, these included:

- Land Surrounding Burloes Cottages Newmarket Road Royston (325 Homes) -17/00110/1 – Granted 28 February 2020;
- Land Across Verges At Royston Bypass Royston Hertfordshire – 17/02470/1 – Granted May 2018;
- Land East Of Garden Walk And North Of Newmarket Road Garden Walk Royston – 14/02485/1 - Granted December 2016;
- Land West Of Royston & North Of Baldock Road Royston SG8 9NT (279 Homes + Land for Primary School) - 16/00378/1 – Granted 6 February 2019;
- Land At Safeline Avs Ltd, Royston Business Park, Greenfield, Royston Hertfordshire SG8 5HN - 17/04357/FP – Granted 26 June 2018; and
- Anglian Business Park, Royston - 19/01172/HYA – Granted 13 October 2020.

Tempro will account for wider growth than growth due to specific developments that will directly affect link flows within the town therefore HCC considers it is robust to consider both elements (Tempro and committed).

Trip Generation/ Mode Split

The people trip generation presented by MODE are based directly on what was agreed with HCC Highways during pre-application and is considered robust. The Person Trip rate has been extracted from the national Trip Generation database TRICS (v7.7.2) based on an average of all Private Housing Sites located in England (excluding Greater London).

During scoping with HCC Highways, it was also agreed to split these predicted people trips according to the travel to work data recorded by the 2011 UK Census for Royston. It is considered that this will represent the transport/travel opportunities bespoke to local residents and therefore appropriate.

<u>Person Trip Rates</u>	In	Out	Total
AM	0.196	0.744	0.940
PM	0.594	0.255	0.849

<u>Mode Split</u>	North Hertfordshire 002A
Walk	11.76%
Cycle	2.30%
Bus	0.85%
Rail	10.30%
Powered Two-wheeler	0.61%
Car/Van Passenger	4.36%
Car/Van Driver	69.82%
	<u>100.00%</u>

<u>Veh Rates</u>	In	Out	Total
AM	0.137	0.519	0.656
PM	0.415	0.178	0.593

<u>Vehicle Trips (300 HH)</u>	In	Out	Total
AM	41	156	197
PM	125	53	178

Distribution/Assignment

Trip distribution and assignment was discussed with HCC Highways in scoping and deemed appropriate. The distribution pattern follows that observed for residents of Royston that was recorded during the 2011 census. Motor vehicle traffic has subsequently been assigned to individual roads as per an online route planner.

Analysis (Macro Modelling)

A10 Melbourne Street/ Newmarket Road Roundabout

It is noted that the 2020 model performs significantly better than the observed 2020 queue particularly on the A10 Priory Lane approach (the model indicates a 1-2 vehicles on the A10 south, whereas the survey indicates a queue of 10-12 vehicles). However, it is noted that the base model contains the mitigation measures proposed by the committed site 14/02485/1 which will deliver significant capacity benefits on this approach and the geometries. The geometries within the model are also considered reasonable by HCC Highways. Therefore, the model is deemed acceptable for further analysis.

Just prior to the estimated opening of the proposed Flint Hall Farm development in the 2022 the upgraded junction is predicted to be operating within operational threshold capacity with a maximum Ratio of Flow to Capacity (RFC) on the A10 Priory Lane approach of 0.80 during the peak 15 minutes of the PM peak. An RFC of 0.85 indicating the operational threshold of a priority approach. The development is predicted to result in this approach going slightly over the operational threshold (0.88). The junction however remains within absolute capacity (RFC < 1.00) and HCC Highways does not consider this is a severe impact in terms of the NPPF.

The 2027 Baseline (including committed development) analysis indicates that the approaches to this junction would go beyond operational threshold capacity (with an RFC of 0.89) during the PM peak due to predicted growth prior to development, and hence would be predicted to become unstable. The analysis within the TA indicates that the development will cause the predicted queue on Melbourn Street to rise from 7 vehicles (or passenger car units) to 15 vehicles, during the peak 15 minutes of the 2027 PM peak. As with 2022 however the junction would operate within absolute capacity thresholds (an RFC of 0.97). The developer has demonstrated that by implementation of the mitigation scheme shown on Drawing J325129-PS-100 that no net detriment could be achieved at the junction (An RFC on the A10 Priory Lane approach of 0.89). HCC Highways however, have concerns as to how the proposals will affect the existing pedestrian crossing across the A10 Priory Lane and consider that in order to promote a LTN4 compliant development that mitigation should concentrate on the establishment of a sustainable connection from the development to town as way of mitigation.

Baldock Street/Kneesworth Street/ Melbourne Street Traffic Signals

Within their TAA MODE have demonstrated that the queues predicted by their model in the peak hour are broadly representative of that observed in 2020. Therefore, HCC Highways consider it valid for use in future analysis.

Approach capacity of a signalised approach is measured by the Degree of Saturation (DOS) and a value of 90% DOS is recognised to be an operational threshold. Values of DOS above 90% will result in negative values for the overall junction Practical Reserve Capacity (PRC) and cognisance of queuing is required. However, similar to a priority junction an individual approach will not go beyond absolute capacity until a DOS of 100% is reached.

During the 2022 AM and PM peaks the approaches to the Baldock Street/Kneesworth Street/ Melbourne Street Traffic Signals are predicted to operate within an operational capacity both prior to and with the proposed development. Where the PRC during the AM peak is predicted to be 16.7% both without and with development and falling slightly from 10.6% to 5.8% during the PM peak post development.

During the 2027PM peak the Baldock Street/Kneesworth Street/ Melbourne Street Traffic Signals are shown to go slightly over an operational capacity threshold of 90% Degree of Saturation when traffic flows due to development are added through the junction. However, the change in queue lengths is just 2-3 vehicles, therefore the impact of the development upon this junction is not considered severe in terms of the NPPF by HCC Highways.

A505/ Baldock Road Roundabout

Within their TAA MODE have demonstrated that the queues predicted by their model in the peak hour are broadly representative of that observed in 2020. Therefore, HCC Highways consider it valid for use in future analysis.

During 2022 in both AM and PM the majority of the approaches to the roundabout are predicted to be operating within operational threshold capacity both prior and post the proposed development. The A505 approach however during the AM peak of 2022 is predicted to be operating slightly over the operational threshold with an RFC of 0.86 prior to the proposed development.

The submitted TA considers that the A505/ Baldock Road Roundabout is operating within capacity, however a review of the submitted information reveals that the A505 approaches are operating above an operational threshold of 0.85 RFC. However, HCC Highways notes that these approaches are operating over this threshold prior to the addition development flows and the change in queue lengths due to development at between 1-3 vehicles is not considered severe by HCC Highways. Furthermore, the approaches to the junction would continue to operate within absolute capacity. As stated previously however, a base analysis must be supplied to qualify this consideration.

A1198/A505/Old North Road Roundabout

There is substantial difference between the 2020 observed queues and 2020 model, with queues of up to 10 vehicles being observed and on up to 3 vehicles being modelled, suggesting that the roundabout will be under slightly more stress than predicted.

However, the analysis has shown that the impact of the development in this location is minimal and thus HCC Highways in terms of the NPPF cannot consider it severe. At worst during the peak 15 minutes of the 2022 PM peak the development would add only 1 extra vehicle to the A605 east approach and the development results in no additional queuing in the AM peak or in either peak in 2027.

A10/A505 Roundabout

Similar to the previous A505 roundabout (the A10/A505 roundabout) there is substantial difference between the 2020 observed queues and 2020 model, with queues of up to 8 vehicles being observed and on up to 2 vehicles being modelled, suggesting that the roundabout will be under slightly more stress than predicted.

However, the analysis has shown that the impact of the development in this location is minimal and thus HCC Highways in terms of the NPPF cannot consider it severe. At worst during the peak 15 minutes of the 2022 PM peak the development would add only 1 extra vehicle to the A10 north approach and the development results in no additional queuing in the AM peak. In 2027 AM peak the development could result in 1 additional vehicle A505 west and during the PM peak there is again predicted to be 1 additional vehicle on the A10 north approach.

A505/ Newmarket Road Priority Junction

Within their TAA MODE have demonstrated that the queues predicted by their model in the peak hour are broadly representative of that observed in 2020. Therefore, HCC Highways consider it valid for use in future analysis.

The approaches to A505/ Newmarket Road Priority Junction are shown to be operating substantially within an operational threshold in both 2022 and 2027 therefore the development impact at this junction is not considered severe by HCC Highways.

A10 Priory Lane/ A10 Market Hill – A10 Gyratory (North East)

Within their TAA MODE have demonstrated that the queues predicted by their model in the peak hour are broadly representative of that observed in 2020. Therefore, HCC Highways consider it valid for use in future analysis.

The north eastern A10 Gyratory junction (A10 Priory Lane/ A10 Market Hill) is shown to be operating within an operational threshold during both the peaks of 2022 and 2027 therefore, the development impact at this junction is not considered severe by HCC Highways.

A10 Priory Lane/ A10 Barkway Street/ B1030 Barkway Road – A10 Gyratory (South East)

Within their TAA MODE have demonstrated that the queues predicted by their model in the peak hour are broadly representative of that observed in 2020. Therefore, HCC Highways consider it valid for use in future analysis.

The analysis indicates that this junction will operate within operational capacity in both 2022 and 2027, with a peak RFC of 0.53 on the Barkway Road approach and a queue of 2 vehicle during the AM period of 2027. The development results in the approach rising to its operational threshold (RFC = 0.85) and the queue rising to 5 vehicles in 2027. However, HCC Highways cannot consider this level of impact severe.

A10 Priory Lane/Prince Andrew's Close/ Barkway Road

Within their TAA MODE have demonstrated that the queues predicted by their model in the peak hour are broadly representative of that observed in 2020. Therefore, HCC Highways consider it valid for use in future analysis.

Approaches A10 Priory Lane/ Prince Andrew's Close/ Barkway Road junction are shown to be operating within an operational threshold, therefore the development impact at this junction is not considered severe by HCC Highways.

A10 Market Hill/A10 Barkway St – A10 Gyratory (West)

The model produced by MODE is shown to slightly overestimate the 2020 observed queues but not beyond what is considered a reasonable day to day fluctuation. Hence HCC highways are satisfied to use this slightly robust model to gauge the future impact of the proposed development.

The presented analysis demonstrates that the western A10 Gyratory junction operates just within absolute capacity in 2022 prior to development of the Barkway Road site and operates beyond absolute capacity when development trips are added. This is recognised by MODE who have proposed as discussed earlier the upgrade of the existing zebra crossing A10 Market Hill/ Barkway Street to a signalised pedestrian crossing as per the preliminary drawing J32-5129-PS-005 Rev B.

Further testing of the junction with the signalised crossing implemented showed the junction would operate within operational capacity in both the peak hours of 2022 and 2027. Furthermore, this improvement is considered in line with the policies of LTP 4 aimed at encouraging sustainable travel. It is considered that in conjunction with the upgrade of PROW ROYSTON 010 and the signalised pedestrian crossing would establish a safer pedestrian route that could encourage sustainable travel. As stated previously however, a base analysis must be supplied to qualify this consideration. As stated previously however, a base analysis must be supplied to qualify this consideration.

A10 Gyratory – Small Network Junction Linsig Analysis

The previous analysis within the TA presented individual macro models of the individual junctions in this gyratory network, however due to the complex nature of the gyratory HCC Highways recommended that the impact of the development upon a small network model would be most apt. MODE within their TAA have undertaken this after seeking advice from the TRL within the LINSIG network model.

The Linsig model indicates that post the pedestrian crossing mitigation (J32-5129-PS-005 Rev B) and with the proposed development traffic the gyratory as a whole will perform well. In 2022 the whole gyratory will have a PRC of 32.2% during the AM peak and 41.1% during the PM peak. In 2027 the gyratory will continue to operate within capacity with a PRC of 25.3% during the AM peak and 32.7% during the PM peak.

Site Access/ Barkway Road

The analysis of the site access presented by Mode indicates that the site access junction will operate satisfactorily and will not interfere significantly with traffic on Barkway Road. The maximum queue on Barkway Road predicted is 1 vehicle and the proposed ghost island will accommodate this without impacting significantly with traffic upon Barkway Road.

Road Safety (PIC Analysis)

At the request of HCC have updated their road accident analysis to consider PIC data from HCC considering reported accident causation factors. Whilst there are some slight accidents at the A505 junctions likely due to the congestion (as observed in the 2020 surveys), these are not considered significant cluster and the development has been shown to have minimal impact at these locations.

There have been 7 slight accidents but no serious or fatal accidents at the A10 gyratory closer to the proposed site. However, HCC Highways do not consider this a significant accident 'black spot'. The causation analysis showed that these accidents were on the whole caused by driver error and whilst it is considered that the development will have a negligible impact upon the gyratory under its current priority operation the addition of signals and repainting lanes on the Market Hill link may regulate things positively.

Contributions

North Hertfordshire District Council has not yet adopted CIL; therefore, contributions would be sought via the S106 agreement using the HCC's Planning Obligations Toolkit. HCC's Planning Obligation Guidance (2008) implements a two-strand approach to planning obligations in order to address the immediate impacts of the new development (first strand), and the cumulative impacts of all development on non-car networks (second strand).

In accordance with the HCC Planning Obligations Guidance, contributions are sought on a unit rate basis and are pooled where appropriate. For residential use the charge is based on the number of bedrooms. This is calculated based on the site's accessibility zone (3 and 4).

Although the exact classification of house types is not known at this stage, assuming 284 x 3 bedrooms a second strand contribution of approximately £319,500 in 2006 prices would be attributed to the following:

- £1,200 pa for 5 years (£6,000 total) would be attributed to travel plan monitoring;
- The provision of the proposed bus stops on Barkway Road under S278;
- £150,000 towards Package PK15 (and its sub program PR79) of the North Central Growth and Transport Plan aimed at promoting sustainable travel within Royston; and
- Possible contributions to Real Time Passenger Information (RTPI) where homes are further than 400m from the proposed bus stops on Barkway Road.

Conclusion

HCC Highways expressed concerns over sustainable travel connections (in particular PROW ROYSTON 010), the number of homes within 400m of a bus stop by actual walking routes and the site layout. Where an emergency access cannot be provided that the development must layout should form a circuit with a connection, at the shortest practical section, to the site access junction and wider road network and it should be approved by the fire service. The residential travel plan also needs to be approved by HCC. However, MODE on behalf of the applicant have demonstrated that the proposal will not have an impact that can be considered severe in terms of the NPPF and have provided an acceptable stage 1 Road Safety Audit and therefore the council considers that these matters can be addressed by the above conditions and does not wish to restrict the outline application.