

# PROPOSED RESIDENTIAL DEVELOPMENT LINCOLNSHIRE LAKES, SCUNTHORPE PROPOSED LOCAL CENTRE – TRANSPORT NOTE (22/11/2024)

## Background

This Transport Note (TN) has been produced by Local Transport Projects Ltd (LTP) to assess the impact of the provision of a local centre as part of a planning application (ref: PA/2023/1124) comprising 599 dwellings on part of the wider Lincolnshire Lakes site adjacent to Burringham Road in Scunthorpe. The local planning and highway authority is North Lincolnshire Council (NLC).

The revised proposals include the provision of a shop/local centre with a Gross Floor Area (GFA) of 200m<sup>2</sup>, adjacent to the proposed roundabout within the site frontage. The local centre will result in a reduction of 6 dwellings within the site, with a revised total of 593 dwellings.

Vehicular access to the proposed shop/local centre will be provided via a connection with the proposed Secondary Street which connects with Primary Street A, adjacent to the proposed roundabout with Burringham Road. Pedestrian access will be provided via a 2m wide footway connecting with the southern footway on the proposed Secondary Street, which links directly to Primary Street A and provides access to the wider residential development and Burringham Road. A proposed site layout plan is included as Appendix 1.

This TN provides an assessment of the trip generation and traffic impact of the revised proposals.

## Trip Generation Projections (Residential Development)

The planning application (ref: PA/2023/1124) is supported by a Transport Assessment (TA) (LTP, 2023), which includes an assessment of the person and vehicle trip generation of the residential element of the development based on the original proposal for 599 dwellings. The approved and proposed residential person trip rates, person trip generation and vehicle trip generation is summarised within Table 1:

**Table 1: Residential Trip Generation**

	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)		12-Hour (07:00-19:00)	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
<b>Houses Privately Owned (03-A)</b>						
Person Trip Rates (per dwelling)	0.222	0.810	0.545	0.279	3.586	3.696
Person Trips (599 dwellings)	133	485	326	167	2,148	2,213
Vehicle Trips (599 dwellings) – 64% Car Driver	85	311	209	107	1,375	1,417
Person Trips (593 dwellings)	132	480	323	165	2,128	2,191
Vehicle Trips (593 dwellings) – 64% Car Driver	85	307	207	106	1,362	1,403
<b>Change in Person Trips</b>	<b>-1</b>	<b>-5</b>	<b>-3</b>	<b>-2</b>	<b>-20</b>	<b>-22</b>
<b>Change in Vehicle Trips</b>	<b>-</b>	<b>-4</b>	<b>-2</b>	<b>-1</b>	<b>-13</b>	<b>-14</b>

Table 1 demonstrates that the reduction in dwellings would be expected to result in a reduction of 4 two-way vehicle trips during the AM peak hour (08:00-09:00), 3 during the PM peak hour (17:00-18:00) and 27 over the full 12-hour period (07:00-19:00).

### Trip Generation Projections (Local Centre)

An end occupier for the proposed shop/local centre is yet to be identified however its size and scale means that it is likely to have a sole occupier rather than being sub-divided into multiple smaller units. In order to consider the worst-case trip generation of the local centre, for the purposes of this assessment it has been assumed that the unit is occupied by a convenience store, which is typically trip intensive.

In order to derive reflective trip rates, person trip generation statistics within the ‘Convenience Store’ (01-O) category of the TRICS database have been interrogated. To ensure that only trip generation statistics for comparable sites were used in calculations, the TRICS sites were filtered to the following criteria:

- Database Version: 7.11.3;
- Survey Type: Multi-Modal sites;
- Size: all sizes;
- TRICS Location Type: ‘Edge of Town’, ‘Suburban Area’ and ‘Neighbourhood Centre’;
- Regions: England only (excluding Greater London sites);
- Weekday Survey Data only (exclusion of Saturday and Sunday surveys);
- Recent survey data only (exclusion of surveys undertaken prior to 01/01/2016).

As there were less than 20 comparable sites in the database after filtering (8 survey sites), mean trip rates (as weighed and calculated by the TRICS software) have been used to project the person trip generation of the proposed local centre, in accordance with good practice guidelines (TCL, 2023). The person trip rates and projected trip generation associated with the proposed shop/local centre are shown in Table 2, with full details of the trip generation for the site attached as Appendix 2.

**Table 2: Local Centre Person Trip Generation**

Convenience Store (01-O)	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)		12-Hour (07:00-19:00)	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Person Trip Rates (per 100m <sup>2</sup> GFA)	18.564	17.933	17.513	17.453	193.091	189.848
<b>Projected Person Trips (200m<sup>2</sup> GFA)</b>	<b>37</b>	<b>36</b>	<b>35</b>	<b>35</b>	<b>386</b>	<b>380</b>

The TRICS sites utilised to predict the person trip generation of the development contain multi-modal information, therefore the modal split and vehicle trip generation of the local centre has been predicted based on travel pattern information from the comparable convenience store sites in the TRICS database, with the number of trips generated by each mode summarised in Table 3.

**Table 3: Local Centre Modal Split & Vehicle Trip Generation**

Mode of Travel	Modal Split	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)		12-Hour (07:00-19:00)	
		Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Vehicle Drivers	40.6%	15	15	14	14	157	154
Vehicle Passengers	8.7%	3	3	3	3	34	33
Pedestrians	45.6%	17	16	16	16	176	173
Cyclists	2.3%	1	1	1	1	9	9
Public Transport Users	2.7%	1	1	1	1	10	10
<b>TOTAL</b>	<b>100%</b>	<b>37</b>	<b>36</b>	<b>35</b>	<b>35</b>	<b>386</b>	<b>380</b>

\* Total may not represent the sum of its parts due to rounding.

Based on the modal split projections, the proposed local centre would be expected to generate 30 two-way vehicle trips during the AM peak hour (08:00-09:00), and 28 during the PM peak hour (17:00-18:00). Considering the reduction in trip generation associated with the smaller residential scheme of 593 dwellings, the net trip generation associated with the revised proposals to provide a local centre would be 26 two-way vehicle movements in the AM peak hour and 25 in the PM peak.

However, this is considered to be a robust estimation of the trips generated by the local centre, with the majority not forming new trips on the network for the following reasons:

- The local centre is positioned adjacent to the primary access road to the development, and as such is expected to generate a high proportion of pass-by trips associated with residents travelling to/from the site, the trips associated with which have already been accounted for as part of the residential trip projections, as the comparable TRICS sites used to project the residential trip generation do not include an on-site local centre;
- Any trips between the proposed residential dwellings and the local centre would remain internal to the site and would not impact junctions on the wider highway network;
- The local centre is primarily expected to serve the residents of the proposed development and is therefore not expected to generate a significant number of trips to/from a wider catchment. The position of the facility adjacent to the Burringham Road roundabout means that any trips not associated with the development would likely be pass-by/diverted trips that are already on the local highway network on Burringham Road;
- The provision of a local centre within the site may reduce the number of trips generated to/from other retail facilities further afield and encourage more trips by sustainable modes.

It is therefore considered that the provision of a local centre within the development will result in a negligible change in the overall vehicle trip generation associated with the development. The traffic impact and modelling results of the TA and subsequent TN (03/04/2024) are therefore considered to remain valid, and the proposed development would not be expected to have a significant impact on the operation of the local highway network or Strategic Road Network (SRN).

Therefore, as the impact of the development is not expected to be severe, the revised proposals are considered to be in accordance with the *'National Planning Policy Framework'*, which states that *"development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe"* (MCHLG, 2023).

## **References**

LTP (Local Transport Projects), 2023. Proposed Residential Development, Lincolnshire Lakes, Scunthorpe. Transport Assessment.

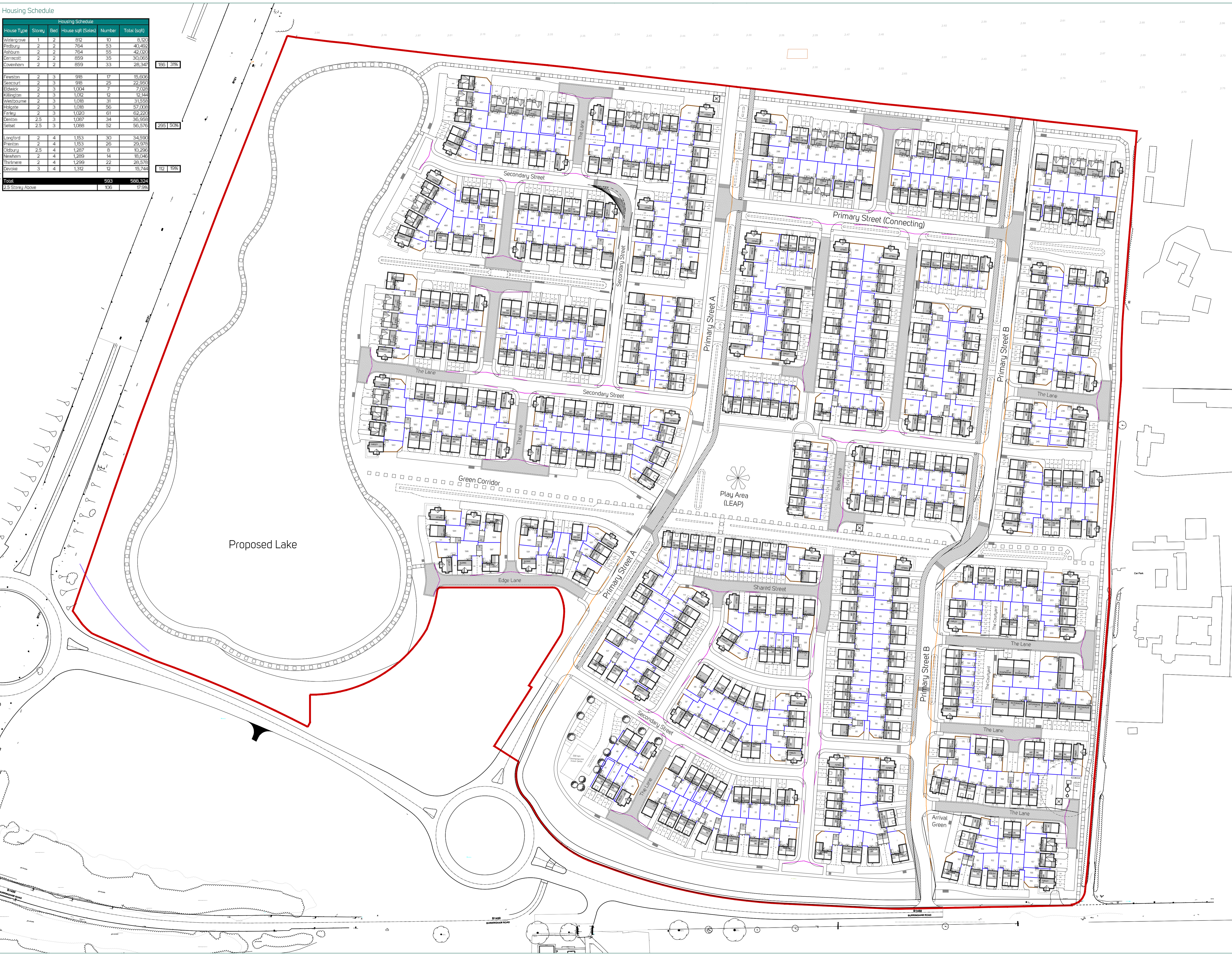
MHCLG (Ministry for Housing, Communities and Local Government), 2023. National Planning Policy Framework.

TCL (TRICS Consortium Ltd), 2023. TRICS Good Practice Guide 2024.

## **Appendix I – Proposed Site Layout**

Housing Schedule

House Type	Storey	Bed	House sqft (Sales)	Number	Total (sqft)
Watergrange	1	2	812	10	8,120
Peabury	2	2	754	53	40,462
Kilburn	2	2	754	55	42,070
Darrecot	2	2	859	35	30,065
Cavenham	2	2	859	33	28,347
Frewston	2	3	918	17	15,606
Snowcat	2	3	918	25	22,950
Elthax	2	3	1,004	7	7,028
Killington	2	3	1,012	12	12,144
Westbourne	2	3	1,018	31	31,558
Holgate	2	3	1,018	56	57,008
Farley	2	3	1,020	61	62,220
Centon	2.5	3	1,057	34	35,938
Selset	2.5	3	1,088	52	56,576
Longford	2	4	1,153	30	34,590
Prionton	2	4	1,153	26	29,978
Clisbury	2.5	4	1,287	8	10,296
Newtham	2	4	1,289	14	18,046
Thirlmere	2	4	1,299	22	28,578
Devoe	3	4	1,312	12	15,744
<b>Total</b>			<b>593</b>	<b>588,324</b>	
<b>2.5 Storey Above</b>			<b>106</b>	<b>17,576</b>	



- Key**
- Application boundary
  - Private bin storage
  - Shared drive bin collection point (only to be used on collection days)
  - Gates
  - 1.8m high screen wall
  - 1.8m high timber fence
  - Knee Rail
  - 3m shared path
  - Raised table
  - Hoggin path

Revision	Date	Revision Note	Issued
J	12.11.24	Commercial/Local Centre amendment for refuse backing	m47
I	08.11.24	Commercial/Local Centre edited and plots 1-12, 42-54, 150-154 and 162-164 amended. Total dwellings reduced to 593	m47
H	05.08.24	Layout amended following receipt of increased visitation	m47
G	17.04.24	Turning head amended near plot 377	m47
F	05.04.24	Pedestrian/cycle link added around the site frontage and pedestrian connections added to the site	m47
E	08.03.24	Swale added back in near plots 252 - 257	m47
D	01.02.24	Swale removed from the layout. A hatch added to the 3m pedestrian path and raised table areas	m47
C	06.12.23	Layout amended to accommodate highway changes	m47
B	Nov 2022	Amendments to highway made and layout updated accordingly	m47
A	-	Planning Layout Issue Revision	m47
Revision	Date	Revision Note	Issued

**Keepmoat Homes**

**nineteen47**  
CHARTERED TOWN PLANNERS & URBAN DESIGNERS

Project  
Lincolnshire Lakes

Drawing Title  
Planning Layout

Project Code: n1720 | Drawing No: 008 | Rev: J | Drawing Scale: 1:1000 @ A1

## **Appendix 2 – Trip Projections (Local Centre)**

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL  
Category : 0 - CONVENIENCE STORE  
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	WS WEST SUSSEX	2 days
03	SOUTH WEST	
	BC BOURNEMOUTH CHRISTCHURCH & POOLE	1 days
	SD SWINDON	1 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	LS LEEDS	1 days
	NY NORTH YORKSHIRE	1 days
09	NORTH	
	TW TYNE & WEAR	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: Gross floor area  
 Actual Range: 292 to 550 (units: sqm)  
 Range Selected by User: 70 to 1056 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/16 to 09/10/23

*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	2 days
Wednesday	2 days
Thursday	2 days
Friday	2 days

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

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Neighbourhood Centre (PPS6 Local Centre)	4

*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	5
High Street	3

*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	3 days - Selected
Servicing vehicles Excluded	5 days - Selected

## Secondary Filtering selection:

Use Class:

E(a) 8 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

## Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	2 days
15,001 to 20,000	1 days
25,001 to 50,000	4 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	1 days
25,001 to 50,000	1 days
125,001 to 250,000	4 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	4 days
1.1 to 1.5	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.*

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	8 days

*This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.*

Travel Plan:

No	8 days
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*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	8 days
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*This data displays the number of selected surveys with PTAL Ratings.*

LIST OF SITES relevant to selection parameters

1	BC-01-O-01 WIMBORNE ROAD BOURNEMOUTH WINTON Neighbourhood Centre (PPS6 Local Centre) High Street Total Gross floor area: <i>Survey date: THURSDAY</i>	SAINSBURY'S LOCAL      550 sqm 29/09/22	BOURNEMOUTH CHRISTCHURCH & POOLE        <i>Survey Type: MANUAL</i>
2	LS-01-O-01 AINSTY ROAD WETHERBY  Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Gross floor area: <i>Survey date: MONDAY</i>	CO-OPERATIVE     539 sqm 26/09/16	LEEDS        <i>Survey Type: MANUAL</i>
3	NY-01-O-03 FOREST ROAD NORTHALLERTON  Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: <i>Survey date: MONDAY</i>	CO-OPERATIVE     305 sqm 19/09/16	NORTH YORKSHIRE        <i>Survey Type: MANUAL</i>
4	SD-01-O-01 THE CIRCLE SWINDON  Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: <i>Survey date: FRIDAY</i>	ONE STOP     292 sqm 23/09/16	SWINDON        <i>Survey Type: MANUAL</i>
5	ST-01-O-01 STAFFORD ROAD CANNOCK  Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: <i>Survey date: WEDNESDAY</i>	TESCO EXPRESS     404 sqm 14/06/23	STAFFORDSHIRE        <i>Survey Type: MANUAL</i>
6	TW-01-O-02 ETHEL TERRACE SUNDERLAND CASTLETOWN Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: <i>Survey date: FRIDAY</i>	CO-OPERATIVE     330 sqm 07/04/17	TYNE & WEAR        <i>Survey Type: MANUAL</i>
7	WS-01-O-01 GORING ROAD WORTHING GORING-BY-SEA Neighbourhood Centre (PPS6 Local Centre) High Street Total Gross floor area: <i>Survey date: THURSDAY</i>	CO-OP     500 sqm 12/05/22	WEST SUSSEX        <i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

8	WS-01-O-02	SAINSBURY'S LOCAL	WEST SUSSEX
	GORING ROAD		
	WORTHING		
	GORING-BY-SEA		
	Neighbourhood Centre (PPS6 Local Centre)		
	High Street		
	Total Gross floor area:	409 sqm	
	Survey date: WEDNESDAY	11/05/22	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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.46

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	500	1.200	1	500	0.800	1	500	2.000
06:00 - 07:00	6	451	1.995	6	451	1.884	6	451	3.879
07:00 - 08:00	8	416	5.287	8	416	5.017	8	416	10.304
08:00 - 09:00	8	416	7.570	8	416	7.540	8	416	15.110
09:00 - 10:00	8	416	6.068	8	416	5.437	8	416	11.505
10:00 - 11:00	8	416	5.677	8	416	5.347	8	416	11.024
11:00 - 12:00	8	416	5.557	8	416	5.617	8	416	11.174
12:00 - 13:00	8	416	7.450	8	416	7.450	8	416	14.900
13:00 - 14:00	8	416	6.038	8	416	5.647	8	416	11.685
14:00 - 15:00	8	416	5.557	8	416	5.767	8	416	11.324
15:00 - 16:00	8	416	6.458	8	416	6.248	8	416	12.706
16:00 - 17:00	8	416	6.969	8	416	6.188	8	416	13.157
17:00 - 18:00	8	416	8.081	8	416	8.471	8	416	16.552
18:00 - 19:00	8	416	7.990	8	416	8.020	8	416	16.010
19:00 - 20:00	8	416	6.819	8	416	6.729	8	416	13.548
20:00 - 21:00	7	434	3.754	7	434	4.577	7	434	8.331
21:00 - 22:00	7	434	2.437	7	434	2.832	7	434	5.269
22:00 - 23:00	4	466	1.020	4	466	1.020	4	466	2.040
23:00 - 24:00	3	438	0.000	3	438	0.228	3	438	0.228
<b>Total Rates:</b>			<b>95.927</b>			<b>94.819</b>			<b>190.746</b>

*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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#### Parameter summary

Trip rate parameter range selected:	292 - 550 (units: sqm)
Survey date range:	01/01/16 - 09/10/23
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

*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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

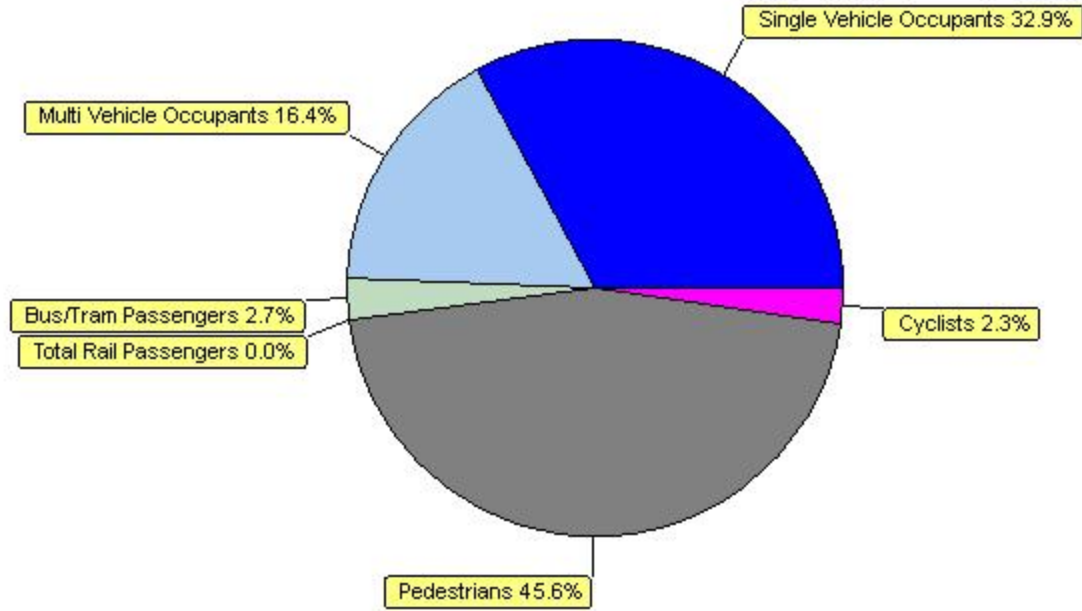
Total People to Total Vehicles ratio (all time periods and directions): 2.46

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	500	1.000	1	500	0.200	1	500	1.200
06:00 - 07:00	6	451	3.879	6	451	3.362	6	451	7.241
07:00 - 08:00	8	416	12.136	8	416	11.265	8	416	23.401
08:00 - 09:00	8	416	18.564	8	416	17.933	8	416	36.497
09:00 - 10:00	8	416	14.449	8	416	13.968	8	416	28.417
10:00 - 11:00	8	416	13.127	8	416	12.526	8	416	25.653
11:00 - 12:00	8	416	13.968	8	416	14.239	8	416	28.207
12:00 - 13:00	8	416	17.363	8	416	17.092	8	416	34.455
13:00 - 14:00	8	416	16.792	8	416	15.771	8	416	32.563
14:00 - 15:00	8	416	14.839	8	416	15.320	8	416	30.159
15:00 - 16:00	8	416	18.444	8	416	18.534	8	416	36.978
16:00 - 17:00	8	416	16.401	8	416	15.951	8	416	32.352
17:00 - 18:00	8	416	17.513	8	416	17.453	8	416	34.966
18:00 - 19:00	8	416	19.495	8	416	19.796	8	416	39.291
19:00 - 20:00	8	416	16.491	8	416	16.221	8	416	32.712
20:00 - 21:00	7	434	10.537	7	434	12.282	7	434	22.819
21:00 - 22:00	7	434	6.454	7	434	7.244	7	434	13.698
22:00 - 23:00	4	466	2.684	4	466	3.328	4	466	6.012
23:00 - 24:00	3	438	0.000	3	438	0.685	3	438	0.685
<b>Total Rates:</b>			234.136			233.170			467.306

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.

### Modal Split Percentages



Time Range/Peak Period Selection  
Direction: Totals / Use All Times

**Proposed Local Centre**

**200** m2 GFA

**Projected Person Trip Generation**

Person Trip Rates (per dwelling)

Person Trips

Time	IN	OUT	TOTAL
07:00-08:00	12.136	11.265	23.401
08:00-09:00	18.564	17.933	36.497
09:00-10:00	14.449	13.968	28.417
10:00-11:00	13.127	12.526	25.653
11:00-12:00	13.968	14.239	28.207
12:00-13:00	17.363	17.092	34.455
13:00-14:00	16.792	15.771	32.563
14:00-15:00	14.839	15.320	30.159
15:00-16:00	18.444	18.534	36.978
16:00-17:00	16.401	15.951	32.352
17:00-18:00	17.513	17.453	34.966
18:00-19:00	19.495	19.796	39.291

IN	OUT	TOTAL
24	23	47
37	36	73
29	28	57
26	25	51
28	28	56
35	34	69
34	32	65
30	31	60
37	37	74
33	32	65
35	35	70
39	40	79

<b>TOTAL</b>	<b>193.091</b>	<b>189.848</b>	<b>382.939</b>
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<b>386</b>	<b>380</b>	<b>766</b>
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MM, Mean 01-0, all sizes, England only (exc. GL), Edge of Town, Suburban Area and Neighbourhood Centre, exc. Sat/Sun, 16+ (8)  
TRICS v7.11.3

**Projected Modal Split**

Proportion of Vehicle Trips

Time	IN	OUT	TOTAL
07:00-08:00	43.6%	44.5%	44.0%
08:00-09:00	40.8%	42.0%	41.4%
09:00-10:00	42.0%	38.9%	40.5%
10:00-11:00	43.2%	42.7%	43.0%
11:00-12:00	39.8%	39.4%	39.6%
12:00-13:00	42.9%	43.6%	43.2%
13:00-14:00	36.0%	35.8%	35.9%
14:00-15:00	37.4%	37.6%	37.5%
15:00-16:00	35.0%	33.7%	34.4%
16:00-17:00	42.5%	38.8%	40.7%
17:00-18:00	46.1%	48.5%	47.3%
18:00-19:00	41.0%	40.5%	40.7%

<b>TOTAL</b>	<b>40.8%</b>	<b>40.4%</b>	<b>40.6%</b>
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**Projected Modal Trip Generation**

Mode	Split	AM Peak			Development PM Peak			Daily (07:00-19:00)		
		IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Vehicle Drivers	40.6%	15	15	30	14	14	28	157	154	311
Vehicle Passengers	8.7%	3	3	6	3	3	6	34	33	67
<b>Vehicle Occupants Sub-Total</b>	<b>49.3%</b>	<b>18</b>	<b>18</b>	<b>36</b>	<b>17</b>	<b>17</b>	<b>34</b>	<b>191</b>	<b>187</b>	<b>378</b>
Pedestrian	45.6%	17	16	33	16	16	32	176	173	349
Pedal-cycle	2.3%	1	1	2	1	1	2	9	9	18
Public Transport	2.7%	1	1	2	1	1	2	10	10	20
	50.6%	19	18	37	18	18	36	195	192	387
<b>Total Person Trips</b>	<b>100%</b>	<b>37</b>	<b>36</b>	<b>73</b>	<b>35</b>	<b>35</b>	<b>70</b>	<b>386</b>	<b>380</b>	<b>766</b>