

Area-level through traffic analysis

November 2024

This analysis was prepared by Arup as part of their commission to develop the South Bristol Liveable Neighbourhood (SBLN) Draft Business Case.

Glossary

AM:	Morning Peak (7am to 10pm).
PM:	Evening Peak (4pm to 7pm).
IP:	Inter Peak. The period between the AM and PM peaks.
Sector:	Neighbourhood areas used to determine through traffic for the purposes of this analysis
Through Traffic:	Traffic that passes through a neighbourhood sector. It represents trips not made by residents or visitors.

Summary

Please see below the through traffic analysis we have done using the ANPR survey data from June 2024. The coverage of the ANPR cameras gives an indication of patterns at a sector level and for some key roads but does not allow us to conclusively identify the number of through traffic vehicles on every road in the study area. As per the summary/ rationale of the survey specification previously shared, this was the intention. The analysis presents an interesting picture as at some locations – between St Johns Lane and Whitehouse Lane in Windmill Hill as an example – were the SBLN scheme to remove all through traffic this would not significantly reduce traffic volumes because a high proportion of the traffic is not rat running and has an origin/ destination at a residence in the area.

Key Roads/ Locations

At an individual road level, there are some high through-traffic percentages. For example:

- 40% of eastbound traffic in Ashton Vale in the AM peak is through traffic
- AM = 7am to 10am, IP = 10am to 4pm, PM = 4pm to 7pm.

Table 1 - Through traffic trip numbers and percentages for worst affected roads

Movement	Direction	AM	IP	PM	Details
Ashton Vale	Eastbound	117 (40%)	119 (34%)	64 (35%)	Between Winterstoke Road and South Bristol Link Road via South Liberty Lane or Ashton Drive
	Westbound	51 (40%)	85 (41%)	59 (58%)	
Palmyra Road	Eastbound	47 (58%)	132 (58%)	130 (66%)	Between West Street and Luckwell Road
	Westbound	229 (65%)	217 (59%)	131 (55%)	
Windmill Hill	Eastbound	12 (17%)	24 (15%)	13 (10%)	Between St Johns Lane and Whitehouse Lane via Cotswold Road, Dunkerry Road, Quantock Road or Mendip Road.
	Westbound	60 (22%)	84 (25%)	47 (25%)	

Sector level

- At a sector level we have estimated the proportion of movements that are through traffic based on matches between combinations of ANPR cameras.
- No exclusion of “long” through trips (trips that are observed at both ends of a rat run but must stop at a destination on the route and therefore aren’t genuine through trips) or of mismatches (where a trip should be picked up by a camera but is not).
 - Both of these exclusions make the through traffic percentage estimates upper end estimates.
- Whilst there is some variance across the study area, at a sector level through-traffic does not appear to make up a large proportion of all traffic.
- An issue with data collection affected sector 6 in the AM period.

The roads that form the boundaries of each sector are as follows:

Sector 1: Winterstoke Road, South Liberty Lane, West and Northern edge of the Ashton Vale residential area.

Sector 2: Marsh Road, Ashton Road, Duckmoor Road, Luckwell Road, Palmyra Road, West Street, Bedminster Down Road and Winterstoke Road.

Sector 3: Clift House Road, Coronation Road, North Street, Luckwell Road, Duckmoor Road, Ashton Road, Marsh Road and Brunel Way.

Sector 4: North Street, Cannon Street, East Street, West Street, Palmyra Road and Luckwell Road

Sector 5: Coronation Road, Bedminster Parade, East Street, Cannon Street and North Street

Sector 6: York Road, St Lukes Road, St Johns Lane, Redcatch Road, Wingfield Road, Wedmore Vale, Marksbury Road and Bedminster Down Road

Sector 7: York Road, Wells Road, St Johns Lane, St Lukes Road

Sector 8: Bath Road, Summer Hill, Wells Road, Crowndale Road, Ravenhill Avenue, Redcatch Road, St Johns Lane and Wells Road

Table 2 - Trips in each neighbourhood sector including percentages of through trips

Sector	Type	AM	IP	PM
1	Through traffic	302	469	231
	Not through traffic	6,715	11,943	6,807
	% Through traffic	4%	4%	3%
2	Through traffic	471	600	463
	Not through traffic	7,678	13,736	8,022
	% Through traffic	6%	4%	5%
3	Through traffic	15	44	29
	Not through traffic	4,624	8,620	4,709
	% Through traffic	0%	1%	1%
4	Through traffic	481	788	510
	Not through traffic	3,766	5,900	3,636
	% Through traffic	11%	12%	12%
5	Through traffic	657	1,483	852
	Not through traffic	5,801	10,571	5,911
	% Through traffic	10%	12%	13%
6	Through traffic	-	2,114	1,195
	Not through traffic	-	9,958	5,659
	% Through traffic	-	18%	17%
7	Through traffic	10	14	9
	Not through traffic	1,355	2,208	1,009
	% Through traffic	1%	1%	1%
8	Through traffic	-	-	-
	Not through traffic	2,231	3,308	1,684
	% Through traffic	0%	0%	0%