

## TECHNICAL NOTE

**Job Name:** Chichester Local Plan Transport Study  
**Job No:** 330610057  
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**Subject:** Impact of Local Plan Development on A27 junctions

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### 1.1 Introduction

- 1.1.1 To understand the level of impact the trips associated with Local Plan (LP) developments have on the A27 junctions, a comparison of flows has been undertaken using the Chichester SATURN models.
- 1.1.2 The note considers the total flows on the A27 junctions, and the flows associated with the LP development only. For the purpose of this high-level assessment the LP allowance for trips generated by the 3500 dwellings are demand flows.
- 1.1.3 The analysis is based on the 2037/39 Reference Case and the 2037/39 Local Plan with mitigation SATURN models for the AM and PM peak hours.

### 1.2 A27 Junctions

- 1.2.1 The following tables show the actual and demand flows on the approaches to the main junctions on the A27 in the Reference Case. It also shows the demand flows associated with LP developments only at the same junctions taken from the LP without mitigation model.
- 1.2.2 The LP development only flows are then assessed against the actual and demand flows from the “2037/39 with mitigation model” (with the full Local Plan Mitigation which includes Stockbridge Link Road) and shown as percentage impact on the approaching links and the junctions overall for the AM and PM peak hours.
- 1.2.3 The tables are for the following junctions:
- Fishbourne Roundabout
  - Bognor Road Roundabout
  - Stockbridge Roundabout
  - Whyke Roundabout
  - Portfield Roundabout

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### Fishbourne Roundabout

1.2.4 Table 1 shows the flows at Fishbourne Roundabout in the AM. The largest impact of the LP development in terms of percentage is on the approach from the A259 west and overall, the LP development being less than 7% of the total flow.

Table 1 Arm	Local Plan with mitigation				
	Actual	Demand	LP Dev Demand Trips Only	LP % of Trips (Actual)	LP % of Trips (Demand)
A259 (N)	859	914	66	7.7%	7.2%
Terminus Rd	-	-	-	-	-
A27 (E)	2385	2667	96	4.0%	3.6%
Stockbridge Link Road	739	773	44	6.0%	5.7%
A259 (W)	1077	1087	205	19.0%	18.9%
A27 (W)	2727	3084	91	3.3%	3.0%
<b>TOTAL</b>	<b>7787</b>	<b>8525</b>	<b>502</b>	<b>6.4%</b>	<b>5.9%</b>

Table 1 - AM Fishbourne Roundabout

1.2.5 Table 2 shows the flows at Fishbourne Roundabout in the PM. The impact of the LP development in the PM is smaller than the AM, but the highest percentage is still on the A259 west and overall the LP development being less than 7% of the total flow.

Table 2 Arm	Local Plan with mitigation				
	Actual	Demand	LP Dev Demand Trips Only	LP % of Trips (Actual)	LP % of Trips (Demand)
A259 (N)	1389	1669	62	4.5%	3.7%
Terminus Rd	-	-	-	-	-
A27 (E)	1993	2212	74	3.7%	3.3%
Stockbridge Link Road	1399	1471	156	11.1%	10.6%
A259 (W)	708	728	150	21.2%	20.6%
A27 (W)	2329	2908	97	4.2%	3.3%
<b>TOTAL</b>	<b>7818</b>	<b>9067</b>	<b>539</b>	<b>6.9%</b>	<b>5.9%</b>

Table 2 - PM Fishbourne Roundabout

1.2.6 Analysis of the model without Stockbridge Link Road indicates that for most approached the Local Plan trips are of the same order. In the AM peak there is an increase on the A259 (W) approach to Fishbourne, with Local Plan flows increasing from 205 with the link road to 229 PCU's. In the PM peak without the link road the flow on the A27 (E) increases from 74 to 180 PCU's.

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### Bognor Road Roundabout

1.2.7 Table 3 shows the flows at Bognor Road Roundabout in the AM. The largest percentage of LP flows is on A27 northern arm, with just under 13% of the total actual flow on that arm. Overall, the LP development is less than 9% of the total actual flow.

Table 3 Arm	Local Plan with mitigation				
	Actual	Demand	LP Dev Demand Trips Only	LP % of Trips (Actual)	LP % of Trips (Demand)
<b>A27 (N)</b>	2407	2751	307	12.8%	11.2%
<b>Bognor Rd (E)</b>	2428	2688	105	4.3%	3.9%
<b>Vinnetrow Rd</b>	-	-	-	-	-
<b>A27 (S)</b>	2479	2738	206	8.3%	7.5%
<b>Bognor Rd (W)</b>	687	741	75	10.9%	10.1%
<b>TOTAL</b>	<b>8001</b>	<b>8918</b>	<b>693</b>	<b>8.7%</b>	<b>7.8%</b>

Table 3 - AM Bognor Road Roundabout

1.2.8 Table 4 shows the flows at Bognor Road Roundabout in the PM. The largest percentage of LP flows is on A259 Bognor Road East, with just under 11.5% of the total actual flow on that arm. Overall, the LP development is less than 8% of the total actual flow.

Table 4 Arm	Local Plan with mitigation				
	Actual	Demand	LP Dev Demand Trips Only	LP % of Trips (Actual)	LP % of Trips (Demand)
<b>A27 (N)</b>	2377	2732	212	8.9%	7.8%
<b>Bognor Rd (E)</b>	2133	2245	243	11.4%	10.8%
<b>Vinnetrow Rd</b>	-	-	-	-	-
<b>A27 (S)</b>	2532	3007	154	6.1%	5.1%
<b>Bognor Rd (W)</b>	1306	1550	54	4.1%	3.5%
<b>TOTAL</b>	<b>8348</b>	<b>9534</b>	<b>663</b>	<b>7.9%</b>	<b>7.0%</b>

Table 4 - PM Bognor Road Roundabout

### Stockbridge Roundabout

1.2.9 Table 5 shows the flows at Stockbridge Roundabout in the AM. Stockbridge Road north has the highest percentage and overall, the LP development being less than 7% of the total flow.

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Table 5 Arm	Local Plan with mitigation				
	Actual	Demand	LP Dev Demand Trips Only	LP % of Trips (Actual)	LP % of Trips (Demand)
Stockbridge Rd (N)	492	514	82	16.7%	16.0%
A27 (E)	2725	3048	133	4.9%	4.4%
Stockbridge Rd (S)	660	679	45	6.8%	6.6%
A27 (W)	2437	2736	179	7.3%	6.5%
<b>TOTAL</b>	<b>6315</b>	<b>6977</b>	<b>439</b>	<b>7.0%</b>	<b>6.3%</b>

Table 5 - AM Stockbridge

1.2.10 Table 6 shows the flows at Stockbridge Roundabout in the PM. The percentage increases are similar across all approaches with Stockbridge North and south the highest. Overall, the LP development being less than 8% of the total flow.

Table 6 Arm	Local Plan with mitigation				
	Actual	Demand	LP Dev Demand Trips Only	LP % of Trips (Actual)	LP % of Trips (Demand)
Stockbridge Rd (N)	649	685	57	8.8%	8.3%
A27 (E)	2579	2873	190	7.4%	6.6%
Stockbridge Rd (S)	641	684	48	7.5%	7.0%
A27 (W)	2315	2865	178	7.7%	6.2%
<b>TOTAL</b>	<b>6183</b>	<b>7106</b>	<b>473</b>	<b>7.7%</b>	<b>6.7%</b>

Table 6 - PM Stockbridge

### Whyke Roundabout

1.2.11 Table 7 shows the flows at Whyke Roundabout in the AM. Whyke Road south has the highest % impact. Overall, the LP development being just over 7% of the total flow.

Table 7 Arm	Local Plan with mitigation				
	Actual	Demand	LP Dev Demand Trips Only	LP % of Trips (Actual)	LP % of Trips (Demand)
Whyke Rd (N)	854	898	47	5.5%	5.2%
A27 (E)	2479	2738	152	6.1%	5.6%
Whyke Rd (S)	1125	1155	94	8.4%	8.1%
A27 (W)	2329	2581	187	8.0%	7.2%
<b>TOTAL</b>	<b>6787</b>	<b>7373</b>	<b>480</b>	<b>7.1%</b>	<b>6.5%</b>

Table 7 - AM Whyke Roundabout

1.2.12 Table 8 shows the flows at Whyke Roundabout in the PM. As with the AM peak, Whyke Road South has the highest %. Overall, the LP development being less than 8% of the total flow.

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Table 8 Arm	Local Plan with mitigation				
	Actual	Demand	LP Dev Demand Trips Only	LP % of Trips (Actual)	LP % of Trips (Demand)
Whyke Rd (N)	691	732	60	8.7%	8.2%
A27 (E)	2532	3007	181	7.1%	6.0%
Whyke Rd (S)	672	713	89	13.2%	12.5%
A27 (W)	2719	3267	159	5.8%	4.9%
<b>TOTAL</b>	<b>6614</b>	<b>7719</b>	<b>489</b>	<b>7.4%</b>	<b>6.3%</b>

Table 8 - PM Whyke Roundabout

### Portfield Roundabout

1.2.13 Table 9 shows the flows at Portfield Roundabout in the PM. Chichester Bypass from the north has the highest percentage and overall, the LP development being less than 8% of the total flow.

Table 9 Arm	Local Plan with mitigation				
	Actual	Demand	LP Dev Demand Trips Only	LP % of Trips (Actual)	LP % of Trips (Demand)
Chichester Bypass	345	351	55	16.0%	15.7%
A27 (E)	2471	2841	165	6.7%	5.8%
A27 (S)	2167	2434	168	7.8%	6.9%
Portfield Way	691	722	62	9.0%	8.6%
<b>TOTAL</b>	<b>5674</b>	<b>6348</b>	<b>450</b>	<b>7.9%</b>	<b>7.1%</b>

Table 9 - AM Portfield Roundabout

1.2.14 Table 10 shows the flows at Portfield Roundabout in the PM. As with the Am peak, Chichester Bypass has the highest percentage. Overall, the LP development being less than 9% of the total flow.

Table 10 Arm	Local Plan with mitigation				
	Actual	Demand	LP Dev Demand Trips Only	LP % of Trips (Actual)	LP % of Trips (Demand)
Chichester Bypass	286	289	36	12.6%	12.4%
A27 (E)	2704	2953	198	7.3%	6.7%
A27 (S)	2576	3334	271	10.5%	8.1%
Portfield Way	443	459	31	7.0%	6.8%
<b>TOTAL</b>	<b>6010</b>	<b>7036</b>	<b>536</b>	<b>8.9%</b>	<b>7.6%</b>

Table 10 - PM Portfield Roundabout

## TECHNICAL NOTE

### 1.3 Conclusion

- 1.3.1 This note has been prepared to demonstrate the impact of the proposed uplift of 3,500 dwellings proposed in the CDC Local Plan, with a focus on their impact on the junctions along the A27 corridor.
- 1.3.2 The result show that with the exception of the Bognor Road Roundabout in the AM peak and Portfield Roundabout, the % increase of trips generated by the additional 3500 units is less than 10% on the A27 Links.
- 1.3.3 The assessment shows that the overall increase across the whole junctions is between 7 to 9%, which highlights that the increase in traffic movement from the local plan allocation requires mitigation in circumstances where current flow and background growth assumed have already used available capacity at the junctions before the Local Plan traffic is added. This increases the need for mitigation to a higher level than where existing demands had already been met. Neighbouring Local Plan allocations also have a significant impact on the junctions and, therefore, equally generate the need for the level of mitigation being considered across the corridor. In these circumstances, it is sensible that the first actions should be to encourage a reduction in the background vehicular movements by providing improved sustainable alternative means to travel and to monitor the effect of this such that the extent of highway capacity improvements provided can be managed.
- 1.3.4 The CDC Local Plan proposals therefore are only a proportion of the wider traffic issues, therefore in terms of a monitor and manage approach are not the defining trigger for the mitigation works and their scale. Therefore, the level of traffic issues on each of the junctions and the corridor as a whole, shows that the level of development defined in the Local Plan considered in isolation would have lesser traffic issues and therefore could be supported by a Monitor and Manage approach.

### DOCUMENT ISSUE RECORD

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