Appendix B: Stresses on the Highways Network

Ver	Date	Author	Review	Approve	Comments
0.1	18 8 16	DF			Initial Draft for comments
0.2		DF	NE		
0.3	23 8 16	DF		DF	Issued to client
1.0		DF			Updated following review by client
1.1	4-10-16	DF		DF	Updated following review by client
1.2	8-12-16	DF		DF	Updated following review by client

1 Summary

1.1.1 The objective of this study is to highlight potential areas where traffic from broad locations or combinations of locations of housing growth in O&W and Harborough districts might impact the highways network in the Principal Urban Area (PUA) to the South East of Leicester.

1.1.2 This is based upon using traffic distributions obtained from the 2031 LLITM core scenario which provide estimates of where traffic from these developments might travel.

1.1.3 This methodology provides potential locations of impact, and is the method recommended by Leicestershire County Council when requesting traffic distributions for developing mitigation strategies as part of a planning application.

1.1.4 However, the method only provides a strategic overview of the cumulative impact of multiple developments as it does not take into account re-routing and changes in journey patterns that may arise due to changes in accessibility and congestion.

1.1.5 Consequently, this analysis provides a broad idea of the location of any impact, and also highlights key routes that are less likely to be impacted. But further work is required to quantify[1] the impact.

1.1.6 The analysis primarily assumes local plan growth levels to 2031, however O&W also wished to test the impact of 150 dwelling per annum (dpa), and Harborough wished to test the impact of having the site fully built, rather than just the amount expected to be complete by 2031.

2 Traffic levels in the year 2031

2.1.1 The LLITM 2031 core scenario was used to determine the traffic distributions.

2.1.2 **Error! Reference source not found.** shows forecast level of vehicles on the highways network in the morning peak in 2031. This is obtained from the LLITM 2031 core scenario which contains the background level of growth in housing, population and jobs expected to

[1] For instance, this analysis will highlight where traffic levels increase, but not what the impact might be. Thus a lightly traffic road might see a large increase in traffic, but be within the design specification of the particular link or junciton. This analysis would be for a second stage of the study

2031 based upon Government forecasts in NTEM6.2. It also contains Local Authority District assumptions on the broad location of the dwelling growth.

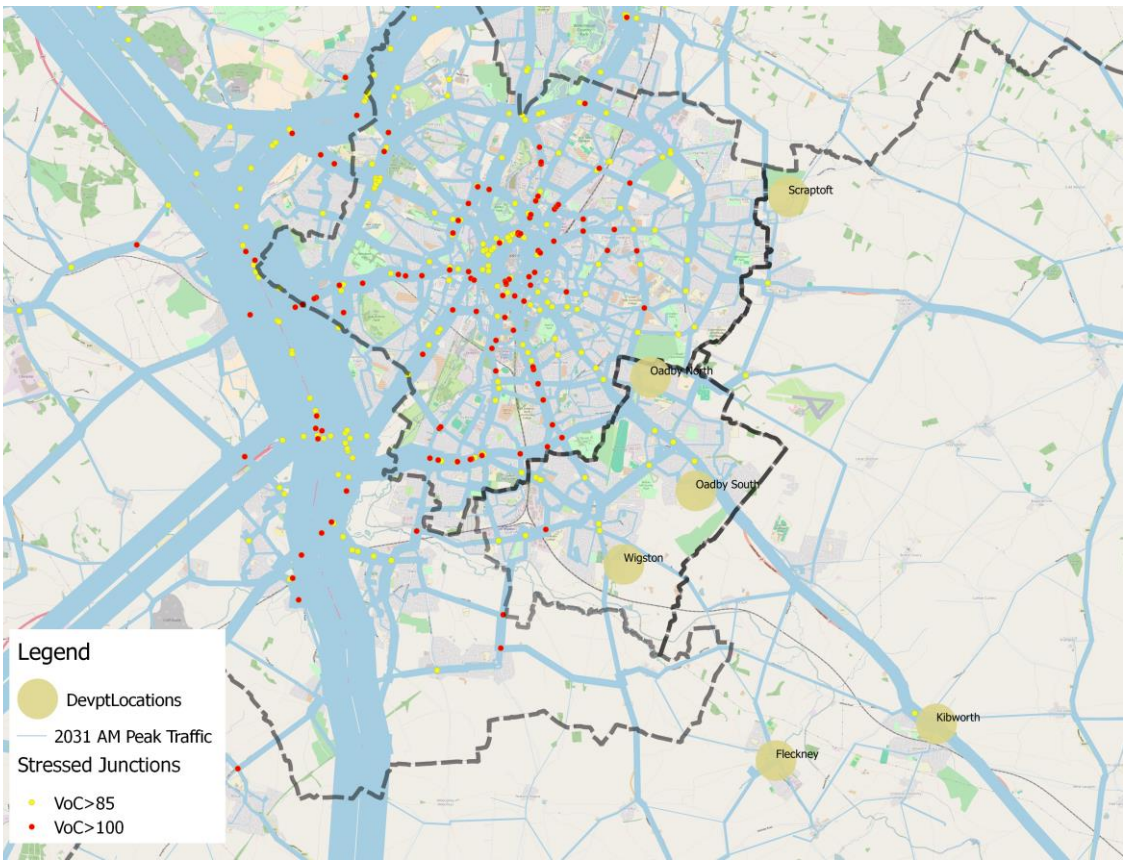

Figure 1: Forecast traffic levels in 2031

2.1.3 The width of the 'blue' links shows the number of vehicles in the AM peak hour (I.e. the volume of traffic). The M1, M69 and A46 around the city are clearly visible and shown to accommodate large levels of traffic. The A563 Outer ring road is also clearly visible to both the North and South of the city. .

2.1.4 LLITM also provides an indication of junctions that it forecasts to be under stress in 2031. The yellow markers highlight those junctions that are operating at over 85%of their design capacity. Those in red are over 100% of their design capacity.

2.1.5 Junctions/links at over 85% of the design capacity will introduce additional delays and journey unreliability. Junctions/links over 100% capacity will have heavily congested flow with traffic demand exceeding the design capacity. These junctions/link are characterized by stop-and-go waves, poor travel time, low comfort and convenience, and increased accident risk

2.1.6 To the South of the city the junctions on the A5199 corridor are shown to be very stressed[2], whilst junctions on the A6 corridor is less severely stressed. The Outer Ring Road (A563) to

[2] It should be noted that volume of traffic and stress are not necessarily related. Stress refers to links or junctions that are approaching or are above their design capacity. For example, two lanes will be able accommodate more traffic than one lane before the link becomes stressed, and a junction made up of a single lane priority junction will become stressed with a lower volume of traffic than a multilane roundabout or signalised junction.

the south of the city is shown to be stressed along its length, although it is less stressed at the A6 junction.

2.1.7 Several junctions are identified within Oadby & Wigston's borough, as well as junctions within Blaby district at Countesthorpe, as having the potential to come under stress.

3 Traffic Generation

3.1.1 For the purposes of this analysis it is assumed that each development is purely residential, and that it comprises of privately owned housing stock.

3.1.2 Traffic trip generation has been derived using the TRICS database to determine a trip-rate for arrivals and departures from the various development sites. The trip rates in Table 1 have been compared to various sites and planning applications within the Leicester Principal Urban Area (PUA) and shown to be representative.

Table 1: Trip Rate for private residential developments (vehicle per dwelling)

AM (0800 to 0900)			PM (1700 to 1800)		
Arr	Dep	Total	Arr	Dep	Total
0.155	0.4	0.555	0.344	0.205	0.549

3.1.3 The resultant number of vehicles to and from each of the sites in the morning peak hour and evening peak hour is shown in Table 2 and Table 3. For the Oadby & Wigston locations the volumes are based upon 100dpa[3] and 150dpa. Whilst for Harborough district the locations include the amount expected to be completed by 2031 and the total site capacity.

Table 2: Trip Generation (Vehicles) in Morning Peak hour

			Estimated development trip volumes (vehicles) AM Peak Hour		
Location	Scenario	Number of Dwellings	To	From	Total
Fleckney	to 2031	400	62	160	222
Fleckney	total	500	78	200	278
Kibworth	to 2031	1200	186	480	666
Kibworth	total	1600	248	640	888
Scraptoft	to 2031	1200	186	480	666
Lutterworth	to 2031	1290	200	516	716
Lutterworth	total	2960	459	1,184	1,643
Wigston	100dpa to 2031	750	116	300	416
Wigston	150dpa to 2031	1125	174	450	624
Oadby South	100dpa to 2031	375	58	150	208
Oadby South	150dpa to 2031	563	87	225	312
Oadby North	100dpa to 2031	375	58	150	208
Oadby North	150dpa to 2031	563	87	225	312

[3] Dwellings per annum

Table 3: Trip Generation (Vehicles) in Evening Peak hour

			Estimated development trip volumes PM Peak Hour		
Location	Location	Number of Dwellings	To	From	Total
Fleckney	to 2031	400	138	82	220
Fleckney	total	500	172	103	275
Kibworth	to 2031	1200	413	246	659
Kibworth	total	1600	550	328	878
Scraptoft	to 2031	1200	413	246	659
Lutterworth	to 2031	1290	444	264	708
Lutterworth	total	2960	1,018	607	1,625
Wigston	100dpa to 2031	750	258	154	412
Wigston	150dpa to 2031	1125	387	231	618
Oadby South	100dpa to 2031	375	129	77	206
Oadby South	150dpa to 2031	563	194	115	309
Oadby North	100dpa to 2031	375	129	77	206
Oadby North	150dpa to 2031	563	194	115	309

4 Potential Traffic Distributions from the individual locations

4.1.1 Each of the broad locations was assessed to determine where the traffic generated might impact the highways within the South Eastern sector of Leicester broadly within the PUA.

4.1.2 In the following figures the background traffic volume is shown in blue[4]. The stressed junctions are shown in red (operating at >100%) and yellow (operating at >85%).

4.1.3 The volume of traffic increased for the individual developments have been quantified at locations shown in Figure 9 and are report in Appendix A and Appendix B.

[4] Note that this is to a different scale to the trip volumes for the development traffic

4.2 Lutterworth

- 1290 dwellings to 2031
- 2970 dwellings when fully built out

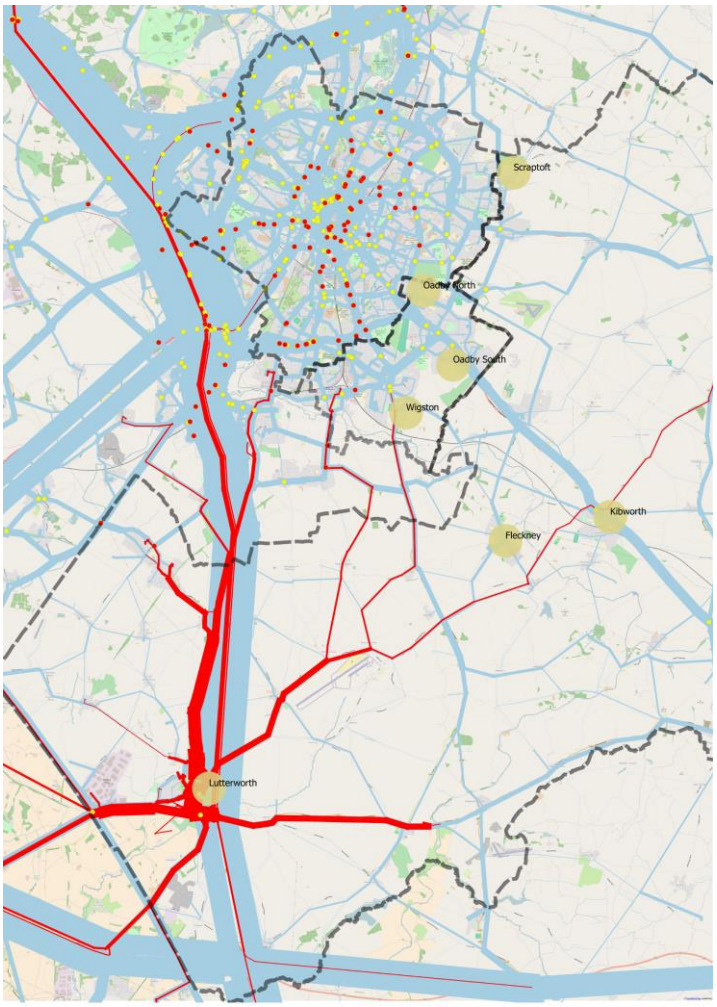

Figure 2: Trips to and from Luterworth

4.2.1 Residents of Lutterworth do not have a large association with the Leicester PUA. A large proportion of the trips are predicted to head towards Warwickshire whilst the proximity to the M1 results in large volumes to/from Nottinghamshire and Derbyshire.

4.2.2 The A426 provides the main linkage to the southern part of Leicester. Results suggest that rural roads near the airport could see an increase in traffic.

4.2.3 It is unlikely that, on its own, traffic from Lutterworth would result in any significant impact within Oadby and Wigston borough or the PUA.

4.3 Scraptoft

- 1200 dwellings to 2031
- 1200 dwellings when fully built out

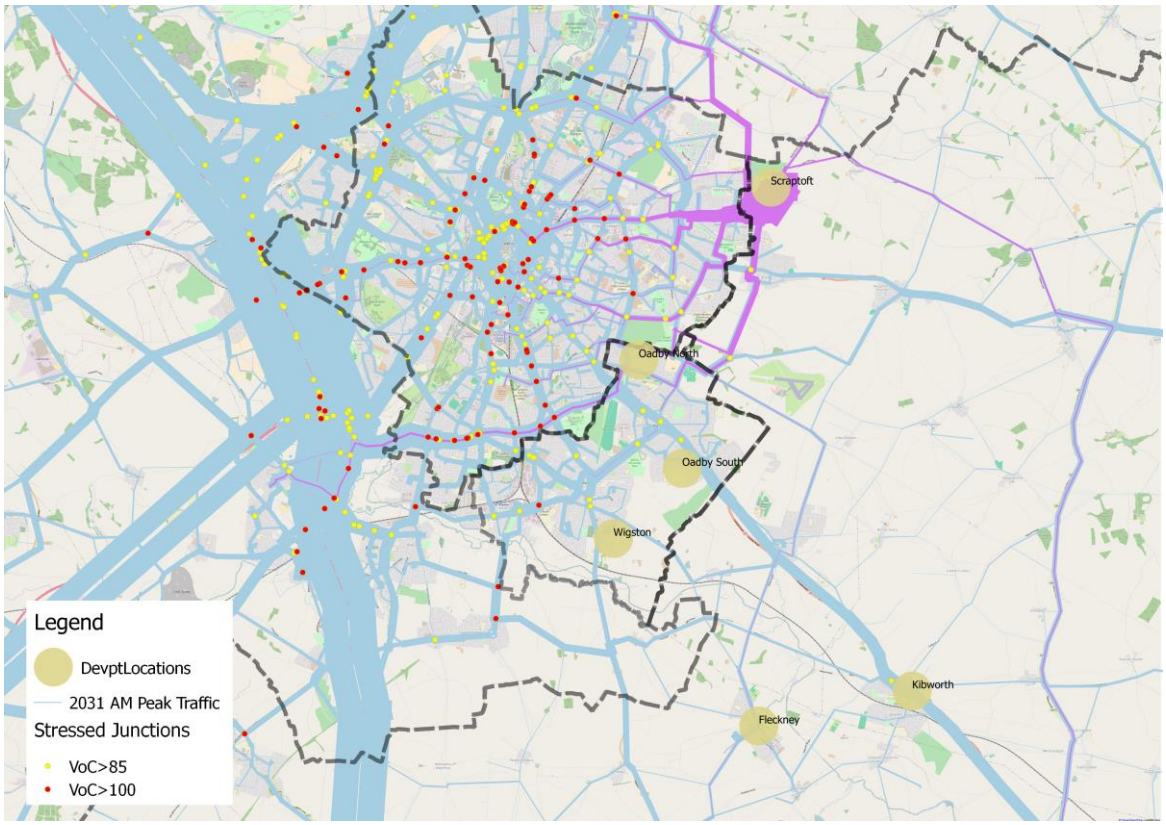

Figure 3: Trips to and from Scraptoft

4.3.1 Located on the City/County border a development at Scraptoft would likely see two predominant traffic movements. Firstly, radial into the city using Scaptoft Lane to access the A47, combined with orbital movements to access the Eastern side of the city. Secondly orbital movements on County Council highways to access Oadby to the South and the Syston area to access A46/A607. Many of the movements are occurring on residential or rural highways which may be a concern to the Highway Authority.

4.3.2 Development at this location could be hindered due to the poor connectivity to the West of Leicester and the rest of the country. This location has poorer connectivity compared to the sites located at the South. The road network near a possible development is primarily single lane suburban roads which have a lower capacity. There is activity within the City that would attract residents of development to the East, but generally the Eastern side of Leicester is less well connected than the North, West and South. Residents of developments to the South of Leicester are able to make use higher quality Orbtial and Radial routes to access opportunities to the West of the City an beyond. To the South the A6 (outside the city) and Outer Ring Road are predominantly two lanes and more able to cope with higher volumes of traffic.

4.4 Oadby North

- 375 dwellings to 2031 (100dpa)
- 563 dwellings to 2031 (150dpa)

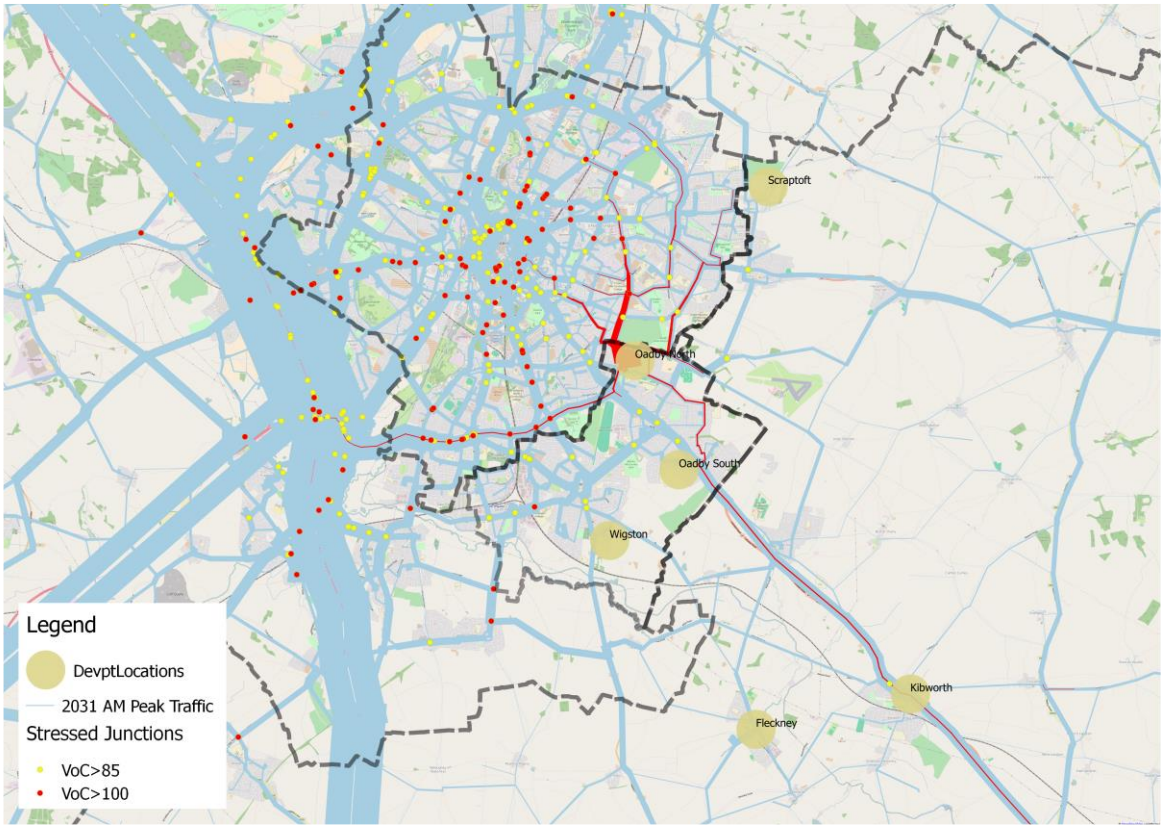

Figure 4: Trips to and from Oadby North

4.4.1 Located on the City/County border the distributions show the majority of the traffic could head towards the city, with a smaller proportion using the A563 Outer ring road, or the A6 southbound. The location could make the use of Evington Lane/Road more attractive to access the City rather than the A6.

4.4.2 The A6030 is shown to be attractive and acts as a distributor around the city.

4.4.3 There are several stressed junctions that could be impacted by the development. Particularly on the A6030 and Evington Lane/Road. To a smaller extent the stressed junctions on the outer ring road towards the M1/M69 junction could also see increased levels of traffic.

4.5 Oadby South

- 375 dwellings to 2031 (100dpa)
- 563 dwellings to 2031 (150dpa)

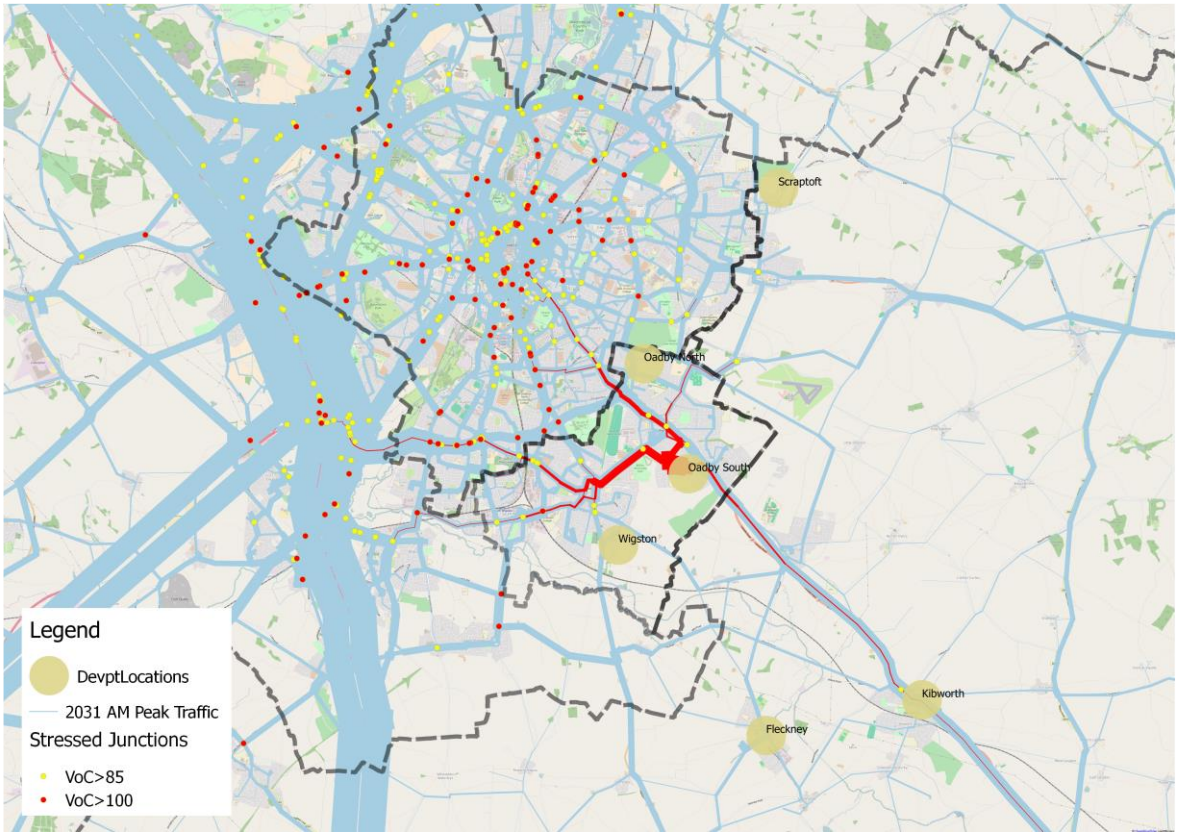

Figure 5: Trips to/from Oadby South

4.5.1 Residents of Oadby South are shown to have strong links with Wigston and onwards to the A563 Soar Valley Way and B582 towards Blaby. This is likely to impact the B582 in Wigston including increasing levels of traffic in Wigston town centre and B5418 Aylestone lane and Stonesby Avenue. The A6 is shown to be the preferred route into Leicester. Developments in Oadby South would potentially have a low impact on the Eastern part of the A563 in the vicinity of the racecourse.

4.5.2 All the major roads likely to be used by residents of a development at Oadby South are likely to be stressed.

4.6 Wigston

- 750 dwellings (100dpa)
- 1,125 dwellings (150dpa)

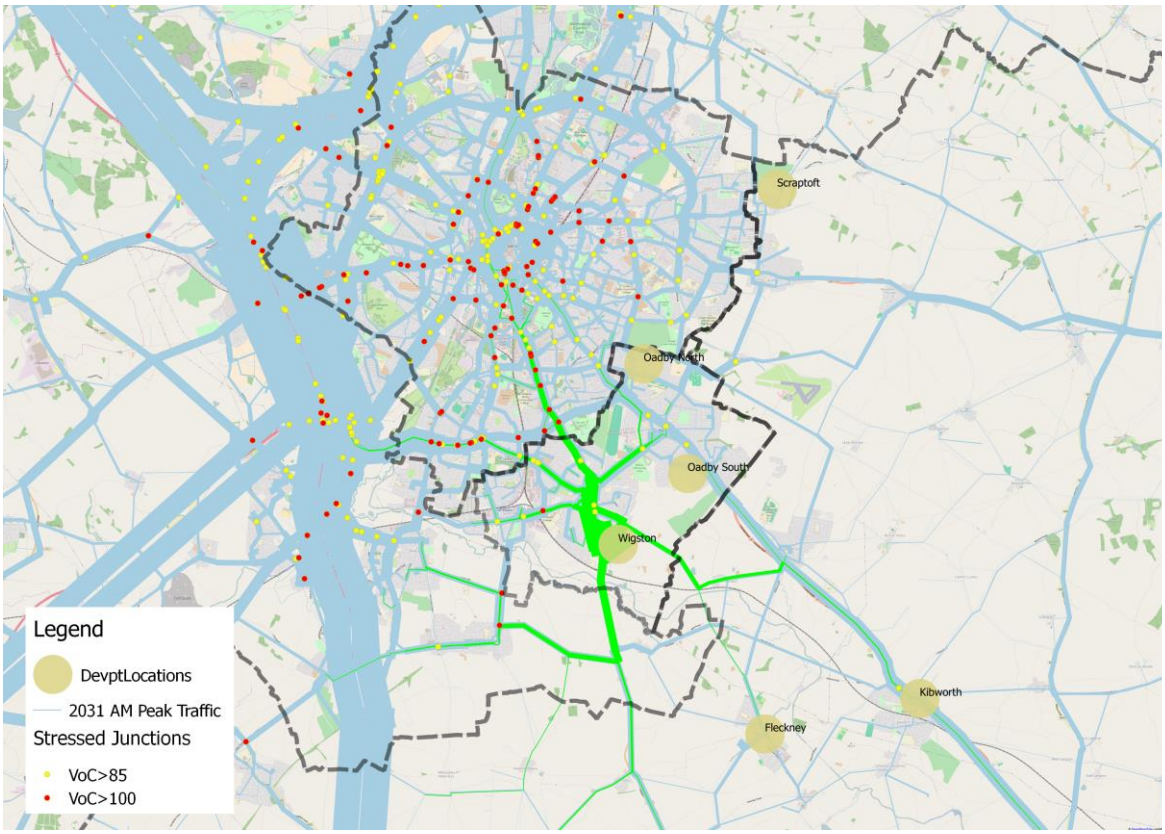

Figure 6: Trips to/from Wigston

4.6.1 The location within Wigston favours the use of the A5199 to access Leicester City Centre. However junctions on this route are shown to be severely stressed and over-capacity. With the junctions under stress it is possible that traffic could be diverted onto alternative routes into and out of the city. Analysis of this effect is beyond the scope of this phase of the study. The B582 both Eastbound and Westbound from Wigston are likely to see an increase in traffic whilst the B5418 Aylestone lane and Stonesby Avenue also sees an increase in traffic. All these roads are shown to be stressed.

4.7 Fleckney

- 400 dwellings to 2031
- 500 dwellings fully built out

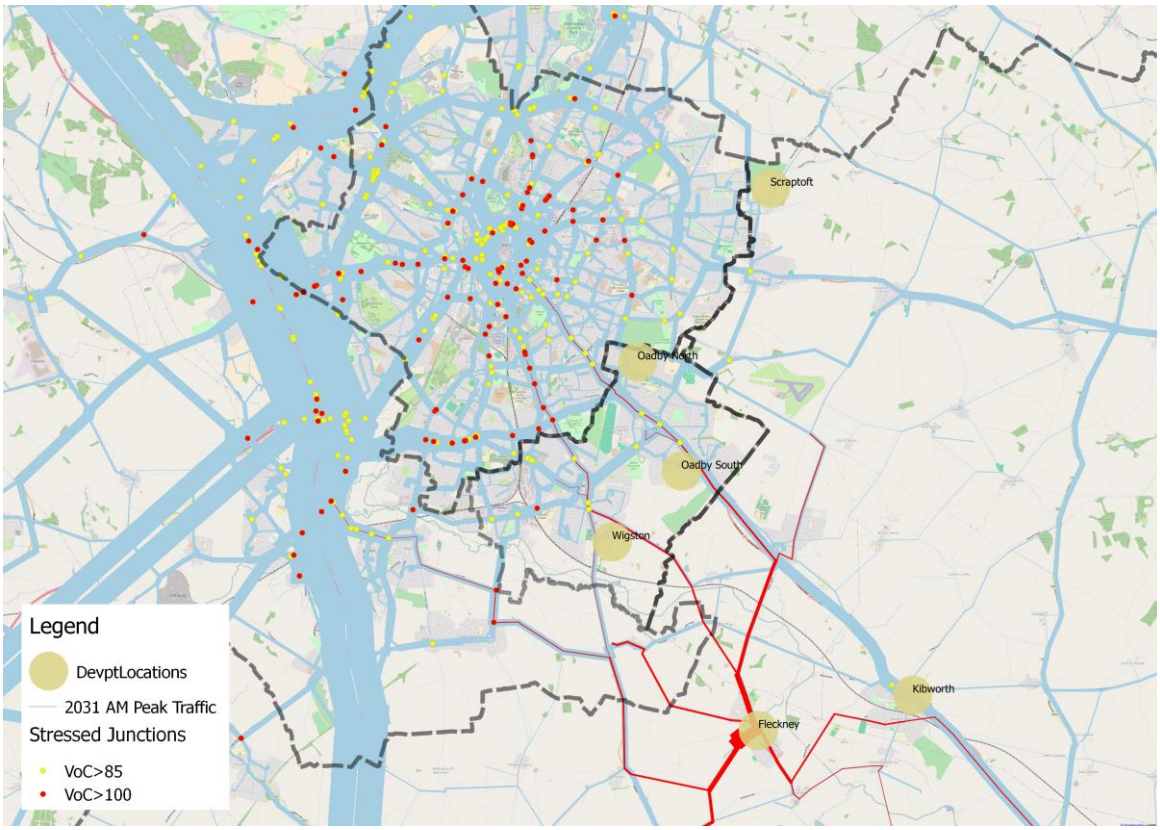

Figure 7: Trips to/from Fleckney

4.7.1 Located within a more rural setting there are no A or B class road near to the settlement. The A5199 can be accessed via Kilby Road and Arnesby Road. Alternatively, the A5199 can be accessed within Wigston via Leicester Road and Newton Lane.

4.7.2 The A6 is accessed via Station Road to the junction at Great Glen.

4.7.3 Whilst traffic is drawn to the North towards Leicester it does become more dispersed by the time it has reached Oadby and Wigston. Newton Lane (which is likely to include the junction with Bull Head street), Bull Head Street/Leicester Road (A5199) in Wigston and the A6 through Oadby are most likely to be impacted. There is likely to be only a marginal impact on the remainder of the highways network within the PUA.

4.8 Kibworth

- 1,200 dwellings to 2031
- 1,600 dwellings total

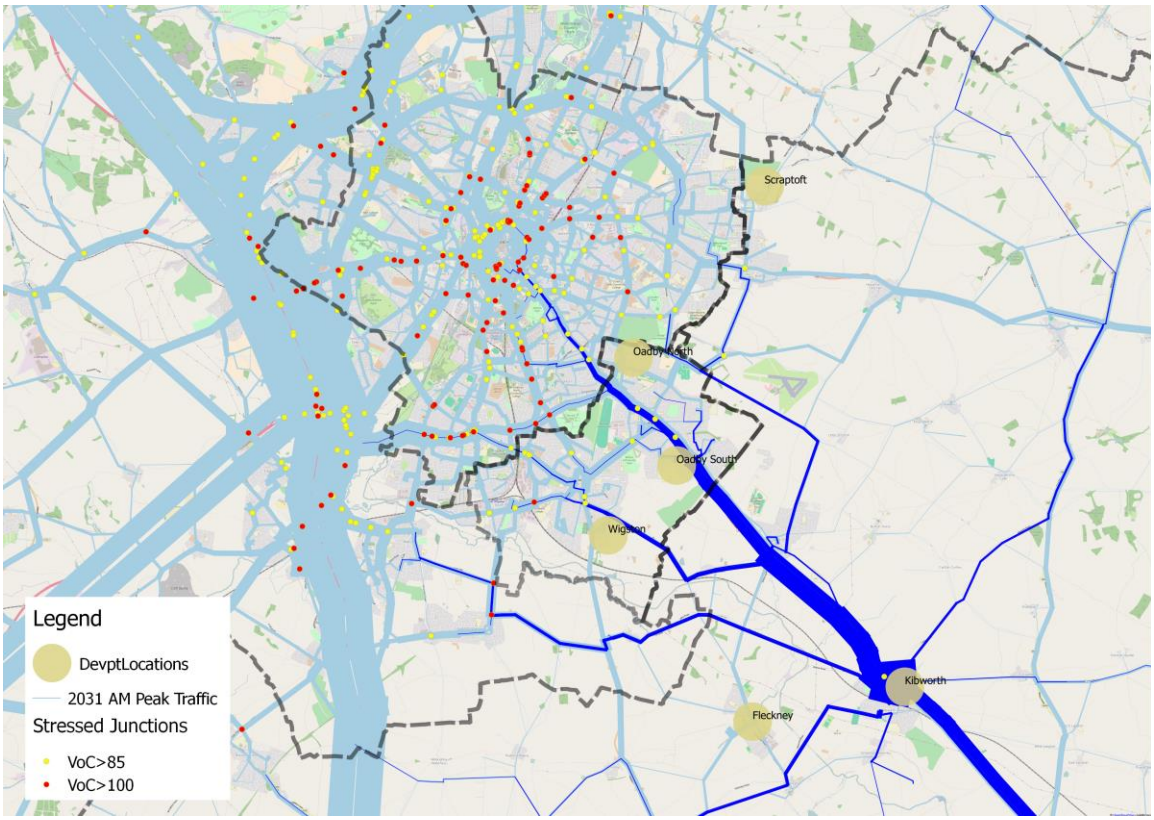

Figure 8: Trips to/from Kibworh

4.8.1 Kibworth is a larger development. The location on the A6 means that there is a large draw toward Market Harborough and Northamptonshire. Consequently, there is less traffic attracted toward Leicester.

4.8.2 Whilst the A6 takes a large proportion of the traffic there is a desire by motorists to use the rural roads to which provide a shorter path, avoid congestion 'hot spots' and act as 'bypasses' between highly trafficked radial routes.

4.8.3 A large proportion of the residents of development in Kibworth are attracted to destinations in the South of Leicestershire and Northamptonshire.

4.8.4 Drivers are attracted to local roads which form a more direct route to Blaby and Wigston.

4.8.5 Countesthorpe with two junctions under stress could be impacted by traffic from Kibworth.

4.8.6 The A6 (not surprisingly) provides the main route into Leicester with the impact from the development likely to extend from the edge of the PUA to the City Centre.

5 Overlaying Distributions

5.1.1 Overlaying the travel distributions from the different locations shows, broadly, where cumulative impacts due to traffic from the different sites are likely to be largest.

5.1.2 As discussed previously these distributions are based upon estimates of congestion due to possible traffic levels in 2031 that have been estimated using earlier assumptions[5] as to the specific locations of development within the whole of Leicester and Leicestershire.

5.1.3 Thus the specific interaction between the traffic from the different sites has not been explicitly considered in this study. However, the overlay does indicate broad areas where traffic from one or more of the developments may impact specific highway links and junctions

5.1.4 From this representative links were identified in locations where the developments either singularly or in combination could lead to increases in traffic levels.

5.1.5 Figure 9 shows an overlay of the travel distributions for the development locations included within this study together with the location of the representative links used in the analysis.

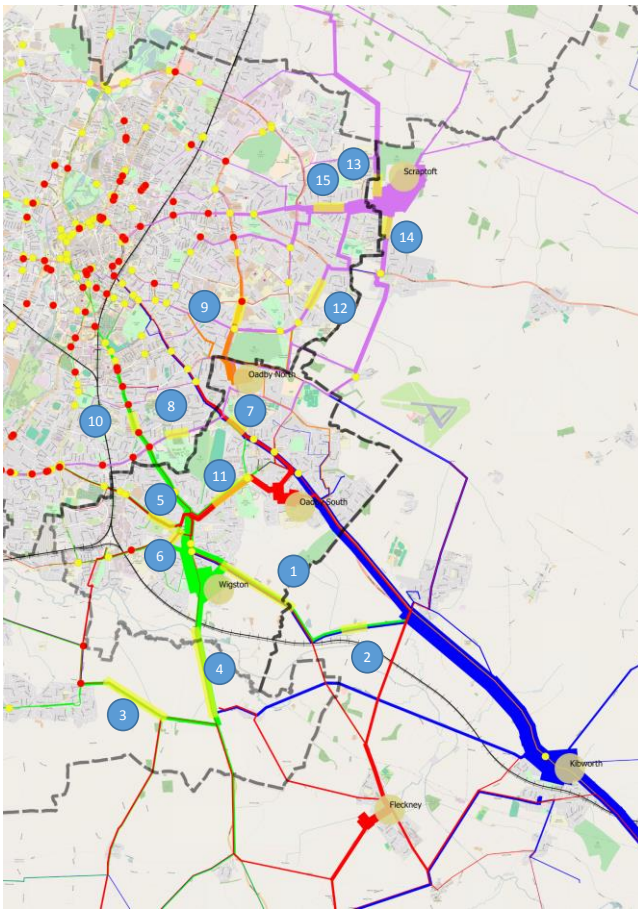

Figure 9: Links for Analysis

[5] In LLITM total traffic levels in 2031 are estimated on the basis of earlier assumptions on the specific location of development. However the broad level of development within each district and across the HMA is similar to current local plan proposals and thus the traffic on the network is representative of the broad levels of congestions that might be experienced in this future year

5.1.6 Details of the modelled traffic flow on each of these links is reported in Appendix A and Appendix B.

5.1.7 In order to estimate the possible scale of impact on each of these links, the background traffic level in 2031, the number of sites that might add traffic to the link, and the broad level of traffic from the possible locations was obtained. This is shown in Table 4.

5.1.8 The A6 (location 7) and Foston Road (location 3), both highlighted in red, could both be potentially impacted by traffic from 4 of the sites. Newton Lane (location 1), B5418 (location 5) and Long Street (location 6) could be impacted by traffic from 3 of the sites.

5.1.9 Where traffic from the sites exceeds 100 vehicles the link has been highlighted in orange. Where it exceeds 150 vehicles it has been highlighted in red.

Table 4: How broad locations of development might impact specific links

											Vehicles	
Am Peak			Scraptoft	Wigston	Kibworth	OadbyS	OadbyN	Fleckney	Lutterworth	Number of sites	2031 traffic level	Development traffic
1	Newton Lane	O&W		✓	✓			✓		3	680	138
2	Glen Road	Harborough		✓	✓					2	665	100
3	Foston Road	Blaby		✓	✓			✓	✓	4	1,225	126
4	A5199	Blaby / O&W		✓						1	880	125
5	B5418	O&W		✓	✓	✓				3	1,599	128
6	Long Street	O&W		✓	✓	✓				3	1,489	64
7	A6	O&W/Leics City		✓	✓	✓		✓		4	2,396	184
8	PalmerstonWay	Leics City	✓				✓			2	1,684	70
9	A6030	Leics City					✓			1	1,172	75
10	A5199	Leics City		✓						1	1,804	82
11	B582	O&W		✓						1	1,992	168
12	Spencerfield Lane	Leics City	✓							1	1,160	112
13	Hamilton Lane	Harborough/Charnwood	✓							1	583	170
14	Station Lane	Harborough	✓							1	569	133
15	Scraptoft Lane	Leics City	✓							1	635	214

5.1.10 This information has been incorporated into

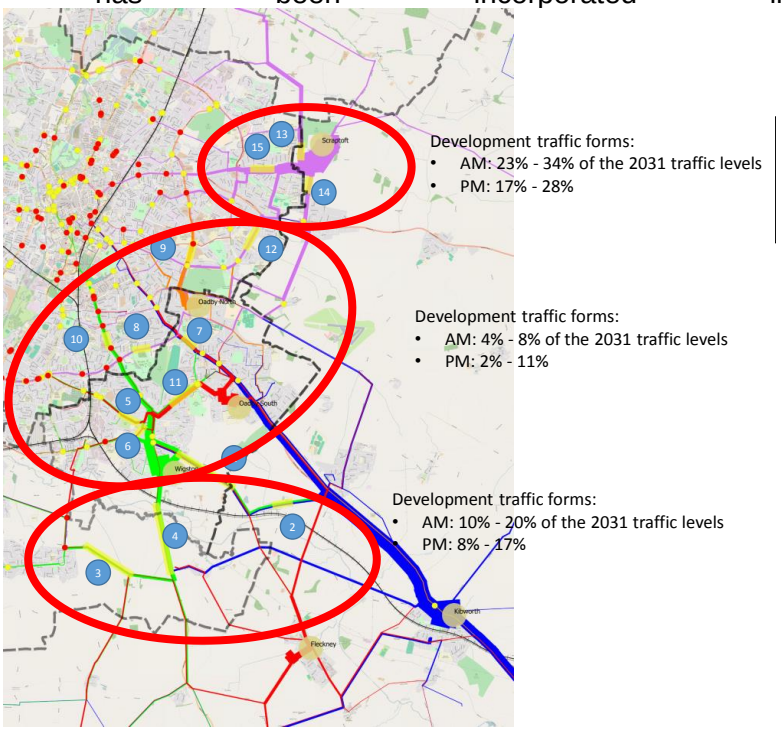

Figure 10 which shows the approximate combined contribution to the increased number of vehicles in 2031 on these key routes.

- In the top (Scraptoft) area there are few stressed junctions. Traffic increases are primarily on Residential and rural roads which may have sufficient design capacity, but which may represent an undesirable route. .
- In the middle area covering the City and the PUA although the absolute increase in traffic levels due to traffic from the sites within this study is large the large volume of background traffic means that the percentage increase is smaller. However, roads within this area are more congested with several routes showing a series of stressed junctions. Small increases in traffic levels could have large impacts on congestion and journey quality.
- South of the PUA traffic levels are lower and therefore the traffic from the sites in this study appears as a larger proportion of the total traffic levels. There are several isolated junctions that LLITM highlights as potentially being under stress

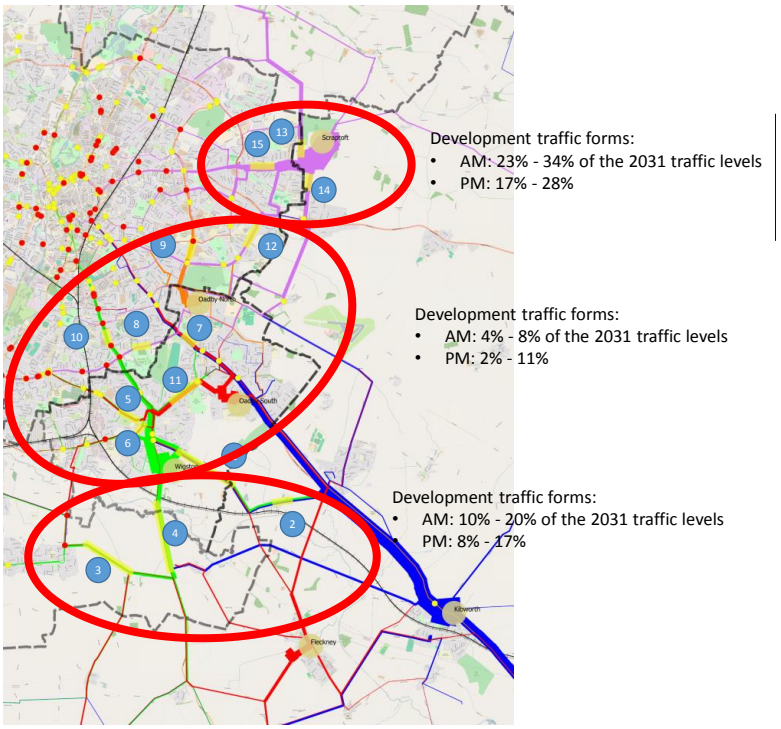

Figure 10: Proportion of vehicles from the sites within this study on the selected links

6 Broad findings:

- Development at Lutterworth has minor impacts within Leicester and the PUA to the South East of the City. Only Foston Road to Blaby is highlighted.
- Scraptoft is largely independent of the other sites. Traffic to/from the site is largely travelling perpendicular to traffic from Oadby North which may cause conflicts at junctions on Spencerfield Lane. In addition, traffic may pass close to the development site at Oadby north on route to the Outer Ring Road. The traffic will largely impact residential or rural roads on the outskirts of the city.
- Drivers from Scraptoft, and Oadby North, are shown to be attracted to destinations within the City (although not necessarily the City Centre). Oadby South and Wigston are located slightly further from the City border and a greater proportion of traffic stays within the borough of Oadby and Wigston, or heads South away from the city.
- Fleckney and Kibworth are sufficiently far away from the PUA that the city is less of an attractor. In addition, the traffic may use direct routes perpendicular to the main radials to connect to specific locations in Leicester PUA (such as Blaby or Countesthorpe).
- Fosse Park/M1/M69 is an important destination for each of the development locations tested. However, traffic will not necessarily make use the A6 and Outer Ring Road to access the area. Traffic from developments to the south may choose more direct routes in which orbital movements are made outside the PUA, or use the B5418 (which joins the Outer Ring Road at the Pork Pie Roundabout) and B582 within Wigston.

- The A6 could see impacts from development at Wigston, Kibworth, Oadby South and Fleckney.
- The A5199 into the City is primarily impacted by traffic from development occurring within Wigston.

Appendix A. Traffic Volumes on Selected Links (AM Peak)

The Tables contains detailed modelled information from the LLITM model:

- 2016 and 2031 modelled traffic levels
- 2031 traffic levels on each link associated with each of the development sites
  - For the Local Plan totals these can be considered to be explicitly included within the modelled traffic levels
  - For the 150dpa and fully built out cases the difference in traffic levels from each site can be considered to be additional traffic
- The locations have been arranged in order of the likely increase in traffic levels on the selected links.

Vehicle numbers in the morning peak (AM Peak) hour in 2031					Total Vehicles				Vehicles to/from each site: Local Plan totals							Vehicles: All sites		Vehicles to/from each site: O&W 150dpa			Vehicles to/from each site: Harborough fully built		
ID	Name	District	Direction travelling	ID	2016	2031	change	% ch	Scraptoft 1200 dwellings	Wigston 750 dwellings	Kibworth 1200 dwellings	OadbyS 375 dwellings	OadbyN 375 dwellings	Fleckney 400 dwellings	Lutterworth 1290 dwellings	All sites (Both directions)	% of 2031	Wigston 1125 dwellings	OadbyS 563 dwellings	OadbyN 563 dwellings	Kibworth 1600 dwellings	Fleckney 500 dwellings	Lutterworth 2960 dwellings
1	Newton Lane	O&W	NW	20559-39978	351	340	- 11	-3%		15	44			19		138	20%	23			58	23	
			SE	39978-20559	247	340	93	37%		36	17			7				54			22	9	
2	Glen Road	Harborough	E	20191-20521	216	316	100	46%		27	17					100	15%	41			22		
			W	20521-20191	237	349	112	47%		10	46							15			61		
3	Foston Road	Blaby	E	1808-30239	464	485	21	5%		14	12			5		126	10%	21			16	6	
			W	30239-1808	565	740	175	31%		36	30			13	16			54			40	16	37
4	A5199	Blaby / O&W	N	2159-39979	246	314	68	28%		19				7	8	125	14%	28				9	19
			S	39979-2159	340	566	225	66%		74		5			7			112	8				16
5	B5418	O&W	NW	2015-1972	762	871	109	14%		37	18	29		6		128	8%	55	43		23	7	
			SE	1972-2015	523	728	206	39%		21	5	9						32	14		6		
6	Long Street	O&W	NE	8593-2042	531	625	93	18%				8				64	4%		12				
			SW	2042-8593	752	865	113	15%		21	5	20						32	30		6		
7	A6	O&W/Leics City	NW	39948-2232	1,125	1,125	- 0	0%		15	68	39		14		184	8%	23	58		91	17	
			SE	2232-39948	1,067	1,271	204	19%			24	13							19	6	32		
8	PalmerstonWay	Leics City	E	3087-3086	707	826	119	17%	7		7					70	4%			5	9		
			W	3086-3087	813	857	45	5%	35				15							22			
9	A6030	Leics City	N	2797-2268	627	722	95	15%					53			75	6%			80			
			S	2268-2797	408	450	42	10%					15							23			
10	A5199	Leics City	N	3228-8499	761	919	158	21%		46				8		82	5%	69				11	
			S	8499-3228	760	885	125	16%		19								29					
11	B582	O&W	NE	3122-2281	751	919	168	22%	6	41		22				168	8%	62	33				
			SW	2281-3122	884	1,073	189	21%	5	16	8	64						24	96		10		
12	Spencerfield Lane	Leics City	N	2435-2455	289	486	197	68%	23			5	10			112	10%		8	15			
			S	2455-2435	576	674	98	17%	57				10							15			
13	Hamilton Lane	Harborough/Charnwood	N	2542-2543	209	311	102	49%	96							170	29%						
			S	2543-2542	152	272	119	78%	64														
14	Station Lane	Harborough	N	7091-8791	209	296	87	42%	21							133	23%		5				
			S	8791-7091	225	273	47	21%	98														
15	Scraptoft Lane	Leics City	E	2498-8755	298	351	53	18%	153							214	34%						
			W	8755-2498	192	284	93	48%	61														
					15,286	18,531	3,245	21%	635	459	316	228	122	91	38	1,889	10%	690	343	181	417	115	87

Figure 11 AM Peak Traffic Volumes on selected links associated with the different broad locations of developments

Proportion of the total 2031 traffic					Total Vehicles				Vehicles to/from each site: Local Plan totals							Vehicles: All sites		Vehicles to/from each site: O&W 150dpa			Vehicles to/from each site: Harborough fully built		
ID	Name	District	Direction travelling	ID	2016	2031	change	% ch	Scraptoft 1200 dwellings	Wigston 750 dwellings	Kibworth 1200 dwellings	OadbyS 375 dwellings	OadbyN 375 dwellings	Fleckney 400 dwellings	Lutterworth 1290 dwellings	All sites (Both directions)	% of 2031	Wigston 1125 dwellings	OadbyS 563 dwellings	OadbyN 563 dwellings	Kibworth 1600 dwellings	Fleckney 500 dwellings	Lutterworth 2960 dwellings
1	Newton Lane	O&W	NW	20559-39978	351	340	11	-3%		4%	13%			6%		138	20%	7%			17%	7%	
			SE	39978-20559	247	340	93	37%		11%	5%			2%				16%			6%	3%	
2	Glen Road	Harborough	E	20191-20521	216	316	100	46%		9%	5%					100	15%	13%			7%		
			W	20521-20191	237	349	112	47%		3%	13%							4%			17%		
3	Foston Road	Blaby	E	1808-30239	464	485	21	5%		3%	2%			1%		126	10%	4%			3%	1%	
			W	30239-1808	565	740	175	31%		5%	4%			2%	2%			7%			5%	2%	5%
4	A5199	Blaby / O&W	N	2159-39979	246	314	68	28%		6%				2%	3%	125	14%	9%				3%	6%
			S	39979-2159	340	566	225	66%		13%					1%	0	0%	20%	1%				3%
5	B5418	O&W	NW	2015-1972	762	871	109	14%		4%	2%	3%				128	8%	6%	5%		3%		
			SE	1972-2015	523	728	206	39%		3%		1%						4%	2%				
6	Long Street	O&W	NE	8593-2042	531	625	93	18%				1%				64	4%		2%				
			SW	2042-8593	752	865	113	15%		2%		2%						4%	3%				
7	A6	O&W/Leics City	NW	39948-2232	1,125	1,125	0	0%		1%	6%	3%		1%		184	8%	2%	5%		8%	2%	
			SE	2232-39948	1,067	1,271	204	19%			2%	1%							1%		3%		
8	PalmerstonWay	Leics City	E	3087-3086	707	826	119	17%								70	4%				1%		
			W	3086-3087	813	857	45	5%	4%				2%							3%			
9	A6030	Leics City	N	2797-2268	627	722	95	15%					7%			75	6%			11%			
			S	2268-2797	408	450	42	10%					3%							5%			
10	A5199	Leics City	N	3228-8499	761	919	158	21%		5%						82	5%	8%				1%	
			S	8499-3228	760	885	125	16%		2%								3%					
11	B582	O&W	NE	3122-2281	751	919	168	22%		4%		2%				168	8%	7%	4%				
			SW	2281-3122	884	1,073	189	21%		1%		6%						2%	9%				
12	Spencerfield Lane	Leics City	N	2435-2455	289	486	197	68%	5%			1%	2%			112	10%		2%	3%			
			S	2455-2435	576	674	98	17%	8%				1%							2%			
13	Hamilton Lane	Harborough/Charnwood	N	2542-2543	209	311	102	49%	31%							170	29%		1%		1%		
			S	2543-2542	152	272	119	78%	24%														
14	Station Lane	Harborough	N	7091-8791	209	296	87	42%	7%		1%	1%				133	23%		2%	1%	1%		
			S	8791-7091	225	273	47	21%	36%														
15	Scraptoft Lane	Leics City	E	2498-8755	298	351	53	18%	44%							214	34%						
			W	8755-2498	192	284	93	48%	21%														

Figure 12 AM Peak: Proportion compared to the 2031 traffic Levels

Appendix B. Traffic Volumes on Selected Links (PM Peak)

Vehicle numbers in the evening peak (PM Peak) hour in 2031					Total Vehicles				Vehicles to/from each site: Local Plan totals							Vehicles: All sites		Vehicles to/from each site: O&W 150dpa			Vehicles to/from each site: Harborough fully built		
ID	Name	District	Direction travelling	ID	2016	2031	change	% ch	Scraptoft 1200 dwellings	Wigston 750 dwellings	Kibworth 1200 dwellings	OadbyS 375 dwellings	OadbyN 375 dwellings	Fleckney 400 dwellings	Lutterworth 1290 dwellings	All sites (Both directions)	% of 2031	Wigston 1125 dwellings	OadbyS 563 dwellings	OadbyN 563 dwellings	Kibworth 1600 dwellings	Fleckney 500 dwellings	Lutterworth 2960 dwellings
1	Newton Lane	O&W	NW	20559-39978	317	519	202	64%		37	29			11		154	17%	56			39	14	
			SE	39978-20559	379	400	22	6%		23	30			24				35			40	30	
2	Glen Road	Harborough	E	20191-20521	220	302	82	37%	5	14	30					102	14%	21			40		
			W	20521-20191	214	439	225	105%		22	29							33			39		
3	Foston Road	Blaby	E	1808-30239	471	474	3	1%		27	23					98	8%	41			30		
			W	30239-1808	626	712	86	14%		17	22			7				25			29	9	
4	A5199	Blaby / O&W	N	2159-39979	345	627	282	82%		52					11	109	11%	78					26
			S	39979-2159	287	364	77	27%		27					13			40					29
5	B5418	O&W	NW	2015-1972	711	832	121	17%		20	9	11				112	7%	30	16		13		
			SE	1972-2015	618	792	173	28%		36	12	17		5				54	26		16	6	
6	Long Street	O&W	NE	8593-2042	602	809	207	34%	6		6	11				108	6%		17		9		
			SW	2042-8593	916	985	70	8%	22	34	12	10		5				51	15		16	6	
7	A6	O&W/Leics City	NW	39948-2232	858	1,025	168	20%		5	23	20				206	8%	7	30		31		7
			SE	2232-39948	1,524	1,572	49	3%		11	67	51		16				16	76		90	20	7
8	PalmerstonWay	Leics City	E	3087-3086	818	918	100	12%	6				13			34	2%			19	6		
			W	3086-3087	880	948	68	8%					7							11			
9	A6030	Leics City	N	2797-2268	431	532	102	24%					28			74	6%			42			
			S	2268-2797	595	643	49	8%			5		32							49	6		
10	A5199	Leics City	N	3228-8499	596	800	204	34%		17						85	4%	25					
			S	8499-3228	1,388	1,456	67	5%		46				11				69				14	6
11	B582	O&W	NE	3122-2281	839	999	161	19%	16	18		36				181	8%	27	54				8
			SW	2281-3122	997	1,157	159	16%	30	37		31			5			55	47				12
12	Spencerfield Lane	Leics City	N	2435-2455	346	455	109	31%	38				7			95	8%			10			
			S	2455-2435	576	695	120	21%	15			5	24					6	8	36			
13	Hamilton Lane	Harborough/Charnwood	N	2542-2543	248	398	150	61%	72							244	38%						
			S	2543-2542	168	242	74	44%	164														
14	Station Lane	Harborough	N	7091-8791	267	385	118	44%	43							108	17%						
			S	8791-7091	206	266	60	29%	53														
15	Scraptoft Lane	Leics City	E	2498-8755	156	241	85	54%	67							208	31%						
			W	8755-2498	320	420	101	31%	141														
				TOTAL	16,916	20,406	3,490	21%	683	454	315	203	125	94	44	1,918	9%	679	307	185	422	116	99

Figure 13: PM Peak Traffic Volumes on selected links associated with the different broad locations of development

Proportion of the total 2031 traffic					Total Vehicles				Vehicles to/from each site: Local Plan totals							Vehicles: All sites		Vehicles to/from each site: O&W 150dpa			Vehicles to/from each site: Harborough fully built		
ID	Name	District	Direction travelling	ID	2016	2031	change	% ch	Scraptoft 1200 dwellings	Wigston 750 dwellings	Kibworth 1200 dwellings	OadbyS 375 dwellings	OadbyN 375 dwellings	Fleckney 400 dwellings	Lutterworth 1290 dwellings	All sites (Both directions)	% of 2031	Wigston 1125 dwellings	OadbyS 563 dwellings	OadbyN 563 dwellings	Kibworth 1600 dwellings	Fleckney 500 dwellings	Lutterworth 2960 dwellings
1	Newton Lane	O&W	NW	20559-39978	351	340	11	-3%		7%	6%			2%		154	17%	11%			8%	3%	
			SE	39978-20559	247	340	93	37%		6%	7%			6%				9%			10%	7%	
2	Glen Road	Harborough	E	20191-20521	216	316	100	46%	2%	5%	10%					102	14%	7%			13%		
			W	20521-20191	237	349	112	47%		5%	7%							8%			9%		
3	Foston Road	Blaby	E	1808-30239	464	485	21	5%		6%	5%					98	8%	9%			6%		
			W	30239-1808	565	740	175	31%		2%	3%							4%			4%	1%	
4	A5199	Blaby / O&W	N	2159-39979	246	314	68	28%		8%					2%	109	11%	12%					4%
			S	39979-2159	340	566	225	66%		7%					4%			11%					8%
5	B5418	O&W	NW	2015-1972	762	871	109	14%		2%	1%	1%				112	7%	4%	2%		2%		
			SE	1972-2015	523	728	206	39%		5%	2%	2%						7%	3%		2%		
6	Long Street	O&W	NE	8593-2042	531	625	93	18%				1%				108	6%		2%		1%		
			SW	2042-8593	752	865	113	15%	2%	3%	1%	1%						5%	2%		2%		
7	A6	O&W/Leics City	NW	39948-2232	1,125	1,125	0	0%			2%	2%				206	8%		3%		3%		
			SE	2232-39948	1,067	1,271	204	19%			4%	3%		1%				1%	5%		6%	1%	
8	PalmerstonWay	Leics City	E	3087-3086	707	826	119	17%					1%			34	2%			2%			
			W	3086-3087	813	857	45	5%												1%			
9	A6030	Leics City	N	2797-2268	627	722	95	15%					5%			74	6%			8%			
			S	2268-2797	408	450	42	10%					5%							8%			
10	A5199	Leics City	N	3228-8499	761	919	158	21%		2%						85	4%	3%					
			S	8499-3228	760	885	125	16%		3%								5%					
11	B582	O&W	NE	3122-2281	751	919	168	22%	2%	2%		4%				181	8%	3%	5%				
			SW	2281-3122	884	1,073	189	21%	3%	3%		3%						5%	4%				1%
12	Spencerfield Lane	Leics City	N	2435-2455	289	486	197	68%	8%				2%			95	8%			2%			
			S	2455-2435	576	674	98	17%	2%				3%						1%	5%			
13	Hamilton Lane	Harborough/Charnwood	N	2542-2543	209	311	102	49%	18%							244	38%						
			S	2543-2542	152	272	119	78%	68%												1%		
14	Station Lane	Harborough	N	7091-8791	209	296	87	42%	11%							108	17%						
			S	8791-7091	225	273	47	21%	20%		1%										1%		
15	Scraptoft Lane	Leics City	E	2498-8755	298	351	53	18%	28%							208	31%						
			W	8755-2498	192	284	93	48%	34%														

Figure 14: PM Peak: Proportion compared to the 2031 traffic Levels