

Shepway District Council

**Transport Strategy  
Spreadsheet Model Report**

January 2011

Prepared for  
**Shepway District Council**

## Revision Schedule

### Transport Strategy: Spreadsheet Model Report January 2011

Rev	Date	Details	Prepared by	Reviewed by	Approved by
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# 1 Introduction

## 1.1 Background

- 1.1.1 URS / Scott Wilson has been commissioned by Shepway District Council (SDC) to prepare the Transport Strategy for the District. The remit of the Transport Strategy is to include and consider both transport matters which relate to the existing District area, as well as those relating to the Strategic Site allocations and their possible future implications.
- 1.1.2 SDC is currently preparing its Core Strategy, which is its lead document in the Local Development Framework. The Transport Strategy will form part of the evidence base for the Core Strategy, which has been subject to public consultation at both the issues and options, and preferred options stages.

## 1.2 Purpose

- 1.2.1 Following consultation with SDC, Kent County Council (KCC - as the local Highways Authority), and the Highways Agency (HA), a spreadsheet model has been developed to help inform the Transport Strategy and aid the assessment of the potential impact of the Core Strategy site allocations on the highway network.
- 1.2.2 The purpose of this report is to detail the methodology used in creating the spreadsheet model, the processes which have been undertaken and the outputs which are available. The presentation of calculations concerning trip generation and distribution are also included, as well as information concerning the Strategic Site allocations.
- 1.2.3 The overall aim of the spreadsheet model is to establish an evidence base that can be used to inform decisions concerning the implementation of the Transport Strategy, and in turn the Core Strategy.

## 1.3 Structure

- 1.3.1 The remainder of this report is set out as follows:
- Section 2 – Network Identification and Baseline Model
  - Section 3 – Consideration of Committed Developments
  - Section 4 – Consideration of Strategic Site Allocations
  - Section 5 - Summary

## 2 Network Identification and Baseline Model

### 2.1 Background

- 2.1.1 As part of the project inception process, discussions were held concerning the most suitable way to assess the operation of the highway network, both in its existing use, and when considering any future developments that may generate additional traffic on the network.
- 2.1.2 Following these discussions, it was suggested that a high level spreadsheet model was developed, that recognises the importance in developing a flexible, interactive tool which allows for a variety of scenarios to be investigated. A Modelling Methodology Briefing Note was therefore prepared, outlining the processes that would be used to build the model, and provided preliminary information concerning trip generation, trip distribution and traffic growth. The Briefing Note was then submitted and agreed by all stakeholders, and is summarised in more detail in this report.

### 2.2 Establishing the Network

- 2.2.1 The first stage when developing this type of model is to establish the base network, onto which information will be overlaid. In this instance, a review was undertaken of the highway network within the District, and routes, junctions and corridors were identified and agreed by the stakeholders, for inclusion in the model. These are presented in **FIGURE 2.1**.
- 2.2.2 A schematic representation of the highway network was then developed for the spreadsheet model, which represents these key routes, junctions and corridors. Due to the geographic scale of the District, schematic diagrams were created for both the district as a whole, and separately for the Folkestone area. **FIGURES 2.2** and **2.3** present the schematic diagrams for Shepway and Folkestone, respectively.

### 2.3 Baseline Model

- 2.3.1 Once the highway network had been established, traffic count information and junction turning movement information was obtained from various sources including:
- Kent County Council
  - Shepway District Council Planning Portal (committed development schemes)
  - The HA's TRADS database
  - Strategic Site Developer representatives
- 2.3.2 A review was subsequently undertaken of the information, highlighting any areas within the network that had limited or no data. Following this review, traffic surveys were commissioned at seven locations, in advance of the commencement of school holidays within the District. As a result, traffic data was available for all of the identified locations within the District.

- 2.3.3 As agreed with SDC, KCC and the HA, traffic data that had been recorded within the past 10 years was considered to be suitable to represent the background situation in Shepway, resulting in information for over 100 sites being identified and used within the spreadsheet model. Due to the variety of sources of information, the data inevitably spanned a number of years and months within each year.
- 2.3.4 Seasonality adjustments and traffic growth factors were therefore applied to these traffic counts, in order to establish the 2010 Baseline Scenario. This Scenario has been used as a basis for assessing the existing operation of the highway network, as discussed in the **Highways Note** and wider Transport Strategy report.

### Seasonality

- 2.3.5 In order to calculate a common base point for analysis, a seasonality factor was first applied to the traffic data, which takes into consideration the seasonal variation of traffic flows across the network. This is particularly pertinent for Shepway, in anticipation of increased traffic flows in the summer months, associated with tourism within the District.
- 2.3.6 The Department for Transport's (DfT) COBA Manual (11, of DMRB 13) presents a Seasonality Index, based on the degree of monthly flow variation across the year. Using this information, a variation factor can be calculated, according to the annual average, as presented in **TABLE 2.1**.

**TABLE 2.1 Seasonal Variation Factors - COBA**

Month	Seasonality Index	Variation Factor
January	471	0.81
February	431	0.88
March	455	0.84
April	378	1.01
May	357	1.07
June	337	1.13
July	309	1.23
August	281	1.36
September	318	1.20
October	373	1.02
November	419	0.91
December	448	0.85
<b>Average</b>	<b>381</b>	-

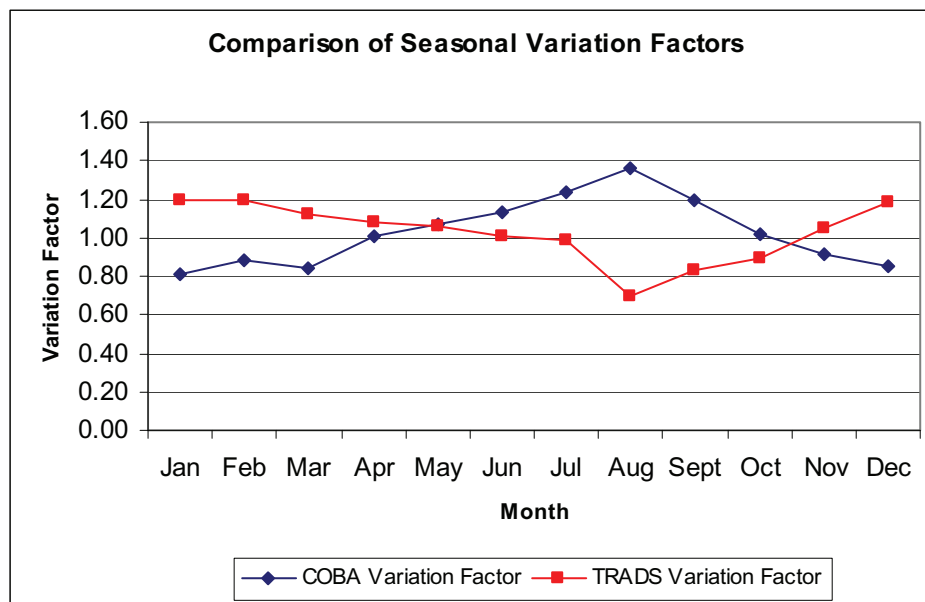
- 2.3.7 As an example therefore, if a traffic survey was undertaken in July, a factor of 1.23 would be applied to the data, to establish a common base, according to the average across the year. This data and approach was presented in the Modelling Methodology Briefing Note, and it was agreed with SDC, KCC and the HA that it would be applied in the absence of any more locally specific data.

- 2.3.8 However; due to the popularity of the District for tourists, it was considered that applying a positive factor (i.e. a factor greater than 1) will over-estimate the seasonal variation at a time when most people will be visiting the District (i.e. the summer months). Therefore, local traffic information from the TRADS database (site 4/131, 2009 data) was used as a comparison for seasonal variation.
- 2.3.9 In this instance, as the spreadsheet model is concerned with weekday traffic only, the comparison has been based on the Average Weekday Traffic (AWT) for each month. **TABLE 2.2** therefore presents the monthly variation factor calculated using TRADS data, whilst **GRAPH 2.1** compares the variation factors according to the COBA manual, and TRADS data.

**TABLE 2.2 Seasonal Variation Factors – TRADS Data**

Month	AWT	Variation Factor
January	18346	<b>1.20</b>
February	18410	<b>1.19</b>
March	19566	<b>1.12</b>
April	20210	<b>1.09</b>
May	20741	<b>1.06</b>
June	21713	<b>1.01</b>
July	22262	<b>0.99</b>
August	31535	<b>0.70</b>
September	26429	<b>0.83</b>
October	24587	<b>0.89</b>
November	20798	<b>1.05</b>
December	18573	<b>1.18</b>
<b>Average</b>	<b>21931</b>	<b>-</b>

**GRAPH 2.1 Comparison of Seasonal Variation Factors**



- 2.3.10 Analysis of the data above suggests that the local monthly variation of traffic flow in relation to the annual average differs to that suggested by COBA. As the TRADS information has been derived from local traffic count information, the variation factors presented in **TABLE 2.2** have therefore been applied to the traffic data used in the spreadsheet model, to ensure that the baseline data is representative of local Shepway conditions.

### Traffic Growth Factors

- 2.3.11 As discussed, due to the variety of sources of information, a number of the traffic counts were undertaken within the 10 year period 2000-2010. Traffic growth factors were therefore calculated and applied to the data, to establish the 2010 Baseline Scenario.
- 2.3.12 The Government's Trip End Database, TEMPRO (dataset 5.4) was used to establish appropriate growth factors for the District. In accordance with the TEMPRO Guidance Note (2006), these factors were then used to tailor the National Transport Model predictions to enable local growth factors to be calculated, in accordance with the following formula: (N.B. The TEMPRO Guidance note states that NRTF (1997) should be used; however in this instance, NTM (2010) has been employed, as this offers a more up to date data set.)

$$\text{Local Peak Hour TEMPRO} / \text{National Average Weekday TEMPRO} \times \text{NTM}$$

- 2.3.13 **TABLE 2.3** presents the results of this analysis, and subsequent growth factors applied to each survey, to establish the 2010 Baseline Scenario. It should be noted that Shepway (Authority) was chosen for the Local TEMPRO geographical area, and South East (all roads and areas) was chosen from the NTM dataset.

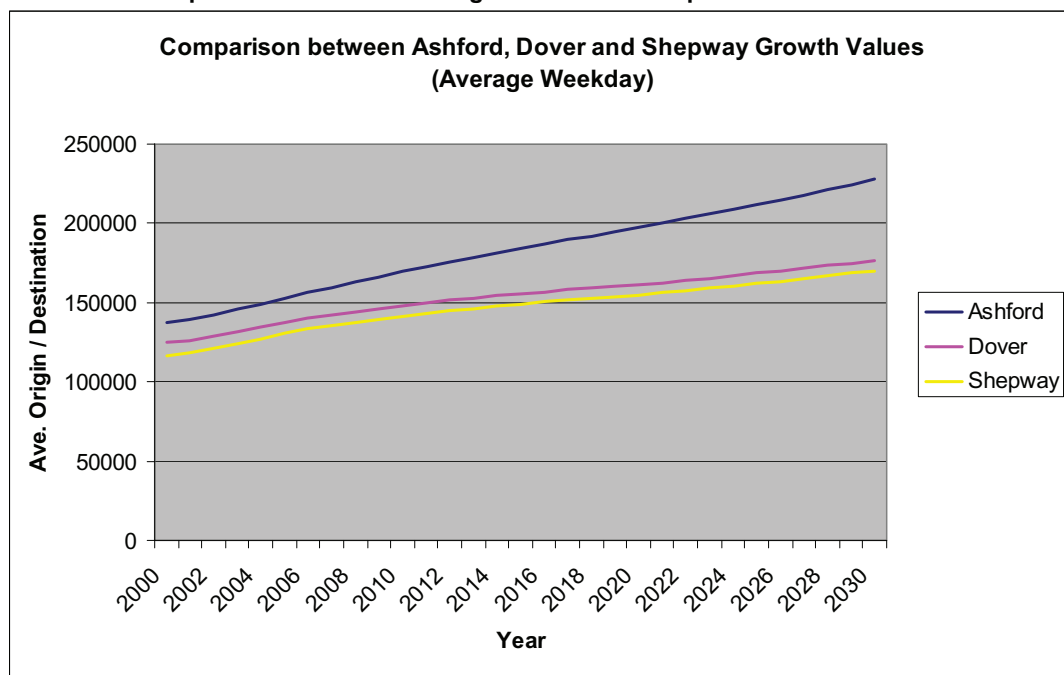


**TABLE 2.3 Growth Factors to 2010**

Year	Time Period	Local Peak Hour TEMPRO	National Average Weekday TEMPRO	NTM	Growth Factor
2000 - 2010	AM (0700-1000)	1.210	1.137	1.041	<b>1.107</b>
	PM (1600-1900)	1.208	1.137	1.041	<b>1.106</b>
	Average Weekday	1.209	1.137	1.041	<b>1.107</b>
2001 – 2010	AM (0700-1000)	1.195	1.121	1.041	<b>1.109</b>
	PM (1600-1900)	1.194	1.121	1.041	<b>1.109</b>
	Average Weekday	1.194	1.121	1.041	<b>1.109</b>
2002 – 2010	AM (0700-1000)	1.165	1.107	1.041	<b>1.095</b>
	PM (1600-1900)	1.164	1.107	1.041	<b>1.095</b>
	Average Weekday	1.165	1.107	1.041	<b>1.095</b>
2003 – 2010	AM (0700-1000)	1.136	1.093	1.041	<b>1.082</b>
	PM (1600-1900)	1.135	1.093	1.041	<b>1.081</b>
	Average Weekday	1.136	1.093	1.041	<b>1.082</b>
2004 – 2010	AM (0700-1000)	1.109	1.080	1.035	<b>1.063</b>
	PM (1600-1900)	1.108	1.080	1.035	<b>1.062</b>
	Average Weekday	1.110	1.080	1.035	<b>1.063</b>
2005 – 2010	AM (0700-1000)	1.083	1.067	1.029	<b>1.044</b>
	PM (1600-1900)	1.082	1.067	1.029	<b>1.044</b>
	Average Weekday	1.084	1.067	1.029	<b>1.046</b>
2006 – 2010	AM (0700-1000)	1.058	1.054	1.023	<b>1.027</b>
	PM (1600-1900)	1.058	1.054	1.023	<b>1.026</b>
	Average Weekday	1.060	1.054	1.023	<b>1.028</b>
2007 – 2010	AM (0700-1000)	1.043	1.040	1.017	<b>1.020</b>
	PM (1600-1900)	1.043	1.040	1.017	<b>1.020</b>
	Average Weekday	1.044	1.040	1.017	<b>1.021</b>
2008 – 2010	AM (0700-1000)	1.028	1.026	1.011	<b>1.013</b>
	PM (1600-1900)	1.028	1.026	1.011	<b>1.013</b>
	Average Weekday	1.029	1.026	1.011	<b>1.014</b>
2009 - 2010	AM (0700-1000)	1.014	1.013	1.006	<b>1.007</b>
	PM (1600-1900)	1.014	1.013	1.006	<b>1.006</b>
	Average Weekday	1.014	1.013	1.006	<b>1.007</b>
2010 - 2010	AM (0700-1000)	1.000	1.000	1.000	<b>1.000</b>
	PM (1600-1900)	1.000	1.000	1.000	<b>1.000</b>
	Average Weekday	1.000	1.000	1.000	<b>1.000</b>

- 2.3.14 In addition to the above, a comparison was made between the predicted increase in Origin / Destination car driver trips across Shepway (Authority), Ashford (Authority) and Dover (Authority) to ensure that growth in the District could be accurately accounted for and was not expected to be distorted by markedly different growth predictions in neighbouring areas.
- 2.3.15 As presented in **GRAPH 2.2**, the results of this analysis suggest that these areas have experienced, and are expected to continue to experience a similar growth profile for the period 2000 to 2030. It is therefore considered that the growth factors presented above are a fair representation of growth across the District.

**GRAPH 2.2 Comparison of Car Driver Origin / Destination trips**



## 2.4 Baseline Spreadsheet Construction and Review

- 2.4.1 Using the information presented above, appropriate seasonal factors and growth factors were applied to the observed traffic data that was obtained and collected to inform the Baseline model. This resulted in turning movements and link flows being added to the schematic highway network presented in **FIGURES 2.2** and **2.3**. Further analysis of this data is provided in the **HIGHWAYS IMPACT** note, which forms part of the Transport Strategy.
- 2.4.2 As part of the model development process, the Baseline spreadsheet model was then reviewed by SDC, KCC and the HA. As presented in **APPENDIX A**, comments received from the HA indicated that there were no major issues concerning the functionality of the model, and agreement was reached concerning the methodology, function and operation of the Baseline model.

### 3 Consideration of Committed Developments

- 3.1.1 Liaison with the stakeholder group (SDC, KCC and the HA) identified a number of committed developments within the District that have received planning permission and have been, or are in the process of being constructed.
- 3.1.2 The type and scale of development ranges from small scale residential developments to large industrial estates. These developments have therefore been considered on an individual basis within the spreadsheet model.
- 3.1.3 Where possible, the Transport Assessments associated with each of the committed schemes have been used to establish the likely generation and distribution of vehicular trips across the highway network. As appropriate, due to the geographical scale of the spreadsheet model, assumptions have been made concerning the distribution of trips associated with the committed developments outside of the study area of their respective Transport Assessments. **SECTION 4** of this report details the method of calculating the distribution of vehicular trips.
- 3.1.4 As such, **TABLE 3.1** presents the committed developments that have been considered within the spreadsheet model, and provides greater detail concerning the type and scale of development and anticipated programme of delivery. **FIGURE 3.1** presents the location of these developments within the District.

**TABLE 3.1 Committed Developments Considered in the Spreadsheet Model**

Name of Development	Development Proposals
<b>Cheriton Parc</b>	B1 Office (15334sqm), Hotel (2648sqm), Nursery (744sqm)
<b>Sainsbury's Hythe</b>	Sales area 3508sqm
<b>Link Park</b>	B1 Office (5200sqm), B2 Industrial (15600sqm), B8 Warehousing (31200sqm)
<b>Shearway (Glenmore Site)</b>	24 Business Units
<b>Shearway (Home Office Site)</b>	B1 Office (5415sqm)
<b>Encombe</b>	36 residential units

- 3.1.5 In addition to the committed developments discussed above (i.e. those that already have planning permission), a number of additional developments have been identified for consideration. These developments are not yet committed, however have been considered as potentially impacting on the highway network in the District, meaning that it would be appropriate for them to be included in the spreadsheet model. In this instance, the traffic associated with these developments has been added to the highway network, as a worst case scenario.
- 3.1.6 Again, the Transport Assessments associated with these proposals have been used to establish the potential impact of each development on the highway network. Where appropriate, assumptions have been made concerning the distribution of trips that fall outside of the study area for each development. The methodology for determining the distribution is discussed in **SECTION 4** of this report.
- 3.1.7 **TABLE 3.2** presents the additional developments that fall under this category.

**TABLE 3.2 Additional Developments Considered in the Spreadsheet Model**

Name of Development	Development Proposals
<b>Lydd Airport</b>	Terminal building to increase capacity from 300,000 to 500,000 passengers pa
<b>Leas Club</b>	68 apartments, Commercial (790sqm)
<b>Plot 15 Collins Road – Mountifeld Rd recycling centre</b>	Household waste recycling centre

- 3.1.8 The traffic associated with the developments presented in **TABLES 3.1** and **3.2** above was therefore assigned to the highway network within the spreadsheet, and an option was created whereby the traffic associated with these developments can be included or excluded, according to the specific scenario being considered. Should one of the schemes not be pursued, or if the proposals are altered, modifications can be made such that the spreadsheet model continues to act as a valid assessment tool.

## 4 Consideration of Strategic Site Allocations

- 4.1.1 As discussed, the aim of the spreadsheet model is to provide an evidence base that can be used to inform both the Transport Strategy and the Core Strategy.
- 4.1.2 As part of the Core Strategy and Local Development Framework, a number of sites within the District have been identified by SDC as potential locations for residential and mixed use development. As such, the spreadsheet model has considered each of these in turn, according to the information available at this time and potential future use of each site.
- 4.1.3 As presented in **TABLE 4.1**, a total of eight strategic sites have been identified across the District. The likely level of development associated with each of the sites has been discussed and agreed with SDC in advance for the purposes of this model assessment. The location of each of these sites is illustrated in **FIGURE 4.1**.

**TABLE 4.1 Strategic Site Allocations**

Name of Development	Development Proposals
<b>New Romney</b>	400 residential dwellings, plus open space
<b>Folkestone Seafront</b>	1000 residential dwellings, restaurant / bar uses and possible water-sports
<b>Nickolls Quarry<sup>1</sup></b>	<i>1050 residential dwellings, plus employment (15000sqm) and commercial (5000sqm)</i>
<b>Risborough and Napier Barracks</b>	900 residential dwellings, improved MOD facilities, open space and community facilities including GP Surgery
<b>Hawkinge</b>	300 residential dwellings and extension to Battle of Britain Museum
<b>Folkestone Racecourse</b>	400 residential dwellings, local shops and small amount of office development, community facilities
<b>Lympne Airfield</b>	400 residential dwellings, open space and recreation facilities
<b>Sellindge</b>	300 residential dwellings, open space and recreational facilities

<sup>1</sup> Nickolls Quarry development has received planning permission

- 4.1.4 Liaison with the land owners / potential developers of each of the identified sites has been undertaken, to establish the overall masterplan and vision for the respective developments. It should be noted that the sites are all at different stages of the masterplanning process, with some having developed broad access strategies and quantum of development, and others having only initial thoughts of the level of development at the site.
- 4.1.5 Additionally, it should be noted that the Nickolls Quarry site has recently been granted planning approval, and so definitive development information is available for this specific site. This has therefore been included in the assessment as a committed development.
- 4.1.6 Through consultation with SDC and potential developers of each of the sites therefore, **TABLE 4.1** above represents the most up to date information available concerning the Strategic Sites. In light of this, the spreadsheet model has been built to allow for changes in the development quantum and associated level of traffic as the proposals for each site progress, should this be required.

- 4.1.7 In order to allow for consideration of the Strategic Sites within the spreadsheet model, trip generation rates and trip distribution calculations were presented to the stakeholders for discussion and agreement, as per the Modelling Methodology Briefing Note.
- 4.1.8 In addition to informing the spreadsheet assessment and Transport Strategy, it is also intended that these calculations are used as a guideline for developers of the Strategic Sites which can be updated on a site by site basis, following the progression of the respective masterplans, and through liaison with both KCC as the local highway authority, and the HA.
- 4.1.9 As such, the methodology for calculating the trip generation rates and vehicular distribution that has been used in the spreadsheet model is discussed in greater detail below, building on information initially set out in the Modelling Methodology Briefing Note.

## 4.2 Trip Generation

- 4.2.1 The potential level of trip generation associated with each of the Strategic Sites has been calculated using the industry standard software programmes, TEMPRO (dataset 5.4), and TRICS (2009b).
- 4.2.2 TEMPRO is based on planning data within the Government's Trip End database, and provides information concerning the expected level of trips originating from, and destined to specific geographic areas within a specific time period (e.g. AM Peak). A benefit of using this data is the ability to differentiate between Home Based (HB) and Non-Home Based (NHB) trips, according to journey purpose across a variety of modes. Vitally, TEMPRO also offers the ability to calculate trip generation rates according to the characteristics of the local area, and planned level of housing and employment growth within the selected area, for a specific year.
- 4.2.3 TRICS (Trip Rate Information Computer System) calculates trip rates based on analysis of existing sites around the country. Depending on the type and number of surveys, it also allows for trip rates to be calculated by mode, and for a wide range of developments. Factors such as proximity to town centres can also be considered, to enable the selection of existing developments that share similar characteristics to the proposed development. However; as TRICS is dependant on calculating trip rates according to existing sites, there are some instances where such sites are not contained within the database, and a trip rate cannot be calculated (for example, for large housing developments).
- 4.2.4 Following consultation with SDC, KCC and the HA, it was agreed that the residential trip rates would be calculated using TEMPRO, as this would allow mode and journey purpose to be considered, and non-residential trip rates would be calculated using TRICS.

### Residential Trip Rates

- 4.2.5 As discussed, TEMPRO provides data concerning the total number of Home Based (HB) trips that are expected to occur within a specific time period, for a specific area. In this instance therefore, data for the AM (0700-1000) and PM (1600-1900) time periods within the Shepway (Authority) area was extracted from the database for the year 2026, as this represents the final year of the Core Strategy and Local Development Framework. The extracted data is presented in TABLES 4.2 and 4.3 below.

**TABLE 4.2 - 2026 Origin and Destination Trips by Mode and Journey Purpose (AM Peak Period)**

2026 AM	HB Education		HB Work*		HB Social**		HB Personal Business (PB)		HB Shopping	
	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination
Walk	7190	10641	2530	3601	3107	3559	937	1280	2845	3582
Cycle	349	311	869	689	187	200	49	64	140	167
Car Driver	3012	3600	20202	21790	3606	3334	966	729	2532	2151
Car Passenger	5707	8305	3832	4963	2456	2880	595	907	1736	2231
Bus / Coach	2470	1672	1565	916	385	403	127	136	398	451
Rail / underground	163	54	909	182	36	55	8	7	24	28
Combined Modes	18890	24582	29908	32140	9777	10430	2682	3124	7675	8610

\* Includes HB Work and HB Employers Business

\*\* Includes HB Holiday, HB Recreation and HB Visiting friends / relatives

**TABLE 4.3 - 2026 Origin and Destination Trips by Mode and Journey Purpose (PM Peak Period)**

2026 PM	HB Education		HB Work*		HB Social**		HB Personal Business (PB)		HB Shopping	
	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination
Walk	2567	1488	3662	2661	6514	6342	2140	2034	6192	5600
Cycle	70	81	683	823	542	515	127	125	355	345
Car Driver	1382	1216	19390	17995	8156	8473	1834	1970	5599	5866
Car Passenger	1993	1263	4586	3630	7058	7041	2024	2015	5489	5145
Bus / Coach	318	529	818	1291	940	835	230	210	736	664
Rail / underground	12	43	129	660	193	163	22	24	81	101
Combined Modes	6341	4620	29266	27059	23403	23370	6376	6378	18451	17722

\* Includes HB Work and HB Employers Business

\*\* Includes HB Holiday, HB Recreation and HB Visiting friends / relatives

4.2.6 TEMPRO provides information for a 3-hour peak period in the AM (0700-1000) and PM (1600-1900) time periods respectively. Appropriate factors were therefore applied to this data in order to convert this information to a single peak hour in the AM (0800-0900) and PM (1700-1800) time periods.

4.2.7 These factors were calculated using traffic data extracted from the TRADS database for a site on the A20, to the immediate east of Junction 13 of the M20. The data was extracted for May 2009, as this represents a recent neutral month. As presented in **TABLE 4.4**, approximately 39% of traffic travelling between 0700 and 1000 occurred in the AM peak hour, and 38% of traffic travelling between 1600 and 1900 occurred in the PM peak hour.

**TABLE 4.4 Peak Period to Peak Hour factors**

	Time Period – AM			Time Period – PM		
	0700-0800	0800-0900	0900-1000	1600-1700	1700-1800	1800-1900
Average Weekday Traffic Flow	1159	1498	1138	1732	1954	1402
Proportion of Period Flow	31%	<b>39%</b>	30%	34%	<b>38%</b>	28%

4.2.8 The factors presented above were applied to the AM and PM Origin and Destination data presented in **TABLES 4.2** and **4.3** above, to establish the Peak Hour level of trips. The results of these calculations are presented in **TABLES 4.5** and **4.6** below. Please note that small discrepancies in the calculations are due to rounding of the results.

**TABLE 4.5 - 2026 Origin and Destination Trips by Mode and Journey Purpose (AM Peak Hour)**

2026 AM	HB Education		HB Work*		HB Social**		HB Personal Business (PB)		HB Shopping	
	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination
<b>Walk</b>	2838	4201	999	1421	1227	1405	370	505	1123	1414
<b>Cycle</b>	138	123	343	272	74	79	19	25	55	66
<b>Car Driver</b>	1189	1421	7975	8602	1424	1316	381	288	999	849
<b>Car Passenger</b>	2253	3278	1513	1959	969	1137	235	358	685	881
<b>Bus / Coach</b>	975	660	618	362	152	159	50	54	157	178
<b>Rail / underground</b>	64	21	359	72	14	22	3	3	10	11
<b>Combined Modes</b>	7457	9704	11807	12688	3860	4118	1059	1233	3030	3399

\* Includes HB Work and HB Employers Business

\*\* Includes HB Holiday, HB Recreation and HB Visiting friends / relatives



**TABLE 4.6 - 2026 Origin and Destination Trips by Mode and Journey Purpose (PM Peak Hour)**

2026 PM	HB Education		HB Work*		HB Social**		HB Personal Business (PB)		HB Shopping	
	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination
Walk	986	572	1406	1022	2502	2436	822	781	2378	2151
Cycle	27	31	262	316	208	198	49	48	136	133
Car Driver	531	467	7447	6911	3132	3254	704	756	2150	2253
Car Passenger	765	485	1761	1394	2711	2704	777	774	2108	1976
Bus / Coach	122	203	314	496	361	321	88	81	283	255
Rail / underground	5	17	49	253	74	63	8	9	31	39
Combined Modes	2436	1774	11240	10392	8988	8975	2449	2449	7087	6806

\* Includes HB Work and HB Employers Business

\*\* Includes HB Holiday, HB Recreation and HB Visiting friends / relatives

- 4.2.9 As TEMPRO contains planning data, the anticipated number of households within the Shepway (Authority) area can also be extracted, for the year 2026, as presented in **TABLE 4.7**.

**TABLE 4.7 Planning Data for Shepway (Authority) – 2026**

Planning data	Population Data by Age (<16)	Population Data by Age (16-64)	Population Data by Age (65+)	Workers	Households	Jobs	Total Population
Shepway (Authority)	19116	64199	29996	48842	<b>51789</b>	54905	113311

- 4.2.10 As presented above, it is anticipated that there will be a total of 51789 households within Shepway, in the year 2026. Using this information, the average number of trips per household can be calculated by dividing the number of origin and destination trips by the number of households within the Shepway area. This is illustrated in **TABLES 4.8** and **4.9** below.

**TABLE 4.8 - 2026 AM Peak Trip Rates (per household)**

2026 AM	HB Education		HB Work*		HB Social**		HB Personal Business (PB)		HB Shopping	
	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination
Walk	0.05	0.08	0.02	0.03	0.02	0.03	0.01	0.01	0.02	0.03
Cycle	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Car Driver	0.02	0.03	0.15	0.17	0.03	0.03	0.01	0.01	0.02	0.02
Car Passenger	0.04	0.06	0.03	0.04	0.02	0.02	0.00	0.01	0.01	0.02
Bus / Coach	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Rail / underground	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Combined Modes	0.14	0.19	0.23	0.24	0.07	0.08	0.02	0.02	0.06	0.07

\* Includes HB Work and HB Employers Business

\*\* Includes HB Holiday, HB Recreation and HB Visiting friends / relatives

**TABLE 4.9 - 2026 PM Peak Trip Rates (per household)**

2026 PM	HB Education		HB Work*		HB Social**		HB Personal Business (PB)		HB Shopping	
	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination
Walk	0.02	0.01	0.03	0.02	0.05	0.05	0.02	0.02	0.05	0.04
Cycle	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Car Driver	0.01	0.01	0.14	0.13	0.06	0.06	0.01	0.01	0.04	0.04
Car Passenger	0.01	0.01	0.03	0.03	0.05	0.05	0.02	0.01	0.04	0.04
Bus / Coach	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.00
Rail / underground	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Combined Modes	0.05	0.03	0.22	0.20	0.17	0.17	0.05	0.05	0.14	0.13

\* Includes HB Work and HB Employers Business

\*\* Includes HB Holiday, HB Recreation and HB Visiting friends / relatives

- 4.2.11 The information presented above provides per household trip rates, by mode and journey purpose, for the Shepway area. In this instance, as the spreadsheet model is based on the potential level of traffic being generated by the Strategic Sites, the sum of the car driver trip rates have been extracted, so that the final trip rate (for the purpose of the highway assessment) represents all journey purposes.
- 4.2.12 Trip generation rates are traditionally provided in terms of 'arrivals', 'departures' and 'combined' rates. As presented in the tables above, the trip rates have been calculated based on origin and destination trips, and an initial analysis would suggest that 'origin' trips would be similar to departures (as they originate within a development), and 'destination' trips would be similar to arrivals (as they are destined to the site). However; the TEMPRO Guidance Note (April 2006) indicates that the home based element of origin and destination trips can occur in either

category, meaning that it is not possible to differentiate between 'arrivals' and 'departures'. The overall (combined) trip rate remains the same however.

- 4.2.13 TRICS was therefore used to establish an appropriate proportional split of arrivals and departures, based on the combined trip rate for each peak hour, respectively. In this instance, the mixed private / non-private category was used, and sites outside of England and central London were disregarded. **APPENDIX B** presents the TRICS output files.
- 4.2.14 **TABLE 4.10** presents the results of the analysis, whilst **TABLE 4.11** applies this split to the AM and PM TEMPRO combined trip rates (i.e. the sum of all car driver trip rates presented in **TABLES 4.8** and **4.9** above), to present the final car driver trip generation rates that have been applied to the residential element of the Strategic Sites development proposals. It should be noted that the trip rates presented are per household, thus the overall residential trip generation of a site is calculated by multiplying the number of dwellings by the appropriate trip rate.

**TABLE 4.10 TRICS proportional split**

	Arrivals	Departures	Combined
AM Peak (0800-0900)	31%	69%	100%
PM Peak (1700-1800)	64%	36%	100%

**TABLE 4.11 Car Driver Strategic Site Trip Generation Rate (per household)**

	Arrivals	Departures	Combined
AM Peak (0800-0900)	0.15	0.32	0.47
PM Peak (1700-1800)	0.34	0.19	0.53

### Non-Residential Trip Rates

- 4.2.15 As discussed above, the proposals for the Strategic Sites range from residential led developments, to mixed use developments containing a number of community and leisure facilities.
- 4.2.16 Whilst it is recognised that the mixed use developments will aim to reduce the level of traffic on the highway network through the provision of appropriate community facilities (e.g. local shops, employment, leisure facilities) and Travel Plans, it is anticipated that an element of non-residential traffic will still be generated on the highway network external to the Strategic Sites.
- 4.2.17 The TRICS database was therefore interrogated to calculate trip generation rates for a number of non-residential land uses, as agreed with SDC, KCC and the HA. The results of the interrogation are presented in **TABLE 4.11** below; with full TRICS outputs contained at **APPENDIX C** of this report.

**TABLE 4.11 Non-Residential Trip Rates (per 100sqm)**

Land Use	AM Peak			PM Peak		
	Arr	Dep	Total	Arr	Dep	Total
B1 (Office)	1.56	0.18	<b>1.74</b>	0.15	1.28	<b>1.43</b>
B2 (Industrial)	0.52	0.21	<b>0.73</b>	0.13	0.45	<b>0.58</b>
B8 (Warehouses)	0.10	0.07	<b>0.17</b>	0.08	0.11	<b>0.19</b>
Primary School	4.92	3.49	<b>8.41</b>	0.28	0.55	<b>0.83</b>
Secondary School	1.86	1.26	<b>3.12</b>	0.22	0.37	<b>0.59</b>
Doctors	4.83	2.12	<b>6.95</b>	2.48	3.67	<b>6.15</b>
Dentists	5.92	1.03	<b>6.95</b>	0.80	5.58	<b>6.38</b>
Local Shops	5.14	4.83	<b>9.97</b>	6.11	6.40	<b>12.51</b>
Leisure <sup>1</sup>	14.36	11.55	<b>25.91</b>	36.52	26.42	<b>62.94</b>
Restaurant	0.00	0.00	<b>0.00</b>	2.49	1.51	<b>4.00</b>
Café	0.00	0.00	<b>0.00</b>	17.00	17.33	<b>34.33</b>
Hotel	0.33	0.46	<b>0.79</b>	0.39	0.28	<b>0.67</b>

<sup>1</sup> Trip Rate by Hectare (rather than 100 sqm)

- 4.2.18 In each of the cases above, it is anticipated that the developers of the respective sites will seek to refine the residential and non-residential trip rates, according to the characteristics of the site, and potential level of internalisation of trips which they anticipate can be achieved and therefore promote and monitor through their site specific Travel Plans. These trip rates are therefore to serve as a robust estimation of the likely level of trips generated by each site, for inclusion within the spreadsheet model.

### Internalisation of Trips

- 4.2.19 As discussed, it is likely that some trips being generated by the residential and non-residential elements of the development will be made internally, thereby reducing the impact of the site on the highway network. For example, it may be possible for some residents to live and work at the same site, thus increasing the opportunity to use sustainable modes of transport within the site, and reducing the number of car trips on the external highway network.
- 4.2.20 The spreadsheet model therefore includes an option to allow for an element of internalisation of traffic, whereby the level of vehicular trips is adjusted by an internalisation factor, on a site by site basis. As a worst case scenario, it can be assumed that no internalisation will take place (i.e. maximum impact on the external highway network); however, if appropriate, 'low', 'medium' and 'high' internalisation factors can be applied, in accordance with **TABLE 4.12** below.

**TABLE 4.12 Optional Internalisation Factors**

Level of Internalisation	Internalisation Factor
None	0%
Low	5%
Medium	10%
High	15%

- 4.2.21 To this extent, liaison with SDC has indicated that internalisation factors may be applied to several of the Strategic Sites, to account for the proximity of non-residential and community facilities to the proposed development. In this instance, the internalisation factor should be applied to the predicted overall trip generation of the site only.
- 4.2.22 **TABLE 4.13** presents the factors that have been applied to each of the Strategic Sites. It should be noted that these are primarily based on walking distances to 'town centres' and / or 'district centres, with the associated range of facilities at these types of locations. Additionally, consideration has been taken of proposed 'on-site' facilities and identification within SHLAA as a suitable site for development, in terms of access to existing facilities and appropriate public transport services.

**TABLE 4.13 Strategic Site Internalisation Factors**

Internalisation Factor	Site	Rationale
High (15%)	Folkestone Seafront	A very short walk from the well served Town Centre which has also been recognised as a Secondary Regional Centre
Medium (10%)	New Romney	A short walk from the Town Centre
	Risborough and Napier Barracks	Potentially walkable from the large Cheriton Centre, and with some significant on-site provision possible
Low (5%)	Hawkinge	Potentially walkable from local facilities
	Sellindge	
None	Lympne Airfield	Only potentially walkable from limited facilities and little prospect at present of significant on-site provision
	Folkestone Racecourse	
N/A	Nickolls Quarry	Committed development

## 4.3 Trip Distribution

- 4.3.1 As appropriate, detailed trip distributions accompanying applications or prepared for specific sites have been applied in the spreadsheet model. Where this has not been possible however, trip distributions have been calculated and applied to sites where a distribution is not yet available, as well as those where the extent of the respective study areas does not encompass the full highway network used in the spreadsheet model.
- 4.3.2 Through liaison with SDC, KCC and the HA, it was agreed that Census 2001 Journey to Work information would be used to establish the distribution of trips within the spreadsheet model. At the request of the HA, LATS data (based on road side interviews) was also considered, with an initial analysis suggesting that the results would be similar to the Census 2001 data. In this instance therefore; the Census data was deemed to be more robust due to the greater sample size, and ability to differentiate between modes and home-based trips that depart or arrive from the Shepway area.
- 4.3.3 As such, an analysis was undertaken of the wards within Shepway, to establish the overall distribution of trips originating from, and arriving to, areas across the District. The results of this analysis are presented in **TABLES 4.14** and **4.15**, and also in **FIGURES 4.2** and **4.3**.

**TABLE 4.14 Car Driver Residential Distribution (trips originating from Shepway)**

Area	Car Driver Journey-to-Work Distribution Proportions (%)
Ashford	12
Canterbury and East Kent	6
Central Kent	1
Dover	8
Greater London	3
Hastings	0
Maidstone	2
North Kent	1
Shepway (internal to district)	65
South Kent	1
Other	1
<b>Total</b>	100

**TABLE 4.15 Car Driver Employment Distribution (trips arriving into Shepway)**

Area	Car Driver Journey-to-Work Distribution Proportions (%)
Ashford	5
Canterbury and East Kent	10
Central Kent	1
Dover	7
Greater London	1
Hastings	0
Maidstone	1
North Kent	1
Shepway (internal to district)	72
South Kent	1
Other	1
<b>Total</b>	100

- 4.3.4 Analysis of the information above indicates that approximately 65% of residential trips (i.e. trips originating in Shepway) and 72% of employment trips (i.e. trips arriving in Shepway) occur between the wards that are contained within the District (i.e. both the start and end point of these journeys are within Shepway).
- 4.3.5 Further analysis was therefore undertaken to calculate a more detailed distribution of trips within the District, so that the traffic associated with the identified committed developments and Strategic Sites could be routed within the spreadsheet model, thereby accounting for these localised trips. The results of this detailed analysis are presented in **TABLES 4.16** and **4.17** below.

**TABLE 4.16 Detailed Car Driver Residential Distribution**

Area	Car Driver Journey-to-Work Distribution Proportions (%)
Ashford	12
Canterbury and East Kent	6
Central Folkestone	24
Central Kent	1
Cheriton	8
Dover	8
Dymchurch	1
East Folkestone	2
Greater London	3
Hastings	0
Hythe	7
Lydd	7
Lympne	2
Maidstone	2
New Romney	5
North Downs	4
North Kent	1
Other	1
Romney Marsh	1
South Kent	1
West Folkestone	4
<b>TOTAL</b>	<b>100</b>

**TABLE 4.17 Detailed Car Driver Employment Distribution**

Area	Car Driver Journey-to-Work Distribution Proportions (%)
Ashford	5
Canterbury and East Kent	10
Central Folkestone	19
Central Kent	1
Cheriton	10
Dover	7
Dymchurch	4
East Folkestone	5
Greater London	1
Hastings	0
Hythe	9
Lydd	5
Lympne	1
Maidstone	1
New Romney	6
North Downs	8
North Kent	1
Other	1
Romney Marsh	1
South Kent	1
West Folkestone	4
<b>TOTAL</b>	<b>100</b>

- 4.3.6 The information presented above was used to inform the distribution of vehicular trips across the highway network within the spreadsheet model. Where appropriate, this information was combined with local knowledge and an internet based route finder to allocate vehicles onto specific links and junctions within the highway network. In addition, it was assumed that vehicles would follow a similar route when arriving or departing a specific location, with the exception of one-way systems, where vehicles were routed appropriately.
- 4.3.7 Where development traffic includes non work related traffic, appropriate distributions were applied based on the type of development and information contained within transport related investigations concerning each specific site. As an example, it was noted that the traffic associated with the Committed Development of Sainsbury's at Hythe was unlikely to travel from New Romney, as there is already a Sainsbury's at this location.



## 4.4 Background Traffic Growth

4.4.1 All of the Strategic Sites previously presented in **TABLE 4.1** are anticipated to be delivered in the period 2010 to 2026. During this time, it is recognised that the level of background traffic (i.e. traffic already on the highway network) is likely to increase.

4.4.2 Traffic growth factors were calculated from the year 2010 up until 2026 (as the final year of the Core Strategy); such that the predicted changes in background traffic volumes could be included within the model assessment. These calculations were undertaken using the same methodology presented in **SECTION 2** of this document, with the results presented in **TABLE 4.18** below.

**TABLE 4.18 Traffic Growth Factors, from 2010**

Future Year	AM Growth Factor	PM Growth Factor	Average Weekday Growth Factor
2011	1.006	1.006	1.007
2012	1.012	1.012	1.013
2013	1.017	1.017	1.018
2014	1.023	1.022	1.024
2015	1.028	1.027	1.030
2016	1.046	1.045	1.048
2017	1.063	1.062	1.066
2018	1.080	1.079	1.084
2019	1.098	1.097	1.102
2020	1.115	1.114	1.120
2021	1.132	1.131	1.138
2022	1.151	1.150	1.158
2023	1.171	1.170	1.177
2024	1.190	1.189	1.197
2025	1.210	1.208	1.217
2026	1.228	1.227	1.236

4.4.3 It is recognised however, that the TEMPRO database is based on planning data concerning, amongst a number of factors, the number of households and jobs which are available or predicted to be available within a selected area. It is likely therefore, that the predicted growth in households and jobs within the TEMPRO database will be attributable, in part, to the development of the Strategic Sites being promoted through the Core Strategy, across the District.

4.4.4 The growth factors presented in **TABLE 4.18** have therefore been adjusted to account for this, and to avoid the 'double counting' of Strategic Site development trips, when these are applied to the highway network. It should be noted that the adjustment has only been applied for the trips associated with the Strategic Sites and not for other developments (i.e. non-strategic sites) which may come forward within the Core Strategy period.

- 4.4.5 Using the information discussed above, the total quantum of development (households and jobs) was calculated for each year of the Transport Strategy on a pro rata basis, according to the anticipated development schedule of the Strategic Sites, as discussed in advance with SDC. It should be noted that the number of jobs associated with each development (where applicable), was calculated using information provided in the document entitled “Employment densities: a simple guide”, published by English Partnerships (September 2001). This information was then used to adjust the local TEMPRO growth factor, to remove the element of ‘double counting’. A worked example is provided below.

#### **Adjustment of Growth Factors – A worked example**

- 4.4.6 Taking the year 2019 as an example, information contained within the TEMPRO database suggests that between 2010 and 2019, a total of 3713 houses will be built and 2996 jobs will be created within the Shepway (Authority) area. Assuming all Strategic Site allocations are developed, these could result in 3597 houses and 596 new jobs within the same time period.
- 4.4.7 The strategic site allocations therefore represent approximately 97% of the total increase in housing, and 20% of the total increase in jobs predicted by 2019. On average, the Strategic Site allocations have been calculated to account for approximately 58% of growth within the Shepway (Authority) area, as it is not possible to disaggregate between housing and employment based growth in TEMPRO.
- 4.4.8 The local TEMPRO growth factor for the Shepway (Authority) area for the period 2010 to 2019 in the AM Peak is 1.084. Therefore, in order to avoid the double counting of trips associated with the Strategic Site allocations, this has been reduced by 58%, and adjusted to 1.035. (i.e. 58% of an 8.4% growth is approximately 4.9%.  $8.4\% - 4.9\% = 3.5\%$ ).
- 4.4.9 The adjusted local TEMPRO growth factors are then used to calculate the revised traffic growth factors for use in the spreadsheet model, in accordance with the methodology discussed in **SECTION 2** of this document, and following the formula below:

$$\text{Adjusted Local Peak Hour TEMPRO} / \text{National Average Weekday TEMPRO} \times \text{NTM}$$

- 4.4.10 **TABLE 4.19** summarises the adjusted growth factors that have been used within the spreadsheet model. It should be noted that this assumes that all of the Strategic Site allocations are developed in accordance with a phased delivery schedule, following discussions with SDC. However; the spreadsheet has been built to allow for various development scenarios to be considered, including the non-delivery of all of, or a selection of the Strategic Sites. This information is then automatically fed through the growth calculations.

**TABLE 4.19 Adjusted Growth Factors from 2010**  
(assuming all Strategic Site allocations are developed)

Future Year	AM Growth Factor	PM Growth Factor	Average Weekday Growth Factor
2011	1.002	1.002	1.002
2012	1.002	1.002	1.002
2013	1.002	1.002	1.002
2014	1.005	1.005	1.006
2015	1.009	1.009	1.009
2016	1.015	1.015	1.016
2017	1.023	1.023	1.024
2018	1.032	1.031	1.033
2019	1.040	1.040	1.043
2020	1.049	1.049	1.052
2021	1.057	1.057	1.061
2022	1.071	1.071	1.075
2023	1.087	1.086	1.092
2024	1.103	1.102	1.108
2025	1.120	1.119	1.126
2026	1.136	1.135	1.142

- 4.4.11 The growth factor methodology presented above has been used to calculate appropriate growth factors to apply to the 2010 Baseline traffic, to account for the anticipated change in traffic on the highway network. **TABLE 4.19** represents the growth factors that would be used, assuming all the Strategic Site allocations are developed. Should only a selection of Strategic Site allocations be selected within the spreadsheet model as being developed, the growth factors will be re-calculated and applied automatically, as would be the case if the schedule of accommodation was altered for any of the Strategic Sites.

## 4.5 Strategic Sites within the Spreadsheet Model

- 4.5.1 Using the information presented above, each of the identified Strategic Sites was incorporated into the spreadsheet. During this process, it was recognised that each of the sites will have their own development programme, spanning a number of years. The level of traffic associated with the developments was therefore adjusted according to the development schedule, assuming an even build out process.
- 4.5.2 As different years are selected within the model, the level of development of each of the Strategic Sites is taken into consideration, and traffic is added to the network, as appropriate. Furthermore, each of the Strategic Sites can be individually controlled, to allow for a multitude of development scenarios to be investigated.

## 4.6 Spreadsheet Model Review

- 4.6.1 Once the committed development and Strategic Site information had been incorporated into the spreadsheet, the model was then sent to the stakeholder group for review. As presented in **APPENDIX D**, the comments received indicated that there were no identified issues with the operation or functionality of the model. The HA indicated that they were aware of a recent planning application being submitted for land at Hawkinge (identified as part of the Strategic Site allocations, but subsequent investigations concluded that the Strategic Site allocations are located to the west), for a mixed use development.
- 4.6.2 Liaison with SDC indicated that this potential development should be considered within the spreadsheet model (in line with those discussed and presented in **TABLE 3.2** of this report). The Transport Assessment associated with the site was therefore used to establish the likely level of vehicular trip generation and distribution of the development proposals, for incorporation into the spreadsheet, as a worst case scenario.

## 5 Summary

- 5.1.1 URS / Scott Wilson has been commissioned by Shepway District Council to prepare a Transport Strategy for the District. The remit of the Transport Strategy is to include and consider both transport matters which relate to the existing District area, as well as those relating to the Strategic Site allocations.
- 5.1.2 As part of the Strategy, a spreadsheet model has been built to provide an evidence base concerning the level of vehicular trips within the district, and to inform the assessment of the potential implications of taking forward the Strategic Site Allocations within the Core Strategy and Local Development Framework, to the year 2026. The model is based on an agreed highway network, incorporating specific links and junctions that have been identified through liaison with SDC, KCC and the HA.
- 5.1.3 Discussions with Shepway District Council have identified a number of committed developments within the District, which have been considered within the spreadsheet model. Additionally, several other developments have been identified as being likely to be delivered within the study period (2010 to 2026), and these have been included, as a worst case scenario.
- 5.1.4 Furthermore, eight Strategic Sites have been identified and incorporated within the spreadsheet model, representing the potential allocation of residential and mixed use developments within the District (one of these has been granted planning permission). As each of these Strategic Sites are at different stages of the masterplanning and planning application process, trip generation and vehicular distribution calculations have been undertaken to establish a robust estimation of the level and allocation of trips onto the highway network. These calculations have been undertaken using industry standard computer programmes and data sources.
- 5.1.5 The spreadsheet model has undergone a review process with the stakeholder group (SDC, KCC and the HA), with comments being incorporated into the final version. As such, the model offers an integrated and flexible means to aid both the assessment of the operation of the existing highway network within Shepway, and the potential impact of the development of the Strategic Sites identified within the Local Development Framework.
- 5.1.6 Further analysis has been undertaken, based on the spreadsheet model, relating to both the Baseline and Future Year scenarios. This is reported as part of the Transport Strategy itself, as well as in a Technical Note entitled '**Highway Assessment**'.





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Key

Base Highway Network

Base Highway Network



Figure 2.1













**Cheriton Parc** ★

**Shearway** ★  
**(Glenmore & Home Office Sites)**

**Link Park, Lymپne** ★

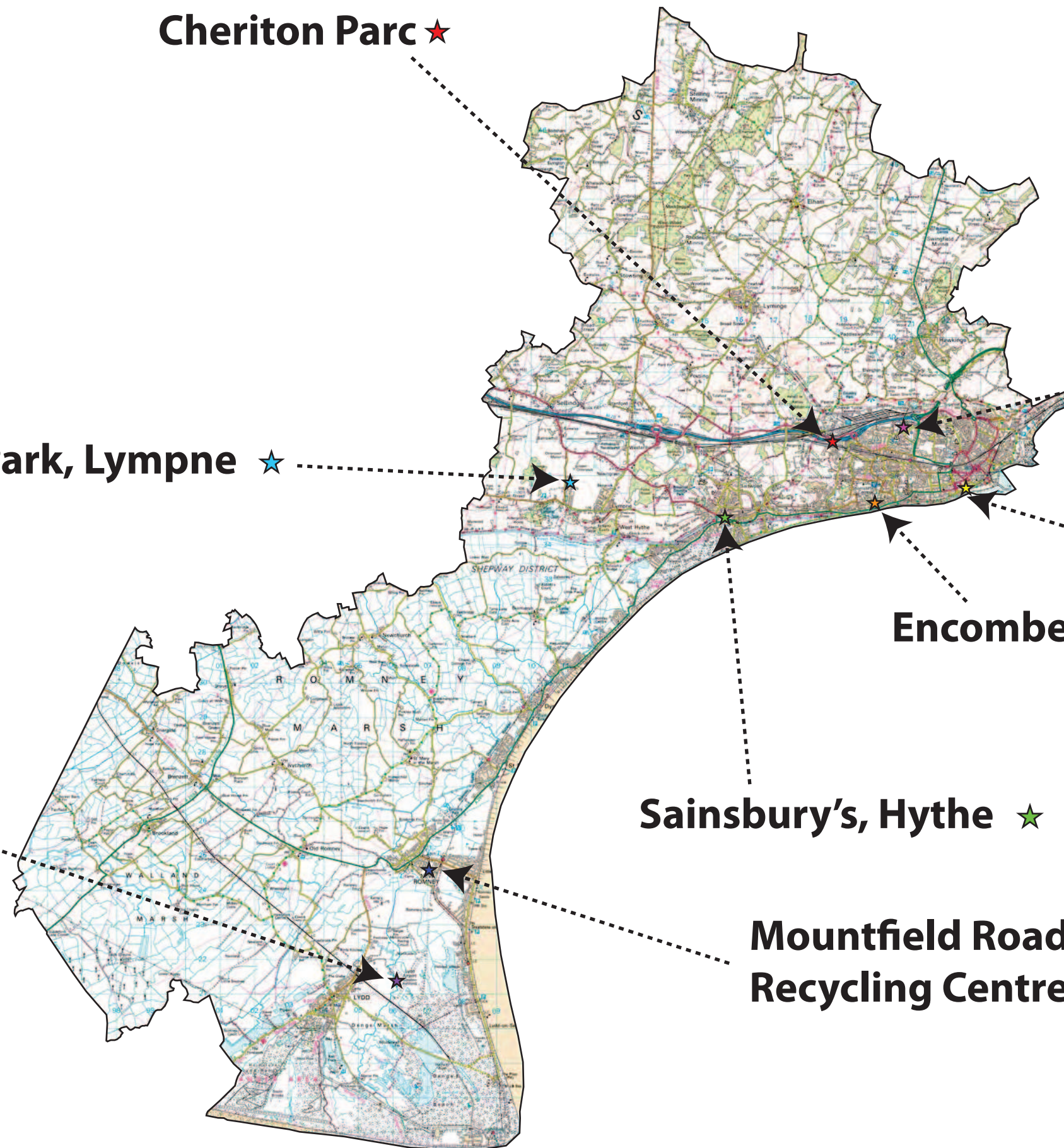
**Leas Club** ★

**Encombe** ★

**Lydd Airport** ★

**Sainsbury's, Hythe** ★

**Mountfield Road  
Recycling Centre** ★



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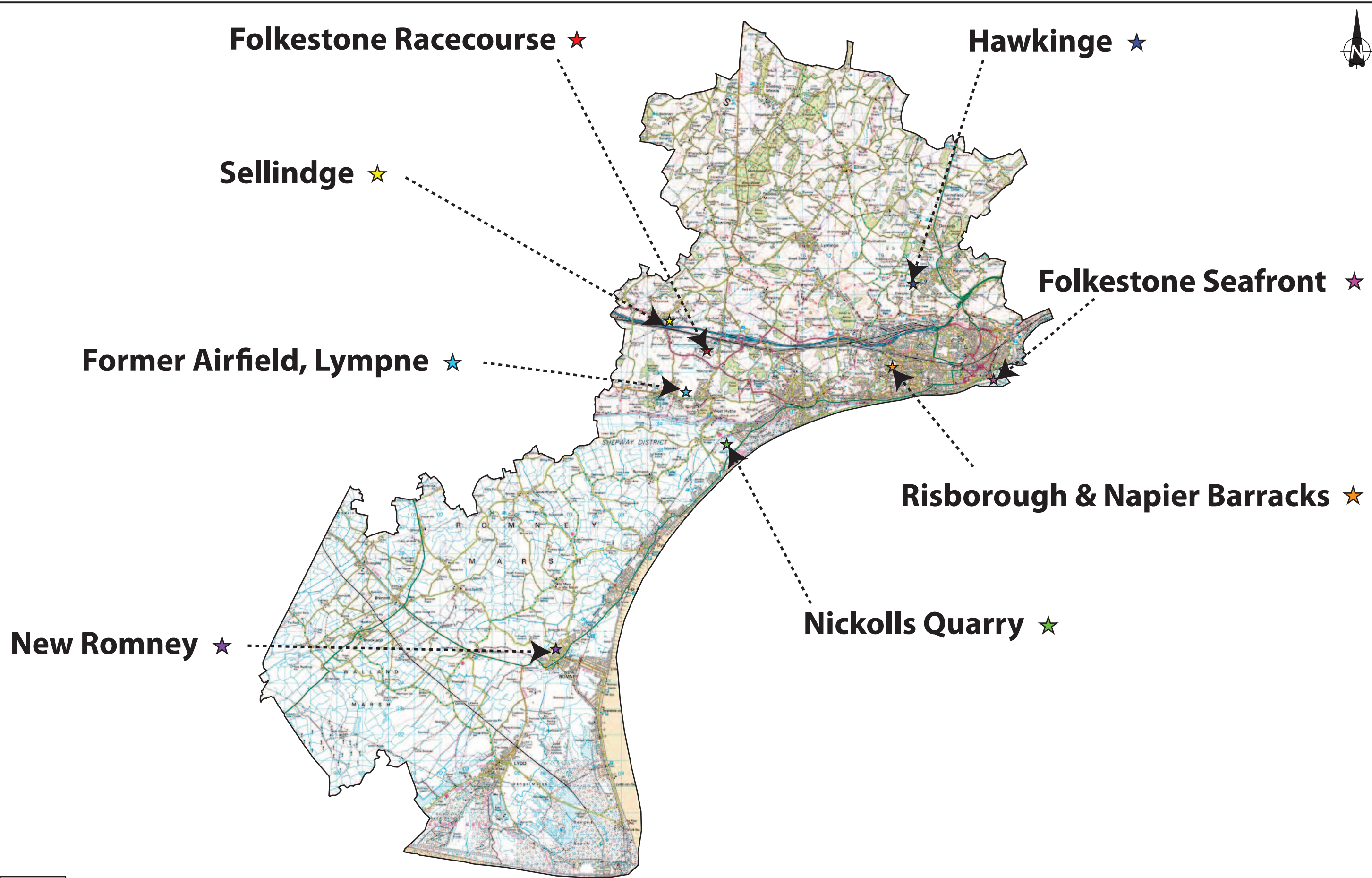
Committed Development Locations



Figure 3.1







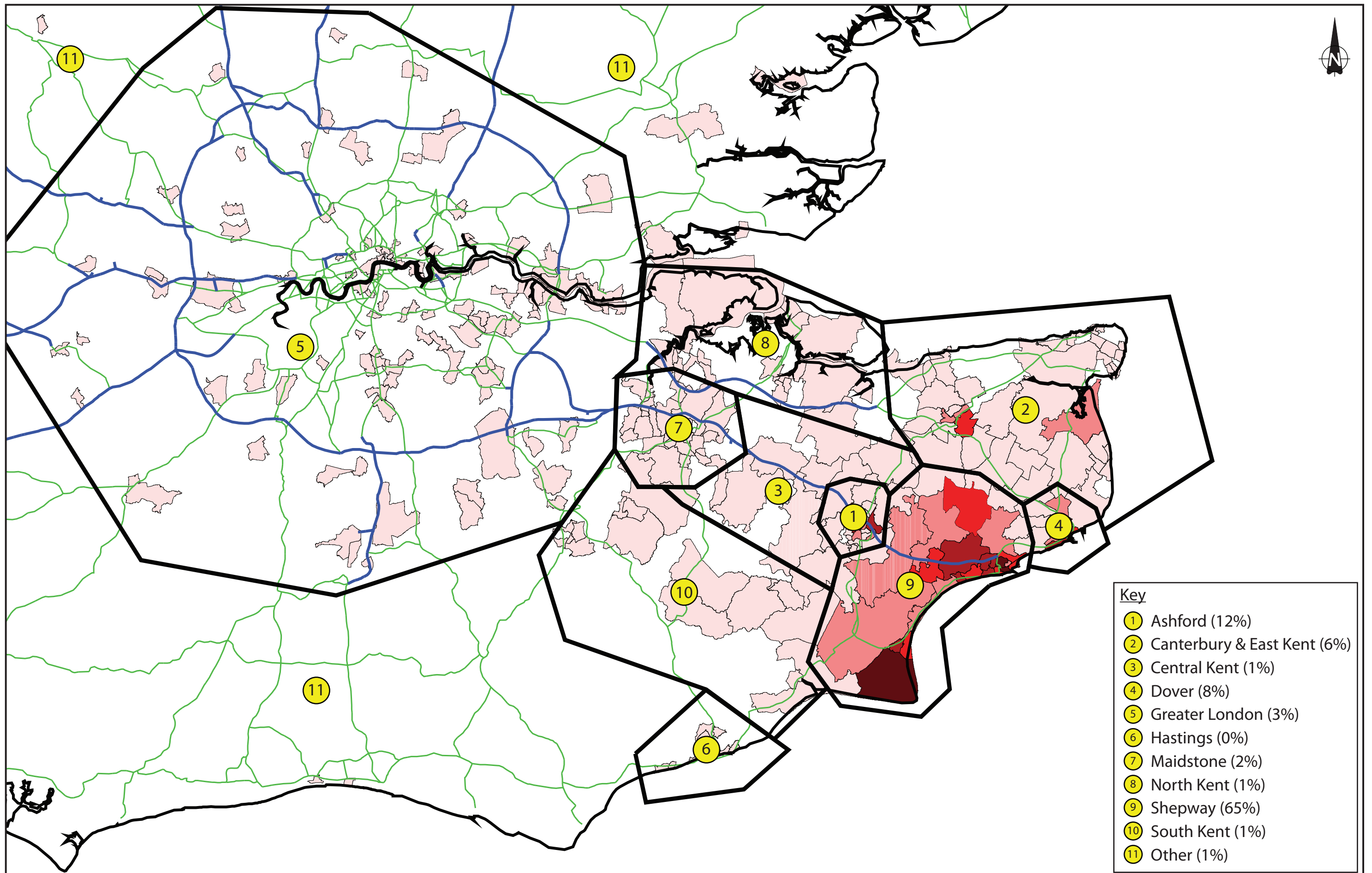
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Strategic Site Locations



Figure 4.1





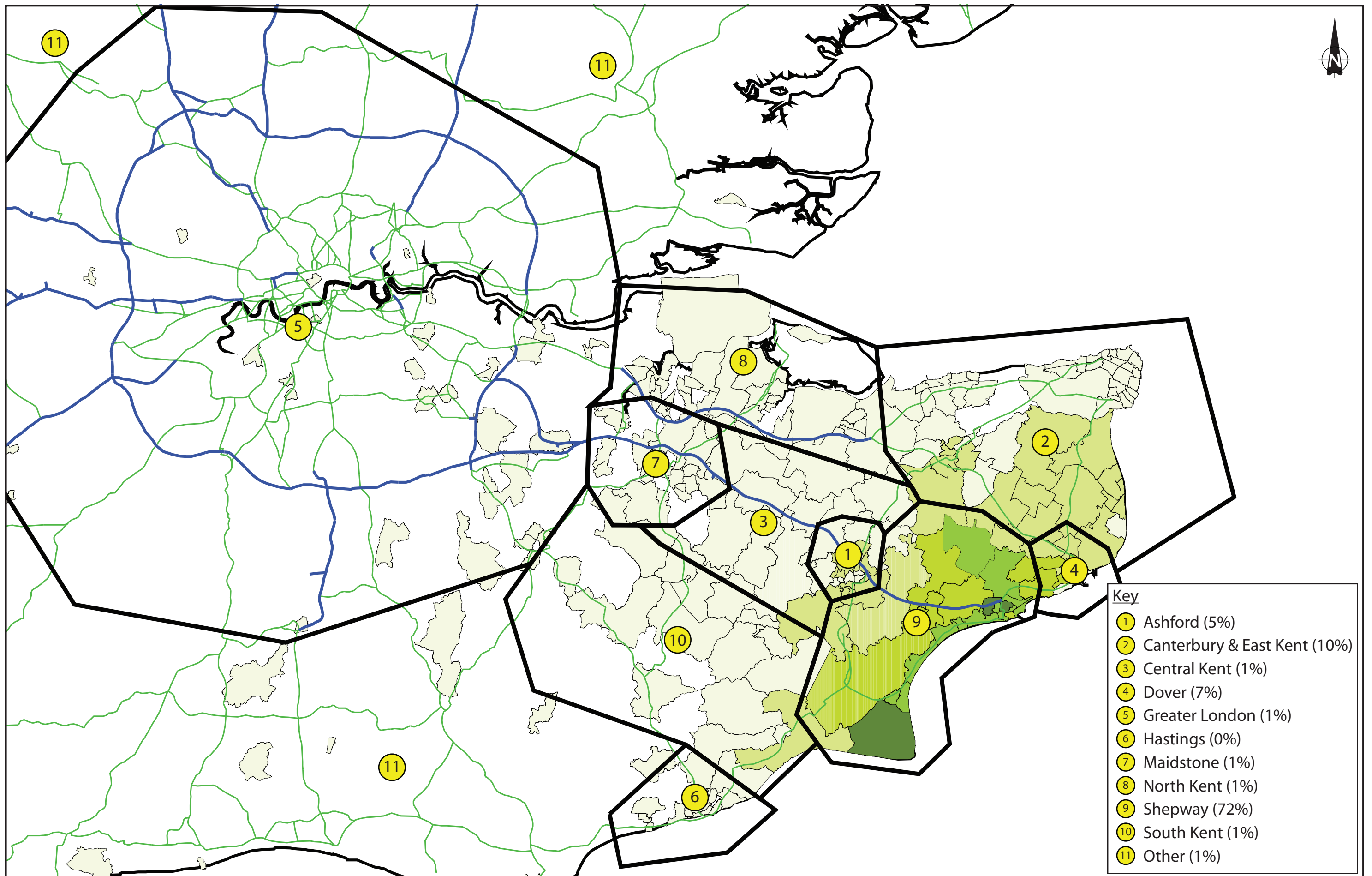
Residential Distribution (Car Driver)



Figure 4.2







Employment Distribution (Car Driver)



Figure 4.3



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**HIGHWAYS AGENCY**

**SHEPWAY LDF: REVIEW OF DRAFT TRANSPORT MODEL**

**TECHNICAL NOTE 2**

PROJECT: HTT91271A/1647.1

**18 AUGUST 2010**

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**1 INTRODUCTION**

- 1.1.1 We have been commissioned by the Highways Agency (HA) to undertake a thorough review of the draft Shepway Transport Model, which shall eventually be used to demonstrate the impact of the Local Development Framework (LDF) on the District's highway network. The model was received by PB on 26 July 2010.
- 1.1.2 This technical note follows on from the previous Technical Note 1 dated 7 June 2010, which was issued to Shepway District Council and Scott Wilson on the same date, following review of a model methodology scoping framework.
- 1.1.3 In undertaking our review of the spreadsheet model our primary focus has been the Strategic Road Network (SRN), which in the case of Shepway encompasses the M20 (Junctions 11 to 13) and the A259 trunk road.

**2 COMMENTS**

- 2.1.1 We appreciate that the model is currently 'work in progress' and that further traffic information still needs to be included. Irrespective of this, we wish to complement you on your efforts as we have failed to identify any major issues concerning the functionality of the model. Note that in reviewing the model we have taken the base traffic data at face value, assuming they have been correctly interpreted from their original sources.
- 2.1.2 The cover email accompanying the model has already highlighted some significant deficiencies which shall need to be addressed. These are set out below:
- Committed development traffic is currently missing and therefore needs to be included (for example the Nickolls Quarry site)
  - Full traffic flow information must be available for the peak hours for the entire SRN study area. For example, M20 Junction 13 morning peak hour traffic flows are currently absent
  - The Folkestone model area is obviously incomplete and therefore needs to be addressed. We are particularly keen for traffic flows at junctions located in close proximity to the SRN to be available, for example, the Linksway and Cherry Garden Lane junctions which are located to the south of M20 Junction 13

- 2.1.3 In addition to the above, we are currently unable to comment upon the appropriateness of the adopted traffic growth factors as we have been unable to replicate them using Temprow. It is therefore assumed that the standard Temprow factors have been manually adjusted, but details of this process have not been provided.
- 2.1.4 We therefore recommend that an additional tab is created in the spreadsheet clearly setting out the methodology/various stages used to calculate the factors, which then can link directly to the factors shown on the 'toggle' tab.
- 2.1.5 Our final comments are less critical, but we consider that they could improve the overall clarity of the model if incorporated. These are as follows:
- Sites 111 and 112 have been based upon traffic data extracted from TRADS database. For completeness it would be useful if the data set out at the bottom of each tab can link to the raw data presented above (the values are currently typed in)
  - It would be helpful if a labelled diagram of each junction could be included alongside the MCC data, so that we can easily associate the survey data with the junction layouts

**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 03 - RESIDENTIAL  
 Category : M - MIXED PRIVATE/NON-PRIVATE HOUSING

**VEHICLES**Selected regions and areas:

<b>01 GREATER LONDON</b>	
NH NEWHAM	1 days
WF WALTHAM FOREST	1 days
<b>02 SOUTH EAST</b>	
ES EAST SUSSEX	1 days
HF HERTFORDSHIRE	1 days
KC KENT	1 days
RE READING	1 days
SC SURREY	1 days
<b>03 SOUTH WEST</b>	
BR BRISTOL CITY	1 days
<b>06 WEST MIDLANDS</b>	
HE HEREFORDSHIRE	1 days
WO WORCESTERSHIRE	1 days
<b>08 NORTH WEST</b>	
LC LANCASHIRE	2 days
MS MERSEYSIDE	1 days
<b>09 NORTH</b>	
CB CUMBRIA	2 days
DH DURHAM	1 days
<b>10 WALES</b>	
CM CARMARTHENSHIRE	1 days

**Filtering Stage 2 selection:**

Parameter: Number of dwellings  
 Range: 40 to 454 (units: )

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/02 to 08/12/09

Selected survey days:

Monday	6 days
Tuesday	1 days
Wednesday	4 days
Thursday	4 days
Friday	2 days

Selected survey types:

Manual count	17 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	9
Edge of Town	6
Neighbourhood Centre (PPS6 Local Centre)	1

Selected Location Sub Categories:

Industrial Zone	1
Residential Zone	9
Built-Up Zone	3
Village	1
No Sub Category	3

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>BR-03-M-02</b>	<b>BLOCKS OF FLATS, BRISTOL</b>	<b>BRISTOL CITY</b>
	CLARENCE ROAD		
	BRISTOL		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	42	
<b>2</b>	<b>CB-03-M-02</b>	<b>BLOCKS OF FLATS, CARLISLE</b>	<b>CUMBRIA</b>
	PORT ROAD		
	WILLOW HOLME		
	CARLISLE		
	Suburban Area (PPS6 Out of Centre)		
	Built-Up Zone		
	Total Number of dwellings:	44	
<b>3</b>	<b>CB-03-M-03</b>	<b>SEMI-DETACHED, WORKINGTON</b>	<b>CUMBRIA</b>
	MOORCLOSE ROAD		
	SALTERBECK		
	WORKINGTON		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	82	
<b>4</b>	<b>CM-03-M-01</b>	<b>HOUSES &amp; FLATS, CARMARTHEN</b>	<b>CARMARTHENSHIRE</b>
	COLLEGE ROAD		
	CARMARTHEN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	48	
<b>5</b>	<b>DH-03-M-01</b>	<b>SEMI DETACHED/FLATS, DURHAM</b>	<b>DURHAM</b>
	CHURCH STREET		
	DURHAM		
	Edge of Town Centre		
	Built-Up Zone		
	Total Number of dwellings:	49	
<b>6</b>	<b>ES-03-M-01</b>	<b>MIXED HOU./FLATS EASTBOURNE</b>	<b>EAST SUSSEX</b>
	A259 PEVENSEY BAY ROAD		
	ST ANTHONYS HILL		
	EASTBOURNE		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	270	
<b>7</b>	<b>HE-03-M-01</b>	<b>SEMI D./TERRACED, HEREFORD</b>	<b>HEREFORDSHIRE</b>
	WHITECROSS ROAD		
	WIDEMARSH		
	HEREFORD		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Number of dwellings:	57	
<b>8</b>	<b>HF-03-M-02</b>	<b>TERRACED/FLATS, WELWYN G.C.</b>	<b>HERTFORDSHIRE</b>
	SYLVAN WAY		
	PANSHANGER		
	WELWYN GARDEN CITY		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	158	
<b>9</b>	<b>KC-03-M-01</b>	<b>BLOCKS OF FLATS, RAMSGATE</b>	<b>KENT</b>
	HIGH STREET		
	RAMSGATE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	103	



LIST OF SITES relevant to selection parameters (Cont.)

<b>10</b>	<b>LC-03-M-02</b>	<b>DETACHED/FLATS, PRESTON</b>	<b>LANCASHIRE</b>
		SHAROE GREEN LANE FULWOOD PRESTON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 217	
<b>11</b>	<b>LC-03-M-03</b>	<b>MIXED HOUSES, NR LANCASTER</b>	<b>LANCASHIRE</b>
		HIGH ROAD HALTON NEAR LANCASTER Neighbourhood Centre (PPS6 Local Centre) Village Total Number of dwellings: 81	
<b>12</b>	<b>MS-03-M-01</b>	<b>HOUSING, LIVERPOOL</b>	<b>MERSEYSIDE</b>
		OFF KINGSWAY PRECOT LIVERPOOL Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 40	
<b>13</b>	<b>NH-03-M-01</b>	<b>TERRACED/FLATS, PLAISTOW</b>	<b>NEWHAM</b>
		MEMORIAL AVENUE  PLAISTOW Suburban Area (PPS6 Out of Centre) No Sub Category Total Number of dwellings: 45	
<b>14</b>	<b>RE-03-M-01</b>	<b>BLOCKS OF FLATS, READING</b>	<b>READING</b>
		OXFORD ROAD  READING Edge of Town Built-Up Zone Total Number of dwellings: 79	
<b>15</b>	<b>SC-03-M-01</b>	<b>HOUSES &amp; FLATS, REDHILL</b>	<b>SURREY</b>
		ST ANNES DRIVE  REDHILL Edge of Town Residential Zone Total Number of dwellings: 454	
<b>16</b>	<b>WF-03-M-01</b>	<b>TERRACED, CHINGFORD</b>	<b>WALTHAM FOREST</b>
		LARSHALL ROAD  CHINGFORD Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 40	
<b>17</b>	<b>WO-03-M-02</b>	<b>SEMI DETACHED, WORCESTER</b>	<b>WORCESTERSHIRE</b>
		PRESTWICH AVENUE PERRYWOOD WORCESTER Edge of Town Residential Zone Total Number of dwellings: 126	

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/NON-PRIVATE HOUSING

## 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	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	17	114	0.070	17	114	0.181	17	114	0.251
08:00 - 09:00	17	114	0.133	<b>17</b>	<b>114</b>	<b>0.294</b>	17	114	0.427
09:00 - 10:00	17	114	0.136	17	114	0.170	17	114	0.306
10:00 - 11:00	17	114	0.124	17	114	0.140	17	114	0.264
11:00 - 12:00	17	114	0.133	17	114	0.128	17	114	0.261
12:00 - 13:00	17	114	0.145	17	114	0.152	17	114	0.297
13:00 - 14:00	17	114	0.156	17	114	0.145	17	114	0.301
14:00 - 15:00	17	114	0.151	17	114	0.162	17	114	0.313
15:00 - 16:00	17	114	0.218	17	114	0.171	17	114	0.389
16:00 - 17:00	17	114	0.236	17	114	0.175	17	114	0.411
17:00 - 18:00	<b>17</b>	<b>114</b>	<b>0.310</b>	17	114	0.177	<b>17</b>	<b>114</b>	<b>0.487</b>
18:00 - 19:00	17	114	0.238	17	114	0.194	17	114	0.432
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			2.050			2.089			4.139

## Parameter summary

Trip rate parameter range selected:	40 - 454 (units: )
Survey date range:	01/01/02 - 08/12/09
Number of weekdays (Monday-Friday):	17
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	10

# TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT

Category : A - OFFICE

## VEHICLES

### Selected regions and areas:

<b>02 SOUTH EAST</b>	
ES EAST SUSSEX	1 days
EX ESSEX	1 days
HC HAMPSHIRE	3 days
HF HERTFORDSHIRE	1 days
KC KENT	4 days
<b>03 SOUTH WEST</b>	
CW CORNWALL	3 days
DC DORSET	1 days
<b>04 EAST ANGLIA</b>	
CA CAMBRIDGESHIRE	2 days
<b>05 EAST MIDLANDS</b>	
LE LEICESTERSHIRE	1 days
<b>06 WEST MIDLANDS</b>	
WM WEST MIDLANDS	2 days
<b>07 YORKSHIRE &amp; NORTH LINCOLNSHIRE</b>	
WY WEST YORKSHIRE	1 days
<b>08 NORTH WEST</b>	
LC LANCASHIRE	2 days
<b>09 NORTH</b>	
CB CUMBRIA	1 days
TV TEES VALLEY	2 days
TW TYNE & WEAR	2 days

### Filtering Stage 2 selection:

Parameter: Gross floor area  
 Range: 427 to 175000 (units: sqm)

### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 11/12/08

### Selected survey days:

Monday	6 days
Tuesday	2 days
Wednesday	3 days
Thursday	14 days
Friday	2 days

### Selected survey types:

Manual count	27 days
Directional ATC Count	0 days

### Selected Locations:

Edge of Town Centre	12
Suburban Area (PPS6 Out of Centre)	7
Edge of Town	8

### Selected Location Sub Categories:

Industrial Zone	1
Commercial Zone	6
Residential Zone	3
Retail Zone	1
Built-Up Zone	10
No Sub Category	6

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>CA-02-A-02</b>	<b>SUGAR HQ, PETERBOROUGH</b>	<b>CAMBRIDGESHIRE</b>
		OUNDLE ROAD	
		PETERBOROUGH	
		Total Gross floor area: 12500 sqm	
		Survey date: THURSDAY 13/05/04	Survey Type: MANUAL
<b>2</b>	<b>CA-02-A-03</b>	<b>OFFICE, PETERBOROUGH</b>	<b>CAMBRIDGESHIRE</b>
		NEW ROAD	
		PETERBOROUGH	
		Total Gross floor area: 5750 sqm	
		Survey date: THURSDAY 08/05/08	Survey Type: MANUAL
<b>3</b>	<b>CB-02-A-01</b>	<b>RADIO STATION, CARLISLE</b>	<b>CUMBRIA</b>
		ANNETWELL STREET	
		CARLISLE	
		Total Gross floor area: 999 sqm	
		Survey date: MONDAY 24/06/02	Survey Type: MANUAL
<b>4</b>	<b>CW-02-A-01</b>	<b>COUNCIL OFFICES, CAMBORNE</b>	<b>CORNWALL</b>
		DOLCOATH AVENUE	
		CAMBORNE	
		Total Gross floor area: 5400 sqm	
		Survey date: MONDAY 04/07/05	Survey Type: MANUAL
<b>5</b>	<b>CW-02-A-02</b>	<b>INLAND REVENUE, ST AUSTELL</b>	<b>CORNWALL</b>
		TRINITY STREET	
		ST AUSTELL	
		Total Gross floor area: 4850 sqm	
		Survey date: FRIDAY 08/06/07	Survey Type: MANUAL
<b>6</b>	<b>CW-02-A-03</b>	<b>COUNCIL OFFICES, TRURO</b>	<b>CORNWALL</b>
		A390 TREYEW ROAD	
		TRURO	
		Total Gross floor area: 30000 sqm	
		Survey date: THURSDAY 07/06/07	Survey Type: MANUAL
<b>7</b>	<b>DC-02-A-08</b>	<b>OFFICE, DORCHESTER</b>	<b>DORSET</b>
		STATION APPROACH	
		DORCHESTER	
		Total Gross floor area: 1550 sqm	
		Survey date: THURSDAY 03/07/08	Survey Type: MANUAL
<b>8</b>	<b>ES-02-A-06</b>	<b>LEGAL &amp; GENERAL, HOVE</b>	<b>EAST SUSSEX</b>
		CITY PARK	
		THE DROVEWAY	
		HOVE	
		Total Gross floor area: 18675 sqm	
		Survey date: THURSDAY 29/11/07	Survey Type: MANUAL
<b>9</b>	<b>EX-02-A-02</b>	<b>TELEPHONE CO., BRENTWOOD</b>	<b>ESSEX</b>
		LONDON ROAD	
		BRENTWOOD	
		Total Gross floor area: 19667 sqm	
		Survey date: THURSDAY 05/04/01	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

<b>10</b>	<b>HC-02-A-08</b>	<b>DIY CO. HQ, CHANDLER'S FORD</b>	<b>HAMPSHIRE</b>
		TEMPLAR'S WAY HAMPSHIRE CORP. PARK CHANDLER'S FORD Total Gross floor area: 15975 sqm Survey date: MONDAY 10/10/07	Survey Type: MANUAL
<b>11</b>	<b>HC-02-A-09</b>	<b>ERICSON, BASINGSTOKE</b>	<b>HAMPSHIRE</b>
		MAPLEWOOD CHINEHAM BUSINESS PARK BASINGSTOKE Total Gross floor area: 9000 sqm Survey date: THURSDAY 22/11/07	Survey Type: MANUAL
<b>12</b>	<b>HC-02-A-10</b>	<b>DIY CO. HQ, CHANDLER'S FORD</b>	<b>HAMPSHIRE</b>
		TEMPLAR'S WAY HAMPSHIRE CORP. PARK CHANDLER'S FORD Total Gross floor area: 15975 sqm Survey date: MONDAY 20/10/08	Survey Type: MANUAL
<b>13</b>	<b>HF-02-A-02</b>	<b>COUNCIL OFFICES, WELWYN GC</b>	<b>HERTFORDSHIRE</b>
		BRIDGE ROAD EAST  WELWYN GARDEN CITY Total Gross floor area: 2700 sqm Survey date: THURSDAY 05/09/02	Survey Type: MANUAL
<b>14</b>	<b>KC-02-A-01</b>	<b>COUNTY HALL, MAIDSTONE</b>	<b>KENT</b>
		SANDLING ROAD  MAIDSTONE Total Gross floor area: 32793 sqm Survey date: THURSDAY 13/10/05	Survey Type: MANUAL
<b>15</b>	<b>KC-02-A-03</b>	<b>COUNCIL OFFICES, MAIDSTONE</b>	<b>KENT</b>
		SANDLING ROAD  MAIDSTONE Total Gross floor area: 2900 sqm Survey date: THURSDAY 16/10/08	Survey Type: MANUAL
<b>16</b>	<b>KC-02-A-04</b>	<b>COUNCIL OFFICES, MAIDSTONE</b>	<b>KENT</b>
		SANDLING ROAD  MAIDSTONE Total Gross floor area: 1500 sqm Survey date: THURSDAY 16/10/08	Survey Type: MANUAL
<b>17</b>	<b>KC-02-A-05</b>	<b>COUNTY HALL, MAIDSTONE</b>	<b>KENT</b>
		SANDLING ROAD  MAIDSTONE Total Gross floor area: 32793 sqm Survey date: THURSDAY 16/10/08	Survey Type: MANUAL
<b>18</b>	<b>LC-02-A-07</b>	<b>COUNCIL OFFICES, BLACKPOOL</b>	<b>LANCASHIRE</b>
		SOUTH PROMENADE SAINT ANNES BLACKPOOL Total Gross floor area: 6678 sqm Survey date: FRIDAY 13/05/05	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

<b>19</b>	<b>LC-02-A-08</b>	<b>COUNCIL OFFICES, CHORLEY</b>	<b>LANCASHIRE</b>
	UNION STREET		
	CHORLEY		
	Total Gross floor area:	2000 sqm	
	Survey date: TUESDAY	13/06/06	Survey Type: MANUAL
<b>20</b>	<b>LE-02-A-03</b>	<b>COUNCIL OFFICES, M. MOWBRAY</b>	<b>LEICESTERSHIRE</b>
	NOTTINGHAM ROAD		
	MELTON MOWBRAY		
	Total Gross floor area:	3251 sqm	
	Survey date: WEDNESDAY	04/05/05	Survey Type: MANUAL
<b>21</b>	<b>TV-02-A-01</b>	<b>INLAND REVENUE, MIDDLESBRGH</b>	<b>TEES VALLEY</b>
	GRANGE ROAD		
	MIDDLESBROUGH		
	Total Gross floor area:	4100 sqm	
	Survey date: TUESDAY	25/09/01	Survey Type: MANUAL
<b>22</b>	<b>TV-02-A-02</b>	<b>BUILDING SOCIETY, DARLINGTON</b>	<b>TEES VALLEY</b>
	LINGFIELD WAY		
	MORTON PARK		
	DARLINGTON		
	Total Gross floor area:	3500 sqm	
	Survey date: MONDAY	25/04/05	Survey Type: MANUAL
<b>23</b>	<b>TW-02-A-01</b>	<b>RADIO STUDIOS, GATESHEAD</b>	<b>TYNE &amp; WEAR</b>
	CHURCH STREET		
	GATESHEAD		
	Total Gross floor area:	645 sqm	
	Survey date: WEDNESDAY	04/05/05	Survey Type: MANUAL
<b>24</b>	<b>TW-02-A-03</b>	<b>DEVELOP. AGENCY, NEWCASTLE</b>	<b>TYNE &amp; WEAR</b>
	KINGFISHER BOULEVARD		
	LEMINGTON		
	NEWCASTLE UPON TYNE		
	Total Gross floor area:	6480 sqm	
	Survey date: THURSDAY	11/12/08	Survey Type: MANUAL
<b>25</b>	<b>WM-02-A-01</b>	<b>COUNCIL OFFICES, STOURBRIDGE</b>	<b>WEST MIDLANDS</b>
	A451 NORTON ROAD		
	MARY STEVENS PARK		
	STOURBRIDGE		
	Total Gross floor area:	2725 sqm	
	Survey date: WEDNESDAY	26/04/06	Survey Type: MANUAL
<b>26</b>	<b>WM-02-A-02</b>	<b>BRITISH TELECOM, BIRMINGHAM</b>	<b>WEST MIDLANDS</b>
	BRINDLEY PLACE		
	BIRMINGHAM		
	Total Gross floor area:	12200 sqm	
	Survey date: THURSDAY	27/11/08	Survey Type: MANUAL
<b>27</b>	<b>WY-02-A-01</b>	<b>CALL CENTRE, BRADFORD</b>	<b>WEST YORKSHIRE</b>
	FILEY STREET		
	BRADFORD		
	Total Gross floor area:	2400 sqm	
	Survey date: MONDAY	09/05/05	Survey Type: MANUAL

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

# VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	26	9846	0.174	26	9846	0.032	26	9846	0.206
07:30 - 08:00	26	9846	0.462	26	9846	0.054	26	9846	0.516
08:00 - 08:30	26	9846	0.746	26	9846	0.084	26	9846	0.830
08:30 - 09:00	<b>26</b>	<b>9846</b>	<b>0.814</b>	26	9846	0.093	<b>26</b>	<b>9846</b>	<b>0.907</b>
09:00 - 09:30	27	9519	0.522	27	9519	0.106	27	9519	0.628
09:30 - 10:00	27	9519	0.284	27	9519	0.102	27	9519	0.386
10:00 - 10:30	27	9519	0.173	27	9519	0.110	27	9519	0.283
10:30 - 11:00	27	9519	0.152	27	9519	0.118	27	9519	0.270
11:00 - 11:30	27	9519	0.115	27	9519	0.114	27	9519	0.229
11:30 - 12:00	27	9519	0.132	27	9519	0.125	27	9519	0.257
12:00 - 12:30	27	9519	0.121	27	9519	0.218	27	9519	0.339
12:30 - 13:00	27	9519	0.179	27	9519	0.222	27	9519	0.401
13:00 - 13:30	27	9519	0.183	27	9519	0.191	27	9519	0.374
13:30 - 14:00	27	9519	0.196	27	9519	0.151	27	9519	0.347
14:00 - 14:30	27	9519	0.181	27	9519	0.154	27	9519	0.335
14:30 - 15:00	27	9519	0.123	27	9519	0.149	27	9519	0.272
15:00 - 15:30	27	9519	0.117	27	9519	0.176	27	9519	0.293
15:30 - 16:00	27	9519	0.115	27	9519	0.196	27	9519	0.311
16:00 - 16:30	27	9519	0.100	27	9519	0.457	27	9519	0.557
16:30 - 17:00	27	9519	0.098	27	9519	0.496	27	9519	0.594
17:00 - 17:30	26	9846	0.099	<b>26</b>	<b>9846</b>	<b>0.807</b>	26	9846	0.906
17:30 - 18:00	26	9846	0.054	26	9846	0.472	26	9846	0.526
18:00 - 18:30	26	9846	0.035	26	9846	0.257	26	9846	0.292
18:30 - 19:00	26	9846	0.020	26	9846	0.122	26	9846	0.142
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:	5.195			5.006			10.201		

**Parameter summary**

Trip rate parameter range selected:	427 - 175000 (units: sqm)
Survey date date range:	01/01/01 - 11/12/08
Number of weekdays (Monday-Friday):	27
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	22



# TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT  
 Category : D - INDUSTRIAL ESTATE

## VEHICLES

### Selected regions and areas:

<b>02 SOUTH EAST</b>	
EX ESSEX	1 days
WS WEST SUSSEX	1 days
<b>03 SOUTH WEST</b>	
CW CORNWALL	1 days
WL WILTSHIRE	1 days
<b>04 EAST ANGLIA</b>	
SF SUFFOLK	1 days
<b>05 EAST MIDLANDS</b>	
LN LINCOLNSHIRE	1 days
NT NOTTINGHAMSHIRE	1 days
<b>07 YORKSHIRE &amp; NORTH LINCOLNSHIRE</b>	
WY WEST YORKSHIRE	1 days
<b>08 NORTH WEST</b>	
CH CHESHIRE	1 days
MS MERSEYSIDE	1 days
<b>09 NORTH</b>	
CB CUMBRIA	1 days
DH DURHAM	1 days
NB NORTHUMBERLAND	1 days
TW TYNE & WEAR	1 days

### Filtering Stage 2 selection:

Parameter: Gross floor area  
 Range: 708 to 234115 (units: sqm)

### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 07/09/08

### Selected survey days:

Monday	3 days
Tuesday	2 days
Wednesday	2 days
Thursday	4 days
Friday	3 days

### Selected survey types:

Manual count	13 days
Directional ATC Count	1 days

### Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	9
Free Standing (PPS6 Out of Town)	2

### Selected Location Sub Categories:

Industrial Zone	7
Residential Zone	1
Out of Town	2
No Sub Category	4

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>CB-02-D-03</b>	<b>INDUSTRIAL ESTATE, BRAMPTON</b>	<b>CUMBRIA</b>
	CARLISLE ROAD		
	BRAMPTON		
	Total Gross floor area:	13700 sqm	
	Survey date: THURSDAY	23/06/05	Survey Type: MANUAL
<b>2</b>	<b>CH-02-D-02</b>	<b>INDUSTRIAL EST., NORTHWICH</b>	<b>CHESHIRE</b>
	MANCHESTER ROAD		
	WINCHAM		
	NORTHWICH		
	Total Gross floor area:	22000 sqm	
	Survey date: FRIDAY	15/06/07	Survey Type: MANUAL
<b>3</b>	<b>CW-02-D-02</b>	<b>INDUSTRIAL ESTATE, CAMBORNE</b>	<b>CORNWALL</b>
	DRUIDS ROAD		
	CAMBORNE		
	Total Gross floor area:	6515 sqm	
	Survey date: FRIDAY	21/09/07	Survey Type: MANUAL
<b>4</b>	<b>DH-02-D-01</b>	<b>INDUSTRIAL ESTATE,NR CONSETT</b>	<b>DURHAM</b>
	PARKWAY		
	ANNFIELD PLAIN		
	NEAR CONSETT		
	Total Gross floor area:	12025 sqm	
	Survey date: WEDNESDAY	27/04/05	Survey Type: MANUAL
<b>5</b>	<b>EX-02-D-01</b>	<b>INDUSTRIAL ESTATE, LOUGHTON</b>	<b>ESSEX</b>
	OAKWOOD HILL		
	LOUGHTON		
	Total Gross floor area:	27687 sqm	
	Survey date: THURSDAY	22/11/07	Survey Type: MANUAL
<b>6</b>	<b>LN-02-D-01</b>	<b>INDUSTRIAL ESTATE, GRANTHAM</b>	<b>LINCOLNSHIRE</b>
	BELTON LANE		
	GRANTHAM		
	Total Gross floor area:	5347 sqm	
	Survey date: THURSDAY	12/05/05	Survey Type: MANUAL
<b>7</b>	<b>MS-02-D-05</b>	<b>INDUSTRIAL ESTATE, ST HELENS</b>	<b>MERSEYSIDE</b>
	BROADOAK ROAD		
	ST HELENS		
	Total Gross floor area:	11700 sqm	
	Survey date: TUESDAY	18/10/05	Survey Type: MANUAL
<b>8</b>	<b>NB-02-D-01</b>	<b>INDUSTRIAL ESTATE, HEXHAM</b>	<b>NORTHUMBERLAND</b>
	A695		
	HEXHAM		
	Total Gross floor area:	10525 sqm	
	Survey date: MONDAY	23/05/05	Survey Type: MANUAL
<b>9</b>	<b>NT-02-D-01</b>	<b>IND. ESTATE, SUTTON-IN-ASHFLD</b>	<b>NOTTINGHAMSHIRE</b>
	B6028 STONEYFORD ROAD		
	STANTON HILL		
	SUTTON-IN-ASHFIELD		
	Total Gross floor area:	26400 sqm	
	Survey date: FRIDAY	30/06/06	Survey Type: MANUAL
<b>10</b>	<b>SF-02-D-01</b>	<b>INDUSTRIAL ESTATE, IPSWICH</b>	<b>SUFFOLK</b>
	RAPIER STREET		
	STOKE		
	IPSWICH		
	Total Gross floor area:	17500 sqm	
	Survey date: MONDAY	28/07/03	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

11	<b>TW-02-D-06</b>	<b>INDUSTRIAL ESTATE, N. SHIELDS</b>	<b>TYNE &amp; WEAR</b>
	NORHAM ROAD		
	WEST CHIRTON		
	NORTH SHIELDS		
	Total Gross floor area:	23000 sqm	
	Survey date: THURSDAY	19/10/06	Survey Type: MANUAL
12	<b>WL-02-D-01</b>	<b>IND. ESTATE, WOOTTON BASSETT</b>	<b>WILTSHIRE</b>
	MARLBOROUGH ROAD		
	WOOTTON BASSETT		
	Total Gross floor area:	7050 sqm	
	Survey date: TUESDAY	03/10/06	Survey Type: MANUAL
13	<b>WS-02-D-05</b>	<b>IND. ESTATE, NR BURGESS HILL</b>	<b>WEST SUSSEX</b>
	STAIRBRIDGE LANE		
	NEAR BURGESS HILL		
	Total Gross floor area:	5858 sqm	
	Survey date: WEDNESDAY	24/09/03	Survey Type: DIRECTIONAL ATC COUNT
14	<b>WY-02-D-02</b>	<b>INDUSTRIAL EST., HUDDERSFIELD</b>	<b>WEST YORKSHIRE</b>
	A629 WAKEFIELD ROAD		
	TANDEM		
	HUDDERSFIELD		
	Total Gross floor area:	20824 sqm	
	Survey date: MONDAY	11/09/06	Survey Type: MANUAL

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

# VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

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 - 00:30	1	5858	0.000	1	5858	0.000	1	5858	0.000
00:30 - 01:00	1	5858	0.000	1	5858	0.000	1	5858	0.000
01:00 - 01:30	1	5858	0.000	1	5858	0.000	1	5858	0.000
01:30 - 02:00	1	5858	0.000	1	5858	0.000	1	5858	0.000
02:00 - 02:30	1	5858	0.000	1	5858	0.000	1	5858	0.000
02:30 - 03:00	1	5858	0.000	1	5858	0.000	1	5858	0.000
03:00 - 03:30	1	5858	0.000	1	5858	0.000	1	5858	0.000
03:30 - 04:00	1	5858	0.000	1	5858	0.000	1	5858	0.000
04:00 - 04:30	1	5858	0.000	1	5858	0.000	1	5858	0.000
04:30 - 05:00	1	5858	0.000	1	5858	0.000	1	5858	0.000
05:00 - 05:30	1	5858	0.034	1	5858	0.000	1	5858	0.034
05:30 - 06:00	1	5858	0.034	1	5858	0.000	1	5858	0.034
06:00 - 06:30	1	5858	0.154	1	5858	0.051	1	5858	0.205
06:30 - 07:00	1	5858	0.171	1	5858	0.051	1	5858	0.222
07:00 - 07:30	14	15009	0.134	14	15009	0.070	14	15009	0.204
07:30 - 08:00	14	15009	0.237	14	15009	0.102	14	15009	0.339
08:00 - 08:30	14	15009	0.257	14	15009	0.099	14	15009	0.356
08:30 - 09:00	<b>14</b>	<b>15009</b>	<b>0.262</b>	14	15009	0.111	14	15009	0.373
09:00 - 09:30	14	15009	0.190	14	15009	0.126	14	15009	0.316
09:30 - 10:00	14	15009	0.139	14	15009	0.130	14	15009	0.269
10:00 - 10:30	14	15009	0.162	14	15009	0.162	14	15009	0.324
10:30 - 11:00	14	15009	0.153	14	15009	0.159	14	15009	0.312
11:00 - 11:30	14	15009	0.178	14	15009	0.178	14	15009	0.356
11:30 - 12:00	14	15009	0.161	14	15009	0.180	14	15009	0.341
12:00 - 12:30	14	15009	0.148	14	15009	0.205	14	15009	0.353
12:30 - 13:00	14	15009	0.145	14	15009	0.166	14	15009	0.311
13:00 - 13:30	14	15009	0.173	14	15009	0.185	14	15009	0.358
13:30 - 14:00	14	15009	0.179	14	15009	0.151	14	15009	0.330
14:00 - 14:30	14	15009	0.151	14	15009	0.153	14	15009	0.304
14:30 - 15:00	14	15009	0.143	14	15009	0.157	14	15009	0.300
15:00 - 15:30	14	15009	0.133	14	15009	0.149	14	15009	0.282
15:30 - 16:00	14	15009	0.149	14	15009	0.166	14	15009	0.315
16:00 - 16:30	14	15009	0.130	14	15009	0.216	14	15009	0.346
16:30 - 17:00	14	15009	0.128	14	15009	0.274	<b>14</b>	<b>15009</b>	<b>0.402</b>
17:00 - 17:30	14	15009	0.083	<b>14</b>	<b>15009</b>	<b>0.286</b>	14	15009	0.369
17:30 - 18:00	14	15009	0.045	14	15009	0.168	14	15009	0.213
18:00 - 18:30	14	15009	0.032	14	15009	0.094	14	15009	0.126
18:30 - 19:00	14	15009	0.019	14	15009	0.043	14	15009	0.062
19:00 - 19:30	1	5858	0.000	1	5858	0.034	1	5858	0.034
19:30 - 20:00	1	5858	0.000	1	5858	0.034	1	5858	0.034
20:00 - 20:30	1	5858	0.017	1	5858	0.017	1	5858	0.034
20:30 - 21:00	1	5858	0.017	1	5858	0.017	1	5858	0.034
21:00 - 21:30	1	5858	0.017	1	5858	0.000	1	5858	0.017
21:30 - 22:00	1	5858	0.017	1	5858	0.017	1	5858	0.034
22:00 - 22:30	1	5858	0.000	1	5858	0.000	1	5858	0.000
22:30 - 23:00	1	5858	0.000	1	5858	0.000	1	5858	0.000
23:00 - 23:30	1	5858	0.000	1	5858	0.000	1	5858	0.000
23:30 - 24:00	1	5858	0.000	1	5858	0.000	1	5858	0.000
Total Rates:			3.992			3.951			7.943

**Parameter summary**

Trip rate parameter range selected:	708 - 234115 (units: sqm)
Survey date date range:	01/01/01 - 07/09/08
Number of weekdays (Monday-Friday):	18
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	16

# TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT  
 Category : F - WAREHOUSING (COMMERCIAL)

## VEHICLES

### Selected regions and areas:

<b>02 SOUTH EAST</b>		
BD	BEDFORDSHIRE	1 days
BU	BUCKINGHAMSHIRE	1 days
HF	HERTFORDSHIRE	2 days
KC	KENT	1 days
<b>03 SOUTH WEST</b>		
CW	CORNWALL	1 days
DC	DORSET	1 days
<b>06 WEST MIDLANDS</b>		
WO	WORCESTERSHIRE	1 days
<b>09 NORTH</b>		
TV	TEES VALLEY	2 days

### Filtering Stage 2 selection:

Parameter: Gross floor area  
 Range: 950 to 80066 (units: sqm)

### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 19/11/08

### Selected survey days:

Tuesday	2 days
Thursday	6 days
Friday	2 days

### Selected survey types:

Manual count	10 days
Directional ATC Count	0 days

### Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	7
Neighbourhood Centre (PPS6 Local Centre)	1

### Selected Location Sub Categories:

Industrial Zone	5
Commercial Zone	2
Village	1
No Sub Category	2

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>BD-02-F-01</b>	<b>WAREHOUSING, DUNSTABLE</b>	<b>BEDFORDSHIRE</b>
	FRENCH'S AVENUE		
	DUNSTABLE		
	Total Gross floor area:	6050 sqm	
	Survey date: THURSDAY	07/03/02	Survey Type: MANUAL
<b>2</b>	<b>BU-02-F-01</b>	<b>SUPERSTORE DISTRIB.,M.KEYNES</b>	<b>BUCKINGHAMSHIRE</b>
	BLETCHAM WAY		
	BLETCHLEY		
	MILTON KEYNES		
	Total Gross floor area:	52125 sqm	
	Survey date: THURSDAY	07/02/02	Survey Type: MANUAL
<b>3</b>	<b>CW-02-F-01</b>	<b>WAREHOUSING, TRURO</b>	<b>CORNWALL</b>
	A390		
	THREEMILESTONE		
	NEAR TRURO		
	Total Gross floor area:	5150 sqm	
	Survey date: TUESDAY	18/09/07	Survey Type: MANUAL
<b>4</b>	<b>DC-02-F-01</b>	<b>STEEL DISTRIB., STALBRIDGE</b>	<b>DORSET</b>
	STATION ROAD		
	STALBRIDGE		
	Total Gross floor area:	9100 sqm	
	Survey date: FRIDAY	05/10/01	Survey Type: MANUAL
<b>5</b>	<b>HF-02-F-02</b>	<b>SUPERSTORE DIST., WELWYN GC</b>	<b>HERTFORDSHIRE</b>
	BLACK FAN ROAD		
	PANSHANGER		
	WELWYN GARDEN CITY		
	Total Gross floor area:	18600 sqm	
	Survey date: FRIDAY	06/09/02	Survey Type: MANUAL
<b>6</b>	<b>HF-02-F-03</b>	<b>DISTRIBUTION CEN., HATFIELD</b>	<b>HERTFORDSHIRE</b>
	HATFIELD BUSINESS CEN.		
	HATFIELD		
	Total Gross floor area:	80000 sqm	
	Survey date: THURSDAY	10/07/08	Survey Type: MANUAL
<b>7</b>	<b>KC-02-F-01</b>	<b>FOOD DISTRIB., SNODLAND</b>	<b>KENT</b>
	HOLBOROUGH ROAD		
	SNODLAND		
	Total Gross floor area:	7500 sqm	
	Survey date: THURSDAY	20/06/02	Survey Type: MANUAL
<b>8</b>	<b>TV-02-F-01</b>	<b>SUPERSTORE DIST., STOCKTON</b>	<b>TEES VALLEY</b>
	MALLEABLE WAY		
	STOCKTON-ON-TEES		
	Total Gross floor area:	30187 sqm	
	Survey date: THURSDAY	04/10/01	Survey Type: MANUAL
<b>9</b>	<b>TV-02-F-02</b>	<b>ARGOS WAREHOUSE, DARL'TON</b>	<b>TEES VALLEY</b>
	ROUNDHOUSE ROAD		
	FAVERDALE		
	DARLINGTON		
	Total Gross floor area:	80066 sqm	
	Survey date: TUESDAY	07/10/08	Survey Type: MANUAL
<b>10</b>	<b>WO-02-F-01</b>	<b>SUPERSTORE DIST., WORCESTER</b>	<b>WORCESTERSHIRE</b>
	WAINWRIGHT ROAD		
	SHIRE BUSINESS PARK		
	WORCESTER		
	Total Gross floor area:	31416 sqm	
	Survey date: THURSDAY	14/03/02	Survey Type: MANUAL

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

# VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

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 - 00:30	1	7500	0.093	1	7500	0.080	1	7500	0.173
00:30 - 01:00	1	7500	0.053	1	7500	0.067	1	7500	0.120
01:00 - 01:30	1	7500	0.013	1	7500	0.027	1	7500	0.040
01:30 - 02:00	1	7500	0.040	1	7500	0.067	1	7500	0.107
02:00 - 02:30	1	7500	0.027	1	7500	0.027	1	7500	0.054
02:30 - 03:00	1	7500	0.053	1	7500	0.067	1	7500	0.120
03:00 - 03:30	1	7500	0.027	1	7500	0.013	1	7500	0.040
03:30 - 04:00	1	7500	0.067	1	7500	0.053	1	7500	0.120
04:00 - 04:30	1	7500	0.053	1	7500	0.053	1	7500	0.106
04:30 - 05:00	1	7500	0.067	1	7500	0.053	1	7500	0.120
05:00 - 05:30	1	7500	0.080	1	7500	0.067	1	7500	0.147
05:30 - 06:00	1	7500	0.067	1	7500	0.053	1	7500	0.120
06:00 - 06:30	2	18844	0.056	2	18844	0.096	2	18844	0.152
06:30 - 07:00	2	18844	0.072	2	18844	0.066	2	18844	0.138
07:00 - 07:30	10	32019	0.042	10	32019	0.047	10	32019	0.089
07:30 - 08:00	10	32019	0.067	10	32019	0.034	10	32019	0.101
08:00 - 08:30	10	32019	0.043	10	32019	0.031	10	32019	0.074
08:30 - 09:00	10	32019	0.054	10	32019	0.034	10	32019	0.088
09:00 - 09:30	10	32019	0.051	10	32019	0.035	10	32019	0.086
09:30 - 10:00	10	32019	0.058	10	32019	0.035	10	32019	0.093
10:00 - 10:30	10	32019	0.037	10	32019	0.042	10	32019	0.079
10:30 - 11:00	10	32019	0.035	10	32019	0.033	10	32019	0.068
11:00 - 11:30	10	32019	0.036	10	32019	0.032	10	32019	0.068
11:30 - 12:00	10	32019	0.041	10	32019	0.036	10	32019	0.077
12:00 - 12:30	10	32019	0.039	10	32019	0.042	10	32019	0.081
12:30 - 13:00	10	32019	0.037	10	32019	0.038	10	32019	0.075
13:00 - 13:30	10	32019	0.065	10	32019	0.050	10	32019	0.115
13:30 - 14:00	<b>10</b>	<b>32019</b>	<b>0.114</b>	<b>10</b>	<b>32019</b>	<b>0.099</b>	<b>10</b>	<b>32019</b>	<b>0.213</b>
14:00 - 14:30	10	32019	0.053	10	32019	0.092	10	32019	0.145
14:30 - 15:00	10	32019	0.062	10	32019	0.072	10	32019	0.134
15:00 - 15:30	10	32019	0.038	10	32019	0.060	10	32019	0.098
15:30 - 16:00	10	32019	0.052	10	32019	0.058	10	32019	0.110
16:00 - 16:30	10	32019	0.040	10	32019	0.060	10	32019	0.100
16:30 - 17:00	10	32019	0.038	10	32019	0.064	10	32019	0.102
17:00 - 17:30	10	32019	0.028	10	32019	0.055	10	32019	0.083
17:30 - 18:00	10	32019	0.047	10	32019	0.057	10	32019	0.104
18:00 - 18:30	9	32223	0.020	9	32223	0.040	9	32223	0.060
18:30 - 19:00	9	32223	0.018	9	32223	0.024	9	32223	0.042
19:00 - 19:30	2	6775	0.030	2	6775	0.030	2	6775	0.060
19:30 - 20:00	2	6775	0.007	2	6775	0.037	2	6775	0.044
20:00 - 20:30	1	7500	0.053	1	7500	0.013	1	7500	0.066
20:30 - 21:00	1	7500	0.040	1	7500	0.053	1	7500	0.093
21:00 - 21:30	1	7500	0.040	1	7500	0.053	1	7500	0.093
21:30 - 22:00	1	7500	0.013	1	7500	0.027	1	7500	0.040
22:00 - 22:30	1	7500	0.067	1	7500	0.053	1	7500	0.120
22:30 - 23:00	1	7500	0.067	1	7500	0.040	1	7500	0.107
23:00 - 23:30	1	7500	0.040	1	7500	0.040	1	7500	0.080
23:30 - 24:00	1	7500	0.040	1	7500	0.040	1	7500	0.080
Total Rates:			2.280			2.345			4.625



**Parameter summary**

Trip rate parameter range selected:	950 - 80066 (units: sqm)
Survey date date range:	01/01/01 - 19/11/08
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	11

# **TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 05 - HEALTH  
 Category : J - DENTAL SURGERY

## **VEHICLES**

### Selected regions and areas:

<b>01 GREATER LONDON</b>	
KI KINGSTON	1 days
<b>02 SOUTH EAST</b>	
KC KENT	1 days
<b>03 SOUTH WEST</b>	
BA BATH & NORTH EAST SOMERSET	1 days
<b>05 EAST MIDLANDS</b>	
LN LINCOLNSHIRE	1 days

### **Filtering Stage 2 selection:**

Parameter: Gross floor area  
 Range: 100 to 366 (units: sqm)

### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 15/03/07

### Selected survey days:

Tuesday	1 days
Wednesday	1 days
Thursday	2 days

### Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

### Selected Locations:

Edge of Town Centre	3
Suburban Area (PPS6 Out of Centre)	1

### Selected Location Sub Categories:

No Sub Category	4
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LIST OF SITES relevant to selection parameters

- |  |   |   |
|--|---|---|
| <p><b>1 BA-05-J-01</b></p> <p>NORTH WAY</p> <p>MIDSOMER NORTON</p> <p>Total Gross floor area: 200 sqm</p> <p>Survey date: THURSDAY 05/10/06</p>              | <p><b>DENTAL SURGERY, MID. NORTON</b></p> | <p><b>BATH &amp; NORTH EAST SOMERSET</b></p>          |
| <p><b>2 KC-05-J-01</b></p> <p>CHURCH ROAD</p> <p>ASHFORD</p> <p>Total Gross floor area: 150 sqm</p> <p>Survey date: WEDNESDAY 08/11/06</p>                   | <p><b>DENTAL SURGERY, ASHFORD</b></p>     | <p><b>KENT</b></p> <p>Survey Type: MANUAL</p>         |
| <p><b>3 KI-05-J-01</b></p> <p>WOODBINES AVENUE</p> <p>KINGSTON UPON THAMES</p> <p>Total Gross floor area: 162 sqm</p> <p>Survey date: THURSDAY 15/03/07</p>  | <p><b>DENTAL SURGERY, KINGSTON</b></p>    | <p><b>KINGSTON</b></p> <p>Survey Type: MANUAL</p>     |
| <p><b>4 LN-05-J-01</b></p> <p>DODDINGTON ROAD</p> <p>MOORLAND</p> <p>LINCOLN</p> <p>Total Gross floor area: 366 sqm</p> <p>Survey date: TUESDAY 10/09/02</p> | <p><b>DENTAL SURGERY, LINCOLN</b></p>     | <p><b>LINCOLNSHIRE</b></p> <p>Survey Type: MANUAL</p> |

TRIP RATE for Land Use 05 - HEALTH/J - DENTAL SURGERY

## VEHICLES

**Calculation factor: 100 sqm**

**BOLD print indicates peak (busiest) period**

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	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	3	226	0.442	3	226	0.000	3	226	0.442
08:00 - 09:00	<b>4</b>	<b>220</b>	<b>5.923</b>	4	220	1.025	4	220	6.948
09:00 - 10:00	4	220	5.125	4	220	3.872	4	220	8.997
10:00 - 11:00	4	220	3.189	4	220	2.847	4	220	6.036
11:00 - 12:00	4	220	3.645	4	220	3.645	4	220	7.290
12:00 - 13:00	4	220	2.278	4	220	4.328	4	220	6.606
13:00 - 14:00	4	220	3.872	4	220	3.189	4	220	7.061
14:00 - 15:00	4	220	4.214	4	220	2.961	4	220	7.175
15:00 - 16:00	4	220	4.897	4	220	5.467	<b>4</b>	<b>220</b>	<b>10.364</b>
16:00 - 17:00	4	220	3.986	4	220	5.467	4	220	9.453
17:00 - 18:00	4	220	0.797	<b>4</b>	<b>220</b>	<b>5.581</b>	4	220	6.378
18:00 - 19:00	3	226	0.000	3	226	0.442	3	226	0.442
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			38.368			38.824			77.192

## Parameter summary

Trip rate parameter range selected:	100 - 366 (units: sqm)
Survey date range:	01/01/01 - 15/03/07
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

# **TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 05 - HEALTH  
 Category : G - GP SURGERIES

## **VEHICLES**

### Selected regions and areas:

<b>02 SOUTH EAST</b>	
ES EAST SUSSEX	1 days
HC HAMPSHIRE	2 days
WS WEST SUSSEX	1 days
<b>03 SOUTH WEST</b>	
BR BRISTOL CITY	1 days
CW CORNWALL	1 days
DC DORSET	1 days
<b>04 EAST ANGLIA</b>	
NF NORFOLK	1 days
<b>06 WEST MIDLANDS</b>	
ST STAFFORDSHIRE	1 days
WM WEST MIDLANDS	2 days
<b>07 YORKSHIRE &amp; NORTH LINCOLNSHIRE</b>	
NO NORTH LINCOLNSHIRE	1 days
<b>08 NORTH WEST</b>	
GM GREATER MANCHESTER	1 days
<b>09 NORTH</b>	
CB CUMBRIA	1 days
DH DURHAM	1 days
TV TEES VALLEY	1 days

### **Filtering Stage 2 selection:**

Parameter: Gross floor area  
 Range: 143 to 1255 (units: sqm)

### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 12/10/07

### Selected survey days:

Monday	4 days
Tuesday	2 days
Wednesday	3 days
Thursday	4 days
Friday	3 days

### Selected survey types:

Manual count	16 days
Directional ATC Count	0 days

### Selected Locations:

Edge of Town Centre	7
Suburban Area (PPS6 Out of Centre)	5
Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	2

### Selected Location Sub Categories:

Residential Zone	6
No Sub Category	10

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>BR-05-G-01</b>	<b>GP SURGERY, BRISTOL</b>	<b>BRISTOL CITY</b>
	WHITTUCKS ROAD		
	HANHAM		
	BRISTOL		
	Total Gross floor area:	480 sqm	
	Survey date: MONDAY	14/06/04	Survey Type: MANUAL
<b>2</b>	<b>CB-05-G-02</b>	<b>GP SURGERY, CARLISLE</b>	<b>CUMBRIA</b>
	PORT ROAD		
	NEWTOWN		
	CARLISLE		
	Total Gross floor area:	995 sqm	
	Survey date: WEDNESDAY	29/10/03	Survey Type: MANUAL
<b>3</b>	<b>CW-05-G-01</b>	<b>GP SURGERY, ST AUSTELL</b>	<b>CORNWALL</b>
	CARLYON ROAD		
	ST AUSTELL		
	Total Gross floor area:	350 sqm	
	Survey date: WEDNESDAY	19/09/07	Survey Type: MANUAL
<b>4</b>	<b>DC-05-G-03</b>	<b>GP SURGERY, NEAR WEYMOUTH</b>	<b>DORSET</b>
	PRESTON ROAD		
	PRESTON		
	NEAR WEYMOUTH		
	Total Gross floor area:	370 sqm	
	Survey date: MONDAY	08/07/02	Survey Type: MANUAL
<b>5</b>	<b>DH-05-G-01</b>	<b>GP SURGERY, HARTLEPOOL</b>	<b>DURHAM</b>
	EARLSFERRY ROAD		
	HARTLEPOOL		
	Total Gross floor area:	200 sqm	
	Survey date: FRIDAY	07/09/07	Survey Type: MANUAL
<b>6</b>	<b>ES-05-G-01</b>	<b>GP SURGERY, HAILSHAM</b>	<b>EAST SUSSEX</b>
	VICARAGE LANE		
	HAILSHAM		
	Total Gross floor area:	477 sqm	
	Survey date: WEDNESDAY	02/07/03	Survey Type: MANUAL
<b>7</b>	<b>GM-05-G-01</b>	<b>GP SURGERY, SALE</b>	<b>GREATER MANCHESTER</b>
	WASHWAY ROAD		
	SALE		
	Total Gross floor area:	900 sqm	
	Survey date: FRIDAY	11/06/04	Survey Type: MANUAL
<b>8</b>	<b>HC-05-G-02</b>	<b>GP SURGERY, ROMSEY</b>	<b>HAMPSHIRE</b>
	ALMA ROAD		
	ROMSEY		
	Total Gross floor area:	482 sqm	
	Survey date: THURSDAY	07/11/02	Survey Type: MANUAL
<b>9</b>	<b>HC-05-G-03</b>	<b>GP SURGERY, WINCHESTER</b>	<b>HAMPSHIRE</b>
	FRIARSGATE		
	WINCHESTER		
	Total Gross floor area:	1000 sqm	
	Survey date: THURSDAY	07/11/02	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

<b>10</b>	<b>NF-05-G-01</b>	<b>GP SURGERY, NORWICH</b>	<b>NORFOLK</b>
	TRINITY STREET		
	NORWICH		
	Total Gross floor area:	375 sqm	
	Survey date: MONDAY	21/05/07	Survey Type: MANUAL
<b>11</b>	<b>NO-05-G-01</b>	<b>GP SURGERY, SCUNTHORPE</b>	<b>NORTH LINCOLNSHIRE</b>
	FERRY ROAD WEST		
	SCUNTHORPE		
	Total Gross floor area:	1255 sqm	
	Survey date: THURSDAY	22/09/05	Survey Type: MANUAL
<b>12</b>	<b>ST-05-G-01</b>	<b>GP SURGERY, STOKE-ON-TRENT</b>	<b>STAFFORDSHIRE</b>
	NEW INN LANE		
	HANFORD		
	STOKE-ON-TRENT		
	Total Gross floor area:	897 sqm	
	Survey date: TUESDAY	16/07/02	Survey Type: MANUAL
<b>13</b>	<b>TV-05-G-01</b>	<b>GP SURGERY, DARLINGTON</b>	<b>TEES VALLEY</b>
	VICTORIA ROAD		
	DARLINGTON		
	Total Gross floor area:	770 sqm	
	Survey date: MONDAY	18/04/05	Survey Type: MANUAL
<b>14</b>	<b>WM-05-G-02</b>	<b>GP SURGERY, COVENTRY</b>	<b>WEST MIDLANDS</b>
	HENLEY ROAD		
	COVENTRY		
	Total Gross floor area:	231 sqm	
	Survey date: FRIDAY	10/02/06	Survey Type: MANUAL
<b>15</b>	<b>WM-05-G-03</b>	<b>GP SURGERY, BIRMINGHAM</b>	<b>WEST MIDLANDS</b>
	WASHWOOD HEATH ROAD		
	WARD END		
	BIRMINGHAM		
	Total Gross floor area:	250 sqm	
	Survey date: TUESDAY	11/09/07	Survey Type: MANUAL
<b>16</b>	<b>WS-05-G-04</b>	<b>GP SURGERY, CHICHESTER</b>	<b>WEST SUSSEX</b>
	CAWLEY ROAD		
	WHYKE		
	CHICHESTER		
	Total Gross floor area:	600 sqm	
	Survey date: THURSDAY	03/07/03	Survey Type: MANUAL

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES

## VEHICLES

**Calculation factor: 100 sqm**

**BOLD print indicates peak (busiest) period**

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	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	13	630	0.599	13	630	0.195	13	630	0.794
08:00 - 09:00	16	602	4.828	16	602	2.118	16	602	6.946
09:00 - 10:00	<b>16</b>	<b>602</b>	<b>5.793</b>	16	602	5.056	<b>16</b>	<b>602</b>	<b>10.849</b>
10:00 - 11:00	16	602	4.734	<b>16</b>	<b>602</b>	<b>5.139</b>	16	602	9.873
11:00 - 12:00	16	602	3.665	16	602	4.194	16	602	7.859
12:00 - 13:00	16	602	2.647	16	602	3.395	16	602	6.042
13:00 - 14:00	16	602	2.367	16	602	2.523	16	602	4.890
14:00 - 15:00	16	602	3.125	16	602	2.627	16	602	5.752
15:00 - 16:00	16	602	3.551	16	602	3.385	16	602	6.936
16:00 - 17:00	16	602	3.623	16	602	3.748	16	602	7.371
17:00 - 18:00	16	602	2.481	16	602	3.665	16	602	6.146
18:00 - 19:00	16	602	0.592	16	602	1.744	16	602	2.336
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:	38.005			37.789			75.794		

### Parameter summary

Trip rate parameter range selected:	143 - 1255 (units: sqm)
Survey date range:	01/01/01 - 12/10/07
Number of weekdays (Monday-Friday):	16
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	6



**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 06 - HOTEL, FOOD & DRINK

Category : A - HOTELS

**VEHICLES**

Selected regions and areas:

<b>01</b>	<b>GREATER LONDON</b>	
	HD HILLINGDON	1 days
<b>02</b>	<b>SOUTH EAST</b>	
	HC HAMPSHIRE	1 days
	HF HERTFORDSHIRE	3 days
	KC KENT	1 days
	SC SURREY	1 days
	WS WEST SUSSEX	1 days
<b>03</b>	<b>SOUTH WEST</b>	
	DC DORSET	1 days
	DV DEVON	1 days
<b>04</b>	<b>EAST ANGLIA</b>	
	CA CAMBRIDGESHIRE	2 days
	NF NORFOLK	1 days
<b>05</b>	<b>EAST MIDLANDS</b>	
	DS DERBYSHIRE	1 days
	NT NOTTINGHAMSHIRE	1 days
<b>06</b>	<b>WEST MIDLANDS</b>	
	WM WEST MIDLANDS	2 days
	WO WORCESTERSHIRE	3 days
<b>08</b>	<b>NORTH WEST</b>	
	CH CHESHIRE	1 days
	GM GREATER MANCHESTER	2 days
<b>09</b>	<b>NORTH</b>	
	TV TEES VALLEY	1 days
	TW TYNE & WEAR	1 days

## Filtering Stage 2 selection:

Parameter: Gross floor area  
 Range: 926 to 11747 (units: sqm)

### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 25/11/08

### Selected survey days:

Monday	1 days
Tuesday	5 days
Wednesday	10 days
Thursday	7 days
Friday	2 days

### Selected survey types:

Manual count	25 days
Directional ATC Count	0 days

### Selected Locations:

Edge of Town Centre	7
Suburban Area (PPS6 Out of Centre)	10
Edge of Town	3
Neighbourhood Centre (PPS6 Local Centre)	2
Free Standing (PPS6 Out of Town)	3

### Selected Location Sub Categories:

Development Zone	2
Residential Zone	1
Retail Zone	1
Built-Up Zone	1
Village	1
Out of Town	1
No Sub Category	18

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>CA-06-A-01</b>	<b>HOTEL, CAMBRIDGE</b>	<b>CAMBRIDGESHIRE</b>
	RECENT STREET		
	CAMBRIDGE		
	Total Gross floor area:	8100 sqm	
	Survey date: TUESDAY	10/09/02	Survey Type: MANUAL
<b>2</b>	<b>CA-06-A-02</b>	<b>HOTEL, CAMBRIDGE</b>	<b>CAMBRIDGESHIRE</b>
	GONVILLE PLACE		
	CAMBRIDGE		
	Total Gross floor area:	5350 sqm	
	Survey date: THURSDAY	13/05/04	Survey Type: MANUAL
<b>3</b>	<b>CH-06-A-01</b>	<b>RAMADA JARVIS, CHESTER</b>	<b>CHESHIRE</b>
	WHITCHURCH ROAD		
	CHRISTLETON		
	CHESTER		
	Total Gross floor area:	6000 sqm	
	Survey date: WEDNESDAY	15/10/08	Survey Type: MANUAL
<b>4</b>	<b>DC-06-A-03</b>	<b>HOTEL, NEAR WAREHAM</b>	<b>DORSET</b>
	EAST STOKE		
	BINNEGAR		
	NEAR WAREHAM		
	Total Gross floor area:	1600 sqm	
	Survey date: WEDNESDAY	11/09/02	Survey Type: MANUAL
<b>5</b>	<b>DS-06-A-01</b>	<b>DAYS INN, DERBY</b>	<b>DERBYSHIRE</b>
	SIR FRANK WHITTLE RD		
	DERBY		
	Total Gross floor area:	5304 sqm	
	Survey date: WEDNESDAY	23/06/04	Survey Type: MANUAL
<b>6</b>	<b>DV-06-A-01</b>	<b>PREMIER TRAVEL INN, PLYMOUTH</b>	<b>DEVON</b>
	SUTTON ROAD		
	SUTTON HARBOUR		
	PLYMOUTH		
	Total Gross floor area:	3420 sqm	
	Survey date: THURSDAY	07/07/05	Survey Type: MANUAL
<b>7</b>	<b>GM-06-A-06</b>	<b>PREMIER LODGE, URMSTON</b>	<b>GREATER MANCHESTER</b>
	TRAFFORD BOULEVARD		
	URMSTON		
	Total Gross floor area:	2475 sqm	
	Survey date: MONDAY	07/06/04	Survey Type: MANUAL
<b>8</b>	<b>GM-06-A-07</b>	<b>TRAVELODGE, MANCHESTER</b>	<b>GREATER MANCHESTER</b>
	BLACKFRIARS STREET		
	SALFORD		
	MANCHESTER		
	Total Gross floor area:	7925 sqm	
	Survey date: TUESDAY	25/05/04	Survey Type: MANUAL
<b>9</b>	<b>HC-06-A-06</b>	<b>HOTEL, SOUTHAMPTON</b>	<b>HAMPSHIRE</b>
	GRANGE ROAD		
	HEDGE END		
	SOUTHAMPTON		
	Total Gross floor area:	4108 sqm	
	Survey date: THURSDAY	18/07/02	Survey Type: MANUAL
<b>10</b>	<b>HD-06-A-01</b>	<b>TRAVELODGE, WEST DRAYTON</b>	<b>HILLINGDON</b>
	SIPSON ROAD		
	WEST DRAYTON		
	Total Gross floor area:	5200 sqm	
	Survey date: WEDNESDAY	28/03/01	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

<b>11</b>	<b>HF-06-A-01</b>	<b>HOTEL, HARPENDEN</b>	<b>HERTFORDSHIRE</b>
	LUTON ROAD		
	HARPENDEN		
	Total Gross floor area:	3100 sqm	
	Survey date: WEDNESDAY	06/03/02	Survey Type: MANUAL
<b>12</b>	<b>HF-06-A-02</b>	<b>PREMIER LODGE, WATFORD</b>	<b>HERTFORDSHIRE</b>
	WATER LANE		
	TIMMS MEADOW		
	WATFORD		
	Total Gross floor area:	3780 sqm	
	Survey date: WEDNESDAY	13/03/02	Survey Type: MANUAL
<b>13</b>	<b>HF-06-A-03</b>	<b>NOVOTEL, STEVENAGE</b>	<b>HERTFORDSHIRE</b>
	A1(M)		
	KNEBWORTH PARK		
	STEVENAGE		
	Total Gross floor area:	5125 sqm	
	Survey date: THURSDAY	08/07/04	Survey Type: MANUAL
<b>14</b>	<b>KC-06-A-01</b>	<b>RAMADA HOTEL, NR MAIDSTONE</b>	<b>KENT</b>
	ASHFORD ROAD		
	HOLLINGBOURNE		
	NEAR MAIDSTONE		
	Total Gross floor area:	8250 sqm	
	Survey date: FRIDAY	14/06/02	Survey Type: MANUAL
<b>15</b>	<b>NF-06-A-01</b>	<b>HOTEL, NORWICH</b>	<b>NORFOLK</b>
	PALACE STREET		
	TOMBLANDS		
	NORWICH		
	Total Gross floor area:	3530 sqm	
	Survey date: WEDNESDAY	16/05/07	Survey Type: MANUAL
<b>16</b>	<b>NT-06-A-01</b>	<b>HOLIDAY INN, NOTTINGHAM</b>	<b>NOTTINGHAMSHIRE</b>
	CASTLE MARINA PARK		
	NOTTINGHAM		
	Total Gross floor area:	5000 sqm	
	Survey date: THURSDAY	25/04/02	Survey Type: MANUAL
<b>17</b>	<b>SC-06-A-04</b>	<b>HOTEL, NEAR REDHILL</b>	<b>SURREY</b>
	NUTFIELD ROAD		
	NUTFIELD		
	NEAR REDHILL		
	Total Gross floor area:	6000 sqm	
	Survey date: THURSDAY	10/05/01	Survey Type: MANUAL
<b>18</b>	<b>TV-06-A-01</b>	<b>HOTEL, MIDDLESBROUGH</b>	<b>TEES VALLEY</b>
	MARTON ROAD		
	MIDDLESBROUGH		
	Total Gross floor area:	2500 sqm	
	Survey date: FRIDAY	21/09/07	Survey Type: MANUAL
<b>19</b>	<b>TW-06-A-01</b>	<b>PREMIER TRAV. INN, NEWCASTLE</b>	<b>TYNE &amp; WEAR</b>
	CITY ROAD		
	QUAYSIDE		
	NEWCASTLE		
	Total Gross floor area:	3075 sqm	
	Survey date: TUESDAY	26/04/05	Survey Type: MANUAL
<b>20</b>	<b>WM-06-A-03</b>	<b>HOTEL, COVENTRY</b>	<b>WEST MIDLANDS</b>
	HOLYHEAD ROAD		
	COVENTRY		
	Total Gross floor area:	1700 sqm	
	Survey date: THURSDAY	27/09/07	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

21	WM-06-A-04	PURPLE HOTEL, BIRMINGHAM	WEST MIDLANDS
		CUCKOO ROAD	
		NECHELLS	
		BIRMINGHAM	
		Total Gross floor area:	3500 sqm
		Survey date: TUESDAY	25/11/08
22	WO-06-A-01	HILTON, NEAR BROMSGROVE	WORCESTERSHIRE
		BIRMINGHAM ROAD	
		UPPER CATSHILL	
		NEAR BROMSGROVE	
		Total Gross floor area:	9700 sqm
		Survey date: TUESDAY	28/05/02
23	WO-06-A-02	QUALITY HOTEL, REDDITCH	WORCESTERSHIRE
		POOLE BANK	
		SOUTHCREST	
		REDDITCH	
		Total Gross floor area:	4000 sqm
		Survey date: WEDNESDAY	26/03/03
24	WO-06-A-03	RAMADA HOTEL, BROMSGROVE	WORCESTERSHIRE
		KIDDERMINSTER ROAD	
		BROMSGROVE	
		Total Gross floor area:	4500 sqm
		Survey date: WEDNESDAY	30/04/03
25	WS-06-A-02	EXPRESS BY HOL. INN, CRAWLEY	WEST SUSSEX
		HASLETT AVENUE EAST	
		CRAWLEY	
		Total Gross floor area:	2350 sqm
		Survey date: WEDNESDAY	28/11/07
			Survey Type: MANUAL

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/A - HOTELS

## VEHICLES

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period**

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	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	3	7983	0.129	3	7983	0.100	3	7983	0.229
07:00 - 08:00	25	4624	0.188	25	4624	0.346	25	4624	0.534
08:00 - 09:00	25	4624	0.328	<b>25</b>	<b>4624</b>	<b>0.458</b>	<b>25</b>	<b>4624</b>	<b>0.786</b>
09:00 - 10:00	25	4624	0.287	25	4624	0.312	25	4624	0.599
10:00 - 11:00	25	4624	0.179	25	4624	0.191	25	4624	0.370
11:00 - 12:00	25	4624	0.188	25	4624	0.170	25	4624	0.358
12:00 - 13:00	25	4624	0.240	25	4624	0.203	25	4624	0.443
13:00 - 14:00	25	4624	0.196	25	4624	0.196	25	4624	0.392
14:00 - 15:00	25	4624	0.226	25	4624	0.250	25	4624	0.476
15:00 - 16:00	25	4624	0.229	25	4624	0.259	25	4624	0.488
16:00 - 17:00	25	4624	0.251	25	4624	0.253	25	4624	0.504
17:00 - 18:00	25	4624	0.388	25	4624	0.281	25	4624	0.669
18:00 - 19:00	<b>25</b>	<b>4624</b>	<b>0.396</b>	25	4624	0.241	25	4624	0.637
19:00 - 20:00	15	4622	0.384	15	4622	0.241	15	4622	0.625
20:00 - 21:00	15	4622	0.245	15	4622	0.175	15	4622	0.420
21:00 - 22:00	11	4612	0.156	11	4612	0.160	11	4612	0.316
22:00 - 23:00	3	6067	0.225	3	6067	0.297	3	6067	0.522
23:00 - 24:00	3	6067	0.066	3	6067	0.121	3	6067	0.187
Total Rates:			4.301			4.254			8.555

### Parameter summary

Trip rate parameter range selected:	926 - 11747 (units: sqm)
Survey date range:	01/01/01 - 25/11/08
Number of weekdays (Monday-Friday):	25
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	21

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE  
Category : C - LEISURE CENTRE  
**VEHICLES**

Selected regions and areas:

<b>02 SOUTH EAST</b>	
HC HAMPSHIRE	1 days
WS WEST SUSSEX	1 days
<b>03 SOUTH WEST</b>	
CW CORNWALL	1 days
DC DORSET	1 days
GS GLOUCESTERSHIRE	1 days
<b>05 EAST MIDLANDS</b>	
LN LINCOLNSHIRE	1 days
<b>06 WEST MIDLANDS</b>	
WM WEST MIDLANDS	1 days
WO WORCESTERSHIRE	1 days
<b>08 NORTH WEST</b>	
GM GREATER MANCHESTER	1 days
MS MERSEYSIDE	2 days
<b>09 NORTH</b>	
CB CUMBRIA	1 days

Filtering Stage 2 selection:

Parameter: Site area  
Range: 0.40 to 22.30 (units: hect)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 16/10/08

Selected survey days:

Monday	4 days
Tuesday	1 days
Wednesday	4 days
Thursday	2 days
Friday	1 days

Selected survey types:

Manual count	12 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	4
Edge of Town	6

Selected Location Sub Categories:

Residential Zone	4
Built-Up Zone	2
No Sub Category	6

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>CB-07-C-01</b>	<b>LEISURE CENTRE, WORKINGTON</b>	<b>CUMBRIA</b>
		NEWLANDS LANE SOUTH MOORCLOSE WORKINGTON Total Site area: 2.30 hect Survey date: WEDNESDAY 22/06/05	Survey Type: MANUAL
<b>2</b>	<b>CW-07-C-01</b>	<b>LEISURE CENTRE, ST AUSTELL</b>	<b>CORNWALL</b>
		CARLYON ROAD  ST AUSTELL Total Site area: 0.55 hect Survey date: WEDNESDAY 19/09/07	Survey Type: MANUAL
<b>3</b>	<b>DC-07-C-06</b>	<b>LEISURE CEN., BLANDFORD</b>	<b>DORSET</b>
		MILLDOWN ROAD  BLANDFORD FORUM Total Site area: 3.50 hect Survey date: MONDAY 07/07/08	Survey Type: MANUAL
<b>4</b>	<b>GM-07-C-04</b>	<b>LEISURE CENTRE, SALE</b>	<b>GREATER MANCHESTER</b>
		BROAD ROAD  SALE Total Site area: 0.60 hect Survey date: TUESDAY 25/05/04	Survey Type: MANUAL
<b>5</b>	<b>GS-07-C-01</b>	<b>LEISURE CENTRE, GLOUCESTER</b>	<b>GLOUCESTERSHIRE</b>
		BRUTON WAY  GLOUCESTER Total Site area: 0.83 hect Survey date: MONDAY 24/05/04	Survey Type: MANUAL
<b>6</b>	<b>HC-07-C-06</b>	<b>LEISURE CENTRE, SOUTHAMPTON</b>	<b>HAMPSHIRE</b>
		WESTON LANE WESTON SOUTHAMPTON Total Site area: 2.06 hect Survey date: MONDAY 19/11/07	Survey Type: MANUAL
<b>7</b>	<b>LN-07-C-01</b>	<b>LEISURE CENTRE, LINCOLN</b>	<b>LINCOLNSHIRE</b>
		BIRCHWOOD AVENUE BIRCHWOOD LINCOLN Total Site area: 5.00 hect Survey date: MONDAY 14/05/07	Survey Type: MANUAL
<b>8</b>	<b>MS-07-C-01</b>	<b>LEISURE CENTRE, HUYTON</b>	<b>MERSEYSIDE</b>
		ROBY ROAD  HUYTON-WITH-ROBY Total Site area: 1.08 hect Survey date: THURSDAY 20/10/05	Survey Type: MANUAL
<b>9</b>	<b>MS-07-C-02</b>	<b>LEISURE CENTRE, LIVERPOOL</b>	<b>MERSEYSIDE</b>
		BAILEYS LANE HALEWOOD LIVERPOOL Total Site area: 1.50 hect Survey date: WEDNESDAY 27/06/07	Survey Type: MANUAL
<b>10</b>	<b>WM-07-C-01</b>	<b>LEISURE CENTRE, COVENTRY</b>	<b>WEST MIDLANDS</b>
		LIVINGSTONE ROAD  COVENTRY Total Site area: 0.40 hect Survey date: THURSDAY 02/02/06	Survey Type: MANUAL



LIST OF SITES relevant to selection parameters (Cont.)

<b>11</b>	<b>WO-07-C-02</b>	<b>LEISURE CENTRE, DROITWICH</b>	<b>WORCESTERSHIRE</b>
		BRIAR MILL	
		WYCHAVON	
		DROITWICH SPA	
		Total Site area:	4.50 hect
		Survey date: FRIDAY	01/07/05
<b>12</b>	<b>WS-07-C-04</b>	<b>LEISURE CENTRE, CRAWLEY</b>	<b>WEST SUSSEX</b>
		PEASE POTTAGE HILL	
		TILGATE	
		CRAWLEY	
		Total Site area:	6.90 hect
		Survey date: WEDNESDAY	28/11/07
			Survey Type: MANUAL

TRIP RATE for Land Use 07 - LEISURE/C - LEISURE CENTRE

## VEHICLES

**Calculation factor: 1 hect**

**BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate
00:00 - 01:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
01:00 - 02:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
02:00 - 03:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
03:00 - 04:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
04:00 - 05:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
05:00 - 06:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
06:00 - 07:00	3	3.97	4.538	3	3.97	0.336	3	3.97	4.874
07:00 - 08:00	10	2.38	13.182	10	2.38	4.114	10	2.38	17.296
08:00 - 09:00	10	2.38	14.358	10	2.38	11.545	10	2.38	25.903
09:00 - 10:00	10	2.38	20.991	10	2.38	10.831	10	2.38	31.822
10:00 - 11:00	12	2.44	11.875	12	2.44	11.841	12	2.44	23.716
11:00 - 12:00	12	2.44	10.130	12	2.44	12.697	12	2.44	22.827
12:00 - 13:00	12	2.44	11.362	12	2.44	10.849	12	2.44	22.211
13:00 - 14:00	12	2.44	13.415	12	2.44	13.210	12	2.44	26.625
14:00 - 15:00	12	2.44	10.746	12	2.44	12.183	12	2.44	22.929
15:00 - 16:00	12	2.44	17.967	12	2.44	13.997	12	2.44	31.964
16:00 - 17:00	12	2.44	24.093	12	2.44	18.207	12	2.44	42.300
17:00 - 18:00	12	2.44	36.516	12	2.44	26.420	12	2.44	62.936
18:00 - 19:00	<b>12</b>	<b>2.44</b>	<b>40.075</b>	12	2.44	33.402	<b>12</b>	<b>2.44</b>	<b>73.477</b>
19:00 - 20:00	12	2.44	35.147	<b>12</b>	<b>2.44</b>	<b>37.714</b>	12	2.44	72.861
20:00 - 21:00	12	2.44	16.153	12	2.44	32.341	12	2.44	48.494
21:00 - 22:00	12	2.44	3.867	12	2.44	22.724	12	2.44	26.591
22:00 - 23:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
23:00 - 24:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
Total Rates:			284.415			272.411			556.826

### Parameter summary

Trip rate parameter range selected:	0.40 to 22.30 (units: hect)
Survey date range:	01/01/01 - 16/10/08
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	6

# **TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 01 - RETAIL  
Category : I - SHOPPING CENTRE - LOCAL SHOPS

## **VEHICLES**

### Selected regions and areas:

<b>02 SOUTH EAST</b>		
EX	ESSEX	1 days
HC	HAMPSHIRE	1 days
WS	WEST SUSSEX	1 days
<b>03 SOUTH WEST</b>		
DC	DORSET	1 days
SG	SOUTH GLOUCESTERSHIRE	1 days
<b>05 EAST MIDLANDS</b>		
DS	DERBYSHIRE	1 days
NR	NORTHAMPTONSHIRE	1 days
<b>06 WEST MIDLANDS</b>		
WM	WEST MIDLANDS	2 days
WO	WORCESTERSHIRE	1 days
<b>07 YORKSHIRE &amp; NORTH LINCOLNSHIRE</b>		
NY	NORTH YORKSHIRE	1 days
<b>08 NORTH WEST</b>		
CH	CHESHIRE	1 days
MS	MERSEYSIDE	1 days
<b>09 NORTH</b>		
TW	TYNE & WEAR	1 days

### **Filtering Stage 2 selection:**

Parameter: Gross floor area  
Range: 210 to 84009 (units: sqm)

### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 19/11/08

### Selected survey days:

Tuesday	4 days
Wednesday	3 days
Thursday	2 days
Friday	5 days

### Selected survey types:

Manual count	14 days
Directional ATC Count	0 days

### Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	9

### Selected Location Sub Categories:

Commercial Zone	1
Residential Zone	13

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>CH-01-I-01</b>	<b>LOCAL SHOPS, CHESTER</b>	<b>CHESHIRE</b>
		CHRISTLETON ROAD	
		CHESTER	
		Total Gross floor area: 210 sqm	
		Survey date: FRIDAY 17/10/08	Survey Type: MANUAL
<b>2</b>	<b>DC-01-I-03</b>	<b>LOCAL SHOPS, CHRISTCHURCH</b>	<b>DORSET</b>
		MARLOW DRIVE	
		ST CATHERINES HILL	
		CHRISTCHURCH	
		Total Gross floor area: 906 sqm	
		Survey date: FRIDAY 18/05/01	Survey Type: MANUAL
<b>3</b>	<b>DS-01-I-01</b>	<b>LOCAL SHOPS, DRONFIELD</b>	<b>DERBYSHIRE</b>
		STONELOW ROAD	
		HOLMESDALE	
		DRONFIELD	
		Total Gross floor area: 1130 sqm	
		Survey date: WEDNESDAY 21/06/06	Survey Type: MANUAL
<b>4</b>	<b>EX-01-I-01</b>	<b>LOCAL SHOPS, LOUGHTON</b>	<b>ESSEX</b>
		PYRLES LANE	
		LOUGHTON	
		Total Gross floor area: 650 sqm	
		Survey date: THURSDAY 22/11/07	Survey Type: MANUAL
<b>5</b>	<b>HC-01-I-02</b>	<b>LOCAL SHOPS, WINCHESTER</b>	<b>HAMPSHIRE</b>
		OLIVER'S BATTERY ROAD S.	
		OLIVERS BATTERY	
		WINCHESTER	
		Total Gross floor area: 1605 sqm	
		Survey date: TUESDAY 20/11/07	Survey Type: MANUAL
<b>6</b>	<b>MS-01-I-01</b>	<b>LOCAL SHOPS, LIVERPOOL</b>	<b>MERSEYSIDE</b>
		HUNTS CROSS AVENUE	
		LIVERPOOL	
		Total Gross floor area: 1890 sqm	
		Survey date: TUESDAY 18/10/05	Survey Type: MANUAL
<b>7</b>	<b>NR-01-I-01</b>	<b>LOCAL SHOPS, CORBY</b>	<b>NORTHAMPTONSHIRE</b>
		OCCUPATION ROAD	
		CORBY	
		Total Gross floor area: 755 sqm	
		Survey date: WEDNESDAY 19/11/08	Survey Type: MANUAL
<b>8</b>	<b>NY-01-I-01</b>	<b>LOCAL SHOPS, SCARBOROUGH</b>	<b>NORTH YORKSHIRE</b>
		NEWLANDS PARK DRIVE	
		SCARBOROUGH	
		Total Gross floor area: 1200 sqm	
		Survey date: FRIDAY 28/09/07	Survey Type: MANUAL
<b>9</b>	<b>SG-01-I-01</b>	<b>LOCAL SHOPS, BRISTOL</b>	<b>SOUTH GLOUCESTERSHIRE</b>
		BURLEY GROVE	
		KINGSWOOD	
		BRISTOL	
		Total Gross floor area: 240 sqm	
		Survey date: FRIDAY 06/10/06	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

10	<b>TW-01-I-01</b>	<b>LOCAL SHOPS, NORTH SHIELDS</b>	<b>TYNE &amp; WEAR</b>
	FARRINGDON ROAD		
	MARDEN		
	NORTH SHIELDS		
	Total Gross floor area:	850 sqm	
	Survey date: TUESDAY	17/10/06	Survey Type: MANUAL
11	<b>WM-01-I-01</b>	<b>LOCAL SHOPS, COVENTRY</b>	<b>WEST MIDLANDS</b>
	HOLYHEAD ROAD		
	COVENTRY		
	Total Gross floor area:	1550 sqm	
	Survey date: THURSDAY	27/09/07	Survey Type: MANUAL
12	<b>WM-01-I-02</b>	<b>LOCAL SHOPS, SOLIHULL</b>	<b>WEST MIDLANDS</b>
	MARSHALL LAKE ROAD		
	SHIRLEY		
	SOLIHULL		
	Total Gross floor area:	515 sqm	
	Survey date: TUESDAY	18/09/07	Survey Type: MANUAL
13	<b>WO-01-I-01</b>	<b>LOCAL SHOPS, WORCESTER</b>	<b>WORCESTERSHIRE</b>
	AMBLESIDE DRIVE		
	WARNDON		
	WORCESTER		
	Total Gross floor area:	599 sqm	
	Survey date: FRIDAY	15/03/02	Survey Type: MANUAL
14	<b>WS-01-I-01</b>	<b>LOCAL SHOPS, CRAWLEY</b>	<b>WEST SUSSEX</b>
	TILGATE PARADE		
	TILGATE		
	CRAWLEY		
	Total Gross floor area:	2461 sqm	
	Survey date: WEDNESDAY	17/10/01	Survey Type: MANUAL

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

## VEHICLES

**Calculation factor: 100 sqm**

**BOLD print indicates peak (busiest) period**

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	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	14	1040	3.709	14	1040	3.351	14	1040	7.060
08:00 - 09:00	14	1040	5.144	14	1040	4.828	14	1040	9.972
09:00 - 10:00	14	1040	5.625	14	1040	5.185	14	1040	10.810
10:00 - 11:00	14	1040	5.501	14	1040	5.583	14	1040	11.084
11:00 - 12:00	14	1040	5.501	14	1040	5.391	14	1040	10.892
12:00 - 13:00	<b>14</b>	<b>1040</b>	<b>6.511</b>	<b>14</b>	<b>1040</b>	<b>6.428</b>	<b>14</b>	<b>1040</b>	<b>12.939</b>
13:00 - 14:00	14	1040	5.508	14	1040	5.700	14	1040	11.208
14:00 - 15:00	14	1040	5.439	14	1040	5.535	14	1040	10.974
15:00 - 16:00	14	1040	5.645	14	1040	5.659	14	1040	11.304
16:00 - 17:00	14	1040	5.954	14	1040	6.016	14	1040	11.970
17:00 - 18:00	14	1040	6.112	14	1040	6.401	14	1040	12.513
18:00 - 19:00	14	1040	5.487	14	1040	5.508	14	1040	10.995
19:00 - 20:00	12	958	3.035	12	958	3.374	12	958	6.409
20:00 - 21:00	8	960	1.707	8	960	1.889	8	960	3.596
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			70.878			70.848			141.726

## Parameter summary

Trip rate parameter range selected:	210 - 84009 (units: sqm)
Survey date range:	01/01/01 - 19/11/08
Number of weekdays (Monday-Friday):	14
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

# TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION

Category : A - PRIMARY

## VEHICLES

### Selected regions and areas:

<b>02 SOUTH EAST</b>		
HC HAMPSHIRE		1 days
<b>03 SOUTH WEST</b>		
DV DEVON		1 days
<b>04 EAST ANGLIA</b>		
CA CAMBRIDGESHIRE		1 days
SF SUFFOLK		2 days
<b>05 EAST MIDLANDS</b>		
NR NORTHAMPTONSHIRE		2 days
NT NOTTINGHAMSHIRE		1 days
<b>06 WEST MIDLANDS</b>		
WO WORCESTERSHIRE		1 days
<b>07 YORKSHIRE &amp; NORTH LINCOLNSHIRE</b>		
NY NORTH YORKSHIRE		2 days
<b>08 NORTH WEST</b>		
MS MERSEYSIDE		1 days

### Filtering Stage 2 selection:

Parameter: Gross floor area  
Range: 677 to 4000 (units: sqm)

### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 26/11/08

### Selected survey days:

Monday	2 days
Tuesday	3 days
Wednesday	3 days
Thursday	2 days
Friday	2 days

### Selected survey types:

Manual count	12 days
Directional ATC Count	0 days

### Selected Locations:

Suburban Area (PPS6 Out of Centre)	6
Edge of Town	4
Neighbourhood Centre (PPS6 Local Centre)	2

### Selected Location Sub Categories:

Residential Zone	8
Village	2
No Sub Category	2



LIST OF SITES relevant to selection parameters

<b>1</b>	<b>CA-04-A-01</b>	<b>PRIMARY SCHOOL, ST NEOTS</b>	<b>CAMBRIDGESHIRE</b>
	LONGSANDS ROAD		
	ST NEOTS		
	Total Gross floor area:	2375 sqm	
	Survey date: THURSDAY	06/03/03	Survey Type: MANUAL
<b>2</b>	<b>DV-04-A-03</b>	<b>PRIMARY SCHOOL, PLYMOUTH</b>	<b>DEVON</b>
	ARDEN GROVE		
	PENNYCROSS		
	PLYMOUTH		
	Total Gross floor area:	1245 sqm	
	Survey date: FRIDAY	08/07/05	Survey Type: MANUAL
<b>3</b>	<b>HC-04-A-04</b>	<b>PRIMARY SCHOOL, WINCHESTER</b>	<b>HAMPSHIRE</b>
	AUSTEN AVENUE		
	WINCHESTER		
	Total Gross floor area:	1450 sqm	
	Survey date: TUESDAY	20/11/07	Survey Type: MANUAL
<b>4</b>	<b>MS-04-A-01</b>	<b>RC PRIMARY SCHOOL, ST HELENS</b>	<b>MERSEYSIDE</b>
	DERWENT ROAD		
	ST HELENS		
	Total Gross floor area:	1260 sqm	
	Survey date: THURSDAY	05/10/06	Survey Type: MANUAL
<b>5</b>	<b>NR-04-A-01</b>	<b>PRIMARY SCH., NORTHAMPTON</b>	<b>NORTHAMPTONSHIRE</b>
	GRANGE ROAD		
	EASTFIELD PARK		
	NORTHAMPTON		
	Total Gross floor area:	2106 sqm	
	Survey date: WEDNESDAY	23/05/07	Survey Type: MANUAL
<b>6</b>	<b>NR-04-A-02</b>	<b>PRIMARY SCHOOL, N'HAMTON</b>	<b>NORTHAMPTONSHIRE</b>
	DAYRELL ROAD		
	NORTHAMPTON		
	Total Gross floor area:	1800 sqm	
	Survey date: WEDNESDAY	26/11/08	Survey Type: MANUAL
<b>7</b>	<b>NT-04-A-01</b>	<b>PRIMARY SCHOOL, NR MANSFIELD</b>	<b>NOTTINGHAMSHIRE</b>
	SCHOOL LANE		
	CUCKNEY		
	NEAR MANSFIELD		
	Total Gross floor area:	1000 sqm	
	Survey date: MONDAY	19/06/06	Survey Type: MANUAL
<b>8</b>	<b>NY-04-A-01</b>	<b>PRIMARY SCHOOL, TADCASTER</b>	<b>NORTH YORKSHIRE</b>
	GRANGE AVENUE		
	TADCASTER		
	Total Gross floor area:	913 sqm	
	Survey date: TUESDAY	10/05/05	Survey Type: MANUAL
<b>9</b>	<b>NY-04-A-03</b>	<b>PRIMARY SCHOOL, NR. SALTBURN</b>	<b>NORTH YORKSHIRE</b>
	DAVISON STREET		
	LINGDALE		
	NR. SALTBURN-BY-THE-SEA		
	Total Gross floor area:	1400 sqm	
	Survey date: TUESDAY	11/09/07	Survey Type: MANUAL
<b>10</b>	<b>SF-04-A-01</b>	<b>PRIMARY SCHOOL, IPSWICH</b>	<b>SUFFOLK</b>
	BELL LANE		
	KESGRAVE		
	IPSWICH		
	Total Gross floor area:	2750 sqm	
	Survey date: FRIDAY	10/10/03	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

<b>11</b>	<b>SF-04-A-02</b>	<b>PRIMARY SCHOOL, IPSWICH</b>	<b>SUFFOLK</b>
		SIDEGATE LANE	
		IPSWICH	
		Total Gross floor area: 4000 sqm	
		Survey date: WEDNESDAY 21/05/08	Survey Type: MANUAL
<b>12</b>	<b>WO-04-A-01</b>	<b>PRIMARY SCHOOL, DROITWICH</b>	<b>WORCESTERSHIRE</b>
		ST PETERS CHURCH LANE	
		DROITWICH SPA	
		Total Gross floor area: 1900 sqm	
		Survey date: MONDAY 13/06/05	Survey Type: MANUAL

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY

## VEHICLES

**Calculation factor: 100 sqm**

**BOLD print indicates peak (busiest) period**

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	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	12	1850	0.423	12	1850	0.140	12	1850	0.563
08:00 - 09:00	<b>12</b>	<b>1850</b>	<b>4.915</b>	12	1850	3.491	<b>12</b>	<b>1850</b>	<b>8.406</b>
09:00 - 10:00	12	1850	0.333	12	1850	0.734	12	1850	1.067
10:00 - 11:00	12	1850	0.221	12	1850	0.221	12	1850	0.442
11:00 - 12:00	12	1850	0.450	12	1850	0.315	12	1850	0.765
12:00 - 13:00	12	1850	0.441	12	1850	0.626	12	1850	1.067
13:00 - 14:00	12	1850	0.338	12	1850	0.378	12	1850	0.716
14:00 - 15:00	12	1850	0.613	12	1850	0.207	12	1850	0.820
15:00 - 16:00	12	1850	3.077	<b>12</b>	<b>1850</b>	<b>3.739</b>	12	1850	6.816
16:00 - 17:00	12	1850	0.541	12	1850	1.045	12	1850	1.586
17:00 - 18:00	12	1850	0.279	12	1850	0.545	12	1850	0.824
18:00 - 19:00	8	1754	0.285	8	1754	0.249	8	1754	0.534
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
<b>Total Rates:</b>			<b>11.916</b>			<b>11.690</b>			<b>23.606</b>

## Parameter summary

Trip rate parameter range selected:	677 - 4000 (units: sqm)
Survey date range:	01/01/01 - 26/11/08
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	7

**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Category : B - RESTAURANTS

## VEHICLES

*Selected regions and areas:*

WM WEST MIDLANDS

3 days

## 08 NORTH WEST

GM GREATER MANCHESTER

1 days

MS MERSEYSIDE

1 days

**Filtering Stage 2 selection:**

Range: 150 to 1200 (units: sqm)

Public Transport Provision:

Selection by:  Include all surveys

Date Range: 01/01/01 to 28/11/08

*Selected survey days:*

Friday 5 days

Selected survey types:

<u>Selected Survey Types:</u>	
Manual count	5 days

Directional ATC Count	0 days
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*Selected Locations:*

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Edge of Town Centre	1
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Suburban Area (PPS6 Out of Centre)	1
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Edge of Town 3

Selected Location Sub Categories:

Development Zone	1
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No Sub Category	4
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LIST OF SITES relevant to selection parameters

1	<b>GM-06-B-02</b>	<b>T.G.I FRIDAY'S, SALE</b>	<b>GREATER MANCHESTER</b>
	CROSS STREET		
	SALE		
	Total Gross floor area:	615 sqm	
	Survey date: FRIDAY	28/05/04	Survey Type: MANUAL
2	<b>MS-06-B-01</b>	<b>INDIAN RESTAURANT, LIVERPOOL</b>	<b>MERSEYSIDE</b>
	GOWER STREET		
	ALBERT DOCK		
	LIVERPOOL		
	Total Gross floor area:	600 sqm	
	Survey date: FRIDAY	22/06/07	Survey Type: MANUAL
3	<b>WM-06-B-01</b>	<b>JEFFERSONS RES., SOLIHULL</b>	<b>WEST MIDLANDS</b>
	A34 STRATFORD ROAD		
	MONKSPATH		
	SOLIHULL		
	Total Gross floor area:	1200 sqm	
	Survey date: FRIDAY	26/01/01	Survey Type: MANUAL
4	<b>WM-06-B-02</b>	<b>T.G.I. FRIDAY'S, BIRMINGHAM</b>	<b>WEST MIDLANDS</b>
	A456 HAGLEY ROAD		
	EDGBASTON		
	BIRMINGHAM		
	Total Gross floor area:	1000 sqm	
	Survey date: FRIDAY	09/03/01	Survey Type: MANUAL
5	<b>WM-06-B-03</b>	<b>RESTAURANT, SOLIHULL</b>	<b>WEST MIDLANDS</b>
	A34 STRATFORD ROAD		
	SHIRLEY		
	SOLIHULL		
	Total Gross floor area:	680 sqm	
	Survey date: FRIDAY	20/07/01	Survey Type: MANUAL

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS

## VEHICLES

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period**

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	1	1200	0.250	1	1200	1.750	1	1200	2.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	0	0	0.000	0	0	0.000	0	0	0.000
08:00 - 09:00	0	0	0.000	0	0	0.000	0	0	0.000
09:00 - 10:00	0	0	0.000	0	0	0.000	0	0	0.000
10:00 - 11:00	2	608	0.823	2	608	0.823	2	608	1.646
11:00 - 12:00	5	819	0.635	5	819	0.293	5	819	0.928
12:00 - 13:00	5	819	1.685	5	819	0.586	5	819	2.271
13:00 - 14:00	5	819	1.612	5	819	1.612	5	819	3.224
14:00 - 15:00	5	819	0.977	5	819	1.392	5	819	2.369
15:00 - 16:00	5	819	1.758	5	819	1.612	5	819	3.370
16:00 - 17:00	5	819	1.563	5	819	1.221	5	819	2.784
17:00 - 18:00	5	819	2.491	5	819	1.514	5	819	4.005
18:00 - 19:00	<b>5</b>	<b>819</b>	<b>5.201</b>	5	819	2.369	5	819	7.570
19:00 - 20:00	5	819	4.005	5	819	2.637	5	819	6.642
20:00 - 21:00	5	819	5.031	<b>5</b>	<b>819</b>	<b>4.225</b>	<b>5</b>	<b>819</b>	<b>9.256</b>
21:00 - 22:00	5	819	3.101	5	819	4.151	5	819	7.252
22:00 - 23:00	5	819	1.026	5	819	3.932	5	819	4.958
23:00 - 24:00	5	819	0.635	5	819	3.175	5	819	3.810
Total Rates:			30.793				31.292	62.085	

## Parameter summary

Trip rate parameter range selected:	150 - 1200 (units: sqm)
Survey date range:	01/01/01 - 28/11/08
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	10

# **TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 04 - EDUCATION  
 Category : B - SECONDARY

## **VEHICLES**

### Selected regions and areas:

<b>02 SOUTH EAST</b>	
EX ESSEX	1 days
HC HAMPSHIRE	4 days
OX OXFORDSHIRE	1 days
WS WEST SUSSEX	1 days
<b>03 SOUTH WEST</b>	
DC DORSET	2 days
<b>05 EAST MIDLANDS</b>	
LE LEICESTERSHIRE	1 days
LN LINCOLNSHIRE	1 days
NR NORTHAMPTONSHIRE	2 days
<b>06 WEST MIDLANDS</b>	
ST STAFFORDSHIRE	1 days
WM WEST MIDLANDS	1 days
WO WORCESTERSHIRE	1 days
<b>07 YORKSHIRE &amp; NORTH LINCOLNSHIRE</b>	
KH KINGSTON UPON HULL	1 days
NY NORTH YORKSHIRE	1 days
WY WEST YORKSHIRE	1 days
<b>08 NORTH WEST</b>	
CH CHESHIRE	1 days
<b>09 NORTH</b>	
CB CUMBRIA	1 days

### **Filtering Stage 2 selection:**

Parameter: Gross floor area  
 Range: 4000 to 17500 (units: sqm)

### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 20/11/08

### Selected survey days:

Monday	1 days
Tuesday	5 days
Wednesday	8 days
Thursday	7 days

### Selected survey types:

Manual count	21 days
Directional ATC Count	0 days

### Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	8
Edge of Town	6
Neighbourhood Centre (PPS6 Local Centre)	4
Free Standing (PPS6 Out of Town)	1

### Selected Location Sub Categories:

Residential Zone	7
Village	1
Out of Town	1
No Sub Category	12



LIST OF SITES relevant to selection parameters

<b>1</b>	<b>CB-04-B-01</b>	<b>SECONDARY SCH., WORKINGTON</b>	<b>CUMBRIA</b>
		STAINBURN ROAD	
		WORKINGTON	
		Total Gross floor area: 8450 sqm	
		Survey date: TUESDAY 21/06/05	Survey Type: MANUAL
<b>2</b>	<b>CH-04-B-01</b>	<b>SECONDARY SCHOOL, CHESTER</b>	<b>CHESHIRE</b>
		VILLAGE ROAD	
		CHRISTLETON	
		CHESTER	
		Total Gross floor area: 12400 sqm	
		Survey date: WEDNESDAY 15/10/08	Survey Type: MANUAL
<b>3</b>	<b>DC-04-B-03</b>	<b>SECONDARY SCHOOL, PORTLAND</b>	<b>DORSET</b>
		WESTON ROAD	
		WESTON	
		PORTLAND	
		Total Gross floor area: 7955 sqm	
		Survey date: WEDNESDAY 19/09/01	Survey Type: MANUAL
<b>4</b>	<b>DC-04-B-04</b>	<b>SECONDARY SCH., SHERBORNE</b>	<b>DORSET</b>
		BRISTOL ROAD	
		SHERBORNE	
		Total Gross floor area: 10272 sqm	
		Survey date: TUESDAY 02/10/01	Survey Type: MANUAL
<b>5</b>	<b>EX-04-B-01</b>	<b>SECONDARY SCH., COLCHESTER</b>	<b>ESSEX</b>
		SHEEPEN ROAD	
		COLCHESTER	
		Total Gross floor area: 9304 sqm	
		Survey date: THURSDAY 29/03/01	Survey Type: MANUAL
<b>6</b>	<b>HC-04-B-04</b>	<b>SECONDARY SCHOOL, ANDOVER</b>	<b>HAMPSHIRE</b>
		CROYE CLOSE	
		ANDOVER	
		Total Gross floor area: 8224 sqm	
		Survey date: THURSDAY 03/05/01	Survey Type: MANUAL
<b>7</b>	<b>HC-04-B-05</b>	<b>SECONDARY SCHOOL, ALTON</b>	<b>HAMPSHIRE</b>
		LONDON ROAD	
		HOLYBOURNE	
		ALTON	
		Total Gross floor area: 5600 sqm	
		Survey date: TUESDAY 12/11/02	Survey Type: MANUAL
<b>8</b>	<b>HC-04-B-06</b>	<b>SECONDARY SCH., HORNDEAN</b>	<b>HAMPSHIRE</b>
		BARTON CROSS	
		HORNDEAN	
		WATERLOOVILLE	
		Total Gross floor area: 13882 sqm	
		Survey date: TUESDAY 12/11/02	Survey Type: MANUAL
<b>9</b>	<b>HC-04-B-07</b>	<b>SECONDARY SCH., ALRESFORD</b>	<b>HAMPSHIRE</b>
		POUND HILL	
		NEW ALRESFORD	
		Total Gross floor area: 8200 sqm	
		Survey date: THURSDAY 14/11/02	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

<b>10</b>	<b>KH-04-B-01</b>	<b>PRIVATE COLLEGE, HULL</b>	<b>KINGSTON UPON HULL</b>
	HYMERS AVENUE		
	HULL		
	Total Gross floor area:	5801 sqm	
	Survey date: MONDAY	15/10/01	Survey Type: MANUAL
<b>11</b>	<b>LE-04-B-01</b>	<b>GRAMMAR SCH., LUTTERWORTH</b>	<b>LEICESTERSHIRE</b>
	BITTESWELL ROAD		
	LUTTERWORTH		
	Total Gross floor area:	13829 sqm	
	Survey date: TUESDAY	30/01/01	Survey Type: MANUAL
<b>12</b>	<b>LN-04-B-01</b>	<b>SECONDARY SCHOOL, LINCOLN</b>	<b>LINCOLNSHIRE</b>
	WRAGBY ROAD		
	GLEBE		
	LINCOLN		
	Total Gross floor area:	12496 sqm	
	Survey date: THURSDAY	12/09/02	Survey Type: MANUAL
<b>13</b>	<b>NR-04-B-01</b>	<b>SECONDARY SCH., N.HAMPTON</b>	<b>NORTHAMPTONSHIRE</b>
	BECKETT WAY		
	NORTHAMPTON		
	Total Gross floor area:	6950 sqm	
	Survey date: WEDNESDAY	23/05/07	Survey Type: MANUAL
<b>14</b>	<b>NR-04-B-02</b>	<b>SECONDARY SCH., N'HAMPTON</b>	<b>NORTHAMPTONSHIRE</b>
	NEWPORT PAGNELL ROAD		
	HARDINGSTONE		
	NORTHAMPTON		
	Total Gross floor area:	13900 sqm	
	Survey date: THURSDAY	20/11/08	Survey Type: MANUAL
<b>15</b>	<b>NY-04-B-01</b>	<b>SECONDARY SCH.,NR HARROGATE</b>	<b>NORTH YORKSHIRE</b>
	LOW WATH ROAD		
	PATELEY BRIDGE		
	NEAR HARROGATE		
	Total Gross floor area:	4200 sqm	
	Survey date: WEDNESDAY	10/09/08	Survey Type: MANUAL
<b>16</b>	<b>OX-04-B-01</b>	<b>SECONDARY SCHOOL, OXFORD</b>	<b>OXFORDSHIRE</b>
	MARSTON FERRY ROAD		
	SUMMERTOWN		
	OXFORD		
	Total Gross floor area:	6040 sqm	
	Survey date: THURSDAY	03/10/02	Survey Type: MANUAL
<b>17</b>	<b>ST-04-B-01</b>	<b>SECONDARY SCHOOL, STOKE</b>	<b>STAFFORDSHIRE</b>
	SANDON ROAD		
	LIGHTWOOD		
	STOKE-ON-TRENT		
	Total Gross floor area:	8970 sqm	
	Survey date: THURSDAY	14/11/02	Survey Type: MANUAL
<b>18</b>	<b>WM-04-B-02</b>	<b>SECONDARY SCH., BIRMINGHAM</b>	<b>WEST MIDLANDS</b>
	PHILIPS STREET		
	ASTON		
	BIRMINGHAM		
	Total Gross floor area:	4000 sqm	
	Survey date: WEDNESDAY	26/09/07	Survey Type: MANUAL
<b>19</b>	<b>WO-04-B-01</b>	<b>SECONDARY SCH., STOURPORT</b>	<b>WORCESTERSHIRE</b>
	MINSTER ROAD		
	STOURPORT-ON-SEVERN		
	Total Gross floor area:	11875 sqm	
	Survey date: WEDNESDAY	03/05/06	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

<b>20</b>	<b>WS-04-B-02</b>	<b>SECONDARY SCHOOL, CRAWLEY</b>	<b>WEST SUSSEX</b>
	ASHDOWN DRIVE		
	TILGATE		
	CRAWLEY		
	Total Gross floor area:	12954 sqm	
	Survey date: WEDNESDAY	28/11/07	Survey Type: MANUAL
<b>21</b>	<b>WY-04-B-01</b>	<b>SECONDARY SCHOOL, LEEDS</b>	<b>WEST YORKSHIRE</b>
	ELLERBY ROAD		
	LEEDS		
	Total Gross floor area:	15000 sqm	
	Survey date: WEDNESDAY	26/09/07	Survey Type: MANUAL

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY

### VEHICLES

**Calculation factor: 100 sqm**

**BOLD print indicates peak (busiest) period**

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	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	20	9324	0.343	20	9324	0.079	20	9324	0.422
08:00 - 09:00	<b>21</b>	<b>9538</b>	<b>1.862</b>	<b>21</b>	<b>9538</b>	<b>1.255</b>	<b>21</b>	<b>9538</b>	<b>3.117</b>
09:00 - 10:00	21	9538	0.227	21	9538	0.171	21	9538	0.398
10:00 - 11:00	21	9538	0.123	21	9538	0.110	21	9538	0.233
11:00 - 12:00	21	9538	0.143	21	9538	0.135	21	9538	0.278
12:00 - 13:00	21	9538	0.155	21	9538	0.193	21	9538	0.348
13:00 - 14:00	21	9538	0.193	21	9538	0.181	21	9538	0.374
14:00 - 15:00	21	9538	0.214	21	9538	0.246	21	9538	0.460
15:00 - 16:00	21	9538	0.855	21	9538	1.055	21	9538	1.910
16:00 - 17:00	20	9605	0.336	20	9605	0.660	20	9605	0.996
17:00 - 18:00	19	9458	0.220	19	9458	0.366	19	9458	0.586
18:00 - 19:00	19	9458	0.203	19	9458	0.181	19	9458	0.384
19:00 - 20:00	3	13201	0.235	3	13201	0.159	3	13201	0.394
20:00 - 21:00	3	13201	0.109	3	13201	0.184	3	13201	0.293
21:00 - 22:00	3	13201	0.028	3	13201	0.316	3	13201	0.344
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
<b>Total Rates:</b>			<b>5.246</b>			<b>5.291</b>			<b>10.537</b>

### Parameter summary

Trip rate parameter range selected:	4000 - 17500 (units: sqm)
Survey date range:	01/01/01 - 20/11/08
Number of weekdays (Monday-Friday):	21
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	4

# **TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 06 - HOTEL, FOOD & DRINK  
 Category : G - TAKE-AWAY SHOPS (eg. fish bars etc)

## **VEHICLES**

### Selected regions and areas:

<b>05</b>	<b>EAST MIDLANDS</b>	
	NR NORTHAMPTONSHIRE	1 days
<b>06</b>	<b>WEST MIDLANDS</b>	
	WM WEST MIDLANDS	1 days
<b>08</b>	<b>NORTH WEST</b>	
	CH CHESHIRE	2 days

## **Filtering Stage 2 selection:**

Parameter: Gross floor area  
 Range: 30 to 100 (units: sqm)

### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 28/11/08

### Selected survey days:

Wednesday	1 days
Friday	3 days

### Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

### Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	1
Neighbourhood Centre (PPS6 Local Centre)	2

### Selected Location Sub Categories:

Residential Zone	2
Retail Zone	1
Village	1

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>CH-06-G-01</b>	<b>FISH AND CHIPS, CREWE</b>	<b>CHESHIRE</b>
	EARLE STREET		
	CREWE		
	Total Gross floor area:	45 sqm	
	Survey date: FRIDAY	17/10/08	Survey Type: MANUAL
<b>2</b>	<b>CH-06-G-02</b>	<b>CHINESE, NR CREWE</b>	<b>CHESHIRE</b>
	CREWE ROAD		
	WINTERLEY		
	NEAR CREWE		
	Total Gross floor area:	90 sqm	
	Survey date: FRIDAY	28/11/08	Survey Type: MANUAL
<b>3</b>	<b>NR-06-G-01</b>	<b>CHIP SHOP, CORBY</b>	<b>NORTHAMPTONSHIRE</b>
	OCCUPATION ROAD		
	CORBY		
	Total Gross floor area:	100 sqm	
	Survey date: WEDNESDAY	19/11/08	Survey Type: MANUAL
<b>4</b>	<b>WM-06-G-01</b>	<b>FISH SALOON, COVENTRY</b>	<b>WEST MIDLANDS</b>
	HOLYHEAD ROAD		
	COVENTRY		
	Total Gross floor area:	65 sqm	
	Survey date: FRIDAY	28/09/07	Survey Type: MANUAL

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/G - TAKE-AWAY SHOPS (eg. fish bars etc)

## VEHICLES

**Calculation factor: 100 sqm**

**BOLD print indicates peak (busiest) period**

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	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	0	0	0.000	0	0	0.000	0	0	0.000
08:00 - 09:00	0	0	0.000	0	0	0.000	0	0	0.000
09:00 - 10:00	0	0	0.000	0	0	0.000	0	0	0.000
10:00 - 11:00	2	55	3.636	2	55	2.727	2	55	6.363
11:00 - 12:00	3	70	6.190	3	70	5.714	3	70	11.904
12:00 - 13:00	3	70	15.714	3	70	15.714	3	70	31.428
13:00 - 14:00	3	70	19.524	<b>3</b>	<b>70</b>	<b>19.524</b>	<b>3</b>	<b>70</b>	<b>39.048</b>
14:00 - 15:00	3	70	1.429	3	70	1.429	3	70	2.858
15:00 - 16:00	3	70	0.476	3	70	1.429	3	70	1.905
16:00 - 17:00	4	75	8.667	4	75	8.667	4	75	17.334
17:00 - 18:00	4	75	17.000	4	75	17.333	4	75	34.333
18:00 - 19:00	4	75	16.667	4	75	16.333	4	75	33.000
19:00 - 20:00	<b>4</b>	<b>75</b>	<b>20.000</b>	4	75	18.667	4	75	38.667
20:00 - 21:00	4	75	14.000	4	75	15.333	4	75	29.333
21:00 - 22:00	4	75	7.333	4	75	7.000	4	75	14.333
22:00 - 23:00	3	85	7.451	3	85	7.451	3	85	14.902
23:00 - 24:00	2	83	0.000	2	83	0.000	2	83	0.000
Total Rates:	138.087			137.321			275.408		

## Parameter summary

Trip rate parameter range selected:	30 - 100 (units: sqm)
Survey date range:	01/01/01 - 28/11/08
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	4



## HIGHWAYS AGENCY

### SHEPWAY LDF: REVIEW OF FORECAST TRANSPORT MODEL

#### TECHNICAL NOTE 3

PROJECT: HTT91271A/1671.1

16 SEPTEMBER 2010

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## 1 INTRODUCTION

Thank you for providing us with the opportunity to provide comments on the above named model which shall eventually be used to demonstrate the impact of the Local Development Framework (LDF) on the District's highway network. This technical note follows our previous Technical Notes 1 and 2 dated 14 October 2009 and 18 August 2010 respectively, with both issued previously to the District Council and Scott Wilson.

As you may be aware, the HA, on behalf of the Secretary of State for Transport, is responsible for the management and operation of a safe and efficient Strategic Road Network (SRN, i.e. the motorway and trunk road network) in England as laid down in the Department for Transport (DfT) Circular 02/2007, 'Planning and the Strategic Road Network'. In the case of Shepway, the SRN encompasses the M20 Junctions 11 to 13, the A20 and the A259 trunk roads.

## 2 COMMENTS

The comments we have relate to the Strategic Site Allocation for the Hawkinge mixed use development which is proposed to be located off Hurricane Way. It is noted that the model currently considers the Hawkinge development to be rather modest in size, consisting of just 300 residential units and a 200m<sup>2</sup> museum. We have however very recently been consulted on two planning applications (Y10/0738/SH and Y10/0739/SH) in relation to the Hawkinge site, and it is therefore our understanding that the proposed development mix includes:

- B1/B8 business units – 5,800 m<sup>2</sup>
- B1/B2 offices – 5,940 m<sup>2</sup>
- Residential apartments – 48
- Retail/commercial units – 1,680 m<sup>2</sup>
- Retirement village dwellings/flats - 121
- Facilities building – 1,300 m<sup>2</sup>

The development mix set out above is currently estimated to generate approximately 460 two-way vehicle trips during the morning and evening peak hours, and this is a far greater vehicular impact than your model currently assumes for this site. It is therefore requested that the trip generation included in the model is revised to be consistent with the two submitted planning applications.

Our primary concern with the Hawkinge development is the highway impacts it has on the A20 trunk road, specifically at the A260 Spitfire Road/Canterbury Road/A20 and the A260 Alkham Valley Road/A20 roundabout junctions. These junctions were included in the initial 'potential congestion hotspot locations' work you presented to us at the very beginning of the transport model scoping exercise, and so we were expecting the latest model to include



these junctions. It is however evident that the forecast model and the previous base model (which was incomplete at the time of our review) have not considered these junctions. Given that the Hawkinge development is likely to impact these junctions, we request that they are included.

We recommend that you refer to the submitted Hawkinge Transport Assessment which is in the public domain and can therefore be accessed via the Shepway District Council website, as it considers the combined impacts of the planning applications and includes recent count data for the A20 junctions.