

**Sevenoaks District Council
LDF Background Paper:**

**'Reduced Transport Evaluation' of development proposed in
Swanley**

May 2010



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1. **INTRODUCTION**

- 1.1 The Sevenoaks Local Development Framework (LDF) is an emerging set of local planning documents, which set out the strategy for future development in Sevenoaks District. The primary document of the LDF is the Core Strategy, which this background paper has been produced to support.
- 1.2 During the 'Preferred Options' consultation stage in the preparation of the LDF Core Strategy, the Highways Agency (HA) raised concerns about the impact of the level of development proposed in Swanley on the Strategic Road Network (SRN). The HA stated:
- Given Swanley's proximity to M25 Junction 3 and the relatively limited quality of public transport links the HA is concerned that the level of planned development (including the proposed Broom Hill site) will exacerbate existing traffic conditions. (Howard Moore's letter of 9th March 2009).*
- 1.3 Following the submission of these representations, SDC discussed with the Highways Agency how their concerns about the level of development in Swanley could be resolved. The broad outline of a methodology to carry out an assessment, based on the Highway Agency's suggested 'Reduced Transport Evaluation' methodology, was agreed between SDC and the Highways Agency.
- 1.4 Figure 1, below, shows the location of Swanley in relation to the Strategic Road Network.

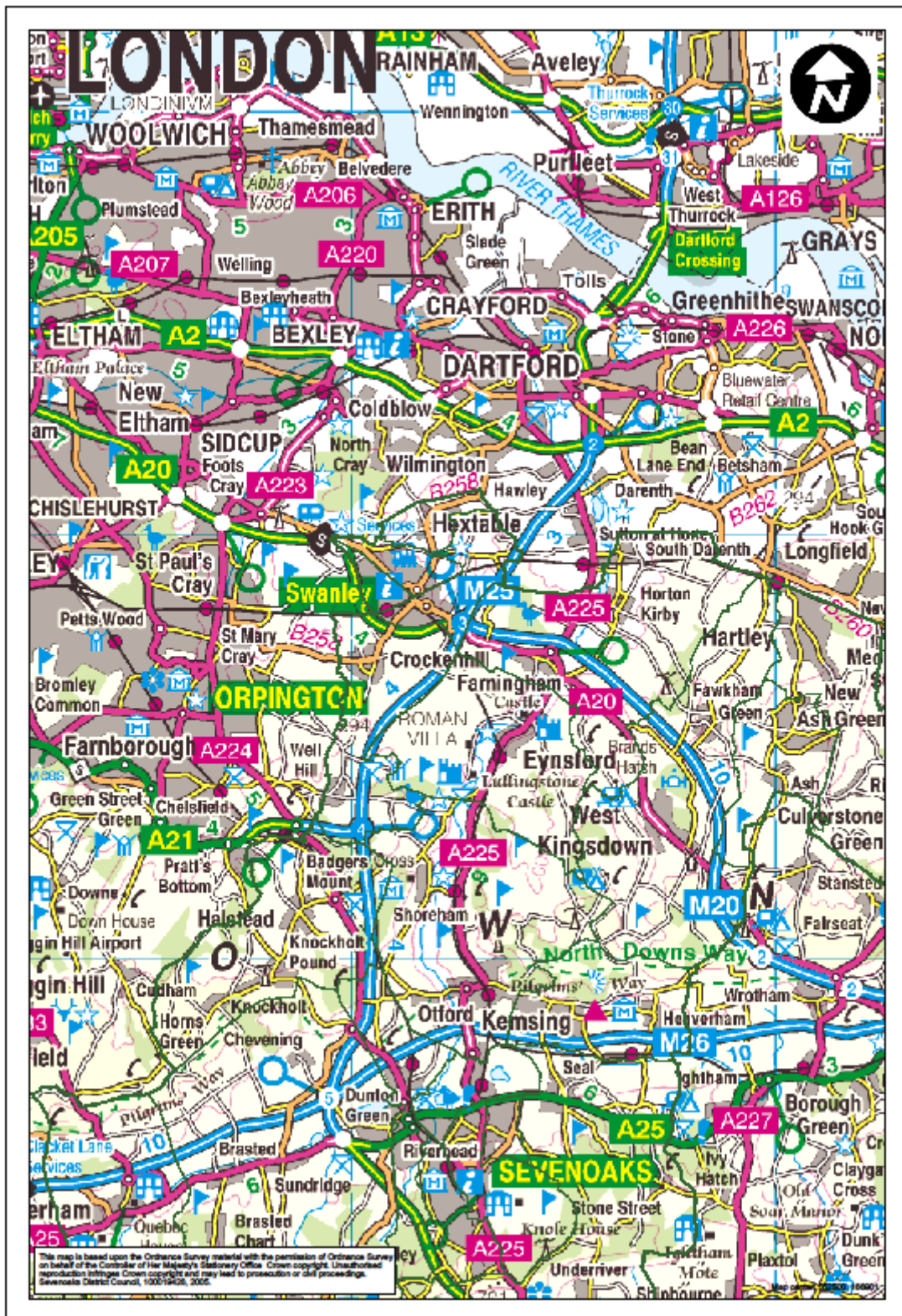


Figure 1: Map showing the location of Swanley in relation to the Strategic Road Network

1.4 This report summarises the detailed methodology that the Council have applied, including the assumptions made, to estimate the impact of development in Swanley on the SRN. It also sets out the results of the assessment and the approach to be taken in Core Strategy policies.

2. **METHODOLOGY**

Outline Methodology

- 2.1 The assessment aimed to estimate the number of vehicle trips on the Strategic Road Network that will result from the scale of residential and employment development in Swanley proposed by the LDF Core Strategy.
- 2.2 With the exception of the residential development envisaged within the scheme, the assessment did not take into account the proposals to redevelop Swanley Town Centre. The Core Strategy does not propose any significant quantitative increase in retail offer in Swanley Town Centre. Therefore, it is considered to be a reasonable assumption that this development would not lead to a significant increase in trips into Swanley on the Strategic Road Network (SRN). It may, instead, lead to a decrease in trips on the SRN as a result of a reduction in the number of journeys by Swanley residents going out of the town to other shopping centres.
- 2.3 The stages that formed part of the methodology for the complete assessment, and the data used, are set out below:
- a. **Identify Development Proposed** – The impacts of the level of residential development identified in SDC’s Strategic Housing Land Availability Assessment (Update 2009), beyond existing commitments, have been assessed. Where SHLAA sites have been identified, these, along with existing Local Plan allocations, have been assumed to come forward for allocation in the Site Allocations DPD. The trips to be lost as a result of redevelopment of existing land uses on these sites have been estimated in stage b. The contribution that small site windfalls are assumed to make towards the overall level of residential development in Swanley has also been taken into account. The Core Strategy: Draft for Submission proposes the development of an additional 8.1 hectares of employment land, through the development of one existing Local Plan allocation, at Broom Hill, adjacent to M25 junction 3.
 - b. **Trip Generation** – The multi modal 08:00 – 09:00 trip generation resulting from the proposed developments have been estimated using ‘TRICS’, an assessment tool that is based on trip rate surveys carried out across the UK and Ireland. Trip rates for the AM peak, defined in this assessment as between 08:00 – 09:00, have been used because it has been assumed that these trips can more closely be related to journeys to work, for which trip flow data is available (see point c). It is recognised that AM peak trip rates will not always fall between 08:00 and 09:00. However, this period has been selected to standardise the selection of trip rates. More information on the detailed methodology used and the assumptions made in TRICS is set out in the following sections of this chapter.
 - c. **Identifying Trip Flows** – Census 2001 Journey to Work matrices are considered to be the best available data source for estimating trip flows and have been used to make assumptions about the origins and destinations of trips generated as a result of new development. For residential development, the locations of workplaces of people living in the three wards covering Swanley (Swanley Christchurch and Swanley Village, Swanley St Mary’s, Swanley White Oak) have been used to estimate trip flows resulting from departures from new residential developments. For the employment development, the home locations of people working in Swanley Christchurch and Swanley Village ward (where the Broom Hill site is located) have been used to estimate trip flows for both arrival and departure trips.

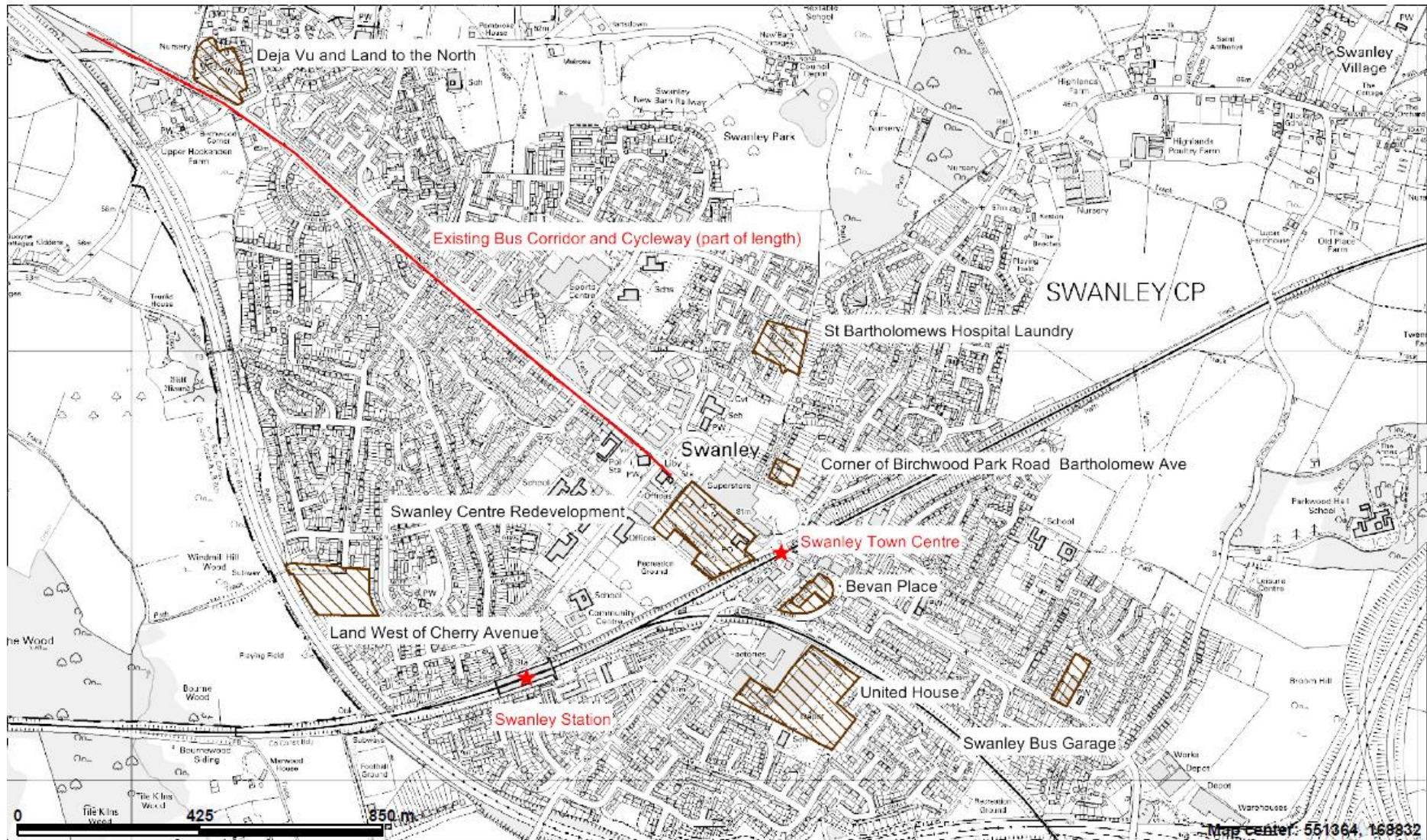
- d. Modal Split - 2001 Census Journey to Work data also provides a breakdown of the modes used to travel to work. This data was used to identify the percentages of people travelling by car (of those people that did travel, i.e. excluding working from home) in the broad directions into or out of the Swanley wards, as assessed in section c (above).
- e. Identifying the Direction of Car Trip Flows – For the employment development at Broom Hill, the direction of trips, i.e. to or from Swanley, was estimated by applying the ratio of arrivals to departure trip rates observed from the TRICS figures (stage b) to the total number of car trips on each flow estimated following stage d. This allowed the assessment to estimate, for example, the number of trips from M25 junction 3 to junction 2 and junction 2 to junction 3 rather than simply the total number of trips in any direction between M25 junction 3 and junction 2. As a result of assumptions made at the trip generation stage (stage b), this stage did not need to be carried out for the residential component of the development proposed in Swanley.
- f. Current Capacities and Deficiencies – Monitoring data of current 08:00 – 09:00 traffic flows on the Strategic Road Network around Swanley were provided by the Highways Agency. The calculations of 08:00 – 09:00 traffic flows were based on the latest information available from the Highways Agency, at the time of the study. This information is from 2005, 2006, 2007 and 2008. Current capacities of the sections of the Strategic Road Network were estimated following guidance from the Highways Agency, which suggested that each lane can accommodate 1800 vehicles per hour. The Highways Agency were unable to provide data on the movements of traffic or current capacities at M25 junction 3.

2.4 Following these stages, it was assessed whether the number of additional trips estimated to be generated by the proposed developments could be accommodated within the capacity headroom currently available on the different sections of the Strategic Road Network in the 08:00 – 09:00 period. The percentage increase in the number of trips on the Strategic Road Network resulting from the proposed development was also calculated to give some perspective to the increase in trips that is anticipated.

a. Identifying Development Proposed

Residential Development

2.5 The numbers of dwellings to be developed in Swanley in the period 2006 – 2026 beyond existing commitments was drawn from the Council's Strategic Housing Land Availability Assessment (SHLAA). The SHLAA Update 2009 identifies the potential for 557 dwellings, above existing commitments, to be developed in the period 2009 – 2026. This is broken down between identified SHLAA sites (494 dwellings), including outstanding Local Plan allocations, and small site windfalls (63 dwellings).



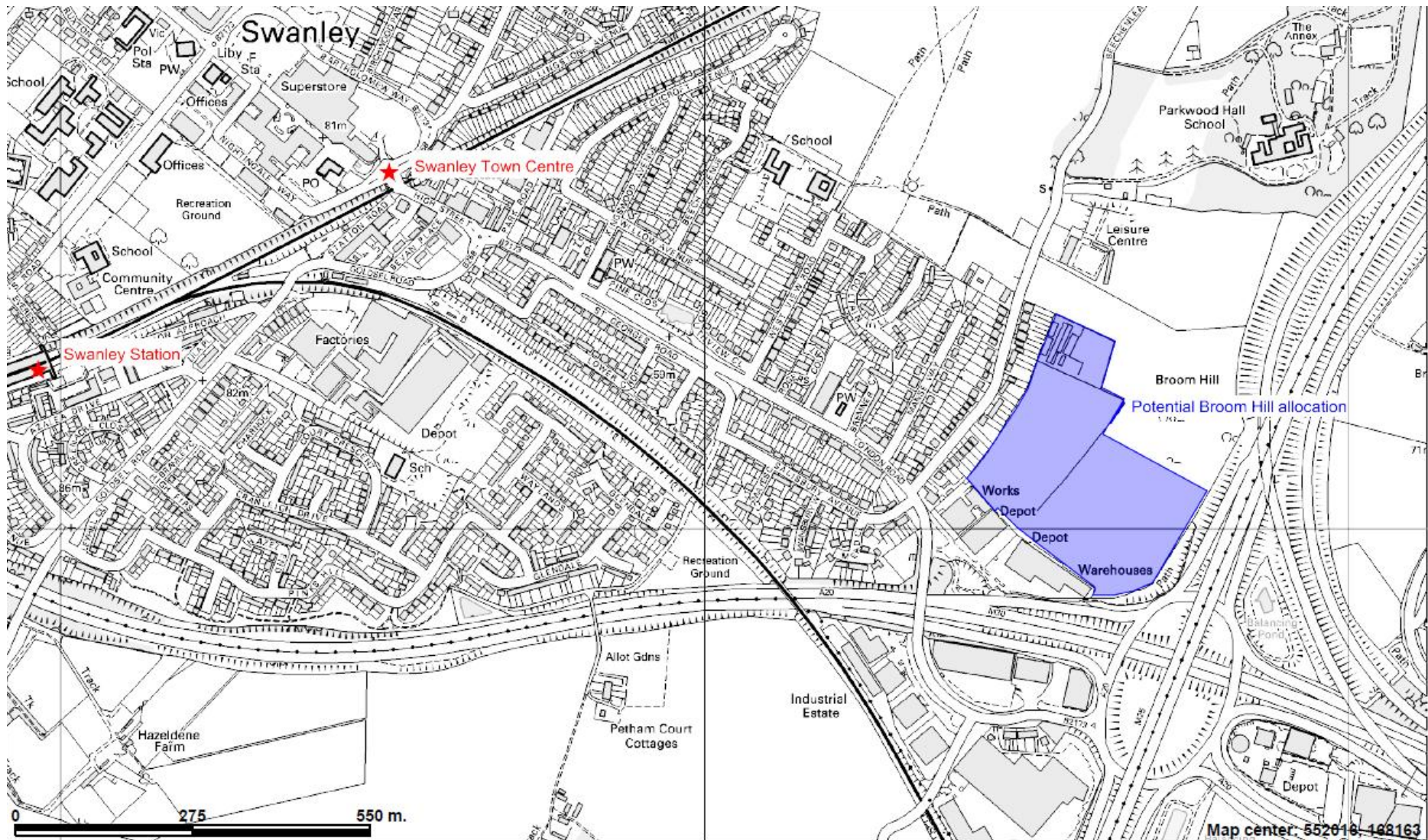
This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Figure 2: Map of SHLAA sites in Swanley

- 2.6 Where SHLAA sites have been identified, these have been assumed, for the purposes of this study, to come forward for allocation in the Site Allocations DPD. For these sites, this assessment used trip rates that relate to the TRICS locational category that the site has been assumed to fall within. Following discussions with Kent Highway Services, all SHLAA sites have been classified as either town centre or edge of town centre on the basis of their physical distance to the town centre and/or the speed and convenience of accessing the town centre by public transport, cycling or walking.
- 2.7 On a number of SHLAA sites there are existing land uses, which are anticipated to be wholly or partly 'lost' as a result of redevelopment. The land uses and site areas envisaged for redevelopment were estimated by SDC. Trip rates for these sites were estimated using TRICS (see below).
- 2.8 The contribution that small site windfalls are assumed to make towards the overall level of residential development in Swanley has been taken into account in this study. Consistent with the approach that has been taken to the classification of SHLAA sites, all windfalls have been assumed to come forward in town centre or edge of town centre locations. The assumed split between these is 50% town centre and 50% edge of town centre. It has been assumed that the development of windfall sites will not result in any trips to be 'lost' as a result of redevelopment. It is likely that this has the impact of overestimating the impact of development on the Strategic Road Network.

Employment Development

- 2.9 The Core Strategy: Draft for Submission proposes the development of an additional 8.1 hectares of employment land, through the development of an existing Local Plan allocation at Broom Hill (see Figure 3, below), adjacent to M25 junction 3. This forms an important part of an overall approach to tackling the relatively high levels of deprivation in Swanley and complements other proposals, focussed primarily on the area in and adjoining the town centre, in contributing to regeneration of the town. The scale and nature of the proposal is such that it cannot be accommodated in a location in or close to the town centre.



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Figure 3: Map of showing the location of the potential Broom Hill allocation in Swanley

2.10 However, the Core Strategy does not set out the scale or type of employment development to be brought forward at the Broom Hill site. The Reduced Transport Evaluation has tested the impact of developing the whole of the Broom Hill site with 22,300 sq m gross floorspace, as proposed in the saved policies of the Sevenoaks Local Plan (EP1 and SW8). The 'LDF Core Strategy: Draft for Submission' proposes that these policies remain saved after the adoption of the Core Strategy policies.

b. Trip Generation Stage - TRICS Methodology and Assumptions

2.10 TRICS assumptions were discussed with Kent County Council, as the Local Transport Authority, prior to the completion of the assessment. Trip rate figures were provided to SDC by Jacobs consultants using TRICS 2010(a)v6.5.1.

Site Classification

2.11 TRICS guidance stresses that in order to identify appropriate trip rates from the database it is necessary to filter sites/surveys by land use definitions, location types, days of the week of survey and vehicle ownership rates so that the sites used are similar to that of the proposed development. Land use definitions are broken down into a main classification list (i.e. residential, employment, retail, etc) and a number of sub categories (houses privately owned, flats for rent, mixed private housing, etc).

2.12 The types of dwellings to be developed on residential sites in Swanley is not known. The trip rate calculations were, therefore, based on all surveys of residential uses in TRICS sub categories A, B, C, D, K, L and M (see below), after other filtering, in the location categories of town centre and edge of centre, which it was assumed that all sites fall within (as discussed above). The approach of using all residential sub-classifications closely follows the methodology used by the Highways Agency in developing their South East Plan model (South East Plan Library Paper 1, 2006).

A – Houses Privately Owned
B – Houses for Rent
C – Flats Privately Owned
D – Flats for Rent
K – Mixed Private Housing
L – Mixed Non-Private Housing
M – Mixed Private / Non-Private

2.13 Trip rates were estimated from TRICS for three SHLAA sites where redevelopment of existing land uses is expected to lead to a loss of existing trips. Total trip rates lost as a result of redevelopment were subtracted from total trip rates assumed to be gained as a result of residential development

2.14 As noted above, the Reduced Transport Evaluation has tested the impact of developing 22,300 sq m gross floorspace on the Broom Hill site. Because the nature of the employment development is unknown, two scenarios were considered, which are consistent with the Local Plan allocation of the site for B1 uses (policy SW8):

1. The development of a business park (predominately B1 uses) (TRICS employment sub-category B)
2. The development of an industrial estate (predominately B1 uses) (TRICS employment sub-category D (B1))

The location of the Broom Hill site was considered to be edge of town, reflecting its physical location and non-car transport links.

Multi Modal Surveys

- 2.15 TRICS allows both vehicle and multi-modal trip rates to be calculated. In order that the local pattern of modal splits could be applied to trip rates (stage d in this methodology), it was necessary to calculate multi-modal trip rates in TRICS. Whilst this reduced the number of surveys that could be used in trip rate calculations, it allowed for consideration of local transport patterns within the model and is considered to be a sound approach.

Arrivals and Departures Data

- 2.16 TRICS allows for arrivals, departures and total (arrivals + departures) trip rates to be estimated for sites. The Highways Agency requested that SDC consider total trip rates when estimating the impact of the level of development proposed in the Core Strategy on the Strategic Road Network. SDC consider that departures from residential sites and arrivals at employment sites in the AM peak are more likely to relate to travel to and from work, respectively. The assumptions made about trip flows and modal splits, which are based on Census 2001 journey to work data (methodology stage c), for these journeys are, therefore, more sound than when they are applied to AM peak arrivals at residential sites and departures from employment sites.
- 2.17 SDC consider it unlikely that a significant percentage of AM peak arrivals at residential sites will result in trips on the Strategic Road Network. It is considered a reasonable assumption that the vast majority of AM peak arrivals at residential sites will be related to local trips, such as returning from dropping members of the household to school or the train station, for example. As a result, SDC consider that the use of total trip rates for residential sites within the assessment would represent an unrealistic over-estimate of the impact of the development on the Strategic Road Network. The assessment of the impact of residential sites has, therefore, only considered AM peak departures. Total trip rates (i.e. arrivals and departures) for employment sites, including those 'lost' as a result of residential development, have been used within the assessment because it is more difficult to make assumptions about the reasons behind the directions of travel to and from these sites (see para 2.29).

85th percentile trip rates

- 2.18 Following Highways Agency and DfT guidance, 85th percentile trip rates, rather than mean trip rates, have been sought from TRICS wherever possible. TRICS guidance suggests where users intend to identify 85th percentile trip rates 20 sites/surveys are identified. This guidance has not been followed in this study as a result of a shortage of applicable TRICS surveys. Wherever it was possible to calculate the 85th percentile in TRICS, this figure has been used. Whilst this suggests that the trip rate figures are subject to a high degree of uncertainty, the alternative approach to calculating trip rates would have been to use the lower mean figure. This would have departed from DfT and Highways Agency guidance (DfT, 2007, 'Guidance on Transport Assessment'). However, it has been necessary to use the mean figure in some cases when TRICS has been unable to calculate 85th percentile figures.

Survey Days

- 2.19 TRICS surveys were excluded from the trip rate calculations if they were carried out on a Saturday or Sunday because of the different trip patterns that may be expected on these days.

Car Ownership Rates

- 2.20 TRICS allows for local levels of car ownership to be filtered when identifying sites. For this assessment, survey data was excluded where it related to sites where car ownership was, on average, less than 0.5 cars per household in the surrounding 5km, which is more likely to occur in inner cities than a modest sized town, such as Swanley.

Sites with Travel Plans

- 2.21 TRICS surveys were excluded from the trip rate calculations if the site had a travel plan. This ensures that a potential mitigation measure that the Council could insist upon to reduce the impact of development on the Strategic Road Network has not already been taken into account in site trip rate calculations.

Other Considerations

- 2.22 Where a site has been surveyed twice, TRICS guidance recommends that only one set of data is included in trip rate calculations. This avoids giving higher weighting to the site surveyed twice in the mean or 85th percentile trip rate calculations.
- 2.23 In order that relatively recent trip rates were used, sites were excluded from the calculations if the surveys were carried out before 2000.

c. Identifying Trip Flows – Census 2001 Data

Residential Development

- 2.24 2001 Census Journey to Work data was obtained for residents in the three wards covering Swanley (Swanley Christchurch and Swanley Village, Swanley St Mary's, Swanley White Oak). The percentages of people travelling in a number of broad directions from Swanley, by all modes, were assessed using this Journey to Work data. The broad directions were:

- Local (not likely to use the SRN if travelling by car)
 - Swanley wards (Swanley Christchurch and Swanley Village, Swanley St Mary's and Swanley White Oak); and
 - Hextable ward.
- East Local (not likely to use the SRN but likely to use M25 junction 3 if travelling by car)
 - Farningham, Horton Kirby and South Darenth ward; and
 - Fawkham and West Kingsdown Ward.
- South (likely to use M25 j3 to j5 if travelling by car)
 - Sevenoaks Urban Area wards (Sevenoaks Town and St John's, Sevenoaks Northern, Sevenoaks Kippington, Sevenoaks Eastern, Dunton Green and Riverhead and Brasted, Chevening and Sundridge)
 - Tonbridge and Malling District
 - Tunbridge Wells Borough
 - Rest of South East Region
- North (likely to use M25 j3-j2, j1b, j1a onwards if travelling by car)
 - Dartford Borough
 - London Borough of Barking and Dagenham
 - London Borough of Havering
 - Essex County
 - Thurrock Council
 - Rest of East England
- North East (likely to use M25 j3 to j2 if travelling by car)
 - Gravesham Borough
 - Medway Council

- West (likely to use A20 from west of Swanley if travelling by car)
 - London Borough of Bexley
 - London Borough of Bromley
 - London Borough of Croydon
 - London Borough of Lewisham
 - London Borough of Greenwich
 - Central London (City of London, London Borough of Tower Hamlets, London Borough of Southwark, City of Westminster, London Borough of Kensington and Chelsea, London Borough of Lambeth, London Borough of Camden, London Borough of Islington, London Borough of Hackney, London Borough of Wandsworth)
 - Rest of London
- East (likely to use M20 from j1 to j4 if travelling by car)
 - Maidstone
 - Tonbridge and Malling District
- Unknown
 - Rest of Sevenoaks District
 - Rest of Kent

2.25 It was assumed that where journeys were made by car, following consideration of modal splits in stage d, they used the SRN or local road network as set out above. This is despite the fact that for some trips there are realistic alternatives that do not require use of the Strategic Road Network, for example journeys into Dartford Borough and London boroughs of Bromley and Bexley. SDC consider that the assessment is, therefore, likely to represent an overestimate of the impact of development on the Strategic Road Network.

2.26 In reality, AM peak departure trips from residential sites identified in TRICS will also contain trips related to locations other than the place of work, particularly schools. The majority of trips between home and school in Swanley in the AM peak are likely to be completed without using the Strategic Road Network. The impact of this on departure trip rates has not been taken into account, through a reduction in trip rates considered, in this assessment. This would, again, suggest that the assessment represents an overestimate of the impact of development on the Strategic Road Network.

2.27 The calculations excluded people working from home within the Swanley wards as this would not lead to car or non-car trips to work in the 08:00 – 09:00 period. The impact of including people working from home within the estimates of broad locations of travel would have been that a higher proportion of trips would have been assumed to be local and, therefore, not impacting upon the SRN.

Employment Development

2.28 The Broom Hill site is located in the Swanley Christchurch and Swanley Village ward. 2001 Census Journey to Work data was obtained for the people working in this ward. The percentages of people travelling in a number of broad directions to the Swanley Christchurch and Swanley Village ward, by all modes, was assessed using this data. The broad directions of travel considered were the reverse of those set out in para 2.22, above.

2.29 It was assumed that all additional arrival trips made as a result of new employment development followed the pattern of trips observed in the 2001 Census Journey to Work analysis. Due to the lack of available alternative data and any information about the nature of

the business to take place on the Broom Hill site, departures from employment sites in the 08:00 – 09:00 period were assumed to follow the pattern of people returning home from work, i.e. the reverse of the 2001 Census Journey to Work data.

2.30 It was assumed that where journeys were made by car, following consideration of modal splits in stage d, the trips used the SRN or local road network as set out in para 2.24 above. As also stated above, this is despite the fact that for some trips there are realistic alternatives that do not require use of the Strategic Road Network. Again, SDC consider that in this respect the assessment is likely to represent an overestimate of the impact of development on the Strategic Road Network.

2.31 As explained above, the assessment excluded people working from home.

d. Identifying Modal Splits – Census 2001 Data

2.32 2001 Census Journey to Work data provides a breakdown of the modes used to travel to work. This data was applied to the multi-modal trip flows, from stage c, to estimate the percentages of people travelling by car in the broad directions from Swanley wards as a result of residential development and to and from Swanley Christchurch and Swanley Village ward as a result of employment development.

e. Identifying the Direction of Car Trip Flows

2.33 For the employment development at Broom Hill, the direction of trips, i.e. to Swanley or from Swanley, was estimated by applying the ratio of arrivals to departure trips rates, observed from the TRICS figures (stage b), to the total number of car trips on each flow estimated at stage d. This allowed the assessment to estimate, for example, the number of trips from M25 junction 3 to junction 2 and junction 2 to junction 3 rather than simply the total number of trips in any direction between M25 junction 3 and junction 2. As a result of assumptions made at the trip generation stage (stage b), this stage did not need to be carried out for the residential component of the proposed development in Swanley.

f. Identifying Current Capacities and Deficiencies

2.34 From information provided by the Highways Agency, current 08:00 – 09:00 flows on the following sections of the Strategic Road Network were considered:

- Every junction-to-junction section of the M25 between junction 5 and 1a in both directions;
- A20 eastbound between the A223/A20 junction and the M20/M25 junction; and
- A20 westbound between the B2173/A20 junction and the A223/A20 junction.

2.35 The calculation of 08:00 – 09:00 average flows is based on monitoring data, provided by the Highways Agency, from 2005, 2006, 2007 and 2008. The average figures are based on all days for which Highways Agency monitoring information is available.

2.36 Current capacities of the sections of the Strategic Road Network were estimated following guidance from the Highways Agency, which suggested that each lane can accommodate 1800 vehicles per hour. This calculation was used by the Highways Agency in their South East Plan model (South East Plan Library Paper 1, 2006).

2.37 The Highways Agency were unable to provide data on the movements of traffic or current capacities at M25 junction 3 itself.

3. **ASSESSMENT**

a. **Identifying Development Proposed**

Residential Development

- 3.1 From the Council's SHLAA Update 2009, the proposed sites for the development of a total of 429 dwellings were identified. Maps showing the locations of these sites are available in the SHLAA Update 2009. The locations were classified, for the purposes of this assessment, as follows:

Site	Location	SHLAA capacity
Déjà vu Site and adjacent	Edge of Town Centre	34 dwellings
United House	Town Centre	116 dwellings
Bevan Place (Local Plan Allocation)	Town Centre	28 dwellings
Bevan Place (Non-LP Allocation)	Town Centre	24 dwellings
Swanley Centre	Town Centre	128 dwellings
Land West of Cherry Avenue	Edge of Town Centre	75 dwellings
Corner of Birchwood Park and Bartholomew Way	Town Centre	4 dwellings
Swanley Bus Garage	Edge of town centre	20 dwellings

- 3.2 The SHLAA 2009 also identifies the potential for development of 65 dwellings at the St. Batholomew's Hospital Laundry, Bonney Way. However, this site was excluded from this assessment as it was granted planning permission for residential redevelopment, following agreement between the applicant and Kent Highway Services that the proposed development would have nil detrimental highways impact (from the Transport Assessment accompanying SE/09/00274).
- 3.3 The potential locations of the remaining 63 proposed dwellings in Swanley is unknown as these are expected to come forward on small site windfalls towards the end of the plan period (2006 – 2026). For the purpose of this assessment, it has been assumed that these dwellings come forward as follows:

50% town centre	32 dwellings
50% edge of town centre	32 dwellings

* Note the total is greater than 63 due to rounding.

- 3.4 The residential development proposed in Swanley is, therefore, assumed to come forward within the following locational categories:

Town centre	332 dwellings
Edge of town centre	161 dwellings
Total	493 dwellings

* Note the total is greater than 492 due to rounding.

3.5 Three of the SHLAA 2009 sites were noted as having existing land uses that could result in trips in the period 08:00 – 09:00. These sites, and the estimated floorspace and land use, are as follows:

Site	Location	Use	Floorspace (sq m)
Land to the north of Déjà vu	Edge of town centre	A1	2,200
United House	Town Centre	B8	10,000
Swanley Bus Garage	Edge of town centre	B8	1,400

Employment Development

3.6 As noted above, this assessment tested the impact of developing 22,300 sq m gross floorspace on the Broom Hill site. Because the nature of the employment development is unknown, two scenarios were considered, which are consistent with the Local Plan allocation of the site for B1 uses (policy SW8):

1. The development of a 22,300 sq m gross floorspace business park (predominately B1 uses) (TRICS employment sub-category B).
2. The development of a 22,300 sq m gross floorspace industrial estate (predominately B1 uses) (TRICS employment sub-category D (B1)).

3.7 The location of the Broom Hill site was considered to be edge of town.

b. Trip Generation Stage

Residential

3.8 Following the assumptions set out above, the trip rates used in this assessment were based on the following numbers of multi-modal counts from TRICS 2010(a)v6.5.1. The TRICS output sheets for these surveys are included in this report at appendix A.

Location	Land Use Sub-Class	TRICS Surveys
Town Centre	C - Flats Privately Owned	3
	K - Mixed Private Housing	1
	Total	4
Edge of Town Centre	A - Houses Privately Owned	6
	B - Houses for Rent	2
	C - Flats Privately Owned	10
	D - Flats for Rent	6
	K - Mixed Private Housing	2
	L - Mixed Non-Private Housing	2
	Total	28

3.9 From these surveys, the following 08:00 – 09:00 multi modal per dwelling trip rates have been identified in TRICS:

	08:00 - 09:00 multi modal trips per dwelling		
	Arrivals	Departures	Total
Town centre	0.26	0.64	0.89
Edge of town centre	0.29	0.70	0.89

* Each 85th percentile figure has been calculated separately, hence why 'arrivals' + 'departures' does not equal 'total'.

- 3.10 As explained above, only departure trip rates from residential sites have been considered in this assessment. 08:00 – 09:00 multi modal trip generation as a result of new residential development in Swanley was, therefore, estimated as:

Location	Dwellings	08:00 - 09:00 multi modal trips
Town centre	332	212.8
Edge of town centre	161	112.9
Total	493	325.8

- 3.11 The estimate of trips 'lost' as a result of redevelopment of sites with existing trip generating uses is based on multi modal surveys within the following site classifications:

Site	Location	Use	Floorspace (sq m)	TRICS sites used	Number of surveys
Land to the north of Déjà vu	Edge of town centre	A1	2,200	Suburban H - Garden Centre	1
United House	Town Centre	B8	10,000	Suburban F - Warehousing (B8)	2
Swanley Bus Garage	Edge of town centre	B8	1,400	Suburban F - Warehousing (B8)	2

- 3.12 Surveys from suburban sites in TRICS were used to estimate trip rates for these sites, instead of town centre and edge of centre sites, because of the lack of town centre and edge of centre surveys for these land uses. As a result of the number of surveys available, it was not possible for TRICS to calculate the 85th percentile trip rate and so mean trip rate figures were used instead. The TRICS output sheets for these surveys are included in this report at appendix B.

- 3.13 08:00 – 09:00 multi modal trip rates to be 'lost' as a result of new residential development in Swanley was, therefore, estimated as:

Site	Floorspace (sq m)	TRICS sites used	08:00 - 09:00 Multi Modal Trips per 100 sq m GFA	08:00 - 09:00 Multi Modal Trips
Land to the north of Déjà vu	2,200	Suburban H - Garden Centre	0.4	9.5
United House	10,000	Suburban F - Warehousing (B8)	0.8	84.3
Swanley Bus Garage	1,400	Suburban F - Warehousing (B8)	0.8	11.8

	Total	105.6
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3.14 The total number of additional 08:00 - 09:00 multi modal trips as a result of the proposed residential development is (325.8 – 105.6) **220.1**.

Employment Development

3.15 Following the assumptions set out above, the trip rates used for the proposed employment development in this assessment were based on the following numbers of multi-modal counts from TRICS 2010(a)v6.5.1.

Location	Land Use Sub-Class	TRICS Surveys
Edge of Town	B – Business Park	13
Edge of Town	D (B1) – Industrial Estate	2

3.16 As a result of the number of edge of town surveys, it was not possible for TRICS to calculate the 85th percentile trip rate for the industrial estate scenario. Therefore, for this scenario the mean figure was used. The 85th percentile figure was used for the business park type development scenario. The TRICS output sheets for these surveys are included in this report at appendix C.

3.17 From TRICS the multi modal 08:00 - 09:00 trip rates for the two scenarios identified for Broom Hill were as follows:

Scenario 1 (business park development):

	Trips per 100 sq m GFA	%
Arrivals	2.99	79.19978802
Departures	0.79	20.80021198
Total	3.77	

Scenario 2 (industrial estate development):

	Trips per 100 sq m GFA	%
Arrivals	0.47	70.82066869
Departures	0.19	29.17933131
Total	0.66	

3.18 From these per 100 sq m GFA trip rates, the total number of additional 08:00 – 09:00 trip rates that might be expected from an additional 22,300 sq m of employment floorspace at Broom Hill under each scenario were estimated as follows:

Development Proposed	Floorspace (sq m)	AM peak total multi modal trips
Business Park (1)	22,300	841.6
Industrial Estate (B1) (2)	22,300	146.7

c. Identifying Trip Flows

Residential Development

3.19 From the Census 2001 Journey to Work data, the percentages of people travelling in a number of broad directions from Swanley, by all modes, were applied to the number of departure trips resulting from the residential developments proposed in Swanley (section b). The full breakdown of the broad locations of workplace and the directions of travel is set out in Appendix D. The percentages and resulting number of additional 08:00 – 09:00 multi modal trips within the broad directions identified are as follows:

Direction of travel to (shows likely SRN route taken if trip is undertaken by car)	% of Total population travelling to work	Additional multi modal 08:00 - 09:00 trips on this flow
Local (Not likely to Use SRN)	26.5	58.3
East Local (A20 (local) but using M25 junction 3)	1.7	3.7
South (M25 j3 to j5)	4.4	9.6
North (M25 j3 - j2, j1b, j1a onwards)	11.8	25.9
North East (M25 j3 to j2)	2.0	4.4
West (A20 from west of Swanley)	49.6	109.2
East (M20 from j1 to j4)	1.6	3.6
Unknown	2.5	5.5
Total	100.0	220.1

Note: The 'local' figure presented here does not include arrivals trips, which were all assumed to be local trips in this assessment.

Employment Development

3.20 From the Census 2001 Journey to Work data, the percentages of people travelling in a number of broad directions to the Swanley Christchurch and Swanley Village ward, by all modes, was applied to the number of total trips resulting from the two employment development scenarios for the Broom Hill site (section b). The full breakdown of the broad locations of residence and the directions of travel is set out in Appendix E. The percentages and resulting number of additional 08:00 – 09:00 total multi modal trips within the broad directions identified are as follows:

Direction of travel (shows likely SRN route taken if trip is undertaken by car)	% of Total population travelling to work	Scenario 1 - Additional multi modal trips on this flow	Scenario 2 - Additional multi modal trips on this flow
Local (Not likely to Use SRN)	30.2	253.8	44.3
East Local (A20 (local) but using M25 junction 3)	5.5	46.5	8.1
South (M25 j3 to j5)	5.7	47.7	8.3
North (M25 j3 - j2, j1b, j1a onwards)	13.1	110.0	19.2
North East (M25 j3 to j2)	12.0	100.6	17.5
West (A20 from west of Swanley)	25.4	214.0	37.3
East (M20 from j1 to j4)	4.7	39.6	6.9
Unknown	3.5	29.3	5.1
Total	100.0	841.6	146.7

d. Identifying Modal Splits

Residential Development

- 3.21 The Census 2001 Journey to Work Matrices for residents of the three Swanley wards were used to identify the percentage of 08:00 – 09:00 trips undertaken by car for the identified trip flows. The full breakdown of the modal splits for each broad location of workplace is set out in Appendix F.

Direction of travel to (shows likely SRN route taken if trip is undertaken by car)	Additional 08:00 - 09:00 multi modal trips on this flow	% Trips by Car	Additional 08:00 - 09:00 vehicle trips on this flow
Local (Not likely to Use SRN)	88.0	49.8	43.9
East Local (A20 (local) but using M25 junction 3)	5.5	64.4	3.6
South (M25 j3 to j5)	14.5	83.1	12.0
North (M25 j3 - j2, j1b, j1a onwards)	39.1	78.9	30.9
North East (M25 j3 to j2)	6.6	74.5	4.9
West (A20 from west of Swanley)	164.8	53.1	87.5
East (M20 from j1 to j4)	5.4	70.0	3.8
Unknown	8.3	75.3	6.3
Total			192.8

Employment Development

- 3.22 The Census 2001 Journey to Work Matrices for those working in Swanley Christchurch and Swanley Village ward were used to identify the percentage of 08:00 – 09:00 trips undertaken by car for the identified trip flows. The full breakdown of the modal split for each broad location of residence is set out in Appendix G.

Scenario 1 (business park development):

Direction of travel from (shows likely SRN route taken if trip is undertaken by car)	Scenario 1 - Additional multi modal trips on this flow	% Trips by Car	Scenario 1 - Additional vehicle trips on this flow
Local (Not likely to Use SRN)	253.8	53.7	136.3
East Local (A20 (local) but using M25 junction 3)	46.5	78.6	36.6
South (M25 j3 to j5)	47.7	91.5	43.7
North (M25 j3 - j2, j1b, j1a onwards)	110.0	86.5	95.2
North East (M25 j3 to j2)	100.6	93.4	94.0
West (A20 from west of Swanley)	214.0	75.1	160.8
East (M20 from j1 to j4)	39.6	82.8	32.8
Unknown	29.3	84.5	24.8
Total			624.0

Scenario 2 (industrial estate development)

Direction of travel from (shows likely SRN route taken if trip is undertaken by car)	Scenario 2 - Additional multi modal trips on this flow	% Trips by Car	Scenario 2 - Additional vehicle trips on this flow
Local (Not likely to Use SRN)	44.3	53.7	23.8
East Local (A20 (local) but using M25 junction 3)	8.1	78.6	6.4
South (M25 j3 to j5)	8.3	91.5	7.6
North (M25 j3 - j2, j1b, j1a onwards)	19.2	86.5	16.6
North East (M25 j3 to j2)	17.5	93.4	16.4
West (A20 from west of Swanley)	37.3	75.1	28.0
East (M20 from j1 to j4)	6.9	82.8	5.7
Unknown	5.1	84.5	4.3
Total			108.8

e. Identifying the direction of trip flows

Employment Development

3.23 The total car trips along the flows identified for the two employment scenarios include trips in both directions, i.e. as a result of arrivals and departures at the Broom Hill site. The number of trips in each direction along these flows were estimated in order that their different impacts on the Strategic Road Network can be assessed. In order to do this, the number of arrivals and departure vehicle trips associated with each flow were estimated on the basis of the ratio of arrivals to departures from the TRICS figures.

Scenario 1 (business park development):

Direction of travel (shows likely SRN route taken if trip is undertaken by car)	Scenario 1 - Additional trips by car on this flow	Arrivals	Departures
Local (Not likely to Use SRN)	136.3	107.9	28.3
East Local (A20 (local) but using M25 junction 3)	36.6	29.0	7.6
South (M25 j3 to j5)	43.7	34.6	9.1
North (M25 j3 - j2, j1b, j1a onwards)	95.2	75.4	19.8
North East (M25 j3 to j2)	94.0	74.4	19.5
West (A20 from west of Swanley)	160.8	127.3	33.4
East (M20 from j1 to j4)	32.8	26.0	6.8
Unknown	24.8	19.6	5.2
Total	624.0	494.2	129.8

Scenario 2 (industrial estate development)

Direction of travel from (shows likely SRN route taken if trip is undertaken by car)	Scenario 2 - Additional trips by car on this flow	Arrivals	Departures
Local (Not likely to Use SRN)	23.8	16.8	6.9
East Local (A20 (local) but using M25 junction 3)	6.4	4.5	1.9
South (M25 j3 to j5)	7.6	5.4	2.2

North (M25 j3 - j2, j1b, j1a onwards)	16.6	11.8	4.8
North East (M25 j3 to j2)	16.4	11.6	4.8
West (A20 from west of Swanley)	28.0	19.9	8.2
East (M20 from j1 to j4)	5.7	4.0	1.7
Unknown	4.3	3.1	1.3
Total	108.8	77.1	31.7

f. Identifying Current Capacities and Deficiencies

3.24 From the Highways Agency's monitoring information and their assumptions about capacities, the following existing traffic flows and capacities were identified:

Link Section	Date of Assessment	Average Annual Daily AM Peak (08:00 - 08:59)	Indicative Capacity
M25 J1b - J1a	2007	4132	7200
M25 J1a - J1b	2008	3813	7200
M25 J1b - J2	2005	2383	5400
M25 J2 - J1b	2006	3409	5400
M25 J2 - J3	2006	4022	7200
M25 J3 - J2	2007	3971	7200
M25 J3 - J4	2008	3385	5400
M25 J4 - J3	2008	3158	5400
M25 J4 - J5	2008	2815	5400
M25 J5 - J4	2008	2912	5400
A20 EB between A223 and M25/M20	2008	1300	3600
A20 WB between B2173 and A223	2008	1959	3600

Overall Assessments

3.25 The following overall assessments are set out below:

- a) Residential Development
- b) Employment Development – Scenario 1: Business Park Development
- c) Employment Development – Scenario 2: Industrial Estate Development
- d) Residential Development plus Scenario 1: Business Park Development
- e) Residential Development plus Scenario 2: Industrial Estate Development.

a) Residential Development

Link Section	Current Average Annual Daily AM Peak (08:00 - 08:59)	Indicative Capacity	Estimated additional AM peak car trips on this link	Estimated additional AM peak trips as a percentage of current trips (%)	Current flows + estimated additional flows	Current flows + estimated additional flows within indicative capacity?
M25 J1b - J1a	4132	7200	20.5	0.5	4152.5	Yes
M25 J1a - J1b	3813	7200			3813.0	
M25 J1b - J2	2383	5400			2383.0	
M25 J2 - J1b	3409	5400	20.5	0.6	3429.5	Yes
M25 J2 - J3	4022	7200			4022.0	
M25 J3 - J2	3971	7200	23.7	0.6	3994.7	Yes
M25 J3 - J4	3385	5400	8.0	0.2	3393.0	Yes
M25 J4 - J3	3158	5400			3158.0	
M25 J4 - J5	2815	5400	8.0	0.3	2823.0	Yes
M25 J5 - J4	2912	5400			2912.0	
A20 EB between A223 and M25/M20	1300	3600			1300.0	
A20 WB between B2173 and A223	1959	3600	58.0	3.0	2017.0	Yes

Total number of AM peak car trips likely to use M25 j3 (if all users of A20 West use the A20 / B2173 junction west of Swanley)	36.5
Total number of AM peak car trips likely to use M25 j3 (if 50% of users of A20 West use the A20 / B2173 junction west of Swanley)	65.5

b) Employment Development – Scenario 1: Business Park Development

Link Section	Current Average Annual Daily AM Peak (08:00 - 08:59)	Indicative Capacity	Estimated additional AM peak car trips on this link	Estimated additional AM peak trips as a percentage of current trips (%)	Current flows + estimated additional flows	Current flows + estimated additional flows within indicative capacity?
M25 J1b - J1a	4132	7200	19.8	0.5	4151.8	Yes
M25 J1a - J1b	3813	7200	75.4	2.0	3888.4	Yes
M25 J1b - J2	2383	5400	75.4	3.2	2458.4	Yes
M25 J2 - J1b	3409	5400	19.8	0.6	3428.8	Yes
M25 J2 - J3	4022	7200	149.8	3.7	4171.8	Yes
M25 J3 - J2	3971	7200	39.3	1.0	4010.3	Yes
M25 J3 - J4	3385	5400	9.1	0.3	3394.1	Yes
M25 J4 - J3	3158	5400	34.6	1.1	3192.6	Yes
M25 J4 - J5	2815	5400	9.1	0.3	2824.1	Yes
M25 J5 - J4	2912	5400	34.6	1.2	2946.6	Yes
A20 EB between A223 and M25/M20	1300	3600	127.3	9.8	1427.3	Yes
A20 WB between B2173 and A223	1959	3600	33.4	1.7	1992.4	Yes

Total number of AM peak car trips likely to use M25 j3 (if all users of A20 West use M25 j3)	463.0
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c) Employment Development – Scenario 2: Industrial Estate Development

Link Section	Current Average Annual Daily AM Peak (08:00 - 08:59)	Indicative Capacity	Estimated additional AM peak car trips on this link	Estimated additional AM peak trips as a percentage of current trips (%)	Current flows + estimated additional flows	Current flows + estimated additional flows within indicative capacity?
M25 J1b - J1a	4132	7200	4.8	0.1	4136.8	Yes
M25 J1a - J1b	3813	7200	11.8	0.3	3824.8	Yes
M25 J1b - J2	2383	5400	11.8	0.5	2394.8	Yes
M25 J2 - J1b	3409	5400	4.8	0.1	3413.8	Yes
M25 J2 - J3	4022	7200	23.4	0.6	4045.4	Yes
M25 J3 - J2	3971	7200	9.6	0.2	3980.6	Yes
M25 J3 - J4	3385	5400	2.2	0.1	3387.2	Yes
M25 J4 - J3	3158	5400	5.4	0.2	3163.4	Yes
M25 J4 - J5	2815	5400	2.2	0.1	2817.2	Yes
M25 J5 - J4	2912	5400	5.4	0.2	2917.4	Yes
A20 EB between A223 and M25/M20	1300	3600	19.9	1.5	1319.9	Yes
A20 WB between B2173 and A223	1959	3600	8.2	0.4	1967.2	Yes

Total number of AM peak car trips likely to use M25 j3 (if all users of A20 West use M25 j3)	80.7
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d) Residential Development plus Scenario 1: Business Park Development

Link Section	Current Average Annual Daily AM Peak (08:00 - 08:59)	Indicative Capacity	Estimated additional AM peak car trips on this link	Estimated additional AM peak trips as a percentage of current trips (%)	Current flows + estimated additional flows	Current flows + estimated additional flows within indicative capacity?
M25 J1b - J1a	4132	7200	40.3	1.0	4172.3	Yes
M25 J1a - J1b	3813	7200	75.4	2.0	3888.4	Yes
M25 J1b - J2	2383	5400	75.4	3.2	2458.4	Yes
M25 J2 - J1b	3409	5400	40.3	1.2	3449.3	Yes
M25 J2 - J3	4022	7200	149.8	3.7	4171.8	Yes
M25 J3 - J2	3971	7200	63.1	1.6	4034.1	Yes
M25 J3 - J4	3385	5400	17.1	0.5	3402.1	Yes
M25 J4 - J3	3158	5400	34.6	1.1	3192.6	Yes
M25 J4 - J5	2815	5400	17.1	0.6	2832.1	Yes
M25 J5 - J4	2912	5400	34.6	1.2	2946.6	Yes
A20 EB between A223 and M25/M20	1300	3600	127.3	9.8	1427.3	Yes
A20 WB between B2173 and A223	1959	3600	91.4	4.7	2050.4	Yes

Total number of AM peak car trips likely to use M25 j3 (if all users of A20 West use the A20 / B2173 junction west of Swanley and 100% of trips on the A20 Eastbound use the M25 j3)	499.5
Total number of AM peak car trips likely to use M25 j3 (if 50% of trips on the A20 Westbound use the M25 j3 and 100% of trips on the A20 Eastbound use the M25 j3)	528.5

e) Residential Development plus Scenario 2: Industrial Estate Development

Link Section	Current Average Annual Daily AM Peak (08:00 - 08:59)	Indicative Capacity	Estimated additional AM peak car trips on this link	Estimated additional AM peak trips as a percentage of current trips (%)	Current flows + estimated additional flows	Current flows + estimated additional flows within indicative capacity?
M25 J1b - J1a	4132	7200	25.3	0.6	4157.3	Yes
M25 J1a - J1b	3813	7200	11.8	0.3	3824.8	Yes
M25 J1b - J2	2383	5400	11.8	0.5	2394.8	Yes
M25 J2 - J1b	3409	5400	25.3	0.7	3434.3	Yes
M25 J2 - J3	4022	7200	23.4	0.6	4045.4	Yes
M25 J3 - J2	3971	7200	33.3	0.8	4004.3	Yes
M25 J3 - J4	3385	5400	10.2	0.3	3395.2	Yes
M25 J4 - J3	3158	5400	5.4	0.2	3163.4	Yes
M25 J4 - J5	2815	5400	10.2	0.4	2825.2	Yes
M25 J5 - J4	2912	5400	5.4	0.2	2917.4	Yes
A20 EB between A223 and M25/M20	1300	3600	19.9	1.5	1319.9	Yes
A20 WB between B2173 and A223	1959	3600	66.1	3.4	2025.1	Yes

Total number of AM peak car trips likely to use M25 j3 (if all users of A20 West use the A20 / B2173 junction west of Swanley and 100% of trips on the A20 Eastbound use the M25 j3)	117.3
Total number of AM peak car trips likely to use M25 j3 (if 50% of trips on the A20 Westbound use the M25 j3 and 100% of trips on the A20 Eastbound use the M25 j3)	146.2

4. **ANALYSIS**

Residential

- 4.1 The 'Reduced Transport Evaluation' of the residential proposals in Swanley shows that, at 2009 levels, the additional number of trips generated on the Strategic Road Network can be accommodated within the existing capacity headroom. Moreover, the additional number of trips represents a small percentage of existing 08:00 – 09:00 flows experienced on the Strategic Road Network near Swanley. The most significant impact is forecast to be on the A20 westbound, where an increase of approximately 88 trips between 08:00 and 09:00 is forecast.
- 4.2 Because it is possible to access the A20 from the B2173/A20 junction west of Swanley, it does not follow that additional westbound trips on the A20 will result in significant additional movements at the M25 junction 3 in the AM peak. This assessment has forecast the number of additional trips at M25 junction 3 if 0% and 50% of trips using the A20 westbound between 08:00 and 09:00 accessed this by using the M25 junction 3. The assessment suggests that under these scenarios, an additional 37 or 66 trips would use M25 junction 3 between 08:00 – 09:00 as a result of residential development in Swanley.

Employment Development at Broom Hill

- 4.3 On the basis of this 'Reduced Transport Evaluation', the number of additional 08:00 – 09:00 trips likely to use the Strategic Road Network varies greatly depending on whether the development takes the form of a business park or industrial estate, within use class B1. Whilst both forms of development have been assessed as producing levels of additional car trips that are acceptable within the capacity headroom at 2009 levels, the number of trips estimated as resulting from a business park development is significant.
- 4.4 The most significant impacts for both scenarios are the number of 08:00 – 09:00 trips on the M25 between junctions 2 – 3 and on the A20 Eastbound between the A223 and M25 junction 3. It is noteworthy that the business park scenario has been assessed as producing an estimated 463 additional 08:00 – 09:00 trips likely to use M25 junction 3.
- 4.5 For both of the employment scenarios, the multi modal trip rates have been calculated in TRICS using lower than ideal numbers of surveys. The assessment is considered to give a broad indication of the impacts to support the preparation of the LDF Core Strategy. However, the detailed implications of development at Broom Hill will need to be rigorously assessed by the applicant in the process of preparing a planning application, when the scale and type of proposed development will be available.
- 4.8 The LDF Core Strategy does not specify the scale of development to take place on the Broom Hill site. In order to carry out this assessment, the Reduced Transport Evaluation has tested the impact of developing 22,300 sq m of employment floorspace on the Broom Hill site, on the basis of Saved Local Plan Policy EP1. However, the Local Plan (Policy SW8) envisaged the development of high-technology business park on the site, which would have been consistent with a higher density of development.
- 4.9 It is possible that other planning considerations, including the need to mitigate the impact of development on habitat and the need to protect views from the AONB, could necessitate a lower quantum of development on the site, if the development takes the form of an industrial estate. The following tables consider the impact of reducing the scale of industrial estate type development on the Broom Hill site on the numbers of additional employment trips using sections of the Strategic Road Network. The scenarios tested are 50% and 75% of the Saved

Local Plan allocation (i.e. 11,150 sq m and 16,725 sq m, respectively). These tables should be compared with table c of section 3, above.

f) Employment Development – Scenario 2: Industrial Estate Development (11,150 sq m Gross Floor Area)

Link Section	Current Average Annual Daily AM Peak (08:00 - 08:59)	Indicative Capacity	Estimated additional AM peak car trips on this link	Estimated additional AM peak trips as a percentage of current trips (%)	Current flows + estimated additional flows	Current flows + estimated additional flows within indicative capacity?
M25 J1b - J1a	4132	7200	2.4	0.1	4134.4	Yes
M25 J1a - J1b	3813	7200	5.9	0.2	3818.9	Yes
M25 J1b - J2	2383	5400	5.9	0.2	2388.9	Yes
M25 J2 - J1b	3409	5400	2.4	0.1	3411.4	Yes
M25 J2 - J3	4022	7200	11.7	0.3	4033.7	Yes
M25 J3 - J2	3971	7200	4.8	0.1	3975.8	Yes
M25 J3 - J4	3385	5400	1.1	0.0	3386.1	Yes
M25 J4 - J3	3158	5400	2.7	0.1	3160.7	Yes
M25 J4 - J5	2815	5400	1.1	0.0	2816.1	Yes
M25 J5 - J4	2912	5400	2.7	0.1	2914.7	Yes
A20 EB between A223 and M25/M20	1300	3600	9.9	0.8	1309.9	Yes
A20 WB between B2173 and A223	1959	3600	4.1	0.2	1963.1	Yes

Total number of AM peak car trips likely to use M25 j3 (if all users of A20 West use M25 j3)	40.4
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g) Employment Development – Scenario 2: Industrial Estate Development (16,725 sq m Gross Floor Area)

Link Section	Current Average Annual Daily AM Peak (08:00 - 08:59)	Indicative Capacity	Estimated additional AM peak car trips on this link	Estimated additional AM peak trips as a percentage of current trips (%)	Current flows + estimated additional flows	Current flows + estimated additional flows within indicative capacity?
M25 J1b - J1a	4132	7200	3.6	0.1	4135.6	Yes
M25 J1a - J1b	3813	7200	8.8	0.2	3821.8	Yes
M25 J1b - J2	2383	5400	8.8	0.4	2391.8	Yes
M25 J2 - J1b	3409	5400	3.6	0.1	3412.6	Yes
M25 J2 - J3	4022	7200	17.5	0.4	4039.5	Yes
M25 J3 - J2	3971	7200	7.2	0.2	3978.2	Yes
M25 J3 - J4	3385	5400	1.7	0.0	3386.7	Yes
M25 J4 - J3	3158	5400	4.0	0.1	3162.0	Yes
M25 J4 - J5	2815	5400	1.7	0.1	2816.7	Yes
M25 J5 - J4	2912	5400	4.0	0.1	2916.0	Yes
A20 EB between A223 and M25/M20	1300	3600	14.9	1.1	1314.9	Yes
A20 WB between B2173 and A223	1959	3600	6.1	0.3	1965.1	Yes

Total number of AM peak car trips likely to use M25 j3 (if all users of A20 West use M25 j3)	60.5
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Combined Residential and Employment Development

- 4.6 The 'Reduced Transport Evaluation' shows that at 2009 levels the additional number of trips generated on the Strategic Road Network as a result of development in Swanley can be accommodated within the existing capacity headroom. As noted above, the number of additional 08:00 – 09:00 trips likely to use the Strategic Road Network varies greatly depending on whether the development takes the form of a business park or industrial estate type of development.
- 4.7 The most significant impacts in the AM peak are on the A20 and the M25 between junctions 3 and 2 (clockwise and anti-clockwise). It is also worth noting that the combination of the residential proposals and the business park scenario has been assessed as producing an estimated 529 additional 08:00 – 09:00 trips likely to use M25 junction 3 if 50% of the additional trips on the A20 Westbound resulting from residential development use the M25 j3. The equivalent figure for the combination of residential proposals and the industrial estate scenario, as tested in the main assessment (i.e. where the scale of development is 22,300 sq m), is 146 08:00 – 09:00 trips using M25 junction 3.
- 4.8 As noted above, it is possible that other planning considerations, including the need to mitigate the impact of development on habitats and the need to protect views from the AONB, could necessitate a lower quantum of development on the site, if the development takes the form of an industrial estate. The following tables consider the impact of reducing the scale of industrial estate type development on the Broom Hill site on the combined numbers of additional residential and employment trips using section of the Strategic Road Network. As above, the scenarios tested are 50% and 75% of the Saved Local Plan allocation (i.e. 11,150 sq m and 16,725 sq m, respectively). These tables should be compared with table e of section 3, above.

f) Residential Development plus Scenario 2: Industrial Estate Development (11,150 sq m Gross Floor Area)

Link Section	Current Average Annual Daily AM Peak (08:00 - 08:59)	Indicative Capacity	Estimated additional AM peak car trips on this link	Estimated additional AM peak trips as a percentage of current trips (%)	Current flows + estimated additional flows	Current flows + estimated additional flows within indicative capacity?
M25 J1b - J1a	4132	7200	22.9	0.6	4154.9	Yes
M25 J1a - J1b	3813	7200	5.9	0.2	3818.9	Yes
M25 J1b - J2	2383	5400	5.9	0.2	2388.9	Yes
M25 J2 - J1b	3409	5400	22.9	0.7	3431.9	Yes
M25 J2 - J3	4022	7200	11.7	0.3	4033.7	Yes
M25 J3 - J2	3971	7200	28.5	0.7	3999.5	Yes
M25 J3 - J4	3385	5400	9.1	0.3	3394.1	Yes
M25 J4 - J3	3158	5400	2.7	0.1	3160.7	Yes
M25 J4 - J5	2815	5400	9.1	0.3	2824.1	Yes
M25 J5 - J4	2912	5400	2.7	0.1	2914.7	Yes
A20 EB between A223 and M25/M20	1300	3600	9.9	0.8	1309.9	Yes
A20 WB between B2173 and A223	1959	3600	62.0	3.2	2021.0	Yes

Total number of AM peak car trips likely to use M25 j3 (if all users of A20 West use the A20 / B2173 junction west of Swanley and 100% of trips on the A20 Eastbound use the M25 j3)	76.9
Total number of AM peak car trips likely to use M25 j3 (if 50% of trips on the A20 Westbound use the M25 j3 and 100% of trips on the A20 Eastbound use the M25 j3)	105.9

g) Residential Development plus Scenario 2: Industrial Estate Development (16,725 sq m Gross Floor Area)

Link Section	Current Average Annual Daily AM Peak (08:00 - 08:59)	Indicative Capacity	Estimated additional AM peak car trips on this link	Estimated additional AM peak trips as a percentage of current trips (%)	Current flows + estimated additional flows	Current flows + estimated additional flows within indicative capacity?
M25 J1b - J1a	4132	7200	24.1	0.6	4156.1	Yes
M25 J1a - J1b	3813	7200	8.8	0.2	3821.8	Yes
M25 J1b - J2	2383	5400	8.8	0.4	2391.8	Yes
M25 J2 - J1b	3409	5400	24.1	0.7	3433.1	Yes
M25 J2 - J3	4022	7200	17.5	0.4	4039.5	Yes
M25 J3 - J2	3971	7200	30.9	0.8	4001.9	Yes
M25 J3 - J4	3385	5400	9.6	0.3	3394.6	Yes
M25 J4 - J3	3158	5400	4.0	0.1	3162.0	Yes
M25 J4 - J5	2815	5400	9.6	0.3	2824.6	Yes
M25 J5 - J4	2912	5400	4.0	0.1	2916.0	Yes
A20 EB between A223 and M25/M20	1300	3600	14.9	1.1	1314.9	Yes
A20 WB between B2173 and A223	1959	3600	64.1	3.3	2023.1	Yes

Total number of AM peak car trips likely to use M25 j3 (if all users of A20 West use the A20 / B2173 junction west of Swanley and 100% of trips on the A20 Eastbound use the M25 j3)	97.1
Total number of AM peak car trips likely to use M25 j3 (if 50% of trips on the A20 Westbound use the M25 j3 and 100% of trips on the A20 Eastbound use the M25 j3)	126.1

- 4.10 As can be seen from the tables above, the impact of reducing the level of development on the Broom Hill site would be a reduction in the number of trips using the Strategic Road Network as a result of the overall level of development in Swanley. Under the scenario that would see development of 16,725 sq m of industrial estate floorspace (75% of the local plan allocation), the number of additional 08:00 – 09:00 trips likely to use M25 junction 3 if 50% of the additional trips on the A20 Westbound resulting from residential development use the M25 j3 is approximately 97.
- 4.11 This assessment has relied on demand-based forecasts and the assumption that existing modal split patterns will continue. It has not taken into account the positive impacts that policy measures to mitigate the impact of development can have. The following section in this document considers the policy measures that the LDF Core Strategy will take forward to reduce reliance on the car and considers some of their wider benefits.

5. APPROACH TO CORE STRATEGY POLICIES

Residential Development

5.1 The level of residential development in Swanley is considered to be broadly acceptable in respect of the anticipated impact on the Strategic Road Network. However, Sevenoaks District Council propose that this impact should be further managed by transport mitigation measures applied locally to development sites and brought forward through the Sevenoaks District Strategy for Transport and the Local Transport Plan. These measures will contribute towards wider planning and sustainability objectives, i.e. to improve accessibility by public transport, cycling and walking and reducing the need to travel. It is proposed that the measures to be supported in the Sevenoaks District LDF Core Strategy: Submission version are:

- Secure an improved walking and cycling link between the town centre and Swanley Station broadly following the route set out in figure 5 of the 'Core Strategy: Draft for Submission' (this proposal is supported by KCC's emerging Sevenoaks District Strategy for Transport);
- Investigate the potential options for developing an improved bus interchange in Swanley (this is a proposal of KCC's emerging Sevenoaks District Strategy for Transport);
- In conjunction with the County Council, improve cycleway and footpath provision in the town through the Sevenoaks District Strategy for Transport and require facilities for cyclists to be provided in new developments;
- Require all developments of 20 dwellings or more to be accompanied by a Travel Plan, which would set out a package of measures to encourage travel to and from the development site by sustainable modes. This is significantly lower than the 100 unit threshold set out in Kent County Council's emerging 'Guidance on Transport Assessments and Travel Plans' (October 2008) and would have the impact of capturing the majority of the potential residential sites identified in the Council's SHLAA Update 2009.

Employment Development at Broom Hill

5.2 The level of additional trips on the Strategic Road Network estimated through this assessment as a result of a business park type development at Broom Hill is relatively high. However, the estimated number of additional vehicle trips resulting from an Industrial Estate type development is substantially less (the number of vehicle trips using the M25 j3 between 08:00 and 09:00 as a result of an industrial estate development is just 17.5% of the business park figure) and is considered to be broadly acceptable in respect of the anticipated impact on the Strategic Road Network.

5.3 However, mitigation measures have the potential to achieve further reductions in the number of journeys on the Strategic Road Network and to contribute towards wider planning and sustainability objectives, i.e. improving accessibility by non-car modes. In addition, measures to mitigate the transport impacts of development at the Broom Hill site are considered to have the potential to improve accessibility by non-car modes to the east of Swanley. Securing these improvements will help to ensure that wider regeneration benefits of development of the Broom Hill site are captured.

5.4 The proposed approach to mitigating transport impacts of development of employment land at Broom Hill is:

- a) Requiring applications to be accompanied by a transport assessment and travel plan that satisfy SDC and the highways authorities that the impacts of development will be

acceptable and that incorporate proposals to promote access by non-car modes and mitigate impact.

- b) Limiting the development to industrial estate type uses (B1(c), B2, B8) unless a developer is able to demonstrate, to the satisfaction of the Council and the Highways Agency, that the development of other types of commercial floorspace will not have a significant impact on traffic levels on the Strategic Road Network.
- c) Requiring the development to implement a travel plan that may provide an improved bus link between Swanley Town Centre, Swanley Station and the east of Swanley, to serve the Broom Hill site and other employment sites in the area.
- d) Limiting the number of parking spaces to a level significantly below the maximum standard that would be consistent with reduced car use.
- e) Using the development of the Broom Hill site as a catalyst to promote sustainable travel options for existing businesses to the east of Swanley.

a) Requiring applications to be accompanied by transport assessments and travel plans

5.5 Kent County Council's emerging 'Guidance on Transport Assessments and Travel Plans' (October 2008) sets out thresholds for the provision of Transport Assessments and Travel Plans. The following thresholds may be appropriate to development of the Broom Hill site:

Class	Land Use	Threshold
B1 (a)	Offices	2500 sq m GFA
B1 (b & c)	Research and Development / Light Industry	3000 sq m GFA
B2	General Industry	5000 sq m GFA
B8	Storage & Distribution	4000 sq m GFA

Source: P11 of 'Guidance on Transport Assessments and Travel Plans' (2008)

Regardless of the thresholds, the guidance also suggests that Transport Assessments should be required when there are 'particular transport, accessibility or environmental issues in connection with the proposed site'.

5.6 SDC will seek to ensure that a Travel Plan is brought forward for the whole of the Broom Hill site with proposals for development. It is felt that this offers the best opportunity to secure substantial transport improvements. SDC will also reserve the right to require Transport Assessments from applicants for proposals that fall below any set thresholds to prevent unacceptable impacts on the Strategic Road Network arising as a result of incremental development of the site.

5.7 A full Transport Assessment will need to include consideration of the acceptable quantity of development in terms of traffic impact, taking account of measures proposed in a Travel Plan, once the likely mix of development is known.

b) Limiting the development to industrial estate type uses

5.8 This Reduced Transport Evaluation has indicated that an industrial estate type of development is likely to have a much smaller impact on the SRN than a business park type development. SDC propose that, unless a developer is able to prove, to the satisfaction of the Council and the HA, that other employment uses on the site would not lead to unacceptable impacts on the Strategic Road Network, the development takes the form of industrial type uses (i.e. B1(c), B2 and B8). Proposals for development of industrial estate type uses would be subject to the requirements for transport assessments and travel plans set out in section a), above.

5.8 In addition, it has been suggested that, as a result of other planning considerations, it is possible that the scale of development that takes place on the Broom Hill site will have to be reduced if an industrial estate type development comes forward (see para 4.9). It is likely that

this would have the impact of further reducing the number of additional trips on the Strategic Road Network as a result of development.

c) Potential Travel Plan targets and schemes

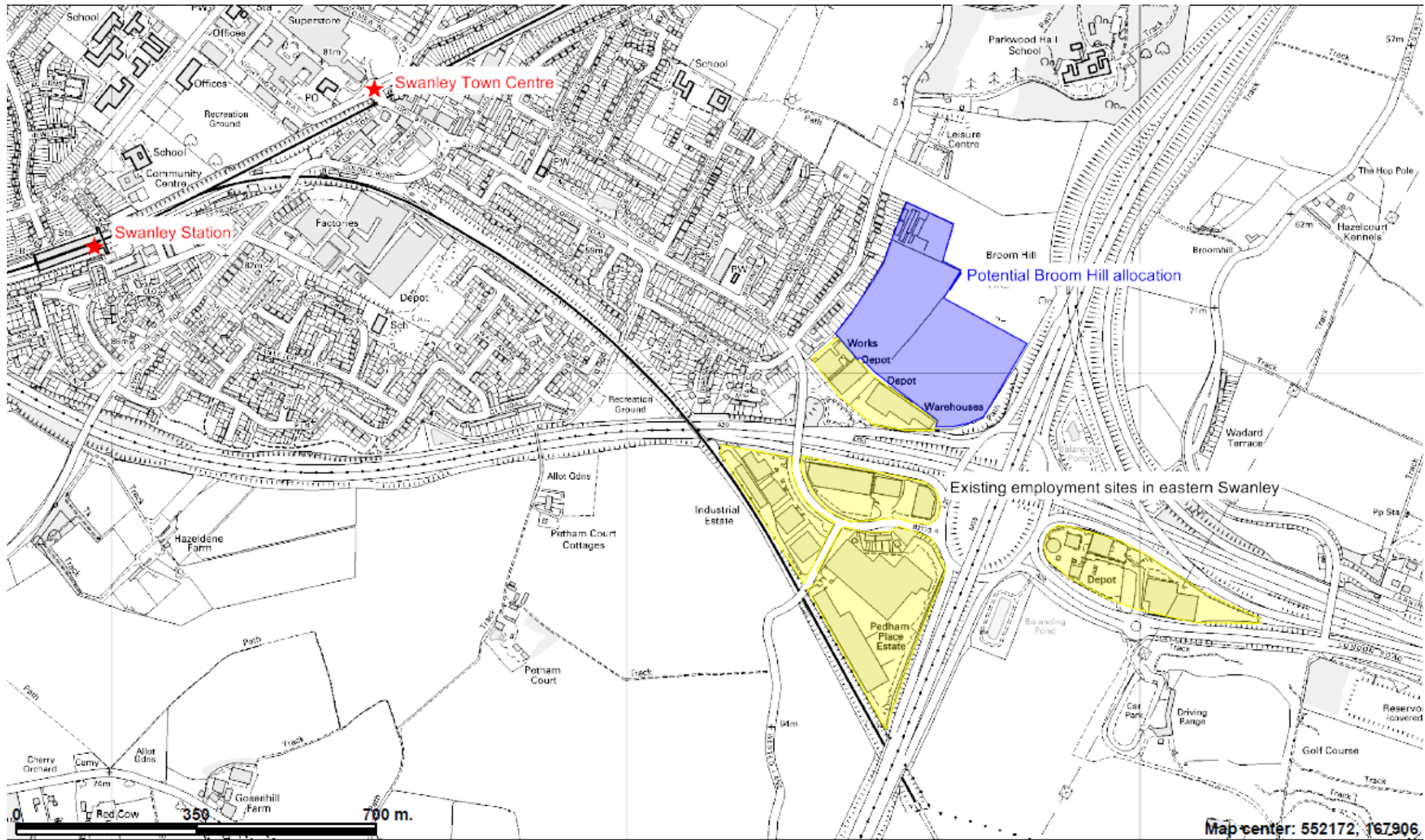
- 5.9 A Travel Plan for development on the Broom Hill site provides an opportunity to mitigate the impact of development on the highway network, including the Strategic Road Network and encourage travel by more sustainable modes of transport, in accordance with national planning policy (PPG13).
- 5.10 Where a travel plan forms a key component of mitigating the impact of development on the Strategic Road Network, the travel plan should be guided by a target modal split percentage for trips to the site by non-car means. In these circumstances, the travel plan target should be set through negotiation between the applicant, the Council and the Highways Agency. This Reduced Transport Evaluation suggests that, for industrial estate type developments, approximately 70% of trips associated with the site in the AM peak are arrivals trips, the majority of which it has been assumed are likely to be associated with journeys to work. This suggests that potential developers of the Broom Hill site should be able to significantly impact the number of car journeys to the site by setting, and achieving, modal split targets for commuting to and from the site for their workforce.
- 5.11 The number and type of measures required will depend on the scale of impact identified through a full Transport Assessment on the scale and nature of development proposed by an applicant. Applicants should discuss, with SDC and the HA, potential measures to be supported through a travel plan during the process of preparing planning applications.
- 5.12 Potential travel plan measures associated with the Broom Hill development that have been identified by the Council include providing an improved bus link between Swanley town centre / Swanley station and the east of Swanley. The Kent and Medway Public Transport Map (September 2009) notes that the east of Swanley is currently served by two low frequency bus services, excluding school services, which currently have timings that are unsuitable for commuting. These are:

Bus	Frequency	Running Times
419	4 per day	Serves AM peak but the latest service calling in east Swanley is at 16:15
421	4 per day	10:00 – 15:00

- 5.13 Providing an improved bus link between Swanley town centre and the Broom Hill site would improve accessibility to the site for any members of the eventual workforce currently living in, or near to, Swanley town centre and for those that move to Swanley following development of the many town centre or edge of town centre sites identified in the Council's SHLAA Update 2009. It would also allow for any members of the workforce living in areas with relatively frequent bus services to and from Swanley town centre, such as Sidcup, Orpington and Dartford, to complete their journeys to the site by bus. Improving bus links between Swanley station and the site would increase opportunities for people to commute to work by train from a number of surrounding settlements, including Otford, Maidstone, Sevenoaks, the Medway Towns and Bromley. This scheme could have wider benefits within Swanley as it would be able to serve other employment sites to the east of Swanley. This could have the impact of reducing journeys on the Strategic Road Network and at M25 junction 3 (see section e).
- 5.14 The Travel Plan could also include consideration of any opportunities to provide minibuses to transport staff to work. This formed part of a recent Travel Plan to mitigate the impacts of a

change of use of a unit (application SE/08/01617) on the Moreton Industrial Estate, to the south of the Broom Hill site.

- 5.15 The LDF Core Strategy and the emerging Sevenoaks District Strategy for Transport (KCC) support improvements to cycleways and footpaths in Swanley, in order to achieve wider planning and sustainability objectives. Through the development of the Travel Plan for the Broom Hill site, opportunities to provide on-site facilities to promote cycling to and from the site, such cycle storage and changing facilities, and contributions towards off-site cycle lanes should also be considered.
- 5.16 Other actions that SDC are considering requiring applicants to undertake could impact upon the directions of travel and the modal splits of the site's workforce. The LDF Core Strategy proposes that new development in Swanley should contribute towards skills training, in order that deprivation in Swanley can be tackled through new development. As part of this, applicants for the development of the Broom Hill site could undertake, or contribute towards, a training programme in Swanley designed to ensure that Swanley residents have the necessary skills to take up new jobs on the Broom Hill site. This would have the potential to reduce the number of people commuting to the site on the Strategic Road Network by increasing the proportion of employees coming from the local community.
- d) Limiting the number of parking spaces to a level significantly below the maximum standard that would be consistent with reduced car use
- 5.16 As part of ensuring that any targets of a travel plan are achieved, SDC will consider the need to limit the number of parking spaces for the development to a level significantly below adopted maximum standards, following the completion of a transport assessment of the proposed development. SDC consider that the on-site parking provision should be consistent with the number of peak trips to a site, as estimated through a full Transport Assessment, and the modal split target set out in a Travel Plan.
- 5.17 For the industrial estate scenario tested in this Reduced Transport Evaluation, national maximum parking standards for B1 developments over 2500 sq m (as set out in appendix D of Planning Policy Guidance 13) would allow 1 parking space per 30 sq m. Following this, an industrial estate development of 22,300 sq m within the B1 use class (Scenario 2 in this assessment) could include approximately 743 parking spaces, a level more associated with business park type developments than industrial estate type developments.
- 5.18 From the figures in this Reduced Transport Evaluation, it can be estimated that the total 08:00 – 09:00 arrivals by all modes at an industrial estate type development of 22,300 sq m is approximately 104 (as set out in section 3 e, approximately 77 of these trips are estimated as being car trips). In this example, limiting the number of staff car parking spaces to 52, and accompanying this with local on street parking controls, would be consistent with a modal split target of 50% for non-car modes, if this were proposed by a Travel Plan following an assessment of transport impacts in a full Transport Assessment.
- e) Using the development of the Broom Hill site as a catalyst to promote sustainable travel options for existing businesses to the east of Swanley
- 5.19 SDC's 'Employment Land Review Addendum Report 2010' identifies three separate employment sites located in close proximity to the proposed Broom Hill site. These are Wested Lane Industrial Estate, Southern Cross Industrial Estate and Moreton Industrial Estate. On the basis of the footprints of the units on these sites, it can be estimated that there are 55,000 sq m of existing employment floorspace within these three sites to the east of Swanley. Units on these sites are likely to be in a mix of uses.



This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Figure 4: Map of showing the location of the potential Broom Hill allocation and existing employment sites in eastern Swanley

- 5.20 If it were assumed that trip rates from these industrial estates broadly followed the trip rates identified for the Broom Hill site (0.66 total multi modal 08:00 – 09:00 trips per 100 sq m GFA), the three sites would be responsible for approximately 363 multi modal trips in the AM peak hour. Using the assumptions made in this Reduced Transport Evaluation, i.e. ratio of local trips to those using the SRN and existing modal splits, this number of multi modal trips would indicate that the three existing sites are responsible for approximately 199 vehicle trips through M25 junction 3 between 08:00 and 09:00.
- 5.21 SDC consider that measures to improve accessibility to the Broom Hill site, brought forward by comprehensive development of the site, will have the potential to improve accessibility to other employment sites, and some residential areas, to the east of Swanley. In particular, any improved bus services provided to mitigate impacts of the Broom Hill site would likely be attractive to people working on the Wested Lane, Southern Cross and Moreton sites. Any improvements to off-site cycle lanes would also benefit these sites, as would opportunities to join car sharing clubs.
- 5.22 Therefore, whilst the main quantitative assessment in this Reduced Transport Evaluation has indicated that development of an industrial estate-type development on the Broom Hill site would lead to a modest increase in AM peak trips on the Strategic Road Network, when the wider impacts of potential mitigation measures are taken into account, the development has the potential to bring about a reduction in the existing number of trips at M25 junction and on the Strategic Road Network generally.

APPENDIX A: TRICS OUTPUT SHEETS FOR RESIDENTIAL SURVEYS USED

Town Centre Sites from TRICS and 85th Percentile Figures

Site Ref	Description	Area	Units	Day	Date	Multi Modal Trips Per Dwelling		
						AM Peak Arrivals	AM Peak Departures	AM Peak Totals
WT-03-C-02	FLATS, ATHLONE	WESTMEATH	20	Tue	19/06/2007	0.25	0.7	0.85
CS-03-C-01	FLATS, SLIGO	SLIGO	21	Fri	15/06/2007	0	0.43	0.43
KI-03-C-01	BLOCKS OF FLATS, KINGSTON	KINGSTON	132	Tue	26/06/2001	0.10	0.25	0.35
NF-03-K-01	TERRACED / FLATS, NORWICH	NORFOLK	51	Fri	03/11/2000	0.35	0.57	0.92
85th Percentile						0.26	0.64	0.89

Edge of Town Centre Sites from TRICS and 85th Percentile Figures

Site Ref	Description	Area	DWELLS	Day	Date	Multi Modal Trips Per Dwelling		
						AM Peak Arrivals	AM Peak Departures	AM Peak Totals
KK-03-A-01	DETACHED, KILKENNY	KILKENNY	10	Mon	24/11/2008	0.8	1	1.8
CA-03-A-02	MIXED HOUSES, PETERBOROUGH	CAMBRIDGESHIRE	363	Thur	13/05/2004	0.27	0.70	0.98
GS-03-A-01	SEMI D./TERRACED, GLOUCESTER	GLOUCESTERSHIRE	73	Tue	25/05/2004	0.19	0.62	0.80
CS-03-A-01	TERRACED, SLIGO	SLIGO	46	Thur	14/06/2007	0.17	0.61	0.78
HF-03-A-01	MIXED HOUSES, WELWYN GARDEN CITY	HERTFORDSHIRE	53	Fri	06/09/2002	0.17	0.45	0.62
NY-03-A-03	PRIVATE HOUSING, BOROUGHBRIDGE	NORTH YORKSHIRE	14	Mon	15/09/2008	0.14	0.36	0.5
MO-03-B-01	SEMI DETACHED, ELGIN	MORAY	15	Fri	12/05/2006	0.07	0.8	0.87
MO-03-B-02	BUNGALOWS, ELGIN	MORAY	40	Weds	10/05/2006	0.15	0.48	0.63
WM-03-C-03	FLATS, SOLIHULL	WEST MIDLANDS	60	Fri	21/09/2007	0.12	0.67	0.78
GR-03-C-01	FLATS, BLACKHEATH	GREENWICH	134	Mon	29/03/2004	0.09	0.66	0.75
WY-03-	BLOCK OF	WEST	12	Weds	13/09/20	0.17	0.58	0.75

C-02	FLATS, HUDDERSFIELD	YORKSHIRE				06			
EG-03-C-02	BLOCKS OF FLATS, EALING	EALING	132	Tue	20/04/2004	0.04	0.55	0.59	
SC-03-C-01	FLATS, CAMBERLEY	SURREY	140	Mon	21/07/2008	0.09	0.52	0.61	
CH-03-C-01	BLOCKS OF FLATS, CHESTER	CHESHIRE	60	Fri	17/10/2008	0.13	0.45	0.58	
WY-03-C-01	BLOCK OF FLATS, LEEDS	WEST YORKSHIRE	127	Thur	13/11/2003	0.09	0.44	0.53	
MS-03-C-01	BLOCKS OF FLATS, LIVERPOOL	MERSEYSIDE	114	Thur	16/10/2003	0.13	0.40	0.54	
DC-03-C-01	BLOCKS OF FLATS, WEYMOUTH	DORSET	27	Tue	08/07/2008	0.30	0.37	0.67	
WT-03-C-01	FLATS, ATHLONE	WESTMEATH	86	Weds	20/06/2007	0.02	0.22	0.24	
WY-03-D-01	BLOCKS OF FLATS, LEEDS	WEST YORKSHIRE	45	Weds	19/11/2003	0.13	0.71	0.84	
SC-03-D-01	BLOCKS OF FLATS, STAINES	SURREY	42	Tue	04/11/2003	0.33	0.69	1.02	
WY-03-D-02	BLOCKS OF FLATS, BRADFORD	WEST YORKSHIRE	44	Mon	09/05/2005	0.30	0.59	0.89	
KI-03-D-01	BLOCKS OF FLATS, KINGSTON	KINGSTON	15	Thur	14/11/2002	0.07	0.47	0.53	
TV-03-D-01	BLOCKS OF FLATS, MIDDLESBRO.	TEES VALLEY	61	Fri	19/10/2001	0.13	0.18	0.31	
HC-03-D-03	FLATS, WINCHESTER	HAMPSHIRE	23	Tue	20/11/2007	0.04	0.09	0.13	
DC-03-K-03	MIXED HOUSING, DORCHESTER	DORSET	24	Fri	04/07/2008	0.21	0.42	0.63	
NY-03-K-01	MIXED HOUSING, BORO'BRIDGE	NORTH YORKSHIRE	19	Tue	16/09/2008	0	0.11	0.11	
CH-03-L-01	MIXED HOUSING, MACCLESFIELD	CHESHIRE	40	Tue	26/06/2007	0.3	0.8	1.1	
NF-03-L-01	TERRACED/ FLATS, NORWICH	NORFOLK	39	Tue	07/11/2000	0.08	0.33	0.41	
85th Percentile						0.29	0.70	0.89	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : C - FLATS PRIVATELY OWNED
 MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON	
	KI KINGSTON	1 days
12	CONNAUGHT	
	CS SLIGO	1 days
14	LEINSTER	
	WT WESTMEATH	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
 Range: 20 to 132 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 06/07/09

Selected survey days:

Tuesday	2 days
Friday	1 days

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

Selected Locations:

Town Centre	3
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Selected Location Sub Categories:

Built-Up Zone	1
No Sub Category	2

Filtering Stage 3 selection:

Use Class:

C3	3 days
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Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days

Population within 5 miles:

5,001 to 25,000	2 days
500,001 or More	1 days

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	2 days

Filtering Stage 3 selection (Cont.):

Travel Plan:

Not Known

1 days

No

2 days

LIST OF SITES relevant to selection parameters

1	CS-03-C-01	FLATS, SLIGO		SLIGO
		LOWER NEW STREET		
		SLIGO		
		Town Centre		
		No Sub Category		
		Total Number of dwellings:	21	
2	KI-03-C-01	BLOCKS OF FLATS, KINGSTON		KINGSTON
		SOPWITH WAY		
		KINGSTON-UPON-THAMES		
		Town Centre		
		Built-Up Zone		
		Total Number of dwellings:	132	
3	WT-03-C-02	FLATS, ATHLONE		WESTMEATH
		CUSTOMER PLACE		
		ATHLONE		
		Town Centre		
		No Sub Category		
		Total Number of dwellings:	20	

Jacobs Engineering U.K. Limited Miller House, 43-51 Lower Stone Street Maidstone

Licence No: 810408

RANK ORDER for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLERanking Type: TOTALS Time Range: 08:00-09:00
Under 6 Surveys Included, 15th/85th Percentile Not HighlightedMedian Values

Arrivals: 0.000

Departures: 0.429

Totals: 0.429

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	WT-03-C-02	FLATS, ATHLONE	WESTMEATH	20	Tue	19/06/07	0.150	0.700	0.850	
2	CS-03-C-01	FLATS, SLIGO	SLIGO	21	Fri	15/06/07	0.000	0.429	0.429	
3	KI-03-C-01	BLOCKS OF FLATS, KINGSTO	KINGSTON	132	Tue	26/06/01	0.098	0.250	0.348	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : K - MIXED PRIVATE HOUSING
 MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

04 EAST ANGLIA
 NF NORFOLK 1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
 Range: 51 to 51 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 03/07/09

Selected survey days:

Friday 1 days

Selected survey types:

Manual count 1 days
 Directional ATC Count 0 days

Selected Locations:

Town Centre 1

Selected Location Sub Categories:

Built-Up Zone 1

Filtering Stage 3 selection:

Use Class:

C3 1 days

Population within 1 mile:

25,001 to 50,000 1 days

Population within 5 miles:

125,001 to 250,000 1 days

Car ownership within 5 miles:

0.6 to 1.0 1 days

Travel Plan:

Not Known 1 days

LIST OF SITES relevant to selection parameters

1	NF-03-K-01 COSLANY STREET	TERRACED/FLATS, NORWICH	NORFOLK
	NORWICH Town Centre Built-Up Zone		
	Total Number of dwellings:	51	

Jacobs Engineering U.K. Limited Miller House, 43-51 Lower Stone Street Maidstone

Licence No: 810408

RANK ORDER for Land Use 03 - RESIDENTIAL/K - MIXED PRIVATE HOUSING
MULTI-MODAL TOTAL PEOPLE

Ranking Type: TOTALS Time Range: 08:00-09:00
Under 6 Surveys Included, 15th/85th Percentile Not Highlighted

Median Values

Arrivals: 0.353
Departures: 0.569
Totals: 0.922

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	NF-03-K-01	TERRACED/FLATS, NORWICH	NORFOLK	51	Fri	03/11/00	0.353	0.569	0.922	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : D - FLATS FOR RENT
 MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON	
	KI KINGSTON	1 days
02	SOUTH EAST	
	HC HAMPSHIRE	1 days
	SC SURREY	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	2 days
09	NORTH	
	TV TEES VALLEY	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
 Range: 15 to 61 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 12/11/08

Selected survey days:

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

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	6
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Selected Location Sub Categories:

Residential Zone	2
Built-Up Zone	4

Filtering Stage 3 selection:

Use Class:

C3	6 days
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Population within 1 mile:

15,001 to 20,000	4 days
25,001 to 50,000	2 days

Filtering Stage 3 selection (Cont.):

Population within 5 miles:

50,001 to 75,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	3 days

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	4 days

Travel Plan:

Not Known	1 days
No	5 days

LIST OF SITES relevant to selection parameters

1	HC-03-D-03 ROMSEY ROAD	FLATS, WINCHESTER	HAMPSHIRE
	WINCHESTER Edge of Town Centre Residential Zone Total Number of dwellings:	23	
2	KI-03-D-01 THE BITTOMS	BLOCKS OF FLATS, KINGSTON	KINGSTON
	KINGSTON Edge of Town Centre Built-Up Zone Total Number of dwellings:	15	
3	SC-03-D-01 KINGSTON ROAD	BLOCKS OF FLATS, STAINES	SURREY
	STAINES Edge of Town Centre Residential Zone Total Number of dwellings:	42	
4	TV-03-D-01 GRANGE ROAD	BLOCKS OF FLATS, MIDDLESBRO.	TEES VALLEY
	MIDDLESBROUGH Edge of Town Centre Built-Up Zone Total Number of dwellings:	61	
5	WY-03-D-01 NORTH STREET LOVELL PARK LEEDS	BLOCKS OF FLATS, LEEDS	WEST YORKSHIRE
	Edge of Town Centre Built-Up Zone Total Number of dwellings:	45	
6	WY-03-D-02 REYHILL GROVE	BLOCKS OF FLATS, BRADFORD	WEST YORKSHIRE
	BRADFORD Edge of Town Centre Built-Up Zone Total Number of dwellings:	44	

Jacobs Engineering U.K. Limited Miller House, 43-51 Lower Stone Street Maidstone

Licence No: 810408

RANK ORDER for Land Use 03 - RESIDENTIAL/D - FLATS FOR RENT
MULTI-MODAL TOTAL PEOPLE

Ranking Type: TOTALS Time Range: 08:00-09:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under
20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. 5 (**)

85th Percentile = No. 2 (**)

Median Values

Arrivals: 0.100

Departures: 0.589

Totals: 0.689

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	SC-03-D-01	BLOCKS OF FLATS, STAINES	SURREY	42	Tue	04/11/03	0.333	0.690	1.023	
2 **	WY-03-D-02	BLOCKS OF FLATS, BRADFORD	WEST YORKSHIRE	44	Mon	09/05/05	0.295	0.591	0.886	
3	WY-03-D-01	BLOCKS OF FLATS, LEEDS	WEST YORKSHIRE	45	Wed	19/11/03	0.133	0.711	0.844	
4	KI-03-D-01	BLOCKS OF FLATS, KINGSTON	KINGSTON	15	Thu	14/11/02	0.067	0.467	0.534	
5 **	TV-03-D-01	BLOCKS OF FLATS, MIDDLESBROUGH	TEES VALLEY	61	Fri	19/10/01	0.131	0.180	0.311	
6	HC-03-D-03	FLATS, WINCHESTER	HAMPSHIRE	23	Tue	20/11/07	0.043	0.087	0.130	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : C - FLATS PRIVATELY OWNED
 MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON	
	EG EALING	1 days
	GR GREENWICH	1 days
02	SOUTH EAST	
	SC SURREY	1 days
03	SOUTH WEST	
	DC DORSET	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	2 days
08	NORTH WEST	
	CH CHESHIRE	1 days
	MS MERSEYSIDE	1 days
14	LEINSTER	
	WT WESTMEATH	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
 Range: 12 to 140 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 06/07/09

Selected survey days:

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

Selected survey types:

Manual count	10 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	10
---------------------	----

Selected Location Sub Categories:

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

Filtering Stage 3 selection:

Use Class:

C3	10 days
----	---------

Filtering Stage 3 selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	4 days
15,001 to 20,000	1 days
20,001 to 25,000	2 days
25,001 to 50,000	2 days

Population within 5 miles:

5,001 to 25,000	1 days
50,001 to 75,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	3 days
500,001 or More	3 days

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	6 days

Travel Plan:

No	10 days
----	---------

LIST OF SITES relevant to selection parameters

1	CH-03-C-01 NEW CRANE STREET	BLOCKS OF FLATS, CHESTER	CHESHIRE
	CHESTER Edge of Town Centre Residential Zone Total Number of dwellings: 60		
2	DC-03-C-01 ABBOTSBURY ROAD	BLOCKS OF FLATS, WEYMOUTH	DORSET
	WEYMOUTH Edge of Town Centre Residential Zone Total Number of dwellings: 27		
3	EG-03-C-02 A406 HANGER LANE	BLOCKS OF FLATS, EALING	EALING
	EALING Edge of Town Centre Residential Zone Total Number of dwellings: 132		
4	GR-03-C-01 BENNETT PARK	FLATS, BLACKHEATH	GREENWICH
	BLACKHEATH Edge of Town Centre Built-Up Zone Total Number of dwellings: 134		
5	MS-03-C-01 WAPPING ROAD WAPPING DOCK LIVERPOOL	BLOCKS OF FLATS, LIVERPOOL	MERSEYSIDE
	Edge of Town Centre Development Zone Total Number of dwellings: 114		
6	SC-03-C-01 HEATHCOTE ROAD	FLATS, CAMBERLEY	SURREY
	CAMBERLEY Edge of Town Centre Residential Zone Total Number of dwellings: 140		
7	WM-03-C-03 LODE LANE	FLATS, SOLIHULL	WEST MIDLANDS
	SOLIHULL Edge of Town Centre No Sub Category Total Number of dwellings: 60		
8	WT-03-C-01 NORTHGATE STREET	FLATS, ATHLONE	WESTMEATH
	ATHLONE Edge of Town Centre No Sub Category Total Number of dwellings: 86		
9	WY-03-C-01 EAST STREET CROWN POINT LEEDS	BLOCK OF FLATS, LEEDS	WEST YORKSHIRE
	Edge of Town Centre Development Zone Total Number of dwellings: 127		
			57

LIST OF SITES relevant to selection parameters (Cont.)

10	WY-03-C-02	BLOCK OF FLATS, HUDDERSFIELD	WEST YORKSHIRE
	KINGS MILL LANE		
	ASPLEY		
	HUDDERSFIELD		
	Edge of Town Centre		
	Built-Up Zone		
	Total Number of dwellings:	12	

Jacobs Engineering U.K. Limited Miller House, 43-51 Lower Stone Street Maidstone

Licence No: 810408

RANK ORDER for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE

Ranking Type: TOTALS Time Range: 08:00-09:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under
20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. 9 (**)

85th Percentile = No. 2 (**)

Median Values

Arrivals: 0.066

Departures: 0.537

Totals: 0.603

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	WM-03-C-03	FLATS, SOLIHULL	WEST MIDLANDS	60	Fri	21/09/07	0.117	0.667	0.784	
2 **	WY-03-C-02	BLOCK OF FLATS, HUDDERSF	WEST YORKSHIRE	12	Wed	13/09/06	0.167	0.583	0.750	
3	GR-03-C-01	FLATS, BLACKHEATH	GREENWICH	134	Mon	29/03/04	0.090	0.657	0.747	
4	DC-03-C-01	BLOCKS OF FLATS, WEYMOUT	DORSET	27	Tue	08/07/08	0.296	0.370	0.666	
5	SC-03-C-01	FLATS, CAMBERLEY	SURREY	140	Mon	21/07/08	0.093	0.521	0.614	
6	EG-03-C-02	BLOCKS OF FLATS, EALING	EALING	132	Tue	20/04/04	0.038	0.553	0.591	
7	CH-03-C-01	BLOCKS OF FLATS, CHESTER	CHESHIRE	60	Fri	17/10/08	0.133	0.450	0.583	
8	MS-03-C-01	BLOCKS OF FLATS, LIVERPO	MERSEYSIDE	114	Thu	16/10/03	0.132	0.404	0.536	
9 **	WY-03-C-01	BLOCK OF FLATS, LEEDS	WEST YORKSHIRE	127	Thu	13/11/03	0.087	0.441	0.528	
10	WT-03-C-01	FLATS, ATHLONE	WESTMEATH	86	Wed	20/06/07	0.023	0.221	0.244	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : B - HOUSES FOR RENT
 MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

11 SCOTLAND
 MO MORAY 2 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
 Range: 15 to 40 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 20/09/07

Selected survey days:

Wednesday 1 days
 Friday 1 days

Selected survey types:

Manual count 2 days
 Directional ATC Count 0 days

Selected Locations:

Edge of Town Centre 2

Selected Location Sub Categories:

No Sub Category 2

Filtering Stage 3 selection:

Use Class:

C3 2 days

Population within 1 mile:

10,001 to 15,000 2 days

Population within 5 miles:

25,001 to 50,000 2 days

Car ownership within 5 miles:

0.6 to 1.0 2 days

Travel Plan:

No 2 days

LIST OF SITES relevant to selection parameters

1	MO-03-B-01	SEMI DETACHED, ELGIN		MORAY
	HAWTHORN ROAD			
	ELGIN			
	Edge of Town Centre			
	No Sub Category			
	Total Number of dwellings:	15		
2	MO-03-B-02	BUNGALOWS, ELGIN		MORAY
	PLUSCARDEN ROAD			
	ELGIN			
	Edge of Town Centre			
	No Sub Category			
	Total Number of dwellings:	40		

Jacobs Engineering U.K. Limited Miller House, 43-51 Lower Stone Street Maidstone

Licence No: 810408

RANK ORDER for Land Use 03 - RESIDENTIAL/B - HOUSES FOR RENT
 MULTI-MODAL TOTAL PEOPLE

Ranking Type: TOTALS Time Range: 08:00-09:00
 Under 6 Surveys Included, 15th/85th Percentile Not Highlighted

Median Values

Arrivals: 0.108
 Departures: 0.637
 Totals: 0.746

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	MO-03-B-01	SEMI DETACHED, ELGIN	MORAY	15	Fri	12/05/06	0.067	0.800	0.867	
2	MO-03-B-02	BUNGALOWS, ELGIN	MORAY	40	Wed	10/05/06	0.150	0.475	0.625	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED
 MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

02	SOUTH EAST	
	HF HERTFORDSHIRE	1 days
03	SOUTH WEST	
	GS GLOUCESTERSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
12	CONNAUGHT	
	CS SLIGO	1 days
14	LEINSTER	
	KK KILKENNY	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
 Range: 10 to 363 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 21/06/09

Selected survey days:

Monday	2 days
Tuesday	1 days
Thursday	2 days
Friday	1 days

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	6
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Selected Location Sub Categories:

Residential Zone	4
No Sub Category	2

Filtering Stage 3 selection:

Use Class:

C3	6 days
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Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
20,001 to 25,000	1 days

Filtering Stage 3 selection (Cont.):

Population within 5 miles:

5,001 to 25,000	2 days
25,001 to 50,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	1 days

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	4 days
1.6 to 2.0	1 days

Travel Plan:

Not Known	1 days
No	5 days

LIST OF SITES relevant to selection parameters

1	CA-03-A-02 THORPE ROAD	MIXED HOUSES, PETERBOROUGH	CAMBRIDGESHIRE
	PETERBOROUGH Edge of Town Centre Residential Zone Total Number of dwellings: 363		
2	CS-03-A-01 CIRCULAR ROAD	TERRACED, SLIGO	SLIGO
	SLIGO Edge of Town Centre No Sub Category Total Number of dwellings: 46		
3	GS-03-A-01 KINGSHOLM ROAD KINGSHOLM GLOUCESTER	SEMI D./TERRACED, GLOUCESTER	GLOUCESTERSHIRE
	Edge of Town Centre No Sub Category Total Number of dwellings: 73		
4	HF-03-A-01 LONGCROFT LANE	MIXED HOUSES, WELWYN GC	HERTFORDSHIRE
	WELWYN GARDEN CITY Edge of Town Centre Residential Zone Total Number of dwellings: 53		
5	KK-03-A-01 ASHLEIGH COURT	DETACHED, KILKENNY	KILKENNY
	KILKENNY Edge of Town Centre Residential Zone Total Number of dwellings: 10		
6	NY-03-A-03 NEW ROW	PRIVATE HOUSING, BOROUGHBIDGE	NORTH YORKSHIRE
	BOROUGHBRIDGE Edge of Town Centre Residential Zone Total Number of dwellings: 14		

Jacobs Engineering U.K. Limited Miller House, 43-51 Lower Stone Street Maidstone

Licence No: 810408

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE

Ranking Type: TOTALS Time Range: 08:00-09:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under
20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. 5 (**)

85th Percentile = No. 2 (**)

Median Values

Arrivals: 0.183

Departures: 0.613

Totals: 0.796

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	KK-03-A-01	DETACHED, KILKENNY	KILKENNY	10	Mon	24/11/08	0.800	1.000	1.800	
2 **	CA-03-A-02	MIXED HOUSES, PETERBOROU	CAMBRIDGESHIRE	363	Thu	13/05/04	0.273	0.702	0.975	
3	GS-03-A-01	SEMI D./TERRACED, GLOUCE	GLOUCESTERSHIRE	73	Tue	25/05/04	0.192	0.616	0.808	
4	CS-03-A-01	TERRACED, SLIGO	SLIGO	46	Thu	14/06/07	0.174	0.609	0.783	
5 **	HF-03-A-01	MIXED HOUSES, WELWYN GC	HERTFORDSHIRE	53	Fri	06/09/02	0.170	0.453	0.623	
6	NY-03-A-03	PRIVATE HOUSING, BOROUGH	NORTH YORKSHIRE	14	Mon	15/09/08	0.143	0.357	0.500	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : L - MIXED NON-PRIVATE HOUSING
 MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

04	EAST ANGLIA	
	NF NORFOLK	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
 Range: 39 to 40 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 26/06/07

Selected survey days:

Tuesday 2 days

Selected survey types:

Manual count 2 days
 Directional ATC Count 0 days

Selected Locations:

Edge of Town Centre 2

Selected Location Sub Categories:

Built-Up Zone 1
 No Sub Category 1

Filtering Stage 3 selection:

Use Class:

C3 2 days

Population within 1 mile:

15,001 to 20,000 1 days
 25,001 to 50,000 1 days

Population within 5 miles:

50,001 to 75,000 1 days
 125,001 to 250,000 1 days

Car ownership within 5 miles:

0.6 to 1.0 1 days
 1.1 to 1.5 1 days

Travel Plan:

Not Known 1 days
 No 1 days

LIST OF SITES relevant to selection parameters

1	CH-03-L-01	MIXED HOUSING, MACCLESFIELD	CHESHIRE
	PERCYVALE STREET		
	HURDSFIELD		
	MACCLESFIELD		
	Edge of Town Centre		
	No Sub Category		
	Total Number of dwellings:	40	
2	NF-03-L-01	TERRACED/FLATS, NORWICH	NORFOLK
	POTTERGATE		
	NORWICH		
	Edge of Town Centre		
	Built-Up Zone		
	Total Number of dwellings:	39	

Jacobs Engineering U.K. Limited Miller House, 43-51 Lower Stone Street Maidstone

Licence No: 810408

RANK ORDER for Land Use 03 - RESIDENTIAL/L - MIXED NON-PRIVATE HOUSING
MULTI-MODAL TOTAL PEOPLE

Ranking Type: TOTALS Time Range: 08:00-09:00
Under 6 Surveys Included, 15th/85th Percentile Not Highlighted

Median Values

Arrivals: 0.189
Departures: 0.567
Totals: 0.755

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	CH-03-L-01	MIXED HOUSING, MACCLESFI	CHESHIRE	40	Tue	26/06/07	0.300	0.800	1.100	
2	NF-03-L-01	TERRACED/FLATS, NORWICH	NORFOLK	39	Tue	07/11/00	0.077	0.333	0.410	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : K - MIXED PRIVATE HOUSING
 MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

03	SOUTH WEST	
	DC DORSET	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
 Range: 19 to 24 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 03/07/09

Selected survey days:

Tuesday	1 days
Friday	1 days

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	2
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Selected Location Sub Categories:

Residential Zone	1
No Sub Category	1

Filtering Stage 3 selection:

Use Class:

C3	2 days
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Population within 1 mile:

1,001 to 5,000	1 days
15,001 to 20,000	1 days

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days

Car ownership within 5 miles:

1.1 to 1.5	1 days
1.6 to 2.0	1 days

Travel Plan:

No	2 days
----	--------

LIST OF SITES relevant to selection parameters

1	DC-03-K-03 MAUMBURY MEWS	MIXED HOUSING, DORCHESTER	DORSET
	DORCHESTER Edge of Town Centre No Sub Category Total Number of dwellings:	24	
2	NY-03-K-01 HORSEFAIR	MIXED HOUSING, BORO'BRIDGE	NORTH YORKSHIRE
	BOROUGHBRIDGE Edge of Town Centre Residential Zone Total Number of dwellings:	19	

Jacobs Engineering U.K. Limited Miller House, 43-51 Lower Stone Street Maidstone

Licence No: 810408

RANK ORDER for Land Use 03 - RESIDENTIAL/K - MIXED PRIVATE HOUSING
MULTI-MODAL TOTAL PEOPLE

Ranking Type: TOTALS Time Range: 08:00-09:00
Under 6 Surveys Included, 15th/85th Percentile Not Highlighted

Median Values

Arrivals: 0.104
Departures: 0.261
Totals: 0.365

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	DC-03-K-03	MIXED HOUSING, DORCHESTE	DORSET	24	Fri	04/07/08	0.208	0.417	0.625	
2	NY-03-K-01	MIXED HOUSING, BORO'BRID	NORTH YORKSHIRE	19	Tue	16/09/08	0.000	0.105	0.105	

APPENDIX B: TRICS OUTPUT SHEETS FOR EMPLOYMENT SURVEYS USED FOR SITES TO BE REDEVELOPED

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : F - WAREHOUSING (COMMERCIAL)
 MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

02	SOUTH EAST	
	HF HERTFORDSHIRE	1 days
13	MUNSTER	
	CR CORK	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
 Range: 14400 to 18600 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 07/10/08

Selected survey days:

Wednesday	1 days
Friday	1 days

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
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Selected Location Sub Categories:

Industrial Zone	1
No Sub Category	1

Filtering Stage 3 selection:

Use Class:

B8	2 days
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Population within 1 mile:

1,001 to 5,000	1 days
20,001 to 25,000	1 days

Population within 5 miles:

100,001 to 125,000	1 days
125,001 to 250,000	1 days

Car ownership within 5 miles:

1.1 to 1.5	2 days
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Travel Plan:

Not Known	1 days
No	1 days

LIST OF SITES relevant to selection parameters

- | | | | |
|---|------------------------------------|-----------------------------|---------------|
| 1 | CR-02-F-01 | WAREHOUSING ESTATE, CORK | CORK |
| | TRAMORE ROAD | | |
| | BALLYPHEHANE | | |
| | CORK | | |
| | Suburban Area (PPS6 Out of Centre) | | |
| | No Sub Category | | |
| | Total Gross floor area: | 14400 sqm | |
| 2 | HF-02-F-02 | SUPERSTORE DIST., WELWYN GC | HERTFORDSHIRE |
| | BLACK FAN ROAD | | |
| | PANSHANGER | | |
| | WELWYN GARDEN CITY | | |
| | Suburban Area (PPS6 Out of Centre) | | |
| | Industrial Zone | | |
| | Total Gross floor area: | 18600 sqm | |

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
 MULTI-MODAL TOTAL PEOPLE
 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	2	16500	0.227	2	16500	0.079	2	16500	0.306
07:30 - 08:00	2	16500	0.497	2	16500	0.176	2	16500	0.673
08:00 - 08:30	2	16500	0.279	2	16500	0.106	2	16500	0.385
08:30 - 09:00	2	16500	0.391	2	16500	0.067	2	16500	0.458
09:00 - 09:30	2	16500	0.415	2	16500	0.118	2	16500	0.533
09:30 - 10:00	2	16500	0.227	2	16500	0.118	2	16500	0.345
10:00 - 10:30	2	16500	0.230	2	16500	0.103	2	16500	0.333
10:30 - 11:00	2	16500	0.158	2	16500	0.115	2	16500	0.273
11:00 - 11:30	2	16500	0.191	2	16500	0.148	2	16500	0.339
11:30 - 12:00	2	16500	0.152	2	16500	0.109	2	16500	0.261
12:00 - 12:30	2	16500	0.158	2	16500	0.164	2	16500	0.322
12:30 - 13:00	2	16500	0.188	2	16500	0.267	2	16500	0.455
13:00 - 13:30	2	16500	0.194	2	16500	0.282	2	16500	0.476
13:30 - 14:00	2	16500	0.391	2	16500	0.230	2	16500	0.621
14:00 - 14:30	2	16500	0.273	2	16500	0.185	2	16500	0.458
14:30 - 15:00	2	16500	0.185	2	16500	0.203	2	16500	0.388
15:00 - 15:30	2	16500	0.118	2	16500	0.173	2	16500	0.291
15:30 - 16:00	2	16500	0.176	2	16500	0.264	2	16500	0.440
16:00 - 16:30	2	16500	0.109	2	16500	0.273	2	16500	0.382
16:30 - 17:00	2	16500	0.100	2	16500	0.233	2	16500	0.333
17:00 - 17:30	2	16500	0.097	2	16500	0.297	2	16500	0.394
17:30 - 18:00	2	16500	0.133	2	16500	0.324	2	16500	0.457
18:00 - 18:30	2	16500	0.067	2	16500	0.324	2	16500	0.391
18:30 - 19:00	2	16500	0.045	2	16500	0.115	2	16500	0.160
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:			5.001			4.473			9.474

Parameter summary

Trip rate parameter range selected:	14400 - 18600 (units: sqm)
Survey date date range:	01/01/00 - 07/10/08
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : H - GARDEN CENTRE
MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

02 SOUTH EAST
HC HAMPSHIRE 1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
Range: 3700 to 3700 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 18/10/09

Selected survey days:

Monday 1 days

Selected survey types:

Manual count 1 days
Directional ATC Count 0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre) 1

Selected Location Sub Categories:

No Sub Category 1

LIST OF SITES relevant to selection parameters

1	HC-01-H-03	GARDEN CENTRE, WINCHESTER	HAMPSHIRE
	ROMSEY ROAD		
	WINCHESTER		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Gross floor area:	3700 sqm	

TRIP RATE for Land Use 01 - RETAIL/H - GARDEN CENTRE
 MULTI-MODAL TOTAL PEOPLE
 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	1	3700	0.378	1	3700	0.054	1	3700	0.432
09:00 - 10:00	1	3700	0.432	1	3700	0.297	1	3700	0.729
10:00 - 11:00	1	3700	1.649	1	3700	1.270	1	3700	2.919
11:00 - 12:00	1	3700	2.568	1	3700	2.351	1	3700	4.919
12:00 - 13:00	1	3700	1.622	1	3700	1.378	1	3700	3.000
13:00 - 14:00	1	3700	1.622	1	3700	1.649	1	3700	3.271
14:00 - 15:00	1	3700	2.108	1	3700	1.811	1	3700	3.919
15:00 - 16:00	1	3700	1.459	1	3700	2.135	1	3700	3.594
16:00 - 17:00	1	3700	0.892	1	3700	1.162	1	3700	2.054
17:00 - 18:00	1	3700	0.108	1	3700	0.730	1	3700	0.838
18:00 - 19:00	0	0	0.000	0	0	0.000	0	0	0.000
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:			12.838			12.837			25.675

Parameter summary

Trip rate parameter range selected: 3700 - 3700 (units: sqm)
 Survey date range: 01/01/00 - 18/10/09
 Number of weekdays (Monday-Friday): 1
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

APPENDIX C: TRICS OUTPUT SHEETS FOR EMPLOYMENT SURVEYS USED FOR BROOM HILL DEVELOPMENT

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : B - BUSINESS PARK
MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

02	SOUTH EAST	
	BU BUCKINGHAMSHIRE	1 days
	OX OXFORDSHIRE	1 days
03	SOUTH WEST	
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
	ST STAFFORDSHIRE	1 days
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NO NORTH LINCOLNSHIRE	1 days
10	WALES	
	CF CARDIFF	1 days
14	LEINSTER	
	WT WESTMEATH	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
 Range: 1574 to 118448 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 30/09/09

Selected survey days:

Monday	2 days
Tuesday	5 days
Wednesday	2 days
Thursday	4 days

Selected survey types:

Manual count	13 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town	13
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Selected Location Sub Categories:

Industrial Zone	6
Commercial Zone	2
Residential Zone	2
Retail Zone	1
No Sub Category	2

Filtering Stage 3 selection:

Use Class:

Not Known	2 days
B1	11 days

Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	2 days
10,001 to 15,000	4 days
15,001 to 20,000	4 days
25,001 to 50,000	1 days

Population within 5 miles:

5,001 to 25,000	1 days
50,001 to 75,000	2 days
75,001 to 100,000	4 days
100,001 to 125,000	1 days
125,001 to 250,000	5 days

Car ownership within 5 miles:

0.6 to 1.0	7 days
1.1 to 1.5	6 days

Travel Plan:

Not Known	2 days
No	11 days

LIST OF SITES relevant to selection parameters

1	BU-02-B-01 LONDON ROAD	BUSINESS PARK, HIGH WYCOMBE	BUCKINGHAMSHIRE
	HIGH WYCOMBE Edge of Town No Sub Category Total Gross floor area: 13300 sqm		
2	CA-02-B-01 MILTON ROAD	SCIENCE PARK, CAMBRIDGE	CAMBRIDGESHIRE
	CAMBRIDGE Edge of Town Industrial Zone Total Gross floor area: 118448 sqm		
3	CF-02-B-01 FORTRAN ROAD ST MELLONS CARDIFF	BUSINESS PARK, CARDIFF	CARDIFF
	Edge of Town Industrial Zone Total Gross floor area: 12000 sqm		
4	LN-02-B-01 BISHOPS ROAD	BUSINESS PARK, LINCOLN	LINCOLNSHIRE
	LINCOLN Edge of Town Industrial Zone Total Gross floor area: 4460 sqm		
5	NF-02-B-02 WHITING ROAD LONG JOHN'S HILL NORWICH	BUSINESS PARK, NORWICH	NORFOLK
	Edge of Town Retail Zone Total Gross floor area: 7400 sqm		
6	NO-02-B-02 DONCASTER ROAD	BUSINESS PARK, SCUNTHORPE	NORTH LINCOLNSHIRE
	SCUNTHORPE Edge of Town Residential Zone Total Gross floor area: 1574 sqm		
7	OX-02-B-01 GARSINGTON ROAD COWLEY OXFORD	BUSINESS PARK, OXFORD	OXFORDSHIRE
	Edge of Town Commercial Zone Total Gross floor area: 33105 sqm		
8	SF-02-B-01 KEMPSON WAY	BUSINESS PK, BURY ST EDMUNDS	SUFFOLK
	BURY ST EDMUNDS Edge of Town Industrial Zone Total Gross floor area: 2480 sqm		
9	SH-02-B-01 WELSHPOOL ROAD	BUSINESS PARK, SHREWSBURY	SHROPSHIRE
	SHREWSBURY Edge of Town Commercial Zone Total Gross floor area: 17197 sqm		

LIST OF SITES relevant to selection parameters (Cont.)

10	ST-02-B-03	BUSINESS PARK, STAFFORD	STAFFORDSHIRE
	FRANK FOLEY WAY		
	GREYFRIARS		
	STAFFORD		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	4064 sqm	
11	WL-02-B-01	BUSINESS PK,WOOTTON BASSETT	WILTSHIRE
	HIGH STREET		
	COPEHALL		
	WOOTTON BASSETT		
	Edge of Town		
	Residential Zone		
	Total Gross floor area:	2600 sqm	
12	WO-02-B-01	BUSINESS PARK, REDDITCH	WORCESTERSHIRE
	BURNT MEADOW ROAD		
	MOORS MOAT NTH IND. EST		
	REDDITCH		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	3525 sqm	
13	WT-02-B-01	BUSINESS/TECH. PARK, ATHLONE	WESTMEATH
	DUBLIN ROAD		
	GARRycastle		
	ATHLONE		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	22150 sqm	

Jacobs Engineering U.K. Limited Miller House, 43-51 Lower Stone Street Maidstone

Licence No: 810408

RANK ORDER for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL TOTAL PEOPLE

Ranking Type: TOTALS Time Range: 08:00-09:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under
20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. 11 (**)

85th Percentile = No. 3 (**)

Median Values

Arrivals: 1.996

Departures: 0.673

Totals: 2.669

Rank	Site-Ref	Description	Area	GFA	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	NO-02-B-02	BUSINESS PARK, SCUNTHORP	NORTH LINCOLNSHIRE	1574	Thu	22/09/05	3.939	0.064	4.003	
2	CF-02-B-01	BUSINESS PARK, CARDIFF	CARDIFF	12000	Wed	18/10/06	3.350	0.458	3.808	
3 **	SH-02-B-01	BUSINESS PARK, SHREWSBUR	SHROPSHIRE	17197	Tue	14/06/05	2.989	0.785	3.774	
4	WL-02-B-01	BUSINESS PK,WOOTTON BASS	WILTSHIRE	2600	Mon	02/10/06	2.692	0.346	3.038	
5	NF-02-B-02	BUSINESS PARK, NORWICH	NORFOLK	7400	Thu	17/05/07	2.635	0.392	3.027	
6	OX-02-B-01	BUSINESS PARK, OXFORD	OXFORDSHIRE	33105	Tue	21/10/03	2.743	0.278	3.021	
7	LN-02-B-01	BUSINESS PARK, LINCOLN	LINCOLNSHIRE	4460	Tue	17/05/05	1.996	0.673	2.669	
8	SF-02-B-01	BUSINESS PK, BURY ST EDM	SUFFOLK	2480	Wed	10/05/06	2.460	0.161	2.621	
9	ST-02-B-03	BUSINESS PARK, STAFFORD	STAFFORDSHIRE	4064	Thu	06/07/00	1.821	0.394	2.215	
10	WO-02-B-01	BUSINESS PARK, REDDITCH	WORCESTERSHIRE	3525	Tue	02/05/06	1.560	0.511	2.071	
11 **	BU-02-B-01	BUSINESS PARK, HIGH WYCO	BUCKINGHAMSHIRE	13300	Thu	08/07/04	1.744	0.098	1.842	
12	CA-02-B-01	SCIENCE PARK, CAMBRIDGE	CAMBRIDGESHIRE	118448	Mon	27/11/00	1.426	0.095	1.521	
13	WT-02-B-01	BUSINESS/TECH. PARK, ATH	WESTMEATH	22150	Tue	19/06/07	0.682	0.149	0.831	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : D - INDUSTRIAL ESTATE
 MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
11	SCOTLAND	
	ER EAST RENFREWSHIRE	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
 Range: 4233 to 20824 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 22/10/09

Selected survey days:

Monday	1 days
Wednesday	1 days

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town	2
--------------	---

Selected Location Sub Categories:

Industrial Zone	1
No Sub Category	1

Filtering Stage 3 selection:

Use Class:

B1	2 days
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Population within 1 mile:

15,001 to 20,000	1 days
20,001 to 25,000	1 days

Population within 5 miles:

125,001 to 250,000	1 days
250,001 to 500,000	1 days

Car ownership within 5 miles:

0.6 to 1.0	2 days
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Travel Plan:

Not Known	1 days
No	1 days

LIST OF SITES relevant to selection parameters

- | | | | |
|---|-------------------------|-------------------------------|-------------------|
| 1 | ER-02-D-02 | INDUSTRIAL EST., NEAR GLASGOW | EAST RENFREWSHIRE |
| | SPIERSBRIDGE AVENUE | | |
| | THORNLIBANK | | |
| | NEAR GLASGOW | | |
| | Edge of Town | | |
| | Industrial Zone | | |
| | Total Gross floor area: | 4233 sqm | |
| 2 | WY-02-D-02 | INDUSTRIAL EST., HUDDERSFIELD | WEST YORKSHIRE |
| | A629 WAKEFIELD ROAD | | |
| | TANDEM | | |
| | HUDDERSFIELD | | |
| | Edge of Town | | |
| | No Sub Category | | |
| | Total Gross floor area: | 20824 sqm | |

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
 MULTI-MODAL TOTAL PEOPLE
 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	1	4233	0.000	1	4233	0.000	1	4233	0.000
06:30 - 07:00	1	4233	0.213	1	4233	0.071	1	4233	0.284
07:00 - 07:30	2	12529	0.423	2	12529	0.092	2	12529	0.515
07:30 - 08:00	2	12529	0.271	2	12529	0.052	2	12529	0.323
08:00 - 08:30	2	12529	0.247	2	12529	0.076	2	12529	0.323
08:30 - 09:00	2	12529	0.219	2	12529	0.116	2	12529	0.335
09:00 - 09:30	2	12529	0.128	2	12529	0.088	2	12529	0.216
09:30 - 10:00	2	12529	0.132	2	12529	0.108	2	12529	0.240
10:00 - 10:30	2	12529	0.112	2	12529	0.084	2	12529	0.196
10:30 - 11:00	2	12529	0.108	2	12529	0.108	2	12529	0.216
11:00 - 11:30	2	12529	0.068	2	12529	0.112	2	12529	0.180
11:30 - 12:00	2	12529	0.112	2	12529	0.116	2	12529	0.228
12:00 - 12:30	2	12529	0.144	2	12529	0.184	2	12529	0.328
12:30 - 13:00	2	12529	0.196	2	12529	0.156	2	12529	0.352
13:00 - 13:30	2	12529	0.148	2	12529	0.156	2	12529	0.304
13:30 - 14:00	2	12529	0.219	2	12529	0.088	2	12529	0.307
14:00 - 14:30	2	12529	0.100	2	12529	0.172	2	12529	0.272
14:30 - 15:00	2	12529	0.096	2	12529	0.108	2	12529	0.204
15:00 - 15:30	2	12529	0.132	2	12529	0.116	2	12529	0.248
15:30 - 16:00	2	12529	0.116	2	12529	0.160	2	12529	0.276
16:00 - 16:30	2	12529	0.144	2	12529	0.299	2	12529	0.443
16:30 - 17:00	2	12529	0.100	2	12529	0.355	2	12529	0.455
17:00 - 17:30	2	12529	0.080	2	12529	0.311	2	12529	0.391
17:30 - 18:00	2	12529	0.036	2	12529	0.188	2	12529	0.224
18:00 - 18:30	2	12529	0.040	2	12529	0.180	2	12529	0.220
18:30 - 19:00	2	12529	0.012	2	12529	0.044	2	12529	0.056
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:			3.596			3.540			7.136

Parameter summary

Trip rate parameter range selected:	4233 - 20824 (units: sqm)
Survey date date range:	01/01/00 - 22/10/09
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

APPENDIX D: BROAD LOCATIONS OF WORKPLACES OF RESIDENTS IN THE THREE SWANLEY WARDS AND THE ASSUMED DIRECTIONS OF TRAVEL

The following data is taken from the 2001 Census 'Method of Travel to Work' table (T206). The data was accessed through www.nomisweb.co.uk.

By area of workplace:

Area of workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total workers commuting by any mode				% of Total working population resident in 3 Swanley wards
		Swanley Christchurch and Swanley Village	Swanley St Mary's	Swanley White Oak	Swanley Total	
Swanley Wards	Local	600	452	720	1,772	24.9
Hextable Ward	Local	25	33	52	110	1.5
Farningham, Horton Kirby and South Darenth Wards	East Local - A20 (local) but using M25 junction 3	22	25	22	69	1.0
Fawkham and West Kingsdown Ward	East Local - A20 (local) but using M25 junction 3	11	14	24	49	0.7
Sevenoaks Urban Area	South - M25 j3 to j5	52	48	56	156	2.2
Rest of Sevenoaks District	Unknown	69	33	61	163	2.3
Dartford Borough	North - Majority M25 j3 to j2 or j1b, some B258	222	207	286	715	10.1
Gravesham Borough	North East - M25 j3 to j2 and A2	30	31	35	96	1.4
Medway Council	North East - M25 j3 to j2 and A2	21	15	9	45	0.6
Maidstone District	East - M20 from j1 to j5	31	18	21	70	1.0
Tonbridge and Malling District	South or East - Some M25 j3 to 5 and A21, Some M20 j1 to j4	37	25	28	90	1.3
Tunbridge Wells Borough	South - M25 j3 to j5 and A21	9	9	15	33	0.5
Rest of Kent	Unknown	9	3	3	15	0.2
LB Bexley	West - A20 from west of Swanley	234	167	269	670	9.4
LB Bromley	West - A20 from west of Swanley	363	211	333	907	12.8
LB Croydon	West - A20 from west of Swanley	25	22	12	59	0.8
LB Lewisham	West - A20 from west of Swanley	67	38	63	168	2.4
LB Greenwich	West - A20 from west of Swanley	72	58	63	193	2.7
Central London	West - A20 from west of Swanley	641	275	460	1,376	19.4
LB Barking and Dagenham	North - M25 j3 to j30	14	4	9	27	0.4
LB Havering	North - M25 j3 to j30	12	6	13	31	0.4

Essex County Council	North - M25 j3 anti clockwise	3	6	16	25	0.4
Thurrock Council	North - M25 j3 to j30	6	8	12	26	0.4
Rest of South East Region	South - M25 j3 clockwise	53	8	15	76	1.1
Rest of East of England	North - M25 j3 anti clockwise	0	0	12	12	0.2
Rest of London	West - A20 from west of Swanley	66	30	54	150	2.1
Total					7,103	100

By broad direction of travel from Swanley wards:

Local (Not likely to Use SRN)

Area of workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total workers commuting by any mode				% of Total working population resident in 3 Swanley wards
		Swanley Christchurch and Swanley Village	Swanley St Mary's	Swanley White Oak	Swanley Total	
Swanley Wards	None	600	452	720	1,772	24.9
Hextable Ward	None	25	33	52	110	1.5
Total					1,882	26.5

East Local (A20 (local) but using M25 junction 3)

Area of workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total workers commuting by any mode				% of Total working population resident in 3 Swanley wards
		Swanley Christchurch and Swanley Village	Swanley St Mary's	Swanley White Oak	Swanley Total	
Farningham, Horton Kirby and South Darenth Wards	A20 (local) but using M25 j3	22	25	22	69	1.0
Fawkham and West Kingsdown Ward	A20 (local) but using M25 j3	11	14	24	49	0.7
Total					118	1.7

South (M25 j3 to j5)

Area of workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total workers commuting by any mode				% of Total working population resident in 3 Swanley wards
		Swanley Christchurch and Swanley Village	Swanley St Mary's	Swanley White Oak	Swanley Total	
Sevenoaks Urban Area	M25 j3 to j5	52	48	56	156	2.2
Tonbridge and Malling District (50%)	Some M25 j3 to 5 and A21,	18.5	12.5	14	45	0.6
Tunbridge Wells Borough	Some M20 j1 to j4					
Rest of South East Region	M25 j3 to j5 and A21	9	9	15	33	0.5
	M25 j3 clockwise	53	8	15	76	1.1
Total					310	4.4

North (M25 j3 - j2, j1b, j1a onwards)

Area of workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total workers commuting by any mode				% of Total working population resident in 3 Swanley wards
		Swanley Christchurch and Swanley Village	Swanley St Mary's	Swanley White Oak	Swanley Total	
Dartford Borough	Majority M25 j3 to j2, some B258	222	207	286	715	10.1
LB Barking and Dagenham	M25 j3 to j30	14	4	9	27	0.4
LB Havering	M25 j3 to j30	12	6	13	31	0.4
Essex County Council	M25 j3 anti clockwise	3	6	16	25	0.4
Thurrock Council	M25 j3 to j30	6	8	12	26	0.4
Rest of East of England	M25 j3 anti clockwise	0	0	12	12	0.2
Total					836	11.8

North East (M25 j3 to j2)

Area of workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total workers commuting by any mode				% of Total working population resident in 3 Swanley wards
		Swanley Christchurch and Swanley Village	Swanley St Mary's	Swanley White Oak	Swanley Total	
Gravesham Borough	M25 j3 to j2 and A2	30	31	35	96	1.4
Medway Council	M25 j3 to j2 and A2	21	15	9	45	0.6
Total					141	2.0

West (A20 from west of Swanley)

Area of workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total workers commuting by any mode				% of Total working population resident in 3 Swanley wards
		Swanley Christchurch and Swanley Village	Swanley St Mary's	Swanley White Oak	Swanley Total	
LB Bexley	A20 from west of Swanley	234	167	269	670	9.4
LB Bromley	A20 from west of Swanley	363	211	333	907	12.8
LB Croydon	A20 from west of Swanley	25	22	12	59	0.8
LB Lewisham	A20 from west of Swanley	67	38	63	168	2.4
LB Greenwich	A20 from west of Swanley	72	58	63	193	2.7
Central London	A20 from west of Swanley	641	275	460	1,376	19.4
Rest of London	A20 from west of Swanley	66	30	54	150	2.1
Total					3,523	49.6

East (M20 from j1 to j4)

Area of workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total workers commuting by any mode				% of Total working population resident in 3 Swanley wards
		Swanley Christchurch and Swanley Village	Swanley St Mary's	Swanley White Oak	Swanley Total	

Maidstone District	M20 from j1 to j5	31	18	21	70	1.0
Tonbridge and Malling District (50%)	Some M25 j3 to 5 and A21, Some M20 j1 to j4	18.5	12.5	14	45	0.6
Total					115	1.6

Unknown

Area of workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total workers commuting by any mode				% of Total working population resident in 3 Swanley wards
		Swanley Christchurch and Swanley Village	Swanley St Mary's	Swanley White Oak	Swanley Total	
Rest of Sevenoaks District	Unknown	69	33	61	163	2.3
Rest of Kent	Unknown	9	3	3	15	0.2
Total					178	2.5

Notes

- The totals exclude those people who work from home.
- Swanley wards are defined as Swanley Christchurch and Swanley Village, Swanley St Mary's and Swanley White Oak.
- Sevenoaks Urban Area wards are defined as Sevenoaks Town and St John's, Sevenoaks Northern, Sevenoaks Kippington, Sevenoaks Eastern, Dunton Green and Riverhead and Brasted, Chevening and Sundridge.
- Central London Boroughs are defined as City of London, London Borough of Tower Hamlets, London Borough of Southwark, City of Westminster, London Borough of Kensington and Chelsea, London Borough of Lambeth, London Borough of Camden, London Borough of Islington, London Borough of Hackney, London Borough of Wandsworth.
- The figures for Essex County Council exclude Thurrock and Southend Councils, which are included in the Rest of East England.

APPENDIX E: BROAD LOCATIONS OF RESIDENCE OF EMPLOYEES IN SWANLEY CHRISTCHURCH AND SWANLEY VILLAGE WARD AND THE ASSUMED DIRECTIONS OF TRAVEL

The following data is taken from the 2001 Census 'Method of Travel to Work' table (T206). The data was accessed through www.nomisweb.co.uk.

By area of residence:

Area of residence	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total Workers commuting by any mode	% of Total People working in Swanley Christchurch and Swanley Village
Swanley Wards	Local	745	26.8
Hextable Ward	Local	63	2.3
Farningham, Horton Kirby and South Darenth Ward	East Local - A20 (local) but using M25 junction 3	25	0.9
Fawkham and West Kingsdown Ward	East Local - A20 (local) but using M25 junction 3	55	2.0
Ash Ward	East Local - A20 (local) but using M25 junction 3	36	1.3
Crockenhill and Well Hill Ward	Local	32	1.1
Eynsford Ward	East Local - A20 (local) but using M25 junction 3	18	0.6
Hartley and Hodsoil Street Ward	East Local - A20 (local) but using M25 junction 3	20	0.7
Sevenoaks Urban Area	South - M25 j3 to j5	28	1.0
Rest of Sevenoaks District	Unknown	22	0.8
Dartford Borough	North - Majority M25 j3 to j2, some B258	292	10.5
Gravesham Borough	North - M25 j3 to j2 and A2	140	5.0
Medway Council	North - M25 j3 to j2 and A2	193	6.9
Maidstone District	East - M20 from j1 to j5	87	3.1
Tonbridge and Malling District	South or East - Some M25 j3 to 5 and A21, Some M20 j1 to j4	88	3.2
Tunbridge Wells Borough	South - M25 j3 to j5 and A21	17	0.6
Rest of Kent	Unknown	75	2.7
LB Bexley	West - A20 from west of Swanley	259	9.3
LB Bromley	West - A20 from west of Swanley	222	8.0
LB Croydon	West - A20 from west of Swanley	28	1.0
LB Lewisham	West - A20 from west of Swanley	63	2.3
LB Greenwich	West - A20 from west of Swanley	76	2.7

Central London	West - A20 from west of Swanley	33	1.2
LB Barking and Dagenham	North - M25 j3 to j30	3	0.1
LB Havering	North - M25 j3 to j30	12	0.4
Essex County Council	North - M25 j3 anti clockwise	36	1.3
Thurrock Council	North - M25 j3 to j30	15	0.5
Rest of South East Region	South - M25 j3 clockwise	69	2.5
Rest of East of England	North - M25 j3 anti clockwise	6	0.2
Rest of London	West - A20 from west of Swanley	27	1.0
Total		2,785	100

By broad direction of travel to Swanley Christchurch and Swanley Village ward:

Local (Not likely to Use SRN)

Area of Residence	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total Workers commuting by any mode	%People working in Swanley Christchurch and Swanley Village
Swanley Wards	Local	745	26.8
Hextable Ward	Local	63	2.3
Crockenhill and Well Hill Ward	Local	32	1.1
Total		840	30.2

East Local (A20 (local) but using M25 junction 3)

Area of Residence	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total Workers commuting by any mode	%People working in Swanley Christchurch and Swanley Village
Farningham, Horton Kirby and South Darenth Ward	East Local - A20 (local) but using M25 junction 3	25	0.9
Fawkham and West Kingsdown Ward	East Local - A20 (local) but using M25 junction 3	55	2.0
Ash Ward	East Local - A20 (local) but using M25 junction 3	36	1.3

Eynsford Ward	East Local - A20 (local) but using M25 junction 3	18	0.6
Hartley and Hodsoll Street Ward	East Local - A20 (local) but using M25 junction 3	20	0.7
Total		154	5.5

South (M25 j3 to j5)

Area of Residence	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total Workers commuting by any mode	%People working in Swanley Christchurch and Swanley Village
Sevenoaks Urban Area	South - M25 j3 to j5	28	1.0
Tonbridge and Malling District (50%)	South or East - Some M25 j3 to 5 and A21, Some M20 j1 to j4	44	1.6
Tunbridge Wells Borough	South - M25 j3 to j5 and A21	17	0.6
Rest of South East Region	South - M25 j3 clockwise	69	2.5
Total		158	5.7

North (M25 j3 - j2, j1b, j1a onwards)

Area of Residence	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total Workers commuting by any mode	%People working in Swanley Christchurch and Swanley Village
Dartford Borough	North - Majority M25 j3 to j2, some B258	292	10.5
LB Barking and Dagenham	North - M25 j3 to j30	3	0.1
LB Havering	North - M25 j3 to j30	12	0.4
Essex County Council	North - M25 j3 anti clockwise	36	1.3
Thurrock Council	North - M25 j3 to j30	15	0.5
Rest of East of England	North - M25 j3 anti clockwise	6	0.2
Total		364	13.1

North East (M25 j3 to j2)

Area of Residence	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total Workers commuting by any mode	%People working in Swanley Christchurch and Swanley Village
Gravesham Borough	North - M25 j3 to j2 and A2	140	5.0
Medway Council	North - M25 j3 to j2 and A2	193	6.9
Total		333	12.0

West (A20 from west of Swanley (using M25 j3))

Area of Residence	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total Workers commuting by any mode	%People working in Swanley Christchurch and Swanley Village
LB Bexley	West - A20 from west of Swanley (using M25 j3)	259	9.3
LB Bromley	West - A20 from west of Swanley (using M25 j3)	222	8.0
LB Croydon	West - A20 from west of Swanley (using M25 j3)	28	1.0
LB Lewisham	West - A20 from west of Swanley (using M25 j3)	63	2.3
LB Greenwich	West - A20 from west of Swanley (using M25 j3)	76	2.7
Central London	West - A20 from west of Swanley (using M25 j3)	33	1.2
Rest of London	West - A20 from west of Swanley (using M25 j3)	27	1.0
Total		708	25.4

East (M20 from j1 to j4)

Area of Residence	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total Workers commuting by any mode	%People working in Swanley Christchurch and Swanley Village
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Maidstone District	East - M20 from j1 to j5	87	3.1
Tonbridge and Malling District (50%)	South or East - Some M25 j3 to 5 and A21, Some M20 j1 to j4	44	1.6
Total		131	4.7

Unknown

Area of Residence	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total Workers commuting by any mode	%People working in Swanley Christchurch and Swanley Village
Rest of Sevenoaks District	Unknown	22	0.8
Rest of Kent	Unknown	75	2.7
Total		97	3.5

Notes

- The totals exclude those people who work from home.
- Swanley wards are defined as Swanley Christchurch and Swanley Village, Swanley St Mary's and Swanley White Oak.
- Sevenoaks Urban Area wards are defined as Sevenoaks Town and St John's, Sevenoaks Northern, Sevenoaks Kippington, Sevenoaks Eastern, Dunton Green and Riverhead and Brasted, Chevening and Sundridge.
- Central London Boroughs are defined as City of London, London Borough of Tower Hamlets, London Borough of Southwark, City of Westminster, London Borough of Kensington and Chelsea, London Borough of Lambeth, London Borough of Camden, London Borough of Islington, London Borough of Hackney, London Borough of Wandsworth.
- The figures for Essex County Council exclude Thurrock and Southend Councils, which are included in the Rest of East England.

APPENDIX F: TRAVEL TO WORK MODAL SPLITS FOR THOSE COMMUTING FROM THE THREE SWANLEY WARDS BY BROAD LOCATION OF WORKPLACE

The following data is taken from the 2001 Census 'Method of Travel to Work' table (T206). The data was accessed through www.nomisweb.co.uk.

By area of residence:

Area of Workplace	Total car-driving commuters from the 3 Swanley wards	Total non car-driving commuters from the 3 Swanley wards	Total commuters from the 3 Swanley wards	% Non-car driving	% Car driving
Swanley Wards	876	896	1,772	50.6	49.4
Hextable Ward	62	48	110	43.6	56.4
Farningham, Horton Kirby and South Darenth Ward	42	27	69	39.1	60.9
Fawkham and West Kingsdown Ward	34	15	49	30.6	69.4
Sevenoaks Urban Area	123	33	156	21.2	78.8
Rest of Sevenoaks District	119	44	163	27.0	73.0
Dartford Borough	551	164	715	22.9	77.1
Gravesham Borough	66	30	96	31.3	68.8
Medway Council	39	6	45	13.3	86.7
Maidstone District	46	24	70	34.3	65.7
Tonbridge and Malling District	69	21	90	23.3	76.7
Tunbridge Wells Borough	27	6	33	18.2	81.8
Rest of Kent	15	0	15	0.0	100.0
LB Bexley	527	143	670	21.3	78.7
LB Bromley	576	331	907	36.5	63.5
LB Croydon	53	6	59	10.2	89.8
LB Lewisham	126	42	168	25.0	75.0
LB Greenwich	151	42	193	21.8	78.2
Central London	326	1,050	1376	76.3	23.7
LB Barking and Dagenham	24	3	27	11.1	88.9
LB Havering	28	3	31	9.7	90.3
Essex County Council	22	3	25	12.0	88.0
Thurrock Council	26	0	26	0.0	100.0
Rest of South East Region	73	3	76	3.9	96.1
Rest of East of England	9	3	12	25.0	75.0

Rest of London	111	39	150	26.0	74.0
Total	4,121	2,982	7,103		

By broad direction of travel from Swanley wards:

Local (Not likely to Use SRN)

Area of Workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total commuters from the 3 Swanley wards	Total non car-driving commuters from the 3 Swanley wards	% Non-Car	Total car-driving commuters from the 3 Swanley wards	% Car
Swanley Wards	None	1,772	896		876	
Hextable Ward	None	110	48		62	
Total		1,882	944	50.2	938	49.8

East Local (A20 (local) but using M25 junction 3)

Area of Workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total commuters from the 3 Swanley wards	Total non car-driving commuters from the 3 Swanley wards	% Non-Car	Total car-driving commuters from the 3 Swanley wards	% Car
Farningham, Horton Kirby and South Darenth Ward	A20 (local) but using M25 j3	69	27		42	
Fawkham and West Kingsdown Ward	A20 (local) but using M25 j3	49	15		34	
Total		118	42	35.6	76	64.4

South (M25 j3 to j5)

Area of Workplace	Direction of travel to (the roads noted	Total	Total non	% Non-Car	Total car-	% Car
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	are indicative of the directions of travel if the journey is undertaken by car)	commuters from the 3 Swanley wards	<u>car-driving</u> commuters from the 3 Swanley wards	<u>driving</u> commuters from the 3 Swanley wards		
Sevenoaks Urban Area	M25 j3 to j5	156	33	123		
Tonbridge and Malling District	Some M25 j3 to 5 and A21, Some M20 j1 to j4	45	10.5	34.5		
Tunbridge Wells Borough	M25 j3 to j5 and A21	33	6	27		
Rest of South East Region	M25 j3 clockwise	76	3	73		
Total		310	52.5	16.9	257.5	83.1

North (M25 j3 - j2, j1b, j1a onwards)

Area of Workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	<u>Total</u> commuters from the 3 Swanley wards	<u>Total non car-driving</u> commuters from the 3 Swanley wards	% Non-Car	<u>Total car-driving</u> commuters from the 3 Swanley wards	% Car
Dartford Borough	Majority M25 j3 to j2, some B258	715	164		551	
LB Barking and Dagenham	M25 j3 to j30	27	3		24	
LB Havering	M25 j3 to j30	31	3		28	
Essex County Council	M25 j3 anti clockwise	25	3		22	
Thurrock Council	M25 j3 to j30	26	0		26	
Rest of East of England	M25 j3 anti clockwise	12	3		9	
Total		836	176	21.1	660	78.9

North East (M25 j3 to j2)

Area of Workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	<u>Total</u> commuters from the 3 Swanley wards	<u>Total non car-driving</u> commuters from the 3 Swanley	% Non-Car	<u>Total car-driving</u> commuters from the 3 Swanley	% Car
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		wards		wards	
Gravesham Borough	M25 j3 to j2 and A2	96	30		66
Medway Council	M25 j3 to j2 and A2	45	6		39
Total		141	36	25.5	105

West (A20 from west of Swanley)

Area of Workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total commuters from the 3 Swanley wards	Total non car-driving commuters from the 3 Swanley wards	% Non-Car	Total car-driving commuters from the 3 Swanley wards	% Car
LB Bexley	A20 from west of Swanley	670	143		527	
LB Bromley	A20 from west of Swanley	907	331		576	
LB Croydon	A20 from west of Swanley	59	6		53	
LB Lewisham	A20 from west of Swanley	168	42		126	
LB Greenwich	A20 from west of Swanley	193	42		151	
Central London	A20 from west of Swanley	1,376	1,050		326	
Rest of London	A20 from west of Swanley	150	39		111	
Total		3,523	1,653	46.9	1,870	53.1

East (M20 from j1 to j4)

Area of Workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total commuters from the 3 Swanley wards	Total non car-driving commuters from the 3 Swanley wards	% Non-Car	Total car-driving commuters from the 3 Swanley wards	% Car
Maidstone District	M20 from j1 to M20 j5	70	24		46	
Tonbridge and Malling District	Some M25 j3 to 5 and A21, Some M20 j1 to j4	45.0	10.5		34.5	

Total			115	34.5	30	80.5	70
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Unknown

Area of Workplace	Direction of travel to (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	<u>Total</u> commuters from the 3 Swanley wards	<u>Total non</u> <u>car-driving</u> commuters from the 3 Swanley wards	% Non-Car	<u>Total car-</u> <u>driving</u> commuters from the 3 Swanley wards	% Car
Rest of Sevenoaks District	Unknown	163	44		119	
Rest of Kent	Unknown	15	0		15	
Total		178	44	24.7	134	75.3

Notes

- The totals exclude those people who work from home.

APPENDIX G: TRAVEL TO WORK MODAL SPLITS FOR THOSE COMMUTING TO SWANLEY CHRISTCHURCH AND SWANLEY VILLAGE WARD BY BROAD LOCATION OF RESIDENCE

The following data is taken from the 2001 Census 'Method of Travel to Work' table (T206). The data was accessed through www.nomisweb.co.uk.

By area of residence:

Area of Workplace	Total <u>car-driving</u> commuters to Swanley Christchurch and Swanley Village ward	Total <u>non car-driving</u> commuters to Swanley Christchurch and Swanley Village ward	Total commuters to Swanley Christchurch and Swanley Village ward	% Non-Car Driving	% Car Driving
Swanley Wards	388	357	745	47.9	52.1
Hextable Ward	43	20	63	31.7	68.3
Farningham, Horton Kirby and South Darenth Wards	22	3	25	12.0	88.0
Fawkham and West Kingsdown Ward	43	12	55	21.8	78.2
Ash Ward	27	9	36	25.0	75.0
Crockenhill and Well Hill Ward	20	12	32	37.5	62.5
Eynsford Ward	9	9	18	50.0	50.0
Hartley and Hodsoll Street Ward	20	0	20	0.0	100.0
Sevenoaks Urban Area	22	6	28	21.4	78.6
Rest of Sevenoaks District	22	0	22	0.0	100.0
Dartford Borough	252	40	292	13.7	86.3
Gravesham Borough	131	9	140	6.4	93.6
Medway Council	150	43	193	22.3	77.7
Maidstone District	69	18	87	20.7	79.3
Tonbridge and Malling District	79	9	88	10.2	89.8
Tunbridge Wells Borough	17	0	17	0.0	100.0
Rest of Kent	60	15	75	20.0	80.0
LB Bexley	211	48	259	18.5	81.5
LB Bromley	166	56	222	25.2	74.8
LB Croydon	22	6	28	21.4	78.6
LB Lewisham	45	18	63	28.6	71.4
LB Greenwich	64	12	76	15.8	84.2
Central London	9	24	33	72.7	27.3

LB Barking and Dagenham	3	0	3	0.0	100.0
LB Havering	9	3	12	25.0	75.0
Essex County Council	36	0	36	0.0	100.0
Thurrock Council	9	6	15	40.0	60.0
Rest of South East Region	66	3	69	4.3	95.7
Rest of East of England	6	0	6	0.0	100.0
Rest of London	15	12	27	44.4	55.6
Total	2,035	750	2,785		

By broad direction of travel to Swanley Christchurch and Swanley Village ward:

Local (Not likely to Use SRN)

Area of Workplace	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total commuters to Swanley Christchurch and Swanley Village ward	Total non car-driving commuters to Swanley Christchurch and Swanley Village ward	% Non-Car	Total car-driving commuters to Swanley Christchurch and Swanley Village ward	% Car
Swanley Wards	Local	745	357		388	
Hextable Ward	Local	63	20		43	
Crockenhill and Well Hill Ward	Local	32	12		20	
Total		840	389	46.3	451	53.7

East Local (A20 (local) but using M25 junction 3)

Area of Workplace	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total commuters to Swanley Christchurch and Swanley Village ward	Total non car-driving commuters to Swanley Christchurch and Swanley Village ward	% Non-Car	Total car-driving commuters to Swanley Christchurch and Swanley Village ward	% Car
Farningham, Horton Kirby and South Darenth Wards	East Local - A20 (local) but using M25 junction 3	25	3		22	

Fawkham and West Kingsdown Ward	East Local - A20 (local) but using M25 junction 3	55	12		43	
Ash Ward	East Local - A20 (local) but using M25 junction 3	36	9		27	
Eynsford Ward	East Local - A20 (local) but using M25 junction 3	18	9		9	
Hartley and Hodsoll Street Ward	East Local - A20 (local) but using M25 junction 3	20	0		20	
Total		154	33	21.4	121	78.6

South (M25 j3 to j5)

Area of Workplace	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total commuters to Swanley Christchurch and Swanley Village ward	Total non car-driving commuters to Swanley Christchurch and Swanley Village ward	% Non-Car	Total car-driving commuters to Swanley Christchurch and Swanley Village ward	% Car
Sevenoaks Urban Area	South - M25 j3 to j5	28	6		22	
Tonbridge and Malling District (50%)	South or East - Some M25 j3 to 5 and A21, Some M20 j1 to j4	44	4.5		39.5	
Tunbridge Wells Borough	South - M25 j3 to j5 and A21	17	0		17	
Rest of South East Region	South - M25 j3 clockwise	69	3		66	
Total		158	13.5	8.5	145	91.5

North (M25 j3 - j2, j1b, j1a onwards)

Area of Workplace	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	Total commuters to Swanley Christchurch and Swanley Village ward	Total non car-driving commuters to Swanley Christchurch and Swanley Village ward	% Non-Car	Total car-driving commuters to Swanley Christchurch and Swanley Village ward	% Car
Dartford Borough	North - Majority M25 j3 to j2, some	292	40		252	

	B258					
LB Barking and Dagenham	North - M25 j3 to j30	3	0		3	
LB Havering	North - M25 j3 to j30	12	3		9	
Essex County Council	North - M25 j3 anti clockwise	36	0		36	
Thurrock Council	North - M25 j3 to j30	15	6		9	
Rest of East of England	North - M25 j3 anti clockwise	6	0		6	
Total		364	49	13.5	315	86.5

North East (M25 j3 to j2)

Area of Workplace	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	<u>Total</u>	<u>Total non car-driving</u>	% Non-Car	<u>Total car-driving</u>	% Car
		commuters to Swanley Christchurch and Swanley Village ward	commuters to Swanley Christchurch and Swanley Village ward		commuters to Swanley Christchurch and Swanley Village ward	
Gravesham Borough	North - M25 j3 to j2 and A2	140	9		131	
Medway Council	North - M25 j3 to j2 and A2	193	43		180	
Total		333	52	15.6	311	93.4

West (A20 from west of Swanley (using M25 j3))

Area of Workplace	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	<u>Total</u>	<u>Total non car-driving</u>	% Non-Car	<u>Total car-driving</u>	% Car
		commuters to Swanley Christchurch and Swanley Village ward	commuters to Swanley Christchurch and Swanley Village ward		commuters to Swanley Christchurch and Swanley Village ward	
LB Bexley	West - A20 from west of Swanley (using M25 j3)	259	48		211	
LB Bromley	West - A20 from west of Swanley (using M25 j3)	222	56		166	
LB Croydon	West - A20 from west of Swanley	28	6		22	

	(using M25 j3)					
LB Lewisham	West - A20 from west of Swanley (using M25 j3)	63	18		45	
LB Greenwich	West - A20 from west of Swanley (using M25 j3)	76	12		64	
Central London	West - A20 from west of Swanley (using M25 j3)	33	24		9	
Rest of London	West - A20 from west of Swanley (using M25 j3)	27	12		15	
Total		708	176	24.9	532	75.1

East (M20 from j1 to j4)

Area of Workplace	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	<u>Total</u> commuters to Swanley Christchurch and Swanley Village ward	<u>Total non car-</u> <u>driving</u> commuters to Swanley Christchurch and Swanley Village ward	% Non-Car	<u>Total car-</u> <u>driving</u> commuters to Swanley Christchurch and Swanley Village ward	% Car
Maidstone District	East - M20 from j1 to j5	87	18		69	
Tonbridge and Malling District (50%)	South or East - Some M25 j3 to 5 and A21, Some M20 j1 to j4	44	4.5		39.5	
Total		131	22.5	17.2	108.5	82.8

Unknown

Area of Workplace	Direction of travel from (the roads noted are indicative of the directions of travel if the journey is undertaken by car)	<u>Total</u> commuters to Swanley Christchurch and Swanley Village ward	<u>Total non car-</u> <u>driving</u> commuters to Swanley Christchurch and Swanley Village ward	% Non-Car	<u>Total car-</u> <u>driving</u> commuters to Swanley Christchurch and Swanley Village ward	% Car
Rest of Sevenoaks District	Unknown	22	0		22	
Rest of Kent	Unknown	75	15		60	

Total

97

15

15.5

82

84.5

Notes

- The totals exclude those people who work from home.