Table 2.3: Total Residential Person Trips – Gross Generation

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	175	734	909	378	165	543
Car Driver	159	666	824	618	269	888
Car Passenger	73	307	380	265	115	380
Total	**406**	**1,707**	**2,113**	**1,262**	**550**	**1,811**

2.2 ALLOWANCE FOR AFFORDABLE HOUSING

2.2.1 The residential element of the proposed development is likely to comprise approximately 30% affordable units. Analysis of the TRICS database indicates that peak hour trips attributable to affordable units in England are approximately 30% lower than private housing trip rates. This correlates well with information contained within the National Travel Survey (NTS) which indicates that housing occupants on lower incomes generate approximately 20% fewer person trips. Relevant extracts of the TRICS and NTS data are attached as Annex C.

2.2.2 Based on the above, it is considered appropriate to reduce the residential trips generated by the affordable element of the units by 25%. Therefore, it can be demonstrated that the proposed development would generate some 7.5% fewer person trips than if it were wholly market housing.

$$[(0.70 \times 1.0) + (0.30 \times 0.75)] = 0.925$$

2.2.3 Table 2.4 shows the number of person trips that would be generated by the residential component of the development, accounting for the element of affordable housing that would be promoted.

Table 2.4: Total Residential Person Trips – Allowing for Affordable Units

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	162	679	841	350	153	503
Car Driver	147	616	762	572	249	821
Car Passenger	68	284	352	245	107	352
Total	**376**	**1,579**	**1,955**	**1,167**	**509**	**1,676**

2.3 ALLOWANCE FOR COMMUTING JOURNEYS MODE SHIFT

2.3.1 It is anticipated that a proportion of the new residents would gain work at the proposed on-site employment and neighbouring land, to the east of the A41. Analysis of NTS data, presented within Annex D, indicates that 36% of morning peak hour trips are for employment purposes. The corresponding proportion of commuting trips during the evening peak hour is 41%.

2.3.2 Surveys undertaken in a range of mixed-use settlements in England demonstrate that for new developments, approximately 10% of financially active adults work and live in the same development. The same surveys identified a significantly higher proportion (24%) of internal employment trips in more established mixed-use areas. Extracts of the survey data is attached as Annex E.

2.3.3 There are two immediate employment areas available to the new residents, 20,000sqm within the proposed development and an additional 60,000sqm on neighbouring land. The available on-site employment will result in a reduction in external trips and, whilst it is acknowledged that the neighbouring employment development would be external to the site, it is considered that its close proximity would result in a higher number of trips being made by non-car modes.

2.3.4 In order to reflect the level of mode shift that is likely to be achieved at the proposed development, it is considered that 17% of the residential trips for employment purposes (the average of the mixed use development surveyed figures) would shift to non-car modes of transport. This equates to a mode shift of 6.1% of the morning peak trips by car and 7.0% of the evening peak hour trips by car. These trips have been apportioned to the car passenger and non-car modes based on their existing proportions. Tables 2.5 and 2.6 show the mode shift for the on-site and neighbouring employment respectively, while Table 2.7 shows the total mode shift for the new residents.

Table 2.5: Commuting Mode Shift to On-Site Employment

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	3	14	17	14	6	20
Car Driver	-2	-9	-12	-10	-4	-14
Car Passenger	-1	-4	-5	-4	-2	-6
Total	**0**	**0**	**0**	**0**	**0**	**0**

Table 2.6: Commuting Mode Shift to Neighbouring Employment

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	10	41	51	43	19	61
Car Driver	-7	-28	-35	-30	-13	-43
Car Passenger	-3	-13	-16	-13	-6	-18
Total	**0**	**0**	**0**	**0**	**0**	**0**

Table 2.7: Allowance for Commuting Mode Shift

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	+13	+55	+68	+57	+25	+82
Car Driver	-9	-38	-47	-40	-17	-57
Car Passenger	-4	-17	-22	-17	-7	-25
Total	**0**	**0**	**0**	**0**	**0**	**0**

2.4 ALLOWANCE FOR INTERNAL EDUCATION TRIPS

2.4.1 As stated in Section 1 of this Technical Report, primary and secondary education provision will be incorporated into the development. Therefore, as the person trips illustrated in Table 2.4 include trips to schools, this element needs to be discounted when deriving the total number of trips that would be external to the development.

2.4.2 Analysis of NTS data (attached as Annex D) indicates that approximately 43% of morning peak hour trips and 4% of evening peak hour trips are likely to be for educational purposes. A further breakdown of the education shows that primary schools account for 45% of all education trips, while secondary and tertiary education account for 35% and 20% respectively. Therefore the proposed education trips for the site equate to 542 and 43 trips during the morning and evening peak hours respectively.

2.4.3 The mode share of these trips has been established using NTS data (extracts attached as Annex F) in order to reflect the typical mode share of primary and secondary trips.

2.4.4 It should be noted that the proposed secondary school provision will only provide facilities for pupils of 14 to 19 years. Consequently, secondary pupils between 11 and 14 years will be required to use off-site secondary schools. It has therefore been assumed that the on-site secondary provision will cater for 5/9ths of secondary education trips, while the remaining 4/9ths will go to external secondary schools.

2.4.5 Tables 2.8 and 2.9 show the resultant mode shift for primary and secondary education.

Table 2.8: Allowance for Internal Primary School Trips

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	-33	-138	-171	-10	-4	-14
Car Driver	-16	-67	-83	-5	-2	-7
Car Passenger	-24	-100	-124	-7	-3	-10
Total	**-73**	**-306**	**-378**	**-21**	**-9**	**-30**

Table 2.9: Allowance for Internal Secondary School Trips

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	-12	-52	-64	-4	-2	-5
Car Driver	-2	-9	-11	-1	0	-1
Car Passenger	-3	-13	-16	-1	0	-1
Total	**-17**	**-73**	**-91**	**-5**	**-2**	**-7**

2.4.6 Given that these trips will remain internal to the development, Table 2.10 shows the total reduction in the external residential trips.

Table 2.10: Allowance for Internal Trips to Schools

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	-45	-190	-235	-13	-6	-19
Car Driver	-18	-75	-93	-5	-2	-7
Car Passenger	-27	-113	-140	-8	-3	-11
Total	-90	-379	-469	-26	-11	-37

2.5 EXTERNAL RESIDENTIAL TRIPS

2.5.1 Table 2.11 shows the total number of external person trips that would be generated by the residential development at South West Bicester , derived by applying the allowances for the mode shift of commuting trips (Table 2.7) and the internalisation of school trips (Table 2.10) to the to the total residential person trips (Table 2.4).

Table 2.11: External Residential Person Trips

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	129	544	673	394	172	566
Car Driver	120	503	622	527	230	756
Car Passenger	37	154	190	220	96	316
Total	**286**	**1200**	**1486**	**1141**	**497**	**1638**

2.5.2 The resultant external car driver trip rates correspond to 0.39 and 0.48 vehs / unit during the morning and evening peak hours respectively.

3 Hotel Generation

3.1 HOTEL PERSON TRIP GENERATION

3.1.1 The proposed development will comprise up to 100 bedrooms. This equates to approximately 7,000 sqm GFA of hotel use.

3.1.2 The TRICS database has been interrogated to determine the vehicular trip rates attributable to this land use. However, as the TRICS database does not hold any multi-modal data on hotels, the TRAVL database has been used to establish the total person trip generation and hence the derivation of the non-car trip rates.

3.1.3 Table 3.1 illustrates the peak hour trip rates for the hotel use within the proposed development while relevant extracts from the TRICS and TRAVL databases are attached as Annex G. It should be noted that an occupancy rate of 1.25 has been used to calculate the passenger trip rate.

Table 3.1: Hotel Person Trip Rates

Trips per 100 sqm GFA	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	0.00	0.32	0.31	0.35	0.21	0.57
Car Driver	0.32	0.35	0.67	0.36	0.27	0.63
Car Passenger	0.08	0.09	0.17	0.09	0.07	0.16
Total	**0.40**	**0.76**	**1.15**	**0.80**	**0.55**	**1.36**

Source: TRICS and TRAVL databases

3.1.4 Table 3.2 shows the number of person trips that would be generated by the hotel, derived by applying the trip generation rates to the quantum of hotel floor space proposed.

Table 3.2: Hotel Person Trips

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	0	23	22	25	15	40
Car Driver	22	25	47	25	19	44
Car Passenger	6	6	12	6	5	11
Total	**28**	**53**	**81**	**56**	**39**	**95**

4 Local Centre Employment Generation

4.1 EMPLOYMENT TRIP GENERATION

4.1.1 The forecast vehicular trip generation of the 1,000 sqm GFA of local employment use has been taken from English business park sites contained in the TRICS database. It is considered that this will provide a fair assessment of the likely vehicular trip generation of the proposed employment uses within the local centre, given the accessibility of this part of the site by foot, cycle and public transport.

4.1.2 The resultant vehicular trips are shown in Table 4.1 while full details of the TRICS outputs are attached as Annex H.

Table 4.1: Local Employment Vehicular Trip Rates and Trips – Gross Generation

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Trip Rate – Vehs/100sqm	1.42	0.12	1.54	0.12	1.09	1.21
Total Trips (Vehs)	**14**	**1**	**15**	**1**	**11**	**12**

Source: TRICS database

4.1.3 Based on the above, the 1,000 sqm employment development would generate a total of 15 vehicle trips during the morning peak hour. The corresponding number of vehicle trips during the evening peak hour is predicted to be 12.

4.1.4 In order to establish the total person trip generation of the employment development, 2001 Census data for employment journeys that have a destination within Bicester has been used to establish the number of trips that would be generated by other modes of travel. As can be seen from Table 4.2, car drivers account for 68% of all employment person trips.

Table 4.2: Mode Share of Local Employment Trips

Mode of Travel	Percentage Share
Non-Car	24%
Car Driver	68%
Car Passenger	8%
Total	**100%**

Source: 2001 Census

4.1.5 Table 4.3 summarises the number of person trips that would be generated by the proposed employment development, derived by factoring-up the vehicle trips to represent person trips by all modes of travel. It is important to note that the number of car drivers does not reduce as a result of this adjustment.

Table 4.3: Total Local Employment Person Trips – Gross Generation

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	5	0	5	0	4	4
Car Driver	14	1	15	1	11	12
Car Passenger	2	0	2	0	1	1
Total	**21**	**2**	**23**	**2**	**16**	**18**

4.2 ALLOWANCE FOR REDUCED CAR PARKING PROVISION

4.2.1 It is important to note that the resultant person trips shown in Table 4.3 are derived using vehicular trip rates associated with existing employment developments that have been operational for some time and do not therefore reflect the benefits of local and national polices aimed at reducing car use. The effect of these polices is difficult to quantify. However, one area which can be examined is the relationship between the provision of on-site car parking spaces and the vehicular mode share.

4.2.2 The sites within the TRICS database used to derive the vehicular trip rate reflect a parking provision of one space per 27 sqm whereas, in accordance with current local and national policy, parking at the proposed development is likely to be at a rate no greater than one space per 30 sqm. Indeed, given that the employment development is likely to incorporate a mix of employment uses (which will result in a lower number of spaces per GFA), the overall parking provision is likely to be between 1 space per 30 sqm and 1 space per 50 sqm. Therefore, for the purposes of this assessment, an overall provision of 1 space per 35 sqm has been applied.

4.2.3 It is considered that the reduced parking provision at the development will induce a proportionate mode shift away from car use when compared to sites within the TRICS database that exhibit higher parking provisions.

4.2.4 Therefore, a mode shift of 30% [(35-27) / 27] away from car drivers has been applied in order to reflect the reduced parking provision that will be provided. These trips have been apportioned onto the other modes of travel, including car passengers, based on the existing proportions (Table 4.4 refers).

Table 4.4: Total Local Employment Person Trips Allowing for Reduced Car Parking

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	+3	0	+3	0	+2	+2
Car Driver	-4	0	-4	0	-3	-3
Car Passenger	+1	0	+1	0	+1	+1
Total	**0**	**0**	**0**	**0**	**0**	**0**

4.2.5 Table 4.5 shows the resultant mode share of the total person trips which would be generated by the on-site local centre employment uses, derived by applying the allowance for reduced parking provision (Table 4.4) to the total trips (Table 4.3).

Table 4.5: Total Local Employment Person Trips Allowing for Reduced Car Parking

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	8	1	9	1	6	7
Car Driver	10	1	11	1	8	9
Car Passenger	3	0	3	0	2	2
Total	**21**	**0**	**23**	**2**	**16**	**18**

5 On Site Employment Generation

5.1 EMPLOYMENT TRIP GENERATION

5.1.1 The forecast vehicular trip generation of the 20,000 sqm GFA of B1 / B2 employment use has been taken from English business park sites contained in the TRICS database. It is considered that this will provide a fair assessment of the likely vehicular trip generation of the proposed employment uses within the South West Bicester development, particularly given that these employment uses will be located adjacent to the existing high quality and frequent bus services along the A41 corridor.

5.1.2 The resultant vehicular trips are shown in Table 5.1 while full details of the TRICS outputs are attached as Annex H.

Table 5.1: B1 / B2 Employment Vehicular Trip Rates and Trips – Gross Generation

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Trip Rate – Vehs/100sqm	1.42	0.12	1.54	0.12	1.09	1.21
Total Trips (Vehs)	**284**	**24**	**308**	**24**	**218**	**242**

Source: TRICS database

5.1.3 Based on the above, the 20,000 sqm of B1 / B2 employment development would generate a total of 308 vehicle trips during the morning peak hour. The corresponding number of vehicle trips during the evening peak hour is predicted to be 242.

5.1.4 In order to establish the total person trip generation of the employment development, 2001 Census data for employment journeys that have a destination within Bicester has been used to establish the number of trips that would be generated by other modes of travel. As can be seen from Table 5.2, car drivers account for 68% of all employment person trips.

Table 5.2: Mode Share of B1 / B2 Employment Trips

Mode of Travel	Percentage Share
Non-Car	24%
Car Driver	68%
Car Passenger	8%
Total	**100%**

Source: 2001 Census

5.1.5 Table 5.3 summarises the number of person trips that would be generated by the proposed B1 / B2 employment development, derived by factoring-up the vehicle trips to represent person trips by all modes of travel. It is important to note that the number of car drivers does not reduce as a result of this adjustment.

Table 5.3: Total B1 / B2 Employment Person Trips – Gross Generation

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	100	8	109	8	77	85
Car Driver	284	24	308	24	218	242
Car Passenger	33	3	36	3	26	28
Total	**418**	**35**	**453**	**35**	**321**	**356**

5.2 ALLOWANCE FOR REDUCED CAR PARKING PROVISION

5.2.1 It is important to note that the resultant person trips shown in Table 5.3 are derived using vehicular trip rates associated with existing employment developments that have been operational for some time and do not therefore reflect the benefits of local and national polices aimed at reducing car use. The effect of these polices is difficult to quantify. However, one area which can be examined is the relationship between the provision of on-site car parking spaces and the vehicular mode share.

5.2.2 The sites within the TRICS database used to derive the vehicular trip rate reflect a parking provision of one space per 27 sqm whereas, in accordance with current local and national policy, parking at the proposed development is likely to be at a rate no greater than one space per 30 sqm. Indeed, given that the employment development is likely to incorporate a mix of employment uses (which will result in a lower number of spaces per GFA), the overall parking provision is likely to be between 1 space per 30 sqm and 1 space per 50 sqm. Therefore, for the purposes of this assessment, an overall provision of 1 space per 35 sqm has been applied.

5.2.3 It is considered that the reduced parking provision at the development will induce a proportionate mode shift away from car use when compared to sites within the TRICS database that exhibit higher parking provisions.

5.2.4 Therefore, a mode shift of 30% [(35-27) / 27] away from car drivers has been applied in order to reflect the reduced parking provision that will be provided. These trips have been apportioned onto the other modes of travel, including car passengers, based on the existing proportions (Table 5.4 refers).

Table 5.4: Total B1 / B2 Employment Person Trips Allowing for Reduced Car Parking

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	+63	+5	+68	+5	+48	+54
Car Driver	-84	-7	-91	-7	-65	-72
Car Passenger	+21	+2	+23	+2	+16	+18
Total	**0**	**0**	**0**	**0**	**0**	**0**

5.2.5 Table 5.5 shows the resultant mode share of the total person trips which would be generated by the on-site employment use, derived by applying the allowance for reduced parking provision (Table 5.4) to the total trips (Table 5.3).

Table 5.5: Total B1 / B2 Employment Person Trips Allowing for Reduced Car Parking

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	163	14	177	14	125	139
Car Driver	200	17	217	17	153	170
Car Passenger	54	5	59	5	42	46
Total	**418**	**35**	**453**	**35**	**321**	**356**

5.3 ALLOWANCE FOR EMPLOYMENT MODE SHIFT

5.3.1 Due to the close proximity of the new residential element of the South West Bicester development, a proportion of the B1 / B2 employment will be satisfied by its future residents. Section 2 (Table 2.5) of this report identifies the likely mode shift in commuting trips that is likely to occur because of the immediate proximity of the new residents. Table 5.6 shows the resultant mode shift as described in Section 2.

Table 5.6: Allowance for B1 / B2 Employment Mode Shift

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	+14	+3	+17	+6	+14	+20
Car Driver	-9	-2	-12	-4	-10	-14
Car Passenger	-4	-1	-5	-2	-4	-6
Total	**0**	**0**	**0**	**0**	**0**	**0**

5.4 EXTERNAL EMPLOYMENT TRIPS

5.4.1 Table 5.7 shows the total number of external trips that will be generated by the proposed on site employment. These figures have been derived by applying the reductions due to mode shift of employment (Table 5.6) to the total employment trips (Table 5.5).

Table 5.7: External B1 / B2 Employment Person Trips

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	177	17	194	20	140	160
Car Driver	190	15	205	13	143	156
Car Passenger	50	4	54	3	38	40
Total	**418**	**35**	**453**	**35**	**321**	**356**

5.4.2 The resulting car driver trip rates correspond to 1.03 and 0.78 vehs / 100sqm GFA during the morning and evening hours respectively.

6 School Generation

6.1 PUPIL TRIP GENERATION

6.1.1 The proposed development includes the provision of two primary schools and secondary school provision for pupils between 14 and 19 years.

6.1.2 It is understood that the primary schools will accommodate a total of 630 pupils while the secondary school provision will cater for a further 650 pupils.

6.1.3 Therefore, it can be seen that the total education facilities provided on the South West Bicester site will attract a total of 1,280 pupils.

6.1.4 Using pupil yield factors a comparison of 0.25 pupils per dwelling (primary) and 0.20 pupils per dwelling (secondary), it can be seen that the proposed South West Bicester development could generate for a total of 713 pupils.

6.1.5 As stated in Section 2, the proposed secondary school provision has been assumed to provide facilities for 5/9ths of the secondary education age groups. Consequently, given that the proposed primary schools will accommodate all predicted primary pupils associated with new residents, the South West Bicester Development will generate a total of 572 pupils (396 primary pupils and 176 secondary pupils) to the proposed on-site education facilities. Therefore, 55% of the pupils at the proposed schools will travel from outside of the development.

6.1.6 As Table 2.10 illustrates, the 572 pupils on the South West Bicester development would generate a total of 469 and 37 person trips during the morning and evening peak hour. Therefore, on a pro-rata basis, the remaining 708 pupils which would originate from outside of the site will generate a further 580 and 46 trips during the respective peak hours.

6.1.7 Table 6.1 depicts these externally generated trips. The mode share has been established using NTS data (extracts attached as Annex F) in order to reflect the typical mode share of primary and secondary education trips.

Table 6.1: Externally Generated (by Pupils) Education Trips

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	235	56	291	7	16	23
Car Driver	93	22	116	3	6	9
Car Passenger	140	33	173	4	10	14
Total	**468**	**112**	**580**	**14**	**32**	**46**

6.1.8 In order to ensure a robust assessment, the trips in the above table make no allowance for any student absences.

6.2 STAFF TRIP GENERATION

6.2.1 Using data contained within the TRICS database it can be established that, on average, one full time equivalent member of staff is required for every 12 pupils. Therefore, a total of 107 staff are likely to be employed within the primary and secondary establishments in order to cater for the 1,280 pupils.

6.2.2 Again, using information within the TRICS database it can be demonstrated that 75% of trips in the morning period (0700-1000) occur during the 0800 to 0900 peak hour. Similarly, 20% of trips during the afternoon period (1500 to 1800) occur during the 1700 to 1800 peak hour.

6.2.3 Based on the above it can be established that 81 and 21 staff trips will be generated during the 0800-0900 and 1700-1800 peak hours.

6.2.4 Table 6.2 summarises these trips. The trips have been attributed to each mode of travel by applying the mode share for employment trips established from 2001 census data for Bicester (summarised in Table 4.2).

Table 6.2: Externally Generated (by Staff) Education Trips

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	14	0	14	0	4	4
Car Driver	64	0	64	0	17	17
Car Passenger	3	0	3	0	1	1
Total	**81**	**0**	**81**	**0**	**21**	**21**

6.3 TOTAL EDUCATION TRIP GENERATION

6.3.1 Table 6.3 shows the total external trip generation for the proposed educational uses on the South West Bicester development site, derived by combining the pupil (Table 6.1) and staff (Table 6.2) trip generations.

Table 6.3: Total Externally Generation Education Trips

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	249	56	305	7	20	27
Car Driver	157	22	180	3	23	26
Car Passenger	143	33	177	4	10	15
Total	**549**	**112**	**661**	**14**	**54**	**68**

7 Health Centre Generation

7.1 DEVELOPMENT PROPOSALS

7.1.1 The proposed health village will be located in the north eastern corner of the site, adjacent to Middleton Stoney Road, covering an area of approximately 3.5 hectares. Whilst the final uses for the site will need to be determined by the local health authority, it is currently considered that the following mix of health uses could be provided within this site:

- Nursing Home – approximately 80 beds / residents;
- Doctors Surgery – approximately 8.5 full time equivalent staff;
- GP Medical Centre – approximately 26 full time equivalent staff;
- Diagnostic Clinic – approximately 15 full time equivalent staff;
- Community Hospital – approximately 30 beds.

7.1.2 Given the intended uses within the health village, it is anticipated that the majority of visitors would be residents of the proposed South West Bicester development and other local residents, who would be within reasonable walking and cycling distance. Furthermore, the facilities are located adjacent to the Middleton Stoney Road and A4421 Oxford Road corridors and are therefore highly accessible in relation to existing bus services.

7.1.3 Consequently, it is likely that a large proportion of person trips associated with these uses would be undertaken by non-car modes. In this respect, the vehicular trip generation for the proposed health village has been derived by determining the overall number of person trips and then applying an appropriate vehicular mode share, based on the location and accessibility of the health village.

7.2 PERSON TRIP GENERATION

7.2.1 The forecast person trip generation of the health village has been taken from appropriate multi-modal sites in the TRICS database. The resultant vehicular trip rates are shown in Table 7.1, while full details of the TRICS outputs are attached as Annex I.

Table 7.1: Health Village Person Trip Rates

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Nursing Home (per bed)	0.09	0.06	0.15	0.06	0.08	0.14
Doctors Surgery (per FTE staff)	1.71	0.88	2.59	1.14	1.59	2.73
GP Medical Centre (per FTE staff)	1.71	0.88	2.59	1.14	1.59	2.73
Diagnostic Clinic (per FTE staff)	1.18	0.41	1.59	0.66	1.00	1.66
Community Hospital (per bed)	1.16	0.24	1.40	0.42	0.98	1.40

7.2.2 The person trip rates shown in Table 7.1 have then been multiplied by the anticipated quantum of each health village use, as detailed in paragraph 7.1.1, to derive the total person trips shown in Table 7.2.

Table 7.2: Health Village Person Trip Generation

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Nursing Home (per bed)	7	5	12	5	6	11
Doctors Surgery (per FTE staff)	15	7	22	10	14	23
GP Medical Centre (per FTE staff)	44	23	67	30	41	71
Diagnostic Clinic (per FTE staff)	18	6	24	10	15	25
Community Hospital (per bed)	35	7	42	13	29	42
Total Person Trips	**119**	**49**	**167**	**67**	**106**	**172**

7.2.3 As can be seen from Table 7.2, the proposed health village is predicted to generate 167 and 172 two-way person trips during the morning and evening peak hours respectively.

7.3 VEHICULAR TRIP GENERATION

7.3.1 In order to derive the predicted car driver and car passenger trips associated with the proposed health village, an appropriate vehicular mode share and car occupancy has then been applied to the total person trips.

7.3.2 As described in paragraph 7.1.2, it is anticipated that a large proportion of person trips associated with the proposed health village would be undertaken by non-car modes. Consequently, given the site's accessibility, it is considered that an overall car mode share (car driver and passenger) of 70% will provide a robust assessment of the potential car person trips associated with the health village. In order to derive the split of car drivers and car passengers, it has been assumed that car trips associated with the health village uses would have an occupancy of 1.2 persons per vehicle. This is considered to provide an appropriate balance between staff and visitor.

7.3.3 Based on the above assumptions, Table 7.3 provides a breakdown of the predicted person trips by car and non-car modes.

Table 7.3: External Health Village Trip Generation

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	36	15	50	20	32	51
Car Driver	69	28	98	39	62	100
Car Passenger	14	6	19	8	12	21
Total Person Trips	**119**	**49**	**167**	**67**	**106**	**172**

7.3.4 From Table 7.3, it can be seen that the health village would generate 98 and 100 two-way vehicular trips during the morning and evening peak hours respectively. To provide a robust assessment, it is assumed these would all be external person trips.

8 Sports Centre Generation

8.1 SPORTS CENTRE PERSON TRIP GENERATION

8.1.1 The proposed development will comprise up to 2,323 sqm GFA of sports centre.

8.1.2 The TRICS database has been interrogated to determine the multi-modal trip rates attributable to this land use. Multi-modal trips rates for pedestrians, cyclists, bus users, vehicles and vehicle occupants have been obtained. The car passenger trip rates have been derived by obtaining the difference between the number of vehicle occupants and the number of vehicles, whilst the number of car drivers equates to the number of vehicles.

8.1.3 Table 8.1 illustrates the peak hour trip rates for the sports centre use within the proposed development while relevant extracts from the TRICS database are attached as Annex J.

Table 8.1: Sports Centre Person Trip Rates

Trips per 100 sqm GFA	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car (bus, walk, cycle)	0.32	0.18	0.5	0.37	0.36	0.73
Car Driver	0.53	0.53	1.06	1.02	0.9	1.92
Car Passenger	0.2	0.1	0.3	0.47	0.81	1.28
Total	**1.05**	**0.81**	**1.86**	**1.86**	**1.71**	**3.93**

Source: TRICS databases

8.1.4 Table 8.2 shows the number of person trips that would be generated by the sports centre, derived by applying the trip generation rates to the quantum of sports centre floor space proposed.

Table 8.2: Sports Centre Person Trips

	AM Peak Hour 0800-0900			PM Peak Hour 1700-1800		
	In	Out	Total	In	Out	Total
Non-Car	7	4	11	9	8	17
Car Driver	12	12	25	24	21	45
Car Passenger	5	2	7	11	19	30
Total	**24**	**18**	**43**	**44**	**48**	**91**

9 Total South West Bicester Generation

9.1 CUMULATIVE TRIP GENERATION

9.1.1 Tables 9.1 and 9.2 present the total external person trip generation for the South West Bicester development, derived by combining the external residential (Table 2.11), hotel (Table 3.2), local employment (Table 4.5), B1 / B2 employment (Table 5.7) and education (Table 6.3), health village (Table 7.3) and sports centre (Table 8.2) trip generation forecasts.

Table 9.1: South West Bicester External Trip Generation – AM Peak Hour (0800-0900)

Mode of Travel	Non Educational Uses			Educational Uses			Total		
	In	Out	Total	In	Out	Total	In	Out	Total
Non-Car	358	603	962	249	56	305	607	659	1266
Car Driver	424	583	1007	157	22	180	581	605	1186
Car Passenger	114	172	286	143	33	177	257	205	462
Total	**896**	**1358**	**2254**	**549**	**112**	**661**	**1445**	**1470**	**2915**

Note: Minor discrepancies due to rounding

Table 9.2: South West Bicester External Trip Generation – PM Peak Hour (1700-1800)

Mode of Travel	Non Educational Uses			Educational Uses			Total		
	In	Out	Total	In	Out	Total	In	Out	Total
Non-Car	468	373	841	7	20	27	475	393	867
Car Driver	628	483	1111	3	23	26	631	506	1137
Car Passenger	248	171	420	4	10	15	253	182	434
Total	**1344**	**1027**	**2371**	**14**	**54**	**68**	**1358**	**1080**	**2438**

Note: Minor discrepancies due to rounding

9.2 TRIP DISTRIBUTION & ASSIGNMENT

9.2.1 The forecast vehicular trips have been distributed in accordance with zonal distributions derived from the 2001 Journey to Work census. Data relating to commuting trips originating within all wards within Bicester has been averaged in order to derive the vehicular distribution for both the residential and employment for the South West Bicester development trips. The resultant zonal distribution are summarised in Table 9.3 and 9.4 while Figure 1 illustrates the depiction of the areas covered by each of the zones.

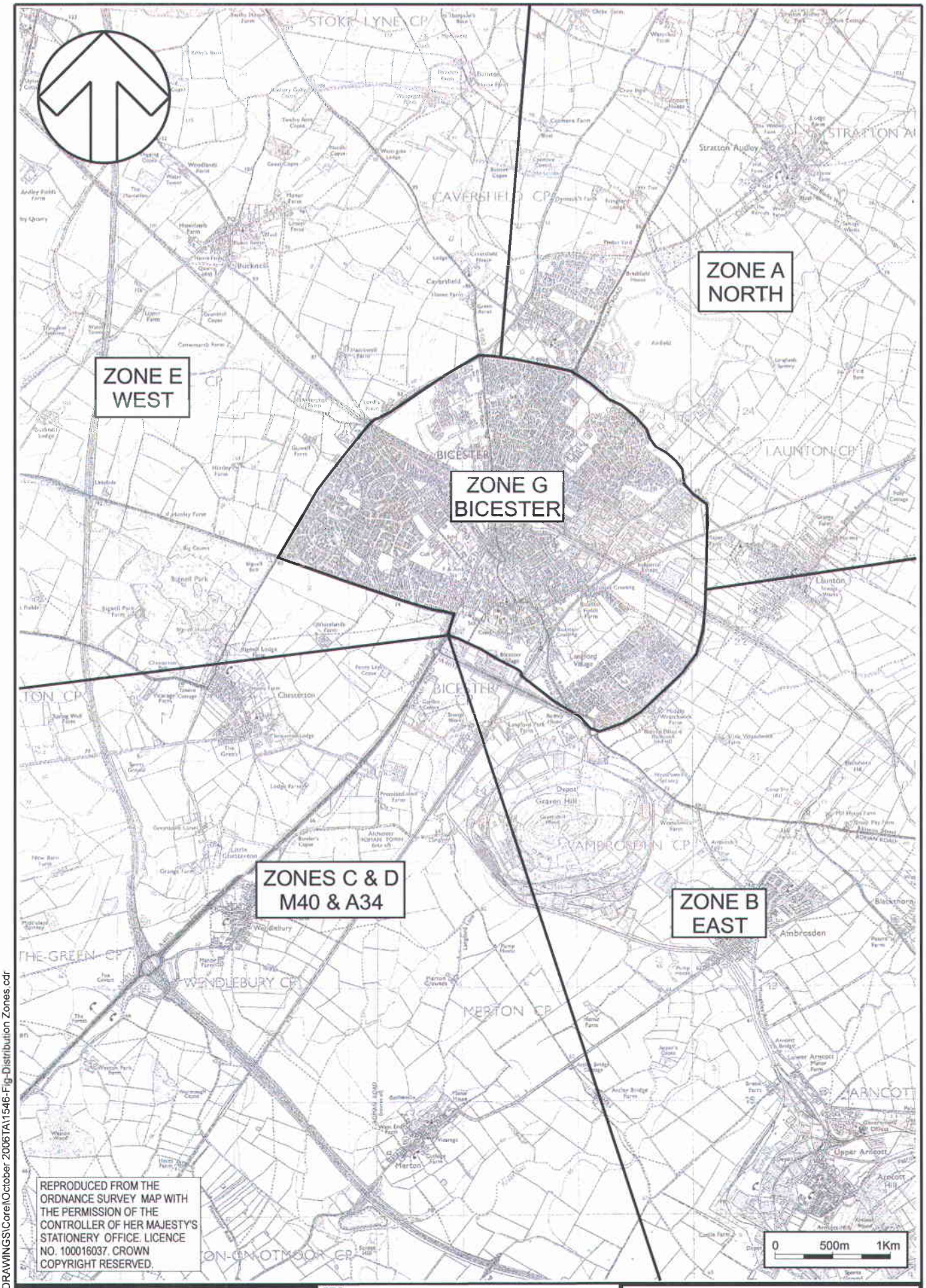
Table 9.3: Residential Vehicular Trip Distribution

Area	Percentage Distribution
Bicester	25.8%
North	4.8%
East	7.6%
South (M40)	12.6%
South (A34)	46.3%
West	3.0%
Total	**100%**

Table 9.4: Employment Vehicular Trip Distribution

Area	Percentage Distribution
Bicester	40.8%
North	8.3%
East	11.4%
South (M40)	2.9%
South (A34)	32.5%
West	4.1%
Total	**100%**

Figure 1 Zonal Distribution



WSP

TITLE:

DISTRIBUTION ZONES

FIGURE No:

1

N:\South West Bicester\DRAWINGS\Core\October 2006\TA\1546-Fig-Distribution Zones.cdr

Annex A Residential Trip Rates

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : K - MIXED PRIVATE HOUSING

Selected regions and areas:

02	**SOUTH EAST**		
	ES	EAST SUSSEX	1 days
	HC	HAMPSHIRE	13 days
	HF	HERTFORDSHIRE	1 days
	WS	WEST SUSSEX	5 days
05	**EAST MIDLANDS**		
	NT	NOTTINGHAMSHIRE	4 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	1 days
	ST	STAFFORDSHIRE	1 days
	WK	WARWICKSHIRE	1 days
	WO	WORCESTERSHIRE	3 days

Main parameter selection:

Parameter: Number of households
Range: 26 to 1165 (units:)

Date Range: 01/01/96 to 03/06/03

Selected survey days:

Monday	1 days
Tuesday	6 days
Wednesday	2 days
Thursday	13 days
Friday	8 days

Selected survey types:

Manual count	17 days
Directional ATC Count	13 days

Optional parameter selection:

Use Class:

C3	30 days

Location:

Neighbourhood Centre	5 days
Edge of Town	22 days
Edge of Town Centre	3 days

Population within 1 mile:

1,001 to 5,000	6 days
5,001 to 10,000	3 days
10,001 to 15,000	14 days
15,001 to 20,000	5 days
20,001 to 25,000	1 days
25,001 to 50,000	1 days

Optional parameter selection (Cont.):

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	3 days
75,001 to 100,000	16 days
100,001 to 125,000	2 days
125,001 to 250,000	2 days
250,001 to 500,000	5 days
500,001 or More	1 days

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	5 days
1.1 to 1.5	22 days
1.6 to 2.0	1 days

Buses/Trains per day (both directions):

Frequency	*Per Hour*	*Per Day*	*Surveys*
Not Known			0 days
0	0	0	1 days
<20 per day	1	20	1 days
20-39 per day	2	40	0 days
40-59 per day	3	60	5 days
60-79 per day	4	80	1 days
80+ per day	> 4	> 80	22 days

LIST OF SITES relevant to selection parameters

1 **ES-03-K-01** **MIXED HOUSING, LEWES** **EAST SUSSEX**
OLD MALLING WAY
SOUTH MALLING
LEWES
Total Number of households: 491 ******
Survey date: THURSDAY *29/03/01* *Survey Type: MANUAL*

2 **HC-03-K-04** **PORTSMOUTH HOUSING** **HAMPSHIRE**
ST GEORGES ROAD

PORTSMOUTH
Total Number of households: 150 ******
Survey date: THURSDAY *11/12/97* *Survey Type: MANUAL*

3 **HC-03-K-05** **PORTSMOUTH HOUSING** **HAMPSHIRE**
BROAD STREET

PORTSMOUTH
Total Number of households: 64 ******
Survey date: THURSDAY *18/12/97* *Survey Type: MANUAL*

4 **HC-03-K-08** **FLEET HOUSING** **HAMPSHIRE**
ANCELLS ROAD
ANCELLS FARM
FLEET
Total Number of households: 747 ******
Survey date: THURSDAY *05/03/98* *Survey Type: MANUAL*

5 **HC-03-K-09** **WINCHESTER HOUSING** **HAMPSHIRE**
RIDGEWAY/MEADOW W.
BADGER FARM
WINCHESTER
Total Number of households: 1040 ******
Survey date: THURSDAY *26/02/98* *Survey Type: MANUAL*

6 **HC-03-K-10** **EASTLEIGH HOUSING** **HAMPSHIRE**
KNIGHTWOOD ROAD
BADGER'S COPSE
EASTLEIGH
Total Number of households: 700 ******
Survey date: WEDNESDAY *18/08/99* *Survey Type: MANUAL*

7 **HC-03-K-11** **WINCHESTER HOUSING** **HAMPSHIRE**
RIDGEWAY/MEADOW W.
BADGER FARM
WINCHESTER
Total Number of households: 1040 ******
Survey date: THURSDAY *09/03/00* *Survey Type: DIRECTIONAL*
Survey date: FRIDAY *10/03/00* *Survey Type: DIRECTIONAL*
Survey date: THURSDAY *15/06/00* *Survey Type: DIRECTIONAL*
Survey date: FRIDAY *16/06/00* *Survey Type: DIRECTIONAL*
Survey date: THURSDAY *21/09/00* *Survey Type: DIRECTIONAL*
Survey date: FRIDAY *22/09/00* *Survey Type: DIRECTIONAL*
Survey date: THURSDAY *07/12/00* *Survey Type: DIRECTIONAL*
Survey date: FRIDAY *08/12/00* *Survey Type: DIRECTIONAL*

LIST OF SITES relevant to selection parameters (Cont.)

8 **HF-03-K-01** **MIXED PRI. HOUSING,WELWYN GC** **HERTFORDSHIRE**
LONGCROFT GARDENS

WELWYN GARDEN CITY
Total Number of households: 53 ******
Survey date: FRIDAY *06/09/02* *Survey Type: MANUAL*

9 **NT-03-K-02** **NEWARK HOUSING** **NOTTINGHAMSHIRE**
BEACON HILL ROAD
BEACON HILL
NEWARK-ON-TRENT
Total Number of households: 394 ******
Survey date: THURSDAY *26/11/98* *Survey Type: MANUAL*

10 **NT-03-K-03** **MANSFIELD HOUSING** **NOTTINGHAMSHIRE**
LOXLEY DRIVE
BERRYHILL
MANSFIELD
Total Number of households: 61 ******
Survey date: TUESDAY *08/12/98* *Survey Type: MANUAL*

11 **NT-03-K-04** **NOTTINGHAM HOUSING** **NOTTINGHAMSHIRE**
BEAUMARIS DRIVE
GEDLING
NOTTINGHAM
Total Number of households: 160 ******
Survey date: TUESDAY *24/11/98* *Survey Type: MANUAL*

12 **NT-03-K-05** **NOTTINGHAM HOUSING** **NOTTINGHAMSHIRE**
JENNY BURTON WAY
ASHFIELD
NOTTINGHAM
Total Number of households: 174 ******
Survey date: TUESDAY *08/12/98* *Survey Type: MANUAL*

13 **SH-03-K-01** **BRIDGNORTH HOUSING** **SHROPSHIRE**
BRAMBLE RIDGE

BRIDGNORTH
Total Number of households: 52 ******
Survey date: FRIDAY *08/05/98* *Survey Type: MANUAL*

14 **ST-03-K-01** **MIXED HOUSING, STAFFORD** **STAFFORDSHIRE**
THE MEADOWS
QUEENSVILLE
STAFFORD
Total Number of households: 224 ******
Survey date: TUESDAY *04/07/00* *Survey Type: MANUAL*

15 **WK-03-K-01** **MIXED HOUSING, STRATFORD** **WARWICKSHIRE**
OLD TOWN MEWS
OLD TOWN
STRATFORD UPON AVON
Total Number of households: 64 ******
Survey date: THURSDAY *07/09/00* *Survey Type: MANUAL*

16 **WO-03-K-01** **MIXED HOUSING, WORCESTER** **WORCESTERSHIRE**
MALVERN ROAD
LOWER WICK
WORCESTER
Total Number of households: 775 ******
Survey date: FRIDAY *24/05/02* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

17 **WO-03-K-02 MIXED HOUSING, BROMSGROVE WORCESTERSHIRE**
ST GODWALDS ROAD
ASTON FIELDS
BROMSGROVE
Total Number of households: 215 ******
Survey date: THURSDAY 23/05/02 Survey Type: MANUAL

18 **WO-03-K-03 MIXED HOUSING, WORCESTER WORCESTERSHIRE**
BYFIELD RISE

WORCESTER
Total Number of households: 103 ******
Survey date: TUESDAY 03/06/03 Survey Type: MANUAL

19 **WS-03-K-03 CHICHESTER HOUSING WEST SUSSEX**
LAVANT DOWN ROAD
LAVANT
CHICHESTER
Total Number of households: 90 ******
Survey date: MONDAY 20/11/00 Survey Type: DIRECTIONAL
Survey date: TUESDAY 21/11/00 Survey Type: DIRECTIONAL
Survey date: WEDNESDAY 22/11/00 Survey Type: DIRECTIONAL
Survey date: THURSDAY 23/11/00 Survey Type: DIRECTIONAL
Survey date: FRIDAY 24/11/00 Survey Type: DIRECTIONAL

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

Calculation factor: 1 HHOLDS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate
00:00 - 01:00	13	675	0.02	13	675	0.01	13	675	0.03
01:00 - 02:00	13	675	0.01	13	675	0.00	13	675	0.01
02:00 - 03:00	13	675	0.00	13	675	0.00	13	675	0.00
03:00 - 04:00	13	675	0.00	13	675	0.00	13	675	0.00
04:00 - 05:00	13	675	0.00	13	675	0.00	13	675	0.00
05:00 - 06:00	13	675	0.01	13	675	0.02	13	675	0.03
06:00 - 07:00	13	675	0.02	13	675	0.10	13	675	0.12
07:00 - 08:00	30	475	0.07	30	475	0.34	30	475	0.41
08:00 - 09:00	30	475	0.10	**30**	**475**	**0.42**	30	475	0.52
09:00 - 10:00	30	475	0.12	30	475	0.18	30	475	0.30
10:00 - 11:00	30	475	0.11	30	475	0.14	30	475	0.25
11:00 - 12:00	30	475	0.13	30	475	0.13	30	475	0.26
12:00 - 13:00	30	475	0.16	30	475	0.13	30	475	0.29
13:00 - 14:00	30	475	0.14	30	475	0.15	30	475	0.29
14:00 - 15:00	30	475	0.15	30	475	0.14	30	475	0.29
15:00 - 16:00	30	475	0.21	30	475	0.16	30	475	0.37
16:00 - 17:00	30	475	0.27	30	475	0.16	30	475	0.43
17:00 - 18:00	**30**	**475**	**0.39**	30	475	0.17	**30**	**475**	**0.56**
18:00 - 19:00	30	475	0.34	30	475	0.21	30	475	0.55
19:00 - 20:00	13	675	0.25	13	675	0.19	13	675	0.44
20:00 - 21:00	13	675	0.16	13	675	0.12	13	675	0.28
21:00 - 22:00	13	675	0.12	13	675	0.06	13	675	0.18
22:00 - 23:00	13	675	0.09	13	675	0.05	13	675	0.14
23:00 - 24:00	13	675	0.08	13	675	0.04	13	675	0.12
Daily Trip Rates:			2.94			2.93			5.87

Parameter summary

Trip rate parameter range selected:	26 - 1165 (units:)
Survey date date range:	01/01/96 - 03/06/03
Number of weekdays (Monday-Friday):	30
Number of Saturdays:	0
Number of Sundays:	0
Optional parameters used in selection:	NO
Surveys manually removed from selection:	0

Annex B Mode Share

Extracts from NTS – Residential

Focus on Personal Travel

December 2001

London: The Stationery Office

Table 7.14 Trips-in-progress by time of day and main mode (weekdays): 1992/2000

Index: Average hour for all modes = 100

	Walk	Bicycle	Car/van driver	Car/van passenger	Other private	Local bus	Rail	Taxi/ minicab	Other public	All modes
0000–0059	–	–	1	1	–	–	–	–	–	3
0100–0159	–	–	1	–	–	–	–	–	–	2
0200–0259	–	–	1	–	–	–	–	–	–	1
0300–0359	–	–	1	–	–	–	–	–	–	1
0400–0459	–	–	1	–	–	–	–	–	–	2
0500–0559	1	1	6	1	–	–	–	–	–	10
0600–0659	4	1	16	4	1	2	2	–	–	30
0700–0759	13	3	53	14	3	8	7	–	1	102
0800–0859	71	4	93	44	5	20	10	1	1	249
0900–0959	55	2	63	25	3	13	6	1	1	169
1000–1059	46	2	50	25	2	14	3	1	1	145
1100–1159	50	2	52	29	2	14	3	1	1	153
1200–1259	51	2	57	29	2	13	2	1	1	158
1300–1359	46	2	56	26	2	12	2	1	1	148
1400–1459	43	2	55	28	2	12	3	1	1	147
1500–1559	93	3	68	49	5	19	3	2	1	244
1600–1659	45	4	75	40	5	18	5	1	1	193
1700–1759	31	3	87	39	3	13	8	1	1	186
1800–1859	25	2	66	33	2	7	8	1	1	145
1900–1959	21	1	49	28	1	3	4	1	1	109
2000–2059	15	1	32	19	1	2	2	1	–	74
2100–2159	12	1	25	14	1	2	1	1	–	56
2200–2259	9	–	17	9	1	2	1	1	–	40
2300–2359	7	–	11	6	–	1	1	2	–	28
All day	27	2	39	19	2	7	3	1	1	100

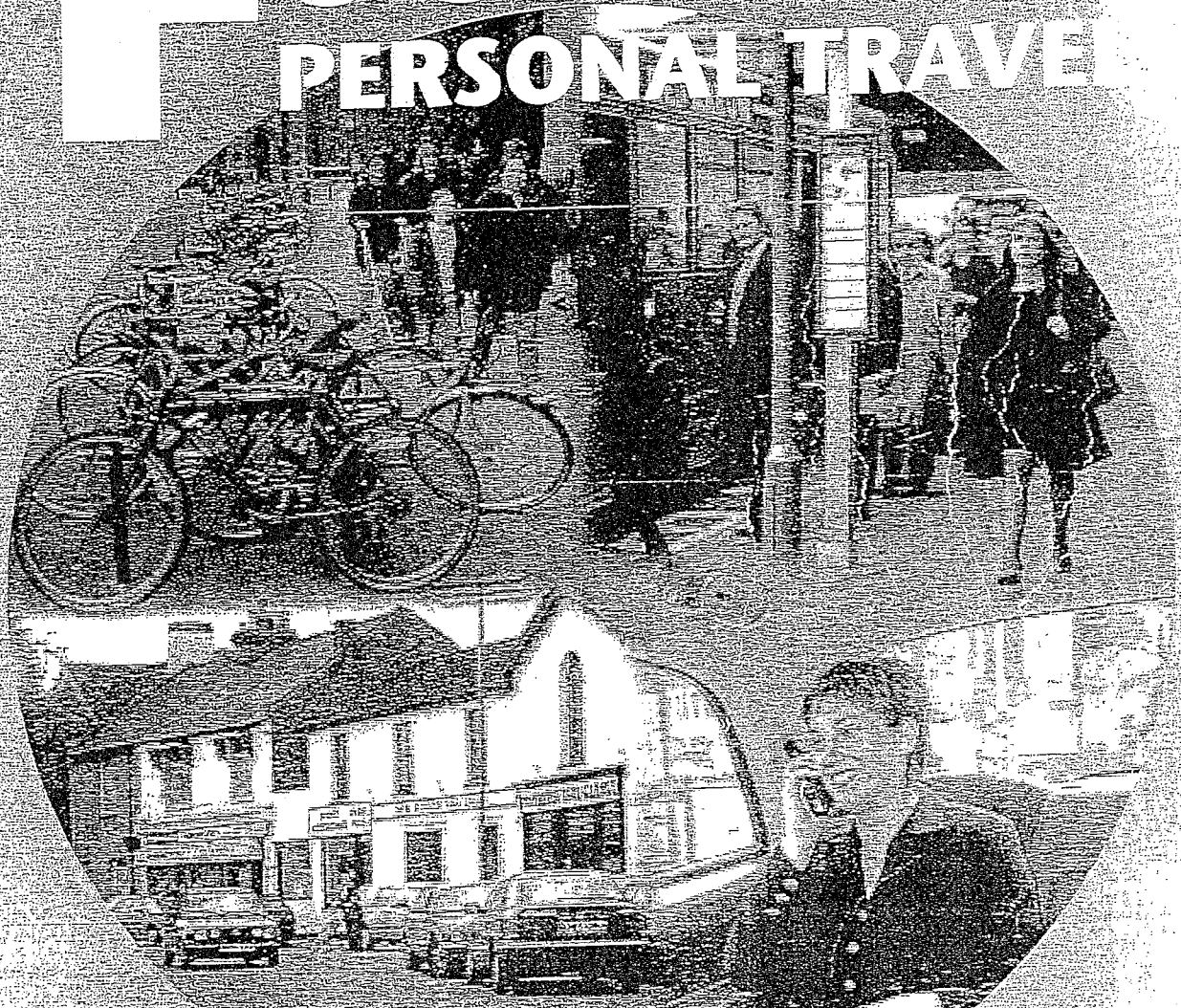
N.B. The overall averages for each hour are slightly lower than that shown on Table 7.11 because the average hour for this table is for weekday journeys only.

Annex C Affordable Housing Trip Patterns

DTLR

TRANSPORT
LOCAL GOVERNMENT
REGIONS

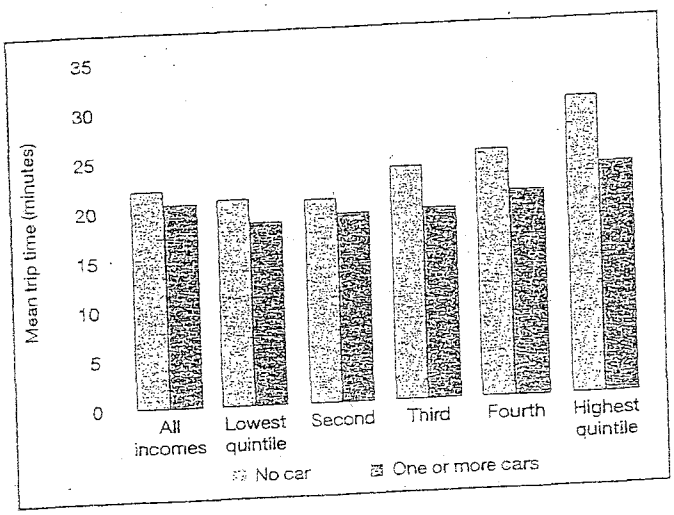
FOCUS ON PERSONAL TRAVEL



2001 EDITION

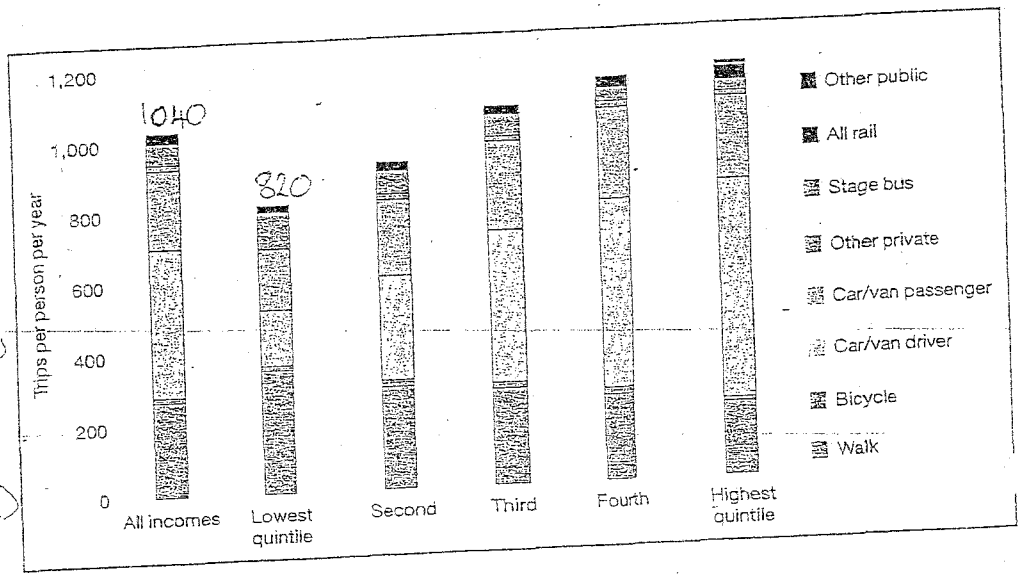
integrated transport

Chart 5.9c Trip time by income quintile and household car ownership: 1998/2000



People living in households in the lowest income quintile, made more of their trips on foot in 1998/2000 (43 per cent) than by car (39 per cent) or bus (12 per cent) (Chart 5.10). With increasing income car use increases, and the number of trips on foot and by bus decline. Rail use (including London Underground) is highest in the highest income quintile.

Chart 5.10 Mode of transport by income quintile: 1998/2000



V INCOME = 1040 TRIPS

LOWEST INCOME = 820 TRIPS

FACTOR = 820/1040 = 80% (APPROX)

Access to bus and rail services

Travel by public transport is also affected by variations in access to these services. Chapter 6 (Tables 6.4 and 6.5) gives details of access by area type, and, not surprisingly, people living in London and the major cities are much more likely to have good access than rural residents. Poor access to public transport is also a factor in high car ownership in rural areas.

Tables 5.5a and 5.5b illustrate how public transport use varies according to access to services. Over the period 1992/2000, the average number of bus trips per person per year was 65. People with access to the best bus services (within a three minute walk of a service running at least every quarter hour) averaged 100 trips a year, ten times as many as those with the lowest levels of service shown (over 13 minutes walk from a service running less than once an hour).

Affordable Housing

Trip Generation Patterns

The TRICS (Trip Rate Information Computer System) database has been used to provide a comparison between mixed private housing and mixed non-private housing sites throughout England (excluding London).

A summary of the vehicular trip rates for mixed private housing and mixed non-private housing for the morning and evening peak hours together with the percentage reduction in the two-way trip rate between market and affordable housing is shown the Table below. The accompanying TRICS output is included within this Appendix.

Table C.1 TRICS Trip Rate Comparison and Percentage Reduction

Time	Mixed Private Housing			Mixed Non- Private Housing			Percentage Reduction in Total
	Arrivals	Departures	Total	Arrivals	Departures	Total	
0800 – 0900	0.10	0.45	0.55	0.13	0.23	0.36	65%
1700 – 1800	0.40	0.18	0.58	0.26	0.17	0.44	76%

Based on the above, it can be demonstrated that the percentage reduction in the two-way peak hour trip rate between market and affordable housing is approximately 70%.

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : K - MIXED PRIVATE HOUSING

Selected Regions and Areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
	HC	HAMPSHIRE	13 days
	HF	HERTFORDSHIRE	1 days
	WS	WEST SUSSEX	5 days
03	SOUTH WEST		
	DC	DORSET	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	1 days
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	NT	NOTTINGHAMSHIRE	4 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	ST	STAFFORDSHIRE	6 days
	WK	WARWICKSHIRE	1 days
	WO	WORCESTERSHIRE	3 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	5 days
	LC	LANCASHIRE	2 days

VEHICULAL TRIP RATES
MIXED PRIVATE HOUSING

Main Parameter Selection:

Parameter: Number of Households
Range: 26 to 1165 (units:)

Date Range: 01/01/95 to 03/06/03

Selected Survey Days:

Monday	3 days
Tuesday	9 days
Wednesday	5 days
Thursday	17 days
Friday	12 days

Selected Survey Types:

Manual Count	23 days
One Way ATC Count	23 days

LIST OF SITES relevant to selection parameters

1 CA-03-K-01 MIXED HOUSING, CAMBRIDGE CAMBRIDGESHIRE
FALLOWFIELD
CHESTERTON
CAMBRIDGE
Total Number of Households: 124 ******
Survey Date: TUESDAY *06/02/01* *Survey Type: MANUAL*

2 DC-03-K-02 WAREHAM HOUSING DORSET
WOODLANDS ESTATE
SANDFORD
WAREHAM
Total Number of Households: 171 ******
Survey Date: THURSDAY *18/04/96* *Survey Type: MANUAL*

3 ES-03-K-01 MIXED HOUSING, LEWES EAST SUSSEX
OLD MALLING WAY
SOUTH MALLING
LEWES
Total Number of Households: 491 ******
Survey Date: THURSDAY *29/03/01* *Survey Type: MANUAL*

4 GM-03-K-02 TAMESIDE HOUSING GREATER MANCHESTER
SPRINGWOOD WAY
LIMEHURST
TAMESIDE
Total Number of Households: 342 ******
Survey Date: FRIDAY *15/05/98* *Survey Type: ONE WAY ATC*
Survey Date: MONDAY *18/05/98* *Survey Type: ONE WAY ATC*
Survey Date: TUESDAY *19/05/98* *Survey Type: ONE WAY ATC*
Survey Date: WEDNESDAY *20/05/98* *Survey Type: ONE WAY ATC*
Survey Date: THURSDAY *21/05/98* *Survey Type: ONE WAY ATC*

5 HC-03-K-04 PORTSMOUTH HOUSING HAMPSHIRE
ST GEORGES ROAD
PORTSMOUTH
Total Number of Households: 150 ******
Survey Date: THURSDAY *11/12/97* *Survey Type: MANUAL*

6 HC-03-K-05 PORTSMOUTH HOUSING HAMPSHIRE
BROAD STREET
PORTSMOUTH
Total Number of Households: 64 ******
Survey Date: THURSDAY *18/12/97* *Survey Type: MANUAL*

7 HC-03-K-08 FLEET HOUSING HAMPSHIRE
ANCELLS ROAD
ANCELLS FARM
FLEET
Total Number of Households: 747 ******
Survey Date: THURSDAY *05/03/98* *Survey Type: MANUAL*

8 HC-03-K-09 WINCHESTER HOUSING HAMPSHIRE
RIDGEWAY/MEADOW W.
BADGER FARM
WINCHESTER
Total Number of Households: 1040 ******
Survey Date: THURSDAY *26/02/98* *Survey Type: MANUAL*

9 HC-03-K-10 EASTLEIGH HOUSING
KNIGHTWOOD ROAD
BADGER'S COPSE
EASTLEIGH
Total Number of Households: 700 ******
Survey Date: WEDNESDAY *18/08/99* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

10 HC-03-K-11 WINCHESTER HOUSING HAMPSHIRE
RIDGEWAY/MEADOW W.
BADGER FARM
WINCHESTER
Total Number of Households: 1040 ******
Survey Date: THURSDAY 09/03/00 Survey Type: ONE WAY ATC
Survey Date: FRIDAY 10/03/00 Survey Type: ONE WAY ATC
Survey Date: THURSDAY 15/06/00 Survey Type: ONE WAY ATC
Survey Date: FRIDAY 16/06/00 Survey Type: ONE WAY ATC
Survey Date: THURSDAY 21/09/00 Survey Type: ONE WAY ATC
Survey Date: FRIDAY 22/09/00 Survey Type: ONE WAY ATC
Survey Date: THURSDAY 07/12/00 Survey Type: ONE WAY ATC
Survey Date: FRIDAY 08/12/00 Survey Type: ONE WAY ATC

11 HF-03-K-01 MIXED PRI. HOUSING,WELWYN GC HERTFORDSHIRE
LONGCROFT GARDENS
WELWYN GARDEN CITY
Total Number of Households: 53 ******
Survey Date: FRIDAY 06/09/02 Survey Type: MANUAL

12 LC-03-K-03 FRECKLETON HOUSING LANCASHIRE
SPRING HILL
FRECKLETON
Total Number of Households: 66 ******
Survey Date: THURSDAY 04/05/95 Survey Type: MANUAL

13 LC-03-K-07 LANCASTER HOUSING LANCASHIRE
HERONSKYE
SKERTON
LANCASTER
Total Number of Households: 135 ******
Survey Date: WEDNESDAY 25/06/97 Survey Type: MANUAL

14 NF-03-K-01 MIXED HOUSING, NORWICH NORFOLK
ROBERT GYBSON WAY
NORWICH
Total Number of Households: 51 ******
Survey Date: FRIDAY 03/11/00 Survey Type: MANUAL

15 NT-03-K-02 NEWARK HOUSING NOTTINGHAMSHIRE
BEACON HILL ROAD
BEACON HILL
NEWARK-ON-TRENT
Total Number of Households: 394 ******
Survey Date: THURSDAY 26/11/98 Survey Type: MANUAL

16 NT-03-K-03 MANSFIELD HOUSING NOTTINGHAMSHIRE
LOXLEY DRIVE
BERRYHILL
MANSFIELD
Total Number of Households: 61 ******
Survey Date: TUESDAY 08/12/98 Survey Type: MANUAL

17 NT-03-K-04 NOTTINGHAM HOUSING
BEAUMARIS DRIVE
GEDLING
NOTTINGHAM
Total Number of Households: 160 ******
Survey Date: TUESDAY 24/11/98 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

18 NT-03-K-05 NOTTINGHAM HOUSING NOTTINGHAMSHIRE
JENNY BURTON WAY
ASHFIELD
NOTTINGHAM
Total Number of Households: 174 ******
Survey Date: TUESDAY *08/12/98* *Survey Type: MANUAL*

19 SF-03-K-01 MIXED HOUSING, IPSWICH SUFFOLK
FINBARS WALK
IPSWICH
Total Number of Households: 99 ******
Survey Date: FRIDAY *29/09/00* *Survey Type: MANUAL*

20 SH-03-K-01 BRIDGNORTH HOUSING SHROPSHIRE
BRAMBLE RIDGE
BRIDGNORTH
Total Number of Households: 52 ******
Survey Date: FRIDAY *08/05/98* *Survey Type: MANUAL*

21 ST-03-K-01 MIXED HOUSING, STAFFORD STAFFORDSHIRE
THE MEADOWS
QUEENSVILLE
STAFFORD
Total Number of Households: 224 ******
Survey Date: TUESDAY *04/07/00* *Survey Type: MANUAL*

22 ST-03-K-02 STAFFORD MIXED HOUSING STAFFORDSHIRE
THE MEADOWS
QUEENSVILLE
STAFFORD
Total Number of Households: 224 ******
Survey Date: MONDAY *10/07/95* *Survey Type: ONE WAY ATC*
Survey Date: TUESDAY *11/07/95* *Survey Type: ONE WAY ATC*
Survey Date: WEDNESDAY *12/07/95* *Survey Type: ONE WAY ATC*
Survey Date: THURSDAY *13/07/95* *Survey Type: ONE WAY ATC*
Survey Date: FRIDAY *14/07/95* *Survey Type: ONE WAY ATC*

23 WK-03-K-01 MIXED HOUSING, STRATFORD WARWICKSHIRE
OLD TOWN MEWS
OLD TOWN
STRATFORD UPON AVON
Total Number of Households: 64 ******
Survey Date: THURSDAY *07/09/00* *Survey Type: MANUAL*

24 WO-03-K-01 MIXED HOUSING, WORCESTER WORCESTERSHIRE
MALVERN ROAD
LOWER WICK
WORCESTER
Total Number of Households: 775 ******
Survey Date: FRIDAY *24/05/02* *Survey Type: MANUAL*

25 WO-03-K-02 MIXED HOUSING, BROMSGROVE WORCESTERSHIRE
ST GODWALDS ROAD
ASTON FIELDS
BROMSGROVE
Total Number of Households: 215 ******
Survey Date: THURSDAY *23/05/02* *Survey Type: MANUAL*