

**Proposed Residential Development
Hill Top Farm
Redbrook Road
Barnsley**

TRANSPORT STATEMENT

Ref: 4811/JGM/001/01

October 2008

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Date 15/10/08

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Redbrook Road
Barnsley

TRANSPORT STATEMENT

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Architects Design Layout – Chris Carr Associates Ref 20.62/RevB

1. INTRODUCTION

- 1.1 Sanderson Associates (Consulting Engineers) Ltd. have been appointed by the Trustees of the Estate of Malcolm Edmund Birkinshaw Deceased (c/o Newman & Bond Solicitors) as Highways Consultants in connection with the redevelopment of Hill Top Farm, situated on Redbrook Road, Barnsley.
- 1.2 A site visit has been undertaken in which various highway measurements and observations were undertaken and a speed survey carried out.
- 1.3 This Transport Statement assesses the highways implications of the scheme and is submitted in support of a planning application for the development.

2. EXISTING SITUATION

- 2.1 The site is situated on Redbrook Road approximately 2km north-west of Barnsley town centre. The area surrounding the site is predominantly residential and the location of the site is shown in **Figure 1**.
- 2.2 The site is a redundant farm and consists of former farm buildings and tenanted cottages as well as surrounding vacant land. There are currently three access points to the site from Redbrook Road, the most western of which is Hill Top Lane which provides access to the formerly tenanted cottages and is located at the western boundary of the site. There is also a small gated access at the approximate centre of the site frontage and a third access along the eastern boundary.
- 2.3 Hill Top Lane is an unmade private drive and has a carriageway width varying between 3.95 and 6.7m, with a hard margin running along the east which varies in width between 0.6m and 1.15m. The access to the east of the site is also an unmade track which varies in width between 3.6m and 4.1m. The gated central access to the site is 3.1m in width at its entrance and was closed during our site visit.
- 2.4 Redbrook Road is street lit and subject to a speed limit of 30mph in the vicinity of the site. In this area, it has a carriageway width varying between 8.1m and 10.5m with footways along either side, varying between 1.4m and 1.8m along the north side and between 1.7m and 4.0m on the south side. On street parking occurs along both sides of the carriageway.
- 2.5 There is a row of shops along the south of Redbrook Road, approximately 150m to the east of the site which include a post office, florists and two hot food takeaways.

- 2.6 Redbrook Road is a bus route and there are stops 60m to the west of the site as well as 150m to the east of the site near to the row of shops, where a bus shelter is provided for eastbound services. Services from here run to places including Barnsley, Gawber, Higham and Cawthorne.
- 2.7 A speed survey was undertaken on Redbrook Road in the vicinity of the site on Thursday 15 November 2007. The speed survey was undertaken in dry conditions and 85th percentile wet weather speeds of 25mph for eastbound traffic and 28mph for westbound traffic were recorded. A copy of the speed survey results obtained is included at **Appendix A**.
- 2.8 Redbrook Road is bounded by houses along both sides with some shops and it is considered that its primary purpose is as a place rather than for movement. The visibility requirements set out in Manual for Streets are therefore applicable and in line with this guidance visibility splays of 39m to the east and 33m to the west are required, both at an 'x' distance of 2.4m.
- 2.9 Visibility from the existing access points is attainable at an 'x' distance of 2.4m as follows:

Table 2.9 (a) Summary of Existing Access Visibility

Visibility splay at 2.4m	To West	To East
Hill Top Lane (western access)	10m	30m
Central Gated Access	5.5m	6m
Eastern Access	7.7m	21.4m

- 2.10 Therefore the required junction visibility splays for the site are not attainable from any of the existing access points.

3. ACCIDENT DATA

3.1 Personal injury accident records for a five year period have been obtained from Barnsley Metropolitan Borough Council for the highway network surrounding the site. A copy of the data received is included at **Appendix B.**

3.2 Within the request area a total of 5 accidents have been recorded over the 5 year period, all of which were slight in severity. A summary of the accidents causality is shown in the table below:

Table 3.2 (a) Accident Data Summary Table

	2003	2004	2005	2006	2007	Total
Pulling out of a Junction	D-00222-03					1
Pedestrian Collision			B-00709-05			1
Crossing a Vehicles Path			B-01720-05			1
Overtake Collision					B-00732-07	1
Rear Collision			B-01805-05			1
Total	1	0	3	0	1	5

3.3 As can be seen from the table above, the frequency of accidents recorded has been low and with varying characteristics. There are no distinct patterns within the data and the contributory factors linked with each incident indicate that all of the above were caused as a result of human error and are in no way related to any deficiencies with the local highway network.

3.4 It should also be noted that there have been no accidents in the direct vicinity of the site.

4. PROPOSED DEVELOPMENT

- 4.1 The proposal seeks to redevelop an existing site at Hill Top Farm, Redbrook Road, Barnsley. The development proposes 6 residential units which will be a mix of newly built, refurbishment and conversions with associated parking.
- 4.2 Existing dwellings, No. 32 & 34 Hilltop Lane are to remain. Land adjacent to No. 30 is the subject of an earlier planning consent and will be accessed separately.
- 4.3 Access to the site will be via the easterly of the three existing access points, as described in section 2 of this report. The access will be improved as part of the development to a width of 4.8m, with a 1.8m wide footway to the eastern flank. The footway will adjoin with the existing footway on Redbrook Road. The access will also be relocated slightly to the west to enhance visibility. The other two access points will be closed as part of the development.
- 4.4 The required visibility at the proposed access is 2.4m x 39m to the east and 2.4m x 33m to the west in accordance with Manual for Streets and in relation to the speed survey undertaken on Redbrook Road, as detailed in paragraphs 2.7 and 2.8.
- 4.5 In order to provide the required visibility, alterations to the design and position of the access have been made. It is proposed that the front boundary walls and shrubbery to units 5 and 6 will not exceed 900mm; this will ensure that a sight line of 2.4 X 49m to the west is available, exceeding the required standard. The improved access will also provide an easterly visibility of 2.4 x 29m.
- 4.6 Although it is recognised that the latter is slightly below standard the existing unmade access points each have restricted sub-standard

visibility. Therefore the proposed access would increase the level of visibility and as such is considered to be a significant improvement on the previous situation. It should be noted that a sight line of 2.4 X 73m can be achieved if the centre line of Redbrook Road is utilised. This would then exceed the required specification.

- 4.7 Furthermore, the proposal will not significantly increase the number of existing dwellings and will also ensure that no farm traffic be generated as the site will revert to residential only.
- 4.8 Barnsley Metropolitan Borough Council states that for a residential development, a maximum of 1.5 car parking spaces per dwelling should be provided. The proposal will provide 13 parking spaces in total. Although this is slightly above the maximum standard indicated, the extra space will prove useful in providing for guests visiting the development; this will subsequently reduce the developments impact to on-street parking.
- 4.9 The TRICS database has been interrogated to calculate the peak hour traffic generations for the proposed development using sites in England only (excluding London). The TRICS output is included at Appendix C and is summarised as follows:

Table 4.7 (a) Trip Rates/ Traffic Generation

Trip Rate/100sqm	In	Out	2-way
AM 0800-0900	0.137	0.384	0.521
PM 1700-1800	0.373	0.234	0.607
8 No. Houses (1 D.P.)	In	Out	2-way
AM 0800-0900	1	3	4
PM 1700-1800	3	2	5

- 4.10 It should be noted that not all of this traffic would represent an increase as the farm and cottages would have generated some peak hour traffic whilst operational and would continue to do so if the site were to be re-used for this purpose. Furthermore the level of generation is relatively

low and will not be discernable against the normal daily traffic fluctuations.

5. ALTERNATIVE MODES OF TRANSPORT

Walking

5.1 Walking is an important mode of transport in the urban area; it can replace a large number of short car journeys which contribute to congestion, pollution and the need for car parking, as stated in PPG13. Walking is the most sustainable form of transport and provides one way of reducing pressure on the environment. People walking are also travelling at a pace that gives a greater engagement with their surroundings and can have positive benefits in relation to a community's security through increased surveillance.

5.2 The site is situated on Redbrook Road approximately 2km from Barnsley town centre. There is a post office and other shops approximately 150m to the east of the site.

5.3 Redbrook Road is street lit and there is footway along both sides of the carriageway in the area of the site, providing a pedestrian link between the site and local facilities.

Cycling

5.4 Like walking cycling has an important part to play in reducing congestion improving accessibility and reducing pollution, PPG13, appendix 58. A further benefit of cycling is linked with increased general health and fitness which has personal benefits as well as economic benefits for the nation in terms of health service costs. The bicycle is generally more affordable than the car and hence there are social equity benefits to the promotion of cycling. Cycling may also allow people without cars to reach destinations that they may otherwise be unable to reach.

- 5.5 There are no dedicated cycle lanes on the local highway network in close proximity to the site; however cyclists have been observed utilising the surrounding highway network.

Bus Services

- 5.6 Redbrook Road is a bus route and there are stops 60m to the west of the site as well as 150m to the east of the site where a shelter is provided for eastbound services. Services from here run as follows:

Table 5.2 (a) Bus Service Summary

	Operator	Service	Route	Frequency
Mon- Sat	Stagecoach	92/92A/93	Barnsley - Gawber-Higham - Cawthorne	60
Evenings	Stagecoach	92/92A/93	Barnsley - Gawber-Higham - Cawthorne	60
Sundays	Stagecoach	92/92A/93	Barnsley - Gawber-Higham - Cawthorne	120

Train Services

- 5.7 The nearest railway station to the site is Barnsley Interchange, which is approximately 2.5km away. Bus services from the stops near to the site run to the station giving residents of the proposed development the opportunity to access the local and national rail network.

Summary

- 5.8 The site is ideally placed to access a numerous modes of transport. Local services are within walking distance and access to the local train station could easily be achieved by bicycle. It is therefore considered that the site conforms to the guidance set down in PPG 13: Transport.

6. CONCLUSIONS

- 6.1 A residential development consisting of 6 residential units is proposed at Hill Top Farm, situated on Redbrook Road, Barnsley
- 6.2 An improved access is proposed to serve the site which will enhance visibility and conform to modern geometric standards. The remaining two sub-standard access points will be closed and the proposed site access will therefore represent a significant improvement to the existing situation.
- 6.3 The site is accessible by a range of transport modes and is in line with guidance set out in PPG 13: Transport.
- 6.4 During the last five years, there have been no accidents in the direct vicinity of the site and there have been no fatal accidents on the highway network surrounding the site.
- 6.5 Therefore, from the studies set out in this Transport Statement it is considered that there are no highway or transportation reasons why the development should not proceed.

APPENDIX A

Speed Survey Results



SANDERSON ASSOCIATES (CONSULTING ENGINEERS) LTD
24 Wakefield Road, Waterloo, Huddersfield, HD5 0HA

Tel: 01484 519333
Fax: 01484 519444

SPEED SURVEY

Location Redbrook Road, Barnsley
Direction of Travel Eastbound

Job Number 4811
Date of Survey 15/11/07
Start Time 14:15
Finish Time 15:00

Speed	No. of Readings	Speed	No. of Readings	Speed	No. of Readings	Speed	No. of Readings
1		26	11	51		76	
2		27	6	52		77	
3		28	5	53		78	
4		29	2	54		79	
5		30	3	55		80	
6		31	2	56		81	
7		32	1	57		82	
8		33	1	58		83	
9		34	1	59		84	
10		35		60		85	
11		36		61		86	
12	1	37		62		87	
13		38		63		88	
14		39		64		89	
15		40		65		90	
16	1	41		66		91	
17	2	42		67		92	
18	5	43		68		93	
19	6	44		69		94	
20	8	45		70		95	
21	12	46		71		96	
22	7	47		72		97	
23	11	48		73		98	
24	11	49		74		99	
25	4	50		75		100	

Number of Readings = 100

Dual C'way Y/N? n

Mean Speed = 23.46

Single C'way Y/N? y

Standard Deviation = 3.9757345

Wet Road Surface Y/N? n

85 Percentile Speed = 27.435734

85 Percentile Wet Weather Speed = 24.950734 <<<<

Note: Insert Y or N in boxes against carriageway type and road surface condition and then use 85 percentile speed as marked with <<<<.



SANDERSON ASSOCIATES (CONSULTING ENGINEERS) LTD
24 Wakefield Road, Waterloo, Huddersfield, HD5 0HA

Tel: 01484 519333
Fax: 01484 519444

SPEED SURVEY

Location Readbrook Road, Barnsley
Direction of Travel Westbound

Job Number 4811
Date of Survey 15/11/07
Start Time 14:15
Finish Time 15:15

Speed	No. of Readings	Speed	No. of Readings	Speed	No. of Readings	Speed	No. of Readings
1		26	8	51		76	
2		27	10	52		77	
3		28	8	53		78	
4		29	4	54		79	
5		30	7	55		80	
6		31	5	56		81	
7		32	3	57		82	
8		33	1	58		83	
9		34		59		84	
10		35	2	60		85	
11		36		61		86	
12		37	2	62		87	
13		38	1	63		88	
14		39		64		89	
15		40		65		90	
16	1	41		66		91	
17	1	42		67		92	
18	2	43		68		93	
19	6	44		69		94	
20	6	45		70		95	
21	7	46		71		96	
22	5	47		72		97	
23	7	48		73		98	
24	6	49		74		99	
25	8	50		75		100	

Number of Readings = 100

Dual C'way Y/N? n

Mean Speed = 25.59

Single C'way Y/N? y

Standard Deviation = 4.6841555

Wet Road Surface Y/N? n

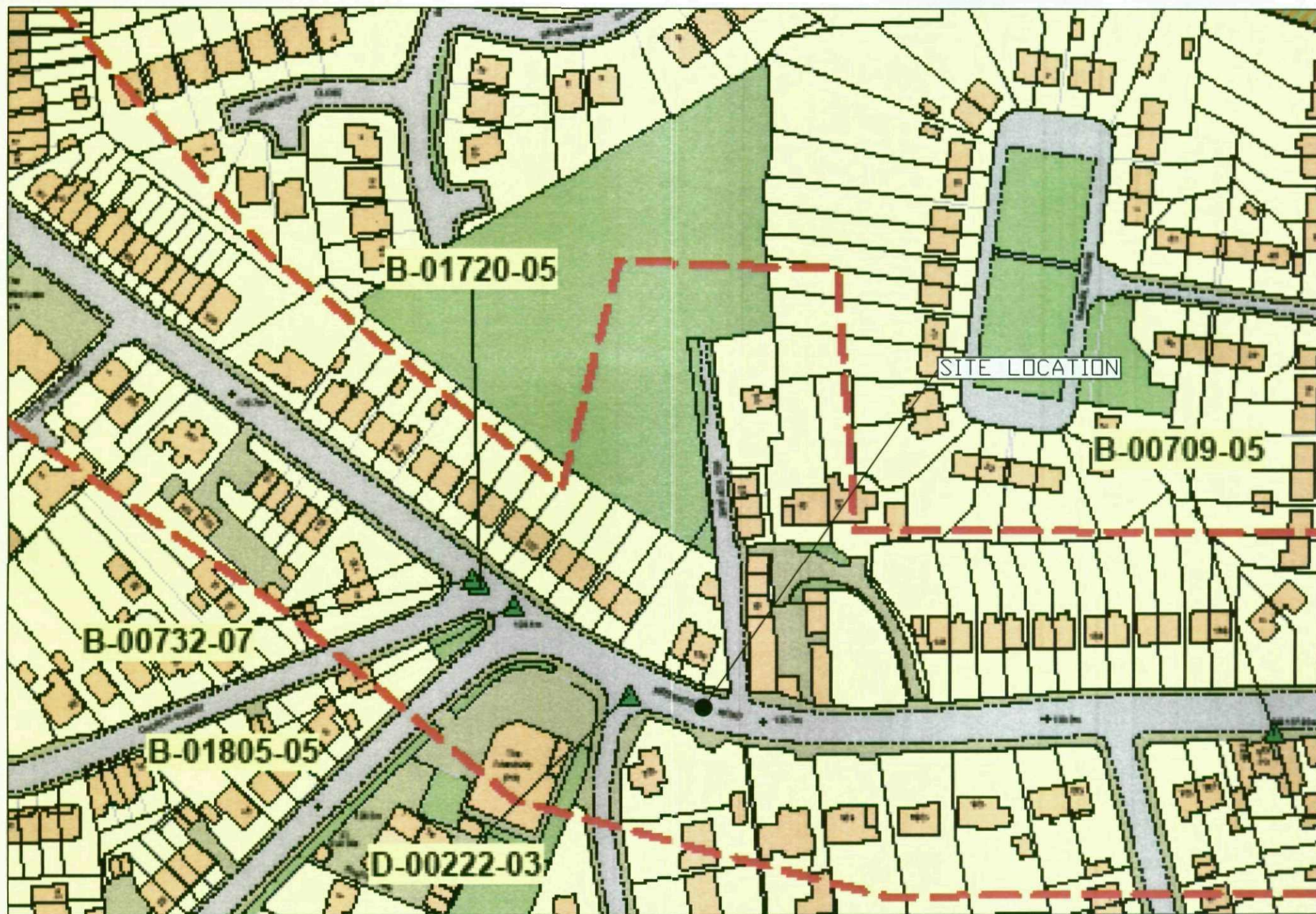
85 Percentile Speed = 30.274156

85 Percentile Wet Weather Speed = 27.789156 <<<<

Note: Insert Y or N in boxes against carriageway type and road surface condition and then use 85 percentile speed as marked with <<<<.

APPENDIX B

Personal Injury Accident
Data



AccsMap - Accident Analysis System

Accidents between dates 01/11/2002 and 31/10/2007 (60) months

Selection:

Notes:

Selected using Build Query :

Accidents selected to criteria as requested by Adam Joi

D-00222-03 16/03/2003 Sunday Time:0735 Vehicles 2 Casualties 1 Slight
Easting: 432,705 Northing: 407,245
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed 30

Location: GAWBER RD BARNSELY AT J/W LINES AVE

Description: V1 TRAV ALONG GAWBER RD TWRDS BARAUGH GREEN V2 ON LINES AVE AT
J/W BAWBER RD, V2 THEN PULLS OUT OF JUNCT FAILS TO SEE V1 WHERE
COLLS OCCURS.

Vehicle Reference:1 Car

Going ahead

First point of impact:Front

Vehicle direction: Parked to Parked

Journey: 0

Age of Driver : 23

Breath test: Not requested

Contributory Factors : 26 52 63

Casualty Reference 1 Age:23 Female Driver/rider Severity:Slight

Ped Dir:

Ped Movement : Not pedestrian

Ped Location:

Vehicle Reference2 Car

Turning right

First point of impact:Front

Vehicle direction: Parked to Parked

Journey: 0

Age of Driver : 93

Breath test: Not requested

Contributory Factors : 26 52 63

TRAFFMAP

INTERPRETED LISTING

Run on: 07/12/2007

AccsMap - Accident Analysis System

Accidents between dates 01/11/2002 and 31/10/2007 (60) months

Selection:

Notes:

Selected using Build Query :

Accidents selected to criteria as requested by Adam Joi

B-00709-05 26/05/2005 Thursday Time:1720 Vehicles 1 Casualties 1 Slight
Easting: 432,873 Northing: 407,235
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed 30

Location: GAWBER RD BARNSLEY LIMESWAY

Description:V1 TV GAWBER RD TW REDBROOK AS V1 APP J/Y LIMESWAY & CHILD RAN
FROM BETWEEN PARKED VEHS INTO PATH OF V1

Vehicle Reference:1 Car

Going ahead

First point of impact:Front

Vehicle direction: S to N

Journey: Commuting to/from work

Age of Driver : 56

Breath test:Not requested

Contributory Factors : 801 802

Casualty Reference 1 Age:9 Male Pedestrian Severity:Slight

Ped Dir:Pedestrian Dir Ped Movement : Driver's nearside masked

Ped Location:In carr elsewhere

TRAFFMAP

INTERPRETED LISTING

Run on: 07/12/2007

AccsMap - Accident Analysis System

Accidents between dates 01/11/2002 and 31/10/2007 (60) months

Selection:

Notes:

Selected using Build Query :

Accidents selected to criteria as requested by Adam Joi

B-01720-05 08/12/2005 Thursday Time:1910 Vehicles 2 Casualties 1 Slight

Easting: 432,666 Northing: 407,274

Fine without high winds Road Surface:Wet/Damp Darkness: street lights present and lit

Road Type: Single carriageway Speed 30

Location: REDBROOK RD BARNSELEY AT J/W CHURCH ST

Description: V1 & V2 TR IN OPPOSITE DIRECTIONS, V1 TURNED RGT ACC PATH OF V2 AND COLL OCC.

Vehicle Reference1 Minibus

Turning right

First point of impact:Front

Vehicle direction: S to E

Journey: Other/Not known

Age of Driver : 22

Breath test:Negative

Contributory Factors : 203 405 406

Vehicle Reference2 Goods <= 3.5 tonnes mgw

Going ahead

First point of impact:Front

Vehicle direction: N to S

Journey: Other/Not known

Age of Driver : 33

Breath test:Negative

Contributory Factors : 203 405 406

Casualty Reference 1 Age:33 Male Driver/rider Severity:Slight

Ped Dir: Ped Movement : Not pedestrian

Ped Location:

AccsMap - Accident Analysis System

Accidents between dates 01/11/2002 and 31/10/2007 (60) months

Selection:

Notes:

Selected using Build Query :

Accidents selected to criteria as requested by Adam Joi

B-01805-05 20/12/2005 Tuesday Time:1530 Vehicles 2 Casualties 1 Slight

Easting: 432,675 Northing: 407,268

Fine without high winds Road Surface:Wet/Damp Daylight:street lights present

Road Type: Single carriageway Speed 30

Location: REDBROOK RD BARNSELY AT J/W INTAKE LN

Description:V1 SLOWED DOWN FOR CAR IN FRONT BUT V2 FOLLOWING FAILED TO REACT
IN TIME AND COLL WITH REAR OF V1.

Vehicle Reference1 Car

Going ahead

First point of impact:Back

Vehicle direction: NW to SE

Journey: Other/Not known

Age of Driver : 25

Breath test:Driver not contacted

Contributory Factors : 406 307 308

Vehicle Reference2 Car

Going ahead

First point of impact:Front

Vehicle direction: NW to SE

Journey: Other/Not known

Age of Driver : 38

Breath test:Driver not contacted

Contributory Factors : 406 307 308

Casualty Reference 1 Age:38 Male Driver/rider Severity:Slight

Ped Dir: Ped Movement : Not pedestrian

Ped Location:

AccsMap - Accident Analysis System

Accidents between dates 01/11/2002 and 31/10/2007 (60) months

Selection:

Notes:

Selected using Build Query :

Accidents selected to criteria as requested by Adam Joi

B-00732-07 02/06/2007 Saturday Time:1917 Vehicles 2 Casualties 1 Slight
Easting: 432,664 Northing: 407,275
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed 30

Location: REDBROOK RD GAWBER AT J/W CHURCH ST

Description:V1 TV DOWN REDBROOK RD TW HUDDERSFIELD RD. V2 TV OPP DIRC. V2 O/T A
VEH & COLL WITH V1.

Vehicle Reference1 Car

Going ahead

First point of impact:Offside

Vehicle direction: SW to NE

Journey: Other/Not known

Age of Driver : 39

Breath test:Driver not contacted

Contributory Factors : 307 406

Casualty Reference 1 Age:39 Male

Driver/rider

Severity:Slight

Ped Dir:

Ped Movement :

Ped Location:

Vehicle Reference2 Minibus

Going ahead

First point of impact:Nearside

Vehicle direction: NE to SW

Journey: Other/Not known

Age of Driver :

Breath test:Driver not contacted

Contributory Factors : 307 406

INJURY ROAD ACCIDENT

CAUSATION CODES 1/1/1996 to 31/12/2004

ROAD ENVIRONMENT				DRIVER/RIDER				
Physical Contributory		Vision Obscured		Judgement Error		Negligence		Negligence
1	Slippery road not weather	11	Parked vehicle	21	Failure to anticipate junction	31	Turning right/left into junction	41 Dangerous driving
2	Slippery road wet/ice/snow	12	Stationary vehicle	22	Wrong course/positioning	32	Turning right/left out of junction	42 Following too close
3	Bend	13	Vegetation	23	Misjudged speed/distance	33	Disobeyed sign/signal	43 Losing control
4	Temporary traffic signals	14	Pedestrian	24	Going too fast	34	Driver disobeyed pedestrian crossing	44 Inappropriate overtaking
5	Road hump	15	Road signs/road furniture/road works	25	Failed to look	35	Disobeyed double white line	45 Inappropriate U turn
6	Hump back bridge	16	Buildings/fences/walls	26	Looked but failed to see	36	Emerging from minor road/private entrance	46 Inappropriate reversing
7	Defective signing/Markings	17	Brow of hill	27	Misinterpreted road layout	37	Failure to give way at junction	47 Changing lane negligently
8	Defective street lighting	18	Bend in road	28	Did not anticipate action of other Driver/rider	38	Failure to give way at roundabout	48 Open door negligently
9	Defective road surface	19		29	Unfamiliar with location	39	Starting suddenly	49 Negligently parked vehicle
10	Level crossing /Supertram tracks	20		30	Learner/Inexperienced driver/rider	40	Misleading signalling	50 Cyclist riding onto/off footway

INJURY ROAD ACCIDENT CAUSATION CODES

DRIVER/RIDER (CONT/D)				PASSENGER		PEDESTRIAN		VEHICLE DEFECT	
Other Factors		Vision Affected							
51	Impaired - fatigue	61	Weather conditions	71	Boarding/ alighting PSV	81	Moves into road suddenly	91	Incorrectly loaded vehicle
52	Impaired - physical/ mental	62	Spray	72	Falling inside PSV	82	Impaired - Physical mental	92	Defective brakes or suspected
53	Impaired - sight hearing	63	Dazzled	73	Opening door	83	Impaired - Sight/hearing/ other	93	Defective steering/ suspension or suspected
54	Impaired - alcohol	64	Rider in dark clothing	74	Inappropriate behaviour	84	Impaired - alcohol/drugs/ other	94	Inadequate/ defective lights or suspected
55	Impaired - Drugs	65	Motor cycle helmet visor	75		85	Insufficient supervision	95	Tyre blow out before impact
56	Illness	66	Windscreen	76		86	Disobeyed pedestrian crossing	96	Defective/ Illegal tyres
57	Attention distracted	67		77		87	Playing chicken	97	Defective wipers/ washers
58	Failed to see pedestrian	68		78		88	Playing in the road	98	Defective Indicators
59	Stopping Suddenly	69		79		89	Vision obscured by clothing/ equipment	99	Other vehicle defect
60	High winds	70		80		90	Wearing dark clothing	0	Unknown

CONTRIBUTORY FACTORS FROM 01/01/2005

MG NSRF/D

CONTRIBUTORY FACTORS

Sept. 2004

1. Select up to six factors from the grid, relevant to the accident.
2. Factors may be shown in any order, but an indication must be given of whether each factor is **very likely (A)** or **possible (B)**.
3. Only include factors that you consider contributed **to the accident**. (i.e. do NOT include "Poor road surface" unless relevant).
4. More than one factor may, if appropriate, be related to the same road user.
5. The same factor may be related to more than one road user.
6. The participant should be identified by the relevant vehicle or casualty ref no. (e.g. 001, 002 etc.), preceded by "V" if the factor applies to a vehicle, driver/rider or the road environment (e.g. V002), or "C" if the factor relates to a pedestrian or passenger casualty (e.g. C001).
7. Enter U000 if the factor relates to an uninjured pedestrian.

Driver/Rider Only (Includes Pedal Cycles and Horse Riders)	Road Environment Contributed	101	102	103	104	105	106	107	108	109	
		Poor or defective road surface	Deposit on road (e.g. oil, mud, chippings)	Slippery road (due to weather)	Inadequate or masked signs or road markings	Defective traffic signals	Traffic calming (e.g. speed cushions, road humps, chicanes)	Temporary road layout (e.g. contraflow)	Road layout (e.g. bend, hill, narrow carriageway)	Animal or object in carriageway	
	Vehicle Defects	201	202	203	204	205	206				
		Tyres illegal, defective or under-inflated	Defective lights or indicators	Defective brakes	Defective steering or suspension	Defective or missing mirrors	Overloaded or poorly loaded vehicle or trailer				
	Injudicious Action	301	302	303	304	305	306	307	308	309	310
		Disobeyed automatic traffic signal	Disobeyed 'Give Way' or 'Stop' sign or markings	Disobeyed double white lines	Disobeyed pedestrian crossing facility	Illegal turn or direction of travel	Exceeding speed limit	Travelling too fast for conditions	Following too close	Vehicle travelling along pavement	Cyclist entering road from pavement
	Driver/ Rider Error or Reaction	401	402	403	404	405	406	407	408	409	410
		Junction overshoot	Junction restart (moving off at junction)	Poor turn or manoeuvre	Failed to signal or misleading signal	Failed to look properly	Failed to judge other person's path or speed	Passing too close to cyclist, horse rider or pedestrian	Sudden braking	Swerved	Loss of control
	Impairment or Distraction	501	502	503	504	505	506	507	508	509	510
		Impaired by alcohol	Impaired by drugs (illicit or medicinal)	Fatigue	Uncorrected, defective eyesight	Illness or disability, mental or physical	Not displaying lights at night or in poor visibility	Cyclist wearing dark clothing at night	Driver using mobile phone	Distraction in vehicle	Distraction outside vehicle
	Behaviour or Inexperience	601	602	603	604	605	606	607			
	Aggressive driving	Careless, reckless or in a hurry	Nervous, uncertain or panic	Driving too slow for conditions or slow vehicle (e.g. tractor)	Learner or inexperienced driver/rider	Inexperience of driving on the left	Unfamiliar with model of vehicle				
Vision Affected by	701	702	703	704	705	706	707	708	709	710	
	Stationary or parked vehicle(s)	Vegetation	Road layout (e.g. bend, winding road, hill crest)	Buildings, road signs, street furniture	Dazzling headlights	Dazzling sun	Rain, sleet, snow or fog	Spray from other vehicles	Visor or windscreen dirty or scratched	Vehicle blind spot	
Pedestrian Only (Casualty or Uninjured)	801	802	803	804	805	806	807	808	809	810	
	Crossing road masked by stationary or parked vehicle	Failed to look properly	Failed to judge vehicle's path or speed	Wrong use of pedestrian crossing facility	Dangerous action in carriageway (e.g. playing)	Impaired by alcohol	Impaired by drugs (illicit or medicinal)	Careless, reckless or in a hurry	Pedestrian wearing dark clothing at night	Disability or illness, mental or physical	
Special Codes	901	902	903	904						#999	
	Stolen vehicle	Vehicle in course of crime	Emergency vehicle on a call	Vehicle door opened or closed negligently						Other - Please specify below	

	1st	2nd	3rd	4th	5th	6th
Factor in the accident						
Which participant? (e.g. V001, C001, U000)						
Very likely (A) or Possible (B)						

* If 999 Other, give brief details
(Note: Only use if another factor contributed to the accident and include it in the text description of how the accident occurred)

These factors reflect the reporting officer's opinion at the time of reporting and may not be the result of extensive investigation

UNCLASSIFIED

APPENDIX C

TRICS Data

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL

Category : A - HOUSES PRIVATELY OWNED

VEHICLESSelected regions and areas:

02 SOUTH EAST	
BD BEDFORDSHIRE	2 days
HC HAMPSHIRE	1 days
SC SURREY	2 days
03 SOUTH WEST	
CW CORNWALL	1 days
WL WILTSHIRE	1 days
05 EAST MIDLANDS	
DS DERBYSHIRE	1 days
LE LEICESTERSHIRE	1 days
NT NOTTINGHAMSHIRE	1 days
06 WEST MIDLANDS	
WM WEST MIDLANDS	1 days
WO WORCESTERSHIRE	3 days
08 NORTH WEST	
GM GREATER MANCHESTER	2 days
LC LANCASHIRE	1 days
MS MERSEYSIDE	1 days
09 NORTH	
CB CUMBRIA	1 days
TW TYNE & WEAR	1 days

Main parameter selection:

Parameter: Number of households

Range: 10 to 4334 (units:)

Date Range: 01/01/99 to 02/10/06

Selected survey days:

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

Selected survey types:

Manual count	20 days
Directional ATC Count	0 days

Optional parameter selection:Use Class:

C3	20 days
----	---------

Optional parameter selection (Cont.):Location:

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

Location Sub Category:

1 days
 12 days
 7 days

Population within 1 mile:

5,001 to 10,000	2 days
10,001 to 15,000	9 days
15,001 to 20,000	2 days
20,001 to 25,000	2 days
25,001 to 50,000	5 days

Population within 5 miles:

25,001 to 50,000	2 days
50,001 to 75,000	1 days
75,001 to 100,000	2 days
100,001 to 125,000	2 days
125,001 to 250,000	9 days
250,001 to 500,000	2 days
500,001 or More	2 days

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	8 days
1.1 to 1.5	10 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	0 days
<20 per day	1	20	0 days
20-39 per day	2	40	0 days
40-59 per day	3	60	2 days
60-79 per day	4	80	0 days
80+ per day	> 4	> 80	6 days

Travel Plan:

Not Known	5 days
No	15 days

LIST OF SITES relevant to selection parameters

- | | | | |
|---|-----------------------------|-----------------------------------|---------------------------|
| 1 | BD-03-A-01 | SEMI-DETACHED, LUTON | BEDFORDSHIRE |
| | NEW BEDFORD ROAD | | |
| | LUTON | | |
| | Total Number of households: | 131 ***** | |
| | Survey date: THURSDAY | 08/07/04 | Survey Type: MANUAL |
| 2 | BD-03-A-02 | SEMI DETACHED, LUTON | BEDFORDSHIRE |
| | RIDDY LANE | | |
| | LUTON | | |
| | Total Number of households: | 82 ***** | |
| | Survey date: TUESDAY | 06/07/04 | Survey Type: MANUAL |
| 3 | CB-03-A-02 | SEMI-DETACHED, WORKINGTON | CUMBRIA |
| | HAWKSHEAD AVENUE | | |
| | WORKINGTON | | |
| | Total Number of households: | 40 ***** | |
| | Survey date: MONDAY | 20/06/05 | Survey Type: MANUAL |
| 4 | CW-03-A-01 | TERRACED HOUSES, PENZANCE | CORNWALL |
| | ALVERTON ROAD | | |
| | PENZANCE | | |
| | Total Number of households: | 13 ***** | |
| | Survey date: THURSDAY | 30/06/05 | Survey Type: MANUAL |
| 5 | DS-03-A-01 | TERRACED HOUSES, DRONFIELD | DERBYSHIRE |
| | THE AVENUE | | |
| | HOLMESDALE | | |
| | DRONFIELD | | |
| | Total Number of households: | 20 ***** | |
| | Survey date: THURSDAY | 22/06/06 | Survey Type: MANUAL |
| 6 | GM-03-A-07 | MANCHESTER HOUSING | GREATER MANCHESTER |
| | MILFORD DRIVE | | |
| | LEVENSHULME | | |
| | MANCHESTER | | |
| | Total Number of households: | 138 ***** | |
| | Survey date: FRIDAY | 09/11/01 | Survey Type: MANUAL |
| 7 | GM-03-A-08 | STOCKPORT HOUSING | GREATER MANCHESTER |
| | ELM TREE ROAD | | |
| | LOWER BREDBURY | | |
| | STOCKPORT | | |
| | Total Number of households: | 247 ***** | |
| | Survey date: FRIDAY | 12/10/01 | Survey Type: MANUAL |
| 8 | HC-03-A-01 | EASTLEIGH HOUSING | HAMPSHIRE |
| | KNIGHTWOOD ROAD | | |
| | KNIGHT WOOD | | |
| | EASTLEIGH | | |
| | Total Number of households: | 300 ***** | |
| | Survey date: THURSDAY | 19/08/99 | Survey Type: MANUAL |

LIST OF SITES relevant to selection parameters (Cont.)

- | | | | |
|----|-----------------------------|---------------------------------------|------------------------|
| 9 | LC-03-A-22 | BUNGALOWS, BLACKPOOL | LANCASHIRE |
| | CLIFTON DRIVE NORTH | | |
| | BLACKPOOL | | |
| | Total Number of households: | 98 ***** | |
| | Survey date: TUESDAY | 18/10/05 | Survey Type: MANUAL |
| 10 | LE-03-A-01 | PRIVATE HOU, MELTON MOWBRAY | LEICESTERSHIRE |
| | REDWOOD AVENUE | | |
| | MELTON MOWBRAY | | |
| | Total Number of households: | 11 ***** | |
| | Survey date: TUESDAY | 03/05/05 | Survey Type: MANUAL |
| 11 | MS-03-A-01 | HOUSING, RUNCORN | MERSEYSIDE |
| | PALACE FIELDS AVENUE | | |
| | RUNCORN | | |
| | Total Number of households: | 372 ***** | |
| | Survey date: THURSDAY | 06/10/05 | Survey Type: MANUAL |
| 12 | NT-03-A-03 | SEMI-DETACHED, KIRKBY-IN-ASHFD | NOTTINGHAMSHIRE |
| | B6018 SUTTON ROAD | | |
| | KIRKBY-IN-ASHFIELD | | |
| | Total Number of households: | 166 ***** | |
| | Survey date: WEDNESDAY | 28/06/06 | Survey Type: MANUAL |
| 13 | SC-03-A-02 | EPSOM HOUSING | SURREY |
| | WELLS ROAD | | |
| | THE WELLS | | |
| | EPSOM | | |
| | Total Number of households: | 514 ***** | |
| | Survey date: TUESDAY | 03/10/00 | Survey Type: MANUAL |
| 14 | SC-03-A-03 | DETACHED HOUSES, E. MOLESEY | SURREY |
| | RIVERMEAD | | |
| | HURST PARK | | |
| | EAST MOLESEY | | |
| | Total Number of households: | 54 ***** | |
| | Survey date: TUESDAY | 12/11/02 | Survey Type: MANUAL |
| 15 | TW-03-A-01 | PRIVATE HOUSING, SUNDERLAND | TYNE & WEAR |
| | MYRELLA CRESCENT | | |
| | HILLVIEW | | |
| | SUNDERLAND | | |
| | Total Number of households: | 81 ***** | |
| | Survey date: WEDNESDAY | 18/09/02 | Survey Type: MANUAL |
| 16 | WL-03-A-01 | HOUSES, WOOTTON BASSETT | WILTSHIRE |
| | MAPLE DRIVE | | |
| | WOOTTON BASSETT | | |
| | Total Number of households: | 99 ***** | |
| | Survey date: MONDAY | 02/10/06 | Survey Type: MANUAL |

Sanderson Associates (CE) Ltd. Sanderson House, Jubilee Way, Grange Moor, Wakefield

Licence No: 311901

LIST OF SITES relevant to selection parameters (Cont.)

- | | | | |
|----|----------------------------------|-----------------------------------|-----------------------|
| 17 | WM-03-A-01 | HOUSES, COVENTRY | WEST MIDLANDS |
| | EDMUND RD/HONEYFIELD RD/LEWIS RD | | |
| | FOLESHILL | | |
| | COVENTRY | | |
| | Total Number of households: | 79 ***** | |
| | Survey date: FRIDAY | 03/02/06 | Survey Type: MANUAL |
| 18 | WO-03-A-01 | DETACHED HOUS., BROMSGROVE | WORCESTERSHIRE |
| | MARLBOROUGH AVENUE | | |
| | ASTON FIELDS | | |
| | BROMSGROVE | | |
| | Total Number of households: | 10 ***** | |
| | Survey date: THURSDAY | 23/06/05 | Survey Type: MANUAL |
| 19 | WO-03-A-02 | SEMI-DETACHED, REDDITCH | WORCESTERSHIRE |
| | MEADOWHILL ROAD | | |
| | REDDITCH | | |
| | Total Number of households: | 48 ***** | |
| | Survey date: TUESDAY | 02/05/06 | Survey Type: MANUAL |
| 20 | WO-03-A-03 | DETACHED, KIDDERMINSTER | WORCESTERSHIRE |
| | BLAKEBROOK | | |
| | BLAKEBROOK | | |
| | KIDDERMINSTER | | |
| | Total Number of households: | 138 ***** | |
| | Survey date: FRIDAY | 05/05/06 | Survey Type: MANUAL |

Sanderson Associates (CE) Ltd. Sanderson House, Jubilee Way, Grange Moor, Wakefield

Licence No: 311901

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
VEHICLES

Calculation factor: 1 HHOLDS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	20	132	0.076	20	132	0.289	20	132	0.365
08:00 - 09:00	20	132	0.137	20	132	0.384	20	132	0.521
09:00 - 10:00	20	132	0.173	20	132	0.225	20	132	0.398
10:00 - 11:00	20	132	0.163	20	132	0.197	20	132	0.360
11:00 - 12:00	20	132	0.179	20	132	0.186	20	132	0.365
12:00 - 13:00	20	132	0.201	20	132	0.184	20	132	0.385
13:00 - 14:00	20	132	0.190	20	132	0.198	20	132	0.388
14:00 - 15:00	20	132	0.203	20	132	0.197	20	132	0.400
15:00 - 16:00	20	132	0.295	20	132	0.233	20	132	0.528
16:00 - 17:00	20	132	0.321	20	132	0.203	20	132	0.524
17:00 - 18:00	20	132	0.373	20	132	0.234	20	132	0.607
18:00 - 19:00	20	132	0.321	20	132	0.231	20	132	0.552
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			2.632				2.761	5.393	

Parameter summary

Trip rate parameter range selected: 10 - 4334 (units:)
 Survey date date range: 01/01/99 - 02/10/06
 Number of weekdays (Monday-Friday): 20
 Number of Saturdays: 0
 Number of Sundays: 0
 Optional parameters used in selection: NO
 Surveys manually removed from selection: 0

APPENDIX D

Multi-Modal TRICS Data

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL

Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL CYCLISTSSelected regions and areas:

01	GREATER LONDON	
	BN BARNET	1 days
	KN KENSINGTON AND CHELSEA	1 days
	WF WALTHAM FOREST	1 days
02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	SC SURREY	1 days
03	SOUTH WEST	
	CW CORNWALL	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	LE LEICESTERSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
	WO WORCESTERSHIRE	2 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
10	WALES	
	WR WREXHAM	1 days
11	SCOTLAND	
	FI FIFE	1 days
	HI HIGHLAND	1 days
12	NORTHERN IRELAND	
	AN ANTRIM	1 days
14	REPUBLIC OF IRELAND	
	CR CORK	1 days
	GA GALWAY	1 days

Main parameter selection:

Parameter: Number of households

Range: 10 to 86 (units:)

Date Range: 01/01/99 to 30/01/07

Selected survey days:

Monday	4 days
Tuesday	5 days
Wednesday	2 days
Thursday	6 days
Friday	2 days

Selected survey types:

Manual count	19 days
Directional ATC Count	0 days

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CYCLISTS

Calculation factor: 1 HHOLDS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	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	19	48	0.006	19	48	0.011	19	48	0.017
08:00 - 09:00	19	48	0.011	19	48	0.017	19	48	0.028
09:00 - 10:00	19	48	0.001	19	48	0.007	19	48	0.008
10:00 - 11:00	19	48	0.004	19	48	0.003	19	48	0.007
11:00 - 12:00	19	48	0.001	19	48	0.002	19	48	0.003
12:00 - 13:00	19	48	0.006	19	48	0.001	19	48	0.007
13:00 - 14:00	19	48	0.000	19	48	0.003	19	48	0.003
14:00 - 15:00	19	48	0.006	19	48	0.001	19	48	0.007
15:00 - 16:00	19	48	0.011	19	48	0.003	19	48	0.014
16:00 - 17:00	19	48	0.020	19	48	0.017	19	48	0.037
17:00 - 18:00	19	48	0.010	19	48	0.014	19	48	0.024
18:00 - 19:00	19	48	0.012	19	48	0.008	19	48	0.020
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:			0.088						0.175

Parameter summary

Trip rate parameter range selected: 10 - 86 (units:)
 Survey date range: 01/01/99 - 30/01/07
 Number of weekdays (Monday-Friday): 19
 Number of Saturdays: 0
 Number of Sundays: 0
 Optional parameters used in selection: NO
 Surveys manually removed from selection: 0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL

Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL PEDESTRIANSSelected regions and areas:

01	GREATER LONDON	
	BN BARNET	1 days
	KN KENSINGTON AND CHELSEA	1 days
	WF WALTHAM FOREST	1 days
02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	SC SURREY	1 days
03	SOUTH WEST	
	CW CORNWALL	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	LE LEICESTERSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
	WO WORCESTERSHIRE	2 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
10	WALES	
	WR WREXHAM	1 days
11	SCOTLAND	
	FI FIFE	1 days
	HI HIGHLAND	1 days
12	NORTHERN IRELAND	
	AN ANTRIM	1 days
14	REPUBLIC OF IRELAND	
	CR CORK	1 days
	GA GALWAY	1 days

Main parameter selection:

Parameter: Number of households
Range: 10 to 86 (units:)

Date Range: 01/01/99 to 30/01/07

Selected survey days:

Monday	4 days
Tuesday	5 days
Wednesday	2 days
Thursday	6 days
Friday	2 days

Selected survey types:

Manual count	19 days
Directional ATC Count	0 days

Sanderson Associates (CE) Ltd. Sanderson House, Jubilee Way, Grange Moor, Wakefield

Licence No: 311901

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 HHOLDS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	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	19	48	0.039	19	48	0.081	19	48	0.120
08:00 - 09:00	19	48	0.088	19	48	0.215	19	48	0.303
09:00 - 10:00	19	48	0.081	19	48	0.085	19	48	0.166
10:00 - 11:00	19	48	0.048	19	48	0.088	19	48	0.136
11:00 - 12:00	19	48	0.070	19	48	0.088	19	48	0.158
12:00 - 13:00	19	48	0.073	19	48	0.085	19	48	0.158
13:00 - 14:00	19	48	0.111	19	48	0.123	19	48	0.234
14:00 - 15:00	19	48	0.059	19	48	0.097	19	48	0.156
15:00 - 16:00	19	48	0.198	19	48	0.139	19	48	0.337
16:00 - 17:00	19	48	0.144	19	48	0.100	19	48	0.244
17:00 - 18:00	19	48	0.107	19	48	0.097	19	48	0.204
18:00 - 19:00	19	48	0.090	19	48	0.099	19	48	0.189
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:			1.108						2.405

Parameter summary

Trip rate parameter range selected: 10 - 86 (units:)
 Survey date range: 01/01/99 - 30/01/07
 Number of weekdays (Monday-Friday): 19
 Number of Saturdays: 0
 Number of Sundays: 0
 Optional parameters used in selection: NO
 Surveys manually removed from selection: 0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL

Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL PUBLIC TRANSPORT USERSSelected regions and areas:

01	GREATER LONDON	
	BN BARNET	1 days
	KN KENSINGTON AND CHELSEA	1 days
	WF WALTHAM FOREST	1 days
02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	SC SURREY	1 days
03	SOUTH WEST	
	CW CORNWALL	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	LE LEICESTERSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
	WO WORCESTERSHIRE	2 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
10	WALES	
	WR WREXHAM	1 days
11	SCOTLAND	
	FI FIFE	1 days
	HI HIGHLAND	1 days
12	NORTHERN IRELAND	
	AN ANTRIM	1 days
14	REPUBLIC OF IRELAND	
	CR CORK	1 days
	GA GALWAY	1 days

Main parameter selection:

Parameter: Number of households

Range: 10 to 86 (units:)

Date Range: 01/01/99 to 30/01/07

Selected survey days:

Monday	4 days
Tuesday	5 days
Wednesday	2 days
Thursday	6 days
Friday	2 days

Selected survey types:

Manual count	19 days
Directional ATC Count	0 days

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 HHOLDS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	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	19	48	0.002	19	48	0.033	19	48	0.035
08:00 - 09:00	19	48	0.024	19	48	0.075	19	48	0.099
09:00 - 10:00	19	48	0.010	19	48	0.014	19	48	0.024
10:00 - 11:00	19	48	0.002	19	48	0.014	19	48	0.016
11:00 - 12:00	19	48	0.008	19	48	0.014	19	48	0.022
12:00 - 13:00	19	48	0.008	19	48	0.011	19	48	0.019
13:00 - 14:00	19	48	0.010	19	48	0.021	19	48	0.031
14:00 - 15:00	19	48	0.017	19	48	0.020	19	48	0.037
15:00 - 16:00	19	48	0.033	19	48	0.023	19	48	0.056
16:00 - 17:00	19	48	0.007	19	48	0.012	19	48	0.019
17:00 - 18:00	19	48	0.029	19	48	0.010	19	48	0.039
18:00 - 19:00	19	48	0.022	19	48	0.019	19	48	0.041
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:			0.172				0.266	0.438	

Parameter summary

Trip rate parameter range selected: 10 - 86 (units:)
 Survey date range: 01/01/99 - 30/01/07
 Number of weekdays (Monday-Friday): 19
 Number of Saturdays: 0
 Number of Sundays: 0
 Optional parameters used in selection: NO
 Surveys manually removed from selection: 0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL

Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLESelected regions and areas:

01 GREATER LONDON	
BN BARNET	1 days
KN KENSINGTON AND CHELSEA	1 days
WF WALTHAM FOREST	1 days
02 SOUTH EAST	
BD BEDFORDSHIRE	1 days
SC SURREY	1 days
03 SOUTH WEST	
CW CORNWALL	1 days
05 EAST MIDLANDS	
DS DERBYSHIRE	1 days
LE LEICESTERSHIRE	1 days
06 WEST MIDLANDS	
WM WEST MIDLANDS	1 days
WO WORCESTERSHIRE	2 days
09 NORTH	
CB CUMBRIA	1 days
TW TYNE & WEAR	1 days
10 WALES	
WR WREXHAM	1 days
11 SCOTLAND	
FI FIFE	1 days
HI HIGHLAND	1 days
12 NORTHERN IRELAND	
AN ANTRIM	1 days
14 REPUBLIC OF IRELAND	
CR CORK	1 days
GA GALWAY	1 days

Main parameter selection:

Parameter: Number of households

Range: 10 to 86 (units:)

Date Range: 01/01/99 to 30/01/07

Selected survey days:

Monday	4 days
Tuesday	5 days
Wednesday	2 days
Thursday	6 days
Friday	2 days

Selected survey types:

Manual count	19 days
Directional ATC Count	0 days

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 HHOLDS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	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	19	48	0.145	19	48	0.459	19	48	0.604
08:00 - 09:00	19	48	0.344	19	48	0.988	19	48	1.332
09:00 - 10:00	19	48	0.350	19	48	0.414	19	48	0.764
10:00 - 11:00	19	48	0.303	19	48	0.439	19	48	0.742
11:00 - 12:00	19	48	0.378	19	48	0.373	19	48	0.751
12:00 - 13:00	19	48	0.398	19	48	0.377	19	48	0.775
13:00 - 14:00	19	48	0.403	19	48	0.442	19	48	0.845
14:00 - 15:00	19	48	0.360	19	48	0.433	19	48	0.793
15:00 - 16:00	19	48	0.732	19	48	0.498	19	48	1.230
16:00 - 17:00	19	48	0.680	19	48	0.508	19	48	1.188
17:00 - 18:00	19	48	0.718	19	48	0.454	19	48	1.172
18:00 - 19:00	19	48	0.573	19	48	0.480	19	48	1.053
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:			5.384						11.249

Parameter summary

Trip rate parameter range selected: 10 - 86 (units:)
 Survey date range: 01/01/99 - 30/01/07
 Number of weekdays (Monday-Friday): 19
 Number of Saturdays: 0
 Number of Sundays: 0
 Optional parameters used in selection: NO
 Surveys manually removed from selection: 0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL

Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLE OCCUPANTSSelected regions and areas:

01	GREATER LONDON	
	BN BARNET	1 days
	KN KENSINGTON AND CHELSEA	1 days
	WF WALTHAM FOREST	1 days
02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	SC SURREY	1 days
03	SOUTH WEST	
	CW CORNWALL	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	LE LEICESTERSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
	WO WORCESTERSHIRE	2 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
10	WALES	
	WR WREXHAM	1 days
11	SCOTLAND	
	FI FIFE	1 days
	HI HIGHLAND	1 days
12	NORTHERN IRELAND	
	AN ANTRIM	1 days
14	REPUBLIC OF IRELAND	
	CR CORK	1 days
	GA GALWAY	1 days

Main parameter selection:

Parameter: Number of households

Range: 10 to 86 (units:)

Date Range: 01/01/99 to 30/01/07

Selected survey days:

Monday	4 days
Tuesday	5 days
Wednesday	2 days
Thursday	6 days
Friday	2 days

Selected survey types:

Manual count	19 days
Directional ATC Count	0 days

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 HHOLDS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	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	19	48	0.099	19	48	0.334	19	48	0.433
08:00 - 09:00	19	48	0.220	19	48	0.682	19	48	0.902
09:00 - 10:00	19	48	0.258	19	48	0.308	19	48	0.566
10:00 - 11:00	19	48	0.248	19	48	0.334	19	48	0.582
11:00 - 12:00	19	48	0.298	19	48	0.269	19	48	0.567
12:00 - 13:00	19	48	0.312	19	48	0.280	19	48	0.592
13:00 - 14:00	19	48	0.282	19	48	0.294	19	48	0.576
14:00 - 15:00	19	48	0.279	19	48	0.315	19	48	0.594
15:00 - 16:00	19	48	0.490	19	48	0.333	19	48	0.823
16:00 - 17:00	19	48	0.509	19	48	0.379	19	48	0.888
17:00 - 18:00	19	48	0.573	19	48	0.333	19	48	0.906
18:00 - 19:00	19	48	0.448	19	48	0.355	19	48	0.803
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:			4.016				4.216	8.232	

Parameter summary

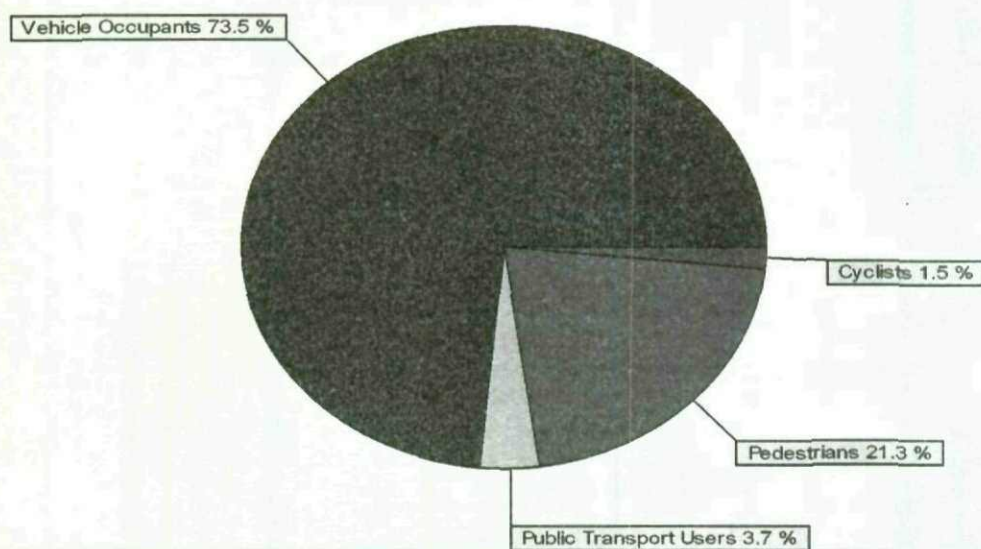
Trip rate parameter range selected: 10 - 86 (units:)
 Survey date range: 01/01/99 - 30/01/07
 Number of weekdays (Monday-Friday): 19
 Number of Saturdays: 0
 Number of Sundays: 0
 Optional parameters used in selection: NO
 Surveys manually removed from selection: 0

MODAL SPLIT PERCENTAGES

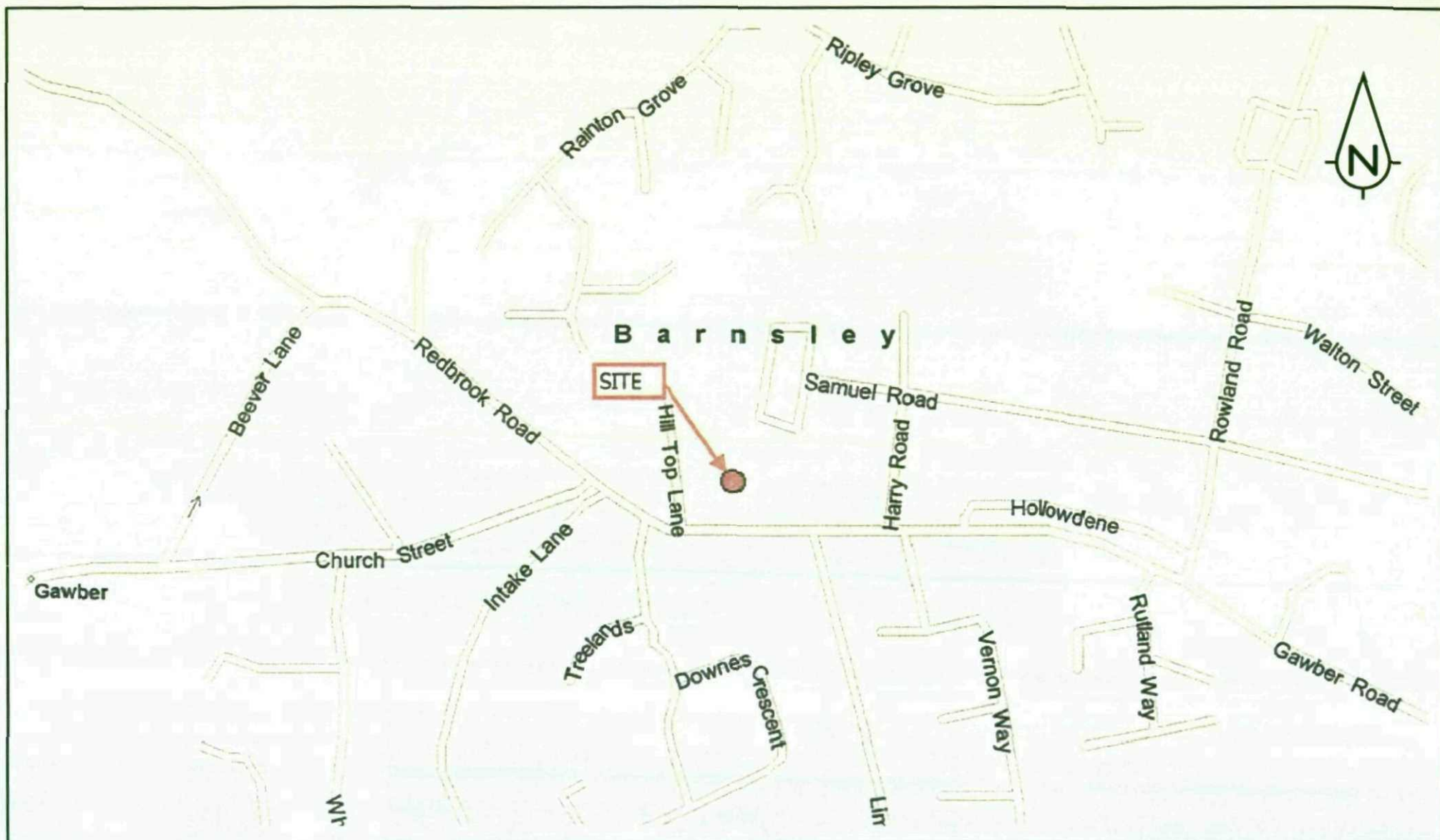
Sanderson Associates (CE) Ltd. Sanderson House, Jubilee Way, Grange Moor, Wakefield

Licence No: 311901

Modal Split Percentages



FIGURES



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ASSOCIATES
(consulting engineers) Ltd
Highways | Traffic | Transportation | Water

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PROPOSED RESIDENTIAL DEVELOPMENT
HILL TOP FARM,
BARNSELEY

SITE LOCATION PLAN

Drawn JGM	Scale NTS	Q.M. S.E. MIL 1:1000 PROPOSED
Checked KS	Date OCT 2008	
Approved KS	Drawing Number FIGURE 1	Size A4

DRAWINGS

Architects Design Layout – Chris Carr Associates Ref 20.62/RevB