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**Proposed Residential Development
Off Dodworth Road
Barnsley
Transport Statement**

Our ref 5872/AA/001/001

August 2010

Written by



Date: 26/08/2010

Checked and Approved by



Date: 26/8/10

**Proposed Residential Development
Off Dodworth Road
Barnsley
Transport Statement**

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1. INTRODUCTION

1.1 Sanderson Associates (Consulting Engineers) Limited have been appointed by Bellway Homes Limited to prepare this Transport Statement in support of a planning application for the development of 59 dwellings situated off Dodworth Road, Barnsley. A site location plan can be found at **Figure 1** at the rear of this document.

1.2 In accordance with National and local guidance this Transport Statement will consider in detail:

- the present layout and nature of the immediate local highway network
- the characteristics and suitability of the proposed access point off Dodworth Road.
- the net impact of the development on the local highway network, and
- the accessibility of the site in relation to sustainable transport and local facilities and means to encourage the use of sustainable transport by residents and their visitors.

1.3 For the purposes of this report the site has been visited and basic measurements of the public highway have been taken, this includes a radar speed survey of traffic on Dodworth Road. General observations of the operation of the local highway network and the nature of the surrounding area have also been recorded.

2. THE SITE & LOCAL HIGHWAY NETWORK

- 2.1 The application site is situated off Dodworth Road, Barnsley. The site is a former Polar Ford Dealership and accident repair centre.
- 2.2 The site is bounded by Dodworth Road to the south and residential developments to the east and west and by the operational railway line with industrial units beyond to the north. Vehicular access to the site is gained from Dodworth Road. There is also a right turn lane present for vehicles turning right into the site.
- 2.3 The A628 Dodworth Road is a principal, classified adopted public highway that runs from the M1 to Barnsley centre. Looking at wider links the A628 provides a strategic route towards Manchester in the west and Pontefract in the east. The route also provides connections to other major routes including the A61, A629, A635 and A638.
- 2.4 In the vicinity of the site Dodworth Road is subject to a 30mph speed limit and there are traffic regulation orders along most of its length prohibiting either parking or loading, Monday to Friday between 08:00 – 09:30 and 16:30 – 18:00.
- 2.5 In the vicinity of the site Dodworth Road has a carriageway width of 9.5m with footways on either flank of the carriageway which are approximately 3.0m wide and street lighting is present to the required standard. There is also a right turn present allowing vehicles access to the site.
- 2.6 Approximately 450 metres west of the site access is the major signal controlled crossroads junction of Dodworth Road with Broadway and Pogmoor Road. Broadway is classified at the A6133 and provides links to the A61 and A635 to the south and east of the Town Centre whilst Pogmoor Road gives a direct route to Barnsley District General Hospital.

Radar Speed Survey

- 2.7 A radar speed survey was undertaken on Dodworth Road between the hours of 14:55 and 15:26 on the 19 August 2010, a copy of which can be found in **Appendix A** to the rear of this report. During the time of the survey the road conditions were dry and the weather sunny. The corrected 85th percentile wet weather speed for traffic travelling eastbound towards Barnsley was recorded as 34.4mph and for traffic travelling westbound towards the M1 was 33.1mph.
- 2.8 In accordance with the standards set out in Design Manual for Roads and Bridges the required sight lines for these recorded speeds at a 2.4m 'x' distance are 120m in both directions. Visibility splays were measured on site at 2.4m x tangential in both directions and a clear distance of over 120m can be observed in both directions. Therefore the required visibility is achievable in regards to Design Manual for Roads and Bridges and can be seen in drawing **5872-001** which is attached at the rear of this report.

Personal Injury Accident Data

- 2.9 The Highway Authority has been requested to supply information on all recorded personal injury accidents that have occurred in the past 5 years within the vicinity of the site. The study area includes a the stretch of Dodworth Road between its junctions with Branksome Avenue to the east of the site and the access to the former SR Gents premises to the west.
- 2.10 The area of interest was selected to provide a comprehensive picture of recorded injury accidents in the locality. The data sheets and accident location plan are included at **Appendix B**.
- 2.11 A total of 6 recorded injury accidents occurred between 1st January 2005 and 10th August 2010. All six of these accidents were of slight severity and no fatal accidents were recorded. In order to achieve clarity within the analysis, the accidents have been analysed in an attempt to highlight any accident problems that may be apparent within the search area.

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- 2.12 Accident B-01159-05 occurred on Tuesday 23rd August 2005 at 17:40 in fine weather on a dry road. The accident was slight in severity and occurred on Dodworth Road at its junction with Grosvenor Drive. The accident involved a vehicle pulling out of their drive and colliding with an approaching vehicle. From the contributory factors provided it is likely that both vehicles failed to judge the other persons path or speed.
- 2.13 Accident B-00822-06 occurred on Wednesday 21st June 2006 at 09:55 in fine weather on a dry road. The accident was slight in severity and occurred on Dodworth Road 200m east of its junction with Pogmoor Road. The accident involved a vehicle colliding with the rear of another vehicle. From the contributory factors provided it is likely that the driver was too close to the vehicle in front.
- 2.14 Accident B-01737-06 occurred on Thursday 21st December 2006 at 14:15 in fine weather on a wet/damp road surface. The accident was slight in severity and occurred on Dodworth Road 50m east of its junction St Hilda Avenue. The accident involved a vehicle pulling out into the path of an approaching vehicle. From the contributory factors provided it is likely that the driver failed to judge other person's path or speed.
- 2.15 Accident B-00541-08 occurred on Saturday 03rd May 2008 at 03:20 in fine weather on a dry road. The accident was slight in severity and occurred on Dodworth Road 180m east of its junction with Pogmoor Road. The accident involved a vehicle turning right across the path of an oncoming vehicle. From the contributory factors provided it is likely that the driver failed to look properly and performed a poor turn or manoeuvre.
- 2.16 Accident B-00247-09 occurred on Sunday 01st March 2009 at 00:06 in fine weather on a dry road. The accident was slight in severity and occurred on Dodworth Road at its junction the former Polar site. The accident involved the passenger of a vehicle arguing with the driver and then exiting the moving vehicle without realising how fast the vehicle was travelling. From the contributory factors provided it is likely that the passenger was impaired by alcohol.

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- 2.17 Accident B-00256-10 occurred on Monday 1st March 2010 at 15:20 in fine weather on a dry road. The accident was slight in severity and occurred on Dodworth Road 230m east of its junction with Pogmoor Road. The accident involved two vehicles travelling in slow moving traffic and one collided with the rear of the other. From the contributory factors provided it is likely that one of the vehicles had defective brakes.
- 2.18 As can be seen from the accident data there has only been one accident at the site access and this accident occurred due to unusual circumstances. Only six accidents occurred within the study area and none of these involved pedestrians. It is considered that the development is unlikely to pose a detriment to highway safety.

Local Facilities

- 2.19 The site is situated within 2.0km of a number of schools and services located within Barnsley Centre . **Figure 2** provides a location plan detailing some of the key facilities and premises and is situated to the rear of this report.
- 2.20 A number of bus stops are located along Dodworth Road and Pogmoor Road which provide frequent and varied services; further information has been incorporated into Section 3 of this report.
- 2.21 Barnsley Railway Station is situated approximately 1.7 km east of the site and provides access to local and main line destinations. Further details are available in Section 3 of this report.

3 SUSTAINABLE TRANSPORT

3.1 Bus Services

3.1.1 The site is located in close proximity to bus facilities. The closest bus stops to the site are located along the Dodworth Road and are located within 150m of the application site. There are also two stops located on Pogmoor Road approximately 500m from the site. Each bus stop is detailed below and a plan showing the location of these stops can be found at **Figure 3**:

Bus stop location: Dodworth Road, St Hilda Avenue

Bus Stop Reference: 37050299

Distance to Stop: 70m

Direction of travel: westbound

Buses towards: Dodworth, Rotherham

Bus stop facilities: Stop with timetable information

Available service: 22, X12

Bus stop location: Dodworth Road, St Hilda Avenue

Bus Stop Reference: 37050300

Distance to Stop: 100m

Direction of travel: Eastbound

Buses towards: Barnsley Centre

Bus stop facilities: Stop with timetable information

Available service: 22, X12

Bus stop location: Pogmoor Road, White Hall Avenue

Bus Stop Reference: 37050325

Distance to Stop: 470m

Direction of travel: South Eastbound

Buses towards: Barnsley Centre

Bus stop facilities: Shelter with Seating, timetable information

Available service: 14, 23, 24, 44

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Bus stop location: Pogmoor Road, White Hall Avenue

Bus Stop Reference: 37050326

Distance to Stop: 495m

Direction of travel: North Westbound

Buses towards: Gilroyd, Penistone, Stocksbridge

Bus stop facilities: Shelter with Seating, timetable information

Available service: 14, 23, 24, 43

3.1.2 A summary of the available services from the above stops can be found below:

Service 22 – Barnsley Interchange – Dodworth – Gilroyd – Dodworth – Barnsley Interchange

Monday – Saturday daytime every 20 minutes

Monday – Saturday evening no service

Sunday no service

Operator Stagecoach in Yorkshire

Service X12 – Barnsley – Thorpe Hesley – Droppingwell – Rotherham

Monday – Saturday daytime every 60 minutes

Monday – Saturday evening no service

Sunday no service

Operator Veolia Transport

Service 14 – Barnsley – Pogmoor – Dodworth – Gilroyd

Monday – Saturday daytime every 20 minutes

Monday – Saturday evening no service

Sunday no service

Operator Tates Travel Group

Service 23 – Barnsley – Pogmoor – Dodworth – Gilroyd – Stainborough – Hood Green – Thurgoland – Wortley – Deepcar – Stocksbridge

Monday – Saturday daytime every 60 minutes

Monday – Saturday evening every 60 minutes

Sunday every 120 minutes

Operator Stagecoach in Yorkshire

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Service 24 – Barnsley – Pogmoor – Dodworth – Silkstone Common – Hood Green – Crane Moor – Thurgoland – Green Moor – Roughbirchworth – Oxspring – Springvale - Penistone

Monday – Saturday daytime every 120 minutes

Monday – Saturday evening no service

Sunday no service

Operator Stagecoach in Yorkshire

Service 43 – Barnsley – Pogmoor – Kingstone – Barnsley

Monday – Saturday daytime every 30 minutes

Monday – Saturday evening every 60 minutes

Sunday every 60 minutes

Operator Stagecoach in Yorkshire

Service 44 – Barnsley – Kingstone – Pogmoor – Barnsley

Monday – Saturday daytime every 30 minutes

Monday – Saturday evening every 60 minutes

Sunday every 60 minutes

Operator Stagecoach in Yorkshire

3.1.3 As can be seen from the above the local highway network offers regular bus services to local centres and public transport hubs.

3.1.4 In order to encourage bus travel to/from the development as part of multi modal trips, it is proposed to provide a financial contribution for the purchase of Travel Master travel cards for residents.

3.2 Rail Services

3.2.1 Barnsley Railway Station is located approximately 1.7km from the application site which is within the 2km walking distances as detailed by the IHT publication 'Providing for Journeys on Foot'.

3.2.2 Barnsley Rail station is a mainline, staffed station that has a variety of facilities such as seated waiting areas, toilets, refreshments, a 76 space free car park, taxi rank and cycle parking facilities.

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3.2.3 The station has 2 platforms and is under the management of Northern Trains and offers direct services to Huddersfield, Leeds, Sheffield, Wakefield Kirkgate, Chesterfield, Nottingham and other local areas.

3.3 Walking

3.3.1 Planning Policy Guidance 13 Transport, identifies that walking is the most importance mode of transport at the local level and offers the greatest potential to replace short car trips in journeys under 2 km.

3.3.2 The IHT publication "Providing for Journeys on Foot" identifies suggested acceptable walking distances for commuting, school and sight-seeing as follows with times based on a walking speed of (1.4m/s).

Desirable 500m	6 minutes
Acceptable 1000m	12 minutes
Preferred maximum 2000m	24 minutes

3.3.3 1.5 km east of the site is Barnsley Town Centre which has a wide variety of amenities including banks, butchers, cafes, cash machines, groceries, hairdressers, newsagents, major high street stores, pharmacy and restaurants. Also located approximately 1.3 km from the site is a Morrison's Supermarket.

3.3.4 Approximate walking distances to local schools from site the site are:

St Mary's C of E Primary School	0.53 km
Holgate Secondary School and Sports College –	0.54 km
Summer Lane Primary School –	0.69 km
Holy Rood R C Primary School –	0.70 km
Joseph Locke Primary School –	0.77 km
Kingstone Secondary School –	0.86 km
Greenacre School –	1.00 km

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- 3.3.5 It should, however, be noted that planning permission has been granted by Barnsley Metropolitan Borough Council for the development of a new Advance Learning Centre to replace the existing Kingstone and Holgate Secondary Schools. The site is located off Dodworth Road on the former S R Gents site approximately 220m from the application site. The facility is to open in September 2011 before the start of the new school year.
- 3.3.6 All of the schools are well within the 2km walking distance from the development and therefore walking to schools should be a realistic option. The majority of the schools nearby have active Travel Plans which seek to encourage the use of sustainable travels modes by pupils to reduce car borne congestion
- 3.3.7 Access to nearby bus stops, local amenities and other areas of interest are provided via lit footways along the main routes. Dodworth Road has wide lit footways on either side of the carriageway. Dodworth Road can also be followed east providing a direct link to the Morrison's Supermarket and Barnsley Town Centre.
- 3.3.8 Controlled pedestrian crossings are available at all major junctions along the routes to the Town Centre which provide safe facilities for pedestrians.
- 3.3.9 **Figure 4** illustrates the walking catchment areas.
- 3.3.10 Pedestrian footways are to be provided within the site which will allow safe movement for pedestrians. Dropped crossing facilities are to be provided within the site where pedestrians need to cross the internal access roads. The proposed on-site infrastructure will be to the correct standard of the Council to provide for safe and convenient journeys by foot.
- 3.3.11 It is considered that both the existing infrastructure and proposed internal layout is adequate to accommodate the predicted level of pedestrian activity.

3.4 Cycling

3.4.1 As detailed within Planning Policy Guidance PPG13 cycling has the potential to substitute short trips, particularly those under 5 km. A list of nearby destinations within 5 km by road, along with the corresponding cycle time based on 12 km per hour is summarised below

Destination	Distance	Time
Kingstone	1.1 km	5 ½ minutes
Barnsley Centre	1.5 km	7 ½ minutes
Barnsley Railway Station	1.7 km	8 ½ minutes
Dodworth	1.9 km	9 ½ minutes
New Lodge	3.2 km	16 minutes
Mapplewell	3.6 km	18 minutes
Worsbrough	3.8 km	19 minutes

3.4.2 Cycle storage can be accommodated within each unit. It is therefore feasible for potential occupiers of the dwellings to commute to and from the application site by cycle to a variety of destinations as part of their everyday activity including trips to work, school, shopping and leisure.

3.4.3 Although there are no formal cycle routes in the vicinity of the site, given the terrain is reasonably level, it is considered that the use of the bicycle is a viable alternative to the private car. Cycle parking is available at the Morrison Supermarket, Barnsley Railway Station and within Barnsley Town Centre. Major employment premises are also likely to have their own cycling facilities for staff and visitors.

3.4.4 **Figure 5** illustrates a 5 km cycling catchment area.

3.5 Conclusions on Sustainable Transport

3.5.1 The application site is in an excellent sustainable location and residents are able to take full advantage of nearby public transport facilities. Furthermore, residents will be able to take full advantage of the local amenities on offer in short walking or cycling distances away from the site which will encourage linked trips and help to reduce the reliance upon the private car.

3.6 Residential Travel Plan

3.6.1 A Residential Travel Plan Statement has been produced to accompany the planning application. The Travel Plan Statement includes measures to further encourage and promote the use of sustainable modes of transport to help reduce the reliance on the private car and reduce the overall traffic generation of the development.

4. DEVELOPMENT PROPOSALS

- 4.1 The development consists of 59 new dwellings situated on the former Polar Ford Premises off Dodworth Road, Barnsley. The proposed site layout is detailed on the drawing attached at the rear of this report prepared by QAD Architects.
- 4.2 It is proposed to utilise the existing vehicular access arrangement to the site from Dodworth Road to serve the vast majority of the site. The right turn lane facility on Dodworth will also be retained to ensure that right turning vehicles are able to stand clear of through traffic and no impede through flowing traffic.
- 4.3 A small private drive is proposed direct from Dodworth Road to the east of the main access to the site which will serve four dwellings. All dwellings will have adequate manoeuvring space to access the proposed parking spaces.
- 4.4 A pedestrian link is proposed which will link to the existing Public Open Space to the west of the site. This area includes children's play facilities and will provide a safe access to the area by residents of the site. This link will also improve access to the bus stops situated on Pogmoor Road.
- 4.5 In accordance with the results of the radar speed survey in Section 2 of this report, the proposed access can provide visibility splays of 2.4m x 120m in both directions for the speeds recorded on Dodworth Road. Therefore, it is considered that visibility splays are adequate, and would not compromise highway safety in this location. The visibility splays at the proposed access are shown on Sanderson Associates plan 5872-001.
- 4.6 It is proposed to provide each dwelling with private parking facilities within the curtilage of each plot to minimise on-street car parking within the site. In addition to the above, many plots are provided with garages which will allow secure cycle storage. Those plots without a garage have secure garden areas which will be available for the storage of cycles within the curtilage of the plot.

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- 4.7 Within the site a turning heads will be provided that will ensure vehicles entering and exiting the site can do so in a forward gear. The turning heads will be capable of accommodating both a refuse vehicle and emergency service vehicles and conform to the guidance contained within Manual for Streets, and the track analysis is detailed in Sanderson Associates plan **5872-002**.

5. THE IMPACT OF THE DEVELOPMENT PROPOSAL

5.1 As required in the DfT 'Guidance on Transport Assessment', the Total People trips to the proposed development have been assessed, using information contained within the TRICS 2010 (b) database. The full TRICS outputs are contained in **Appendix C**

5.2 The land use category Residential – Houses Privately Owned has been used to determine vehicular trip rates. To ensure the assessment is robust, surveys conducted in Scotland and Ireland have all been omitted as they do not accurately represent the local area.

5.3 The TRICS data has been utilised to assess the relative impact of the proposals and the following table provides a summary of the vehicle trip rates and traffic generation for proposed development:

Residential House Privately Owned			
Trip Rates	Arr	Dep	Two-Way
AM Peak Hour (0800 – 0900)	0.170	0.420	0.590
PM Peak Hour (1700 – 1800)	0.393	0.235	0.628
Traffic Generation for 59 Dwellings			
AM Peak Hour (0800 – 0900)	10	25	35
PM Peak Hour (1700 – 1800)	23	14	37

5.4 As can be seen from the table above the proposed development generates a low level of two-way traffic during the morning and evening peak highway hours compared to the amount of traffic on Dodworth Road.

5.5 It is also considered appropriate to make a comparison between the level of vehicular activity generated by the previous use of the site. Again the TRICS 2010 (b) database has been used to predict the likely vehicle movements that would have been generated by the site when it was fully operational. The land use category of car showrooms has been used although part of the site was in use as a repair workshop. The trip rates, however, are not that dissimilar.

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- 5.6 The TRICS data is attached at **Appendix D** and the overall site area is 2.05 Hectares and this has been used to calculate the likely level of activity. The average trip rates and level of activity are summarised in the table below:-

Car Showrooms			
Trip Rates	Arr	Dep	Two-Way
AM Peak Hour (0800 – 0900)	36.839	12.850	49.689
PM Peak Hour (1700 – 1800)	13.679	32.902	46.581
Traffic Generation for 2.05 Hectare Site			
AM Peak Hour (0800 – 0900)	76	26	102
PM Peak Hour (1700 – 1800)	28	67	95

- 5.7 When comparing the traffic generation in the tables at 5.3 and 5.6 above it is clear that the former use of the site would have generated significantly higher two-way vehicle movements although the arrival and departure peak periods are reversed as the garage premises would have been classed as a traffic destination as opposed to a traffic originator in the case of the proposed residential development.
- 5.8 This change in circumstances is not considered to a material factor and it is concluded that the residential development will undoubtedly reduce overall traffic flow along this stretch of the A628.

Multimodal Assessment

- 5.9 It is, however, likely that the change of use of the site to residential will increase pedestrian and cycle activity. It is also possible that there will be additional demand for public transport and as such the multimodal generation for sustainable travel has also been calculated.
- 5.10 As with the vehicle trip rate data, the multimodal assessment has been calculated based on the same criteria and the following table provides a summary of the two-way trips and associated generation based on 59 dwellings:

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Mode	Two-Way Trip Rates		Total People Trip Generation	
	AM Peak	PM Peak	AM Peak	PM Peak
Walking	0.245	0.138	14	8
Cycling	0.021	0.025	1	1
Public Transport	0.044	0.025	3	1
Vehicle Occupants	0.836	0.843	49	50
Total People	1.145	1.031	68	61

5.11 As can be seen from the table above, a large proportion of the modal split is attributed to vehicle occupants with a slight split to public transport. It is however considered that the site is situated within a well established residential area with frequent bus services operating within the vicinity. As such it is highly likely that a proportion of the vehicle occupants would travel by bus to their destinations.

5.12 It is therefore considered that the overall impact of the site is relatively low and that the existing infrastructure is capable of accommodating both the additional traffic movements and sustainable transport use.

6. SUMMARY & CONCLUSIONS

- 6.1 Sanderson Associates (Consulting Engineers) Limited have been appointed by Bellway Homes Limited to prepare this Transport Statement in support of a planning application for the development of 59 dwellings on the former Polar Ford premises situated off Dodworth Road, Barnsley
- 6.2 As part of the development it is proposed to retain the existing vehicle access arrangement to Dodworth Road. This access and associated visibility splays comply with the standards set out in Design Manual for Roads and Bridges.
- 6.3 Accident data was obtained from the Local Authority which indicated no significant safety issues or patterns. Only been one accident has occurred at the site access and this accident occurred due to unusual circumstances. Six accidents occurred within the study period and none of these involved pedestrians. It is considered that the development is unlikely to pose a detriment to highway safety.
- 6.4 In order to encourage bus travel to/from the development as part of multi modal trips, it is proposed to provide a financial contribution for the purchase of Travel Master travel card for residents.
- 6.5 The likely level of movements by all modes of travel has been predicted for the development using the latest version of a nationally accepted data base and an indication of the expected level of vehicle trips provided.
- 6.6 The trips predicted to be generated by the 59 new dwellings are relatively low and are less than those likely to have been generated by the previous use of the site. They are at a level considered to be indiscernible from normal daily variations in traffic on the local road network and as such it is concluded that the proposal will have no material effect on the safety and capacity of the local highway network.

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- 6.7 The proposed internal turning heads has been designed to accommodate the turning manoeuvre of a refuse vehicle and emergency service vehicle and such will ensure vehicles entering the exiting the site can do so in a forward gear.
- 6.8 Sanderson Associates (CE) Ltd therefore considers that there are no highway or transportation reasons why this development should not proceed and requests that the Local Planning Authority confirms the findings of this report.

FIGURES

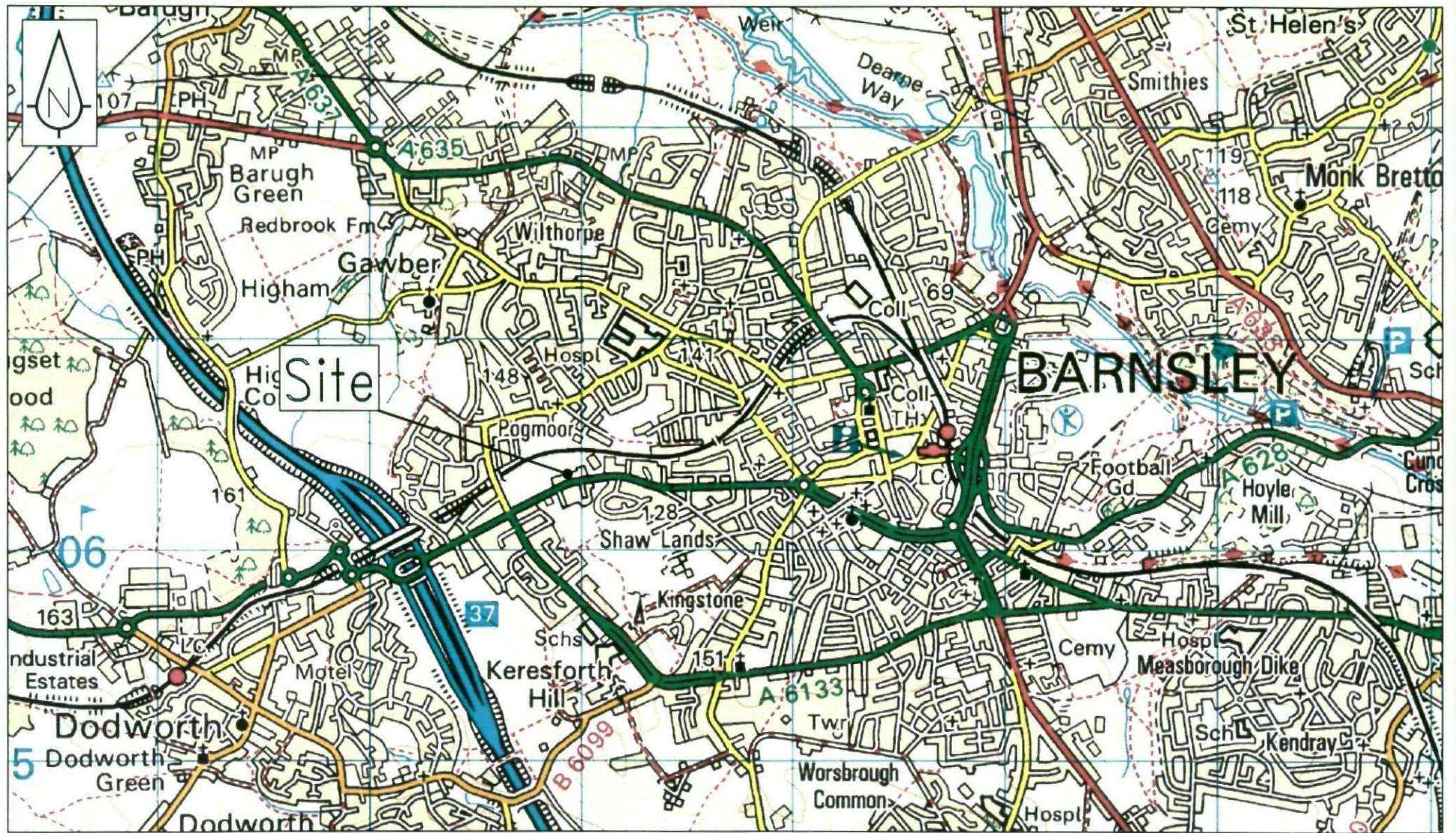
1. Site Location Plan

2. Local Services

3. Bus Stop Location Plan

4. 2km Walking Radius from the Site


5. 5km Cycling Radius from the Site

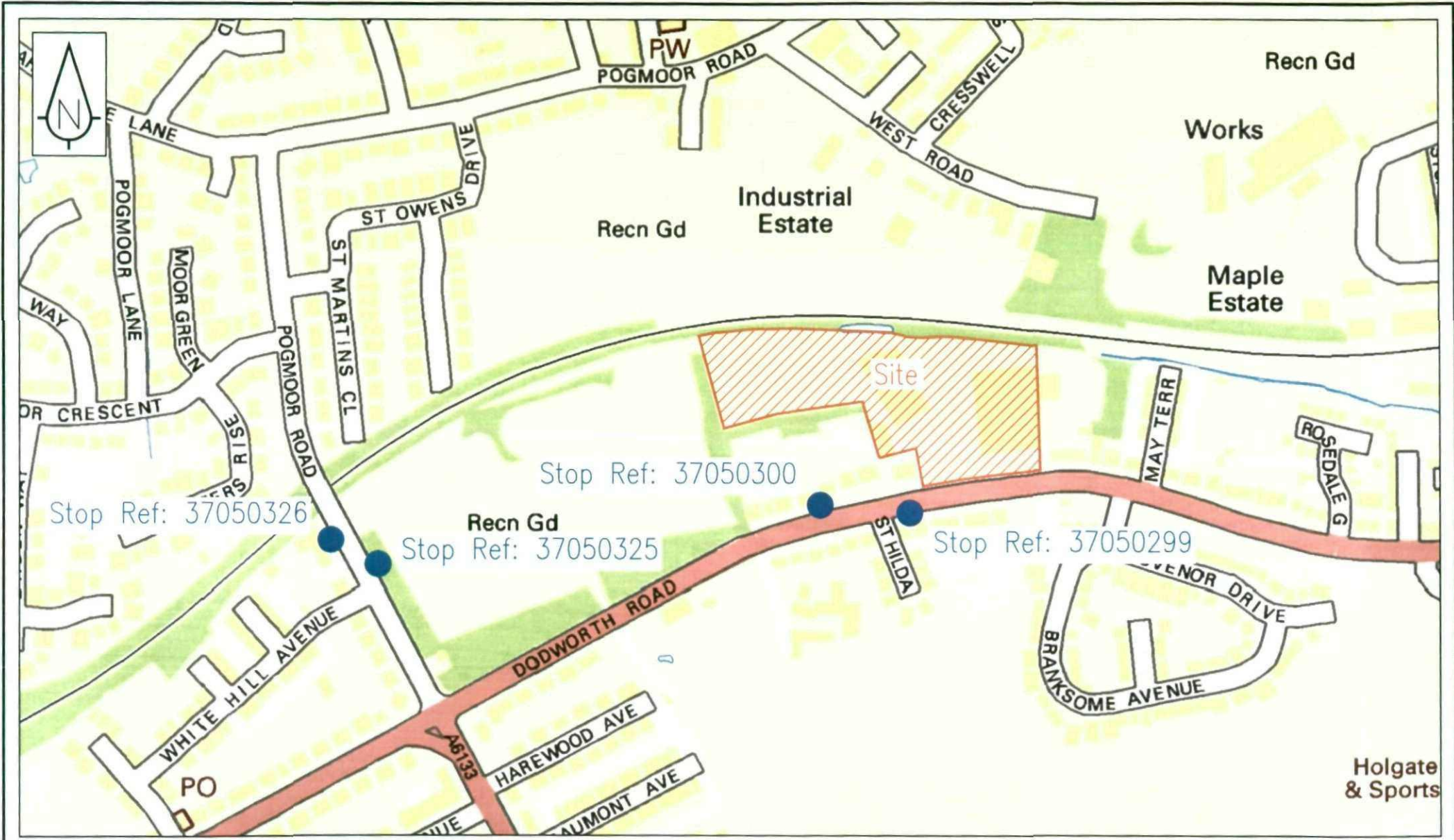



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Dodworth Road, Barnsley

Site Location Plan


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Checked KS	Date August 2010	
Approved KS	Drawing Number Figure 1	Size A4

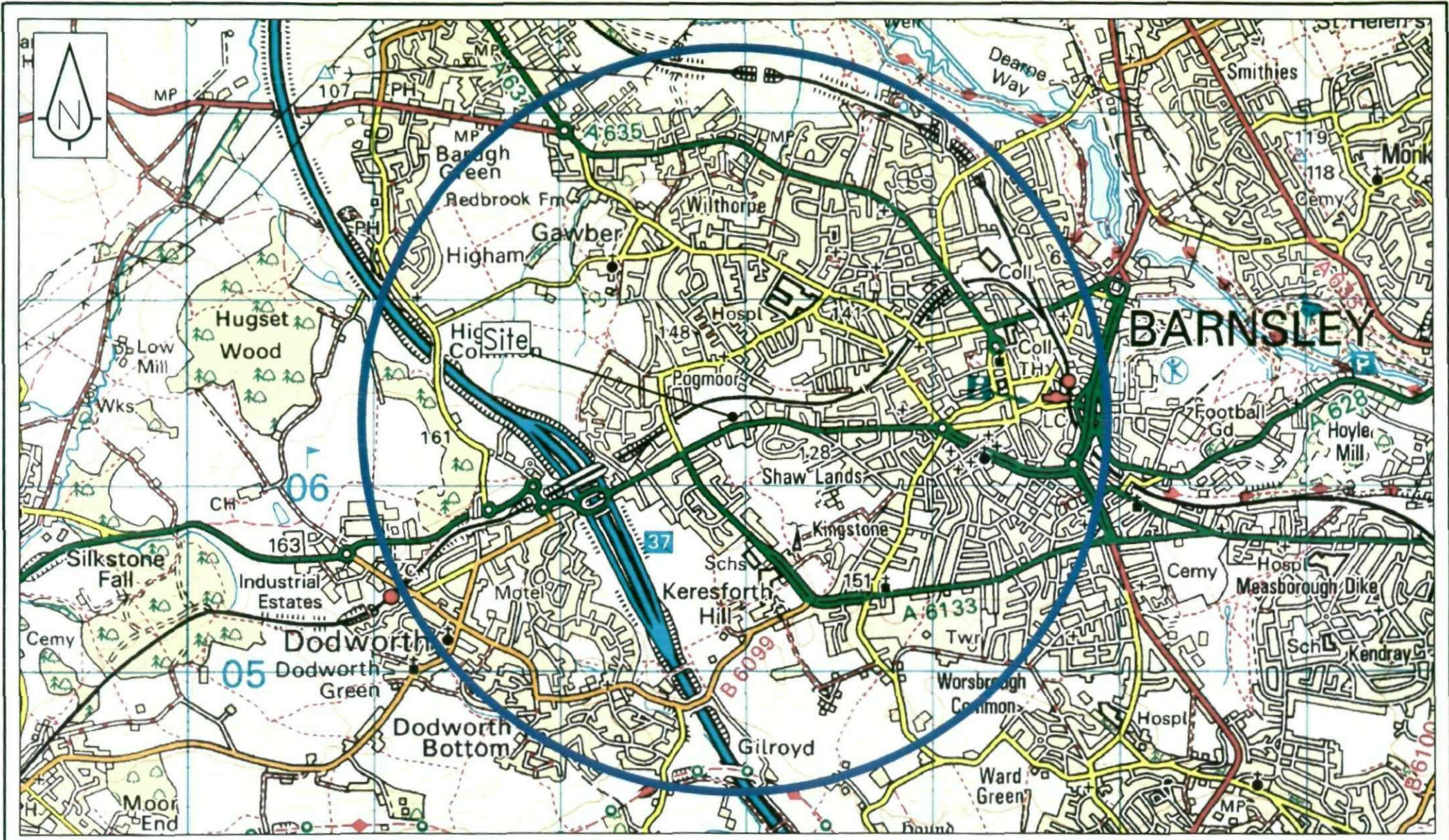


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Dodworth Road, Barnsley

Bus Stop Location Plan


Drawn AA	Scale NTS	
Checked KS	Date August 2010	
Approved KS	Drawing Number Figure 3	Size A4

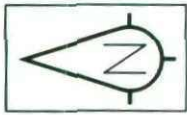
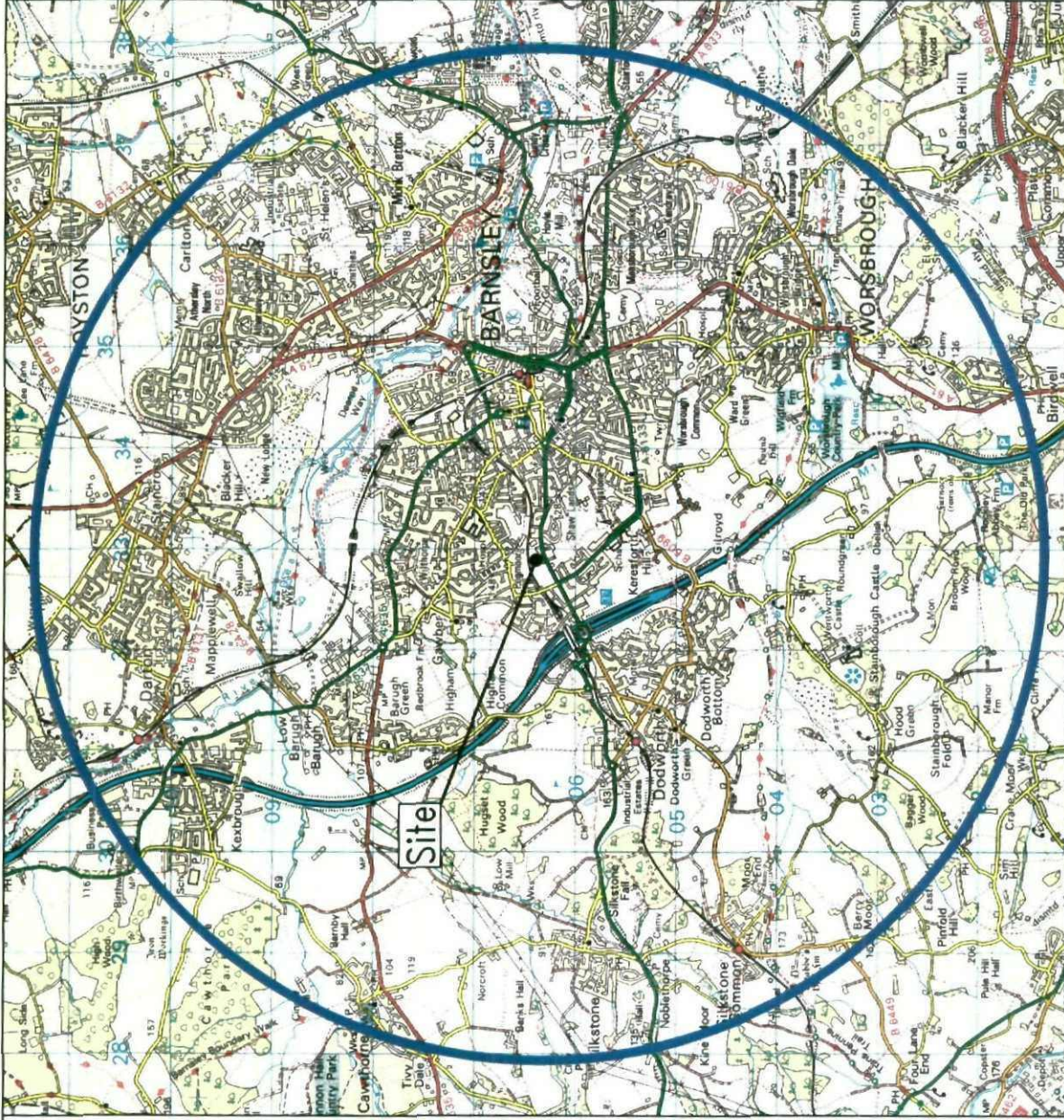



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Dodworth Road, Barnsley

2km Walking Radius Plan

Drawn AA	Scale NTS	 <small>QMS ISO 9001 REGISTERED FIRM</small>
Checked KS	Date August 2010	
Approved KS	Drawing Number Figure 4	Size A4



Q.M. S2 REG. NO. 1000 REGISTERED TRADE MARK	Scale	NTS
Drawn	AA	Checked
	KS	Approved
Date	August 2010	Drawing Number
	Figure 5	Size
		A4

5km Cycling Radius Plan

Dodworth Road, Barnsley


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APPENDICES

APPENDIX A

Radar Speed Survey Results



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SPEED SURVEY

Location Dodworth Road, Bamsley
Direction of Travel Eastbound Towards Bamsley

Job Number 5872
Date of Survey 19/08/10
Start Time 14:55
Finish Time 15:20

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

Number of Readings = 100

Dual C'way Y/N?

Mean Speed = 33.58

Single C'way Y/N?

Standard Deviation = 3.3247769

Wet Road Surface Y/N?

85 Percentile Speed = 36.904777

85 Percentile Wet Weather Speed = 34.419777 <<<<

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
Sanderson House, Jubilee Way, Huddersfield, WF4 4TD

Tel: 01924 844080
Fax: 01924 844081

SPEED SURVEY

Location Dodworth Road, Bamsley
Direction of Travel Westbound Towards M1

Job Number 5872
Date of Survey 19/08/10
Start Time 14:55
Finish Time 15:26

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

Number of Readings = 100

Dual C'way Y/N?

Mean Speed = 32.51

Single C'way Y/N?

Standard Deviation = 3.0566867

Wet Road Surface Y/N?

85 Percentile Speed = 35.566687

85 Percentile Wet Weather Speed = 33.081687 <<<<

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



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MAKING SOUTH YORKSHIRE ROADS SAFER

DRAWING TITLE	
Selected map area	
SCALE	1 : 1660
DATE	25/08/2010
DRAWING No.	
DRAWN BY	

Accidents between dates 01/01/2005 and 10/08/2010 (67) months
Selection: Notes:
Selected using Pre-defined Query : ; Refined using Pre-defined :

B-01159-05 23/08/2005 Tuesday Time:1740 Vehicles 2 Casualties 1 Slight
Easting: 433,188 Northing: 406,324
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed Limit: 30

Location: DODWORTH RD BARNSELY AT J/W GROSVENOR DRIVE
Description:V1 EMERGING FROM DRIVE IN BETWEEN STATIONARY TF, V2 OVERTAKING
STATIONARY TF COLL WITH V1.

Vehicle Reference1 Car Going ahead
First point of impact:Offside
Vehicle direction: N to E Journey: Other/Not known
Age of Driver : 50 Breath test:Not requested

Contributory Factors : 406 701

Vehicle Reference2 Motorcycle over 500cc Overtaking moving vehicle on its offside
First point of impact:Front
Vehicle direction: E to W Journey: Other/Not known
Age of Driver : 20 Breath test:Not requested

Contributory Factors : 406 701

Casualty Reference 1 Age:20 Male Driver/rider Severity:Slight
Ped Dir: Ped Movement : Not pedestrian
Ped Location:

Accidents between dates 01/01/2005 and 10/08/2010 (67) months
Selection: Notes:
Selected using Pre-defined Query : ; Refined using Pre-defined :

B-00822-06 21/06/2006 Wednesday Time:0955 Vehicles 3 Casualties 1 Slight
Easting: 432,857 Northing: 406,258
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: One way street Speed Limit: 30

Location: DODWORTH RD BARNESLEY 200 MTS FROM J/W POGMOOR RD
Description:V1 & V2 STATIONARY ON DODWORTH RD, V3 COLL WITH V2 PUSHING IT INTO V1.

Vehicle Reference1 Car Waiting to go ahead but held up
First point of impact:Back
Vehicle direction: E to W Journey: Commuting to/from work
Age of Driver : 35 Breath test:Negative

Contributory Factors : 405 308

Vehicle Reference2 Car Waiting to go ahead but held up
First point of impact:Back
Vehicle direction: E to W Journey: Commuting to/from work
Age of Driver : 44 Breath test:Negative

Contributory Factors : 405 308

Casualty Reference 1 Age:44 Female Driver/rider Severity:Slight
Ped Dir: Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference3 Car Slowing or Stopping
First point of impact:Front
Vehicle direction: E to W Journey: Commuting to/from work
Age of Driver : 21 Breath test:Negative

Contributory Factors : 405 308

AccsMap - Accident Analysis System

Accidents between dates 01/01/2005 and 10/08/2010 (67) months
 Selection: Notes:
 Selected using Pre-defined Query : ; Refined using Pre-defined :

B-01737-06 21/12/2006 Thursday Time:1415 Vehicles 2 Casualties 1 Slight
 Easting: 433,059 Northing: 406,324
 Fine without high winds Road Surface:Wet/Damp Daylight:street lights present
 Road Type: Single carriageway Speed Limit: 30

Location: DODWORTH RD BARNSELY

Description:V1 FLASHED FOR VEH ON RGT TO PULL OUT BUT V2 THOUGHT IT WAS FOR
 HER AND PULLED INTO PATH OF V1 AND COLL OCC.

Vehicle Reference1 Car Slowing or Stopping
 First point of impact:Front
 Vehicle direction: E to W Journey: Journey as part of work
 Age of Driver : 54 Breath test:Negative

Contributory Factors : 406

Vehicle Reference2 Car Moving off
 First point of impact:Nearside
 Vehicle direction: N to W Journey: Journey as part of work
 Age of Driver : 19 Breath test:Negative

Contributory Factors : 406

Casualty Reference 1 Age:19 Female Driver/rider Severity:Slight

Ped Dir: Ped Movement : Not pedestrian
 Ped Location:

AccsMap - Accident Analysis System

Accidents between dates 01/01/2005 and 10/08/2010 (67) months
 Selection: Notes:
 Selected using Pre-defined Query : ; Refined using Pre-defined :

B-00541-08 03/05/2008 Saturday Time:0320 Vehicles 2 Casualties 1 Slight
 Easting: 432,846 Northing: 406,247
 Fine without high winds Road Surface:Dry Darkness: street lights present and lit
 Road Type: Single carriageway Speed Limit: 30

Location: DODWORTH RD BARNSELY
 Description:V1 TV UP DODWORTH RD TW THE M1. V2 TV OPP DIRC,WAS STATIONARY
 WAITING TO TURN R ONTO GARAGE FORECOURT. V2 THEN TURNED R & COLL
 WITH V1.

Vehicle Reference1 Car Going ahead left hand bend
 First point of impact:Front
 Vehicle direction: S to N Journey: Commuting to/from work
 Age of Driver : 21 Breath test:Negative

Contributory Factors : 401 403 405

Casualty Reference 1 Age:21 Female Driver/rider Severity:Slight

Ped Dir: Ped Movement :
 Ped Location:

Vehicle Reference2 Car Turning right
 First point of impact:Front
 Vehicle direction: N to W Journey: Commuting to/from work
 Age of Driver : 43 Breath test:Negative

Contributory Factors : 401 403 405

Accidents between dates 01/01/2005 and 10/08/2010 (67) months
Selection: Notes:
Selected using Pre-defined Query : ; Refined using Pre-defined :

B-00247-09 01/03/2009 Sunday Time:0006 Vehicles 1 Casualties 1 Slight
Easting: 433,079 Northing: 406,327
Fine without high winds Road Surface:Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 30

Location: DODWORTH RD BARNSELY
Description:V1(FORD TRANSIT) TV ALONG DODWORTH RD. CAS 1 WAS FRONT SEAT PASS
AND AFTER ARGUMENT WITH THE DRIVER ALIGHTED MOVING VEH WITHOUT
REALISING HOW FAST THE VEH WAS TV.

Vehicle Reference1 Goods <= 3.5 tonnes mgw Going ahead
First point of impact:Did not impact
Vehicle direction:Parked to Parked Journey: Other/Not known
Age of Driver :26 Breath test:Driver not contacted

Contributory Factors : 806 808

Casualty Reference 1 Age:21 Male Passenger Severity:Slight
Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian
Ped Location:

Accidents between dates 01/01/2005 and 10/08/2010 (67) months
Selection: Notes:
Selected using Pre-defined Query : ; Refined using Pre-defined :

B-00256-10 01/03/2010 Monday Time:1520 Vehicles 2 Casualties 1 Slight
Easting: 432,891 Northing: 406,274
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed Limit: 30

Location: DODWORTH RD BARNSELY
Description:V2 TV IN SLOW MOVING TF. V1 FOLLOWING WHEN V1 COLL WITH REAR OF V2.

Vehicle Reference1 Car Going ahead
First point of impact:Front
Vehicle direction: NE to SW Journey: Other/Not known
Age of Driver : 18 Breath test:Negative
Contributory Factors : 408 405 203

Vehicle Reference2 Car Going ahead
First point of impact:Back
Vehicle direction: NE to SW Journey: Other/Not known
Age of Driver : 37 Breath test:Negative
Contributory Factors : 408 405 203

Casualty Reference 1 Age:37 Female Driver/rider Severity:Slight
Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian
Ped Location:

AccsMap - Accident Analysis System

Accidents between dates 01/01/2005 and 10/08/2010 (67) months
 Selection: Notes:
 Selected using Pre-defined Query : ; Refined using Pre-defined :

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only excluding 2-wheels	0	0	5	5
2-wheeled motor vehicles	0	0	1	1
Pedal cycles	0	0	0	0
Horses & other	0	0	0	0
Total	0	0	6	6

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	0	4	4
Passenger	0	0	1	1
Motorcycle rider	0	0	1	1
Cyclist	0	0	0	0
Pedestrian	0	0	0	0
Other	0	0	0	0
Total	0	0	6	6

Accidents between dates 01/01/2005 and 10/08/2010 (67) months

Selection: Notes:

Selected using Pre-defined Query : : Refined using Pre-defined
Query : District - (Barnsley) collisions

Police Ref.	Date	Cas.	Sev.	Cycs	Peds	Ch	OAPs	Vis.	Manv.	Road Cond.	Time	Location
B-01159-05	23/08/2005	1	Slight	0	0	0	0	Light	No turn	Dry	1740	DODWORTH RD BARNSELY AT J/W GROSVENOR DRIVE
B-00822-06	21/06/2006	1	Slight	0	0	0	0	Light	No turn	Dry	0955	DODWORTH RD BARNSELY 200 MTS FROM J/W POGMOOR RD
B-01737-06	21/12/2006	1	Slight	0	0	0	0	Light	No turn	Wet/Damp	1415	DODWORTH RD BARNSELY
B-00541-08	03/05/2008	1	Slight	0	0	0	0	Dark	Right	Dry	0320	DODWORTH RD BARNSELY
B-00247-09	01/03/2009	1	Slight	0	0	0	0	Dark	No turn	Dry	0006	DODWORTH RD BARNSELY
B-00256-10	01/03/2010	1	Slight	0	0	0	0	Light	No turn	Dry	1520	DODWORTH RD BARNSELY
Column Totals		6		0	0	0	0					
No. of Accidents				0	0	0	0					
Total number of accidents listed:		6										

Accidents between dates 01/01/2005 and 10/08/2010 (67) months

Selection: Notes:

Selected using Pre-defined Query : ; Refined using Pre-defined
Query : District - (Barnsley) collisions

Police Ref.	Acc Class	Date	Time	Grid References	Casualties			Causation Factors/ Prob	Ped		Weather	Road Surface	Vehicle Types
					Ftd	Ser	Sl		L	MD			
B-01159-05	Slight	23/08/2005	1740	433188 406324	0	0	1	406V002A 701V002A 0 0 0 0	0 0 0	Light	Fine without high winds	Dry	9 5
B-00822-06	Slight	21/06/2006	0955	432857 406258	0	0	1	405V003A 308V003A 0 0 0 0	0 0 0	Light	Fine without high winds	Dry	9 9 9
B-01737-06	Slight	21/12/2006	1415	433059 406324	0	0	1	406V002A 0 0 0 0 0	0 0 0	Light	Fine without high winds	Wet/Damp	9 9
B-00541-08	Slight	03/05/2008	0320	432846 406247	0	0	1	401V2A 403V2A 405V2A	0 0 0	Dark	Fine without high winds	Dry	9 9
B-00247-09	Slight	01/03/2009	0006	433079 406327	0	0	1	806C1A 808C1A	0 0 0	Dark	Fine without high winds	Dry	19
B-00256-10	Slight	01/03/2010	1520	432891 406274	0	0	1	408V1A 405V1A 203V1B	0 0 0	Light	Fine without high winds	Dry	9 9

Column Totals
No. of Accidents

Total number of accidents listed: 6

APPENDIX C

TRICS 2010 (b) Output - Houses Privately Owned

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLESSelected regions and areas:

01	GREATER LONDON	
	BN BARNET	1 days
	BT BRENT	1 days
	KN KENSINGTON AND CHELSEA	1 days
	SK SOUTHWARK	1 days
	WE WESTMINSTER	1 days
	WF WALTHAM FOREST	1 days
02	SOUTH EAST	
	BD BEDFORDSHIRE	2 days
	EX ESSEX	1 days
	HF HERTFORDSHIRE	1 days
	SC SURREY	1 days
03	SOUTH WEST	
	CW CORNWALL	2 days
	GS GLOUCESTERSHIRE	1 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	SF SUFFOLK	3 days
05	EAST MIDLANDS	
	LE LEICESTERSHIRE	1 days
	LN LINCOLNSHIRE	2 days
	NT NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	2 days
	ST STAFFORDSHIRE	1 days
	WM WEST MIDLANDS	3 days
	WO WORCESTERSHIRE	4 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	3 days
08	NORTH WEST	
	CH CHESHIRE	2 days
	LC LANCASHIRE	2 days
09	NORTH	
	CB CUMBRIA	3 days
	TV TEES VALLEY	1 days
	TW TYNE & WEAR	1 days
10	WALES	
	CF CARDIFF	3 days
	CP CAERPHILLY	1 days
	WR WREXHAM	1 days

OFF-LINE VERSION

Sanderson Associates (CE) Ltd. Jubilee Way Wakefield

Licence No: 311901

Filtering Stage 2 selection:

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

Public Transport Provision:

Selection by: Include all surveys

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

Selected survey days:

Monday	10 days
Tuesday	14 days
Wednesday	5 days
Thursday	14 days
Friday	7 days

Selected survey types:

Manual count	50 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	5
Suburban Area (PPS6 Out of Centre)	24
Edge of Town	21

Selected Location Sub Categories:

Residential Zone	35
Built-Up Zone	2
Out of Town	1
No Sub Category	12

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

MULTI-MODAL VEHICLES

Calculation factor: **1 DWELLS**

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	50	93	0.079	50	93	0.268	50	93	0.347
08:00 - 09:00	50	93	0.170	50	93	0.420	50	93	0.590
09:00 - 10:00	50	93	0.182	50	93	0.224	50	93	0.406
10:00 - 11:00	50	93	0.158	50	93	0.191	50	93	0.349
11:00 - 12:00	50	93	0.191	50	93	0.180	50	93	0.371
12:00 - 13:00	50	93	0.215	50	93	0.190	50	93	0.405
13:00 - 14:00	50	93	0.192	50	93	0.183	50	93	0.375
14:00 - 15:00	50	93	0.199	50	93	0.193	50	93	0.392
15:00 - 16:00	50	93	0.289	50	93	0.217	50	93	0.506
16:00 - 17:00	50	93	0.337	50	93	0.216	50	93	0.553
17:00 - 18:00	50	93	0.393	50	93	0.235	50	93	0.628
18:00 - 19:00	50	93	0.279	50	93	0.223	50	93	0.502
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:			2.684			2.740			5.424

Parameter summary

Trip rate parameter range selected: 10 - 363 (units:)
 Survey date range: 01/01/02 - 10/02/10
 Number of weekdays (Monday-Friday): 50
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

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

MULTI-MODAL CYCLISTS

Calculation factor: **1 DWELLS**

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	50	93	0.006	50	93	0.012	50	93	0.018
08:00 - 09:00	50	93	0.005	50	93	0.016	50	93	0.021
09:00 - 10:00	50	93	0.003	50	93	0.005	50	93	0.008
10:00 - 11:00	50	93	0.002	50	93	0.004	50	93	0.006
11:00 - 12:00	50	93	0.005	50	93	0.003	50	93	0.008
12:00 - 13:00	50	93	0.004	50	93	0.003	50	93	0.007
13:00 - 14:00	50	93	0.003	50	93	0.003	50	93	0.006
14:00 - 15:00	50	93	0.004	50	93	0.003	50	93	0.007
15:00 - 16:00	50	93	0.013	50	93	0.009	50	93	0.022
16:00 - 17:00	50	93	0.013	50	93	0.011	50	93	0.024
17:00 - 18:00	50	93	0.015	50	93	0.010	50	93	0.025
18:00 - 19:00	50	93	0.012	50	93	0.007	50	93	0.019
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:			0.085			0.086			0.171

Parameter summary

Trip rate parameter range selected: 10 - 363 (units:)
 Survey date range: 01/01/02 - 10/02/10
 Number of weekdays (Monday-Friday): 50
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

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

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: **1 DWELLS**

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	50	93	0.088	50	93	0.323	50	93	0.411
08:00 - 09:00	50	93	0.208	50	93	0.628	50	93	0.836
09:00 - 10:00	50	93	0.218	50	93	0.296	50	93	0.514
10:00 - 11:00	50	93	0.201	50	93	0.251	50	93	0.452
11:00 - 12:00	50	93	0.240	50	93	0.227	50	93	0.467
12:00 - 13:00	50	93	0.270	50	93	0.243	50	93	0.513
13:00 - 14:00	50	93	0.249	50	93	0.234	50	93	0.483
14:00 - 15:00	50	93	0.261	50	93	0.248	50	93	0.509
15:00 - 16:00	50	93	0.448	50	93	0.296	50	93	0.744
16:00 - 17:00	50	93	0.465	50	93	0.305	50	93	0.770
17:00 - 18:00	50	93	0.523	50	93	0.320	50	93	0.843
18:00 - 19:00	50	93	0.370	50	93	0.321	50	93	0.691
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:			3.541			3.692			7.233

Parameter summary

Trip rate parameter range selected: 10 - 363 (units:)
 Survey date date range: 01/01/02 - 10/02/10
 Number of weekdays (Monday-Friday): 50
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

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

MULTI-MODAL PEDESTRIANS

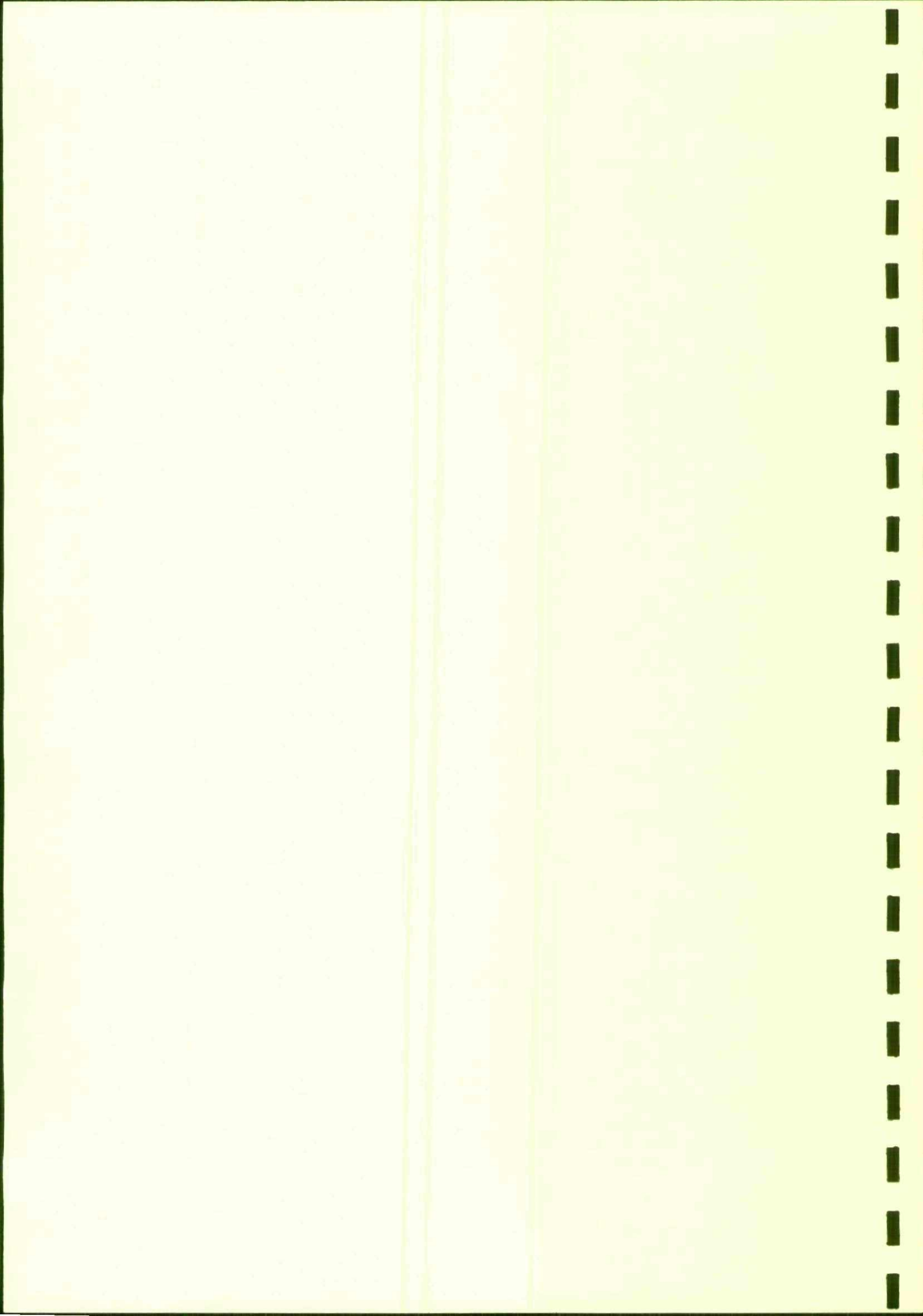
Calculation factor: **1 DWELLS**

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	50	93	0.026	50	93	0.058	50	93	0.084
08:00 - 09:00	50	93	0.050	50	93	0.195	50	93	0.245
09:00 - 10:00	50	93	0.053	50	93	0.067	50	93	0.120
10:00 - 11:00	50	93	0.034	50	93	0.060	50	93	0.094
11:00 - 12:00	50	93	0.050	50	93	0.050	50	93	0.100
12:00 - 13:00	50	93	0.054	50	93	0.046	50	93	0.100
13:00 - 14:00	50	93	0.052	50	93	0.054	50	93	0.106
14:00 - 15:00	50	93	0.046	50	93	0.054	50	93	0.100
15:00 - 16:00	50	93	0.168	50	93	0.077	50	93	0.245
16:00 - 17:00	50	93	0.093	50	93	0.061	50	93	0.154
17:00 - 18:00	50	93	0.081	50	93	0.057	50	93	0.138
18:00 - 19:00	50	93	0.067	50	93	0.061	50	93	0.128
19:00 - 20:00	1	29	0.069	1	29	0.034	1	29	0.103
20:00 - 21:00	1	29	0.034	1	29	0.000	1	29	0.034
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:			0.877			0.874			1.751

Parameter summary

Trip rate parameter range selected: 10 - 363 (units:)
 Survey date date range: 01/01/02 - 10/02/10
 Number of weekdays (Monday-Friday): 50
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0



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

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: **1 DWELLS**

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	50	93	0.002	50	93	0.021	50	93	0.023
08:00 - 09:00	50	93	0.008	50	93	0.036	50	93	0.044
09:00 - 10:00	50	93	0.007	50	93	0.011	50	93	0.018
10:00 - 11:00	50	93	0.005	50	93	0.010	50	93	0.015
11:00 - 12:00	50	93	0.008	50	93	0.011	50	93	0.019
12:00 - 13:00	50	93	0.006	50	93	0.009	50	93	0.015
13:00 - 14:00	50	93	0.007	50	93	0.008	50	93	0.015
14:00 - 15:00	50	93	0.007	50	93	0.008	50	93	0.015
15:00 - 16:00	50	93	0.013	50	93	0.009	50	93	0.022
16:00 - 17:00	50	93	0.016	50	93	0.006	50	93	0.022
17:00 - 18:00	50	93	0.019	50	93	0.006	50	93	0.025
18:00 - 19:00	50	93	0.012	50	93	0.006	50	93	0.018
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:			0.110			0.141			0.251

Parameter summary

Trip rate parameter range selected: 10 - 363 (units:)
 Survey date range: 01/01/02 - 10/02/10
 Number of weekdays (Monday-Friday): 50
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

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

MULTI-MODAL TOTAL PEOPLECalculation factor: **1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	50	93	0.122	50	93	0.414	50	93	0.536
08:00 - 09:00	50	93	0.270	50	93	0.875	50	93	1.145
09:00 - 10:00	50	93	0.280	50	93	0.378	50	93	0.658
10:00 - 11:00	50	93	0.243	50	93	0.324	50	93	0.567
11:00 - 12:00	50	93	0.302	50	93	0.291	50	93	0.593
12:00 - 13:00	50	93	0.334	50	93	0.301	50	93	0.635
13:00 - 14:00	50	93	0.311	50	93	0.299	50	93	0.610
14:00 - 15:00	50	93	0.318	50	93	0.313	50	93	0.631
15:00 - 16:00	50	93	0.642	50	93	0.391	50	93	1.033
16:00 - 17:00	50	93	0.587	50	93	0.383	50	93	0.970
17:00 - 18:00	50	93	0.638	50	93	0.393	50	93	1.031
18:00 - 19:00	50	93	0.461	50	93	0.395	50	93	0.856
19:00 - 20:00	1	29	0.069	1	29	0.034	1	29	0.103
20:00 - 21:00	1	29	0.034	1	29	0.000	1	29	0.034
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:			4.611			4.791			9.402

Parameter summary

Trip rate parameter range selected: 10 - 363 (units:)
 Survey date date range: 01/01/02 - 10/02/10
 Number of weekdays (Monday-Friday): 50
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

APPENDIX D

TRICS 2010 (b) Output – Car Showrooms

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 14 - CAR SHOW ROOMS
 Category : A - CAR SHOW ROOMS

VEHICLESSelected regions and areas:

01	GREATER LONDON	
	BM BROMLEY	1 days
	CN CAMDEN	1 days
02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	KC KENT	1 days
	SC SURREY	1 days
03	SOUTH WEST	
	DV DEVON	1 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	LE LEICESTERSHIRE	3 days
	NR NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
	WY WEST YORKSHIRE	2 days
08	NORTH WEST	
	GM GREATER MANCHESTER	2 days
	LC LANCASHIRE	2 days
09	NORTH	
	CB CUMBRIA	1 days
	TV TEES VALLEY	3 days
	TW TYNE & WEAR	1 days
11	SCOTLAND	
	AD ABERDEEN CITY	1 days
	PK PERTH & KINROSS	1 days
14	LEINSTER	
	WT WESTMEATH	1 days
15	GREATER DUBLIN	
	DL DUBLIN	1 days
17	ULSTER (NORTHERN IRELAND)	
	AN ANTRIM	2 days

Filtering Stage 2 selection:

Parameter: Site area
 Range: 0.16 to 2.00 (units: hect)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/02 to 16/11/09

Selected survey days:

Monday	4 days
Tuesday	8 days
Wednesday	6 days
Thursday	6 days
Friday	9 days

Selected survey types:

Manual count	33 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	15
Edge of Town	15
Neighbourhood Centre (PPS6 Local Centre)	1

Selected Location Sub Categories:

Industrial Zone	8
Commercial Zone	6
Residential Zone	6
Built-Up Zone	4
No Sub Category	9

Filtering Stage 3 selection:Use Class:

Sui Generis	33 days
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Population within 1 mile:

1,001 to 5,000	5 days
5,001 to 10,000	5 days
10,001 to 15,000	7 days
15,001 to 20,000	4 days
20,001 to 25,000	3 days
25,001 to 50,000	8 days
50,001 to 100,000	1 days

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	2 days
50,001 to 75,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	2 days
125,001 to 250,000	10 days
250,001 to 500,000	11 days
500,001 or More	5 days

Sanderson Associates (CE) Ltd Jubilee Way, Grange Moor Huddersfield

Licence No: 311901

Filtering Stage 3 selection (Cont.):

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	19 days
1.1 to 1.5	10 days
1.6 to 2.0	3 days

Travel Plan:

Not Known	1 days
Yes	1 days
No	31 days

TRIP RATE for Land Use 14 - CAR SHOW ROOMS/A - CAR SHOW ROOMS

VEHICLES

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate
00:00 - 01:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
01:00 - 02:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
02:00 - 03:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
03:00 - 04:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
04:00 - 05:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
05:00 - 06:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
06:00 - 07:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
07:00 - 08:00	17	0.69	13.520	17	0.69	2.806	17	0.69	16.326
08:00 - 09:00	33	0.58	36.839	33	0.58	12.850	33	0.58	49.689
09:00 - 10:00	33	0.58	28.705	33	0.58	20.415	33	0.58	49.120
10:00 - 11:00	33	0.58	26.788	33	0.58	25.440	33	0.58	52.228
11:00 - 12:00	33	0.58	24.249	33	0.58	26.373	33	0.58	50.622
12:00 - 13:00	33	0.58	26.166	33	0.58	26.788	33	0.58	52.954
13:00 - 14:00	33	0.58	26.995	33	0.58	24.404	33	0.58	51.399
14:00 - 15:00	33	0.58	25.907	33	0.58	27.720	33	0.58	53.627
15:00 - 16:00	33	0.58	25.026	33	0.58	27.358	33	0.58	52.384
16:00 - 17:00	33	0.58	21.036	33	0.58	26.321	33	0.58	47.357
17:00 - 18:00	33	0.58	13.679	33	0.58	32.902	33	0.58	46.581
18:00 - 19:00	31	0.59	4.130	31	0.59	11.304	31	0.59	15.434
19:00 - 20:00	14	0.52	3.051	14	0.52	6.380	14	0.52	9.431
20:00 - 21:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
21:00 - 22:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
22:00 - 23:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
23:00 - 24:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
Total Rates:			276.091			271.061			547.152

Parameter summary

Trip rate parameter range selected: 0.16 to 2.00 (units: hect)
 Survey date date range: 01/01/02 - 16/11/09
 Number of weekdays (Monday-Friday): 33
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

PLANS

1. Proposed Layout Plan - QAD Architects

2. 5872/001 - Access Layout & Visibility Splays

3. 5872/002 – Swept Path Analysis