sanderson

Highways, Transportation & Water

Sanderson Associates (Consulting Engineers) Ltd, Sanderson House
Jubilee Way, Grange Moor, Huddersfield, West Yorkshire WF4 4TD
T 01924 844080
F 01924 844081
mail@sandersonassociates.co.uk
www sandersonassociates.co.uk

Prepared for
Oakwell Community Assets Ltd

Proposed Residential Development
Land at Grove Street
Barnsley

Highway Statement

Report Ref:	6451/KS/001/01		December 2011
Author:	Karen Smith		
Checked & Approved:		**Date:**	21 December 2011

Directors
A J France IEng FIHE AMICE MCIHT
C R France

Associate Directors
P Maurice BEng (Hons) CEng MICE
R Greenwood IEng FIHE
D Colley BEng MCIHT
J McKellar GradIHE

VAT No. GB 873219218
Company No. 3235830
Registered Office
Sanderson House, Jubilee Way
Grange Moor WF4 4TD

QMS ISO 9001 REGISTERED FIRM

IHE

Contents

Page No

1 Introduction 4
2 Existing Situation 5
3 Proposed Development 6
4 Sustainable Transport 8
5 Multi Modal Trip Generation 13
6 Traffic Impact Assessment 15
7 Conclusion 16

Appendices

APPENDIX A

Figure 1 Site Location Plan

Figure 2 2km Walking Radius Plan

Figure 3 5km Cycling Radius Plan

Figure 4 Bus stop Location Plan

APPENDIX B

Architects Plan C1536-02A

Architects Plan C1536-04

SA drawing 6451-001

APPENDIX C

TRICS Data

Contents

Page No

1 Introduction 4
2 Existing Situation 5
3 Proposed Development 6
4 Sustainable Transport 8
5 Multi Modal Trip Generation 13
6 Traffic Impact Assessment 15
7 Conclusion 16

Appendices

APPENDIX A

Figure 1 Site Location Plan

Figure 2 2km Walking Radius Plan

Figure 3 5km Cycling Radius Plan

Figure 4 Bus stop Location Plan

APPENDIX B

Architects Plan C1536-02A

Architects Plan C1536-04

SA drawing 6451-001

APPENDIX C

TRICS Data

1 Introduction

1.1 Sanderson Associates (CE) Ltd have been appointed by Oakwell Community Assets Ltd to prepare this Highway Statement in support of a detailed planning application for the erection of 12 dwellings on land at Grove Street, Barnsley and replacement parking for Barnsley Football Club. **Figure 1 (Appendix A)** details the location of the site.

1.2 For the purpose of this assessment the site has been visited on several occasions to both observe how the site functions when in full match-day operation and on a day-to-day basis. Observations have also been made of the operation of the highway network in the vicinity of the site and to assess the scale and impact of on-street parking associated with the site on match days.

1.3 The methodology adopted and the sources of information used by Sanderson Associates in providing its services are outlined in this Report. The work described in this report was undertaken between October and December 2011 and is based on the conditions encountered and the information available during the said period of time. The scope of this Report and the services are accordingly factually limited by these circumstances.

2 Existing Situation

2.1 The development site fronts Grove Street which is situated some 600 metres east of Barnsley Town Centre and currently forms part of the south car park of the Oakwell Stadium, home ground of Barnsley Football Club.

2.2 The site is currently laid out as car parking for general supporters (a charge of £3.00 is made) guests, club concessions and staff. The car park markings are laid out in a "tramline" arrangement to maximise occupancy. The south car park is accessed direct from Grove Street via the main stadium entrance.

2.3 Egress from the existing car park is via two designated points one direct to Pontefract Road and a second to Grove Street both at the southern end of a car park.

2.4 On match days vehicle movements are assisted by marshals to minimise conflict with pedestrians and to control vehicle flow onto the highway network.

2.5 As part of the assessment of the development proposals and in the preparation of this report a detailed survey of the car parking arrangements has been undertaken. The survey was undertaken by Nationwide Data Collection (NDC) on Saturday 19th November 2011 which was a match day between Barnsley FC and Doncaster Rovers.

2.6 The car park was surveyed during the game once all the fans had parked up and a total of 470 parked vehicles were recorded, leaving approximately 94 available spaces. This gives an approximate total of 564 parking spaces within the south car park, excluding the dedicated disabled parking area which remains unaffected by the development proposals.

3 Proposed Development

3.1 The development proposals consist of the erection of 12 dwellings at land off Grove Street Barnsley and replacement parking for the Club within the Oakwell Stadium boundary. The proposals also incorporate appropriate parking for residents. The proposed site layout is as detailed on **Drawing Number C1536-02B** prepared by Designmix Architects, which is attached at the rear of this report at **Appendix B**.

3.2 Vehicle access to the residential site will be provided direct from Grove Street via three separate access points each serving 4 dwellings. The accesses will allow vehicles to enter and exit in all directions. The widths of the accesses have been kept as narrow as possible at the tangent points to minimise the pedestrian crossing distance.

3.3 It is proposed to erect the dwellings on the south-western section of the Football Club's existing southern car park. As such the remaining car parking areas within the south car park have been reconfigured and working on the basis of each car occupying on average 5.0 metres each the proposed south car park layout will accommodate 383 spaces. The proposed residential development will, therefore, result in a net loss of 181 parking spaces.

3.4 To accommodate the loss of these spaces it is proposed to provide a replacement car park to the north east of the stadium which is capable of accommodating 194 spaces. The proposed car parking layout is as detailed on Sanderson Associates **Drawing 6451-001** and **Drawing C1536-04** prepared by Designmix Architects, attached at the rear of this report in **Appendix B**.

3.5 It is proposed to access this car park via the existing access road known as Beevor Court, off Pontefract Road some 325 metres further east along Pontefract Road (A628). This access is already utilised on match days and marshals are present at the entrance gates directing traffic upon its arrival to the ground.

3.6 Further marshals will be deployed within the proposed replacement parking area to guide drivers into the appropriate sections. Drivers will enter the site from the access on the north-western corner of the site and will then travel south and then east to park in the tramlines set out.

3.7 The car park will be filled in such a manner that all vehicles will be facing to the north-east for ease of egress and to also maximise the number of vehicles that are able to be accommodated. Vehicles will be directed to fill the car park from the north-east down to the south-east on a row-by-row basis.

3.8 Upon exiting the site drivers will be marshalled back towards the Beevor Court access where they will rejoin the main highway network at the junction with Pontefract Road.

3.9 Footways are present along Beevor Court from the stadium which will minimise conflict between vehicles and pedestrians.

3.9.1 With regards to parking provision for the proposed residential development Barnsley Council's car parking standards for new developments are contained within their Supplementary Planning Document, adopted in March 2005. Car parking guidelines are categorised into planning use classes and expressed in terms of the number of spaces required per dwelling and m^2 of GFA.

3.9.2 For housing the standards are in accordance with PPG 3, where the allowable maximum parking level is 1.5 spaces per dwelling.

3.9.3 Using this guidance it has been established that the **maximum** level of parking for the development would be 18 spaces. However, it is proposed to provide only 12 spaces, i.e. 1 per dwelling.

3.9.4 It is, therefore, considered that this level of parking is in accordance with the standards set by the Council in that parking is not being over provided. This takes into consideration the sites proximity to Barnsley Town Centre which is a major employment centre and also has access to extensive public transport services.

4 Sustainable Transport

4.1.1 In order to accord with the aspirations of Planning Policy Guidance Note 13, any new proposals should extend the choice in transport and secure mobility in a way that supports sustainable development.

4.1.2 This section of the report considers the accessibility of the development by the following modes of transport.

- Accessibility on foot;
- Accessibility by cycle;
- Accessibility by public transport – bus and rail;

4.1.3 The non-car accessibility of the site is important to provide a viable alternative to the private car when considering the travel options for future residents.

4.2 Accessibility on Foot

4.2.1 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 and pollution, and the need for car parking. 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 them a greater connection with their surroundings and can have positive benefits in relation to a community's security through increased surveillance.

4.2.2 Walking stimulates both personal health and the health of communities and local economies and is promoted in PPS1. Government health improvement advice states that just 30 minutes brisk walking 5 times a week can bring about significant reductions in the risk of coronary heart disease, high blood pressure and diabetes.

4.2.3 Finally Planning Policy Guidance Note PPG 13 identifies that walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips in journeys under 2km. **Figure 2 (Appendix A)** provides a 2km walking radius from the site.

4.2.4 There are pedestrian facilities already in the vicinity of the site in the form of footways and dropped kerbs at appropriate junctions. Street lighting is also present to the appropriate standard.

4.2.5 Barnsley Town Centre is located approximately 600m from the site within an acceptable walking distance. Pontefract Road via Grove Street provides a direct pedestrian route from the site to the Town Centre. Wide footways are provided on both sides of the carriageway giving residents a realistic option of walking to the centre.

4.2.6 The IHT publication "Guidelines for Planning for Public Transport in Developments" identifies maximum walking distances to bus stops as 400m with 300m desirable and 800m to a rail connection.

4.2.7 Bus stops are located along Pontefract Road less than 150m from the site. The bus stops are readily accessible using the existing footways and are well within the desirable recommended walking distance identified in the IHT guidance.

4.3 Accessibility on Cycle

4.3.1 Like walking, cycling has an important part to play in reducing congestion improving accessibility and reducing pollution. Planning Policy Guidance PPG 13, states that cycling has the potential to substitute for short car trips, particularly those less than 5km. Details of the 5km catchment can be seen on **Figure 3 (Appendix A).**

4.3.2 The site is located close to Barnsley Town Centre and to other existing retail, leisure and employment centres which will allow future residents and customers to cycle to the site.

4.3.3 In relation to the application site; cycling distances from local residential centres within 5km, along with the corresponding cycle time based on 12 km per hour are as follows.

Origin/Destination	Distance	Time
Barnsley Town Centre	0.6km	3 minutes
Barnsley Interchange	0.7km	3½ minutes
Monk Bretton	2.1km	10½ minutes
Worsbrough Dale	2.3km	11½ minutes
Dodworth	3.8km	19 minutes
Birdwell	4.4km	22 minutes
Cudworth	4.7km	23½ minutes
Darton	4.8km	24 minutes

4.3.4 The dwellings within the site are accessible by bicycle and residents will be able to store their bicycles within the boundary of their property.

4.4 Bus Travel

4.4.1 There are bus stops located within close proximity to the site. A shelter with seating and timetable information is provided along Pontefract Road and a pole stop with timetable information is provided on the opposite side of the carriageway. These services are located within 150m of the site. **Figure 4 (Appendix A)** details the location of these stops.

4.4.2 A summary of the existing available services from these stops is set out in the table overleaf:-

Summary of services along York Road		Frequency		
Route Number	Overall Route	Daytime Frequency (Mon - Sat)	Evening Frequency (Mon – Sat)	Sunday Frequency
32	Barnsley - Lundwood - Cudworth	15	60	60
33/33A	Barnsley - Cudworth - Grimethorpe - Great Houghton - Darfield - Wombwell	60	60	60
34	Barnsley - Monk Bretton - Athersley - Carlton - Shafton - Cudworth - Lundwood	60	60	No service
35/35B	Barnsley - Cudworth - Shafton - Grimethorpe - Brierley - Hemsworth - Pontefract	30	60	60
36	Barnsley - Cudworth - Shafton - Grimethorpe - Brierley - South Elmsall	60	60	60
37	Barnsley - Lundwood - Cudworth - Shafton - Grimethorpe - Brierley	60	No service	No service
38/38A	Barnsley - Lundwood - Cudworth - Shafton - Grimethorpe - Brierley - Hemsworth	60	No service	No service
46	Barnsley - Cudworth - Shafton - Brierley - Hemsworth - South Elmsall - Upton - Pontefract	60	60	No service
47	Barnsley - Cudworth - Shafton - Brierley - Hemsworth - South Elmsall - Upton	60	60	No service
48	Barnsley - Lundwood - Cudworth - Shafton - Brierley - Hemsworth	Mon – Fri 2 services at 14:16 & 15:46		

Table 1 – Summary of available bus services.

4.4.3 As can be seen from the above, there are a number of services providing access to the local and wider area. As such it is considered that residents have a very realistic opportunity to utilise local bus services as a means of travel. It can also be seen that there is a frequent service available connecting to Barnsley. Barnsley Interchange is located approximately 700m to the west of the site and offers an even wider range of district and local destinations.

4.5 Rail Travel

4.5.1 The closest train station to the development site is Barnsley Railway Station located approximately 0.7km west of the site, within acceptable walking distance of the site.

4.5.2 The station is a mainline fully staffed station that is under the management of Northern Rail. The station provides services to Leeds - Sheffield - Huddersfield - Nottingham and other local areas.

4.5.3 The station has sheltered seating areas, ticket counter, vending machine, waiting area and cycle parking facilities.

4.5.4 Cycle parking is provided at the station, this makes it possible for residents to access the station by bicycle.

4.5.5 For residents that do not have the opportunity to cycle, all the above bus services can be caught from the bus stop on Pontefract Road. This services stops at the interchange and the bus journey takes approximately 2 minutes.

4.6 Accessibility Summary

4.6.1 It is considered that the site has particularly good access by both "active transport" to the adjacent catchment area, other local facilities and to public passenger transport arrangements. As such, residents of the development will have a realistic choice of sustainable travel options.

5 Multi Modal Trip Generation

5.1 In order to give an indication of the predicted modal split the TRICS 2011 (b) database has been utilised to predict the likely total person trips generated by the development.

5.2 The TRICS Category 03 – Residential – A – Housing Privately Owned has been used to predict the Total Person Trips generated by the proposed development. Location categories of town centre, edge of town centre, suburban area and edge of town are listed in the TRICS User Guide as being possibly compatible and are considered appropriate in this instance. The regions of Greater London and Ireland have been omitted from this search.

5.3 Weekday AM and PM periods have been assessed for the residential trip rates and the full TRICS data is contained within **Appendix C** at the rear of this report with the total person trip rates shown in the table below:-

Housing Privately Owned Total Person Trip Rates	Arrivals (per dwelling)	Departures (per dwelling)	2-way (per dwelling)
Weekday AM Peak 08:00-09:00	0.302	0.950	1.252
Weekday PM Peak 16:00-17:00	0.741	0.496	1.237

Table 2 – Total Person Trip Rates

5.4 The above rates have been used to predict the total number of "trips" to and from the site. The table below provides the predicted trips for the proposed 12 dwellings.

Housing Privately Owned 12 Dwellings Total Person Trips	Arrivals	Departures	2-way
Weekday AM Peak 08:00-09:00	4	11	15
Weekday PM Peak 16:00-17:00	9	6	15

Table 3 – Total Person Trips

5.5 The following tables summarise the modal split of the total person trips predicted in connection with the proposed development:

Weekday AM Peak Hour Modal Split	2-Way Trip Rate	% Split	No of Trips
Pedestrians	0.295	23.5	4
Cyclist	0.051	4.1	1*
Public Transport Users	0.022	1.7	1*
Total Vehicle Occupants	0.885	70.7	11
Total	1.252	100.0	15

Table 4 - Proposed Number of Two-Way Trips Weekday AM *minimum value of 1

Weekday PM Peak Hour Modal Split Person Trip Rates	2-Way Trip Rate	% Split	No of Trips
Pedestrians	0.194	15.7	2
Cyclist	0.036	2.9	1*
Public Transport Users	0.007	0.6	1*
Total Vehicle Occupants	1.000	80.8	12
Total	1.237	100.0	15

Table 5 - Proposed Number of Two-Way Trips Weekday PM *minimum value of 1

5.6 It is considered that the modal split predicted in the tables above can be satisfactorily accommodated within the existing infrastructure. It should also be noted that due to the site being in such a sustainable location, that it is likely that there will be a higher amount of public transport users and a lower value of vehicle occupants compared to the calculated trips.

6 Traffic Impact

6.1 The TRICS 2011 (b) database has also been utilised to predict the likely level of traffic generated by the development.

6.2 The TRICS Category 03 – Residential – A – House Privately Owned has been used to predict the Vehicle Trips generated by the proposed development. Location categories of town centre, edge of town centre, suburban area and edge of town are listed in the TRICS User Guide as being possibly compatible and are considered appropriate in this instance. The regions of Greater London and Ireland have been omitted from this search.

6.3 Weekday AM and PM periods have been assessed for the residential trip rates and the full TRICS data is contained within **Appendix C** at the rear of this report with the vehicle trip rates shown in the table below:-

Housing Privately Owned Vehicles Trip Rates	Arrivals (per dwelling)	Departures (per dwelling)	2-way (per dwelling)
Weekday AM Peak 08:00-09:00	0.209	0.432	0.641
Weekday PM Peak 16:00-17:00	0.410	0.266	0.676

Table 6 – Vehicle Trip Rates

6.4 The above rates have been used to predict the total number of vehicular "trips" to and from the site. The table below provides the predicted trips for the proposed 12 dwellings.

House Privately Owned 12 Dwellings	Arrivals	Departures	2-way
Weekday AM Peak 08:00-09:00	3	5	8
Weekday PM Peak 16:00-17:00	5	3	8

Table 7 – Vehicle Trips

6.5 As can been seen from the above table the proposed development is likely to generate only a minimal amount of traffic during the AM and PM peak hours and less at other times of the day. It is, therefore, considered that this will have a modest impact on the local highway network and would not be generally discernable from fluctuations in daily traffic flow.

7 Conclusion

7.1 Sanderson Associates (CE) Ltd have been appointed by Oakwell Community Assets Ltd to prepare this Highway Statement in support of a detailed planning application for the erection of 12 dwellings on land at Grove Street, Barnsley and replacement parking for Barnsley Football Club..

7.2 The scope of development comprises the erection of 12 dwellings with associated parking as appropriate to the various guidance documents issued by Barnsley Council and a replacement car park for use by the football club.

7.3 It is proposed to erect the dwellings on part of the existing Barnsley Football grounds southern car park. The proposed development will result in a net loss 181 existing parking spaces within this car park.

7.4 To accommodate the loss of these spaces it is proposed to provide a 194 space car park to the north east of the stadium. The proposed car parking layout is as detailed on **Drawing 6451-001**.

7.5 A detailed assessment has been undertaken with regards to the sustainability of the site. There are bus stops very close to the site giving access to several locations including Barnsley Centre where connections are available to an extensive range of destinations by public transport.

7.6 With the existing public transport provision available close to the site will be more than capable of accommodating the levels of activity predicted in the multi modal assessment which has been undertaken.

7.7 The proposed development is likely to generate only a minimal amount of traffic during the AM and PM peak hours. It is, therefore, considered that this will have a modest impact on the local highway network and would not be generally discernable from fluctuations in daily traffic flow.

7.8 It is therefore, concluded that there are no highway related reasons why this development should not proceed.

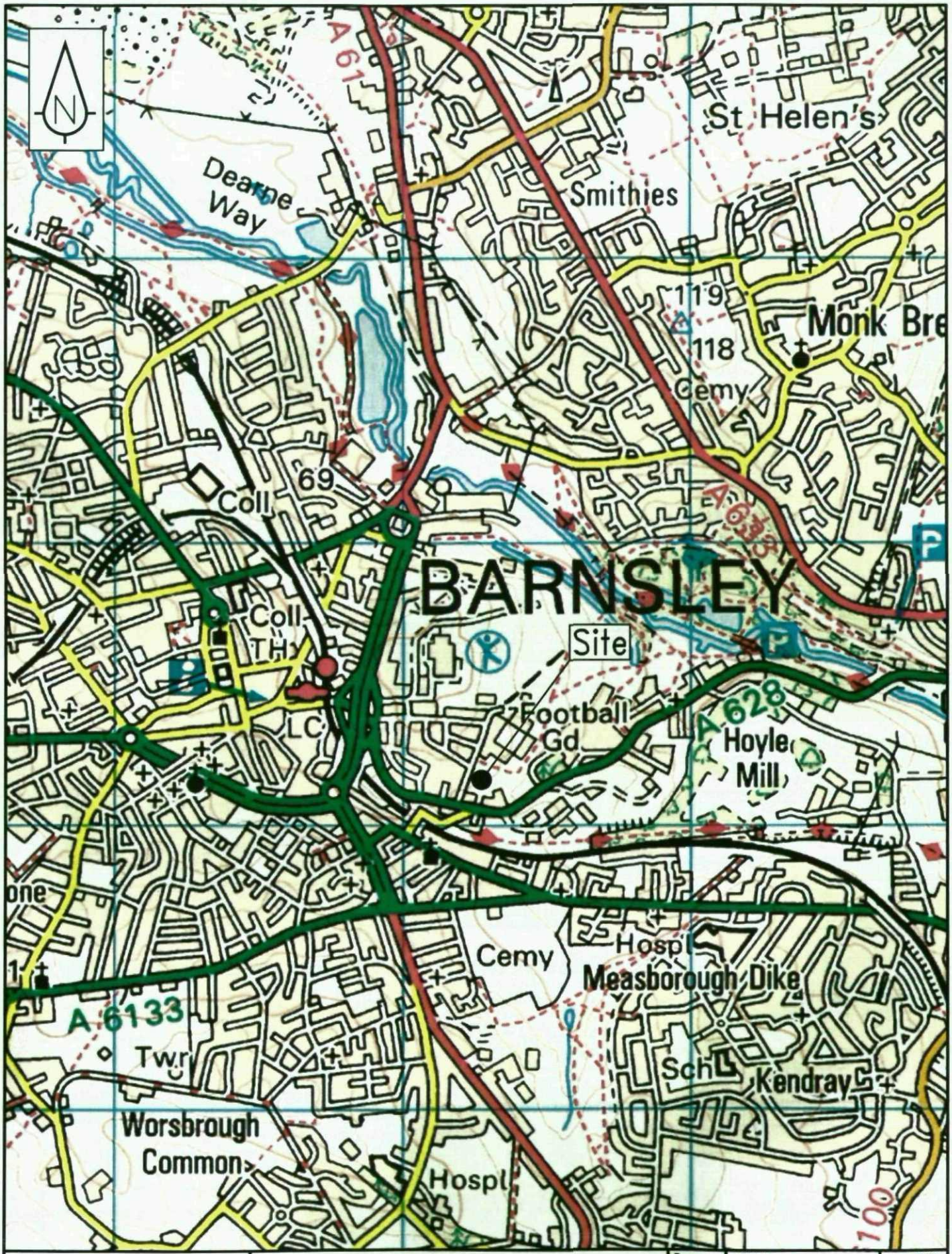
APPENDIX A

Figure 1 Site Location Plan

Figure 2 2km Walking Radius Plan

Figure 3 5km Cycling Radius Plan

Figure 4 Bus stop Location Plan



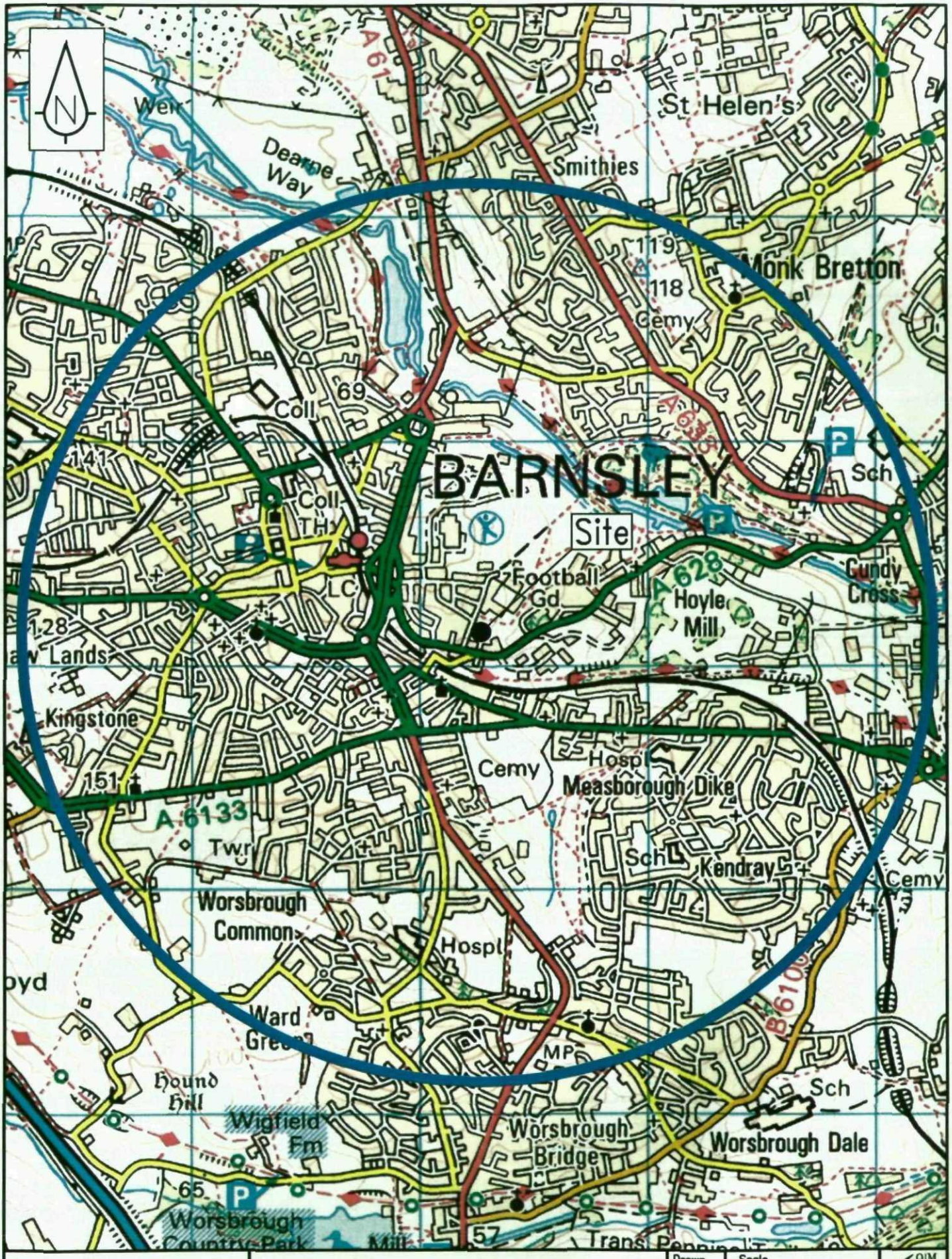
sanderson associates (consulting engineers) ltd
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
F 01924 844081 www.sandersonassociates.co.uk

Site Location Plan

Land at Grove Street, Barnsley

Drawn	Scale	
AA	NTS	QMS ISO 9001 REGISTERED FIRM
Checked	Date	
KS	December 2011	
Approved	Drawing Number	Size
KS	Figure 1	A4

© Copyright Sanderson Associates (CE) Ltd.



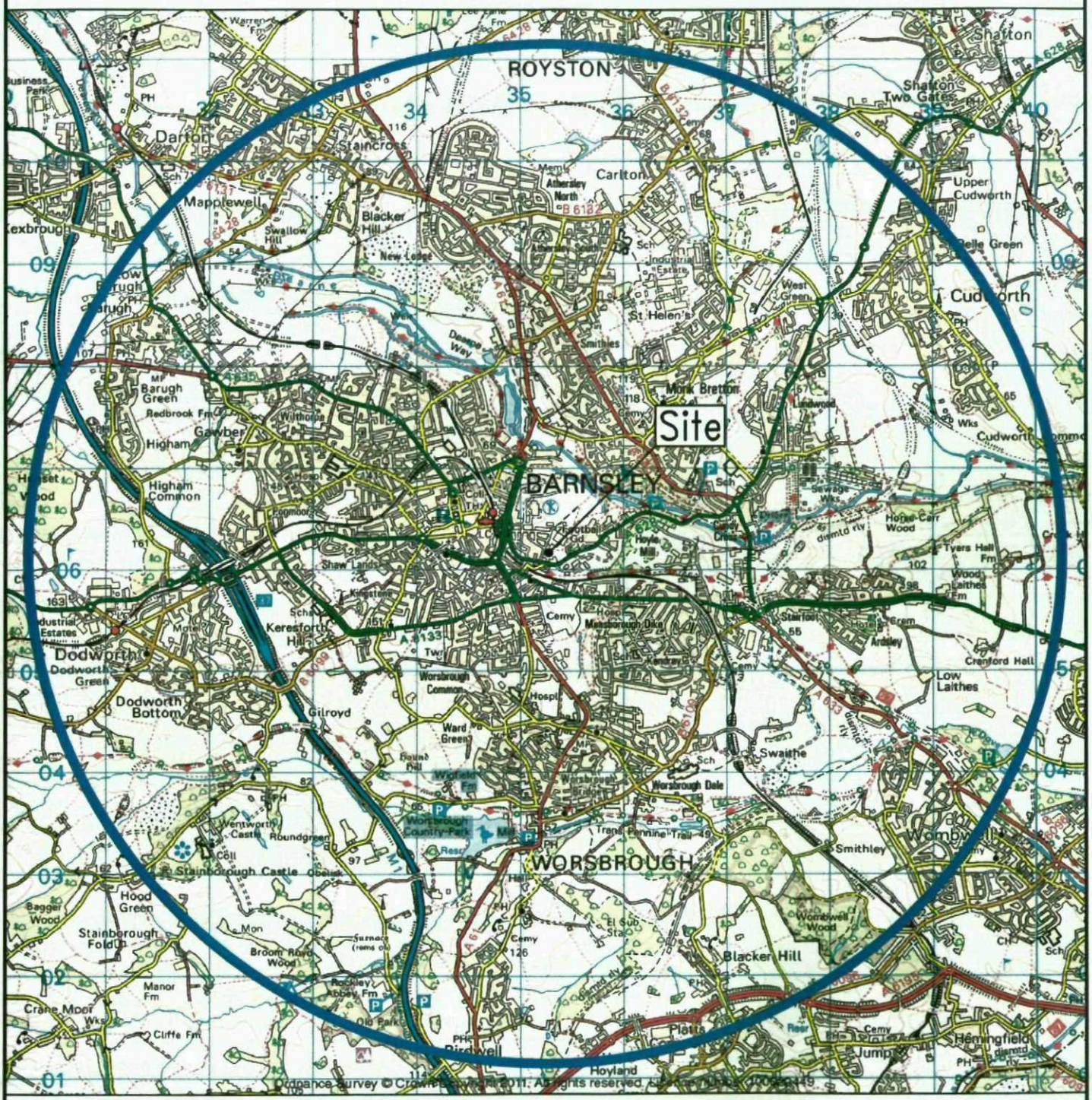
sanderson associates (consulting engineers) ltd
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
F 01924 844081 www.sandersonassociates.co.uk

2km Walking Radius Plan

Land at Grove Street, Barnsley

Drawn	Scale	
AA	NTS	QIM S ISO 9001 REGISTERED FIRM
Checked	Date	
KS	December 2011	
Approved	Drawing Number	Size
KS	Figure 2	A4

© Copyright Sanderson Associates (CE) Ltd.



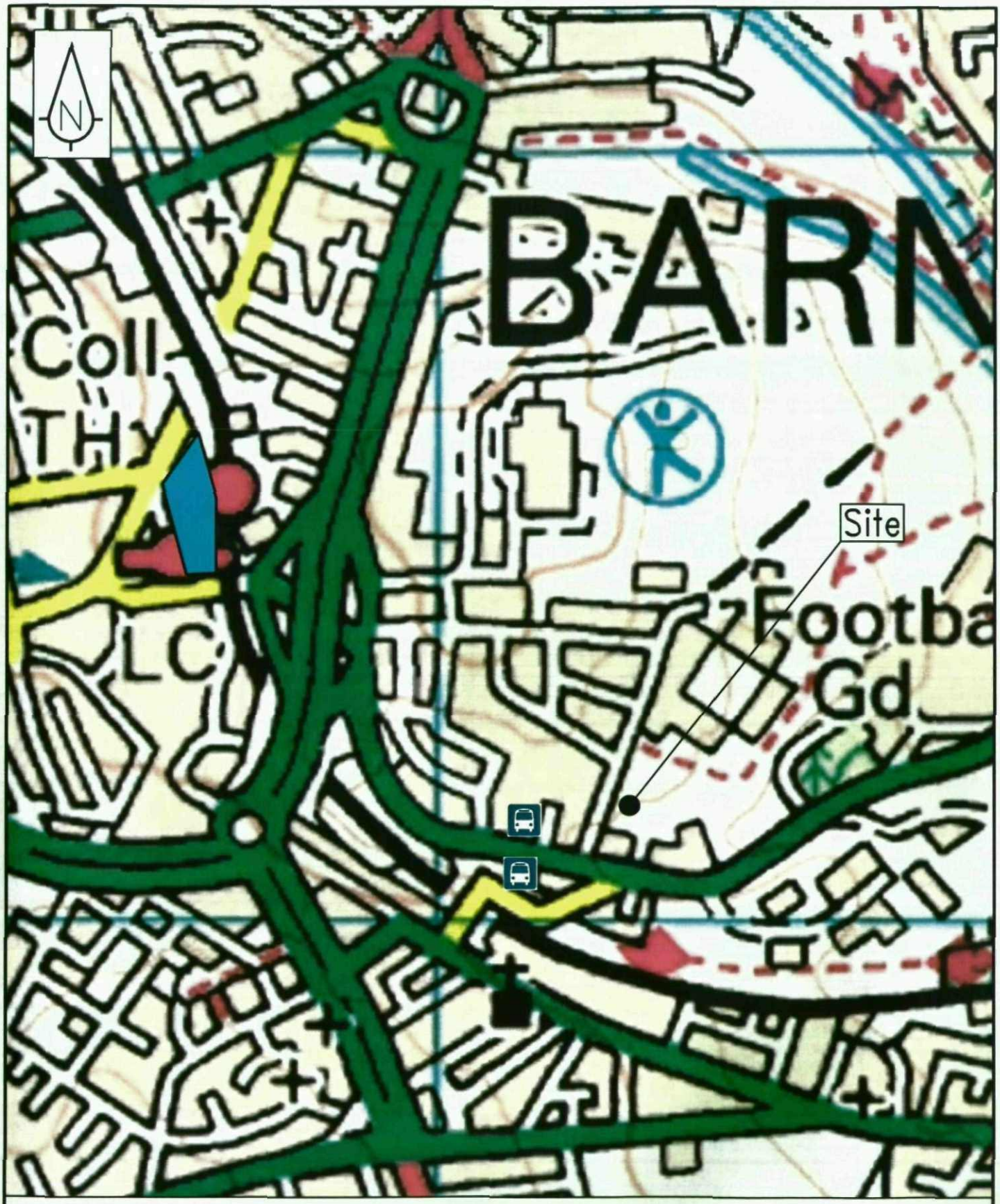
sanderson associates (consulting engineers) ltd
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
F 01924 844081 www.sandersonassociates.co.uk

5km Cycling Radius Plan

Land at Grove Street, Barnsley

Drawn AA	Scale NTS	QIM S ISO 9001 REGISTERED FIRM	
Checked KS	Date December 2011		
Approved KS	Drawing Number Figure 3	Size A4	

© Copyright Sanderson Associates (CE) Ltd.



Barnsley Interchange

Bus stop

sanderson associates (consulting engineers) ltd
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
F 01924 844081 www.sandersonassociates.co.uk

Bus Stop Location Plan

Land at Grove Street, Barnsley

Drawn	Scale	
AA	NTS	QMS ISO 9001 REGISTERED FIRM
Checked	Date	
KS	December 2011	
Approved	Drawing Number	Size
KS	Figure 4	A4

© Copyright Sanderson Associates (CE) Ltd.

APPENDIX B

Architects Plan C1536-02A

Architects Plan C1536-04

SA drawing 6451-001

194 spaces

Rev	Amendment	Drawn	Date	Checked

sanderson® associates (consulting engineers) ltd
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
F 01924 844081 www.sandersonassociates.co.uk

Project Name

Proposed Residential Development Land at Grove Street, Barnsley

Drawing Title

Proposed Replacement Car Park Layout

Scale 1:500	Drawn By AA
Drawing Size A3	Checked By KS
Date 15.12.2011	Approved By KS

ISO 9001 REGISTERED FIRM

Drawing Number 6451-001

Rev

FILE REF:

APPENDIX C

TRICS Data

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

03	SOUTH WEST		
	CW	CORNWALL	1 days
05	EAST MIDLANDS		
	LE	LEICESTERSHIRE	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	ST	STAFFORDSHIRE	1 days
	WM	WEST MIDLANDS	1 days
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	1 days
10	WALES		
	CF	CARDIFF	1 days
11	SCOTLAND		
	HI	HIGHLAND	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
Range: 9 to 29 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/03 to 26/06/09

Selected survey days:

Monday	2 days
Tuesday	2 days
Wednesday	2 days
Thursday	3 days
Friday	1 days

Selected survey types:

Manual count	10 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	5
Edge of Town	4

Selected Location Sub Categories:

Residential Zone	9
No Sub Category	1

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	**10**	**14**	**0.029**	**10**	**14**	**0.036**	**10**	**14**	**0.065**
08:00 - 09:00	10	14	0.022	10	14	0.029	10	14	0.051
09:00 - 10:00	10	14	0.000	10	14	0.000	10	14	0.000
10:00 - 11:00	10	14	0.007	10	14	0.007	10	14	0.014
11:00 - 12:00	10	14	0.007	10	14	0.014	10	14	0.021
12:00 - 13:00	10	14	0.014	10	14	0.014	10	14	0.028
13:00 - 14:00	10	14	0.014	10	14	0.000	10	14	0.014
14:00 - 15:00	10	14	0.022	10	14	0.000	10	14	0.022
15:00 - 16:00	10	14	0.000	10	14	0.000	10	14	0.000
16:00 - 17:00	10	14	0.014	10	14	0.022	10	14	0.036
17:00 - 18:00	10	14	0.029	10	14	0.014	10	14	0.043
18:00 - 19:00	10	14	0.000	10	14	0.000	10	14	0.000
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			0.158			0.136			0.294

Parameter summary

Trip rate parameter range selected:	9 - 29 (units:)
Survey date date range:	01/01/03 - 26/06/09
Number of weekdays (Monday-Friday):	10
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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	10	14	0.072	10	14	0.223	10	14	0.295
08:00 - 09:00	10	14	0.230	10	14	0.655	10	14	0.885
09:00 - 10:00	10	14	0.144	10	14	0.288	10	14	0.432
10:00 - 11:00	10	14	0.194	10	14	0.201	10	14	0.395
11:00 - 12:00	10	14	0.216	10	14	0.273	10	14	0.489
12:00 - 13:00	10	14	0.324	10	14	0.281	10	14	0.605
13:00 - 14:00	10	14	0.302	10	14	0.252	10	14	0.554
14:00 - 15:00	10	14	0.331	10	14	0.302	10	14	0.633
15:00 - 16:00	10	14	0.446	10	14	0.331	10	14	0.777
16:00 - 17:00	**10**	**14**	**0.597**	10	14	0.403	**10**	**14**	**1.000**
17:00 - 18:00	10	14	0.504	10	14	0.403	10	14	0.907
18:00 - 19:00	10	14	0.324	10	14	0.288	10	14	0.612
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:			3.684			3.900			7.584

Parameter summary

Trip rate parameter range selected:	9 - 29 (units:)
Survey date date range:	01/01/03 - 26/06/09
Number of weekdays (Monday-Friday):	10
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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	10	14	0.029	10	14	0.036	10	14	0.065
08:00 - 09:00	10	14	0.050	**10**	**14**	**0.245**	**10**	**14**	**0.295**
09:00 - 10:00	10	14	0.086	10	14	0.115	10	14	0.201
10:00 - 11:00	10	14	0.065	10	14	0.180	10	14	0.245
11:00 - 12:00	10	14	0.101	10	14	0.079	10	14	0.180
12:00 - 13:00	10	14	0.086	10	14	0.094	10	14	0.180
13:00 - 14:00	10	14	0.050	10	14	0.043	10	14	0.093
14:00 - 15:00	10	14	0.108	10	14	0.129	10	14	0.237
15:00 - 16:00	**10**	**14**	**0.129**	10	14	0.094	10	14	0.223
16:00 - 17:00	10	14	0.122	10	14	0.072	10	14	0.194
17:00 - 18:00	10	14	0.079	10	14	0.022	10	14	0.101
18:00 - 19:00	10	14	0.072	10	14	0.036	10	14	0.108
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:			1.080			1.179			2.259

Parameter summary

Trip rate parameter range selected:	9 - 29 (units:)
Survey date date range:	01/01/03 - 26/06/09
Number of weekdays (Monday-Friday):	10
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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	10	14	0.000	10	14	0.000	10	14	0.000
08:00 - 09:00	10	14	0.000	**10**	**14**	**0.022**	**10**	**14**	**0.022**
09:00 - 10:00	10	14	0.000	10	14	0.000	10	14	0.000
10:00 - 11:00	10	14	0.000	10	14	0.000	10	14	0.000
11:00 - 12:00	10	14	0.000	10	14	0.000	10	14	0.000
12:00 - 13:00	10	14	0.007	10	14	0.000	10	14	0.007
13:00 - 14:00	10	14	0.000	10	14	0.000	10	14	0.000
14:00 - 15:00	10	14	0.000	10	14	0.000	10	14	0.000
15:00 - 16:00	**10**	**14**	**0.014**	10	14	0.000	10	14	0.014
16:00 - 17:00	10	14	0.007	10	14	0.000	10	14	0.007
17:00 - 18:00	10	14	0.000	10	14	0.000	10	14	0.000
18:00 - 19:00	10	14	0.000	10	14	0.000	10	14	0.000
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			0.028			0.022			0.050

Parameter summary

Trip rate parameter range selected:	9 - 29 (units:)
Survey date date range:	01/01/03 - 26/06/09
Number of weekdays (Monday-Friday):	10
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 PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	10	14	0.129	10	14	0.295	10	14	0.424
08:00 - 09:00	10	14	0.302	**10**	**14**	**0.950**	**10**	**14**	**1.252**
09:00 - 10:00	10	14	0.230	10	14	0.403	10	14	0.633
10:00 - 11:00	10	14	0.266	10	14	0.388	10	14	0.654
11:00 - 12:00	10	14	0.324	10	14	0.367	10	14	0.691
12:00 - 13:00	10	14	0.432	10	14	0.388	10	14	0.820
13:00 - 14:00	10	14	0.367	10	14	0.295	10	14	0.662
14:00 - 15:00	10	14	0.460	10	14	0.432	10	14	0.892
15:00 - 16:00	10	14	0.590	10	14	0.424	10	14	1.014
16:00 - 17:00	**10**	**14**	**0.741**	10	14	0.496	10	14	1.237
17:00 - 18:00	10	14	0.612	10	14	0.439	10	14	1.051
18:00 - 19:00	10	14	0.396	10	14	0.324	10	14	0.720
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:			4.952			5.235			10.187

Parameter summary

Trip rate parameter range selected:	9 - 29 (units:)
Survey date date range:	01/01/03 - 26/06/09
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

03	SOUTH WEST		
	CW	CORNWALL	1 days
05	EAST MIDLANDS		
	LE	LEICESTERSHIRE	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	ST	STAFFORDSHIRE	1 days
	WM	WEST MIDLANDS	1 days
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	1 days
10	WALES		
	CF	CARDIFF	1 days
11	SCOTLAND		
	HI	HIGHLAND	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
Range: 9 to 29 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/03 to 26/06/09

Selected survey days:

Monday	2 days
Tuesday	2 days
Wednesday	2 days
Thursday	3 days
Friday	1 days

Selected survey types:

Manual count	*10 days*
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	5
Edge of Town	4

Selected Location Sub Categories:

Residential Zone	9
No Sub Category	1

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	10	14	0.094	10	14	0.201	10	14	0.295
08:00 - 09:00	10	14	0.209	**10**	**14**	**0.432**	10	14	0.641
09:00 - 10:00	10	14	0.129	10	14	0.252	10	14	0.381
10:00 - 11:00	10	14	0.180	10	14	0.165	10	14	0.345
11:00 - 12:00	10	14	0.165	10	14	0.209	10	14	0.374
12:00 - 13:00	10	14	0.252	10	14	0.216	10	14	0.468
13:00 - 14:00	10	14	0.223	10	14	0.209	10	14	0.432
14:00 - 15:00	10	14	0.252	10	14	0.237	10	14	0.489
15:00 - 16:00	10	14	0.302	10	14	0.252	10	14	0.554
16:00 - 17:00	**10**	**14**	**0.410**	10	14	0.266	**10**	**14**	**0.676**
17:00 - 18:00	10	14	0.345	10	14	0.302	10	14	0.647
18:00 - 19:00	10	14	0.230	10	14	0.209	10	14	0.439
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:			2.791			2.950			5.741

Parameter summary

Trip rate parameter range selected:	9 - 29 (units:)
Survey date date range:	01/01/03 - 26/06/09
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0