PROPOSED RESIDENTIAL DEVELOPMENT
BARNSLEY ROAD
WOMBWELL
BARNSLEY

PLANNING APPLICATION BY
STRATA HOMES

TRANSPORT STATEMENT

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Planning Issue

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CONTENTS

APPENDICES

BGH1 SITE LAYOUT PLAN

BGH2 SITE LOCATION PLAN

BGH3 EXISTING 2006 AM AND PM PEAK HOUR TRAFFIC FLOWS

BGH4 TRICS DATA

BGH5 WALKING INFORMATION

BGH6 PUBLIC TRANSPORT INFORMATION

BGH7 CYCLING INFORMATION

BGH8 EXISTING 2006 TWO WAY FLOWS ON BARNSLEY ROAD IN THE VICINITY OF THE PROPSED SITE ACCESS

BGH9 GROWTHED SITE ACCESS AM AND PM PEAK HOUR TRAFFIC FLOWS

BGH10 DEVELOPMENT GENERATED SITE ACCESS AM AND PM PEAK HOUR TRAFFIC FLOWS

BGH11 PREDICTED SITE ACCESS AM AND PM PEAK HOUR TRAFFIC FLOWS

BGH12 PICADY OUTPUTS – SITE ACCESS PREDICTED TRAFFIC DEMANDS

1.0 INTRODUCTION / BACKGROUND

1.1 This Transport Statement has been prepared as part of a planning application submitted by Strata Homes to develop an area of land off Barnsley Road in the Wombwell area of Barnsley. The application site is approximately 5.0 kilometres to the south-east of Barnsley town centre.

1.2 Woodford Land were granted outline planning permission on the site in August 2007 (application number 2006/1172) for residential development of the site. The proposals associated with this approval comprised the redevelopment of an industrial mill premises formally occupied by Perfecta Beds to provide a mixed development of 89 town houses and 40 apartments totalling 129 units served by way of a new priority junction with Barnsley Road.

1.3 The current proposals for which planning permission is sought comprise some 92 residential units including a mix of two, three and four storey units ranging from two bed apartments to five bed town houses.

1.4 The report considers the transport issues associated with the proposed development and, in particular, the access and likely transport impact on the surrounding highway network based upon trip data from the TRICS Consortium database and the guidance given in the Department for Transport (DfT) publication 'Guidance on Transport Assessment', March 2007.

1.5 The site will be served by means of a ghost island priority access junction on to Barnsley Road, as agreed as part of the existing outline planning permission on the site. The priority access will serve the site by means of a 5.5 metre wide residential access road, with 2.0 metre wide footways either side of the carriageway, as indicated on the site layout plan attached at Appendix **BGH1.**

1.6 This report demonstrates that the site can be satisfactorily accessed and that the traffic likely to be generated by the development proposals can be accommodated safely and satisfactorily on the local highway network. The site is also well located to encourage trips by more environmentally friendly

modes of travel than the private car.

1.7 A separate Residential Travel Plan has been produced in conjunction with this Transport Statement and therefore the development will accord with Government advice contained in PPG13: "Transport".

1.8 This Transport Statement concludes therefore that there are no highways or transportation reasons which would prevent the proposed development being granted planning consent.

2.0 RELEVANT CENTRAL AND LOCAL GOVERNMENT POLICIES

2.1 Planning Policy Statement 3 (PPS3): Housing

2.1.1 Planning Policy Statement 3 (PPS3): Housing, which was last published in June 2010 contains advice on providing housing in suitable locations.

2.1.2 At paragraph 36 of PPS3 it is noted that the Government's policy is to ensure that housing is developed in suitable locations which offer a range of community facilities with good access to jobs, key services and infrastructure.

2.2 Planning Policy Guidance 13 (PPG13): Transport

2.2.1 Planning Policy Guidance 13 (PPG13): Transport, which was last published in January 2011, provides advice on the integration of transport and land use planning. The objectives of the guidance are to integrate planning and transport at national, regional, strategic and local level to:

- promote more sustainable transport choices for both people and for moving freight;
- promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling; and
- reduce the need to travel, especially by car.

2.2.2 PPG13 also provides guidance on parking policy and states that policies in development plans should set maximum levels of parking for broad classes of development. PPG13 states that maximum standards should be designed to be used as part of a package of measures to promote sustainable transport choices, reduce land-take of development, enable schemes to fit into central urban sites, promote linked-trips and access to development for those without use of a car and to tackle congestion.

2.3 South Yorkshire's Transport Plan 2006 – 2011 (LTP2)

2.3.1 The relevant local policy documentation is the Second South Yorkshire Local Transport Plan 2006-2011 (LTP2). The Second South Yorkshire Local Transport Plan contains the strategy and implementation plan for local

transport investment in the sub-region for the five year period 2006/7 to 2010/11. Like the first LTP before it, this document is a requirement of the Transport Act 2000 and has been prepared jointly by Barnsley, Doncaster, Rotherham and Sheffield Councils and the South Yorkshire Passenger Transport Authority.

2.3.2 The vision for transport in South Yorkshire contains the following six core elements, all of which relate to the national/local government shared priorities of improving accessibility, tackling congestion, better road safety and addressing air quality and quality of life issues:

- Excellent road, rail and air links from South Yorkshire that build on the county's relatively strong position on the motorway network, and on crucial north-south and TransPennine rail routes;
- A core, high quality public transport system that links the four main urban centres and the new international airport in South Yorkshire;
- High quality, car competitive public transport giving good access to jobs and services and feeding into the four main urban centres. This will be based primarily on improved bus networks and operations but could include the extension of Supertram and/or the use of other appropriate technologies;
- A road network in good condition, managed and enhanced, in conjunction with car parking policies and other appropriate demand management measures to maximise the use of existing road space, minimise congestion and facilitate the free movement of goods;
- A safe transport system for all users; and
- Improved air quality and reduced energy consumption through improved use of public transport, reduced congestion and the encouragement of cycling and walking.

2.3.3 The South Yorkshire LTP Partnership and the Sheffield City Region (SCR) are currently developing the Sheffield City Region Transport Strategy, incorporating the 3rd South Yorkshire Local Transport Plan (LTP3). This will cover the period from 2011 to 2026.

2.3.4 The Transport Plan will set out how 'transport' will help deliver the wider vision of the Region. This will be undertaken by delivering against 4 key transport goals:

- To enhance and unlock the economic growth of SCR, through tackling unreliability on all transport networks, congestion and overcrowding, improving connections, enhancing the attractiveness of key locations and ensuring equality of opportunity - effectively linking people to jobs, training and education opportunities;
- To make real progress in reducing greenhouse gas emissions and improving environmental quality in the SCR enhance its position as a city region valuing sustainability at its heart;
- To focus on lifestyle and health benefits and quality of life for the people of the city region – capitalising on the city region's high quality nature environment and green spaces; and
- To make transport safe and secure – especially to those more vulnerable or more at risk.

3.0 THE EXISTING SITUATION

3.1 The Application Site

3.1.1 The development site is located approximately 5.0 kilometres to the south-east of Barnsley town centre. The site is bounded to the north by the Barnsley Road, to the east and south by residential dwellings and to the west by Aldham House Lane.

3.1.2 The site previously housed a substantial mill building providing some 12,540 m^2 gross floor area of manufacturing floor space, however, the site is now cleared. It is understood that when fully occupied by the previous owners, Perfecta Beds, approximately 200 people were employed within the factory.

3.1.2 The site was previously accessed via two informal accesses off the eastern kerb line of Aldham House Lane, which will be stopped up. The location of the application site in relation to the highway network is shown on the plan attached at Appendix **BGH2**.

3.2 The Local Highway Network

3.2.1 Barnsley Road is lit to main road standard, subject to a 40mph speed limit and classified A633. Along the site frontage, Barnsley Road has a 13 metre wide carriageway which is marked out to provide 4.0 metre through lanes with the remaining central area of the carriageway being hatched. There are also three central pedestrian refuges within Barnsley Road, one located immediately to the east of the Barnsley Road/Aldham House Lane junction, one located toward the centre of the site frontage and the third located immediately to the west of the Mitchell Road junction. Barnsley Road is a bus route accommodating services 222/223, 226 and 228/229 as discussed further in section 6.0.

3.2.2 As part of the analysis undertaken for the existing outline planning permission on the site fully classified traffic survey were carried out at the Barnsley Road / Aldham House Lane junction on Thursday 17 January 2006 during the morning and evening peak periods 7:00am to 9:30am and 4:00pm and

6:30pm. The peak hours were found to be 8:00am to 9:00am and 5:00pm to 6:00pm and the surveyed peak hour flows are summarised at Appendix **BGH3**.

3.2.3 During the AM Peak hour Barnsley Road carried a maximum 2-way flow of 1542 vehicles and during the PM Peak hour a maximum 2-way flow of 1590 vehicles.

3.2.4 Advice regarding the capacity of urban road links is set out in TA79/99, "Traffic Capacity of Urban Roads". This indicates that an 8.0 metre wide road such as Barnsley Road has a theoretical capacity of some1400 vehicles in the busiest direction of flow or some 2330 vehicles 2-way. Barnsley Road is therefore operating at about 68% of its theoretical capacity during the morning and evening peak hours.

4.0 THE DEVELOPMENT PROPOSALS

4.1 The Form of Development

4.1.1 The current proposals comprise some 92 residential units including a mix of two, three and four storey units ranging from two bed apartments to five bed town houses.

4.2 Means of Access

4.2.1 The residential development site will be served by a ghost islandpriority access onto Barnsley Road, the details of which were agreed within the existing outline approval on the site. The priority access will serve the site by means of a 5.5 metre wide residential culs-de-sac, as shown on the site layout plan attached at Appendix **BGH1.** The site is currently accessed via two informal accesses off the eastern kerb line of Aldham House Lane, which will be stopped up and reinstated to footway as part of the development proposals.

4.2.2 The internal highway layout has been designed to take account of current Government guidance as contained within the Departments of Communities and Local Government and Transport publication 'Manual for Streets', March 2007.

4.2.3 The form of internal road layout and central access to Barnsley Road provides for ease of travel on foot and by cycle through the development to achieve a permeable street network. The proposed layout will provide direct routes for all pedestrians to local facilities and the bus stops located on Barnsley Road. Walking and cycling is therefore promoted as an attractive alternative to the car, as well as providing spread of traffic within the development.

5.0 POTENTIAL TRAFFIC GENERATION OF THE APPLICATION SITE

5.1.1 In order to predict the level and type of trips which will be made as a result of the residential development and as required in the Department for Transport's "Guidance on Transport Assessment", the person trips to the proposed development have been assessed using information contained within the TRICS 2010(b) database. The TRICS outputs are attached at Appendix **BGH4**.

5.1.2 The TRICS database has been used to assess the 85th percentile vehicle trips generated by the proposed residential development assuming the land-use category Residential – Houses Privately Owned and the results are summarised below:-

Table 5.1

Total Person Trips

Assessment Period	Trip Rates per Unit			Trips for 92 Units		
	IN	OUT	2-WAY	IN	OUT	2-WAY
08:00 – 09:00	0.385	1.010	1.395	36	94	130
17:00 – 18:00	0.494	0.377	0.871	46	35	81

5.1.3 This assessment is considered robust as a proportion of the residential dwellings proposed are apartments which have lower trip rates than those associated with houses, used in this assessment.

5.1.4 Following the above estimation of total person trips, the modal split for the overall trips associated with the proposed development have been derived from the National Statistics Census 2001 data for journeys to work for the ward area of Wombwell, in which the site is situated. This provides a percentage breakdown of different modes of transport currently used to travel to/from the ward, which can then be applied to the proposed development. The results are summarised below in Table 5.2.

Table 5.2

National Statistics Census 2001 Ward Data for Wombwell

Method of Journey to Work – Resident Population (UV39)

Modal Split	% Split
Pedestrians	15
Cyclist	1
Public Transport Users	12
Car	71
Motorcyclist	1
Total	100

5.1.5 It can be seen that 71% of all journeys are undertaken using the private car either as the driver or a passenger. These percentages have been applied to the vehicle trips in Table 5.1 to calculate the likely number multi modal trips associated with the proposed development. The morning and evening peak hour trips for each mode are shown in Table 5.3 below.

Table 5.3

AM and PM Peak Hour Modal Split

Peak Hour Modal Split	% Split	Trips			
		AM In	AM Out	PM In	PM Out
Pedestrians	15	5	14	6	5
Cyclist	1	0.5	1	0.5	0.5
Public Transport Users	12	4	11	6	4
Car	71	26	67	33	25
Motorcyclist	1	0.5	1	0.5	0.5
Total	100	36	94	46	35

5.1.6 It can be seen from the above that the current proposals for the site are likely to generate some 93 two way vehicular trips during the AM Peak period, 26 in and 67 out, and 58 during the PM Peak period, 33 in and 25 out.

6.0 SUSTAINABLE TRANSPORT ACCESSIBILITY

6.1 General

6.1.1 As set out in Section 2 of this Transport Statement, national transport policies through PPS3 and PPG13 place significant emphasis for new development proposals on the availability and use of means of transport other than the private car.

6.2 Walking

6.2.1 With regard to pedestrian accessibility more specific advice is set out in "Guidelines for Providing for Journeys on Foot", which was published in 2000 by the Institution of Highways and Transportation. These guidelines note that walking accounts for over a quarter of all journeys and four-fifths of journeys less than one mile (1.6 kilometres).

6.2.2 The guidelines also provide 'ideal' walk distances for various trip types and advise that the 'desirable' walking distance for commuting or walking to and from school is 500 metres, the 'acceptable' walking distance for commuting or walking to and from schools is 1.0 kilometre and the 'preferred maximum' walking distance is 2.0 kilometres. In terms of walking to town centres, the Guidelines suggest a 'desirable' walking distance of 200 metres, an 'acceptable' distance of 400 metres and a 'preferred maximum' of 800 metres.

6.2.3 As regards walk distances to retail outlets, the IHT Guidelines suggest a 'preferred maximum' walking distance to town centres of 800 metres. This advice is reflected in the Department for Transport, Local Government and the Regions in conjunction with CABE published 'Better places to live: By design – A companion guide to PPG3', September 2001. This suggests that:

> "Having established the site's broad setting in terms of its relationship to a city, town or village centre, a good starting point is to examine the area within 10 minutes' (about 800m) walking distance of the site. This can help to identify the range of facilities which residents may access comfortably access on foot, as well as opportunities to reach more distant facilities by public transport."

6.2.4 An accessibility study of the site has been carried out and the plan attached at Appendix **BGH5** shows in detail the full range of facilities within 800 metres (10 minutes) walking distance of the site.

6.2.5 Pedestrian / cyclist access into the site will be provided from the main access off the southern kerb line of Barnsley Road, the proposed layout will provide direct routes for all pedestrians to local facilities and the bus stops located on Barnsley Road.

6.2.6 There are existing footways and dropped crossings along both sides of all local roads between the site and the bus stops and other facilities located in the vicinity of the site.

6.2.7 A plan is also provided at Appendix **BGH5** which shows the straight-line 1.6km and 2.0km walking isochrones from the centre of the site.

6.3 Public Transport

6.3.1 The Department of the Environment publication [1996] 'PPG13: A Guide to Better Practice' states that for trips over 3 miles (5 km), public transport is the main alternative mode of transport to the private car. It is recognised however that for public transport to be an attractive alternative mode of transport to the private car it needs to be easily accessible on foot.

6.3.2 The Institution of Highways and Transportation publication [1999] 'Planning for Public Transport recommends that residents of major new housing developments should not have to walk more than 400m (¼ mile) to their nearest bus stop but that this criterion has been hard to satisfy comprehensively and therefore it recognises that direct, frequent and easily understood services are more important than a few metres of walking distance.

6.3.3 The nearest bus stops are located on both sides of Barnsley Road on the site frontage approximately 110 metres from the centre of the site. Both bus stops benefit from shelters, seating and timetable information. These bus stops are

served by bus numbers 222, 226 and 229, which have a combined service frequency of six per hour Monday to Saturday daytime, four per hour in the evenings and three per hour on Sundays.

6.3.4 There are also bus stops located on Aldham House Lane and Pearson Street within the recommended 400 metres walking distance. These stops are served by service numbers 68, 68A and 69, which have a combined service frequency of two per hour Monday to Saturday daytime only.

6.3.5 All of the buses serving the site stop in Wombwell town centre where there is a wealth of facilities available to residents. All the buses also stop at Barnsley Interchange providing residents with the opportunity to work in the town or to make use of the extensive public transport facilities available within the town centre to complete their journeys. The journey time from the site into Barnsley town centre is approximately 16 minutes.

6.3.6 Barnsley Interchange is a combined bus and rail station located on Midland Street in Barnsley town centre, approximately 3.1 kilometres from the site, within the cycling catchment. It is staffed part time, has a car park with 76 spaces and cycle storage is available. Regular buses are available to areas including Worsborough, Wombwell, Mexborough, Rotherham, Swinton, Thurnscoe, Staincross and Wakefield. Regular trains are available from the station to destinations including Sheffield, Rotherham, Huddersfield, Wakefield and Leeds.

6.3.7 The Institution of Highways and Transportation publication 'Guidelines for Planning for Public Transport in Developments', March 1999, sets out that new developments should be located so that walking distances to the nearest railway station should be less than 800 metres.

6.3.8 The nearest railway station to the development site is Wombwell Railway Station, located on Hough Lane some 1.0 kilometre from the centre of the site, which although is outside the recommended 800 metres it is still within the acceptable walking and cycling catchments. The station has a car park with

six spaces and secure cycle storage is available. Regular trains are available from the station to destinations including Sheffield, Huddersfield, Wakefield, Leeds and Barnsley Interchange.

6.3.9 A summary of the bus services serving the stops in the vicinity of the site, the trains serving Wombwell Railway Station and the buses and trains serving Barnsley Interchange are given at Appendix **BGH6** along with extracts from bus maps and timetables as provided on the Travel South Yorkshire web-site at www.travelsouthyorkshire.com/. Further information including real time bus information can also be obtained by visiting the web-site. Further rail information can be obtained by visiting the National Rail website at www.nationalrail.ciom.

6.4 Cycling

6.4.1 The Department of the Environment publication [1996] 'PPG13: A Guide to Better Practice' states that the bicycle is an ideal mode of transport for journeys under 8 kilometres. PPG13 [March 2001] states that cycling "has clear potential to substitute for short car trips, particularly those under 5km, and to form part of a longer journey by public transport."

5.4.2 The majority of the Barnsley conurbation including the town centre lies within an 8 kilometre catchment area, as well as northern Rotherham and Sheffield. Barnsley has a network of cycle routes and lanes as shown on the plan attached at Appendix **BGH7**. Route 62 of the National Cycle Network runs close to the site and intersects with Barnsley Road approximately 150 metres north west of the proposed site access. Route 62 provides a traffic free route from the site in to Barnsley town centre.

5.4.3 Also attached at Appendix **BGH7** is a plan showing the 5 kilometre and 8 kilometre cycle isochrones. Wombwell Railway Station and Barnsley Interchange both lie well within the 5 kilometre cycling catchment area.

7.0 NET TRAFFIC CHANGES

7.1 The starting point for assessment of the traffic consequences of the application proposal is a comparison between the traffic generating potential of the permitted and proposed land uses. The current guidance on Transport Assessments sets out that the permitted and existing use of the site should be identified. Furthermore, previous advice set out in the Institution of Highways and Transportation document 'Guidelines for Traffic Impact Assessment'. On the question of net impact the Guidelines state:

> "3.3.4 Frequently a new development will be proposed that will replace an existing use. In such cases it will be important to identify as much information as possible about a current activity since the traffic impact of the proposal will be the net change between the two uses."
>
> "3.4.10 *Many developments are not on greenfield sites and account* needs to be taken of the traffic generation of the existing use which is to be replaced. The quantification of traffic generated by the existing use is therefore important and should be separately identified within the assessment of existing conditions."

7.2 Furthermore, Section 70(2) of the Town and Country Planning Act also states that, in dealing with applications the authority shall have regard to the provisions of the development plan and to other material considerations. In the general note on this section in the Encyclopaedia of Planning Law, Paragraph 8 discusses material considerations and under paragraph 9(8) reference is made to the planning history of the site stating that:-

> "An *existing planning permission may be a material consideration in* determining an application."

The sub-paragraph goes on:-

> "The planning authority are entitled, and indeed obliged, to have regard to the 'fall-back' position, i.e. what the applicant could do without any fresh planning permission."

7.3 To establish the traffic generation associated with the permitted residential land use on the site, the traffic generation agreed within the Transport

Assessment for the 129 mixed residential dwellings are summarised below.

Table 7.1

Traffic Generation Associated with Permitted Land Use

129 Dwellings	AM Peak			PM Peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Generated Traffic	19	67	86	63	23	86

7.4 By comparison, the peak hour traffic generation associated with the current residential development proposals for 92 mixed residential dwellings are summarised below.

Table 7.2

Traffic Generation Associated with the Current Proposals

92 Dwellings	AM Peak			PM Peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Generated Traffic	26	67	93	33	25	58

7.5 The net changes in traffic flows entering and leaving the site during the morning and evening peak traffic hours resulting from the replacement of the permitted residential land use by the current residential proposals are summarised below:

Table 7.3

Net Changes in Traffic Flows

Land Use	AM Peak		PM Peak	
	Arrivals	Departures	Arrivals	Departures
Approved Residential Use	19	67	63	23
Current Residential Use	26	67	33	25
Net Difference	+7	0	-30	+2

7.6 It can be seen from the above table that the substitution of the permitted residential land use for the current residential proposals will result in similar car borne trips in both the morning and evening peak periods to those approved as part of the existing outline planning permission on the site and therefore it is not considered that the current proposals will have any impact on the approved situation.

7.7 *In addition, this is considered to be a robust assessment as the trip rates used* in the assessment of the current residential proposals are substantially higher than those used in the approved application. The total dwelling numbers are actually decreasing as part of the current development proposals.

7.8 The trip rates used in the assessment of the current residential proposals were obtained from from TRICS Database 2010(b) and are considered to be an up to date and accurate reflection of the vehicular flows expected to be generated by residential houses. Also the higher 'House' trip rates were asssumed for all 92 dwellings when infact a percentage of them will be apartments.

7.9 Hence, there can be no defensible highway reason why the proposed residential development should not be acceptable as a substitute for the extant planning permission granted on the site.

8.0 ACCESS CONSIDERATIONS

8.1 As identified previously, the residential development site will be served by a ghost island priority access junction onto Barnsley Road, agreed as part of the outline planning permission existing on the site. The ghost island priority junction onto Barnsley Road will be located towards the centre of the northern site frontage.

8.2 The access will serve the site by means of a 5.5 metre wide residential culs-de-sac, as shown on the site layout plan attached at **Appendix BGH1.** The access will satisfy all current geometric requirements, in terms of width, radii and egress visibility, as well as being carefully designed to integrate the residential development with the existing Barnsley Road highway.

8.3 The operation of the proposed access has been analysed for the 2016 "Predicted" morning and evening peak hour traffic demands, using the PICADY 5 computer program.

8.4 It has been assumed that the traffic on the local and strategic highway networks will grow by Tempro adjusted NTM Central Forecast factors. Applying the adjusted NTM growth factors to the existing traffic flows will ensure a robust assessment since there will be an element of double counting as the growth rates already include for elements such as future development forecasts and increased affluence.

8.5 The Tempro adjusted NTM central growth factors from 2006 - 2016 are 1.159 (am peak factor) and 1.154 (pm peak factor). These factors have been applied to the 2006 morning and evening peak hour two way flows surveyed on Barnsley Road in the vicinity of the proposed site access, shown on the flow diagrams attached at Appendix **BGH8,** to provide the 2016 morning and evening peak hour growthed traffic flows. The growthed AM and PM peak flow diagrams are attached at Appendix **BGH9**.

8.6 The vehicular flows expected to be generated by the current development proposals have been distribution in the same proportions as the two way flows surveyed on Barnsley Road. The development generated AM and PM peak flow diagrams are attached at Appendix **BGH10.**

8.7 The development generated flows have then been added to the growthed traffic flows to provide the predicted traffic flow scenario. The predicted AM and PM peak flow diagrams are attached at Appendix **BGH11**.

8.8 For the purpose of the analyses, a 12.5% peak within peak "surge" in traffic flows has been assumed to be further robust. A summary of the results obtained by analysis of the operation of the Site Access / Barnsley Road junction under the predicted traffic demands are given in Table 8.1 below with the full PICADY 5 output attached at Appendix **BGH12.**

Table 9.1

Proposed Simple Priority Junction Site Access on to Barnsley Road
Ratio of Flow to Capacity (RFC), Queues, and Maximum Delay (sec/veh)
Predicted 2016 Morning and Evening Peak Hour Traffic Flows

Movement	Morning Peak Hour			Evening Peak Hour		
	RFC	Queue (veh)	Max. Delay	RFC	Queue (veh)	Max. Delay
Left/Right out of the site access onto Barnsley Road	0.291	0.40	15.6	0.107	0.12	13.2
Right into the site access from Barnsley Road	0.029	0.03	6.6	0.035	0.04	6.6

8.9 From the results tabulated above it can be seen that the proposed Site Access / Barnsley Road junction is predicted to operate satisfactorily with RFCs well below the 0.85 practical capacity threshold. There is considerable spare capacity at 2016 to accommodate future "natural" traffic growth and the predicted development traffic. There can therefore be no capacity or safety reasons why the access should not be acceptable.

9.0 CONCLUSIONS

9.1 This Transport Statement forms part of a planning application submitted by Strata Homes to develop an area of land off Barnsley Road in the Wombwell area of Barnsley. The application site is approximately 5.0 kilometres to the south-east of Barnsley town centre. The proposals comprise some 92 residential units including a mix of two, three and four storey units ranging from two bed apartments to five bed town houses.

9.2 The site previously housed a substantial mill building providing some 12,540 m^2 gross floor area of manufacturing floor space, however, the site is now cleared. It is understood that when fully occupied by the previous owners, Perfecta Beds, approximately 200 people were employed within the factory.

9.3 Woodford Land were granted outline planning permission on the site in August 2007 (application number 2006/1172) for residential development of the site. The proposals associated with this approval comprised the redevelopment of an industrial mill premises formally occupied by Perfecta Beds to provide a mixed development of 89 town houses and 40 apartments totalling 129 units served by way of a new junction with Barnsley Road.

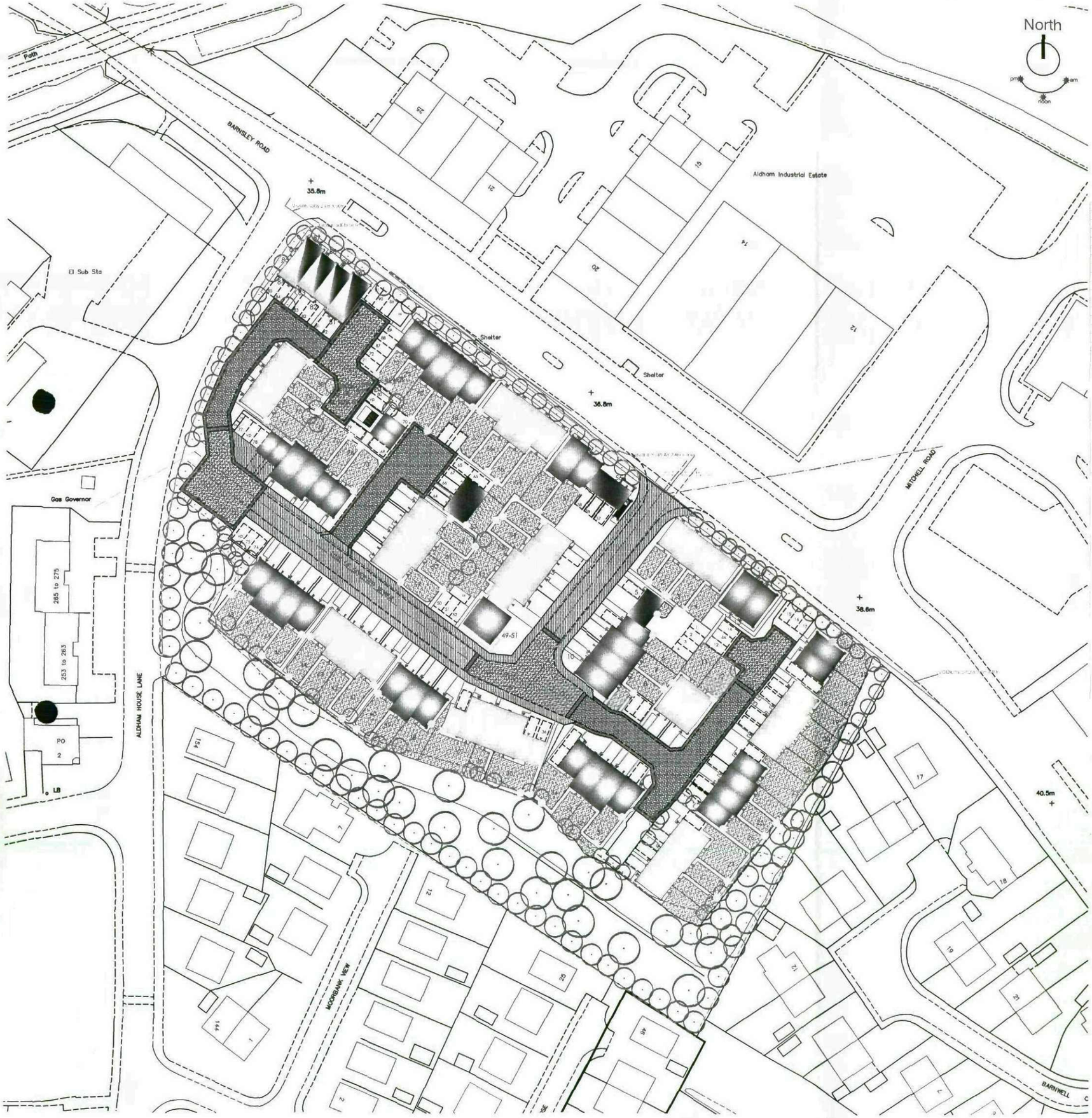
9.4 The site is currently accessed via two informal accesses off the eastern kerb line of Aldham House Lane, these accesses will be stopped up. The proposed residential development will be accessed via a priority junction with Barnsley Road, agreed as part of the outline planning permission existing on the site. The access will serve the site by means of a 5.5 metre wide residential access road with 2.0 metre wide footways either side of the carriageway.

9.5 This Statement has demonstrated through robust assessment that the current proposals will result in similar car borne trips in both the morning and evening peak periods to those approved as part of the existing outline planning permission on the site and therefore it is not considered that the current proposals will have any impact on the permitted land use.

9.6 The site is well located to encourage trips other than by private car and it is assumed that it will be a condition of any planning approval that a residential Travel Plan is implemented. For this reason, a Residential Travel Plan has been produced in conjunction with this Transport Statement, for the consideration of Barnsley metropolitan Borough Council. Development of the site therefore accords with sustainable transport policies promoted by the Government and the relevant Local Government departments.

9.7 It is concluded that there are no defensible highway or transport related reasons why these development proposals should not be granted full planning permission.

APPENDIX BGH 1



All work to be carried out in accordance with the requirements of the Building Regulations,Water Authority and the Construction (Design and Management) Regulations currently in force.

Do not scale from this drawing. Architect to be notified of any discrepancies.

Verify relevant dimensions on site before commencing work or preparing shop drawings. This drawing is copyright.

Rev:	Date:	Action:	Init:
A	12.10	Substation position and adjacent parking amended	
B	18.01.11	Blocks updated and plots 20–31 amended; square footages updated	
C	21.01.11	Plots 35,38,41, 74 & 75 amended	
D	07.02.11	Plots 11–15 amended	
E	09.02.11	Plots 5,10,13–18 amended;road adjacent plots 9 & 10 amended	

ACCOMODATION SCHEDULE — **SITE:** Barnsley Road Wombwell (Woodfords) — **DRAWING NUMBER:** BR/WW/SK03 E

House Type	Abb.	No	Bedrooms	Parking	Storey Height	Sq/ft	Total sqft	%age	
Aix	Ai	1	2	PS/IG	2	558	558	1.09	
Lisbon	Li	1	1	PS	2	576	576	1.09	
Colmar	Cm	1	2	PS	2	636	636	1.09	
Lucca	Lu	4	1	PS	3.5	475	1900	4.35	
Lucca	Lu	4	1	PS	3.5	421	1684	4.35	
Monaco	Mo	10	2	PS	3	716	7160	10.87	
Oslo	Os	3	1	PS	2	660	1980	3.26	
Rimini	Ri	0	2	PS	2	591	0	0.00	
Milan	Mi	4	2	PS	2	655	2620	4.35	30.43
Cadiz	Ca	12	3	PS	2.5	896	10752	13.04	
Roma	Rom	6	3	PS	2	791	4746	6.52	
Geneva	Gen	12	3	PS	2.5	1065	12780	13.04	
Malmo	Ma	9	3	IG	2.5	976	8784	9.78	42.39
Rouen	Ro	14	4	IG	3	1257	17598	15.22	
Verona	Ve	11	4	G	3	1410	15510	11.96	27.17
Sub Total		92							100.00
Affordable Units									
Aix	Ai	0	2	PS	2	558	0	0.00	
Lisbon	Lis	0	1	PS	2	576	0	0.00	
Vigo	Vi	0	2	PS	2	596	0	0.00	
Vigo	Vi	0	2	PS	2	721	0	0.00	
Colmar	Col	0	2	PS	2	636	0	0.00	
Lucca	Lu	0	1	PS	3.5	475	0	0.00	
Lucca	Lu	0	1	PS	3.5	421	0	0.00	
Monaco	Db	0	2	PS	3	716	0	0.00	
2 Bed	2b	0	2	PS	2	648	0	0.00	
Roma (2b)	Fa	0	2	PS	2	791	0	0.00	
Roma (3b)	Fa	0	3	PS	2	791	0	0.00	
Cadiz	Ca	0	3	PS	2.5	896	0	0.00	0.00
AH Sub Total		0							
	Total	92				Total Sq.Ft	87284		

Gross Site Area -	21316	m2	PS= Parking Space Only IG = Integral Garage G= Detached/Remote or Attached Garage
Amenity	4170	m2	
Undevelopable	0		* = No Pod - Awaiting Decision
Net Area	17146	m2	4.237 acres
	1.7146	Ha	
	20602	sq.ft/acre	
Density.	53.7	dwellings/Ha	

homes by strata

strata homes limited cusy point lakeside doncaster DN4 5PL
T 01302 308508 F 01302 308501 www.homesbystrata.co.uk

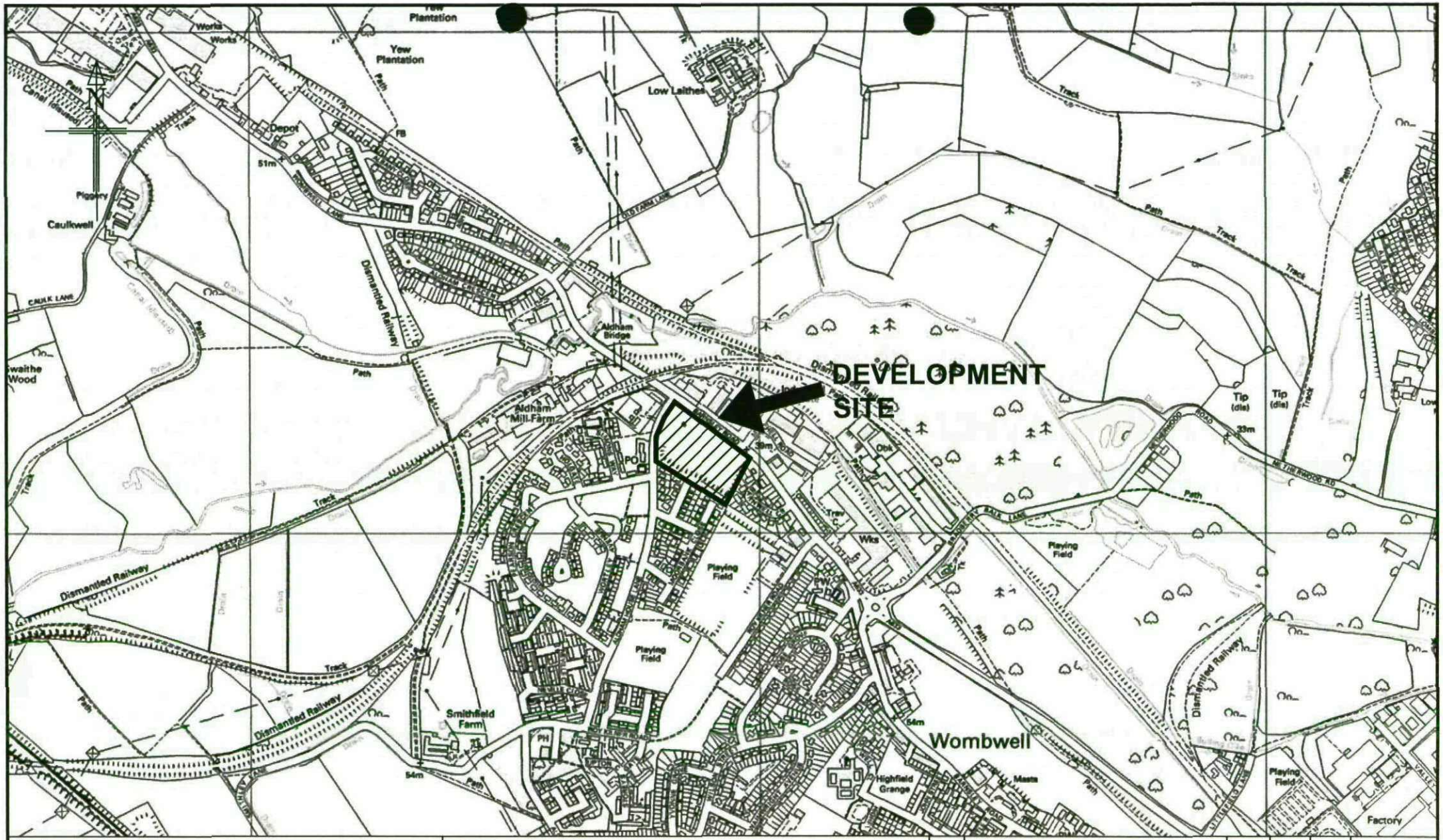
scale: 1/500 | drawn by: ikc | date: 01.08.10

Project: Barnsley Road Wombwell

Drawing: Sketch Layout

Drawing Number: BR/WW/SK03 | Revision: E

APPENDIX BGH 2

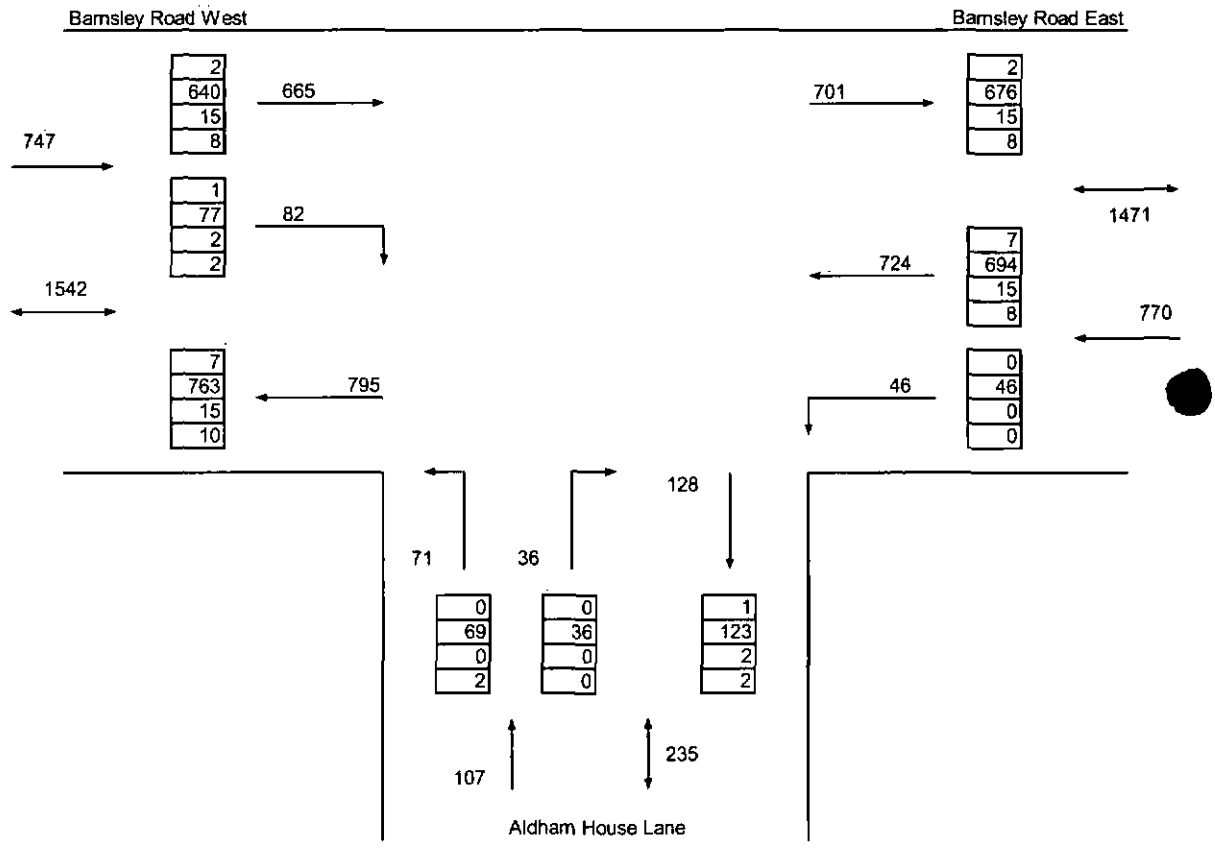


Client	STRATA HOMES	Project	BARNSLEY ROAD WOMBWELL, BARNSLEY			
BRYAN G HALL consulting civil & transportation planning engineers	Bryan G Hall Ltd. Suite BE Joseph's Well Hanover Walk Leeds LS3 1AB Tel: +44(0)113 246 1555 Fax: +44(0)113 234 2201 http:\www.bryanghall.co.uk	Title	SITE LOCATION PLAN IN RELATION TO THE LOCAL HIGHWAY NETWORK			
		Rev	Amendments	Drawn	Chkd / Appr	Date
		Scale	1:1,000 @ A4	Date	MARCH 2011	Doc Sheet No
		Drawn	ALH	Checked	NA	Approved NA
		Job No	11-142	Drawing No	BGH2	Rev –

FILENAME

APPENDIX BGH 3

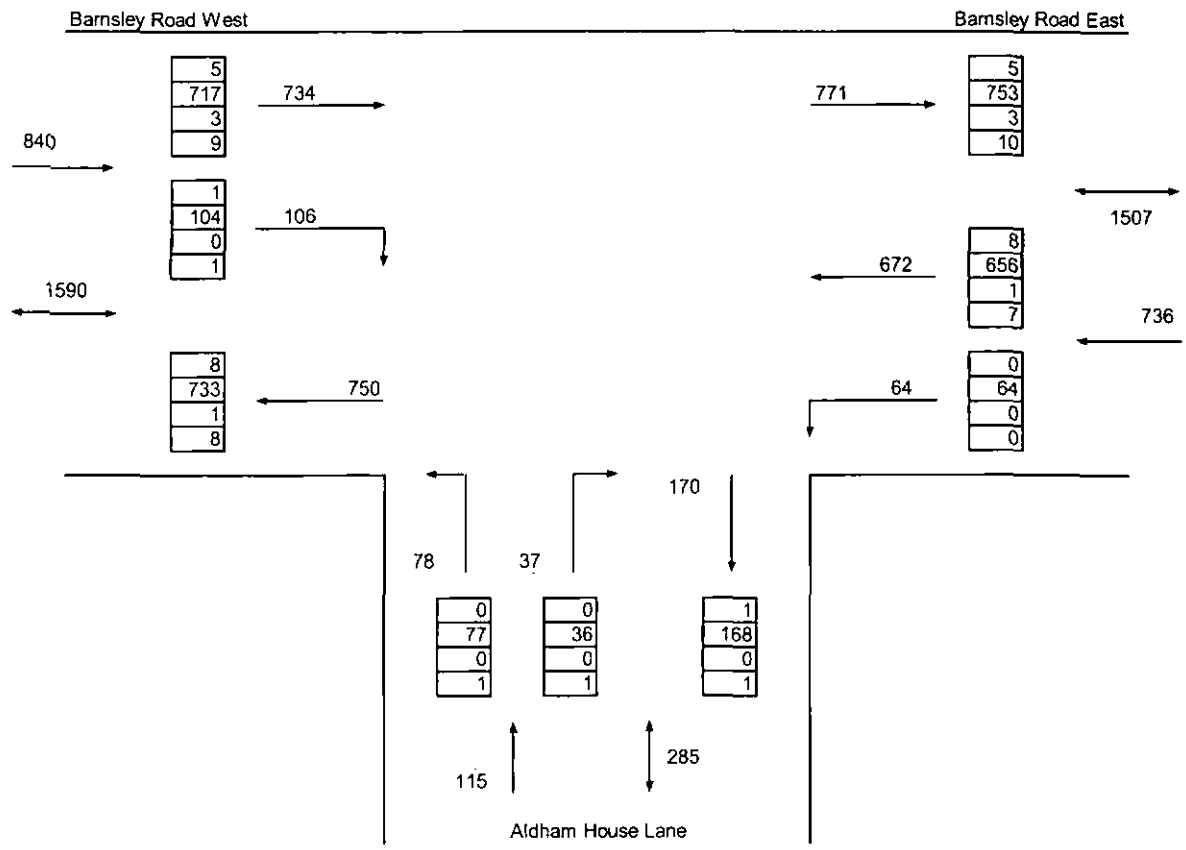
EXISTING VEHICULAR FLOWS
ALDHAM HOUSE LANE / BARNSLEY ROAD
TUESDAY 17 JANUARY 2006
8:00 am - 9:00 am



Vehicular Flows

- Motor cycles and pedal cycles
- Cars and light goods vehicles
- Heavy goods vehicles
- Buses

EXISTING VEHICULAR FLOWS
ALDHAM HOUSE LANE / BARNSLEY ROAD
TUESDAY 17 JANUARY 2006
5:00 pm - 6:00 pm



Vehicular Flows

- Motor cycles and pedal cycles
- Cars and light goods vehicles
- Heavy goods vehicles
- Buses

APPENDIX BGH 4

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	**SOUTH EAST**		
	BD	BEDFORDSHIRE	2 days
	HF	HERTFORDSHIRE	1 days
	SC	SURREY	1 days
03	**SOUTH WEST**		
	CW	CORNWALL	1 days
	GS	GLOUCESTERSHIRE	1 days
	WL	WILTSHIRE	1 days
04	**EAST ANGLIA**		
	SF	SUFFOLK	2 days
05	**EAST MIDLANDS**		
	LN	LINCOLNSHIRE	1 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	1 days
	WM	WEST MIDLANDS	2 days
	WO	WORCESTERSHIRE	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NY	NORTH YORKSHIRE	2 days
08	**NORTH WEST**		
	CH	CHESHIRE	1 days
	LC	LANCASHIRE	1 days
09	**NORTH**		
	CB	CUMBRIA	1 days
	TW	TYNE & WEAR	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
Range: 52 to 150 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/02 to 21/06/09

Selected survey days:

Monday	4 days
Tuesday	8 days
Wednesday	2 days
Thursday	2 days
Friday	4 days

Selected survey types:

Manual count	20 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	10
Edge of Town	8

Selected Location Sub Categories:

Residential Zone	14
Out of Town	1
No Sub Category	5

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Ranking Type: **ARRIVALS** Time Range: 08:00-09:00
15th Percentile = No. **17 (**)**
85th Percentile = No. **4 (**)**

Median Values
Arrivals: 0.222
Departures: 0.734
Totals: 0.955

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Arrivals)			Travel Plan
							Arrivals	Departures	Totals	
1	BD-03-A-02	SEMI DETACHED, LUTON	BEDFORDSHIRE	82	Tue	06/07/04	0.744	1.317	2.061	
2	SH-03-A-04	TERRACED, SHREWSBURY	SHROPSHIRE	108	Thu	11/06/09	0.407	0.843	1.250	
3	WM-03-A-03	MIXED HOUSING, COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.405	0.905	1.310	
4 **	**WO-03-A-03**	**DETACHED, KIDDERMINSTER**	**WORCESTERSHIRE**	**138**	**Fri**	**05/05/06**	**0.384**	**1.058**	**1.442**	
5	WM-03-A-01	TERRACED, COVENTRY	WEST MIDLANDS	79	Fri	03/02/06	0.380	0.886	1.266	
6	NY-03-A-01	MIXED HOUSES,NORTHALLERT	NORTH YORKSHIRE	52	Tue	25/09/07	0.269	1.000	1.269	
7	LC-03-A-22	BUNGALOWS, BLACKPOOL	LANCASHIRE	98	Tue	18/10/05	0.255	0.469	0.724	
8	TW-03-A-01	SEMI DETACHED, SUNDERLAN	TYNE & WEAR	81	Wed	18/09/02	0.247	1.012	1.259	
9	LN-03-A-01	MIXED HOUSES, LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.247	0.920	1.167	
10	CH-03-A-06	SEMI-DET./BUNGALOWS,CREW	CHESHIRE	129	Tue	14/10/08	0.225	0.457	0.682	
11	SF-03-A-03	MIXED HOUSES, BURY ST ED	SUFFOLK	101	Mon	15/05/06	0.218	1.010	1.228	
12	NY-03-A-05	HOUSES AND FLATS, RIPON	NORTH YORKSHIRE	71	Mon	22/09/08	0.211	0.676	0.887	
13	CB-03-A-04	SEMI DETACHED, WORKINGTO	CUMBRIA	82	Fri	24/04/09	0.207	0.695	0.902	
14	BD-03-A-01	SEMI DETACHED, LUTON	BEDFORDSHIRE	131	Thu	08/07/04	0.206	0.870	1.076	
15	SC-03-A-03	DETACHED, EAST MOLESEY	SURREY	54	Tue	12/11/02	0.204	0.667	0.871	
16	GS-03-A-01	SEMI D./TERRACED, GLOUCE	GLOUCESTERSHIRE	73	Tue	25/05/04	0.192	0.616	0.808	
17 **	**CW-03-A-02**	**SEMI D./DETATCHED, TRURO**	**CORNWALL**	**73**	**Tue**	**18/09/07**	**0.178**	**0.877**	**1.055**	
18	HF-03-A-01	MIXED HOUSES, WELWYN GC	HERTFORDSHIRE	53	Fri	06/09/02	0.170	0.453	0.623	
19	SF-03-A-01	SEMI DETACHED, IPSWICH	SUFFOLK	77	Wed	23/05/07	0.117	0.805	0.922	
20	WL-03-A-01	SEMI D./TERRACED W. BASS	WILTSHIRE	99	Mon	02/10/06	0.081	0.636	0.717	

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	**SOUTH EAST**		
	BD	BEDFORDSHIRE	2 days
	HF	HERTFORDSHIRE	1 days
	SC	SURREY	1 days
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	GS	GLOUCESTERSHIRE	1 days
	WL	WILTSHIRE	1 days
04	**EAST ANGLIA**		
	SF	SUFFOLK	2 days
05	**EAST MIDLANDS**		
	LN	LINCOLNSHIRE	1 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	1 days
	WM	WEST MIDLANDS	2 days
	WO	WORCESTERSHIRE	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NY	NORTH YORKSHIRE	2 days
08	**NORTH WEST**		
	CH	CHESHIRE	1 days
	LC	LANCASHIRE	1 days
09	**NORTH**		
	CB	CUMBRIA	1 days
	TW	TYNE & WEAR	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
Range: 52 to 150 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/02 to 21/06/09

Selected survey days:

Monday	4 days
Tuesday	8 days
Wednesday	2 days
Thursday	2 days
Friday	4 days

Selected survey types:

Manual count	20 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	10
Edge of Town	8

Selected Location Sub Categories:

Residential Zone	14
Out of Town	1
No Sub Category	5

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Ranking Type: **DEPARTURES** Time Range: 08:00-09:00

15th Percentile = No. **17 (**)**

85th Percentile = No. **4 (**)**

Median Values

Arrivals: 0.306

Departures: 0.857

Totals: 1.163

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Departures)			Travel Plan
							Arrivals	Departures	Totals	
1	BD-03-A-02	SEMI DETACHED, LUTON	BEDFORDSHIRE	82	Tue	06/07/04	0.744	1.317	2.061	
2	WO-03-A-03	DETACHED, KIDDERMINSTER	WORCESTERSHIRE	138	Fri	05/05/06	0.384	1.058	1.442	
3	TW-03-A-01	SEMI DETACHED, SUNDERLAN	TYNE & WEAR	81	Wed	18/09/02	0.247	1.012	1.259	
4 **	**SF-03-A-03**	**MIXED HOUSES, BURY ST ED**	**SUFFOLK**	**101**	**Mon**	**15/05/06**	**0.218**	**1.010**	**1.228**	
5	NY-03-A-01	MIXED HOUSES,NORTHALLERT	NORTH YORKSHIRE	52	Tue	25/09/07	0.269	1.000	1.269	
6	LN-03-A-01	MIXED HOUSES, LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.247	0.920	1.167	
7	WM-03-A-03	MIXED HOUSING, COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.405	0.905	1.310	
8	WM-03-A-01	TERRACED, COVENTRY	WEST MIDLANDS	79	Fri	03/02/06	0.380	0.886	1.266	
9	CW-03-A-02	SEMI D./DETATCHED, TRURO	CORNWALL	73	Tue	18/09/07	0.178	0.877	1.055	
10	BD-03-A-01	SEMI DETACHED, LUTON	BEDFORDSHIRE	131	Thu	08/07/04	0.206	0.870	1.076	
11	SH-03-A-04	TERRACED, SHREWSBURY	SHROPSHIRE	108	Thu	11/06/09	0.407	0.843	1.250	
12	SF-03-A-01	SEMI DETACHED, IPSWICH	SUFFOLK	77	Wed	23/05/07	0.117	0.805	0.922	
13	CB-03-A-04	SEMI DETACHED, WORKINGTO	CUMBRIA	82	Fri	24/04/09	0.207	0.695	0.902	
14	NY-03-A-05	HOUSES AND FLATS, RIPON	NORTH YORKSHIRE	71	Mon	22/09/08	0.211	0.676	0.887	
15	SC-03-A-03	DETACHED, EAST MOLESEY	SURREY	54	Tue	12/11/02	0.204	0.667	0.871	
16	WL-03-A-01	SEMI D./TERRACED W. BASS	WILTSHIRE	99	Mon	02/10/06	0.081	0.636	0.717	
17 **	**GS-03-A-01**	**SEMI D./TERRACED, GLOUCE**	**GLOUCESTERSHIRE**	**73**	**Tue**	**25/05/04**	**0.192**	**0.616**	**0.808**	
18	LC-03-A-22	BUNGALOWS, BLACKPOOL	LANCASHIRE	98	Tue	18/10/05	0.255	0.469	0.724	
19	CH-03-A-06	SEMI-DET./BUNGALOWS,CREW	CHESHIRE	129	Tue	14/10/08	0.225	0.457	0.682	
20	HF-03-A-01	MIXED HOUSES, WELWYN GC	HERTFORDSHIRE	53	Fri	06/09/02	0.170	0.453	0.623	

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	**SOUTH EAST**		
	BD	BEDFORDSHIRE	2 days
	HF	HERTFORDSHIRE	1 days
	SC	SURREY	1 days
03	**SOUTH WEST**		
	CW	CORNWALL	1 days
	GS	GLOUCESTERSHIRE	1 days
	WL	WILTSHIRE	1 days
04	**EAST ANGLIA**		
	SF	SUFFOLK	2 days
05	**EAST MIDLANDS**		
	LN	LINCOLNSHIRE	1 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	1 days
	WM	WEST MIDLANDS	2 days
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	NY	NORTH YORKSHIRE	2 days
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	CH	CHESHIRE	1 days
	LC	LANCASHIRE	1 days
09	**NORTH**		
	CB	CUMBRIA	1 days
	TW	TYNE & WEAR	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
Range: 52 to 150 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/02 to 21/06/09

Selected survey days:

Monday	4 days
Tuesday	8 days
Wednesday	2 days
Thursday	2 days
Friday	4 days

Selected survey types:

Manual count	20 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	10
Edge of Town	8

Selected Location Sub Categories:

Residential Zone	14
Out of Town	1
No Sub Category	5

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

Ranking Type: **ARRIVALS** Time Range: 17:00-18:00
15th Percentile = No. **17 (**)**
85th Percentile = No. **4 (**)**

Median Values
Arrivals: 0.580
Departures: 0.285
Totals: 0.865

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Arrivals)			Travel Plan
							Arrivals	Departures	Totals	
1	TW-03-A-01	SEMI DETACHED, SUNDERLAN	TYNE & WEAR	81	Wed	18/09/02	0.864	0.543	1.407	
2	SH-03-A-04	TERRACED, SHREWSBURY	SHROPSHIRE	108	Thu	11/06/09	0.833	0.426	1.259	
3	CW-03-A-02	SEMI D./DETATCHED, TRURO	CORNWALL	73	Tue	18/09/07	0.822	0.397	1.219	
4 **	**WO-03-A-03**	**DETACHED, KIDDERMINSTER**	**WORCESTERSHIRE**	**138**	**Fri**	**05/05/06**	**0.812**	**0.399**	**1.211**	
5	WM-03-A-03	MIXED HOUSING, COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.798	0.560	1.358	
6	WM-03-A-01	TERRACED, COVENTRY	WEST MIDLANDS	79	Fri	03/02/06	0.759	0.392	1.151	
7	SF-03-A-03	MIXED HOUSES, BURY ST ED	SUFFOLK	101	Mon	15/05/06	0.713	0.337	1.050	
8	NY-03-A-05	HOUSES AND FLATS, RIPON	NORTH YORKSHIRE	71	Mon	22/09/08	0.662	0.225	0.887	
9	GS-03-A-01	SEMI D./TERRACED, GLOUCE	GLOUCESTERSHIRE	73	Tue	25/05/04	0.658	0.219	0.877	
10	LN-03-A-01	MIXED HOUSES, LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.587	0.280	0.867	
11	BD-03-A-01	SEMI DETACHED, LUTON	BEDFORDSHIRE	131	Thu	08/07/04	0.573	0.290	0.863	
12	CB-03-A-04	SEMI DETACHED, WORKINGTO	CUMBRIA	82	Fri	24/04/09	0.561	0.244	0.805	
13	SC-03-A-03	DETACHED, EAST MOLESEY	SURREY	54	Tue	12/11/02	0.519	0.241	0.760	
14	LC-03-A-22	BUNGALOWS, BLACKPOOL	LANCASHIRE	98	Tue	18/10/05	0.510	0.306	0.816	
15	HF-03-A-01	MIXED HOUSES, WELWYN GC	HERTFORDSHIRE	53	Fri	06/09/02	0.509	0.226	0.735	
16	WL-03-A-01	SEMI D./TERRACED W. BASS	WILTSHIRE	99	Mon	02/10/06	0.505	0.293	0.798	
17 **	**SF-03-A-01**	**SEMI DETACHED, IPSWICH**	**SUFFOLK**	**77**	**Wed**	**23/05/07**	**0.494**	**0.377**	**0.871**	
18	BD-03-A-02	SEMI DETACHED, LUTON	BEDFORDSHIRE	82	Tue	06/07/04	0.415	0.476	0.891	
19	NY-03-A-01	MIXED HOUSES,NORTHALLERT	NORTH YORKSHIRE	52	Tue	25/09/07	0.404	0.365	0.769	
20	CH-03-A-06	SEMI-DET./BUNGALOWS,CREW	CHESHIRE	129	Tue	14/10/08	0.178	0.225	0.403	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
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MULTI-MODAL TOTAL PEOPLE

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	CB	CUMBRIA	1 days
	TW	TYNE & WEAR	1 days

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Range: 52 to 150 (units:)

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Directional ATC Count	0 days

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Out of Town	1
No Sub Category	5

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Ranking Type: **ARRIVALS** Time Range: 17:00-18:00
15th Percentile = No. **17 (**)**
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Median Values
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Departures: 0.285
Totals: 0.865

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Arrivals)			Travel Plan
							Arrivals	Departures	Totals	
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2	SH-03-A-04	TERRACED, SHREWSBURY	SHROPSHIRE	108	Thu	11/06/09	0.833	0.426	1.259	
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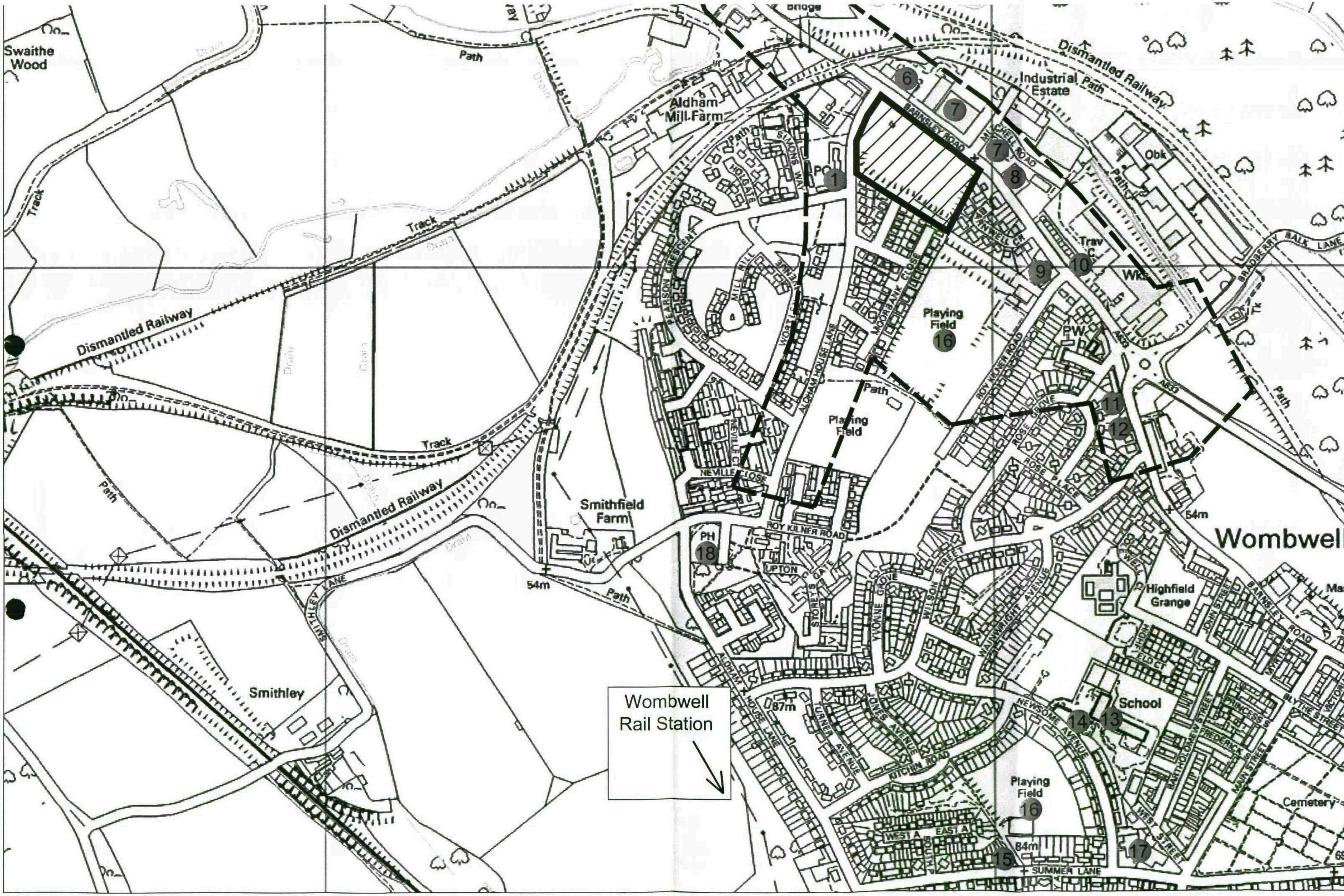
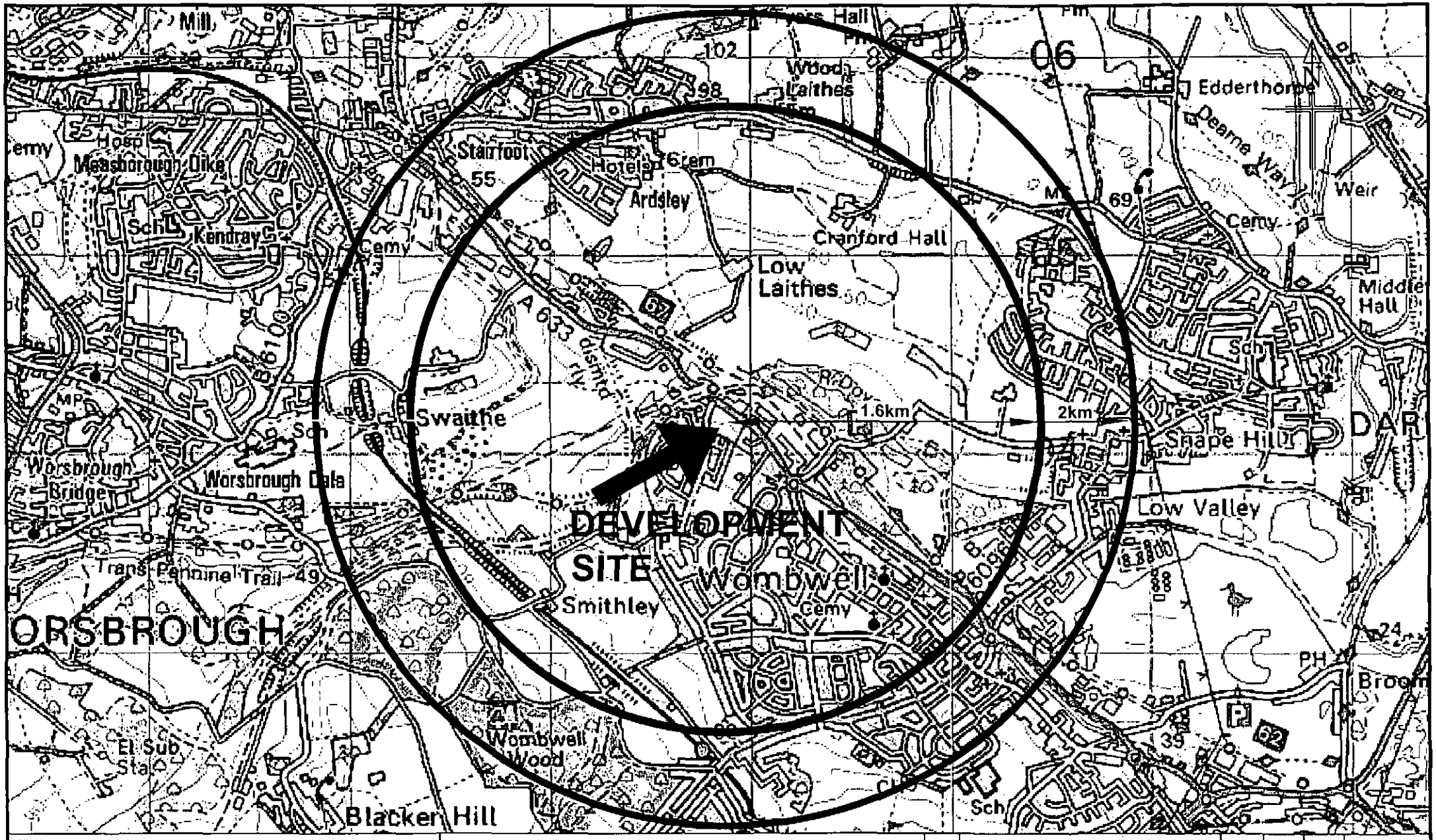
4 **	**WO-03-A-03**	**DETACHED, KIDDERMINSTER**	**WORCESTERSHIRE**	**138**	**Fri**	**05/05/06**	**0.812**	**0.399**	**1.211**	
5	WM-03-A-03	MIXED HOUSING, COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.798	0.560	1.358	
6	WM-03-A-01	TERRACED, COVENTRY	WEST MIDLANDS	79	Fri	03/02/06	0.759	0.392	1.151	
7	SF-03-A-03	MIXED HOUSES, BURY ST ED	SUFFOLK	101	Mon	15/05/06	0.713	0.337	1.050	
8	NY-03-A-05	HOUSES AND FLATS, RIPON	NORTH YORKSHIRE	71	Mon	22/09/08	0.662	0.225	0.887	
9	GS-03-A-01	SEMI D./TERRACED, GLOUCE	GLOUCESTERSHIRE	73	Tue	25/05/04	0.658	0.219	0.877	
10	LN-03-A-01	MIXED HOUSES, LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.587	0.280	0.867	
11	BD-03-A-01	SEMI DETACHED, LUTON	BEDFORDSHIRE	131	Thu	08/07/04	0.573	0.290	0.863	
12	CB-03-A-04	SEMI DETACHED, WORKINGTO	CUMBRIA	82	Fri	24/04/09	0.561	0.244	0.805	
13	SC-03-A-03	DETACHED, EAST MOLESEY	SURREY	54	Tue	12/11/02	0.519	0.241	0.760	
14	LC-03-A-22	BUNGALOWS, BLACKPOOL	LANCASHIRE	98	Tue	18/10/05	0.510	0.306	0.816	
15	HF-03-A-01	MIXED HOUSES, WELWYN GC	HERTFORDSHIRE	53	Fri	06/09/02	0.509	0.226	0.735	
16	WL-03-A-01	SEMI D./TERRACED W. BASS	WILTSHIRE	99	Mon	02/10/06	0.505	0.293	0.798	
17 **	**SF-03-A-01**	**SEMI DETACHED, IPSWICH**	**SUFFOLK**	**77**	**Wed**	**23/05/07**	**0.494**	**0.377**	**0.871**	
18	BD-03-A-02	SEMI DETACHED, LUTON	BEDFORDSHIRE	82	Tue	06/07/04	0.415	0.476	0.891	
19	NY-03-A-01	MIXED HOUSES,NORTHALLERT	NORTH YORKSHIRE	52	Tue	25/09/07	0.404	0.365	0.769	
20	CH-03-A-06	SEMI-DET./BUNGALOWS,CREW	CHESHIRE	129	Tue	14/10/08	0.178	0.225	0.403	

APPENDIX BGH 5

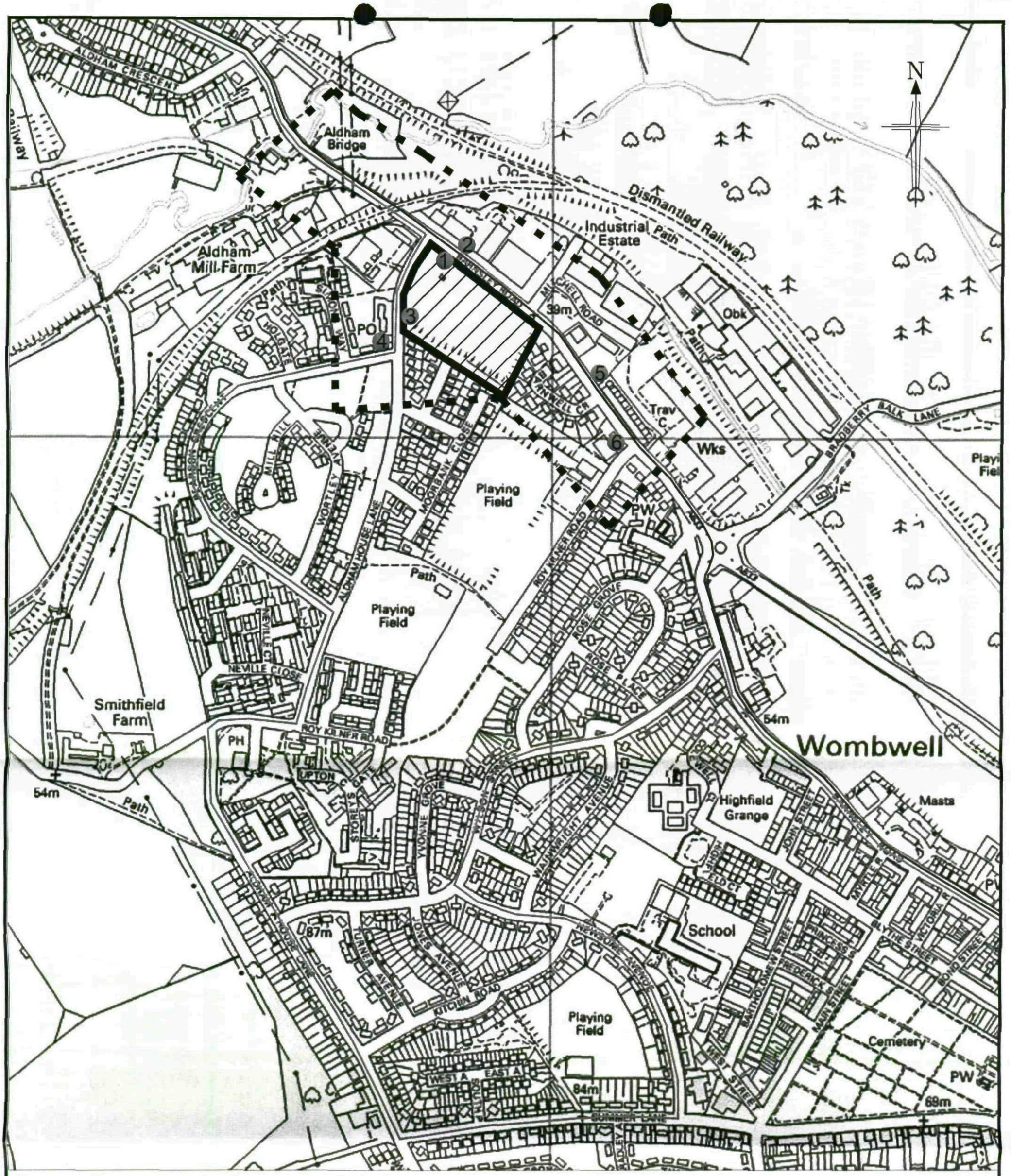

Swaithe Wood
Track
Path
Aldham Mill Farm
Dismantled Railway
Track
Dismantled Railway
Path
Smithfield Farm
54m
Path
Smithley
Smithley Lane
Wombwell Rail Station
PH
18
Roy Kilner Road
Upton
Neville Close
Neville Ct
Aldham House Lane
Playing Field
Path
Pearson Crescent
Holgate
Simons Way
PO
1
Mill Hill
Moorbank Close
Playing Field
16
Barnsley Road
6
7
7
8
Mitchell Road
Industrial Estate
Path
Dismantled Railway
Obk
Path
Trav C
9
10
Wks
Bradberry Balk Lane
Tk
PW
A633
Path
11
12
Rose Grove
Rose Place
54m
Wombwell
Highfield Grange
Mast
John Street
Barnsley Road
School
13
14
Newsome Avenue
Wilson Street
Yvonne Grove
Wainwright Avenue
Jones Avenue
Turner Avenue
Kitchin Road
87m
West A
East A
84m
Summer Lane
15
Playing Field
16
17
West Street
Bartholomew Street
Frederick
Princess
Main Street
Blythe Street
Victoria
Cemetery
69m



Client: STRATA HOMES	Project: BARNSLEY ROAD WOMBWELL, BARNSLEY	Rev	Amendments	Drawn	Chkd	Appr	Date
BRYAN · G HALL consulting civil & transportation planning engineers Bryan G Hall Ltd, Suite B2 Joseph's Well, Hanover Walk, Leeds LS3 1AB Tel: +44(0)113 246 1555 Fax: +44(0)113 234 2201 http://www.bryanghall.co.uk	Title: WALKING ISOCRONES SHOWN AT 1.6KM AND 2KM DISTANCES	Scale: 1:25,000 @ A4	Date: MARCH 2011	Doc Sheet No			
		Drawn: ALH	Checked: NA	Approved: NA			
		Job No: 11-142	Drawing No: BGH5-02	Rev: -			

FILENAME

APPENDIX BGH 6



Key:

Site Boundary

400m Walking Catchment from centre of site

Bus Stops

1 - Shelter, Seats & Schedule

2 - Shelter, Seats & Schedule

3 - Pole & Scehdule

4 - Shelter, Seats , Schedule & Markings

5 - Shelter, Seats & Schedule

6 - Shelter, Seats & Scehdule

Bus Routes

Bus No 222, 223, 226, 228 & 229

Bus No 69

Client: STRATA HOMES

Project: BARNSLEY ROAD WOMBWELL, BARNSLEY

Title: BUS STOPS & ROUTES

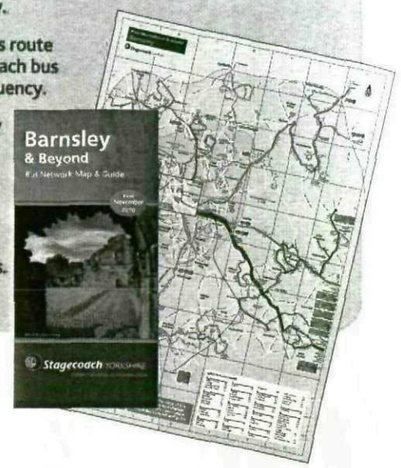
BRYAN G HALL
consulting civil & transportation planning engineers
Bryan G Hall Ltd.
Suite E8 Joseph's Well
Hanover Walk
Leeds,
LS3 1AB
Tel: +44(0)113 246 1555
Fax: +44(0)113 234 2201

Rev	Amendments	Drawn	Chkd	Appr	Date

Scale	Date	Doc Sheet No
1:5,000 @ A3	MARCH 2011	
Drawn	**Checked**	**Approved**
ALH	NA	NA
Job No	**Drawing No**	**Rev**
11-142	BGH6-01	-

FILENAME

- An easy to read map of all the routes Stagecoach operates to and from Barnsley.
- A list of all the bus route numbers, where each bus goes and the frequency.
- A map of Barnsley Interchange.
- Maps of Barnsley town centre.
- Details of our great value tickets.



FOR MORE INFO

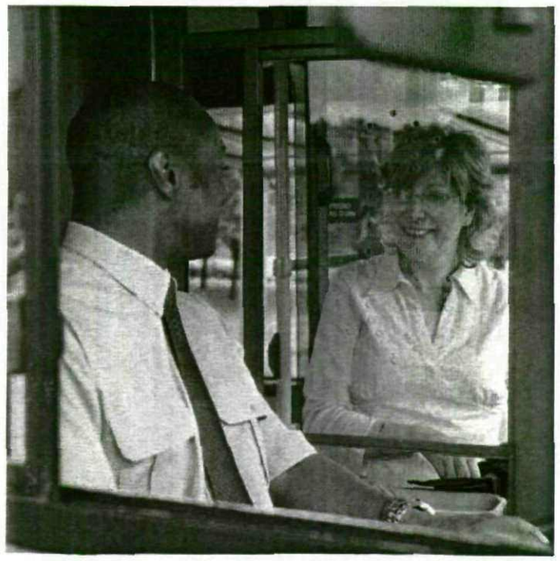
...contact us

We have produced this pocket sized, easy to use network map and guide to help you travel around Barnsley using Stagecoach services. If you do need any further information you can:

- Pick up timetables from the South Yorkshire travel information centre in Barnsley Interchange or your local travel information centre.
- Download timetables at **www.travelsouthyorkshire.com** or **www.stagecoachbus.com/yorkshire**
- Call Traveline on **01709 515151**

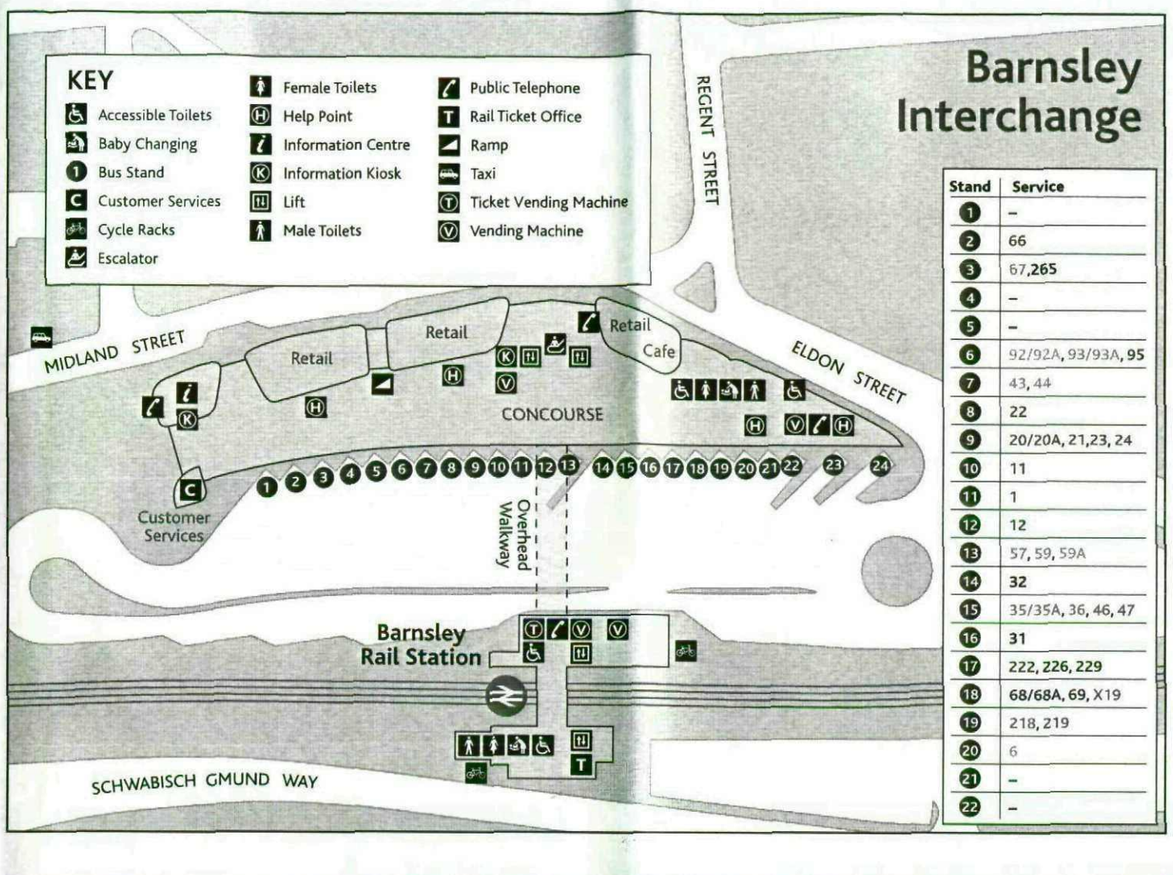
You can keep up to date with everything we're doing at **www.stagecoachbus.com/yorkshire**

We look forward to welcoming you on board!



Stagecoach YORKSHIRE

Produced by FWT 22.10.10 www.fwt.co.uk



Stand	Service
1	–
2	66
3	67,265
4	–
5	–
6	92/92A, 93/93A, 95
7	43, 44
8	22
9	20/20A, 21,23, 24
10	11
11	1
12	12
13	57, 59, 59A
14	32
15	35/35A, 36, 46, 47
16	31
17	222, 226, 229
18	68/68A, 69, X19
19	218, 219
20	6
21	–
22	–

tickets to go...

Simply buy direct from your driver in cash

Barnsley megarider	£8.00	Enjoy 7 days UNLIMITED TRAVEL in Barnsley Zone 1
Barnsley megarider PLUS	£11.00	Enjoy 7 days UNLIMITED TRAVEL across Barnsley (Zones 1&2)
Barnsley dayrider	£4.00	Enjoy 1 days UNLIMITED TRAVEL across Barnsley (Zones 1&2)

Save up to 15%* when you buy online

For more information visit **www.buymymegarider.com**

**Saving calculated on a 52 week Barnsley megarider*

35A	Barnsley - Lundwood - Cudworth - Shafton - Grimethorpe, Michaels Estate
36	Barnsley - Lundwood - Cudworth - Shafton - Grimethorpe - Nancy Crescent Brierley Common -Moorthorpe - South Elmsall
43	Barnsley - Pogmoor Road (Barnsley Hospital) - Kingstone - Barnsley
44	Barnsley - Kingstone - Pogmoor Road (Barnsley Hospital) - Barnsley
46	Barnsley - Lundwood - Cudworth - Shafton - Grimethorpe - Brierley - South Hiendley - Hemsworth - South Elmsall - Upton - Pontefract
47	Barnsley - Lundwood - Cudworth - Shafton - Grimethorpe - Brierley - Hemsworth - South Elmsall - Upton
57	Barnsley - Monk Bretton - Carlton - Park View - Royston - Meadstead Drive
59	Barnsley - Monk Bretton - Carlton - Cross Lane - Royston - Station Road - Ne Newmillerdam - Wakefield
59A	Barnsley - Monk Bretton - Carlton - Church Street - Royston - Station Road
66	Barnsley - Worsbrough - Birdwell - Hoyland - Elsecar
67	Barnsley - Worsbrough Dale - Birdwell - Hoyland - Platts Common - Jump - Hemingfield - Corton Wood - Wombwell
68/68A	Barnsley - Stairfoot - Aldham House - Wombwell - Low Valley - Darfield - Midc Great Houghton
69	Barnsley - Stairfoot - Aldham House - Wombwell - Low Valley - D[redacted]d Esta
92/92A	Barnsley - Gawber Road (Barnsley Hospital) - Redbrook Road - Barugh Green - Higham - Cawthorne
93	Barnsley - Gawber Road (Barnsley Hospital) - Redbrook Road - Barugh Green - Darton - Woolley Colliery Village
93A	Barnsley - Gawber Road (Barnsley Hospital) - Redbrook Road - Barugh Green - Darton - Staincross
95	Barnsley - Gawber Road (Barnsley Hospital) - Wilthorpe Road - Barugh Green - Barugh Green - Darton - Kexbrough
200	Wombwell - Corton Wood - Old Moor - Wath - Manvers - Mexborough
218	Barnsley - Stairfoot - Darfield - Goldthorpe - Bolton - Manvers - Mexbrough - S Kilnhurst - Rawmarsh - Rotherham
219	Barnsley - Stairfoot - Darfield - Middlecliffe - Great Houghton - Thurnscoe - Goldthorpe - Scawsby - Doncaster
222	Barnsley - Stairfoot - Wombwell - Brampton - West Melton - Wath - Swinton Mexborough - Conisbrough - Doncaster
226	Barnsley - Stairfoot - Wombwell - Brampton - West Melton - Wath - Manvers Bolton - Goldthorpe - Thurnscoe
229	Barnsley - Stairfoot - Wombwell - Brampton - West Melton - Wath - Rawmar Parkgate - Rotherham
265	Barnsley - Worsbrough Village - Birdwell - Hoyland Common - Chapeltown - Fir Vale (Northern General Hospital) - Sheffield
X19	Barnsley - Stairfoot - Darfield - Goldthorpe - Scawsby - Doncaster - Robin Hoo

a Route 20 extends from Millhouse Green to Holmfirth every 2 hours. Service 20A extend: 2 hours.
b Evening and Sunday journeys operate between Barnsley and Hemsworth.
c Evening & Sunday journeys operate as service 95A extending beyond Kexborough to serv
d Evening and Sunday journeys operate between Wath and Mexborough only.
e Evening & Sunday journeys operate between Mexborough, Highwoods & Rotherham Inter
f Frequency between Goldthorpe and Doncaster is hourly during daytimes Monday to Satu

Main bus routes in & around Barnsley

Stagecoach YORKSHIRE

A B C D E

1 2 3 4 5 6 7

59 to Wakefield

Summer Lane Top

Applehaigh View

59A

Summer Lane

59

Station Road

Midland Road

Lund Hill Lane

High Street

57

Park View

Cross Lane

59

57

Meadstead Drive

57.59A

59A

Church St.

Church Hill

Royston

Lee Lane

Warren Lane

Wakefield Road

Keswick Road

Staincross Common

New Road

Woolley Colliery Village

Woolley Colliery Rd.

93

Bloomhouse Lane

Sackup Lane

Kingsway

Wellgate Primary School

Staincross

Greenside

Tipsey Hill

Huddersfield Road

Darton

Darton

93A

Darton Lane

Church Street Lane

Ballfield Ln.

Church Field Lane

95

Kexbrough

Bence Lane

Barnsley Road

93

93A

95

Spark Lane

Blacker Road

New Lodge Eastfield Arms

New Lodge

Athersley Leisure Centre

Ollerton Road

Athersley North

Newstead Rd.

Trowell Way

Lindhurst Road

Laithes La.

Laithes Lane

Primary School

Standhill Cres.

Kirkstall Rd.

Wingfield Road

Chatsworth Road

Derwent Rd.

Athersley Rd.

Carlton Road

Athersley South

Wakefield Road

Carlton

Royston Lane

Chapel Lane

Carlton Road

Church Street

Carlton Primary School

Lyons\Wharncliffe Street

Shaw Lane

Boulder Bridge Lane

Weetshaw Lane

Royston Road

Pontefract Road

Shafton Green

Slack Lane

Kirkgate La.

Sandybridge Lane

Dog Hill

High Street

Shafton Primary School

Shafton

35

35A

36

46

47

Industry Rd.

Fish Dam Lane

St. Michael's and St. Dominics School

Shawfield Rd.

Preston Way

57

59

59A

Cudworth

31.32

35.35A

36.46.47

Cudworth Bridge

Barnsley Road

St. John's Rd.

Snydale Road

32

31

Infant and Junior School

Barnsley Bowl

Lamb Lane

St. Helen's Way

Well La.

Burton Road

West Green

Darfield Road

31

32

Crown Av.

MEGARIDER ZONE

Smithies

Wilthorpe

Wilthorpe Infant School

Devonshire Drive

Smithies Lane

Wilthorpe Road

95

Wilthorpe Junior School

Gawber

Queens Dr.

Greenfoot Lane

Huddersfield Rd.

Redbrook Road

92

92A

93

93A

12

Monk Bretton

Newhill Rd.

Rotherham Road

Cross St.

High St.

Burton Road

Lundwood

Burton

Long Causeway

Littleworth Lane

Pontefract Road

Parish Way

Bishops Way

31

57

59

59A

32

35

35A

36

46

47

Lund Lane

Priory School

Priory Campus

Lang Ave.

MEGARIDER PLUS ZONE

Barugh Green Crossroads

92.92A to Cawthorne

Head Road

Barugh Lane

Barugh Green

Claycliffe Rd.

Barugh Green Primary School

Barnsley Megarider Plus boundary extends to Cawthorne

Higham Common Road

Gilroyd Lane

92.92A

Lawrence Close

Higham

92A

Church Street

Wharfedale Rd.

Barnsley District Hospital

Pogmoor

Pogmoor Road

23

24

44

43

Dodworth Road

22

Barnsley Town Centre

Town Hall

Barnsley College

Metrodome

Barnsley

Football Ground

Alhambra Shopping Centre

For enlargement of Barnsley Town Centre see inset map overleaf

Cundy Cross

Monk Bretton Priory

Pontefract Road

Oaks Lane

Tank Row

Grange Lane

Hoyle Mill

Hoyle Mill Rd.

Ardsley

Top of Ardsley Hill

218

219.X19

Doncaster Road

Primary School

Tesco Wombwell Lane

68

68A.69

222.226

229

Barnsley Road

Dodworth Business Park/ Bluebell Inn

20

20A

21

20.20A.21

22.23.24

Mitchelson Avenue

20 to Holmfirth

20A to Deepcar

21 to Cubley

Dodworth

Station Road

High St.

Barnsley Megarider Plus boundary extends to Milhouse Green

Dodworth Green

Dodworth Infant School

24 to Penistone

Barnsley Megarider Plus boundary extends to Penistone

Keresforth Road

22

23

24A

Saville Road

20

20A

21

22

Gilroyd

Gilroyd Lane/ Saville Road

23

24A

23.24A to Deepcar

Barnsley Megarider Plus boundary extends to Thurgoland, Green Dragon

Round Green Lane

Rockley Lane

M1 Motorway

Broadway

Woodland Drive

43

44

Park Road

Kingstone

Racecommon La.

Worsbrough Common

Genn Lane

Hill Lane

Hound

Ward Green

Haverlands Lane

Worsbrough Dale

Worsbrough Mill & Country Park

Worsbrough

Sheffield Road

Worsbrough Road

66

67

265

Mt. Vernon Rd.

Highstone Lane

Kingwell Road

Saxon Cres.

Yews Lane

Overdale

Farm Road

Kendray

Medical Centre

Swanee Rd.

Lambert Rd.

Neville Ave.

Birk Ave.

Cypress Rd.

Primary School

Elmhirst School

Allendale

Ardsley Road

High Street Bank End Road

Broomroyd

Oakdale

Station Road

West Street

Wentworth Road

Dovecliffe Road

Smithley Lane

Wombwell

Wombwell Lane

Humingley Lane

Aldham House

Aldham House La.

Wilson Street

Newsome Ave.

Pearson Cres.

Windmill Rd.

Copeland Rd.

Bradberry Ba

Mitchells Wa

Summer

Hough

Blacker Hill

Wood Walk

Jump

Dearne Valley Parkway

Hemingfield Rd.

Roebuck Road

Barnsley Road

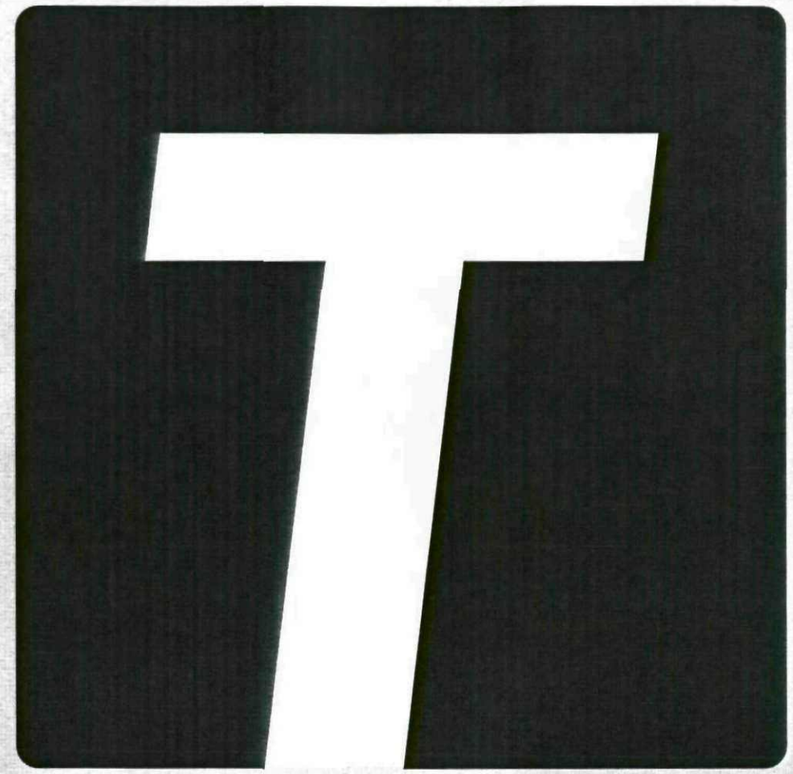
Birdwell

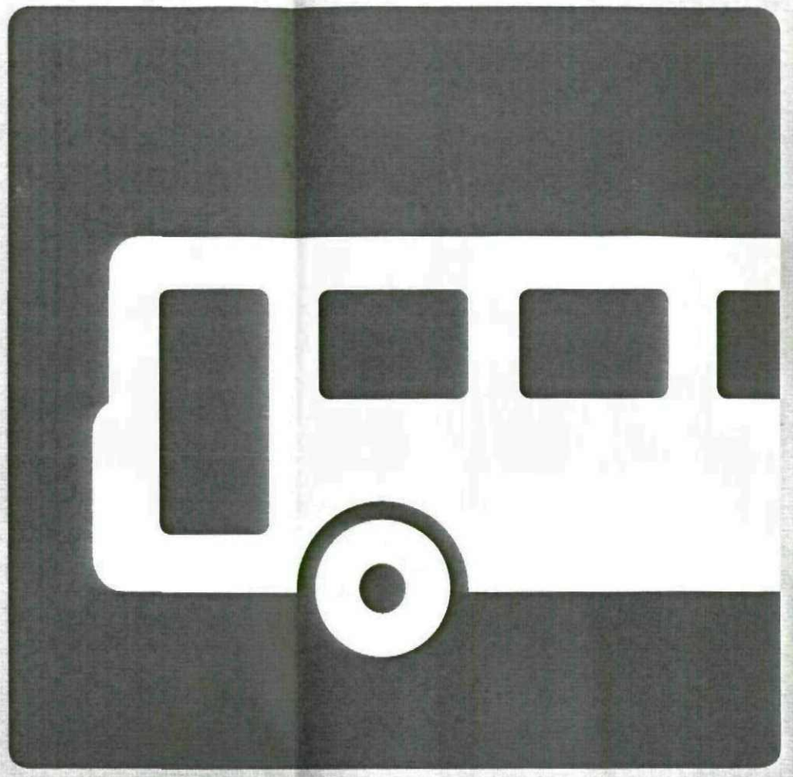
KEY

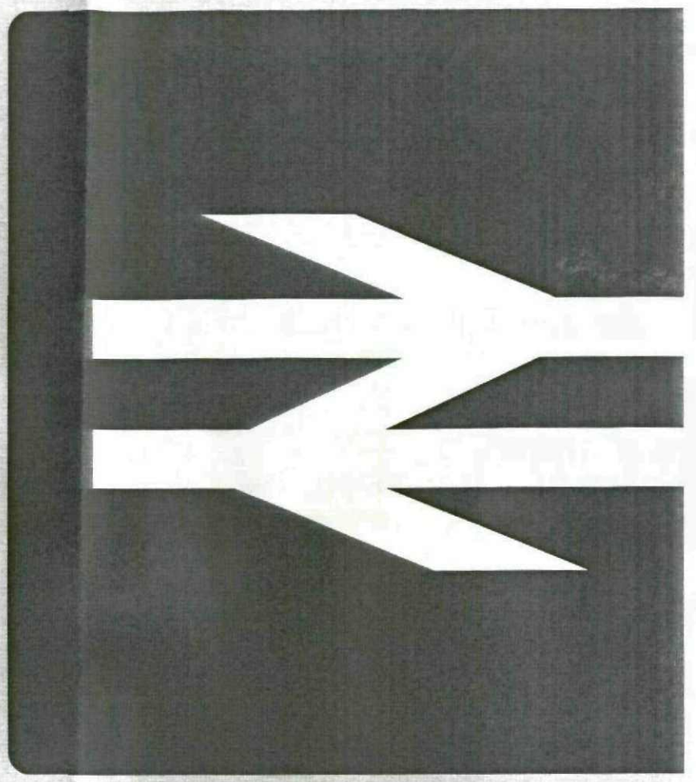
Main Bus Routes

Summary of Trains at Wombwell Railway Station and Barnsley Interchange

Train	Geographical Areas Covered	Operator	Frequency
Nottingham to Leeds	Nottingham - Langley Mill - Alfreton - Chesterfield - Dronfield - Sheffield - Meadowhall - Wakefield Kirkgate - Leeds	Northern	Every 60 minutes
Sheffield to Leeds	Sheffield - Meadowhall - Barnsley - Wakefield Kirkgate - Leeds	Northern	Every 30 minutes
Sheffield to Leeds	Sheffield - Meadowhall - Chapeltown - Elsecar - Wombwell - Barnsley - Darton - Wakefield Kirkgate - Normanton - Castleford - Woodlesford - Leeds	Northern	Every 60 minutes
Sheffield to Huddesfield	Sheffield - Meadowhall - Chapeltown - Wombwell - Barnsley - Dodworth - Silkstone Common - Penistone - Denby Dale - Shepley - Stocksmoor - Brockholes - Honley - Berry Brow - Lockwood - Huddersfield	Northern	Every 60 minutes



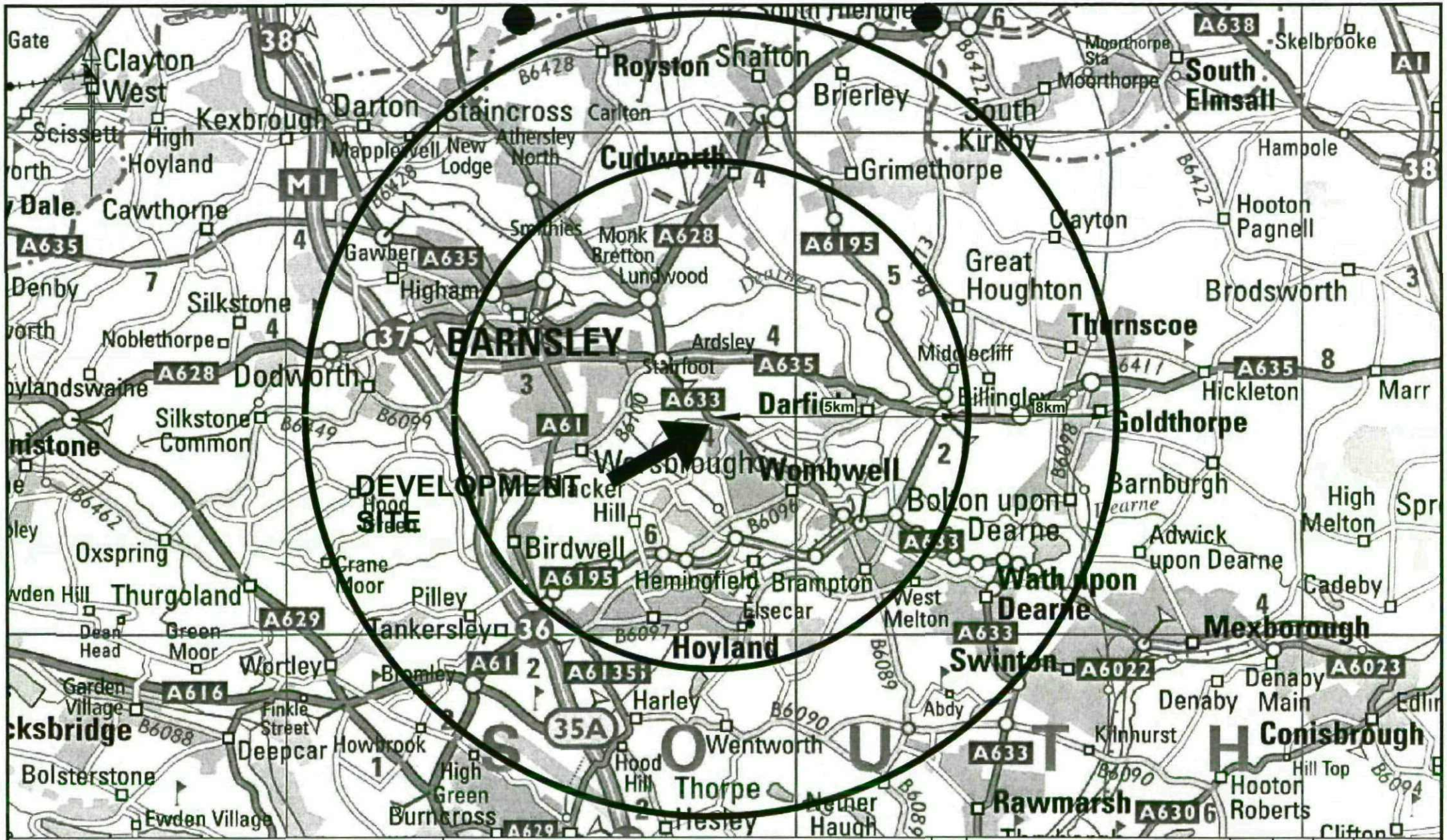




Service finder

Bus services	Towards	Places of interest along route*	Stop	Service f
1	Staincross		**A11**	10 mins
6	Worsbrough Dale		**A20**	10 mins
11	Athersley North		**A10**	10 mins
12	Athersley South		**A12**	15 mins
14	Gilroyd	H A&E	**A8**	20 mins
21	Cubley		**A9**	32 mins

APPENDIX BGH 7



Client	STRATA HOMES
Project	BARNSLEY ROAD WOMBWELL, BARNSLEY
Title	CYCLING ISOCRONES SHOWN AT 5KM AND 8KM DISTANCES

BRYAN G HALL
consulting civil & transportation planning engineers

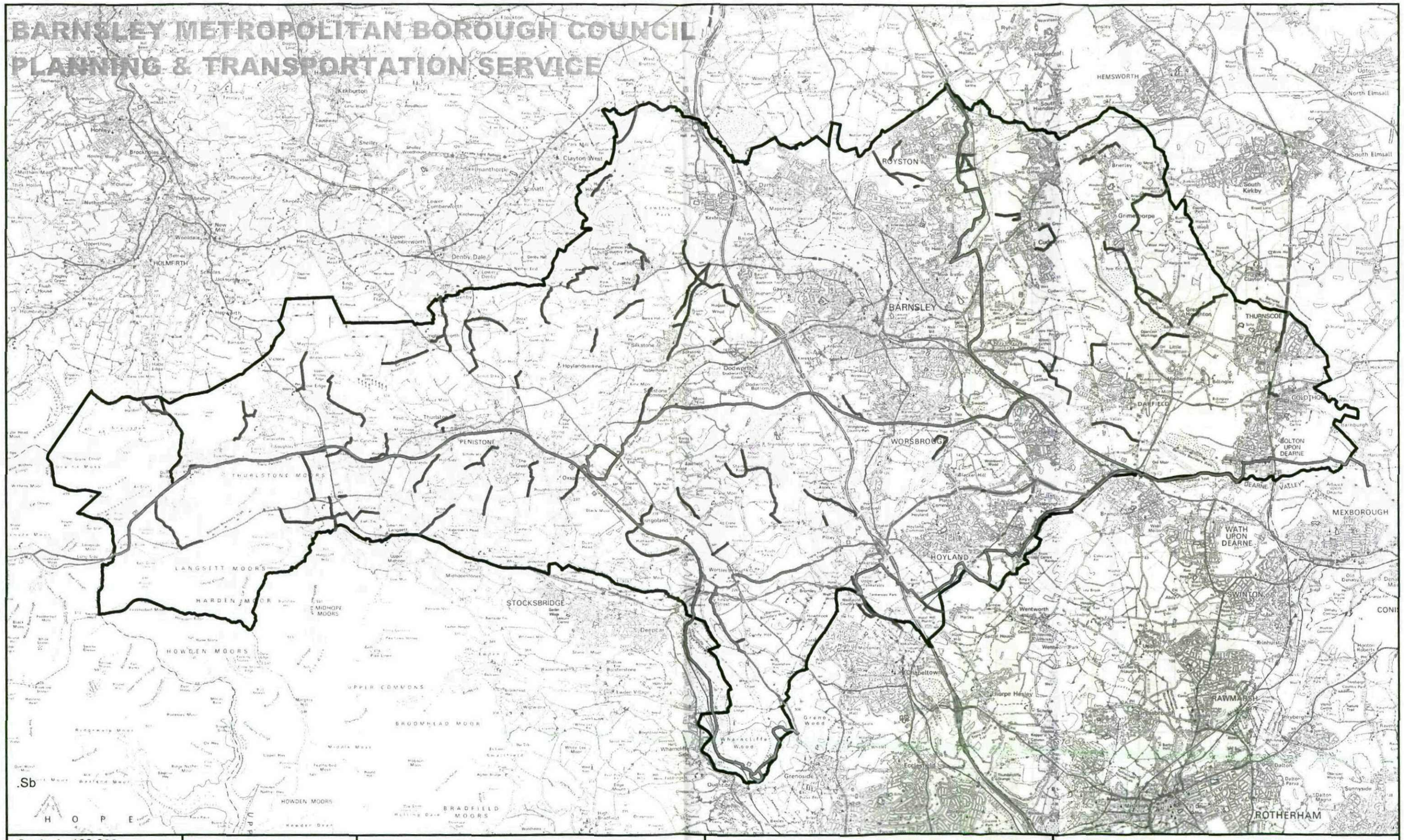
Bryan G Hall Ltd.
Suite BE Joseph's Well
Hanover Walk
Leeds
LS3 1AB
Tel: +44(0)113 246 1555
Fax: +44(0)113 234 2201
http:\\www.bryanghall.co.uk

Rev	Amendments	Drawn	Chkd	Appr	Date

Scale 1:100,000 @ A4	Date MARCH 2011	Doc Sheet No
Drawn ALH	Checked NA	Approved NA
Job No 11-142	Drawing No BGH7-01	Rev –

FILENAME

BARNSLEY METROPOLITAN BOROUGH COUNCIL
PLANNING & TRANSPORTATION SERVICE



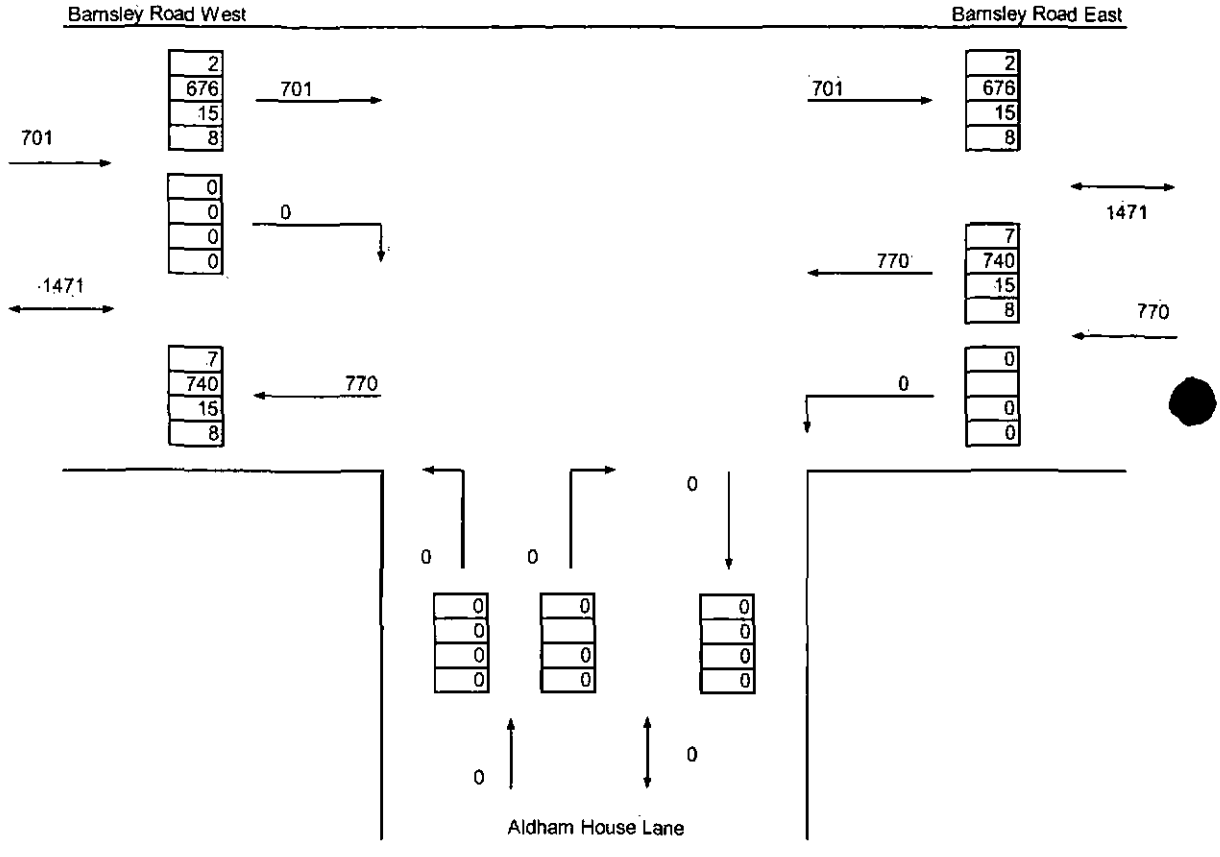
Scale 1: 100,000 **Drawn by:** KS **Drwg No:** 001 **Date:** March 2005	**Project:** Cycle Routes **Drawing:** BMBC	**KEY** — Trans Penine Trail Cycle Lanes — NCN Routes —Bridleways	BARNSLEY Metropolitan Borough Council	**Planning and Transportation Service** Assistant Director: Ruth Middleton, BA(Hons), DipSurv, MRTPI Central Offices, Kendray Street, Barnsley. S70 2TN Tel: (01226) 770770 Fax: (01226) 772599

NORTH

APPENDIX BGH 8

EXISTING 2006 VEHICULAR FLOWS
PROPOSED SITE ACCESS / BARNSLEY ROAD

8:00 am - 9:00 am

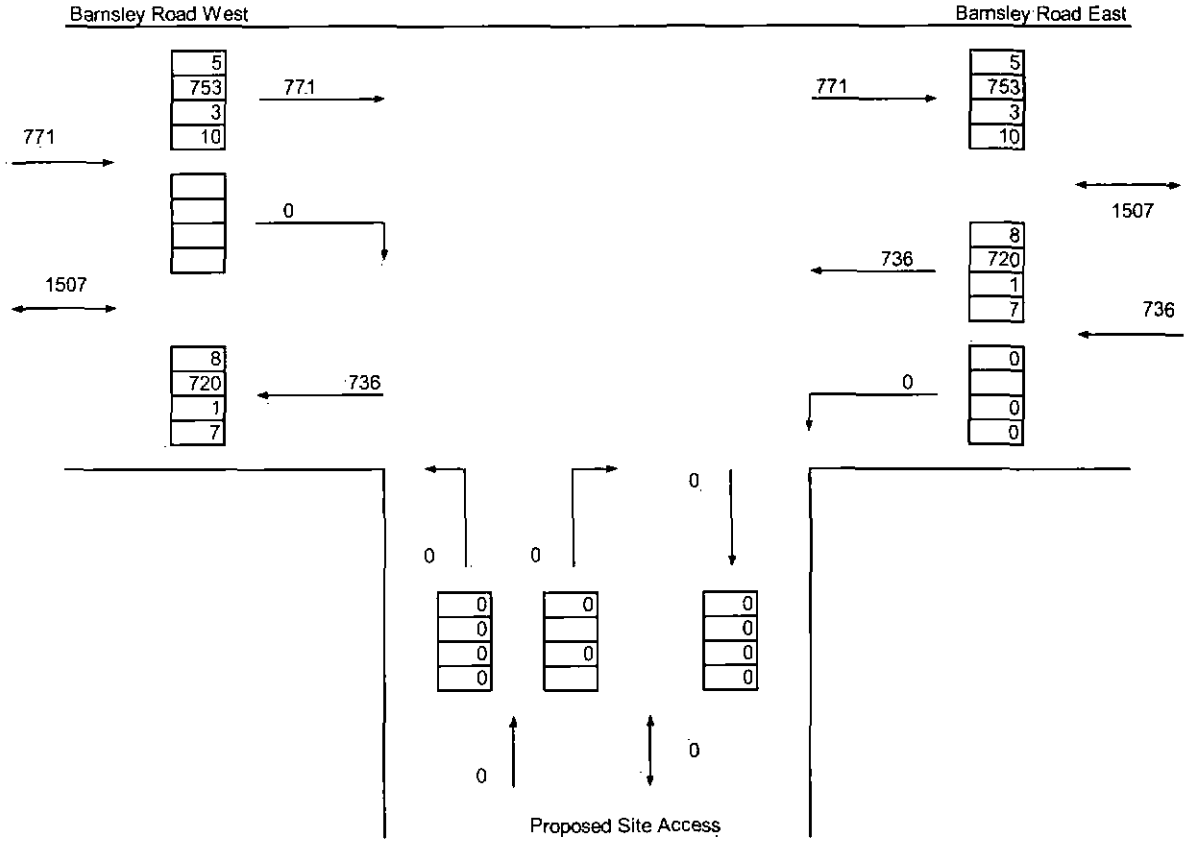


Vehicular Flows

- Motor cycles and pedal cycles
- Cars and light goods vehicles
- Heavy goods vehicles
- Buses

EXISTING 2006 VEHICULAR FLOWS
PROPOSED SITE ACCESS / BARNSLEY ROAD

5:00 pm - 6:00 pm



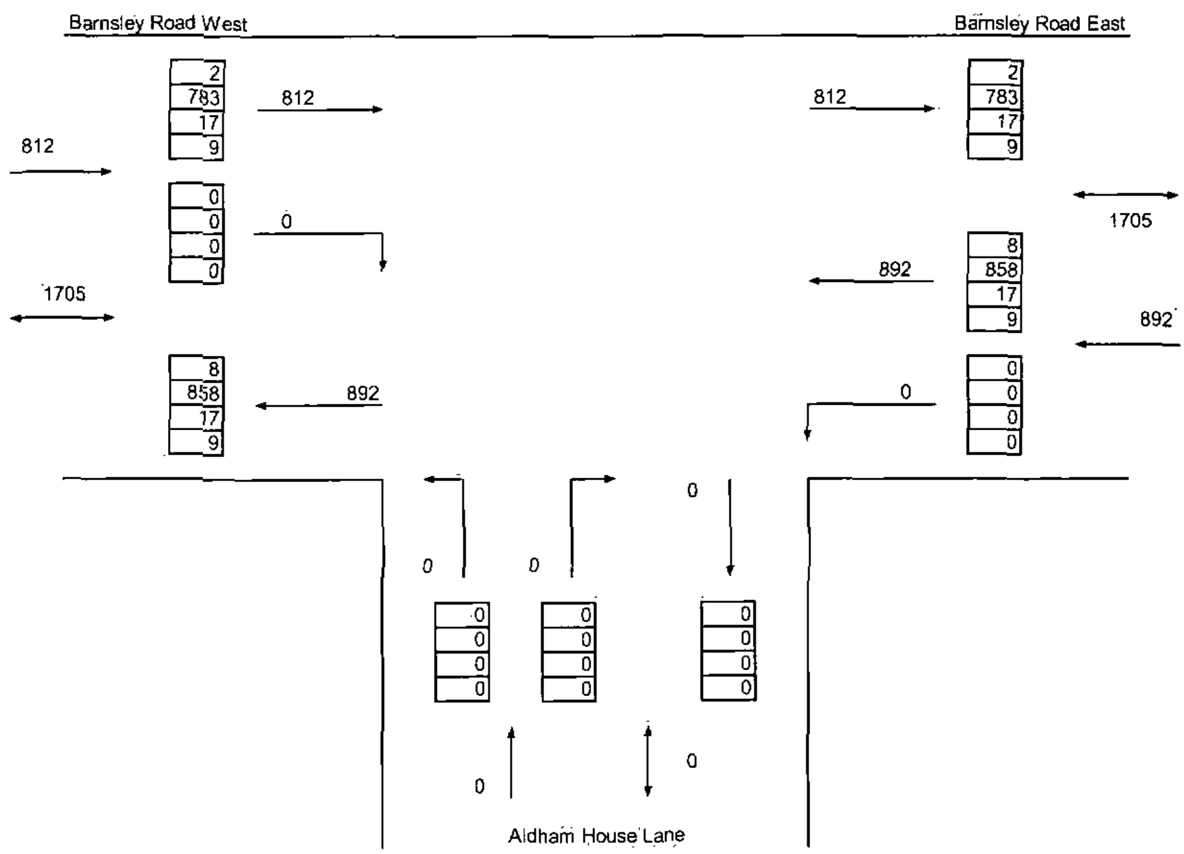
Vehicular Flows

- Motor cycles and pedal cycles
- Cars and light goods vehicles
- Heavy goods vehicles
- Buses

APPENDIX BGH 9

GROWTHED 2016 VEHICULAR FLOWS
PROPOSED SITE ACCESS / BARNSLEY ROAD

8:00 am - 9:00 am

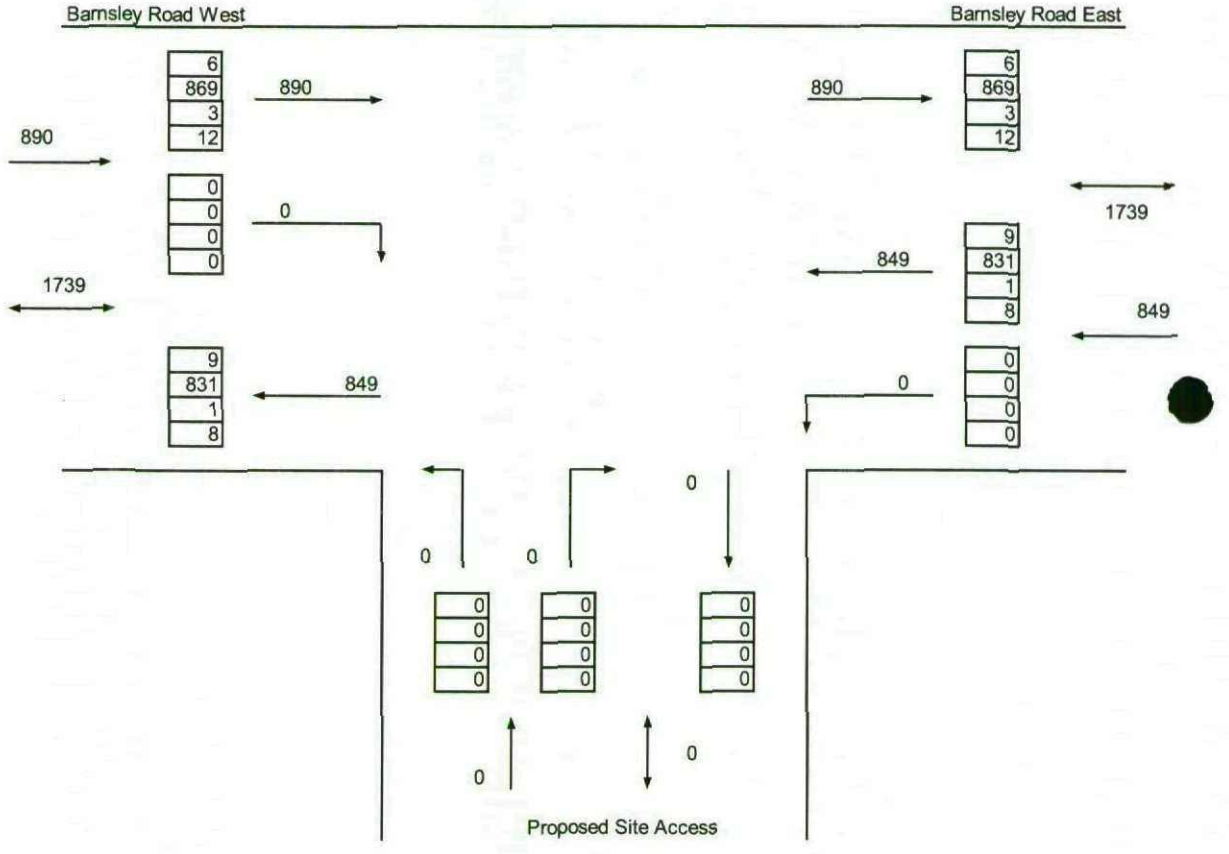


Vehicular Flows

	Motor cycles and pedal cycles
	Cars and light goods vehicles
	Heavy goods vehicles
	Buses

GROWTHED 2016 VEHICULAR FLOWS
PROPOSED SITE ACCESS / BARNSLEY ROAD

5:00 pm - 6:00 pm



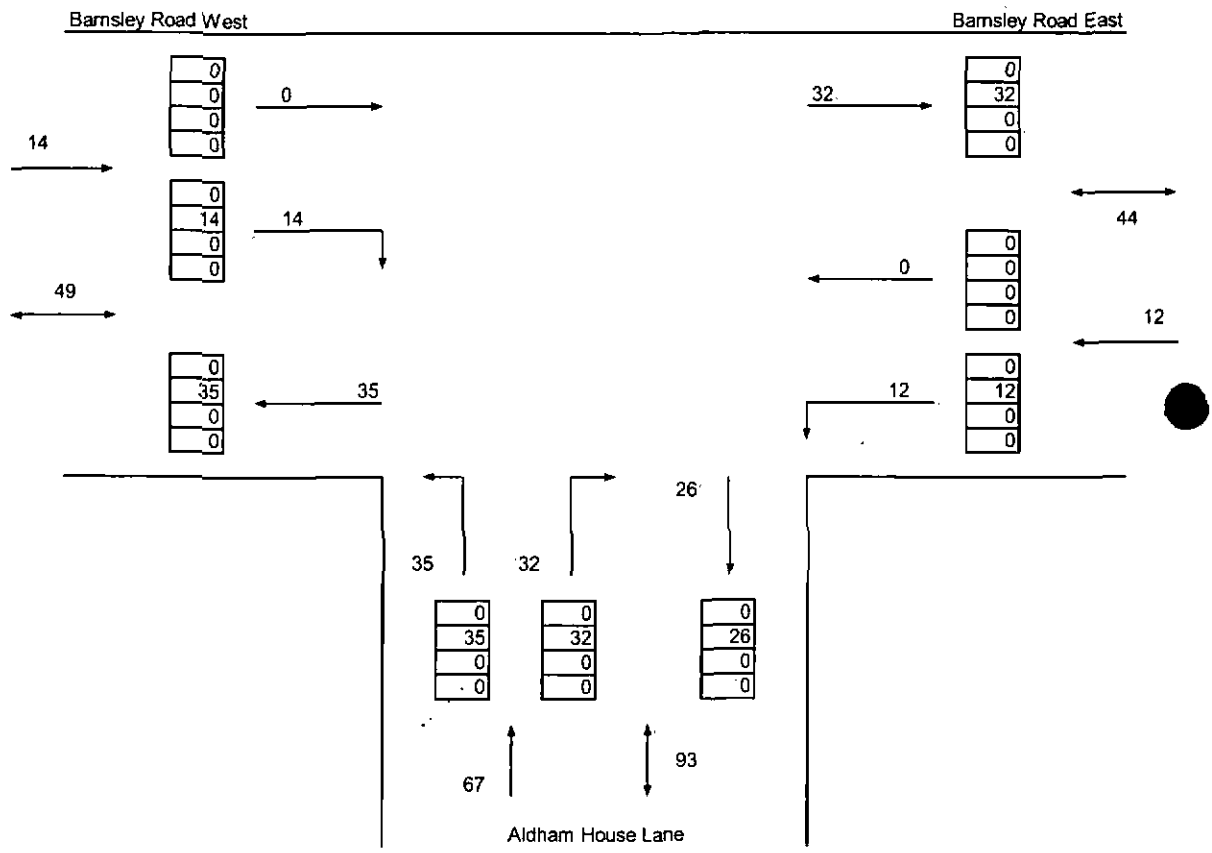
Vehicular Flows

- Motor cycles and pedal cycles
- Cars and light goods vehicles
- Heavy goods vehicles
- Buses

APPENDIX BGH 10

GENERATED VEHICULAR FLOWS
PROPOSED SITE ACCESS / BARNSLEY ROAD

8:00 am - 9:00 am

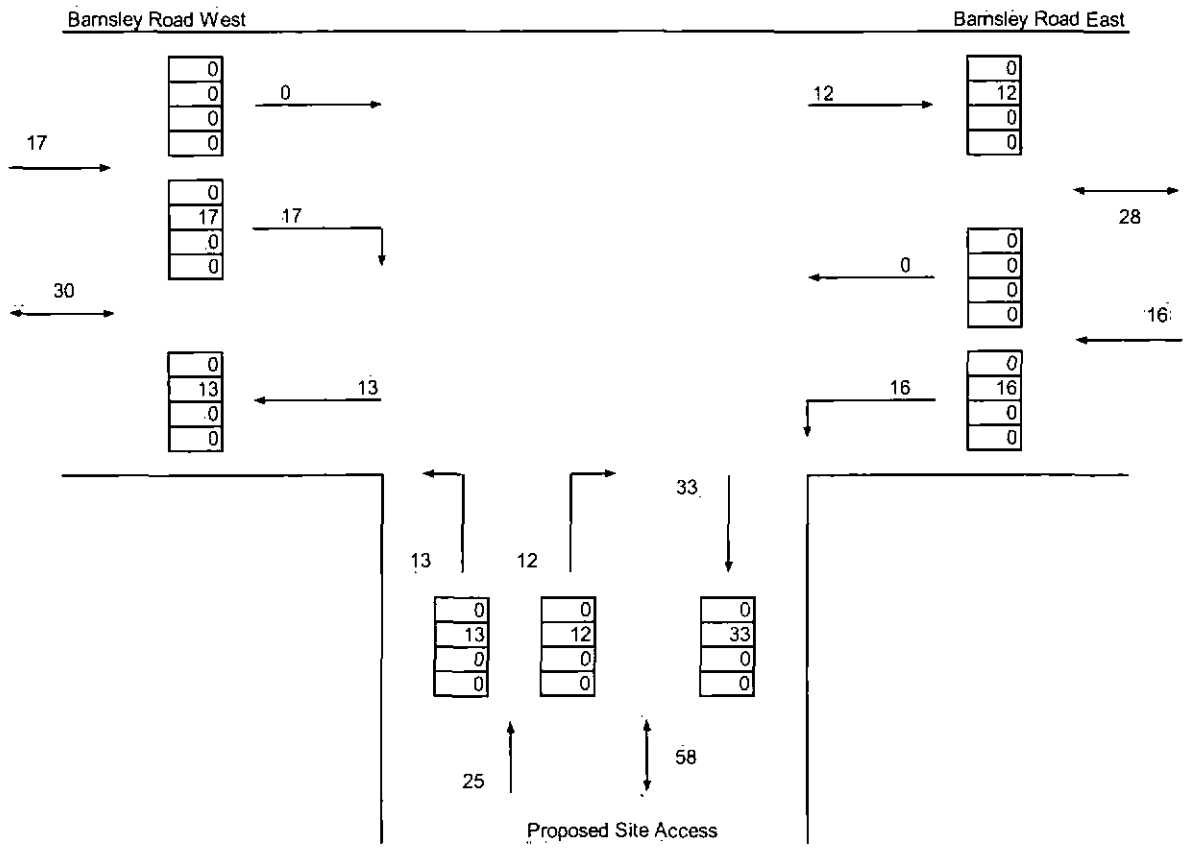


Vehicular Flows

- Motor cycles and pedal cycles
- Cars and light goods vehicles
- Heavy goods vehicles
- Buses

GENERATED VEHICULAR FLOWS
PROPOSED SITE ACCESS / BARNSLEY ROAD

5:00 pm - 6:00 pm



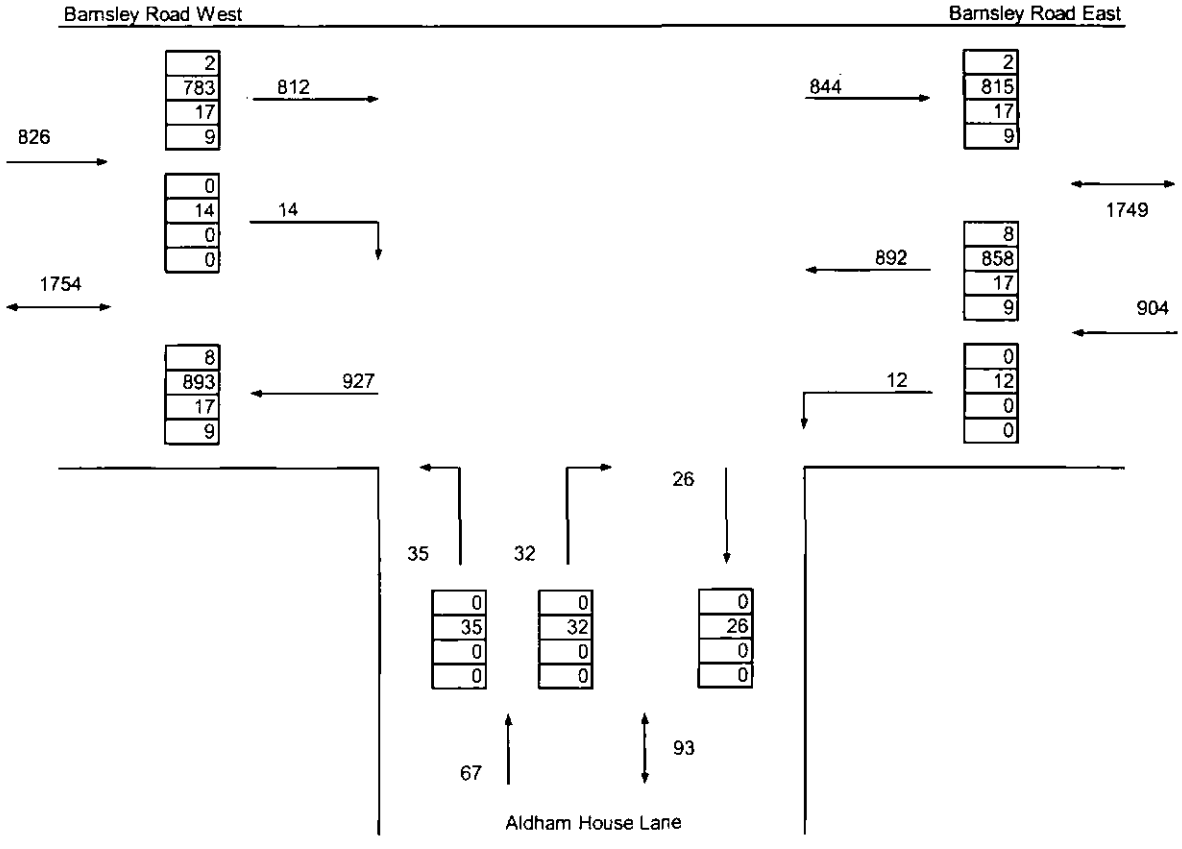
Vehicular Flows

- Motor cycles and pedal cycles
- Cars and light goods vehicles
- Heavy goods vehicles
- Buses

APPENDIX BGH 11

PREDICTED 2016 VEHICULAR FLOWS
PROPOSED SITE ACCESS / BARNSLEY ROAD

8:00 am - 9:00 am

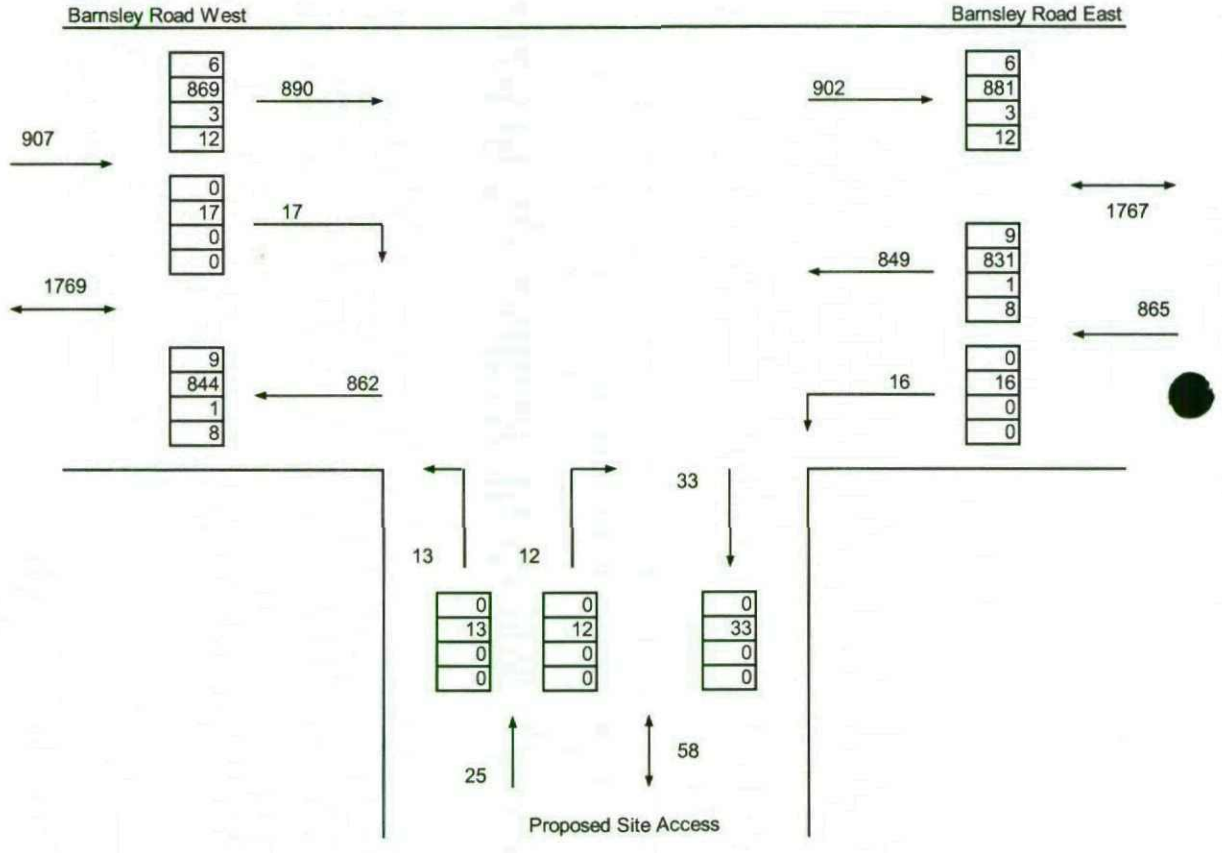


Vehicular Flows

- Motor cycles and pedal cycles
- Cars and light goods vehicles
- Heavy goods vehicles
- Buses

PREDICTED 2016 VEHICULAR FLOWS
PROPOSED SITE ACCESS / BARNSLEY ROAD

5:00 pm - 6:00 pm



Vehicular Flows

	Motor cycles and pedal cycles
	Cars and light goods vehicles
	Heavy goods vehicles
	Buses

APPENDIX BGH 12

TRL LIMITED

CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: Software@trl.co.uk

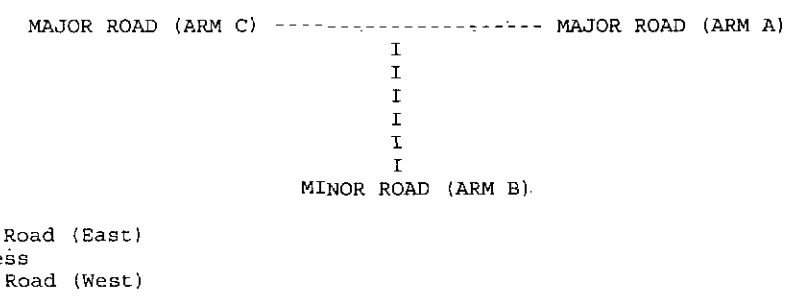
in with file:-
Y:\2011\11-126 to 11-150\11-142 Barnsley Road, Wombwell\Technical\Site Access - Barnsley Road.vpi"
rive-on-the-left) at 17:15:51 on Friday, 25 February 2011

JN INFORMATION

JN TITLE	: Site Access / Barnsley Road Predicted 2016 AM and PM Peak Period
OCATION	: Wombwell, Barnsley
ATE	: 25/02/11
LIENT	: Strata Homes
UMERATOR	: ahanson [BGH20]
OB NUMBER	: 11-142
TATUS	: Preliminary
ESCRIPTION	:

AJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



M A IS Barnsley Road (East)
M B IS Site Access
M C IS Barnsley Road (West)

TREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

OMETRIC DATA

DATA ITEM		MINOR ROAD B	
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	9.60 M.	
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.	
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	4.50 M.	
- VISIBILITY	(VC-B)	100.00 M.	
- BLOCKS TRAFFIC		NO	
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	16.0 M.	
- VISIBILITY TO RIGHT	(VB-A)	16.0 M.	
- LANE 1 WIDTH	(WB-C)	2.75 M.	
- LANE 2 WIDTH	(WB-A)	0.00 M.	

LOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
618.14	0.20	0.08

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
478.41	0.19	0.07	0.12	0.27

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
790.04	0.26	0.26

(NB These values do not allow for any site specific corrections)

RAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

emand set: Site Access / Barnsley Road Predicted 2016 AM Peak Period

IME PERIOD BEGINS 07.45 AND ENDS 09.15

ENGTH OF TIME PERIOD - 90 MIN.
ENGTH OF TIME SEGMENT - 15 MIN.

EMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START TO TOP OF PEAK IS REACHED: FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	11.30	16.95	11.30
ARM B	15.00	45.00	75.00	0.84	1.26	0.84
ARM C	15.00	45.00	75.00	10.32	15.49	10.32

emand set: Site Access / Barnsley Road Predicted 2016 AM Peak Period

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 08.00	ARM A	0.000 0.0 (0.0)	0.013 12.0 (0.0)	0.987 892.0 (2.9)
	ARM B	0.478 32.0 (0.0)	0.000 0.0 (0.0)	0.522 35.0 (0.0)
	ARM C	0.983 812.0 (3.1)	0.017 14.0 (0.0)	0.000 0.0 (0.0)

JRNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
IE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	0.84	5.86	0.143		0.00	0.16	2.4		0.20
C-A	10.19								
C-B	0.18	10.16	0.017		0.00	0.02	0.3		0.10
A-B	0.15								
A-C	11.19								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	1.00	5.19	0.193		0.16	0.24	3.4		0.24
C-A	12.17								
C-B	0.21	9.57	0.022		0.02	0.02	0.3		0.11
A-B	0.18								
A-C	13.36								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	1.23	4.22	0.291		0.24	0.40	5.7		0.33
C-A	14.90								
C-B	0.26	8.76	0.029		0.02	0.03	0.4		0.12
A-B	0.22								
A-C	16.37								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	1.23	4.22	0.291		0.40	0.40	6.0		0.33
C-A	14.90								
C-B	0.26	8.76	0.029		0.03	0.03	0.5		0.12
A-B	0.22								
A-C	16.37								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	1.00	5.19	0.193		0.40	0.24	3.8		0.24
C-A	12.17								
C-B	0.21	9.57	0.022		0.03	0.02	0.3		0.11
A-B	0.18								
A-C	13.36								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	0.84	5.86	0.143		0.24	0.17	2.6		0.20
C-A	10.19								
C-B	0.18	10.16	0.017		0.02	0.02	0.3		0.10
A-B	0.15								
A-C	11.19								

JEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.2
08.30	0.4
08.45	0.4
09.00	0.2
09.15	0.2

JEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	92.2	61.5	23.9	0.26	23.9	0.26
C-A	1117.7	745.1				
C-B	19.3	12.8	2.1	0.11	2.1	0.11
A-B	16.5	11.0				
A-C	1227.8	818.5				
ALL	2473.4	1649.0	26.0	0.01	26.0	0.01

DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
HICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

******END OF RUN*******

SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
618.14	0.20	0.08

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
478.41	0.19	0.07	0.12	0.27

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
790.04	0.26	0.26

(NB These values do not allow for any site specific corrections)

RAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

emand set: Site Access / Barnsley Road Predicted 2016 PM Peak Period

IME PERIOD BEGINS 16.45 AND ENDS 18.15

ENGTH OF TIME PERIOD - 90 MIN.
ENGTH OF TIME SEGMENT - 15 MIN.

EMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	10.81	16.22	10.81
ARM B	15.00	45.00	75.00	0.31	0.47	0.31
ARM C	15.00	45.00	75.00	11.34	17.01	11.34

emand set: Site Access / Barnsley Road Predicted 2016 PM Peak Period

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.018	0.982
		0.0	16.0	849.0
		(0.0)	(0.0)	(1.1)
	ARM B	0.480	0.000	0.520
		12.0	0.0	13.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.981	0.019	0.000
		890.0	17.0	0.0
		(1.7)	(0.0)	(0.0)

JRNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
HE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	0.31	5.92	0.053		0.00	0.06	0.8		0.18
C-A	11.17								
C-B	0.21	10.34	0.021		0.00	0.02	0.3		0.10
A-B	0.20								
A-C	10.65								
17.00-17.15									
B-AC	0.37	5.26	0.071		0.06	0.08	1.1		0.20
C-A	13.33								
C-B	0.25	9.79	0.026		0.02	0.03	0.4		0.10
A-B	0.24								
A-C	12.72								
17.15-17.30									
B-AC	0.46	4.29	0.107		0.08	0.12	1.7		0.26
C-A	16.33								
C-B	0.31	9.03	0.035		0.03	0.04	0.5		0.11
A-B	0.29								
A-C	15.58								
17.30-17.45									
B-AC	0.46	4.29	0.107		0.12	0.12	1.8		0.26
C-A	16.33								
C-B	0.31	9.03	0.035		0.04	0.04	0.5		0.11
A-B	0.29								
A-C	15.58								
17.45-18.00									
B-AC	0.37	5.25	0.071		0.12	0.08	1.2		0.21
C-A	13.33								
C-B	0.25	9.79	0.026		0.04	0.03	0.4		0.10
A-B	0.24								
A-C	12.72								
18.00-18.15									
B-AC	0.31	5.92	0.053		0.08	0.06	0.9		0.18
C-A	11.17								
C-B	0.21	10.34	0.021		0.03	0.02	0.3		0.10
A-B	0.20								
A-C	10.65								

JEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1

JEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	34.4	22.9	7.4	0.22	7.4	0.22
C-A	1225.0	816.7				
C-B	23.4	15.6	2.5	0.11	2.5	0.11
A-B	22.0	14.7				
A-C	1168.6	779.1				
ALL	2473.4	1649.0	9.9	0.00	9.9	0.00

DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
HICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

******END OF RUN*******

========== end of file ==========

rinted at 17:15:58 on 25/02/2011]