

KINGSTONE AND HOLGATE
ADVANCED LEARNING CENTRE
DODWARTH ROAD
BARNLEY

PLANNING APPLICATION BY
BARNLEY EDUCATION SERVICES DEPARTMENT

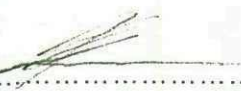
TRANSPORT ASSESSMENT

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1.0 INTRODUCTION

- 1.1 This Transport Assessment (TA) forms part of an outline planning application submitted by Barnsley Education Services Department for the proposed joint Kingstone and Holgate Advanced Learning Centre located off the A628 Dodworth Road in Barnsley which will replace the existing Kingstone and Holgate Schools. The location of the site in relation to the highway network is shown on the site location plans contained at Appendix BGH1. Further information on the development proposals is contained within Section 7.0 of this Transport Assessment.
- 1.2 This TA 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 multi modal surveys undertaken at the existing schools, trip data from the TRICS 2008(b) database and the guidance given in the Department for Transport (DfT) publication 'Guidance on Transport Assessment', March 2007.
- 1.3 The DfT guidance also places significant emphasis on promoting Smarter Travel Choices via the implementation of School Travel Plans and in line with this guidance and that previously given in 'Planning Policy Guidance 13: Transport', March 2001 (PPG13) a Travel Plan Framework has been produced and accompanies this Transport Assessment, as a separate document, as part of a planning application submission.
- 1.4 This TA includes an assessment of the traffic likely to be generated by the development proposals and shows that the resultant development traffic can be accommodated safely and satisfactorily on the existing and proposed local highway network.
- 1.5 It will be concluded therefore that there are no highway or transport reasons which would prevent the proposed Advanced Learning Centre being granted planning consent.

2.0 RELEVANT CENTRAL AND LOCAL GOVERNMENT POLICIES

2.1 *Planning Policy Statement 1: Delivering Sustainable Development (PPS1)*

2.1.1 Planning Policy Statement 1: Delivering Sustainable Development (PPS1), sets out the Government's overarching planning policies on the delivery of sustainable development through the planning system.

2.1.2 In December 2007 a supplement to PPS1 was published, Planning Policy Statement: Planning and Climate Change. This document states that one of the key planning objectives is to deliver patterns of urban growth and sustainable rural developments that help secure the fullest possible use of sustainable transport for moving freight, public transport, cycling and walking which overall, reduce the need to travel especially by car.

2.1.3 At paragraph 42 the new PPS states that in considering the environmental performance of proposed development, planning authorities should expect new development to create and secure opportunities for sustainable development in line with PPG13 including through:

- the preparation and submission of travel plans;
- providing for safe and attractive walking and cycling opportunities including, where appropriate, secure cycle parking and changing facilities; and
- an appropriate approach to the provision and management of car parking.

2.2 *Planning Policy Guidance 13: Transport (PPG13)*

2.2.1 PPG13, which was published in March 2001, 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 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 Paragraphs 12-17 of PPG13 that deal specifically with housing are cancelled by PPS3 but the general guidance contained within PPG13 as outlined above is considered to be relevant to all development proposals and it is also specifically referred to within the new supplement to PPS1 on Planning and Climate Change.

2.3 *Planning Policy Guidance 13: Transport (PPG13) – Paragraph 89*

2.3.1 'The Government considers that travel plans should be submitted alongside planning applications which are likely to have significant transport implications, including those for:-

- all major developments comprising jobs, shopping, leisure and services
- smaller developments comprising jobs, shopping, leisure and services which would generate significant amounts of travel in, or near to, air quality management areas, and in other locations where there are local initiatives or targets set out in the development plan or local transport plan for the reduction of road traffic, or the promotion of public transport, walking and cycling. This particularly applies to offices, industry, health and education uses
- new and expanded school facilities which should be accompanied by a school travel plan which promotes safe cycle and walking routes, restricted parking and car access at and around schools, and includes on site changing and cycle storage facilities; and
- Where a travel plan would help address a particular local traffic problem associated with a planning application, which might otherwise have to be refused on local traffic grounds

2.4 *The Yorkshire and Humber Plan – Regional Spatial Strategy to 2026*

2.4.1 The Yorkshire and Humber Plan was published in May 2008 and sets out the Secretary of State for Communities and Local Government's policies in

relation to the development of land within the region. It aims to guide development of land within the region. It aims to guide development over the next 15 to 20 years. The plan also embodies the Regional Transport Strategy and must be taken into account by local authorities in preparing their Local Development Frameworks and Local Transport Plans. The plan does not however make site-specific allocation of land for development.

2.4.2 Barnsley is named as a Sub Regional Town and Policy YH4 of the Plan states that Regional Cities and Sub Regional Cities and Towns should be the prime focus for housing, employment, shopping, leisure, education, health and cultural activities and facilities in the region.

2.4.3 The policies relating to the Regional Transport Strategy for Yorkshire and the Humber are contained in Section 13 of the RSS. Policy T1 relates to Personal Travel Reduction and Modal Shift and states in Part B of the policy that *"LDFs, and transport assessments accompanying planning applications, should be informed by public transport accessibility criteria in Tables 13.8 and 13.9 to ensure development is appropriately located."*

2.4.4 Part E of Policy T1 states that *"Congestion should be addressed especially in urban areas and on the strategic road network through positive measures including:*

1. *Giving priority to improvements to public transport*
2. *Improved facilities for cyclists and pedestrians*
3. *Encouraging a shift from car-based to public transport-based travel*
4. *Using wider travel options such as the West Yorkshire Yellow Bus Initiative and safe routes to schools*
5. *Encouragement of travel awareness campaigns, car clubs and car sharing*

2.4.5 An outcome of Policy T1 should be a reduction in travel demand and a modal shift to more sustainable modes of transport in the Region and indicators of this are the number of trips by different modes of transport, conformity with the accessibility standards set out in Tables 13.8 and 13.9, the number of planning

applications supported by an approved Transport Assessment and Travel Plan and distances travelled.

2.5 *Barnsley Unitary Development Plan*

2.5.1 The statutory development plan in Barnsley is the Barnsley Unitary Development Plan (UDP). The UDP was prepared in the 1990s and involved two major rounds of public consultation and a year-long public inquiry. It was formally adopted in 2000 but was in use throughout the 1990s. The main aims of the Barnsley UDP are to increase job opportunities, to conserve and improve the environment and to revitalise communities. The UDP therefore has a key role in helping to deliver the Barnsley Community Plan. The Community Plan provides a long-term vision for Barnsley to 2020. It is prepared by One Barnsley a partnership of the public, private, voluntary and community sectors. The Council is currently working to produce the LDF for Barnsley which will replace the current UDP.

2.5.2 PPG 12 advises that supplementary planning guidance can be taken into account as a material consideration in deciding planning applications which can be given substantial weight. PPG1 advises that applicants should be able to demonstrate that they had regard to development plan policies and supplementary planning guidance.

2.6 *Home to School Travel and Transport Guidance*

2.6.1 Published in May 2007, this guidance sets out the new general duty placed on local authorities, by the Education and Inspections Act 2006, to promote the use of sustainable travel and transport. There are four main elements to the duty:

- An assessment of the travel and transport needs of children and young people.
- An audit of the sustainable travel and transport infrastructure in the authority.

- A strategy to develop the sustainable travel and transport infrastructure within the authority so that the travel and transport needs of children and young people are better catered for.
- The promotion of sustainable travel and transport modes on the journey to, from and between schools and other institutions

2.6.2 These four main elements have therefore been covered within this TA and the accompanying Travel Plan.

3.0 THE EXISTING SITUATION

3.1 *The Application Site*

- 3.1.1 The proposed joint Kingstone and Holgate Advanced Learning Centre is to be situated on land immediately to the south of the A628 Dodworth Road and east of the A6133 Broadway Lee Lane, approximately 1.5 miles west of Barnsley Town Centre. The location of the application site in relation to the highway network is shown on the plan attached at Appendix BGH1.
- 3.1.2 The application site is 16 HA in size and currently houses a Petrol Filling Station, the former S R Gents Factory site and Holgate School. The site is bounded to the north by the A628 Dodworth Road and residential properties, to the east by Shaw Lane and residential properties, to the south by residential properties and to the west by the Co-op Distribution Centre, residential properties and the A6133 Broadway. Further a field in all directions are existing residential developments, to the east is Barnsley Town Centre and the west the M1 motorway Junction 37.
- 3.1.3 The existing Petrol Filling Station is currently operational and comprises six pumps and a car wash, it takes direct access and egress onto the A628 Dodworth Road.
- 3.1.4 The SR Gent Factory site has an area of 10HA, is now cleared. It was previously occupied by industrial development which included two large factories with associated warehousing divided into four units. The Council is aware of the reasons for the very recent demolition of the buildings, these being related to health and safety issues and problems with unauthorised access. Vehicular access into the site is currently gained from the southern kerb line of the A628 Dodworth Road.
- 3.1.5 The Holgate School site has an area of 10.7HA which comprises three blocks with the main one being two stories and the second two being single story, a sports hall, hard surfaced games court area, small car park and playing fields. Vehicular access into the development site is currently gained from the

western kerb line of Shaw Lane.

3.2 The Local Highway Network

- 3.2.1 The development site will retain vehicular access from the southern kerb line of the A628 Dodworth Road, however this access will be upgraded. The current S R Gents Factory access off the A628 Dodworth Road will serve both the staff car park and the parent drop off / pick up area. Discussions will be held with Barnsley Metropolitan Borough Council Highway Department with regard to the form of an acceptable site access onto the A628 Dodworth Road.
- 3.2.2 The existing Holgate School access connecting to the western kerb line of Shaw Lane will remain as a cyclist and pedestrian access only. The existing public footpaths at the south of the site link the site with Shaw Lane, Harvey Street and Broadway and at the north of the site with Grosvenor Drive. These footpaths will be surfaced where required and provided with gated access to the school so they are of sufficient standard to be used as cycle and pedestrian routes to the school.
- 3.2.3 Shaw Lane is a single carriageway road of approximately 6.6 metres in width with two metre footways on both sides. It provides frontage access to residential properties as well as priority junctions with other residential streets. It is lit and has a 30mph speed restriction.
- 3.2.4 In the immediate vicinity of the site access the A628 Dodworth Road has one west bound and one east bound running lane and a right turn holding lane for vehicles travelling east, with a total carriageway width of nine metres. Footways are present on both sides of the A628 Dodworth Road and are approximately two metres in width on the south side and 3.2 metres on the north side. The A628 Dodworth Road, in the vicinity of the site, is subject to a 30mph speed restriction and is lit. There are signalised pedestrian crossings on all arms of the existing signalised junction of A628 Dodworth Road / Broadway / Pogmoor Road.

- 3.2.5 The A628 Dodworth Road is subject to a 40 mph speed limit from junction 37 of the M1 to the four arm signalised junction of the A628 Dodworth Road / Broadway / Pogmoor Road from which point the speed limit reduces to 30mph past the site. Traffic Regulation Orders preventing parking, waiting and loading between the hours of 08:00 - 09:30 hrs and 16:30 – 18:00 hrs are located on both sides of the A628 Dodworth Road in the vicinity of the site.
- 3.2.6 The A628 Dodworth Road runs in an easterly direction from Hollingworth to Barnsley Town Centre providing access onto the M1, A61, A629, A635 and A638 and passes through Tintwistle, Langsett, Penistone and Silkstone. Broadway forms a signalised junction with the A628 Dodworth Road and the A61 and Shaw Lane leads onto Racecommon Road which forms a priority junction with Broadway.
- 3.2.7 The A61 runs northerly from Chesterfield City Centre, passes through Sheffield City Centre and provides access onto the M1. The A629 runs north westerly from Rotherham Town Centre to Huddersfield and on to provide access onto the M62. The A635 runs westerly from Doncaster Town Centre to Barnsley Town Centre and provides access onto the A1M. The A638 runs northerly from Bawtry to Wakefield providing access onto the M18 and A1M and passing through Doncaster Town Centre.

4.0 SCOPE OF THE ASSESSMENT

Opening Year

- 4.1.1 Following receipt of planning approval, construction of the Advanced Learning Centre is expected to commence in early 2010 with first occupation from September 2011 (start of the academic year).

Design Year

- 4.1.2 For the purposes of assessing the traffic impact of the development on the local highway network a Design Year of 2014 has been assumed, five years after the date of registration of the planning application, in line with current DfT guidance on the preparation of Transport Assessments. This assessment is considered very robust and given the size and location of the development, will represent a worst case scenario in terms of traffic growth on the surrounding highway network.

Traffic Generation

- 4.1.3 Traffic generation predictions for the proposed development are based upon 85th percentile total person TRICS data derived from the TRICS 2008(b) database and modal splits from the surveys undertaken at the existing Kingstone School.

Assessment Periods

- 4.1.4 The weekday morning and evening peak periods have been assessed based upon the time periods identified from the traffic surveys undertaken by Road Data Services. Also an additional afternoon peak hour has been assessed based on school finishing time, when students leave.

Traffic Surveys

- 4.1.5 Fully classified traffic counts were undertaken on Wednesday 14th January 2009 at the A628 Dodworth Road / Pogmoor Road / Broadway Signalised Junction to enable an assessment of the surrounding highway network to be undertaken.

Trip Distribution

- 4.1.6 The distribution of the development traffic onto the local highway network has been based upon the pupil catchments and the routes currently used to access the existing schools.

Committed Development

- 4.1.7 There is no committed development in the vicinity of the site that would materially affect traffic flows on the local highway network in the vicinity of the site.

Personal Injury Accident Data

- 4.1.8 Personal injury accident data has been obtained from Barnsley Metropolitan Borough Council Accident Studies Department and covers the last five years from 2004 to 2009.

Traffic Growth

- 4.1.9 The existing weekday morning, afternoon and evening peak hour traffic demands have been growthed in line with National Transport Model (NTM) predictions with a local adjustment assuming TEMPRO 5.0 factors.

5.0 EXISTING TRAFFIC CONDITIONS

5.1 *Traffic Counts*

5.1.1 On Wednesday 14th January 2009, fully classified traffic surveys including the counting of pedestrians crossing were undertaken during the morning and evening peak periods at the following junction:

- A628 Dodworth Road / Pogmoor Road / Broadway – Signalised Junction

5.1.2 The surveys were carried out between the hours of 7:30 - 10:00 and 14:30 - 18:00. From the survey results the morning and evening peak hours have been identified as 08:00 - 09:00 and 17:00 - 18:00. An additional afternoon peak hour generated by pupils leaving school at 15:00 – 16:00 has been assessed. Pupils and staff arriving at school corresponds with the AM Peak taken from the surveys. A summary of the existing 2009 peak hour traffic flows is contained at Appendix BGH2.

5.2 Existing Traffic Generation

5.2.1 As mentioned previously until very recently the site was occupied by two large industrial units with a gross floor area of 18,947m² with a significant level of external space available for service parking and servicing. The six pump petrol filling station with car washing facilities is still fully operational on the A628 Dodworth Road frontage.

5.2.3 The TRICS database has been interrogated in order to predict the level of traffic associated with the use of the existing petrol filling station in peak hour periods. The petrol station is still fully operational and therefore the traffic generated by its use is included within the traffic counts undertaken at the A628 Dodworth Road / Pogmoor Road / Broadway signalised junction. The full TRICS data is contained at Appendix BGH3 with the 85th percentile peak hour trip rates and subsequent generated traffic tabulated in Table 1 below.

Table 1**Trip Rates – Petrol Filling Stations**

Assessment Period	Total filling bays	Trip Rates per bay			Trips for 6 filling bays		
		IN	OUT	2-WAY	IN	OUT	2-WAY
08:00 ~ 09:00	6 filling bays	8.625	9.125	17.750	52	55	107
15:00 ~ 16:00		9.667	9.333	19.000	58	56	114
17:00 ~ 18:00		8.500	10.667	19.167	51	64	115

5.2.3 It is acknowledged that a percentage of the above trips will turn left into and right out of the petrol filling station and do not impact upon the A628 Dodworth Road / Pogmoor Road / Broadway signalised junction. Therefore these trips were not integrated within the traffic counts, also a proportion of the above trips will be 'pass by'. For the purposes of this assessment it has been assumed that only 50% of the total trips are currently impacting on the signalised junction. Utilising the reduced rates the petrol filling station could generate in the region of 54 two way trips in the AM peak, 57 in the Inter peak and 58 two way trips in the PM peak.

5.2.4 The traffic generated by the existing Kingstone and Holgate Schools which impacts the A628 Dodworth Road / Pogmoor Road / Broadway is also included within the traffic counts. In order to estimate the trips that are currently generated by the two existing schools the TRICS database has been used to assess the 85th percentile total person trips assuming the land-use categories Education – Secondary as detailed in section 5.2.

5.2.5 Following the above estimation of person trips, vehicular movements generated have been derived from the Multi Modal Survey Data from surveys undertaken at the existing Kingstone School. The total vehicular movements generated by both schools are summarised in Table 2 below.

Table 2**Vehicular Trips Generated by the Existing Schools**

Assessment Period	Kingstone Trips for 1398 Pupils			Holgate Trips for 974 Pupils		
	IN	OUT	2-WAY	IN	OUT	2-WAY
08:00 – 09:00	246	8	254	172	5	177
15:00 – 16:00	16	211	227	11	147	158
17:00 – 18:00	1	37	38	1	26	27

- 5.2.6 Using the pupil catchment information for the two existing schools attached at Appendix BGH4 a prediction of the likely routes traffic currently takes to the existing schools was made. The percentage distribution and total traffic generation for the two existing schools is shown on plans also attached at Appendix BGH4.
- 5.2.7 Where there is legitimate 'fallback' as in the case with the remainder of the current application site which previously operated as industrial premises, the starting point of any assessment of transport impact is to have regard to the traffic associated with this legitimate use and to the access by which it was served.
- 5.2.8 On the basis that the remainder of the application site has a previous industrial land use, the Authority should pay full and detailed regard to this previous use, including making an allowance for the traffic that was generated within the baseline of traffic forecasts and have regard to the access by which it was served.
- 5.2.9 With this in mind an estimate of the levels of traffic that could be generated by the previous industrial land use has been calculated, the TRICS 2008(b) database has been interrogated. The land use category Employment - Industrial Units has been assumed. The full TRICS data is contained at Appendix BGH3 with the 85th percentile peak hour trip rates and subsequent generated traffic tabulated in Table 3 below.

Table 3

Trip Rates – Employment – Industrial Units

Assessment Period	Total GFA	Trip Rates per 100 sq m			Trips for 18,947 sq m GFA		
		IN	OUT	2-WAY	IN	OUT	2-WAY
08:00 – 09:00	18,947 sq m	0.266	0.068	0.334	50	13	63
15:00 – 16:00		0.088	0.137	0.225	17	26	43
17:00 – 18:00		0.056	0.311	0.367	11	59	70

5.2.10 The two way traffic generation flows from the former S R gents Factory are expected to have been 63 trips in the AM peak, 43 trips during the Inter peak and 70 in the PM peak.

5.3 Personal Injury Accidents

5.3.1 Personal injury accident data covering the last five years from 2004 to 2009 has been obtained from Barnsley Metropolitan Borough Council Accident Department. The area of interest includes the junction surveyed and the section the A628 Dodworth Road which will serve the proposed Advanced Learning Centre vehicular access.

5.3.2 A total of 12 personal injury accidents have been recorded within the study area, of which all were classified as slight in severity. Of these, one accident involved a pedestrian.

5.3.3 Over the five year period three accidents have occurred at the A628 / Pogmoor Road / Broadway Signalised Junction as follows:

- A car (vehicle three) approached the signals too fast when they became red, collided with the rear of another car (vehicle two) pushing it into a motor cycle (vehicle one). The female driver of vehicle two was slightly injured.
- A car (vehicle one) was travelling along Broadway towards Pogmoor Road and turned right onto the A628 Dodworth Road across the path of another car (vehicle 2), collision occurred. The female driver of

vehicle two was slightly injured.

- A car (vehicle two) was travelling through the lights when another car (vehicle one) turned right across its path collision occurred. A female passenger of vehicle one was slightly injured.

5.3.4 In the immediate vicinity of the proposed vehicular site access one accident has occurred in the five year study period which occurred as follows;

- A motorcycle pulled out of the S R Gents Factory access and collided with the rear of a car travelling along the A628 Dodworth Road. The male motorcyclist was slightly injured.

5.3.5 In the immediate vicinity of the proposed vehicular site access one slight accident has occurred over the five year period and at the A628 Dodworth Road / Pogmoor Road / Braodway Signalised junction three slight accidents have occurred. This is not considered to be a significant amount and no trends have been identified. The full accident report data can be seen in Appendix BGH5.

6.0 ACCESSIBILITY AND SUSTAINABILITY OF THE SITE

6.1 Introduction

6.1.1 As set out within Section 2.0 of this Transport Assessment national and regional transport policies and guidance place significant emphasis on the availability and use of means of transport other than by the private car in new development.

6.2 Pedestrian Accessibility

6.2.1 The Institution of Highways and Transportation publication [2000] 'Guidelines for providing for Journeys on Foot' notes that walking accounts for over a quarter of all journeys and four-fifths of journeys of less than one mile (1.6 kilometres).

6.2.2 Walking is also an essential part of public transport travel, bus stops usually being accessed on foot. Promoting sustainable, integrated transport involves providing good pedestrian links to public transport facilities as are available to the application site. A plan is attached at Appendix BGH6 showing existing facilities and recommended routes to school.

6.2.3 'Planning for Public Transport in Developments' also sets out that new development should be located so that walking distances to the nearest bus stop should be less than 400 metres, the bus stops located on the A628 Dodworth Road, Broadway and Shaw Lane are all within this catchment, the closest on both sides of the carriageway been within 50 metres of the site access.

6.2.4 The IHT Guidelines also describe 'acceptable' walking distances for pedestrians without any mobility impairment. They suggest that up to 500 metres is the desirable distance, up to 1000 metres is an acceptable distance and 2000 metres is the preferred maximum, for walking to school.

6.2.5 The Department of the Environment publication [1996] 'PPG13 A Guide to Better Practice' states that distances under 1.6 kilometres are suited to journeys on foot. The plan attached at Appendix BGH6 shows the areas within reasonable walking distance of the application site, based on straight-line distances of 1.6 and 2.0 kilometres.

6.2.6 The maximum recommended walking distance of 2.0 kilometres covers the residential settlements of in parts, Dodworth, Gawber and Kingston.

6.3 Public Transport

6.3.1 There are existing bus stops on both sides of A628 Dodworth Road and Broadway. The closest of which are on both sides of the A628 Dodworth Road, the stop on the south side is approximately 15 metres from the site access off Dodworth Road and the stop on the north side approximately 40 metres. The route from the proposed development site to the bus stops is fully lit with adequate footways and for those not wishing to cross the A628 Dodworth Road unaided there are signalised pedestrian crossings present at the A628 Dodworth Road / Pogmoor Road / Broadway Junction. A plan showing the location of these bus stops and the catchment is attached at Appendix BGH7.

6.3.2 The A628 Dodworth Road is served by numbers 23, 24 and X12 and the stops on Broadway by the number 43 and 44. All of these services stop at Barnsley Interchange. A summary of these bus services and a plan showing their routes are attached at Appendix BGH7.

6.3.2 Barnsley Interchange, located on Midland Street approximately 1.6 kilometres from the site, is a combined bus and rail station offering a wealth of facilities to the travelling public including a newsagents, a chemist, a café, rail ticket office, information centre, offices & meeting room, toilets, cash machines, telephone, cycle racks, lifts & escalators, real time information screens a car park with 74 spaces for rail users and a secure, fully enclosed, high quality passenger concourse and waiting area. There are many buses and trains available from

Barnsley Interchange, a summary of which is attached at Appendix BGH7.

- 6.3.3 The Institution of Highways and Transportation publication 'Planning for Public Transport in Development' states:

"The maximum walking distance to a bus stop should not exceed 400m and preferably be no more than 300m. These distances are quoted for guidance, and should not be followed slavishly if that would lead to complex or indirect bus routes"

- 6.3.4 'Planning for Public Transport in Developments' also sets out that new development should be located so that walking distances to the nearest bus stop should be less than 400 metres. The bus stops located on the A628 Dodworth Road, Broadway and Shaw Lane are all within this catchment as shown on the plan attached at Appendix BGH7.

- 6.3.5 It is considered that the application site is very well located being within recommended walking distance of existing bus stops Barnsley Interchange and will thereby encourage staff and pupils of the Advanced Learning Centre to chose alternative modes of transport to the private car in accordance with the aims and objectives of PPG13.

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."
- 6.4.2 The majority of the Barnsley conurbation including the Town Centre and residential settlements of Darton, New Lodge, Mapplewell, Barugh Green, Gawber, Higham, Silkstone, Dodworth, Silkstone Common, Hood Green, Monk Bretton, Worsbrough Common, Ardsley, Kendray, Worsbrough Dale, Swaithe and Birdwell lie within an 8 kilometre catchment area and Barnsley

has a network of cycle routes and lanes as shown on the Cycle Map attached at Appendix BGH8 along with a plan showing the 5km cycle isochrone.

- 6.4.3 Barnsley Interchange is located approximately 1.6 kilometres from the site and is therefore well within the cycling catchment area.
- 6.4.4 The site is therefore considered to be in a sustainable location in relation to the availability of public transport, walking and cycle provision. It will further the aims and objectives of the Central and Local Government's Sustainable Transport Policy by promoting the use of alternative modes of transport and hence reducing the need to travel by private car.
- 6.4.5 Therefore, there will be a reasonable prospect of some pupils and staff cycling to and from the application site including linked trips with bus journeys.
- 6.4.6 With the implementation of a Travel Plan it is expected that the pupils and staff of the proposed development will be encouraged to choose to travel by alternative modes of transport to the private car.

7.0 THE PROPOSALS

- 7.1 This Transport Assessment is based upon the Bransley Education Services Departments proposals for the Kingstone and Holgate Advanced Learning Centre. The total site area is 16 HA. This comprises a 17,650 sq m total gross floor area Advanced Learning Centre building with associated access road, staff and visitor car park, parent and bus drop off/pick up areas and sports pitches. The school will have approximately 2200 pupils and approximately 220 members of staff. There are 285 car parking spaces proposed within the development to be used by staff and visitors. The current development proposals are shown on the Barnsley Metropolitan Borough Council plan, a copy of which is contained at Appendix BGH9.
- 7.2 The existing access into the S R Gents Factory situated at the northern extent of the site, located off the southern kerbline of the A628 Dodworth Road will remain as the only vehicular access into the proposed residential development. The access will serve the staff and visitor car park as well as the parents and bus drop off / pick up areas. This access will undergo improvements which will be agreed with Barnsley Metropolitan Borough Council.
- 7.3 The existing access off the western kerb line of Shaw Lane, serving the existing Holgate School Site, will remain as a cyclist / pedestrian access. The existing public footpaths at the south of the site link the site with Shaw Lane, Harvey Street and Broadway and at the north of the site with Grosvenor Drive. These footpaths will be surfaced where required and provided with gated access to the school so they are of sufficient condition to be used as cycle and pedestrian routes to the school.

8.0 PROPOSED TRAFFIC DISTRIBUTION & GENERATION

8.1 Multimodal Trip Generation

8.1.1 In order to predict the level and type of trips which will be made as a result of the 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 2008 (b) database. The TRICS outputs are attached at Appendix BGH3.

8.1.2 The TRICS database has been used to assess the 85th percentile total person trips to the proposed Advanced Learning Centre development assuming the land-use categories Education – Secondary and the results are summarised in Table 4 below:-

Table 4

85th Percentile Total Person Trips – Education - Secondary

Assessment Period	Total No of Pupils	Trip Rates per Pupil			Trips for 2200 Pupils		
		IN	OUT	2-WAY	IN	OUT	2-WAY
08:00 – 09:00	2200	1.036	0.032	1.068	2279	71	2350
15:00 – 16:00		0.068	0.887	0.955	150	1951	2101
17:00 – 18:00		0.003	0.155	0.158	7	341	348

8.1.3 Following the above estimation of person trips, the modal split for these trips has been derived from the Multi Modal Survey Data from surveys undertaken at the existing Kingstone School. This provides a percentage breakdown of different modes of transport currently used by both staff and pupils to travel to/from Kingstone School, which can then be applied to the proposed development. The results are summarised in Tables 5 and 6 below:

Table 5**Multi Modal Survey Data Pupils – Existing Kingstone School.**

Modal Split	% Split
Train	0%
Bus	5%
School Bus	46%
Taxi or minicab	0%
Car	9%
Motorcycle, scooter or moped	0%
Cycle	0%
On foot	40%

Table 6**Multi Modal Survey Data Staff – Existing Kingstone School.**

Modal Split	% Split
Train	0%
Bus, minibus or coach	2%
Taxi or minicab	0%
Driving a car or van	82%
Car Share	3%
Motorcycle, scooter or moped	0%
Cycle	1%
On foot	12%

8.1.4 It can be seen that only 9% of all journeys undertaken by pupils and their parents are in the private car and 82% undertaken by staff are by car. As the proposed staff numbers are approximately 10% of the proposed total pupil numbers we have added a further 8% onto the predicted vehicular trips generated by the proposed Advanced Learning Centre in order to account for the 82% of staff coming to and from the school in their cars.

8.1.5 The pupil percentages, plus the additional 8% staff vehicular movements, have been applied to the person trips in Table 4 to calculate the likely number multi modal trips associated with the pupils and staff at the proposed Advanced Learning Centre, summarised in Table 7.

Table 7**AM, Inter and PM Peak Hour Modal Split – Proposed Advanced Learning Centre**

Peak Hour Modal Split	% Split	No of Two Way Trips		
		AM	Inter	PM
Train	0%	0	0	0
Bus	5%	118	105	17
School Bus	46%	1081	966	160
Taxi or Minicab	0%	0	0	0
Car	9% + 8% = 17%	212 + 188 = 400	189 = 168 = 357	31 + 29 = 60
Motorcycle, scooter or moped	0%	0	0	0
Cycle	0%	0	0	0
On foot	40%	940	840	139

8.1.6 In the AM peak the proposed Advanced Learning Centre is expected to generate some 400 vehicular trips, 357 during the Inter peak and 60 during the PM peak.

8.2 Distribution

8.2.1 The traffic generated by the existing Kingstone and Holgate Schools has been redistributed on the local highway network to the proposed Advanced Learning Centre. The proposed percentage distributions and traffic generation is shown on the plans attached at Appendix BGH10, the figures have being manipulated to correspond with the proposed pupil numbers at the Advanced Learning Centre.

9.0 TRAFFIC IMPACT OF THE DEVELOPMENT PROPOSALS

- 9.1 As shown on the plan attached at Appendix BGH10 the proposed Advanced Learning Centre will generate an additional 64 trips during the AM Peak, 92 during the Inter Peak and 17 during the PM Peak at the A628 Dodworth Road / Pogmoor Road / Broadway signalised junction, in comparison to those generated by the existing Kingstone and Holgate schools at that junction.
- 9.2 However, the trips generated by the petrol filling station which currently impact on the A628 Dodworth Road / Pogmoor Road / Broadway signalised junction will no longer be present post development, therefore a reduction of 54 trips in the AM, 57 in the Inter and 58 in the PM peak will take place at this junction.
- 9.3 Also the previous Industrial use on the remainder of the application site would generated in the region on 63 trips in the AM, 43 in the Inter and 70 in the PM Peak which would result in additional trips at the A628 Dodworth Road / Pogmoor Road / Broadway signalised junction.
- 9.4 Therefore taking into consideration the closure of the petrol filling station and the trips previously generated by the lawful use on the remainder of the site causing a reduction in trips, the redevelopment of the site to the proposed Advanced Learning Centre will actually show a reduction in the traffic impacting on the A628 Dodworth Road / Pogmoor Road / Broadway signalised junction. Therefore the additional trips which may be generated by the Proposed Advanced Learning Centre in comparison to those generated by the existing Kingstone and Holgate schools is considered insignificant.
- 9.5 The operation of the A638 / Pogmoor Road / Broadway Signalised Junction has not been modelled as Barnsley Metropolitan Borough Council are in the process of making changes to the operation of this junction and hence it would be meaningless to model the existing arrangement.
- 9.6 In addition to this, the implementation of an effective Travel Plan as part of this development will reduce further the potential impact of development on the

local highway network, through the encouragement of alternative modes of transport to the private car.

- 9.7 The distribution of the development traffic onto the local highway network has been distributed based upon the existing pupil catchments and the routes currently used to access the existing schools.
- 9.8 The operation of the proposed site access junction with the A628 Dodworth Road has been modelled using the computer program PICADY for the 2014 (predicted scenario) morning, afternoon and evening peak traffic flows. The traffic flows for this scenario are attached at Appendix BGH13.
- 9.9 For the purpose of assessing the 'natural' highway traffic growth on the local highway network a Base Year of 2014 has been assumed, five years after the date of registration of the planning application, in line with current DfT guidance on the preparation of Transport Assessments.
- 9.10 To establish the 2014 "Predicted" traffic demands on the highway network, the existing weekday morning, afternoon and evening peak hour traffic generated has been growthed in line with National Transport Model (NTM) with a local adjustment assuming TEMPRO 5.0 factors. The 2014 peak hour growth factor used in the assessment is 1.061 in the AM peak, 1.064 in Inter peak and 1.059 in the PM peak. Derivation of the peak hour growth factors is attached at Appendix BGH12. Using such growth factors will ensure a robust assessment since there is an element of double counting as they already include for future development forecasts and increased affluence.
- 9.11 A summary of the maximum ratio of demand flow to capacity (RFC), queues (vehicles) and maximum delay (mins / veh) obtained by the analysis of this proposed access junction under the predicted 2014 peak hour traffic flows are given in Table 8 below and the full PICADY output is contained at Appendix BGH14.

- 9.12 As the petrol filling station is still fully operational the traffic generated by its use was included within the traffic counts undertaken and is therefore included within the figures used in this assessment, therefore the assessment is very robust as the petrol filling station will not exist post development.

Table 8

Site Access / A628 Dodworth Road

Ratio of Flow to Capacity (RFC), Queues, and Mean Delay

Predicted 2014 Traffic Flows

- Arm A – A628 Dodworth Road (East)
- Arm B – Site Access
- Arm C – A628 Dodworth Road (West)

Movement	08:00 – 09:00 AM Peak			15:00 – 16:00 Inter Peak			17:00 – 18:00 PM Peak		
	RFC	Queue (veh)	Mean Delay (mins)	RFC	Queue (veh)	Mean Delay (mins)	RFC	Queue (veh)	Mean Delay (mins)
B - AC	0.111	0.12	1.7	2.097	108.29	1265.7	0.310	0.44	6.6
C - B	0.452	0.8	11.3	0.028	0.03	0.4	0.003	0	0

- 9.13 The results above show that there will be no adverse queuing or capacity problems at the Site Access / A628 Dodworth Road Priority Junction during the AM and PM Peak periods given that the maximum ratio of flow to capacity (RFC) is well below 0.85. However during the Inter Peak on the Site Access arm of the junction the RFC is 2.097 which is considerably over capacity and substantial queues of traffic leaving the school are expected to form.

- 9.14 It is recognised that the number of vehicles leaving the site access during the AM Peak is low, the number of parents dropping their children off during the AM peak could vary considerably. As the RFC in the Predicted 2014 AM peak is only 0.111 there is ample capacity to accommodate a variation in this figure. Almost eight times the 12 vehicles proposed could in fact turn out of the site access onto the A638 Dodworth Road during the AM peak before a problem would start to occur.

- 9.15 Discussions will be held with Barnsley Metropolitan Borough Council Highway Department with regard to the form of an acceptable site access onto the A628 Dodworth Road.

10.0 SUMMARY AND CONCLUSIONS

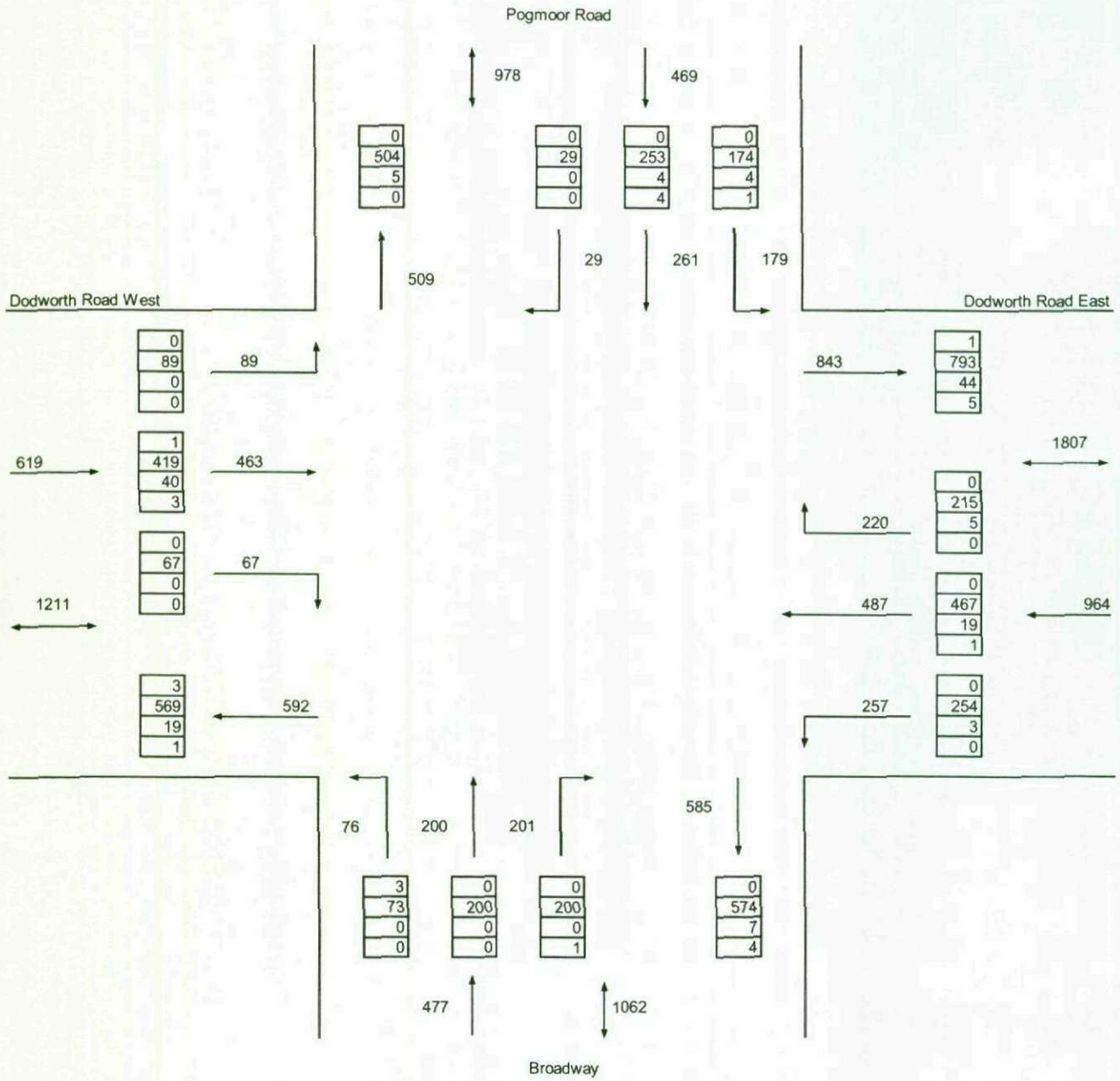
- 10.1 This Transport Assessment forms part of a planning application submitted by Barnsley Education Services Department for the proposed development of Kingstone and Holgate Advanced Learning Centre on land situated approximately 1.6 kilometres to the west of Barnsley Town Centre.
- 10.2 A comparison of the existing and proposed trips impacting the A628 Dodworth Road / Pogmoor Road / Broadway Signalised Junction has been undertaken and the future operation of the A628 Dodworth Road / Site Access Priority Junction has been modelled using PICADY. This has shown that the additional trips generated at the signalised junction will be minimal and the Site Access junction will operate in a safe and satisfactory manner in the adopted design year of 2014, five years from the date of registration of the planning application.
- 10.3 The area in the vicinity of the site is currently well served by public transport and there will be scope when developing the Travel Plan to promote further alternative modes of transport to the private car.
- 10.4 Existing accident statistics for the local highway network have been considered and from close inspection of these details there is no accident problem within the vicinity of the site access. It is therefore concluded that the development proposals will not materially increase the accident potential within the study area.
- 10.5 The overall conclusion is that the proposed Advanced Learning Centre will not generate additional trips in comparison to the previous and existing uses on the development site and following necessary improvements to the site access, to be agreed with Barnsley Metropolitan Borough Council, on highway and transport grounds there are no defensible reasons why planning consent for the development should be withheld.

APPENDIX BGH 1

APPENDIX BGH 2

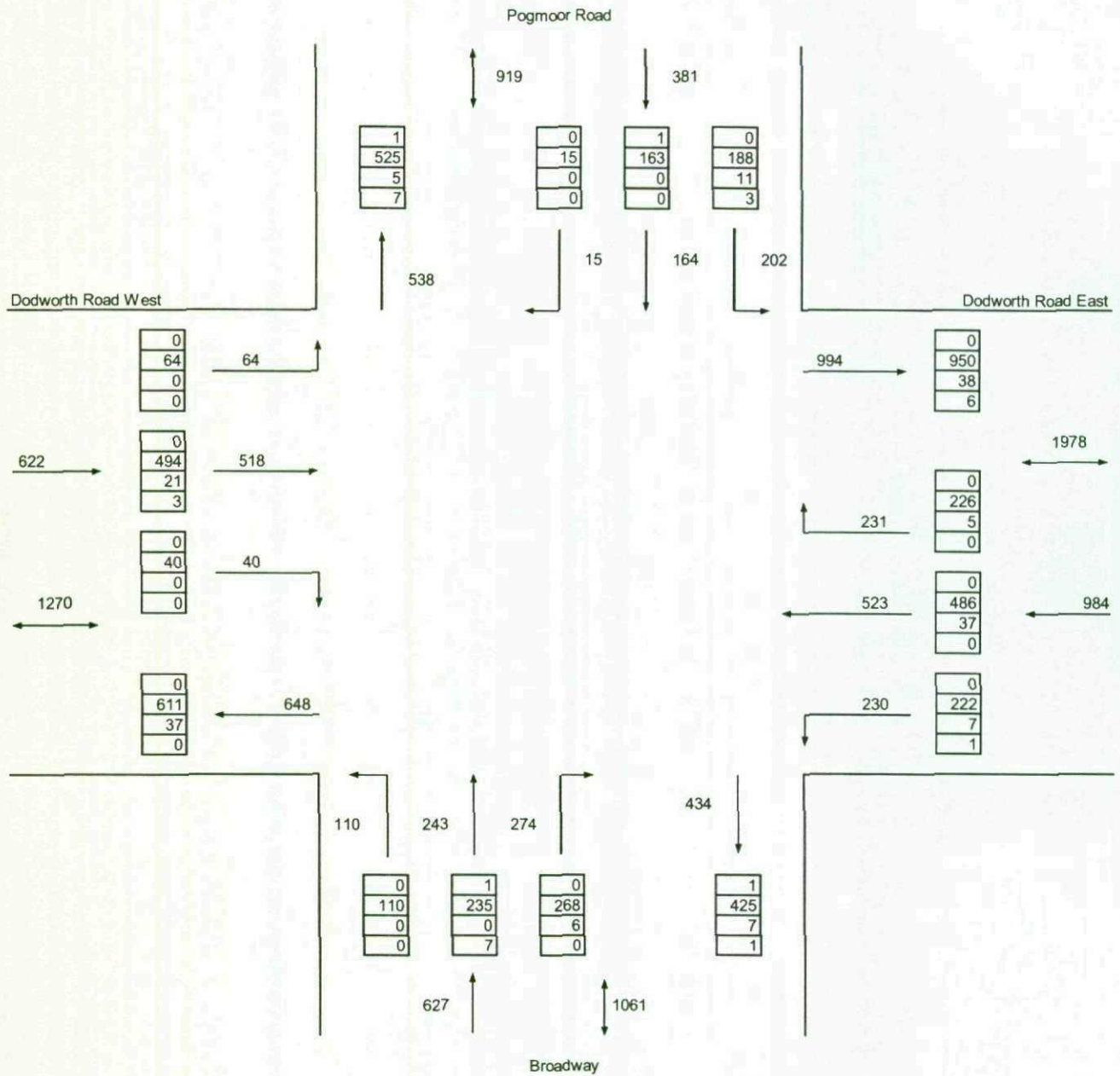
EXISTING VEHICULAR FLOWS A628 Dodworth Rd / Pogmoor Road / Broadway

8:00 am - 9:00 am



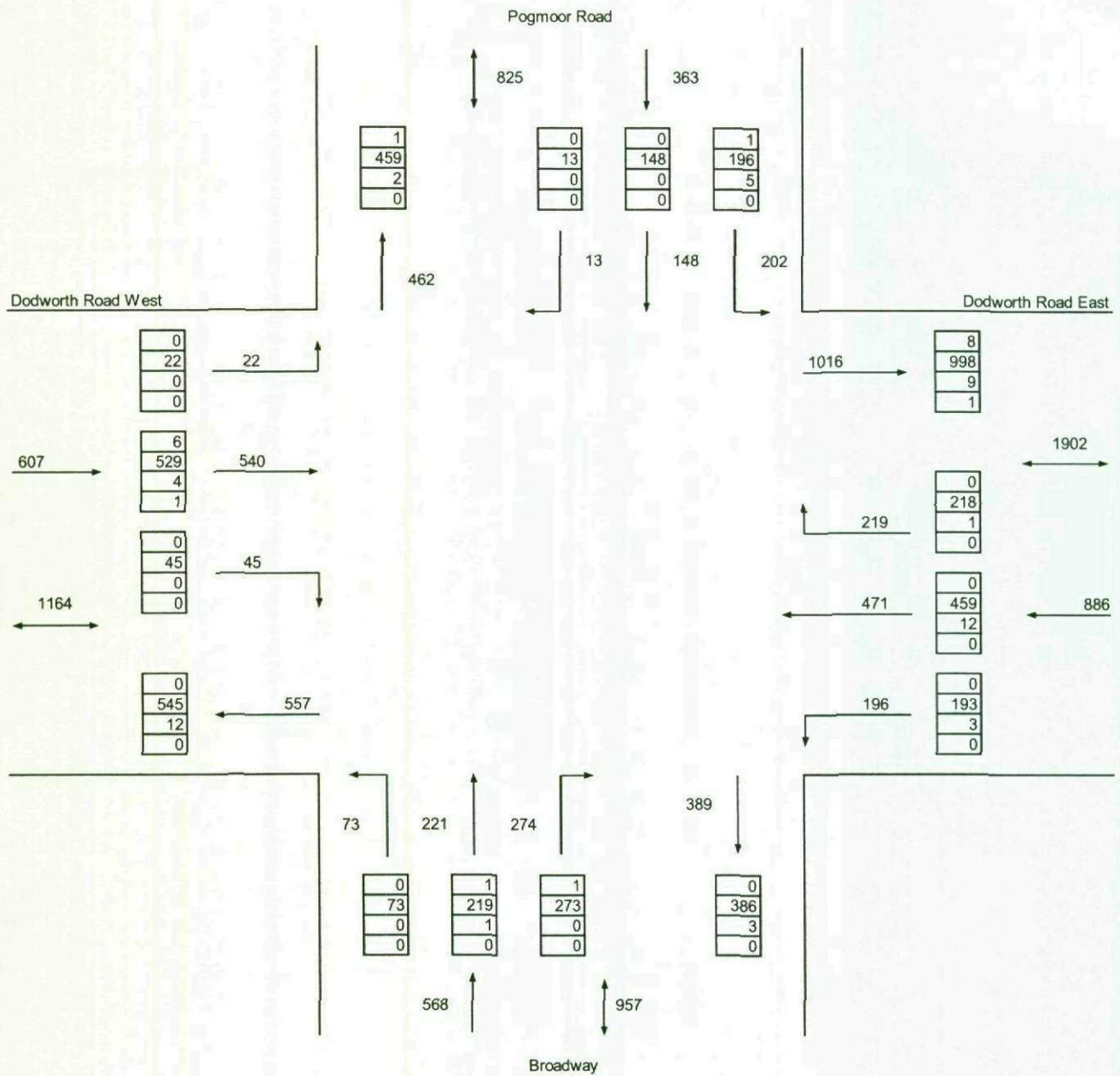
EXISTING VEHICULAR FLOWS A628 Dodworth Rd / Pogmoor Road / Broadway

3:00 pm - 4:00 pm



EXISTING VEHICULAR FLOWS **A628 Dodworth Rd / Pogmoor Road / Broadway**

5:00 pm - 6:00 pm



APPENDIX BGH 3

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 604801

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 13 - PETROL FILLING STATIONS

Category : A - PETROL FILLING STATIONS

VEHICLESSelected regions and areas:

02 SOUTH EAST		
BD	BEDFORDSHIRE	1 days
HC	HAMPSHIRE	3 days
KC	KENT	2 days
03 SOUTH WEST		
BR	BRISTOL CITY	1 days
DC	DORSET	1 days
04 EAST ANGLIA		
CA	CAMBRIDGESHIRE	3 days
05 EAST MIDLANDS		
LE	LEICESTERSHIRE	2 days
NR	NORTHAMPTONSHIRE	1 days
NT	NOTTINGHAMSHIRE	1 days
06 WEST MIDLANDS		
WM	WEST MIDLANDS	2 days
07 YORKSHIRE & NORTH LINCOLNSHIRE		
NY	NORTH YORKSHIRE	1 days
RI	EAST RIDING OF YORKSHIRE	1 days
WY	WEST YORKSHIRE	1 days
08 NORTH WEST		
GM	GREATER MANCHESTER	2 days
MS	MERSEYSIDE	1 days
09 NORTH		
DH	DURHAM	1 days
NB	NORTHUMBERLAND	2 days
TW	TYNE & WEAR	1 days

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 604801

Main parameter selection:

Parameter: Filling bays
 Range: 5 to 16 (units:)
 Date Range: 01/01/00 to 18/05/07

Selected survey days:

Monday	4 days
Tuesday	3 days
Wednesday	1 days
Friday	4 days
Saturday	7 days
Sunday	8 days

Selected survey types:

Manual count	27 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	6
Suburban Area (PPS6 Out of Centre)	5
Edge of Town	7
Neighbourhood Centre (PPS6 Local Centre)	5
Free Standing (PPS6 Out of Town)	4

Selected Location Sub Categories:

Industrial Zone	2
Commercial Zone	1
Residential Zone	8
Retail Zone	1
Built-Up Zone	2
Village	3
Out of Town	4
High Street	1
No Sub Category	5

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 604801

RANK ORDER for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
VEHICLESRanking Type: **TOTALS**

Time Range: 08:00-09:00

15th Percentile = No. **23 (**)**85th Percentile = No. **5 (**)**

Rank	Site-Ref	Description	Area	BAYS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	HC-13-A-01	ESSO, ROMSEY	HAMPSHIRE	8	Fri	19/07/02	12.125	13.000	25.125	
2	MS-13-A-01	BP, FORMBY	MERSEYSIDE	8	Tue	11/10/05	10.250	10.000	20.250	
3	TW-13-A-01	SHELL, NEWCASTLE	TYNE & WEAR	6	Sat	14/05/05	9.500	10.000	19.500	
4	DH-13-A-01	TOTAL, ANNFIELD PLAIN	DURHAM	8	Mon	09/06/03	9.125	9.125	18.250	
5 **	NR-13-A-01	TOTAL, NEAR NORTHAMPTON	NORTHAMPTONSHIRE	8	Fri	18/05/07	8.625	9.125	17.750	
6	NT-13-A-01	ESSO, NEAR NOTTINGHAM	NOTTINGHAMSHIRE	6	Tue	15/06/04	7.500	7.333	14.833	
7	HC-13-A-06	ESSO, WINCHESTER	HAMPSHIRE	8	Tue	16/07/02	6.500	6.750	13.250	Yes
8	CA-13-A-01	SHELL, PETERBOROUGH	CAMBRIDGESHIRE	12	Sat	02/08/03	6.417	6.083	12.500	
9	HC-13-A-07	STAR, ROMSEY	HAMPSHIRE	12	Fri	19/07/02	5.833	5.833	11.666	
10	CA-13-A-03	SHELL, NEAR CAMBRIDGE	CAMBRIDGESHIRE	8	Fri	05/11/04	5.375	5.875	11.250	
11	NB-13-A-01	PFS/GARAGE, NEAR HEXHAM	NORTHUMBERLAND	8	Mon	23/06/03	6.000	5.125	11.125	
12	BD-13-A-01	BP, DUNSTABLE	BEDFORDSHIRE	10	Mon	05/07/04	5.400	5.100	10.500	
13	LE-13-A-02	PFS, LEICESTER	LEICESTERSHIRE	6	Mon	09/05/05	5.333	4.667	10.000	
14	NB-13-A-02	ESSO, HEXHAM	NORTHUMBERLAND	8	Sun	22/05/05	4.750	4.875	9.625	
15	DC-13-A-09	TESCO, DORCHESTER	DORSET	12	Sun	19/10/03	4.583	4.500	9.083	
16	KC-13-A-06	SAFeway, GRAVESEND	KENT	12	Sun	21/09/03	4.667	4.250	8.917	
17	LE-13-A-01	TOTAL, LEICESTER	LEICESTERSHIRE	8	Wed	30/06/04	4.250	4.250	8.500	
18	WY-13-A-01	BP, HUDDERSFIELD	WEST YORKSHIRE	8	Sun	16/03/03	4.000	4.125	8.125	
19	GM-13-A-07	BP CONNECT, MANCHESTER	GREATER MANCHESTER	10	Sat	12/06/04	3.900	3.900	7.800	
20	BR-13-A-01	BP, BRISTOL	BRISTOL CITY	11	Sat	14/09/02	3.273	3.091	6.364	
21	NY-13-A-01	JET, NEAR YORK	NORTH YORKSHIRE	9	Sat	21/05/05	3.222	2.889	6.111	
22	WM-13-A-02	ESSO, NEAR BROMSGROVE	WEST MIDLANDS	7	Sun	02/02/03	3.000	3.000	6.000	
23 **	GM-13-A-08	PFS, ALTRINCHAM	GREATER MANCHESTER	8	Sat	12/06/04	3.000	2.750	5.750	
24	RI-13-A-01	Q8, NEAR THORNE	EAST RIDING OF YORKSHIRE	6	Sat	28/05/05	2.500	2.500	5.000	
25	WM-13-A-01	SHELL, NEAR BROMSGROVE	WEST MIDLANDS	12	Sun	19/01/03	2.250	2.083	4.333	
26	CA-13-A-02	TOTAL, ST NEOTS	CAMBRIDGESHIRE	8	Sun	10/08/03	2.125	2.125	4.250	
27	KC-13-A-05	SAINSBURYS, BROADSTAIRS	KENT	12	Sun	09/11/03	1.500	1.167	2.667	

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 604801

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 13 - PETROL FILLING STATIONS

Category : A - PETROL FILLING STATIONS

VEHICLES

Selected regions and areas:

02 SOUTH EAST		
BD	BEDFORDSHIRE	1 days
HC	HAMPSHIRE	3 days
KC	KENT	2 days
03 SOUTH WEST		
BR	BRISTOL CITY	1 days
DC	DORSET	1 days
04 EAST ANGLIA		
CA	CAMBRIDGESHIRE	3 days
05 EAST MIDLANDS		
LE	LEICESTERSHIRE	2 days
NR	NORTHAMPTONSHIRE	1 days
NT	NOTTINGHAMSHIRE	1 days
06 WEST MIDLANDS		
WM	WEST MIDLANDS	2 days
07 YORKSHIRE & NORTH LINCOLNSHIRE		
NY	NORTH YORKSHIRE	1 days
RI	EAST RIDING OF YORKSHIRE	1 days
WY	WEST YORKSHIRE	1 days
08 NORTH WEST		
GM	GREATER MANCHESTER	2 days
MS	MERSEYSIDE	1 days
09 NORTH		
DH	DURHAM	1 days
NB	NORTHUMBERLAND	2 days
TW	TYNE & WEAR	1 days

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 604801

Main parameter selection:

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Date Range: 01/01/00 to 18/05/07

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Commercial Zone	1
Residential Zone	8
Retail Zone	1
Built-Up Zone	2
Village	3
Out of Town	4
High Street	1
No Sub Category	5

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 604801

RANK ORDER for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS

VEHICLESRanking Type: **TOTALS**

Time Range: 15:00-16:00

15th Percentile = No. **23 (**)**85th Percentile = No. **5 (**)**

Rank	Site-Ref	Description	Area	BAYS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	HC-13-A-01	ESSO, ROMSEY	HAMPSHIRE	8	Fri	19/07/02	13.250	12.375	25.625	
2	NR-13-A-01	TOTAL, NEAR NORTHAMPTON	NORTHAMPTONSHIRE	8	Fri	18/05/07	11.875	11.750	23.625	
3	DC-13-A-09	TESCO, DORCHESTER	DORSET	12	Sun	19/10/03	11.667	11.250	22.917	
4	TW-13-A-01	SHELL, NEWCASTLE	TYNE & WEAR	6	Sat	14/05/05	10.833	11.167	22.000	
5 **	KC-13-A-06	SAFEBAY, GRAVESEND	KENT	12	Sun	21/09/03	9.667	9.333	19.000	
6	MS-13-A-01	BP, FORMBY	MERSEYSIDE	8	Tue	11/10/05	8.375	9.000	17.375	
7	NB-13-A-02	ESSO, HEXHAM	NORTHUMBERLAND	8	Sun	22/05/05	8.375	8.375	16.750	
8	CA-13-A-03	SHELL, NEAR CAMBRIDGE	CAMBRIDGESHIRE	8	Fri	05/11/04	7.375	8.125	15.500	
9	WY-13-A-01	BP, HUDDERSFIELD	WEST YORKSHIRE	8	Sun	16/03/03	7.250	7.375	14.625	
10	CA-13-A-01	SHELL, PETERBOROUGH	CAMBRIDGESHIRE	12	Sat	02/08/03	6.833	7.250	14.083	
11	NT-13-A-01	ESSO, NEAR NOTTINGHAM	NOTTINGHAMSHIRE	6	Tue	15/06/04	7.667	6.333	14.000	
12	WM-13-A-02	ESSO, NEAR BROMSGROVE	WEST MIDLANDS	7	Sun	02/02/03	6.571	6.286	12.857	
13	KC-13-A-05	SAINSBURYS, BROADSTAIRS	KENT	12	Sun	09/11/03	6.083	6.333	12.416	
14	DH-13-A-01	TOTAL, ANNFIELD PLAIN	DURHAM	8	Mon	09/06/03	6.250	6.125	12.375	
15	LE-13-A-01	TOTAL, LEICESTER	LEICESTERSHIRE	8	Wed	30/06/04	5.875	6.000	11.875	
16	GM-13-A-07	BP CONNECT, MANCHESTER	GREATER MANCHESTER	10	Sat	12/06/04	5.700	5.300	11.000	
17	HC-13-A-06	ESSO, WINCHESTER	HAMPSHIRE	8	Tue	16/07/02	5.375	5.375	10.750	Yes
18	HC-13-A-07	STAR, ROMSEY	HAMPSHIRE	12	Fri	19/07/02	5.167	5.417	10.584	
19	WM-13-A-01	SHELL, NEAR BROMSGROVE	WEST MIDLANDS	12	Sun	19/01/03	5.083	5.167	10.250	
20	NB-13-A-01	PFS/GARAGE, NEAR HEXHAM	NORTHUMBERLAND	8	Mon	23/06/03	4.375	4.250	8.625	
21	GM-13-A-08	PFS, ALTRINCHAM	GREATER MANCHESTER	8	Sat	12/06/04	4.375	4.250	8.625	
22	BD-13-A-01	BP, DUNSTABLE	BEDFORDSHIRE	10	Mon	05/07/04	4.100	4.000	8.100	
23 **	RI-13-A-01	Q8, NEAR THORNE	EAST RIDING OF YORKSHIRE	6	Sat	28/05/05	4.667	3.333	8.000	
24	LE-13-A-02	PFS, LEICESTER	LEICESTERSHIRE	6	Mon	09/05/05	4.333	3.667	8.000	
25	BR-13-A-01	BP, BRISTOL	BRISTOL CITY	11	Sat	14/09/02	3.909	4.000	7.909	
26	NY-13-A-01	JET, NEAR YORK	NORTH YORKSHIRE	9	Sat	21/05/05	3.778	4.111	7.889	
27	CA-13-A-02	TOTAL, ST NEOTS	CAMBRIDGESHIRE	8	Sun	10/08/03	1.875	2.125	4.000	

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 604801

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 13 - PETROL FILLING STATIONS

Category : A - PETROL FILLING STATIONS

VEHICLESSelected regions and areas:

02 SOUTH EAST		
BD	BEDFORDSHIRE	1 days
HC	HAMPSHIRE	3 days
KC	KENT	2 days
03 SOUTH WEST		
BR	BRISTOL CITY	1 days
DC	DORSET	1 days
04 EAST ANGLIA		
CA	CAMBRIDGESHIRE	3 days
05 EAST MIDLANDS		
LE	LEICESTERSHIRE	2 days
NR	NORTHAMPTONSHIRE	1 days
NT	NOTTINGHAMSHIRE	1 days
06 WEST MIDLANDS		
WM	WEST MIDLANDS	2 days
07 YORKSHIRE & NORTH LINCOLNSHIRE		
NY	NORTH YORKSHIRE	1 days
RI	EAST RIDING OF YORKSHIRE	1 days
WY	WEST YORKSHIRE	1 days
08 NORTH WEST		
GM	GREATER MANCHESTER	2 days
MS	MERSEYSIDE	1 days
09 NORTH		
DH	DURHAM	1 days
NB	NORTHUMBERLAND	2 days
TW	TYNE & WEAR	1 days

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 604801

Main parameter selection:

Parameter: Filling bays
Range: 5 to 16 (units:)

Date Range: 01/01/00 to 18/05/07

Selected survey days:

Monday	4 days
Tuesday	3 days
Wednesday	1 days
Friday	4 days
Saturday	7 days
Sunday	8 days

Selected survey types:

Manual count	27 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	6
Suburban Area (PPS6 Out of Centre)	5
Edge of Town	7
Neighbourhood Centre (PPS6 Local Centre)	5
Free Standing (PPS6 Out of Town)	4

Selected Location Sub Categories:

Industrial Zone	2
Commercial Zone	1
Residential Zone	8
Retail Zone	1
Built-Up Zone	2
Village	3
Out of Town	4
High Street	1
No Sub Category	5

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 604801

RANK ORDER for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS

VEHICLESRanking Type: **TOTALS**

Time Range: 17:00-18:00

15th Percentile = No. **23 (**)**85th Percentile = No. **5 (**)**

Rank	Site-Ref	Description	Area	BAYS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	NR-13-A-01	TOTAL, NEAR NORTHAMPTON	NORTHAMPTONSHIRE	8	Fri	18/05/07	12.750	13.000	25.750	
2	HC-13-A-01	ESSO, ROMSEY	HAMPSHIRE	8	Fri	19/07/02	11.250	11.875	23.125	
3	MS-13-A-01	BP, FORMBY	MERSEYSIDE	8	Tue	11/10/05	10.250	10.500	20.750	
4	TW-13-A-01	SHELL, NEWCASTLE	TYNE & WEAR	6	Sat	14/05/05	9.667	10.000	19.667	
5 **	NT-13-A-01	ESSO, NEAR NOTTINGHAM	NOTTINGHAMSHIRE	6	Tue	15/06/04	8.500	10.667	19.167	
6	DH-13-A-01	TOTAL, ANFIELD PLAIN	DURHAM	8	Mon	09/06/03	8.500	8.625	17.125	
7	CA-13-A-01	SHELL, PETERBOROUGH	CAMBRIDGESHIRE	12	Sat	02/08/03	7.917	8.583	16.500	
8	DC-13-A-09	TESCO, DORCHESTER	DORSET	12	Sun	19/10/03	8.333	8.083	16.416	
9	HC-13-A-06	ESSO, WINCHESTER	HAMPSHIRE	8	Tue	16/07/02	7.375	7.375	14.750	Yes
10	CA-13-A-03	SHELL, NEAR CAMBRIDGE	CAMBRIDGESHIRE	8	Fri	05/11/04	7.625	6.875	14.500	
11	NB-13-A-02	ESSO, HEXHAM	NORTHUMBERLAND	8	Sun	22/05/05	7.125	7.250	14.375	
12	WY-13-A-01	BP, HUDDERSFIELD	WEST YORKSHIRE	8	Sun	16/03/03	6.125	6.375	12.500	
13	LE-13-A-01	TOTAL, LEICESTER	LEICESTERSHIRE	8	Wed	30/06/04	5.625	5.625	11.250	
14	HC-13-A-07	STAR, ROMSEY	HAMPSHIRE	12	Fri	19/07/02	5.417	5.333	10.750	
15	GM-13-A-07	BP CONNECT, MANCHESTER	GREATER MANCHESTER	10	Sat	12/06/04	5.200	5.400	10.600	
16	LE-13-A-02	PFS, LEICESTER	LEICESTERSHIRE	6	Mon	09/05/05	5.167	5.333	10.500	
17	WM-13-A-02	ESSO, NEAR BROMSGROVE	WEST MIDLANDS	7	Sun	02/02/03	5.286	5.143	10.429	
18	WM-13-A-01	SHELL, NEAR BROMSGROVE	WEST MIDLANDS	12	Sun	19/01/03	5.000	4.833	9.833	
19	NB-13-A-01	PFS/GARAGE, NEAR HEXHAM	NORTHUMBERLAND	8	Mon	23/06/03	4.875	4.875	9.750	
20	BR-13-A-01	BP, BRISTOL	BRISTOL CITY	11	Sat	14/09/02	4.545	4.909	9.454	
21	BD-13-A-01	BP, DUNSTABLE	BEDFORDSHIRE	10	Mon	05/07/04	4.400	4.100	8.500	
22	KC-13-A-06	SAFEWAY, GRAVESEND	KENT	12	Sun	21/09/03	4.083	4.417	8.500	
23 **	GM-13-A-08	PFS, ALTRINCHAM	GREATER MANCHESTER	8	Sat	12/06/04	3.875	3.875	7.750	
24	NY-13-A-01	JET, NEAR YORK	NORTH YORKSHIRE	9	Sat	21/05/05	3.889	3.444	7.333	
25	KC-13-A-05	SAINSBURYS, BROADSTAIRS	KENT	12	Sun	09/11/03	2.083	2.333	4.416	
26	CA-13-A-02	TOTAL, ST NEOTS	CAMBRIDGESHIRE	8	Sun	10/08/03	2.125	2.250	4.375	
27	RI-13-A-01	Q8, NEAR THORNE	EAST RIDING OF YORKSHIRE	6	Sat	28/05/05	1.667	1.500	3.167	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : C - INDUSTRIAL UNIT

VEHICLESSelected regions and areas:

03	SOUTH WEST	
	CW CORNWALL	2 days
	DC DORSET	4 days
	GS GLOUCESTERSHIRE	1 days
04	EAST ANGLIA	
	NF NORFOLK	2 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
	GM GREATER MANCHESTER	1 days
	LC LANCASHIRE	1 days
09	NORTH	
	TV TEES VALLEY	1 days
10	WALES	
	CF CARDIFF	1 days
	MT MERTHYR TYDFIL	1 days
11	SCOTLAND	
	ER EAST RENFREWSHIRE	2 days
	FI FIFE	1 days
	HI HIGHLAND	1 days

Main parameter selection:

Parameter: Gross floor area
Range: 1068 to 43325 (units: sqm)

Date Range: 01/01/00 to 09/10/07

Selected survey days:

Monday	3 days
Tuesday	7 days
Wednesday	4 days
Thursday	5 days
Friday	2 days

Selected survey types:

Manual count	21 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	4
Suburban Area (PPS6 Out of Centre)	3
Edge of Town	11
Free Standing (PPS6 Out of Town)	3

Selected Location Sub Categories:

Industrial Zone	11
Built-Up Zone	5
Out of Town	2
No Sub Category	3

Optional parameter selection:

Use Class:

Not Known	1 days
B1	15 days
B2	4 days

Population within 1 mile:

1,001 to 5,000	7 days
5,001 to 10,000	4 days
15,001 to 20,000	6 days
20,001 to 25,000	3 days
25,001 to 50,000	1 days

Population within 5 miles:

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	12 days
1.1 to 1.5	8 days

Optional parameter selection (Cont.):

Travel Plan:

Not Known

No

8 days

13 days

LIST OF SITES relevant to selection parameters

- | | | | |
|---|--|-------------------------------------|---------------------|
| 1 | CF-02-C-01 | PLASTICS COMPANY, CARDIFF | CARDIFF |
| | PARC-TY-GLAS
LLANISHEN
CARDIFF
Total Gross floor area: 1068 sqm
Survey date: TUESDAY 24/10/06 | | Survey Type: MANUAL |
| 2 | CH-02-C-01 | BAKERY, NORTHWICH | CHESHIRE |
| | GADBROOK PARK
HIGH SHURLACH
NORTHWICH
Total Gross floor area: 15000 sqm
Survey date: THURSDAY 21/06/07 | | Survey Type: MANUAL |
| 3 | CW-02-C-01 | FOOD DISTRIBUTION, CAMBORNE | CORNWALL |
| | WILSON WAY
POOL
CAMBORNE
Total Gross floor area: 10200 sqm
Survey date: FRIDAY 08/06/07 | | Survey Type: MANUAL |
| 4 | CW-02-C-02 | LIGHTING COMPANY, BODMIN | CORNWALL |
| | NORMANDY WAY

BODMIN
Total Gross floor area: 17675 sqm
Survey date: WEDNESDAY 06/06/07 | | Survey Type: MANUAL |
| 5 | DC-02-C-02 | NEWSPAPER HQ, WEYMOUTH | DORSET |
| | HAMPSHIRE ROAD
CHICKERELL
WEYMOUTH
Total Gross floor area: 3035 sqm
Survey date: TUESDAY 04/07/00 | | Survey Type: MANUAL |
| 6 | DC-02-C-03 | INDUSTRIAL UNIT, NR WIMBORNE | DORSET |
| | NIMROD WAY
STAPEHILL
NEAR WIMBORNE MINSTER
Total Gross floor area: 1626 sqm
Survey date: TUESDAY 15/05/01 | | Survey Type: MANUAL |
| 7 | DC-02-C-04 | BREWERY, DORCHESTER | DORSET |
| | WEYMOUTH AVENUE

DORCHESTER
Total Gross floor area: 19857 sqm
Survey date: MONDAY 09/07/01 | | Survey Type: MANUAL |
| 8 | DC-02-C-05 | ELECTRONICS CO., WEYMOUTH | DORSET |
| | HAMPSHIRE ROAD
GRANBY IND. ESTATE
WEYMOUTH
Total Gross floor area: 4600 sqm
Survey date: THURSDAY 11/10/01 | | Survey Type: MANUAL |
| 9 | DS-02-C-01 | BAKERY, NEAR SHEFFIELD | DERBYSHIRE |
| | STUBLEY LANE
DRONFIELD
NEAR SHEFFIELD
Total Gross floor area: 23500 sqm
Survey date: THURSDAY 22/06/06 | | Survey Type: MANUAL |

LIST OF SITES relevant to selection parameters (Cont.)

10	ER-02-C-01	PET FOODS, BARRHEAD	EAST RENFREWSHIRE
	GLASGOW ROAD		
	BARRHEAD		
	Total Gross floor area:	22926 sqm	
	Survey date: THURSDAY	11/10/01	Survey Type: MANUAL
11	ER-02-C-02	DYEWORCS, NEWTON MEARNES	EAST RENFREWSHIRE
	NETHERPLACE ROAD		
	NETHERPLACE		
	NEWTON MEARNES		
	Total Gross floor area:	11972 sqm	
	Survey date: WEDNESDAY	08/05/02	Survey Type: MANUAL
12	FI-02-C-01	REFRIGERATION, DUNFERMLINE	FIFE
	HALBEATH PLACE		
	DUNFERMLINE		
	Total Gross floor area:	4900 sqm	
	Survey date: FRIDAY	20/04/07	Survey Type: MANUAL
13	GM-02-C-02	BREWERY, MANCHESTER	GREATER MANCHESTER
	GREAT DUCIE STREET		
	STRANGEWAYS		
	MANCHESTER		
	Total Gross floor area:	33470 sqm	
	Survey date: TUESDAY	08/06/04	Survey Type: MANUAL
14	GS-02-C-01	HEALTH PRODUCTS, GLOUCESTER	GLOUCESTERSHIRE
	ST CATHERINE STREET		
	GLOUCESTER		
	Total Gross floor area:	6604 sqm	
	Survey date: WEDNESDAY	26/05/04	Survey Type: MANUAL
15	HI-02-C-01	DAIRY, NAIRN	HIGHLAND
	TOM SEMPLE ROAD		
	BALMAKEITH BUSINESS PK		
	NAIRN		
	Total Gross floor area:	3000 sqm	
	Survey date: WEDNESDAY	24/05/06	Survey Type: MANUAL
16	LC-02-C-01	BREWERY, BLACKBURN	LANCASHIRE
	PENNY STREET		
	BLACKBURN		
	Total Gross floor area:	34581 sqm	
	Survey date: MONDAY	21/06/04	Survey Type: MANUAL
17	MT-02-C-01	CONFECTIONERY, DOWLAIS	MERTHYR TYDFIL
	HIGH STREET		
	DOWLAIS		
	MERTHYR TYDFIL		
	Total Gross floor area:	15450 sqm	
	Survey date: TUESDAY	09/10/07	Survey Type: MANUAL
18	NF-02-C-01	INDUSTRIAL UNIT, NORWICH	NORFOLK
	KERRISON ROAD		
	NORWICH		
	Total Gross floor area:	32000 sqm	
	Survey date: THURSDAY	16/11/00	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

- | | | | |
|----|-------------------------|-------------------------------|---------------------|
| 19 | NF-02-C-02 | GROCERY FACTORY, KINGS LYNN | NORFOLK |
| | HARDWICK ROAD | | |
| | KINGS LYNN | | |
| | Total Gross floor area: | 43325 sqm | |
| | Survey date: MONDAY | 19/09/05 | Survey Type: MANUAL |
| 20 | TV-02-C-01 | ELECTRONICS CO.,NR BILLINGHAM | TEES VALLEY |
| | SAMSUNG AVENUE | | |
| | WOLVISTON | | |
| | NEAR BILLINGHAM | | |
| | Total Gross floor area: | 21841 sqm | |
| | Survey date: TUESDAY | 02/10/01 | Survey Type: MANUAL |
| 21 | WY-02-C-01 | ANIMAL FEEDS, NEAR SHERBURN | WEST YORKSHIRE |
| | BISHOPDYKE ROAD | | |
| | NEAR SHERBURN IN ELMET | | |
| | Total Gross floor area: | 9835 sqm | |
| | Survey date: TUESDAY | 19/04/05 | Survey Type: MANUAL |

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

VEHICLES

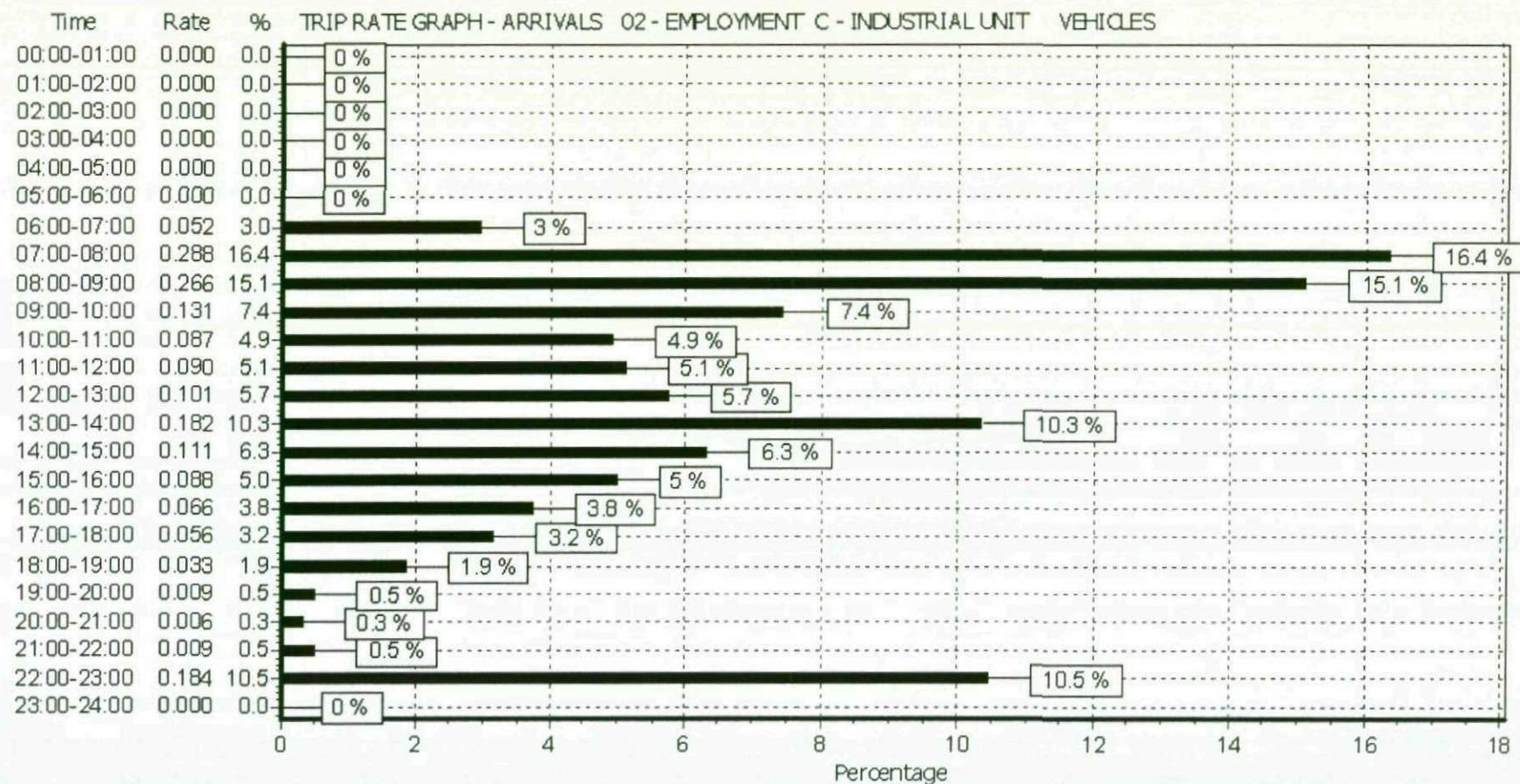
Calculation factor: 100 sqm

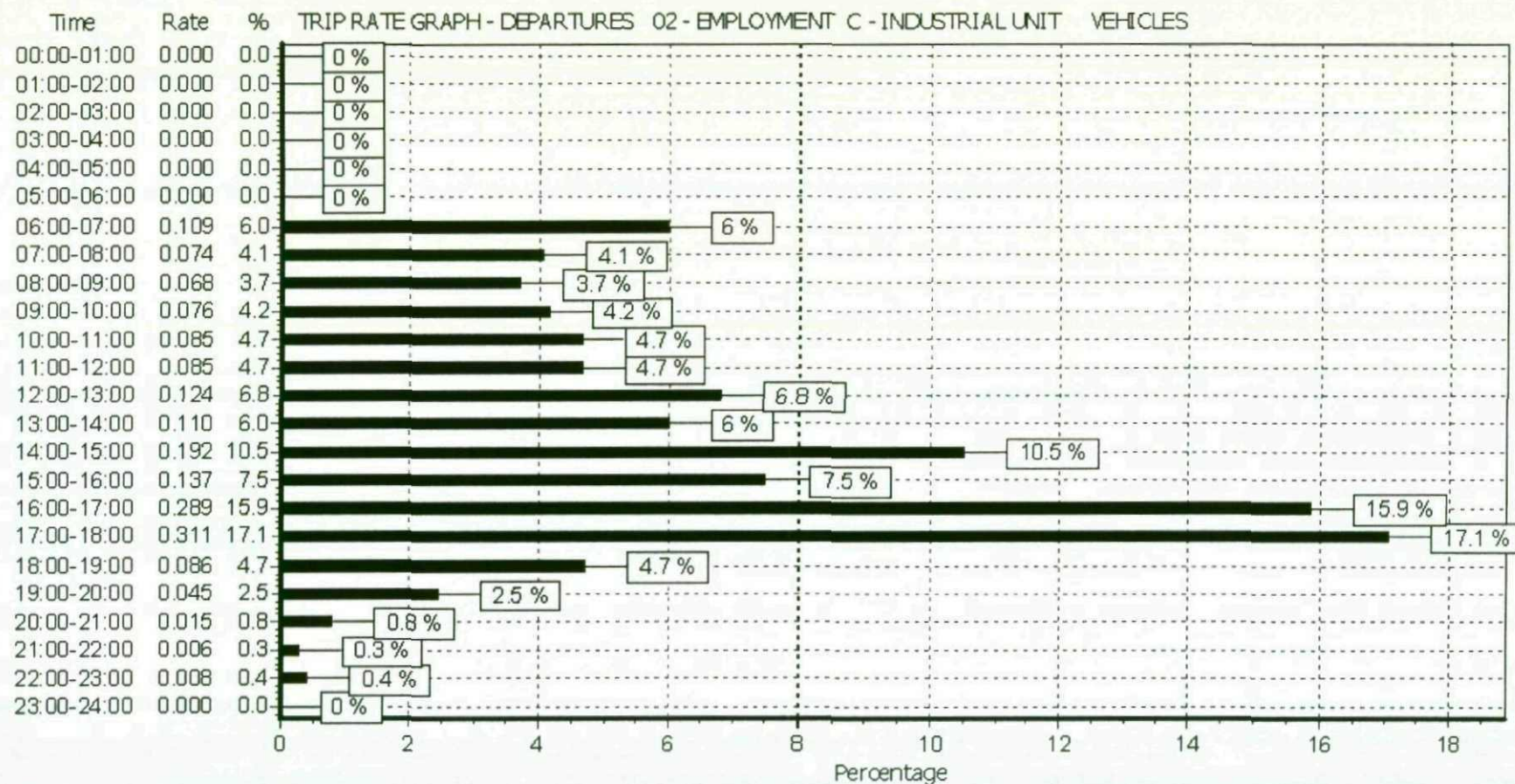
BOLD print indicates peak (busiest) period

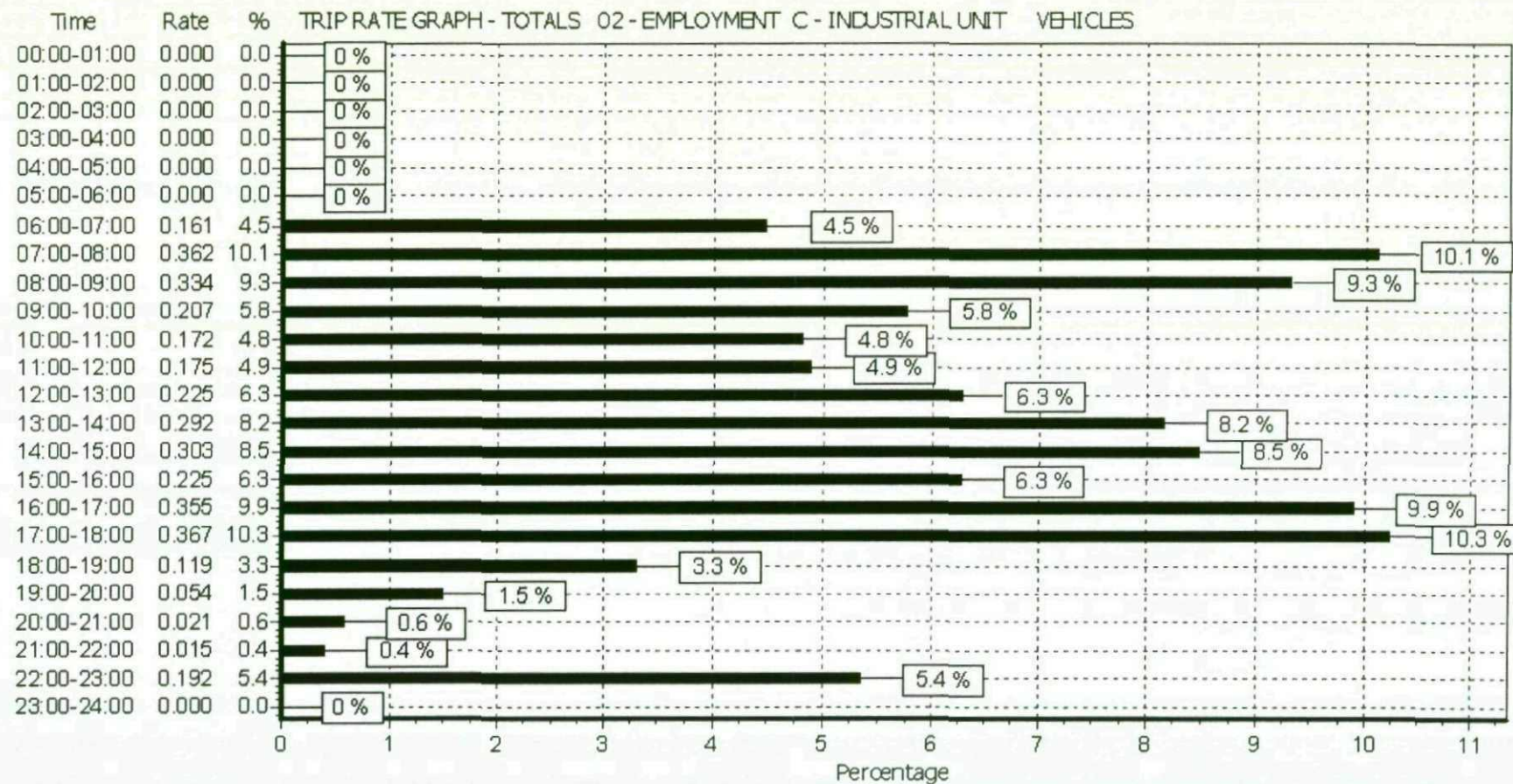
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	1	22926	0.017	1	22926	0.087	1	22926	0.104
06:30 - 07:00	1	22926	0.035	1	22926	0.022	1	22926	0.057
07:00 - 07:30	21	16022	0.107	21	16022	0.039	21	16022	0.146
07:30 - 08:00	21	16022	0.181	21	16022	0.035	21	16022	0.216
08:00 - 08:30	21	16022	0.150	21	16022	0.031	21	16022	0.181
08:30 - 09:00	21	16022	0.116	21	16022	0.037	21	16022	0.153
09:00 - 09:30	21	16022	0.077	21	16022	0.036	21	16022	0.113
09:30 - 10:00	21	16022	0.054	21	16022	0.040	21	16022	0.094
10:00 - 10:30	21	16022	0.044	21	16022	0.045	21	16022	0.089
10:30 - 11:00	21	16022	0.043	21	16022	0.040	21	16022	0.083
11:00 - 11:30	21	16022	0.043	21	16022	0.040	21	16022	0.083
11:30 - 12:00	21	16022	0.047	21	16022	0.045	21	16022	0.092
12:00 - 12:30	21	16022	0.043	21	16022	0.065	21	16022	0.108
12:30 - 13:00	21	16022	0.058	21	16022	0.059	21	16022	0.117
13:00 - 13:30	21	16022	0.080	21	16022	0.055	21	16022	0.135
13:30 - 14:00	21	16022	0.102	21	16022	0.055	21	16022	0.157
14:00 - 14:30	21	16022	0.053	21	16022	0.136	21	16022	0.189
14:30 - 15:00	21	16022	0.058	21	16022	0.056	21	16022	0.114
15:00 - 15:30	21	16022	0.048	21	16022	0.070	21	16022	0.118
15:30 - 16:00	21	16022	0.040	21	16022	0.067	21	16022	0.107
16:00 - 16:30	21	16022	0.033	21	16022	0.105	21	16022	0.138
16:30 - 17:00	21	16022	0.033	21	16022	0.184	21	16022	0.217
17:00 - 17:30	21	16022	0.025	21	16022	0.211	21	16022	0.236
17:30 - 18:00	21	16022	0.031	21	16022	0.100	21	16022	0.131
18:00 - 18:30	20	16578	0.016	20	16578	0.057	20	16578	0.073
18:30 - 19:00	20	16578	0.017	20	16578	0.029	20	16578	0.046
19:00 - 19:30	2	17449	0.003	2	17449	0.034	2	17449	0.037
19:30 - 20:00	2	17449	0.006	2	17449	0.011	2	17449	0.017
20:00 - 20:30	2	17449	0.003	2	17449	0.009	2	17449	0.012
20:30 - 21:00	2	17449	0.003	2	17449	0.006	2	17449	0.009
21:00 - 21:30	2	17449	0.003	2	17449	0.003	2	17449	0.006
21:30 - 22:00	2	17449	0.006	2	17449	0.003	2	17449	0.009
22:00 - 22:30	1	11972	0.000	1	11972	0.000	1	11972	0.000
22:30 - 23:00	1	11972	0.184	1	11972	0.008	1	11972	0.192
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			1.759				1.820		
							3.579		

Parameter summary

Trip rate parameter range selected:	1068 - 43325 (units: sqm)
Survey date range:	01/01/00 - 09/10/07
Number of weekdays (Monday-Friday):	21
Number of Saturdays:	0
Number of Sundays:	0
Optional parameters used in selection:	NO
Surveys manually removed from selection:	1







TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION

Category : B - SECONDARY

MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01 GREATER LONDON	
BN BARNET	1 days
HM HAMMERSMITH AND FULHAM	1 days
02 SOUTH EAST	
EX ESSEX	1 days
HC HAMPSHIRE	1 days
OX OXFORDSHIRE	1 days
03 SOUTH WEST	
DC DORSET	1 days
05 EAST MIDLANDS	
LE LEICESTERSHIRE	1 days
LN LINCOLNSHIRE	1 days
06 WEST MIDLANDS	
ST STAFFORDSHIRE	1 days
07 YORKSHIRE & NORTH LINCOLNSHIRE	
KH KINGSTON UPON HULL	1 days
09 NORTH	
CB CUMBRIA	1 days

Main parameter selection:

Parameter: Number of pupils
Range: 610 to 1913 (units:)

Date Range: 01/01/00 to 01/01/08

Selected survey days:

Monday	1 days
Tuesday	3 days
Wednesday	2 days
Thursday	5 days

Selected survey types:

Manual count	11 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	6
Edge of Town	3
Neighbourhood Centre (PPS6 Local Centre)	2

Selected Location Sub Categories:

Residential Zone	5
No Sub Category	6

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 504801

RANK ORDER for Land Use 04 - EDUCATION/B - SECONDARY

MULTI-MODAL TOTAL PEOPLERanking Type: **TOTALS**

Time Range: 08:00-09:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. **9 (**)**85th Percentile = No. **3 (**)**

Rank	Site-Ref	Description	Area	PUPILS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	LE-04-B-01	GRAMMAR SCH., LUTTERWORT	LEICESTERSHIRE	1913	Tue	30/01/01	1.020	0.142	1.162	
2	LN-04-B-01	SECONDARY SCHOOL, LINCOL	LINCOLNSHIRE	1200	Thu	12/09/02	1.105	0.018	1.123	
3 **	OX-04-B-01	SECONDARY SCHOOL, OXFORD	OXFORDSHIRE	1069	Thu	03/10/02	1.036	0.032	1.068	
4	EX-04-B-01	SECONDARY SCH., COLCHESTER	ESSEX	927	Thu	29/03/01	0.950	0.078	1.028	
5	KH-04-B-01	PRIVATE COLLEGE, HULL	KINGSTON UPON HULL	973	Mon	15/10/01	1.003	0.016	1.019	
6	ST-04-B-01	SECONDARY SCHOOL, STOKE	STAFFORDSHIRE	758	Thu	14/11/02	0.906	0.022	0.928	
7	DC-04-B-04	SECONDARY SCH., SHERBORN	DORSET	1327	Tue	02/10/01	0.897	0.002	0.899	
8	BN-04-B-01	SECONDARY SCHOOL, E. BAR	BARNET	1200	Wed	19/10/05	0.821	0.062	0.883	
9 **	HC-04-B-04	SECONDARY SCHOOL, ANDOVE	HAMPSHIRE	895	Thu	03/05/01	0.829	0.037	0.866	
10	CB-04-B-01	SECONDARY SCH., WORKINGTON	CUMBRIA	861	Tue	21/06/05	0.829	0.017	0.846	
11	HM-04-B-01	SECONDARY SCHOOL, FULHAM	HAMMERSMITH AND FULHAM	610	Wed	04/12/02	0.770	0.028	0.798	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION

Category : B - SECONDARY

MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01 GREATER LONDON	
BN BARNET	1 days
HM HAMMERSMITH AND FULHAM	1 days
02 SOUTH EAST	
EX ESSEX	1 days
HC HAMPSHIRE	1 days
OX OXFORDSHIRE	1 days
03 SOUTH WEST	
DC DORSET	1 days
05 EAST MIDLANDS	
LE LEICESTERSHIRE	1 days
LN LINCOLNSHIRE	1 days
06 WEST MIDLANDS	
ST STAFFORDSHIRE	1 days
07 YORKSHIRE & NORTH LINCOLNSHIRE	
KH KINGSTON UPON HULL	1 days
09 NORTH	
CB CUMBRIA	1 days

Main parameter selection:

Parameter: Number of pupils
Range: 610 to 1913 (units:)

Date Range: 01/01/00 to 01/01/08

Selected survey days:

Monday	1 days
Tuesday	3 days
Wednesday	2 days
Thursday	5 days

Selected survey types:

Manual count	11 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	6
Edge of Town	3
Neighbourhood Centre (PPS6 Local Centre)	2

Selected Location Sub Categories:

Residential Zone	5
No Sub Category	6

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 604801

RANK ORDER for Land Use 04 - EDUCATION/B - SECONDARY

MULTI-MODAL TOTAL PEOPLERanking Type: **TOTALS**

Time Range: 15:00-16:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. **9 (**)**85th Percentile = No. **3 (**)**

Rank	Site-Ref	Description	Area	PUPILS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	LN-04-B-01	SECONDARY SCHOOL, LINCOL	LINCOLNSHIRE	1200	Thu	12/09/02	0.090	1.133	1.223	
2	LE-04-B-01	GRAMMAR SCH., LUTTERWORT	LEICESTERSHIRE	1913	Tue	30/01/01	0.102	0.858	0.960	
3 **	OX-04-B-01	SECONDARY SCHOOL, OXFORD	OXFORDSHIRE	1069	Thu	03/10/02	0.068	0.887	0.955	
4	ST-04-B-01	SECONDARY SCHOOL, STOKE	STAFFORDSHIRE	758	Thu	14/11/02	0.047	0.897	0.944	
5	EX-04-B-01	SECONDARY SCH., COLCHEST	ESSEX	927	Thu	29/03/01	0.101	0.833	0.934	
6	HC-04-B-04	SECONDARY SCHOOL, ANDOVE	HAMPSHIRE	895	Thu	03/05/01	0.120	0.696	0.816	
7	BN-04-B-01	SECONDARY SCHOOL, E. BAR	BARNET	1200	Wed	19/10/05	0.036	0.738	0.774	
8	HM-04-B-01	SECONDARY SCHOOL, FULHAM	HAMMERSMITH AND FULHAM	610	Wed	04/12/02	0.023	0.746	0.769	
9 **	CB-04-B-01	SECONDARY SCH., WORKINGT	CUMBRIA	861	Tue	21/06/05	0.015	0.674	0.689	
10	DC-04-B-04	SECONDARY SCH., SHERBORN	DORSET	1327	Tue	02/10/01	0.047	0.498	0.545	
11	KH-04-B-01	PRIVATE COLLEGE, HULL	KINGSTON UPON HULL	973	Mon	15/10/01	0.051	0.206	0.257	

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 604801

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION

Category : B - SECONDARY

MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01 GREATER LONDON	
BN BARNET	1 days
HM HAMMERSMITH AND FULHAM	1 days
02 SOUTH EAST	
EX ESSEX	1 days
HC HAMPSHIRE	1 days
OX OXFORDSHIRE	1 days
03 SOUTH WEST	
DC DORSET	1 days
05 EAST MIDLANDS	
LE LEICESTERSHIRE	1 days
LN LINCOLNSHIRE	1 days
06 WEST MIDLANDS	
ST STAFFORDSHIRE	1 days
07 YORKSHIRE & NORTH LINCOLNSHIRE	
KH KINGSTON UPON HULL	1 days
09 NORTH	
CB CUMBRIA	1 days

Main parameter selection:

Parameter: Number of pupils
Range: 610 to 1913 (units:)

Date Range: 01/01/00 to 01/01/08

Selected survey days:

Monday	1 days
Tuesday	3 days
Wednesday	2 days
Thursday	5 days

Selected survey types:

Manual count	11 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	6
Edge of Town	3
Neighbourhood Centre (PPS6 Local Centre)	2

Selected Location Sub Categories:

Residential Zone	5
No Sub Category	6

BRYAN G HALL JOSEPH'S WELL LEEDS

Licence No: 604801

RANK ORDER for Land Use 04 - EDUCATION/B - SECONDARY

MULTI-MODAL TOTAL PEOPLERanking Type: **TOTALS**

Time Range: 17:00-18:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.

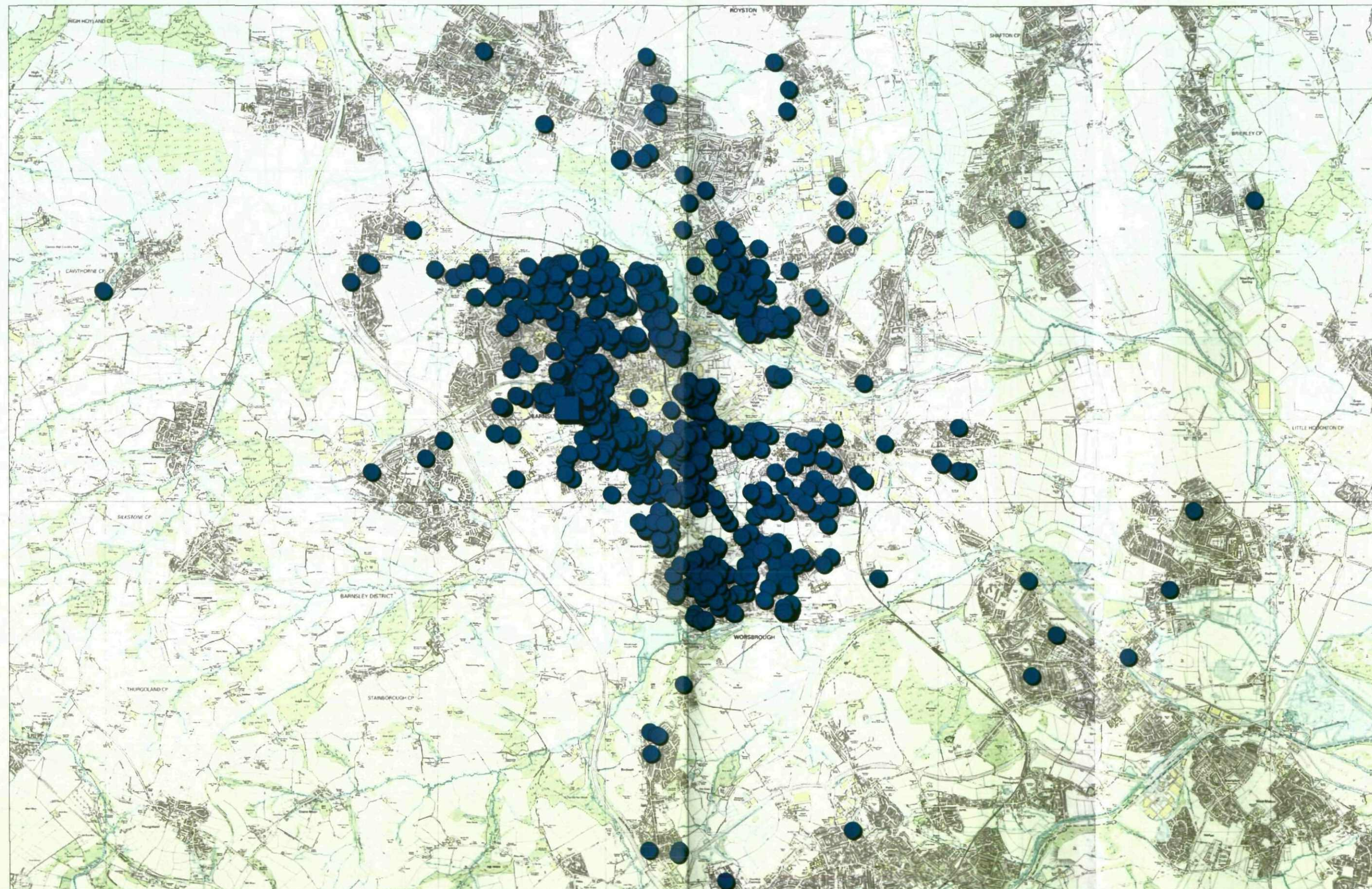
15th Percentile = No. **9 (**)**85th Percentile = No. **3 (**)**

Rank	Site-Ref	Description	Area	PUPILS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	LN-04-B-01	SECONDARY SCHOOL, LINCOL	LINCOLNSHIRE	1200	Thu	12/09/02	0.102	0.098	0.200	
2	DC-04-B-04	SECONDARY SCH., SHERBORN	DORSET	1327	Tue	02/10/01	0.071	0.099	0.170	
3 **	KH-04-B-01	PRIVATE COLLEGE, HULL	KINGSTON UPON HULL	973	Mon	15/10/01	0.003	0.155	0.158	
4	LE-04-B-01	GRAMMAR SCH., LUTTERWORT	LEICESTERSHIRE	1913	Tue	30/01/01	0.017	0.092	0.109	
5	EX-04-B-01	SECONDARY SCH., COLCHESTER	ESSEX	927	Thu	29/03/01	0.015	0.049	0.064	
6	HM-04-B-01	SECONDARY SCHOOL, FULHAM	HAMMERSMITH AND FULHAM	610	Wed	04/12/02	0.008	0.051	0.059	
7	CB-04-B-01	SECONDARY SCH., WORKINGTON	CUMBRIA	861	Tue	21/06/05	0.008	0.035	0.043	
8	BN-04-B-01	SECONDARY SCHOOL, E. BARNET	BARNET	1200	Wed	19/10/05	0.013	0.026	0.039	
9 **	HC-04-B-04	SECONDARY SCHOOL, ANDOVER	HAMPSHIRE	895	Thu	03/05/01	0.009	0.025	0.034	
10	ST-04-B-01	SECONDARY SCHOOL, STOKE	STAFFORDSHIRE	758	Thu	14/11/02	0.004	0.029	0.033	
11	OX-04-B-01	SECONDARY SCHOOL, OXFORD	OXFORDSHIRE	1069	Thu	03/10/02	0.002	0.019	0.021	

APPENDIX BGH 4

Holgate School- distribution of pupils January 2009

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BARNSELY MBC - Directorate for Children, Young People and Families
Executive Director: Edna Sutton
Berneslai Close, Barnsley, S70 2HS Tel: 01226 774513

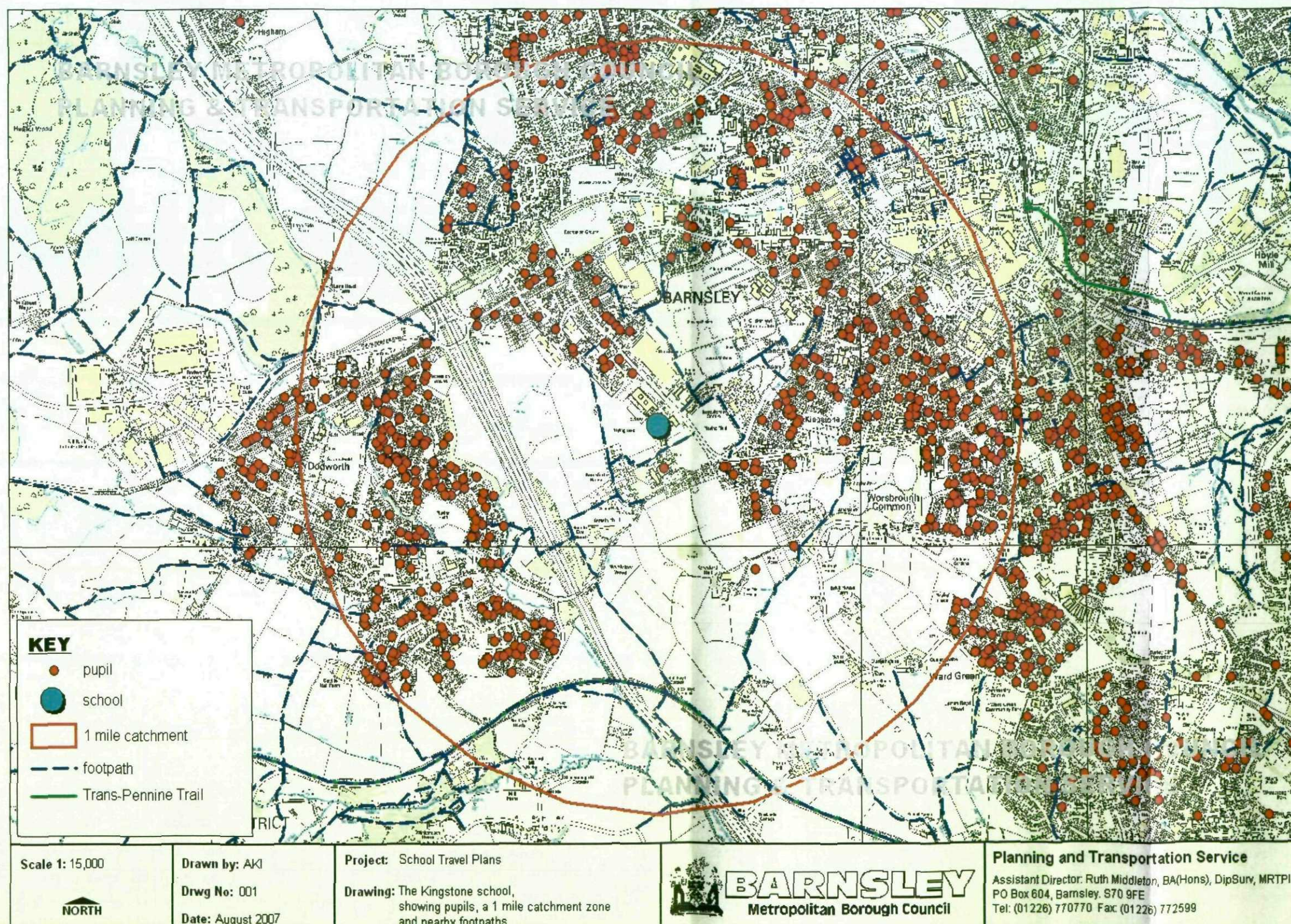


Holgate School

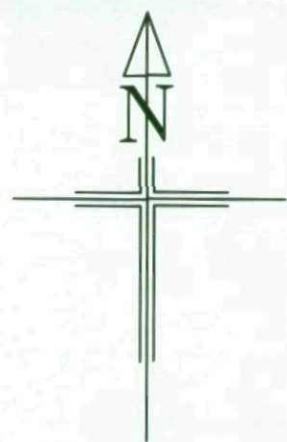
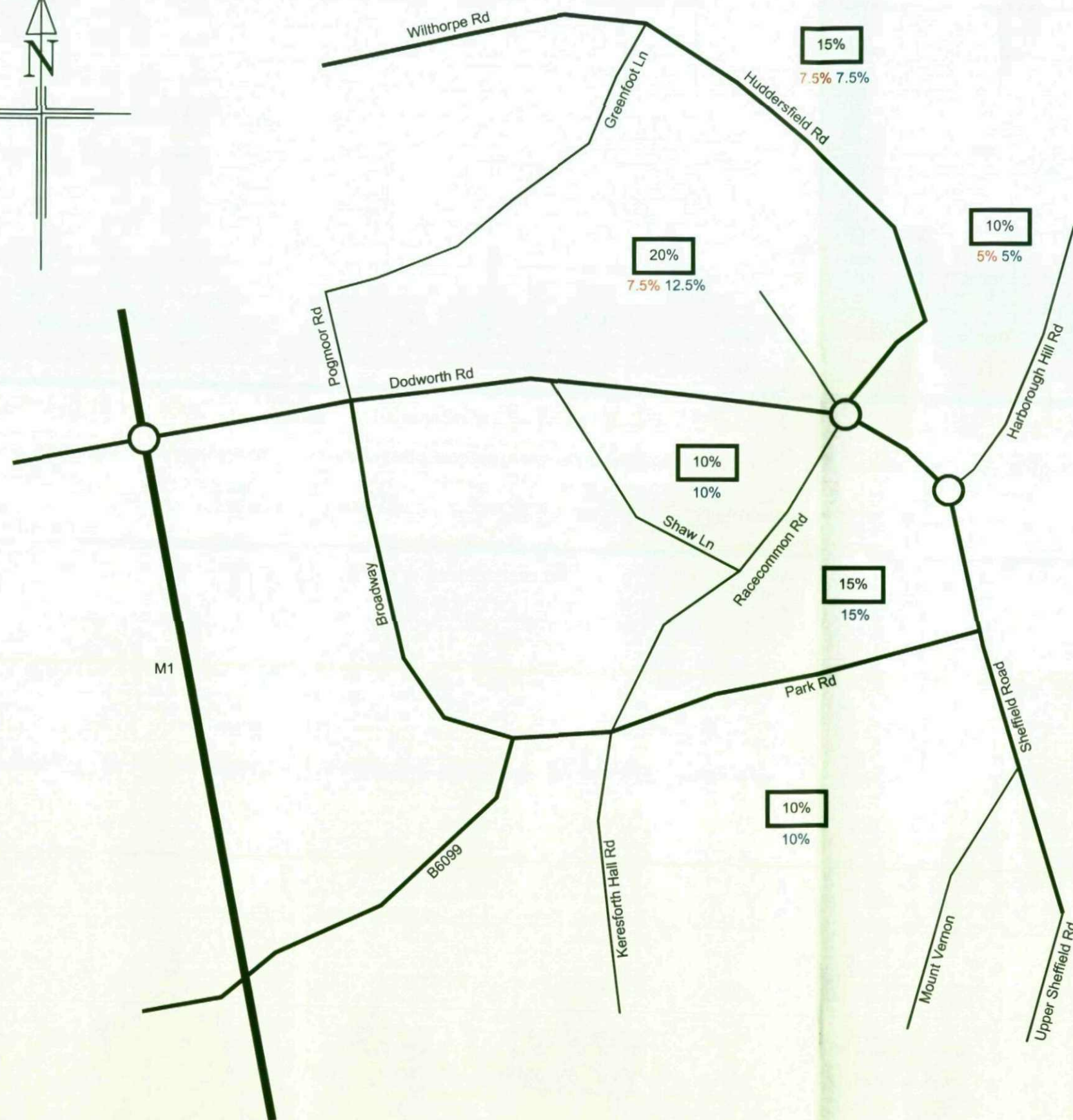


Pupil addresses (99.4% plotted)

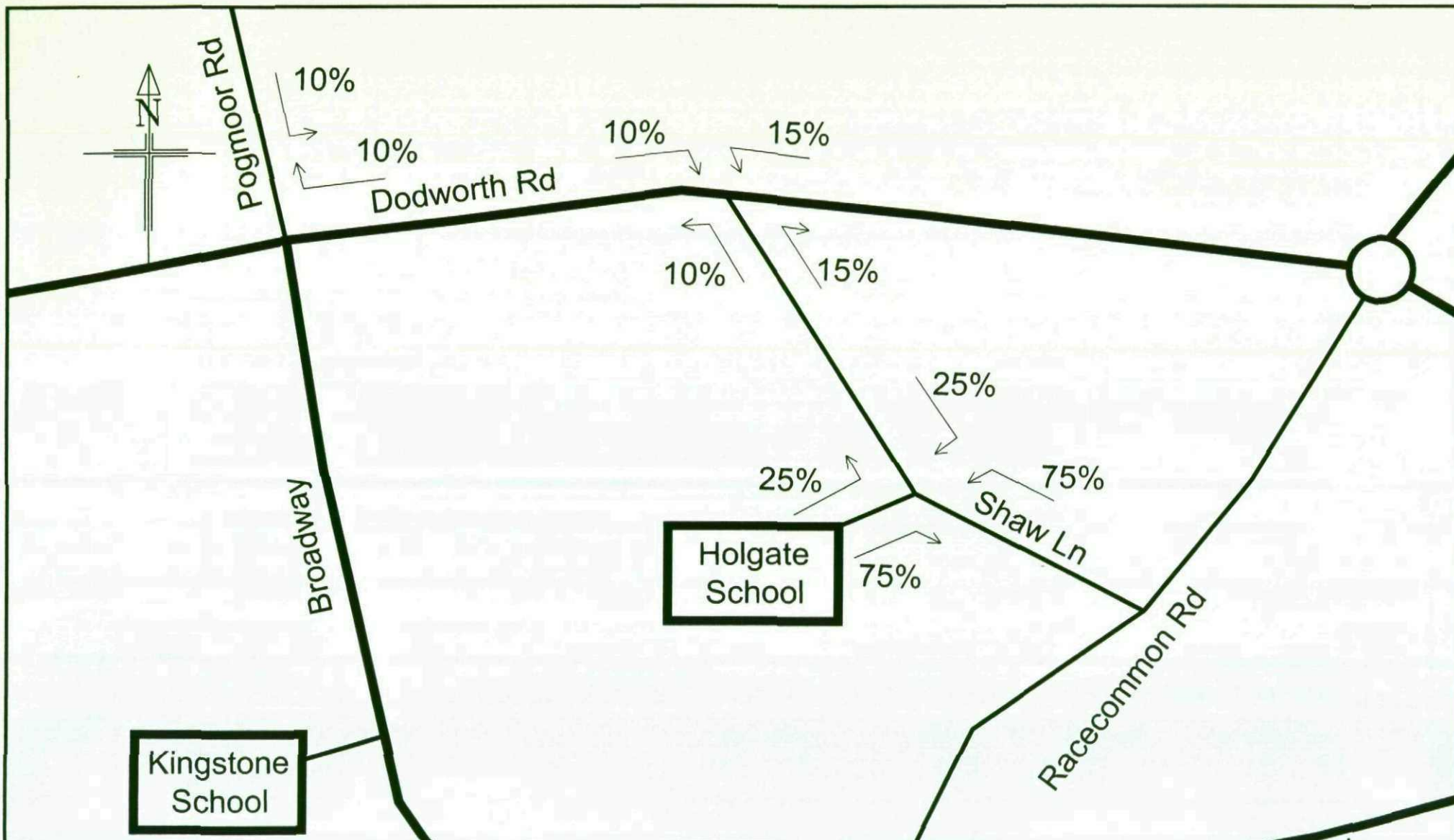
NORTH



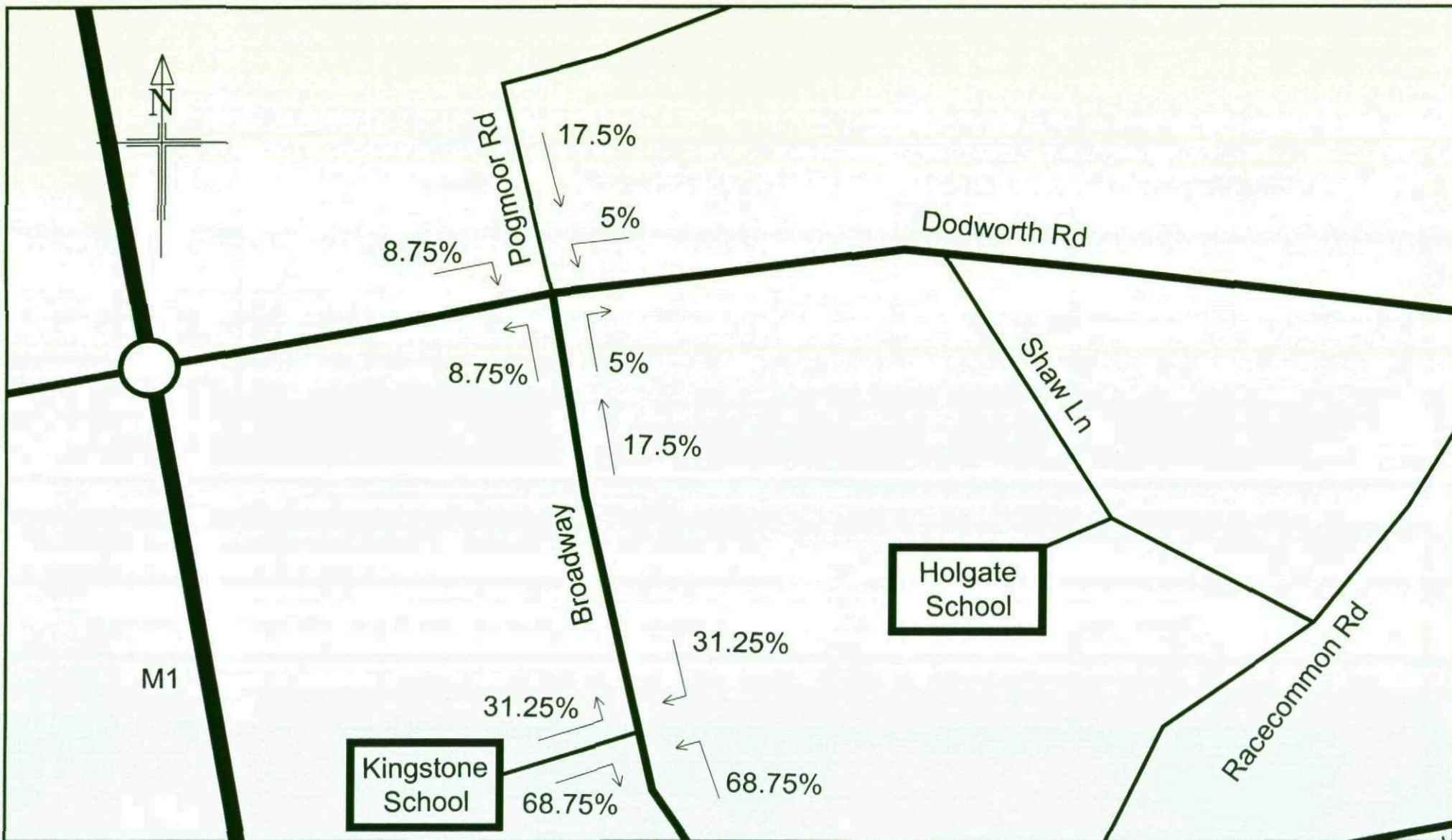
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Drawing Number		Revision	
Notes			
Key:			
Total % Pupils residing in this area	10%		
% Accessing Shaw Lane from the North	10%		
% Accessing Shaw Lane from the South	10%		
Do not scale this drawing			
Rev	Date	Approved	Rev
BRYAN · G · HALL consulting civil & transportation planning engineers			
Status			
Client		BARNESLEY EDUCATION SERVICES DEPARTMENT	
Project		KINGSTONE & HOLGATE ADVANCED LEARNING CENTRE	
Title		PLAN SHOWING PERCENTAGE OF HOLGATE SCHOOL PUPILS RESIDING IN AREAS AND WHICH DIRECTION THEY ARE CURRENTLY ACCESSING BROADWAY FROM	
Drawing No.	BGH-03	Revision	
Scale	NTS	Job No.	06-473
A2 - 420 x 594	Drawn ALS	Checked	EAG
Copyright reserved by B. G. Hall		Approved	
Bryan G Hall Ltd		EAG	
Units 123 124			
Tel No 0113 246 1995			
Fax No 0113 234 2391			



Client BARNLEY EDUCATION SERVICES DEPARTMENT		Project KINGSTONE & HOLGATE ADVANCED LEARNING CENTRE		Rev	Amendments	Drawn	Chkd	Appr	Date
BRYAN · G · HALL consulting civil & transportation planning engineers Bryan G Hall Ltd Suite 02 Joseph's Well Handover Walk Leeds LS3 1AB Tel: +44(0)113 246 1555 Fax: +44(0)113 234 2201 http://www.bryanghall.co.uk		Title PLAN SHOWING % DISTRIBUTION OF VEHICLES ACCESSING AND EGRESSING HOLGATE SCHOOL DURING PEAK PERIODS		Scale	NTS	Date	FEB 2009	Doc Sheet No	
				Drawn	ALS	Checked	EAG	Approved EAG	
				Job No	BGH4-05	Drawing No	08-473	Rev	



Client BARNLEY EDUCATION SERVICES DEPARTMENT		Project KINGSTONE & HOLGATE ADVANCED LEARNING CENTRE		Rev Amendments		Drawn Chkd Appr Date	
BRYAN · G · HALL consulting civil & transportation planning engineers Bryan G Hall Ltd Suite 8E Joseph's Well Hangover Walk Leeds LS3 1AB Tel: +44(0)113 246 1555 Fax: +44(0)113 234 2201 http://www.bryanhall.co.uk		Title PLAN SHOWING % DISTRIBUTION OF VEHICLES ACCESSING AND EGRESSING KINGSTONE SCHOOL DURING PEAK PERIODS		Scale NTS		Date FEB 2009	
		Drawn ALS Job No 08-473		Checked EAG Drawing No BGH4-06		Approved EAG Rev -	

69

FILENAME



Pogmoor Rd

17 10

1 15 3

Dodworth Rd

17 10

26 20

1 15 3

1 22 4

Broadway

Kingstone School

Holgate School

2 37 7

43 30

129 8 1

Shaw Ln

4 110 20

Racecommon Rd

Key:

AM Peak
Vehicular
Flows 10

Inter Peak
Vehicular
Flows 10

PM Peak
Vehicular
Flows 10

Client BARNSELY EDUCATION SERVICES DEPARTMENT

Project KINGSTONE & HOLGATE
ADVANCED LEARNING CENTRE

BRYAN · G · HALL
consulting civil & transportation planning engineers

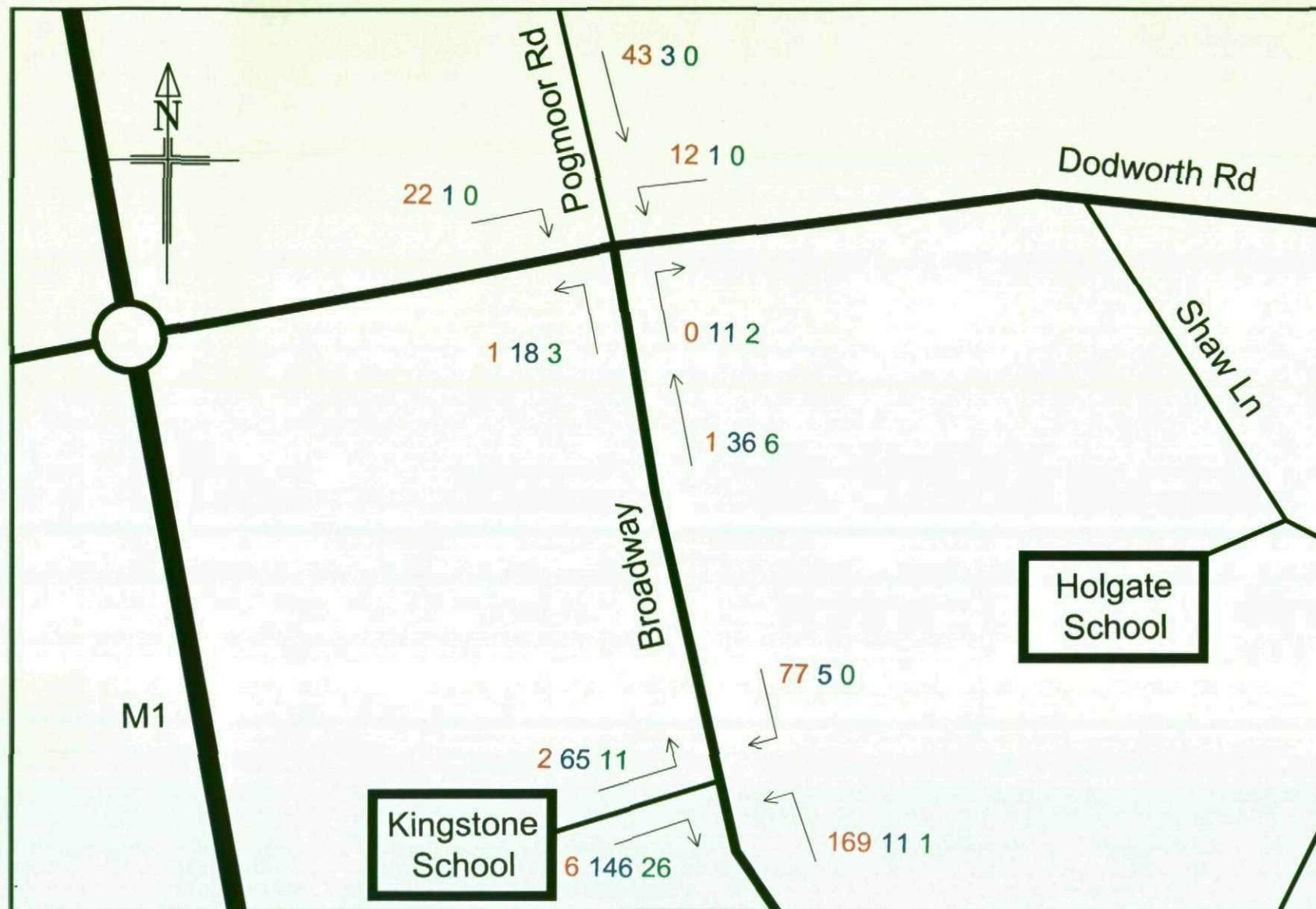
Bryan G Hall Ltd
Units 25, Joseph's Well
Hamper Walk
Leeds LS3 7AB
Tel: +44(0)113 248 1555
Fax: +44(0)113 234 2201
http://www.bryanhall.co.uk

Title PLAN SHOWING VEHICULAR FLOWS ACCESSING AND
EGRESSING HOLGATE SCHOOL DURING PEAK PERIODS

Rev	Amendments	Drawn	Chkd	Appr	Date
Scale	NTS	Date	FEB 2009	Doc Sheet No	
Drawn	ALS	Checked	EAG	Approved	EAG
Job No	08-473	Drawing No	BGH4-07	Rev	-

FILENAME

04



Key:

AM Peak
Vehicular
Flows 10

Inter Peak
Vehicular
Flows 10

PM Peak
Vehicular
Flows 10

Client BARNSELY EDUCATION SERVICES DEPARTMENT

Project KINGSTONE & HOLGATE
ADVANCED LEARNING CENTRE

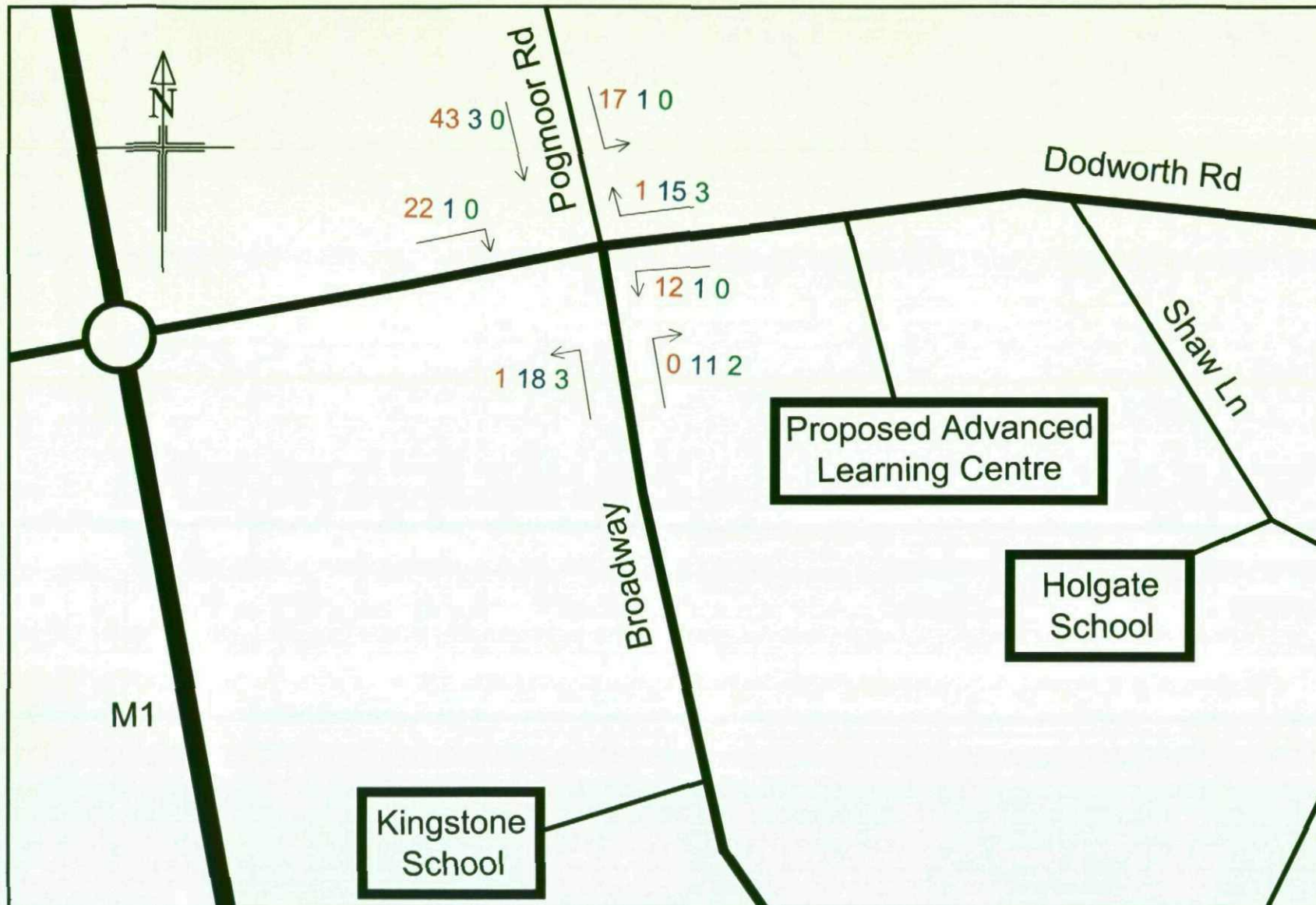
Title PLAN SHOWING VEHICULAR FLOWS ACCESSING AND
EGRESSING KINGSTONE SCHOOL DURING PEAK PERIODS

BRYAN · G · HALL
consulting civil & transportation planning engineers

Bryan G Hall Ltd
Sales & Joseph's Wall
Hawker Walk
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http://www.bryanhall.co.uk

Rev	Amendments	Drawn	Chkd	Appr	Date
Scale	NTS	Date	FEB 2009	Doc Sheet No	
Drawn	ALS	Checked	EAG	Approved	EAG
Job No	08-473	Drawing No	BGH4-08	Rev	-

FILENAME



Key:

AM Peak
Vehicular
Flows 10

Inter Peak
Vehicular
Flows 10

PM Peak
Vehicular
Flows 10

Client BARNSELY EDUCATION SERVICES DEPARTMENT		Project KINGSTONE & HOLGATE ADVANCED LEARNING CENTRE		Rev	Amendments	Drawn	Chd	Appr	Date
BRYAN · G · HALL <small>consulting civil & transportation planning engineers</small> <small>Bryan G Hall Ltd Units 16, Joseph's Wall Hempster Walk Leeds LS3 7AD Tel: +44(0)113 246 1555 Fax: +44(0)113 234 2201 http://www.bryanhall.co.uk</small>		Title PLAN SHOWING TOTAL VEHICULAR FLOWS FOR THE EXISTING KINGSTONE & HOLGATE SCHOOLS DURING PEAK PERIODS		Scale	NTS	Date	FEB 2009	Doc Sheet No	
				Drawn	ALS	Checked	EAG	Approved EAG	
				Job No	08-473	Drawing No	BGH4-09	Rev -	

FILENAME

APPENDIX BGH 5

Accidents between dates 01/08/2003 and 31/07/2008 (60) months

Selection:

Notes:

Selected using Build Query : Local_auth=210

Any 2008 data is Provisional

Police Ref.	Acc Class	Date	Time	Grid References	Casualties			Causation Factors/ Prob	Ped		Weather	Road Surface	Vehicle Types
					Ftl	Ser	Slk		L	MD			
D-00625-03	Slight	11/08/2003	1655	433790 406250	0	0	1	0 0 0 0 0 0	0 0 0	Light	Fine without high winds	Dry	9 1
D-00827-03	Slight	28/10/2003	0740	433661 406280	0	0	1	0 0 0 0 0 0	0 0 0	Light	Fine without high winds	Dry	9 9
D-00856-03	Slight	31/10/2003	1841	433402 406281	0	0	1	0 0 0 0 0 0	0 0 0	Dark	Raining without high winds	Wet/Damp	21 3
D-00855-03	Slight	06/11/2003	1525	433186 406320	0	0	1	0 0 0 0 0 0	5 1	Dark	Fine without high winds	Dry	9
D-00900-03	Slight	25/11/2003	1637	433624 406281	0	0	1	0 0 0 0 0 0	5 3	Light	Raining without high winds	Wet/Damp	9
D-00986-03	Slight	19/12/2003	1115	432773 406206	0	0	2	0 0 0 0 0 0	0 0 0	Light	Fine without high winds	Dry	9 9 9
B-00027-04	Slight	08/01/2004	0850	433000 406311	0	0	1	0 0 0 0 0 0	0 0 0	Light	Raining without high winds	Wet/Damp	9 9
B-00240-04	Slight	14/02/2004	2011	433407 406281	0	0	4	0 0 0 0 0 0	0 0 0	Dark	Raining without high winds	Wet/Damp	9 9 9
B-00822-04	Slight	15/06/2004	0648	433801 406286	0	0	1	0 0 0 0 0 0	10 9 0	Light	Fine without high winds	Dry	21 9
B-00834-04	Slight	18/06/2004	2050	432807 406229	0	0	1	0 0 0 0 0 0	0 0 0	Light	Fine without high winds	Dry	9 3
B-01234-04	Serious	28/08/2004	1113	433701 406284	0	1	0	0 0 0 0 0 0	5 1	Light	Fine without high winds	Dry	9
B-01288-04	Slight	23/09/2004	2145	433420 406279	0	0	1	0 0 0 0 0 0	0 0 0	Dark	Raining without high winds	Wet/Damp	3 9
B-01453-04	Slight	27/10/2004	1419	432384 405998	0	0	1	0 0 0 0 0 0	0 0 0	Light	Fine without high winds	Dry	19 9 9 9
B-01479-04	Slight	29/10/2004	1223	433781 406283	0	0	1	0 0 0 0 0 0	0 0 0	Light	Fine without high winds	Wet/Damp	9 4
B-01851-04	Slight	15/12/2004	1305	433110 406320	0	0	1	0 0 0 0 0 0	0 0 0	Light	Fine without high winds	Wet/Damp	9 21
B-00232-05	Slight	17/02/2005	1850	432469 406046	0	0	1	0 0 0 0 0 0	0 0 0	Dark	Fine without high winds	Dry	9 1
B-00611-05	Slight	03/05/2005	1300	432276 405936	0	0	1	405V001A	0 0 0	Light	Fine without high winds	Dry	9 9
								406V001A 0 0 0 0					
B-00620-05	Slight	10/05/2005	2120	433504 406280	0	0	2	405V001A	0 0 0	Dark	Fine without high winds	Dry	9 9
								801V001A 0 0 0 0					
B-00732-05	Slight	31/05/2005	1440	432478 406046	0	0	1	406V002B 0 0 0 0 0	0 0 0	Light	Fine without high winds	Dry	9 9
B-01159-05	Slight	23/08/2005	1740	433188 406324	0	0	1	406V002A	0 0 0	Light	Fine without high winds	Dry	9 5
								701V002A 0 0 0 0					
B-01394-05	Slight	06/10/2005	1335	433720 406289	0	0	1	0 0 0 0 0 0	6 8 9	Light	Fine without high winds	Dry	20
B-01653-05	Slight	17/11/2005	1530	433648 406088	0	0	1	802C001A 0 0 0 0 0	9 5 9	Light	Fine without high winds	Dry	9
B-00146-06	Slight	31/01/2006	1500	432405 406011	0	0	1	406V001A 0 0 0 0 0	0 0 0	Light	Fine without high winds	Dry	9 19
B-00484-06	Slight	11/04/2006	0900	432674 406152	0	0	1	405V003A 0 0 0 0 0	0 0 0	Light	Fine without high winds	Dry	9 5 9
B-00652-06	Slight	15/05/2006	1235	433718 406287	0	0	1	602V002A 0 0 0 0 0	0 0 0	Light	Raining without high winds	Wet/Damp	11
B-00822-06	Slight	21/06/2006	0955	432857 406258	0	0	1	405V003A	0 0 0	Light	Fine without high winds	Dry	9 9 9
								308V003A 0 0 0 0					

74

Accidents between dates 01/08/2003 and 31/07/2008 (60) months

Selection:

Selected using Build Query : Local_auth=210

Notes:

Any 2008 data is Provisional

Police Ref.	Acc Class	Date	Time	Grid References	Casualties			Causation Factors/ Prob	Ped		Light	Weather	Road Surface	Vehicle Types
					Ftl	Ser	St		L	MD				
B-00890-06	Slight	12/07/2006	1545	433398 406274	0	0	7	406V002A 306V002B 308V002B 0 0 0	0 0 0	Light	Fine without high winds	Dry	9 9	
B-01066-06	Slight	18/08/2006	0855	432475 406055	0	0	1	103V002A 406V002A 707V002A 0 0 0	0 0 0	Light	Raining without high winds	Wet/Damp	9 9 9	
B-01233-06	Slight	20/09/2006	1525	433351 406289	0	0	1	802C001A 701V001B 0 0 0 0	5 2 1	Light	Fine without high winds	Dry	19	
B-01427-06	Slight	27/10/2006	1730	432276 405932	0	0	1	405V002B 408V002B 0 0 0 0	0 0 0	Dark	Fine without high winds	Dry	9 9	
B-01737-06	Slight	21/12/2006	1415	433059 406324	0	0	1	406V002A 0 0 0 0 0	0 0 0	Light	Fine without high winds	Wet/Damp	9 9	
B-00155-07	Slight	29/01/2007	1836	432267 405916	0	0	1	405V2A	0 0 0	Light	Fine without high winds	Dry	9 9	
B-00459-07	Slight	04/04/2007	1440	433402 406277	0	0	3	510V1A	0 0 0	Light	Fine without high winds	Dry	9 20 9 9	
B-00579-07	Slight	28/04/2007	1635	432270 405923	0	0	1	405V2A	0 0 0	Light	Fine without high winds	Dry	1 10	
B-00706-07	Slight	21/05/2007	1510	433596 406125	0	0	1	602V2A 405V2A	0 0 0	Light	Fine without high winds	Dry	1 9	
B-00819-07	Slight	14/06/2007	2130	432682 406161	0	0	1	605V1A 403V1A 405V1A 406V1B 103V1B 707V1B	0 0 0	Dark	Raining without high winds	Wet/Damp	9 9	
B-01006-07	Serious	22/07/2007	0125	433718 406281	0	1	0	806C1A 805C1A	5 1 1	Dark	Fine without high winds	Dry	9	
B-01113-07	Slight	11/08/2007	1900	432483 406046	0	0	2	406V3A 605V3A	0 0 0	Light	Fine without high winds	Dry	9 9 9	
B-01381-07	Slight	16/10/2007	1824	432444 406027	0	0	1	707V2A	0 0 0	Dark	Raining without high winds	Wet/Damp	2 9	
B-00100-08	Slight	22/01/2008	1450	432678 406154	0	0	1	710V1B 406V1A 406V2A	0 0 0	Light	Fine without high winds	Dry	9 9	
B-00526-08	Slight	01/05/2008	0530	433721 406283	0	0	1	405V1A 406V1A	0 0 0	Light	Fine without high winds	Dry	5 9	
B-00541-08	Slight	03/05/2008	0320	432846 406247	0	0	1	401V2A 403V2A 405V2A	0 0 0	Dark	Fine without high winds	Dry	9 9	

Column Totals
No. of Accidents

Total number of accidents listed: 42



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**MAKING SOUTH YORKSHIRE
ROADS SAFER**

DRAWING TITLE
Selected map area

SCALE 1 : 2400

DATE 14/01/2009

DRAWING No.

DRAWN BY



Colour coding by SEVERITY

- Serious (2)
- ▲ Slight (40)

Selected Range of Accidents
Selected using Manual Selection

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**MAKING SOUTH YORKSHIRE
ROADS SAFER**

DRAWING TITLE
Selected map area

SCALE	1 : 2400
DATE	14/01/2009
DRAWING No.	
DRAWN BY	



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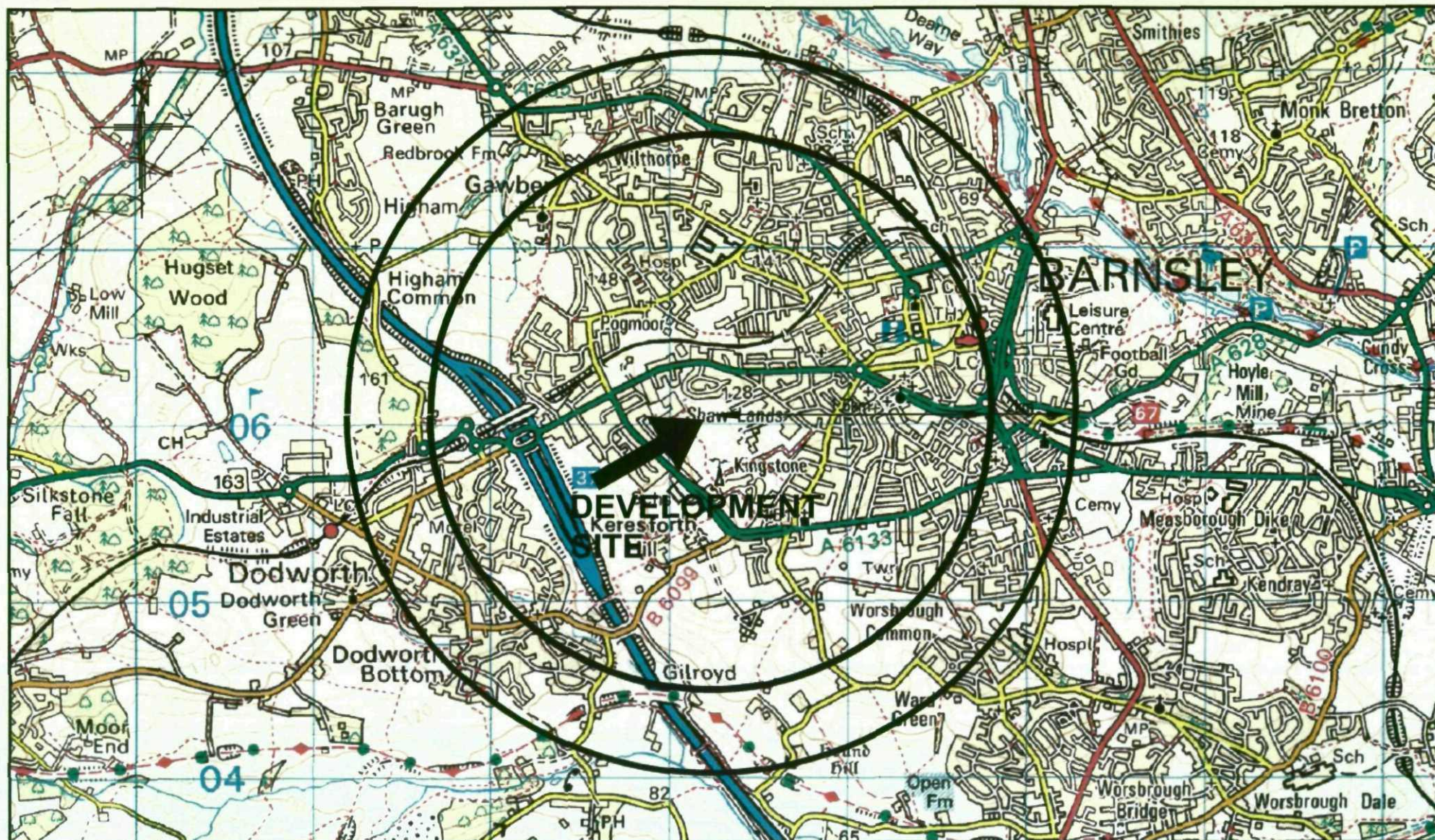


**MAKING SOUTH YORKSHIRE
ROADS SAFER**

DRAWING TITLE
Selected map area

SCALE	1 : 2400
DATE	14/01/2009
DRAWING No.	
DRAWN BY	

APPENDIX BGH 6



Client BARNSELEY EDUCATION SERVICES DEPARTMENT

Project KINGSTONE & HOLGATE
ADVANCED LEARNING CENTRE, BARNSELEY

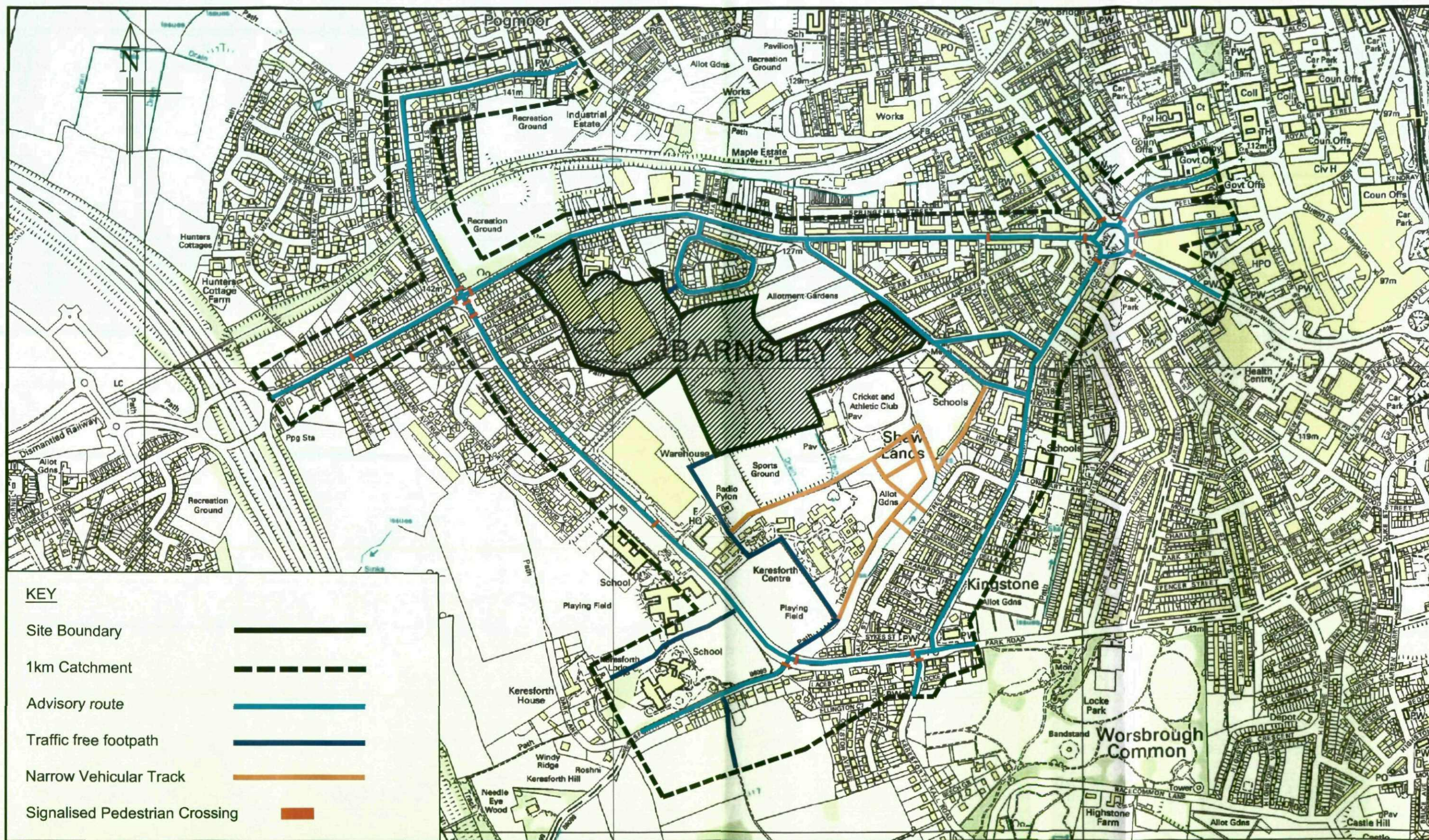
BRYAN · G · HALL
consulting civil & transportation planning engineers

Bryan G Hall Ltd
Suite 86, Joseph's Wall
Hawthorn Road
S61 1AB
Tel: +44(0)113 246 1335
Fax: +44(0)113 234 2201
http://www.bryanhall.co.uk

Title WALKING ISOCHRONES
SHOWN AT 1.6KM AND 2KM DISTANCES

Rev	Amendments	Drawn	Chkd	Appr	Date
Scale	NTS	Date	JANUARY 2009	Doc Sheet No	
Drawn	ALS	Checked	EAG	Approved	EAG
Job No	08-473	Drawing No	BGH6-01	Rev	-

FILENAME



KEY

- Site Boundary
- 1km Catchment
- Advisory route
- Traffic free footpath
- Narrow Vehicular Track
- Signalised Pedestrian Crossing

Client BARNSELY EDUCATION SERVICES DEPARTMENT

BRYAN · G · HALL

consulting civil & transportation planning engineers

Bryan G Hall Ltd.
Suite 8E 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

Project PROPOSED ADVANCED LEARNING CENTRE
DODWORTH ROAD, BARNSELY

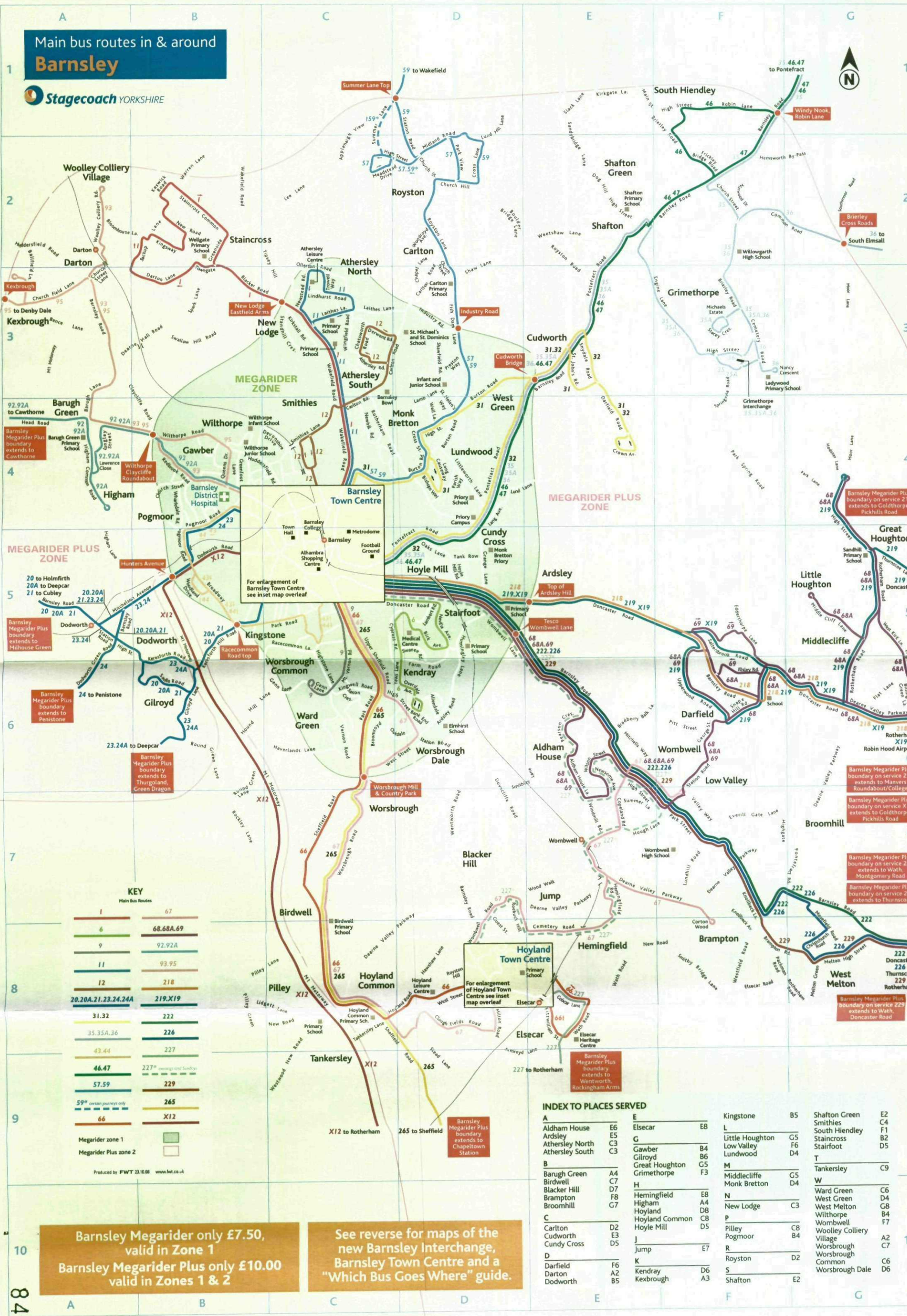
Title SAFE ROUTES TO SCHOOL AND EXISTING
PEDESTRIAN FACILITIES WITHIN 1KM CATCHMENT

Rev	Amendments	Drawn	Chkd	Appr	Date
Scale	NTS	Date	JANUARY 2008	Doc Sheet No	
Drawn	A SMITH	Checked	E GREEN	Approved	E GREEN
Job No	08-473	Drawing No	BGH6-02	Rev	-

APPENDIX BGH 7

Main bus routes in & around Barnsley

Stagecoach YORKSHIRE



KEY
Main Bus Routes

1	67
6	68.68A.69
9	92.92A
11	93.95
12	218
20.20A.21.23.24.24A	219.X19
31.32	222
35.35A.36	226
43.44	227
46.47	227* (weekends and Sundays)
57.59	229
59* (certain journeys only)	265
66	X12

Megarider zone 1
Megarider Plus zone 2

Produced by FWT 23.10.08 www.bct.co.uk

INDEX TO PLACES SERVED

A	Aldham House	E6	E	Elsecar	E8	Kingstone	B5	Shafton Green	E2
B	Ardsley	E5	G	Gawber	B4	L	Little Houghton	G5	C4
C	Athersley North	C3	G	Gilroyd	B6	M	Low Valley	F6	F1
C	Athersley South	C3	G	Grimethorpe	F3	N	Lundwood	D4	B2
D	Barugh Green	A4	H	Hemfield	E8	P	Monk Bretton	D4	D5
D	Birdwell	C7	H	Hingham	A4	R	Tankersley	C9	
D	Blacker Hill	D7	J	Hoyland	D8	S	Ward Green	C6	
D	Brampton	F8	J	Hoyland Common	C8	S	West Green	D4	
D	Broomhill	G7	J	Hoyle Mill	D5	S	West Melton	G8	
D	Carlton	D2	J	Jump	E7	S	Wiltshire	B4	
D	Cudworth	E3	K	Kendray	D6	S	Woolley Colliery	A2	
D	Cundy Cross	D5	K	Kexbrough	A3	S	Village	AZ	
D	Darfield	F6	K			S	Worsbrough	C7	
D	Darton	A2				S	Worsbrough Common	C6	
D	Dodworth	B5				S	Worsbrough Dale	D6	

Barnsley Megarider only £7.50,
valid in Zone 1
Barnsley Megarider Plus only £10.00
valid in Zones 1 & 2

See reverse for maps of the
new Barnsley Interchange,
Barnsley Town Centre and a
"Which Bus Goes Where" guide.

Welcome to Stagecoach Yorkshire ... and to your bus network for Barnsley & beyond

Stagecoach Yorkshire operates an extensive network of bus services in South Yorkshire including Barnsley, Rotherham, Doncaster, across the Dearne Valley, and into parts of West Yorkshire.

Continuously striving to improve our service for all our customers, Stagecoach Yorkshire has been working on improving reliability and punctuality, increasing frequencies on many routes and has invested almost £5m in brand new low floor easy access vehicles since 2006.

How to use this map and guide

This map and guide provides:-

- 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 the new **Barnsley Interchange**
- A Barnsley town centre map
- Details of our great value travel tickets

We hope you'll agree this is a handy and easy-to-use map, however if you are in any doubt, or need more information, please make sure you:-

1. Pick up new timetables at Travel South Yorkshire information centres in **Barnsley Interchange** or your local travel information centre.
2. Download new timetables at www.travelsouthyorkshire.com or www.stagecoachbus.com/yorkshire
3. Call Traveline on 01709 515151
4. Keep up to date with everything we're doing at stagecoachbus.com/yorkshire

We look forward to
welcoming you on board very soon!

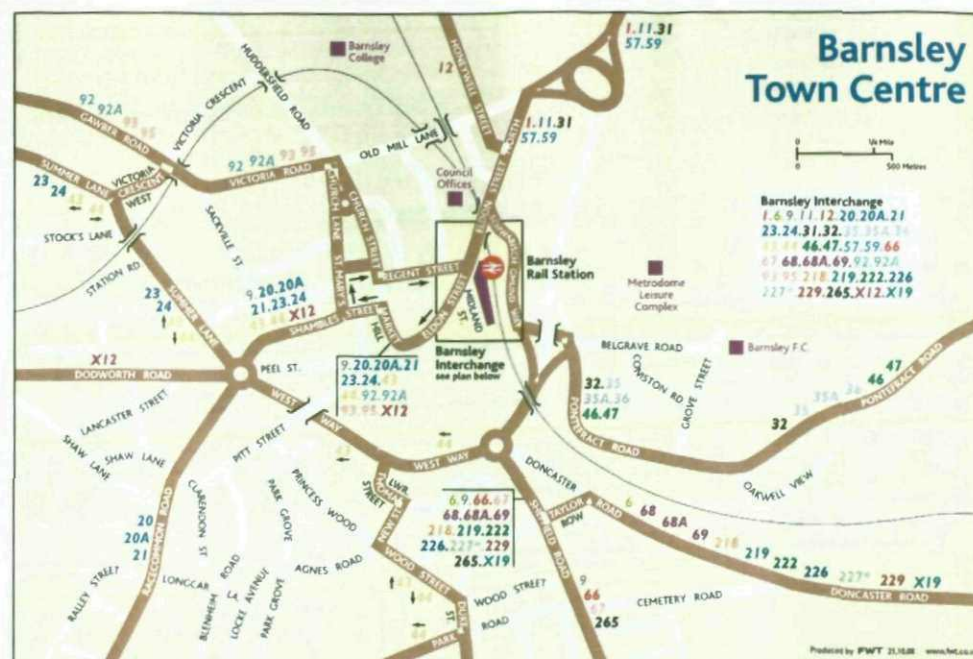
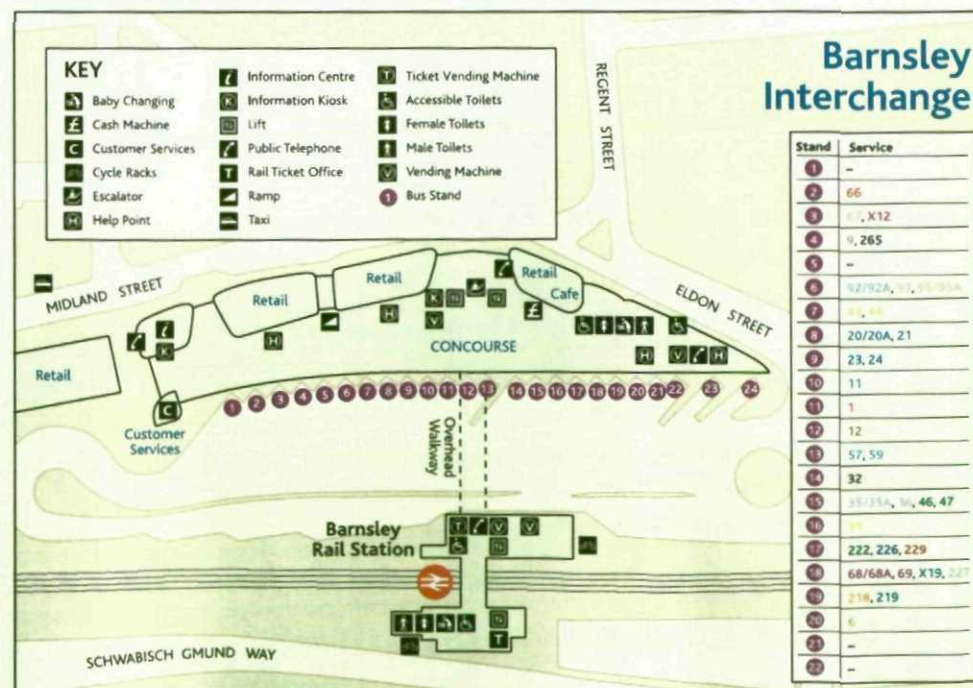
tickets to go...

UNLIMITED BUS TRAVEL
with Stagecoach

Barnsley megarider	£7.50	Enjoy 7 days UNLIMITED TRAVEL in Barnsley Zone 1
Barnsley mega	£10.00	Enjoy 7 days UNLIMITED TRAVEL across Barnsley (Zones 1&2)
Barnsley dayrider	£4.00	Enjoy 1 day UNLIMITED TRAVEL across Barnsley (Zones 1&2)

Simply buy direct from your
driver in cash.

Megarider online... Stagecoach now offers even better value with our great range of online tickets click www.buymymegarider.com for more details



buses around Barnsley

service number	route	buses run every (mins)	MON - SAT day	SUN evas	NOTES
1	Barnsley - Wakefield Road - Mapplewell - Staincross	10	30	30	-
6	Barnsley - Kendray	10	30	30	-
9	Barnsley - Ward Green	30	-	-	-
11	Barnsley - Wakefield Road - Adersley North	10	30	30	-
12	Barnsley - Honeywell - Adersley South	15	30	30	-
20/20A	Barnsley - Gilroyd - Dodworth - Silksone - Penistone - Millhouse Green - Holmfirth/Stockbridge	60	60	60	a
21	Barnsley - Gilroyd - Dodworth - Silksone - Oxspring - Penistone - Cudley	2 per hour	30	60	-
23	Barnsley - Pogmoor Road (Barnsley Hospital) - Dodworth - Thurgoland - Deepcar - Stocksbridge	120	120	120	-
24	Barnsley - Pogmoor Road (Barnsley Hospital) - Dodworth - Thurgoland - Oxspring - Penistone	120	-	-	-
31	Barnsley - Bishops Way - Monk Bretton - Cudworth - Crown Avenue	60	-	-	-
32	Barnsley - Lundwood - Cudworth - Crown Avenue	15	60	60	-
35	Barnsley - Lundwood - Cudworth - Shafton - Grimethorpe - Brierley - Hemsworth - Fitzwilliam - Ackworth - Pontefract	30	60	60	b
35A	Barnsley - Lundwood - Cudworth - Shafton - Grimethorpe - Michaels Estate	60	-	-	-
36	Barnsley - Lundwood - Cudworth - Shafton - Grimethorpe - Nancy Crescent - Brierley Common - Moorhorpe - South Elmsall	60	60	60	c
43	Barnsley - Pogmoor Road (Barnsley Hospital) - Kingstone - Barnsley	30	60	60	-
44	Barnsley - Kingstone - Pogmoor Road (Barnsley Hospital) - Barnsley	30	60	60	-
46	Barnsley - Lundwood - Cudworth - Shafton - Brierley - South Hensley - Hemsworth - South Elmsall - Upton - Pontefract	60	-	-	-
47	Barnsley - Lundwood - Cudworth - Shafton - Brierley - Hemsworth - South Elmsall - Upton - Low Ackworth - Pontefract	60	60	60	d
57	Barnsley - Monk Bretton - Carlton - Park View - Royston - Meadstead Drive	4 per hour	-	-	-
59	Barnsley - Monk Bretton - Carlton - Cross Lane - Royston - Station Road (Short journeys)	60	60	60	-
59	Barnsley - Monk Bretton - Carlton - Cross Lane - Royston - Station Road - Notten - Newmillerdam - Wakefield	60	-	-	-
66	Barnsley - Worsbrough - Birdwell - Hoyland - Elsecar	10	60	60	-
67	Barnsley - Worsbrough Dale - Birdwell - Hoyland - Platts Common - Jump - Hemingfield - Corton Wood - Wombwell	60	-	-	-
68/68A	Barnsley - Stairfoot - Aldham House - Wombwell - Low Valley - Darfield - Middlecliffe - Great Houghton	60	-	-	-
69	Barnsley - Stairfoot - Aldham House - Wombwell - Low Valley - Darfield Estates	60	-	-	-
92/92A	Barnsley - Gawber Road (Barnsley Hospital) - Redbrook Road - Barugh Green - Higham - Cawthorne	60	60	120	-
93	Barnsley - Gawber Road (Barnsley Hospital) - Redbrook Road - Barugh Green - Darton - Woolley Colliery Village	60	-	-	-
95	Barnsley - Gawber Road (Barnsley Hospital) - Wilthorpe Road - Barugh Green - Darton - Kexbrough - (High Hoyland - Clayton West - Skelmanthorpe - Denby Dale)	30	60	60	e
218	Barnsley - Stairfoot - Darfield - Goldthorpe - Bolton - Manvers - Mexbrough - Swinton - Kilnhurst - Rawmarsh - Rotherham	30	60	60	f
219	Barnsley - Stairfoot - Darfield - Middlecliffe - Great Houghton - Thurnscoe - Goldthorpe - Scawby - Doncaster	30	60	60	-
222	Barnsley - Stairfoot - Wombwell - Brampton - West Melton - Wath - Swinton - Mexborough - Conisbrough - Doncaster	30	60	60	-
226	Barnsley - Stairfoot - Wombwell - Brampton - West Melton - Wath - Manvers - Bolton - Goldthorpe - Thurnscoe	30	60	60	-
227	Hoyland - Elsecar - Wentworth - Greasbrough - Rotherham	60	60	60	g
229	Barnsley - Stairfoot - Wombwell - Brampton - West Melton - Wath - Rawmarsh - Parkgate - Rotherham	30	60	60	-
265	Barnsley - Worsbrough Village - Birdwell - Hoyland Common - Chapelton - Fir Vale (Northern General Hospital) - Sheffield	60	60	60	h
X12	Barnsley - Dodworth - Thorpe Hesley - Droppingwell - Rotherham	60	-	-	-
X19	Barnsley - Stairfoot - Darfield - Goldthorpe - Scawby - Doncaster - Robin Hood Airport	60	60	-	-

- a. Route 20 now extends from Millhouse Green to Holmfirth every 2 hours. Service 20A extends from Millhouse Green to Stocksbridge and Deepcar every 2 hours.
- b. Evening and Sunday journeys only operate between Barnsley and Brierley.
- c. Evening & Sunday journeys operate as Service 36A omitting Minsthorpe Lane/Little Lane in Moorhorpe.
- d. Evening and Sunday journeys operate between Barnsley and Hemsworth only.
- e. Monday-Saturday daytime journeys extended hourly from Kexbrough to Denby Dale/Skelmanthorpe.
- f. Evening & Sunday journeys operate as service 95A extending beyond Kexbrough to serve Woolley Colliery Village.
- g. Evening & Sunday journeys operate between Mexborough, Highwoods & Rotherham Interchange only.
- h. Additional journeys operate at peak times Monday-Friday.



Barnsley & Beyond Bus network map and guide

Stagecoach YORKSHIRE

Stagecoach YORKSHIRE

stagecoachbus.com/yorkshire
Stagecoach Yorkshire
Customer Service
Unit 4 Eldon Arcade
Barnsley
S70 2JP
tel: 01226 202555

traveline
public transport info
0871 2002233

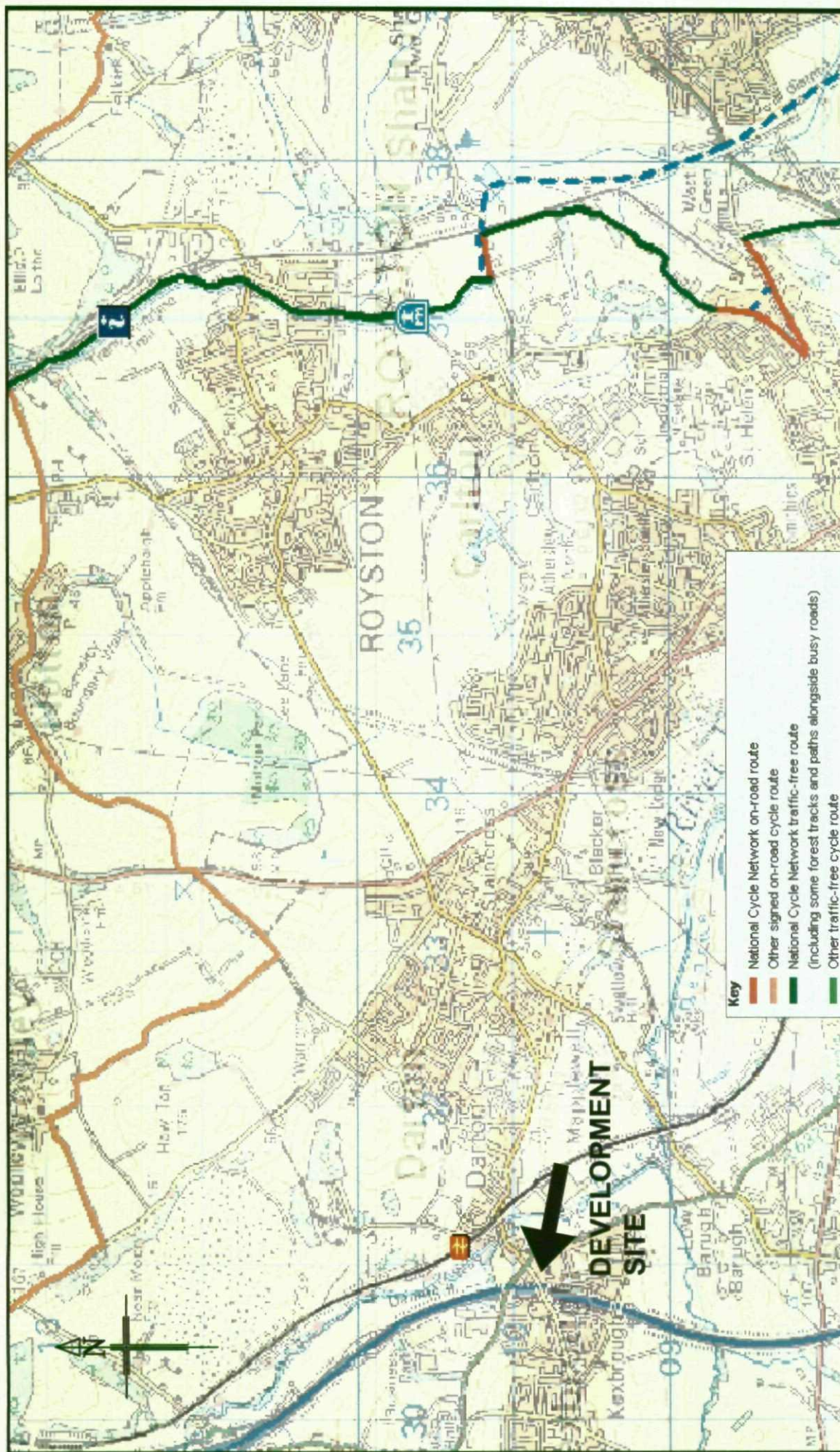
Travel
South Yorkshire
travelsouthyorkshire.com

We do our best to meet your expectations, but occasionally things can go wrong. If you feel we have failed you in some way, please write in the first instance to the address above.
If you then remain unhappy with our response, you can write to:
The Bus Appeals Body, PO Box 2920, South-on-Trent, ST14 9EW
This is an independent organisation that will review your complaint.
Information correct at time of going to press.
October 2008

Summary of Trains at Barnsley Interchange

Train	Geographical Areas Covered	Operator	Frequency
Huddersfield to Sheffield	Huddersfield - Barnsley - Wombwell - Chapelton - Meadowhall - Sheffield	Northern	60 minutes
Sheffield to Huddersfield	Sheffield - Meadowhall - Chapelton - Elsecar - Wombwell - Barnsley - Dodworth - Silkstone Common - Penistone - Denby Dale - Shepley - Stocksmoor - Brockholes - Honley - Berry Brow - Lockwood - Huddersfield	Northern	30 minutes
Sheffield to Leeds	Sheffield - Meadowhall - Barnsley - Wakefield Kirkgate - Leeds	Northern	60 minutes

APPENDIX BGH 8

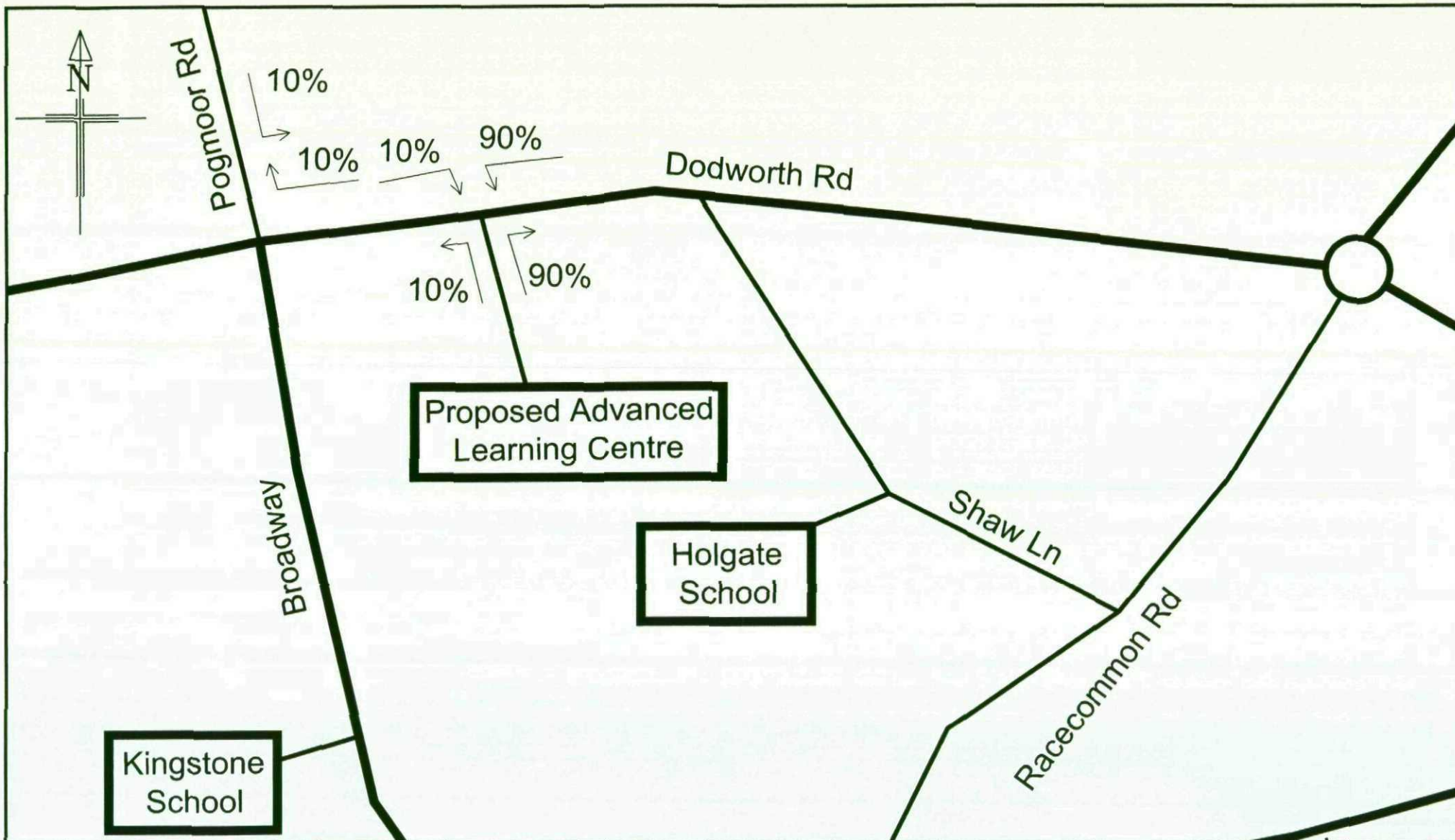


- Key**
- National Cycle Network on-road route
 - Other signed on-road cycle route
 - National Cycle Network traffic-free route
 - (including some forest tracks and paths alongside busy roads)
 - Other traffic-free cycle route

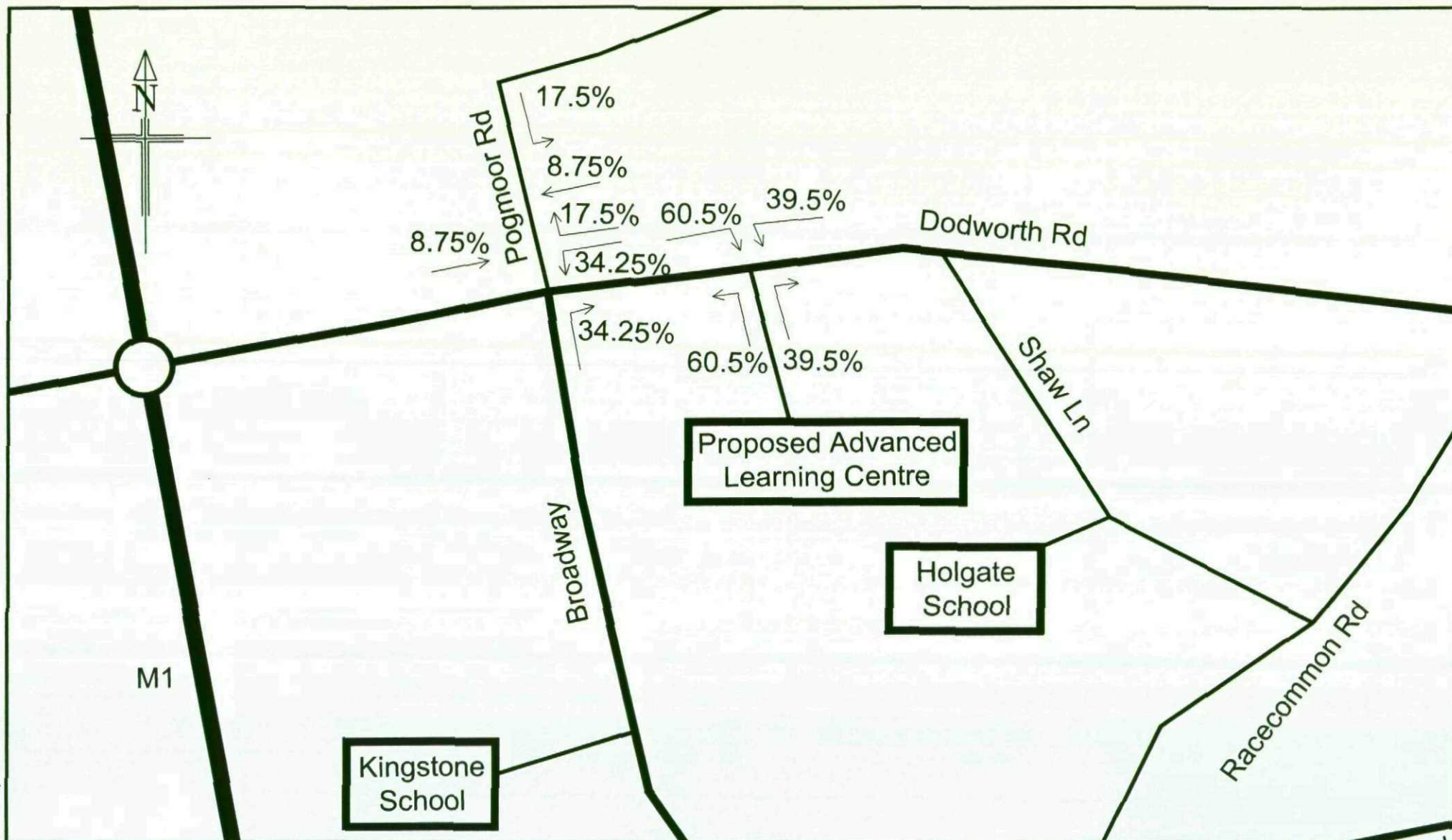
Client	BARNESLEY EDUCATION SERVICES DEPARTMENT		Project	KINGSTONE & HOLGATE ADVANCED LEARNING CENTRE, BARNESLEY	
	BRYAN · G · HALL <small>consulting civil & transportation planning engineers</small> <small>0113 246 1555</small> <small>0113 234 2251</small> <small>www.bgh.co.uk</small>			<small>Rev</small> <small>08-473</small> <small>BGH8-02</small>	
Title	CYCLING MAP		Scale	NTS	
	<small>Drawn</small> <small>ALS</small> <small>Checked</small> <small>EAG </small>			<small>Date</small> <small>JANUARY 2009</small> <small>Doc Sheet No</small> 	
			<small>Rev</small>	<small>Drawn</small>	<small>Date</small>

APPENDIX BGH 9

APPENDIX BGH 10

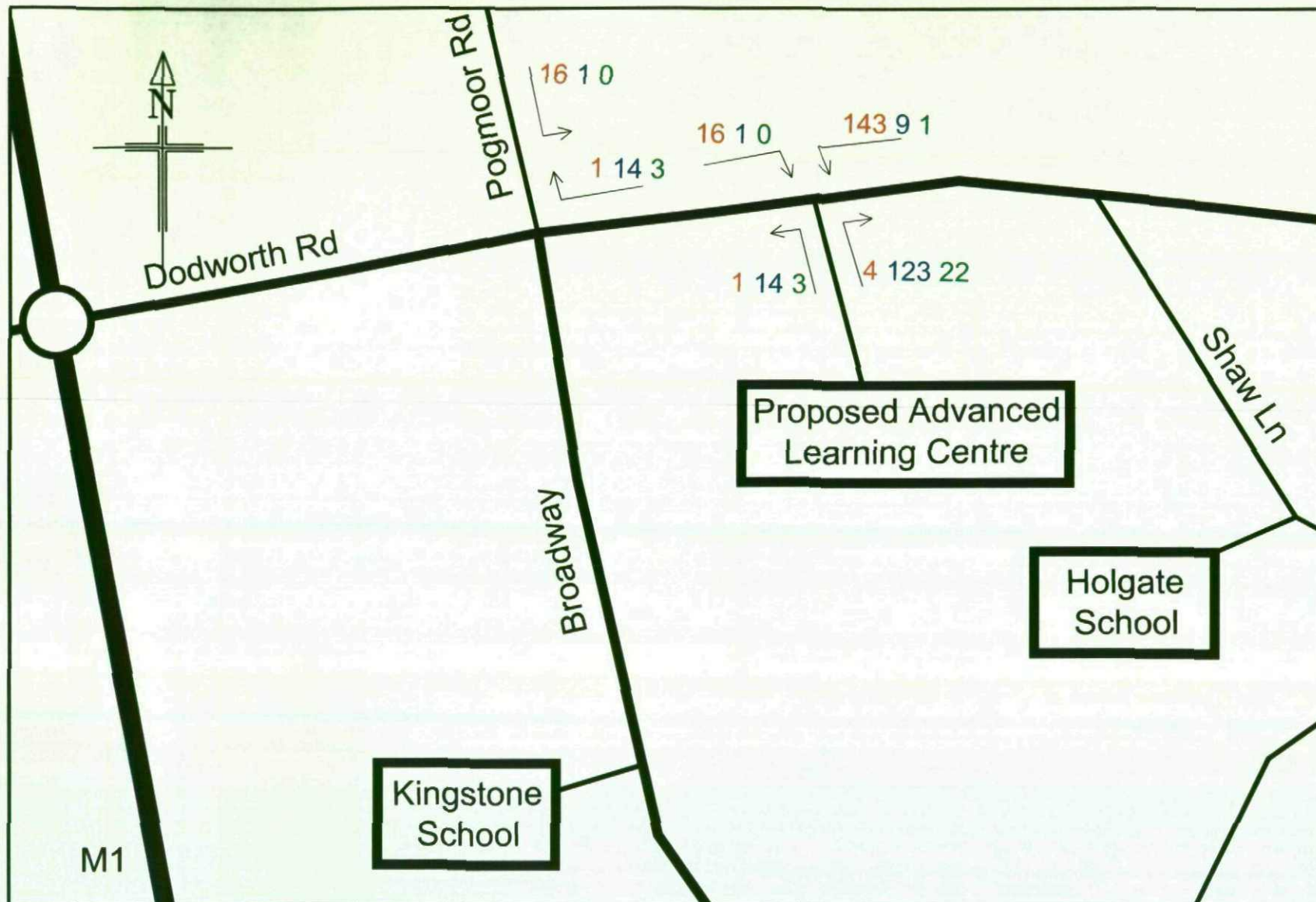


Client BARNLEY EDUCATION SERVICES DEPARTMENT		Project KINGSTONE & HOLGATE ADVANCED LEARNING CENTRE		Rev	Amendments	Drawn	Chkd	Appr	Date
BRYAN · G · HALL consulting civil & transportation planning engineers Bryan G Hall Ltd Suite 8E Joseph's Well Hanover Walk Leeds LS3 1AB Tel: +44(0)113 246 1555 Fax: +44(0)113 234 2201 http://www.bryanhall.co.uk		Title PLAN SHOWING % DISTRIBUTION OF HOLGATE SCHOOL TRAFFIC ACCESSING & EGRESSING THE PROPOSED ADVANCED LEARNING CENTRE DURING PEAK PERIODS		Scale	NTS	Date	FEB 2009	Doc Sheet No	
				Drawn	ALS	Checked	EAG	Approved EAG	
				Job No	08-473	Drawing No		BGH10-01	Rev -



Client BARNLEY EDUCATION SERVICES DEPARTMENT		Project KINGSTONE & HOLGATE ADVANCED LEARNING CENTRE		Rev	Amendments	Drawn	Chkd	Appr	Date
BRYAN · G · HALL consulting civil & transportation planning engineers Bryan G Hall Ltd Suite 8E Joseph's Well Harrover Walk Leeds LS3 1AB Tel: +44(0)113 246 1555 Fax: +44(0)113 234 2201 http://www.bryanhall.co.uk		Title PLAN SHOWING % DISTRIBUTION HOLGATE SCHOOL TRAFFIC ACCESSING AND EGRESSING THE PROPOSED ADVANCED LEARNING CENTRE DURING PEAK PERIODS		Scale	NTS	Date	FEB 2009	Doc Sheet No	
				Drawn	ALS	Checked	EAG	Approved EAG	
				Job No	08-473	Drawing No	BGH10-02	Rev -	

FILENAME



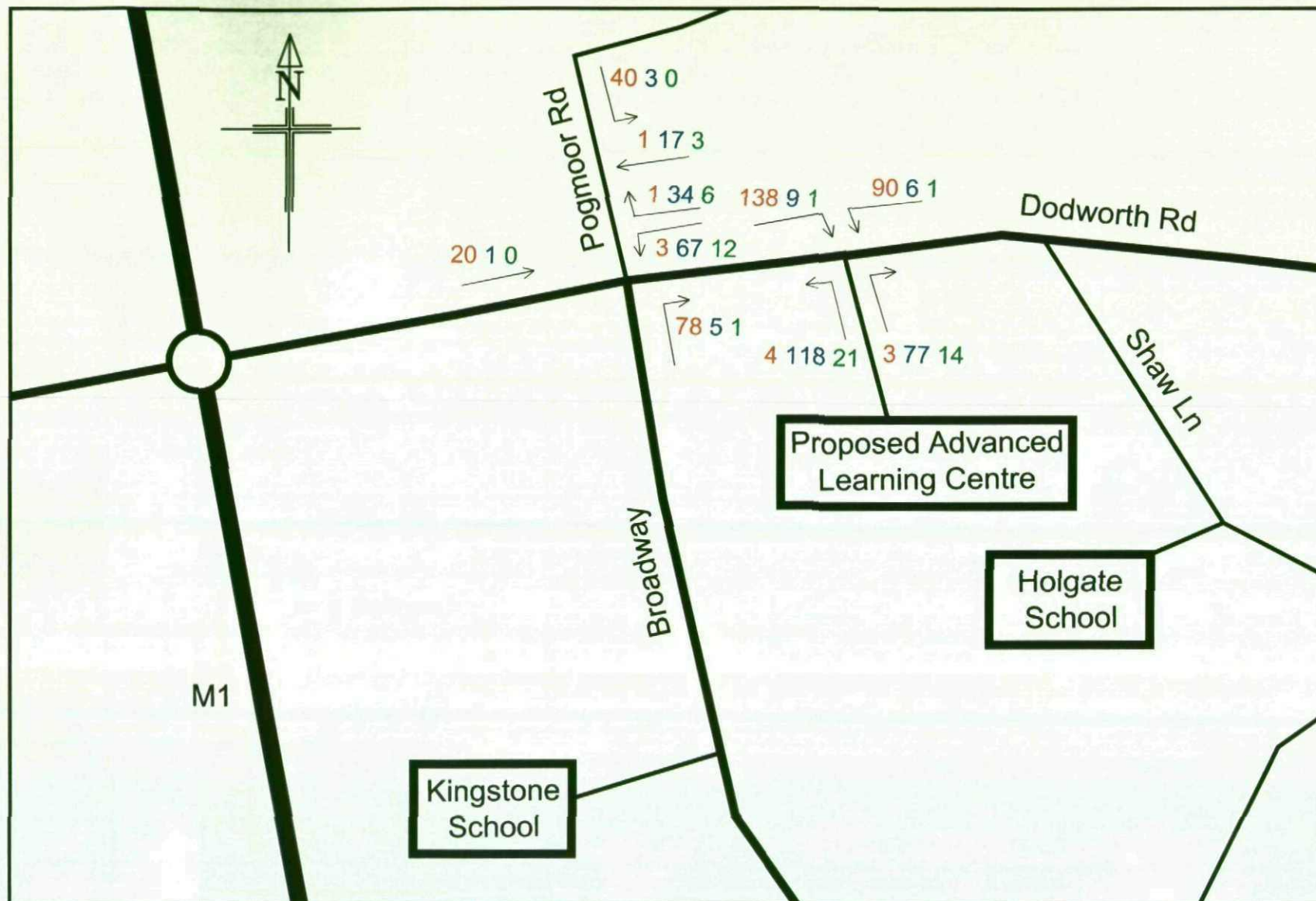
Key:

AM Peak Vehicular Flows	10
Inter Peak Vehicular Flows	10
PM Peak Vehicular Flows	10

96

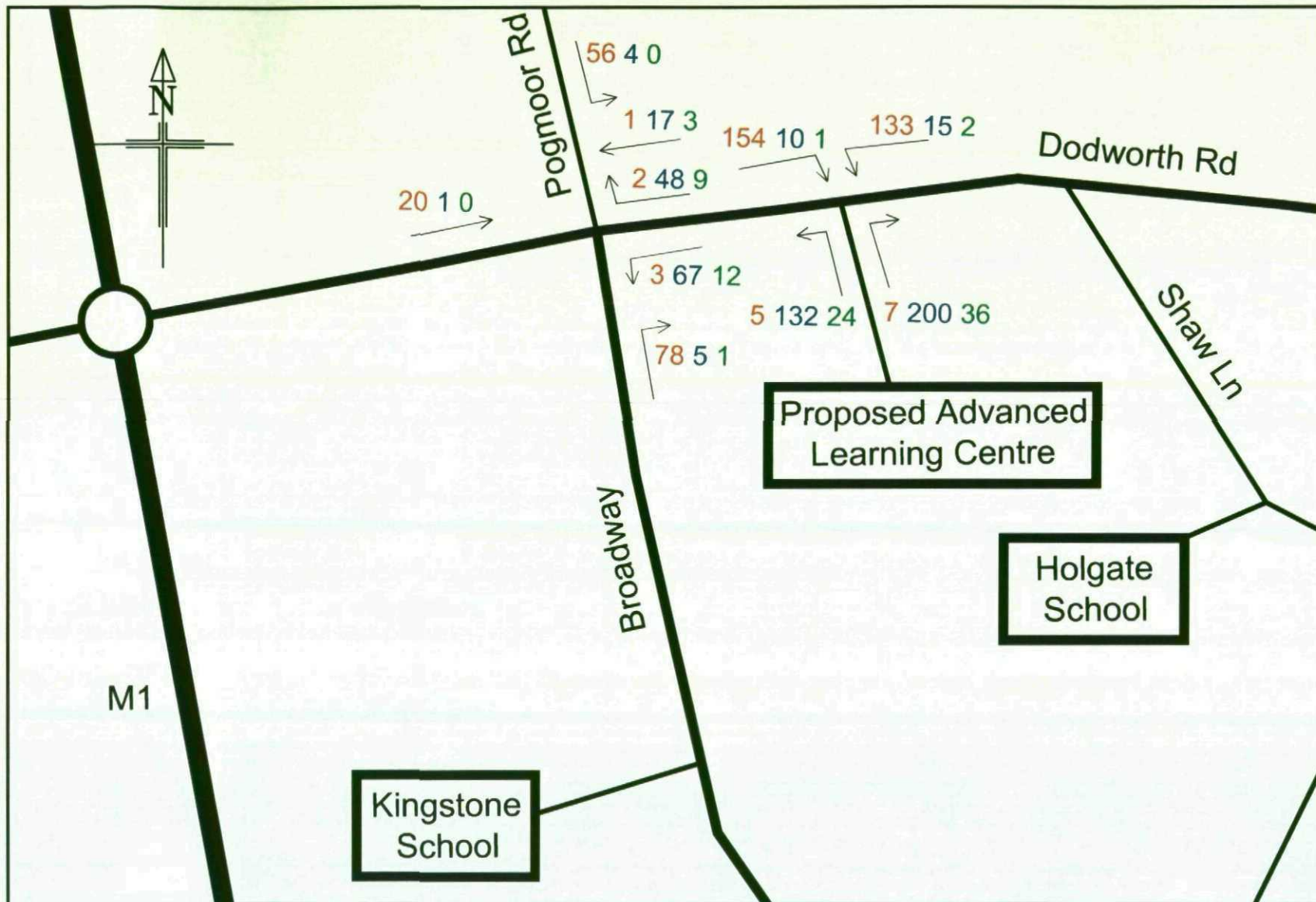
Client BARNSELY EDUCATION SERVICES DEPARTMENT		Project KINGSTONE & HOLGATE ADVANCED LEARNING CENTRE		Rev	Amendments	Drawn	Chkd	Appr	Date
BRYAN · G · HALL consulting civil & transportation planning engineers		Title PLAN SHOWING HOLGATE SCHOOL VEHICULAR FLOWS REDISTRIBUTED TO THE PROPOSED ADVANCED LEARNING CENTRE DURING PEAK PERIODS		Scale	NTS	Date	FEB 2009	Doc Sheet No	
26/01/11 13 248 1555 Tel: +44(0)113 234 2201 Fax: +44(0)113 234 2201 http://www.bryanhall.co.uk				Drawn	ALS	Checked	EAG	Approved EAG	
				Job No	08-473	Drawing No		BGH10-03	Rev -

FILENAME



Client BARNLEY EDUCATION SERVICES DEPARTMENT	Project KINGSTONE & HOLGATE ADVANCED LEARNING CENTRE											
		Rev		Amendments		Drawn	Chkd	Appr	Date			
		Scale		NTS		Date		FEB 2009		Doc Sheet No		
		Drawn		ALS		Checked		EAG		Approved		EAG
BRYAN · G · HALL consulting civil & transportation planning engineers	Title PLAN SHOWING KINGSTONE SCHOOL VEHICULAR FLOWS REDISTRIBUTED TO THE PROPOSED ADVANCED LEARNING CENTRE DURING PEAK PERIODS	Job No		08-473		Drawing No		BGH10-04		Rev		-

FILENAME



Key:

AM Peak Vehicular Flows	10
Inter Peak Vehicular Flows	10
PM Peak Vehicular Flows	10

Client BARNSELY EDUCATION SERVICES DEPARTMENT

Project KINGSTONE & HOLGATE
ADVANCED LEARNING CENTRE

BRYAN · G · HALL
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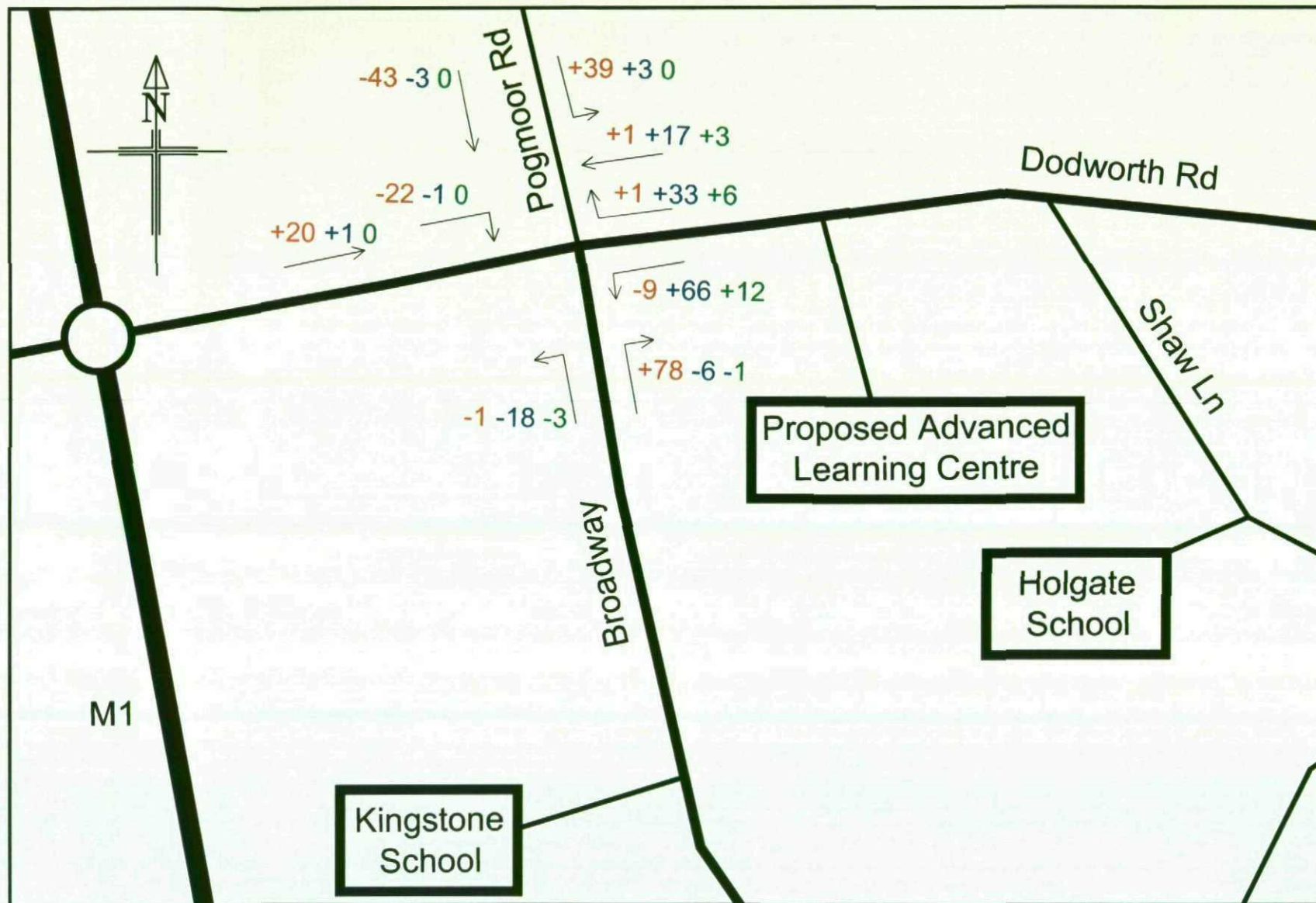
Title PLAN SHOWING TOTAL VEHICULAR FLOWS FOR THE
ADVANCED LEARNING CENTRE DURING PEAK PERIODS

Rev	Amendments	Date	Drawn	Chkd	Appr	Date
Scale	NTS	Date	FEB 2009	Doc Sheet No		
Drawn	ALS	Checked	EAG	Approved	EAG	
Job No	08-473	Drawing No	BGH10-05	Rev	-	

FILENAME

97

APPENDIX BGH 11



Key:

AM Peak
Vehicular
Flows 10

Inter Peak
Vehicular
Flows 10

PM Peak
Vehicular
Flows 10

66

Client BARNSELY EDUCATION SERVICES DEPARTMENT

BRYAN · G · HALL
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Bryan G Hall Ltd
Units 25, Joseph's Wall
Hempster Works
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Fax: +44(0)113 234 2201
http://www.bryanhall.co.uk

Project KINGSTONE & HOLGATE
ADVANCED LEARNING CENTRE

Title PLAN SHOWING THE EFFECT ON VEHICULAR FLOWS AT
THE DODWORTH ROAD / POGMOOR ROAD / BRAODWAY
SIGNALISED JUNCTION DURING PEAK PERIODS

Rev	Amendments	Drawn	Chkd	Appr	Date
Scale	NTS	Date	FEB 2009	Doc Sheet No	
Drawn	ALS	Checked	EAG	Approved	EAG
Job No	08-473	Drawing No	BGH11	Rev	-

FILENAME

APPENDIX BGH 12

Formula to generate Compound Annual Growth Rate (CAGR)

Start year	=	2003	Percentage Multiple *	=	1.015
Finish year (i.e. 2010/2015/2025) *	=	2015	CAGR figures for associated years		
Number of years between Start and Finish	=	12	2003	=	6.800
			2004	=	6.902
			2005	=	7.006
			2006	=	7.111
			2007	=	7.217
			2008	=	7.326
Start (2003 Base year) value *	=	6.8	2009	=	7.435
2010/2015/2025 percentage Increase *	=	19 %	2010	=	7.547
Finish value	=	8.1	2011	=	7.660
			2012	=	7.775
			2013	=	7.892
			2014	=	8.010
			2015	=	8.130
			2016	=	8.252
			2017	=	8.376
			2018	=	8.502
CAGR (between start year and finish year)	=	0.015	2019	=	8.629
	=	1.5 % per year	2020	=	8.759
Percentage multiple	=	1.015	2021	=	8.890
			2022	=	9.023
			2025	=	9.159

Formula to generate NTM growth factor

CAGR figure for surveyed year
(year in which surveys were undertaken) * = 7.435

CAGR figure for site specific design year * = 8.01

NTM Growth Factor =

Formula to generate TEMPRO adjusted growth factor

NTM growth factor = 1.077

TEMPRO local AM factor * = 1.05

Inter Peak 1.053

TEMPRO local PM factor * = 1.048

TEMPRO regional average day factor * = 1.066

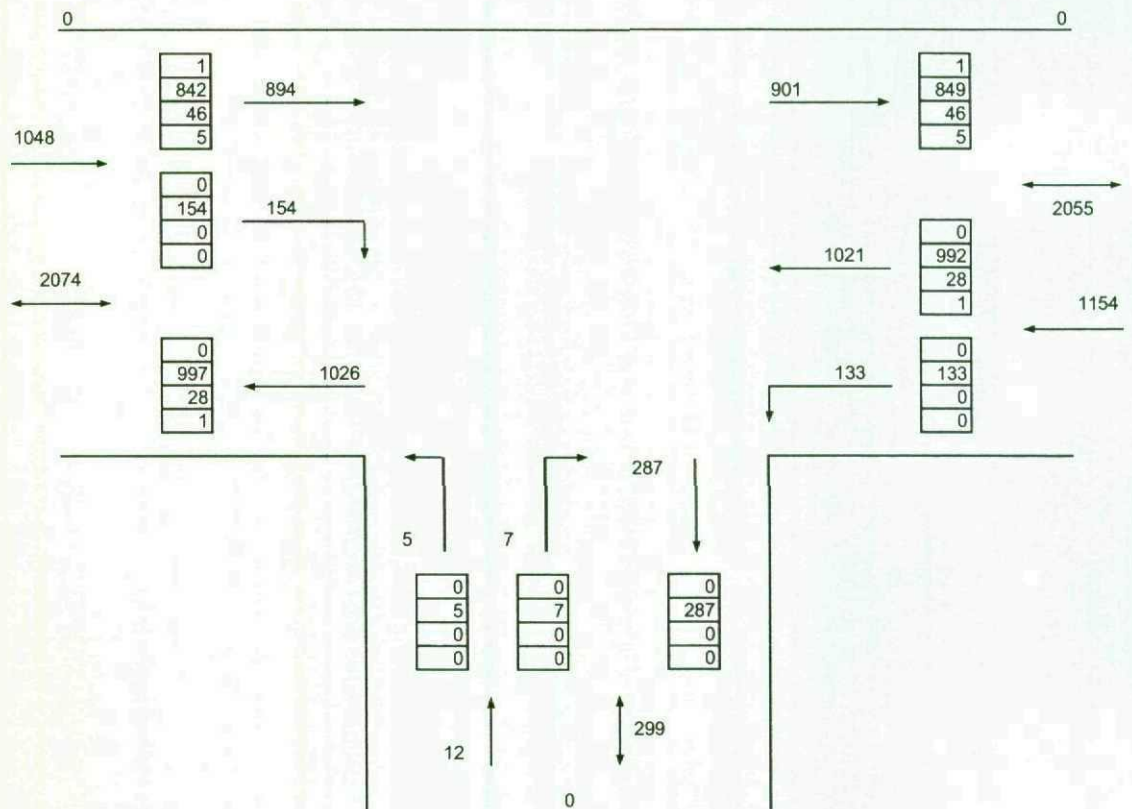
TEMPRO adjusted AM growth factor =

TEMPRO adjusted PM growth factor =

APPENDIX BGH 13

PREDICTED 2014 VEHICULAR FLOWS **Site Access / A628 Dodworth Road**

8:00 am - 9:00 am

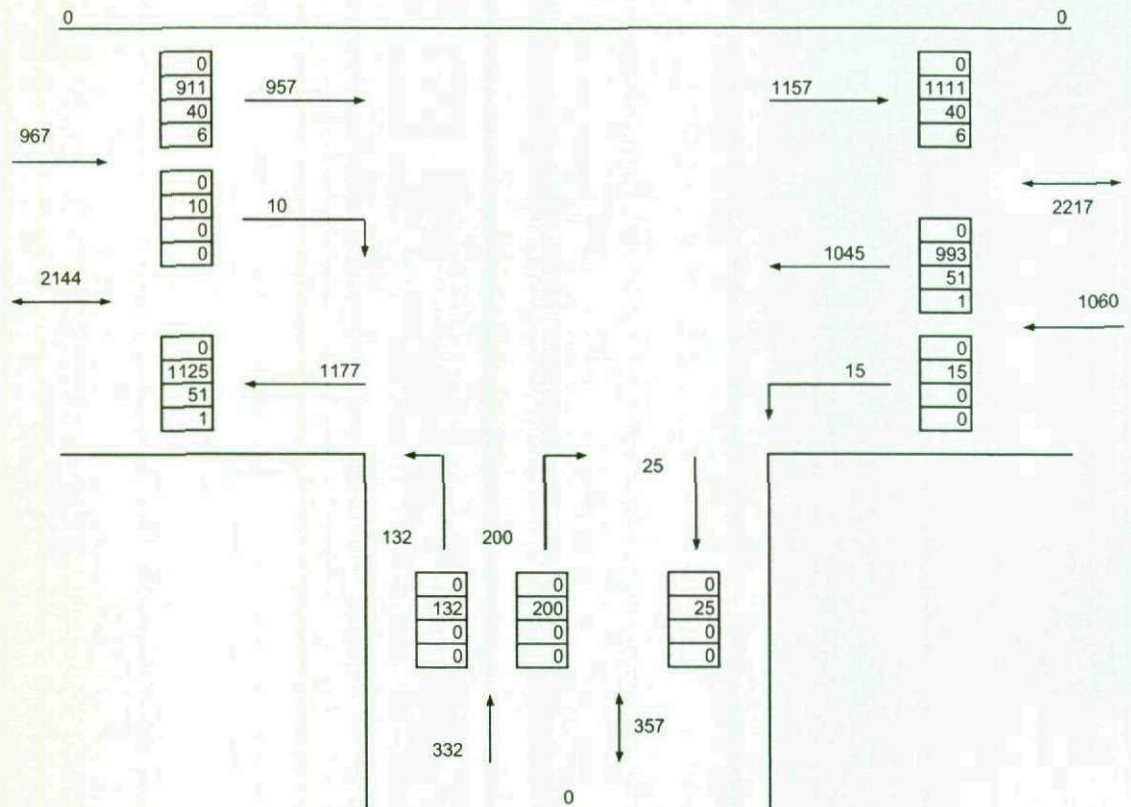


Vehicular Flows

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

PREDICTED 2014 VEHICULAR FLOWS **Site Access / A628 Dodworth Road**

3:00 pm - 4:00 pm

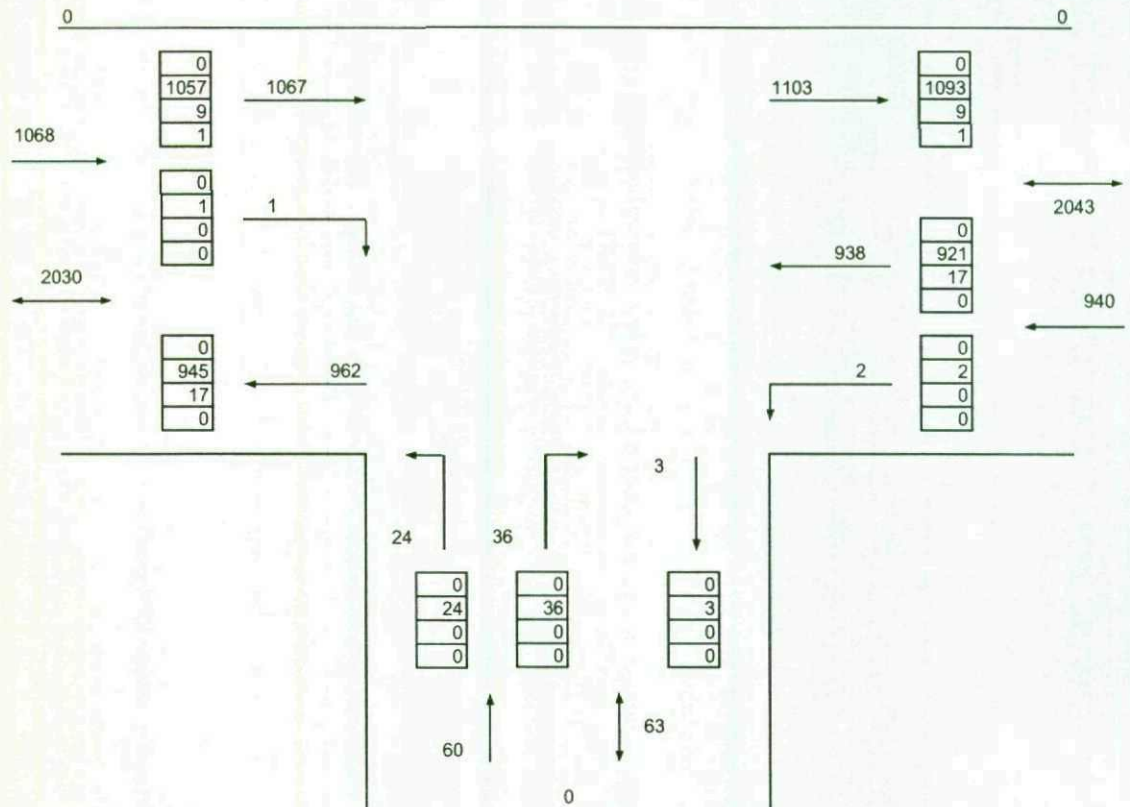


Vehicular Flows

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

PREDICTED 2014 VEHICULAR FLOWS Site Access / A628 Dodworth 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 14

TRL LIMITED

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
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Run with file:-
"Y:\2008\08-451 to 08-475\08-473 Holgate Kingstone School, Barnsley\Data\PICADY\Predicted 2014 AM Peak.vpi"
(drive-on-the-left) at 13:41:03 on Monday, 9 February 2009

RUN INFORMATION

RUN TITLE: Predicted 2014 Situation - Site Access - A628 Dodworth Road
LOCATION: Barnsley
DATE: 22/01/09
CLIENT: Barnsley Education Services Department
ENUMERATOR: ASmith [BGH20]
JOB NUMBER: 08-473
STATUS: On-going
DESCRIPTION:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS A628 Dodworth Road (East)
ARM B IS Site Access
ARM C IS A628 Dodworth Road (West)

STREAM 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.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	8.50 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR)	0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	2.50 M.	I
I	- VISIBILITY	I (VC-B)	150.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	140.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	150.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	3.00 M.	I
I	- LANE 2 WIDTH	I (WB-A)	0.00 M.	I

SLOPES AND INTERCEPT

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

I	Intercept For Stream B-C	Slope For Stream A-C	Slope For Opposing Stream A-B	I
I	718.37	0.25	0.10	I

I	Intercept For Stream B-A	Slope For Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	600.96	0.25	0.10	0.16	0.35	I

I	Intercept For Stream C-B	Slope For Stream A-C	Slope For Opposing Stream A-B	I
I	682.41	0.24	0.24	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Predicted 2014 Situation - Site Access - A628 Dodworth Road

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	14.43	I	21.64	I	14.43	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.15	I	0.23	I	0.15	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	13.10	I	19.65	I	13.10	I

TIME	FROM/TO	TURNING PROPORTIONS		
		TURNING COUNTS (VEH/HR)		
		(PERCENTAGE OF H.V.S)		
		ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.115	0.885
		0.0	133.0	1021.0
		(0.0)	(0.0)	(3.0)
	ARM B	0.583	0.000	0.417
		7.0	0.0	5.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.853	0.147	0.000
		894.0	154.0	0.0
		(6.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE 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	0.15	5.21	0.029		0.00	0.03	0.4		0.20
C-A	11.22								
C-B	1.93	7.87	0.246		0.00	0.32	4.6		0.17
A-B	1.67								
A-C	12.81								

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	0.18	3.95	0.046		0.03	0.05	0.7		0.27
C-A	13.39								
C-B	2.31	7.19	0.321		0.32	0.46	6.7		0.20
A-B	1.99								
A-C	15.30								

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	0.22	1.99	0.111		0.05	0.12	1.7		0.56
C-A	16.41								
C-B	2.83	6.25	0.452		0.46	0.80	11.3		0.29
A-B	2.44								
A-C	18.74								

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	0.22	1.98	0.111		0.12	0.12	1.8		0.57
C-A	16.41								
C-B	2.83	6.25	0.452		0.80	0.81	12.1		0.29
A-B	2.44								
A-C	18.74								

I	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)	I
I	08.45-09.00										I
I	B-AC	0.18	3.94	0.046		0.12	0.05	0.8		0.27	I
I	C-A	13.39									I
I	C-B	2.31	7.19	0.321		0.81	0.48	7.6		0.21	I
I	A-B	1.99									I
I	A-C	15.30									I

I	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)	I
I	09.00-09.15										I
I	B-AC	0.15	5.20	0.029		0.05	0.03	0.5		0.20	I
I	C-A	11.22									I
I	C-B	1.93	7.87	0.246		0.48	0.33	5.1		0.17	I
I	A-B	1.67									I
I	A-C	12.81									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.5
08.30	0.8 *
08.45	0.8 *
09.00	0.5
09.15	0.3

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	16.5	I	5.8	I	5.8	I
I	C-A	I	1230.5	I		I		I
I	C-B	I	212.0	I	47.3	I	47.3	I
I	A-B	I	183.1	I		I		I
I	A-C	I	1405.3	I		I		I
I	ALL	I	3047.4	I	53.2	I	53.2	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH 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 JOB

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

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

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RELEASE 3.0 (JUNE 2006)

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Run with file:-

"Y:\2008\08-451 to 08-475\08-473 Holgate Kingstone School, Barnsley\Data\PICADY\Predicted 2014 Inter Peak.vpi"
drive-on-the-left) at 13:42:03 on Monday, 9 February 2009

RUN INFORMATION

RUN TITLE: Predicted 2014 Situation - Site Access - A628 Dodworth Road

LOCATION: Barnsley

DATE: 22/01/09

CLIENT: Barnsley Education Services Department

ENUMERATOR: ASmith [BGH20]

JOB NUMBER: 08-473

STATUS: On-going

DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I
I

MINOR ROAD (ARM B)

ARM A IS A628 Dodworth Road (East)

ARM B IS Site Access

ARM C IS A628 Dodworth Road (West)

STREAM 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.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	8.50 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR)	0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	2.50 M.	I
I	- VISIBILITY	I (VC-B)	150.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	140.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	150.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	3.00 M.	I
I	- LANE 2 WIDTH	I (WB-A)	0.00 M.	I

SLOPES AND INTERCEPT

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

I	Intercept For Slope For Opposing	Slope For Opposing	I
I	Stream B-C Stream A-C	Stream A-B	I
I	718.37 0.25	0.10	I

I	Intercept For Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	Stream B-A Stream A-C	Stream A-B	Stream C-A	Stream C-B	I
I	600.96 0.25	0.10	0.16	0.35	I

I	Intercept For Slope For Opposing	Slope For Opposing	I
I	Stream C-B Stream A-C	Stream A-B	I
I	682.41 0.24	0.24	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Predicted 2014 Situation - Site Access - A628 Dodworth Road

TIME PERIOD BEGINS 14.45 AND ENDS 16.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	ARM	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I		I
I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK I	I		I
I	ARM A	I 15.00 I 45.00 I 75.00 I 13.25 I 19.88 I 13.25 I	I		I
I	ARM B	I 15.00 I 45.00 I 75.00 I 4.15 I 6.23 I 4.15 I	I		I
I	ARM C	I 15.00 I 45.00 I 75.00 I 12.09 I 18.13 I 12.09 I	I		I

TIME	TURNING PROPORTIONS					
	TURNING COUNTS (VEH/HR)					
	(PERCENTAGE OF H.V.S)					
TIME	FROM/TO	ARM A	ARM B	ARM C		
14.45 - 16.15						
	ARM A	0.000	0.014	0.986		
		0.0	15.0	1045.0		
		(0.0)	(0.0)	(5.0)		
	ARM B	0.602	0.000	0.398		
		200.0	0.0	132.0		
		(0.0)	(0.0)	(0.0)		
	ARM C	0.990	0.010	0.000		
		957.0	10.0	0.0		
		(5.0)	(0.0)	(0.0)		

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE 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)
14.45-15.00									
B-AC	4.17	5.64	0.739		0.00	2.45	30.4		0.57
C-A	12.01								
C-B	0.13	8.08	0.016		0.00	0.02	0.2		0.13
A-B	0.19								
A-C	13.11								

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)
15.00-15.15									
B-AC	4.97	4.54	1.095		2.45	12.57	120.3		2.37
C-A	14.34								
C-B	0.15	7.45	0.020		0.02	0.02	0.3		0.14
A-B	0.22								
A-C	15.66								

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)
15.15-15.30									
B-AC	6.09	2.91	2.097		12.57	60.46	548.0		12.87
C-A	17.56								
C-B	0.18	6.56	0.028		0.02	0.03	0.4		0.16
A-B	0.28								
A-C	19.18								

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)
15.30-15.45									
B-AC	6.09	2.90	2.097		60.46	108.29	1265.7		29.51
C-A	17.56								
C-B	0.18	6.56	0.028		0.03	0.03	0.4		0.16
A-B	0.28								
A-C	19.18								

I	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)	I
I	15.45-16.00										I
I	B-AC	4.97	4.54	1.095		108.29	114.81	1673.2		22.93	I
I	C-A	14.34									I
I	C-B	0.15	7.45	0.020		0.03	0.02	0.3		0.14	I
I	A-B	0.22									I
I	A-C	15.66									I

I	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)	I
I	16.00-16.15										I
I	B-AC	4.17	5.64	0.739		114.81	93.50	1562.3		18.65	I
I	C-A	12.01									I
I	C-B	0.13	8.08	0.016		0.02	0.02	0.2		0.13	I
I	A-B	0.19									I
I	A-C	13.11									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
15.00	2.5	**
15.15	12.6	*****
15.30	60.5	*****
15.45	108.3	*****
16.00	114.8	*****
16.15	93.5	*****

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
15.00	0.0
15.15	0.0
15.30	0.0
15.45	0.0
16.00	0.0
16.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND (VEH)	I	304.6	I	5200.0	I	11.38	I	5975.7	I	13.08	I
I	B-AC	I	457.0	I	304.6	I	5200.0	I	11.38	I	5975.7	I	13.08	I
I	C-A	I	1317.2	I	878.2	I		I		I		I		I
I	C-B	I	13.8	I	9.2	I	1.9	I	0.14	I	1.9	I	0.14	I
I	A-B	I	20.6	I	13.8	I		I		I		I		I
I	A-C	I	1438.4	I	958.9	I		I		I		I		I
I	ALL	I	3247.0	I	2164.7	I	5201.9	I	1.60	I	5977.6	I	1.84	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH 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 JOB

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

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

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Run with file:-

"Y:\2008\08-451 to 08-475\08-473 Holgate Kingstone School, Barnsley\Data\PICADY\Predicted 2014 PM Peak.vpi"
(drive-on-the-left) at 13:42:55 on Monday, 9 February 2009

RUN INFORMATION

RUN TITLE: Predicted 2014 Situation - Site Access - A628 Dodworth Road

LOCATION: Barnsley

DATE: 22/01/09

CLIENT: Barnsley Education Services Department

ENUMERATOR: ASmith [BGH20]

JOB NUMBER: 08-473

STATUS: On-going

DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I
I

MINOR ROAD (ARM B)

ARM A IS A628 Dodworth Road (East)

ARM B IS Site Access

ARM C IS A628 Dodworth Road (West)

STREAM 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.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	8.50 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR)	0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	2.50 M.	I
I	- VISIBILITY	I (VC-B)	150.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	140.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	150.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	3.00 M.	I
I	- LANE 2 WIDTH	I (WB-A)	0.00 M.	I

SLOPES AND INTERCEPT

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

I	Intercept For Slope For Opposing	Slope For Opposing I	I
I	Stream B-C Stream A-C	Stream A-B	I
I	718.37 0.25	0.10	I

I	Intercept For Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI	I
I	Stream B-A Stream A-C	Stream A-B	Stream C-A	Stream C-B	I
I	600.96 0.25	0.10	0.16	0.35	I

I	Intercept For Slope For Opposing	Slope For Opposing I	I
I	Stream C-B Stream A-C	Stream A-B	I
I	682.41 0.24	0.24	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Predicted 2014 Situation - Site Access - A628 Dodworth Road

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	ARM I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I		I
I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK I	I		I
I	ARM A I	15.00 I 45.00 I 75.00 I 11.75 I 17.63 I 11.75 I	I		I
I	ARM B I	15.00 I 45.00 I 75.00 I 0.75 I 1.13 I 0.75 I	I		I
I	ARM C I	15.00 I 45.00 I 75.00 I 13.35 I 20.03 I 13.35 I	I		I

TIME	TURNING PROPORTIONS					
	TURNING COUNTS (VEH/HR)					
	(PERCENTAGE OF H.V.S)					
	FROM/TO	ARM A	ARM B	ARM C		
16.45 - 18.15	ARM A	0.000	0.002	0.998		
		0.0	2.0	938.0		
		{ 0.0}	{ 0.0}	{ 1.0}		
	ARM B	0.600	0.000	0.400		
		36.0	0.0	24.0		
		{ 0.0}	{ 0.0}	{ 0.0}		
	ARM C	0.999	0.001	0.000		
		1067.0	1.0	0.0		
		{ 2.0}	{ 0.0}	{ 0.0}		

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE 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)
16.45-17.00									
B-AC	0.75	6.05	0.124		0.00	0.14	2.0		0.19
C-A	13.39								
C-B	0.01	8.57	0.001		0.00	0.00	0.0		0.12
A-B	0.03								
A-C	11.77								

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)
17.00-17.15									
B-AC	0.90	5.05	0.178		0.14	0.21	3.1		0.24
C-A	15.99								
C-B	0.01	8.02	0.002		0.00	0.00	0.0		0.12
A-B	0.03								
A-C	14.05								

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)
17.15-17.30									
B-AC	1.10	3.56	0.310		0.21	0.43	6.0		0.40
C-A	19.58								
C-B	0.02	7.27	0.003		0.00	0.00	0.0		0.14
A-B	0.04								
A-C	17.21								

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)
17.30-17.45									
B-AC	1.10	3.56	0.310		0.43	0.44	6.6		0.41
C-A	19.58								
C-B	0.02	7.27	0.003		0.00	0.00	0.0		0.14
A-B	0.04								
A-C	17.21								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RPC)	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)
17.45-18.00									
B-AC	0.90	5.05	0.178		0.44	0.22	3.5		0.24
C-A	15.99								
C-B	0.01	8.02	0.002		0.00	0.00	0.0		0.12
A-B	0.03								
A-C	14.05								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RPC)	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)
18.00-18.15									
B-AC	0.75	6.05	0.124		0.22	0.14	2.2		0.19
C-A	13.39								
C-B	0.01	8.57	0.001		0.00	0.00	0.0		0.12
A-B	0.03								
A-C	11.77								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.4
17.45	0.4
18.00	0.2
18.15	0.1

QUEUE 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)	DEMAND (VEH/H)	* QUEUEING * * DELAY * (MIN)	* INCLUSIVE QUEUEING * * DELAY * (MIN)
B-AC	82.6	55.1	23.4	23.4
C-A	1468.6	979.1		
C-B	1.4	0.9	0.2	0.2
A-B	2.8	1.8		
A-C	1291.1	860.7		
ALL	2846.4	1897.6	23.6	23.6

- * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
- * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH 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 JOB

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