City of Bradford Metropolitan District Council
Silsden Primary School

Transport Assessment

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Issue


Fore

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1 Introduction

City of Bradford Metropolitan District Council (CBMDC) is bringing forward a planning application for the new Silsden Primary School. Fore Consulting (Fore) has been commissioned by CBMDC to provide highways and transport advice in relation to the proposed school development, including the preparation of a Transport Assessment, including Aimsun and LEGION microsimulation modelling.

1.1 The Development Proposal

The scheme proposal is to create a new primary school which will replace the existing Aire View Infant School and Hothfield Junior School. It should be noted that as of September 2017, the two schools have merged as Silsden Primary School split across the two existing sites.

A preliminary site plan for the proposed school is enclosed at Appendix A.

1.2 Purpose of this Report

This report is the Transport Assessment for the development proposals. The report has been commissioned to understand and analyse the effects of the proposed development from a transport perspective, and to inform the proposals for the site and the subsequent planning application.

The purpose of this Transport Assessment is to provide a full and robust assessment of the transportation impacts of the development proposals and to identify any mitigation measures required, as necessary. The intention is to provide the necessary information to assist CBDMC, as the Local Planning and Highway Authority, in determining the planning application.

The structure and content of this Transport Assessment follows the national planning policy contained within the National Planning Policy Framework[1] and Planning Practice Guidance[2].

[1] *National Planning Policy Framework*, Department of Communities and Local Government, 2012.
[2] *Planning Practice Guidance*, Department of Communities and Local Government, 2014.

1.3 Structure of this Report

The structure of the report is set out as follows:

- Chapter 2 describes the existing transport networks in the vicinity of the existing and proposed schools.
- Chapter 3 identifies how the proposed development accords with the national and local transport planning context for the site.
- Chapter 4 presents an outline of the proposed development and describes in detail how the development will be accessed by all modes of transport.
- Chapter 5 sets out the likely trip generation, mode share and trip distribution associated with the development.
- Chapter 6 sets out the traffic impact of the proposed school.
- Chapter 7 provides a summary and conclusions to the report.

2 Existing Situation

2.1 Introduction

This Chapter provides a general overview of the existing school sites that are proposed for relocation and a description of the respective local transport networks. Baseline mode share data is presented for each of the school sites.

2.2 Silsden Primary School

2.2.1 Overview

As of September 2017 the two local schools Aire View Infant School and Hothfield Junior School merged to form Silsden Primary School. The school will remain split across the two existing sites until a new single campus is built. Both schools are currently heavily oversubscribed, according to student postcode data provided by the school, Aire View Infant School currently has 344 pupils (Aged 3 to 7) whilst Hothfield Junior School currently has 282 pupils (Aged 7 to 11). The sites are located within a large urban estate just 40m apart, connected to each other by Prince Street.

The location of both school sites is shown on Figure 1.

2.2.2 Local Transport Network

The local transport network within the schools is outlined, as follows:

- Hothfield Junior School is currently located to the east of School Street. The school is bound by four roads, Norton Street to the north, Hothfield Street to the east, New Road to the south and School Street to the west.

- Aire View Primary School site is currently located to the north of Elliott Street. The school is bound by Aire Street to the north, Elliott Street to the south, Prince Street to the west, and residential dwellings to the east.

- New Road and Aire View run adjacent to each other. New Road provides a one-way a connection from the A6034 to the east which is the main road running through Silsden and Aire View is a small two-way side street. There is a zebra crossing located about 5m metres south of the junction between New Road and the A6034.

- Both sites are located in the centre of Silsden and therefore each has a large residential catchment area with almost all of Silsden accessible within a 20-minute walking distance of the school, as demonstrated in Figure 2.

- Pedestrian footways and street lighting is provided along the roads within the vicinity of the schools and throughout most of Silsden itself, however, there are a few cobbled streets between terraces which do not have footways.

2.2.3 Pedestrian Access

Figure 3 outlines the key pedestrian road crossing points. The pedestrian access is considered to be satisfactory with footways, street lighting, and crossing points provided. As such the site is well located to encourage access by trips on foot.

There are four crossing points located on the A6034:

- There is a signal-controlled crossing in the south of Silsden, adjacent to the junction between the A6034, Elliott Street, and Clog Bridge.
- Approximately 100m north of this there is an uncontrolled zebra crossing adjacent to the junction between the A6034 and New Road.
- A second zebra crossing is located opposite the Silsden Methodist Church.
- A signal-controlled crossing is located towards the north of Silsden opposite the Kings Arms pub.

2.2.4 Baseline Mode Share

Baseline mode share data for pupils at Silsden Primary School is presented in Table 1, below. The data has been derived from a school 'hands-up' travel survey undertaken in 2017.

Table 1: Baseline Mode Share - Silsden Primary School (Pupils)

Walk	Bike/scooter	Car	Total
275	12	257	544
51%	2%	47%	100%

2.3 Traffic and Pedestrian Data

Traffic and pedestrian surveys were conducted at ten sites throughout Silsden, as identified in Figure 4.

The surveys were undertaken during the week commencing Monday 26 June 2017. Traffic data were recorded at the following junctions:

- **Site 1:** A6034 Kirkgate / Elliott Street / Clogg Bridge (All Movements)
- **Site 2:** A6034 Bolton Road / Bell Square (All Movements)
- **Site 3:** A6034 Bolton Road / Dale View / Pickard Lane (All Movements)
- **Site 4:** Howden Road / Daisy Hill (All Movements)
- **Site 5:** A6034 Kirkgate / Aire View (Turning Movements Only)
- **Site 6:** A6034 Kirkgate / New Road (Turning Movements Only)
- **Site 7:** A6034 Bolton Road / Briggate (Turning Movements Only)

Pedestrian surveys were undertaken at the following locations:

- **Site 8:** Pelican corssing on A6034 near Clogg Bridge
- **Site 9:** Zebra crossing on A6034 near New Road
- **Site 10:** Zebra crossing on A6034 outside Silsden Town Hall

2.4 Proposed Site

The proposed school site is located on the east of Silsden, just west of Hawber Lane. The site is bound by agricultural land to the north and west, to the south the site is bound by the residential dwellings of Aireville Crescent and Middleway, to the east the site is bound by Hawber Lane. The site is currently in agricultural use and therefore generates minimal traffic movements.

The proposed site is within walking distance of Silsden town centre, although it is less central than the current school sites outlined in Section 2. The location of the proposed site is shown on Figure 1.

2.5 Local Transport Network

The local transport network within the vicinity of the proposed school site is outlined, as follows:

- The proposed vehicular entrance to the site is located at its northern extent off Hawber Cote Lane and the proposed vehicular exit at the southern extent of the site off Middleway.

- Hawber Cote Lane connects to the A6034 in the north of Silsden via Banklands Lane and Dale View. Street lighting and pedestrian footways are provided along each of these roads.

- Middleway connects to a series of residential roads in the south east of Silsden. Access to the A6034 in the south of Silsden is provided via Howden Road. Street lighting and pedestrian footways are provided along each of these roads.

2.6 Pedestrian Access

Although the main vehicular entrance to the proposed site is located at its northern extent, pedestrians will be able to access the site by both the northern (Hawber Cote Lane) and western (Bankslands Lane) access.

Figure 5 outlines the key pedestrian facilities such as road crossing points, as well potential pedestrian routes from the proposed school. These routes are further detailed in Appendix 1 which presents an audit of each routes' suitability, including photographs. Based on these facilities the pedestrian access is considered to be satisfactory with adequate footways, street lighting, and crossing points provided. As such the site is well located to encourage safe access by trips on foot.

However, given that the proposed site is located to the east of Silsden, the pedestrian catchment for the proposed site is smaller than that which is available to the current central school sites, as shown in Figure 6.

3 Transport and Planning Policy

3.1 Introduction

This Chapter identifies national and local policy that is relevant to the development proposals.

3.2 National Policy

3.2.1 National Planning Policy Framework

The *'National Planning Policy Framework'* (NPPF) was published by the Department for Communities and Local Government (DCLG) in March 2012.

NPPF sets out the national planning policy for England, and supersedes the *'Planning Policy Guidance Notes'* (PPGs) and their replacements *'Planning Policy Statements'* (PPSs). The Framework seeks to contribute to achieving sustainable development and therefore performs three roles:

- An economic role, by building a strong, responsive and competitive economy.
- A social role, by supporting strong, vibrant and healthy communities.
- An environmental role, by protecting and enhancing the natural, built and historic environment.

The NPPF sets out a presumption in favour of sustainable development. This effectively means that development proposals that accord with the development plan should be approved without delay. Where the development plan is out-of-date or absent, proposals should be approved unless the adverse impacts would significantly, and demonstrably, outweigh the benefits when assessed against the NPPF, or specific policies in the NPPF indicate development should be restricted (for example, if the site is subject to certain environmental designations).

The NPPF sets out twelve core land-use planning principles that should be taken into account when making planning decisions, including:

> *"planning should… actively manage patterns of growth to make fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable"*

In particular, Paragraph 32 of the NPPF states that:

"All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

- *The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;*
- *Safe and suitable access to the site can be achieved for all people;*
- *Improvements can be undertaken within the transport network that cost effectively limits the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of the development are severe."*

The NPPF states that a Travel Plan is required for all developments that generate a significant amount of movement.

3.2.2 Planning Practice Guidance

Planning Practice Guidance[3] (PPG) was launched by the DCLG on 6 March 2014. It brings together many areas of English planning guidance into a new stream-lined format, which is linked to the NPPF. PPG replaces previous planning practice guidance documents. The guidance is a key material consideration in the decision making process, set within the overarching NPPF.

PPG provides advice on when Transport Assessments and Transport Statements are required and what they should contain[4]:

"Transport Assessments are thorough assessments of the transport implications of development, and Transport Statements are a 'lighter-touch' evaluation to be used where this would be more proportionate to the potential impact of the development (i.e. in the case of developments with anticipated limited transport impacts)."

[3] *Planning Practice Guidance*, Department of Communities and Local Government, 2014.
[4] *Planning Practice Guidance: Travel Plans, transport assessments and statements in decision-taking*, Department of Communities and Local Government, Revision Date: 06/03/2014, Paragraph 005.

Furthermore, it states that:

> *"Transport Assessments and Statements can be used to establish whether the residual transport impacts of a proposed development are likely to be "severe", which may be a reason for refusal, in accordance with the National Planning Policy Framework."*

And:

> *"The Transport Assessment or Transport Statement may propose mitigation measures where these are necessary to avoid unacceptable or "severe" impacts."*

3.3 Local Policy

3.3.1 Background

Bradford Metropolitan District Council (BMDC) is the local authority of the City of Bradford in West Yorkshire. The Council is currently in the process of preparing a new Local Plan, which will be made up of a collection of planning documents that will guide the future development for housing, employment, leisure and retail for the next 10 to 20 years.

The Local Plan will comprise a number of Local Development Documents (LDDs), which will provide the framework for delivering the spatial planning strategy for the area. DPD's, together with any adopted Neighbourhood Plans, will form the statutory development plan for the Bradford District and will be the start point for the consideration of planning applications.

The Core Strategy DPD[5] was submitted to the Secretary of State on Friday 12th December 2014 for examination by a Planning Inspector. The Inspectors Report was subsequently received on 22nd August 2016.

Until formal adoption of the new Local Plan the Replacement Unitary Development Plan (RUDP)[6] will continue to be the statutory development plan for the district. The RUDP was adopted in 2005 and saved, in part, by the Secretary of State in 2008. As of October 2008, a total of 16 policies have been deleted from the RUDP. These policies have been superseded by either national or regional policies.

Where policy documents were originally adopted some time ago, it is likely that material considerations, in particular the emergence of new national policy and also new evidence, will be afforded considerable weight in decisions on planning applications. The NPPF is a material consideration in the decision making process.

[5] *Core Strategy Development Plan Document – Publication Draft*, City of Bradford Metropolitan District Council, 2014.
[6] *Replacement Unitary Development Plan for the Bradford District*, City of Bradford Metropolitan District Council, 2005.

A number of Supplementary Planning Documents (SPDs) have also been produced by the Council. While SPD's are non-statutory documents, they may provide more detail to a DPD or may focus on developing a brief for a site. The Sustainable Design Guide SPD has been considered in detail for the purpose of this assessment.

3.3.2 Replacement Unitary Development Plan (RUDP)

The RUDP was adopted by the Council in October 2005. The document is a land use strategy for the District and is the prime consideration when the Council makes decision on planning applications.

While a number of policies have been deleted (as of 2008), the following 'Saved Policies' are of relevance to the development proposals from a transportation perspective:

Policy UDP 1

"The location of development to meet the needs of the district will be made by:

- *Focusing on the urban areas.*
- *Encouraging the most effective use of brownfield sites and buildings.*
- *Concentrating development in areas with good public transport links.*
- *Concentrating development in areas with proximity to essential and wider facilities and services.*
- *Phasing the release of land for housing development."*

Policy UDP7

"Reduce the impact of travel by:

- *Managing the growth of traffic and minimising its impact on communities and the environment.*
- *Promoting improved accessibility through enabling the use of public transport, cycling and walking and reducing the dependency on the private car."*

Policy UDP7

"Reduce the impact of travel by:

- *Managing the growth of traffic and minimising its impact on communities and the environment*

- *Promoting improved accessibility through enabling the use of public transport, cycling and walking and reducing the dependency on the private car."*

Policy UR2

"Development will be permitted provided that it contributes to the social, economic and environmental aspects of sustainable development, and:

- *Makes efficient use of existing physical and social infrastructure and minimises adverse impacts from the development.*

- *Provides appropriate mitigation where negative impacts are identified.*

- *Does not constitute piecemeal development that would prejudice the proper planning of the area.*

In major or significant developments this should be undertaken through a sustainability appraisal."

Transport Objectives

"The transport objectives of the Unitary Development Plan are as follows:

- *To improve the environment and reduce air pollution by restricting non-essential traffic particularly in residential areas.*

- *To reduce reliance on the private car, restrain its use and encourage greater use of alternative modes of transport.*

- *To co-ordinate planning and regeneration to achieve transport improvements which enhance the attractiveness of regeneration areas, as well as ensuring that development in regeneration areas is designed and located so that it is attractive to access by public transport, where necessary by securing service improvements.*

- *To provide real choice of transport for the district's residents, workforce and visitors. In particular to improve the quality of accessibility by public transport, walking and cycling.*

- *To make better use of existing road space and reduce the environmental impact of traffic by prioritising sustainable modes of transport - such as walking, cycling and*

buses - in managing traffic. Using this to minimise the amount of road building to that which is essential to secure access to regeneration areas;

- *To improve access to town centres by means of transport other than the car, while continuing to provide a reasonable level of parking for shopping and leisure visits.*
- *To improve road safety where opportunities arise through the land use planning process.*
- *To ensure that the needs for freight transport and servicing are met - including a greater emphasis on non-road based freight transport."*

Policy TM1

"When considering planning applications for developments likely to be significant generators of travel the Council will require these to be supported by a detailed Transport Assessment (TA). The TA should incorporate proposed traffic reduction measures by the developer and measures to promote sustainable travel including the use of public transport, walking and cycling as necessary arising from the travel generation requirements of the development."

Policy TM2

"Planning permission for new development or change of use will not be granted unless:

- *The Council is satisfied that the proposal does not adversely affect existing and proposed transport infrastructure or services, including public transport and walking and cycling facilities, in the vicinity of the site, or the local environment.*
- *Improvements considered necessary by the Council to overcome any adverse impact of the proposal will be secured by agreement or undertaken as part of the development."*

Policy TM6

- *"In determining planning applications, the Council will consider the potential impact of new developments and changes of use on the bus priority network, bus services and their users, and will seek provision of suitable infrastructure improvements and other facilities, including highway works and bus shelters, where appropriate."*

Policy TM8

- *"The Council will require the provision, where appropriate, of new pedestrian and cycle links through development sites and open spaces, especially where these will provide links to existing routes."*

Policy TM10

"The national and local cycle network and associated links as shown on the proposals map will be implemented. Developments should facilitate or incorporate the network and associated links.

Major developments will be expected to contribute towards the construction and improvement of the national and local cycle network and links to it where such facilities would service the development by sustainable modes."

Policy TM19A

"In determining planning applications the Council will consider the potential impact on traffic management and road safety and will seek any consequential improvements"

Policy D6

"Development proposals including environmental improvements, highway improvements and traffic management schemes, should incorporate appropriate facilities to meet the need of pedestrians and people with special needs. In particular the design of development proposals should take into account the following:

- *Pedestrian links should have priority over other links including those for cycles and cars as appropriate to the development.*
- *The layout of the development so that car parks do not deter pedestrian access and use.*
- *The provision of adequate and safe pedestrian facilities within the development and safe access onto existing pedestrian links and network of routes.*
- *Ensuring existing pedestrian links are not severed nor their safety or amenity harmed unless suitable alternative provision are provided by the developer."*

Policy D7

"Development proposals including environmental improvements, highway improvements and traffic management schemes, should incorporate appropriate facilities to meet the needs of cyclists. In particular the design of development proposals should take into account the following:

- *Provision of safe convenient direct and coherent cycle routes and priority measures as appropriate to the development.*

- *Provision of convenient and securely located cycle parking or storage facilities in appropriate new developments including those in town centres, at transport interchanges, educational institutions and public car parks.*

- *Development proposals should not sever existing or planned cycle links, to other parts of the cycle network or reduce their safety or amenity unless acceptable suitable alternative provision is made".*

Policy D7A

"Development proposals including environmental improvements, highway improvements and traffic management schemes, should incorporate appropriate facilities to meet the needs of public transport. In particular the design of development proposals should take into account the following:

- *Operational requirements of normal bus services in the design and layout of highways.*

- *Location of bus stops.*

- *Pedestrian links to bus stops, including road crossings".*

The proposed development will deliver development in a sustainable and accessible location. It is considered that the development will not have a detrimental impact on highway safety. It is demonstrated within the Transport Assessment that the traffic impact of the development is not considered severe and a suitable access arrangement has been identified, which also accommodates pedestrian movement between the development and its wider setting.

3.3.3 Emerging Core Strategy Development Plan Document – Publication Draft

The Core Strategy DPD has recently been the subject of an Inspectors Report, which was received by the Council in August 2016. The Report provides findings, recommendations and conclusions of the emerging Core Strategy. The Report summarised that with the inclusion of the main modifications to the Core Strategy, the document would be capable of adoption.

It should be noted however that at the time of writing the Emerging Core Strategy Document has been issued a direction under section 21A of the Planning and Compulsory Purchase Act 2004 to the City of Bradford Metropolitan District Council not to take any step in connection with the adoption of the document. The direction will remain in force until it is withdrawn by the Secretary of State or the Secretary of State gives a direction under section 21 of the 2004 Act in relation to the Core Strategy.

While the Core Strategy is to be treated as an emerging document, this report has considered a number of key policies of relevance to the development proposals from a transportation perspective. Note that the following policies are of relevance to the development proposals at the time of writing, and are subject to change. In accordance with Paragraph 216 of the NPPF, decision-takers may give weight to policies in emerging plans, where relevant.

While the proposed main modifications to the Core Strategy have been published (November 2015 and June 2016), the policies referenced within this report refer to the Publication Draft of the Core Strategy published in February 2014. The following policies are of pertinence to the development proposals from a transportation perspective:

Strategic Core Policy 1 (SC1): Overall Approach and Key Spatial Priorities

"Manage the delivery of development and change to meet the needs of the district to 2030 in order to deliver the Spatial Vision and objectives and achieve sustainable development in line with National Planning Policy Framework and Policy P1.

Planning decisions as well as plans, strategies, programmes and investment decisions should seek to:

- *Ensure that transport management and investment decisions support and help deliver the spatial strategy, in particular sustainable patterns of development, inclusive access to jobs and facilities, and shift to sustainable forms of movement."*

Strategic Core Policy 5 (SC5): Location of Development

"In identifying and comparing sites for development, the Local Plan will adopt an accessibility orientated approach to ensure that development:

- *Makes the best use of existing transport infrastructure and capacity.*

- *Takes into account capacity constraints and deliverable improvements, particularly in relation to improving and development of the Strategic Road Network including junctions and schemes identified in the spatial vision.*

- *Complies with the public transport accessibility criteria set out in Appendix 3 (of the Core Strategy) and maximises accessibility by walking and cycling."*

Sub Area Policy PN1: South Pennines Towns and Villages

"Transport:

- *Ensure that strategic patterns of development maximise the opportunities to use non car modes of transport and reduce the overall need to travel."*

Policy TR1: Travel Reduction and Modal Shift

"The Council through planning and development decisions and transport policies will aim to reduce the demand for travel, encourage and facilitate the use of sustainable travel modes, limit traffic growth, reduce congestion and improve journey time reliability.

- *Development to be appropriately located to ensure that the need to travel is reduced, the use of sustainable travel is maximised, and the impact of development on the existing transport networks is minimal. (Allocation DPD, Area Action Plan DPDs, and individual planning applications, will be informed by government policy and public transport Accessibility Standards in Appendix 3 (of the Core Strategy) and be accompanied by Transport Assessments and Travel Plans).*

- *The Council will seek the effective and efficient management of the existing transport networks (strategic and local highway, rail, bus, and cycle and walking routes) to address congestion and encourage modal shift to sustainable transport modes. This will include prioritisation of appropriate sustainable transport modes on the highway, through measures such as HOV lanes, bus priority and cycle lanes.*

- *Influence travel behaviour through the requirement for all new build and change of use developments (above thresholds set out in the latest DfT guidance) which lead to a potential increase in movements to provide an approved transport assessment / statement and Travel Plan in accordance with DfT guidance.*

- *Travel Demand (particularly single occupancy car use) will be managed through application of parking policies (TR3), and the use of existing powers to explore innovative demand management measures, where local conditions are appropriate,*

in conjunction with the introduction of sustainable travel initiatives and enhancements.

- *Identify, protect and develop appropriate facilities and high quality infrastructure for active travel modes (walking, cycling and horse riding). Including identified strategic routes and networks as well as local routes and links where opportunities arise, linking into national and regional routes. Provide appropriate facilities for active travel modes at new developments, including but not exclusively cycle parking, and changing facilities along with safe and attractive routes within developments.*

- *A key factor in encouraging the wider take up of alternative fuels, technologies and vehicle ownership and use models is the implementation of the associated recharging, refuelling and other infrastructure. Proposals to implement such infrastructure, for example Electric Vehicle (EV) charging points, through the development process will be explored and supported where viable.*

- *Encourage development that reduces travel needs through the promotion of home working and live/work."*

Policy TR2: Parking Policy

"The Council through planning and development decisions and transport policies will seek to manage car parking to help manage travel demand, support the use of sustainable travel modes, meet the needs of disabled and other groups whilst improving quality of place. These to include the following mechanisms:

- *The assessment of new developments against indicative parking standards contained in Appendix 4.*

- *Require new developments to take a design led approach to parking which is well integrated within the overall layout so that it supports the street scene and local character, and creates a safe and pleasant environment even in parking areas."*

Policy TR3: Public Transport, Cycling and Walking

"The Council through planning and development decisions and transport policies will safeguard and improve public transport, walking and cycling infrastructure and services through the following measures:

- *Development should support the enhancement of public transport infrastructure and services where viable and necessary*

- *Require that the layout of new development encourages walking and cycling by taking the opportunities to connect to the existing street and path network, local facilities and public transport in obvious and direct ways.*

- *Require that new development creates attractive places that encourage walking and cycling by providing a permeable network of routes that are well overlooked, and which balance the needs of all users by treating highways as streets rather than as roads."*

Policy DS4: Streets and Movement

"Plans and development proposals should take the opportunities to encourage people to walk, cycle and use public transport through:

- *Creating a network of routes which are well overlooked and convenient and easy for all people to understand and move around.*

- *Connecting to existing street and path networks, public transport and places where people want to go in obvious and direct ways, and where necessary improving existing routes and public transport facilities.*

- *Integrating existing footpaths/cycle routes on the site into the development.*

- *Take an approach to highway design which supports the overall character of the place and which encourages people to use streets as social spaces rather than just as routes for traffic movement.*

- *Take a design led approach to car parking so that it supports the street scene and pedestrian environment whilst also being convenient and secure."*

The development is considered to meet the objectives of the emerging Draft Core Strategy, delivering development in a sustainable and accessible location. The proposed development is not considered to generate unacceptable impacts in terms of traffic generation and encourages sustainable accessibility through design. The proposed development does not have a significant impact (in highways terms) on the existing infrastructure and a detailed Transport Assessment has been produced, which outlines and details the transportation impacts of the development and provides details on the opportunities to access the site by sustainable modes.

4 Development Proposals

4.1 Introduction

This Chapter presents a description of the development proposals and sets out in detail how the development will be accessed by the main modes of transport. Particularly considering is given to ensure that the proposed development is fully accessible by sustainable travel modes.

4.2 Development Proposal

Planning permission is sought for the development of land to the west of Hawber Lane, Silsden. The proposed development is for a new primary school building for Silsden Primary School, which is currently split across two campus sites.

Silsden Primary School opened on the existing sites in September 2017 and is formed from the merger of Aire View Infant School and Horthfield Junior School, which were the last separate infant and junior schools in the District.

4.3 Vehicular Access

The proposed vehicular entrance to the site is located at its northern extent off Hawber Cote Lane and the proposed vehicular exit at the southern extent of the site off Middleway. A one-way road within the site will connect these two accesses.

Pick-up / drop-off facilities will be provided within the site thereby reducing the need for parking on nearby residential streets.

4.4 Pedestrian Access

Although the main vehicular entrance to the proposed site is located at its northern extent, pedestrians will be able to access the site by both the northern (Hawber Cote Lane) and western (Bankslands Lane) accesses.

Figures 2 and 6 demonstrate the walking catchments for both the current and proposed sites. As can be seen, given that the proposed site is located to the east of Silsden, the pedestrian catchment for the proposed site covers a significantly smaller extent of Silsden than that of the current, more centrally located, school sites.

4.5 Car Parking

Car parking is proposed to be provided to the northern extent of the site area, adjacent to the main vehicular entrance. 120 car parking spaces are proposed, as follows:

- 100 staff spaces;
- 15 visitor spaces;
- 5 disabled spaces.

The Parking Standards given in the Replacement Unitary Development Plan (RUDP) for the Bradford District by Bradford Council[7] provide maximum car parking standards for day nurseries/creches and higher and further education developments as presented in Table 2, below.

Table 2: Parking Standards from Bradford Council's RUDP

Development type	Maximum Car Parking Standard	Threshold above which standard applies
D1 Non-Residential Day nurseries/creches	3 spaces per 4 staff	N/A
D1 Higher and Further Education	1 space per 2 staff + 1 space per 15 students	2500m^2

As no specific parking standards are given for primary schools, these two development types are the most relevant standards available. The school estimate the numbers of staff to total 100 and there are 625 students. Under these standards, the maximum car parking standard for the proposed site would therefore be between 75 and 92 parking spaces. The proposed parking is broadly in-line with these standards.

4.6 Public Transport

As no students responded with public transport to the travel mode survey, public transport is not discussed within this TA.

[7] *Replacement Unitary Development Plan for the Bradford District*, City of Bradford Metropolitan District Council, 2005.

5 Trip Generation, Mode Share and Trip Distribution

5.1 Introduction

This Chapter sets out an estimate of the likely trip generation and mode share associated with the development proposals and details the methodology used.

5.2 Walking

Figure 7 presents a set of walk-time isochrones disaggregated into 5-minute walking intervals from the current locations of Aire View Infant School and Hothfield Junior School assuming an average walking speed of 4km/hr along the walkable local road network. Overlaid are the home postcode locations of pupils from both schools.

Based on this information, the total number of pupils who lived within a 5-minute walk, a 10-minute walk, a 15-minute walk, a 20-minute walk, and a greater than 20-minute walk was calculated. Using this data and the baseline mode share data from the 'hands-up' travel mode survey presented in section 2.2.3, estimated percentages of students walking to school from each of these five catchments were derived. These results are presented in Table 3, below.

Table 3: Walking Catchment - Silsden Primary School (Current Site)

Walking Catchment	Total Pupils	Percentage estimated to walk	Walking Pupils
0-5-minute walk	171	90%	154
5-10-minute walk	142	70%	99
10-15-minute walk	156	45%	70
15-20-minute walk	53	20%	11
20-minute+ walk	103	0%	0
Total	625	53%[8]	334

A similar set of walk-time isochrones were also produced for the proposed site (Figure 8). The number of pupils living within each walk-time catchment was calculated and, using the same percentages as defined above, the estimated number of students who would walk to school at the proposed site was derived. These results are presented in Table 4, below.

[8] Based on student travel mode survey. Those 2% of pupils who responded that they either use a bike or scooter to commute to school have been added to the total of walking students.

Table 4: Walking Catchment - Silsden Primary School (Proposed Site)

Walking Catchment	Total Pupils	Percentage estimated to walk	Walking Pupils
0-5-minute walk	33	90%	30
5-10-minute walk	116	70%	81
10-15-minute walk	167	45%	75
15-20-minute walk	117	20%	23
20-minute+ walk	192	0%	0
Total	625	34%	209

The relocation of the school is likely to result in a reduction in the number of pupils walking to school. On this basis, following the proposed relocation, 19% less pupils will walk to school than do at the current site. It is assumed in this TA that these pupils will instead be driven to school. This is considered to be a robust assumption since these pupils already have an established walking habit and therefore may continue to walk to school event though their walking distance has increased. The School Travel Plan should seek to encourage those that currently walk to school to continue walking, particularly focussing on the health and wellbeing benefits of walking.

5.3 Driving

As there is no bus service to the school, those students who do not walk are instead assumed to be driven to school. At the current site, the base line mode share data identified that 47% of pupils are driven to the school; at the proposed site this is estimated to rise to 66% of pupils.

A car occupancy rate of 1.5 is assumed for the students who are driven to school. This assumption is based upon the student postcode data containing 625 students. These students live in 201 unique postcodes and therefore, on average, three students are estimated to live in each postcode.

5.4 School Staff

In addition to the students, there are approximately 100 staff who work at the school. Whilst walking, cycling and public transport are more environmentally friendly modes of transport, school staff often have to carry large amounts of heavy school material, such as exercise books for marking at home. It is therefore assumed that the majority of school staff drive and will continue to drive to school. However, these trips will occur earlier and later than trips associated with pupil drop-off and pick-off and have not therefore been taken into account in the assessment presented in this report.

5.5 Summary of Trip Generation

Trip generation for the current sites and the proposed site was derived from the student postcode data. As discussed in section 6.2, the numbers and locations of those students estimated to walk to school were calculated based on walking catchments. Those students who were estimated to not walk to school were instead assumed to drive with a car occupancy rate of 1.5.

Table 5 presents the estimated number of car trips for both the current school sites and the proposed site.

Table 5: Trip Generation - Silsden Primary School (Current and Proposed Site)

Site	Total Pupils	% estimated to drive	Total Driving	Trip Generation*
Current site	625	47%	294	196
Proposed site	625	66%	416	277

* Assumed car occupancy rate of 1.5

6 Traffic Impact

6.1 Approach

The traffic impact of the proposals have been assessed using Aimsun traffic microsimulation and LEGION pedestrian modelling software. A base year model, representative of existing conditions, has been produced. The development, calibration and validation of this model is set out in detail in the Model Validation Report, a copy of which is presented in Appendix C.

6.2 Model Summary

6.2.1 Model Extent

The extent of the Aimsun model is shown in Screenshot 1, below, and covers the TA study area. It extends along the A6034 Keighley Road from south of the bridge over the Leeds & Liverpool Canal to north of the Dale View junction. The model includes all junctions between these two points and also extends to the east to include the main access roads for the proposed school.

Screenshot 1: Model Extent

6.2.2 Modelled Time Periods

The model covers the following time periods, which have been chosen to capture the peak periods associated with school drop-off and pick-up:

- 0830 to 0930
- 1500 to 1600

In addition, the model demand has been input in 5 minute intervals to capture the detailed profile associated with school arrivals and departures.

6.2.3 Model Calibration and Validation

The model has been calibrated using manually classified turning count surveys undertaken during the week commencing Monday 26 June 2017 and accurately reproduces the observed turning movements. Queue lengths in the model have been validated against observations undertaken on-site.

6.3 2017 Base Year Traffic Flows

The 2017 base year traffic flows have been output from the model and are presented on Figures 9 and 10 for the AM and PM peak hours, respectively.

6.4 2022 Do Minimum Traffic Flows

The development has been assessed using an assessment year of 2022. This has been developed by including background traffic growth as well as traffic associated with committed developments.

The base year demand matrices have been factored using National Transport Model (NTM) locally-adjusted growth factors derived using TEMPro v7.2, as set out in Table 6.

Table 6: TEMPro Growth Factors

Base Year	Future Year	NTM Local Growth Factor for Sheffield (Main)	
		AM peak (0800 to 0900)	PM peak (1700 to 1800)
2017	2022	1.0791	1.0778

Traffic associated with committed developments has then been added to the growthed matrices to create the 2022 Do Minimum matrices. The committed developments and associated trips are presented in Table 7.

Table 7: Committed Development Trips

Committed Development	Vehicle Trip Generation			
	AM peak (0830 to 0930)		PM peak (1500 to 1600)	
	Arrivals	Departures	Arrivals	Departures
Belton Road, Silsden	33	77	69	43
Land off Bolton Road, Silsden	10	26	24	14
Land off Daisy Hill, Silsden	8	24	24	8
Silvermantle Ltd Residential Development	48	61	69	44
Total	**99**	**188**	**186**	**109**

The resulting 2022 Do Minimum traffic flows are presented on Figure 11 and 12 for the AM and PM peak hours, respectively.

6.5 2022 With Development Traffic Flows

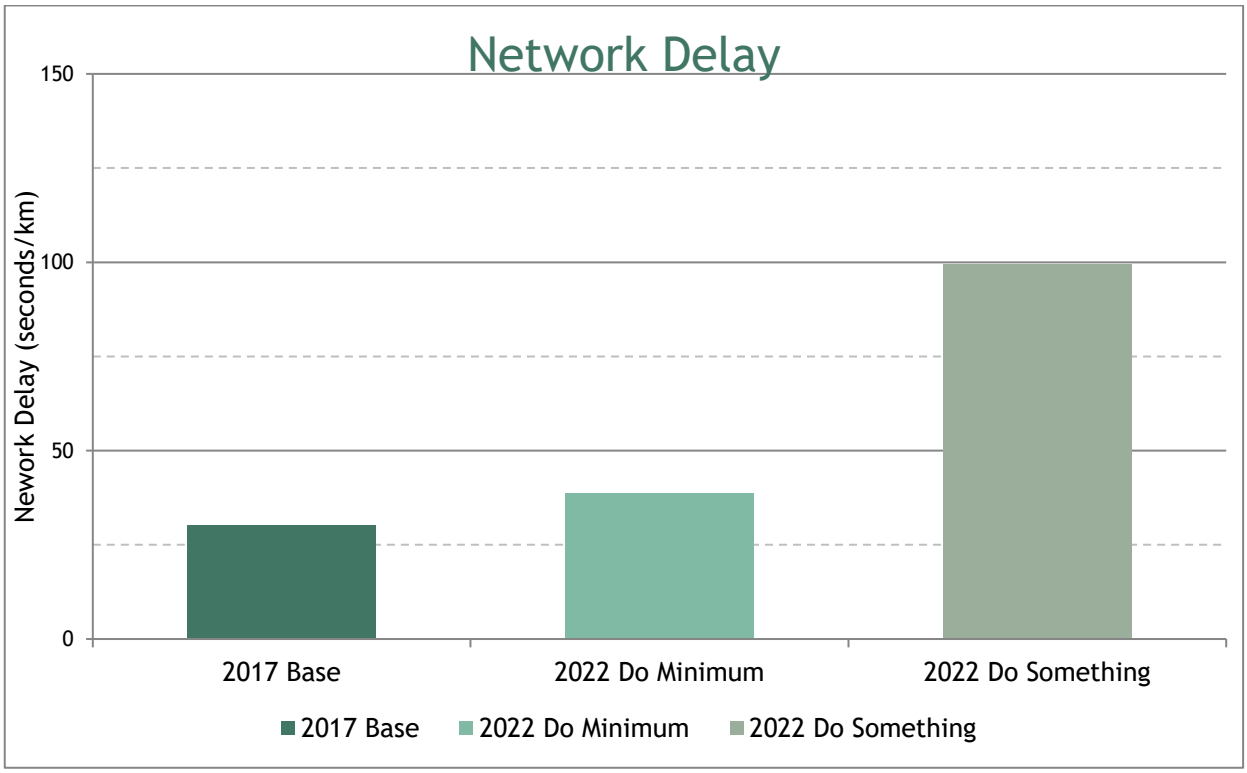
The 2022 With Development Traffic Flows have been developed by substracting the trips associated with the existing schools from the 2022 Do Minimum traffic flows and adding the trips associated with the proposed school. The resulting 2022 traffic flows, as taken from the model, are shown on Figure 13 and 14 for the AM and PM peak hours, respectively.

6.6 Model Results

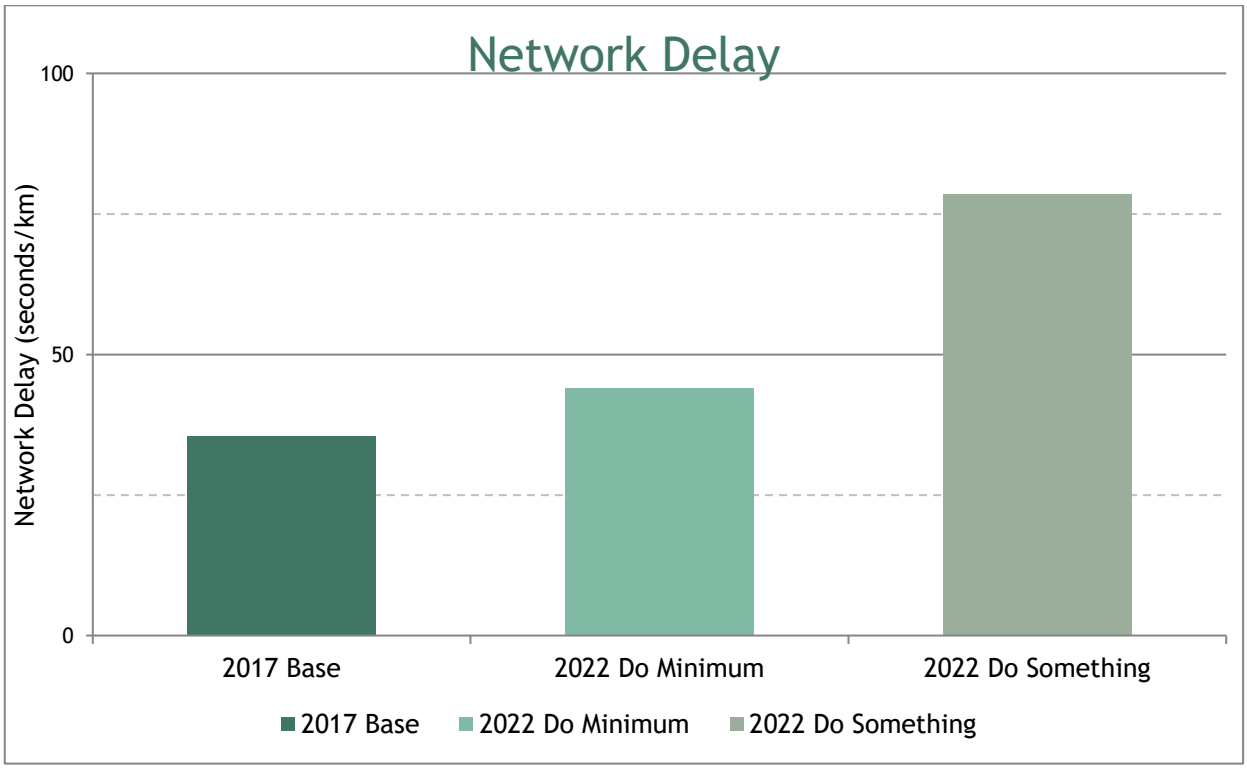
6.6.1 Network Statistics

Network statistics provide a strategic overview of the performance of the whole network. These statistics have been extracted for the modelled network to understand the overall impacts of the proposed development. The statistic considered is the delay time which is the mean delay incurred by vehicles travelling through the network in the modelled time period and is calculated as the difference between actual travel time and free flow travel time. The delay time plotted in Graph 1 and 2 for the AM and PM peak hours, respectively.

Graph 1: Mean Delay Time – AM Peak Hour



Graph 2: Mean Delay Time – PM Peak Hour



The graphs show that there is a small increase in network delay between the 2017 Base and the 2022 Do Minimum as a result of the background growth and committed developments.

In terms of the impact of the proposed school, the graphs show an increase in network delay for the Do Something compared to the Do Minimum scenario of 61 (sec/km) and 35 (sec/km) in the AM and PM peak hours, respectively. Whilst these increases seem large, they have to be considered in the context that the model extent has been designed to capture the specific impacts of the proposed school (and not necessarily the benefits associated with the closure of the existing school). On this basis, the impact is not considered to be significant and this is demonstrated at a more detailed level in the following section.

6.6.2 Junction Statistics

Junction statistics have been produced to isolate the key junctions and assess the impacts. These show the delay time, mean queue and maximum queue on each approach to the junction. The junction queues and delays have been calculated by using data from sections entering the junction. In most cases the junction statistics can only be collected back to the proceeding junction, which means that where queues block back through junctions, the queue reported at one junction may actually be associated with a downstream junction.

6.6.3 A3034 Keighley Road / Elliot Street / Clog Bridge

Table 8 and Table 9Table 4 present the junction statistics for the Keighley Road / Elliott Street / Clog Bridge junction. The results show that in the Do Something scenario there are increases in delay and queueing on all of the junction arms in both the AM and PM peak periods compared to the Do Minimum scenario. The largest impact appears in the AM peak period on Elliott Street with an increase in delay of 27 seconds and mean queue of just two vehicles. There is therefore not considered to be a severe impact at this junction as a result of the proposed development.

Table 8: AM Peak Junction Statistics - Keighley Road / Elliott Street / Clog Bridge

Statistic	2017 Base			2022 Do Minimum			2022 Do Something		
	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue
Keighey Road North	4	0	11	4	0	10	6	1	12
Clog Bridge	2	0	3	2	0	3	17	2	12
Keighley Road South	3	0	12	2	0	11	13	2	29
Elliott Street	13	1	11	11	0	11	38	2	16

Table 9: PM Peak Junction Statistics - Keighley Road / Elliott Street / Clog Bridge

Statistic	2017 Base			2022 Do Minimum			2022 Do Something		
	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue
Keighey Road North	5	0	10	5	0	11	7	1	11
Clog Bridge	1	0	1	1	0	1	13	1	11
Keighley Road South	3	0	12	4	1	16	13	2	24
Elliott Street	5	0	6	7	0	8	8	0	9

6.6.4 A6034 Bolton Road / Bell Square

Table 10 and Table 11 present the junction statistics for the Bolton Road / Bell Square junction. The results show that in the Do Something scenario there are increases in delay and queueing on all of the junction arms in both the AM and PM peak periods compared to the Do Minimum scenario. The largest impact appears on the Bell Square approach to the junction, with increases in delay of 28 and 22 seconds for the AM and PM peaks, respectively. There is therefore not considered to be a severe impact at the junction as a result of the proposed development.

Table 10: AM Peak Junction Statistics – Bolton Road / Bell Square

Statistic	2017 Base			2022 Do Minimum			2022 Do Something		
	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue
Bolton Road South	0	0	4	1	0	4	2	0	7
Bolton Road North	3	0	6	3	0	6	7	1	6
Bell Square	5	0	7	12	1	9	40	2	15

Table 11: PM Peak Junction Statistics – Bolton Road / Bell Square

Statistic	2017 Base			2022 Do Minimum			2022 Do Something		
	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue
Bolton Road South	0	0	1	0	0	3	1	0	7
Bolton Road North	3	0	6	3	0	6	7	1	6
Bell Square	7	0	9	21	1	17	43	3	19

6.6.5 A6034 Bolton Road / Dale View

Table 12 and Table 13 present the junction statistics for the Bolton Road / Dale View junction. The results show that in the Do Something scenario there is only an impact from the Bolton Road South approach, as a result of an increase to right turners into Dale View accessing the proposed school site. This results in an increase in delay of 11 and 18 seconds for each peak period. There is therefore not considered to be a severe impact at the junction at a result of the proposed development.

Table 12: AM Peak Junction Statistics – Bolton Road / Dale View

Statistic	2017 Base			2022 Do Minimum			2022 Do Something		
	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue
Bolton Road South	3	0	17	3	0	20	14	2	26
Pickard Lane	7	0	2	7	0	2	7	0	2
Dale View	6	0	2	6	0	2	6	0	2
Bolton Road North	1	0	9	1	0	9	1	0	9

Table 13: PM Peak Junction Statistics – Bolton Road / Dale View

Statistic	2017 Base			2022 Do Minimum			2022 Do Something		
	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue
Bolton Road South	4	0	17	6	1	18	24	3	36
Pickard Lane	7	0	2	8	0	3	7	0	2
Dale View	6	0	3	6	0	2	10	0	2
Bolton Road North	1	0	2	1	0	3	1	0	3

6.6.6 Howden Road / Daisy Hill

Table 14 and Table 15 present the junction statistics for the Howden Road / Daisy Hill junction. The results show that in the Do Something scenario there is only an impact on the Daisy Hill approach, which occurs in the AM peak period. The increase in delay in the Do Something compared to the Do Minimum from this approach is 17 seconds. It is therefore considered that there is not a severe impact at this junction as a result of the proposed development.

Table 14: AM Peak Junction Statistics – Howden Road / Daisy Hill

Statistic	2017 Base			2022 Do Minimum			2022 Do Something		
	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue
Howden Road West	0	0	1	0	0	0	1	0	2
Daisy Hill	4	0	0	2	0	0	19	1	17
Howden Road East	0	0	1	0	0	1	2	0	3

Table 15: PM Peak Junction Statistics – Howden Road / Daisy Hill

Statistic	2017 Base			2022 Do Minimum			2022 Do Something		
	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue
Howden Road West	0	0	1	0	0	1	1	0	1
Daisy Hill	4	0	0	3	0	0	3	0	3
Howden Road East	0	0	1	0	0	1	0	0	1

6.6.7 Howden Road / Craven Drive

Table 16 and Table 17 present the junction statistics for the Howden Road / Craven Drive junction. The results show that in the Do Something scenario there is an impact on the Craven Drive and Howden Road East approaches in the Do something scenario compared to the Do Minimum. The largest impact appears in the AM peak period, with delays increasing by 28 seconds. This is not considered to be a severe impact.

Table 16: AM Peak Junction Statistics – Howden Road / Craven Drive

Statistic	2017 Base			2022 Do Minimum			2022 Do Something		
	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue
Howden Road West	0	0	0	0	0	0	1	0	2
Craven Drive	2	0	0	2	0	0	30	1	12

Howden Road East	0	0	0	0	0	0	24	2	13

Table 17: PM Peak Junction Statistics – Howden Road / Craven Drive

Statistic	2017 Base			2022 Do Minimum			2022 Do Something		
	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue	Delay	Mean Queue	Max Queue
Howden Road West	0	0	0	0	0	0	0	0	0
Craven Drive	2	0	0	2	0	0	3	0	3
Howden Road East	0	0	0	0	0	0	4	0	7

7 Summary and Conclusions

7.1 Introduction

CBMDC is bringing forward a planning application for the new Silsden Primary School. Fore Consulting (Fore) has been commissioned by CBMDC to provide highways and transport advice in relation to the proposed school development, including the preparation of a Transport Assessment, including Aimsun and LEGION microsimulation modelling.

7.2 The Development Proposal

The proposal is to create a new primary school which will replace the existing Aire View Infant School and Hothfield Junior School. It should be noted that as of September 2017, the two schools have merged as Silsden Primary School split across the two existing sites.

The proposed school site is located on the east of Silsden, just west of Hawber Lane. The site is bound by agricultural land to the north and west, to the south the site is bound by the residential dwellings of Aireville Crescent and Middleway, to the east the site is bound by Hawber Lane. The site is currently in agricultural use and therefore generates minimal traffic movements.

7.3 Vehicular Access

The proposed vehicular entrance to the site is located at its northern extent off Hawber Cote Lane and the proposed vehicular exit at the southern extent of the site off Middleway. A one-way road within the site will connect these two accesses.

Pick-up / drop-off facilities will be provided within the site thereby reducing the need for parking on nearby residential streets.

7.4 Pedestrian Access

Although the main vehicular entrance to the proposed site is located at its northern extent, pedestrians will be able to access the site by both the northern and southern access. The walking catchments for the proposed sites will cover a smaller area by virtue of its location to the east of Silsden.

7.5 Car Parking

Car parking is proposed to be provided to the northern extent of the site area, adjacent to the main vehicular entrance. A total of 120 car parking spaces are planned. Comprising of 100 staff spaces, 15 visitor spaces and 5 disabled spaces. There is also provision for a cycle store. Although no specific parking standards are available for primary schools the proposed parking is broadly in-line with standards for other educational institutions.

7.6 Transport Planning Policy

The proposals have been reviewed in the context of relevant national and local transport planning policy and it is considered they are fully in accordance with these policies.

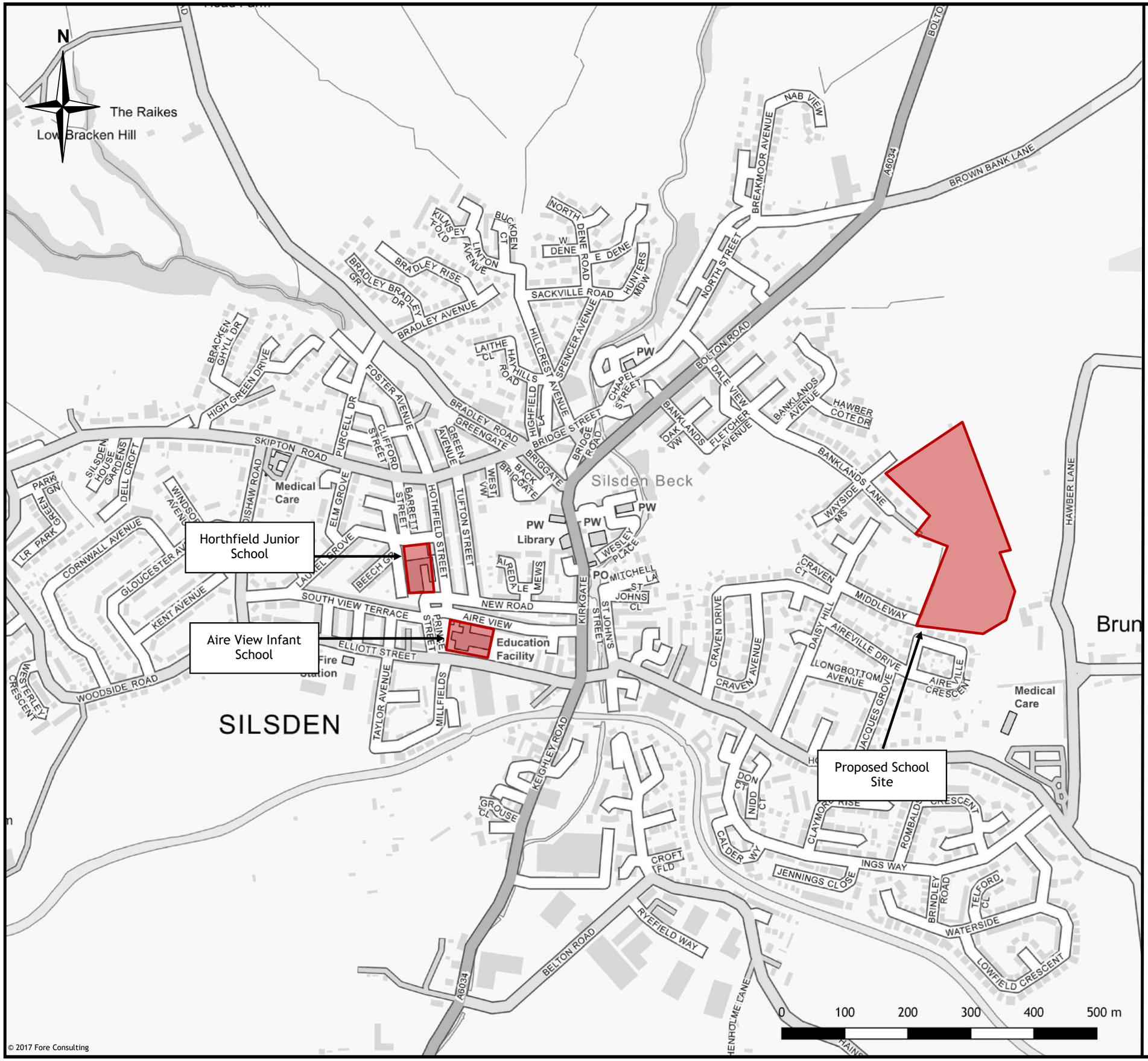
7.7 Traffic Impact

The traffic impact of the proposals have been assessed using Aimsun traffic microsimulation and LEGION pedestrian modelling software. Whilst the proposed school will result in increased traffic and congestion in some locations, the assessment confirms that the associated impacts could not be considered to be severe in the context of paragraph 32 of the NPPF.

7.8 Conclusion

Considering all of the above, it is concluded that the development proposals are acceptable and should be supported from a transport perspective.

Figures



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Key:

Indicative Site Boundary

Fore Consulting Limited
2nd Floor, Queens House
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Client:
City of Bradford Metropolitan District Council

Project:
Silsden Primary school

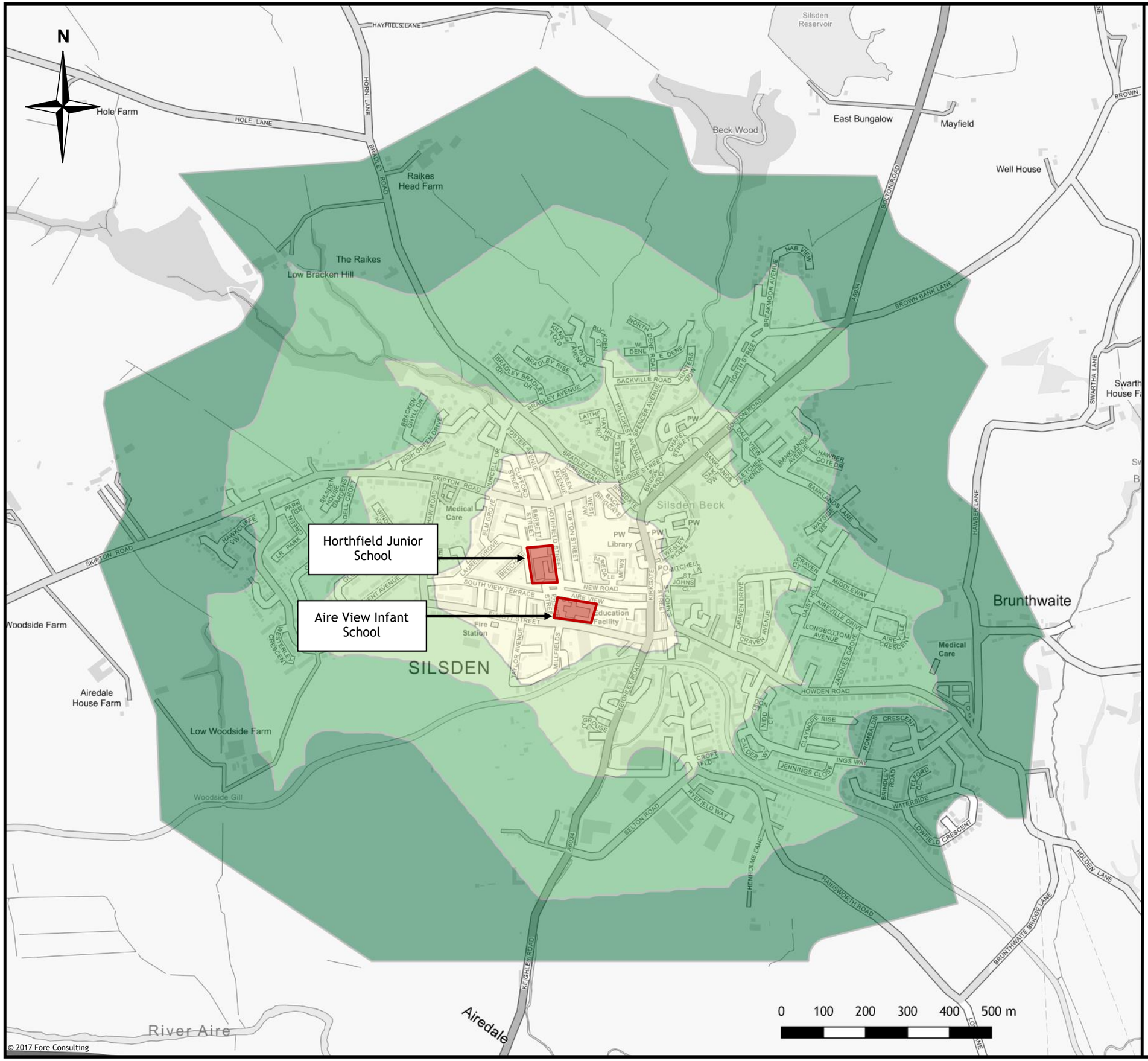
Figure Title:
Site Location

Scale:
1:10,000

Figure Status:
Issue

Job Number:
3551

Figure Number:
Figure 1



Key:

Indicative Site Boundary

Walk-time isochrones

- 20 minute walk
- 15 minute walk
- 10 minute walk
- 5 minute walk

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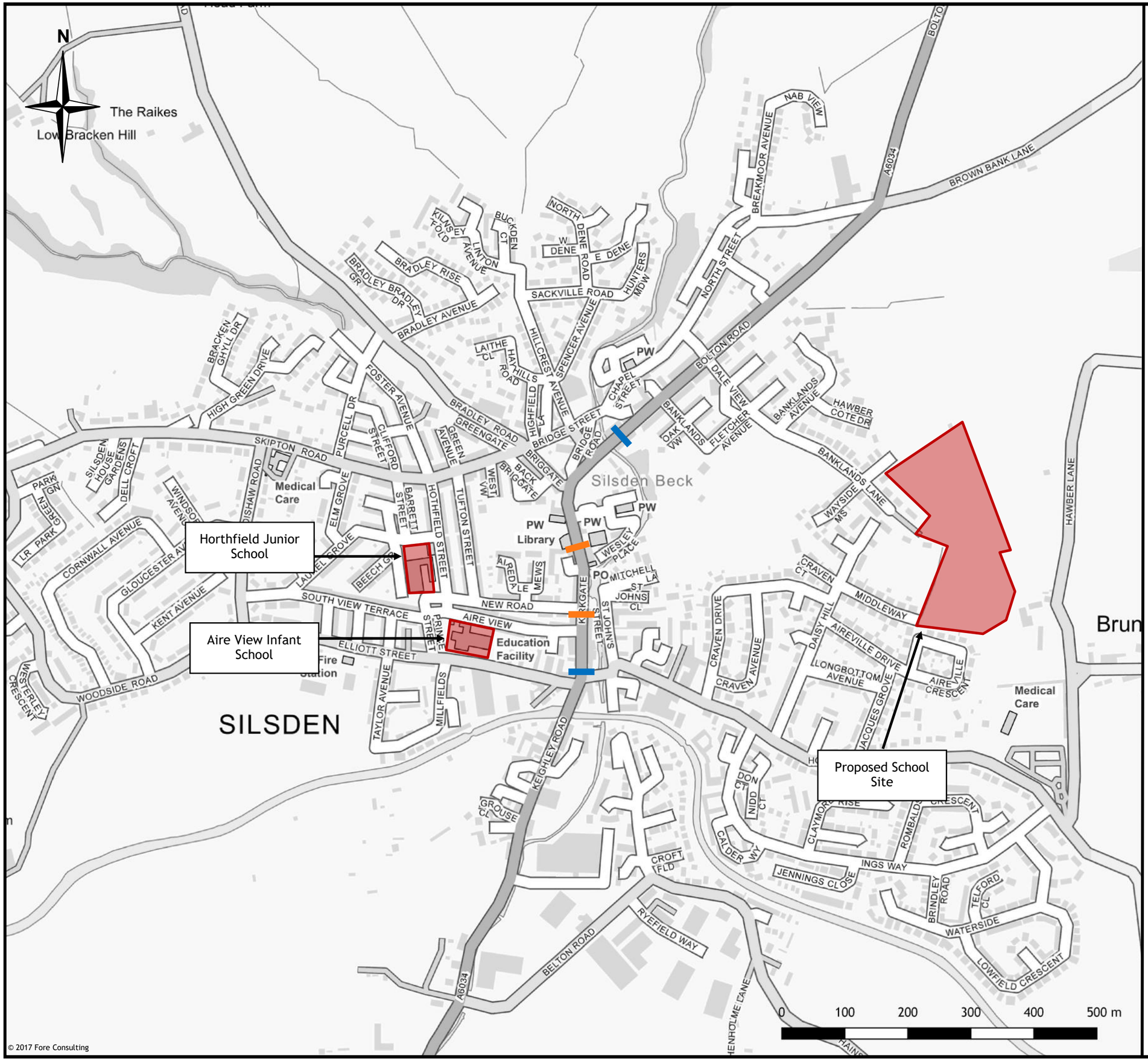
Figure Title:
Current Site Walk-Time Isochrones

Scale:
1:15,000

Figure Status:
Issue

Job Number:
3551

Figure Number:
Figure 2



Key:

- Indicative Site Boundary
- Signal controlled Pedestrian Crossing
- Zebra Crossing

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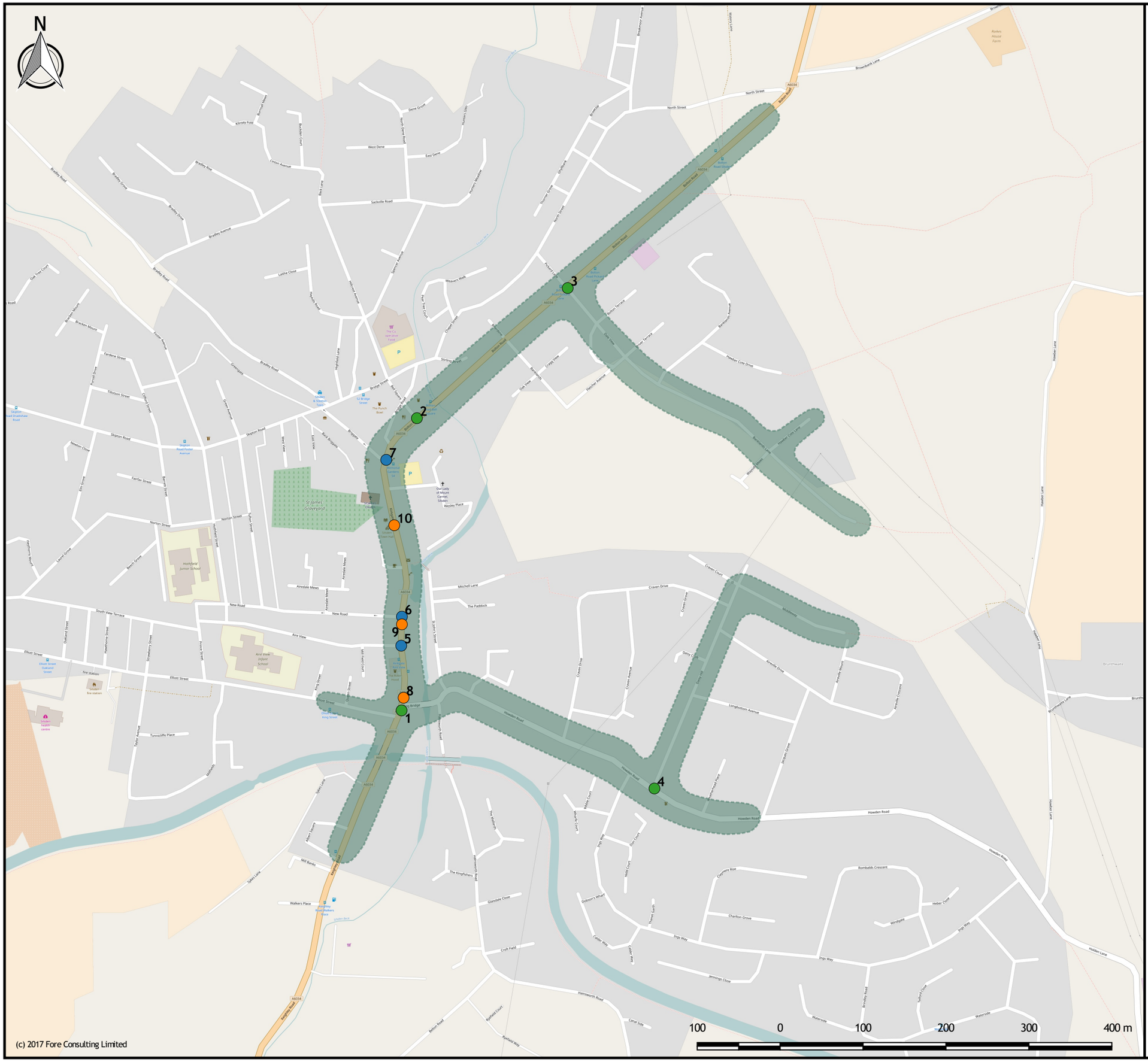
Figure Title:
Pedestrian Crossing Facilities

Scale:
1:10,000

Figure Status:
Issue

Job Number:
3551

Figure Number:
Figure 3



Key

Study Area

Proposed Traffic Surveys

- Manual Classified Turning Count (All Movements)
- Manual Classified Turning Count (Turning Movements Only)
- Pedestrian Count

Mapping (c) OpenStreetMap Contributors

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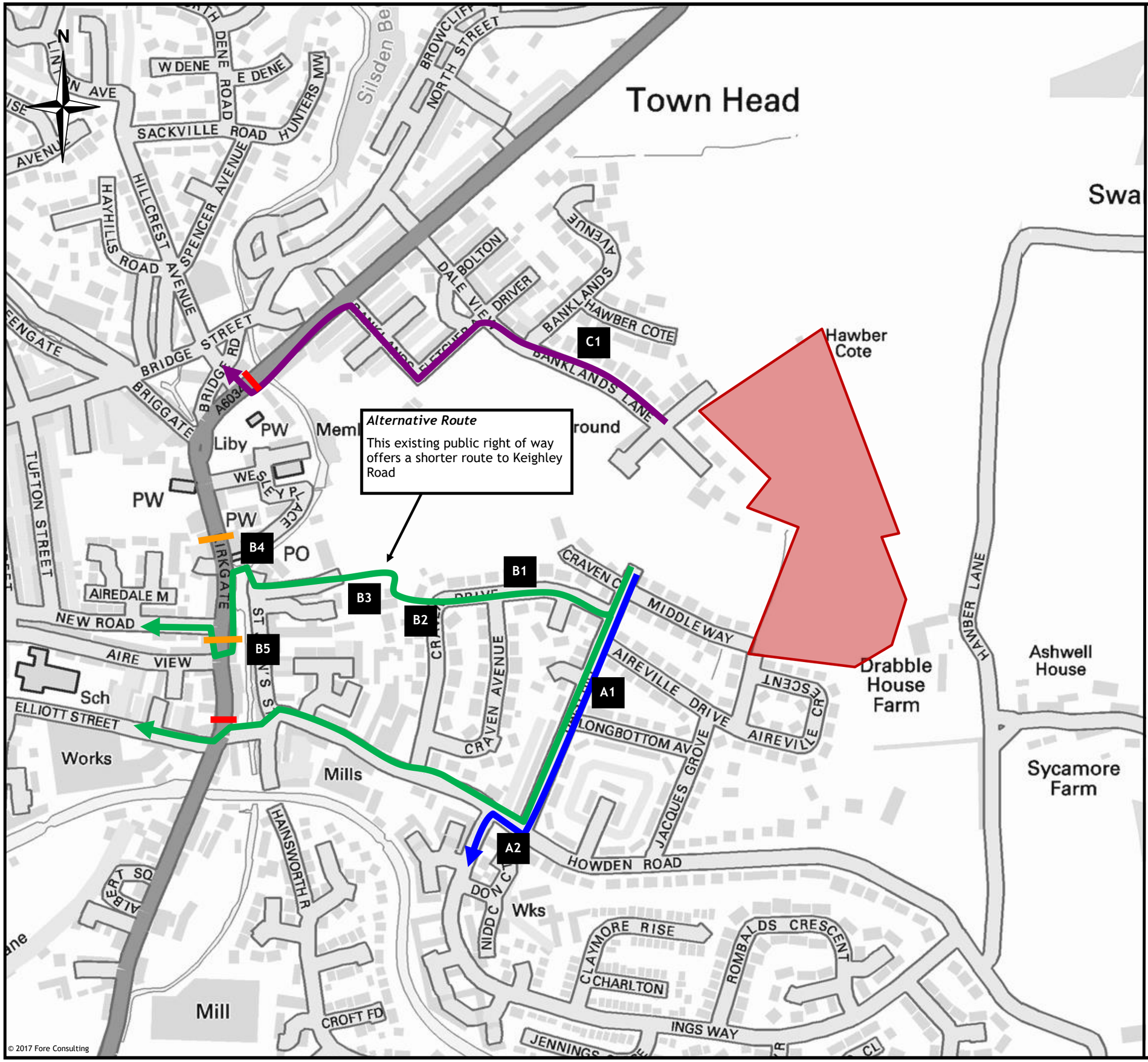
Figure Title:
Proposed Traffic Surveys

Scale:
1:7500 @ A3

Figure Status:
Draft

Job Number:
3551

Figure Number:
Figure 4



Key:

- Indicative Site Boundary
- Routes to/from Ings Way residential area
- Routes to/from West Silsden
- Routes to/from North Silsden
- Signal Controlled Pedestrian Crossing
- Zebra Crossing

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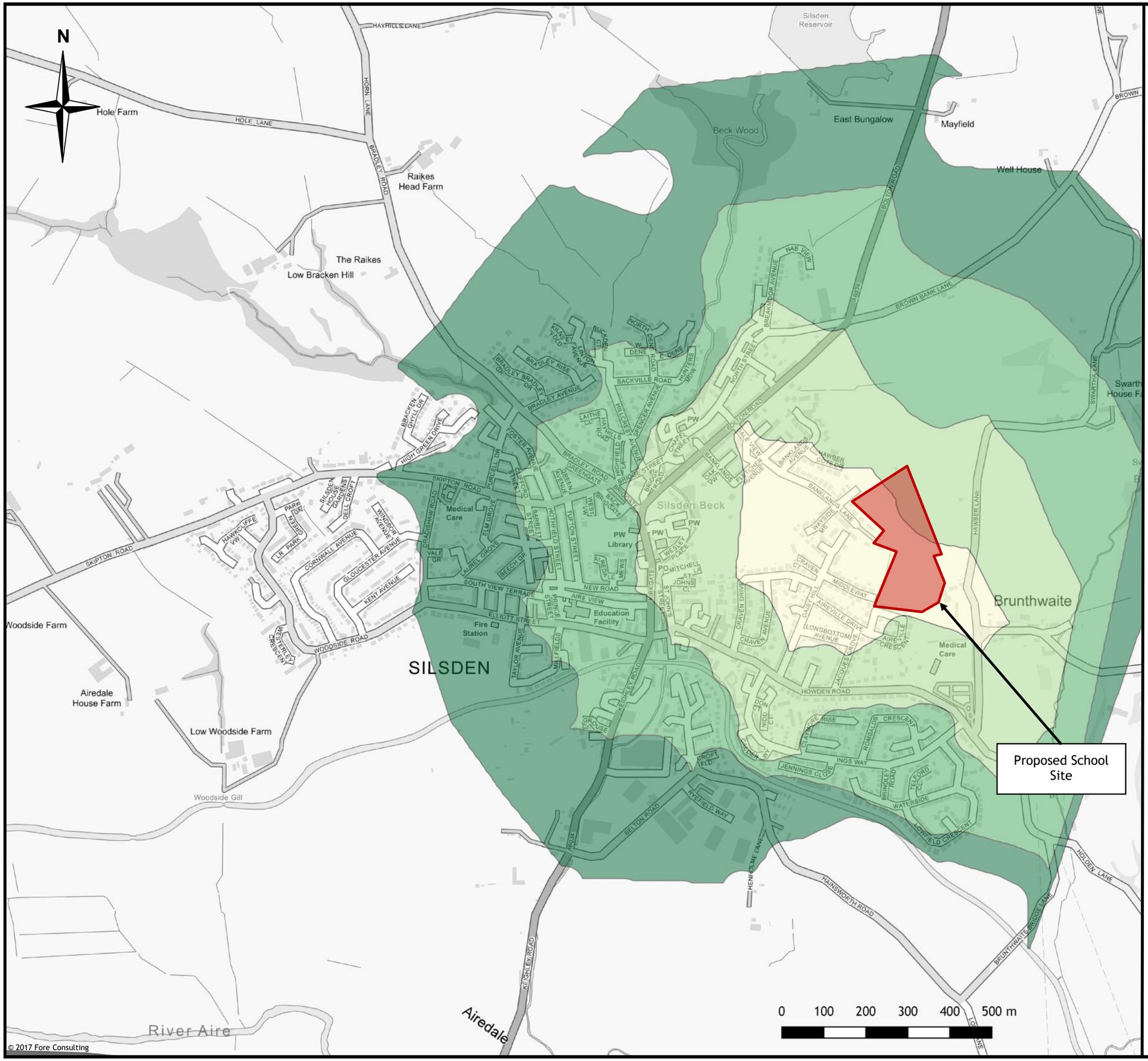
Figure Title:
Walking Routes

Scale:
Not to Scale

Figure Status:
Issue

Job Number:
3551

Figure Number:
Figure 5



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Key:

Indicative Site Boundary

Walk-time isochrones

- 20 minute walk
- 15 minute walk
- 10 minute walk
- 5 minute walk

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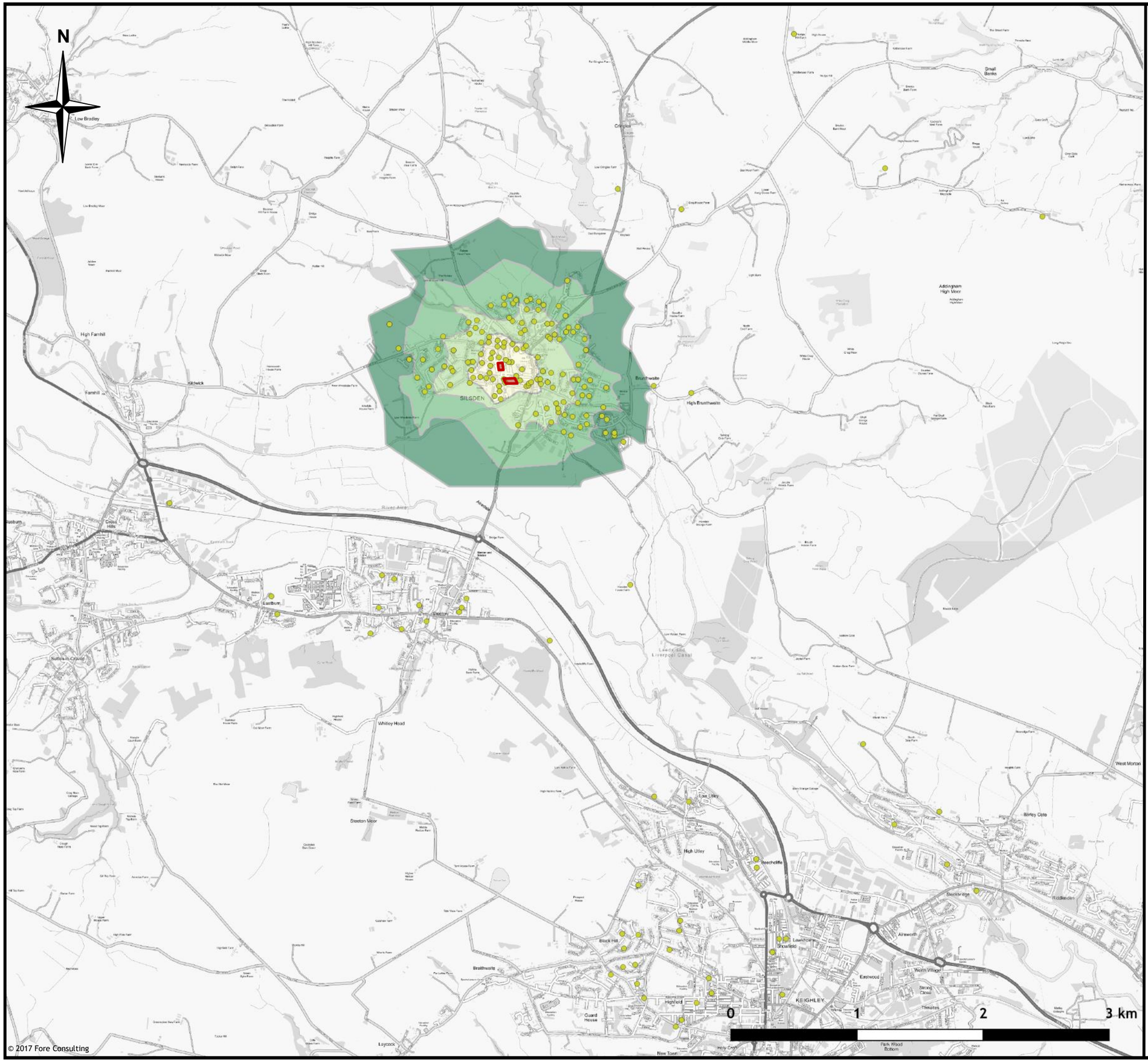
Figure Title:
Proposed Site Walk-Time Isochrones

Scale:
1:15,000

Figure Status:
Issue

Job Number:
3551

Figure Number:
Figure 6



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Key:

- Indicative Site Boundary
- Student Postcodes

Walk-time isochrones

- 20 minute walk
- 15 minute walk
- 10 minute walk
- 5 minute walk

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Figure Title:
Current Site Isochrones and Students

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1:50,000

Figure Status:
Issue

Job Number:
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Figure Number:
Figure 7

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Key:

- Indicative Site Boundary
- Student Postcodes

Walk-time isochrones

- 20 minute walk
- 15 minute walk
- 10 minute walk
- 5 minute walk

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Figure Title:
Proposed Site Isochrones and Students

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1:50,000

Figure Status:
Issue

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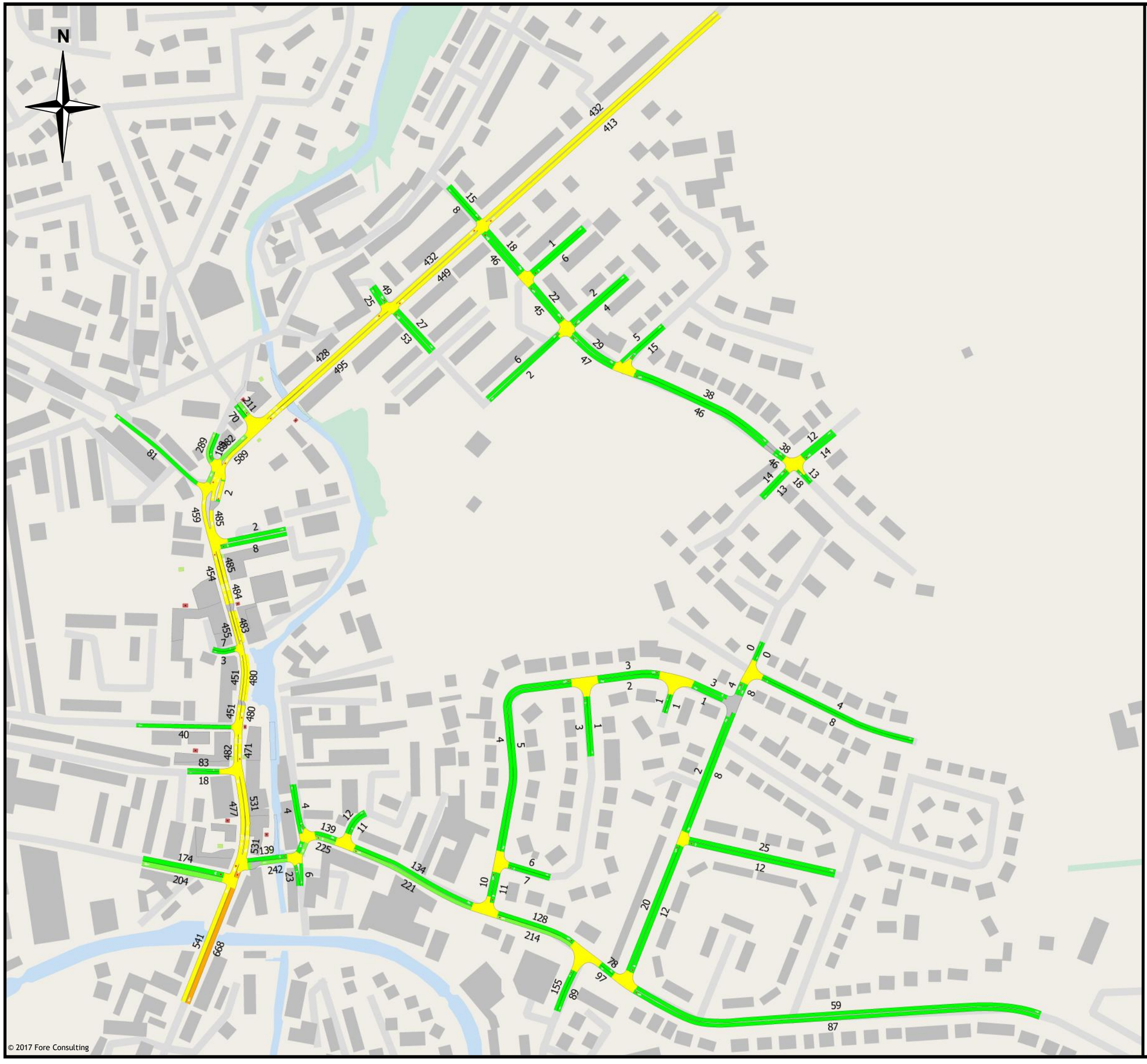
Figure Number:
Figure 8



Key:

Simulated Flow (veh)

- 0 to 200
- 200 to 400
- 400 to 600
- 600 to 800
- 800 to 1000
- 1000 to 1200

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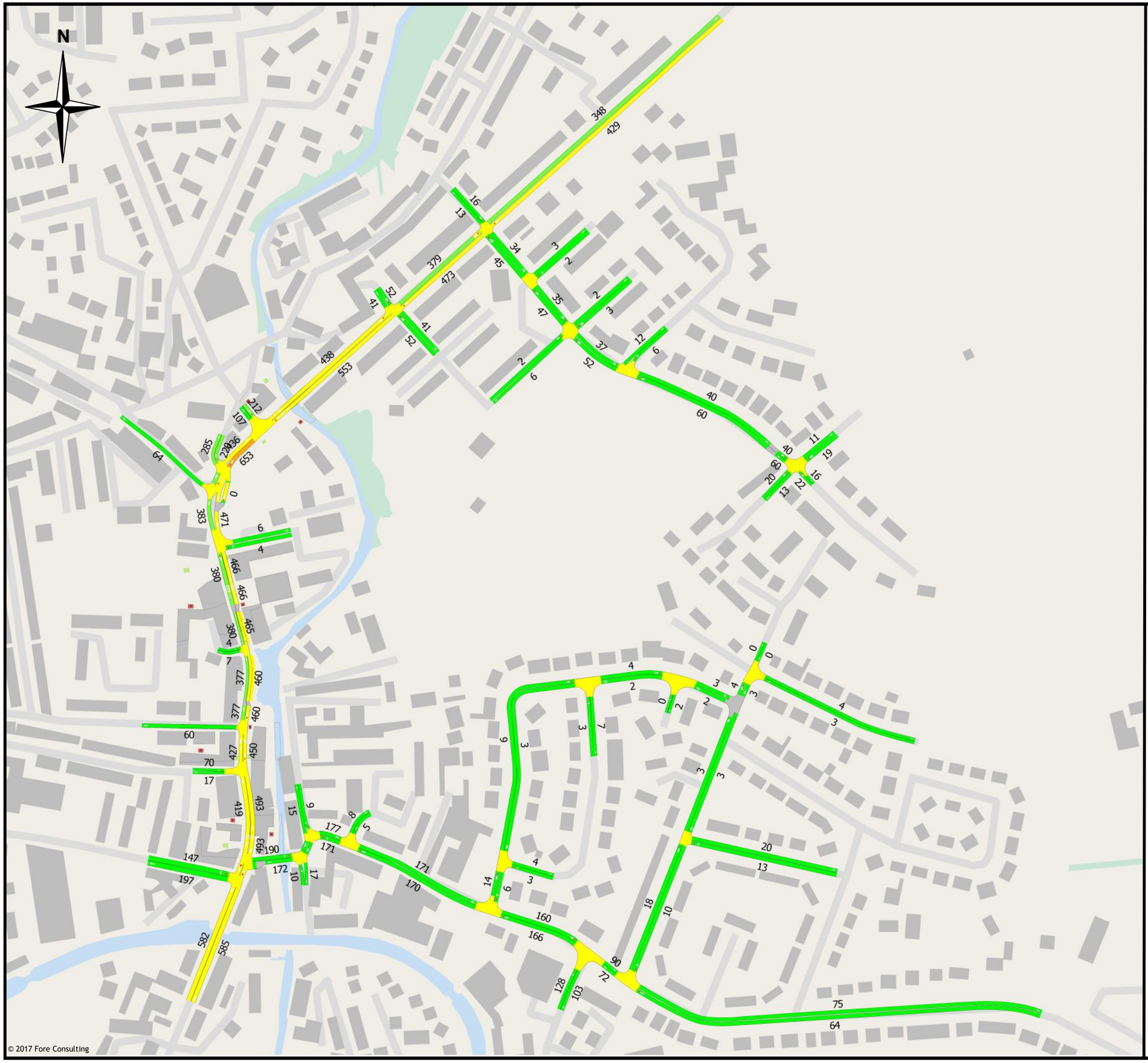
Figure Title:
2017 Base AM Simulated Flow

Scale:
Not to Scale

Figure Status:
Issue

Job Number:
3551

Figure Number:
Figure 9



Key:

Simulated Flow (veh)

- 0 to 200
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Project:
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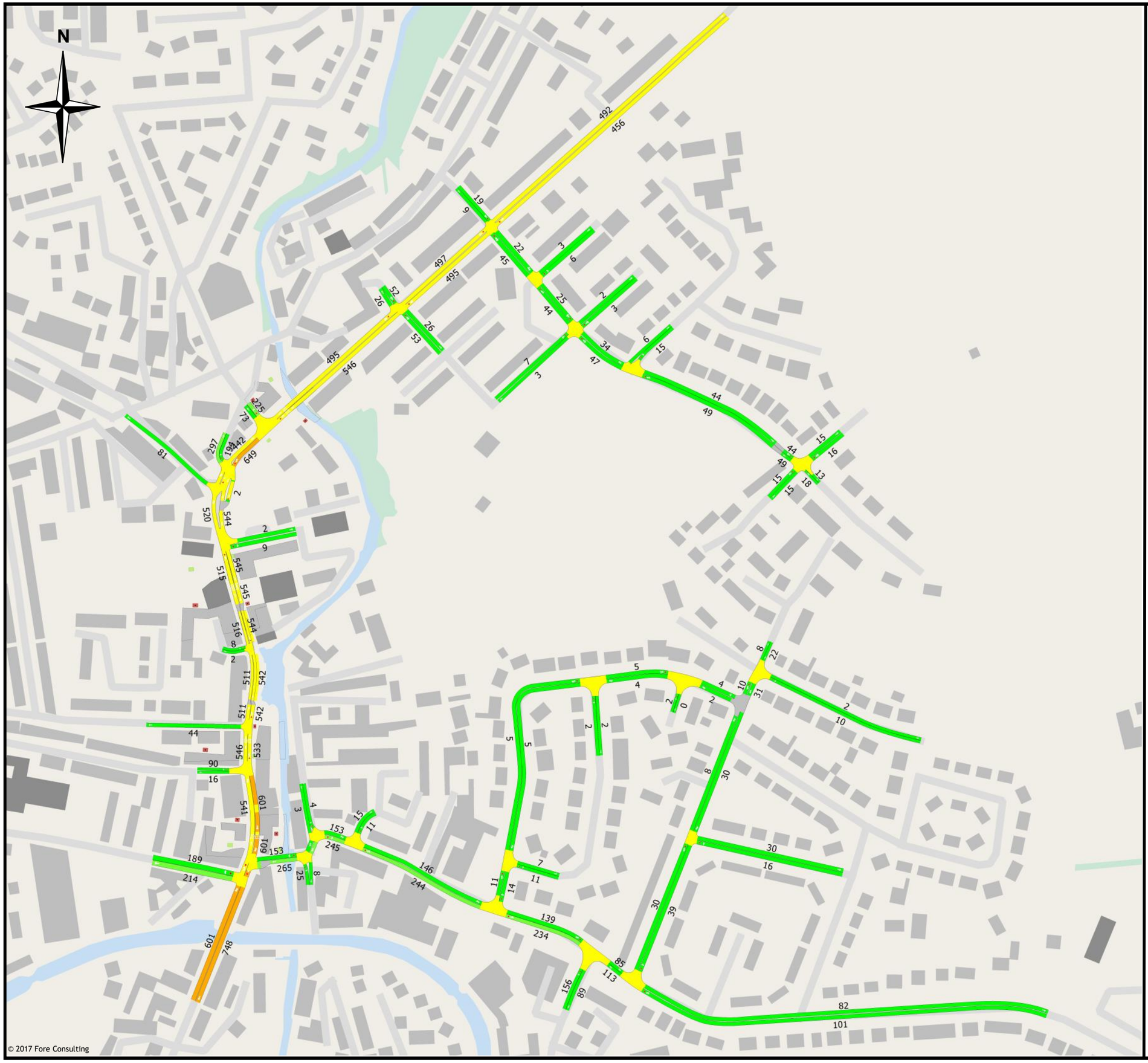
Figure Title:
2017 Base PM Simulated Flow

Scale:
Not to Scale

Figure Status:
Issue

Job Number:
3551

Figure Number:
Figure 10



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Key:

Simulated Flow (veh)

- 0 to 200
- 200 to 400
- 400 to 600
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Client:
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Project:
Silsden Primary school

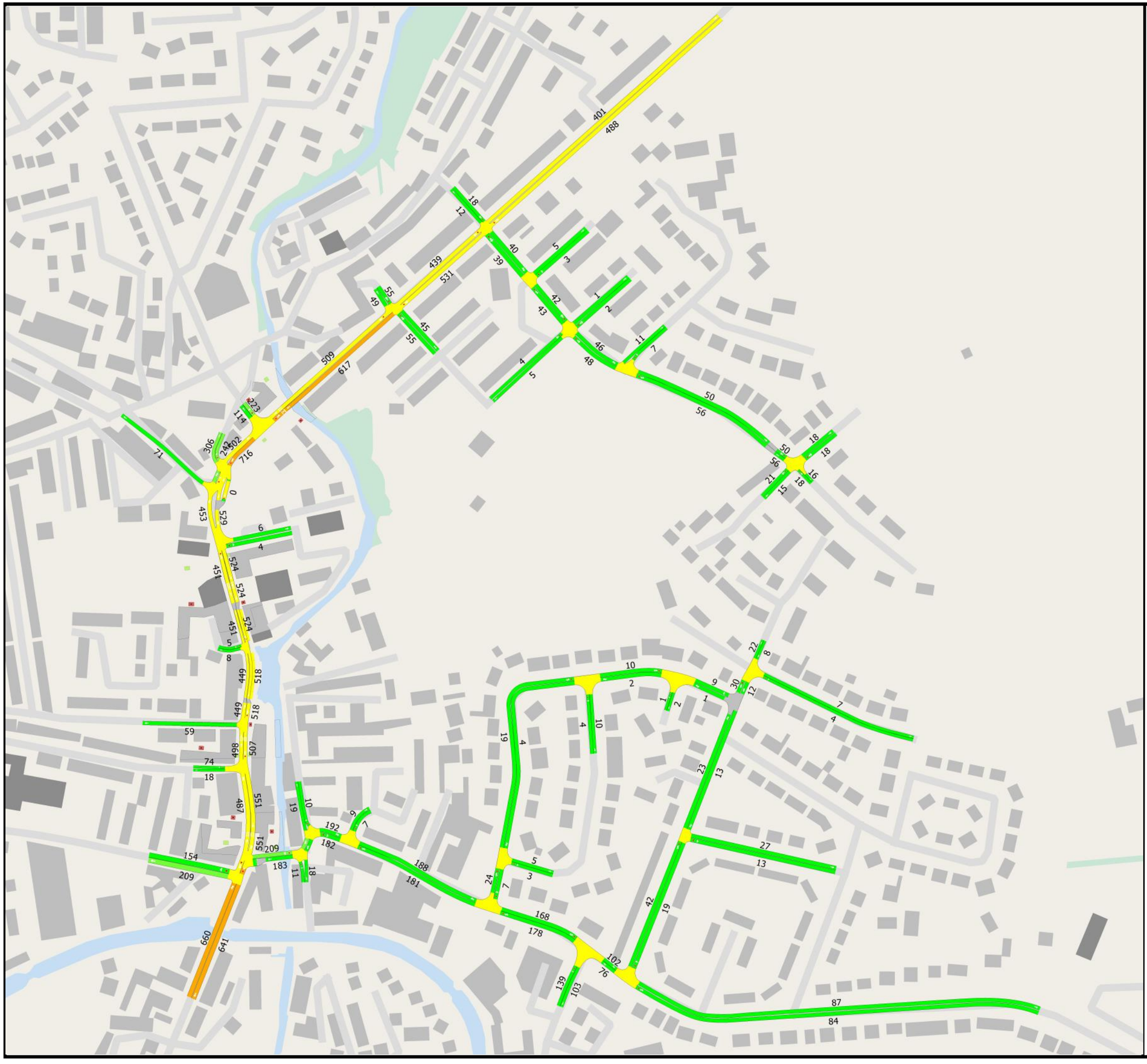
Figure Title:
2022 Do Minimum AM Simulated Flow

Scale:
Not to Scale

Figure Status:
Issue

Job Number:
3551

Figure Number:
Figure 11



Key:

Simulated Flow (veh)

- 0 to 200
- 200 to 400
- 400 to 600
- 600 to 800
- 800 to 1000
- 1000 to 1200

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Client:
City of Bradford Metropolitan District Council

Project:
Silsden Primary school

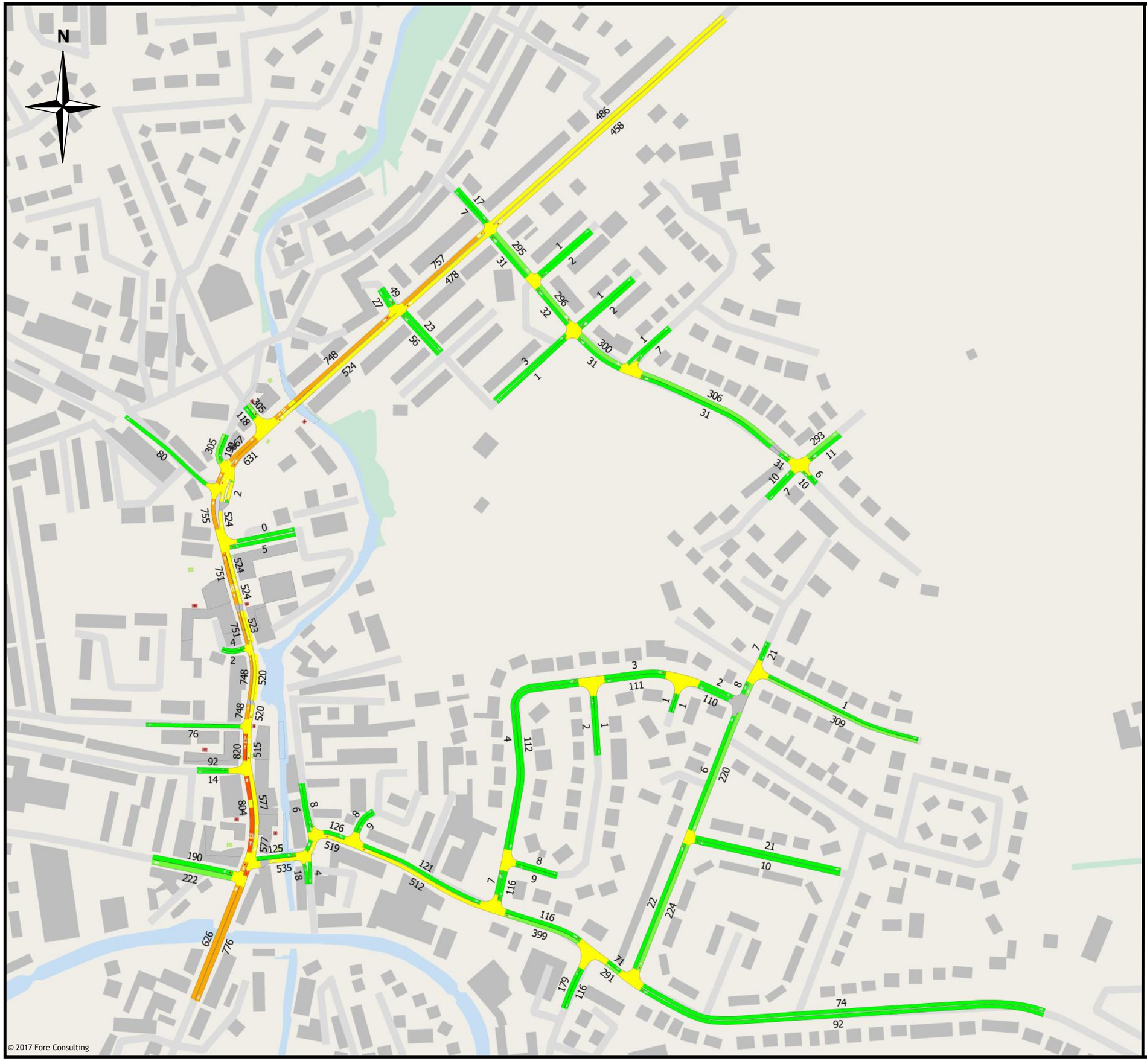
Figure Title:
2022 Do Minimum PM Simulated Flow

Scale:
Not to Scale

Figure Status:
Issue

Job Number:
3551

Figure Number:
Figure 12



Key:

Simulated Flow (veh)

- 0 to 200
- 200 to 400
- 400 to 600
- 600 to 800
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Project:
Silsden Primary school

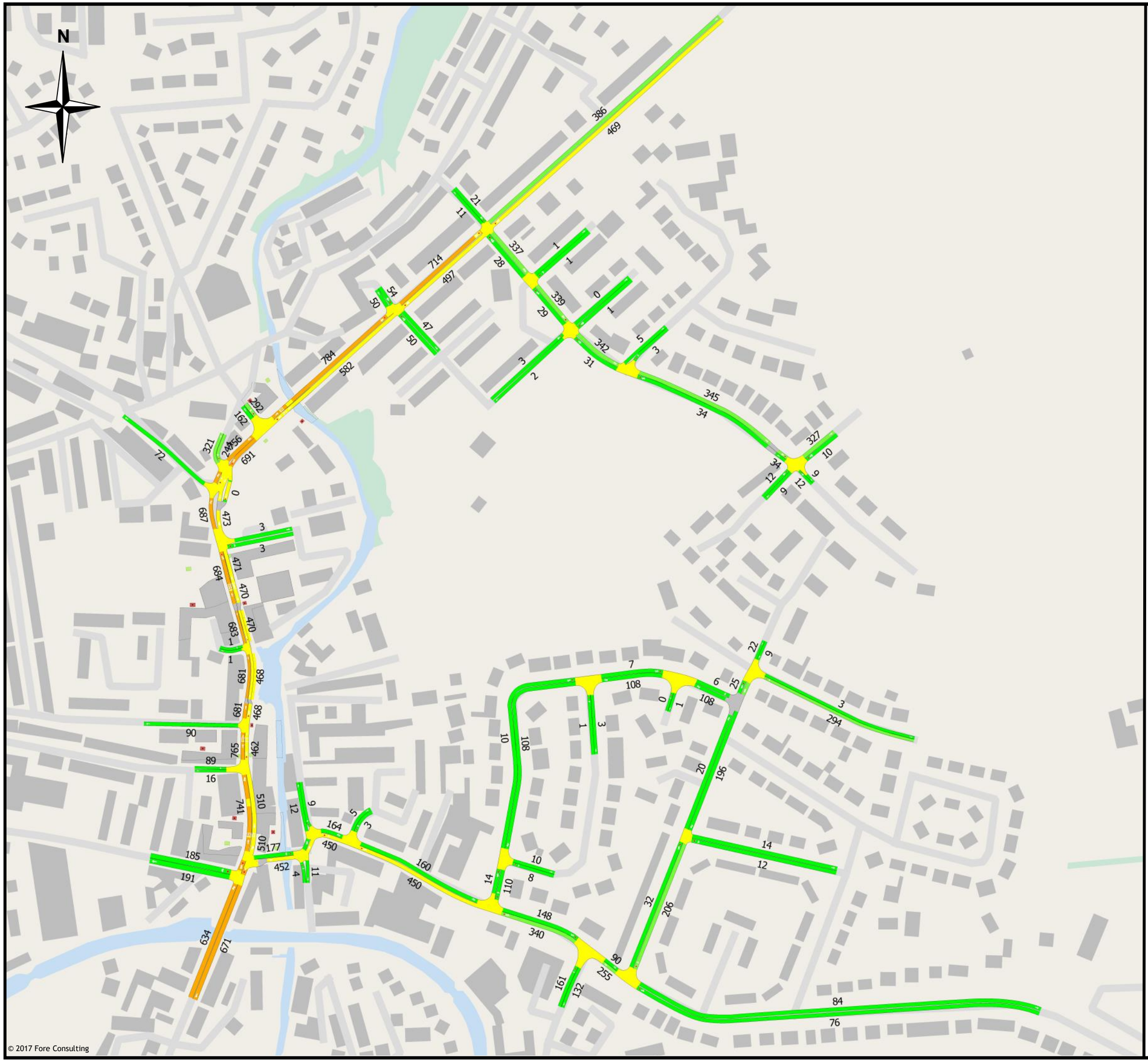
Figure Title:
2022 Do Something AM Simulated Flow

Scale:
Not to Scale

Figure Status:
Issue

Job Number:
3551

Figure Number:
Figure 13



Key:

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2022 Do Something PM Simulated Flow

Scale:
Not to Scale

Figure Status:
Issue

Job Number:
3551

Figure Number:
Figure 14

Appendix A

Preliminary Site Plan

1 **Site Plan Proposed - Landscape details**
1 : 500

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Notify Project Manager of any discrepancies.

This drawing is to be read in conjunction with all other contract documents and drawings.

This drawing is subject to confirmation by site survey.

All work to be in accordance with the current Building Regulations, current good practice & Construction, Design & Maintenance Regulations.

Revisions			
Rev	Issued by	Description	Date
A	TR	Draft Issue prior to Planning Application	05/05/17
B	MJH	Issue to Planning	17/10/17

Preliminary - RIBA Stage 02

City of BRADFORD METROPOLITAN DISTRICT COUNCIL

CLIENT:
CBMDC Education Client Services

PROJECT:
Proposed Silsden Primary School

DRAWING:
RIBA Stage 02 - Site Plan
Proposed Landscaping

Architect/Lead Designer:		OS Ref:	
MJH			
Drawn By:	Date:	Approved By:	Scale: @A0
TR/MJH	Oct 2017	BB	1 : 500

Drawing No. AR00404A118 A0 Rev A

Appendix B

Walking Route Audit

Bradford Metropolitan District Council
Silsden

School Route Audits to/from site

20 October 2017
Version 1.0
Draft

1 Route A – Ings Way Residential

Table 1: Audit of Route A – Blackgates Primary School

Ref	Description	Condition	Comment	Picture
A1	Daisy Hill	Good	There are footways along both sides of the carriageway and the area is well lit.	
A2	Daisy Hill / Howden Road	Adequate	There are no crossing facilities but the road narrows and is currently a quiet residential road.	

2 Route B – West Silsden

Table 2: Audit of Route B- Woodkirk Academy

Ref	Description	Condition	Comment	Picture
B1	Craven Drive	Good	There are footways along both sides of the carriageway and the area is well lit.	
B2	Public Right of Way	Good	There is a good footway with street lighting.	

Ref	Description	Condition	Comment	Picture
B3	Public Right of Way	Adequate	PROW path in poor condition in parts.	
B4	Pedestrian Bridge Crossing	Good	Bridge crossing the The Beck in good condition.	
B5	Keighley Road Crossing Facility	Good	Zebra Crossing Facility.	

3 Route C – North Silsden

Ref	Description	Condition	Comment	Picture
C1	Banklands Lane / Fletcher Avenue	Good	There is a well-lit footway along one side of the carriageway with a recreation ground along the other.	
C2	A6034 Bolton Road	Good	There are footways along both sides of the carriageway and the area is well lit.	

Ref	Description	Condition	Comment	Picture
C2	A6034 Bolton Road Crossing Facility	Good	Signal Controlled Pedestrian Crossing.	

Appendix C

Model Validation Report

City of Bradford Metropolitan District Council
Silsden Primary School

Model Validation Report

1 November 2017
Version 1.0
Issue


Fore

Contents

Appendices

1 Introduction

Fore Consulting Limited (Fore) has been commissioned by City of Bradford Metropolitan District Council (CBMDC) to develop an Aimsun microsimulation model for Silsden.

The model will be used to assess the impact of the proposed relocation of Silsden Primary School, including LEGION modelling of the four pedestrian crossings in Silsden.

This report sets out the development, calibration, and validation of the model.

1.1 Report Structure

This report is structured as follows:

- Chapter 2 describes the development of the model, including the coding of the network, traffic signals and public transport and the estimation of traffic demand matrices;
- Chapter 3 sets out the model verification process that was undertaken;
- Chapter 4 discusses the model calibration;
- Chapter 5 presents the validation of the model against observed traffic count and journey time data;
- Chapter 6 provides a summary and conclusions to the report.

2 Model Development

2.1 Purpose of the Model

The model has been developed to test the impacts of the proposed school relocation in Silsden, including the effects of pedestrian crossings on Bolton Road and the proposed one-way car driver pick up and drop off system.

2.2 Aimsun Version

The model has been developed in Aimsun version number 8.2.0 (R49393).

2.3 Extent of the Model

The extent of the Aimsun model is shown in Screenshot 1 and covers the TA study area. It extends along the A6034 Keighley Road from south of the bridge over the Leeds & Liverpool Canal to north of the Dale View junction. The model includes all junctions between these two points and extends to the east to include the main access roads for the proposed school.

Screenshot 1: Extent of the Model

2.4 Modelled Year and Time Periods

The model covers the following time periods, which have been chosen to capture the peak periods associated with school drop-off and pick-up:

- AM peak period: 08:30 to 09:30.
- PM peak period: 15:00 to 16:00.

In addition, the model demand has been input in 5 minute intervals to capture the detailed profile associated with school arrivals and departures. In addition, a fifteen minute warm-up period has been used to generate the initial starting point for the model.

2.5 Vehicle Types

The model considers the following vehicle types:

- Cars – comprising private cars and taxis;
- Light goods vehicles (LGVs) – with a gross vehicle weight of less than 3.5t;
- Heavy goods vehicles (HGVs) – with a gross vehicle weight greater than 3.5t;
- Buses – comprising all public service buses.

2.6 Network Development

The network was automatically generated by Aimsun using the Open Street Map importer and then refined using geo-referenced Ordinance Survey (OS) Mastermap data to provide a spatially accurate representation of the highway network. This data was supplemented by aerial photography and site visit information to enable the accurate positioning of stop-lines and lane markings.

2.7 Pedestrian Modelling

Pedestrians have been modelled in Aimsun using the integrated LEGION pedestrian simulator. Pedestrian movement data has been collected and inputed into Aimsun in the form of origin – destination matrices in 5 minute intervals. Pedestrian obstacles have been coded using an Ordinance Survey mapping base.

2.8 Traffic Signal Coding

The traffic signal-controlled junctions and pedestrian crossings that have been modelled are detailed in Table 1.

Table 1: Traffic Signal Controlled Pedestrian Crossings

Model ID	Junction or Crossing	Description of Control
2246	A6034 Kirkgate	Pelican Crossing Pedestrian Controlled using Legion 60s Cycle Time
2349	A6034 Bolton Road	Pelican Crossing Pedestrian Controlled using Legion 60s Cycle Time

For the signal controlled pedestrian crossings, the traffic signal controls have been coded to accurately reflect the on-street situation, with stages, green times and intergreens. The pedestrian crossings are actuated and called only when pedestrians are present within the model using Legion.

There are two zebra crossings within the study area, both located along the A6034 Bolton Road. In order to replicate the operation of these crossings they have been coded in as actuated signal controlled junctions with a cycle time of 10 seconds and called by pedestrians modelled in Legion. This reflects that on-site conditions whereby pedestrians would not be waiting long for cars to stop and enable crossings at the junction.

2.9 Public Transport

All bus stops within the modelled area have been coded into the model using various sources including the WYMetro[1] website, as well as aerial photography. The bus routes have been coded into the model based on published timetable and routing information. The routes and operators are listed in Table 2, below.

Table 2: Modelled Bus Services

Service	Between	Operator
903	Middleton Thorpe Lane - Roundhay	Jacksons

Dwell times for buses at each bus stop have been coded with a mean of 20 seconds and standard deviation of 10 seconds. This results in a variation in bus stop dwell times, with some buses stopping for short periods (for example, for passengers to alight) and some buses stopping for longer periods (for example, for passengers to board and purchase tickets).

2.10 Traffic Demand

2.10.1 Observed Traffic Data

Classified turning count traffic surveys (CTCs) covering key junctions in the study area were undertaken during the week commencing Monday 26 June 2017, as set out in Table 3. Turning counts were collected at a total of 7 junctions. The turning counts were collected in five minute intervals during the modelled peak periods and were classified by vehicle type. The count data at five minute intervals covers the time periods 08:30 to 09:30 and 15:00 to 16:00 and at fifteen minute intervals outside of this between 07:00 to 10:00 and 15:00 to 19:00. Results for these counts are included as Appendix A.

[1] https:// http://www.wymetro.com/

Table 3: Traffic Survey Locations

Location	Type	Date
A6034 Kirkgate / Elliott Street / Clogg Bridge (All Movements)	CTC	27/06/2017
A6034 Bolton Road / Bell Square (All Movements)		29/06/2017
A6034 Bolton Road / Dale View / Pickard Lane (All Movements)		28/06/2017
Howden Road / Daisy Hill (All Movements)		27/06/2017
A6034 Kirkgate / Aire View (Turning Movements Only)		28/06/2017
A6034 Kirkgate / New Road (Turning Movements Only)		29/06/2017
A6034 Bolton Road / Briggate (Turning Movements Only)		29/06/2017

2.10.2 Observed Pedestrian Data

Directional pedestrian movements covering the key pedestrian crossings in the study area were undertaken during the week commencing Monday 26 June 2017, as set out in Table 4. Pedestrian movement counts were collected at three junctions. As with the traffic counts they were collected at five and fifteen minute intervals where appropriate and were classified by person type (Children, Adults, Elderly). Results for these counts are included as Appendix A.

Table 4: Pedestrian Survey Locations

Location	Type	Date
Pelican Crossing on A6304 near Clog Bridge	Pedestrian Count	27/06/2017
Zebra crossing on A6034 near New Road		29/06/2017
Zebra Crossing on A6034 outside Silsden Town Hall		29/06/2017

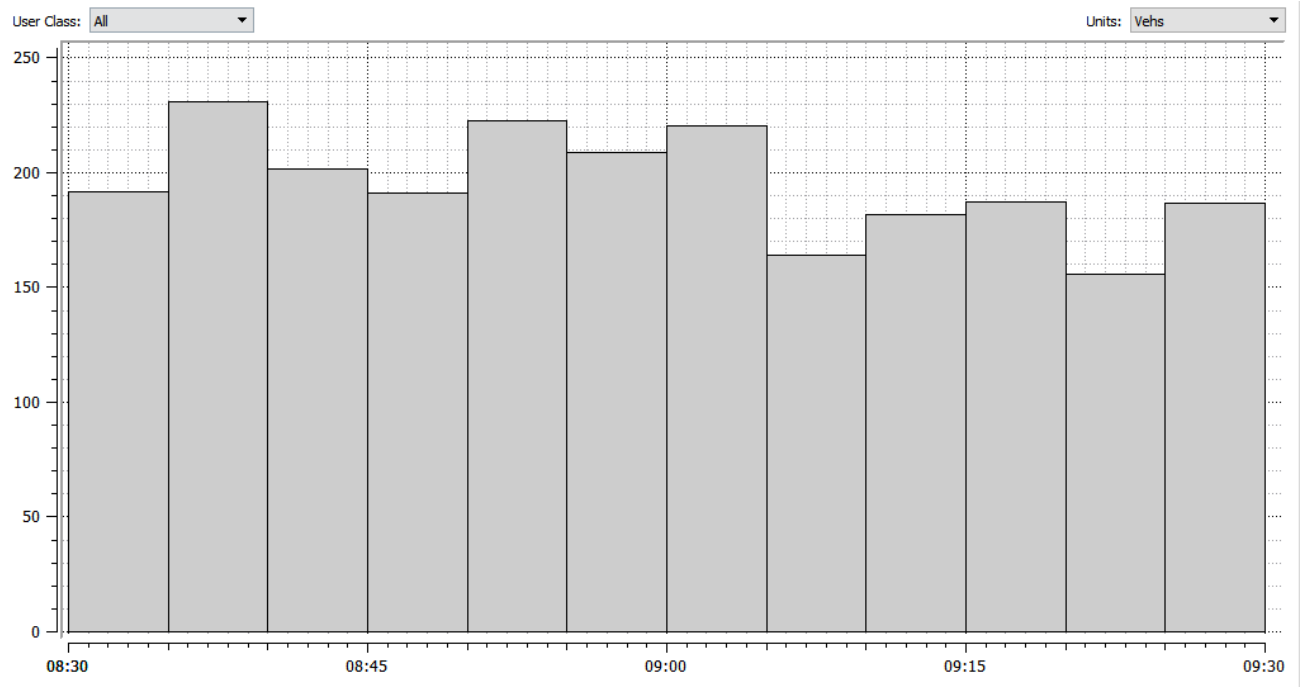
2.10.3 Matrix Development

Prior matrices were derived using small seed values. Aimsun's built-in matrix adjustment algorithm was then used to adjust the matrices so that modelled flows matched the observed turn and link flows. In addition, to provide further constraints to the matrix estimation process, the trip generation and attractions for all centroids where demand has not been directly observed (such as minor residential roads) have been estimated from trip rates.

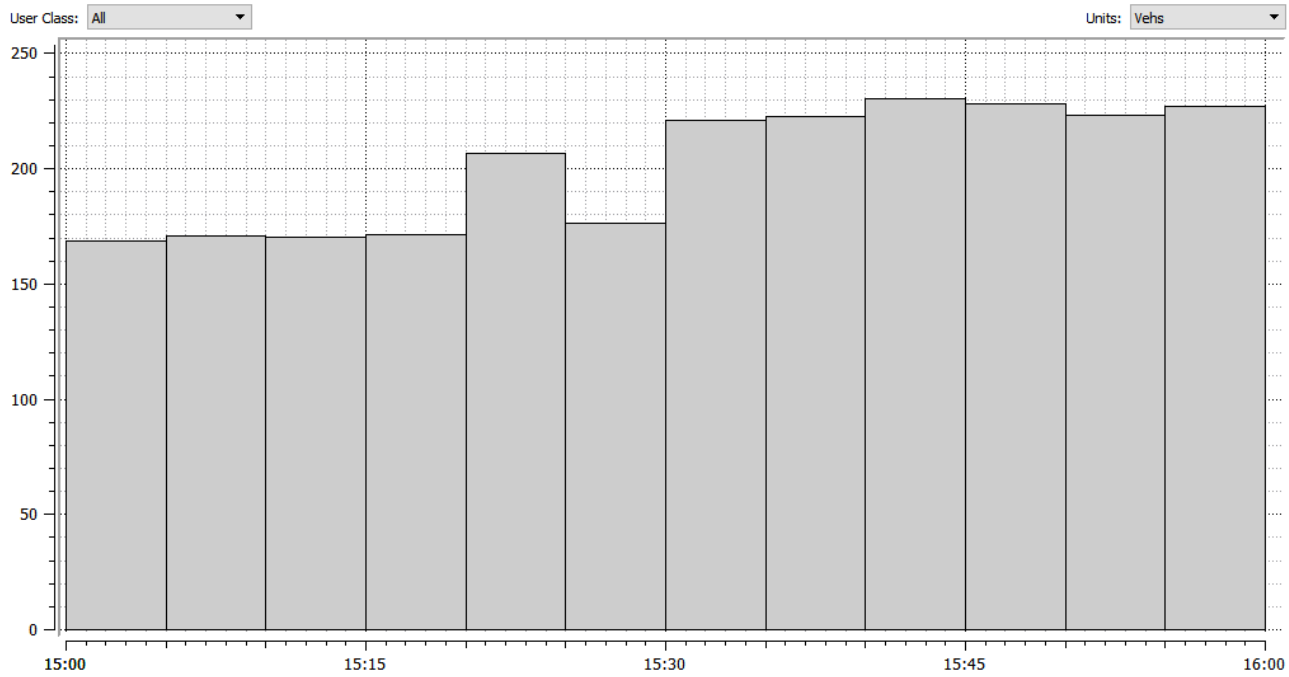
Demand matrices have been derived for each 5 minute time period for cars, LGVs and HGVs in the time periods 08:30 to 09:30 and 15:00 to 16:00. This process produced 72 matrices in total which were combined to create the AM and PM peak period traffic demands.

The use of 5 minute time-sliced matrices allows a realistic traffic profile to be created within the model that reflects both changes in traffic levels and traffic patterns over the modelled periods. The resulting traffic demand profiles for the 2017 base year are shown in Screenshot 2 to Screenshot 3.

Screenshot 2: AM Peak Period Traffic Demand Profile (All Vehicles)



Screenshot 3: PM Peak Period Traffic Demand Profile (All Vehicles)



3 Model Verification

Model verification is the process of ensuring the model is correctly specified and operates as expected. The inputs to the model have all been checked to ensure that geometry, stop-line location, number of lanes, bus stop locations, etc. have been coded as accurately as possible.

The “Check and Fix Experiment” feature in Aimsun has been used to identify any errors in the model coding and all warnings have been investigated and addressed, as necessary.

The models have been run as “animated simulations” and observed carefully to check that they are working correctly, with any errors being corrected. Traffic signal coding has been reviewed and the resulting operation has been compared to the operation on-site.

4 Model Calibration

4.1 Introduction

Model calibration is the process of adjusting the parameters of the model to ensure that simulated traffic flows, routes and travel behaviour correspond with observed behaviour. A number of features within the Aimsun models were calibrated to ensure the best representation of the network and driver behaviour.

The calibration parameters in the model include:

- Route Choice;
- Behavioural Models;
- Section characteristics;
- Give-way model parameters;
- Turn characteristics;
- Vehicle characteristics;
- Simulation step and reaction time;
- Traffic Flow Verification.

The calibration of the model is discussed in detail in the following sections.

4.2 Route Choice

Within the model study area, there is virtually no route choice, with any route choice limited to vehicles travelling on the residential roads of Craven Drive and Daisy Hill. This residential area would be used by very few, if any, vehicles. The “fixed using travel times calculated under free-flow conditions” route choice model has therefore been used. With this all-or-nothing route choice model, all vehicles are assigned to the quickest route, which avoids any vehicles being assigned to the routes set out above.

It is noted that the proposals include the introduction of the proposed school exit onto the residential area where there is route choice of either Craven Drive or Daisy Hill onto Howden Road that is likely to be used in the model. The limited route choice available in the base model is not considered to be sufficient to robustly calibrate route choice, hence the adoption of the fixed route choice model described above. It is therefore proposed

that the route choice associated with the new link road will be determined using the "OD Route" feature in Aimsun. This allows specific routes between origin-destination pairs to be defined along with the proportion of traffic using each route. The proportion of traffic using Craven Drive will be adjusted such that the queues for vehicles using either route onto Howden Road are broadly equal, effectively creating a user equilibrium.

4.3 Behavioural Models

4.3.1 Car Following and Lane Change Models

Both car following and lane changing models have global parameters for which it is possible to alter the default settings. The 2-lane car following model with default parameters was used in the model.

The lane changing model is a decision process and the factors of the model include percentage overtake (percentage of the desired speed of a vehicle below which the vehicle may decide to overtake), percentage recover (percentage of the desired speed of a vehicle above which a vehicle may decide to get back into the slower lane) and distance zone variability (the percentage variability in the look ahead distances described in section 4.3). In the model, none of the values were changed from these default settings, which are shown in Table 5.

Table 5: Car Following and Lane Changing Parameters

Parameter	Value
Percentage Overtake	90%
Percentage Recover	95%
Distance Zone Variability	40%

4.4 Section Characteristics

There are a number of section characteristics that can be calibrated in the Aimsun model as follows:

- **Section Maximum Speed:** This gives the maximum speed that vehicles travel on the section, although the maximum speed for each vehicle will vary (higher or lower) depending on speed limit acceptance characteristic of the drivers. The section maximum speed in the model has been set to be equal to the signed speed limit;
- **Yellow Box Speed:** The yellow box speed prohibits a vehicle from entering the junction area (which is designated as a yellow box) should the preceding vehicle be travelling at a speed lower than the specified value. This facility can be used to

model yellow boxes that are marked on-street. However, it is also used to simulate the effect of slow moving traffic on the main road allowing traffic to emerge from minor side roads, to avoid gridlock which often occurs in many microsimulation models, and to adjust the relative capacity of approaches. The yellow box speed can also be set by turning movement. The yellow box speed has been set to zero for some turns to and from minor road arms at priority junctions, whilst the major road yellow box speeds have been maintained at the default values. This has the effect of major road traffic creating gaps and showing courtesy to minor road traffic in congested situations.

- **Lane Changing Cooperation:** This parameter considers the percentage of upstream vehicles that try to create a gap for a vehicle that tries to change lanes. The default value of 80% has been used in the model.

4.5 Give-Way Model Parameters

- **Visibility to give way:** This is distance from the end of the link where vehicles begin to apply the gap acceptance model and is used to calibrate the capacity of priority junctions and has initially been set by road type, as shown in Table 6.

- **Visibility along main stream:** This is the distance along the major road within which vehicles travelling on the main road are taken into account in the gap acceptance model and has been set by road type, as shown in Table 6.

- **Initial and final safety margin and initial and final give-way time factor**: In the give-way model, minor road vehicles will emerge into the major road if there is a large enough gap to avoid a collision. The initial and final safety margins add an additional element of safety in the algorithm. This safety margin reduces over time from the initial to final safety margin to reflect the increased likelihood of a driver accepting a smaller gap the longer they have to wait. The length of time before the safety margin starts to reduce and length of time over which the safety margin in reduced depends on the give way time parameter, which varies for different vehicles. The initial and final give-way time factors can be adjusted to vary these lengths. These have been set by road type, as shown in Table 6.

Table 6: Give Way Parameters

Road Type	Visibility to Give Way (m)	Visibility along main stream (m)	Initial Safety Margin (s)	Final Safety Margin (s)	Initial Give-way Factor	Final Give-way Factor
Primary	30	60	3.0	1.0	1.0	2.0
Residential	30	60	3.0	1.0	1.0	2.0
Tertiary	30	60	3.0	1.0	1.0	2.0

Specific changes have been made at turn level to further calibrate the give-way behaviour.

4.6 Turning Characteristics

- **Turning Speed:** This is the maximum speed a vehicle will travel when making the turn, although the speed will vary (higher or lower) depending on the speed limit acceptance characteristic of the drivers. A vehicle driving through a section will start to decelerate while approaching the turn in order to reach its turning speed at the end of the section. The turning speed is maintained during the turn and, when entering the next section, the vehicle will start to accelerate again according to its desired speed for that section. The turning speeds in the model have been automatically calculated by Aimsun based on the geometry of the turn. The automatically calculated speeds have been reviewed to ensure they are appropriate, and the values have been manually lowered at roundabouts to generate more realistic behaviour.

- **Look Ahead Distance Zones 1 and 2:** The lane changing model considers three zones labelled Zone 1, 2 and 3. In Zone 1, lane-changing decisions are mainly governed by the traffic conditions of the lanes involved and the next desired turning movement is not taken into account. In Zone 2, it is the desired turning movement that affects the lane-changing decision. Vehicles not driving in the correct lane for the next turn tend to move towards the correct lane. Vehicles looking for a gap may try to adapt to it, but do not affect the behaviour of vehicles in the adjacent lanes. In Zone 3, vehicles are forced to reach the correct lane, reducing speed if necessary, and even coming to a complete stop in order to make the lane change possible. Also, vehicles in the adjacent lane can modify their behaviour in order to provide a gap big enough for the vehicle to change lanes. The “Distance Zone 1” and “Distance Zone 2” parameters determine the locations of Zones 1, 2 and 3 and therefore affect how the lane changing model is applied in different parts of the network. These parameters were

reviewed in order to obtain realistic lane-changing behaviour and lane usage in the model.

4.7 Vehicle Characteristics

There are several vehicle characteristics specified in the model. Almost all parameters are defined using a truncated normal distribution. The mean, standard deviation, maximum and minimum values are carefully defined. The characteristics can be broadly split into two categories: vehicle properties and driver characteristics. Vehicle properties include size, maximum speed and maximum acceleration and driver characteristics include speed acceptance, minimum distance between vehicles and maximum give way time. The following characteristics have been changed from default values:

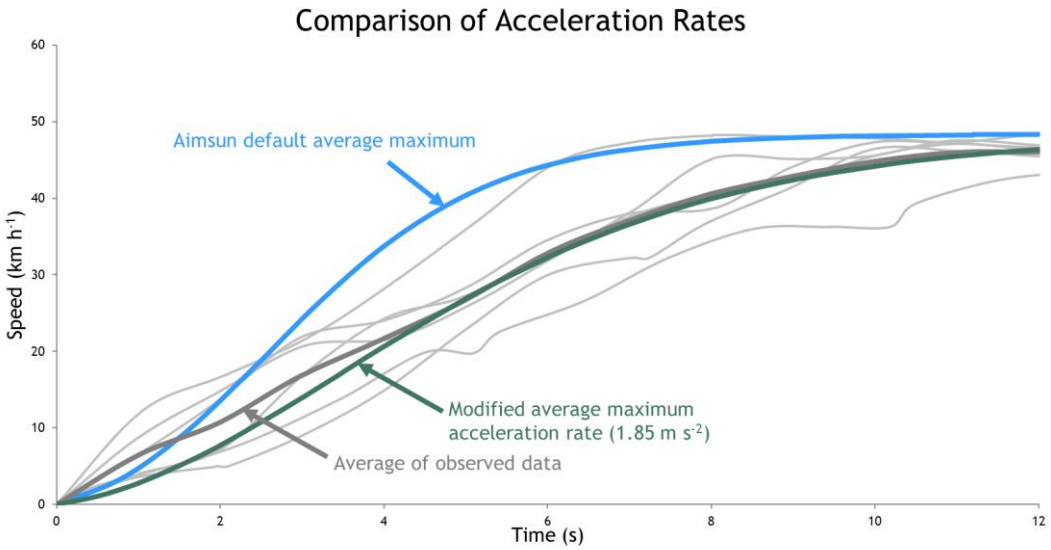
- **Maximum Acceleration:** The default maximum acceleration rates in Aimsun are generally high for the UK, especially for cars. Revised maximum acceleration parameters based on research[2] have therefore been used and these are set out in Table 7 and Graph 1.

Table 7: Maximum Acceleration Rates

Vehicle Type	Maximum Acceleration Rates (m s^{-2})			
	Mean	Standard Deviation	Minimum	Maximum
Car	1.85	0.43	1.35	2.75
HGV	1.25	0.5	0.75	1.75
LGV	1.65	0.5	1.15	2.15
Bus	1.5	0.5	1	2

[2] Zallinger, M., Tate, J., and Hausberger, S. 2008. An instantaneous emission model for the passenger car fleet. Transport and Air Pollution conference, Graz 2008

Graph 1: Comparison of Acceleration Rates



- **Maximum Give Way Time:** When a vehicle is in a give-way situation, for example at a Yield or Stop sign in a junction or an on-ramp in a freeway, it applies either the normal gap-acceptance model or a lane-changing model in order to cross or merge with traffic, respectively. When a vehicle has been at a standstill for more than this Give-way Time (in seconds), it will become more aggressive and will reduce the acceptance margins. This period is also used in the Lane-Changing model as the time that a vehicle accepts being at a standstill while waiting for a gap to be created in the desired turning lane before giving up and continuing ahead. The default values have been used.

4.8 Simulation Step and Reaction Time

The reaction time is a global parameter which defines the time it takes a driver to react to changes in speed of the preceding vehicle, and this will influence the capacity at signal controlled junctions. The parameter can be either fixed (for all vehicle types) or variable (a discrete probability function is defined for each vehicle type). A reaction time of 0.6s has been used, as this is required for the Legion simulator.

The reaction time at stop (which determines how quickly a vehicle reacts from a complete stop) and reaction time at traffic light (which determines how quickly the vehicle at the head of the queue at a traffic signal reacts to the changing signals) are also global parameters which can be varied. These have been left as the default Aimsun values.

The reaction time parameters set for each time period in the model are shown in Table 8.

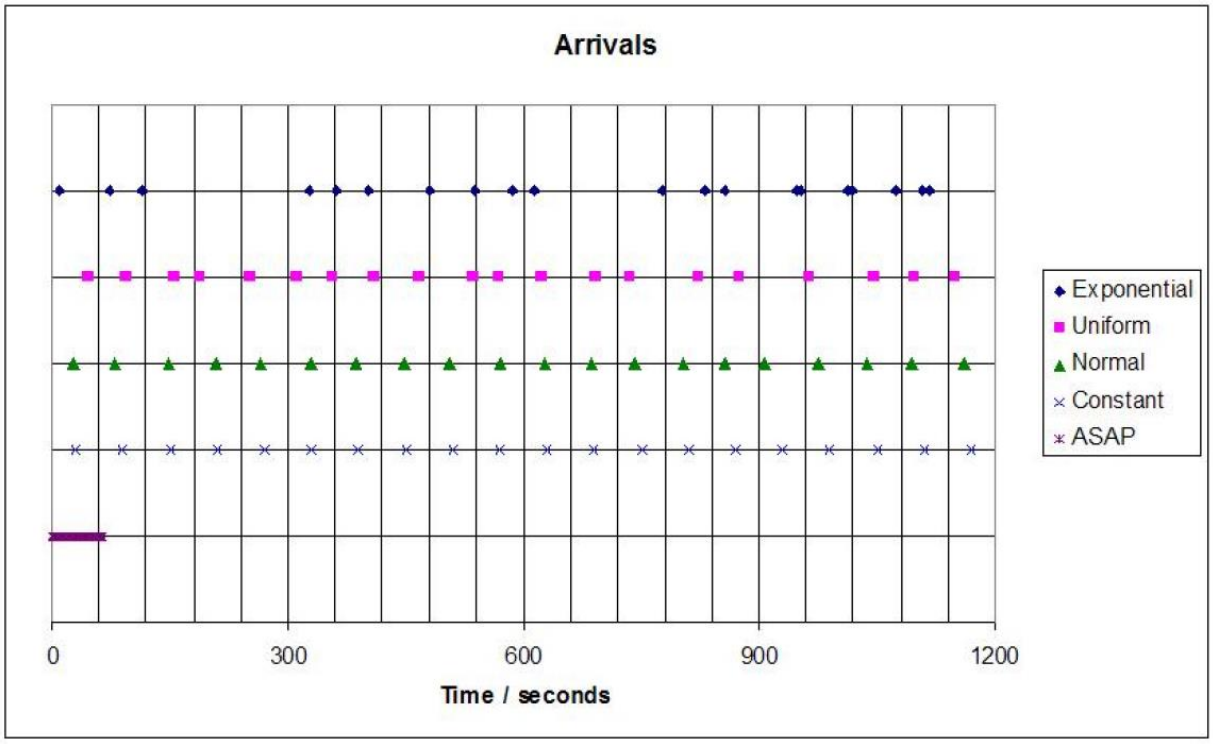
Table 8: Simulation Step and Reaction Time

Parameter	Value (s)
Simulation Step / Reaction Time	0.6
Reaction Time at Stop	1.2
Reaction Time at Traffic Light	1.6

4.9 Trip Generation

When loading a traffic demand into the simulation model a number of different models can be used to determine the headway between two consecutive vehicle arrivals. Five types of traffic generation are available in Aimsun: exponential, uniform, normal, constant, and ASAP. Figure 1 illustrates the trip generation profile for each type of distribution. Clearly, the ASAP distribution is not appropriate for this model and was therefore discounted. Sensitivity testing of the other distributions was undertaken to determine which best reflected reality. The uniform, normal and constant distributions did not result in sufficient variation in traffic flows. The exponential distribution was therefore used as it models some platooning on the approaches to the model.

Figure 1: Trip Generation



5 Traffic Flow Verification

5.1 Introduction

Modelled traffic flows have been compared to observed traffic flows to determine whether the model is accurately reproducing the observed situation. Whilst this is not strictly validation in this instance, as the observed traffic flows have been used to estimate the demand matrices and are not independent, it is important to demonstrate that the model accurately reproduces link flows and turning movements at the junctions that are to be considered as part of the Transport Assessment. The use of non-independent data is considered to be valid in this case, as there is no route choice in the model to calibrate or validate.

5.2 Verification Criteria

Modelled traffic flows have been compared to observed traffic flows to assist in the calibration of the model. This calibration has been undertaken using the following measures:

- The absolute and percentage differences between modelled and observed flows;
- The GEH statistic, which is a form of the Chi-squared statistic that incorporates both relative and absolute errors, and is defined as follows:

$$GEH = \sqrt{\frac{2(M-C)^2}{(M+C)}}$$

Where M is the modelled flow

C is the observed flow

The verification criteria and acceptability guidelines that have been adopted for both section and turning movement flows are as follows:

Table 9: WebTAG Section Turning Flow Calibration / Validation Criteria and Acceptability Guidelines

Criteria	Description	Acceptability Guideline
1	Individual flows within 100 veh/h of counts for flows less than 700 veh/h	> 85% of cases
	Individual flows within 15% of counts for flows from 700 to 2,700 veh/h	
	Individual flows within 400 veh/h of counts for flows more than 2,700 veh/h	
2	GEH < 5 for individual flows	

In accordance with the guidance set out in the WebTAG, any sections or turning movements that meet either of the criteria are considered to be acceptable.

5.3 Verification Results

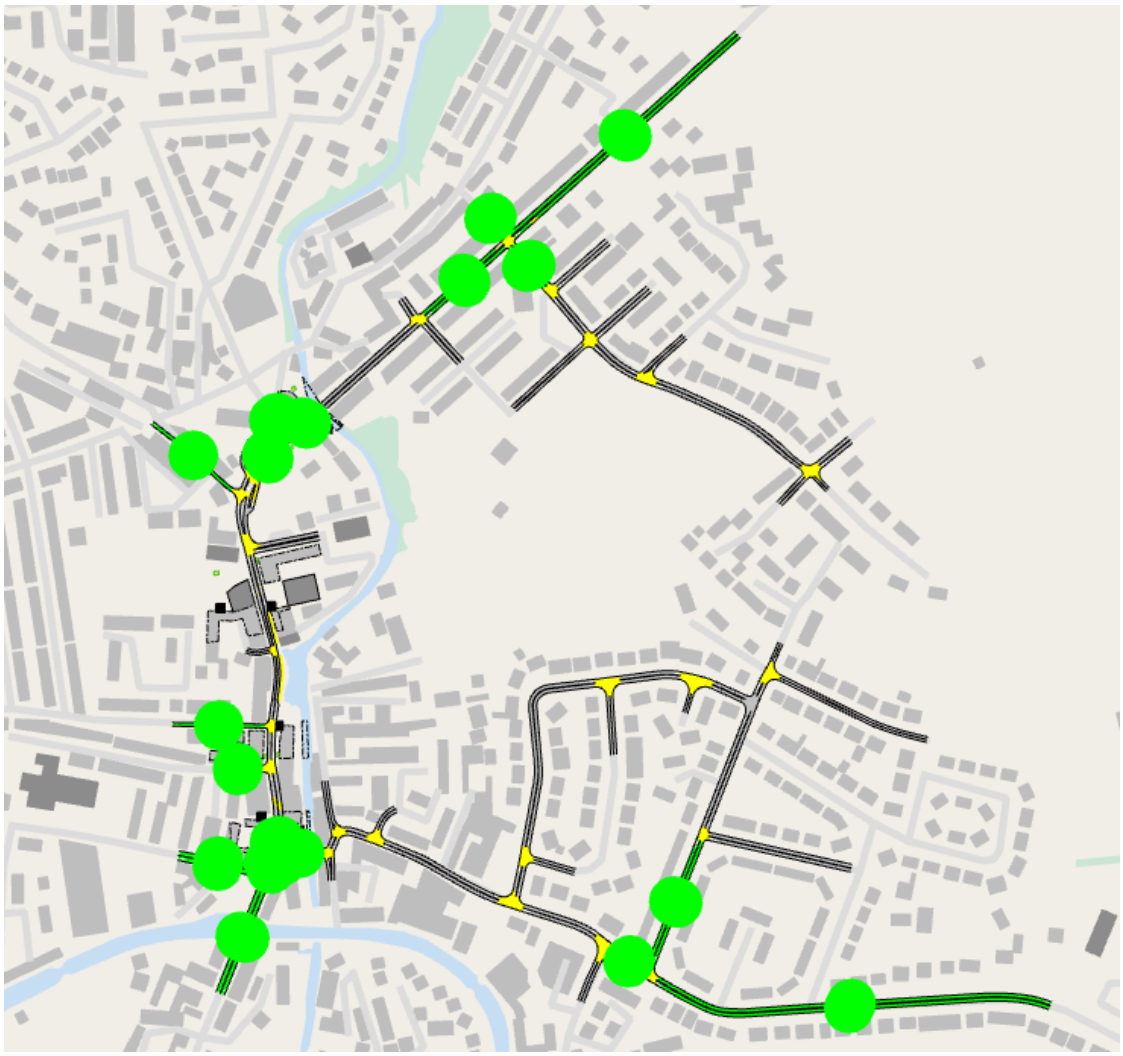
The results of the traffic flow verification for turn counts in the AM and PM peak periods are summarised in Table 10 for section and turning movements, respectively. The analysis shows that the traffic flows within the model are represented to a high level of accuracy, all section and turning flows being replicated within the acceptability guidelines.

Additionally, the results are shown spatially in Screenshot 4 to Screenshot 7. Green represents a GEH statistic of less than 5, orange represents a GEH statistic between 5 and 10 and red represents a GEH statistic greater than 10. The analysis shows that traffic flows in the model are reproduced to an acceptable level of accuracy, with all links and turns having GEH statistics of less than 5 in both the AM and PM peak periods.

Table 10: Summary of Peak Traffic Flow Verification

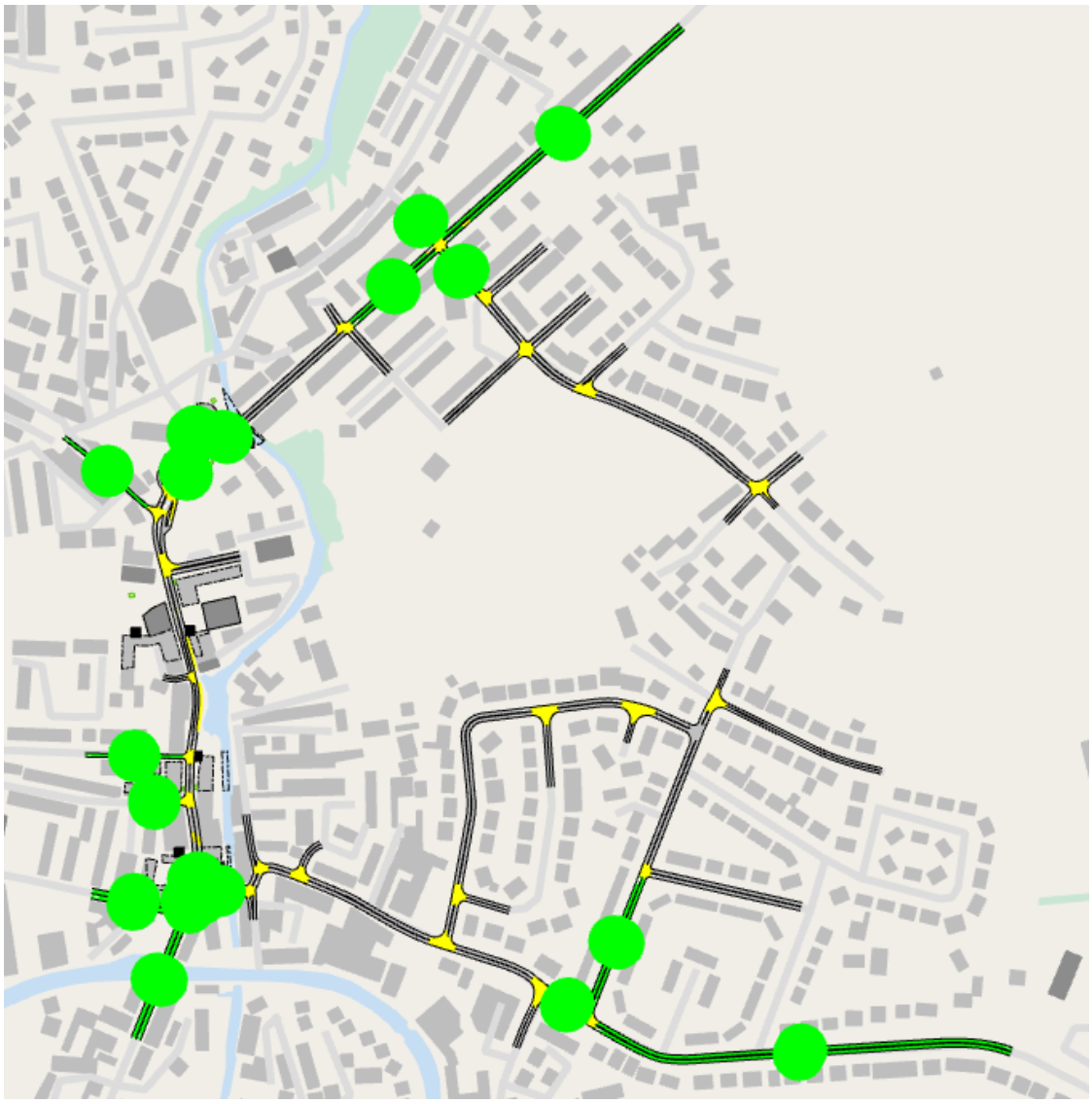
Criteria	Description	Percentage Meeting Criteria	
		Sections	Turns
AM Peak Period (08:30 to 09:30)			
1	Individual flows within 100 veh/h of counts for flows less than 700 veh/h	100.0%	100.0%
	Individual flows within 15% of counts for flows from 700 to 2,700 veh/h	N/A	N/A
	Individual flows within 400 veh/h of counts for flows more than 2,700 veh/h	N/A	N/A
2	GEH < 5 for individual flows	100.0%	100.0%
Percentage meeting either criteria 1 or 2		**100.0%**	**100.0%**
PM Peak Period (15:00 to 16:00)			
1	Individual flows within 100 veh/h of counts for flows less than 700 veh/h	100.0%	100.0%
	Individual flows within 15% of counts for flows from 700 to 2,700 veh/h	N/A	N/A
	Individual flows within 400 veh/h of counts for flows more than 2,700 veh/h	N/A	N/A
2	GEH < 5 for individual flows	100.0%	100.0%
Percentage meeting either criteria 1 or 2		**100.0%**	**100.0%**

Screenshot 4: AM Peak (08:30 to 09:30) Section Flow Verification



Screenshot 5: AM Peak (08:30 to 09:30) Turn Flow Verification

Screenshot 6: PM Peak (15:00 to 16:00) Section Flow Verification



Screenshot 7: PM Peak (15:00 to 16:00) Turn Flow Verification

5.4 Regression Analysis

As well as considering the GEH statistic, DMRB[3] recommends the use of regression analysis to compare how well the observed and modelled data are correlated. The regression analysis calculates the correlation coefficient (R), which can be used to measure the goodness of model fit. A correlation coefficient of 1.0 would denote a perfect fit and DMRB advises that the correlation coefficient should be greater than 0.95.

Screenshot 8 to Screenshot 11 illustrates the regression lines in AM and PM periods and Table 11 summarises the values of the correlation coefficient, R. The table shows that the calibration sections and turns in both periods have a correlation co-efficient that exceeds the DMRB guidance.

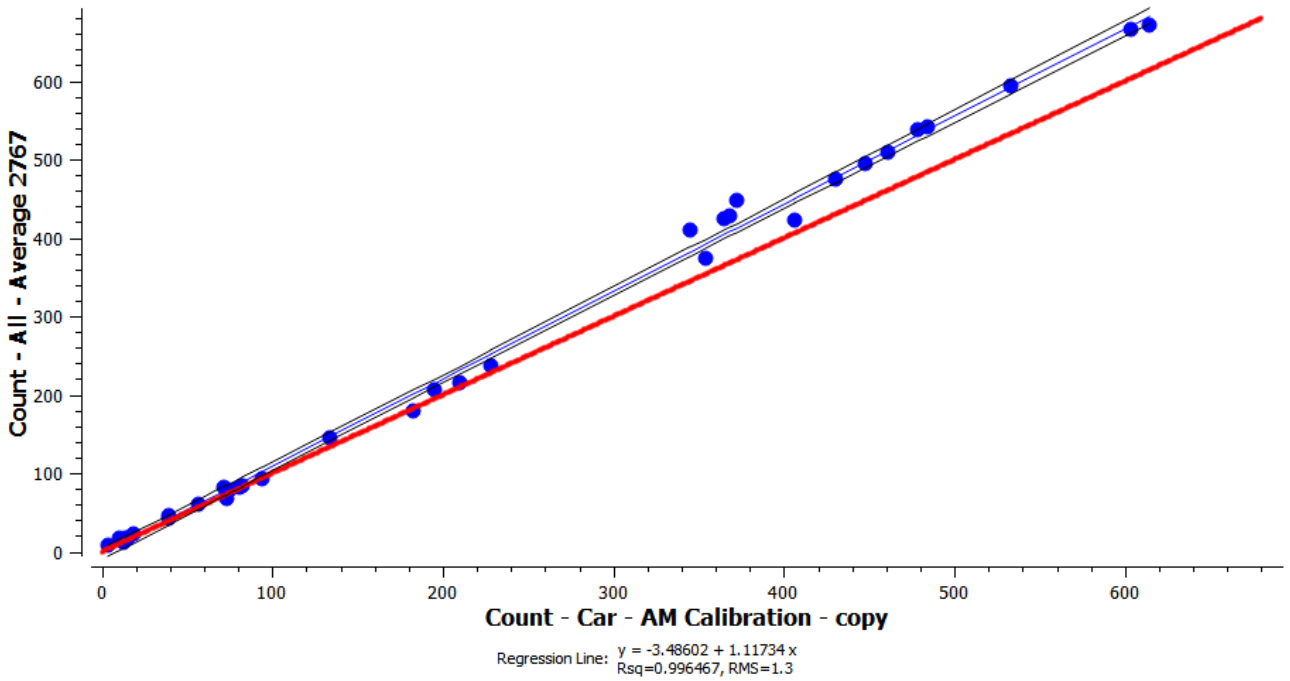
Table 11: Aimsun Model Traffic Flow Calibration Correlation Coefficients

Type	Correlation Coefficient, R	
	AM Peak Period (08:30 to 09:30)	PM Peak Period (15:00 to 16:00)
Sections	0.996	0.995
Turns	0.998	0.996

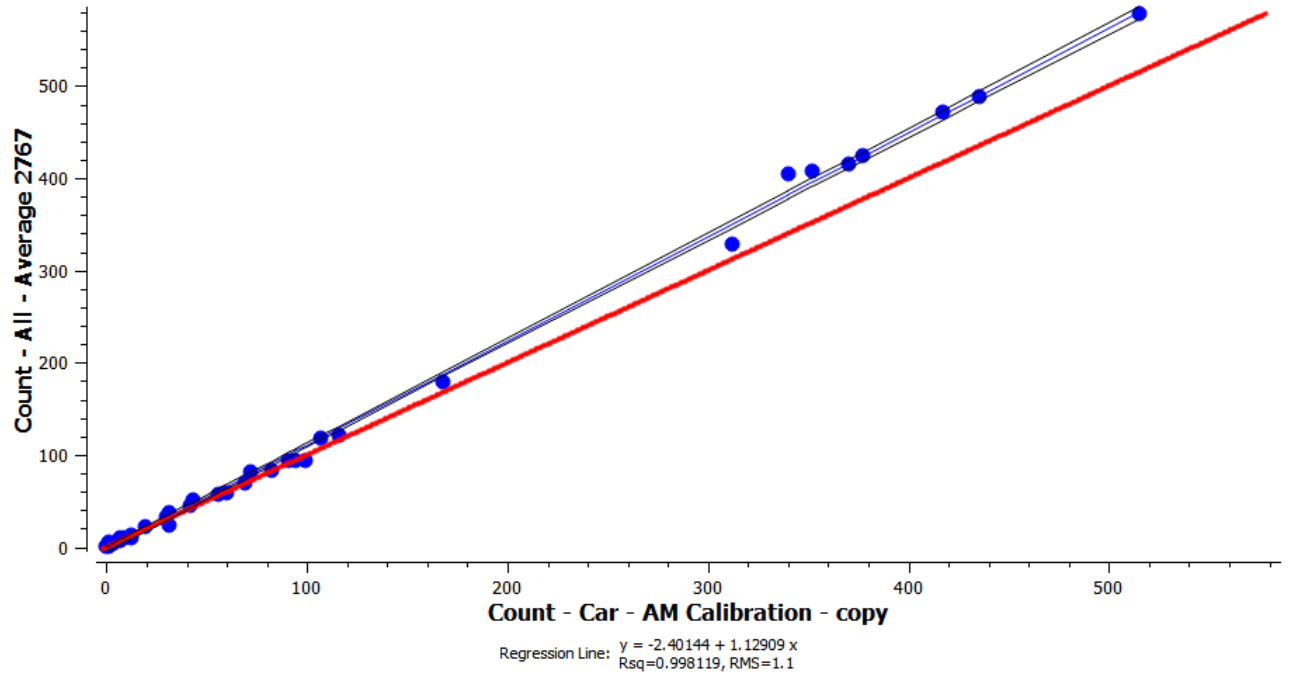
Note: All values rounded to 3 decimal places

[3] Design Manual for Roads and Bridges, Volume 12, Section 2, Part 1, Paragraph 4.4.42

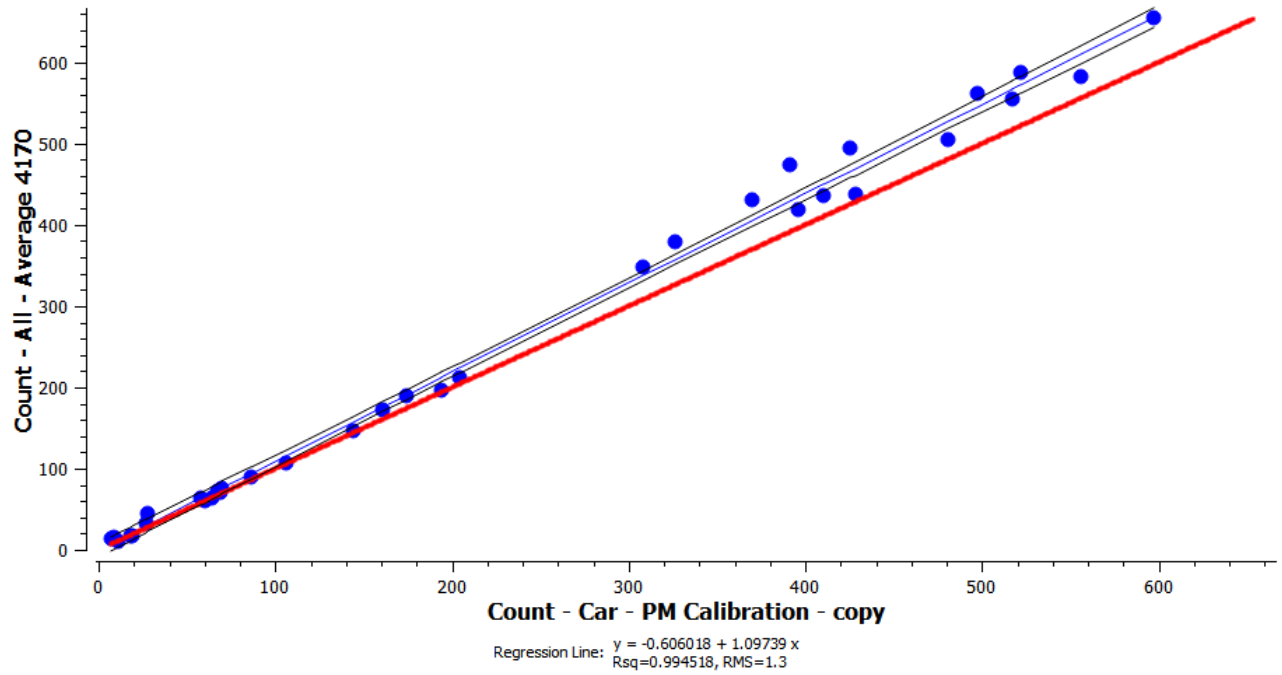
Screenshot 8: Regression Analysis - AM Peak Period (08:30 to 09:30) - Sections



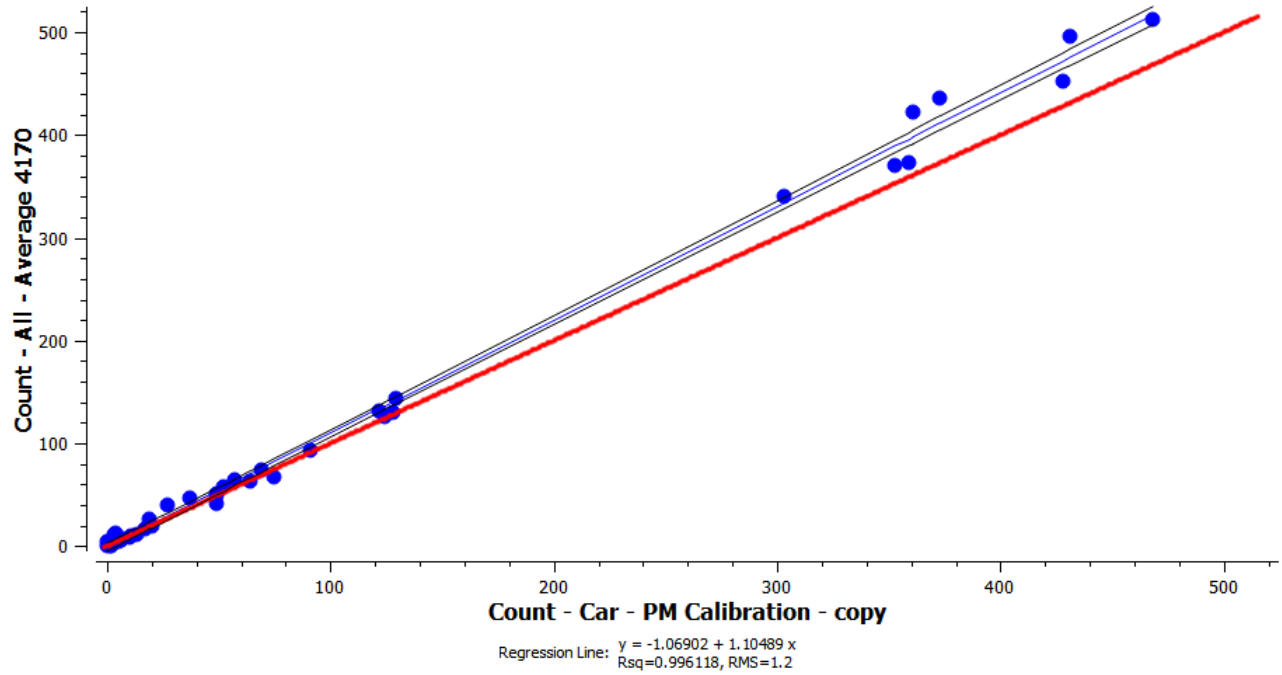
Screenshot 9: Regression Analysis - AM Peak Period (08:30 to 09:30) - Turns



Screenshot 10: Regression Analysis - PM Peak Period (15:00 to 16:00) - Sections



Screenshot 11: Regression Analysis - PM Peak Period (15:00 to 16:00) - Turns



6 Model Validation

The validation process determines whether the simulated model is an accurate representation of the observed situation by comparing modelled output data with observed data. Given the size of the model and the low levels of congestion in Silsden it was deemed appropriate in this case that a site visit survey to check onsite conditions would be appropriate to validate the model.

The site visit confirmed that the queuing occurred at the Keighley Road / Elliott Street / Clog Bridge junction. During the site visit the maximum queues on Elliott Road were around 8 to 9 vehicles whilst from Clog Lane the queues were less with generally 2 to 3 vehicles. This is reflected in the modelling outputs with maximum queues on the Elliott Road approach being 8 and 5 vehicles in the AM and PM peak period, respectively. Whilst from Clog lane the maximum queues from the model is one vehicle in both peak periods.

At all other locations, any queuing was observed to be small and short-lived and this is reflected in the model.

We therefore consider the model to be representative of a typical day and validates to observations on site.

7 Summary and Conclusion

7.1 Introduction

Fore Consulting Limited (Fore) has been commissioned by CBMDC to deveop an Aimsun microsimulation model for Silsden. The model will be used to test the impact of the proposed relocation of Silsden Primary School.

This report sets out the development and calibration of the model.

7.2 Model Description

The model has been developed to be representative of typical conditions in the year 2017 during the following time periods:

- AM peak period: 08:30 to 09:30;
- PM peak period: 15:00 to 16:00.

7.3 Calibration and Validation

The model has been fully calibrated and accurately reflects traffic flows. The model has been validated by comparing modelled queues to on-site observations.

7.4 Conclusion

It is therefore concluded that the model is a suitable tool to assess the impact of the proposed development and assocaited mitigation schemes on the local highway network.

Appendix A

Traffic Survey Data

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT** **PRINT OPTIONS**

LOCATION OF CENSUS A6034 Keighley Road — **Site Ref No.** AAAA-1168-Site1A

Date of census Day: Tue; Date: 27-Jun-17; **Weather** Wet; **12 hour** No

Direction of Travel From: Keighley Rd (S); Turn: left turn; To: Elliot Street

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			10				2	12	14
0715-0730			8	1			1	10	12
0730-0745	1		24	2			5	32	37
0745-0800			14				1	15	16
0800-0815			17					17	17
0815-0830			5					5	5
0830-0835			3	1				4	5
0835-0840			20				1	21	22
0840-0845			9					9	9
0845-0850			10	1				11	12
0850-0855			6		1			7	8
0855-0900			9					9	9
0900-0905			13					13	13
0905-0910			7				1	8	9
0910-0915			4					4	4
0915-0920			6					6	6
0920-0925			3					3	3
0925-0930			17					17	17
0930-0945			13				1	14	15
0945-1000			12					12	12
1500-1505			5					5	5
1505-1510			15				1	16	17
1510-1515			13					13	13
1515-1520			14					14	14
1520-1525			19					19	19
1525-1530			13				1	14	15
1530-1535			15				3	18	21
1535-1540			5				2	7	9
1540-1545			6					6	6
1545-1550			6					6	6
1550-1555			13					13	13
1555-1600			4					4	4
1600-1615			29					29	29
1615-1630	1		35				1	37	37
1630-1645			26				2	28	30
1645-1700			24				1	25	26
1700-1715			37				1	38	39
1715-1730			43					43	43
1730-1745			27				1	28	29
1745-1800	1		35					36	35
1800-1815			31					31	31
1815-1830	1	1	23					25	23
1830-1845	1		41				1	43	43
1845-1900			30					30	30
TOTAL	**5**	**1**	**719**	**5**	**1**	**0**	**26**	**757**	**781**
0800-0900	0	0	79	2	1	0	1	83	86.3
1630-1730	0	0	130	0	0	0	4	134	138
1700-1800	1	0	142	0	0	0	2	145	146

ADDITIONAL COUNT SHEETS

There are currently

0 extra count sheets

TOTAL FLOW THROUGH JUNCTION
Vehicles
9196 Survey

1365 0800-0900

1404 1630-1730

1444 1700-1800
NB includes up to 10 minor moves/ u turns

Data not yet sent

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS A6034 Keighley Road — **Site Ref No.** AAAA-1168-Site1A

DATE OF CENSUS Day: Tue; Date: 27-Jun-17; **Weather** Wet

Direction of Travel From: Keighley Rd (S); Turn: ahead; To: Keighley Rd (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715	0	1	77	2	0	2	4	86	93
0715-0730	0	0	107	5	1	4	11	128	148
0730-0745	0	0	104	9	1	1	2	117	126
0745-0800	0	0	78	6	5	3	1	93	107
0800-0815	1	0	100	8	5	5	0	119	135
0815-0830	0	0	89	11	3	2	0	105	117
0830-0835	0	0	32	3	2	0	0	37	41
0835-0840	0	0	37	1	1	0	0	39	41
0840-0845	0	0	38	3	0	1	0	42	45
0845-0850	0	0	23	3	0	1	0	27	30
0850-0855	0	0	31	3	0	0	0	34	36
0855-0900	0	0	26	3	0	1	0	30	33
0900-0905	0	0	34	2	0	2	0	38	42
0905-0910	0	0	27	3	1	2	0	33	38
0910-0915	0	0	34	3	0	1	0	38	41
0915-0920	0	0	25	3	0	0	0	28	30
0920-0925	0	0	34	2	0	0	0	36	37
0925-0930	0	0	36	2	1	2	1	42	48
0930-0945	0	0	88	6	1	2	1	98	106
0945-1000	0	0	97	13	4	3	0	117	133
1500-1505	0	0	38	0	0	0	0	38	38
1505-1510	0	0	40	1	0	0	0	41	42
1510-1515	1	0	34	2	0	0	0	37	37
1515-1520	0	0	36	1	0	0	0	37	38
1520-1525	0	0	39	1	0	0	0	40	41
1525-1530	0	1	39	3	1	1	0	45	49
1530-1535	0	0	32	1	0	0	1	34	36
1535-1540	0	0	24	0	0	0	0	24	24
1540-1545	0	0	30	1	0	0	0	31	32
1545-1550	0	0	40	2	0	1	0	43	45
1550-1555	0	0	40	1	0	1	1	43	46
1555-1600	0	0	36	2	0	0	0	38	39
1600-1615	1	3	132	4	0	0	1	141	141
1615-1630	0	0	127	3	0	1	0	131	134
1630-1645	0	0	138	3	1	0	0	142	145
1645-1700	1	0	147	2	0	0	0	150	150
1700-1715	0	2	150	8	0	0	1	161	165
1715-1730	1	0	133	9	5	1	1	150	162
1730-1745	0	0	168	8	0	0	1	177	182
1745-1800	1	0	151	2	0	1	0	155	156
1800-1815	1	2	132	1	0	0	0	136	134
1815-1830	2	2	120	3	0	1	0	128	128
1830-1845	0	0	135	6	0	1	0	142	146
1845-1900	2	2	119	0	0	0	0	123	120
TOTAL	**11**	**13**	**3197**	**155**	**32**	**40**	**26**	**3474**	**3652**
0800-0900	1	0	376	35	11	10	0	433	476.8
1630-1730	2	2	568	22	6	1	2	603	621.9
1700-1800	2	2	602	27	5	2	3	643	665.4

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS A6034 Keighley Road — **Site Ref No.** AAAA-1168-Site1A

DATE OF CENSUS Day: Tue; Date: 27-Jun-17 — **Weather** Wet

Direction of Travel From: Elliot Street — Turn: left turn — To: Keighley Rd (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			4					4	4
0715-0730			5					5	5
0730-0745	1		14					15	14
0745-0800	1		6					7	6
0800-0815			6					6	6
0815-0830			16					16	16
0830-0835			5					5	5
0835-0840			2					2	2
0840-0845			2					2	2
0845-0850			3					3	3
0850-0855			6					6	6
0855-0900			20					20	20
0900-0905			13				1	14	15
0905-0910			10					10	10
0910-0915			6					6	6
0915-0920			7					7	7
0920-0925			6					6	6
0925-0930			4					4	4
0930-0945			10					10	10
0945-1000			3					3	3
1500-1505			2					2	2
1505-1510			1					1	1
1510-1515			2					2	2
1515-1520			3					3	3
1520-1525			4					4	4
1525-1530			1					1	1
1530-1535			7					7	7
1535-1540			14				1	15	16
1540-1545			2					2	2
1545-1550			7					7	7
1550-1555			8					8	8
1555-1600			2					2	2
1600-1615			7					7	7
1615-1630			19					19	19
1630-1645			10					10	10
1645-1700			10					10	10
1700-1715			11					11	11
1715-1730			18				1	19	20
1730-1745			21					21	21
1745-1800	1		9					10	9
1800-1815			16					16	16
1815-1830		1	7					8	7
1830-1845			13					13	13
1845-1900			9					9	9
TOTAL	**3**	**1**	**351**	**0**	**0**	**0**	**3**	**358**	**357**
0800-0900	0	0	60	0	0	0	0	60	60
1630-1730	0	0	49	0	0	0	1	50	51
1700-1800	1	0	59	0	0	0	1	61	61

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS A6034 Keighley Road — **Site Ref No.** AAAA-1168-Site1A

DATE OF CENSUS Day: Tue; Date: 27-Jun-17 — **Weather** Wet

Direction of Travel From: Elliot Street — Turn: right — To: Keighley Rd (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			25					25	25
0715-0730			24					24	24
0730-0745			30	1				31	32
0745-0800			23	1			1	25	27
0800-0815			27				1	28	29
0815-0830			29					29	29
0830-0835			7					7	7
0835-0840			14					14	14
0840-0845			6					6	6
0845-0850			7					7	7
0850-0855			7					7	7
0855-0900			15					15	15
0900-0905			8	1				9	10
0905-0910			5	1				6	7
0910-0915			9					9	9
0915-0920			11					11	11
0920-0925			3					3	3
0925-0930			7					7	7
0930-0945			18				1	19	20
0945-1000			16					16	16
1500-1505			3				1	4	5
1505-1510			6					6	6
1510-1515			4					4	4
1515-1520			7					7	7
1520-1525			9					9	9
1525-1530			4					4	4
1530-1535			7					7	7
1535-1540	1		11				1	13	13
1540-1545			5					5	5
1545-1550			7				1	8	9
1550-1555			8					8	8
1555-1600			5					5	5
1600-1615			13				1	14	15
1615-1630			13					13	13
1630-1645			24				1	25	26
1645-1700			12					12	12
1700-1715			10					10	10
1715-1730			16					16	16
1730-1745			11				1	12	13
1745-1800			24					24	24
1800-1815			20				1	21	22
1815-1830			19					19	19
1830-1845	1		23				1	25	25
1845-1900			20					20	20
TOTAL	**2**	**0**	**572**	**4**	**0**	**0**	**11**	**589**	**600**
0800-0900	0	0	112	0	0	0	1	113	114
1630-1730	0	0	62	0	0	0	1	63	64
1700-1800	0	0	61	0	0	0	1	62	63

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS A6034 Keighley Road — **Site Ref No.** AAAA-1168-Site1A

DATE OF CENSUS Day: Tue; Date: 27-Jun-17 — **Weather** Wet

Direction of Travel From: Keighley Rd (N); Turn: ahead; To: Keighley Rd (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715	0	0	119	2	1	2	1	125	131
0715-0730	1	0	167	5	0	2	0	175	179
0730-0745	0	0	159	3	1	1	2	166	172
0745-0800	0	1	147	6	0	1	4	159	167
0800-0815	1	0	154	12	1	1	2	171	181
0815-0830	2	0	136	6	2	0	2	148	154
0830-0835	0	0	33	0	0	0	2	35	37
0835-0840	0	1	61	0	1	0	1	64	66
0840-0845	0	0	32	2	0	1	0	35	37
0845-0850	0	0	42	1	0	0	0	43	44
0850-0855	1	1	47	1	0	0	0	50	49
0855-0900	0	0	49	2	2	0	0	53	57
0900-0905	0	0	46	6	1	2	1	56	64
0905-0910	0	0	44	2	3	3	0	52	61
0910-0915	0	0	35	3	1	0	2	41	46
0915-0920	0	0	46	2	0	0	0	48	49
0920-0925	0	0	39	0	1	2	0	42	46
0925-0930	0	0	41	3	0	0	2	46	50
0930-0945	0	0	115	9	1	5	0	130	142
0945-1000	0	0	119	4	1	0	1	125	129
1500-1505	0	1	29	3	0	1	0	34	36
1505-1510	1	1	33	3	0	0	0	38	38
1510-1515	0	0	38	1	1	0	0	40	42
1515-1520	0	0	31	1	0	0	0	32	33
1520-1525	0	0	29	0	1	1	2	33	38
1525-1530	1	0	32	2	1	0	0	36	37
1530-1535	0	0	39	3	0	2	0	44	48
1535-1540	0	0	32	2	0	0	4	38	43
1540-1545	0	0	36	1	0	0	1	38	40
1545-1550	0	0	39	0	0	0	0	39	39
1550-1555	0	1	52	3	1	0	0	57	59
1555-1600	0	0	41	3	0	1	1	46	50
1600-1615	0	0	106	7	0	0	2	115	121
1615-1630	0	1	105	7	0	0	1	114	118
1630-1645	0	0	140	7	1	2	3	153	163
1645-1700	1	0	111	6	0	1	2	121	126
1700-1715	0	0	100	6	0	0	0	106	109
1715-1730	1	0	124	6	1	0	1	133	137
1730-1745	0	1	119	5	1	0	0	126	129
1745-1800	1	0	115	5	0	0	1	122	125
1800-1815	0	1	106	4	0	0	0	111	112
1815-1830	0	0	122	2	0	1	2	127	131
1830-1845	0	0	120	2	0	2	0	124	128
1845-1900	0	0	78	2	0	0	0	80	81
TOTAL	**10**	**9**	**3408**	**150**	**23**	**31**	**40**	**3671**	**3841**
0800-0900	4	2	554	24	6	2	7	599	623.2
1630-1730	2	0	475	25	2	3	6	513	536
1700-1800	2	1	458	22	2	0	2	487	500

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS A6034 Keighley Road — **Site Ref No.** AAAA-1168-Site1A

DATE OF CENSUS Day: Tue; Date: 27-Jun-17 — **Weather** Wet

Direction of Travel From: Keighley Rd (N); Turn: right; To: Elliot Street

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			5					5	5
0715-0730			8				1	9	10
0730-0745	1		6				1	8	8
0745-0800			7					7	7
0800-0815	1	1	11					13	11
0815-0830			7					7	7
0830-0835			5					5	5
0835-0840			7					7	7
0840-0845			19					19	19
0845-0850			10	1				11	12
0850-0855			10					10	10
0855-0900			5					5	5
0900-0905			5					5	5
0905-0910			8	1				9	10
0910-0915			9					9	9
0915-0920			5					5	5
0920-0925			3					3	3
0925-0930			2					2	2
0930-0945			9					9	9
0945-1000			4					4	4
1500-1505			6					6	6
1505-1510			4					4	4
1510-1515			8					8	8
1515-1520			5					5	5
1520-1525			8					8	8
1525-1530			6					6	6
1530-1535			6					6	6
1535-1540			10					10	10
1540-1545			4					4	4
1545-1550			4					4	4
1550-1555			1					1	1
1555-1600			4					4	4
1600-1615			4					4	4
1615-1630			15					15	15
1630-1645			5					5	5
1645-1700	1		11					12	11
1700-1715	1		13					14	13
1715-1730			10					10	10
1730-1745	1		10					11	10
1745-1800			11					11	11
1800-1815			12				1	13	14
1815-1830			13					13	13
1830-1845			11					11	11
1845-1900			10					10	10
TOTAL	**5**	**1**	**336**	**2**	**0**	**0**	**3**	**347**	**345**
0800-0900	1	1	74	1	0	0	0	77	75.9
1630-1730	2	0	39	0	0	0	0	41	39
1700-1800	2	0	44	0	0	0	0	46	44

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT** **PRINT OPTIONS**

LOCATION OF CENSUS A6034 Keighley Road — **Site Ref No.** AAAA-1168-Site1B

Date of census Day: Tue; Date: 27-Jun-17; **Weather** Wet; **12 hour** No

Direction of Travel From: Keighley Rd (N); Turn: left turn; To: Clog Bridge

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715	1		6	1	1			9	10
0715-0730	1		13	1				15	15
0730-0745			1			1		2	3
0745-0800			2					2	2
0800-0815			10				1	11	12
0815-0830			9					9	9
0830-0835			1				1	2	3
0835-0840								0	0
0840-0845			3	1				4	5
0845-0850			3					3	3
0850-0855			2					2	2
0855-0900			10	2				12	13
0900-0905			5					5	5
0905-0910			1					1	1
0910-0915			4					4	4
0915-0920			7	2				9	10
0920-0925			2					2	2
0925-0930			5	1				6	7
0930-0945			13	1			1	15	17
0945-1000			3		1			4	5
1500-1505			7					7	7
1505-1510			2					2	2
1510-1515			3					3	3
1515-1520			9					9	9
1520-1525			3					3	3
1525-1530			1					1	1
1530-1535			4			1		5	6
1535-1540			6	1		1	1	9	12
1540-1545			10					10	10
1545-1550			1					1	1
1550-1555			2	2				4	5
1555-1600			4					4	4
1600-1615			22		1			23	24
1615-1630			21					21	21
1630-1645			17	2				19	20
1645-1700			23	1		1		25	27
1700-1715		1	27					28	27
1715-1730			35	1	1			37	39
1730-1745	2		24					26	24
1745-1800			19			1	1	21	23
1800-1815	1		29	1			1	32	33
1815-1830	1		21					22	21
1830-1845			18					18	18
1845-1900			9			2		11	14
TOTAL	**6**	**1**	**417**	**17**	**4**	**7**	**6**	**458**	**480**
0800-0900	0	0	38	3	0	0	2	43	46.5
1630-1730	0	1	102	4	1	1	0	109	113
1700-1800	2	1	105	1	1	1	1	112	113.5

ADDITIONAL COUNT SHEETS

There are currently

0 extra count sheets

TOTAL FLOW THROUGH JUNCTION
Vehicles
8691 Survey

1285 0800-0900

1387 1630-1730

1417 1700-1800
NB includes up to 10 minor moves/ u turns

Data not yet sent

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL TRAFFIC UNIT

LOCATION OF CENSUS A6034 Keighley Road — **Site Ref No.** AAAA-1168-Site1B

DATE OF CENSUS Day: Tue; Date: 27-Jun-17; **Weather** Wet

Direction of Travel From: Keighley Rd (N); Turn: ahead; To: Keighley Rd (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715	0	0	97	2	0	1	0	100	102
0715-0730	0	0	120	4	0	2	1	127	133
0730-0745	1	0	114	3	1	1	2	122	127
0745-0800	0	1	121	4	0	1	4	131	138
0800-0815	2	1	121	8	1	1	1	135	140
0815-0830	1	0	103	4	2	0	2	112	118
0830-0835	0	0	22	0	0	0	2	24	26
0835-0840	0	0	53	0	0	0	0	53	53
0840-0845	0	0	36	1	0	1	0	38	40
0845-0850	0	0	29	2	0	0	0	31	32
0850-0855	0	0	35	0	0	0	0	35	35
0855-0900	0	0	43	2	2	0	0	47	51
0900-0905	0	0	37	6	0	1	1	45	50
0905-0910	0	0	37	3	2	0	0	42	46
0910-0915	0	0	38	3	1	0	2	44	49
0915-0920	0	0	40	2	0	0	0	42	43
0920-0925	0	0	34	0	1	1	0	36	39
0925-0930	0	0	31	2	0	0	2	35	38
0930-0945	0	0	97	6	1	5	0	109	120
0945-1000	0	0	94	3	0	0	0	97	99
1500-1505	0	1	25	2	0	1	0	29	31
1505-1510	1	0	28	3	0	0	0	32	33
1510-1515	0	0	34	1	1	0	0	36	38
1515-1520	0	0	25	0	0	0	0	25	25
1520-1525	0	0	25	0	1	1	2	29	34
1525-1530	1	0	29	2	1	0	0	33	34
1530-1535	0	0	34	1	0	2	0	37	40
1535-1540	0	0	30	2	0	0	3	35	39
1540-1545	0	0	33	1	0	0	0	34	35
1545-1550	0	0	30	0	0	0	0	30	30
1550-1555	0	1	45	3	1	0	0	50	52
1555-1600	0	0	35	2	0	1	1	39	42
1600-1615	0	0	82	5	0	0	1	88	92
1615-1630	0	1	83	5	0	0	1	90	93
1630-1645	0	0	115	6	1	2	3	127	137
1645-1700	1	0	89	5	0	0	2	97	101
1700-1715	1	0	74	3	0	0	0	78	79
1715-1730	1	0	99	5	1	0	0	106	109
1730-1745	1	0	91	3	1	0	0	96	98
1745-1800	1	0	91	5	0	0	0	97	99
1800-1815	0	1	84	4	0	0	1	90	92
1815-1830	0	0	115	2	0	1	1	119	122
1830-1845	0	0	100	1	0	1	0	102	104
1845-1900	0	0	59	1	0	0	0	60	61
TOTAL	**11**	**6**	**2757**	**117**	**18**	**23**	**32**	**2964**	**3093**
0800-0900	3	1	442	17	5	2	5	475	494
1630-1730	3	0	377	19	2	2	5	408	424.7
1700-1800	4	0	355	16	2	0	0	377	383.6

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	A6034 Keighley Road		AAAA-1168-Site1B
	Day	**Date**	
DATE OF CENSUS	Tue	27-Jun-17	**Weather** Wet
	From		**Turn** **To**
Direction of Travel	Clog Bridge		left turn Keighley Rd (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			27		1	1	1	30	34
0715-0730	1		55	1				57	57
0730-0745			51				1	52	53
0745-0800			33	2				35	36
0800-0815			44	4			1	49	52
0815-0830	1		40	2				43	43
0830-0835			16					16	16
0835-0840		1	15		1		1	18	20
0840-0845			15	1				16	17
0845-0850			23					23	23
0850-0855	1	1	22	1				25	24
0855-0900			11					11	11
0900-0905			14		1	1		16	19
0905-0910			15		1	3		19	24
0910-0915			6					6	6
0915-0920			11					11	11
0920-0925			8			1		9	10
0925-0930			12	1				13	14
0930-0945			27	3				30	32
0945-1000			29	1	1		1	32	35
1500-1505			10	1				11	12
1505-1510		1	9					10	9
1510-1515			12					12	12
1515-1520			11	1				12	13
1520-1525			12					12	12
1525-1530			9					9	9
1530-1535			11	2				13	14
1535-1540			12				1	13	14
1540-1545			7				1	8	9
1545-1550			13					13	13
1550-1555			8					8	8
1555-1600			10	1				11	12
1600-1615			28	2			1	31	33
1615-1630			37	2				39	40
1630-1645			30	1				31	32
1645-1700	1		33	1		1		36	37
1700-1715			39	3				42	44
1715-1730			35	1			1	37	39
1730-1745		1	38	2				41	41
1745-1800			35				1	36	37
1800-1815			34					34	34
1815-1830			20				1	21	22
1830-1845			31	1		1		33	35
1845-1900			29	1				30	31
TOTAL	**4**	**4**	**987**	**35**	**5**	**8**	**11**	**1054**	**1093**
0800-0900	2	2	186	8	1	0	2	201	205.1
1630-1730	1	0	137	6	0	1	1	146	150.3
1700-1800	0	1	147	6	0	0	2	156	160.4

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

				Site Ref No.
LOCATION OF CENSUS	A6034 Keighley Road			AAAA-1168-Site1B
	Day	**Date**		
DATE OF CENSUS	Tue	27-Jun-17	**Weather**	Wet
	From		**Turn**	**To**
Direction of Travel	Clog Bridge		right	Keighley Rd (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			10	1				11	12
0715-0730		1	13	1			2	17	19
0730-0745			16	1				17	18
0745-0800			12	1				13	14
0800-0815			18	1	1	1		21	24
0815-0830		1	9					10	9
0830-0835			6					6	6
0835-0840			11					11	11
0840-0845			7					7	7
0845-0850			6					6	6
0850-0855			8					8	8
0855-0900			4					4	4
0900-0905			6					6	6
0905-0910			3					3	3
0910-0915			1					1	1
0915-0920			3	1				4	5
0920-0925			2	1				3	4
0925-0930			3					3	3
0930-0945			11					11	11
0945-1000			10	1				11	12
1500-1505			1					1	1
1505-1510			3					3	3
1510-1515			4					4	4
1515-1520			3					3	3
1520-1525			2	1				3	4
1525-1530			3					3	3
1530-1535			3					3	3
1535-1540			1					1	1
1540-1545			2	1				3	4
1545-1550			3	2				5	6
1550-1555			2	1				3	4
1555-1600			5					5	5
1600-1615			7	1				8	9
1615-1630			12					12	12
1630-1645			19					19	19
1645-1700			13	1		1		15	17
1700-1715			21	1				22	23
1715-1730			15					15	15
1730-1745	1		10					11	10
1745-1800	2		17		1			20	19
1800-1815			9	1				10	11
1815-1830			13					13	13
1830-1845			12	1		1		14	16
1845-1900			12	1		1		14	16
TOTAL	**3**	**2**	**351**	**19**	**2**	**4**	**2**	**383**	**398**
0800-0900	0	1	69	1	1	1	0	73	75.5
1630-1730	0	0	68	2	0	1	0	71	73.3
1700-1800	3	0	63	1	1	0	0	68	66.8

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS A6034 Keighley Road — **Site Ref No.** AAAA-1168-Site1B

DATE OF CENSUS Day: Tue; Date: 27-Jun-17; **Weather** Wet

Direction of Travel From: Keighley Rd (S); Turn: ahead; To: Keighley Rd (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715	0	1	74	1	0	2	3	81	87
0715-0730	0	0	99	3	1	4	10	117	135
0730-0745	1	0	104	9	1	0	2	117	124
0745-0800	1	0	75	5	5	3	1	90	103
0800-0815	1	0	96	6	4	5	0	112	126
0815-0830	0	0	89	8	2	1	0	100	108
0830-0835	0	0	30	3	2	0	0	35	39
0835-0840	0	0	33	1	1	0	0	35	37
0840-0845	0	0	38	3	0	1	0	42	45
0845-0850	0	0	23	3	0	0	0	26	28
0850-0855	0	0	30	3	0	0	0	33	35
0855-0900	0	0	34	3	0	0	0	37	39
0900-0905	0	0	34	0	0	2	1	37	41
0905-0910	0	0	25	2	1	2	0	30	35
0910-0915	0	0	30	3	0	1	0	34	37
0915-0920	0	0	28	3	0	0	0	31	33
0920-0925	0	0	30	2	0	0	0	32	33
0925-0930	0	0	35	2	1	2	1	41	47
0930-0945	0	0	81	3	1	2	1	88	94
0945-1000	0	0	87	11	4	3	0	105	120
1500-1505	0	0	35	0	0	0	0	35	35
1505-1510	0	0	35	0	0	0	0	35	35
1510-1515	1	0	34	2	0	0	0	37	37
1515-1520	0	0	30	0	0	0	0	30	30
1520-1525	0	0	32	1	0	0	0	33	34
1525-1530	0	1	34	2	1	1	0	39	42
1530-1535	0	0	27	0	0	0	1	28	29
1535-1540	0	0	27	0	0	0	1	28	29
1540-1545	0	0	11	0	0	0	0	11	11
1545-1550	0	0	34	0	0	0	0	34	34
1550-1555	0	0	34	1	0	0	1	36	38
1555-1600	0	0	26	1	0	0	0	27	28
1600-1615	0	2	101	4	0	0	1	108	110
1615-1630	0	0	102	1	0	0	0	103	104
1630-1645	0	0	99	2	1	0	0	102	104
1645-1700	0	0	105	1	0	0	0	106	107
1700-1715	0	2	97	7	0	0	1	107	110
1715-1730	1	0	98	7	2	0	1	109	115
1730-1745	0	0	133	3	0	0	1	137	140
1745-1800	1	0	129	2	0	1	0	133	134
1800-1815	1	1	98	0	0	0	0	100	98
1815-1830	2	3	93	3	0	0	0	101	99
1830-1845	0	0	104	5	0	1	0	110	114
1845-1900	2	2	101	0	0	0	0	105	102
TOTAL	**11**	**12**	**2694**	**116**	**27**	**31**	**26**	**2917**	**3058**
0800-0900	1	0	373	30	9	7	0	420	454.8
1630-1730	1	2	399	17	3	0	2	424	436.2
1700-1800	2	2	457	19	2	1	3	486	499.2

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

LOCATION OF CENSUS A6034 Keighley Road — **Site Ref No.** AAAA-1168-Site1B

DATE OF CENSUS **Day** Tue **Date** 27-Jun-17 **Weather** Wet

Direction of Travel **From** Keighley Rd (S) **Turn** right **To** Clog Bridge

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			7	1			1	9	11
0715-0730			13	2			1	16	18
0730-0745			14			1		15	16
0745-0800			9	1				10	11
0800-0815			10	2	1			13	15
0815-0830			16	3	1	1		21	25
0830-0835			7					7	7
0835-0840			6					6	6
0840-0845			2					2	2
0845-0850			3			1		4	5
0850-0855			7					7	7
0855-0900			12			1		13	14
0900-0905			13	2				15	16
0905-0910			12	1				13	14
0910-0915			10					10	10
0915-0920			4					4	4
0920-0925			10					10	10
0925-0930			5					5	5
0930-0945			17	3				20	22
0945-1000			13	2				15	16
1500-1505			5					5	5
1505-1510			6	1				7	8
1510-1515			2					2	2
1515-1520			9	1				10	11
1520-1525			11					11	11
1525-1530			6	1				7	8
1530-1535			12	1				13	14
1535-1540			11					11	11
1540-1545			21	1				22	23
1545-1550			13	2		1		16	18
1550-1555			14			1		15	16
1555-1600			12	1				13	14
1600-1615	1	1	38					40	38
1615-1630			44	2		1		47	49
1630-1645			49	1				50	51
1645-1700	1		52	1				54	54
1700-1715			64	1				65	66
1715-1730			53	2	3	1	1	60	67
1730-1745			56	5				61	64
1745-1800	1		31					32	31
1800-1815		1	50	1				52	52
1815-1830			34			1		35	36
1830-1845			44	1				45	46
1845-1900			27					27	27
TOTAL	**3**	**2**	**854**	**39**	**5**	**9**	**3**	**915**	**952**
0800-0900	0	0	63	5	2	3	0	73	82
1630-1730	1	0	218	5	3	1	1	229	236.7
1700-1800	1	0	204	8	3	1	1	218	227.2

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

PRINT OPTIONS

LOCATION OF CENSUS A6034 Bolton Road — **Site Ref No.** AAAA-1168-Site 2

Date of census **Day** Thur **Date** 29-Jun-17 **Weather** Showers **12 hour**

Direction of Travel **From** Bolton Road (S) **Turn** left turn **To** Bell Square

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			7					7	7
0715-0730			10				1	11	12
0730-0745			9					9	9
0745-0800			6				1	7	8
0800-0815			10					10	10
0815-0830			5					5	5
0830-0835			1					1	1
0835-0840			4					4	4
0840-0845			1					1	1
0845-0850			2					2	2
0850-0855			3					3	3
0855-0900			4					4	4
0900-0905			5					5	5
0905-0910			3					3	3
0910-0915			3					3	3
0915-0920			9					9	9
0920-0925			3					3	3
0925-0930			4					4	4
0930-0945			9				1	10	11
0945-1000			11					11	11
1500-1505			6	1				7	8
1505-1510			1					1	1
1510-1515			7					7	7
1515-1520			1					1	1
1520-1525			8					8	8
1525-1530			5					5	5
1530-1535			1					1	1
1535-1540			4					4	4
1540-1545			8					8	8
1545-1550	1		5					6	5
1550-1555			8					8	8
1555-1600			3					3	3
1600-1615			23					23	23
1615-1630			20	1				21	22
1630-1645			31					31	31
1645-1700			22					22	22
1700-1715			21				1	22	23
1715-1730			22	1				23	24
1730-1745			20					20	20
1745-1800			26					26	26
1800-1815			21					21	21
1815-1830			19					19	19
1830-1845			21					21	21
1845-1900			15					15	15
TOTAL	**1**	**0**	**427**	**3**	**0**	**0**	**4**	**435**	**440**
0800-0900	0	0	30	0	0	0	0	30	30
1630-1730	0	0	96	1	0	0	1	98	99.5
1700-1800	0	0	89	1	0	0	1	91	92.5

ADDITIONAL COUNT SHEETS

There are currently

0 extra count sheets

TOTAL FLOW THROUGH JUNCTION
Vehicles
8914 Survey

1212 0800-0900

1448 1630-1730

1437 1700-1800
NB includes up to 10 minor moves/ u turns

Data not yet sent

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

				Site Ref No.
LOCATION OF CENSUS	A6034 Bolton Road			AAAA-1168-Site 2
	Day	**Date**		
DATE OF CENSUS	Thur	29-Jun-17	**Weather**	Showers
	From		**Turn**	**To**
Direction of Travel	Bolton Road (S)		ahead	Bolton Rd (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			68	2			2	72	75
0715-0730			109	7	1		8	125	138
0730-0745			91	4	2	1	3	101	110
0745-0800			117	4	1	1		123	128
0800-0815			129	6	3	2		140	150
0815-0830			73	5	2	3	1	84	94
0830-0835			43	1	1			45	47
0835-0840			36		1			37	38
0840-0845			22	3		1		26	29
0845-0850			20	2		1		23	25
0850-0855			21	2	2			25	29
0855-0900			25					25	25
0900-0905			22			1		23	24
0905-0910			24	2				26	27
0910-0915			21			1		22	23
0915-0920			33	1				34	35
0920-0925			23	2		1		26	28
0925-0930			22	1				23	24
0930-0945			64	4	1	2	1	72	79
0945-1000			72	1	2	3	1	79	87
1500-1505			35	1				36	37
1505-1510			25					25	25
1510-1515			33					33	33
1515-1520			24	1				25	26
1520-1525			25					25	25
1525-1530			27					27	27
1530-1535			20			1		21	22
1535-1540			29	2				31	32
1540-1545			32	1				33	34
1545-1550			41	1	1			43	45
1550-1555			28	1		1		30	32
1555-1600			34	1		2		37	40
1600-1615			83	2	1	2		88	93
1615-1630			105	2		1		108	110
1630-1645			110	1		1		112	114
1645-1700			109	1		1		111	113
1700-1715			96	1		1	2	100	104
1715-1730			127	1				128	129
1730-1745			110	2				112	113
1745-1800			94			1		95	96
1800-1815			105	1				106	107
1815-1830			89	1				90	91
1830-1845			96					96	96
1845-1900			73					73	73
TOTAL	**0**	**0**	**2585**	**67**	**18**	**28**	**18**	**2716**	**2827**
0800-0900	0	0	369	19	9	7	1	405	436.3
1630-1730	0	0	442	4	0	3	2	451	458.9
1700-1800	0	0	427	4	0	2	2	435	441.6

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	A6034 Bolton Road		AAAA-1168-Site 2
	Day	**Date**	
DATE OF CENSUS	Thur	29-Jun-17	**Weather** Showers
	From		**Turn** **To**
Direction of Travel	Bell Square		left turn Bolton Rd (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			19				1	20	21
0715-0730		1	28	1			2	32	34
0730-0745			29				1	30	31
0745-0800			21				1	22	23
0800-0815			27	2		1	1	31	34
0815-0830			21					21	21
0830-0835			13					13	13
0835-0840			15					15	15
0840-0845			7					7	7
0845-0850			5				1	6	7
0850-0855			6					6	6
0855-0900			5					5	5
0900-0905			12					12	12
0905-0910			4					4	4
0910-0915			9					9	9
0915-0920			5				1	6	7
0920-0925			9					9	9
0925-0930			4					4	4
0930-0945			20	1			1	22	24
0945-1000			13	1				14	15
1500-1505			8					8	8
1505-1510			7					7	7
1510-1515			5	1				6	7
1515-1520			4					4	4
1520-1525			11			1	1	13	15
1525-1530			4					4	4
1530-1535			3	1				4	5
1535-1540			2					2	2
1540-1545			11					11	11
1545-1550			3				1	4	5
1550-1555			9			1	1	11	13
1555-1600			8					8	8
1600-1615			26					26	26
1615-1630			15	1			1	17	19
1630-1645			19				1	20	21
1645-1700			24					24	24
1700-1715			24					24	24
1715-1730			18				1	19	20
1730-1745	1		14					15	14
1745-1800			16				1	17	18
1800-1815			23					23	23
1815-1830			25					25	25
1830-1845			22				1	23	24
1845-1900			31					31	31
TOTAL	**1**	**1**	**604**	**8**	**0**	**3**	**17**	**634**	**657**
0800-0900	0	0	99	2	0	1	2	104	108.3
1630-1730	0	0	85	0	0	0	2	87	89
1700-1800	1	0	72	0	0	0	2	75	76

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	A6034 Bolton Road		AAAA-1168-Site 2
	Day	**Date**	
DATE OF CENSUS	Thur	29-Jun-17	**Weather** Showers
	From		**Turn** **To**
Direction of Travel	Bell Square		right Bolton Road (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			42		1		1	44	46
0715-0730			38					38	38
0730-0745		1	44		1		3	49	53
0745-0800			26					26	26
0800-0815	1		39				3	43	45
0815-0830			30				1	31	32
0830-0835			6				1	7	8
0835-0840			9					9	9
0840-0845			13					13	13
0845-0850			5					5	5
0850-0855			10					10	10
0855-0900			15					15	15
0900-0905			15				1	16	17
0905-0910			6	2				8	9
0910-0915			15					15	15
0915-0920			7					7	7
0920-0925			3		3			6	10
0925-0930			12					12	12
0930-0945			39				1	40	41
0945-1000			40					40	40
1500-1505			3	1				4	5
1505-1510			9					9	9
1510-1515		1	8					9	8
1515-1520			12					12	12
1520-1525			9					9	9
1525-1530			10	1				11	12
1530-1535			7					7	7
1535-1540			13				5	18	23
1540-1545			10				1	11	12
1545-1550			10					10	10
1550-1555	1		9			1		11	11
1555-1600			10				1	11	12
1600-1615			33					33	33
1615-1630			36					36	36
1630-1645	1		29				1	31	31
1645-1700	1		35				1	37	37
1700-1715			37					37	37
1715-1730			39	1			1	41	43
1730-1745			37	1			1	39	41
1745-1800			50	2				52	53
1800-1815			48					48	48
1815-1830			36				1	37	38
1830-1845			45					45	45
1845-1900			44	1				45	46
TOTAL	**4**	**2**	**993**	**9**	**5**	**1**	**23**	**1037**	**1067**
0800-0900	1	0	127	0	0	0	5	133	137
1630-1730	2	0	140	1	0	0	3	146	147.5
1700-1800	0	0	163	4	0	0	2	169	173

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

LOCATION OF CENSUS A6034 Bolton Road — **Site Ref No.** AAAA-1168-Site 2

DATE OF CENSUS **Day** Thur **Date** 29-Jun-17 **Weather** Showers

Direction of Travel **From** Bolton Rd (N) **Turn** ahead **To** Bolton Road (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715	1		115	1	1	2	1	121	125
0715-0730		1	129	3	2			135	139
0730-0745	1		131	2	1		1	136	138
0745-0800		1	153	3	1	1	7	166	177
0800-0815	1		137	2	2			142	145
0815-0830	1	1	113	1		1	6	123	129
0830-0835	1		43			1	2	47	49
0835-0840			39	2				41	42
0840-0845			54	1				55	56
0845-0850			30					30	30
0850-0855			47	2		1		50	52
0855-0900			19	1		2		22	25
0900-0905			27	2	1			30	32
0905-0910			29				1	30	31
0910-0915			36					36	36
0915-0920			30			1	1	32	34
0920-0925			27	4		2		33	38
0925-0930			36	3	1			40	43
0930-0945			122	1			1	124	126
0945-1000			101	1	2	1	1	106	111
1500-1505			42	2	1			45	47
1505-1510	1		38		1			40	40
1510-1515	1	1	25	1	1	2		31	34
1515-1520			38					38	38
1520-1525		1	29	1		1		32	33
1525-1530			34	1				35	36
1530-1535			42	1		1		44	46
1535-1540			53	1			5	59	65
1540-1545			36	1	1			38	40
1545-1550			65		1			66	67
1550-1555			37			1	1	39	41
1555-1600			29	2		1	3	35	40
1600-1615		1	145	3	2	4	1	156	166
1615-1630	1		145	1			1	148	149
1630-1645	1	1	124				3	129	130
1645-1700	1	1	133		2	1	3	141	146
1700-1715			131	3		1		135	138
1715-1730			157	4	2		1	164	170
1730-1745			140	2	1		1	144	147
1745-1800		1	131	2	1			135	137
1800-1815			148	1	1		1	151	154
1815-1830	3		143					146	143
1830-1845			141		1		1	143	145
1845-1900		1	133	1		2		137	140
TOTAL	**13**	**10**	**3557**	**56**	**26**	**26**	**42**	**3730**	**3849**
0800-0900	3	1	482	9	2	5	8	510	528
1630-1730	2	2	545	7	4	2	7	569	584.1
1700-1800	0	1	559	11	4	1	2	578	591.4

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

LOCATION OF CENSUS A6034 Bolton Road — **Site Ref No.** AAAA-1168-Site 2

DATE OF CENSUS **Day** Thur **Date** 29-Jun-17 **Weather** Showers

Direction of Travel **From** Bolton Rd (N) **Turn** right **To** Bell Square

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			7					7	7
0715-0730			10					10	10
0730-0745			8	1				9	10
0745-0800			2					2	2
0800-0815			7					7	7
0815-0830			8				1	9	10
0830-0835			2					2	2
0835-0840			3					3	3
0840-0845			3					3	3
0845-0850			3					3	3
0850-0855			2				1	3	4
0855-0900								0	0
0900-0905			6					6	6
0905-0910			2					2	2
0910-0915			1					1	1
0915-0920			4					4	4
0920-0925			2					2	2
0925-0930			3				1	4	5
0930-0945			5					5	5
0945-1000			9				1	10	11
1500-1505			4					4	4
1505-1510			5					5	5
1510-1515			5					5	5
1515-1520			6					6	6
1520-1525			5					5	5
1525-1530			1				1	2	3
1530-1535			7					7	7
1535-1540			4					4	4
1540-1545			4					4	4
1545-1550			3					3	3
1550-1555			3					3	3
1555-1600			2					2	2
1600-1615			9	1				10	11
1615-1630			5	1				6	7
1630-1645			25				1	26	27
1645-1700			28				1	29	30
1700-1715			16	1				17	18
1715-1730			24				1	25	26
1730-1745			23					23	23
1745-1800			23				1	24	25
1800-1815			19					19	19
1815-1830			14				1	15	16
1830-1845			16					16	16
1845-1900			9				1	10	11
TOTAL	**0**	**0**	**347**	**4**	**0**	**0**	**11**	**362**	**375**
0800-0900	0	0	28	0	0	0	2	30	32
1630-1730	0	0	93	1	0	0	3	97	100.5
1700-1800	0	0	86	1	0	0	2	89	91.5

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT** **PRINT OPTIONS**

LOCATION OF CENSUS BOLTON RD A6O34 **Site Ref No.** AAAA-1168-site 3

Date of census **Day** Thur **Date** 28-Jun-17 **Weather** WET **12 hour** No

Direction of Travel **From** Bolton Rd (N) **Turn** left turn **To** Dale View

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830			1					1	1
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850			1					1	1
0850-0855			1					1	1
0855-0900								0	0
0900-0905				1				1	2
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930			1					1	1
0930-0945								0	0
0945-1000								0	0
1500-1505			1					1	1
1505-1510								0	0
1510-1515			1					1	1
1515-1520			2					2	2
1520-1525								0	0
1525-1530								0	0
1530-1535			1					1	1
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555			1					1	1
1555-1600			1					1	1
1600-1615			2					2	2
1615-1630			3					3	3
1630-1645								0	0
1645-1700			3					3	3
1700-1715			2					2	2
1715-1730			3					3	3
1730-1745			3					3	3
1745-1800			2					2	2
1800-1815			2					2	2
1815-1830			5					5	5
1830-1845			2					2	2
1845-1900			2					2	2
TOTAL	**0**	**0**	**40**	**1**	**0**	**0**	**0**	**41**	**42**

0800-0900	0	0	3	0	0	0	0	3	3

1630-1730	0	0	8	0	0	0	0	8	8

1700-1800	0	0	10	0	0	0	0	10	10

ADDITIONAL COUNT SHEETS

There are currently

0 extra count sheets

TOTAL FLOW THROUGH JUNCTION
Vehicles
6025 Survey

929 0800-0900

983 1630-1730

1008 1700-1800
NB includes up to 10 minor moves/ u turns

Data not yet sent

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	BOLTON RD A6O34		AAAA-1168-site 3
	Day	**Date**	
DATE OF CENSUS	Thur	28-Jun-17	**Weather** WET
	From		**Turn** **To**
Direction of Travel	Bolton Rd (N)		ahead Bolton Rd (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			56					56	56
0715-0730	1		87	2	2			92	95
0730-0745	1		85	4	2			92	96
0745-0800			100	2	1			103	105
0800-0815		1	95	3				99	100
0815-0830			87	2	1		5	95	102
0830-0835			37	1			2	40	43
0835-0840			38				1	39	40
0840-0845		1	27	1	1			30	31
0845-0850			28	1				29	30
0850-0855			19	1		1	1	22	25
0855-0900			22	1	1			24	26
0900-0905			29	3			1	33	36
0905-0910			27	2	1			30	32
0910-0915			41	3	1		1	46	50
0915-0920			27				1	28	29
0920-0925			14		2			16	19
0925-0930			31		1		1	33	35
0930-0945			74	4	2	1	2	83	91
0945-1000			66	5				71	74
1500-1505			23	1				24	25
1505-1510			22		1			23	24
1510-1515		1	27	1				29	29
1515-1520			32					32	32
1520-1525			25	1				26	27
1525-1530			34	1			1	36	38
1530-1535			32	1	3		1	37	42
1535-1540			42	1				43	44
1540-1545			31	1				32	33
1545-1550			22	3				25	27
1550-1555			40	2				42	43
1555-1600			31			2	1	34	38
1600-1615			89	2			1	92	94
1615-1630			107	2	2		1	112	117
1630-1645			107	5			4	116	123
1645-1700			109	1			2	112	115
1700-1715		1	126	5				132	134
1715-1730			128	4				132	134
1730-1745		1	112	2			1	116	117
1745-1800			100	1	1		1	103	106
1800-1815			89					89	89
1815-1830			93	2			1	96	98
1830-1845			79	1			1	81	83
1845-1900			76	1			1	78	80
TOTAL	**2**	**5**	**2566**	**73**	**22**	**4**	**31**	**2703**	**2799**
0800-0900	0	2	353	10	3	1	9	378	396
1630-1730	0	1	470	15	0	0	6	492	505
1700-1800	0	2	466	12	1	0	2	483	491

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS BOLTON RD A6O34 — **Site Ref No.** AAAA-1168-site 3

DATE OF CENSUS **Day** Thur **Date** 28-Jun-17 — **Weather** WET

Direction of Travel **From** Bolton Rd (N) **Turn** right **To** PICKARD LANE

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915			1					1	1
0915-0920			1					1	1
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540			1					1	1
1540-1545			1					1	1
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645			1					1	1
1645-1700								0	0
1700-1715								0	0
1715-1730			1					1	1
1730-1745			1					1	1
1745-1800								0	0
1800-1815			1					1	1
1815-1830			1					1	1
1830-1845								0	0
1845-1900								0	0
TOTAL	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**9**	**9**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	2	0	0	0	0	2	2
1700-1800	0	0	2	0	0	0	0	2	2

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS BOLTON RD A6O34 — **Site Ref No.** AAAA-1168-site 3

DATE OF CENSUS **Day** Thur **Date** 28-Jun-17 — **Weather** WET

Direction of Travel **From** Dale View — **Turn** left turn — **To** Bolton Rd (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			4					4	4
0715-0730			6					6	6
0730-0745			6					6	6
0745-0800			5					5	5
0800-0815			7					7	7
0815-0830			4					4	4
0830-0835			4					4	4
0835-0840			3					3	3
0840-0845			3					3	3
0845-0850			3					3	3
0850-0855			2					2	2
0855-0900			4					4	4
0900-0905			3					3	3
0905-0910			1					1	1
0910-0915			2					2	2
0915-0920			4					4	4
0920-0925			2					2	2
0925-0930								0	0
0930-0945			2					2	2
0945-1000			10					10	10
1500-1505			2					2	2
1505-1510								0	0
1510-1515								0	0
1515-1520			2					2	2
1520-1525			4					4	4
1525-1530			1					1	1
1530-1535			1					1	1
1535-1540			2					2	2
1540-1545			3					3	3
1545-1550			1					1	1
1550-1555			3	1				4	5
1555-1600			4					4	4
1600-1615			3					3	3
1615-1630			5					5	5
1630-1645			4					4	4
1645-1700			2					2	2
1700-1715			5	1				6	7
1715-1730			4					4	4
1730-1745			3					3	3
1745-1800			7					7	7
1800-1815			5					5	5
1815-1830			3					3	3
1830-1845			10	1				11	12
1845-1900			2					2	2
TOTAL	**0**	**0**	**151**	**3**	**0**	**0**	**0**	**154**	**156**
0800-0900	0	0	30	0	0	0	0	30	30
1630-1730	0	0	15	1	0	0	0	16	17
1700-1800	0	0	19	1	0	0	0	20	21

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS BOLTON RD A6O34 — **Site Ref No.** AAAA-1168-site 3

DATE OF CENSUS **Day** Thur **Date** 28-Jun-17 — **Weather** WET

Direction of Travel **From** Dale View — **Turn** ahead — **To** PICKARD LANE

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850			1					1	1
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520			1					1	1
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645								0	0
1645-1700								0	0
1700-1715								0	0
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815								0	0
1815-1830								0	0
1830-1845								0	0
1845-1900								0	0
TOTAL	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2**
0800-0900	0	0	1	0	0	0	0	1	1
1630-1730	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS BOLTON RD A6O34 — **Site Ref No.** AAAA-1168-site 3

DATE OF CENSUS **Day** Thur **Date** 28-Jun-17 — **Weather** WET

Direction of Travel **From** Dale View **Turn** right **To** Bolton Rd (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730			3					3	3
0730-0745			1					1	1
0745-0800			5					5	5
0800-0815			2					2	2
0815-0830			3					3	3
0830-0835								0	0
0835-0840			1					1	1
0840-0845								0	0
0845-0850								0	0
0850-0855			2					2	2
0855-0900			1					1	1
0900-0905								0	0
0905-0910			1					1	1
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930			2					2	2
0930-0945			2					2	2
0945-1000			1					1	1
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525				1				1	2
1525-1530								0	0
1530-1535				1				1	2
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630			4					4	4
1630-1645			1					1	1
1645-1700								0	0
1700-1715			1					1	1
1715-1730			1					1	1
1730-1745								0	0
1745-1800			1	1				2	3
1800-1815			1					1	1
1815-1830			1					1	1
1830-1845								0	0
1845-1900			1					1	1
TOTAL	**0**	**0**	**35**	**3**	**0**	**0**	**0**	**38**	**40**
0800-0900	0	0	9	0	0	0	0	9	9
1630-1730	0	0	3	0	0	0	0	3	3
1700-1800	0	0	3	1	0	0	0	4	5

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	BOLTON RD A6O34		AAAA-1168-site 3
	Day	**Date**	
DATE OF CENSUS	Thur	28-Jun-17	**Weather** WET
	From		**Turn** **To**
Direction of Travel	Bolton Rd (S)		left turn PICKARD LANE

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745			1					1	1
0745-0800			1					1	1
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925			1					1	1
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510			1					1	1
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540			2					2	2
1540-1545								0	0
1545-1550								0	0
1550-1555			1					1	1
1555-1600		1						1	0
1600-1615			2					2	2
1615-1630			2					2	2
1630-1645								0	0
1645-1700			2					2	2
1700-1715			3					3	3
1715-1730			3					3	3
1730-1745			2	2				4	5
1745-1800			3					3	3
1800-1815			2	1				3	4
1815-1830								0	0
1830-1845			2					2	2
1845-1900			3					3	3
TOTAL	**0**	**1**	**31**	**3**	**0**	**0**	**0**	**35**	**36**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	8	0	0	0	0	8	8
1700-1800	0	0	11	2	0	0	0	13	14

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS BOLTON RD A6O34 — **Site Ref No.** AAAA-1168-site 3

DATE OF CENSUS **Day** Thur **Date** 28-Jun-17 — **Weather** WET

Direction of Travel **From** Bolton Rd (S) **Turn** ahead **To** Bolton Rd (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715		1	110	5		2	3	121	129
0715-0730		2	124	3			10	139	149
0730-0745			130	9	2	2	3	146	159
0745-0800			118	4	4	2	1	129	140
0800-0815			120	13			1	134	142
0815-0830			120	10	1	2	1	134	144
0830-0835			41					41	41
0835-0840			38	4	11			53	69
0840-0845			26	3		2		31	35
0845-0850			27	5	1	1		34	39
0850-0855			20	2		2	1	25	30
0855-0900			26	3	1	1		31	35
0900-0905			30	3		3		36	41
0905-0910			18	1	2			21	24
0910-0915			36	1		1		38	40
0915-0920			36	4	2		1	43	49
0920-0925			29	3	2			34	38
0925-0930			25	2	3		2	32	39
0930-0945			63	8		1	3	75	83
0945-1000			76	16		1	5	98	112
1500-1505			27	2			2	31	34
1505-1510			35			1		36	37
1510-1515			31	1				32	33
1515-1520			29					29	29
1520-1525			18	4	1	1	2	26	33
1525-1530			22					22	22
1530-1535			33	1				34	35
1535-1540			16	2	1			19	21
1540-1545			11	1				12	13
1545-1550			23	2	1			26	28
1550-1555			32	2	1		1	36	39
1555-1600			26	3			1	30	33
1600-1615			25	8	3		2	38	48
1615-1630			87	4	2		2	95	102
1630-1645			98	5	1		1	105	110
1645-1700			90		2			92	95
1700-1715			100	5	1			106	110
1715-1730			110	1			1	112	114
1730-1745			112	3				115	117
1745-1800			92	8		1	1	102	108
1800-1815			90	11				101	107
1815-1830			95	5	1		1	102	107
1830-1845			65	6			1	72	76
1845-1900			73	2				75	76
TOTAL	**0**	**3**	**2553**	**175**	**43**	**23**	**46**	**2843**	**3061**
0800-0900	0	0	418	40	14	8	3	483	535
1630-1730	0	0	398	11	4	0	2	415	428
1700-1800	0	0	414	17	1	1	2	435	448

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	BOLTON RD A6O34		AAAA-1168-site 3
	Day	**Date**	
DATE OF CENSUS	Thur	28-Jun-17	**Weather** WET
	From	**Turn**	**To**
Direction of Travel	Bolton Rd (S)	right	Dale View

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			1					1	1
0715-0730			3					3	3
0730-0745			1					1	1
0745-0800			1					1	1
0800-0815			2	1				3	4
0815-0830			4					4	4
0830-0835				1				1	2
0835-0840								0	0
0840-0845			1					1	1
0845-0850			1					1	1
0850-0855								0	0
0855-0900			4					4	4
0900-0905			1					1	1
0905-0910								0	0
0910-0915			2					2	2
0915-0920								0	0
0920-0925			2					2	2
0925-0930			1					1	1
0930-0945			1	1				2	3
0945-1000			3	1				4	5
1500-1505								0	0
1505-1510			4					4	4
1510-1515			1					1	1
1515-1520								0	0
1520-1525			2					2	2
1525-1530								0	0
1530-1535				1				1	2
1535-1540			2					2	2
1540-1545			6					6	6
1545-1550			1					1	1
1550-1555			2					2	2
1555-1600			1					1	1
1600-1615			7	2				9	10
1615-1630			3					3	3
1630-1645			8					8	8
1645-1700			7	1				8	9
1700-1715			6					6	6
1715-1730			4					4	4
1730-1745			7	1				8	9
1745-1800			11					11	11
1800-1815			9	1				10	11
1815-1830			5					5	5
1830-1845			3	1				4	5
1845-1900			5	1				6	7
TOTAL	**0**	**0**	**122**	**12**	**0**	**0**	**0**	**134**	**140**
0800-0900	0	0	12	2	0	0	0	14	15
1630-1730	0	0	25	1	0	0	0	26	27
1700-1800	0	0	28	1	0	0	0	29	30

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	BOLTON RD A6O34		AAAA-1168-site 3
	Day	**Date**	
DATE OF CENSUS	Thur	28-Jun-17	**Weather** WET
	From		**Turn** **To**
Direction of Travel	PICKARD LANE		left turn Bolton Rd (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			1					1	1
0715-0730			1					1	1
0730-0745			1					1	1
0745-0800								0	0
0800-0815								0	0
0815-0830			6					6	6
0830-0835			1					1	1
0835-0840			1					1	1
0840-0845			1					1	1
0845-0850			1					1	1
0850-0855								0	0
0855-0900			1					1	1
0900-0905				1				1	2
0905-0910			1					1	1
0910-0915			1					1	1
0915-0920			2					2	2
0920-0925								0	0
0925-0930								0	0
0930-0945			1					1	1
0945-1000			2					2	2
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540			1					1	1
1540-1545			2					2	2
1545-1550								0	0
1550-1555			1					1	1
1555-1600								0	0
1600-1615			2					2	2
1615-1630								0	0
1630-1645			2					2	2
1645-1700			2	1				3	4
1700-1715			2					2	2
1715-1730			2					2	2
1730-1745			2					2	2
1745-1800								0	0
1800-1815			1					1	1
1815-1830			1					1	1
1830-1845			1					1	1
1845-1900			1					1	1
TOTAL	**0**	**0**	**41**	**2**	**0**	**0**	**0**	**43**	**44**
0800-0900	0	0	11	0	0	0	0	11	11
1630-1730	0	0	8	1	0	0	0	9	10
1700-1800	0	0	6	0	0	0	0	6	6

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

				Site Ref No.
LOCATION OF CENSUS	BOLTON RD A6O34			AAAA-1168-site 3
	Day	**Date**		
DATE OF CENSUS	Thur	28-Jun-17	**Weather**	WET
	From		**Turn**	**To**
Direction of Travel	PICKARD LANE		ahead	Dale View

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545			1					1	1
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630				1				1	2
1630-1645								0	0
1645-1700								0	0
1700-1715			1					1	1
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815								0	0
1815-1830								0	0
1830-1845								0	0
1845-1900								0	0
TOTAL	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**3**	**4**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	1	0	0	0	0	1	1
1700-1800	0	0	1	0	0	0	0	1	1

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS BOLTON RD A6O34 — **Site Ref No.** AAAA-1168-site 3

DATE OF CENSUS **Day** Thur **Date** 28-Jun-17 — **Weather** WET

Direction of Travel **From** PICKARD LANE **Turn** right **To** Bolton Rd (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915			1					1	1
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945			2					2	2
0945-1000								0	0
1500-1505			1					1	1
1505-1510			1					1	1
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530			1					1	1
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615			1					1	1
1615-1630			2					2	2
1630-1645								0	0
1645-1700			1					1	1
1700-1715								0	0
1715-1730			2					2	2
1730-1745			1					1	1
1745-1800			1	1				2	3
1800-1815			1					1	1
1815-1830			2					2	2
1830-1845				1				1	2
1845-1900				1				1	2
TOTAL	**0**	**0**	**17**	**3**	**0**	**0**	**0**	**20**	**22**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	3	0	0	0	0	3	3
1700-1800	0	0	4	1	0	0	0	5	6

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

PRINT OPTIONS

LOCATION OF CENSUS HOWDEN RD JUNC DAISY HILL — **Site Ref No.** AAAA-1168-site 4

Date of census **Day** Tue **Date** 27-Jun-17 **Weather** WET **12 hour** NO

Direction of Travel **From** Howden Rd (W) **Turn** left turn **To** Daisy Hill

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			2					2	2
0715-0730								0	0
0730-0745			2					2	2
0745-0800			1					1	1
0800-0815								0	0
0815-0830			5	1				6	7
0830-0835			1					1	1
0835-0840			2					2	2
0840-0845								0	0
0845-0850			2					2	2
0850-0855			1					1	1
0855-0900			4					4	4
0900-0905			3					3	3
0905-0910								0	0
0910-0915			4					4	4
0915-0920			2					2	2
0920-0925								0	0
0925-0930				1				1	2
0930-0945			4		1			5	6
0945-1000			1					1	1
1500-1505			1					1	1
1505-1510			1					1	1
1510-1515			1					1	1
1515-1520			2					2	2
1520-1525			2					2	2
1525-1530								0	0
1530-1535			3					3	3
1535-1540			2					2	2
1540-1545			3					3	3
1545-1550			2					2	2
1550-1555								0	0
1555-1600								0	0
1600-1615			9					9	9
1615-1630			6					6	6
1630-1645			4					4	4
1645-1700			8					8	8
1700-1715			7					7	7
1715-1730			10					10	10
1730-1745			10					10	10
1745-1800			13					13	13
1800-1815			7					7	7
1815-1830			11					11	11
1830-1845			9					9	9
1845-1900			8					8	8
TOTAL	**0**	**0**	**153**	**2**	**1**	**0**	**0**	**156**	**158**
0800-0900	0	0	15	1	0	0	0	16	16.5
1630-1730	0	0	29	0	0	0	0	29	29
1700-1800	0	0	40	0	0	0	0	40	40

ADDITIONAL COUNT SHEETS

There are currently

0 extra count sheets

TOTAL FLOW THROUGH JUNCTION
Vehicles
1383 Survey

188 0800-0900

294 1630-1730

289 1700-1800
NB includes up to 10 minor moves/ u turns

Data not yet sent

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	HOWDEN RD JUNC DAISY HILL		AAAA-1168-site 4
	Day	**Date**	
DATE OF CENSUS	Tue	27-Jun-17	**Weather** WET
	From	**Turn**	**To**
Direction of Travel	Howden Rd (W)	ahead	Howden Road (E)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			5	2			1	8	10
0715-0730			13				1	14	15
0730-0745			8					8	8
0745-0800			12					12	12
0800-0815			9		1			10	11
0815-0830			9	2				11	12
0830-0835			1					1	1
0835-0840		1	8					9	8
0840-0845				1				1	2
0845-0850			1	1				2	3
0850-0855			4	1				5	6
0855-0900			8					8	8
0900-0905			10					10	10
0905-0910			4					4	4
0910-0915			5					5	5
0915-0920			5					5	5
0920-0925			5		1			6	7
0925-0930			5					5	5
0930-0945			10					10	10
0945-1000			7		1			8	9
1500-1505			7					7	7
1505-1510			4					4	4
1510-1515			4					4	4
1515-1520			5					5	5
1520-1525			4					4	4
1525-1530		1	7					8	7
1530-1535			3					3	3
1535-1540			7				1	8	9
1540-1545			4					4	4
1545-1550			12					12	12
1550-1555			10		1			11	12
1555-1600			2		1	1		4	7
1600-1615			20	1				21	22
1615-1630			27	1				28	29
1630-1645			24					24	24
1645-1700			41					41	41
1700-1715			41					41	41
1715-1730	1		56					57	56
1730-1745		1	36					37	36
1745-1800	3		16					19	16
1800-1815			37					37	37
1815-1830			20				1	21	22
1830-1845			20					20	20
1845-1900			8					8	8
TOTAL	**4**	**3**	**544**	**9**	**5**	**1**	**4**	**570**	**581**
0800-0900	0	1	40	5	1	0	0	47	50.2
1630-1730	1	0	162	0	0	0	0	163	162
1700-1800	4	1	149	0	0	0	0	154	149.4

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	HOWDEN RD JUNC DAISY HILL		AAAA-1168-site 4
	Day	**Date**	
DATE OF CENSUS	Tue	27-Jun-17	**Weather** WET
	From	**Turn**	**To**
Direction of Travel	Daisy Hill	left turn	Howden Road (E)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			1					1	1
0715-0730			1					1	1
0730-0745								0	0
0745-0800			1					1	1
0800-0815			2					2	2
0815-0830								0	0
0830-0835								0	0
0835-0840		1		1				2	2
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930			1					1	1
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535			1					1	1
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630			1					1	1
1630-1645								0	0
1645-1700			1					1	1
1700-1715			1					1	1
1715-1730			1					1	1
1730-1745								0	0
1745-1800			2					2	2
1800-1815								0	0
1815-1830								0	0
1830-1845			1					1	1
1845-1900			1					1	1
TOTAL	**0**	**1**	**15**	**1**	**0**	**0**	**0**	**17**	**17**
0800-0900	0	1	2	1	0	0	0	4	3.9
1630-1730	0	0	3	0	0	0	0	3	3
1700-1800	0	0	4	0	0	0	0	4	4

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	HOWDEN RD JUNC DAISY HILL		AAAA-1168-site 4
	Day	**Date**	
DATE OF CENSUS	Tue	27-Jun-17	**Weather** WET
	From	**Turn**	**To**
Direction of Travel	Daisy Hill	right	Howden Rd (W)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			2					2	2
0715-0730			3					3	3
0730-0745			3					3	3
0745-0800			2					2	2
0800-0815			5					5	5
0815-0830			2					2	2
0830-0835			1					1	1
0835-0840			2					2	2
0840-0845			1					1	1
0845-0850								0	0
0850-0855			2					2	2
0855-0900			1					1	1
0900-0905								0	0
0905-0910								0	0
0910-0915			2					2	2
0915-0920			1					1	1
0920-0925			2					2	2
0925-0930								0	0
0930-0945			3					3	3
0945-1000			3		1			4	5
1500-1505								0	0
1505-1510								0	0
1510-1515			1					1	1
1515-1520			3					3	3
1520-1525								0	0
1525-1530								0	0
1530-1535			1					1	1
1535-1540			2					2	2
1540-1545			1					1	1
1545-1550								0	0
1550-1555								0	0
1555-1600			2					2	2
1600-1615								0	0
1615-1630			7					7	7
1630-1645			2					2	2
1645-1700			4					4	4
1700-1715			1					1	1
1715-1730			1					1	1
1730-1745								0	0
1745-1800			2					2	2
1800-1815			3					3	3
1815-1830								0	0
1830-1845			1					1	1
1845-1900			2					2	2
TOTAL	**0**	**0**	**68**	**0**	**1**	**0**	**0**	**69**	**70**
0800-0900	0	0	14	0	0	0	0	14	14
1630-1730	0	0	8	0	0	0	0	8	8
1700-1800	0	0	4	0	0	0	0	4	4

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	HOWDEN RD JUNC DAISY HILL		AAAA-1168-site 4
	Day	**Date**	
DATE OF CENSUS	Tue	27-Jun-17	**Weather** WET
	From	**Turn**	**To**
Direction of Travel	Howden Road (E)	ahead	Howden Rd (W)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			11	1				12	13
0715-0730			26			1	1	28	30
0730-0745			32	1			1	34	36
0745-0800			19	3				22	24
0800-0815	1		31	1				33	33
0815-0830		1	12					13	12
0830-0835			7					7	7
0835-0840	1	1	6					8	6
0840-0845			16					16	16
0845-0850			11					11	11
0850-0855		1	9	1	1			12	13
0855-0900			7					7	7
0900-0905			5	2				7	8
0905-0910			4		1			5	6
0910-0915			3					3	3
0915-0920			4			1		5	6
0920-0925			6					6	6
0925-0930			4					4	4
0930-0945			22	2				24	25
0945-1000			21		1			22	23
1500-1505		1	3					4	3
1505-1510			2					2	2
1510-1515			7					7	7
1515-1520			7					7	7
1520-1525			3					3	3
1525-1530			7					7	7
1530-1535			3					3	3
1535-1540			3		1			4	5
1540-1545			5		1		1	7	9
1545-1550			4					4	4
1550-1555			3			2		5	8
1555-1600			10					10	10
1600-1615		1	13			1		15	16
1615-1630			22					22	22
1630-1645			17					17	17
1645-1700			20		1	2		23	27
1700-1715			19					19	19
1715-1730			27		2			29	32
1730-1745			23					23	23
1745-1800			13			2		15	18
1800-1815			15					15	15
1815-1830			14					14	14
1830-1845			9			2		11	14
1845-1900			15			1		16	17
TOTAL	**2**	**5**	**520**	**11**	**8**	**12**	**3**	**561**	**591**
0800-0900	2	3	99	2	1	0	0	107	105.5
1630-1730	0	0	83	0	3	2	0	88	94.5
1700-1800	0	0	82	0	2	2	0	86	91.2

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

LOCATION OF CENSUS HOWDEN RD JUNC DAISY HILL — **Site Ref No.** AAAA-1168-site 4

DATE OF CENSUS **Day** Tue **Date** 27-Jun-17 **Weather** WET

Direction of Travel **From** Howden Road (E) **Turn** right **To** Daisy Hill

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745			2					2	2
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945			1	1				2	3
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540			1					1	1
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645			1					1	1
1645-1700			1					1	1
1700-1715			1					1	1
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815			1					1	1
1815-1830								0	0
1830-1845			1					1	1
1845-1900								0	0
TOTAL	**0**	**0**	**9**	**1**	**0**	**0**	**0**	**10**	**11**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	3	0	0	0	0	3	3
1700-1800	0	0	1	0	0	0	0	1	1

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

PRINT OPTIONS

LOCATION OF CENSUS A6034 Bolton Road — **Site Ref No.** AAAA-1168-site 5

Date of census **Day** Wed **Date** 28-Jun-17 **Weather** Wet **12 hour**

Direction of Travel **From** Bolton Road (S) **Turn** left turn **To** Aire View

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			2					2	2
0715-0730			3					3	3
0730-0745			1					1	1
0745-0800			1					1	1
0800-0815								0	0
0815-0830			1					1	1
0830-0835								0	0
0835-0840			1					1	1
0840-0845			1					1	1
0845-0850								0	0
0850-0855			1					1	1
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915			1					1	1
0915-0920								0	0
0920-0925			2					2	2
0925-0930			1					1	1
0930-0945			2					2	2
0945-1000			5					5	5
1500-1505			1					1	1
1505-1510			1					1	1
1510-1515								0	0
1515-1520			2					2	2
1520-1525			2					2	2
1525-1530			1					1	1
1530-1535			2					2	2
1535-1540								0	0
1540-1545								0	0
1545-1550			2					2	2
1550-1555			1					1	1
1555-1600			1					1	1
1600-1615			3					3	3
1615-1630			2					2	2
1630-1645			2					2	2
1645-1700			6					6	6
1700-1715			2					2	2
1715-1730			7					7	7
1730-1745			3					3	3
1745-1800			2					2	2
1800-1815			3					3	3
1815-1830			5					5	5
1830-1845			6					6	6
1845-1900			4					4	4
TOTAL	**0**	**0**	**80**	**0**	**0**	**0**	**0**	**80**	**80**
0800-0900	0	0	4	0	0	0	0	4	4
1630-1730	0	0	17	0	0	0	0	17	17
1700-1800	0	0	14	0	0	0	0	14	14

ADDITIONAL COUNT SHEETS

There are currently

0 extra count sheets

TOTAL FLOW THROUGH JUNCTION
Vehicles
506 Survey

100 0800-0900

65 1630-1730

67 1700-1800
NB includes up to 10 minor moves/ u turns

Data not yet sent

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

				Site Ref No.
LOCATION OF CENSUS	A6034 Bolton Road			AAAA-1168-site 5
	Day	**Date**		
DATE OF CENSUS	Wed	28-Jun-17	**Weather**	Wet
	From		**Turn**	**To**
Direction of Travel	Bolton Road (S)		ahead	Bolton Road (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645								0	0
1645-1700								0	0
1700-1715								0	0
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815								0	0
1815-1830								0	0
1830-1845								0	0
1845-1900								0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	A6034 Bolton Road		AAAA-1168-site 5
	Day	**Date**	
DATE OF CENSUS	Wed	28-Jun-17	**Weather** Wet
	From	**Turn**	**To**
Direction of Travel	Aire View	left turn	Bolton Road (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			2					2	2
0715-0730			2					2	2
0730-0745			4					4	4
0745-0800			4					4	4
0800-0815			7					7	7
0815-0830			7					7	7
0830-0835			1					1	1
0835-0840			1					1	1
0840-0845								0	0
0845-0850			2					2	2
0850-0855								0	0
0855-0900			4					4	4
0900-0905			3					3	3
0905-0910			1					1	1
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945			3					3	3
0945-1000			5					5	5
1500-1505			1					1	1
1505-1510			2					2	2
1510-1515								0	0
1515-1520			3					3	3
1520-1525			2					2	2
1525-1530								0	0
1530-1535			1					1	1
1535-1540			3					3	3
1540-1545			4					4	4
1545-1550			1					1	1
1550-1555			2					2	2
1555-1600			1					1	1
1600-1615			5					5	5
1615-1630			1					1	1
1630-1645								0	0
1645-1700			3					3	3
1700-1715			5					5	5
1715-1730			1					1	1
1730-1745			5					5	5
1745-1800			5					5	5
1800-1815			5					5	5
1815-1830			2	1				3	4
1830-1845			1					1	1
1845-1900			3					3	3
TOTAL	**0**	**0**	**102**	**1**	**0**	**0**	**0**	**103**	**104**
0800-0900	0	0	22	0	0	0	0	22	22
1630-1730	0	0	9	0	0	0	0	9	9
1700-1800	0	0	16	0	0	0	0	16	16

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	A6034 Bolton Road		AAAA-1168-site 5
	Day	**Date**	
DATE OF CENSUS	Wed	28-Jun-17	**Weather** Wet
	From	**Turn**	**To**
Direction of Travel	Aire View	right	Bolton Road (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			15					15	15
0715-0730			7					7	7
0730-0745		1	14					15	14
0745-0800			13					13	13
0800-0815		1	12					13	12
0815-0830	1		9					10	9
0830-0835			4					4	4
0835-0840			8					8	8
0840-0845			6					6	6
0845-0850			5					5	5
0850-0855			7					7	7
0855-0900			13					13	13
0900-0905			13					13	13
0905-0910			4					4	4
0910-0915			1					1	1
0915-0920			2					2	2
0920-0925			3					3	3
0925-0930			3					3	3
0930-0945			13					13	13
0945-1000			3					3	3
1500-1505								0	0
1505-1510			1					1	1
1510-1515								0	0
1515-1520			1					1	1
1520-1525			4					4	4
1525-1530			2					2	2
1530-1535			8					8	8
1535-1540			8					8	8
1540-1545			11					11	11
1545-1550			5					5	5
1550-1555			1					1	1
1555-1600			2					2	2
1600-1615			11					11	11
1615-1630	1		7					8	7
1630-1645			7					7	7
1645-1700			7					7	7
1700-1715			10					10	10
1715-1730			11					11	11
1730-1745			7					7	7
1745-1800			4					4	4
1800-1815			8					8	8
1815-1830			5					5	5
1830-1845			7					7	7
1845-1900			8					8	8
TOTAL	**2**	**2**	**290**	**0**	**0**	**0**	**0**	**294**	**291**
0800-0900	1	1	64	0	0	0	0	66	64.4
1630-1730	0	0	35	0	0	0	0	35	35
1700-1800	0	0	32	0	0	0	0	32	32

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

				Site Ref No.
LOCATION OF CENSUS	A6034 Bolton Road			AAAA-1168-site 5
	Day	**Date**		
DATE OF CENSUS	Wed	28-Jun-17	**Weather**	Wet
	From		**Turn**	**To**
Direction of Travel	Bolton Road (N)		ahead	Bolton Road (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645								0	0
1645-1700								0	0
1700-1715								0	0
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815								0	0
1815-1830								0	0
1830-1845								0	0
1845-1900								0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	A6034 Bolton Road		AAAA-1168-site 5
	Day	**Date**	
DATE OF CENSUS	Wed	28-Jun-17	**Weather** Wet
	From		**Turn** **To**
Direction of Travel	Bolton Road (N)		right Aire View

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			1					1	1
0715-0730								0	0
0730-0745				1				1	2
0745-0800				1				1	2
0800-0815			2					2	2
0815-0830								0	0
0830-0835			1					1	1
0835-0840			1					1	1
0840-0845			2					2	2
0845-0850			2					2	2
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925			1					1	1
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505			1					1	1
1505-1510								0	0
1510-1515			1					1	1
1515-1520			1					1	1
1520-1525			2					2	2
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600			1					1	1
1600-1615			2					2	2
1615-1630			1					1	1
1630-1645								0	0
1645-1700			1					1	1
1700-1715			2					2	2
1715-1730			1					1	1
1730-1745			1					1	1
1745-1800			1					1	1
1800-1815			1					1	1
1815-1830			1					1	1
1830-1845								0	0
1845-1900								0	0
TOTAL	**0**	**0**	**27**	**2**	**0**	**0**	**0**	**29**	**30**
0800-0900	0	0	8	0	0	0	0	8	8
1630-1730	0	0	4	0	0	0	0	4	4
1700-1800	0	0	5	0	0	0	0	5	5

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

LOCATION OF CENSUS A6034 Keighley Road — **Site Ref No.** AAAA-1168-Site 6

Date of census **Day** Thur **Date** 29-Jun-17 **Weather** Overcast **12 hour** No

Direction of Travel **From** A6034 Keighley Road (S) **Turn** left turn **To** New Road

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			1					1	1
0715-0730			1					1	1
0730-0745			6					6	6
0745-0800			3					3	3
0800-0815	1		9					10	9
0815-0830			2					2	2
0830-0835			5					5	5
0835-0840			2					2	2
0840-0845			7					7	7
0845-0850			2					2	2
0850-0855			2					2	2
0855-0900			6	1				7	8
0900-0905								0	0
0905-0910								0	0
0910-0915			1					1	1
0915-0920			2					2	2
0920-0925			1					1	1
0925-0930			2					2	2
0930-0945			3					3	3
0945-1000			5					5	5
1500-1505			5					5	5
1505-1510			1					1	1
1510-1515			1					1	1
1515-1520			9					9	9
1520-1525			7					7	7
1525-1530			7					7	7
1530-1535			2					2	2
1535-1540			1					1	1
1540-1545			5					5	5
1545-1550			2					2	2
1550-1555			6					6	6
1555-1600			3					3	3
1600-1615			6					6	6
1615-1630			9					9	9
1630-1645			12					12	12
1645-1700			12					12	12
1700-1715			11					11	11
1715-1730			10					10	10
1730-1745	1		11					12	11
1745-1800	1	1	12					14	12
1800-1815			9					9	9
1815-1830			3					3	3
1830-1845		1	12					13	12
1845-1900			6					6	6
TOTAL	**3**	**2**	**222**	**1**	**0**	**0**	**0**	**228**	**224**
0800-0900	1	0	35	1	0	0	0	37	36.5
1630-1730	0	0	45	0	0	0	0	45	45
1700-1800	2	1	44	0	0	0	0	47	44.4

PRINT OPTIONS

ADDITIONAL COUNT SHEETS

There are currently

0 extra count sheets

TOTAL FLOW THROUGH JUNCTION
Vehicles
603 Survey

43 0800-0900

56 1630-1730

57 1700-1800
NB includes up to 10 minor moves/ u turns

Data not yet sent

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

			Site Ref No.
LOCATION OF CENSUS	A6034 Keighley Road		AAAA-1168-Site 6
	Day	**Date**	
DATE OF CENSUS	Thur	29-Jun-17	**Weather** Overcast
	From		**Turn** **To**
Direction of Travel	A6034 Keighley Road (S)		ahead A6034 Keighley Rd (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645								0	0
1645-1700								0	0
1700-1715								0	0
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815								0	0
1815-1830								0	0
1830-1845								0	0
1845-1900								0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	A6034 Keighley Road		AAAA-1168-Site 6
	Day	**Date**	
DATE OF CENSUS	Thur	29-Jun-17	**Weather** Overcast
	From		**Turn** **To**
Direction of Travel	New Road		left turn A6034 Keighley Rd (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645								0	0
1645-1700								0	0
1700-1715								0	0
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815								0	0
1815-1830								0	0
1830-1845								0	0
1845-1900								0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL — TRAFFIC UNIT

LOCATION OF CENSUS A6034 Keighley Road — **Site Ref No.** AAAA-1168-Site 6

DATE OF CENSUS **Day** Thur **Date** 29-Jun-17 **Weather** Overcast

Direction of Travel **From** New Road **Turn** right **To** A6034 Keighley Road (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645								0	0
1645-1700								0	0
1700-1715								0	0
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815								0	0
1815-1830								0	0
1830-1845								0	0
1845-1900	44	44	44	44	44	44	44	308	418
TOTAL	**44**	**44**	**44**	**44**	**44**	**44**	**44**	**308**	**418**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

				Site Ref No.
LOCATION OF CENSUS	A6034 Keighley Road			AAAA-1168-Site 6
	Day	**Date**		
DATE OF CENSUS	Thur	29-Jun-17	**Weather**	Overcast
	From		**Turn**	**To**
Direction of Travel	A6034 Keighley Rd (N)		ahead	A6034 Keighley Road (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645								0	0
1645-1700								0	0
1700-1715								0	0
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815								0	0
1815-1830								0	0
1830-1845								0	0
1845-1900								0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	A6034 Keighley Road		AAAA-1168-Site 6
	Day	**Date**	
DATE OF CENSUS	Thur	29-Jun-17	**Weather** Overcast
	From		**Turn** **To**
Direction of Travel	A6034 Keighley Rd (N)		right New Road

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730			1	1				2	3
0730-0745			2					2	2
0745-0800			3					3	3
0800-0815			1					1	1
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845			3					3	3
0845-0850			1					1	1
0850-0855			1					1	1
0855-0900								0	0
0900-0905			1					1	1
0905-0910								0	0
0910-0915			1					1	1
0915-0920								0	0
0920-0925								0	0
0925-0930			2					2	2
0930-0945			3					3	3
0945-1000			3					3	3
1500-1505			1					1	1
1505-1510			3					3	3
1510-1515								0	0
1515-1520			2					2	2
1520-1525			1					1	1
1525-1530			1					1	1
1530-1535								0	0
1535-1540			1					1	1
1540-1545								0	0
1545-1550			1					1	1
1550-1555			1					1	1
1555-1600								0	0
1600-1615								0	0
1615-1630			3					3	3
1630-1645			4					4	4
1645-1700			2					2	2
1700-1715			2					2	2
1715-1730			3					3	3
1730-1745			2					2	2
1745-1800			3					3	3
1800-1815	1		3					4	3
1815-1830			7					7	7
1830-1845			1					1	1
1845-1900			2					2	2
TOTAL	**1**	**0**	**65**	**1**	**0**	**0**	**0**	**67**	**67**
0800-0900	0	0	6	0	0	0	0	6	6
1630-1730	0	0	11	0	0	0	0	11	11
1700-1800	0	0	10	0	0	0	0	10	10

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT** **PRINT OPTIONS**

				Site Ref No.	
LOCATION OF CENSUS	BRIGGATE JUC BOLTON RD				AAAA-1168-Site 7
	Day	**Date**			
Date of census	Thur	29-Jun-17	**Weather**	WET	**12 hour** NO
	From		**Turn**	**To**	
Direction of Travel	BOLTON RD (S)		left turn	BRIGGATE	

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			9				1	10	11
0715-0730			10					10	10
0730-0745			10	1			1	12	14
0745-0800			20				1	21	22
0800-0815			15		1			16	17
0815-0830			25				1	26	27
0830-0835			11					11	11
0835-0840			10					10	10
0840-0845			9					9	9
0845-0850			4					4	4
0850-0855			7					7	7
0855-0900			3	1				4	5
0900-0905			3	1				4	5
0905-0910			5	1				6	7
0910-0915			4					4	4
0915-0920			5		1			6	7
0920-0925			5	1				6	7
0925-0930			6					6	6
0930-0945			18	2				20	21
0945-1000			6		1			7	8
1500-1505			4					4	4
1505-1510			5					5	5
1510-1515			5					5	5
1515-1520			7	1				8	9
1520-1525			6					6	6
1525-1530			8					8	8
1530-1535			3				1	4	5
1535-1540			7					7	7
1540-1545			4					4	4
1545-1550			3					3	3
1550-1555			5					5	5
1555-1600			7					7	7
1600-1615			13	1				14	15
1615-1630			15					15	15
1630-1645			16				1	17	18
1645-1700			18	1				19	20
1700-1715			22	1				23	24
1715-1730			18		1			19	20
1730-1745			23				1	24	25
1745-1800			20					20	20
1800-1815			24				1	25	26
1815-1830			16					16	16
1830-1845			23					23	23
1845-1900			18					18	18
TOTAL	**0**	**0**	**475**	**11**	**4**	**0**	**8**	**498**	**517**
0800-0900	0	0	84	1	1	0	1	87	89.8
1630-1730	0	0	74	2	1	0	1	78	81.3
1700-1800	0	0	83	1	1	0	1	86	88.8

ADDITIONAL COUNT SHEETS

There are currently

0 extra count sheets

TOTAL FLOW THROUGH JUNCTION
Vehicles
969 Survey

120 0800-0900

108 1630-1730

116 1700-1800
NB includes up to 10 minor moves/ u turns

Data not yet sent

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	BRIGGATE JUC BOLTON RD		AAAA-1168-Site 7
	Day	**Date**	
DATE OF CENSUS	Thur	29-Jun-17	**Weather** WET
	From	**Turn**	**To**
Direction of Travel	BOLTON RD (S)	ahead	BOLTON RD (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645								0	0
1645-1700								0	0
1700-1715								0	0
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815								0	0
1815-1830								0	0
1830-1845								0	0
1845-1900								0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

				Site Ref No.
LOCATION OF CENSUS	BRIGGATE JUC BOLTON RD			AAAA-1168-Site 7
	Day	**Date**		
DATE OF CENSUS	Thur	29-Jun-17	**Weather**	WET
	From		**Turn**	**To**
Direction of Travel	BRIGGATE		left turn	BOLTON RD (N)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645								0	0
1645-1700								0	0
1700-1715								0	0
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815								0	0
1815-1830								0	0
1830-1845								0	0
1845-1900								0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	BRIGGATE JUC BOLTON RD		AAAA-1168-Site 7
	Day	**Date**	
DATE OF CENSUS	Thur	29-Jun-17	**Weather** WET
	From	**Turn**	**To**
Direction of Travel	BRIGGATE	right	BOLTON RD (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645								0	0
1645-1700								0	0
1700-1715								0	0
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815								0	0
1815-1830								0	0
1830-1845								0	0
1845-1900	44	44	44	44	44	44	44	308	418
TOTAL	**44**	**44**	**44**	**44**	**44**	**44**	**44**	**308**	**418**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

				Site Ref No.
LOCATION OF CENSUS	BRIGGATE JUC BOLTON RD			AAAA-1168-Site 7
	Day	**Date**		
DATE OF CENSUS	Thur	29-Jun-17	**Weather**	WET
	From		**Turn**	**To**
Direction of Travel	BOLTON RD (N)		ahead	BOLTON RD (S)

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715								0	0
0715-0730								0	0
0730-0745								0	0
0745-0800								0	0
0800-0815								0	0
0815-0830								0	0
0830-0835								0	0
0835-0840								0	0
0840-0845								0	0
0845-0850								0	0
0850-0855								0	0
0855-0900								0	0
0900-0905								0	0
0905-0910								0	0
0910-0915								0	0
0915-0920								0	0
0920-0925								0	0
0925-0930								0	0
0930-0945								0	0
0945-1000								0	0
1500-1505								0	0
1505-1510								0	0
1510-1515								0	0
1515-1520								0	0
1520-1525								0	0
1525-1530								0	0
1530-1535								0	0
1535-1540								0	0
1540-1545								0	0
1545-1550								0	0
1550-1555								0	0
1555-1600								0	0
1600-1615								0	0
1615-1630								0	0
1630-1645								0	0
1645-1700								0	0
1700-1715								0	0
1715-1730								0	0
1730-1745								0	0
1745-1800								0	0
1800-1815								0	0
1815-1830								0	0
1830-1845								0	0
1845-1900								0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800-0900	0	0	0	0	0	0	0	0	0
1630-1730	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

			Site Ref No.
LOCATION OF CENSUS	BRIGGATE JUC BOLTON RD		AAAA-1168-Site 7
	Day	**Date**	
DATE OF CENSUS	Thur	29-Jun-17	**Weather** WET
	From	**Turn**	**To**
Direction of Travel	BOLTON RD (N)	right	BRIGGATE

TIME	Pedal Cycles	M/C's Scooters Moped	Cars and Light Vans	Commercial Under 7.5 tonnes	H.G.V.s Under 16.5 tonnes (2 axles)	H.G.V.s Over 16.5 tonnes (3+ axles)	P.S.V.s & coaches inc S.S	Total Vehs	Total P.C.U.s
0700-0715			1		1			2	3
0715-0730								0	0
0730-0745			2					2	2
0745-0800			4					4	4
0800-0815			6					6	6
0815-0830			11					11	11
0830-0835								0	0
0835-0840			2					2	2
0840-0845			2					2	2
0845-0850			3					3	3
0850-0855			5					5	5
0855-0900			4					4	4
0900-0905			1					1	1
0905-0910			1					1	1
0910-0915								0	0
0915-0920								0	0
0920-0925			2		1			3	4
0925-0930			1					1	1
0930-0945			1					1	1
0945-1000			6					6	6
1500-1505			4					4	4
1505-1510			3					3	3
1510-1515			1					1	1
1515-1520			2					2	2
1520-1525			7					7	7
1525-1530			3					3	3
1530-1535			1					1	1
1535-1540			2					2	2
1540-1545			4					4	4
1545-1550			3					3	3
1550-1555			2					2	2
1555-1600			1					1	1
1600-1615			4					4	4
1615-1630			6					6	6
1630-1645			6					6	6
1645-1700			7	1				8	9
1700-1715			9					9	9
1715-1730			7					7	7
1730-1745			4					4	4
1745-1800			10					10	10
1800-1815			6	1				7	8
1815-1830			6					6	6
1830-1845			6					6	6
1845-1900			3					3	3
TOTAL	**0**	**0**	**159**	**2**	**2**	**0**	**0**	**163**	**167**
0800-0900	0	0	33	0	0	0	0	33	33
1630-1730	0	0	29	1	0	0	0	30	30.5
1700-1800	0	0	30	0	0	0	0	30	30

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

ROAD NAME A6034 Keighley Road

Pedestrian survey

LOCATION Crossing A6034 Keighley Road, N of Clog Bridge

Site Ref No. AAAA-1168-SITE 8

Day Thur **Date** 27-Jun-17

Date of census

Weather AM Rain PM Dry

	Direction A-B			Direction B-A			Two Way			Total
TIME	Children	Adults	Elderly	Children	Adults	Elderly	Children	Adults	Elderly	All
0700-0715		2			2		0	4	0	**4**
0715-0730		1			4		0	5	0	**5**
0730-0745	2	1		4	2		6	3	0	**9**
0745-0800	4	1		1	3		5	4	0	**9**
0800-0815		2			4		0	6	0	**6**
0815-0830		2					0	2	0	**2**
0830-0835		1		3	2		3	3	0	**6**
0835-0840				2	2		2	2	0	**4**
0840-0845		1		1	2		1	3	0	**4**
0845-0850				12	9		12	9	0	**21**
0850-0855	1	1		4	2		5	3	0	**8**
0855-0900	2	5		2	2		4	7	0	**11**
0900-0905		2			1		0	3	0	**3**
0905-0910		1		1	4		1	5	0	**6**
0910-0915							0	0	0	**0**
0915-0920		1					0	1	0	**1**
0920-0925					2		0	2	0	**2**
0925-0930					3		0	3	0	**3**
0930-0945		3			1		0	4	0	**4**
0945-1000					1		0	1	0	**1**
1500-1505		2		1	5		1	7	0	**8**
1505-1510		2			3		0	5	0	**5**
1510-1515	1	5			5		1	10	0	**11**
1515-1520				2	4		2	4	0	**6**
1520-1525		1		2	7		2	8	0	**10**
1525-1530		1		2	9		2	10	0	**12**
1530-1535	21	11			5		21	16	0	**37**
1535-1540	14	10			2		14	12	0	**26**
1540-1545	15	9		1	2		16	11	0	**27**
1545-1550	10	6		1	2		11	8	0	**19**
1550-1555	4	5			2		4	7	0	**11**
1555-1600	1	1			3		1	4	0	**5**
1600-1615	3	5		1	4		4	9	0	**13**
1615-1630		5		1	2		1	7	0	**8**
1630-1645	1	5		2	4		3	9	0	**12**
1645-1700	3	7			2		3	9	0	**12**
1700-1715		6			6		0	12	0	**12**
1715-1730	1	3			1		1	4	0	**5**
1730-1745	2	7		2	6		4	13	0	**17**
1745-1800	2	6					2	6	0	**8**
1800-1815		4					0	4	0	**4**
1815-1830		2			1		0	3	0	**3**
1830-1845		5			1		0	6	0	**6**
1845-1900		2			1		0	3	0	**3**
TOTAL	**87**	**134**	**0**	**45**	**123**	**0**	**132**	**257**	**0**	**389**
Percent	**39.4%**	**60.6%**	**0.0%**	**26.8%**	**73.2%**	**0.0%**	**33.9%**	**66.1%**	**0.0%**	
0800-0900	3	12	0	24	23	0	27	35	0	**62**
1630-1730	5	21	0	2	13	0	7	34	0	**41**
1700-1800	5	22	0	2	13	0	7	35	0	**42**

COMMANDS

There are currently
2 count sheets

PV2 calculations are in columns R to AA to the right

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

ROAD NAME A6034 Keighley Road

Day Thur **Date** 27-Jun-17 **Site Ref No.** AAAA-1168-SITE 8

Date of census

Weather AM Rain PM D

PV2 SUMMARY

SECTION 1 **#N/A** **x 108**

Location 1 Crossing A6034 Keighley Road, N of Clog Bridge
Location 2 Crossing Road A 50m east of BBB

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

ROAD NAME A6034 Keighley Road **Pedestrian survey**

Site Ref No.

LOCATION Crossing Road A 50m east of BBB AAAA-1168-SITE 8

Day **Date**

Date of census Thur 27-Jun-17 **Weather** AM Rain PM Dry

	Direction A-B			Direction B-A			Two Way			Total
TIME	Children	Adults	Elderly	Children	Adults	Elderly	Children	Adults	Elderly	All
0700-0715							0	0	0	**0**
0715-0730							0	0	0	**0**
0730-0745							0	0	0	**0**
0745-0800							0	0	0	**0**
0800-0815							0	0	0	**0**
0815-0830							0	0	0	**0**
0830-0835							0	0	0	**0**
0835-0840							0	0	0	**0**
0840-0845							0	0	0	**0**
0845-0850							0	0	0	**0**
0850-0855							0	0	0	**0**
0855-0900							0	0	0	**0**
0900-0905							0	0	0	**0**
0905-0910							0	0	0	**0**
0910-0915							0	0	0	**0**
0915-0920							0	0	0	**0**
0920-0925							0	0	0	**0**
0925-0930							0	0	0	**0**
0930-0945							0	0	0	**0**
0945-1000							0	0	0	**0**
1500-1505							0	0	0	**0**
1505-1510							0	0	0	**0**
1510-1515							0	0	0	**0**
1515-1520							0	0	0	**0**
1520-1525							0	0	0	**0**
1525-1530							0	0	0	**0**
1530-1535							0	0	0	**0**
1535-1540							0	0	0	**0**
1540-1545							0	0	0	**0**
1545-1550							0	0	0	**0**
1550-1555							0	0	0	**0**
1555-1600							0	0	0	**0**
1600-1615							0	0	0	**0**
1615-1630							0	0	0	**0**
1630-1645							0	0	0	**0**
1645-1700							0	0	0	**0**
1700-1715							0	0	0	**0**
1715-1730							0	0	0	**0**
1730-1745							0	0	0	**0**
1745-1800							0	0	0	**0**
1800-1815							0	0	0	**0**
1815-1830							0	0	0	**0**
1830-1845							0	0	0	**0**
1845-1900							0	0	0	**0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Percent	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	
0800-0900	0	0	0	0	0	0	0	0	0	**0**
1630-1730	0	0	0	0	0	0	0	0	0	**0**
1700-1800	0	0	0	0	0	0	0	0	0	**0**

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **PV2**

ROAD NAME A6034 Keighley Road **DATE** 27-Jun-17

LOCATION 1 Crossing A6034 Keighley Road, N of Clog Bridge

LOCATION 2 Crossing Road A 50m east of BBB

Rank by hour	Time period	Two way vehs	Two way peds	PV2	Top Four PV2
18	0700-0715	181	4	131044	
11	0715-0730	244	5	297680	
3	0730-0745	239	9	514089	514089
5	0745-0800	221	9	439569	
7	0800-0815	247	6	366054	366054
15	0815-0830	212	2	89888	
32	0830-0835	59	6	20886	#N/A
28	0835-0840	88	4	30976	
28	0840-0845	80	4	25600	#N/A
19	0845-0850	57	21	68229	
24	0850-0855	68	8	36992	
18	0855-0900	84	11	77616	#N/A
27	0900-0905	82	3	20172	
24	0905-0910	72	6	31104	#N/A
	0910-0915	78	0	0	
29	0915-0920	73	1	5329	
28	0920-0925	68	2	9248	
27	0925-0930	76	3	17328	
11	0930-0945	197	4	155236	
20	0945-1000	202	1	40804	
21	1500-1505	64	8	32768	
21	1505-1510	67	5	22445	
18	1510-1515	73	11	58619	
21	1515-1520	55	6	18150	
19	1520-1525	62	10	38440	
17	1525-1530	72	12	62208	
10	1530-1535	65	37	156325	
12	1535-1540	63	26	103194	
15	1540-1545	45	27	54675	#N/A
14	1545-1550	64	19	77824	
13	1550-1555	86	11	81356	
13	1555-1600	66	5	21780	#N/A
3	1600-1615	196	13	499408	#N/A
6	1615-1630	193	8	297992	
2	1630-1645	229	12	629292	629292
2	1645-1700	203	12	494508	#N/A
3	1700-1715	185	12	410700	#N/A
4	1715-1730	215	5	231125	
1	1730-1745	233	17	922913	922913
1	1745-1800	230	8	423200	#N/A
3	1800-1815	190	4	144400	#N/A
2	1815-1830	220	3	145200	#N/A
1	1830-1845	212	6	269664	#N/A
1	1845-1900	165	3	81675	

PV2 = #N/A x 10^8

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

ROAD NAME A6034 Keighley Road **Pedestrian survey**

LOCATION Crossing A6034 Keighley Road, N of Aire View **Site Ref No.** AAAA-1168-SITE 9

Date of census **Day** Thur **Date** 29-Jun-17 **Weather** Overcast

	Direction A-B			Direction B-A			Two Way			Total
TIME	Children	Adults	Elderly	Children	Adults	Elderly	Children	Adults	Elderly	All
0700-0715		2					0	2	0	**2**
0715-0730		1			1		0	2	0	**2**
0730-0745	1	1					1	1	0	**2**
0745-0800	2	2		1			3	2	0	**5**
0800-0815				2	1		2	1	0	**3**
0815-0830		3			1		0	4	0	**4**
0830-0835		3					0	3	0	**3**
0835-0840							0	0	0	**0**
0840-0845							0	0	0	**0**
0845-0850				1	1		1	1	0	**2**
0850-0855		1		2	4		2	5	0	**7**
0855-0900		1		2	3		2	4	0	**6**
0900-0905		2			3		0	5	0	**5**
0905-0910		4					0	4	0	**4**
0910-0915	1	1		3	1		4	2	0	**6**
0915-0920		2			1		0	3	0	**3**
0920-0925			1			1	0	0	2	**2**
0925-0930		2					0	2	0	**2**
0930-0945	1	5	3		3	1	1	8	4	**13**
0945-1000		7	1		2	1	0	9	2	**11**
1500-1505	2	1		1	2		3	3	0	**6**
1505-1510		4			1		0	5	0	**5**
1510-1515		1		1	1		1	2	0	**3**
1515-1520		1			2		0	3	0	**3**
1520-1525				2	4	3	2	4	3	**9**
1525-1530		2					0	2	0	**2**
1530-1535					3		0	3	0	**3**
1535-1540	6	4		1	1		7	5	0	**12**
1540-1545	13	8	1		1		13	9	1	**23**
1545-1550	3	2					3	2	0	**5**
1550-1555	2	2			1		2	3	0	**5**
1555-1600	5	4	1		3		5	7	1	**13**
1600-1615		1			9	1	0	10	1	**11**
1615-1630		4			2		0	6	0	**6**
1630-1645	1	5		1	4		2	9	0	**11**
1645-1700	1	1	1		1		1	2	1	**4**
1700-1715					2		0	2	0	**2**
1715-1730		2			4		0	6	0	**6**
1730-1745	3	3		2	2		5	5	0	**10**
1745-1800	5	10		3	7		8	17	0	**25**
1800-1815		2		2	4		2	6	0	**8**
1815-1830		3		2	1		2	4	0	**6**
1830-1845		5			1		0	6	0	**6**
1845-1900		3			1		0	4	0	**4**
TOTAL	**46**	**105**	**8**	**26**	**78**	**7**	**72**	**183**	**15**	**270**
Percent	**28.9%**	**66.0%**	**5.0%**	**23.4%**	**70.3%**	**6.3%**	**26.7%**	**67.8%**	**5.6%**	
0800-0900	0	8	0	7	10	0	7	18	0	**25**
1630-1730	2	8	1	1	11	0	3	19	1	**23**
1700-1800	8	15	0	5	15	0	13	30	0	**43**

COMMANDS

There are currently
2 count sheets

PV2 calculations are in columns R to AA to the right

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

ROAD NAME A6034 Keighley Road

Date of census **Day** Thur **Date** 29-Jun-17 **Weather** Overcast **Site Ref No.** AAAA-1168-SITE 9

PV2 SUMMARY

SECTION 1 **#N/A** **x 108**

Location 1 Crossing A6034 Keighley Road, N of Aire View
Location 2 Crossing Road A 50m east of BBB

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

ROAD NAME A6034 Keighley Road **Pedestrian survey**

Site Ref No.

LOCATION Crossing Road A 50m east of BBB AAAA-1168-SITE 9

Day **Date**

Date of census Thur 29-Jun-17 **Weather** Overcast

	Direction A-B			Direction B-A			Two Way			Total
TIME	Children	Adults	Elderly	Children	Adults	Elderly	Children	Adults	Elderly	All
0700-0715							0	0	0	**0**
0715-0730							0	0	0	**0**
0730-0745							0	0	0	**0**
0745-0800							0	0	0	**0**
0800-0815							0	0	0	**0**
0815-0830							0	0	0	**0**
0830-0835							0	0	0	**0**
0835-0840							0	0	0	**0**
0840-0845							0	0	0	**0**
0845-0850							0	0	0	**0**
0850-0855							0	0	0	**0**
0855-0900							0	0	0	**0**
0900-0905							0	0	0	**0**
0905-0910							0	0	0	**0**
0910-0915							0	0	0	**0**
0915-0920							0	0	0	**0**
0920-0925							0	0	0	**0**
0925-0930							0	0	0	**0**
0930-0945							0	0	0	**0**
0945-1000							0	0	0	**0**
1500-1505							0	0	0	**0**
1505-1510							0	0	0	**0**
1510-1515							0	0	0	**0**
1515-1520							0	0	0	**0**
1520-1525							0	0	0	**0**
1525-1530							0	0	0	**0**
1530-1535							0	0	0	**0**
1535-1540							0	0	0	**0**
1540-1545							0	0	0	**0**
1545-1550							0	0	0	**0**
1550-1555							0	0	0	**0**
1555-1600							0	0	0	**0**
1600-1615							0	0	0	**0**
1615-1630							0	0	0	**0**
1630-1645							0	0	0	**0**
1645-1700							0	0	0	**0**
1700-1715							0	0	0	**0**
1715-1730							0	0	0	**0**
1730-1745							0	0	0	**0**
1745-1800							0	0	0	**0**
1800-1815							0	0	0	**0**
1815-1830							0	0	0	**0**
1830-1845							0	0	0	**0**
1845-1900							0	0	0	**0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Percent	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	
0800-0900	0	0	0	0	0	0	0	0	0	**0**
1630-1730	0	0	0	0	0	0	0	0	0	**0**
1700-1800	0	0	0	0	0	0	0	0	0	**0**

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **PV2**

ROAD NAME A6034 Keighley Road **DATE** 29-Jun-17

LOCATION 1 Crossing A6034 Keighley Road, N of Aire View

LOCATION 2 Crossing Road A 50m east of BBB

Rank by hour	Time period	Two way vehs	Two way peds	PV2	Top Four PV2
20	0700-0715	181	2	65522	
16	0715-0730	244	2	119072	
16	0730-0745	239	2	114242	#N/A
11	0745-0800	221	5	244205	
12	0800-0815	247	3	183027	
12	0815-0830	212	4	179776	#N/A
32	0830-0835	59	3	10443	#N/A
	0835-0840	88	0	0	
	0840-0845	80	0	0	
35	0845-0850	57	2	6498	#N/A
23	0850-0855	68	7	32368	
18	0855-0900	84	6	42336	
21	0900-0905	82	5	33620	
23	0905-0910	72	4	20736	#N/A
19	0910-0915	78	6	36504	36504
23	0915-0920	73	3	15987	#N/A
27	0920-0925	68	2	9248	9248
25	0925-0930	76	2	11552	
4	0930-0945	197	13	504517	
4	0945-1000	202	11	448844	
18	1500-1505	64	6	24576	
18	1505-1510	67	5	22445	
19	1510-1515	73	3	15987	
21	1515-1520	55	3	9075	
17	1520-1525	62	9	34596	
19	1525-1530	72	2	10368	
18	1530-1535	65	3	12675	
14	1535-1540	63	12	47628	
14	1540-1545	45	23	46575	#N/A
15	1545-1550	64	5	20480	
14	1550-1555	86	5	36980	#N/A
13	1555-1600	66	13	56628	
4	1600-1615	196	11	422576	#N/A
8	1615-1630	193	6	223494	
2	1630-1645	229	11	576851	576851
7	1645-1700	203	4	164836	
8	1700-1715	185	2	68450	#N/A
5	1715-1730	215	6	277350	277350
2	1730-1745	233	10	542890	#N/A
1	1745-1800	230	25	1322500	1322500
2	1800-1815	190	8	288800	#N/A
1	1815-1830	220	6	290400	#N/A
1	1830-1845	212	6	269664	#N/A
1	1845-1900	165	4	108900	108900

PV2 = #N/A x 10^8

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

ROAD NAME A6034 Keighley Road **Pedestrian survey**

LOCATION Crossing A6034 Keighley Road, S of Wesley Pl **Site Ref No.** AAAA-1168-SITE 10

Date of census **Day** Thur **Date** 29-Jun-17 **Weather** Overcast

	Direction A-B			Direction B-A			Two Way			Total
TIME	Children	Adults	Elderly	Children	Adults	Elderly	Children	Adults	Elderly	All
0700-0715	1	1			1		1	2	0	**3**
0715-0730							0	0	0	**0**
0730-0745	1	1					1	1	0	**2**
0745-0800				1	2		1	2	0	**3**
0800-0815		1					0	1	0	**1**
0815-0830					1		0	1	0	**1**
0830-0835		1			1		0	2	0	**2**
0835-0840		1			2		0	3	0	**3**
0840-0845		3		2	2		2	5	0	**7**
0845-0850		1		2	2		2	3	0	**5**
0850-0855	1	2		7	8		8	10	0	**18**
0855-0900		1					0	1	0	**1**
0900-0905		2		2	1		2	3	0	**5**
0905-0910							0	0	0	**0**
0910-0915		1		1	2		1	3	0	**4**
0915-0920		5		1	2		1	7	0	**8**
0920-0925	1	3			2		1	5	0	**6**
0925-0930		1		2	3		2	4	0	**6**
0930-0945		5			3		0	8	0	**8**
0945-1000		6			12		0	18	0	**18**
1500-1505		1			2		0	3	0	**3**
1505-1510		2			1		0	3	0	**3**
1510-1515		2			1		0	3	0	**3**
1515-1520							0	0	0	**0**
1520-1525		1		2	3		2	4	0	**6**
1525-1530		2			2		0	4	0	**4**
1530-1535		2			1	1	0	3	1	**4**
1535-1540		2			2		0	4	0	**4**
1540-1545		2		1	2		1	4	0	**5**
1545-1550		2	1		2		0	4	1	**5**
1550-1555	5	1					5	1	0	**6**
1555-1600		4			3		0	7	0	**7**
1600-1615	2	4		3	4		5	8	0	**13**
1615-1630	1	5		4	4	2	5	9	2	**16**
1630-1645	2	3	1	2	1		4	4	1	**9**
1645-1700				2	7		2	7	0	**9**
1700-1715		5		1	9		1	14	0	**15**
1715-1730	1	2	1	1	3		2	5	1	**8**
1730-1745	1	3					1	3	0	**4**
1745-1800	1	2		4	6		5	8	0	**13**
1800-1815		1		2	6		2	7	0	**9**
1815-1830		2			1	1	0	3	1	**4**
1830-1845				1	2		1	2	0	**3**
1845-1900		3		1	5		1	8	0	**9**
TOTAL	**17**	**86**	**3**	**42**	**111**	**4**	**59**	**197**	**7**	**263**
Percent	**16.0%**	**81.1%**	**2.8%**	**26.8%**	**70.7%**	**2.5%**	**22.4%**	**74.9%**	**2.7%**	
0800-0900	1	10	0	11	16	0	12	26	0	**38**
1630-1730	3	10	2	6	20	0	9	30	2	**41**
1700-1800	3	12	1	6	18	0	9	30	1	**40**

COMMANDS

There are currently
2 count sheets

PV2 calculations are in columns R to AA to the right

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

ROAD NAME A6034 Keighley Road

Date of census **Day** Thur **Date** 29-Jun-17 **Weather** Overcast **Site Ref No.** AAAA-1168-SITE 10

PV2 SUMMARY

SECTION 1 **#N/A** **x 108**

Location 1 Crossing A6034 Keighley Road, S of Wesley Pl
Location 2 Crossing Road A 50m east of BBB

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **TRAFFIC UNIT**

ROAD NAME A6034 Keighley Road **Pedestrian survey**

Site Ref No.

LOCATION Crossing Road A 50m east of BBB AAAA-1168-SITE 10

Day **Date**

Date of census Thur 29-Jun-17 **Weather** Overcast

	Direction A-B			Direction B-A			Two Way			Total
TIME	Children	Adults	Elderly	Children	Adults	Elderly	Children	Adults	Elderly	All
0700-0715							0	0	0	**0**
0715-0730							0	0	0	**0**
0730-0745							0	0	0	**0**
0745-0800							0	0	0	**0**
0800-0815							0	0	0	**0**
0815-0830							0	0	0	**0**
0830-0835							0	0	0	**0**
0835-0840							0	0	0	**0**
0840-0845							0	0	0	**0**
0845-0850							0	0	0	**0**
0850-0855							0	0	0	**0**
0855-0900							0	0	0	**0**
0900-0905							0	0	0	**0**
0905-0910							0	0	0	**0**
0910-0915							0	0	0	**0**
0915-0920							0	0	0	**0**
0920-0925							0	0	0	**0**
0925-0930							0	0	0	**0**
0930-0945							0	0	0	**0**
0945-1000							0	0	0	**0**
1500-1505							0	0	0	**0**
1505-1510							0	0	0	**0**
1510-1515							0	0	0	**0**
1515-1520							0	0	0	**0**
1520-1525							0	0	0	**0**
1525-1530							0	0	0	**0**
1530-1535							0	0	0	**0**
1535-1540							0	0	0	**0**
1540-1545							0	0	0	**0**
1545-1550							0	0	0	**0**
1550-1555							0	0	0	**0**
1555-1600							0	0	0	**0**
1600-1615							0	0	0	**0**
1615-1630							0	0	0	**0**
1630-1645							0	0	0	**0**
1645-1700							0	0	0	**0**
1700-1715							0	0	0	**0**
1715-1730							0	0	0	**0**
1730-1745							0	0	0	**0**
1745-1800							0	0	0	**0**
1800-1815							0	0	0	**0**
1815-1830							0	0	0	**0**
1830-1845							0	0	0	**0**
1845-1900							0	0	0	**0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Percent	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	
0800-0900	0	0	0	0	0	0	0	0	0	**0**
1630-1730	0	0	0	0	0	0	0	0	0	**0**
1700-1800	0	0	0	0	0	0	0	0	0	**0**

CITY OF BRADFORD METROPOLITAN DISTRICT COUNCIL **PV2**

ROAD NAME A6034 Keighley Road **DATE** 29-Jun-17

LOCATION 1 Crossing A6034 Keighley Road, S of Wesley Pl

LOCATION 2 Crossing Road A 50m east of BBB

Rank by hour	Time period	Two way vehs	Two way peds	PV2	Top Four PV2
17	0700-0715	181	3	98283	98283
	0715-0730	244	0	0	
16	0730-0745	239	2	114242	
14	0745-0800	221	3	146523	146523
16	0800-0815	247	1	61009	#N/A
16	0815-0830	212	1	44944	#N/A
36	0830-0835	59	2	6962	#N/A
24	0835-0840	88	3	23232	
16	0840-0845	80	7	44800	#N/A
27	0845-0850	57	5	16245	
15	0850-0855	68	18	83232	
31	0855-0900	84	1	7056	
18	0900-0905	82	5	33620	
	0905-0910	72	0	0	
20	0910-0915	78	4	24336	
16	0915-0920	73	8	42632	#N/A
18	0920-0925	68	6	27744	
16	0925-0930	76	6	34656	
10	0930-0945	197	8	310472	
1	0945-1000	202	18	734472	
22	1500-1505	64	3	12288	
21	1505-1510	67	3	13467	
19	1510-1515	73	3	15987	
	1515-1520	55	0	0	
15	1520-1525	62	6	23064	
15	1525-1530	72	4	20736	
16	1530-1535	65	4	16900	
16	1535-1540	63	4	15876	#N/A
16	1540-1545	45	5	10125	#N/A
15	1545-1550	64	5	20480	#N/A
13	1550-1555	86	6	44376	
13	1555-1600	66	7	30492	#N/A
4	1600-1615	196	13	499408	
2	1615-1630	193	16	595984	595984
3	1630-1645	229	9	471969	
3	1645-1700	203	9	370881	#N/A
2	1700-1715	185	15	513375	#N/A
2	1715-1730	215	8	369800	#N/A
4	1730-1745	233	4	217156	#N/A
1	1745-1800	230	13	687700	#N/A
1	1800-1815	190	9	324900	#N/A
2	1815-1830	220	4	193600	#N/A
2	1830-1845	212	3	134832	#N/A
1	1845-1900	165	9	245025	

PV2 = #N/A x 10^8

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