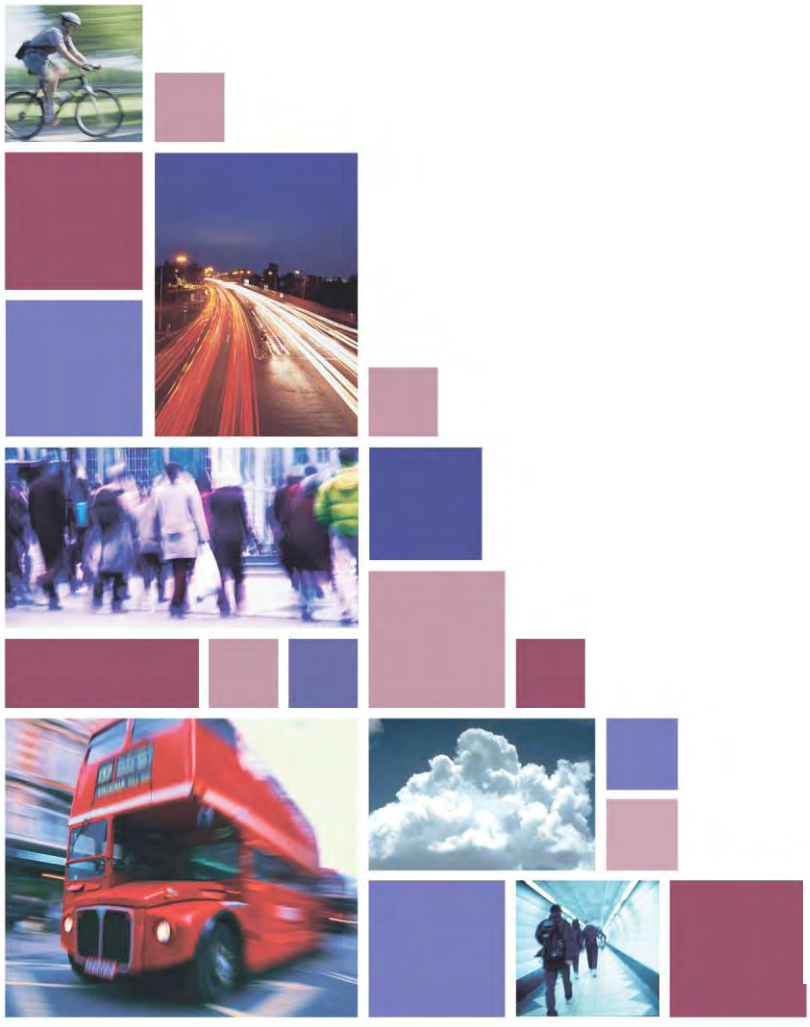
ashleyhelme

Land off Dymock Road, Ledbury, Herefordshire

Transport Assessment



Report Prepared for

Gladman Developments Ltd

October 2018

Report Reference 1394/5/C

This page has been left blank intentionally.

ashleyhelme

Transport Assessment

Land off Dymock Road, Ledbury, Hereford

Client:	Gladman Developments Ltd
Report Ref:	1394/5/C
Status:	Final
Date:	October 2018

Ashley Helme Associates Ltd
76 Washway Road
SALE, Manchester
M33 7RE

Telephone
0161 972 0552

aha@ashleyhelme.co.uk
www.ashleyhelme.co.uk

This page has been left blank intentionally.

Transport Assessment

Land off Dymock Road, Ledbury, Herefordshire

This page has been left blank intentionally.

1 Introduction

1.1 Ashley Helme Associates Limited (AHA) is appointed by Gladman Developments Ltd to provide highways advice with respect to the planning application for residential development on land off Dymock Road, Ledbury, Herefordshire (henceforth referred to as the Site). The location of the Site is indicated on Figure 1, in the context of the local highway network.

1.2 The Site is presently agricultural/field land. The proposed development comprises a residential development of up to 420 dwellings. All matters are reserved, except for access. The applicant also proposes to make land within the Site available for future community uses, the details of which can be decided by Herefordshire Council (HC) at a later date.

1.3 The transport policy context for the proposed development is outlined in Chapter 2. The principles of the access strategy are also discussed in Chapter 2, and this provides the means to achieve transport policy objectives. It is fundamental to the approach of the applicant, as represented in this TA, that a holistic view is taken of the consideration of access to the proposed development by all modes of transport.

1.4 The issues addressed within the TA fall broadly into the following areas:

- Accessibility by non-car modes, and
- The vehicular traffic impact on the operational performance of the local highway network, assessed quantitatively for the TA defined study network.

1.5 AHA prepared TA report 1394/2/A which accompanied the planning application for the land to the north of the Site (application ref P143116/O). This land now benefits from planning consent for up to 321 dwellings. Through the application process AHA agreed with the highway authority HC a number of TA parameters. Given the close proximity of the permitted scheme and the new Site it is proposed to adopt some of the parameters previously agreed with HC as appropriate. This is set out in more detail later in the report.

1.6 The local highway network is described in Chapter 3. The Site access proposals are set out in Chapter 4.

1.7 The transport sustainability of the proposed development is a key issue, as set out in the National Planning Policy Framework (NPPF, July 2018), and also Planning Practice Guidance (PPG, March 2014). Accessibility issues are identified in Chapter 2, and an accessibility appraisal of the Site by non-car modes is presented in Chapters 5 (Walk & Cycle) and 6 (Public Transport), using an accessibility mapping methodology.

1.8 The planning application is supported by the Travel Plan (TP) report. Chapter 7 outlines the principles of the TP.

1.9 The estimation of the development generated traffic and associated With Development traffic flows is presented in Chapter 8. Modelling of the impact of development traffic on the highway network is described in Chapter 9.

1.10 The conclusions of the TA are presented in Chapter 10.

2 Policies & Principles of Access Strategy

2.1 A holistic approach is adopted for the desired access strategy. Due cognisance is taken of a range of relevant policy documents and considerations that represent current national and local policies. These include:

- National Planning Policy Framework (NPPF), July 2018,
- Planning Practice Guidance (PPG), March 2014,
- Herefordshire Local Plan – Core Strategy (2011-2031),
- Herefordshire Local Transport Plan (LTP).

2.2 A general thrust of current national and local policies is to promote and deliver sustainable transport objectives, and this is a key factor in defining the access strategy for the proposed development.

2.3 There are a range of documents that provide advice and guidance identifying that the historic approach of adopting rigid highway design standards and considering this in isolation is not appropriate or desirable in today's world. This includes, for example, Manual for Streets (MfS) and the associated Manual for Streets 2 (MfS2).

2.4 NPPF: ACHIEVING SUSTAINABLE TRANSPORT

2.4.1 The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these should be applied.

2.4.2 Paragraph 7 of NPPF sets out that:

"The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs."

2.4.3 In paragraph 10, NPPF makes it clear that:

"So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable ***development."***

2.5 NPPF: PROMOTING SUSTAINABLE TRANSPORT

2.5.1 The Government's commitment to sustainable development is emphasised in NPPF. Paragraph 102 advises development promoters to consider transport issues from the earliest stages of plan-making and development proposals, so that:

a) the potential impacts of development on transport networks can be addressed;

b) opportunities from existing or proposed transport infrastructure, and changing technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;

c) opportunities to promote walking, cycling and public transport use are identified and pursued;

d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and

e) patterns of movement, streets, parking and other transport considerations are integral to design of schemes, and contribute to making high quality places.''

2.5.2 This is expanded in paragraph 103, which states:

"The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making."

The proposed development respects and reflects this NPPF transport sustainability related objective.

2.5.3 NPPF states in paragraph 108 that:

"*In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*

a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;

b) safe and suitable access to the site can be achieved for all users; and

c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated.''

2.5.4 NPPF makes it clear in paragraph 109 that:

''*Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.''* (AHA emphasis).

2.5.5 NPPF offers specific transport advice with respect to development proposals. In paragraph 110, NPPF sets out that development should:

"*a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) *create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*

d) *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*

e) *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*

2.6 PPG

2.6.1 The Planning Practice Guidance (PPG) web-based resource was launched on on 6 March 2014. The PPG includes advice on when transport assessments and transport statements are required, and what they should contain.

2.6.2 The PPG states that:

"Travel Plans, Transport Assessments and Statements can positively contribute to:

- *encouraging sustainable travel;*
- *lessening traffic generation and its detrimental impacts;*
- *reducing carbon emissions and climate impacts;*
- *creating accessible, connected, inclusive communities;*
- *improving health outcomes and quality of life;*
- *improving road safety; and*
- *reducing the need for new development to increase existing road capacity or provide new roads."*

2.6.3 With respect to Transport Assessments and Statements, PPG sets out that:

''The key issues to consider at the start of preparing a Transport Assessment or Statement may include:

- *the planning context of the development proposal;*
- *appropriate study parameters (i.e. area, scope and duration of study);*

- *assessment of public transport capacity, walking/ cycling capacity and road network capacity;*
- *road trip generation and trip distribution methodologies and/ or assumptions about the development proposal;*
- *measures to promote sustainable travel;*
- *safety implications of development; and*
- *mitigation measures (where applicable) – including scope and implementation strategy.''*

2.6.4 With respect to Travel Plans, PPG sets out that:

''Travel Plans should set explicit outcomes rather than just identify processes to be followed (such as encouraging active travel or supporting the use of low emission vehicles). They should address all journeys resulting from a proposed development by anyone who may need to visit or stay and they should seek to fit in with wider strategies for transport in the area.

They should evaluate and consider:

- *benchmark travel data including trip generation databases;*
- *information concerning the nature of the proposed development and the forecast level of trips by all modes of transport likely to be associated with the development;*
- *relevant information about existing travel habits in the surrounding area;*
- *proposals to reduce the need for travel to and from the site via all modes of transport; and*
- *provision of improved public transport services.''*

2.7 HEREFORDSHIRE LOCAL PLAN – CORE STRATEGY (2011-2031)

2.7.1 The Herefordshire Local Plan was adopted in October 2015. The plan sets out the strategic objectives in the period 2011-2031.

2.7.2 Policy MT1 of the Local Plan sets out Herefordshire transport policies. Policy MT1 states:

Policy MT1 – Traffic management, highway safety and promoting active travel

"Development proposals should incorporate the following principle requirements covering movement and transportation:

1. demonstrate that the strategic and local highway network can absorb the traffic impacts of the development without adversely affecting the safe and efficient flow of traffic on the network or that traffic impacts can be managed to acceptable levels to reduce and mitigate any adverse impacts from the development;

2. promote and, where possible, incorporate integrated transport connections and supporting infrastructure (depending on the nature and location of the site), including access to services by means other than private motorised transport;

3. encourage active travel behaviour to reduce numbers of short distance car journeys through the use of travel plans and other promotional and awareness raising activities;

4. ensure that developments are designed and laid out to achieve safe entrance and exit, have appropriate operational and manoeuvring space, accommodate provision for all modes of transport, the needs of people with disabilities and provide safe access for the emergency services;

5. protect existing local and long distance footways, cycleways and bridleways unless an alternative route of at least equal utility value can be used, and facilitate improvements to existing or provide new connections to these routes, especially where such schemes have been identified in the Local Transport Plan and/or Infrastructure Delivery Plan; and

6. have regard to with both the council's Highways Development Design Guide and cycle and vehicle parking standards as prescribed in the Local Transport Plan - having regard to the location of the site and need to promote sustainable travel choices. Where traffic management measures are introduced they should be designed in a way which respects the character of the surrounding area including

its landscape character. Where appropriate, the principle of shared spaces will be encouraged."

2.7.3 Policy SS4 of the Local Plan also addresses transport with reference to impacts on highway networks and sustainable travel. Policy SS4 states:

Policy SS4 – Movement and Transportation

"Movement and transportation New developments should be designed and located to minimise the impacts on the transport network; ensuring that journey times and the efficient and safe operation of the network are not detrimentally impacted. Furthermore, where practicable, development proposals should be accessible by and facilitate a genuine choice of modes of travel including walking, cycling and public transport.

Development proposals that will generate high journey numbers should be in sustainable locations, accessible by means other than private car. Alternatively, such developments will be required to demonstrate that they can be made sustainable by reducing unsustainable transport patterns and promoting travel by walking, cycling and public transport. Proposals to provide new and improved existing public transport, walking and cycling infrastructure will be supported. Where appropriate, land and routes will be safeguarded as required in future local or Neighbourhood Development Plans and developer contributions, which meet the statutory tests, sought to assist with the delivery of new sustainable transport infrastructure, including that required for alternative energy cars...."

2.8 LOCAL TRANSPORT PLAN (LTP)

2.8.1 Herefordshire Council (HC) is the local highway authority, and has responsibility for the development and delivery of the Local Transport Plan (LTP).

2.8.2 The Herefordshire LTP (2016-2031) sets out a vision and transport objectives:

"A transport network that supports growth enabling the provision of new jobs and houses, whilst providing the conditions for safe and active travel, which reduces

congestion and increases accessibility by less polluting and healthier forms of transport than the private car."

2.8.3 The underlying theme and objectives of the LTP are to promote policies and measures to foster and achieve improved opportunities for travel choices by non-car modes, particularly for the most vulnerable. This provides the context for specific local measures to be considered, promoted and introduced.

2.9 PRINCIPLES OF THE ACCESS STRATEGY

2.9.1 The application is for all matters reserved, excluding access. The access proposals will provide opportunity for access to/from the Site by non-car modes. This is in accordance with all local and national policies.

2.9.2 The accessibility of the Site for those travelling on foot and cycle is reviewed in Chapter 5, and takes account of the existing and proposed facilities. The current accessibility of the Site by public transport is outlined in Chapter 6 herein, together with the development proposals for public transport. The proposed development takes account of the needs of the mobility impaired.

2.9.3 The Access Strategy for the development is cohesive, reflecting the need to appropriately consider and enable provision for the movement of people and goods. This is in accordance with the aims and spirit of NPPF. This includes considering, inter alia:

- Permeability of the Site from/connection to the surrounding locality, for all modes of transport, motorised and non-motorised,
- Internal access arrangements, all to be the subject of reserved matters application(s), should minimise distance travelled by all modes (where appropriate).

2.9.4 The development proposals adopt an integrated approach to managing travel demand, offering safe and sustainable access for all by a choice of sustainable transport alternatives, between homes and employment and a range of services and facilities, such as retail, health, education, and leisure.

2.10 SUMMARY

In summary, the development proposal respects and promotes the principles of transport sustainability, and is consistent with national and local transport policy objectives.

This page has been left intentionally blank

3 Highway Network

3.1 The location of the Site is indicated on Figure 1 in the context of the local highway network. The Site is located on land east of Dymock Road, Ledbury.

3.2 TA STUDY NETWORK

3.2.1 Traffic generated by the Site will pass through the following junctions that comprise the TA study network of junctions:

REF	JUNCTION	CONTROL
SJ1	Barratt scheme/Leadon Way/Martins Way	roundabout
SJ2	Leadon Way/Ross Road	roundabout
SJ3	Leadon Way/Little Marcle Road	roundabout
SJ4	Leadon Way/New Mills Way	roundabout
SJ5	Leadon Way/Hereford Road	roundabout
SJ6	Hereford Road/Bromyard Road	priority
SJ7	New Street/Worcester Road	signals
SJ8	The Southend/A417	roundabout.

The local highway authority Herefordshire Council (HC) is responsible for TA study junctions SJ1-8. The TA network of study junctions is presented on Figure 2. The above network of TA study junctions was agreed with HC for the TA assessment of the 321 dwelling scheme to the north of the Site and is also adopted for the assessment of this application Site.

3.2.2 The Site access arrangements are set out and considered in Chapter 4.

3.2.3 The layout of the existing study network junctions is presented on the following drawings:

REF	JUNCTION	DRG NO
SJ2	Leadon Way/Ross Road	1394/02/A,
SJ3	Leadon Way/Little Marcle Road	1394/03/A,
SJ4	Leadon Way/New Mills Way	1394/04/A,
SJ5	Leadon Way/A438 Hereford Road	1394/05/A,
SJ6	Hereford Road/Bromyard Road	1394/06/A,
SJ7	New Street/Worcester Road	1394/07/A,
SJ8	The Southend/A417	1394/08/A.

3.2.4 Leadon Way is a single carriageway road and is currently subject to a derestricted speed limit in the vicinity of the Site. However, AHA understands that there are proposals to reduce the speed limit to 40mph in the vicinity of the new roundabout junction with Martins Way as part of the Land south of Leadon Way development.

3.2.5 Leadon Way forms a five arm roundabout junction with Ross Road and the B4216 to the northwest of the Site (SJ2). SJ2 is subject to a derestricted speed limit and the existing layout of the junction is indicated on drg No 1394/02/A. There is footway on most arms of the junction and this is indicated on Drg No 1394/02/A. Street lighting is present at the junction.

3.2.6 SJ3 is located circa 540m northwest of SJ2. Drg No 1394/03/A presents the existing SJ3 layout. SJ3 is a four arm roundabout junction and is subject to a derestricted speed limit. Footway is present on most arms of the junction and this is indicated on Drg No 1394/03/A. Street lighting is present at the junction.

3.2.7 SJ4 is located circa 670m north of SJ3. SJ3 is a four arm roundabout junction and the existing layout of SJ4 is presented on Drg No 1394/04/A. SJ4 is subject to a derestricted speed limit. Footway is present on all arms of the junction with the exception of the Leadon Way (S) arm. Street lighting is present at the junction.

3.2.8 SJ5 is located circa 680m north of SJ4. SJ5 is a four arm roundabout junction and is subject to a derestricted speed limit. Drg No 1394/05/A presents the existing layout of SJ5. There is footway on the Hereford Road (E), New Mills Way and the Leadon Way arms of the junction. Street lighting is present at SJ5.

3.2.9 SJ6 is located circa 640m east of SJ5 and is a priority controlled T-junction. The layout of SJ6 is presented on Drg No 1394/06/A. There is a ghost island right turn bay on the major road arm (A438) of the junction. SJ6 is subject to a 30mph speed limit. There is footway on both sides of the B4214 and the north/east sides of the A438 at SJ6. Street lighting is present at the junction.

3.2.10 SJ7 is located circa 1.1km northeast of the Site and is a four arm traffic signal junction. The layout of SJ7 is presented on Drg No 1394/07/A. The Upper Cross arm of the

junction is one-way (towards the junction). Footway is present on all arms of the junction and there are cycling facilities on the High Street arm of the junction.

3.2.11 SJ8 is located circa 800m east of the Site and is a roundabout junction. The layout of SJ8 is indicated on Drg No 1394/08. SJ8 is subject to a derestricted speed limit. There is some footway on the east side of the junction and this is indicated on Drg No 1394/08/A, but there is no other footway at the junction. Street lighting is present at SJ8.

3.3 ACCIDENT HISTORY

3.3.1 The most recent (at the time of ordering) five year accident records for the TA study junctions were purchased from HC. The accident data covers the period 01.06.12 to 31.05.17. A copy of the Accident data is included in Appendix A.

3.3.2 A summary of the recorded accidents at the TA study junctions is set out below:

Study Junction	No Recorded Accidents	Severity
SJ1	0	N/A,
SJ2	4	3 Slight, 1 Serious
SJ3	1	Slight,
SJ4	1	1 Serious,
SJ5	0	N/A,
SJ6	1	1 Serious,
SJ7	2	2 Slight,
SJ8	1	Serious.

Review of the above shows that there have been no recorded accidents at SJ1 and SJ5.

3.3.3 SJ2

3.3.3.1 There have been four recorded accidents at SJ2 in the last five years. The first accident occurred in June 2013. A Van/Goods vehicle entered the roundabout from Dymock Road and collided with a cyclist. The accident is classified as serious.

3.3.3.2 The second recorded accident occurred in July 2013 and is classified as slight. A vehicle swerved, mounted the kerb and struck a lamp post. No other vehicle was involved in the accident. It appears that the driver suffered from diabetes and that this was a significant contributory factor in the accident.

3.3.3.3 The third recorded accident also occurred in 2013 (October) and is classified as slight. A car collided with a cyclist on the roundabout.

3.3.3.4 The fourth accident occurred in 2014 and is classified as slight. A car stopped on the roundabout to turn right into Dymock Road and was struck in the rear by a following vehicle.

3.3.4 SJ3

There is a single recorded accident at SJ3. A car entered the roundabout from Lower Road and failed to see a cyclist. A collision occurred and the cyclist fell from their bike. The accident occurred in 2016 and is classified as slight.

3.3.5 SJ4

There is a single recorded accident at SJ4. The accident occurred in 2017 and involved a group of five motorcycles. A motorcycle rider, travelling in the company of two of the five motorcycles, collided with another motorcycle at roundabout causing both riders to be thrown from their bikes. A third rider was thrown from their bike whilst braking. Careless/reckless rider behaviour was given as a very likely contributory factor. The accident is classified as slight.

3.3.6 SJ6

There is a single recorded accident at SJ6. The accident occurred in 2016 and is classified as serious. A car travelling under the railway bridge struck a pedestrian that had walked into the carriageway.

3.3.7 SJ7

3.3.7.1 There are two recorded accidents at SJ7. Both accidents occurred in 2016 and are classified as slight. The first accident involved a vehicle travelling along New Street towards the junction. The traffic signals were on green and a pedestrian ran out in front of the car and was struck.

3.3.7.2 The second accident occurred on High Street. A car was stationary on the left hand side of High Street when goods vehicle collided with the rear offside door of the vehicle, which was open at the time.

3.3.8 SJ8

There is a single recorded accident at SJ8. The accident occurred in 2014 and is classified as serious. A motorcycle lost control of their bike on Gloucester Road after exiting the roundabout, possibly due to over accelerating.

3.3.9 Leadon Way

There has been a single (non-junction) recorded accident on Leadon Way between the SJ2 and SJ8. The accident occurred in 2016 and involved a cyclist. The cyclist was traveling along Leadon Way with their head down and failed to see a parked vehicle. The cyclist was unable to avoid the vehicle in time and a collision occurred causing the cyclist to fall into the road. The accident is classified as slight.

3.3.10 Summary

Whilst all accidents are regrettable, the fact remains that more often than not an accident has unique isolated accident cause/characteristics, providing no basis for identifying or requiring accident remedial/mitigation works. No recurring accident type/problem is identified from the accident records for the TA study junctions or Dymock Road and Leadon Way in the vicinity of the Site. It is concluded that there is no requirement for accident remedial works at the TA study junctions as part of the proposed development.

This page has been left intentionally blank

4 Site Access Arrangements

4.1 SITE ACCESS STRATEGY

4.1.1 The proposed Site access strategy comprises:

- Vehicular, cycle and pedestrian link through to the Barratt Homes access road,
- Introduction of a new emergency access on Dymock Road,
- Off-site pedestrian and cycle improvements.

4.1.2 Drg No 1394/28 presents the location of the proposed link through to the Barratt Homes scheme. It is acknowledged that the Barratt Homes layout indicated on Drg No 1394/28 is not the latest plan. The plan shown was approved by HC, but that approval was quashed at the high court. The latest reserved matters application that has been made by Barratt Homes is largely unchanged from that previously approved, except that it does not include details for the portion of the site to the west of the access loop. The western part of the site was the subject of the high court challenge, due to issues of noise.

4.1.3 Whilst the proposed development includes a single link into the Barratt Homes scheme, there will be loop roads either side of this link. The Barratt Homes scheme includes an access loop after the roundabout junction on Leadon Way and the proposed development will also include a loop road to the south of the link into the Barratt Homes site. The details of the Site loop road can be agreed with HC at the reserved matters stage.

4.1.4 The Barratt Homes scheme does not include an emergency access and the proposed development proposes to introduce an emergency access on Dymock Road. This would be beneficial to both the extant Barratt Homes scheme and the proposed development as it would provide an alternative access point on the local highway network for emergency vehicles if required.

4.1.5 Pedestrian and Cycle Improvements

4.1.5.1 AHA undertook a review of pedestrian and cycle provisions in the context of the proposed development. The assessment and findings are set out in the Non-Motorised User (NMU) Audit report 1394/8/A. The assessment identified a number of amenities, including the key amenities in Ledbury, and the likely routes between the Site and these facilities.

4.1.5.2 The NMU Audit also identified a number of improvements and these include:

- Introduction of dropped kerbs and tactile paving in various locations,
- Introduction of shared pedestrian/cycle lanes on Leadon Way (between Ross Road and Little Marcle Road roundabouts),
- Improving crossing facilities at the Ross Road roundabout,
- Introduction of advanced cycle stop lines at 2No traffic signal control junctions.

4.1.5.3 The new footway/cycleway scheme is indicated on Drg No 1394/27. Residents of the proposed development (and those of the permitted Barratt Homes scheme) do not have a suitable direct link to the New Mills Industrial Estate which is a relatively large employment area and also includes an Aldi supermarket. The most direct route at present it using part of the town trail, but this does not have a quality surface, is unlit and is not overlooked. It had been previously proposed to upgrade this route, but it is now proposed to introduce a high quality footway/cycle link along Leadon Way as indicated on Drg No 1394/27.

4.1.5.4 It is proposed to extend the 40mph speed limit (agreed with HC as part of the Barratt Homes scheme) along Leadon Way from the Ross Road roundabout to the roundabout with Little Marcle Way as part of the footway/cycleway scheme. Street lighting will also be introduced along this section of Leadon Way. It is considered that the introduction of a 40mph speed limit along this route is appropriate, particularly if pedestrian and cycle movements are to be encouraged.

4.1.5.5 AHA commissioned 2No Automatic Traffic Count (ATC) surveys along Leadon Way to establish existing speeds. ATC 1 was located circa 180m south of Little Marcle Road and ATC 2 was located circa 180m north of Ross Road. The results of the ATC surveys are included in Appendix B. A summary of the ATC results is set out below:

ATC 1

	Mean	85%ile
Northbound	37.5mph	43.4mph,
Southbound	41.8mph	48.5mph.

ATC 2

	Mean	85%ile
Northbound	40.0mph	47.7mph,
Southbound	39.0mph	45.0mph.

4.1.5.6 Department for Transport Circular 01/2013 ('Setting Local Speed Limits') sets out the guidance for assessing local speed limits. With regard to using existing speeds to determine appropriate speed limits, the guidance states in paragraph 35 that:

''*Mean speed and 85th percentile speed (the speed at or below which 85% of vehicles are travelling) are the most commonly used measures of actual traffic speed. Traffic authorities should continue to routinely collect and assess both, but mean speeds should be used as the basis for determining local speed limits.*''

4.1.5.7 With respect to urban roads the guidance states:

''*Roads suitable for a 40 mph limit are generally higher quality suburban roads or those on the outskirts of urban areas where there is little development. Usually, the movement of motor vehicles is the primary function.*''

4.1.5.8 The existing mean speeds along the section of Leadon Way between Ross Road and Little Marcle Road are already at or around 40mph. The proposed introduction of a shared footway/cycleway and street lighting is a material change that is likely to influence driver speed choice. It is also the case that HC are proposing to introduce a 40mph speed limit along a section of Leadon Way to the east as part of the permitted Barratt Homes scheme. It would therefore seem appropriate to extend this 40mph speed limit further west to include section of Leadon Way where it is proposed to provide a shared footway/cycleway.

This page has been left intentionally blank

5 Walk & Cycle

5.1 WALK

5.1.1 It is established and acknowledged that walking is the most important mode of travel at the local level, and offers the greatest potential to replace short car trips, particularly under 2km.

5.1.2 The DfT National Travel Survey of 2017 confirms that 81% of all trips less than a mile (1.6km) were carried out on foot.

5.1.3 The 'walkable neighbourhood' concept is set out in MfS1 and endorsed in MfS2. MfS1 explains that:

"*Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800 m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and ……. walking offers the greatest potential to replace short car trips, particularly those under 2 km.*" (MfS1 para 4.4.1)

5.1.4 Background: Permitted Scheme (P143116/O)

5.1.4.1 The issue of walk distances was something that was discussed during the planning appeal for the Site immediately north of the application Site. With respect to walk distances the planning inspector stated:

''*The appeal site lies immediately adjacent to the existing built up area of Ledbury, a recognised sustainable location within the District. The site lies within 1.6 kilometres of the town centre, well within the 2 kilometre walking distance usually considered as offering the greatest potential for replacing short car trips. Cycling also has the potential to substitute for short car trips of up to 5 kilometres. I note, in this regard, that Ledbury railway station lies within 2.5 kilometres of the site. There is a bus stop on Martins Way within 400 metres of the appeal site and others within 800 metres. Typically there are two-three buses an hour Monday- Saturday during the day. Destinations include Gloucester, Hereford, Bromyard, Cheltenham, Great Malvern, Tewkesbury, Ross and Ledbury town centre. Some services also connect to the*

railway station. All in all, it seems to me that the appeal site provides a good context for journeys to be undertaken by foot and by cycle to access everyday services, facilities and amenities that would be required by future occupiers on a daily basis and that a range of destinations that are accessible from the site by public transport, including amenity and employment locations.''

5.1.5 Application Site

5.1.5.1 The NMU Audit measured the distances to/from the Site centroid to a number of amenities in Ledbury, including key amenities such as schools, train station, health centre etc. The distances to these amenities are set out below:

Education:	Distance (m)	Road
Ledbury Primary School	2505	Long Acres
John Masefield Secondary School	1340	Mabels Furlong
Health		
Ledbury Health Centre	1985	Market Street
Leisure		
Café	1210	Dymock Road
Full Pitcher	840	New Street
Ledbury Rugby Club	1245	Ross Road
Ledbury Town Football Club	965	New Street
Leisure Centre	1340	Mabels Furlong
Retail		
High Street (Market House)	1975	High Street
Co-op Supermarket	1775	New Street
Aldi	2200	New Mills Ind Est
Tesco	2535	The Homend
Employment		
New Mill Industrial Estate	1840	East of Leadon Way
Commercial/industrial units	1040	Dymock Road

Transport		
Bus stops	610	Martins Way
Bus stops	930	Biddulph Way
Ledbury Rail Station	2950	The Homend.

5.1.5.2 Figure 3 presents the development 800m, 1200m, 1600m and 2000m walk isochrones, (ie reflecting 10, 15, 20 and 25 minute walk journeys), and taking account of the existing and proposed pedestrian infrastructure. It also includes additional amenities to those included in the NMU Audit.

5.1.5.3 Review of Figure 3 shows that the centre of Ledbury is around a circa 2000m walk of the Site (some of the town centre amenities are beyond a 2000m walk). There are numerous amenities within the town centre and these include:

- Convenience stores,
- Supermarket,
- Pub/restaurant,
- Banks,
- Post office,
- Health centre,
- Pharmacy,
- Dentists,
- Opticians,
- Places of employment,
- Schools,
- Public open space,
- Leisure centres,
- Community centre,
- Library.

5.1.5.4 It is clear from Figure 3 that there is a wide range of amenities within a 2000m (or slightly beyond a 2000m) walk of the Site. This provides opportunity for residents of the Site to undertake walk trips to/from the Site for a wide range of journey purposes.

5.1.5.5 Figure 4 presents the existing Public Rights of Way (PROW) in the vicinity of the Site. These are complementary to the pedestrian routes afforded by footway. There are a number of footpaths and bridleway in the vicinity of the Site.

5.1.5.6 The National Travel Survey of 2017 provides data on walk trips and establishes that:

- 81% of all trips under 1 mile (1.6km) are made by foot,
- The average walk trip is 17min which equates to a distance of about 1.36km,
- Walking accounts for 26% of all trips and 3% of distance travelled,
- Education and Shopping trips account for 40% of all walk trips,
- 67% of people undertake a walk of 20 minutes or more at least once a week,
- The average shopping trip was 17 minutes and 27% of shopping trips were made by foot,
- The average commuting trip was 31 minutes and 11% of commuting trips were made by foot.

5.1.5.7 The walk distances to/from the schools in Ledbury are as follows:

- Ledbury Primary School: 2505m,
- John Masefield Secondary School: 1340m,

5.1.5.8 The pedestrian and cycle assessment report has identified suitable walk routes to both of these schools. The 2017 NTS identifies that the average educational trip is 3.3 miles (5.3km). The distance to both schools from the Site centroid is well below the national average trip distance.

5.2 CYCLE

5.2.1 It is recognised that cycling also has potential to substitute for short car trips, particularly those under 5km, and to form part of a longer journey by public transport.

5.2.2 The CIHT guidance 'Cycle Friendly Infrastructure' states that:

"Most journeys are short. Three quarters of journeys by all modes are less than five miles (8km) and half under two miles (3.2km) (DOT 1993, table 2a). These are distances that can be cycled comfortably by a reasonably fit person."(para 2.3)

5.2.3 The National Travel Survey of 2017 also provides data on cycle trips and establishes that:

- In the 3 years up to 2017, 42% of people had access to a bicycle and this figure increases to 82% for young children,
- The average cycle trip was 23 minutes,
- Education, shopping and commuting accounted for 9%, 11% and 34% of cycle trips.

5.2.4 Cycle access to the highway network will be available onto Leadon Way through the Barratt scheme to the north.

5.2.5 The Barratts scheme to the north of the Site also includes cycle improvements and these comprise:

- Introduction of toucan crossing on Leadon Way in the vicinity of the new roundabout junction,
- Introduction of footway/cycleway on both sides of the Leadon Way between the new roundabout and the Ross Road/Leadon Way roundabout,
- Introduction of pedestrian/cycleway on east side of B4216 (for a short distance south of the roundabout).

5.2.6 The NMU Audit report (Ref 1394/8/A) identified further measures to improve cycle connectivity and these comprise:

- Introduction of shared pedestrian/cycle lanes on Leadon Way between Ross Road and Little Marcle Road roundabouts (Refer Drg No 1394/27),
- Improving crossing facilities at the Ross Road roundabout,
- Introduction of advanced cycle stop lines on The Southend arm of the A438/Upper Cross/Worcester Road junction (refer Drg No 1394/24),
- Introduction of advanced cycle stop lines on each arm of the A438/Orchard Lane junction (refer Drg No 1394/25).

5.2.7 Figure 5 indicates the 2km and 5km cycle isochrones for the Site, reflecting typically 10 minute and 25 minute journeys. Review of Figure 5 shows that the majority of the built-up area of Ledbury is within a 10 minute cycle ride of the Site. The outlying parts of Ledbury, including the villages of Wellington Heath, Eastnor and Little Marcle are within a 25 minute cycle journey. This provides opportunity for leisure cycling with the attendant health benefits.

5.2.8 Figure 6 presents the existing cycle routes in Ledbury recommended by HC. These include suggested on-road routes and also traffic free routes. Ledbury train station is within a 3km cycle ride of the Site and there are cycle stands at the Station. The permitted Barratts scheme and the application Site will significantly increase and improve cycle infrastructure in Ledbury.

5.2.9 In summary, the destination opportunities within a cycle ride of the Site for residents of the development comprise a full range of amenity and employment locations within Ledbury and the surrounding villages. Furthermore, the development includes significant improvements to cycle infrastructure.

5.3 SUMMARY

Transport sustainability is a key principle underlying the development. Encouraging walk and cycle journeys is an important part of this. The location of the Site provides a good context for journeys to be undertaken on foot and by cycle.

6 Public Transport

6.1 BUS

6.1.1 There is an existing bus stop on Martins Way within a 610m walk of the Site. It was agreed with HC that the 321 dwelling Barratt Homes scheme to the north of the Site would upgrade this bus stop and introduce a bus stop on the west side of Martins Way (funded through a S106 contribution). AHA is not aware if the precise location of the new bus stop on Martins Way has been decided yet, but it is likely to be a similar distance from the Site centroid as the existing stop. There are further bus stops on Deer Park and Biddulph Way that are within 1200m of the Site.

6.4.2 Table 1 summarises the scheduled bus services calling at these bus stops. Destinations include Gloucester, Hereford, Ross-on-Wye, Worcester and Ledbury town centre. Figure 7 presents the HC Ledbury Town bus map which indicates the bus service routes within Ledbury.

6.4.3 The 132 bus service provides opportunity for residents of the Site to undertake commuter trips to/from Gloucester. The 132 service times in the main commuter periods are set out below:

Ledbury	Gloucester
0725	0828

Gloucester	Ledbury
1605	1655
1755	1845

6.4.4 The 476 bus service provides opportunity for residents of the Site to undertake commuter trips to/from Hereford. The service times in the main commuter periods are set out below:

Ledbury	Hereford
0645	0720
0735	0830
0810	0900

Hereford	Ledbury
1615	1658
1715	1758
1750	1828

6.4.5 The 476 bus services also calls at bus stops close to Ledbury rail station (the 417 service also call at stops near to the rail station). This provides opportunity for residents to travel to the train station by bus in the AM and PM commuter periods. There are also bus services throughout the daytime and at weekends to a range of destinations. This provides opportunity for residents to undertake trips by bus for a variety of journey purposes such as shopping and leisure activities.

6.4.6 It is demonstrated that there is opportunity to undertake trips to Hereford and Gloucester in the main AM and PM commuter periods. This provides opportunity for residents to access areas of employment.

6.4.7 Bus Improvements

6.4.7.1 AHA is currently in discussions with Stagecoach with regard to the 132 service. The 132 service runs along Dymock Road at present with a frequency of 120 minutes. It is proposed to improve the frequency of this service.

6.4.7.2 It is desirable to reroute the 132 bus service into the Site and Stagecoach have indicated a willingness to do this as part of any upgrade to the service frequency. However, this is dependent on the Barratt Homes layout and road geometry as the 132 bus service will need to travel through the Barratt Homes scheme to access the Site land. The present Barratt Homes proposals are for a 5.5m loop road and this width may not be sufficient to allow Stagecoach to bring a vehicle into the Site.

6.4.7.3 AHA will continue to liaise with Stagecoach and other local bus operators to determine what improvements can be delivered as part of the development. AHA will provide HC with an update with regard to the progress of these discussions.

6.5 RAIL

6.5.1 Ledbury railway station is within a 3km cycle ride of the Site and there is a cycle shelter at the station. The 476 and 417 bus services call at the bus stops on Homend which are close to the station. The 132 service currently terminates at the Tesco store bus stops which is about a 500m walk from the Rail Station. Therefore, there is opportunity for residents to access the train station by cycle or by bus.

6.5.2 Ledbury railway station is managed by West Midlands Railway. There are typically 2 trains every hour. Services calling at Ledbury also call at destinations such as:

DESTINATION	TYPICAL JOURNEY TIME
Great Malvern	11 minutes
Worcester	24 minutes
Bromsgrove	44 minutes
Birmingham New Street	71 minutes
Hereford	15 minutes

6.5.3 There is opportunity for residents of the proposed development to undertake trips by rail to a range of destinations and for a variety of journey purposes (eg work, shopping and leisure etc).

6.6 SUMMARY

It is established that a range of destinations are accessible from the Site by public transport, including amenity and employment locations. This is in accordance with the aims and objectives of current national and local policies. Improvements to public transport services are proposed and discussions are continuing with local operators.

This page has been left intentionally blank

7 Travel Plan

7.1 A Travel Plan (TP) report has been submitted in support of the planning application, and is complementary to this TA report. A summary of the key points in the TP are set out below.

7.2 The TP for the proposed development is prepared in accordance with good practice and experience, and the latest available guidance. The outcomes approach is adopted for the development TP.

7.3 The key objectives of the TP are to:

- Contribute to traffic reduction and other sustainable transport objectives set out in national, regional and local policies,
- Improve accessibility of the Site by sustainable modes of transport and address traffic and parking issues,
- Widen choice of travel mode for all those travelling to/from the Site.

7.4 Specific outcomes sought from the TP are to:

- Achieve the minimum number of additional single occupancy car traffic movements to/from the development,
- Address the access needs of site users, by supporting walking, cycling and public transport,
- Reduce the need for travel to/from the Site.

7.5 The TP explicitly considers accessibility by the sustainable travel modes of pedestrian, cycle, public transport and car share.

7.6 The residential TP target is set as a maximum weekday AM peak hour 2-way vehicle trip rate of 0.558 vehicles/hour/dwelling and a maximum weekday PM peak hour 2-way vehicle trip rate of 0.615 vehicles/hour/dwelling. The objective is for the TP targets to be achieved within 5 years from first occupation, and subsequently to be maintained, or if possible improved upon.

7.7 The residential developer will appoint a Travel Plan Coordinator (TPC), to introduce, manage, operate and monitor the TP. As part of the on-going management of the TP, the TPC will maintain a dialogue with the Council, and monitor emerging best practice information, to provide the most efficient platform for maximising the effectiveness of the TP.

7.8 The residential developer is required to finance the TP. A sufficient revenue budget will be identified to employ the TPC for a period of 5 years of first occupation of the development, on a sufficient basis to introduce and manage the TP initiatives, and thereafter as required to:

- Manage the initiatives,
- Finance the measures identified in this and subsequent TP Monitoring and Review reports and as agreed with the Council, and
- Enable the TPC postholder to carry out the duties identified above.

7.9 The TP Action Plan is set out in Chapter 10 of the TP. The TP Table 3 summarises identified measures that are proposed, and indicates the timing for the measures and funding information. This illustrates the holistic approach adopted for the TP, aimed at encouraging from the outset a positive sustainable transport awareness and culture for the development. The TP measures will be reviewed and amended as appropriate, in consultation with and requiring the agreement of the local authority, as part of the on-going dynamic monitoring and review process for the TP.

8 Traffic Flows

8.1 STUDY NETWORK

The TA study network of junctions comprises:

REF	JUNCTION	CONTROL
SJ1	Barratt scheme/Leadon Way/Martins Way	roundabout
SJ2	Leadon Way/Ross Road	roundabout
SJ3	Leadon Way/Little Marcle Road	roundabout
SJ4	Leadon Way/New Mills Way	roundabout
SJ5	Leadon Way/Hereford Road	roundabout
SJ6	Hereford Road/Bromyard Road	priority
SJ7	New Street/Worcester Road	signals
SJ8	The Southend/A417	roundabout.

8.2 PEAK PERIODS

The times when the combination is greatest, of traffic generated by the proposed residential development and the existing highway network traffic, are the weekday AM & PM peak hours. The TA includes quantitative analysis of the traffic impact of the proposed development for these periods.

8.3 TRAFFIC COUNTS

8.3.1 The traffic count surveys were undertaken at the TA Study Junctions on 31 October 2017.

8.3.2 Review of the traffic count data identifies the AM and PM peak hours as follows:

- AM 0745-0845,
- PM 1630-1730.

The TA adopts these AM and PM peak hours for quantitative analysis.

8.3.3 The 2017 AM & PM peak hour traffic count flows at the TA study network junctions are presented on Figure C1, Appendix C.

8.4 ASSESSMENT YEAR

8.4.1 A year of development opening of 2028 is adopted for the TA quantitative analysis. This represents 10 years after the submission of the planning application and is considered robust.

8.4.2 TEMPRO NTM (Version 7.2, AF15 Dataset) growth factors are applied to the traffic count data to estimate the 'growthed' year 2028 peak hour traffic flows at the TA study network junctions. AHA Technical File Note 2A, Appendix D sets out the methodology for estimating the 2028 growth factors. The consequent estimate of 2028 year of opening AM & PM peak hour traffic flows at the TA study junctions are presented on Figure C2, Appendix C.

8.5 RESIDENTIAL TRIP GENERATION RATES

8.5.1 AHA prepared the TA that accompanied the planning application for a residential development on Land South of Leadon Way (P143116/O) and agreed with HC suitable trip generation rates. A copy of the TRICS data is included in Appendix E of this report.

8.5.2 The original TRICS interrogation was undertaken is 2014 and allow these trip generation rates were agreed with HC, a new TRICS interrogation was been undertaken for comparison. A copy of the 2018 TRICS data is also included in Appendix E.

8.5.3 The 2014 and 2018 trip generation rates are set out below for comparison:

		2014	
	ARR	DEP	TWO-WAY
AM	0.158	0.462	0.620
PM	0.438	0.245	0.683.

		2018	
	ARR	DEP	TWO-WAY
AM	0.122	0.385	0.507
PM	0.347	0.174	0.521.

8.5.4 Review of the above trip rates shows that those adopted in 2014 are higher than the 2018 trip rates. Therefore, for robustness and consistency with the original application for the development to the north (Barratt Homes) the higher 2014 trip rates are adopted.

8.6 COMMITTED DEVELOPMENT

8.6.1 AHA is aware of the following committed developments:

- Land South of Leadon Way: 321 dwellings.
- Land to the rear of the Full Pitcher PH: 100 dwellings.

8.6.2 Land South of Leadon Way

8.6.2.1 As set out in paragraph 8.5.1, AHA prepared the TA that accompanied the planning application for a residential development on Land South of Leadon Way (P143116/O). This work included agreeing a suitable % distribution/assignment of traffic based on the 2001 Census journey to work data.

8.6.2.2 As part of the preparation of this TA report AHA reviewed the latest 2011 Census for journey to work data to establish whether there have been any significant changes. AHA is satisfied that the changes between the 2001 and 2011 Census data for journeys to work for Ledbury are not significantly different. However, a revised % distribution/assignment is adopted based on the latest 2011 Census data. Table 2 presents 2011 Census distribution.

8.6.2.3 Figure C3, Appendix C presents the revised % distribution/assignment for the Land South of Leadon Way adopted for TA quantitative analysis of the Base situation.

8.6.2.4 Figure C4, Appendix D presents the consequent estimate of the traffic generated by the Land South of Leadon Way committed development at the TA study junctions in the AM and PM peak hours.

8.6.3 Land to the rear of the Full Pitcher PH

8.6.3.1 The TA that accompanied the outline application for the land to the rear of the Full Pitcher PH did not appear to provide a detailed estimate of the traffic impact of the development. Therefore, AHA has estimated the traffic generated by this scheme adopting the TA trip rates and % distribution (with changes to the assignment to reflect the different location).

8.6.3.2 The % distribution/assignment adopted for the Land to the rear of the Full Pitcher scheme is presented on Figure C5. The consequent estimate of the traffic generated by this development is presented on Figure C6, Appendix C.

8.6.4 Proposed Developments

8.6.4.1 In addition to the above committed developments, AHA is also aware of the following planning application:

- Ledbury Urban Extension: 625 dwellings and B1 employment.

8.6.4.2 At the time of preparing this report the Ledbury Urban Extension application has not been determined and hence, is not a committed development. Nevertheless, it is a potentially significant development in Ledbury and is considered as a 'Sensitivity Test'. The Sensitivity Test traffic flows are detailed later in this Chapter.

8.6.4.3 AHA was made aware of another application for a residential development of Land South of Leadon Way (P174745/O). However, AHA believes that this application has now been withdrawn.

8.6.5 Total Committed Development Traffic

Figure C7, Appendix C presents the estimate of the total committed development traffic at the TA study junctions in the AM and PM peak hours.

8.7 2028 BASE

Figure C8, Appendix C presents the estimate of the AM and PM peak hours for the 2028 Base situation.

8.8 2028 WITH DEVELOPMENT

8.8.1 % Distribution Land South of Leadon Way

Figure C9, Appendix C presents the % distribution/assignment for the proposed development. This is the same distribution and assignment adopted for the Land South of Leadon Way committed scheme (Barratt Homes).

8.8.2 Generated Traffic: Proposed Development

8.8.2.1 Figure C10, Appendix C presents the estimate of the traffic generated by the proposed residential development in the AM and PM peak hours.

8.8.2.2 Figure C11, Appendix C presents the consequent estimate of the 2028 With Development traffic flows in the AM and PM peak hours.

8.9 TRAFFIC IMPACT

8.9.1 AHA usually adopts a materiality test to determine the requirement for detailed junction modelling. The test adopted is that junction modelling is undertaken if the proposed development is predicted to generate an increase in traffic at a study junction of:

(i) Test 1: 30 vehicles or more, and
(ii) Test 2: 2.5% or greater of the total 2028 Base junction flows.

Junction modelling is undertaken of the TA Study Junctions where the traffic impact of the development exceeds 30 vehicles and is also 2.5% (or greater) than the total 2028 Base junction flows.

8.9.2 The net traffic impact of the proposed development at the TA study network of junctions in the AM and PM peak hours is summarised below:

	AM		PM	
SJ	Vehs	%	Vehs	%
SJ1	+260	+20.1	+287	+21.7
SJ2	+160	+8.9	+177	+9.3
SJ3	+99	+8.9	+109	+8.7
SJ4	+83	+8.3	+92	+7.1
SJ5	+67	+4.9	+75	+4.9
SJ6	+25	+1.9	+28	+2.0
SJ7	+28	+2.3	+31	+2.4
SJ8	+99	+7.3	+109	+8.3.

8.9.3 Review of the above summary shows that the proposed development is estimated to have a traffic impact in excess of 30 vehicles and 2.5% of the 2028 Base flows at SJ1, SJ2-5 and SJ8. The traffic impact at SJ6 and SJ7 is less than 30 two-way trips and or less than +2.5% of the 2028 Base flows. Notwithstanding this, previous analysis and review of the Ledbury Urban Extension TA indicates that SJ6 is a sensitive junction with capacity issues. Therefore, modelling is undertaken of SJ6 despite having an impact less than 30 two-way vehicle and 2.5% of the 2028 Base traffic flows.

8.10 SENSITIVITY TEST

8.10.1 Figure C12, Appendix C presents the estimate of the total traffic generated by the residential and offices uses on the TA study network of junctions. The traffic flows at SJ4-8 are taken from Figures 21 and 22 of the latest BWB TA report (July 2018).

8.10.2 The BWB TA that accompanies this application does not assess the traffic impact of the proposals at all of the AHA study junctions. Therefore, for robust assessment AHA has estimated the traffic impact of the Ledbury Urban Extension at SJ1-3 (ie including those not considered in the Ledbury Urban Extension TA). It is assumed that the Ledbury Urban Extension traffic arriving at SJ5 from Leadon Way and the traffic departing from SJ5 to Leadon Way continues along Leadon Way to SJ8 (ie also passes through SJ1-4). It is considered that this provides very robust assessment.

8.11 JUNCTION MODELLING

The junction modelling of TA study junctions SJ1-6 & SJ8 is undertaken for the AM and PM peak hours for the 2028 Base, With Development and Sensitivity situations. The modelling is undertaken and reported in Chapter 9.

9 Operational Performance of the Highway Network

9.1 The computer program ARCADY (Junctions 9) is used to model the performance of a roundabout junction. ARCADY predicts the ratio of flow to capacity (RFC) and associated queue for the entry arms of the. ARCADY is used to model the operational performance of SJ1, SJ2-5, SJ6 (BWB roundabout scheme) and SJ8.

9.2 The computer program PICADY (Junctions 9) is used to model the performance of a priority (give-way) control junction. PICADY predicts the ratio of flow to capacity (RFC) and associated queue for the minor (give-way) entry to the junction and for the major road. PICADY is used to model the operational performance of SJ6.

9.3 The computer program LINSIG is used to model the performance of traffic signal control junction. LINSIG predicts the degree of saturation (DS) and associated queue for the entry links of a junction. LINSIG is used to model the operational performance of SJ6 (BWB traffic signal scheme).

9.4 Modelling is undertaken for the 2028 AM and PM peak hour Base, With Development and Sensitivity Test (Ledbury Urban Extension) situations.

9.5 SJ1: SITE/LEADON WAY

9.5.1 Table 3 presents the ARCADY analysis results for SJ1. The modelling of SJ1 is based on the geometric layout indicated in Drg No 1394/10 that was previously agreed with HC for the land to the north of the application Site (Barratt scheme). Review of Table 3 shows that the Leadon Way/Barratt Scheme/Martins Way roundabout is predicted to operate with spare capacity in the AM & PM peak hours in the 2028 Base and With Development situations.

9.5.2 The ARCADY model predicts that roundabout will continue to operate within capacity in the 2028 Sensitivity Test scenario.

9.6 SJ2: A449 ROSS ROAD/LEADON WAY/B4216

9.6.1 AHA is aware that there is a HC scheme at SJ2 that proposes changes the existing geometry. This scheme is associated with the Full Pitcher development and has not yet been implemented. Therefore, modelling of SJ2 is undertaken based on both the existing and proposed geometry. A plan indicating the HC improvement scheme is presented in Appendix F.

9.6.2 Table 4 presents the 2028 AM & PM peak hour ARCADY modelling results for SJ2 based on the existing geometry. Review of Table 4 shows that SJ2 is predicted to operate with high levels of spare capacity and low queues and delays in the AM and PM peak hours in the 2028 Base situation, and to continue to operate in the same manner in the corresponding With Development and Sensitivity Test situations.

9.6.3 Table 5 presents the 2028 AM & PM peak hour ARCADY modelling results for SJ2 based on the HC scheme geometry. The ARCADY modelling predicts that the roundabout junction will continue to operate within capacity in the AM and PM peak hours in the 2028 Base situation, With Development and Sensitivity Test situations.

9.7 SJ3: LEADON WAY/LITTLE MARCLE ROAD

The 2028 AM & PM peak hour ARCADY modelling results for SJ3 are presented in Table 6. Review of Table 6 shows that SJ3 is predicted to operate with high levels of spare capacity and negligible queues and delays in the AM and PM peak hours in the 2028 Base situations. The modelling predicts that SJ3 will continue to operate in this manner following the implementation of the proposed development and also in the Sensitivity Test situation.

9.8 SJ4: LEADON WAY/NEW MILLS WAY

Table 7 presents the 2028 AM & PM peak hour ARCADY modelling results for SJ4. Review of Table 7 shows that SJ4 is predicted to operate with high levels of spare capacity and negligible queues and delays in the AM and PM peak hours in the 2028 Base, With Development and Sensitivity Test situations.

9.9 SJ5: A438 HEREFORD ROAD/LEADON WAY

Table 8 presents the 2028 AM & PM peak hour ARCADY modelling results for SJ5. Review of Table 8 shows that SJ5 is predicted to operate with high levels of spare capacity and negligible queues and delays in the AM and PM peak hours in the 2028 Base, With Development and Sensitivity Test situations.

9.10 SJ6: A438 HEREFORD ROAD/BROMYARD ROAD/THE HOMEND

9.10.1 Table 9 presents the PICADY results for SJ6. Review of Table 9 shows that Bromyard Road arm (minor arm) of the junction is predicted to be above capacity in the 2028 PM Base situation with an RFC value of 1.09 and queue of 27.2. Following the implementation of the development the PICADY model predicts the Bromyard Road RFC value will increase from 1.09 to 1.15 and the associated queue increasing from 27.2 to 38.9. The junction is predicted to operate with spare capacity in the AM Base and With Development situation, though the RFC values of the Bromyard Road arm are approaching capacity.

9.10.2 Review of Table 9 shows that the operation of the junction is predicted to significantly deteriorate in the both the AM and PM peak hours for the 2028 Sensitivity Test situation, with RFC values on the Bromyard Road arm of 1.76 and 1.99 respectively for the AM and PM peak hours. This is unsurprising given the scale of the additional traffic predicted to pass through this junction as a result of the Ledbury Urban Extension.

9.10.3 AHA Junction Improvement

9.10.3.1 The proposed development is predicted to increase traffic at SJ6 by only +25 and +28 vehicles in the AM and PM peak hours respectively. This represents an increase of about 2.0% of the 2028 Base situation, which is likely to be well within the daily variation of flows at the junction. Notwithstanding this, AHA has identified a modest improvement scheme at SJ6 to mitigate the traffic impact of the proposed development. The improvement scheme is indicated on Drg No 1394/26

9.10.3.2 Table 10 presents the results of the PICADY modelling for the 2028 AM and PM With Development situation. Review of Table 10 shows that the improvement scheme indicated on Drg No 1394/26 mitigates the development impact at SJ6.

9.10.4 BWB Junction Improvements

9.10.4.1 The original BWB TA proposed a mini-roundabout scheme at SJ6. A copy of the BWB mini-roundabout scheme is included in Appendix G. Table 11 presents the ARCADY analysis results of the 2028 Sensitivity Test analysis based on the mini-roundabout scheme. Review of Table 11 shows that the mini-roundabout scheme can accommodate the estimated 2028 Sensitivity Test traffic in both the AM and PM peak hours.

9.10.4.2 The latest BWB TA indicates that HC would prefer a traffic signal arrangement at SJ6 to improve pedestrian/cycle facilities at the junction. A copy of the BWB signal option is also included in Appendix G. Table 12 presents the results of the LINSIG modelling of SJ6 based on the BWB signal scheme. Review of Table 12 shows that the traffic signal scheme is predicted to be over capacity in the AM and PM peak hours in the 2028 Sensitivity Test situation. The BWB analysis similarly predicts that the junction will be over capacity, particularly in the PM peak period.

9.10.5 Conclusions

9.10.5.1 The proposed development is predicted to increase traffic at SJ6 by less than 30 two-way trips in the AM and PM peak hours. Notwithstanding this, a modest mitigation scheme has been identified and could be provided as part of the proposed development.

9.10.5.2 The traffic impact at SJ6 that will result from the Ledbury Urban Extension is far greater than the proposed development and will require significant works at the junction. Two options have been proposed and the latest BWB TA suggests that HC favour the traffic signal option, despite this being predicted to be over capacity in the future year (with or without the proposed Dymock Road development). AHA will liaise with HC with regard to this issue as it would be unusual for a highway authority to introduce a new form of control that is predicted to result in the junction operating well above capacity in the future test year situation.

9.11 SJ8

Table 13 presents the 2028 peak hour ARCADY modelling results for SJ8. Review of Table 13 shows that SJ13 is predicted to operate with high levels of spare capacity and negligible queues and delays in the AM and PM peak hours in the 2028 Base situations. The model also predicts that SJ8 will continue to operate in the same manner in the corresponding 2028 With Development and Sensitivity Test situations.

9.12 SUMMARY

9.12.1 Junction modelling is undertaken of the TA study junctions for the AM and PM peak hours for the 2028 Base, With Development and Sensitivity Test (Ledbury Urban Extension) situations. SJ1, SJ2-5 and SJ8 are predicted to operate in an acceptable manner in the AM and PM peak hours for the 2028 Base, With Development and Sensitivity Test situations.

9.12.2 The PICADY modelling of SJ6 predicts that the existing junction will operate above capacity in the PM 2028 Base situation and that there will be a further deterioration in the With Development situation. A mitigation scheme is identified and is presented on Drg No 1394/26.

9.12.3 The traffic impact of the Ledbury Urban Extension is significantly greater at SJ6 than the proposed development. A mini-roundabout scheme and a traffic signal scheme have been identified by BWB. The latest BWB TA suggests that HC favour the traffic signal option, but this option is predicted to leave the junction over capacity in the 2028 future year (with or without the proposed Dymock Road development). AHA will liaise with HC with regard to this issue as it would be unusual for a highway authority to introduce a new form of control that is predicted to result in the junction operating well above capacity in the future test year situation.

9.12.4 It is concluded that the proposed development does not have a significant traffic impact at SJ6. Notwithstanding this, the junction is predicted to operate above capacity in the 2028 Base situation and AHA have identified a mitigation scheme that can be delivered as part of the proposed development. It is considered that further work will be required to accommodate the Ledbury Urban Extension traffic,

but that it is for the applicant of that development to identify and implement a suitable improvement scheme at the junction.

This page has been left intentionally blank

10 Summary & Conclusions

10.1 Ashley Helme Associates Ltd (AHA) are appointed by Gladman Developments Ltd to prepare a Transport Assessment (TA) report in support of the planning application for proposed residential development on Land off Dymock Road, Ledbury, Herefordshire.

10.2 The Site is presently agricultural/field land. The proposed development comprises a residential development of up to 420 dwellings. All matters are reserved, except access. The applicant also proposes to make land within the Site available for future community uses, the details of which can be decided by Herefordshire Council (HC) at a later date.

10.3 The principle of transport sustainability underlies the masterplan development. The location of the Site provides a good context for journeys to be undertaken on foot and by cycle.

10.4 AHA undertook a Non-Motorised User (NMU) Audit of pedestrian and cycle provision in the context of the proposed development. The assessment and findings are set out in report 1394/8/A. The assessment identified the likely routes between the Site and local facilities, including key amenities.

10.5 The Assessment also identified a number of improvements and these include:

- Introduction of dropped kerbs and tactile paving in various locations,
- Introduction of shared pedestrian/cycle lanes on Leadon Way (between Ross Road and Little Marcle Road roundabouts),
- Improving crossing facilities at the Ross Road roundabout,
- Introduction of advanced cycle stop lines at 2No traffic signal control junctions.

10.6 There is a wide range of amenities within a 2000m (or slightly beyond a 2000m) walk of the Site. This provides opportunity for residents of the Site to undertake walk trips to/from the Site for a wide range of journey purposes. There are numerous amenities within the town centre and these include:

- Convenience stores,
- Supermarket,
- Pub/restaurant,
- Banks,
- Post office,
- Health centre,
- Pharmacy,
- Dentists,
- Opticians,
- Places of employment,
- Schools,
- Public open space,
- Leisure centres,
- Community centre,
- Library.

10.7 The land immediately north of the application Site benefits from planning permission for up to 321 dwellings. Planning permission for the erection of 321 dwellings on this land was granted through the planning appeal process. The issue of walk distances was something that was discussed during the planning appeal for the Site immediately north of the application Site. It is clear that the inspector considered the site to the north of the application Site to be located in a sustainable location in relation to Ledbury town centre, being ''*well within the 2 kilometre walking distance usually considered as offering the greatest potential for replacing short car trips*''. The centroid of the application Site is approximately 300m further south than the permitted site to the north and this provides the context for assessing the sustainability of the application Site.

10.8 Encouraging public transport journeys is an essential component of the development access strategy. It is established that a range of destinations are accessible from the Site by bus and rail, including amenity and employment locations. This is in accordance with the aims and objectives of current national and local policies.

10.9 AHA is currently in discussions with Stagecoach with regard to the 132 service. The 132 service runs along Dymock Road at present with a frequency of 120 minutes. It is proposed to improve the frequency of this service.

10.10 It is desirable to reroute the 132 bus service into the Site and Stagecoach have indicated a willingness to do this as part of any upgrade to the service frequency. However, this is dependent on the Barratt Homes layout and road geometry as the 132 bus service will need to travel through the Barratt Homes scheme to access the Site land. The present Barratt Homes proposals are for a 5.5m loop road and this width may not be sufficient to allow Stagecoach to bring a vehicle into the Site.

10.11 The TA study network of junctions comprises:

REF	JUNCTION	CONTROL
SJ1	Barratt scheme/Leadon Way/Martins Way	roundabout
SJ2	Leadon Way/Ross Road	roundabout
SJ3	Leadon Way/Little Marcle Road	roundabout
SJ4	Leadon Way/New Mills Way	roundabout
SJ5	Leadon Way/Hereford Road	roundabout
SJ6	Hereford Road/Bromyard Road	priority
SJ7	New Street/Worcester Road	signals
SJ8	The Southend/A417	roundabout.

10.12 Junction modelling is undertaken of the TA study junctions for the AM and PM peak hours for the 2028 Base, With Development and Sensitivity Test (Ledbury Urban Extension) situations. SJ1, SJ2-5 and SJ8 are predicted to operate in an acceptable manner in the AM and PM peak hours for the 2028 Base, With Development and Sensitivity Test situations.

10.13 The PICADY modelling of SJ6 predicts that the existing junction will operate above capacity in the PM 2028 Base situation and that there will be a further small deterioration in the With Development situation. AHA have identified a mitigation scheme (Drg No 1394/26) that can be delivered as part of the proposed development.

10.14 The traffic impact of the Ledbury Urban Extension is significantly greater at SJ6 than the proposed development. A mini-roundabout scheme and a traffic signal scheme have been identified by BWB. The latest BWB TA suggests that HC favour the traffic

signal option, but this option is predicted to leave the junction over capacity in the 2028 future year (with or without the proposed Dymock Road development). AHA will liaise with HC with regard to this issue as it would be unusual for a highway authority to introduce a new form of control that is predicted to result in the junction operating well above capacity in the future test year situation.

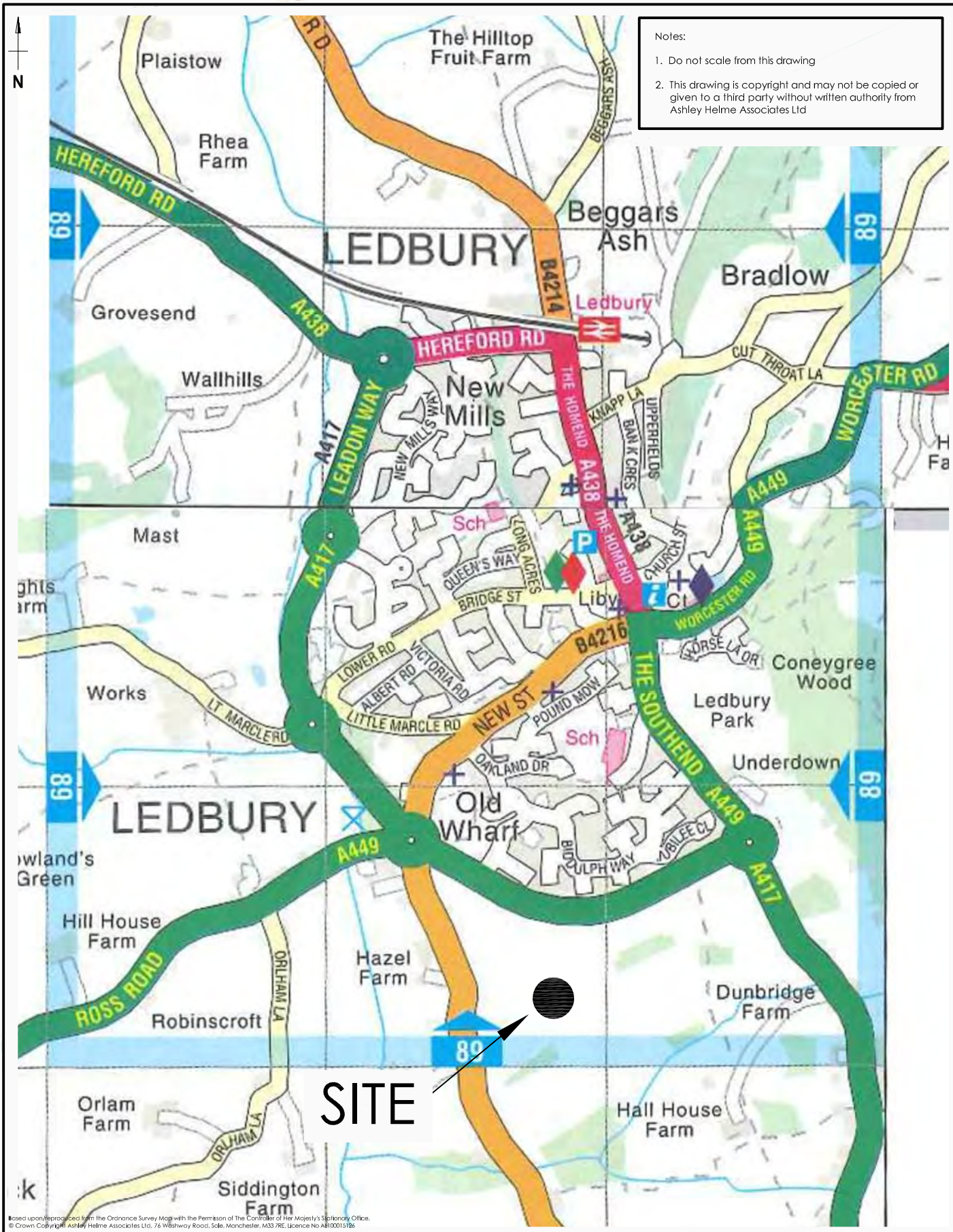
10.15 It is concluded that the proposed development does not have a significant impact at SJ6. Notwithstanding this, the junction is predicted to operate above capacity in the Base situation and AHA have identified a mitigation scheme that can be delivered as part of the proposed development.

10.16 It is concluded that the proposed development is in accordance with national and local transport policies, and that there are no transport/highways reasons for refusal of planning permission.

This page has been left blank intentionally.

Figures

This page has been left blank intentionally.



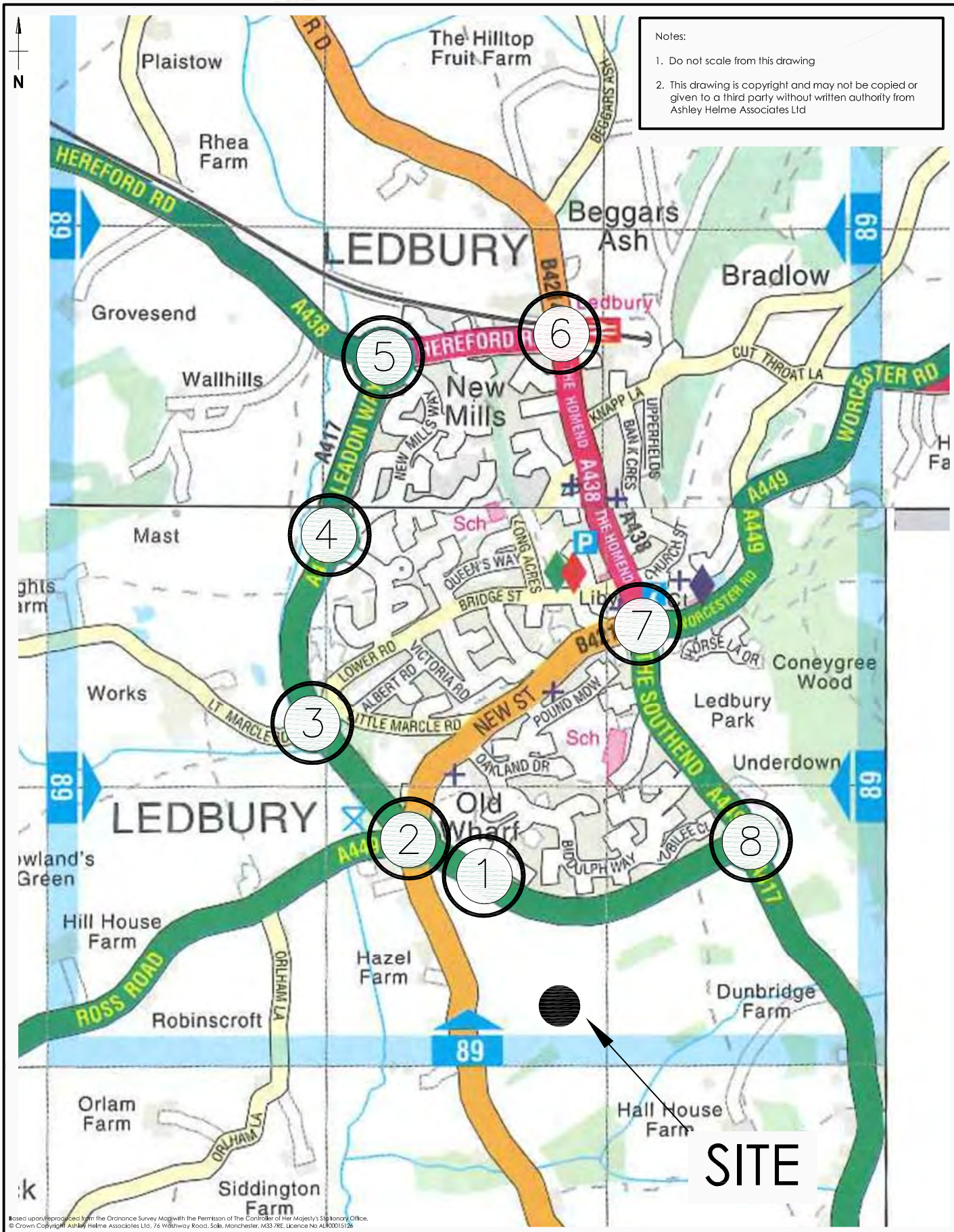
LOCATION PLAN

FIGURE 1

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

1394_1_1

This page has been left blank intentionally.

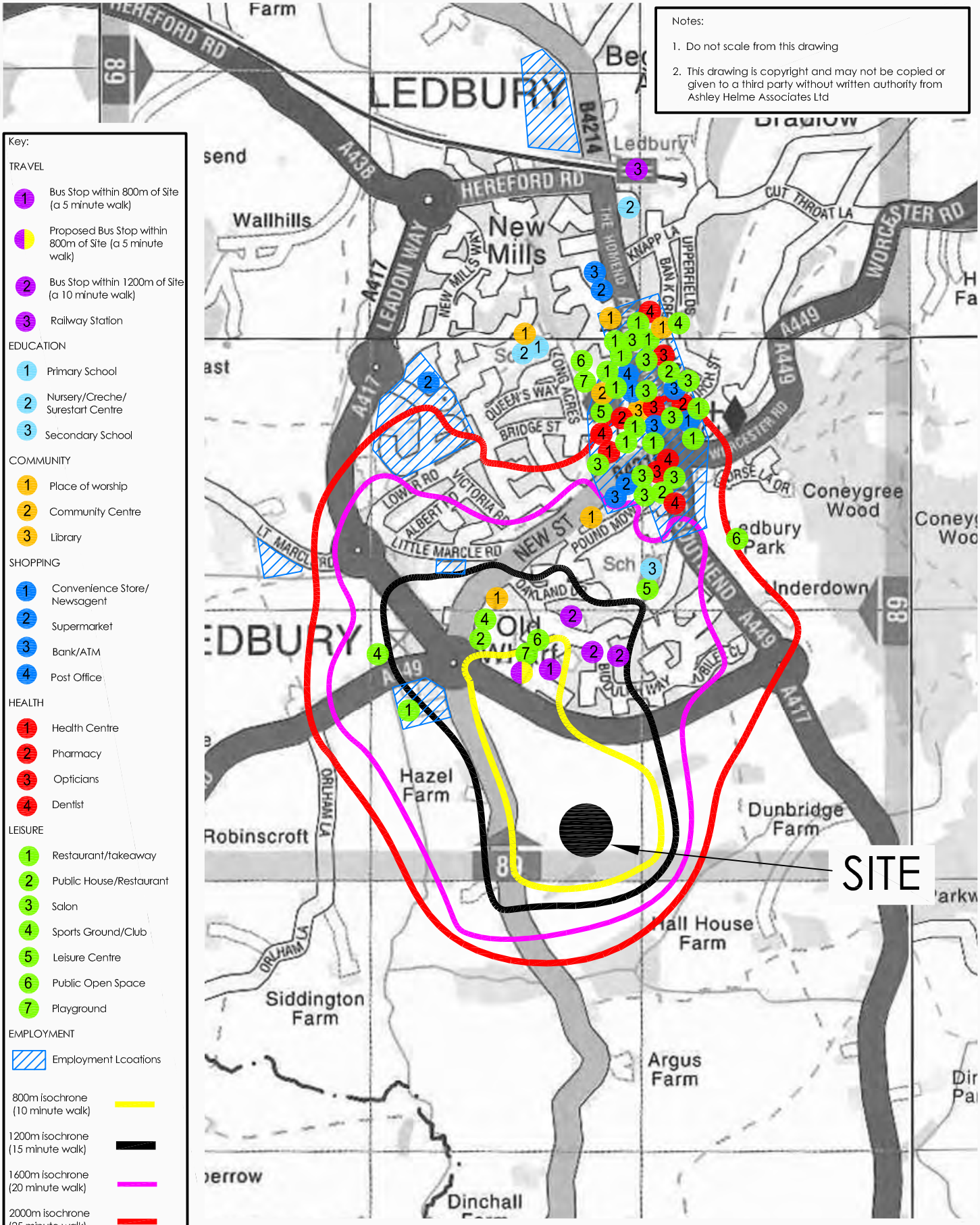


STUDY JUNCTIONS

FIGURE 2

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

This page has been left blank intentionally.



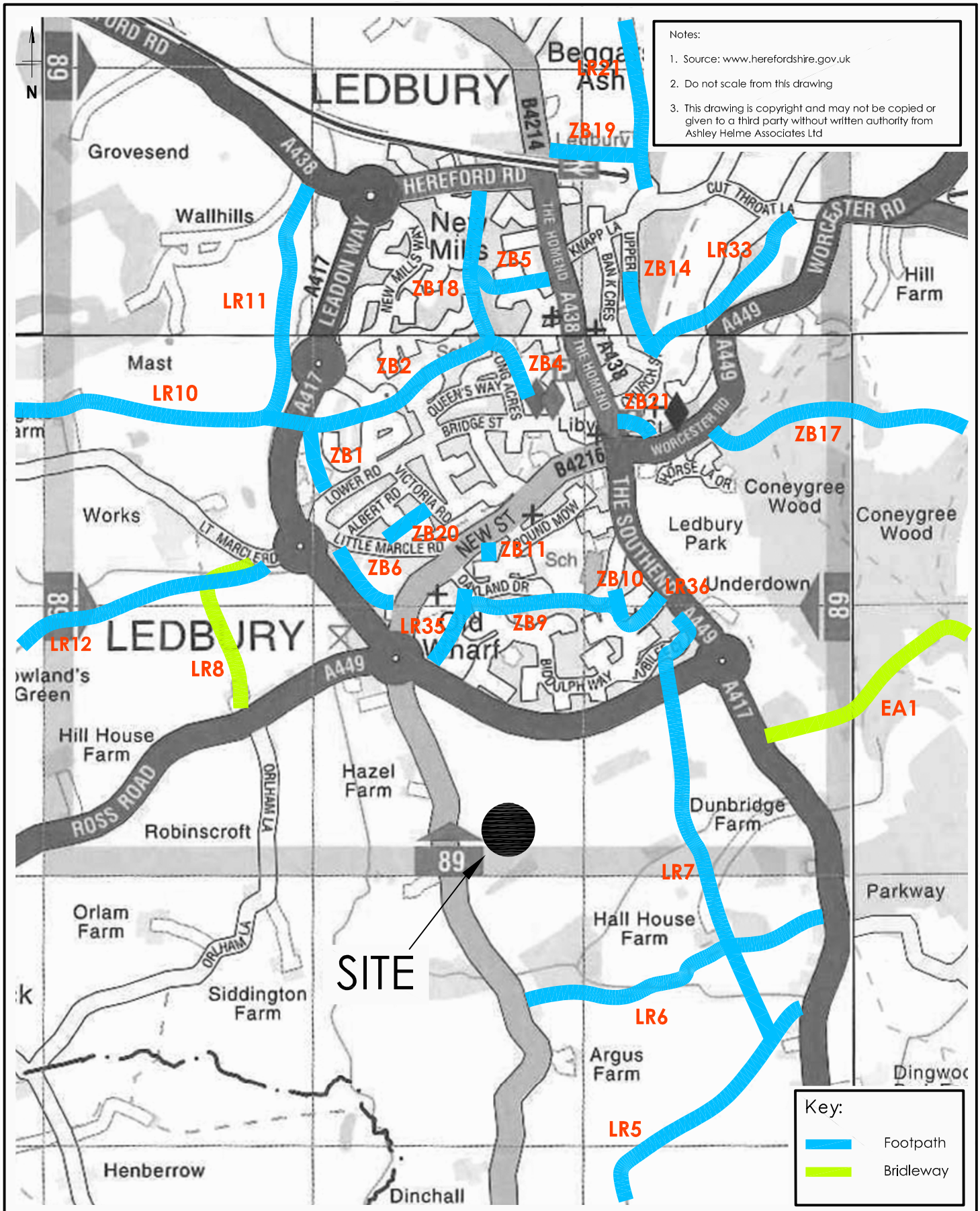
WALK ISOCHRONES & LOCAL AMENITIES

FIGURE 3

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

1394_1_3

This page has been left blank intentionally.

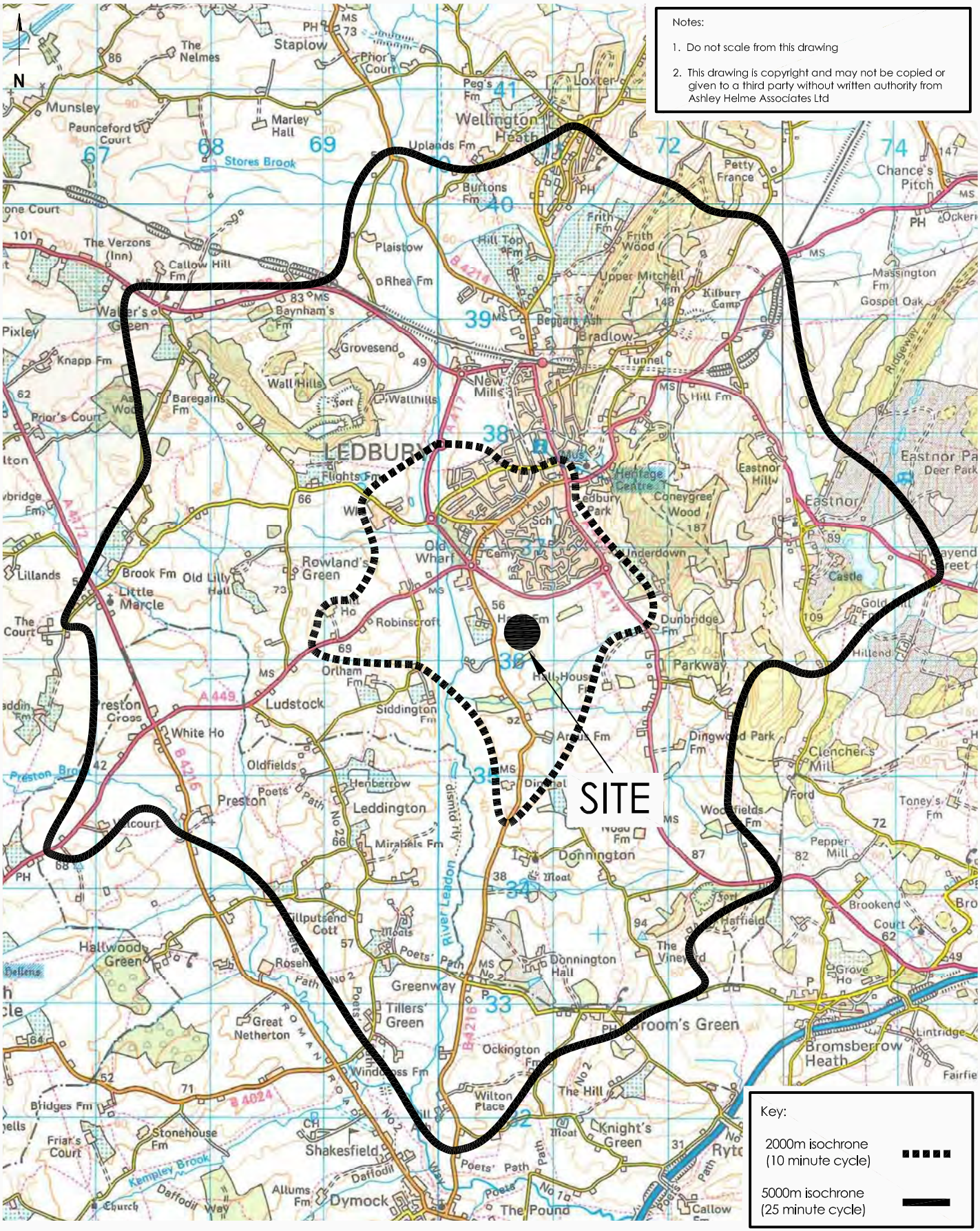


PUBLIC RIGHTS OF WAY (PROW)

FIGURE 4

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

This page has been left blank intentionally.



CYCLE ISOCHRONES

FIGURE 5

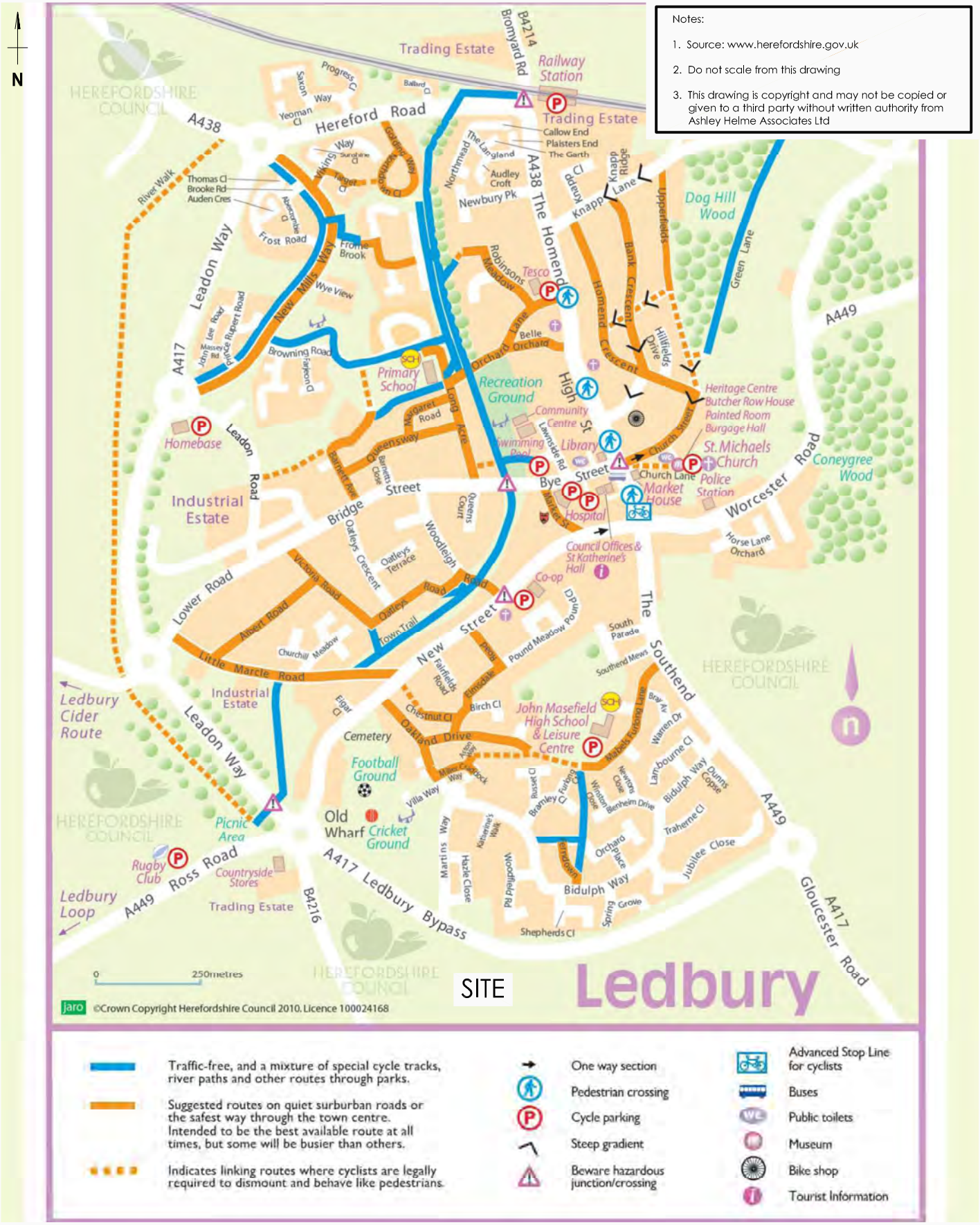
ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

1394_1_5

This page has been left blank intentionally.

Notes:

1. Source: www.herefordshire.gov.uk
2. Do not scale from this drawing
3. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd



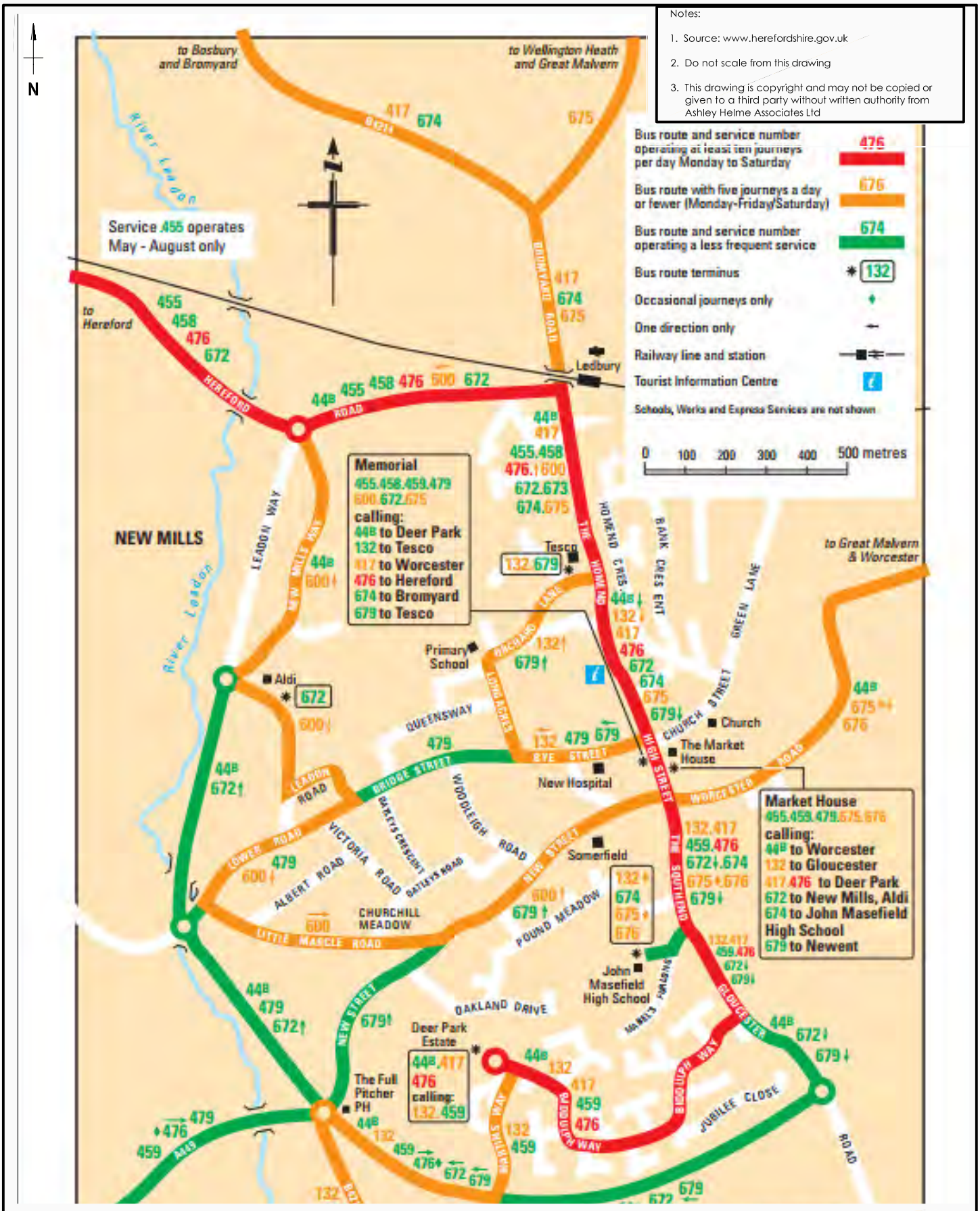
CYCLE ROUTES

FIGURE 6

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

1394_1_6

This page has been left blank intentionally.



BUS ROUTES

FIGURE 7

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Tables

This page has been left blank intentionally.

BUS No	Route	FREQUENCY			OPERATOR
		Mon- Sat		Sun	
		Day	Eve		
Services calling within 800m of Site (a 10 minute walk)					
132	Gloucester - Newent - Ross on Wye -Ledbury	120mins	-	-	SCW
459	Ross on Wye - Ledbury	2 trips[1]	-	-	GYC
Services calling within 1200m of Site (a 15 minute walk)					
417	Ledbury-Cradley-Worcester	8 trips[2]	-	-	FW
418	Ledbury-Worcester	2 trips[3]	-	-	FW
476	Ledbury-Hereford	60mins	1 trip[4]	120mins	DRM
44B	Royal Hospital-Worcester-Malvern-Ledbury	60mins[5]	-	-	FW

Source: www.travelinemidlands.co.uk

Key:

SCW Stagecoach in West
GYC George Young's Coaches
FW First Worcestershire
DRM DRM Bus

Notes
1. 2 trips, 1 in the AM in direction to Ross-on-Wye and 1 in the PM in direction to Ledbury. Service only operates on Thursdays.
2. 8 trips, 4 in each direction except on Saturdays when there are 12 trips, 6 in each direction,
3. 1 trip to Worcester and 1 trip to Ledbury on Saturdays only,
4. Evening trips operate Friday and Saturday only. There are 2 request trips in the direction of Ledbury on Fridays and Saturdays only,
5. Service operates June to September only.

TABLE 1 BUS SERVICES AND FREQUENCIES

This page has been left intentionally blank

AREA OF WORKPLACE - RESIDENT POPULATION

LOCAL AUTHORITY/COUNTY/REGION

PLACE OF RESIDENCE / ROUTE ASSIGNMENT		North West Leicestershire	Stratford-on-Avon	Birmingham	Dudley	Sandwell	Bromsgrove	Malvern Hills	Redditch	Worcester	Wychavon	Wyre Forest	West Oxfordshire	Bristol	North Somerset	South Gloucestershire	Swindon	Cheltenham	Cotswold	Forest of Dean	Gloucester	Stroud	Tewkesbury	Cardiff	Torfaen	Monmouthshire	Newport
A449 Ross Road																								4	6	6	6
A438 Hereford Road (W)																											
B4214 Bromyard Road								40																			
A449 Worcester Road								190																			
A417 (S)		3	4	10	4	3	3	41	3	100	41	10	3	10	3	12	6	49	8	34	47	16	90				
B4216 (S)																				101	46						
Little Marcle Road																											
A449 The Southend																											
New Street																											
Unnamed Road																											
TOTAL	No.	3	4	10	4	3	3	271	3	100	41	10	3	10	3	12	6	49	8	135	93	16	90	4	6	6	6
	%	0.1	0.2	0.5	0.2	0.1	0.1	12.6	0.1	4.6	1.9	0.5	0.1	0.5	0.1	0.6	0.3	2.3	0.4	6.3	4.3	0.7	4.2	0.2	0.3	0.3	0.3

WARDS WITHIN HEREFORDSHIRE, COUNTY OF

PLACE OF RESIDENCE / ROUTE ASSIGNMENT		Herefordshire 001	Herefordshire 003	Herefordshire 004	Herefordshire 005	Herefordshire 006	Herefordshire 007	Herefordshire 008	Herefordshire 009	Herefordshire 010	Herefordshire 011	Herefordshire 012	Herefordshire 013	Herefordshire 014	Herefordshire 015	Herefordshire 016	Herefordshire 017	Herefordshire 018	Herefordshire 019	Herefordshire 020	Herefordshire 021	Herefordshire 022	Herefordshire 023		TOTAL %
A449 Ross Road					16						13			6				78		1		19	11	**166**	7.7
A438 Hereford Road (W)		2	31	22	16	2	9	23		50	13	110	6	7	9	4	1				42			**347**	16.1
B4214 Bromyard Road									39										132					**211**	9.8
A449 Worcester Road									39															**229**	10.6
A417 (S)																						19	11	**530**	24.6
B4216 (S)																								**147**	6.8
Little Marcle Road																			132					**132**	6.1
A449 The Southend																			66					**66**	3.1
New Street																			198					**198**	9.2
Unnamed Road																			132					**132**	6.1
TOTAL	No.	2	31	22	32	2	9	23	78	50	26	110	6	13	9	4	1	78	660	1	42	38	22	**2158**	100
	%	0.1	1.4	1.0	1.5	0.1	0.4	1.1	3.6	2.3	1.2	5.1	0.3	0.6	0.4	0.2	0.0	3.6	30.6	0.0	1.9	1.8	1.0		

Source: Origin-Destination data for Middle Layer Super Output (SO) Area,

Notes:

1. Car drivers only.
2. Destinations with 1 trip not included.
3. Destinations beyond 1 hour 30 minute commute not included.

TABLE 2 2011 CENSUS DISTRIBUTION PLACE OF WORK RESIDENTS IN HEREFORDSHIRE 019 MIDDLE LAYER SO AREA

LEFT INTENTIONALLY BLANK

PEAK HOUR	YEAR	LEADON WAY (E)			SITE			LEADON WAY (W)			MARTINS WAY		
		RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY
AM	Base[1]	0.55	1.2	8.42	0.18	0.2	4.75	0.50	1.0	5.92	0.14	0.2	4.48
	With[2]	0.59	1.4	9.17	0.41	0.7	6.61	0.56	1.2	6.92	0.15	0.2	4.91
	Sens Test[3]	0.66	1.9	10.75	0.43	0.8	7.23	0.65	1.8	8.74	0.16	0.2	5.37
PM	Base[1]	0.69	2.1	11.47	0.10	0.1	4.57	0.48	0.9	5.62	0.09	0.1	4.08
	With[2]	0.77	3.1	15.01	0.23	0.3	5.33	0.59	1.4	7.30	0.10	0.1	4.55
	Sens Test[3]	0.83	4.5	19.10	0.25	0.3	5.83	0.67	2.0	9.04	0.11	0.1	4.87

Notes:
1. Refer Figure C8, Appendix C, for traffic flows,
2. Refer Figure C11, Appendix C, for traffic flows,
3. Refer Figure C13, Appendix C, for traffic flows,
4. Refer Drg No 1394/10 for proposed junction geometry,
5. Q= Queue (veh),

TABLE 3 **ARCADY ANALYSIS RESULTS: SJ1**
AM & PM PEAK HOURS
2028 BASE, WITH DEVELOPMENT & SENSITIVITY TEST

PEAK HOUR	YEAR	B4216 (N)			A449 LEADON WAY (E)			B4216 (S)			A449 ROSS ROAD			LEADON WAY (N)		
		RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY
AM	Base[1]	0.11	0.1	2.95	0.42	0.7	3.72	0.13	0.2	4.17	0.40	0.7	5.18	0.37	0.6	4.07
	With[2]	0.12	0.1	3.03	0.50	1.0	4.31	0.15	0.2	4.56	0.43	0.7	5.71	0.39	0.7	4.28
	Sens Test[3]	0.12	0.1	3.23	0.55	1.2	4.79	0.16	0.2	4.84	0.44	0.8	6.15	0.47	0.9	4.91
PM	Base[1]	0.12	0.1	3.00	0.45	0.8	3.92	0.18	0.2	4.50	0.34	0.5	4.75	0.43	0.8	4.34
	With[2]	0.14	0.2	3.25	0.49	1.0	4.24	0.20	0.3	4.79	0.36	0.6	5.10	0.49	1.0	4.94
	Sens Test[3]	0.14	0.2	3.44	0.55	1.2	4.85	0.22	0.3	5.19	0.38	0.6	5.55	0.56	1.3	5.69

Notes:
1. Refer Figure C8, Appendix C, for traffic flows,
2. Refer Figure C11, Appendix C, for traffic flows,
3. Refer Figure C13, Appendix C, for traffic flows,
4. Refer Drg No 1394/02/A for proposed junction geometry,
5. Q= Queue (veh),

TABLE 4 **ARCADY ANALYSIS RESULTS: SJ2 (EXISTING GEOMETRY)**
AM & PM PEAK HOURS
2028 BASE, WITH DEVELOPMENT & SENSITIVITY TEST

PEAK HOUR	YEAR	B4216 (N)			A449 LEADON WAY (E)			B4216 (S)			A449 ROSS ROAD			LEADON WAY (N)		
		RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY
AM	Base[1]	0.15	0.2	4.34	0.61	1.6	8.13	0.15	0.2	4.75	0.49	1.0	7.47	0.53	1.1	7.92
	With[2]	0.17	0.2	4.50	0.73	2.6	11.56	0.17	0.2	5.27	0.53	1.1	8.59	0.57	1.3	8.74
	Sens Test[3]	0.18	0.2	4.90	0.80	3.9	15.69	0.18	0.2	5.64	0.56	1.2	9.60	0.68	2.1	11.78
PM	Base[1]	0.16	0.2	4.45	0.65	1.9	9.20	0.20	0.3	5.21	0.41	0.7	6.60	0.62	1.6	9.37
	With[2]	0.20	0.2	4.95	0.72	2.5	11.20	0.23	0.3	5.60	0.45	0.8	7.30	0.71	2.4	12.58
	Sens Test[3]	0.21	0.3	5.35	0.81	4.0	16.51	0.25	0.3	6.16	0.48	0.9	8.21	0.81	4.0	18.51

Notes:
1. Refer Figure C8, Appendix C, for traffic flows,
2. Refer Figure C11, Appendix C, for traffic flows,
3. Refer Figure C13, Appendix C, for traffic flows,
4. Refer HCC drawing, Appendix F, for traffic flows,
5. Q= Queue (veh),

TABLE 5 **ARCADY ANALYSIS RESULTS: SJ2 (HCC PROPOSED GEOMETRY)**
AM & PM PEAK HOURS
2028 BASE, WITH DEVELOPMENT & SENSITIVITY TEST

PEAK HOUR	YEAR	LITTLE MARCLE ROAD (E)			LEADON WAY (S)			LITTLE MARCLE ROAD (W)			LEADON WAY (N)		
		RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY
AM	Base[1]	0.15	0.2	3.31	0.34	0.5	3.26	0.04	0.0	3.15	0.26	0.3	2.91
	With[2]	0.15	0.2	3.37	0.38	0.6	3.53	0.04	0.0	3.27	0.27	0.4	2.97
	Sens Test[3]	0.16	0.2	3.59	0.43	0.8	3.84	0.05	0.0	3.41	0.34	0.5	3.26
PM	Base[1]	0.17	0.2	3.47	0.31	0.5	3.10	0.09	0.1	2.89	0.30	0.4	2.96
	With[2]	0.18	0.2	3.63	0.34	0.5	3.23	0.10	0.1	2.97	0.34	0.5	3.15
	Sens Test[3]	0.19	0.2	3.85	0.40	0.7	3.55	0.10	0.1	3.13	0.39	0.6	3.42

Notes:
1. Refer Figure C8, Appendix C, for traffic flows,
2. Refer Figure C11, Appendix C, for traffic flows,
3. Refer Figure C13, Appendix C, for traffic flows,
4. Refer Drg No 1394/03/A for proposed junction geometry,
5. Q= Queue (veh),

TABLE 6 **ARCADY ANALYSIS RESULTS: SJ3**
AM & PM PEAK HOURS
2028 BASE, WITH DEVELOPMENT & SENSITIVITY TEST

PEAK HOUR	YEAR	NEW MILLS WAY			COMMERCIAL ACCESS			LEADON WAY (S)			LEADON WAY (N)		
		RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY
AM	Base[1]	0.11	0.1	3.42	0.10	0.1	3.35	0.23	0.3	2.64	0.25	0.3	2.77
	With[2]	0.11	0.1	3.48	0.10	0.1	3.42	0.27	0.4	2.78	0.26	0.4	2.83
	Sens Test[3]	0.12	0.1	3.71	0.11	0.1	3.63	0.32	0.5	2.97	0.33	0.5	3.11
PM	Base[1]	0.08	0.1	3.29	0.28	0.4	3.86	0.28	0.4	2.94	0.28	0.4	2.90
	With[2]	0.08	0.1	3.39	0.30	0.4	4.05	0.30	0.4	2.98	0.31	0.4	3.04
	Sens Test[3]	0.09	0.1	3.57	0.31	0.5	4.31	0.36	0.6	3.26	0.36	0.6	3.31

Notes:
1. Refer Figure C8, Appendix C, for traffic flows,
2. Refer Figure C11, Appendix C, for traffic flows,
3. Refer Figure C13, Appendix C, for traffic flows,
4. Refer Drg No 1394/04/A for proposed junction geometry,
5. Q= Queue (veh),

TABLE 7 **ARCADY ANALYSIS RESULTS: SJ4**
AM & PM PEAK HOURS
2028 BASE, WITH DEVELOPMENT & SENSITIVITY TEST

PEAK HOUR	YEAR	A438 HEREFORD ROAD (E)			NEW MILLS WAY			LEADON WAY			A438 HEREFORD ROAD (W)			ACCESS ROAD		
		RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY
AM	Base[1]	0.27	0.4	2.93	0.12	0.1	3.70	0.25	0.3	2.88	0.33	0.5	3.37	0.01	0.0	3.90
	With[2]	0.27	0.4	2.97	0.12	0.1	3.74	0.28	0.4	3.02	0.34	0.5	3.45	0.01	0.0	3.97
	Sens Test[3]	0.37	0.6	3.42	0.13	0.2	4.08	0.33	0.5	3.30	0.38	0.6	3.77	0.01	0.0	4.26
PM	Base[1]	0.36	0.6	3.22	0.07	0.1	3.50	0.29	0.4	2.95	0.30	0.4	3.22	0.00	0.0	0.00
	With[2]	0.37	0.6	3.34	0.07	0.1	3.59	0.31	0.4	3.03	0.32	0.5	3.34	0.00	0.0	0.00
	Sens Test[3]	0.46	0.8	3.86	0.07	0.1	3.87	0.37	0.6	3.39	0.37	0.6	3.68	0.00	0.0	0.00

Notes:
1. Refer Figure C8, Appendix C, for traffic flows,
2. Refer Figure C11, Appendix C, for traffic flows,
3. Refer Figure C13, Appendix C, for traffic flows,
4. Refer Drg No 1394/05/A for proposed junction geometry,
5. Q= Queue (veh),

TABLE 8 **ARCADY ANALYSIS RESULTS: SJ5**
AM & PM PEAK HOURS
2028 BASE, WITH DEVELOPMENT & SENSITIVITY TEST

PEAK HOUR	YEAR	BROMYARD ROAD			THE HOMEND RIGHT TURN		
		RFC	Q	DELAY	RFC	Q	DELAY
AM	Base[1]	0.84	4.6	50.54	0.40	0.7	10.91
	With[2]	0.87	5.4	58.74	0.40	0.7	11.09
	Sens Test[3]	1.76	198.1	1686.66	0.59	1.4	16.67
PM	Base[1]	1.09	27.2	210.85	0.39	0.6	10.26
	With[2]	1.15	38.9	287.18	0.39	0.6	10.35
	Sens Test[3]	1.99	288.5	2338.07	0.61	1.6	16.57

Notes:
1. Refer Figure C8, Appendix C, for traffic flows,
2. Refer Figure C11, Appendix C, for traffic flows,
3. Refer Figure C13, Appendix C, for traffic flows,
4. Refer Drg No 1394/06/A for proposed junction geometry,
5. Q= Queue (veh),

TABLE 9 **ARCADY ANALYSIS RESULTS: SJ6 (EXISTING GEOMETRY)**
AM & PM PEAK HOURS
2028 BASE, WITH DEVELOPMENT & SENSITIVITY TEST

PEAK HOUR	BROMYARD ROAD						THE HOMEND		
	LEFT TURN			RIGHT TURN					
	RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY
AM	0.47	0.9	14.90	0.53	1.1	28.64	0.42	0.7	11.93
PM	0.79	3.1	56.23	0.87	4.9	73.22	0.41	0.7	11.17

Notes:
1. Refer Figure C11, Appendix C, for traffic flows,
2. Refer Drg No 1394/26 for proposed junction geometry,
3. Q= Queue (veh),

TABLE 10 **PICADY ANALYSIS RESULTS: SJ6 (POTENTIAL GEOMETRY)**
AM & PM PEAK HOURS
2028 WITH DEVELOPMENT

PEAK HOUR	YEAR	BROMYARD ROAD			THE HOMEND			HEREFORD ROAD		
		RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY
AM	Sens Test[1]	0.77	3.1	18.87	0.60	1.5	9.05	0.79	3.6	18.92
PM	Sens Test[1]	0.78	3.5	18.31	0.77	3.3	16.48	0.70	2.3	13.99

Notes:
1. Refer Figure C13, Appendix C, for traffic flows,
2. Refer Appendix G of AHA TA report for BWB junction improvement scheme,
3. Q= Queue (veh),

TABLE 11 **ARCADY ANALYSIS RESULTS: SJ6 (BWB MINI ROUNDABOUT SCHEME)**
AM & PM PEAK HOURS
2028 SENSITIVITY TEST

PEAK HOUR	HEREFORD ROAD			THE HOMEND			BROMYARD ROAD		
	DS	Q	DELAY	DS	Q	DELAY	DS	Q	DELAY
AM	106.3	58.0	216.0	58.0	14.0	26.2	105.9	48.1	204.6
PM	125.7	97.3	528.6	59.6	18.1	20.3	125.6	112.2	522.9

Notes:
1. Refer Figure C13, Appendix C, for traffic flows,
2. Refer Appendix G of AHA TA report for BWB junction improvement scheme,
3. Q= Queue (pcu),

TABLE 12 LINSIG ANALYSIS RESULTS: SJ6 (BWB TRAFFIC SIGNAL SCHEME)
AM & PM PEAK HOURS
2028 SENSITIVITY TEST

PEAK HOUR	YEAR	A417 GLOUCESTER ROAD			A417 LEADON WAY			A449 THE SOUTHEND		
		RFC	Q	DELAY	RFC	Q	DELAY	RFC	Q	DELAY
AM	Base[1]	0.31	0.4	3.18	0.35	0.5	3.29	0.28	0.4	3.32
	With[2]	0.31	0.4	3.26	0.40	0.7	3.55	0.29	0.4	3.46
	Sens Test[3]	0.37	0.6	3.60	0.47	0.9	4.06	0.33	0.5	3.83
PM	Base[1]	0.40	0.7	3.65	0.25	0.3	2.89	0.24	0.3	2.90
	With[2]	0.43	0.8	3.93	0.27	0.4	2.99	0.26	0.3	3.02
	Sens Test[3]	0.51	1.1	4.59	0.33	0.5	3.30	0.28	0.4	3.26

Notes:
1. Refer Figure C8, Appendix C, for traffic flows,
2. Refer Figure C11, Appendix C, for traffic flows,
3. Refer Figure C13, Appendix C, for traffic flows,
4. Refer Drg No 1394/08/A for proposed junction geometry,
5. Q= Queue (veh),

TABLE 13 **ARCADY ANALYSIS RESULTS: SJ8**
AM & PM PEAK HOURS
2028 BASE, WITH DEVELOPMENT & SENSITIVITY TEST

This page has been left blank intentionally.

A Accident Records

This page has been left blank intentionally.

Contributory Factors Report Summary - Ledbury Area

Accidents Found Date Range: 24/07/2012 - 03/05/2017
Grid Coordinate Range: 369884,236284 - 371526,238688
Accident Date BETWEEN '01-Jun-2012' AND '31-May-2017'

Accident Severity

	2012	2013	2014	2015	2016	2017	Total
Fatal	**0**	**0**	**0**	**0**	**1**	**0**	**1**
Serious	**0**	**2**	**1**	**0**	**2**	**1**	**6**
Slight	**2**	**4**	**9**	**3**	**9**	**4**	**31**
Total	**2**	**6**	**10**	**3**	**12**	**5**	**38**

Casualty Severity

	2012	2013	2014	2015	2016	2017	Total
Fatal	**0**	**0**	**0**	**0**	**1**	**0**	**1**
Serious	**0**	**2**	**1**	**0**	**2**	**3**	**8**
Slight	**3**	**4**	**9**	**4**	**9**	**5**	**34**
Total	**3**	**6**	**10**	**4**	**12**	**8**	**43**

Casualty KSI

	2012	2013	2014	2015	2016	2017	Total
Adult KSI	**0**	**2**	**1**	**0**	**3**	**3**	**9**
Slight	**3**	**4**	**9**	**4**	**9**	**5**	**34**
Total	**3**	**6**	**10**	**4**	**12**	**8**	**43**

Ledbury Area

Accident Date BETWEEN '01-Jun-2012' AND '31-May-2017'

Accident Reference:12D203184 Slight A438 Hereford Rd Ledbury,O/S Bradford Building Supplies, Accident 1 of 38

Tuesday 24/07/2012 07:26 Grid Coords 370685/238598 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 002	Very likely	Yes
406 Failed to judge other person's path/speed (Driver/Rider - Error)	Vehicle 002	Very likely	
706 Dazzling sun (Driver/Rider - Vision Affected)	Vehicle 002	Very likely	

Accident Description

Driver V1 Appears to Have Been Dazzled by Low Sun, Dr V1 Fails to See Parked V2 and a Collision Occurs.

Vehicles

1 Goods 3.5 - 7.5t	Parked	No skid	Negative	Parked	Male Age 56
2 Car	Going ahead other	No skid	Negative	W to E	Male Age 62

Casualties

1 Driver or Rider	Slight	Vehicle no.1	Male 56
2 Driver or Rider	Slight	Vehicle no.2	Male 62

Accident Reference:12E203468 Slight Lower Road, Ledbury,J/W Childer Rd O/S Wateredge, Accident 2 of 38

Sunday 26/08/2012 00:25 Grid Coords 370032/237362 Daylight Dark/lights lit

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
410 Loss of control (Driver/Rider - Error)	Vehicle 001	Very likely	Yes
501 Impaired by alcohol (Driver/Rider - Impairment)	Vehicle 001	Very likely	
403 Poor turn or manoeuvre (Driver/Rider - Error)	Vehicle 001	Very likely	

Accident Description

V1 Lost Control and Drove over Pavement Before Hitting Brick Wall Boundary Demolishing 3M Long Section & Buckling Metal Gate. Driver Blew 41 on Breath Test So Alcohol Involved (Nb Due to Ankle Pain Hospital Procedure/Blood Not Obtained Yet at 0400 Hrs 26/8/12 So Anticipate she Will Be Under) (Further no Fme Could Be Located So 2Nd Breath Test at 0515 Hrs, Driver Blew 15!) Driver Failed to Control her Car.

Vehicles

1 Car	Going ahead right hand bend	No skid	Positive	SW to NE	Female Age 21

Casualties

1 Driver or Rider	Slight	Vehicle no.1	Female 21

Accident Reference:13E300393 Slight Lawnside Road Ledbury,J/W Bye Street, Accident 3 of 38

Tuesday 29/01/2013 19:20 Grid Coords 370937/237698 Daylight Dark/lights lit

Surface Wet/Damp Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	No - reported 'over the counter'
406 Failed to judge other person's path/speed (Driver/Rider - Error)	Vehicle 001	Very likely	
602 Careless/Reckless (Driver/Rider - Behaviour)	Vehicle 001	Very likely	
802 Failed to look properly (Pedestrian)	Casualty 001	Possible	

Accident Description

V001 turning right from Bye Street into Lawnside Toad Has Taken Turn Early and Collided with Pedestrian Who is Still Crossing the Road. V001 Has Failed to Stop/Repport

Vehicles

1 Car	Turning right	No skid	Not contacted	E to N	Not traced Age -1

Casualties

1	Pedestrian	Slight	Vehicle no.1	Female 24

Accident Reference:13E300679 Slight B4216, New St, Ledbury,O/S Wilberm, Accident 4 of 38

Sunday 24/02/2013 21:07 Grid Coords 370838/237434 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
999 Other (Special Codes)	Vehicle 001	Very likely	Yes
999 Other (Special Codes)	Casualty 001	Very likely	

Accident Description

V1 Trav Towards Town Centre. Ped on Side of the Rd Leaning Against Parked Veh Feeling Unwell (Dizzy). V1 Commenced Overtaking of Parked Stat Veh, then Somehow a Bag the Ped was Carrying Got Caught by V1 and Ped Fell onto the Rd.

Vehicles

1 Car	O/T stat. vehicle on its O/S	No skid	Negative	SW to NE	Female Age 27

Casualties

1	Pedestrian	Slight	Vehicle no.1	Male 20

Accident Reference:13C300682 Serious B4214 Bromyard Rd Ledbury,O/S Sequani Ltd Accident 5 of 38

Tuesday 26/02/2013 17:13 Grid Coords 370837/238688 Daylight Daylight

Surface Wet/Damp Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
801 Crossed road masked by stationary or parked vehicle (Pedestrian)	Casualty 001	Very likely	Yes
802 Failed to look properly (Pedestrian)	Casualty 001	Very likely	

Accident Description

V1 Trav Nb . Stat Traffic in Sb Carriageway - Ped Steps out Bet Two Vehs on the Sb Carriageway into Path V1. Ped is Struck by V1, Mounts Bonnet and Coll/W Windscreen

Vehicles

1 Car	Going ahead other	No skid	Negative	S to N	Male Age 45

Casualties

1 Pedestrian	Serious	Vehicle no.1	Female 40

Accident Reference:13E302160 Serious Full Pitcher Roundabout,Jw B 4216 Dymock Rd, Accident 6 of 38

Thursday 20/06/2013 07:52 Grid Coords 370290/236788 Daylight Daylight

Surface Wet/Damp Weather Raining without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	Yes

Accident Description

Driver of Volkswagon Van Pulled onto Roundabout from B4216 Dymoor Road and and Hit Cyclist on Rounabout.

Vehicles

1 Van/Goods < 3.5t	Starting	No skid	Negative	S to N	Male Age 45
2 Pedal Cycle	Going ahead other	No skid	Not applicable	E to W	Female Age 58

Casualties

1 Driver or Rider	Serious	Vehicle no.2	Female 58

Accident Reference:13E302317 Slight A417 Leadon Way Ledbury,Jw B4216 Full Pitcher Roundabout Accident 7 of 38

Wednesday 03/07/2013 17:40 Grid Coords 370340/236790 Daylight Dark/lights not lit

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
410 Loss of control (Driver/Rider - Error)	Vehicle 001	Very likely	Yes
505 Illness or disability, mental or physical (Driver/Rider - Impairment)	Vehicle 001	Very likely	

Accident Description

Dr/V1 is Diabetic, Has Driven to Picnic Area, Ross Rd, Ledbury, to Take Dog for Walk. After Walk he Has Driven Car from Here to Roundabout A417/B4216 by Full Pitcher Pub. his Blood Sugar Has Dropped and he Cannot Remember Anything in Detail from Here. Witness Has Foll V1 Towards Full Pitcher. V1 Swerves Very Close to Verge, as App Roundabout, Has Swerved to Right, Mounted Triangular Kerb Area and Smashed into Lighting Lamp Post Head On.

Vehicles

1 Car	Going ahead other	No skid	Not provided	SE to NW	Male Age 80

Casualties

1	Driver or Rider	Slight	Vehicle no.1	Male 80

Accident Reference:13E303633 Slight A417 Leadon Way Island Ledbury,J/W A449 Ross Road, Accident 8 of 38

Monday 07/10/2013 10:15 Grid Coords 370289/236791 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	No - reported 'over the counter'
406 Failed to judge other person's path/speed (Driver/Rider - Error)	Vehicle 001	Very likely	
403 Poor turn or manoeuvre (Driver/Rider - Error)	Vehicle 001	Very likely	

Accident Description

Cycling Round the Roundabout on Outer. the Car on right Side, then Turned Left. Driver Knocked her off the Bycycle. Driver Said he Didn't See her on the Bike. Weather was Clear and Dry.

Vehicles

1 Car	Turning left	No skid	Not contacted	S to W	Male Age 31
2 Pedal Cycle	Turning left	No skid	Not applicable	S to W	Female Age 51

Casualties

1	Driver or Rider	Slight	Vehicle no.2	Female 51

Accident Reference:14E400927 Slight Lawnside Road, Ledbury Accident 9 of 38

Saturday 15/03/2014 23:14 Grid Coords 370937/237721 Daylight Dark/lights lit

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
501 Impaired by alcohol (Driver/Rider - Impairment)	Vehicle 001	Very likely	Yes

Accident Description

V1 Trav Lawnside Rd from Direction of Housing Estate. V2 was Parked Unoccupied to Ns of Carriageway. V1 Drove into V2 Causing both Vehs to Turn Anti Clockwise in Carriageway Before Coming to Rest.

Vehicles

1 Car	Going ahead other	No skid	Positive	N to S	Male Age 27
2 Car	Parked	No skid	Not contacted	Parked	Not traced Age -1

Casualties

1	Driver or Rider	Slight	Vehicle no.1	Male 27

Accident Reference:14E401021 Slight A449 the Southend Ledbury,75 Mt Sb B4216, Accident 10 of 38

Tuesday 25/03/2014 11:05 Grid Coords 371132/237494 Daylight Daylight

Surface Wet/Damp Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
407 Too close to cyclist, horse or pedestrian (Driver/Rider - Error)	Vehicle 001	Very likely	No - reported 'over the counter'
406 Failed to judge other person's path/speed (Driver/Rider - Error)	Vehicle 001	Very likely	
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	

Accident Description

Ped Walking Along Southend Towards Town About 1 Foot Away from Edge of Pavement Got Hit on Rgt Arm by Wing Mirror of Passing V1

Vehicles

1 Car	Going ahead other	No skid	Not contacted	S to N	Female Age -1

Casualties

1	Pedestrian	Slight	Vehicle no.1	Male 17

Accident Reference:14C401182 Slight A417 Leadon Way Ledbury,333 Mt Sb Riverside Park Islan, Accident 11 of 38

Thursday 27/03/2014 20:44 Grid Coords 369884/237553 Daylight Dark/no lights

Surface Wet/Damp Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
403 Poor turn or manoeuvre (Driver/Rider - Error)	Vehicle 001	Very likely	Yes
605 Inexperienced or learner driver/rider (Driver/Rider - Behaviour)	Vehicle 001	Very likely	
605 Inexperienced or learner driver/rider (Driver/Rider - Behaviour)	Vehicle 003	Very likely	
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	

Accident Description

Veh003 Travelling Along Leadon Way with Veh001 Behind Direction Towards Counry Wide Roundabout. Veh001 Has Effected an Overtake on the Slight left Hand Bend. Veh002 Has Been Travelling from Country Wide Roundabout Towards Homebase Roundabout. both Veh001 and Veh003 Have Braked Keeping Level with Each Other.Veh001 Has Been Unable to Avoid Veh002 Causing Impact to Occur. Medic Attended no Hospital Requirement Driver Veh002.

Vehicles

1 Car	O/T moving vehicle on its O/S	Skid	Negative	NE to S	Male Age 18
2 Van/Goods < 3.5t	Going ahead right hand bend	Skid	Negative	S to NE	Male Age 27
3 Car	Going ahead left hand bend	No skid	Not requested	NE to S	Male Age 19

Casualties

1 Driver or Rider	Slight	Vehicle no.2	Male 27

Accident Reference:14E401382 Serious a 417, Gloucester Road Ledbury,50 M S Jw A449. Accident 12 of 38

Sunday 30/03/2014 13:30 Grid Coords 371526/236739 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
601 Aggressive driving (Driver/Rider - Behaviour)	Vehicle 001	Possible	Yes
403 Poor turn or manoeuvre (Driver/Rider - Error)	Vehicle 001	Very likely	
410 Loss of control (Driver/Rider - Error)	Vehicle 001	Very likely	

Accident Description

it Appears That Veh001, Who was in Company with a Fellow Rider, Albeit Behind Friend, Has Exited Gloucester Island onto Gloucester Road Towards M50. Approximately 50M off Island the Rider Has Lost Control and Crashed, Causing Damage to M/Cycle and Self. Evidence Suggests, Control was Lost Moments Before by Marks on Road. Possibly over Accelerated Losing Back End.

Vehicles

1 M/cycle > 500cc	Going ahead left hand bend	No skid	Negative	NE to SE	Male Age 41

Casualties

1 Driver or Rider	Serious	Vehicle no.1	Male 41

Accident Reference:14E401396 Slight New Mills Ind Estate Ledbury,Nr Homebase, Accident 13 of 38

Monday 21/04/2014 12:58 Grid Coords 370167/237780 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
602 Careless/Reckless (Driver/Rider - Behaviour)	Vehicle 001	Very likely	Yes
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	
406 Failed to judge other person's path/speed (Driver/Rider - Error)	Vehicle 001	Very likely	
703 Road layout (Driver/Rider - Vision Affected)	Vehicle 001	Very likely	

Accident Description

Veh001 Travelling from Bypass Towards Homebase. Veh002 Travelling Towards Bypass from Trading Estate Approaching Junction of Homebase. Veh001 Travelled into Path of Veh002. both Veh's then Collided. Veh002 ? ? Veh001 ? on Carriageway.

Vehicles

1 Car	Turning right	No skid	Negative	NW to SW	Female Age 33
2 Car	Going ahead left hand bend	No skid	Negative	S to NW	Male Age 23

Casualties

1 Driver or Rider	Slight	Vehicle no.1	Female 33

Accident Reference:14E402351 Slight New Mills Way.Ledbury ,Browning Road. Accident 14 of 38

Monday 23/06/2014 07:15 Grid Coords 370248/238021 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	No - reported 'over the counter'
703 Road layout (Driver/Rider - Vision Affected)	Vehicle 001	Possible	

Accident Description

V001 Exiting Browning Road, Did Not See V002 Approach from the right and Pulled out into Path of V002.

Vehicles

1 Car	Turning right	No skid	Negative	SE to NE	Male Age 35
2 Car	Going ahead other	No skid	Negative	NE to SW	Female Age 63

Casualties

1 Driver or Rider	Slight	Vehicle no.1	Male 35

Accident Reference:14E402432 Slight Woodleigh Road Ledbury ,O/S Hillview, Accident 15 of 38

Monday 23/06/2014 19:06 Grid Coords 370671/237497 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	No - reported 'over the counter'
406 Failed to judge other person's path/speed (Driver/Rider - Error)	Vehicle 001	Very likely	
602 Careless/Reckless (Driver/Rider - Behaviour)	Vehicle 001	Very likely	

Accident Description

V002 Travelling Along Woodleigh Road, Ledbury Towards the New Street Direction. V001 Travelling in the Opposite Direction from the New Street Direction, Collided with V002, V001 then Collided with V003 which was Parked Secure and Unattended on the Side of the Road in Woodleigh Road. (Driver of V001 Refused to Exchange Detials)

Vehicles

1 Car	Going ahead other	No skid	Not contacted	SE to NW	Not traced Age -1
2 Car	Going ahead other	No skid	Not contacted	NW to SE	Male Age 56
3 Car	Parked	No skid	Not contacted	Parked	Male Age 50

Casualties

1	Driver or Rider	Slight	Vehicle no.2	Male 56

Accident Reference:14E402721 Slight Woodleigh Road, Ledbury,70 M Nw Jw New Street, Accident 16 of 38

Tuesday 22/07/2014 21:30 Grid Coords 370742/237440 Daylight Dark/lights lit

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
407 Too close to cyclist, horse or pedestrian (Driver/Rider - Error)	Vehicle 001	Very likely	Yes
506 Not displaying lights at night or poor visibility (Driver/Rider - Impairment)	Vehicle 002	Very likely	
501 Impaired by alcohol (Driver/Rider - Impairment)	Vehicle 002	Very likely	
507 Rider wearing dark clothing (Driver/Rider - Impairment)	Vehicle 002	Very likely	

Accident Description

Cyclist Cycling Along Woodleigh Road over a Bridge, is Struck by a Car That Approached from Behind. Cyclist Fell off and Stated he Hit his Headon the Car. Veh001 Stopped and Reversed Back then Drove Off. no Vrm Taken. Minor Injury.

Vehicles

1 Car	Going ahead other	No skid	Not contacted	SE to NW	Not traced Age -1
2 Pedal Cycle	Going ahead other	No skid	Not applicable	SE to NW	Male Age 33

Casualties

1	Driver or Rider	Slight	Vehicle no.2	Male 33

Accident Reference:14E403006 Slight A449 Ross Road Ledbury,J/W A417 Leadon Way Island, Accident 17 of 38

Tuesday 05/08/2014 21:00 Grid Coords 370277/236804 Daylight Dark/lights lit

Surface Wet/Damp Weather Raining without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 002	Very likely	Yes
406 Failed to judge other person's path/speed (Driver/Rider - Error)	Vehicle 002	Very likely	
308 Following too close (Driver/Rider - Injudicious)	Vehicle 002	Possible	

Accident Description

Veh001 Stopped at Roundabout to Turn right Towards Dymook. Veh002 Did Not Stop and Went into the Back of Veh001.

Vehicles

1 Car	Stopping	No skid	Negative	W to S	Female Age 47
2 Car	Stopping	No skid	Negative	W to N	Male Age 28

Casualties

1	Driver or Rider	Slight	Vehicle no.1	Female 47

Accident Reference:14E404850 Slight New Mills Road,Ledbury,55M N Frome Brook Rd. Accident 18 of 38

Tuesday 16/12/2014 12:30 Grid Coords 370390/238366 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
302 Disobeyed give way or stop sign markings (Driver/Rider - Injudicious)	Vehicle 001	Very likely	No - reported 'over the counter'
406 Failed to judge other person's path/speed (Driver/Rider - Error)	Vehicle 001	Very likely	
408 Sudden braking (Driver/Rider - Error)	Vehicle 002	Possible	
410 Loss of control (Driver/Rider - Error)	Vehicle 002	Possible	

Accident Description

V002 Travelling Towards Hereford Road Roundabout Along New Mills Road, this Road Has Traffic Calming V002 Had right of Way, V001 Failed to Comply and Continued Through, V002 Has Braked Hard Causing Him to Lose Control and Fall off but Not Collide with V001. Driver of V001 Asked If Rider of V002 was Ok and then Drove off Without Exchanging Details.

Vehicles

1 Car	Going ahead other	No skid	Not contacted	NW to S	Not traced Age -1
2 M/cycle 50 - 125cc	Going ahead other	No skid	Not contacted	S to NW	Male Age 27

Casualties

1	Driver or Rider	Slight	Vehicle no.2	Male 27

Accident Reference:15E502866 Slight New Street Ledbury,Opp the Co Op Car Park, Accident 19 of 38

Sunday 12/07/2015 08:18 Grid Coords 370905/237502 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
509 Distraction in vehicle (Driver/Rider - Impairment)	Vehicle 001	Very likely	Yes
410 Loss of control (Driver/Rider - Error)	Vehicle 001	Very likely	

Accident Description

V1 Driving up New St Towards the Town Coll/W Parked V2. V2 is Pushed up on to Pavement Front Passengerside Coll/W a House. V1 Has Veered across Carriageway After Impact with V2 and up onto Pavment Driver Side Embedding in Hedge

Vehicles

1 Car	Going ahead right hand bend	No skid	Negative	SW to NE	Female Age 19
2 Car	Parked	No skid	Not requested	Parked	Female Age 69

Casualties

1	Driver or Rider	Slight	Vehicle no.1	Female 19

Accident Reference:38466 Slight THE SOUTHEND LEDBURY A449 BIDULPH WAY Accident 20 of 38

Wednesday 18/11/2015 17:55 Grid Coords 371315/237066 Daylight Dark/lights lit

Surface Wet/Damp Weather Raining without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	No - reported 'over the counter'
406 Failed to judge other person's path/speed (Driver/Rider - Error)	Vehicle 001	Very likely	
605 Inexperienced or learner driver/rider (Driver/Rider - Behaviour)	Vehicle 001	Very likely	
601 Aggressive driving (Driver/Rider - Behaviour)	Vehicle 001	Very likely	

Accident Description

V001 HAS BEEN TURNING LEFT OFF BIDULPH WAY JUNCTION TO ENTER ONTO THE SOUTHEND, LEDBURY AND PULLED OUT INTO THE PATH OF V002 WHO HAS BEEN TRAVELLING ON THE SOUTHEND TOWARDS LEDBURY TOWN CENTRE. THE IMPACT BETWEEN VEHICLE V001 AND V002 HAS CAUSED V002 TO FURTHER COLLIDE WITH V003 WHICH WAS TRAVELLING FROM LEDBURY TOWN CENTRE TOWARDS GLOUCESTER. THERE HAS BEEN CASUALTIES WITH MINOR INJURIES V001 AND V002, NONE HAVE ATTENDED HOSPITAL OR SEEN BY AMBO AT SCENE BUT COMPLAINED OF NECK AND CHEST PAIN.

Vehicles

1 Car	Turning left	No skid	Negative	SW to NW	Male Age 17
2 Car	Going ahead other	No skid	Negative	SE to NW	Male Age 21
3 Car	Going ahead other	No skid	Negative	NW to SE	Male Age 45

Casualties

1	Driver or Rider	Slight	Vehicle no.1	Male 17
2	Driver or Rider	Slight	Vehicle no.2	Male 21

Accident Reference:37162 Slight 46 ALBERT ROAD UNSPECIFIED ROAD OR LOCATION Accident 21 of 38

Wednesday 09/12/2015 00:37 Grid Coords 370160/237297 Daylight Daylight

Surface Wet/Damp Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
407 Too close to cyclist, horse or pedestrian (Driver/Rider - Error)	Vehicle 001	Very likely	Yes
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	
307 Travelling too fast for conditions (Driver/Rider - Injudicious)	Vehicle 001	Very likely	
802 Failed to look properly (Pedestrian)	Casualty 001	Very likely	

Accident Description

THE COLLISION OCCURED ON ALBERT ROAD WHICH IS NARROW WITH BUSY ON-STREET PARKING.THE PEDESTRIAN WALKING DOWN THE HILL ON -ROUTE HOME FROM SCHOOL. SHE WAS MANOEVRING AROUND A PARKED CAR OUTSIDE NO.46 WHEN A WHITE CAR 'SPED' PAST & MADE CONTACT WITH THE GIRLS HIP CAUSING REDNESS & SORENESS. NO MEDICAL ATTENTION SOUGHT.

Vehicles

1 Car	Going ahead other	No skid	Not contacted	SW to NE	Male Age 64

Casualties

1	Pedestrian	Slight	Vehicle no.1	Female 13

Accident Reference:47653 Slight LEADON WAY, LEDBURY A417 LOWER ROAD Accident 22 of 38

Saturday 16/01/2016 13:07 Grid Coords 369975/237230 Daylight Daylight

Surface Wet/Damp Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	Yes
406 Failed to judge other person's path/speed (Driver/Rider - Error)	Vehicle 001	Very likely	
710 Vehicle blind spot (Driver/Rider - Vision Affected)	Vehicle 001	Possible	
603 Nervous/Uncertain (Driver/Rider - Behaviour)	Vehicle 001	Possible	

Accident Description

VEH01 HAS ALLEGEDLY COME FROM THE DIRECTION OF LOWER ROAD LEDBURY TOWARDS THE ROUNDABOUT. VEH01 HAS THEN TAKEN THE ROUNDABOUT GOING STRAIGHT OVER TO TAKE THE SECOND EXIT TO LITTLE MARCLE. AS VEH01 HAS ENTERED ONTO THE ROUNDABOUT HE HAS FAILED TO SEE A PEDAL CYCLIST ON THE ROUNDABOUT COMING FROM THE HEREFORD DIRECTION AND GOING STRAIGHT OVER, VEH01 HAS MADE CONTACT WITH THE PEDAL CYCLIST KNOCKING THE MALE OFF HIS BIKE. VEH01 HAS STOPPED AND ASSISTED THE PEDAL CYCLIST WHO HAS CONCUSSION AND A MINOR LACERATION TO HIS HEAD. HE ATTENDED HOSPITAL. CYCLE DAMAGED, VEH01 NOT DAMAGED.

Vehicles

1 Car	Going ahead other	No skid	Negative	NE to W	Male Age 77
2 Pedal Cycle	Going ahead other	No skid	Not applicable	N to SE	Male Age 68

Casualties

1	Driver or Rider	Slight	Vehicle no.2	Male 68

Accident Reference:44278 Slight LEADON WAY A417 210 METRES EAST OF JUNCTION WITH ROUNDABOUT A449 Accident 23 of 38

Friday 29/01/2016 16:05 Grid Coords 370140/237010 Daylight Daylight

Surface Wet/Damp Weather Raining without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	Yes

Accident Description

V001 HAS BEEN FOLLOWING V002 WHICH HAS STOPPED AT THE NEW ROUNDABOUT. V001 HAS COLLIDED WITH THE REAR OF V002 AS V002 HAS FAILED TO MOVE OFF, THE DRIVER OF V002 FOREIGN MALE HAS THE FEMALE IF SHE IS OK BEFORE DRIVEING OFF.TOWARDS HEREFORD.

Vehicles

1 Car	Going ahead other	No skid	Negative	SE to NW	Female Age 37
2 Car	Stopping	No skid	Not contacted	SE to NW	Male Age 30

Casualties

1 Driver or Rider	Slight	Vehicle no.1	Female 37

Accident Reference:56767 Serious CARVILLE LOWER ROAD LEDBURY UNSPECIFIED ROAD OR LOCATION TURN TO IND EST Accident 24 of 38

Wednesday 17/02/2016 14:45 Grid Coords 370368/237573 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 002	Very likely	Yes
406 Failed to judge other person's path/speed (Driver/Rider - Error)	Vehicle 002	Very likely	
403 Poor turn or manoeuvre (Driver/Rider - Error)	Vehicle 002	Very likely	

Accident Description

VEH.001 WAS TRAVELLING DOWN LOWER ROAD, LEDBURY HAD SLOWED TO TURN RIGHT AND INDICATED AND BEGAN TO TAKE THE RIGHT TURN WHEN IT WAS STRUCK BY VEH.002 ALSO TRAVELLING DOWN LOWER ROAD WHO OVERTOOK VEH.001 AS IT WAS TURNING RIGHT. VEH.002 LOST CONTROL AND MOUNTED THE RIGHT SIDE PAVEMENT CAUSING IT TO ROLL OVER A NUMBER OF TIMES BEFORE STOPPING. THE DRIVER OF VEH.001 WAS UNHURT, DRIVER OF VEH.002 LOST CONSCIOUSNESS AND HAD SLIGHT GRAZING TO HIS HEAD. VEH.002 CAUSED A BRICK WALL TO FALL DOWN AFTER IMPACT, HE WAS TAKEN TO HOSPITAL

Vehicles

1 Car	Turning right	No skid	Negative	NE to NW	Female Age 74
2 Car	O/T moving vehicle on its O/S	Overturned	Negative	NE to SW	Male Age 25

Casualties

1 Driver or Rider	Serious	Vehicle no.2	Male 25

Accident Reference:62505 Slight HAZEL FARM DYMOCK RD B4216 Accident 25 of 38

Friday 04/03/2016 15:55 Grid Coords 370490/236284 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
102 Deposit on road e.g. oil, mud, chippings (Road Environment Contrib)	Vehicle 001	Very likely	Yes

Accident Description

V001 WAS TRAVELLING SLOWLY AT ABOUT 15MPH DUE TO THE MUD ON THE ROAD. REAR WHEEL HAS SLIPPED ON THE MUD CAUSING THE RIDER TO FALL OFF THE BIKE.

Vehicles

1 M/cycle 50 - 125cc	Going ahead other	Skid	Negative	N to SW	Male Age 17

Casualties

1 Driver or Rider	Slight	Vehicle no.1	Male 17

Accident Reference:73134 Slight LEADON WAY LEDBURY A449 173 METRES SOUTH OF JUNCTION WITH MARTINS WAY Accident 26 of 38

Monday 07/03/2016 17:50 Grid Coords 370716/236583 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 002	Very likely	Yes

Accident Description

CYCLIST RIDING ALONG A449,OUTSKIRTS OF LEDBURY,WITH HEAD DOWN HAS FAILED TO SEE STATIONARY VEHICLE. ATTEMPTED TO AVOID IT BUT CLIPPED REAR OFF SIDE CORNER CAUSING HIM TO FALL OFF THE BIKE ONTO THE ROAD.

Vehicles

1 Car	Parked	No skid	Not requested	Parked	Male Age 35
2 Pedal Cycle	Going ahead other	No skid	Not applicable	NW to SE	Male Age 51

Casualties

1 Driver or Rider	Slight	Vehicle no.2	Male 51

Accident Reference:80828 Slight O/S NO. 29 THE HOMEND LEDBURY A438 BANK CRESCENT Accident 27 of 38

Saturday 07/05/2016 23:25 Grid Coords 371042/237820 Daylight Dark/lights lit

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
501 Impaired by alcohol (Driver/Rider - Impairment)	Vehicle 001	Very likely	Yes
410 Loss of control (Driver/Rider - Error)	Vehicle 001	Very likely	

Accident Description

VEH01 WAS DRIVING ALONG TEH HOMEND, LEDBURY FROM THE DIRECTION OF THE M50 TOWARDS TESCO. THE DRIVER LOST CONTROL AND SWERVED ONTO THE OFFSIDE MOUNTING THE PAVEMENT AND COLLIDING WITH THE WALL OFTHE ST MICHAELS HOSPICE SHOP CAUSING MINOR DAMAGE, BLEW 113 AT ROADSIDE - ARRESTED AND CHARGED DRINK DRIVE

Vehicles

1 Car	Going ahead other	No skid	Positive	SE to NW	Male Age 30

Casualties

1	Driver or Rider	Slight	Vehicle no.1	Male 30

Accident Reference:84767 Slight O/S NO 51 THE SOUTHEND LEDBURY A449 22 METRES SOUTH OF JUNCTION WITH MABELS FURLONG Accident 28 of 38

Sunday 29/05/2016 23:05 Grid Coords 371183/237224 Daylight Dark/no lights

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
306 Exceeding speed limit (Driver/Rider - Injudicious)	Vehicle 001	Very likely	Yes
501 Impaired by alcohol (Driver/Rider - Impairment)	Vehicle 001	Very likely	
410 Loss of control (Driver/Rider - Error)	Vehicle 001	Very likely	

Accident Description

VEH01 HAS DRIVEN ALONG THE SOUTHEND, LEDBURY TOWARDS THE M50 MOTORWAY IN EXCESS OF THE 30MPH SPEED LIMIT. IT HAS LOST CONTROL AND COLLIDED WITH OFFSIDE FENCING / WALLS TO ADJACENT PROPERTIES.

Vehicles

1 Car	Going ahead left hand bend	Overturned	Positive	N to SE	Male Age 35

Casualties

1	Driver or Rider	Slight	Vehicle no.1	Male 35

Accident Reference:85823 Slight NEW STREET LEDBURY B4216 HIGH STREET A449 Accident 29 of 38

Saturday 04/06/2016 18:45 Grid Coords 371117/237574 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
802 Failed to look properly (Pedestrian)	Casualty 001	Very likely	Yes
803 Failed to judge vehicle's path/speed (Pedestrian)	Casualty 001	Very likely	

Accident Description

VEH 01 TRAVELLING TOWARDS TOP CROSS ON NEW STREET, LEDBURY - LIGHTS WERE GREEN AS REACHED JUNCTION. MALE RAN FROM NEAR SIDE AND COLLIDED WITH NSF OF FIAT. NO DAMAGE TO CAR, CUTS TO PEDESTRIAN. PARAMEDICAS ATTENDED AND CLEANED UP CUTS. MALE APOLOGISED TO DRIVER.

Vehicles

1 Car	Going ahead other	No skid	Negative	W to E	Female Age 20

Casualties

1	Pedestrian	Slight	Vehicle no.1	Male 19

Accident Reference:88009 Slight NEW STREET LEDBURY B4216 OAK LAND DRIVE Accident 30 of 38

Tuesday 28/06/2016 06:00 Grid Coords 370495/237153 Daylight Dark/lights not lit

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
306 Exceeding speed limit (Driver/Rider - Injudicious)	Vehicle 001	Very likely	Yes
307 Travelling too fast for conditions (Driver/Rider - Injudicious)	Vehicle 001	Very likely	
408 Sudden braking (Driver/Rider - Error)	Vehicle 001	Possible	
408 Sudden braking (Driver/Rider - Error)	Vehicle 001	Possible	
602 Careless/Reckless (Driver/Rider - Behaviour)	Vehicle 001	Very likely	

Accident Description

V002 IS PARKED ON ROAD, V001 CLAIMS HE WAS DRIVING FROM THE FELL PITCHER TOWARDS TOWN WHEN HE CLAIMS A SILVER CAR ON THE OPPOSITE DIRECTION SPEEDING TOWARDS HIM,HE PULLED THE HAND BRAKE ON,APPLIED BREAKS WENT INTO THE BACK OF V002.

THIS RESULTED IN V001 PIVOTING AND FACING 180' IN OPPOSITE DIRECTION MAKING CONTACT A SECOND TIME ON SIDE OF V002.

Vehicles

ALL PARTIES HAPPY TO DEAL VIA INSURANCE.

1 Car	Going ahead other	Skid	Negative	SW to NE	Male Age 29
2 Car	Parked	No skid	Not requested	Parked	Male Age 76

Casualties

1	Driver or Rider	Slight	Vehicle no.1	Male 29

Accident Reference:101872 Fatal O/S THE MARKET HOUSE HIGH STREET LEDBURY A438 CHURCH ST Accident 31 of 38

Saturday 16/07/2016 09:05 Grid Coords 371093/237708 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
810 Disability or illness (Pedestrian)	Casualty 001	Possible	No - reported 'over the counter'

Accident Description

APPARENTLY THE CASUALTY HAS BOARDED A DOUBLE DECKER BUS FROM OUTSIDE THE MARKET HOSUE IN LEDBURY AND GOING TOWARDS GLOUCESTER TO PLAY BINGO. THE CASUALTY CLIMBED THE STAIRS TO THE UPPER DECK AND HAS FALLEN BACK DOWN TO THE LOWER DECK. BUS - VEH 1 - WAS STATIONARY AT THE TIME OF THE INCIDENT. THE CASUALTY WAS TAKEN TO HEREFORD hOSPITAL WHERE HE REMAINED UNTIL HE DIED ON 2ND AUGUST 2016.

Vehicles

1 Bus or Coach	Waiting to go ahead but held up	No skid	Not contacted	N to S	Male Age 45

Casualties

1 Passenger	Fatal	Vehicle no.1	Male 78

Accident Reference:94605 Slight HIGH STREET A438 100 METRES NORTH OF JUNCTION WITH B4216 Accident 32 of 38

Thursday 21/07/2016 22:00 Grid Coords 371113/237610 Daylight Dark/lights lit

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
904 Vehicle door opened or closed negiligently (Special Codes)	Vehicle 002	Possible	Yes

Accident Description

V001 has been stationary,parked on the left hand side of the high street facing north. V002 has travelled past v001 too close and has collided with the open rear offside door of v001.v002 has not stopped

Vehicles

1 Car	Parked	No skid	Not requested	Parked	Male Age 42
2 Goods unknown weight	O/T stat. vehicle on its O/S	No skid	Not contacted	S to N	Male Age 45

Casualties

1 Pedestrian	Slight	Vehicle no.2	Male 42

Accident Reference:144289 Serious HEREFORD ROAD A438 Accident 33 of 38

Friday 16/12/2016 17:37 Grid Coords 370860/238575 Daylight Dark/lights lit

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	Yes

Accident Description

VEH 01 TRAVELLING ALONG HEREFORD ROAD TOWARDS LEDBURY TOWN CENTRE. VEH 01 HAS DRIVEN UNDER THE RAILWAY BRIDGE, A PEDESTRIAN HAS WALKED FROM THE VEH OFFSIDE AND COLLIDED WITH VEH 01 NEARSIDE BONNET.

Vehicles

1 Car	Going ahead other	No skid	Negative	N to S	Male Age 29

Casualties

1 Pedestrian	Serious	Vehicle no.1	Male 93

Accident Reference:150378 Slight A449 OPP NO. 11 THE SOUTHEND LEDBURY Accident 34 of 38

Wednesday 04/01/2017 22:22 Grid Coords 371138/237492 Daylight Dark/lights lit

Surface Frost/Ice Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
103 Slippery road due to weather (Road Environment Contrib)	Vehicle 001	Possible	Yes
306 Exceeding speed limit (Driver/Rider - Injudicious)	Vehicle 001	Very likely	
307 Travelling too fast for conditions (Driver/Rider - Injudicious)	Vehicle 001	Very likely	
410 Loss of control (Driver/Rider - Error)	Vehicle 001	Possible	
501 Impaired by alcohol (Driver/Rider - Impairment)	Vehicle 001	Possible	
902 Vehicle in course of crime (Special Codes)	Vehicle 001	Very likely	

Accident Description

VEH 01 HAS TRAVELLED AT SPEED FROM MALVERN DIRECTION ON THE A449, TURNED LEFT AND THEN HIT VEH 02 WHICH WAS STATIONARY AND PARKED ON THE NEARSIDE. VEH 02 HAS THEN BEEN SHUNTED FORWARDS INTO VEH 03 WHICH WAS STATIONARY. THE DRIVER OF VEH 01 HAS THEN GOT OUT AND LEFT ON FOOT BEFORE POLICE HAVE ARRIVED. HE WAS LOCATED 4 HOURS LATER AND ARRESTED FOR A VARIETY OF OFFENCES.

Vehicles

1 Car	Going ahead other	Skid	Negative	N to S	Male Age 29
2 Car	Parked	No skid	Not requested	Parked	Male Age 23
3 Car	Parked	No skid	Not requested	Parked	Male Age 34

Casualties

1 Driver or Rider	Slight	Vehicle no.1	Male 29

Accident Reference:150860 Slight LITTLE MARCLE RD LEDBURY UNSPECIFIED ROAD OR LOCATION COACHMANS COURT (GREYSTONES) Accident 35 of 38

Friday 06/01/2017 13:17 Grid Coords 370466/237215 Daylight Daylight

Surface Wet/Damp Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Possible	Yes
403 Poor turn or manoeuvre (Driver/Rider - Error)	Vehicle 001	Possible	
602 Careless/Reckless (Driver/Rider - Behaviour)	Vehicle 001	Possible	

Accident Description

I BELIEVE VEH 01 HAD BEEN DELIVERING TO AN ADDRESS IN COACHMANS COURT AND FAILED TO LOOK PROPERLY WHEN AT THE JUNCTION ONTO LITTLE MARCLE ROAD SUBSEQUENTLY COLLIDING INTO VEH 02. THE FRONT NEARSIDE OF VEH 01 HIT THE FRONT OFFSIDE OF VEH 02 CAUSING VEH 02 TO SCRAPE THE FRONT NEARSIDE ONTO HEDGING/WALL

Vehicles

1 Goods unknown weight	Turning right	No skid	Negative	S to E	Male Age 29
2 Car	Going ahead other	No skid	Negative	W to E	Female Age 55

Casualties

1	Driver or Rider	Slight	Vehicle no.2	Female 55

Accident Reference:158983 Slight A449 O/S NO. 40 THE SOUTHEND LEDBURY Accident 36 of 38

Wednesday 01/02/2017 16:20 Grid Coords 371151/237312 Daylight Daylight

Surface Wet/Damp Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Very likely	Yes
403 Poor turn or manoeuvre (Driver/Rider - Error)	Vehicle 001	Very likely	
409 Swerved (Driver/Rider - Error)	Vehicle 001	Possible	
603 Nervous/Uncertain (Driver/Rider - Behaviour)	Vehicle 001	Possible	
410 Loss of control (Driver/Rider - Error)	Vehicle 001	Very likely	

Accident Description

VEH002 A BLUE FIESTA HAD PULLED UP AND WAS STATIONARY SPEAKING TO PEDESTRIAN AND CASUALTY 4 AND VAEH001 A BLACK HONDA JAZZ WAS FOLLOWING IN THE SAME DIRECTION AND WENT TO PASS VEH002. LOSS OF CONTROL OCCURED LEADING TO VEH001 HITTING VEH002 THEN CAUSING VEH001 TO SPIN IN THE CARRIAGEWAY AND HIT VEH003 A GREY WHICH WAS PARKED UNATTENDED. CASUALTY 4 WAS STRUCK IN THE HEAD AS VEH002 WAS SHUNTED. THE OCCUPANT OF VEH001 ATTENDED HEREFORD A AND E. VEH001 WAS A HIRE CAR. ALL PARTIES INSURED.

Vehicles

1 Car	O/T stat. vehicle on its O/S	No skid	Negative	S to N	Male Age 94
2 Car	Parked	No skid	Negative	Parked	Female Age 67
3 Car	Parked	No skid	Not requested	Parked	Male Age 50

Casualties

1	Driver or Rider	Slight	Vehicle no.1	Male 94
2	Pedestrian	Slight	Vehicle no.1	Male 73

Accident Reference:170602 Serious A417 LEADON WAY NR JW NEW MILLS WAY LEDBURY Accident 37 of 38

Sunday 02/04/2017 13:20 Grid Coords 370013/237919 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
602 Careless/Reckless (Driver/Rider - Behaviour)	Vehicle 001	Very likely	Yes
410 Loss of control (Driver/Rider - Error)	Vehicle 001	Very likely	
306 Exceeding speed limit (Driver/Rider - Injudicious)	Vehicle 001	Possible	

Accident Description

V001 WAS TRAVELLING SOUTH ON THE A417 LEADON WAY, LEDBURY, IN COMPANY OF V002 & V003. V001 WAS TO THE REAR OF THE THREE. V004 & V005 WERE TRAVELLING NORTH ON THE A417 AND WERE JUST EXITING THE R/A WITH NEW MILLS WAY. V001, V002 & V003 WERE APPROACHING THE SAME R/A HAVING JUST OVERTAKEN A WITNESS. V001 HAS THEN COME TO THE SLIGHT LEFT BEND BEFORE R/A AND HAS CONTINUED IN A STRAIGHT LINE,GAVE INTO THE OFFSIDE LANE,COLLIDED WITH V004,THEN HIT THE KERB AND HAS BEEN THROWN OFF. V004 RIDER THROWN OFF. V005 RIDER CAME OFF UNDERBRAKING.

Vehicles

1	M/cycle > 500cc	Stopping	No skid	Not provided	N to S	Male Age 50
2	M/cycle > 500cc	Stopping	No skid	Not requested	N to S	Male Age 48
3	M/cycle > 500cc	Stopping	No skid	Not requested	N to S	Male Age 49
4	M/cycle > 500cc	Going ahead other	No skid	Negative	S to N	Male Age 75
5	M/cycle > 500cc	Going ahead other	No skid	Negative	S to N	Male Age 67

Casualties

1	Driver or Rider	Serious Vehicle no.1	Male 50
2	Driver or Rider	Serious Vehicle no.4	Male 75
3	Driver or Rider	Serious Vehicle no.5	Male 67

Accident Reference:187300 Slight LOWER ROAD TRADING ESTATE Accident 38 of 38

Wednesday 03/05/2017 10:52 Grid Coords 370203/237528 Daylight Daylight

Surface Dry Weather Fine without high winds

Contributory Factors	Participant	Confidence	Did a police officer attend?
104 Inadequate/Masked signs or road markings (Road Environment Contrib)	Vehicle 001	Possible	Yes
405 Failed to look properly (Driver/Rider - Error)	Vehicle 001	Possible	

Accident Description

The location consists of a trading estatewith multiple business premises situated along the verges of the pavements and roads.the scene is a 4 way cross roads with poor road markings and parked vehicles all around the junction mouths. V1 was approaching the junction with aim of going straight over. V1 has failed to spot v2 approaching on its nearside and travelled into its path. Both vehicles collided, resulting in V1 pushed across across the road and further colliding with a parked vehicle.

Vehicles

1	Car	Going ahead other	No skid	Negative	NE to SW	Male Age 26
2	Car	Going ahead other	No skid	Negative	S to N	Male Age 79
3	Car	Parked	No skid	Not requested	Parked	Female Age 57

Casualties

1	Driver or Rider	Slight Vehicle no.2	Male 79

B Speed Survey Results

This page has been left blank intentionally.

Ledbury ATC 01, Leadon Way South of Little Marcle Road

Produced by Streetwise Services Ltd.

Channel 1 - Northbound

	11/09/2018 Tuesday	12/09/2018 Wednesday	13/09/2018 Thursday	14/09/2018 Friday	15/09/2018 Saturday	16/09/2018 Sunday	17/09/2018 Monday	5-DAY MEAN	7-DAY MEAN
0000-2400 Vehicle Flow	3993	4264	4254	4344	3135	2756	3779	**4127**	**3789**
Mean Speed	37.1	37.3	37.7	37.1	38.2	37.4	37.4	**37.3**	**37.5**
85%ile Speed	43.6	43.9	43.6	43.2	43.1	43.3	43.0	**43.5**	**43.4**
No. Vehicles > 60 MPH Limit	1	1	0	0	5	1	0	**0**	**1**
% Vehicles > 60 MPH Limit	0.0	0.0	0.0	0.0	0.2	0.0	0.0	**0.0**	**0.0**
No. Vehicles > 75 MPH	0	0	0	0	0	0	0	**0**	**0**
% Vehicles > 75 MPH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**

Channel 2 - Southbound

	11/09/2018 Tuesday	12/09/2018 Wednesday	13/09/2018 Thursday	14/09/2018 Friday	15/09/2018 Saturday	16/09/2018 Sunday	17/09/2018 Monday	5-DAY MEAN	7-DAY MEAN
0000-2400 Vehicle Flow	4433	4816	4851	4761	3463	3111	4282	**4629**	**4245**
Mean Speed	41.3	41.6	41.9	41.7	42.7	42.1	41.5	**41.6**	**41.8**
85%ile Speed	48.4	48.2	48.9	48.7	48.1	48.0	48.9	**48.6**	**48.5**
No. Vehicles > 60 MPH Limit	26	38	29	36	34	35	38	**33**	**34**
% Vehicles > 60 MPH Limit	0.6	0.8	0.6	0.8	1.0	1.1	0.9	**0.7**	**0.8**
No. Vehicles > 75 MPH	2	1	0	3	1	1	0	**1**	**1**
% Vehicles > 75 MPH	0.0	0.0	0.0	0.1	0.0	0.0	0.0	**0.0**	**0.0**

Channels 1+2 - Northbound & Southbound

	11/09/2018 Tuesday	12/09/2018 Wednesday	13/09/2018 Thursday	14/09/2018 Friday	15/09/2018 Saturday	16/09/2018 Sunday	17/09/2018 Monday	5-DAY MEAN	7-DAY MEAN
0000-2400 Vehicle Flow	8426	9080	9105	9105	6598	5867	8061	**8755**	**8035**
Mean Speed	39.2	39.5	39.8	39.4	40.5	39.8	39.5	**39.5**	**39.6**
85%ile Speed	46.0	46.1	46.3	46.0	45.6	45.6	46.0	**46.0**	**45.9**
No. Vehicles > 60 MPH Limit	27	39	29	36	39	36	38	**34**	**35**
% Vehicles > 60 MPH Limit	0.3	0.4	0.3	0.4	0.6	0.6	0.5	**0.4**	**0.4**
No. Vehicles > 75 MPH	2	1	0	3	1	1	0	**1**	**1**
% Vehicles > 75 MPH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**

Class No	Vehicle Description	Class No	Vehicle Description
1	Car, Light Van Taxi	5	Rigid 2 Axle HGV + 2 Axle (Close coupled) Trailer
1	Light Goods Vehicle	6	Rigid 3 Axle HGV + 2 Axle Drawbar Trailer
1	Car or Light Goods Vehicle + 1 Axle Caravan or Trailer	6	Rigid 3 Axle HGV + 3 Axle Drawbar Trailer
1	Car or Light Goods Vehicle + 2 Axle Caravan or Trailer	7	Artic, 2 Axle Tractor + 1 Axle Semi-Trailer
2	Rigid 2 Axle Heavy Goods Vehicle	8	Artic, 2 Axle Tractor + 2 Axle Semi-Trailer
3	Rigid 3 Axle Heavy Goods Vehicle	9	Artic, 2 Axle Tractor + 3 Axle Semi-Trailer
3	Rigid 3 Axle Heavy Goods Vehicle	10	Artic, 3 Axle Tractor + 1 Axle Semi-Trailer
4	Rigid 4 Axle Heavy Goods Vehicle	10	Artic, 3 Axle Tractor + 2 Axle Semi-Trailer
4	Rigid 4 Axle Heavy Goods Vehicle	11	Artic, 3 Axle Tractor + 3 Axle Semi-Trailer
5	Rigid 2 Axle HGV + 2 Axle Drawbar Trailer	12	Bus or Coach, 2 Axle
5	Rigid 2 Axle HGV + 3 Axle Drawbar Trailer	12	Bus or Coach, 3 Axle
5	Rigid 2 Axle HGV + 1 Axle Caravan or Trailer	13	Vehicle with 7 or more Axles

Ledbury ATC 02, Leadon Way North of Ross Road

Produced by Streetwise Services Ltd.

Channel 1 - Northbound

	11/09/2018 Tuesday	12/09/2018 Wednesday	13/09/2018 Thursday	14/09/2018 Friday	15/09/2018 Saturday	16/09/2018 Sunday	17/09/2018 Monday	5-DAY MEAN	7-DAY MEAN
0000-2400 Vehicle Flow	3904	4131	4059	4184	3079	2716	3601	3976	3668
Mean Speed	39.8	39.8	40.3	39.7	40.7	40.0	39.9	39.9	40.0
85%ile Speed	48.6	43.9	48.6	48.2	48.1	48.3	48.1	47.5	47.7
No. Vehicles > 60 MPH Limit	17	19	17	13	13	15	11	15	15
% Vehicles > 60 MPH Limit	0.4	0.5	0.4	0.3	0.4	0.6	0.3	0.4	0.4
No. Vehicles > 75 MPH	0	0	0	0	1	0	0	0	0
% Vehicles > 75 MPH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Channel 2 - Southbound

	11/09/2018 Tuesday	12/09/2018 Wednesday	13/09/2018 Thursday	14/09/2018 Friday	15/09/2018 Saturday	16/09/2018 Sunday	17/09/2018 Monday	5-DAY MEAN	7-DAY MEAN
0000-2400 Vehicle Flow	4581	4939	4891	4800	3497	3133	4274	4697	4302
Mean Speed	38.4	38.4	39.2	38.8	40.0	39.3	39.0	38.8	39.0
85%ile Speed	43.9	43.2	43.9	43.7	48.1	48.0	43.9	43.7	45.0
No. Vehicles > 60 MPH Limit	8	7	7	13	8	8	5	8	8
% Vehicles > 60 MPH Limit	0.2	0.1	0.1	0.3	0.2	0.3	0.1	0.2	0.2
No. Vehicles > 75 MPH	0	0	0	0	0	0	0	0	0
% Vehicles > 75 MPH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Channels 1+2 - Northbound & Southbound

	11/09/2018 Tuesday	12/09/2018 Wednesday	13/09/2018 Thursday	14/09/2018 Friday	15/09/2018 Saturday	16/09/2018 Sunday	17/09/2018 Monday	5-DAY MEAN	7-DAY MEAN
0000-2400 Vehicle Flow	8485	9070	8950	8984	6576	5849	7875	8673	7970
Mean Speed	39.1	39.1	39.8	39.3	40.4	39.7	39.5	39.3	39.5
85%ile Speed	46.3	43.6	46.3	46.0	48.1	48.1	46.0	45.6	46.3
No. Vehicles > 60 MPH Limit	25	26	24	26	21	23	16	23	23
% Vehicles > 60 MPH Limit	0.3	0.3	0.3	0.3	0.3	0.4	0.2	0.3	0.3
No. Vehicles > 75 MPH	0	0	0	0	1	0	0	0	0
% Vehicles > 75 MPH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Class No	Vehicle Description	Class No	Vehicle Description
1	Car, Light Van Taxi	5	Rigid 2 Axle HGV + 2 Axle (Close coupled) Trailer
1	Light Goods Vehicle	6	Rigid 3 Axle HGV + 2 Axle Drawbar Trailer
1	Car or Light Goods Vehicle + 1 Axle Caravan or Trailer	6	Rigid 3 Axle HGV + 3 Axle Drawbar Trailer
1	Car or Light Goods Vehicle + 2 Axle Caravan or Trailer	7	Artic, 2 Axle Tractor + 1 Axle Semi-Trailer
2	Rigid 2 Axle Heavy Goods Vehicle	8	Artic, 2 Axle Tractor + 2 Axle Semi-Trailer
3	Rigid 3 Axle Heavy Goods Vehicle	9	Artic, 2 Axle Tractor + 3 Axle Semi-Trailer
3	Rigid 3 Axle Heavy Goods Vehicle	10	Artic, 3 Axle Tractor + 1 Axle Semi-Trailer
4	Rigid 4 Axle Heavy Goods Vehicle	10	Artic, 3 Axle Tractor + 2 Axle Semi-Trailer
4	Rigid 4 Axle Heavy Goods Vehicle	11	Artic, 3 Axle Tractor + 3 Axle Semi-Trailer
5	Rigid 2 Axle HGV + 2 Axle Drawbar Trailer	12	Bus or Coach, 2 Axle
5	Rigid 2 Axle HGV + 3 Axle Drawbar Trailer	12	Bus or Coach, 3 Axle
5	Rigid 2 Axle HGV + 1 Axle Caravan or Trailer	13	Vehicle with 7 or more Axles

C Traffic Flows

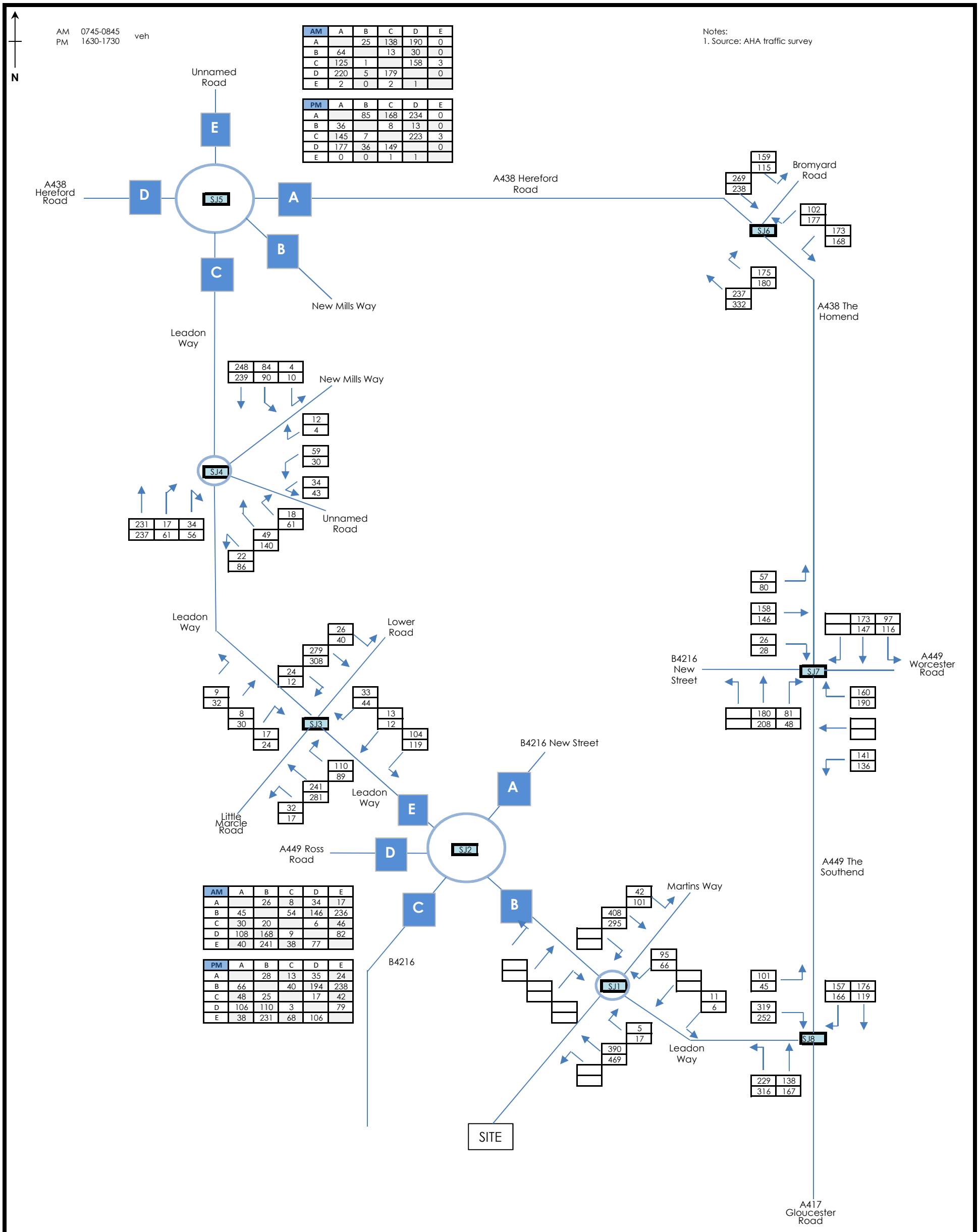
This page has been left blank intentionally.

AM 0745-0845
PM 1630-1730
veh

Notes:
1. Source: AHA traffic survey

AM	A	B	C	D	E
A		25	138	190	0
B	64		13	30	0
C	125	1		158	3
D	220	5	179		0
E	2	0	2	1	

PM	A	B	C	D	E
A		85	168	234	0
B	36		8	13	0
C	145	7		223	3
D	177	36	149		0
E	0	0	1	1	



AM	A	B	C	D	E
A		26	8	34	17
B	45		54	146	236
C	30	20		6	46
D	108	168	9		82
E	40	241	38	77	

PM	A	B	C	D	E
A		28	13	35	24
B	66		40	194	238
C	48	25		17	42
D	106	110	3		79
E	38	231	68	106	

FIGURE C1 TRAFFIC COUNT: 2017
AM & PM PEAK HOURS

ashleyhelme
associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

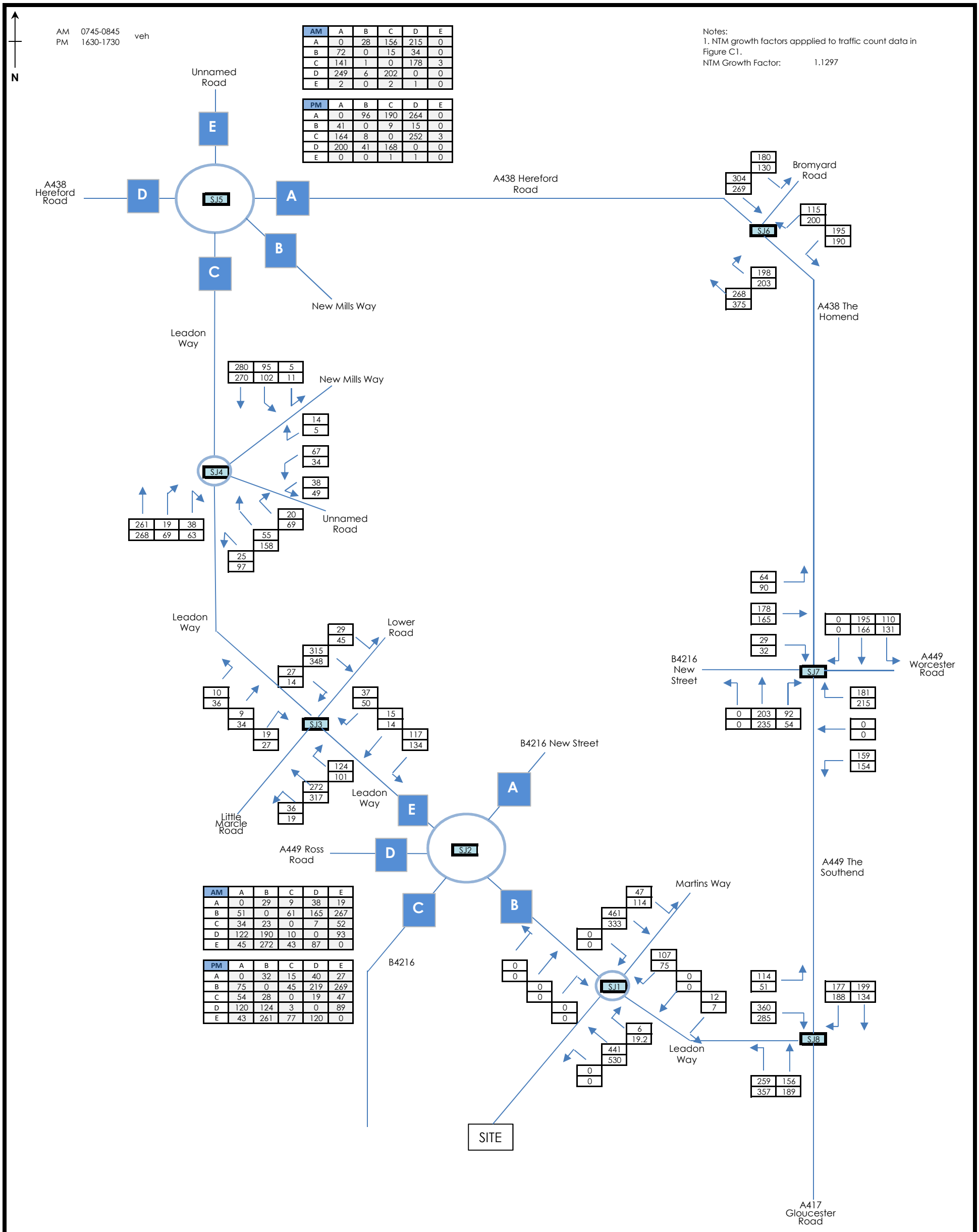
This page has been left blank intentionally.

AM 0745-0845
PM 1630-1730
veh

AM	A	B	C	D	E
A	0	28	156	215	0
B	72	0	15	34	0
C	141	1	0	178	3
D	249	6	202	0	0
E	2	0	2	1	0

PM	A	B	C	D	E
A	0	96	190	264	0
B	41	0	9	15	0
C	164	8	0	252	3
D	200	41	168	0	0
E	0	0	1	1	0

Notes:
1. NTM growth factors appplied to traffic count data in Figure C1.
NTM Growth Factor: 1.1297



AM	A	B	C	D	E
A	0	29	9	38	19
B	51	0	61	165	267
C	34	23	0	7	52
D	122	190	10	0	93
E	45	272	43	87	0

PM	A	B	C	D	E
A	0	32	15	40	27
B	75	0	45	219	269
C	54	28	0	19	47
D	120	124	3	0	89
E	43	261	77	120	0

FIGURE C2 FACTORED COUNT: 2028
AM & PM PEAK HOURS

ashleyhelme
associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

This page has been left blank intentionally.

AM 0745-0845
PM 1630-1730
veh

AM	A	B	C	D	E
A			9.8%		
B					
C	9.8%			16.1%	
D			16.1%		
E					

PM	A	B	C	D	E
A			9.8%		
B					
C	9.8%			16.1%	
D			16.1%		
E					

Notes:
1. Distribution is based upon 2011 Census Data.

AM	A	B	C	D	E
A		9.1%			
B	9.1%		6.8%	7.7%	38.1%
C		6.8%			
D		7.7%			
E		38.1%			

PM	A	B	C	D	E
A		9.1%			
B	9.1%		6.8%	7.7%	38.1%
C		6.8%			
D		7.7%			
E		38.1%			

FIGURE C3 % DISTRIBUTION: LAND SOUTH OF LEADON WAY

ashleyhelme associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

This page has been left blank intentionally.

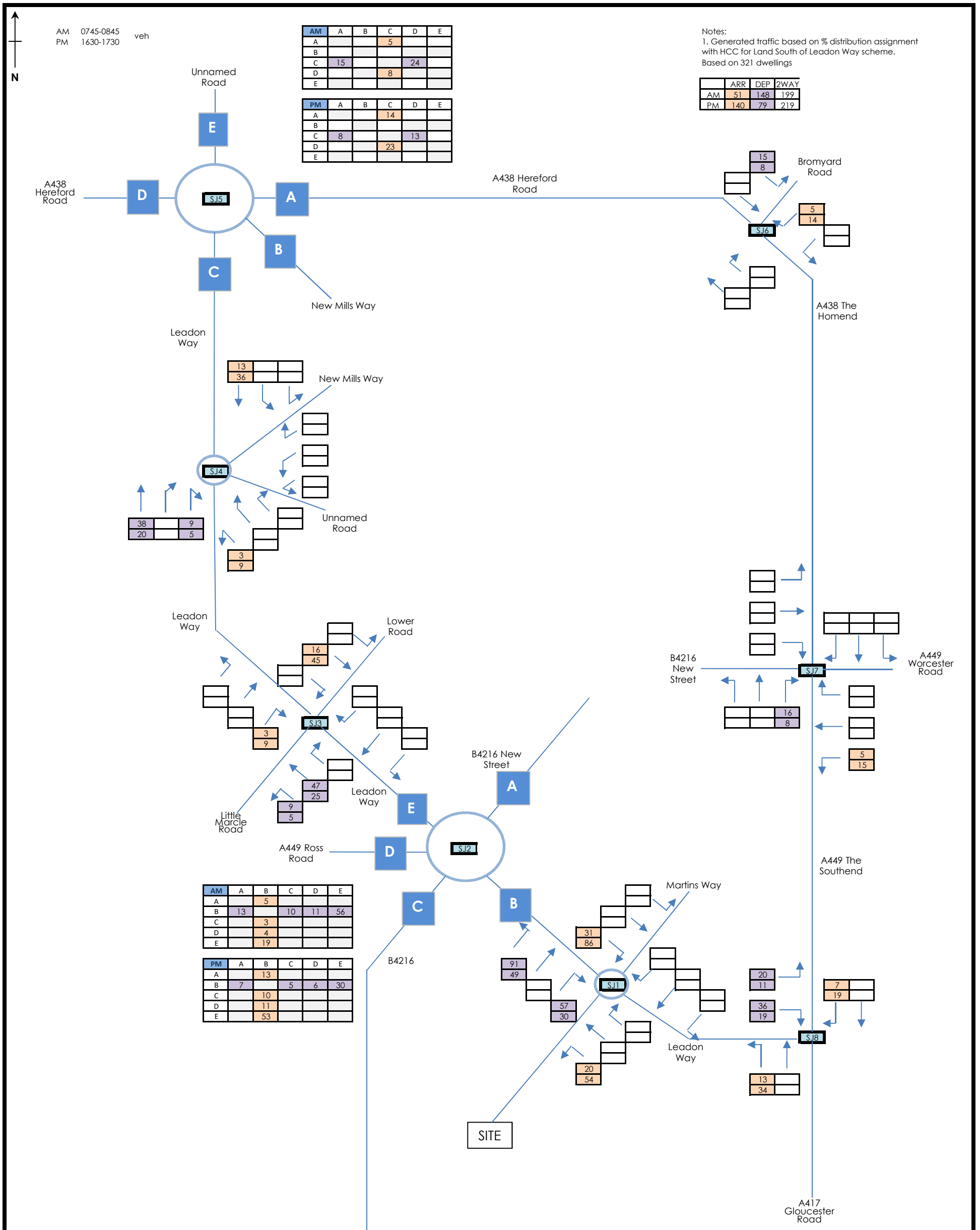


FIGURE C4 GENERATED TRAFFIC: LAND SOUTH OF LEADON WAY

ashleyhelme associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

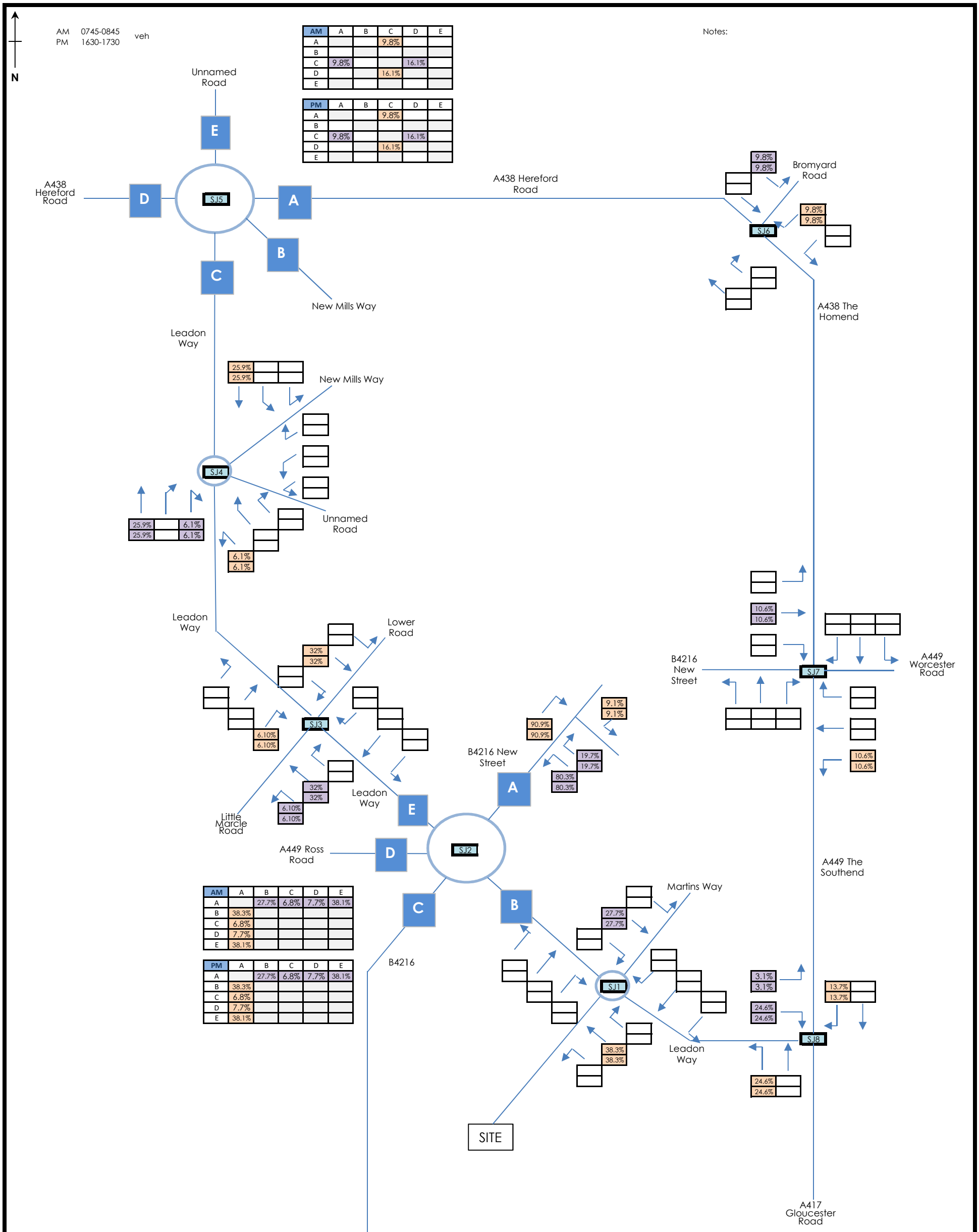
This page has been left blank intentionally.

AM 0745-0845
PM 1630-1730
veh

Notes:

AM	A	B	C	D	E
A			9.8%		
B					
C	9.8%			16.1%	
D			16.1%		
E					

PM	A	B	C	D	E
A			9.8%		
B					
C	9.8%			16.1%	
D			16.1%		
E					



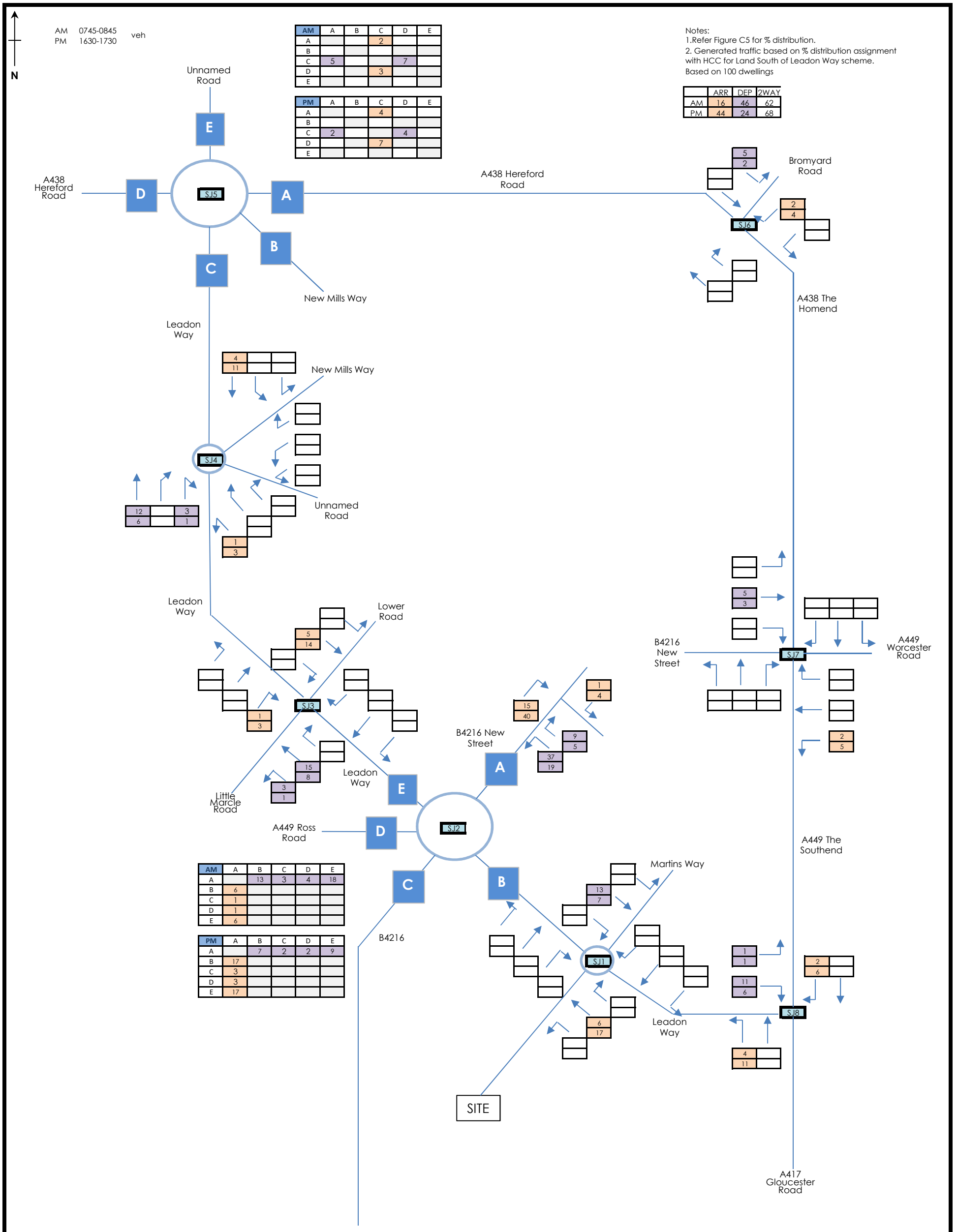
AM	A	B	C	D	E
A		27.7%	6.8%	7.7%	38.1%
B	38.3%				
C	6.8%				
D	7.7%				
E	38.1%				

PM	A	B	C	D	E
A		27.7%	6.8%	7.7%	38.1%
B	38.3%				
C	6.8%				
D	7.7%				
E	38.1%				

FIGURE C5 % DISTRIBUTION: LAND AT REAR OF FULL PITCHER

ashleyhelme associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

This page has been left blank intentionally.



AM	A	B	C	D	E
A			2		
B					
C	5			7	
D			3		
E					

PM	A	B	C	D	E
A			4		
B					
C	2			4	
D			7		
E					

AM	A	B	C	D	E
A		13	3	4	18
B	6				
C	1				
D	1				
E	6				

PM	A	B	C	D	E
A		7	2	2	9
B	17				
C	3				
D	3				
E	17				

FIGURE C6 GENERATED TRAFFIC: LAND AT REAR OF FULL PITCHER

ashleyhelme associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

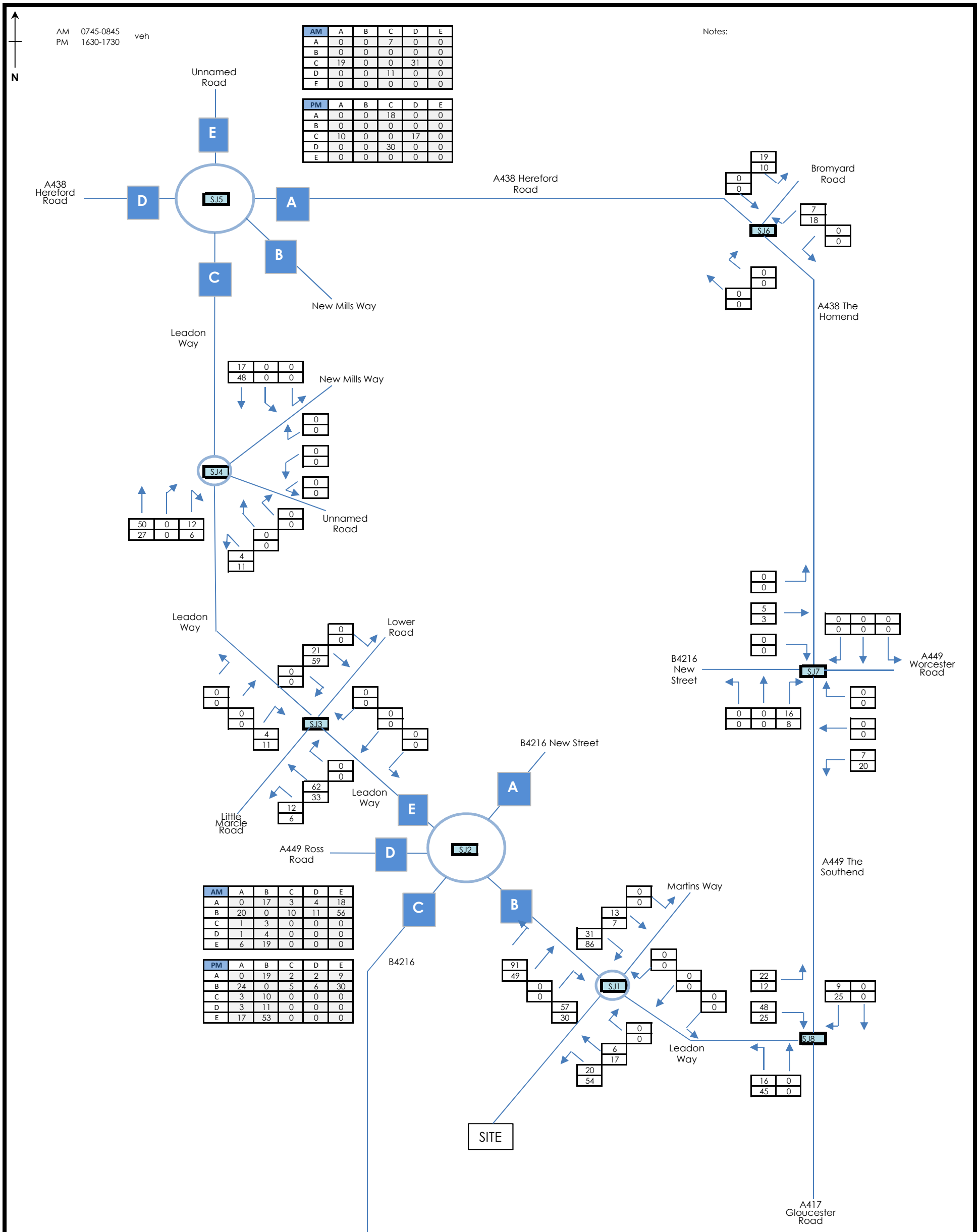
This page has been left blank intentionally.

AM 0745-0845
PM 1630-1730
veh

Notes:

AM	A	B	C	D	E
A	0	0	7	0	0
B	0	0	0	0	0
C	19	0	0	31	0
D	0	0	11	0	0
E	0	0	0	0	0

PM	A	B	C	D	E
A	0	0	18	0	0
B	0	0	0	0	0
C	10	0	0	17	0
D	0	0	30	0	0
E	0	0	0	0	0



AM	A	B	C	D	E
A	0	17	3	4	18
B	20	0	10	11	56
C	1	3	0	0	0
D	1	4	0	0	0
E	6	19	0	0	0

PM	A	B	C	D	E
A	0	19	2	2	9
B	24	0	5	6	30
C	3	10	0	0	0
D	3	11	0	0	0
E	17	53	0	0	0

FIGURE C7 TOTAL COMMITTED DEVELOPMENT TRAFFIC
C4 + C6

ashleyhelme
associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

This page has been left blank intentionally.

AM 0745-0845
PM 1630-1730
veh

N

AM	A	B	C	D	E
A	0	28	162	215	0
B	72	0	15	34	0
C	160	1	0	210	3
D	249	6	213	0	0
E	2	0	2	1	0

PM	A	B	C	D	E
A	0	96	208	264	0
B	41	0	9	15	0
C	174	8	0	269	3
D	200	41	198	0	0
E	0	0	1	1	0

Notes:

Unnamed Road
A438 Hereford Road
A438 Hereford Road
Bromyard Road
New Mills Way
Leadon Way
New Mills Way
Unnamed Road
A438 The Homend
Leadon Way
Lower Road
Leadon Way
Little Marcle Road
B4216 New Street
A449 Ross Road
B4216
B4216 New Street
A449 Worcester Road
A449 The Southend
Martins Way
Leadon Way
A417 Gloucester Road
SITE

SJ1 SJ2 SJ3 SJ4 SJ5 SJ6 SJ7 SJ8

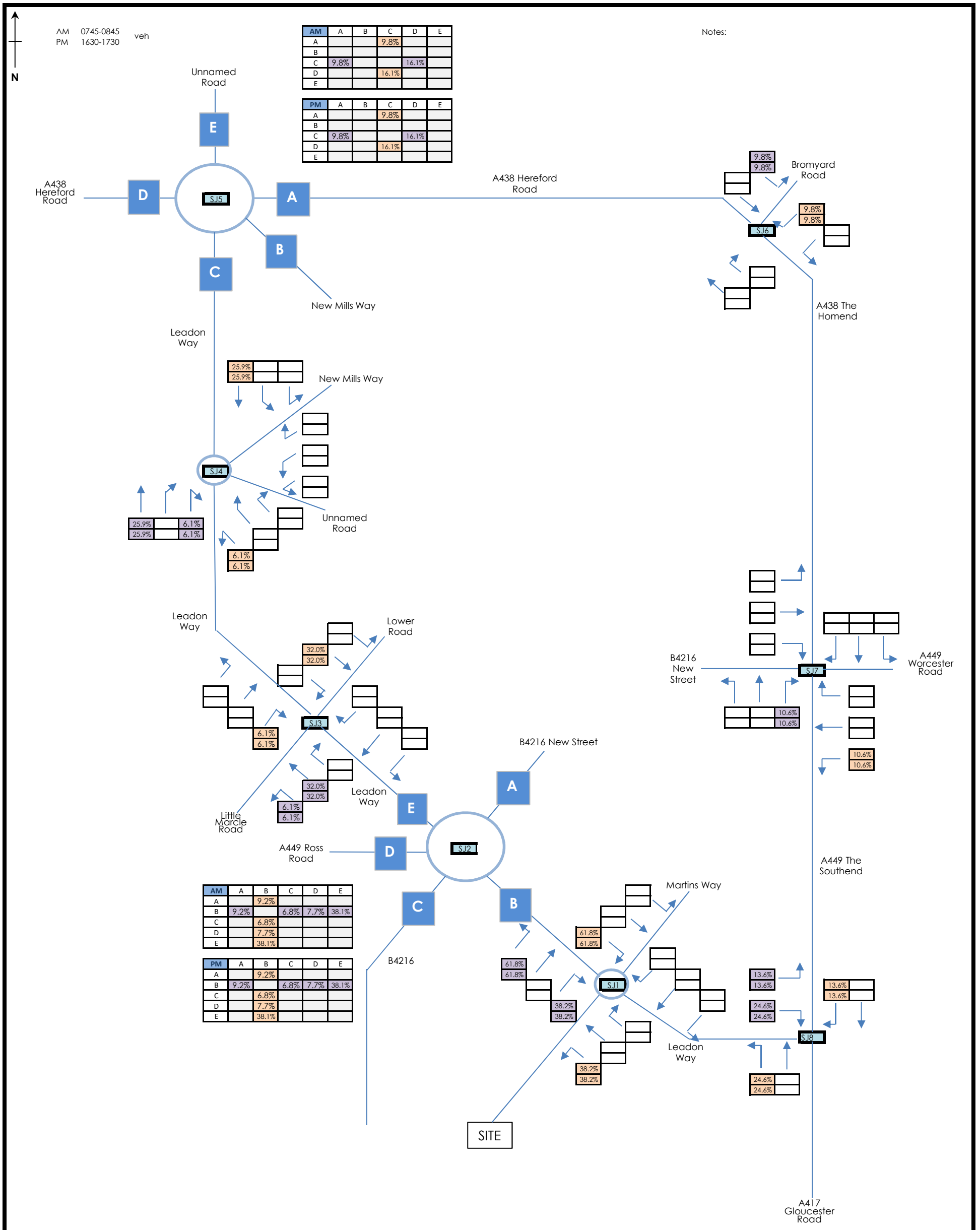
AM	A	B	C	D	E
A	0	47	12	42	37
B	70	0	71	176	323
C	35	26	0	7	52
D	123	194	10	0	93
E	51	292	43	87	0

PM	A	B	C	D	E
A	0	51	16	41	36
B	99	0	51	225	299
C	57	38	0	19	47
D	123	135	3	0	89
E	60	314	77	120	0

FIGURE C8 BASE: 2028
AM & PM PEAK HOURS

ashleyhelme associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

This page has been left blank intentionally.



AM	A	B	C	D	E
A			9.8%		
B					
C	9.8%			16.1%	
D			16.1%		
E					

PM	A	B	C	D	E
A			9.8%		
B					
C	9.8%			16.1%	
D			16.1%		
E					

AM	A	B	C	D	E
A		9.2%			
B	9.2%		6.8%	7.7%	38.1%
C		6.8%			
D		7.7%			
E		38.1%			

PM	A	B	C	D	E
A		9.2%			
B	9.2%		6.8%	7.7%	38.1%
C		6.8%			
D		7.7%			
E		38.1%			

FIGURE C9 % DISTRIBUTION: PROPOSED DEVELOPMENT AM & PM PEAK HOURS

ashleyhelme associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

This page has been left blank intentionally.

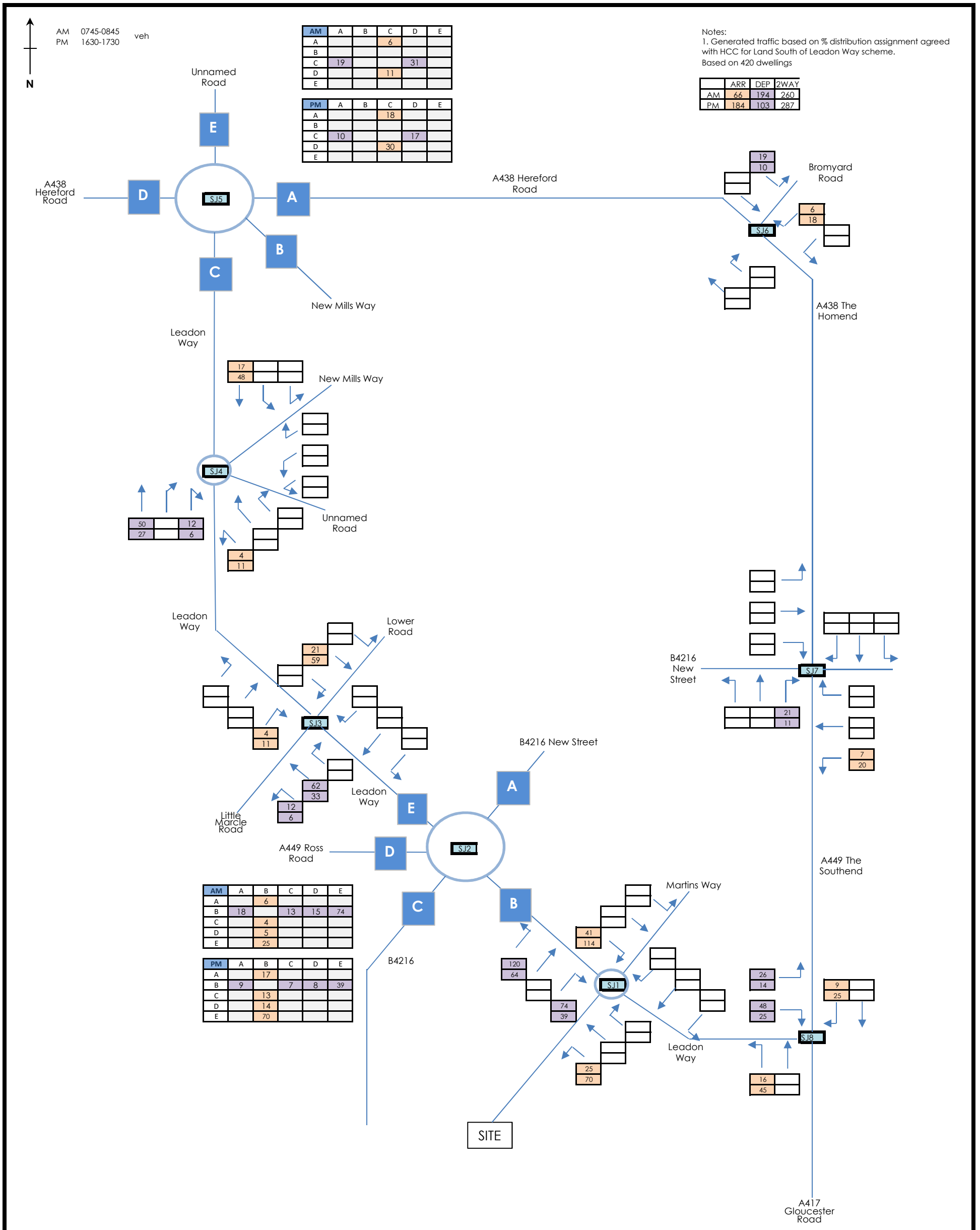


FIGURE C10 GENERATED TRAFFIC: PROPOSED DEVELOPMENT AM & PM PEAK HOURS

ashleyhelme associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

This page has been left blank intentionally.

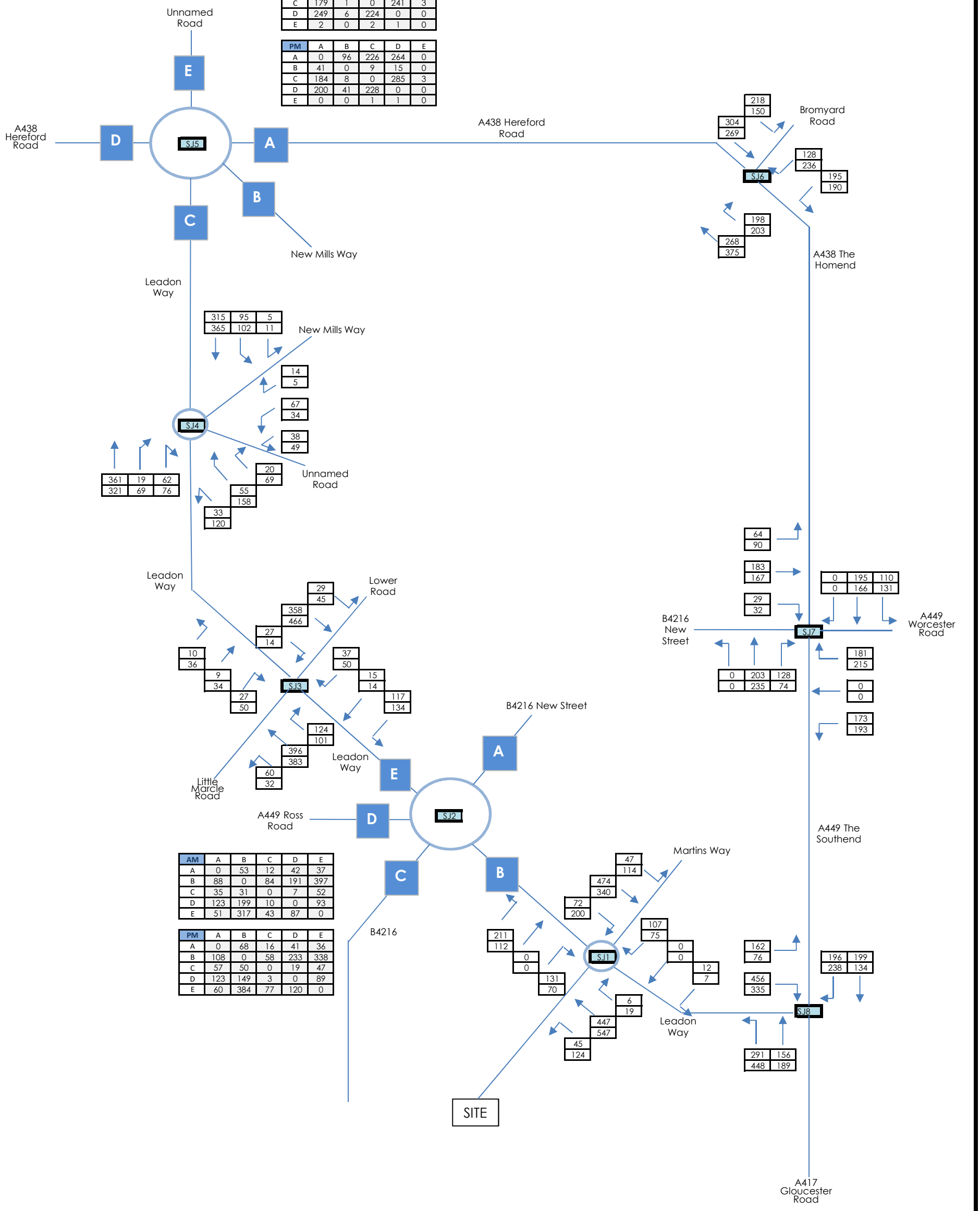
AM 0745-0845
PM 1630-1730
veh

N

AM	A	B	C	D	E
A	0	28	169	215	0
B	72	0	15	34	0
C	179	1	0	241	3
D	249	6	224	0	0
E	2	0	2	1	0

PM	A	B	C	D	E
A	0	96	226	264	0
B	41	0	9	15	0
C	184	8	0	285	3
D	200	41	228	0	0
E	0	0	1	1	0

Notes:



AM	A	B	C	D	E
A	0	53	12	42	37
B	88	0	84	191	397
C	35	31	0	7	52
D	123	199	10	0	93
E	51	317	43	87	0

PM	A	B	C	D	E
A	0	68	16	41	36
B	108	0	58	233	338
C	57	50	0	19	47
D	123	149	3	0	89
E	60	384	77	120	0

FIGURE C11 WITH DEVELOPMENT: 2028
AM & PM PEAK HOURS
C2 + C7 + C10

ashleyhelme
associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

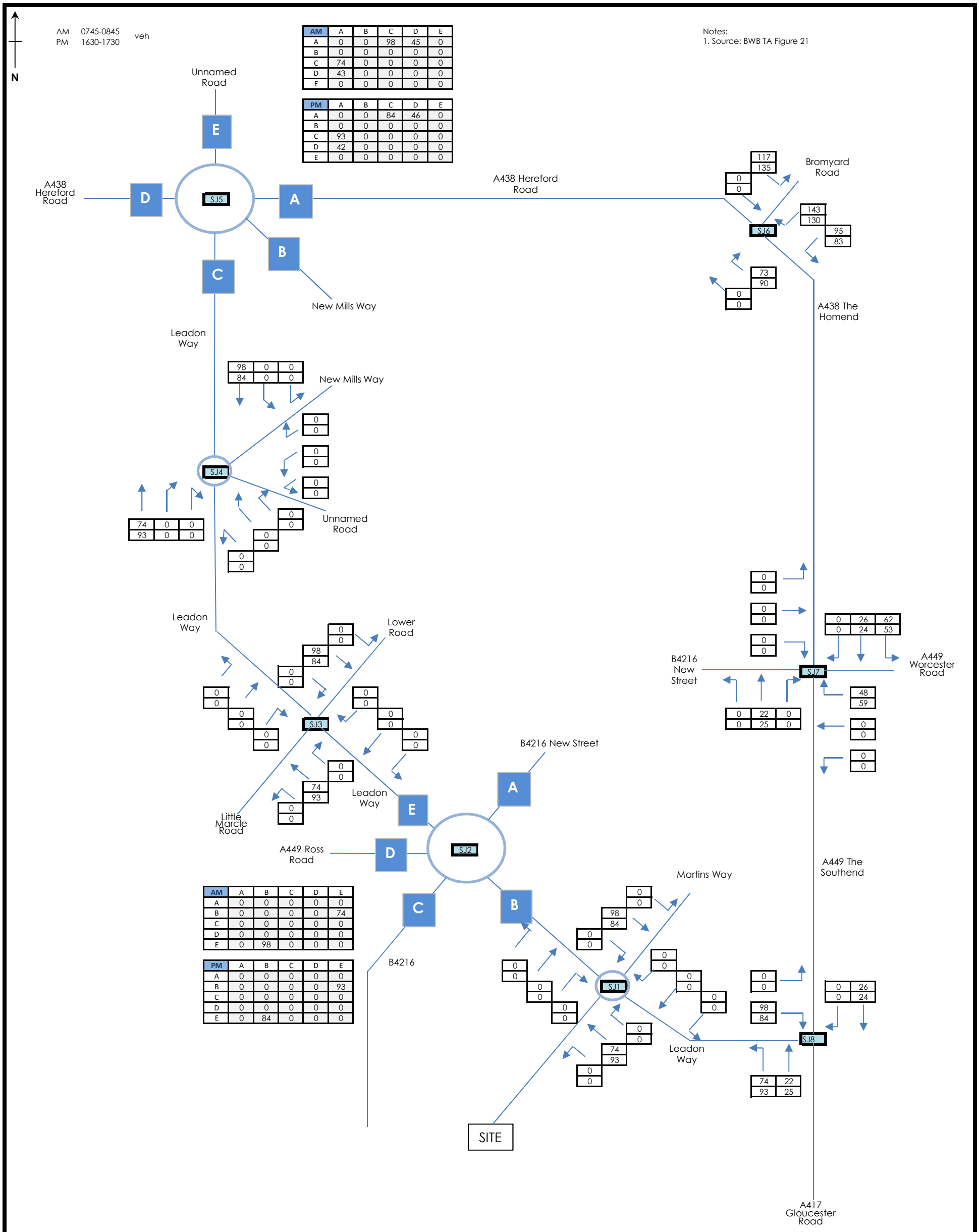
This page has been left blank intentionally.

AM 0745-0845
PM 1630-1730 veh

AM	A	B	C	D	E
A	0	0	98	45	0
B	0	0	0	0	0
C	74	0	0	0	0
D	43	0	0	0	0
E	0	0	0	0	0

PM	A	B	C	D	E
A	0	0	84	46	0
B	0	0	0	0	0
C	93	0	0	0	0
D	42	0	0	0	0
E	0	0	0	0	0

Notes:
1. Source: BWB TA Figure 21



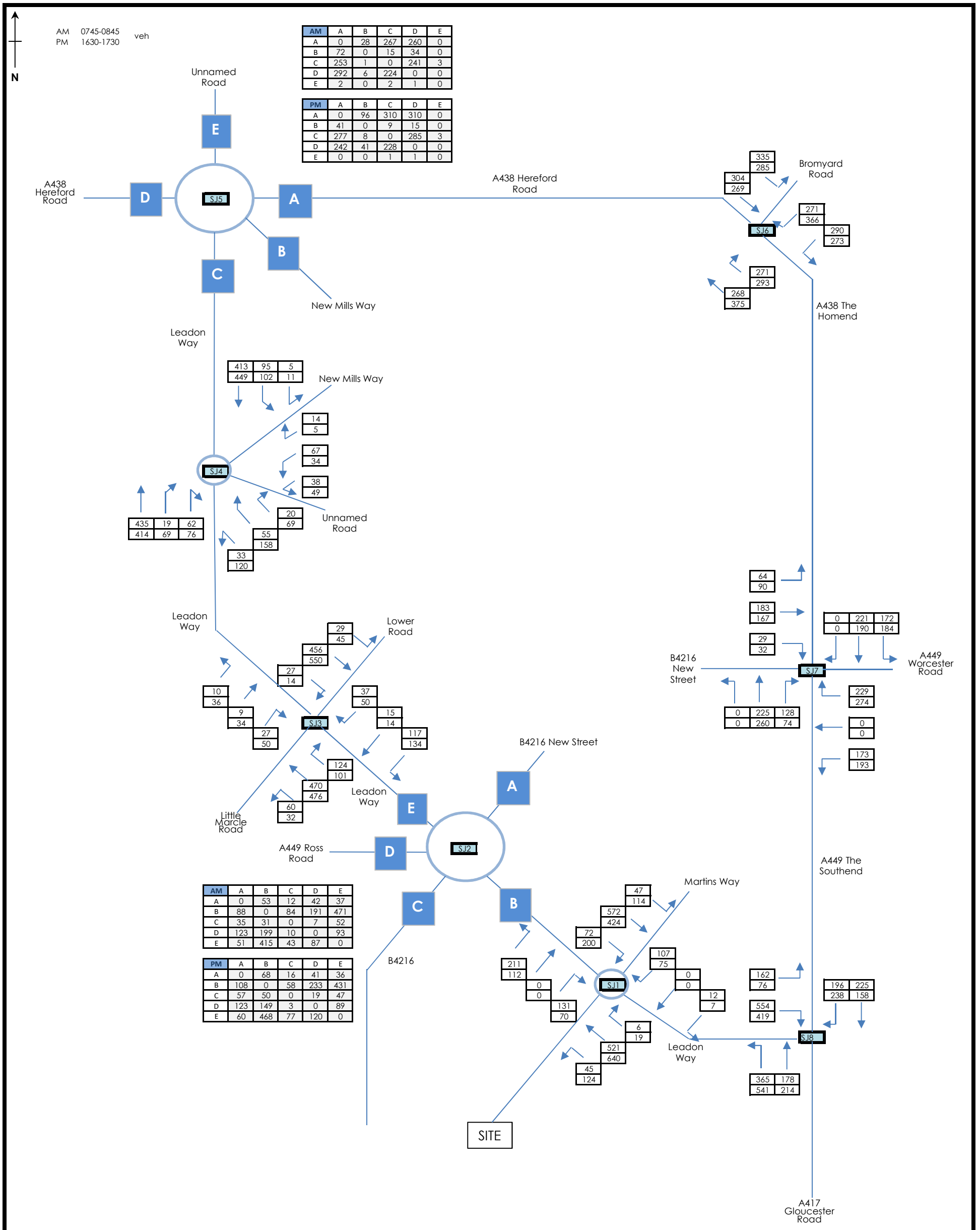
AM	A	B	C	D	E
A	0	0	0	0	0
B	0	0	0	0	74
C	0	0	0	0	0
D	0	0	0	0	0
E	0	98	0	0	0

PM	A	B	C	D	E
A	0	0	0	0	0
B	0	0	0	0	93
C	0	0	0	0	0
D	0	0	0	0	0
E	0	84	0	0	0

FIGURE C12 SENSITIVITY TEST (LEDBURY URBAN EXTENSION): GENERATED TRAFFIC AM & PM PEAK HOURS

ashleyhelme associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

This page has been left blank intentionally.



AM	A	B	C	D	E
A	0	28	267	260	0
B	72	0	15	34	0
C	253	1	0	241	3
D	292	6	224	0	0
E	2	0	2	1	0

PM	A	B	C	D	E
A	0	96	310	310	0
B	41	0	9	15	0
C	277	8	0	285	3
D	242	41	228	0	0
E	0	0	1	1	0

AM	A	B	C	D	E
A	0	53	12	42	37
B	88	0	84	191	471
C	35	31	0	7	52
D	123	199	10	0	93
E	51	415	43	87	0

PM	A	B	C	D	E
A	0	68	16	41	36
B	108	0	58	233	431
C	57	50	0	19	47
D	123	149	3	0	89
E	60	468	77	120	0

FIGURE C13 SENSITIVITY TEST: 2027 (WITH DEVELOPMENT + SENSITIVITY TEST)
AM & PM PEAK HOURS
C11 + C12

ashleyhelme
associates
76 Washway Road, Sale, Manchester, M33 7RE
Email: aha@ashleyhelme.co.uk Tel: 0161 972 0552

This page has been left blank intentionally.

This page has been left blank intentionally.

ashleyhelme associates

TECHNICAL FILE NOTE 2A

Project	Land off Dymock Road, Ledbury			Project No	1394	Meeting [ ] Telephone [ ]
Contact		Originator	BDJ	Date	05.10.18	Aide Memoire [x]

TRAFFIC GROWTH: NATIONAL TRANSPORT MODEL (NTM)

METHODOLOGY

Methodology for growthing background traffic from count year (2017) to Year of Opening (2028) is to use the National Transport Model (NTM) methodology, using the following criteria:

- Herefordshire 019,
- All purpose car driver trips,
- Area type: All
- Road type: All

2017 to 2028 <Year of Opening>

AM peak period: 1.1298

PM peak period: 1.1295

Adopt average growth factor: **1.1297**

This page has been left blank intentionally.

This page has been left blank intentionally.

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	EX	ESSEX	1 days
04	EAST ANGLIA		
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	1 days
06	WEST MIDLANDS		
	WO	WORCESTERSHIRE	1 days
09	NORTH		
	TV	TEES VALLEY	1 days
10	WALES		
	CF	CARDIFF	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 186 to 237 (units:)
Range Selected by User: 180 to 540 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/05 to 20/07/08

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	1 days
Thursday	3 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	4

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	4
No Sub Category	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

C3	6 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

10,001 to 15,000	1 days
15,001 to 20,000	4 days
20,001 to 25,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	3 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	6 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 CF-03-A-02 MIXED HOUSES CARDIFF
DROPE ROAD

CARDIFF
Edge of Town
Residential Zone
Total Number of dwellings: 196
Survey date: FRIDAY 05/10/07 Survey Type: MANUAL

2 EX-03-A-01 SEMI-DET. ESSEX
MILTON ROAD
CORRINGHAM
STANFORD-LE-HOPE
Edge of Town
Residential Zone
Total Number of dwellings: 237
Survey date: TUESDAY 13/05/08 Survey Type: MANUAL

3 LN-03-A-02 MIXED HOUSES LINCOLNSHIRE
HYKEHAM ROAD

LINCOLN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 186
Survey date: MONDAY 14/05/07 Survey Type: MANUAL

4 SF-03-A-02 SEMI DET./TERRACED SUFFOLK
STOKE PARK DRIVE
MAIDENHALL
IPSWICH
Edge of Town
Residential Zone
Total Number of dwellings: 230
Survey date: THURSDAY 24/05/07 Survey Type: MANUAL

5 TV-03-A-01 HOUSES & FLATS TEES VALLEY
POWLETT ROAD

HARTLEPOOL
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 225
Survey date: THURSDAY 14/04/05 Survey Type: MANUAL

6 WO-03-A-06 DET./TERRACED WORCESTERSHIRE
ST GODWALDS ROAD
ASTON FIELDS
BROMSGROVE
Edge of Town
No Sub Category
Total Number of dwellings: 232
Survey date: THURSDAY 30/06/05 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
MS-03-A-01	Unsuitable

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	218	0.096	6	218	0.303	6	218	0.399
08:00 - 09:00	6	218	0.158	6	218	0.462	6	218	0.620
09:00 - 10:00	6	218	0.164	6	218	0.208	6	218	0.372
10:00 - 11:00	6	218	0.145	6	218	0.188	6	218	0.333
11:00 - 12:00	6	218	0.177	6	218	0.165	6	218	0.342
12:00 - 13:00	6	218	0.201	6	218	0.186	6	218	0.387
13:00 - 14:00	6	218	0.188	6	218	0.179	6	218	0.367
14:00 - 15:00	6	218	0.182	6	218	0.183	6	218	0.365
15:00 - 16:00	6	218	0.316	6	218	0.206	6	218	0.522
16:00 - 17:00	6	218	0.351	6	218	0.221	6	218	0.572
17:00 - 18:00	6	218	0.438	6	218	0.245	6	218	0.683
18:00 - 19:00	6	218	0.308	6	218	0.236	6	218	0.544
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.724			2.782			5.506

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	186 - 237 (units:)
Survey date date range:	01/01/05 - 20/07/08
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	218	0.000	6	218	0.000	6	218	0.000
08:00 - 09:00	6	218	0.000	6	218	0.000	6	218	0.000
09:00 - 10:00	6	218	0.000	6	218	0.000	6	218	0.000
10:00 - 11:00	6	218	0.000	6	218	0.000	6	218	0.000
11:00 - 12:00	6	218	0.000	6	218	0.000	6	218	0.000
12:00 - 13:00	6	218	0.000	6	218	0.000	6	218	0.000
13:00 - 14:00	6	218	0.000	6	218	0.000	6	218	0.000
14:00 - 15:00	6	218	0.000	6	218	0.000	6	218	0.000
15:00 - 16:00	6	218	0.000	6	218	0.000	6	218	0.000
16:00 - 17:00	6	218	0.000	6	218	0.000	6	218	0.000
17:00 - 18:00	6	218	0.000	6	218	0.000	6	218	0.000
18:00 - 19:00	6	218	0.000	6	218	0.000	6	218	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	186 - 237 (units:)
Survey date date range:	01/01/05 - 20/07/08
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Calculation Reference: AUDIT-733101-180727-0744

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
	KC	KENT	2 days
	WS	WEST SUSSEX	1 days
06	WEST MIDLANDS		
	ST	STAFFORDSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NE	NORTH EAST LINCOLNSHIRE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 180 to 432 (units:)
Range Selected by User: 150 to 700 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 19/04/18

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	2 days
Wednesday	3 days
Thursday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

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

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	5
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3	6 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	4 days
20,001 to 25,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

50,001 to 75,000	3 days
75,001 to 100,000	1 days
125,001 to 250,000	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	5 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	1 days
No	5 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	6 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 ES-03-A-03 MIXED HOUSES & FLATS EAST SUSSEX
SHEPHAM LANE
POLEGATE

Edge of Town
Residential Zone
Total Number of dwellings: 212
Survey date: MONDAY *11/07/16* *Survey Type: MANUAL*

2 KC-03-A-06 MIXED HOUSES & FLATS KENT
MARGATE ROAD
HERNE BAY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 363
Survey date: WEDNESDAY *27/09/17* *Survey Type: MANUAL*

3 KC-03-A-07 MIXED HOUSES KENT
RECULVER ROAD
HERNE BAY

Edge of Town
Residential Zone
Total Number of dwellings: 288
Survey date: WEDNESDAY *27/09/17* *Survey Type: MANUAL*

4 NE-03-A-02 SEMI DETACHED & DETACHED NORTH EAST LINCOLNSHIRE
HANOVER WALK
SCUNTHORPE

Edge of Town
No Sub Category
Total Number of dwellings: 432
Survey date: MONDAY *12/05/14* *Survey Type: MANUAL*

5 ST-03-A-07 DETACHED & SEMI-DETACHED STAFFORDSHIRE
BEACONSIDE
STAFFORD
MARSTON GATE
Edge of Town
Residential Zone
Total Number of dwellings: 248
Survey date: WEDNESDAY *22/11/17* *Survey Type: MANUAL*

6 WS-03-A-08 MIXED HOUSES WEST SUSSEX
ROUNDSTONE LANE
ANGMERING

Edge of Town
Residential Zone
Total Number of dwellings: 180
Survey date: THURSDAY *19/04/18* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
FA-03-A-02	Low trip rates
WS-03-A-04	Low trip rates

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	287	0.086	6	287	0.280	6	287	0.366
08:00 - 09:00	6	287	0.122	6	287	0.385	6	287	0.507
09:00 - 10:00	6	287	0.144	6	287	0.152	6	287	0.296
10:00 - 11:00	6	287	0.123	6	287	0.154	6	287	0.277
11:00 - 12:00	6	287	0.133	6	287	0.154	6	287	0.287
12:00 - 13:00	6	287	0.165	6	287	0.150	6	287	0.315
13:00 - 14:00	6	287	0.159	6	287	0.153	6	287	0.312
14:00 - 15:00	6	287	0.188	6	287	0.189	6	287	0.377
15:00 - 16:00	6	287	0.275	6	287	0.187	6	287	0.462
16:00 - 17:00	6	287	0.293	6	287	0.182	6	287	0.475
17:00 - 18:00	6	287	0.347	6	287	0.174	6	287	0.521
18:00 - 19:00	6	287	0.312	6	287	0.216	6	287	0.528
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.347			2.376			4.723

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

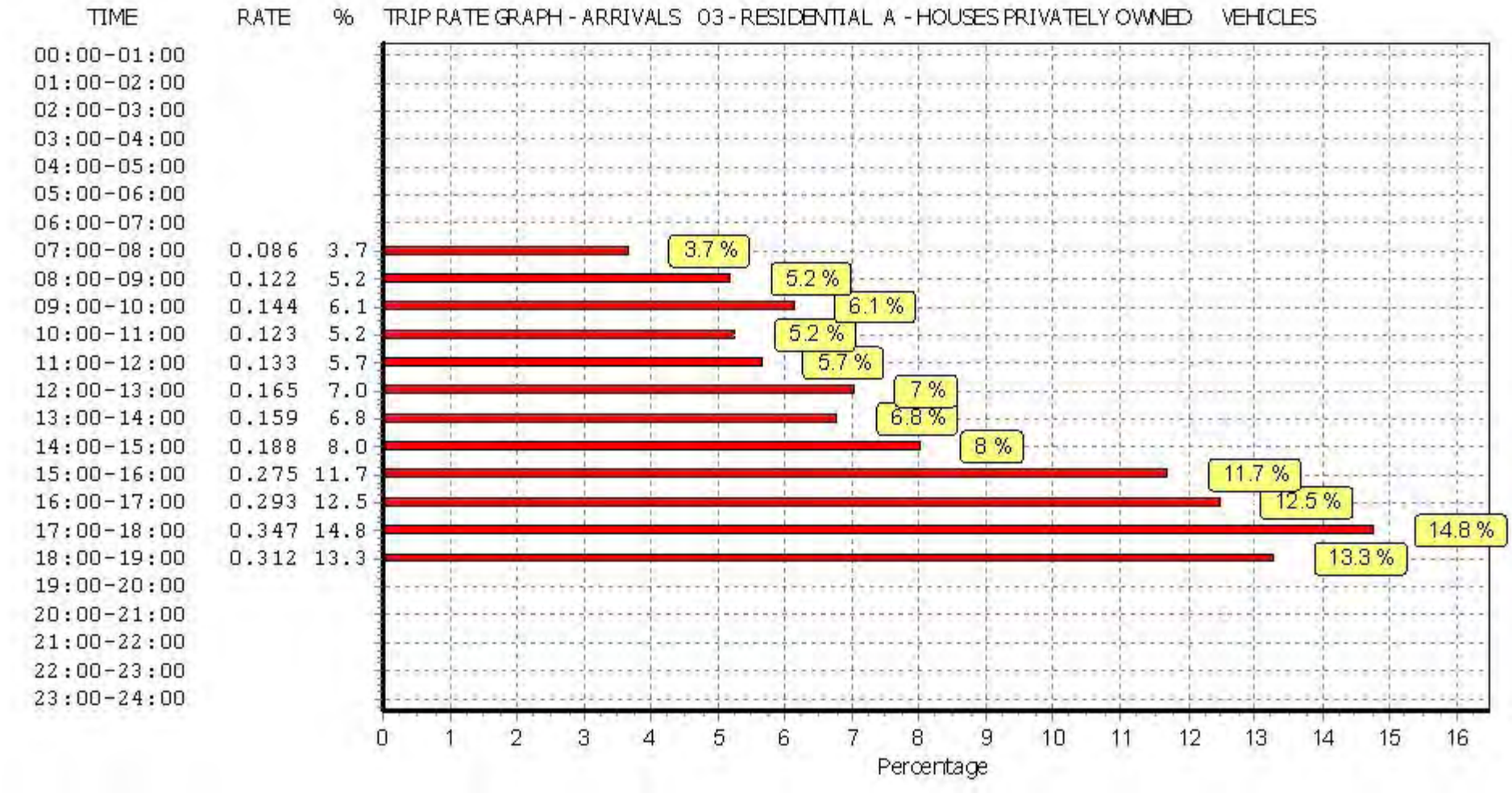
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	180 - 432 (units:)
Survey date date range:	01/01/10 - 19/04/18
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

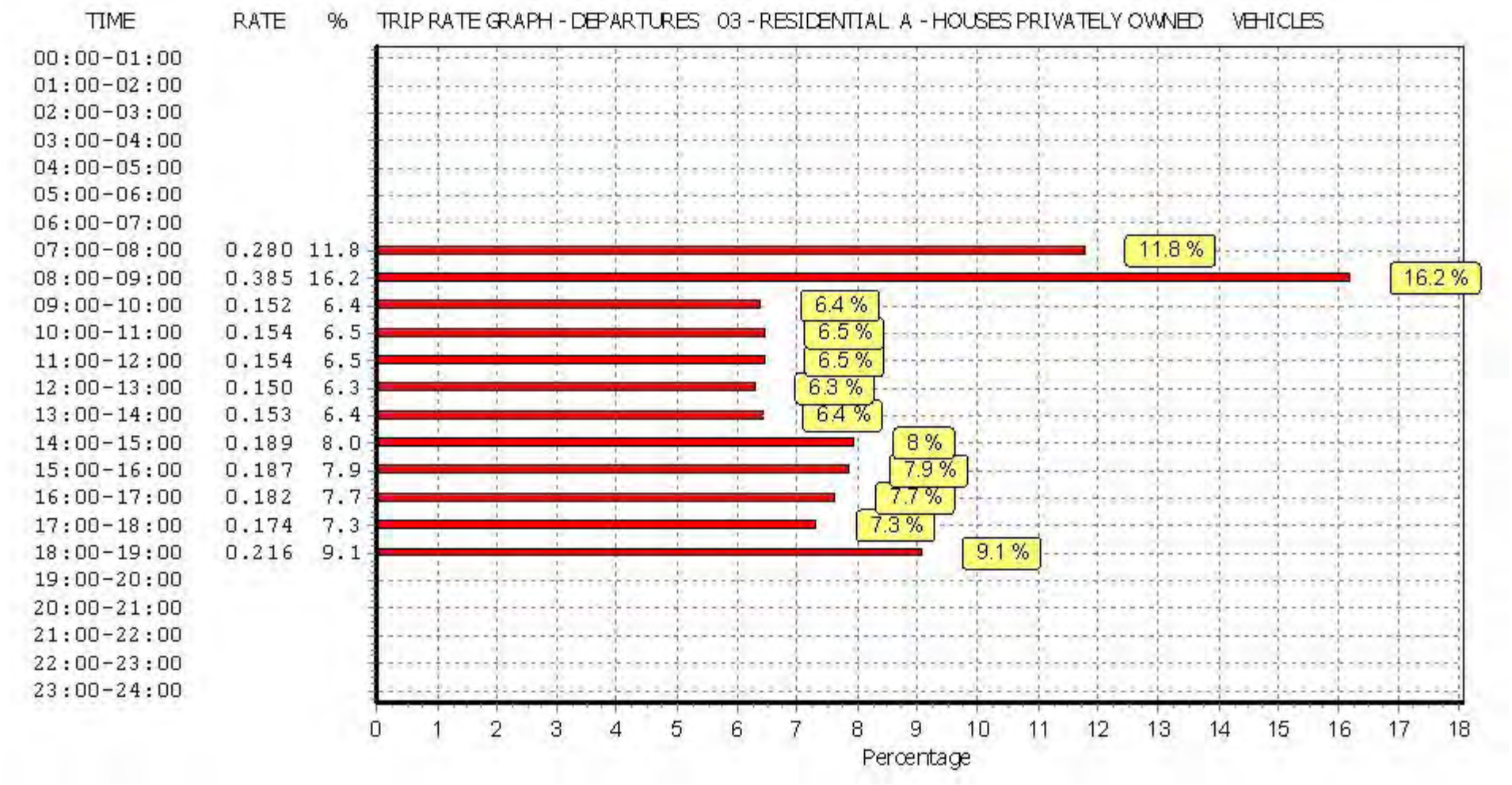
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101



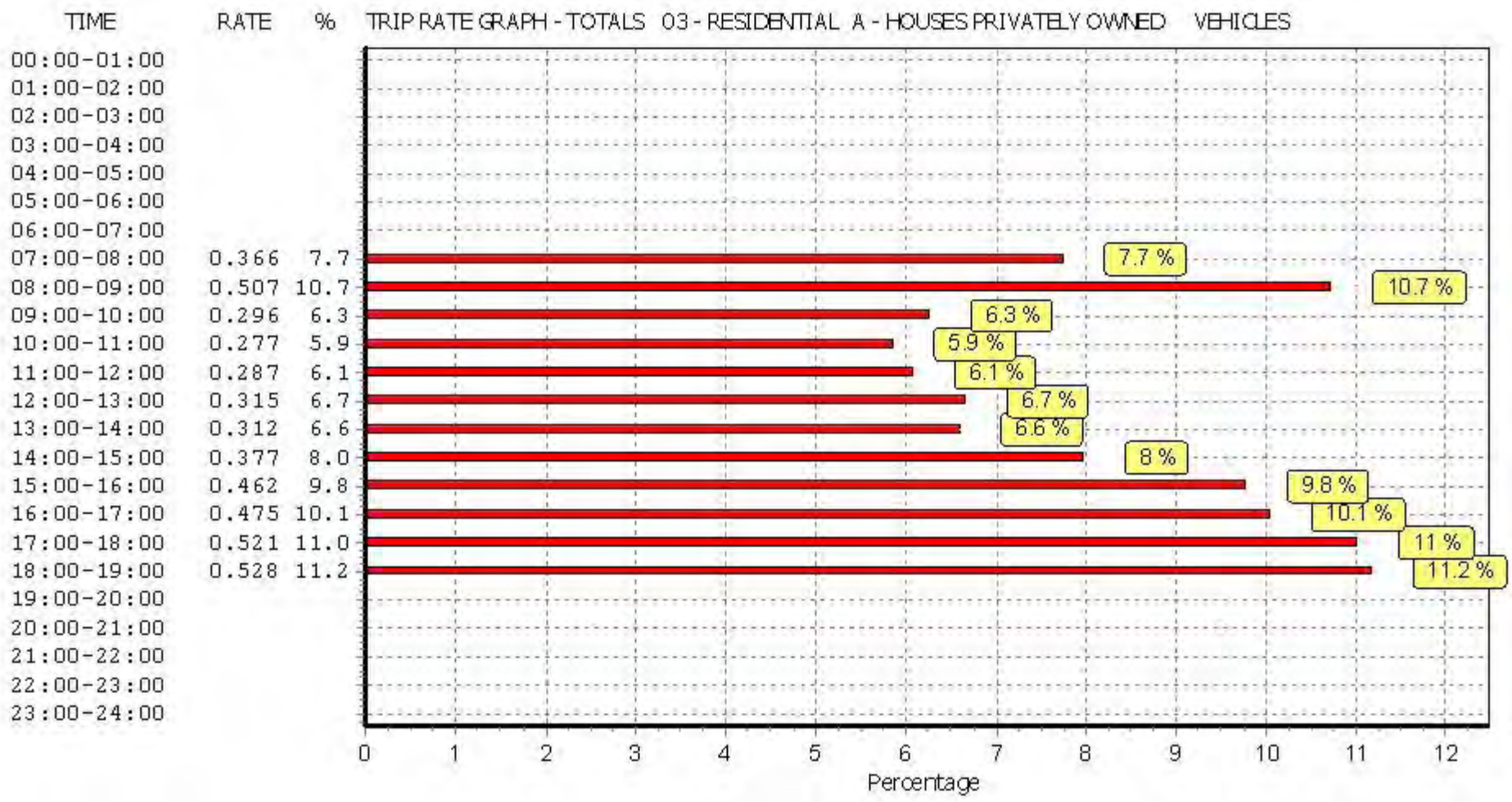
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

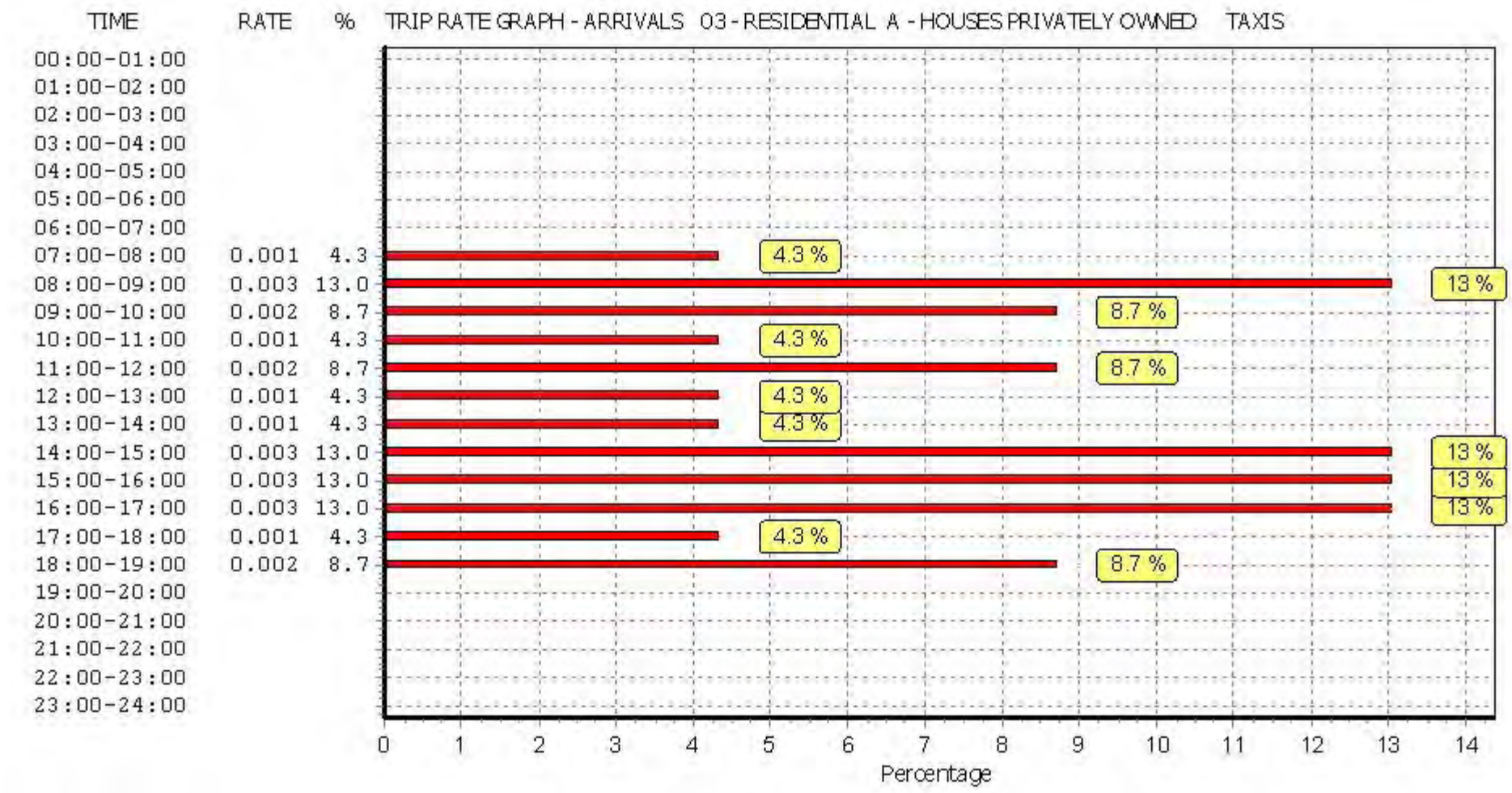
TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
TAXIS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	287	0.001	6	287	0.001	6	287	0.002
08:00 - 09:00	6	287	0.003	6	287	0.002	6	287	0.005
09:00 - 10:00	6	287	0.002	6	287	0.000	6	287	0.002
10:00 - 11:00	6	287	0.001	6	287	0.002	6	287	0.003
11:00 - 12:00	6	287	0.002	6	287	0.002	6	287	0.004
12:00 - 13:00	6	287	0.001	6	287	0.001	6	287	0.002
13:00 - 14:00	6	287	0.001	6	287	0.000	6	287	0.001
14:00 - 15:00	6	287	0.003	6	287	0.003	6	287	0.006
15:00 - 16:00	6	287	0.003	6	287	0.003	6	287	0.006
16:00 - 17:00	6	287	0.003	6	287	0.003	6	287	0.006
17:00 - 18:00	6	287	0.001	6	287	0.001	6	287	0.002
18:00 - 19:00	6	287	0.002	6	287	0.002	6	287	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.023			0.020			0.043

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

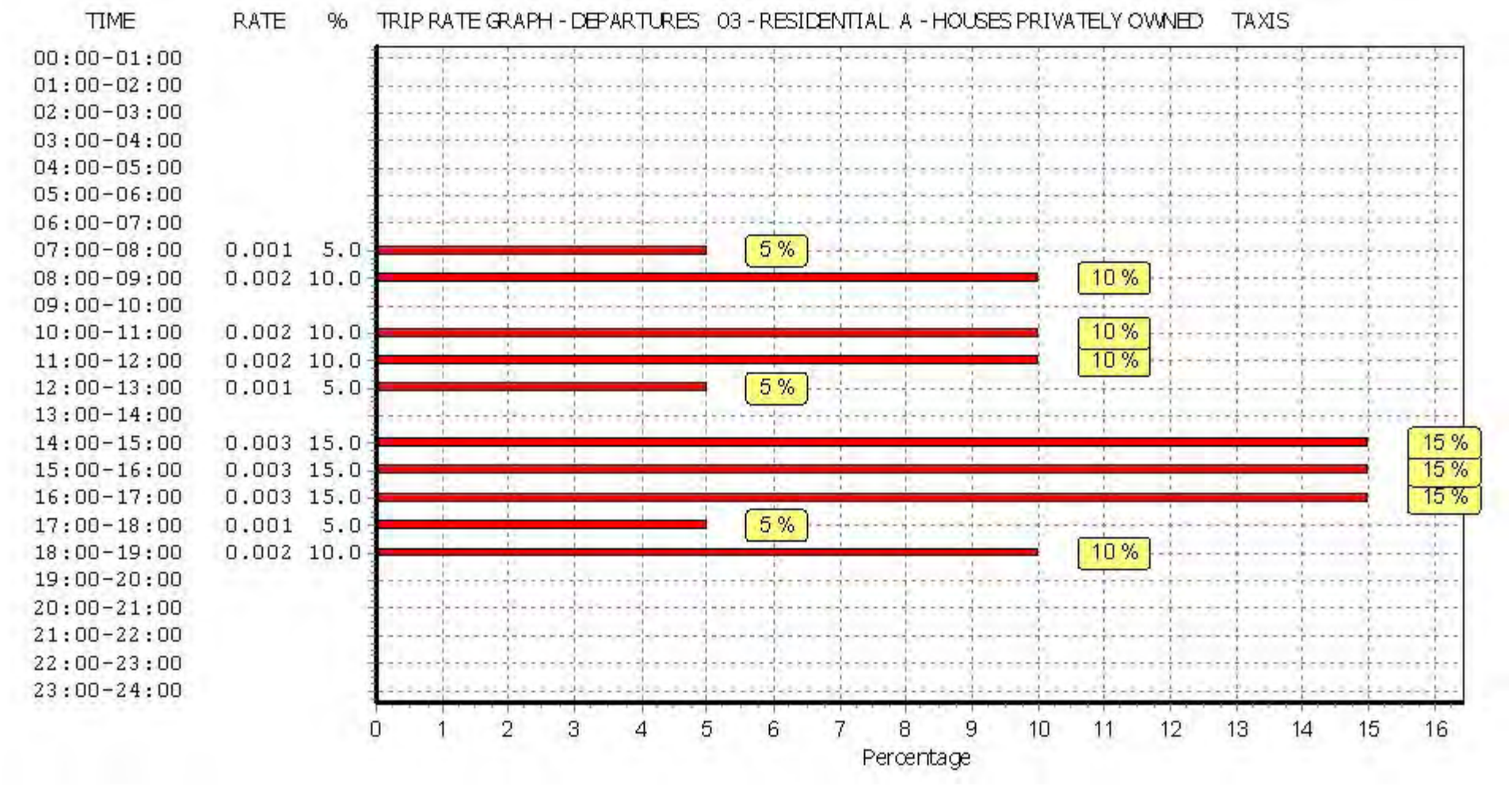
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101

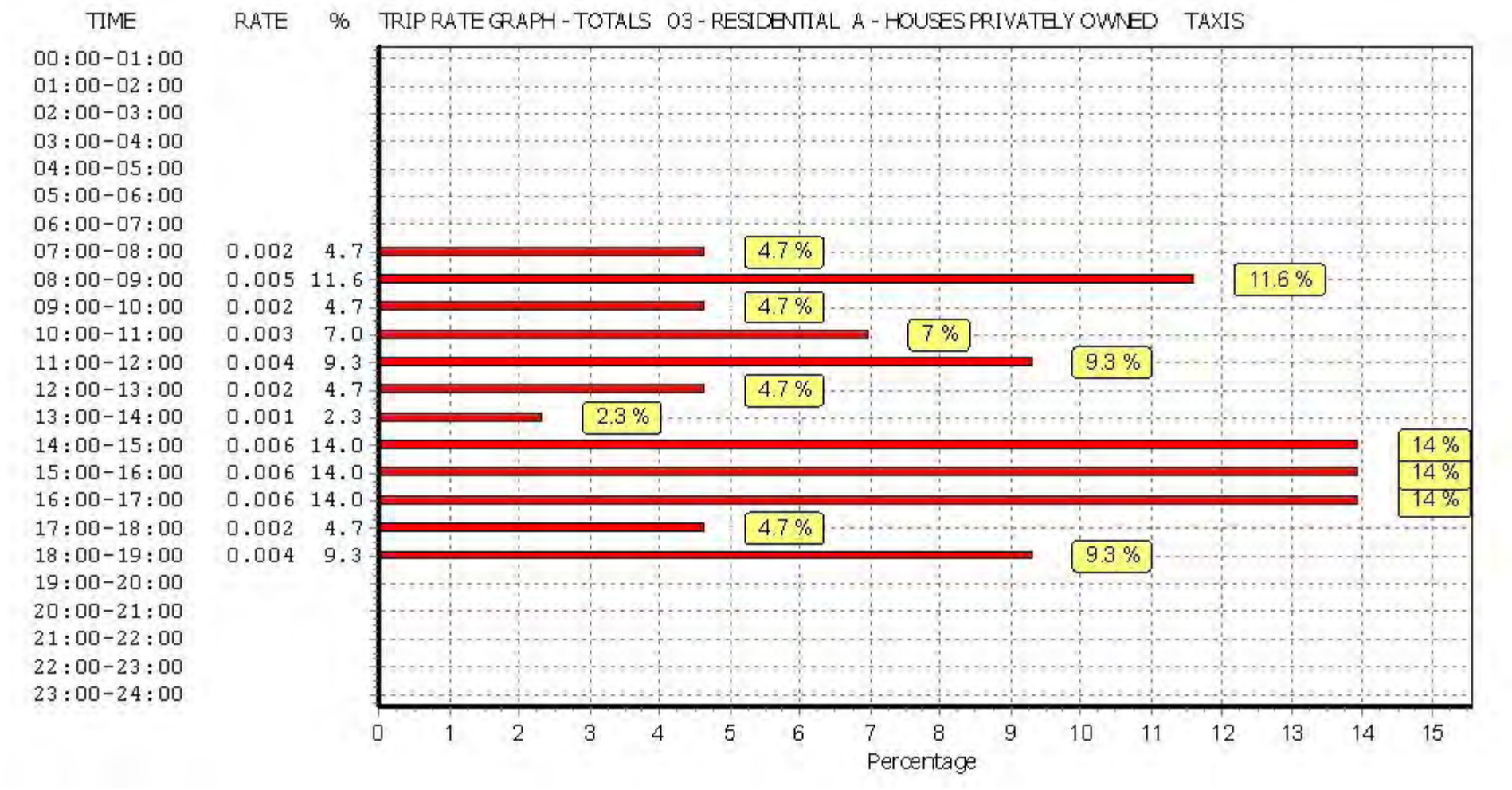


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

This page has been left intentionally blank

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

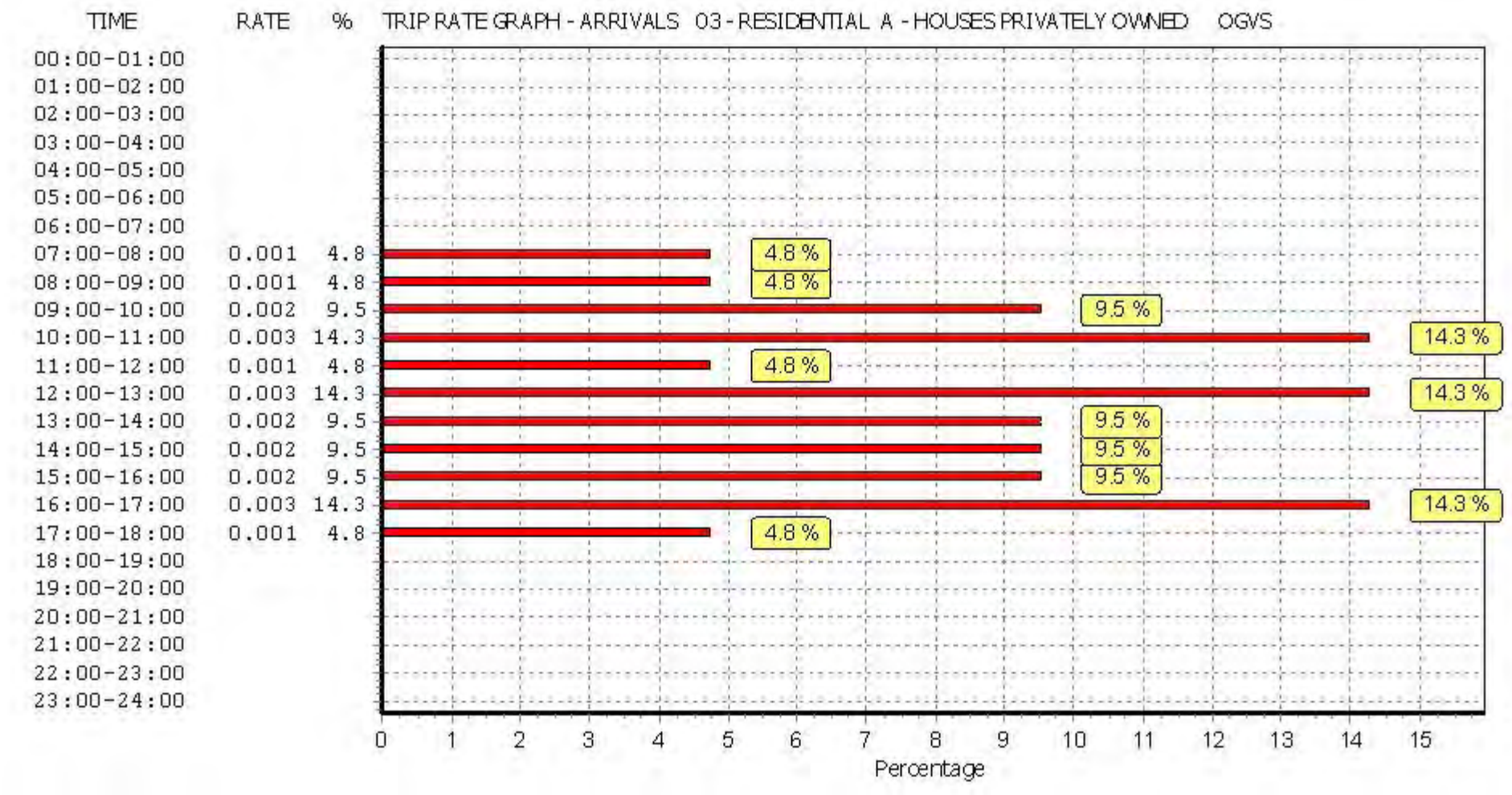
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	287	0.001	6	287	0.000	6	287	0.001
08:00 - 09:00	6	287	0.001	6	287	0.002	6	287	0.003
09:00 - 10:00	6	287	0.002	6	287	0.000	6	287	0.002
10:00 - 11:00	6	287	0.003	6	287	0.005	6	287	0.008
11:00 - 12:00	6	287	0.001	6	287	0.001	6	287	0.002
12:00 - 13:00	6	287	0.003	6	287	0.005	6	287	0.008
13:00 - 14:00	6	287	0.002	6	287	0.001	6	287	0.003
14:00 - 15:00	6	287	0.002	6	287	0.003	6	287	0.005
15:00 - 16:00	6	287	0.002	6	287	0.002	6	287	0.004
16:00 - 17:00	6	287	0.003	6	287	0.002	6	287	0.005
17:00 - 18:00	6	287	0.001	6	287	0.001	6	287	0.002
18:00 - 19:00	6	287	0.000	6	287	0.000	6	287	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.021			0.022			0.043

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

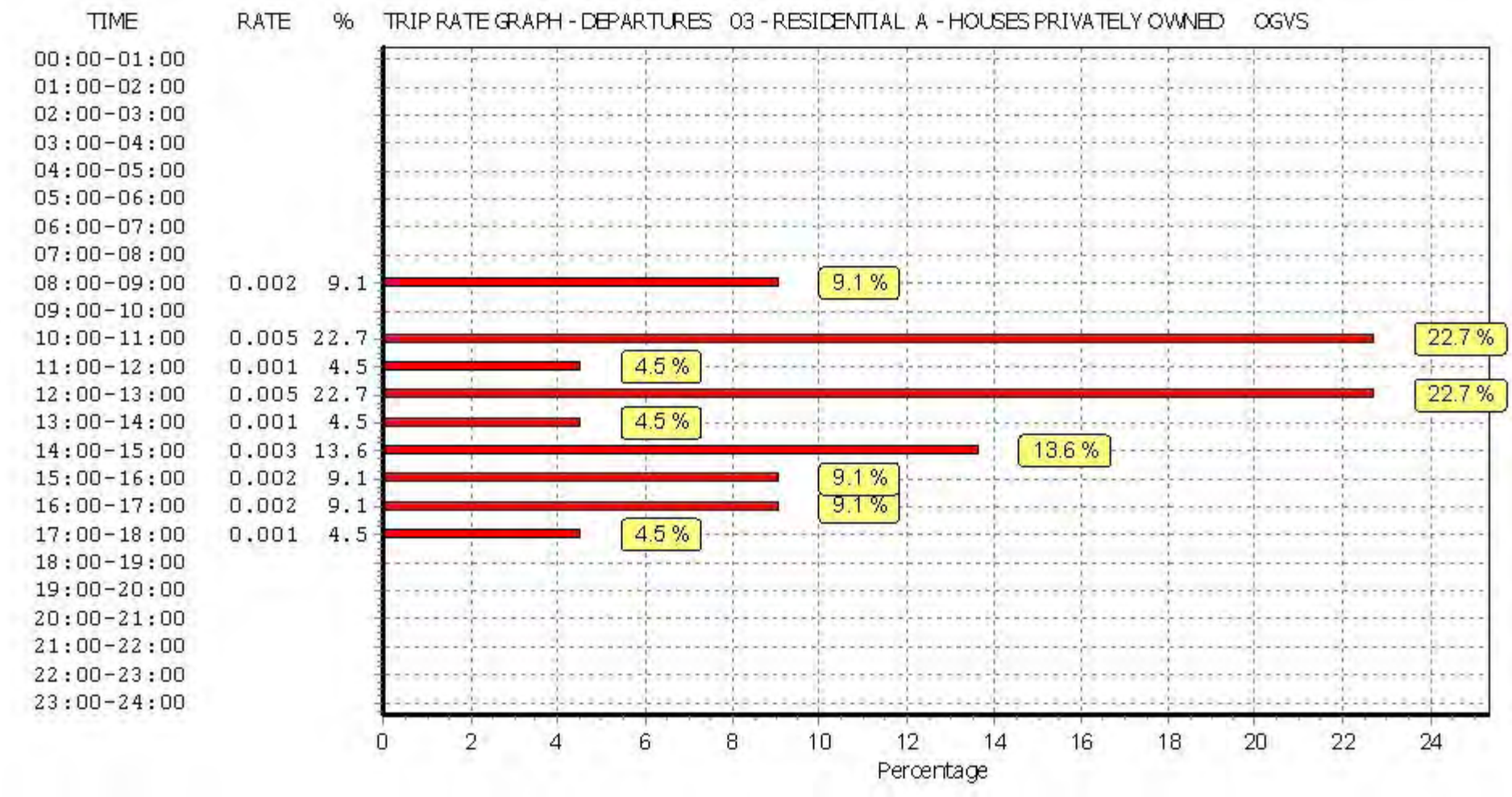
This page has been left intentionally blank

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101

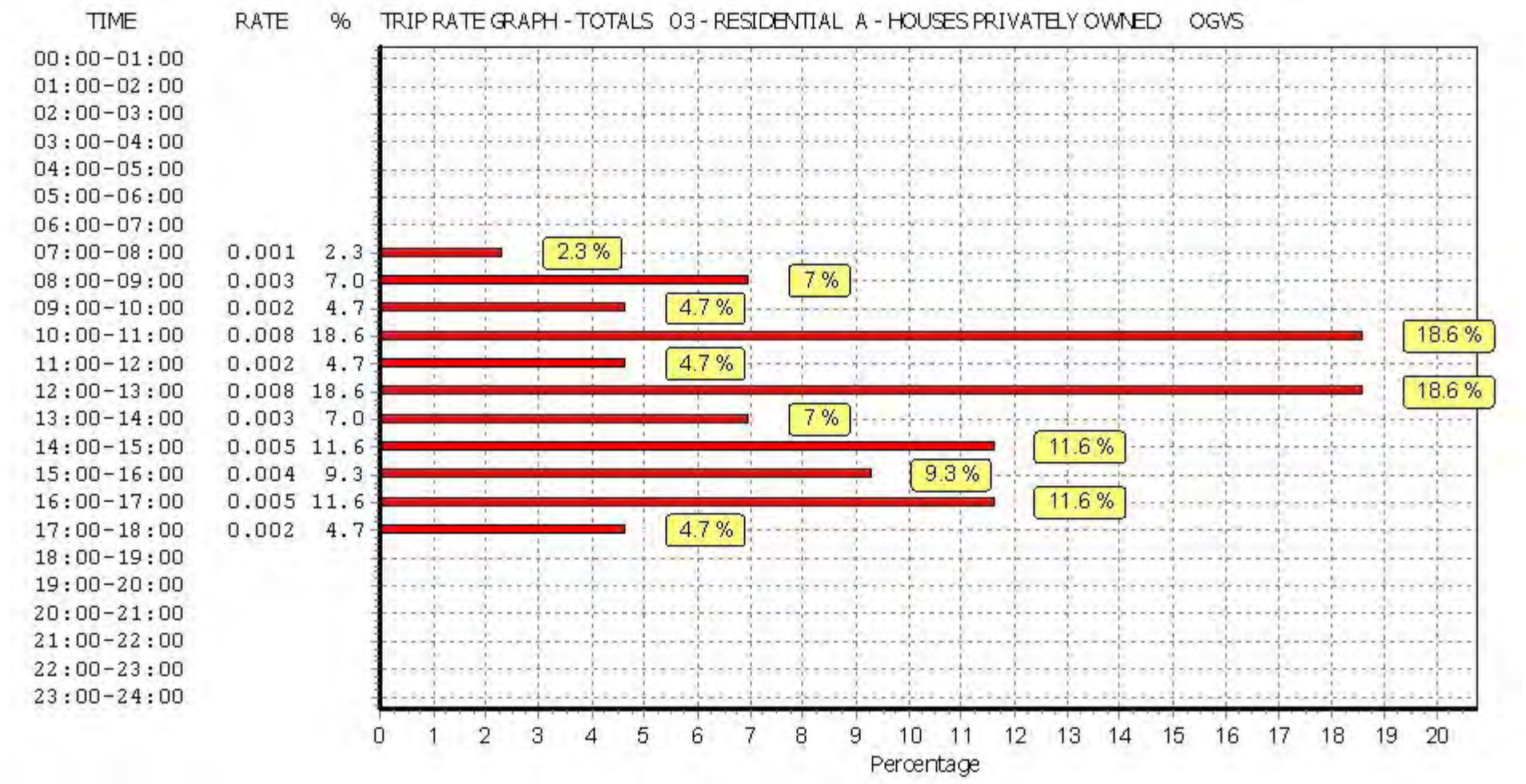


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

This page has been left intentionally blank

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

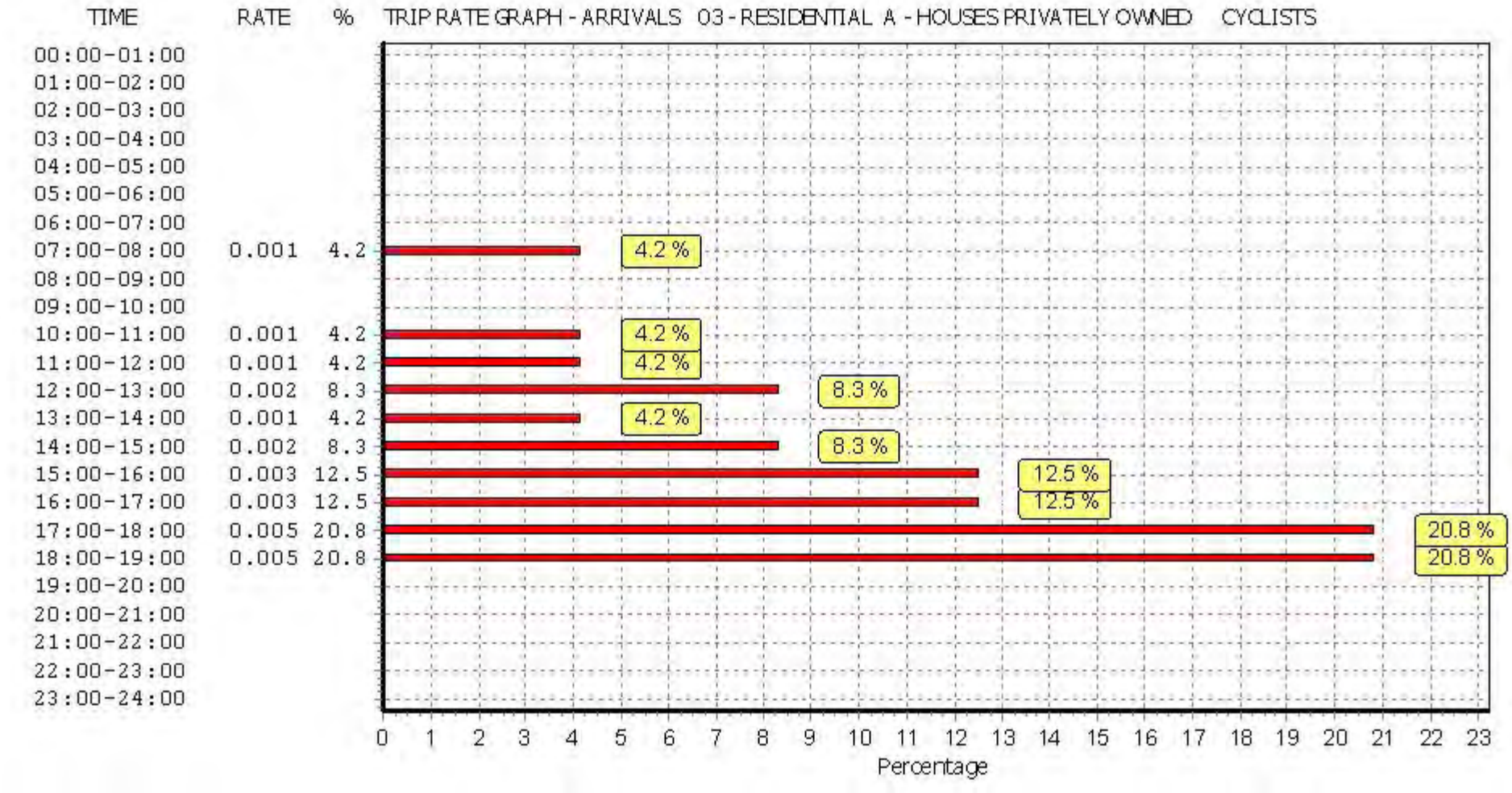
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	287	0.001	6	287	0.007	6	287	0.008
08:00 - 09:00	6	287	0.000	6	287	0.004	6	287	0.004
09:00 - 10:00	6	287	0.000	6	287	0.001	6	287	0.001
10:00 - 11:00	6	287	0.001	6	287	0.001	6	287	0.002
11:00 - 12:00	6	287	0.001	6	287	0.001	6	287	0.002
12:00 - 13:00	6	287	0.002	6	287	0.002	6	287	0.004
13:00 - 14:00	6	287	0.001	6	287	0.001	6	287	0.002
14:00 - 15:00	6	287	0.002	6	287	0.002	6	287	0.004
15:00 - 16:00	6	287	0.003	6	287	0.002	6	287	0.005
16:00 - 17:00	6	287	0.003	6	287	0.002	6	287	0.005
17:00 - 18:00	6	287	0.005	6	287	0.002	6	287	0.007
18:00 - 19:00	6	287	0.005	6	287	0.003	6	287	0.008
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.024			0.028			0.052

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

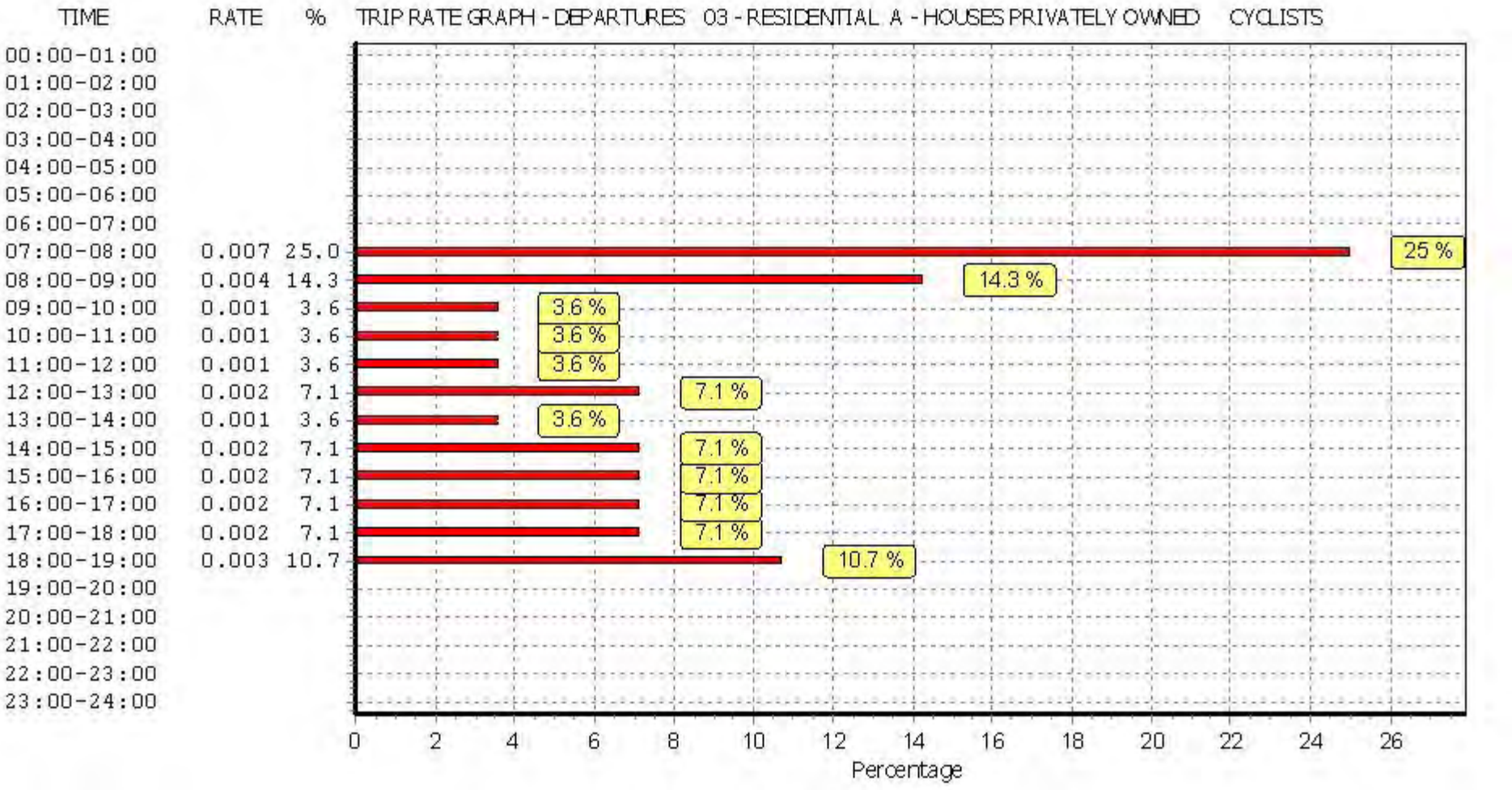
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

This page has been left intentionally blank

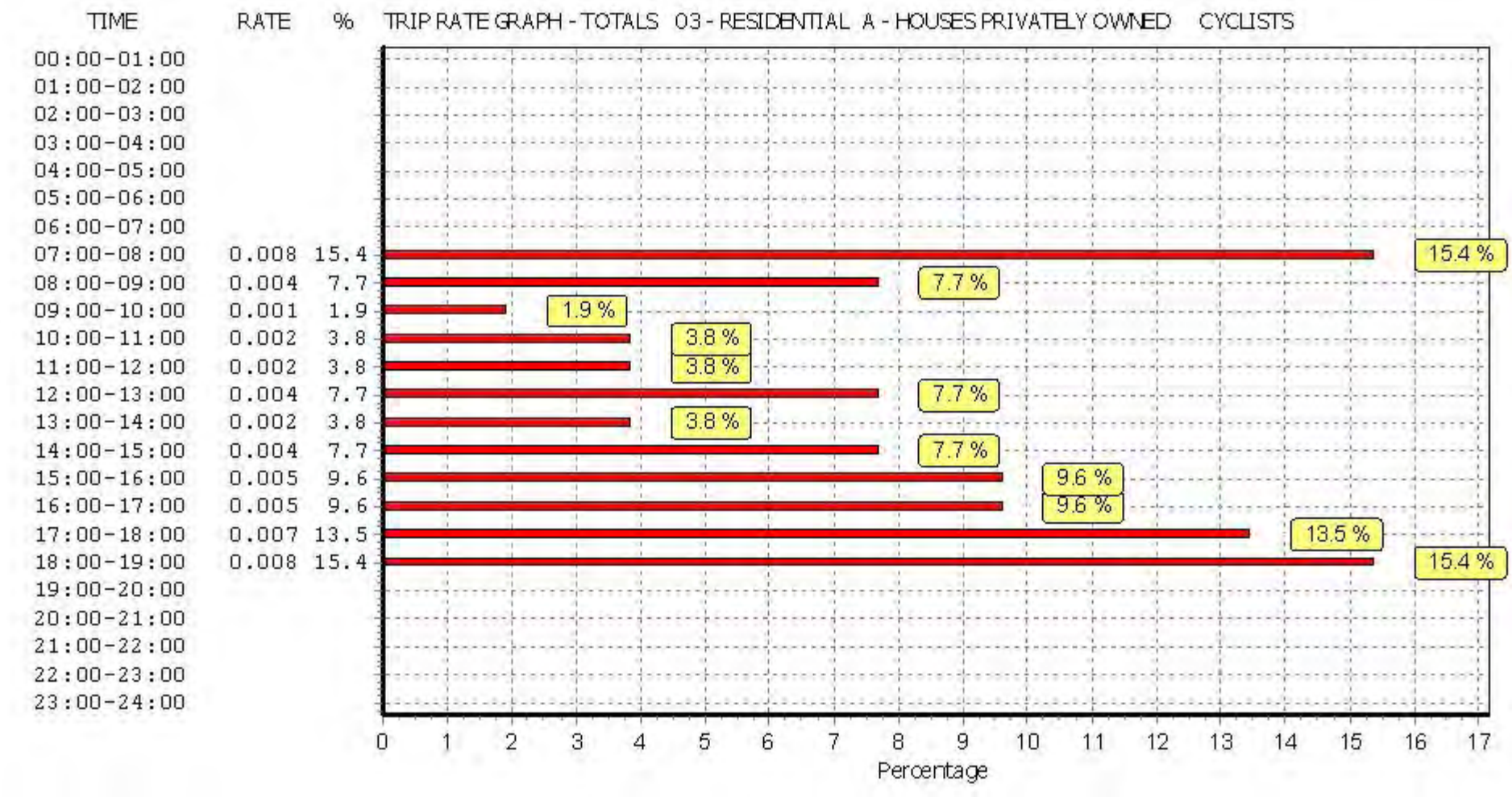
ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

This page has been left intentionally blank

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

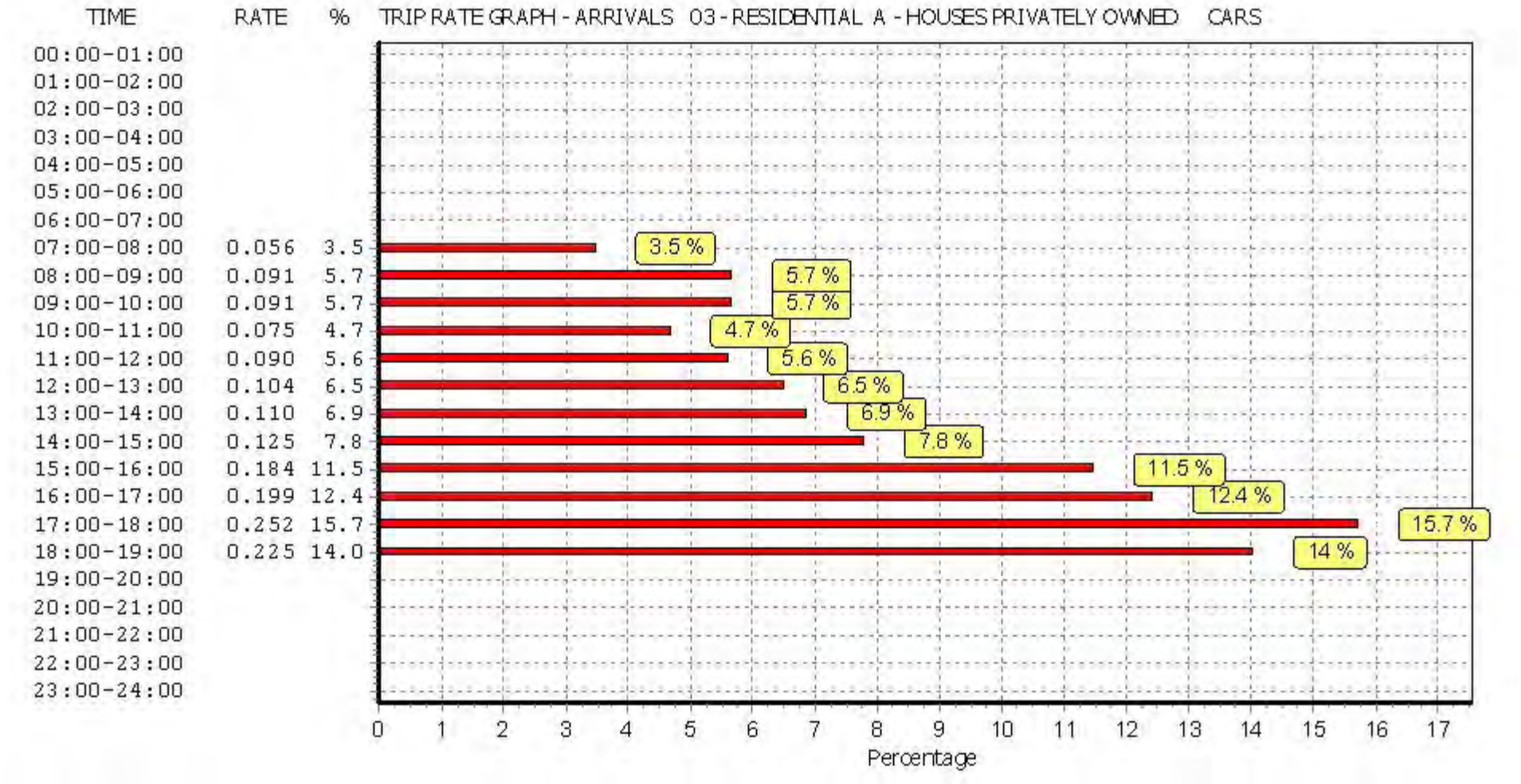
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	287	0.056	6	287	0.204	6	287	0.260
08:00 - 09:00	6	287	0.091	6	287	0.275	6	287	0.366
09:00 - 10:00	6	287	0.091	6	287	0.105	6	287	0.196
10:00 - 11:00	6	287	0.075	6	287	0.100	6	287	0.175
11:00 - 12:00	6	287	0.090	6	287	0.100	6	287	0.190
12:00 - 13:00	6	287	0.104	6	287	0.094	6	287	0.198
13:00 - 14:00	6	287	0.110	6	287	0.094	6	287	0.204
14:00 - 15:00	6	287	0.125	6	287	0.121	6	287	0.246
15:00 - 16:00	6	287	0.184	6	287	0.108	6	287	0.292
16:00 - 17:00	6	287	0.199	6	287	0.116	6	287	0.315
17:00 - 18:00	6	287	0.252	6	287	0.116	6	287	0.368
18:00 - 19:00	6	287	0.225	6	287	0.150	6	287	0.375
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.602			1.583			3.185

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

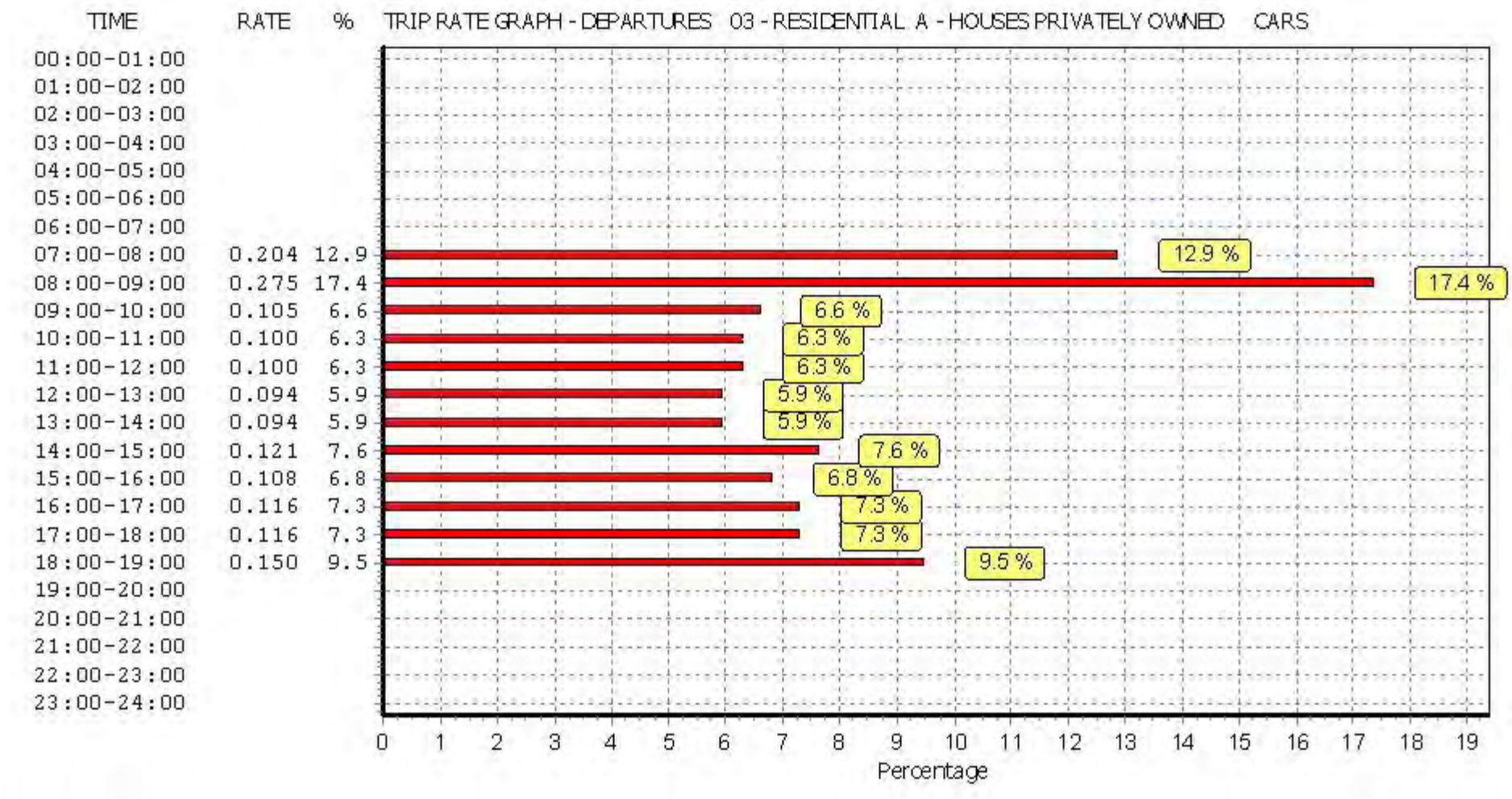
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

This page has been left intentionally blank

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101

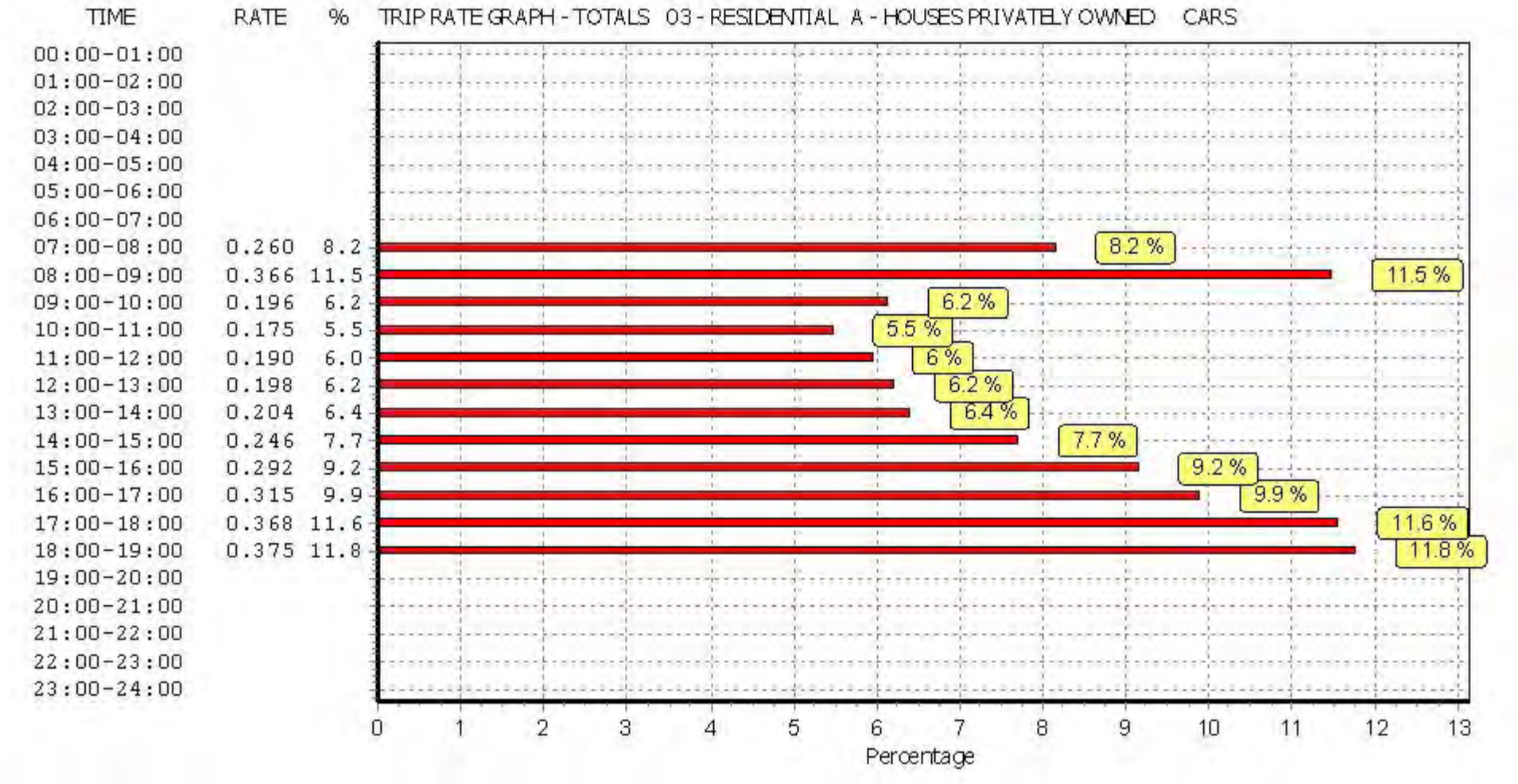


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

This page has been left intentionally blank

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

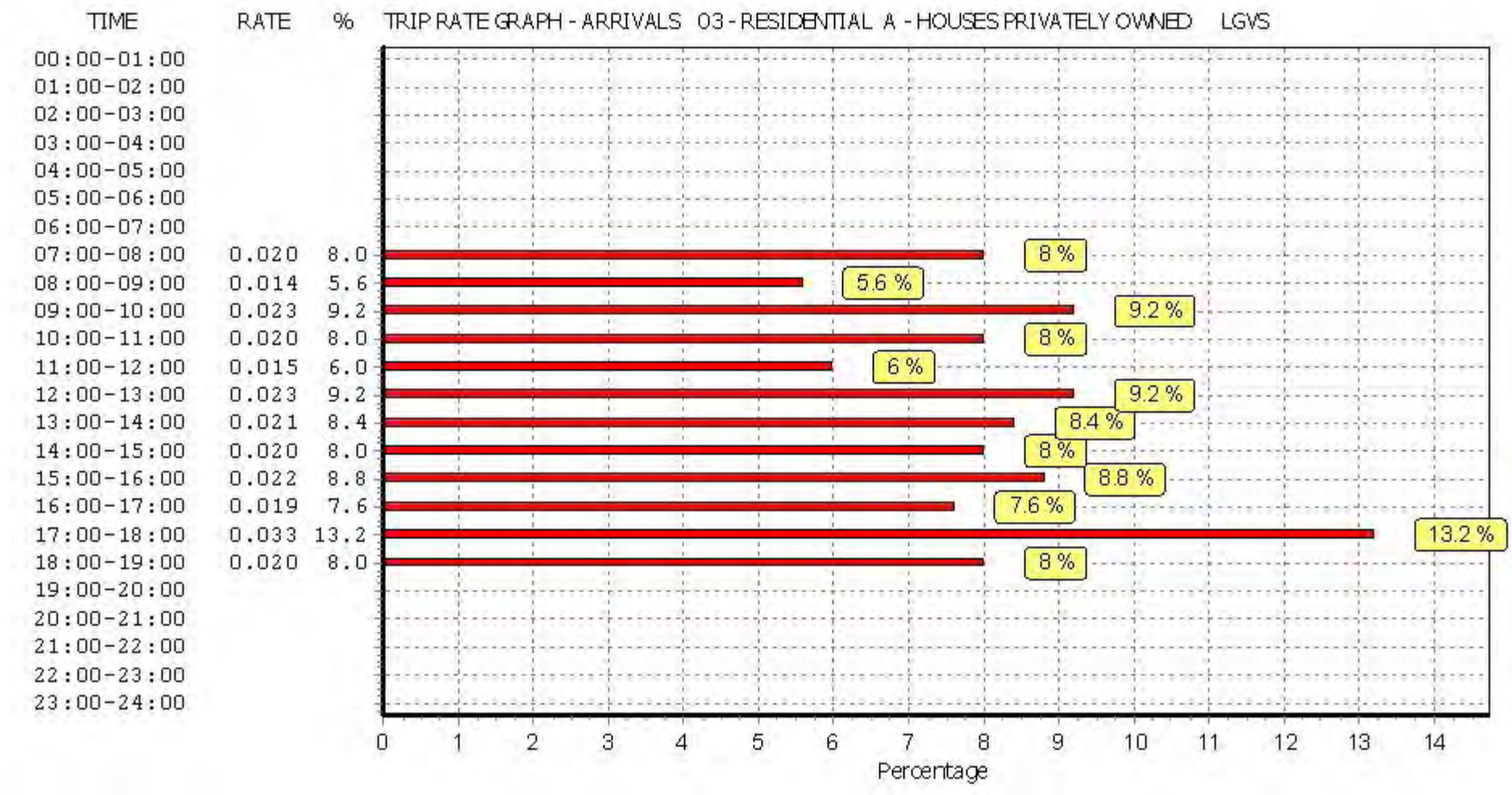
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	287	0.020	6	287	0.030	6	287	0.050
08:00 - 09:00	6	287	0.014	6	287	0.021	6	287	0.035
09:00 - 10:00	6	287	0.023	6	287	0.020	6	287	0.043
10:00 - 11:00	6	287	0.020	6	287	0.016	6	287	0.036
11:00 - 12:00	6	287	0.015	6	287	0.024	6	287	0.039
12:00 - 13:00	6	287	0.023	6	287	0.017	6	287	0.040
13:00 - 14:00	6	287	0.021	6	287	0.027	6	287	0.048
14:00 - 15:00	6	287	0.020	6	287	0.018	6	287	0.038
15:00 - 16:00	6	287	0.022	6	287	0.024	6	287	0.046
16:00 - 17:00	6	287	0.019	6	287	0.020	6	287	0.039
17:00 - 18:00	6	287	0.033	6	287	0.017	6	287	0.050
18:00 - 19:00	6	287	0.020	6	287	0.018	6	287	0.038
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.250			0.252			0.502

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

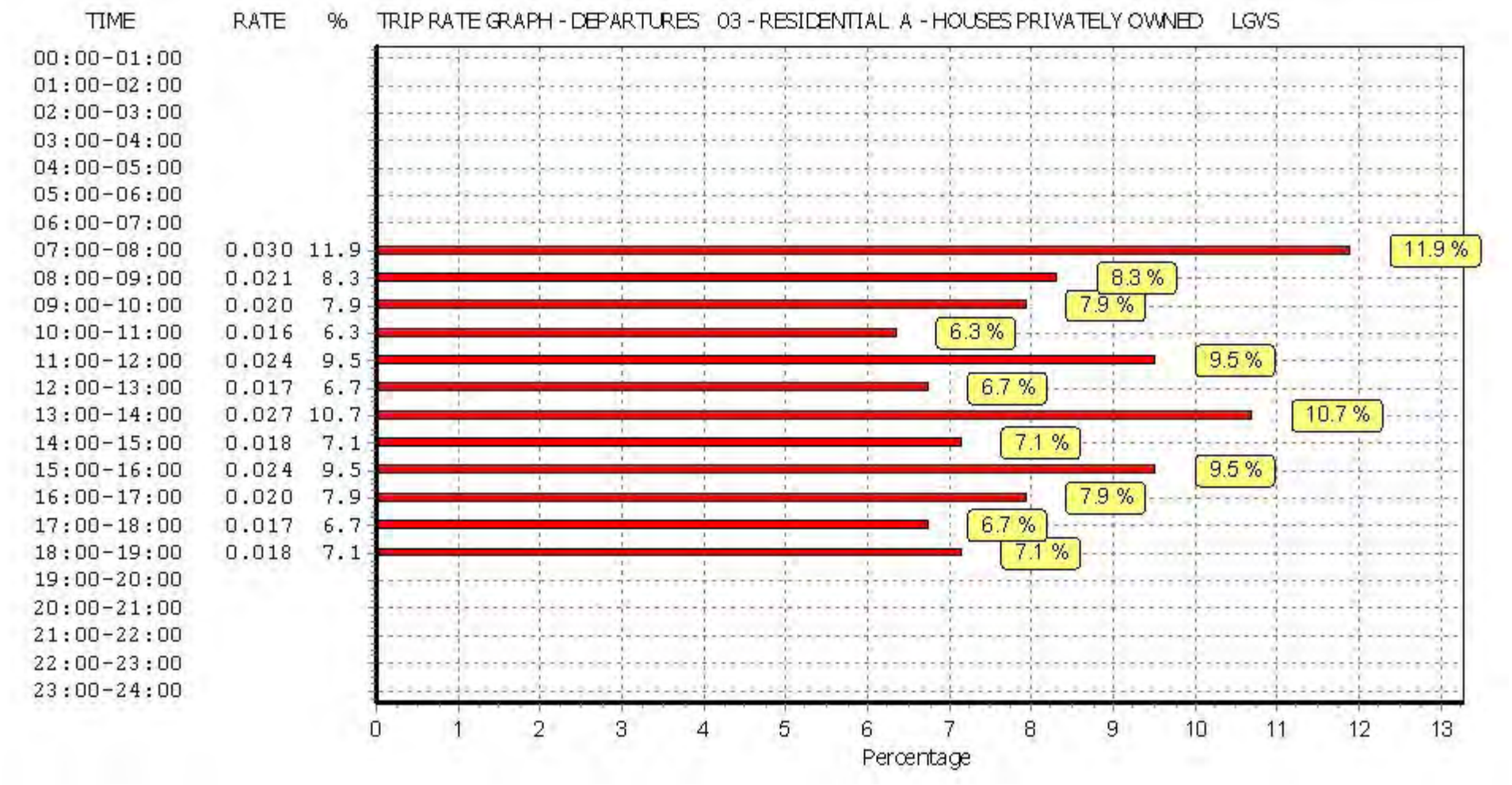
This page has been left intentionally blank

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101



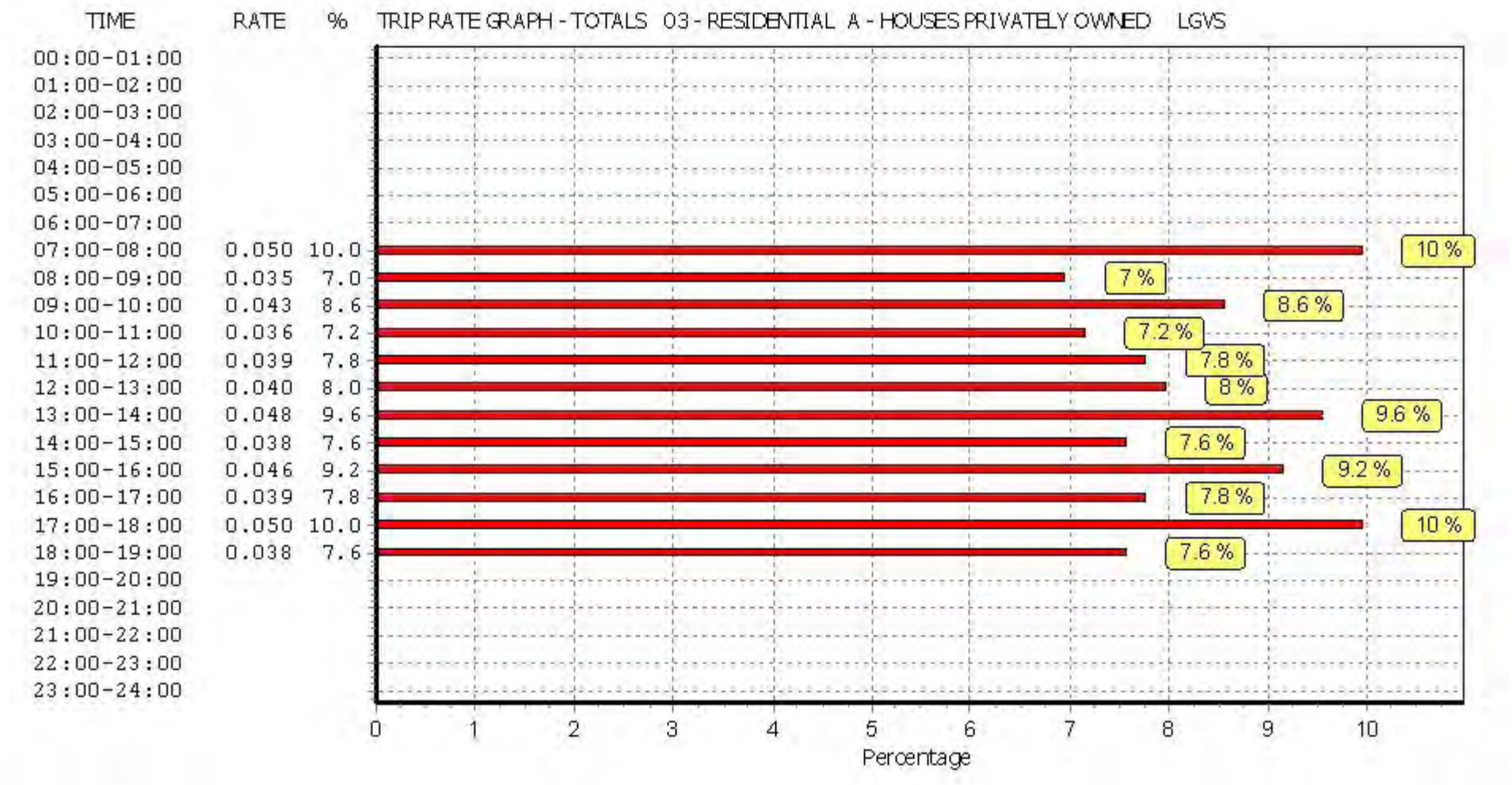
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

This page has been left intentionally blank

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

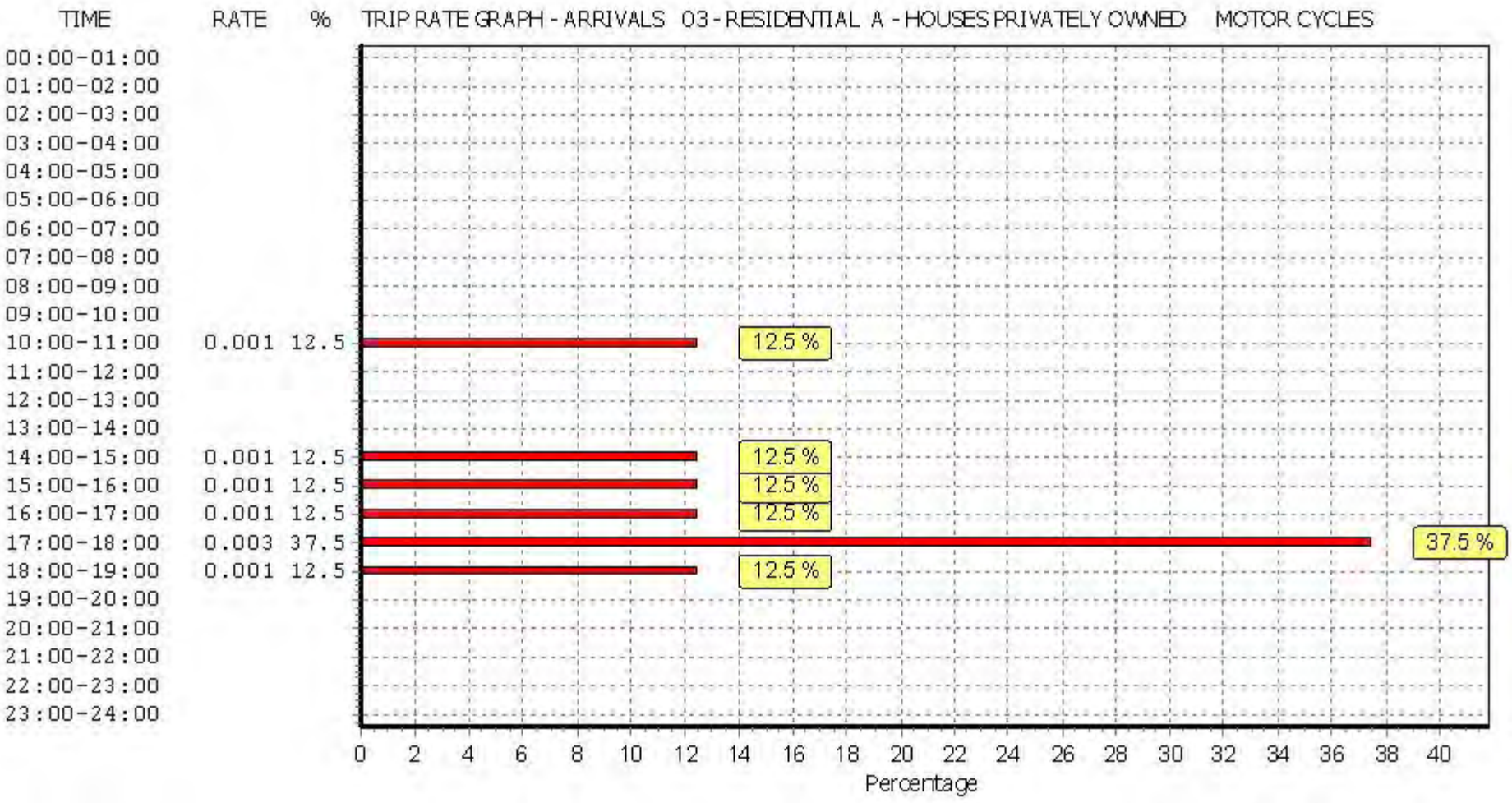
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	287	0.000	6	287	0.001	6	287	0.001
08:00 - 09:00	6	287	0.000	6	287	0.001	6	287	0.001
09:00 - 10:00	6	287	0.000	6	287	0.001	6	287	0.001
10:00 - 11:00	6	287	0.001	6	287	0.001	6	287	0.002
11:00 - 12:00	6	287	0.000	6	287	0.001	6	287	0.001
12:00 - 13:00	6	287	0.000	6	287	0.001	6	287	0.001
13:00 - 14:00	6	287	0.000	6	287	0.000	6	287	0.000
14:00 - 15:00	6	287	0.001	6	287	0.000	6	287	0.001
15:00 - 16:00	6	287	0.001	6	287	0.001	6	287	0.002
16:00 - 17:00	6	287	0.001	6	287	0.001	6	287	0.002
17:00 - 18:00	6	287	0.003	6	287	0.001	6	287	0.004
18:00 - 19:00	6	287	0.001	6	287	0.001	6	287	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.010			0.018

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

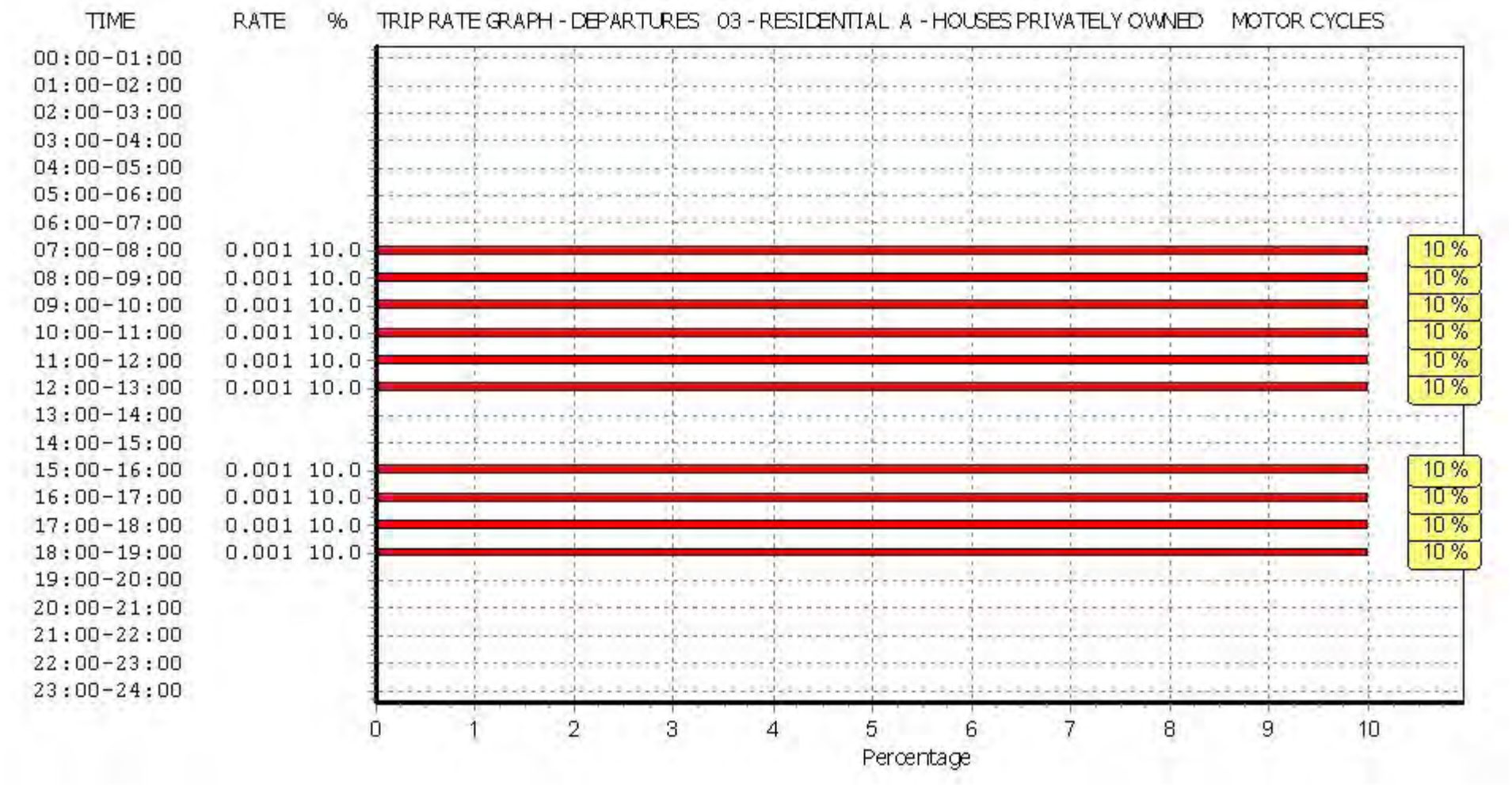
This page has been left intentionally blank

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101



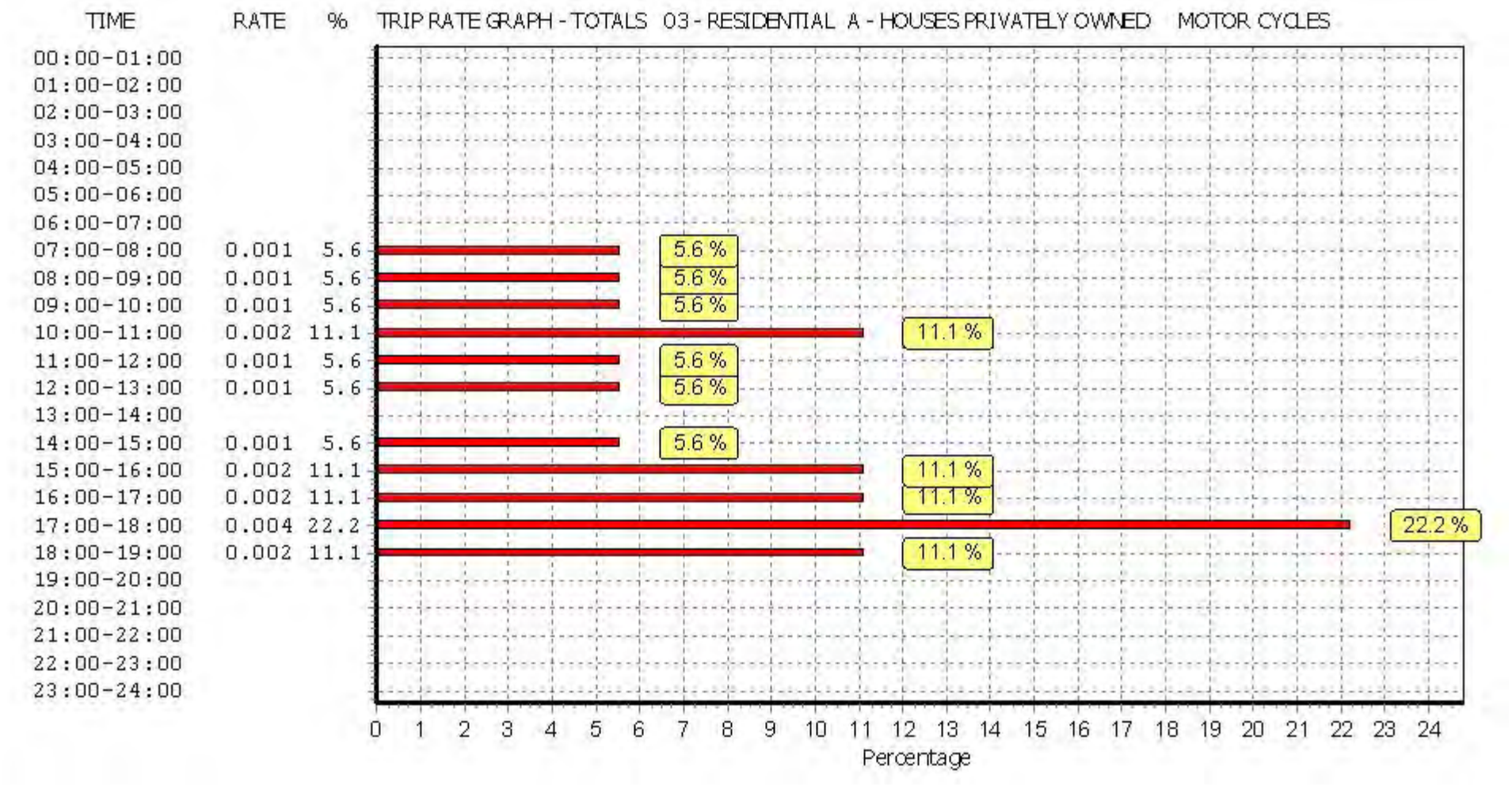
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE Licence No: 733101

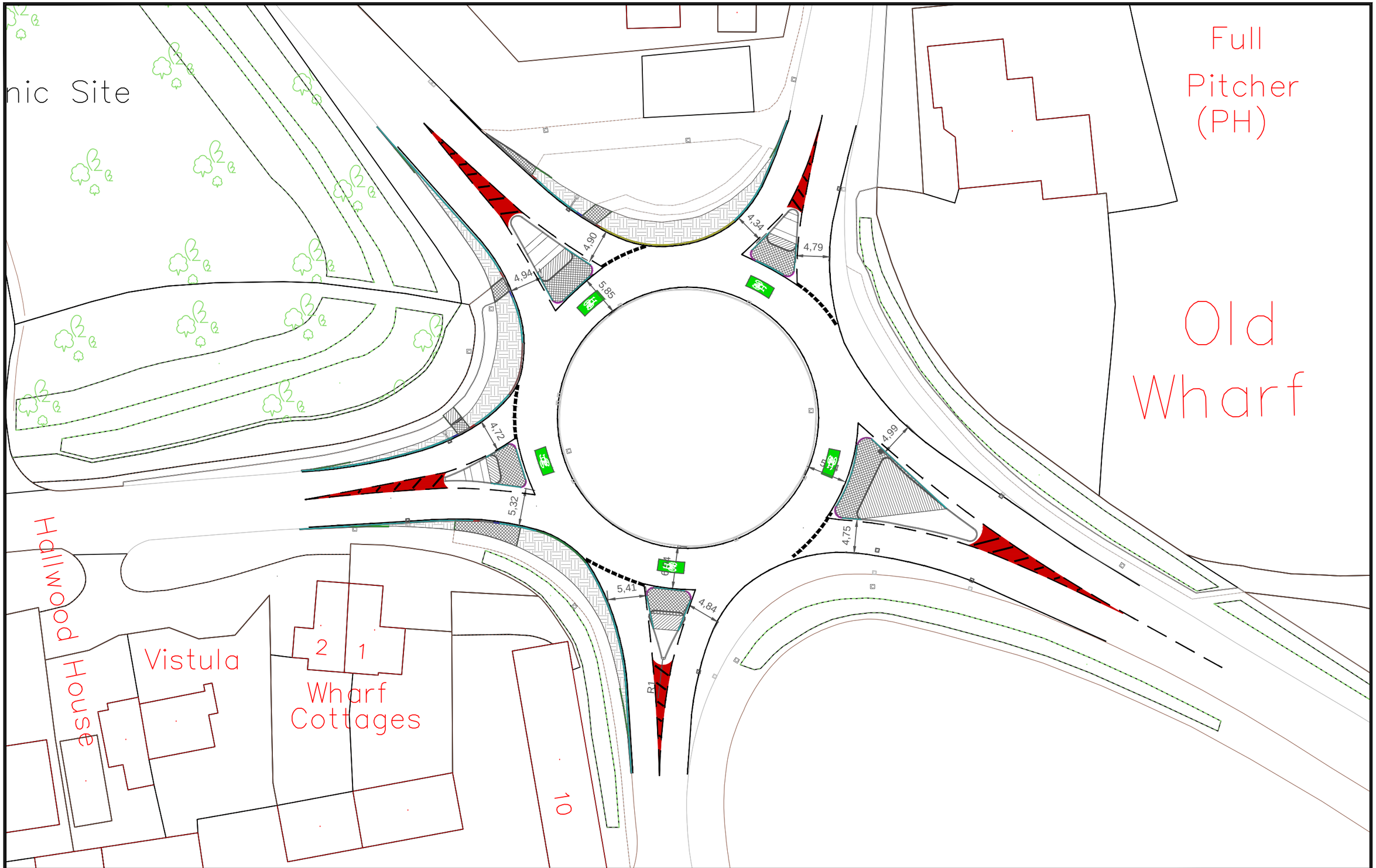


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

This page has been left intentionally blank

F HCC SJ2 Improvement Scheme

This page has been left blank intentionally.



Herefordshire Council NHS Herefordshire
Working together for the people of Herefordshire

A449 J/W A417 AT FULL PITCHER ROUNDABOUT, LEDBURY BYPASS - GENERAL ARRANGEMENT

No.	Revision	By	Date

SCALE:1/500 @ A3

Survey		Date	
Designed By		Date	
Drawn By	MSL	Date	06/14
Checked By		Date	

GEOFF HUGHES
DIRECTOR of PLACES AND COMMUNITIES
HEREFORDSHIRE

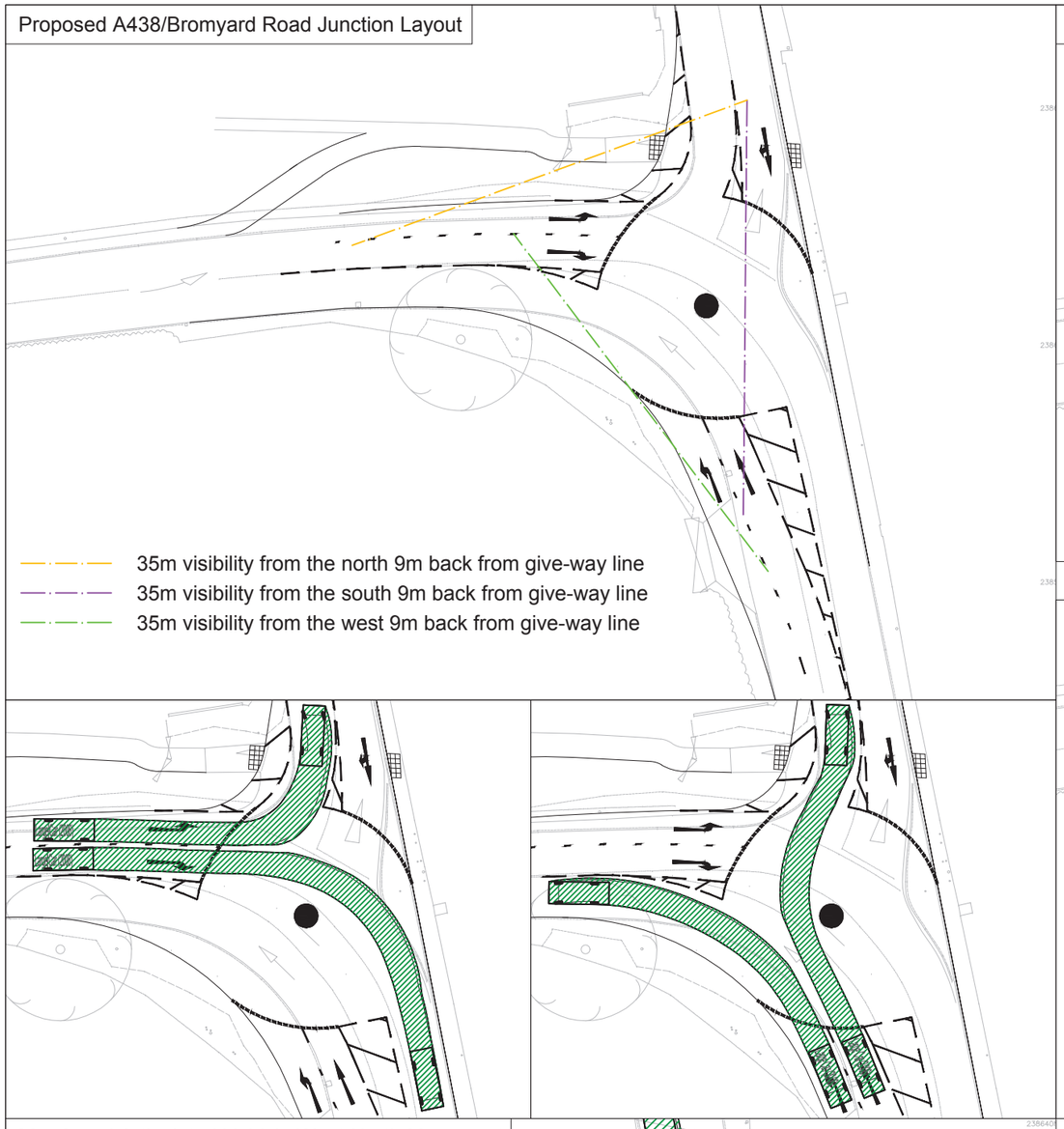
Drg.No. :

LEFT INTENTIONALLY BLANK

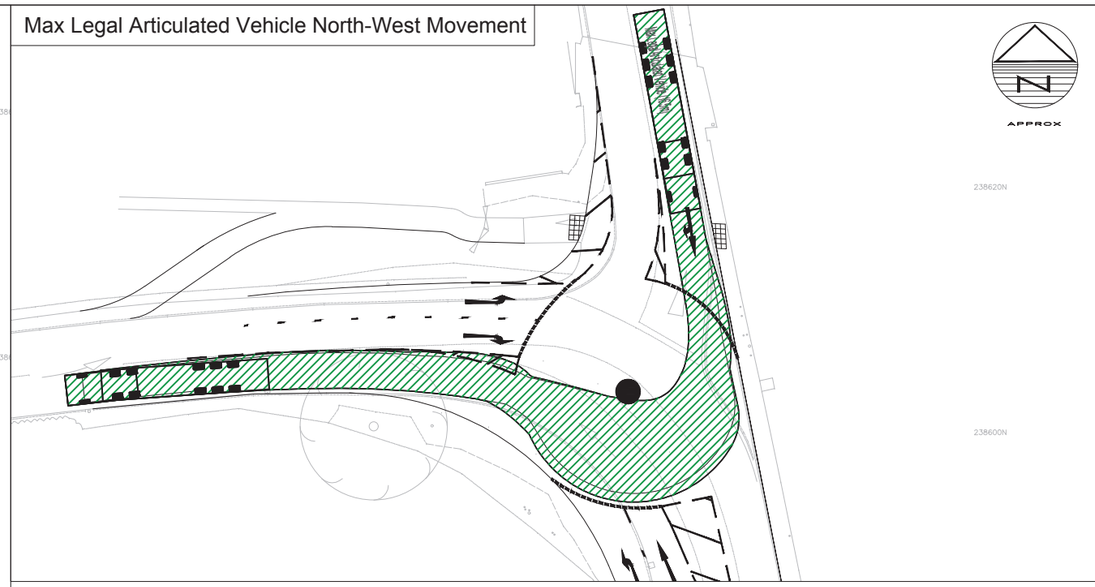
G BWB Improvement Schemes

This page has been left blank intentionally.

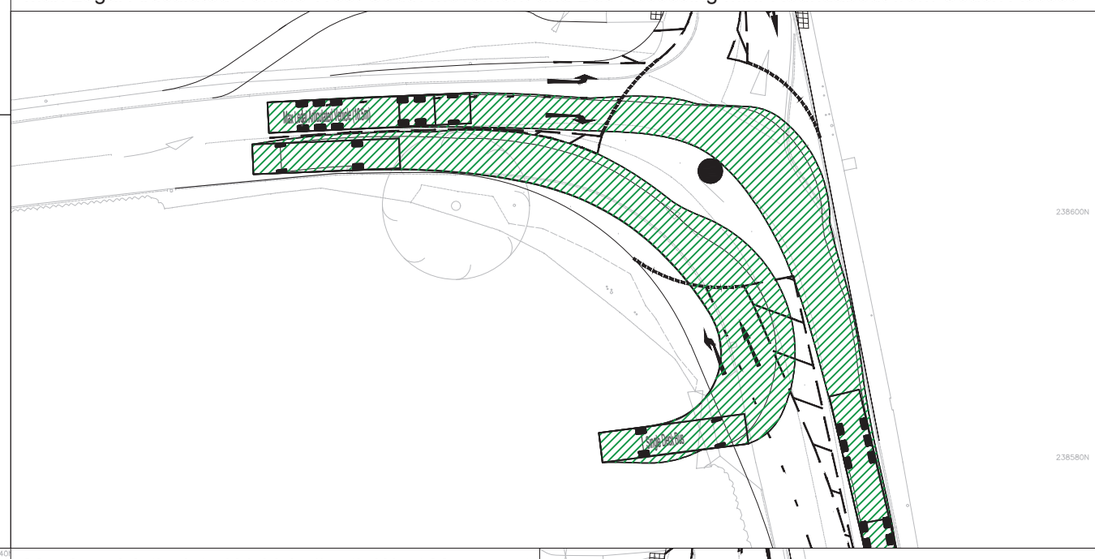
Proposed A438/Bromyard Road Junction Layout



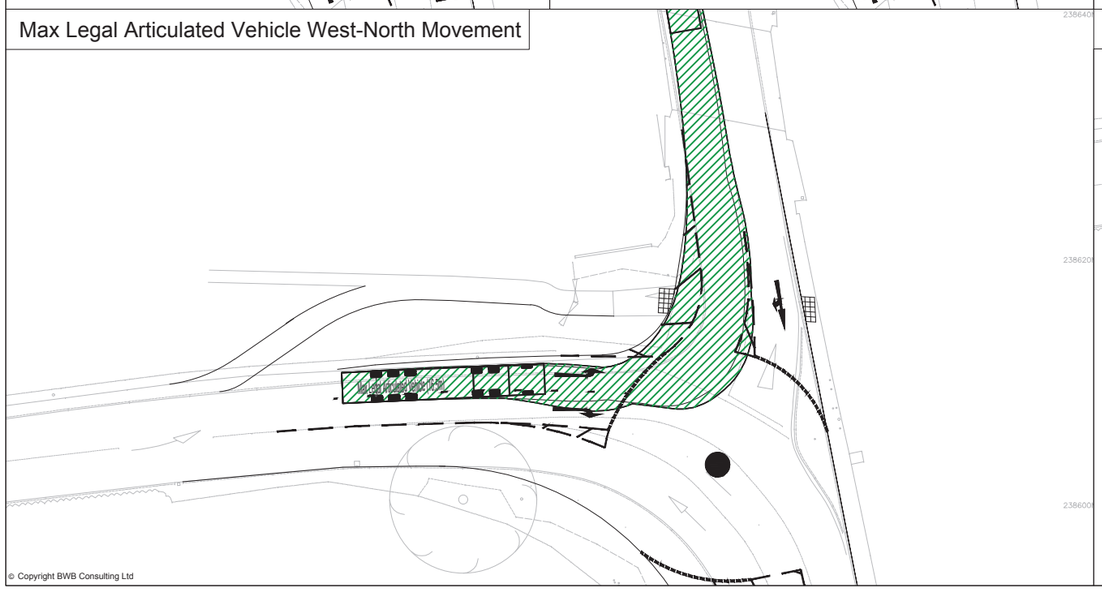
Max Legal Articulated Vehicle North-West Movement



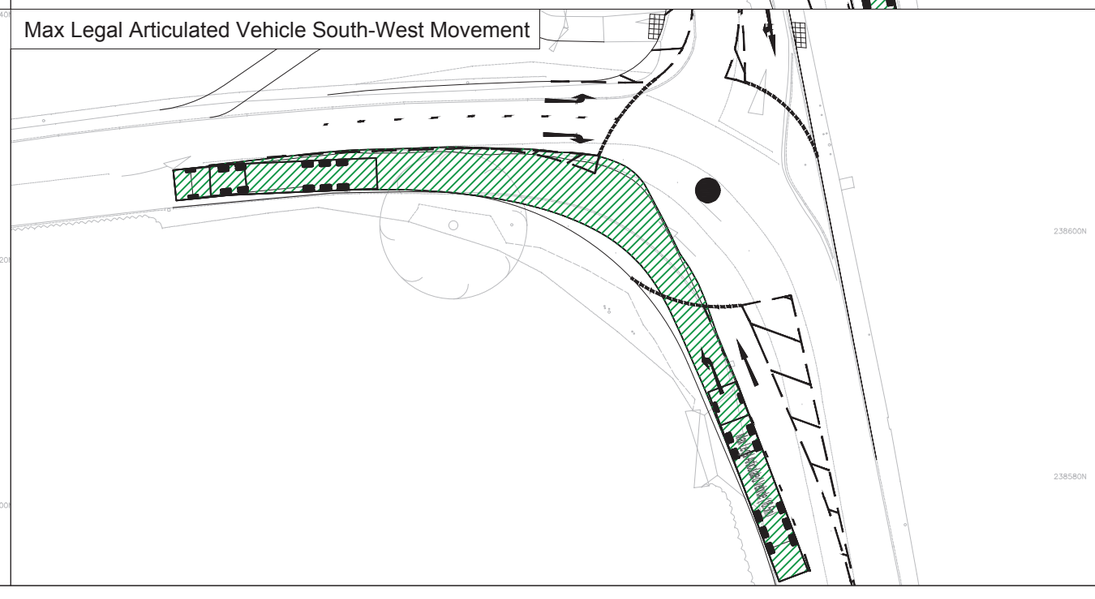
Max Legal Articulated Vehicle West-South Movement and Bus Accessing Mini-Roundabout from Coach Access



Max Legal Articulated Vehicle West-North Movement



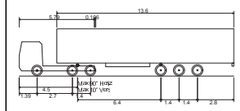
Max Legal Articulated Vehicle South-West Movement



Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key Plan

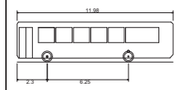


Max Legal Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.500m
Overall Body Height	3.632m
Min Body Ground Clearance	0.396m
Max Track Width	2.500m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	6.870m

Large Car (2006)

Overall Length	5.079m
Overall Width	1.872m
Overall Body Height	1.525m
Min Body Ground Clearance	0.310m
Max Track Width	1.831m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	5.900m



Single Deck Bus

Overall Length	11.980m
Overall Width	2.440m
Overall Body Height	3.070m
Min Body Ground Clearance	0.306m
Track Width	2.322m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	10.368m

P5	03.11.16	PRELIMINARY ISSUE	TG	TC
P4	16.08.16	PRELIMINARY ISSUE	VD	TC
P3	03.08.16	PRELIMINARY ISSUE	VD	TC
P2	29.07.16	PRELIMINARY ISSUE	SH	TC
P1	13.05.16	PRELIMINARY ISSUE	TG	TC
Rev	Date	Details of issue / revision	Drw	Rev

Issues & Revisions

BWB CONSULTANCY | ENVIRONMENT INFRASTRUCTURE | BUILDINGS

- Birmingham | 0121 233 3322
- Leeds | 0113 233 8000
- London | 020 7234 9122
- Manchester | 0161 233 4260
- Nottingham | 0115 924 1100

www.bwbconsulting.com

Client

BLOOR HOMES WESTERN LTD

Project Title

LEDBURY URBAN EXTENSION

Drawing Title

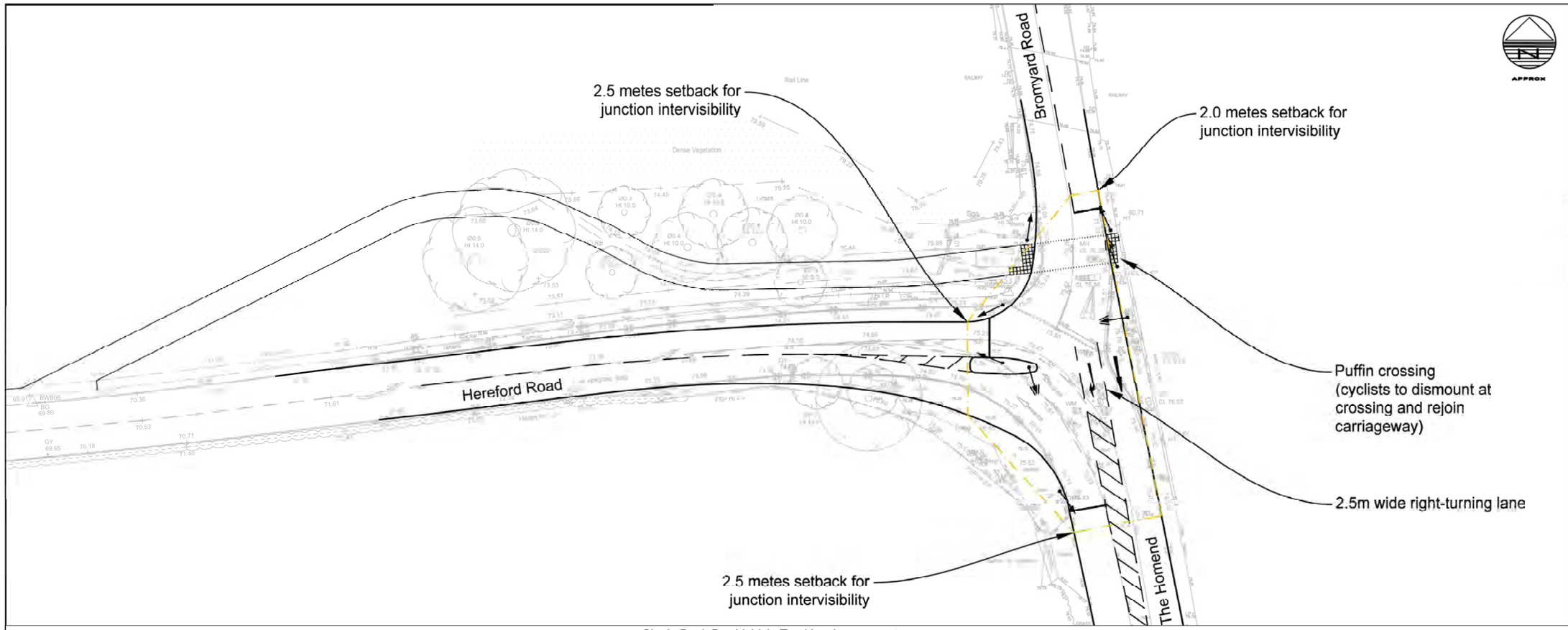
HEREFORD ROAD/ BROMYARD ROAD MINI-ROUNDABOUT JUNCTION PROPOSALS

Drawn:	T.Gregory		Reviewed:	T.Cooke	
BWB Ref:	BMW2470	Date: 13.05.16	Scale@A3:	1:500	

Drawing Status

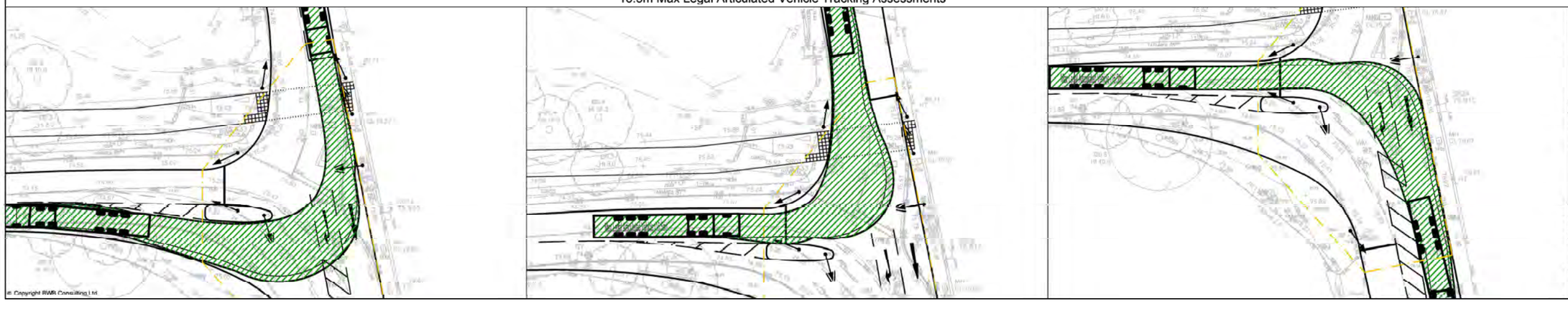
PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
LUE-BWB-HML-XX-DR-D-103	S2	P5



Single Deck Bus Vehicle Tracking Assessments

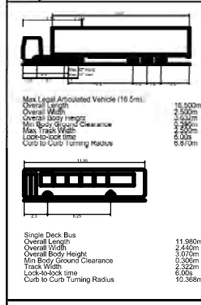
16.5m Max Legal Articulated Vehicle Tracking Assessments



Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key Plan



Rev	Date	Details of issue / revision	Drw	Rev
P7	06.06.18	MINOR JUNCTION AMENDMENTS	AJ	VD
P6	27.03.18	MINOR JUNCTION AMENDMENTS	TG	VD
P5	22.03.18	JUNCTION POSITION AMENDED	AJO	TC
P4	16.03.18	LAYOUT AMENDED	TG	TC
P3	07.02.18	LAYOUT AMENDED	TG	SK
P2	23.01.18	LAYOUT AMENDED	AJO	SK
P1	11.08.17	PRELIMINARY ISSUE	VD	SK

Issues & Revisions

BWB CONSULTANCY | ENVIRONMENT | INFRASTRUCTURE | BUILDINGS
Birmingham | 0121 233 3322
Leeds | 0113 233 8000
London | 020 7234 9122
Manchester | 0161 233 4260
Nottingham | 0115 924 1100
www.bwbconsulting.com

Client
BLOOR HOMES WESTERN LTD

Project Title
LEDBURY URBAN EXTENSION

Drawing Title
PROPOSED INDICATIVE SIGNAL JUNCTION

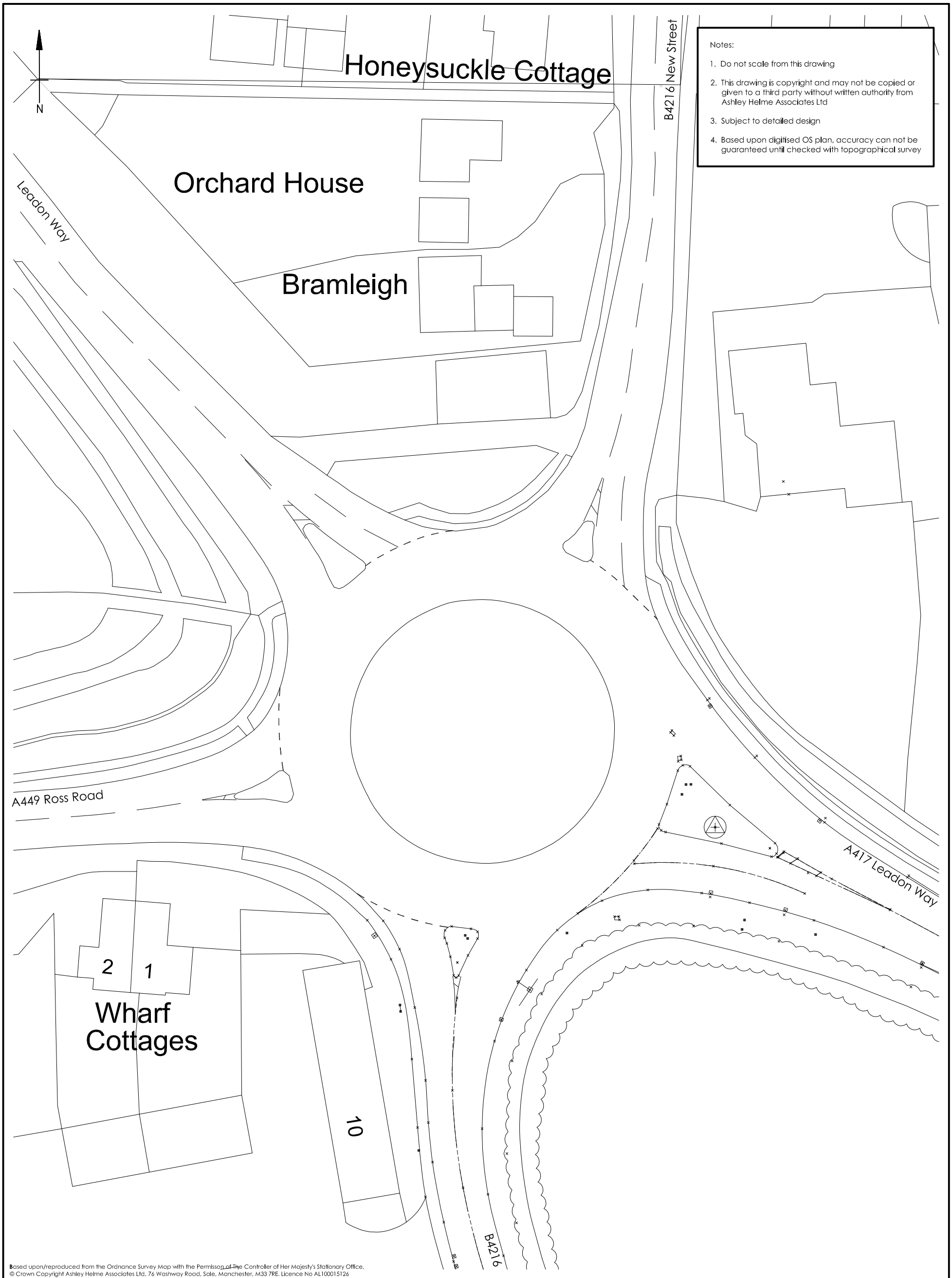
Drawn:	V. Devaharan	Reviewed:	S. Kelly		
BWB Ref:	BMW2470	Date:	11.08.17	Scale@A3:	1:500

Drawing Status
PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
LUE-BWB-HML-XX-DR-D-111	S2	P7

Drawings

This page has been left blank intentionally.



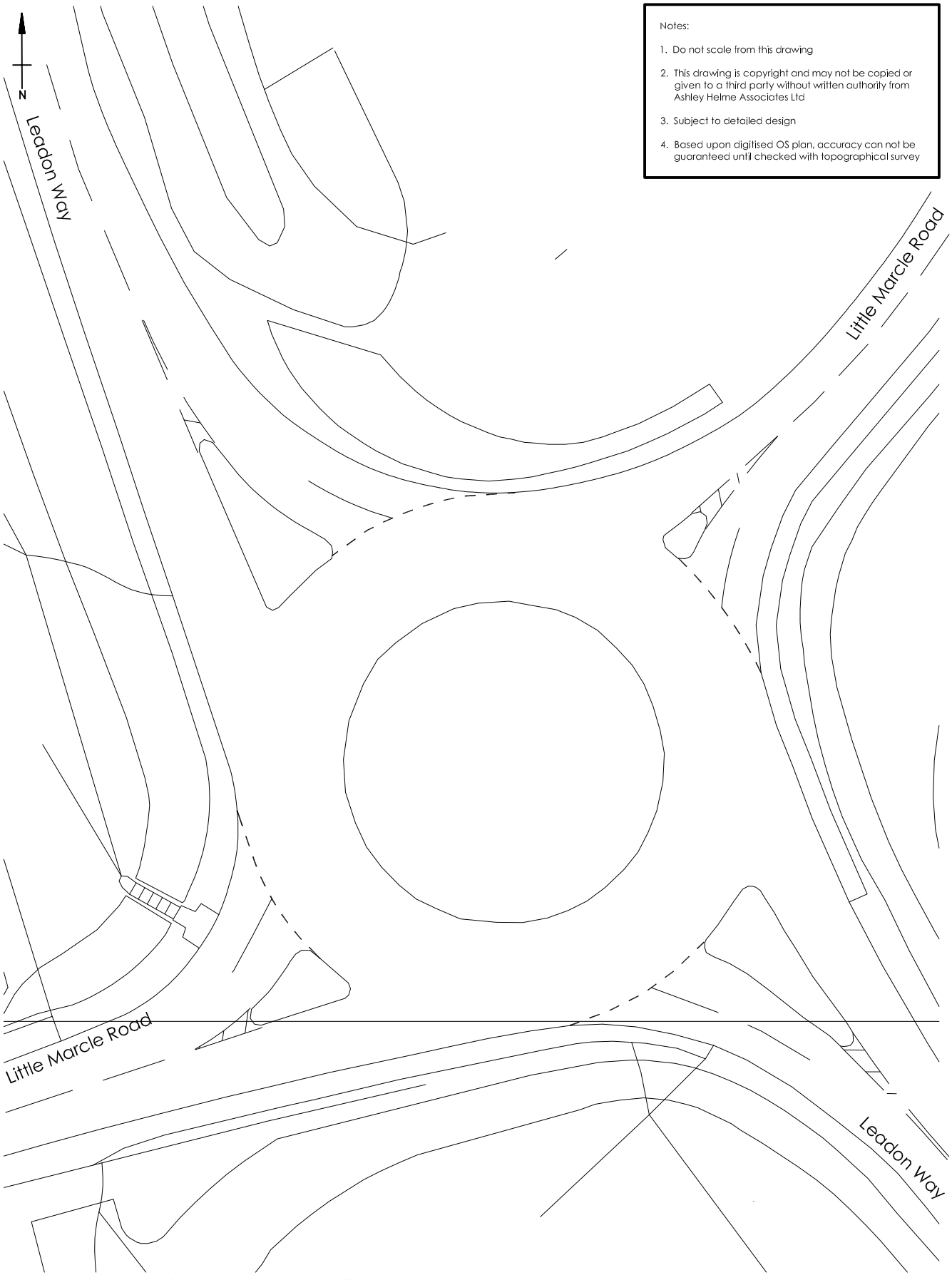
Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Project: DYMOCK ROAD, LEDBURY		Client: GLADMAN DEVELOPMENTS	Drawing No: 1394/02	Rev: A
Title: EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 2			Date: NOV 2017	Scale: 1:500 @ A3

This page has been left blank intentionally.



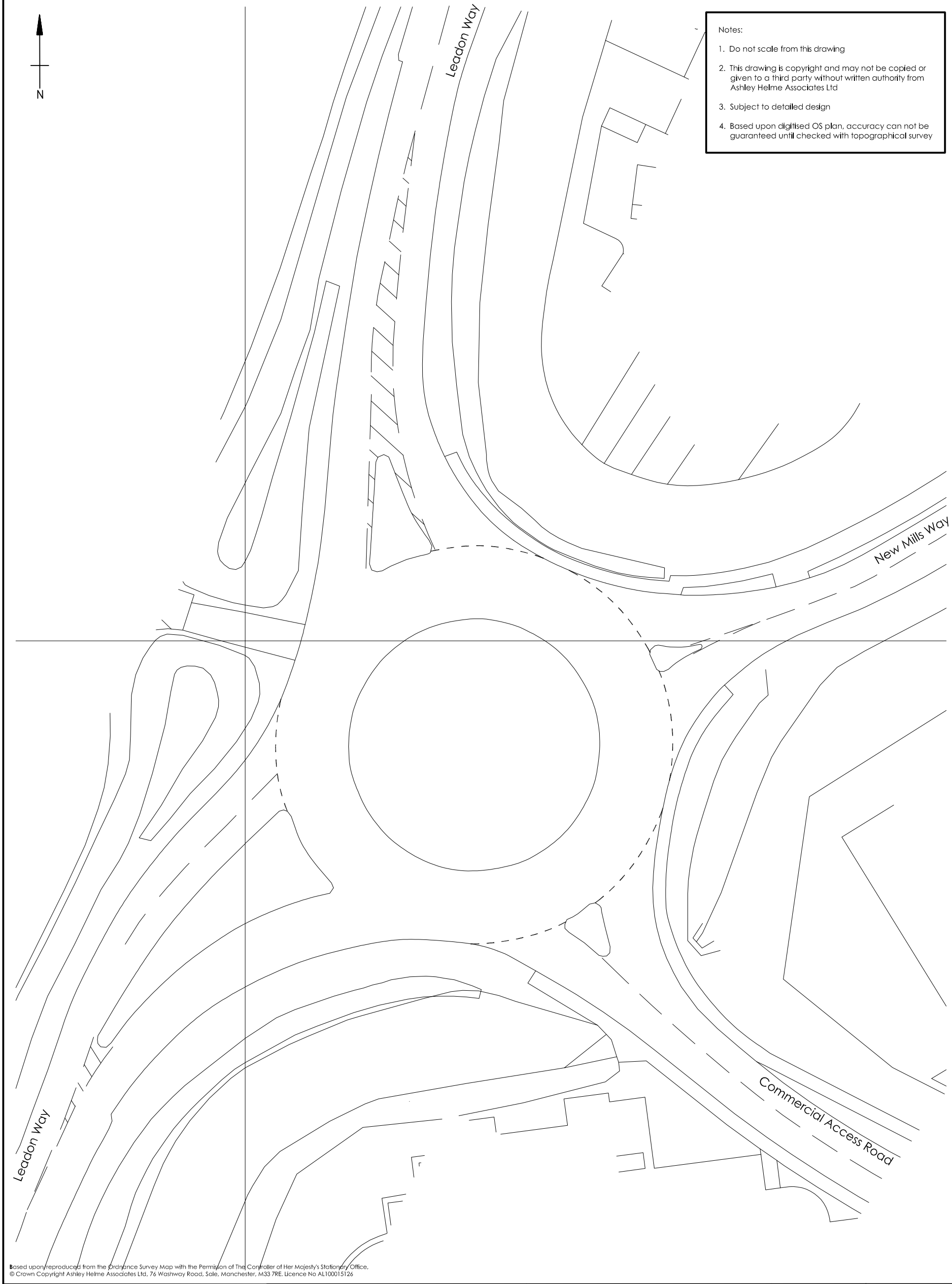
Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Project	DYMOCK ROAD, LEDBURY	Client	GLADMAN DEVELOPMENTS	Drawing No 1394/03	Rev A
Title	EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 3			Date NOV 2017	Scale 1:500 @ A4

This page has been left blank intentionally.



Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

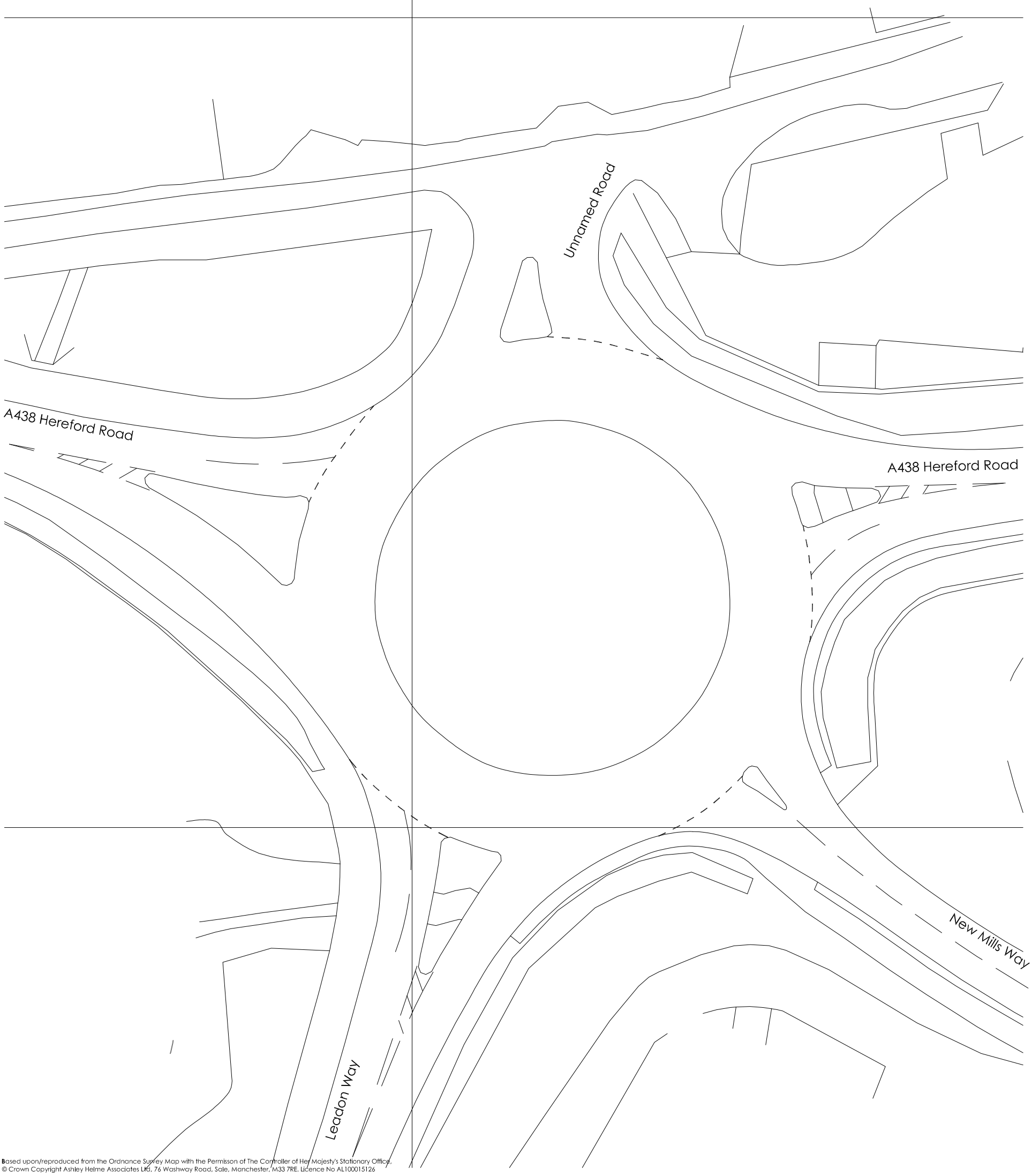
Project	Client	Drawing No	Rev
DYMOCK ROAD, LEDBURY	GLADMAN DEVELOPMENTS	1394/04	A
Title		**Date**	**Scale**
EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 4		NOV 2017	1:500 @ A3

This page has been left blank intentionally.

N

Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey



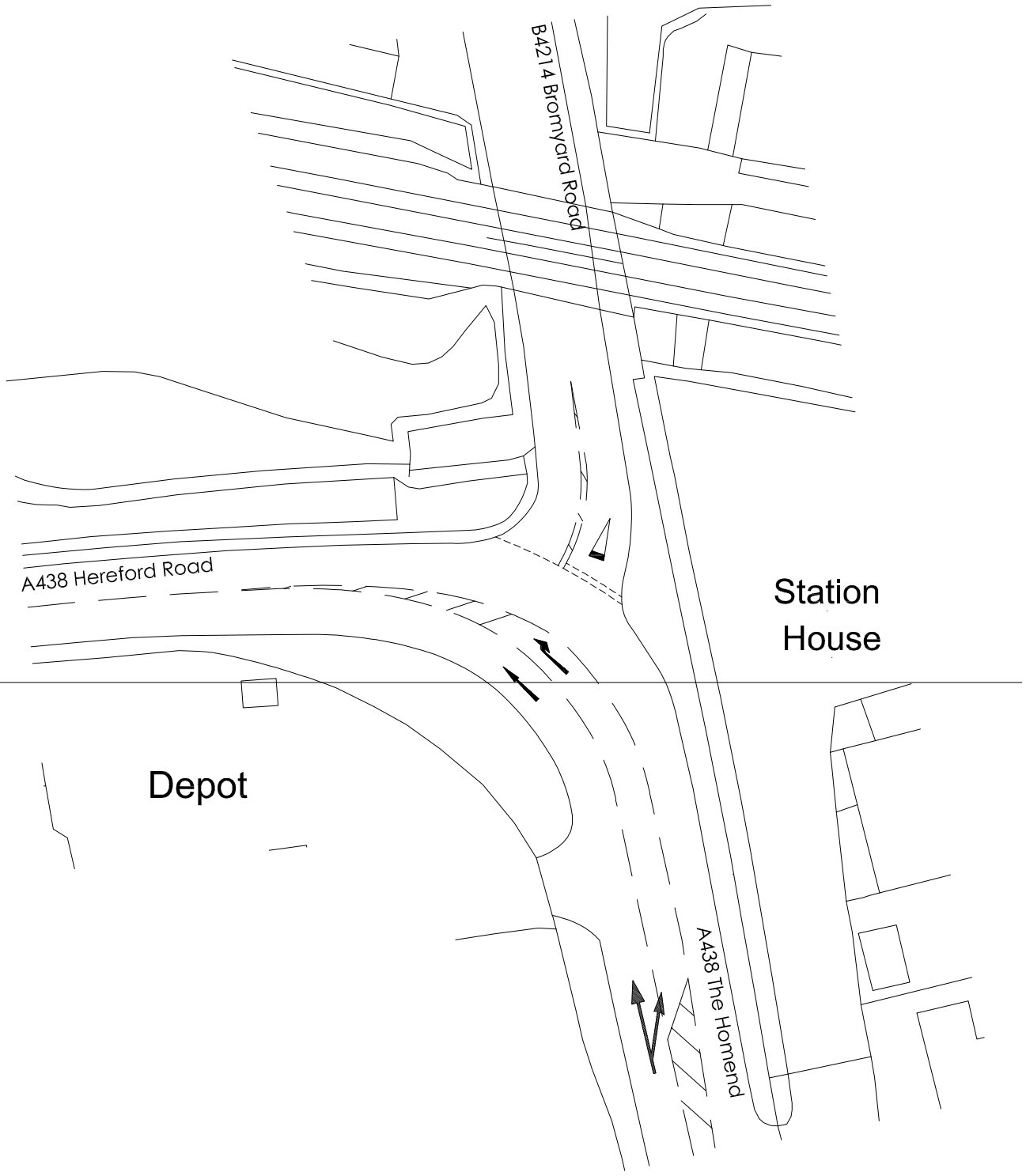
ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Project	Client	Drawing No	Rev
DYMOCK ROAD, LEDBURY	GLADMAN DEVELOPMENTS	1394/05	A
Title		Date	Scale
EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 5		NOV 2017	1:500 @ A3

This page has been left blank intentionally.

Notes:

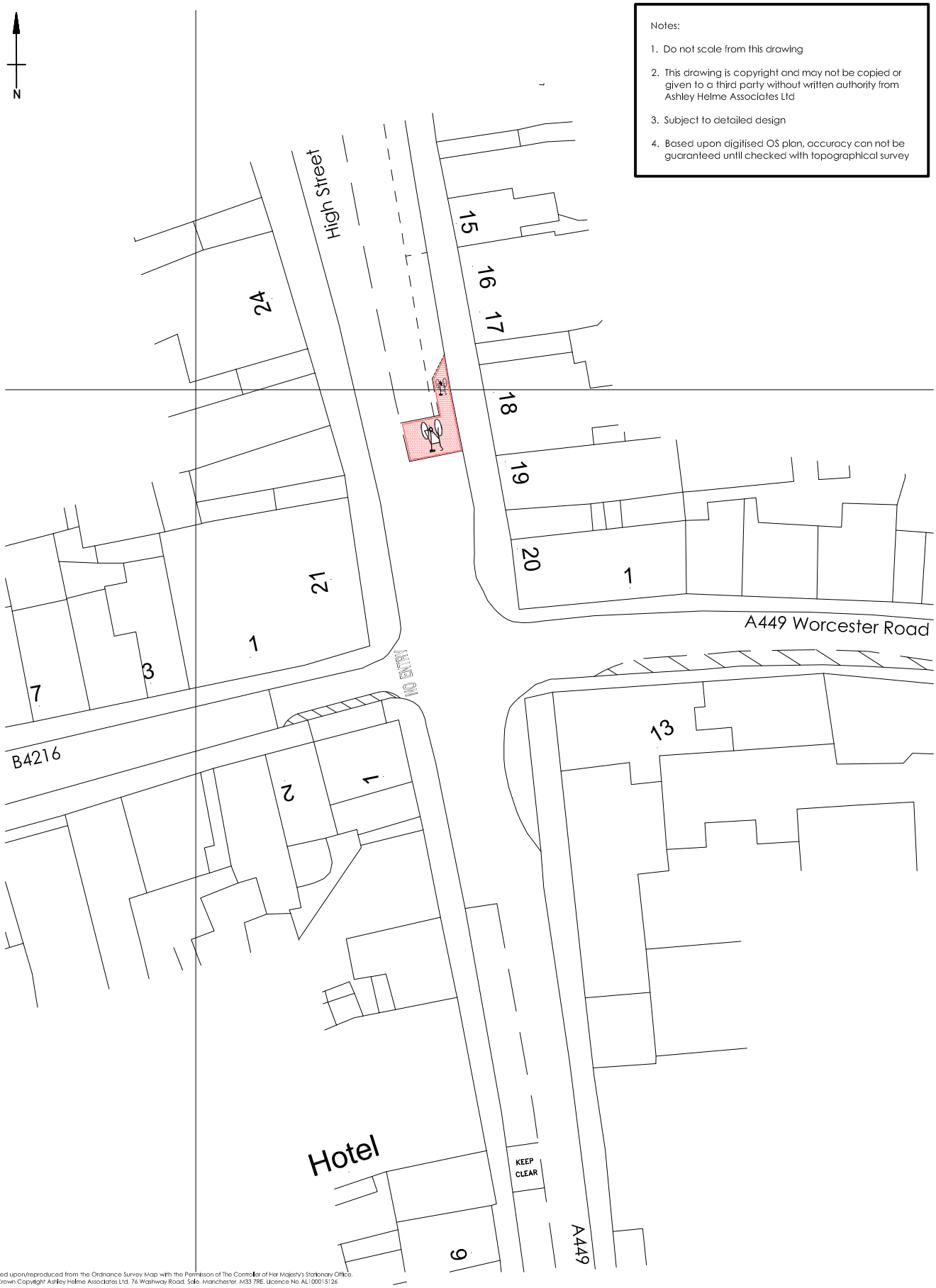
1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey



ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Project	DYMOCK ROAD, LEDBURY	Client	GLADMAN DEVELOPMENTS	Drawing No	Rev
				1394/06	A
Title	EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 6			Date	Scale
				NOV 2017	1:500 @ A4

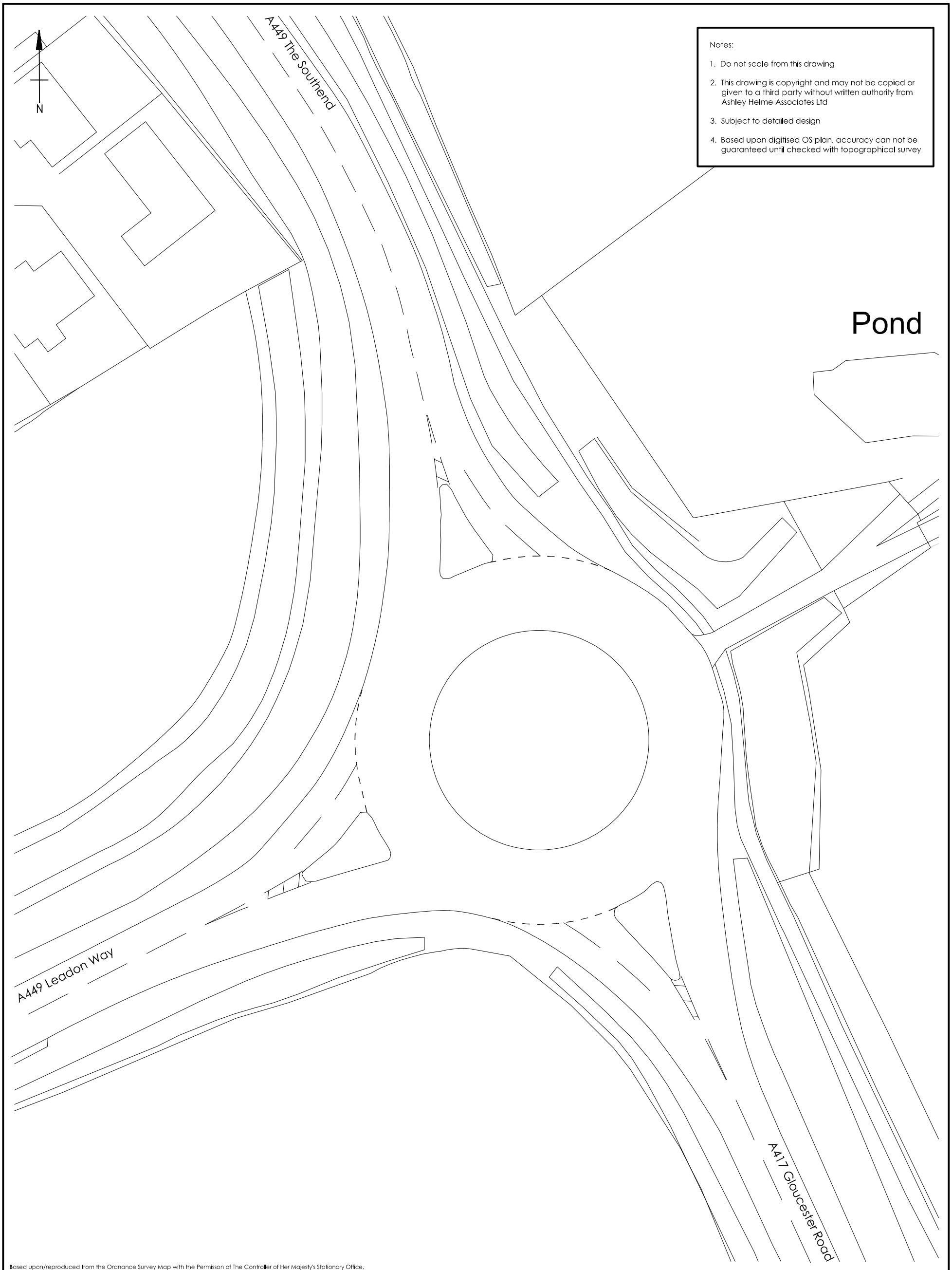
This page has been left blank intentionally.



ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Project	DYMOCK ROAD, LEDBURY	Client	GLADMAN DEVELOPMENTS LTD	Drawing No 1394/07	Rev A
Title	EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 7			Date NOV 2017	Scale 1:500 @ A4

This page has been left blank intentionally.



Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Project	Client	Drawing No	Rev
DYMOCK ROAD, LEDBURY	GLADMAN DEVELOPMENTS	1394/08	A
Title		**Date**	**Scale**
EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 8		NOV 2017	1:500 @ A3

This page has been left blank intentionally.

Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

N

Refer AHA Drg No 1394/10 for proposed pedestrian improvements along Martin's Way and Biddulph Way

Introduce dropped kerbs and tactile paving at junction. Termination or continuation of proposed cycleway to be reviewed at detailed design stage

Introduce pedestrian/cycle link to the Leadon Way/Ross Road roundabout

Pedestrian/cycle link to the Leadon Way/Ross Road roundabout to be provided through the Site/on B4216 south of the A449 Leadon Way

Introduce gateway feature at the commencement of the new 40mph speed limit. The exact details and location of the gateway feature are to be agreed with the highway authority, but could include for example high visibility speed limit signage and coloured textured surfacing on the approach to speed limit change.

Introduce roundabout at existing Leadon Way/Martins Way junction

HAZLE CLOSE

LEADON WAY

Play Area

LB

Provide footway/cycle link

Introduce 3.0m wide shared footway/cycleway to Leadon Way/Ross Road roundabout

Introduce 40mph speed limit on Leadon Way between 'Full Pitcher' roundabout and a point to the east of the new Site access roundabout. Details to be agreed with highway authority.

Proposed Site Access

Street lighting to be introduced at the junction and on Leadon Way along the extent of the 40mph speed limit, details to be agreed with the highway authority

B4216

Key:

- Proposed kerbline
- Existing road markings
- Proposed road markings
- Proposed footway/cycleway (to be 3m wide where achievable)
- Proposed footway
- Existing footway
- 120m stopping sight distance (based on proposed speed limit)
- Internal footpath link
- Site western boundary

INDICATIVE ONLY
SUBJECT TO DETAILED DESIGN

Rev	Description	Date

Client: GLADMAN DEVELOPMENTS

Project: LEADON WAY, LEDBURY

Title: INDICATIVE ROUNDABOUT JUNCTION

Date: JAN 2015

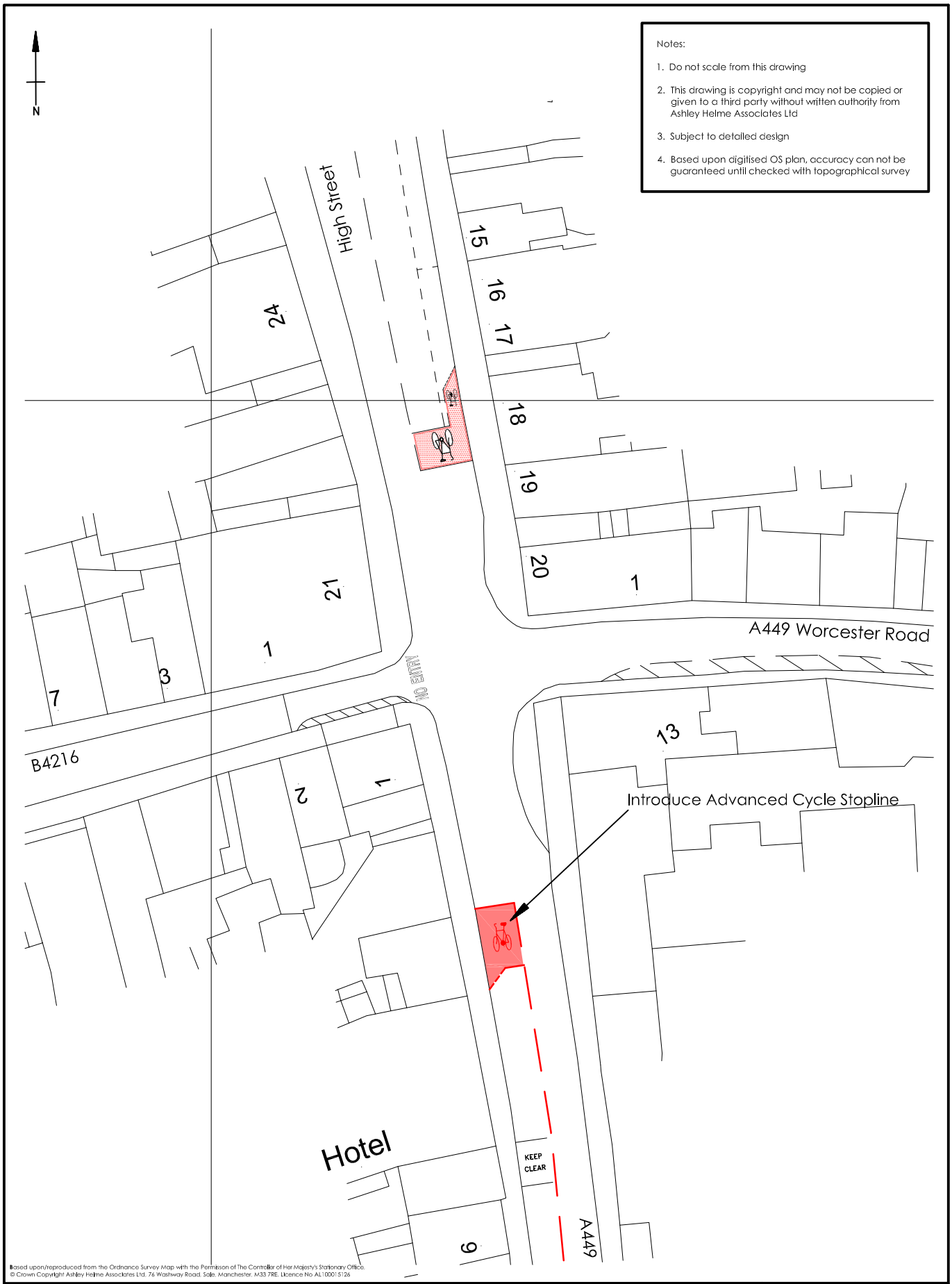
Scale: 1:1000@A2

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Drawing No: 1394/10

Revision:

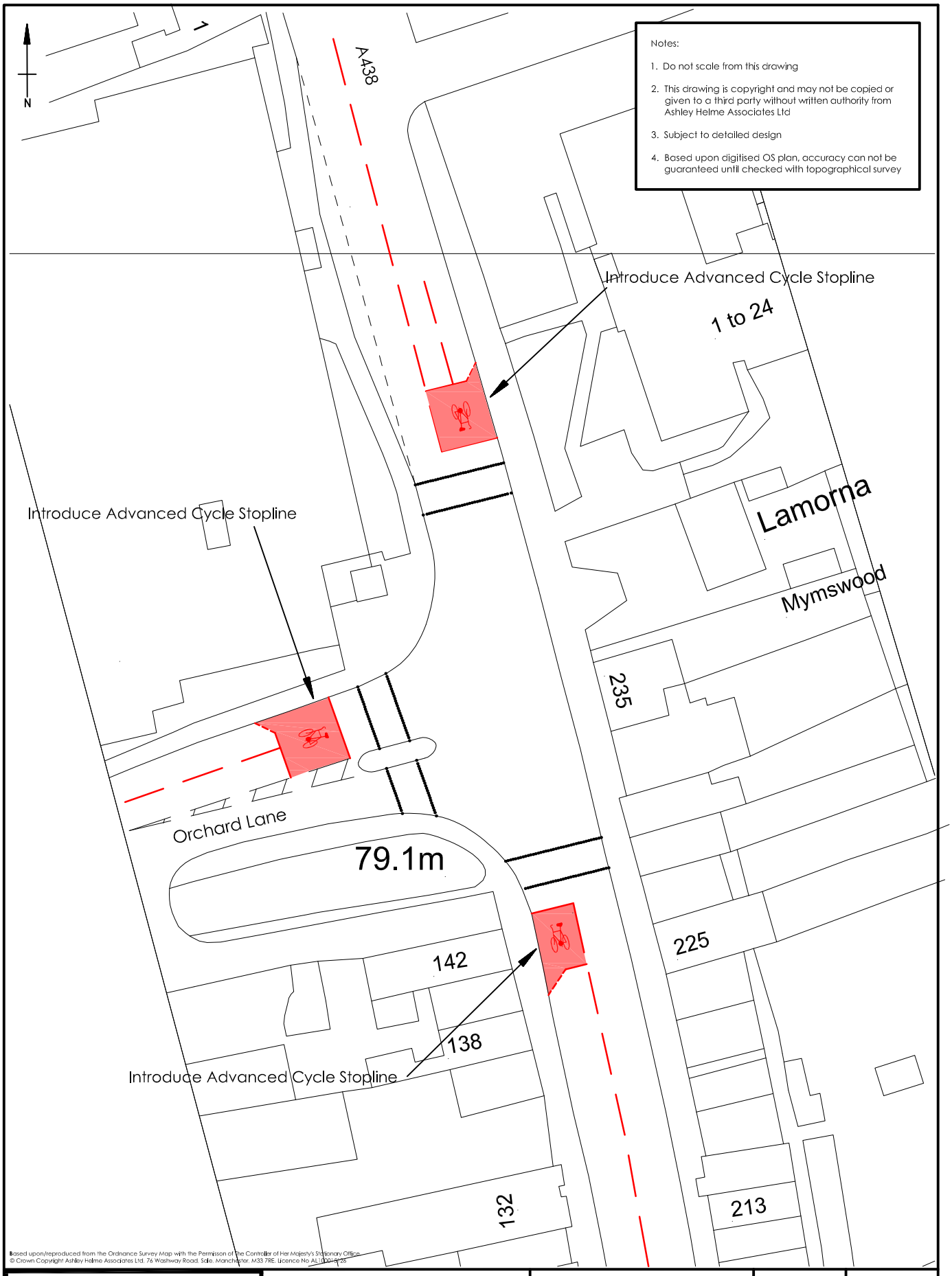
This page has been left intentionally blank



ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Project	DYMOCK ROAD, LEDBURY	Client	GLADMAN DEVELOPMENTS LTD	Drawing No 1394/24	Rev
Title	PROPOSED CYCLE IMPROVEMENTS: STUDY JUNCTION 7			Date JULY 2018	Scale 1:500 @ A4

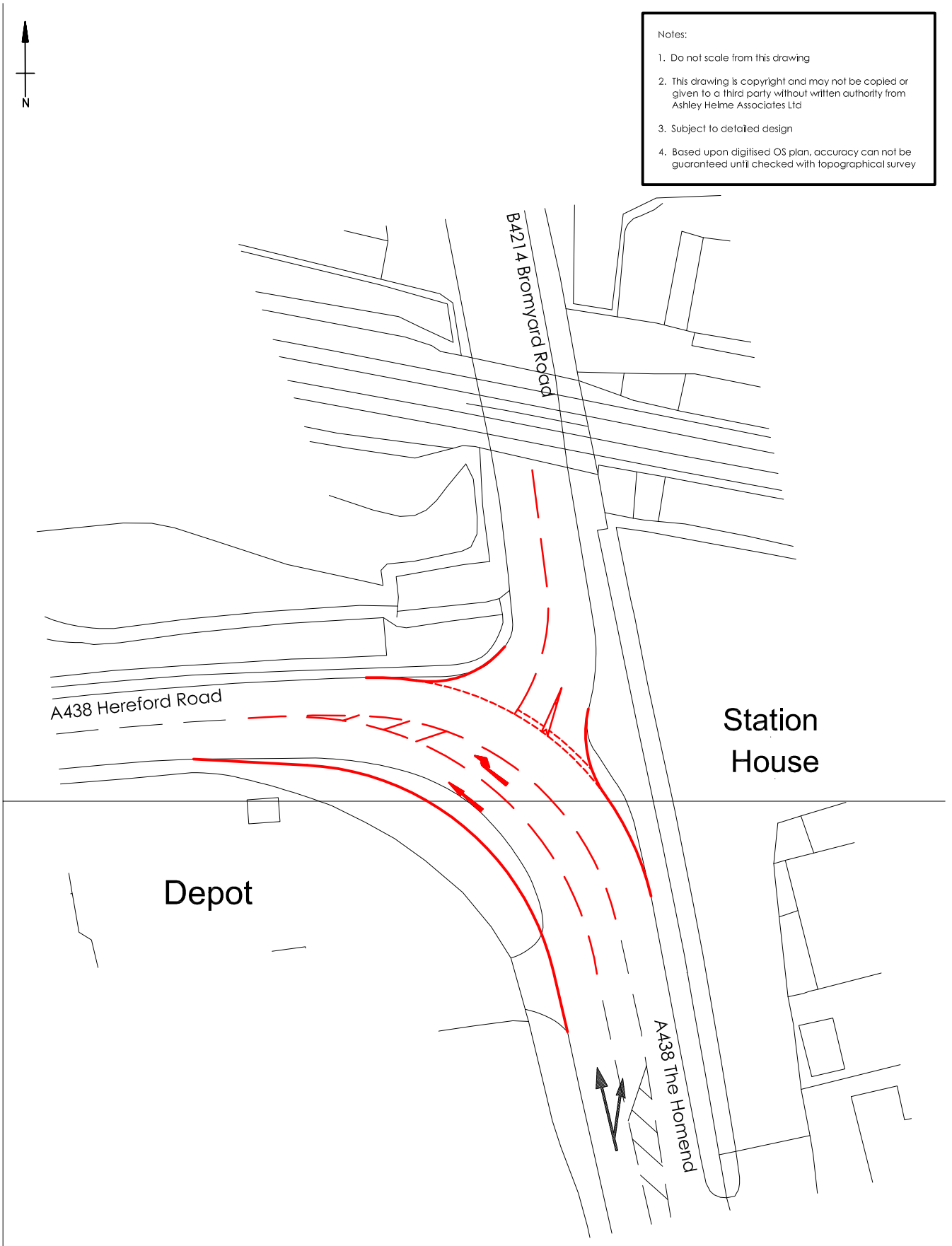
This page has been left blank intentionally.



ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Project	DYMOCK ROAD, LEDBURY	Client	GLADMAN DEVELOPMENTS LTD	Drawing No 1394/25	Rev
Title	PROPOSED CYCLE IMPROVEMENTS A438/ORCHARD LANE SIGNAL JUNCTION			Date JULY 2018	Scale 1:500 @ A4

This page has been left blank intentionally.



ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Project	DYMOCK ROAD LEDBURY	Client	GLADMAN DEVELOPMENTS	Drawing No 1394/26	Rev
Title	INDICATIVE JUNCTION IMPROVEMENT: STUDY JUNCTION 6			Date AUG 2018	Scale 1:500 @ A4

This page has been left blank intentionally.

Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

Introduce 3.0m wide shared footway/cycleway on east side of Leadon Way.
Introduce street lighting along Leadon Way between the Ross Road roundabout and Little Marcle Road roundabout. Extend the proposed 40mph speed limit (to be introduced at the Ross Road Roundabout) to

Key:

- Proposed kerbline
- Proposed road markings
- Proposed new shared footway/cycleway
- HCC improvement scheme at Ross Road/Dymock Road roundabout
- Shared footway/cycleway to be provided as part of the permitted Barratt scheme to the north

Project: LAND OFF DYMOCK ROAD, LEDBURY	Client: GLADMAN	Drawing No: 1394/27	Rev:
Title: PROPOSED FOOTWAY/CYCLEWAY SCHEME ON LEADON WAY		Date: JULY 2018	Scale: 1:1250@A2

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Do not Print

Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
2. Subject to detailed design
3. Based upon topographical survey and OS plan

N

Orchard House

Bramleigh

Leadon Way

B4216 New Street

A449 Ross Road

A417 Leadon Way

Introduce shared footway/cycleway crossing points at the Ross Road/Dymock Road roundabout

Barratts schemme includes shared footway/cycleway along Leadon Way between Ross Road roundabout and Barratt roundabout juncton

Wharf Cottages

2 1

10

B4216

Play Area

HAZLE CLOSE

39 8 12 31 34 33

Proposed vehicular and pedestrian/cycle link between the Site and the permitted Barratts scheme

Key:

- Proposed kerbline
- Proposed road markings
- Proposed new shared footway/cycleway
- HCC improvement scheme at Ross Road/Dymock Road roundabout
- Shared footway/cycleway to be provided as part of the permitted Barratt scheme to the north

Project: LAND OFF DYMOCK ROAD, LEDBURY	Client: GLADMAN	Drawing No: 1394/28	Rev:
Title: PROPOSED ACCESS LINK THROUGH TO BARRATT HOMES SCHEME		Date: OCT 2018	Scale: 1:1250@A2

ashleyhelme associates
76 washway road, sale, manchester, m33 7re
e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Do not Print

ashleyhelme
associates

76 washway road
sale, manchester, m33 7re
tel 0161 972 0552
fax 0161 972 0553