

**Clywedog Road North,
Wrexham**

TRANSPORT STATEMENT

Report prepared for
JCP Investments Ltd

October 2020

Report Reference 1717/1/C



ASHLEY HELME
ASSOCIATES



Transport Statement

Clywedog Road North, Wrexham

Client: JCP Investments Ltd
Report Ref: 1717/1/C
Status: Final
Date: October 2020

Ashley Helme Associates Ltd

76 Washway Road
SALE, Manchester
M33 7RE

Telephone
0161 972 0552

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

COPYRIGHT

© 2020 by Ashley Helme Associates Ltd
No part of this publication may be reproduced by any means
Without the permission of Ashley Helme Associates Ltd



Transport Statement

Clywedog Road North, Wrexham

Chapter	Page
1. Introduction	1
2. Highway Network	2
3. Proposed Site Access Arrangements	4
4. Accessibility by Non-Car Modes	8
5. Traffic Impact	12
6. Summary & Conclusions	15

Figures

- 1.1 Location Plan
- 4.1 Walk Isochrones
- 4.2 Cycle Isochrones

Tables

- 4.1 Bus Services

Appendices

- A Sustrans Map
- B TRICS Output

Drawings

- 1717/01/B Proposed Site Access Arrangements
- 1717/SP/01/A Swept Path Analysis



1 Introduction

- 1.1 Ashley Helme Associates Limited (AHA) are appointed by JCP Investments Ltd to prepare a Transport Statement (TS) to support a planning application for a proposed new B1(c)/B2/B8 unit on Clywedog Road North, Wrexham Industrial Estate (henceforth referred to as the Site). The location of the Site is indicated on Figure 1.1, in the context of the local highway network.

1.2 Existing Situation & Proposed Development

- 1.2.1 The Site is located on land to the west of Clywedog Road North, between the existing Décor-Lam Ltd unit and the Etiquette Labels Ltd unit. The existing AST Plastics unit is located to the west of the Site.
- 1.2.2 The proposed development comprises a standalone 2161sm GFA B1(c)/B2/B8 unit on the Site land. The development is speculative and the applicant wishes to allow a wide range of potential end users and hence, the application is for a B1(c)/B2/B8 use class. Vehicular access to the development will be provided via a new access on Clywedog Road North. Pedestrian and cycle access will also be via Clywedog Road North.

1.3 Scope of the Report

- 1.3.1 The issues addressed within this TS fall broadly into the following areas:
- Accessibility by non-car modes, and
 - Access and parking.
- 1.3.2 The local highway network is described in Chapter 2.
- 1.3.3 The proposed Site access arrangements and parking provision are outlined in Chapter 3.
- 1.3.4 The accessibility of the Site by choice of mode is considered in Chapter 4.
- 1.3.5 The estimate of the traffic generated by the proposed warehouse is set out in Chapter 5.
- 1.3.6 The summary and conclusions of the TS are presented in Chapter 6.



2 Highway Network

- 2.1 The location of the Site is shown on Figure 1.1. The Site is located on land to the west of Clywedog Road North, Wrexham Industrial Estate. Clywedog Road East is located to the south of the Site.
- 2.2 Clywedog Road North is a circa 7.5m wide single carriageway road and subject to a 40mph speed limit. There is continuous footway on the west and south side of the carriageway. Footway is also present on the east and north side of the road, where there are industrial units along the frontage.
- 2.3 Clywedog Road North forms priority-controlled T-junctions with Clywedog Road South and Clywedog Road East, to the north and south of the Site respectively. Further north of the Site, Clywedog Road North forms a priority-controlled T-junction with Abenbury Way. Abenbury Way forms part of the main route through Wrexham Industrial Estate, which provides a link between the B5130 to the east and the A534 to the north.
- 2.4 Clywedog Road East forms a priority-controlled T-junction with Clywedog Road South to the southwest of the Site. It also forms a roundabout junction with Bridge Road South to the southeast of the Site. Clywedog Road South and Bridge Road South provide a link to Cefn Road and the A525 further south.

2.5 Accident Records

- 2.5.1 AHA has reviewed the Crashmap database for the most recent five-year period for the roads in the immediate vicinity of the Site.
- 2.5.2 There are no recorded accidents on Clywedog Road North and Clywedog Road East in the latest 5 year accident records.
- 2.5.3 There are four recorded accidents on Clywedog Road South in the latest 5 year accident data. These are classified as follows:

Date	No Vehicle	No Casualties	Severity
18.02.16	2	1	Serious,
08.03.16	2	1	Serious,
02.06.17	1	1	Slight,
25.06.19	2	2	Slight.



- 2.5.4 Clywedog Road South is circa 1.2km in length and the four recorded accidents are not clustered in one particular section of the road. Therefore, the accident data does not indicate a recurring accident type/problem on Clywedog Road South.



3 Proposed Site Access and Parking Arrangements

3.1 Design Standards

- 3.1.1 The access proposals comprise the creation of a new priority-controlled T-junction on Clywedog Road North to serve the development. The Design Manual for Roads and Bridges (DMRB) publication CD 123 provides guidance on the design of priority-controlled junctions.
- 3.1.2 The Welsh Assembly Government publication Technical Advice Note 18 (TAN 18) also includes guidance on some aspects of priority control junction design.
- 3.1.3 Due consideration is given to CD 123 and TAN 18 in the design of the proposed Site access arrangements.

3.2 Site Access

- 3.2.1 It is proposed to introduce a new access on Clywedog Road North to serve the new warehouse unit. The proposed access is indicated on Drg No 1717/01/B and comprise:
- 7.3m wide access road,
 - 12.5m corner radii,
 - 2.0m footways,
 - 2.4m x 46m visibility splay to the left,
 - 2.4m x 37m visibility splay to the right.

3.2.2 Vehicular Speeds

- 3.2.2.1 AHA commissioned an ATC survey on Clywedog Road North in the vicinity of the proposed Site access. The ATC was located to the north of the proposed access close to the bend. The ATC survey was undertaken on seven consecutive days, starting on the 27 June and ending on the 3 July 2020. It is acknowledged that some Government restrictions in response to the Covid19 pandemic remained in place at the time of the surveys. Whilst this is likely to have affect traffic volumes along Clywedog Road North, it seems unlikely that this would have affected vehicular speeds significantly. Therefore, it is considered that the ATC speed data remains valid.
- 3.2.2.2 The speed data results of the ATC survey on Clywedg Road North are set out below:



24hr five day mean 85%ile Speed

Southbound	32.6mph,
Northbound	28.4mph.

3.2.2.3 The five day mean 85%ile speeds are slightly higher for both southbound and northbound directions than the seven day mean speeds.

3.2.2.4 Adopting the above design speeds, it is considered that Manual for Streets (MfS) stopping sight distances are appropriate in this location. On this basis, visibility splays of 2.4m x 46m and 2.4m x 37m to the left and right respectively are considered appropriate. These are indicated on Drg No 1717/01/B.

3.2.3 Swept Path Analysis

3.2.3.1 AHA has undertaken swept path analysis of the proposed access arrangements adopting a 16.5m articulated HGV as the design vehicle.

3.2.3.2 The swept path analysis shown on Drg No 1717/SP/01/A confirms that a 16.5m articulated HGV can enter and exit the Site in an acceptable manner. Drg No 1717/SP/01/A also shows that a 16.5m articulated HGV can reverse into position where the loading area is located.

3.2.3.3 It is demonstrated that the access arrangements can accommodate the movements of a 16.5m articulated HGV in an acceptable manner.

3.3 Parking

3.3.1 Car Parking

3.3.1.1 The Wrexham Borough Council (WBC) parking standards are set out in Local Planning Guidance Note No 16. The maximum car parking for B1, B2 and B8 uses are set out below:

- B1 Business and Light Industry: 1 space per 30sm,
- B2 General Industry: 1 space per 50sm,
- B8 Storage and Distribution: 1 space per 100sm.

3.3.1.2 The proposed unit comprises 2161sm GFA with a B1(c)/B2/B8 use. On this basis the maximum number of car park spaces that could be provided at the Site are:



- B1 Business and Light Industry: 72 spaces,
- B2 General Industry: 43 spaces,
- B8 Storage and Distribution: 22 spaces.

3.3.1.3 The WBC parking standard for B1 do not distinguish between B1(a), B1(b) or B1(c) and provide a single maximum value for all B1 use classes. Clearly, a B1(a) office use would be likely to have a greater number of employees per square metre than if the unit had a B1(c) industrial processes use and consequently would also be likely to require more spaces. It is considered that the WBC maximum standards for a B1 use are intended to accommodate the levels of demand that might be expected from a B1(a) use.

3.3.1.4 The development proposes 46 car park spaces and this equates to the average of the three maximum car parking standards set out above. It is considered that providing a level of parking close to the maximum B1 standard would be an over provision, given that the development will not B1(a) or B1(b) use. Similarly, providing spaces based on the B8 use could lead to a significant under provision should the end user have a B1(c) or B2 use. Therefore, it is considered that the provision of 46 car park spaces strikes the correct balance between not over providing car parking at the Site, whilst providing sufficient spaces to ensure that parking issues are unlikely to arise.

3.3.1.5 The WBC standards also require that a minimum of 10% of the total parking provision should be designated as disabled parking. On this basis the proposed development will provide 5 designated disabled parking spaces and these will be located close to the warehouse pedestrian entrance. This is indicated on the architect's plan.

3.3.1.6 The development also includes 2 Electric Vehicle parking spaces, with charging points.

3.3.2 Cycle Parking

3.3.2.1 The Wrexham Borough Council (WBC) cycle parking standards are also set out in Local Planning Guidance Note No 16. The maximum car parking for B1, B2 and B8 uses are set out below:

- B1 Business and Light Industry: 1 space per 300sm,
- B2 General Industry: 1 space per 500sm,
- B8 Storage and Distribution: 1 space per 1000sm,

3.3.2.2 The proposed development proposes 7 cycle parking spaces in accordance with the WBC standards for B1 Business and Light Industry (ie the highest requirement). This is to promote journey's to/from the development by cycle.



3.4 Summary

- 3.4.1 It is proposed that the development will be served by a new access on Clywedog Road North. The proposed access arrangements are indicated on Drg No 1717/01/B.
- 3.4.2 Visibility splays of 2.4m x 46m and 2.4m x 37m to the left and right respectively are indicated at the proposed Site access and these meet MfS visibility standards based on the existing speeds.
- 3.4.3 Drg No 1717/SP/01/A presents the results of the swept path tracking exercise for the proposed access arrangements, adopting a 16.5m rigid articulated HGV as the design vehicle. It is demonstrated that the proposed access arrangements can suitably accommodate the movements of the design vehicle.
- 3.4.4 The proposed development proposes 46 car park spaces and these are indicated on the masterplan. It is considered that the provision of 46 car park spaces strikes the correct balance of not over providing car parking at the Site, whilst providing sufficient spaces to ensure that parking issues are unlikely to arise.
- 3.4.5 The proposed development proposes 7 cycle spaces. These are in accordance with the WBC standards for B1 Business and Light Industry (ie the highest requirement). The development also includes 2 Electric Vehicle parking spaces, with charging points.



4 Accessibility By Non-Car Modes

4.1 Walk

- 4.1.1 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.
- 4.1.2 Figure 4.1 presents the 400m, 800m, 1200m, 1600m and 2000m walk isochrones. Wrexham Industrial Estate is located approximately 4km east of the centre of Wrexham and the existing residential areas on the eastern edge of the town are beyond a 2km walk. There is a small residential area located to the south of the Site. These dwelling are within a 1200m walk of the Site and are within a commutable distance of the proposed development.
- 4.1.3 There are existing food outlets located on Bridge Road South, including a café and diner. These are within a 1200m walk and will provide opportunity for employees of the Site to access these facilities by foot during a lunch period.
- 4.1.4 It is acknowledged that the location of the Site, within Wrexham Industrial Estate, is beyond a practical walking distance of the majority of residential areas in the local vicinity, with only a small residential area to the south of Clywedog Road East within a reasonable walk distance. Nevertheless, within the industrial estate there are a number of amenities including a diner and café that are within a practical walk distance of the Site. This means that employees of the site will be able to access these facilities by foot during in lunch periods without requiring to undertake car trips.

4.2 Cycle

- 4.2.1 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.
- 4.2.2 The CIHT guidance 'Cycle Friendly Infrastructure' (2004) 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)



4.2.3 There are existing cycle routes within Wrexham Industrial Estate and these are shown on the Sustrans Wrexham cycling leaflet included in Appendix A. The leaflet includes the off-road and advisory cycle routes within the industrial estate. Clywedog Road East and Clywedog Road South (between Clywedog Road East and Clywedog Road North) are advisory cycle routes that provide a route to Cefn Road via ErLas Lane and Redwither Lane. There is a shared footway/cycleway on the north side of Cefn Road between Redwither Lane and Queensway. Therefore, Wrexham Industrial Estate and the Site benefit from a good cycle connection to Wrexham.

4.2.4 Figure 4.2 presents the 2000m and 5000m cycle isochrones for the Site. Almost all of Wrexham Industrial Estate is within a 2km cycle ride of the Site, which provides employees opportunity to access the facilities within the estate during lunch periods.

4.2.5 A large residential area on the eastern side of Wrexham is within a 5km cycle ride of the Site. The village of Marchwiel is also within a 5km cycle ride of the Site and the village of Bangor-on-Dee is very slightly beyond a 5km cycle ride.

4.2.6 It is clear that there is a sizeable residential population within a practical cycle ride of the proposed development. This provides opportunity for employees to cycle to/from work.

4.2.7 Cycle Parking

4.2.7.1 As set out in Chapter 3, the proposed development includes cycle parking in accordance with WBC standards based on a B1 use.

4.2.7.2 Cycle storage will be provided as part of the proposed development in accordance with WBC standards, offering practical assistance and encouragement for employees to cycle to/from the proposed development.

4.3 Public Transport

4.3.1 The option for public transport journeys to/from the Site are bus and rail.

4.3.2 Bus

4.3.2.1 The closest bus stops to the Site are located as follows (measured from the Site centroid):

- Bridge Road (Northbound): 560m,



- Bridge Road (Southbound): 565m,
- Ash Road North: 835m.

4.3.2.2 The route most direct route between the Site and the bus stops on Bridge Road includes the section of Clywedog Road East between Bridge Road and Clywedog Road North. This section of the road does not have footway on either side, though wide grass verges are present. During the Site visit AHA observed pedestrians using the grass verge or walking in the road along this section, so it still appears to be used despite the lack of footway. Nevertheless, it is acknowledged that the lack of footway along this section of Clywedog Road East is not ideal.

4.3.2.3 Table 4.1 presents the bus services calling at the stops on Bridge Road and the frequencies. The 41A bus service operates between Wrexham bus station and the industrial estate. The 41A bus service operates with a 60 minute frequency Monday to Saturday. The first service from Wrexham bus station is at 0530 and the last bus departs Wrexham Industrial Estate at around 1815, arriving back at Wrexham bus station at 1832. Service 41A also calls at the bus stop on Ash Road North.

4.3.2.4 The 41B bus service operates between Wrexham General (Rail) Station and the industrial estate. The 41B operates on Sundays and Bank Holidays only.

4.3.2.5 It is acknowledged that the existing bus stops are slightly beyond the preferred walk distance of 400m. Nevertheless, they are within a reasonable walk distance of the Site and provide access to a regular service that operates between Wrexham and the industrial estate. This provides opportunity for employees of the Site to live in Wrexham and commute to/from work by bus.

4.3.3 Rail

4.3.3.1 Wrexham benefits from two stations, Wrexham General and Wrexham Central. Both stations are located close to the centre of the town. Wrexham General is a circa 550m walk from the bus station and Wrexham Central is a circa 280m walk from the bus station. Therefore, both train stations are within a practical walk of the town's bus station, where the 41A and 41B services can be accessed. The 41B actually commences from a stop at Wrexham General so can easily be accessed by those arriving/departing from that station.

4.3.3.2 Wrexham General is the town's main station and is operated by Transport for Wales. It is located on the Shrewsbury to Chester line and also the Borderlands Line. Destinations available from Wrexham General include:

Destination	Approximate Journey Time
-------------	--------------------------



Bidston	55min
Buckley	20min
Chester	20min
Ruabon	10min
Shrewsbury	40min
Shotton	30min.

4.3.3.3 Wrexham Central is the lesser of the Town's rail stations and is located on the Borderlands Line which operates between Shotton and Bidston. The journey times between Wrexham Central and Bidston, Buckley and Shotton are very slightly longer than those from Wrexham General.

4.3.3.4 Wrexham benefits from two train stations that are also accessible to the Site using the 41A and 41B bus services. This provides opportunity for employees that live outside of Wrexham to potentially commute to the Site using public transport.

4.4 Summary

4.4.1 It is acknowledged that the location of the Site within Wrexham Industrial Estate limits the opportunity of employees to commute to work by foot. There is a small residential area to the south of the Site within a practical walk distance, but the majority of residential areas in and around Wrexham are beyond a realistic walking distance for commuting journeys.

4.4.2 However, it is demonstrated that the Site is very accessible by cycle, with existing cycle routes linking Wrexham to the industrial estate and additional routes within the industrial estate itself. This provides good opportunity for employees of the Site to cycle to/from the place of work. Cycle parking in accordance with WBC standards will be provided at the Site as part of the proposed development.

4.4.3 Similarly, the Site is accessible by public transport. The 41A and 41B buses provide an hourly service between Wrexham and the industrial estate. The nearest stops are slightly beyond the preferred walk distance of 400m, but are within a reasonable walk distance that is unlikely to deter usage. Furthermore, the 41A and 41B services provide access to Wrexham General and Central rail stations. This provides further opportunity for employees that live outside of Wrexham to potentially commute to the Site using public transport.



5 Traffic Impact

5.1 Peak Periods

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

5.2 Proposed Development

- 5.2.1 The proposed development comprises a standalone B1(c)/B2/B8 unit on the Site land. The development is speculative and the applicant wishes to allow a wide range of potential end users and hence, the application is for a B1(c)/B2/B8 use class.
- 5.2.2 At this stage the end user is not known and could have a general industrial use or a storage/warehousing use. Therefore, TRIC is interrogated for both industrial and warehousing uses to identify AM and PM peak hour trip rates for both uses.
- 5.2.3 TRICS is interrogated for information about trip generation rates for Commercial Warehousing. Criteria adopted for this interrogation include:
- Warehousing (Commercial);
 - Sites between 1000-7000sm;
 - All surveys 2012 or more recent;
 - Sites in Ireland, Northern Ireland and Greater London excluded on the basis that they may have significantly different travel characteristics;
 - If a site has multiple survey date entries, include only the most recent survey used within the identified TRICS sample, (to avoid statistical bias in the trip rates identified for use in the analysis).
- 5.2.4 On this basis, 4 sites are identified and the results of the TRICS interrogation are included in Appendix B. TRICS explicitly states that the 85thile statistic is not reliable for a database with less than 20 entries. Thus, average trip rates are adopted to estimate the traffic generated by the proposed warehouse unit.
- 5.2.5 The AM and PM peak hours of a highway network are typically 0800-0900 and 1700-1800. However, review of the TRICS data shows that the two-way trip rates for 1630-1730 are higher than the 1700-1800 trip generation rates. Therefore, for robustness the higher trip generation rates are adopted. The AM and PM peak hour trip rates based on the above TRICS interrogation are:



	ARR	DEP	2-WAY
AM	0.426	0.196	0.622
PM	0.175	0.404	0.579.

5.2.6 TRICS is interrogated for information about trip generation rates for Industrial Units. Criteria adopted for this interrogation include:

- Industrial Unit;
- Sites between 1000-5000sm;
- All surveys 2012 or more recent;
- Sites in Ireland, Northern Ireland and Greater London excluded on the basis that they may have significantly different travel characteristics;
- If a site has multiple survey date entries, include only the most recent survey used within the identified TRICS sample, (to avoid statistical bias in the trip rates identified for use in the analysis).

5.2.7 On this basis, 10 sites are identified and the results of the TRICS interrogation are included in Appendix B. TRICS explicitly states that the 85%ile statistic is not reliable for a database with less than 20 entries. Thus, average trip rates are adopted to estimate the traffic generated by the proposed warehouse unit.

5.2.8 The AM and PM peak hours of a highway network are typically 0800-0900 and 1700-1800. However, review of the TRICS data shows that the two-way trip rates for 1630-1730 are higher than the 1700-1800 trip generation rates. Therefore, for robustness the higher trip generation rates are adopted. The AM and PM peak hour trip rates based on the above TRICS interrogation are:

	ARR	DEP	2-WAY
AM	0.519	0.100	0.619
PM	0.120	0.436	0.556.

5.2.9 Review of the above trip generation rates shows that the two-way warehouse trip rates are highest in both the AM and PM peak hours. Therefore, for robustness the warehouse trip rates are adopted for estimating the peak hour traffic generated by the proposed development.

5.2.10 The consequent estimate of traffic (in vehicles) generated by the proposed development in the AM and PM peak hours is:

	ARR	DEP	2-WAY
AM	9	4	13
PM	4	9	13.



- 5.2.11 Review of the above shows that the proposed development is estimated to generate only 11 two-way movements in the AM and PM peak hours.

5.3 Traffic Impact

- 5.3.1 It is demonstrated that the traffic impact of the proposed development in the AM and PM peak hours is likely to be very modest. Furthermore, the network of roads in the vicinity of the Site are likely to distribute the traffic impact of the development along several roads, further reducing the impact of the traffic generated by the proposed development.
- 5.3.2 Therefore, it is concluded that the traffic impact of the proposed residential development on the local highway network is **not material**.



6 Summary and Conclusions

- 6.1 Ashley Helme Associates Limited (AHA) are appointed by JCP Investments Ltd to prepare a Transport Statement (TS) to support a planning application for a proposed new B1(c)/B2/B8 unit on Clywedog Road North, Wrexham Industrial Estate (henceforth referred to as the Site).

6.2 Existing Situation & Proposed Development

- 6.2.1 The Site is located on land to the west of Clywedog Road North, between the existing Décor-Lam Ltd unit and Etiquette Labels Ltd unit. The existing AST Plastics unit is located to the west of the Site.
- 6.2.2 The proposed development comprises a standalone 2161sm GFA B1(c)/B2/B8 unit on the Site land. The development is speculative and the applicant wishes to allow a wide range of potential end users and hence, the application is for a B1(c)/B2/B8 use class. Vehicular access to the new warehouse unit will be provided via a new access on Clywedog Road North. Pedestrian and cycle access will also be via Clywedog Road North.

6.3 Access Arrangements

- 6.3.1 It is proposed that the development will be served by a new access on Clywedog Road North. The proposed access is indicated on Drg No 1717/01/B and comprise:
- 7.3m wide access road,
 - 12.5m corner radii,
 - 2.0m footways,
 - 2.4m x 46m visibility splay to the left,
 - 2.4m x 37m visibility splay to the right.
- 6.3.2 Visibility splays of 2.4m x 46m and 2.4m x 37m to the left and right respectively are achievable at the proposed access and these meet MfS design standards based on existing speeds.

6.3.3 Swept Path Tracking

- 6.3.3.1 Drg No 1717/SP/01/A presents the results of the swept path tracking exercise for the proposed access arrangements, adopting a 16.5m rigid articulated HGV as the design vehicle. It is demonstrated that the proposed access arrangements can suitably accommodate the movements of the design vehicle.



6.3.4 Car Parking

6.3.4.1 The proposed development proposes 46 car park spaces and these are indicated on the masterplan. It is considered that the provision of 46 car park spaces strikes the correct balance between not over providing car parking at the Site, whilst providing sufficient spaces to ensure that parking issues are unlikely to arise.

6.3.4.2 The WBC standards also require that a minimum of 10% of the total parking provision should be designated as disabled parking. On this basis the proposed development will provide 5 designated disabled parking spaces and these will be located close to the warehouse pedestrian entrance. The development also includes 2 Electric Vehicle parking spaces, with charging points.

6.3.5 Cycle Parking

6.3.5.1 The proposed development proposes 7 cycle spaces. These are in accordance with the WBC standards for B1 Business and Light Industry (ie the highest requirement).

6.4 Sustainability

6.4.1 It is acknowledged that the location of the Site within Wrexham Industrial Estate limits the opportunity of employees to commute to work by foot. There is a small residential area to the south of the Site within a practical walk distance, but the majority of residential areas in and around Wrexham are beyond a realistic walking distance for commuting journeys.

6.4.2 However, it is demonstrated that the Site is very accessible by cycle, with existing cycle routes linking Wrexham to the industrial estate and additional routes within the industrial estate itself. This provides good opportunity for employees of the Site to cycle to/from the place of work. Cycle parking in accordance with WBC standards will be provided at the Site as part of the proposed development.

6.4.3 Similarly, the Site is accessible by public transport. The 41A and 41B buses provide an hourly service between Wrexham and the industrial estate. The nearest stops are slightly beyond the preferred walk distance of 400m, but are within a reasonable walk distance that is unlikely to deter usage. Furthermore, the 41A and 41B services provide access to Wrexham General and Central rail stations. This provides further opportunity for employees that live outside of Wrexham to potentially commute to the Site using public transport.



6.5 Traffic Impact

6.5.1 The estimate of traffic (in vehicles) generated by the proposed development in the AM and PM peak hours is:

	ARR	DEP	2-WAY
AM	9	4	13
PM	4	9	13.

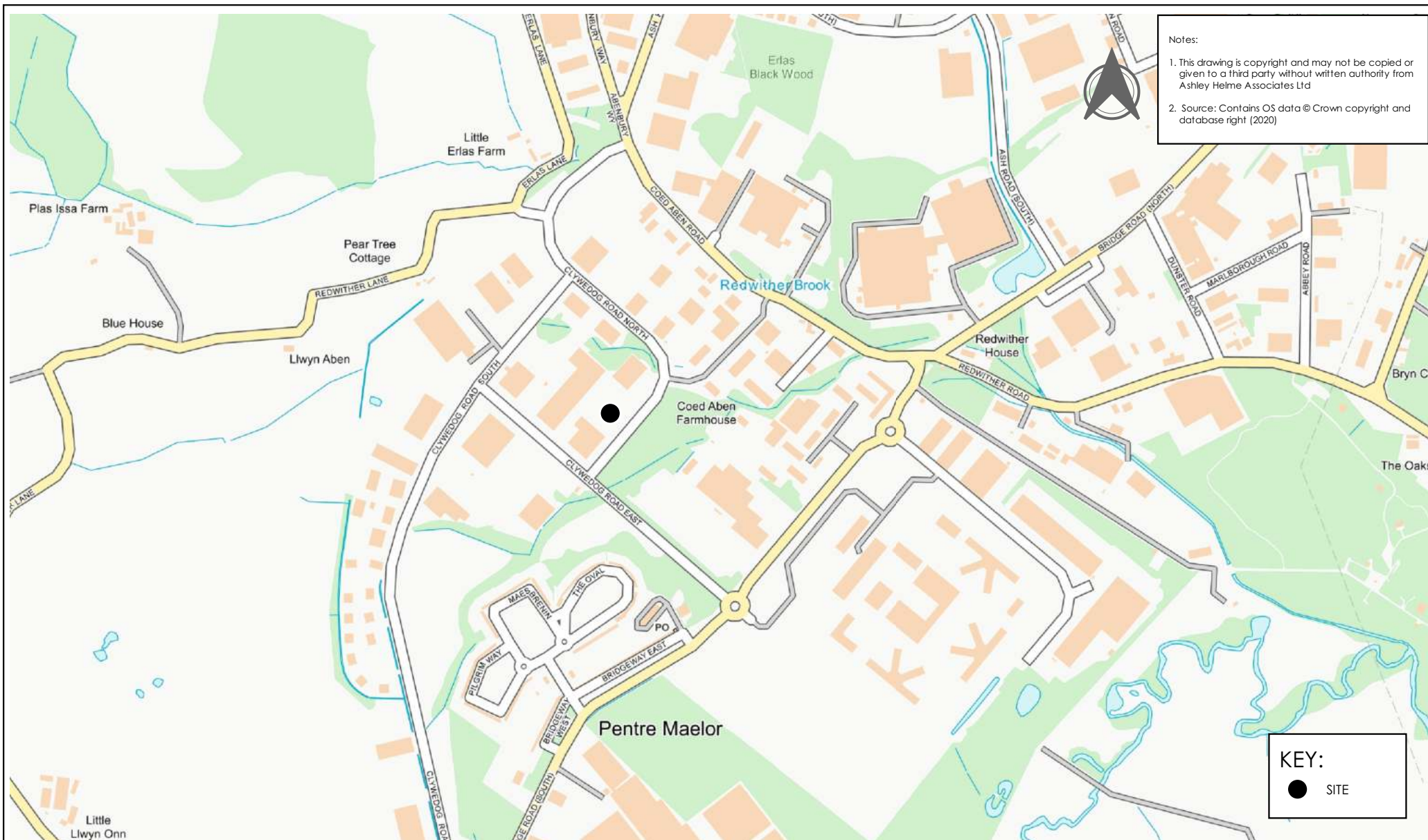
6.5.2 It is demonstrated that the traffic impact of the proposed development in the AM and PM peak hours is likely to be very modest. Furthermore, the network of roads in the vicinity of the Site are likely to distribute the traffic impact of the development along several roads, further reducing the impact of the traffic generated by the proposed development.

6.5.3 Therefore, it is concluded that the traffic impact of the proposed residential development on the local highway network is **not material**.

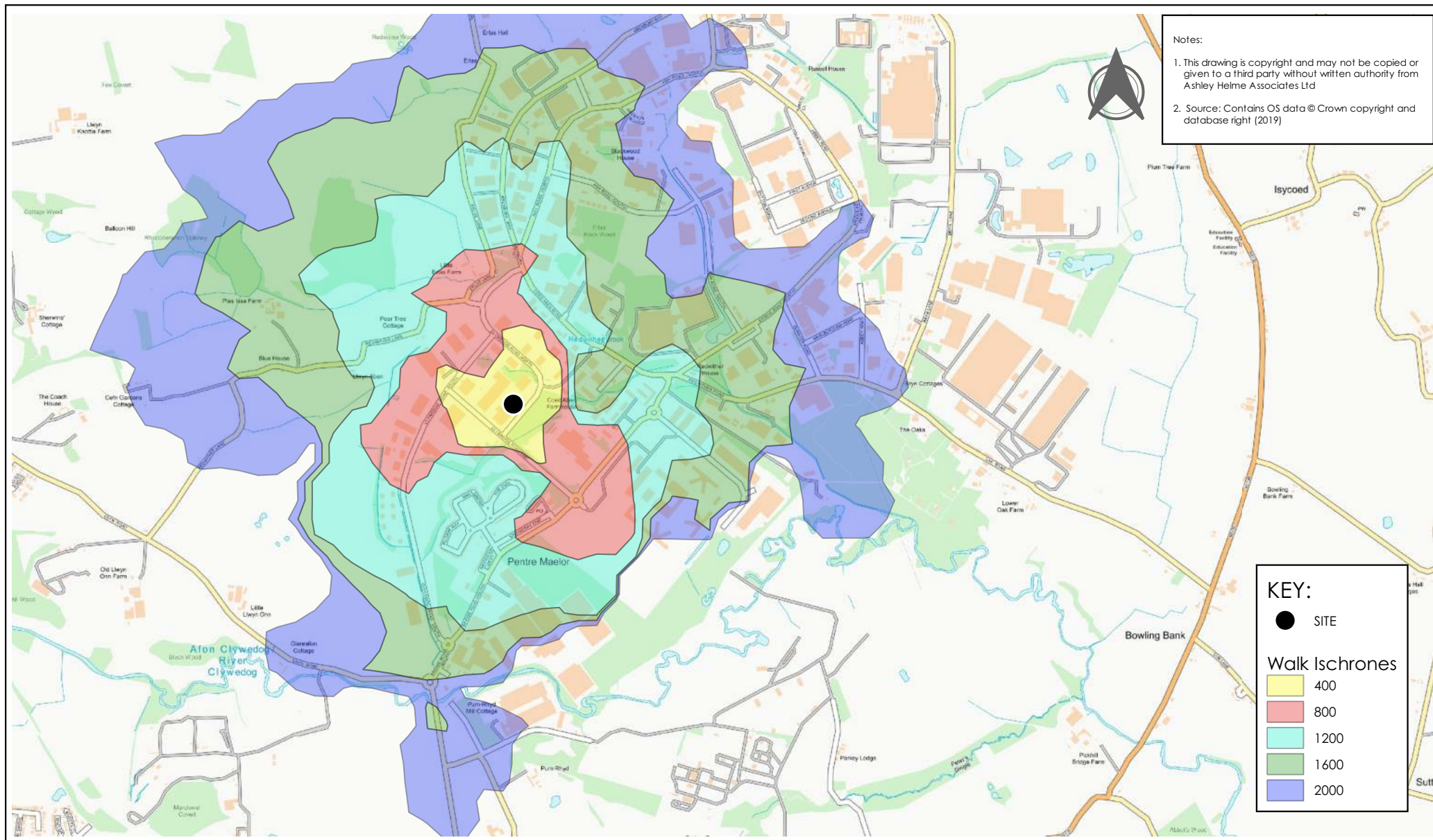
6.6 Summary

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

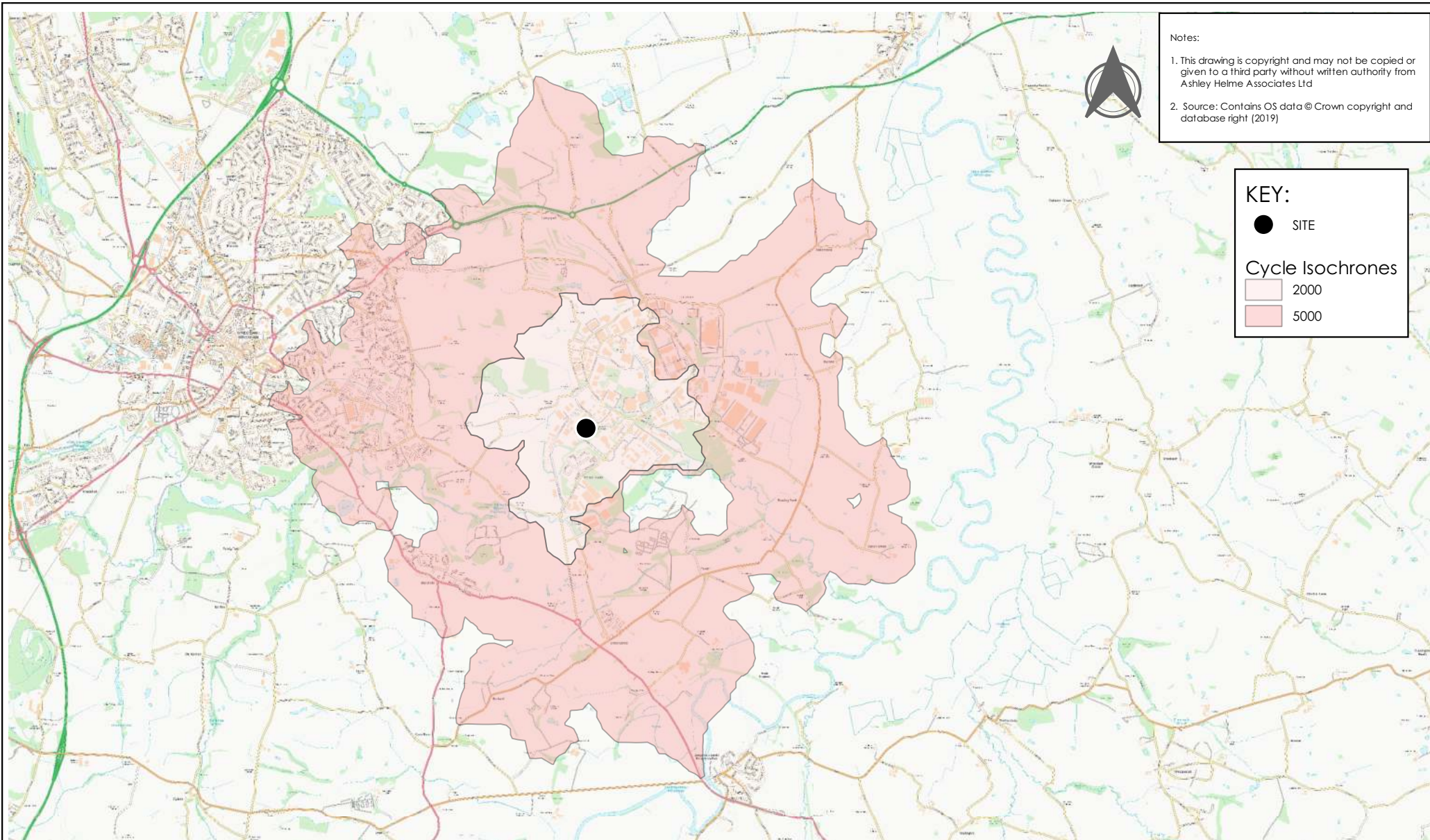
Figures



Project: CLYWEDOG ROAD NORTH, WREXHAM	Title: LOCATION PLAN	FIGURE 1.1		
Client: CAULMERT		Date: JUNE 2020	Scale: NTS	



Project: CLYWEDOG ROAD NORTH	Title: WALK ISOCHRONES	FIGURE 4.1		
Client: JCP INVESTMENTS LTD		Date: JUNE 2020	Scale: NTS	



Notes:

1. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
2. Source: Contains OS data © Crown copyright and database right (2019)

KEY:

● SITE

Cycle Isochrones

2000

5000

Project: CLYWEDOG ROAD NORTH	Title: CYCLE ISOCHRONES	FIGURE 4.2		
Client: JCP INVESTMENT LTD		Date: JUNE 2020	Scale: NTS	

Tables

BUS NUMBER	ROUTE	FREQUENCY			OPERATOR
		MONDAY-SATURDAY		SUN	
		DAY	EVE		

Service calling bus stops on Bridge Road					
41A	Wrexham-Wrexham Industrial Estate	60	-	-	AW
41B	Wrexham General Rail Station-HMP Berwyn	-	-	60	D&G

Key:
 AW = Arriva Wales
 D&G = D& G Coach & Bus

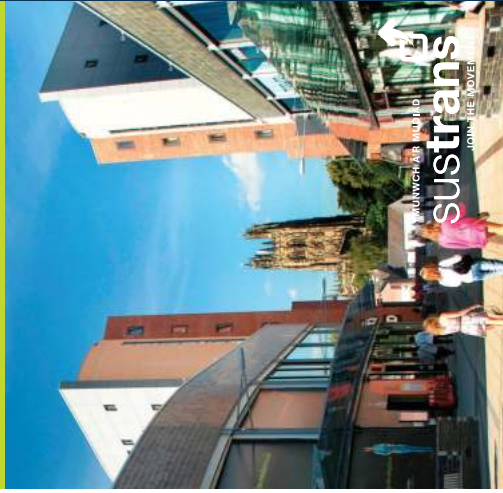
Source:
www.bustimes.org

Table 4.1 Bus Services & Frequencies

A Sustrans Map



Wrexham Wrexham



Sustrans yw'r elusen sy'n galluogi pobl i deithio ar droed, beic neu drafnidiaeth gyhoeddus ar gyfer rhagor o'r si-
wrneiau a wnawn bob dydd. Mae ein gwaith yn ei gwneud
hi'n bosibl i bobl ddevis siwrneiau iechach, glanach a
riatach gyda gwell lleoedd a golodau i symud drwyddynt a
byw ynddynt.

Mae'n bryd i ni gyd wneud dewisiadau gwell yn y ffordd yr
ydem yn teithio. Cymerwch y cam a chefnogwch Sustrans
heddiw.

Sustrans is the charity that's enabling people to travel by
foot, bike or public transport for more of the journeys we
make every day. Our work makes it possible for people to
choose healthier, cleaner and cheaper journeys, with better
places and spaces to move through and live in.

It's time we all began making smarter travel choices. Make
your move and support Sustrans today.

@ www.sustrans.org.uk

☎ 0845 113 0065

f www.facebook.com/sustrans.cymru

t www.twitter.com/sustranscymru



A ddiwygwyd i'r rhan o'r prosiect 'Live Well, Gwell' dda gda chydig i'w Llywodraeth Cymru.
Downloaded as part of the Live Well, Work Well project with funding from the Welsh Government.



Llinell cerbyd: © Hysfoddi y Gorn (2014) Cyngor Bwrdeistref Sŵn Wrexham
Cover photo: © Crown Copyright (2014) Wrexham County Borough Council
Registered Charity No. 325650 (England and Wales) SC039283 (Scotland)

MAP TEITHIO BYW / ACTIVE TRAVEL MAP



Rhesymau da dros deithio o gwmpas ar droed, beic, bws neu drên

Er budd eich iechyd a'ch lles

Mae cerdded a beicio i'r gwaith, i'r siopau neu i ymweld
â frindiau a theulu yn ffordd ardderchog i gynyms
gweithgaredd corfforol rheolaidd yn eich trefn arferol bob
dydd. Gall hyn eich cynorthwyo i losgi calorïau, lleihau
colesterol a gostwng pwysedd gwaed. Mae gweithgaredd
corfforol rheolaidd hefyd yn gwella eich hwyliau, eich
teimlad o les a gall gynythwyo i roi hwb i'ch hunan-barch.

Ar y bws neu'r trên, fe gewch amser i fwyhau'r daith -
gwrandao ar gerddoriaeth, ymgolli mewn lyfr da neu sgwrsio
- a thrwy roi gorffwys i'ch cerbyd gallowch arbed arian hefyd!

Er budd yr amgylchedd

Dwy fynd ar y bws neu'r bws rydych yn lleihau eich
allyriadau carbon gan rhwng chwech ac wyth gwaith o
gymharu â mynd mewn car. Yn well byth, nid yw cerdded
a beicio yn cynhyrchu allyriadau carbon. Mae llai o geir
ar y ffordd hefyd yn golygu amgylchedd mwy diogel, yn
arbenig ar gyfer plant, a lle mwy plaserus i bawb ohonom.

Er mwyn arbed arian

Un o fanteision teithio o gwmpas o dan eich grym eich hun
yw ei fod yn eithriadol o rad. Dim trefn car, dim MOT a dim
gofidiau petrol. Os byddwch yn cerdded neu'n beicio'n
rheolaidd fe arbedwch ffortiwn!

Good reasons to get around by foot, bike, bus or train

For your health and well-being

Walking and cycling to work, the shops, or to visit friends
and family are great ways to fit regular physical activity into
your daily routine. This can help you burn calories, reduce
cholesterol and lower blood pressure. Regular physical
activity also improves your mood, your sense of well-being
and can help boost self-esteem.

On the bus or train, you'll have time to enjoy the journey
- listen to music, read a good book or have a chat - and
by giving your vehicle a well deserved rest, you can save
money too!

For the environment

By taking a train or bus you reduce your carbon emissions
by between six and eight times compared to going by
car. Even better, walking and cycling do not produce any
carbon emissions. Fewer cars on the road also mean a safer
environment, particularly for children, and a more pleasant
place for us all.

For saving money

One of the things about getting around under your own
steam is that it's really cheap. No car tax, no MOT and no
petrol price worries. If you walk or cycle regularly you'll
save a fortune!

Cysylltu eich siwrnai

Cerdded a beicio

Sustrans. Porwch, lawrwythwch a chreu mapiau ar-lein
o lwybrau cerdded a beicio lleol eich hun. Gallwch hefyd
blotio eich siwrnai er mwyn ei rhannu gyda frindiau a
theulu.

www.sustrans.org.uk/maps Ffôn: 0845 113 0065

Dewch i ddarganfod y gorau o'r Rhwydwaith Beicio
Cenedlaethol yng Wrecsam ar ein gwefan:

www.sustrans.org.uk/wales/routes

Am ragor o fanylion ar lwybrau cerdded a beicio yn
Wrecsam: **http://www.sustrans.org.uk/wales/national-
cycle-network/free-leaflets-and-maps**

Trên a bws

I gael gwybodaeth teithio cysylltwch â **Traveline Cymru**,
y gwasanaeth gwybodaeth trafnidiaeth gyhoeddus ar
gyfer Cymru.

Ewch i **www.cymraeg.traveline-cymru.info**

neu ffoniwch **0871 200 22 33** i gael manylion am
wasanaethau bws, coets a rheilffordd.

Connecting your journey

Walking and cycling

Sustrans. Browse, download and create online maps of
local walking and cycling routes. You can also plot your
journey to share with friends and family.

www.sustrans.org.uk/maps Tel: 0845 113 0065

Discover the very best of the National Cycle Network in
Wales on our website:

www.sustrans.org.uk/wales/routes

For further details on walking and cycling routes in
Wrexham: **http://www.sustrans.org.uk/wales/national-
cycle-network/free-leaflets-and-maps**

Train and bus

For travel information contact **Traveline Cymru**, the
public transport information service for Wales. Visit
www.traveline-cymru.info or call **0871 200 22 33** for
bus, coach and rail service details.

B TRICS Output

Calculation Reference: AUDIT-733101-201006-1012

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

TOTAL VEHICLESSelected regions and areas:

02	SOUTH EAST	
	HC HAMPSHIRE	1 days
03	SOUTH WEST	
	BR BRISTOL CITY	1 days
	DV DEVON	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
06	WEST MIDLANDS	
	HE HEREFORDSHIRE	1 days
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	LC LANCASHIRE	1 days
11	SCOTLAND	
	SR STIRLING	1 days

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

Primary 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: Gross floor area
 Actual Range: 1010 to 4324 (units: sqm)
 Range Selected by User: 1000 to 5000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 20/06/19

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	3 days
Wednesday	1 days
Thursday	4 days
Friday	1 days

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

Selected survey types:

Manual count	10 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 undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	6
Neighbourhood Centre (PPS6 Local Centre)	1

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:

Industrial Zone	8
Commercial Zone	1
Village	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,

Secondary Filtering selection:

Use Class:

Not Known	1 days
B1	5 days
B2	4 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@.

Filter by Use Class Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	2 days
10,001 to 15,000	2 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	3 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	1 days
75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	3 days
250,001 to 500,000	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	2 days
1.1 to 1.5	8 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	10 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	10 days
-----------------	---------

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

LIST OF SITES relevant to selection parameters

1	BR-02-C-02 SOUTH LIBERTY LANE BRISTOL	STAINLESS FITTINGS	BRISTOL CITY
	Edge of Town Industrial Zone Total Gross floor area: 1475 sqm Survey date: TUESDAY 22/09/15		Survey Type: MANUAL
2	DS-02-C-02 PONTEFRAC STREET DERBY	ENGINEERED PRODUCTS	DERBYSHIRE
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 2600 sqm Survey date: THURSDAY 25/06/15		Survey Type: MANUAL
3	DV-02-C-02 GRACE ROAD SOUTH EXETER MARSH BARTON TRAD. EST. Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 3513 sqm Survey date: THURSDAY 06/07/17	ENERGY RECOVERY FACILITY	DEVON
4	HC-02-C-01 JAYS CLOSE BASINGSTOKE	ENGINEERING COMPANY	HAMPSHIRE
	Edge of Town Industrial Zone Total Gross floor area: 3000 sqm Survey date: THURSDAY 16/06/16		Survey Type: MANUAL
5	HE-02-C-02 COLLEGE ROAD HEREFORD BURCOTT Edge of Town Commercial Zone Total Gross floor area: 1880 sqm Survey date: TUESDAY 22/10/13	THERMAL PROCESSING	HEREFORDSHIRE
6	LC-02-C-04 CHORLEY ROAD BLACKPOOL LITTLE CARLETON Edge of Town Industrial Zone Total Gross floor area: 1010 sqm Survey date: THURSDAY 20/06/19	POWDER COATINGS	LANCASHIRE
7	SF-02-C-01 ANSON ROAD IPSWICH MARTLESHAM HEATH Edge of Town Industrial Zone Total Gross floor area: 1100 sqm Survey date: FRIDAY 12/07/13	JOINERY	SUFFOLK
8	SR-02-C-01 BORROWMEADOW ROAD STIRLING	SPECIALIST MODEL MAKING	STIRLING
	Edge of Town Industrial Zone Total Gross floor area: 2350 sqm Survey date: MONDAY 16/06/14		Survey Type: MANUAL
9	WM-02-C-04 STOURVALE ROAD STOURBRIDGE LYE Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 4324 sqm Survey date: TUESDAY 21/11/17	FOUNDRY	WEST MIDLANDS
			Survey Type: MANUAL

ASHLEY HELME ASSOCIATES
76 WSHWAY ROAD
SALE

Licence No: 733101

LIST OF SITES relevant to selection parameters (Cont.)

10
WY-02-C-03
COMPUTER MANUFACTURER
WEST YORKSHIRE

INMOOR ROAD
NEAR BRADFORD
BIRKENSHAW
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Gross floor area: 1890 sqm
Survey date: WEDNESDAY 10/10/18

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.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE

Licence No: 733101

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

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00	1	2350	0.298	1	2350	0.043	1	2350	0.341
07:00 - 07:30	9	2361	0.169	9	2361	0.038	9	2361	0.207
07:30 - 08:00	9	2361	0.174	9	2361	0.024	9	2361	0.198
08:00 - 08:30	10	2314	0.212	10	2314	0.035	10	2314	0.247
08:30 - 09:00	10	2314	0.307	10	2314	0.065	10	2314	0.372
09:00 - 09:30	10	2314	0.181	10	2314	0.082	10	2314	0.263
09:30 - 10:00	10	2314	0.160	10	2314	0.134	10	2314	0.294
10:00 - 10:30	10	2314	0.151	10	2314	0.078	10	2314	0.229
10:30 - 11:00	10	2314	0.095	10	2314	0.117	10	2314	0.212
11:00 - 11:30	10	2314	0.091	10	2314	0.095	10	2314	0.186
11:30 - 12:00	10	2314	0.117	10	2314	0.112	10	2314	0.229
12:00 - 12:30	10	2314	0.169	10	2314	0.147	10	2314	0.316
12:30 - 13:00	10	2314	0.134	10	2314	0.147	10	2314	0.281
13:00 - 13:30	10	2314	0.147	10	2314	0.173	10	2314	0.320
13:30 - 14:00	10	2314	0.121	10	2314	0.147	10	2314	0.268
14:00 - 14:30	10	2314	0.130	10	2314	0.104	10	2314	0.234
14:30 - 15:00	10	2314	0.117	10	2314	0.156	10	2314	0.273
15:00 - 15:30	10	2314	0.086	10	2314	0.104	10	2314	0.190
15:30 - 16:00	10	2314	0.073	10	2314	0.177	10	2314	0.250
16:00 - 16:30	10	2314	0.095	10	2314	0.151	10	2314	0.246
16:30 - 17:00	10	2314	0.060	10	2314	0.216	10	2314	0.276
17:00 - 17:30	10	2314	0.060	10	2314	0.220	10	2314	0.280
17:30 - 18:00	10	2314	0.048	10	2314	0.190	10	2314	0.238
18:00 - 18:30	10	2314	0.017	10	2314	0.156	10	2314	0.173
18:30 - 19:00	9	2310	0.029	9	2310	0.048	9	2310	0.077
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:	3.241			2.959			6.200		

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.

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	1010 - 4324 (units: sqm)
Survey date range:	01/01/12 - 20/06/19
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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 shown. 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-733101-201006-1024

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : F - WAREHOUSING (COMMERCIAL)

TOTAL VEHICLESSelected regions and areas:

04	EAST ANGLIA	
	SF SUFFOLK	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
09	NORTH	
	CB CUMBRIA	1 days
10	WALES	
	BG BRIDGEND	1 days

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

Primary 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: Gross floor area
 Actual Range: 2950 to 4700 (units: sqm)
 Range Selected by User: 1000 to 5000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 19/09/16

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
Tuesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	4 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 undertaken using machines.

Selected Locations:

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:

Industrial Zone	3
Commercial Zone	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:

B8	4 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®.

Filter by Use Class Breakdown:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less	1 days
5,001 to 10,000	2 days
25,001 to 50,000	1 days

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

Population within 5 miles:

5,001 to 25,000	2 days
75,001 to 100,000	1 days
500,001 or More	1 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	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	4 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	4 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	BG-02-F-01	LOGISTICS COMPANY	BRIDGEND
	PARC CRESCENT		
	BRIDGEND		
	WATERTON IND. EST.		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	3050 sqm	
	Survey date: MONDAY	13/10/14	Survey Type: MANUAL
2	CB-02-F-01	DOMINO'S PIZZA	CUMBRIA
	COWPER ROAD		
	PENRITH		
	GILWILLY IND. ESTATE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	2950 sqm	
	Survey date: TUESDAY	10/06/14	Survey Type: MANUAL
3	SF-02-F-03	ROAD HAULAGE	SUFFOLK
	CENTRAL AVENUE		
	IPSWICH		
	WARREN HEATH		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	4700 sqm	
	Survey date: FRIDAY	18/09/15	Survey Type: MANUAL
4	WM-02-F-02	LOGISTICS FIRM	WEST MIDLANDS
	SOVEREIGN ROAD		
	BIRMINGHAM		
	KINGS NORTON		
	Edge of Town		
	Commercial Zone		
	Total Gross floor area:	3625 sqm	
	Survey date: MONDAY	09/11/15	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.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE

Licence No: 733101

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

TOTAL VEHICLES**Calculation factor: 100 sqm****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
05:30 - 06:00	1	2950	0.102	1	2950	0.000	1	2950	0.102
06:00 - 06:30	1	2950	0.034	1	2950	0.000	1	2950	0.034
06:30 - 07:00	1	2950	0.102	1	2950	0.034	1	2950	0.136
07:00 - 07:30	4	3581	0.105	4	3581	0.070	4	3581	0.175
07:30 - 08:00	4	3581	0.161	4	3581	0.077	4	3581	0.238
08:00 - 08:30	4	3581	0.175	4	3581	0.098	4	3581	0.273
08:30 - 09:00	4	3581	0.251	4	3581	0.098	4	3581	0.349
09:00 - 09:30	4	3581	0.140	4	3581	0.063	4	3581	0.203
09:30 - 10:00	4	3581	0.077	4	3581	0.063	4	3581	0.140
10:00 - 10:30	4	3581	0.119	4	3581	0.140	4	3581	0.259
10:30 - 11:00	4	3581	0.105	4	3581	0.091	4	3581	0.196
11:00 - 11:30	4	3581	0.119	4	3581	0.119	4	3581	0.238
11:30 - 12:00	4	3581	0.070	4	3581	0.084	4	3581	0.154
12:00 - 12:30	4	3581	0.091	4	3581	0.049	4	3581	0.140
12:30 - 13:00	4	3581	0.091	4	3581	0.084	4	3581	0.175
13:00 - 13:30	4	3581	0.119	4	3581	0.140	4	3581	0.259
13:30 - 14:00	4	3581	0.140	4	3581	0.070	4	3581	0.210
14:00 - 14:30	4	3581	0.098	4	3581	0.084	4	3581	0.182
14:30 - 15:00	4	3581	0.098	4	3581	0.084	4	3581	0.182
15:00 - 15:30	4	3581	0.098	4	3581	0.112	4	3581	0.210
15:30 - 16:00	4	3581	0.084	4	3581	0.154	4	3581	0.238
16:00 - 16:30	4	3581	0.112	4	3581	0.112	4	3581	0.224
16:30 - 17:00	4	3581	0.077	4	3581	0.188	4	3581	0.265
17:00 - 17:30	4	3581	0.098	4	3581	0.216	4	3581	0.314
17:30 - 18:00	4	3581	0.035	4	3581	0.168	4	3581	0.203
18:00 - 18:30	4	3581	0.056	4	3581	0.154	4	3581	0.210
18:30 - 19:00	4	3581	0.063	4	3581	0.084	4	3581	0.147
19:00 - 19:30	1	2950	0.169	1	2950	0.102	1	2950	0.271
19:30 - 20:00	1	2950	0.034	1	2950	0.102	1	2950	0.136
20:00 - 20:30	1	2950	0.034	1	2950	0.034	1	2950	0.068
20:30 - 21:00	1	2950	0.068	1	2950	0.102	1	2950	0.170
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			3.125			2.976			6.101

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.

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

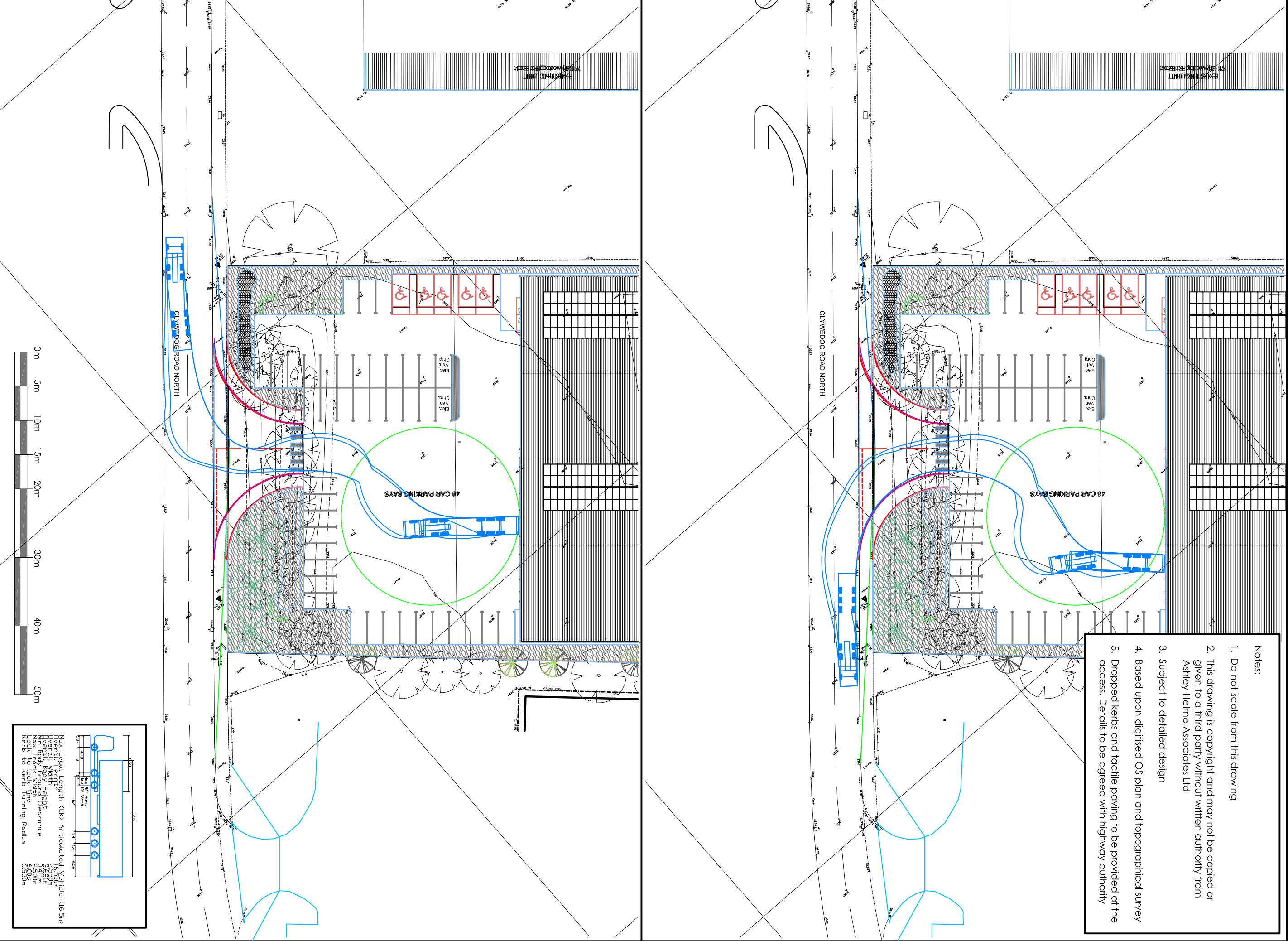
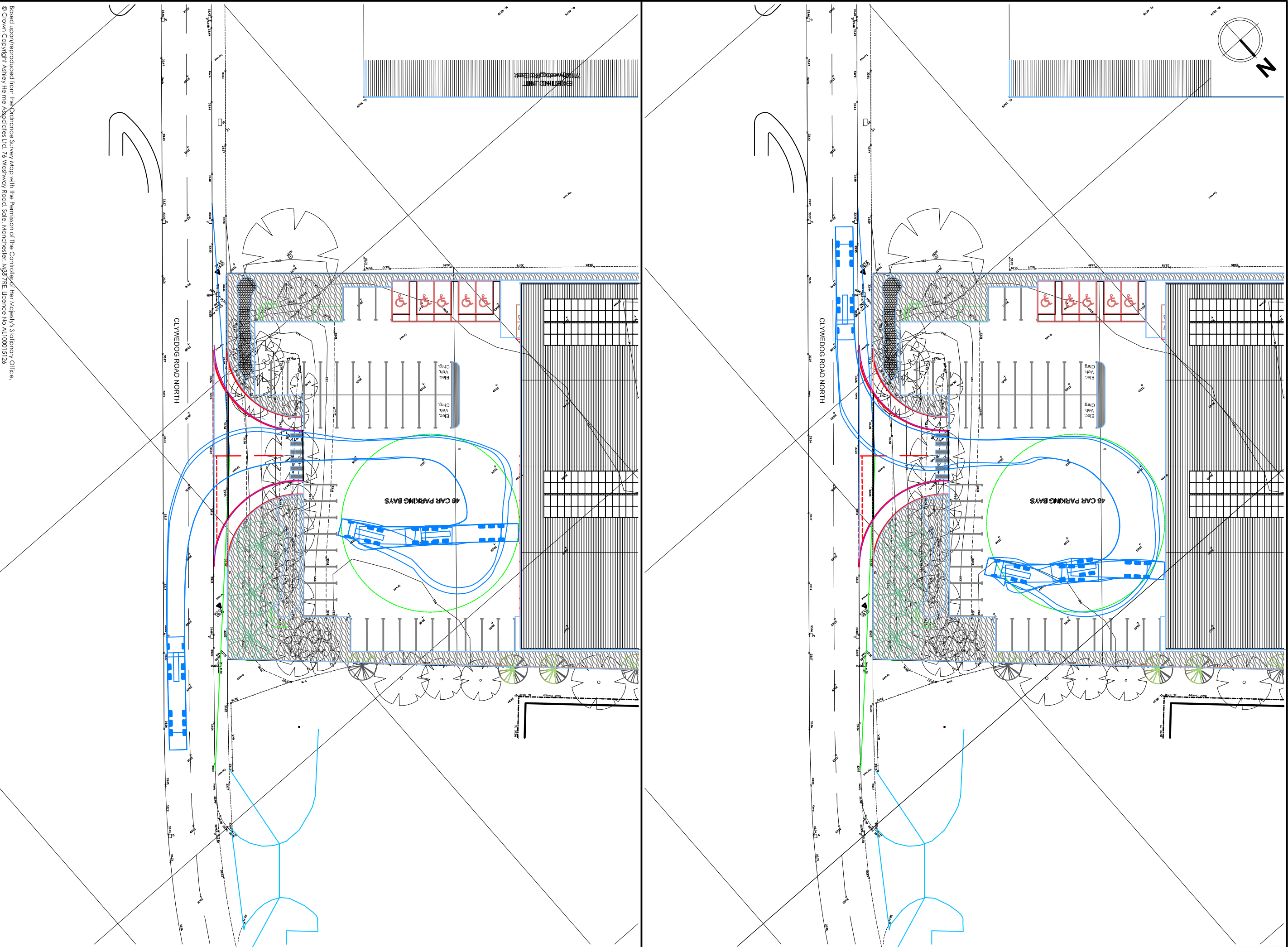
Parameter summary

Trip rate parameter range selected:	2950 - 4700 (units: sqm)
Survey date date range:	01/01/12 - 19/09/16
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Drawings

- 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 and topographical survey
 5. Dropped kerbs and tactile paving to be provided at the access. Details to be agreed with highway authority



Project		Title	
CLYWEDOG ROAD NORTH, WREXHAM		SWEEP PATH TRACKING: 16.5m ARTICULATED VEHICLE	
Client		JCP INVESTMENTS LTD	
Based upon reproduced from the Ordnance Survey Map with the permission of The Controller of Her Majesty's Stationery Office. © Crown Copyright Ashley Helme Associates Ltd, 76 Watnway Road, Salford, Manchester, M33 7RE. Licence No. AL100015126		Dwg No	
		1717/SP/01	
		Rev	
		A	
		Date	
		OCTOBER 2020	
		Scale	
		1:500@A2	
		Telephone	
		0161 972 0552	
		Web site	
		www.ashleyhelme.co.uk	
		Address	
		76 Watnway Road, Salford, Manchester, M33 7RE	