

Potential Residential Development
Bridge Street | Wrexham

LINGAR PROPERTIES

Transport Advice Note

April 2018





REPORT CONTROL

Document: Transport Advice Note

Project: Potential Residential Development, Bridge Street, Wrexham

Client: Lingar Properties

Job Number: 2171

File Origin: Z:\projects\2171 Bridge Street, Wrexham\Docs\Reports\2171TAN.3.docx

Document Checking:

Primary Author	MR	Initialled:
Contributor	SM/GM	Initialled:
Review By	PJW	Initialled:

Issue	Date	Status	Checked for Issue
1	24-04-18	Final	
2			
3			
4			



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1 INTRODUCTION

1.1 Preamble

- 1.1.1 Croft have been instructed by Lingar Properties to advise on the traffic and transportation issues relating to a potential residential development on two parcels of land off Bridge Street in Wrexham.
- 1.1.2 While a planning application may be forthcoming in the future, the purpose of this report is to provide initial advice and set out the key issues that will need to be addressed prior to an application coming forward.
- 1.1.3 Due to the location of the site close to Wrexham town centre and its services and facilities, the site would be well placed to deliver much needed sustainable housing in close proximity of the town centre, which is well integrated, with good access to local facilities and jobs.

1.2 Structure of Report

- 1.2.1 Following this introduction, Section 2 of the Report will detail the existing site conditions, describe the adjacent highway and present the findings of the site visit.
- 1.2.2 Section 3 will briefly consider relevant national policy.
- 1.2.3 Section 4 will consider the accessibility of the site by non-car modes, including walking, cycling and public transport.
- 1.2.4 Section 5 will consider the trip generation and potential traffic impact of any proposals on the local highway network.
- 1.2.5 Section 6 will briefly refer to maximising sustainable travel through Travel Planning measures and Section 7 will draw together the Report's findings and conclusions.



2 EXISTING CONDITIONS

2.1 Introduction

2.1.1 This section of the report describes the existing site, details the surrounding highway network in the vicinity and reports on the site visit undertaken.

2.2 Site Location

2.2.1 The two land parcels are located on the corner of the Bridge Street/Brook Street junction on the edge of Wrexham town centre, as identified in **Figure 2.1** below, while **Plan 1** shows the sites in relation to the surrounding local area.

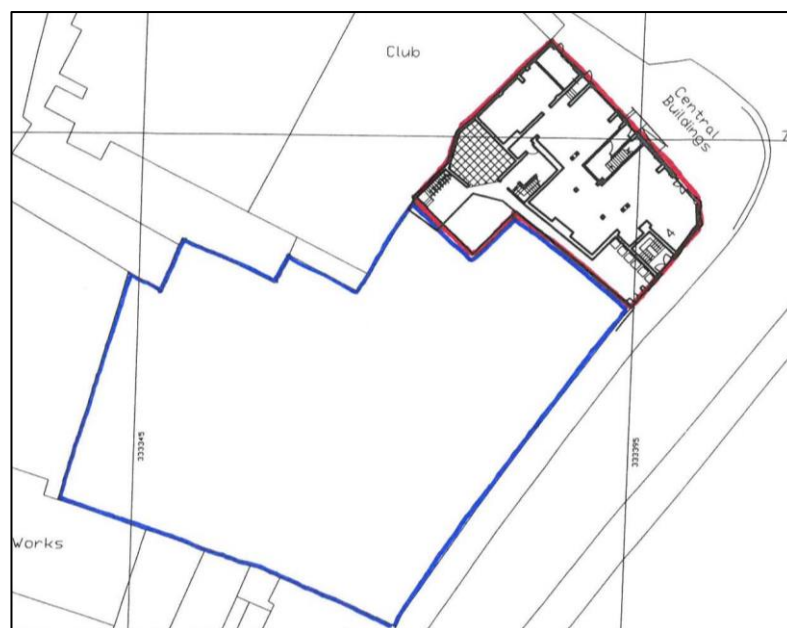


Figure 2.1 – Location of Land Parcels

2.2.2 As indicated above, the red line (Site 1) identifies an existing property referred to Central Buildings, while the blue line (Site 2) indicates additional land that may also become available for development.



2.3 Existing Site Information

Site 1

- 2.3.1 At present, the ground floor/basement of Site 1 is used for bar and restaurant takeaway uses, while the two upper floors are vacant and have potential to be developed for residential purposes. It is understood that these floors could accommodate up to 10 private apartments, likely to be promoted as 'car free'.

Site 2

- 2.3.2 The land associated with Site 2 extends to approximately 0.14 hectares (0.36 acres) and is undeveloped but is currently being promoted by the Council, who own the land. It is understood that the likely land use would be residential in the form of potentially 32 private apartments, with potential to provide a reduced parking provision, which would need to be justified.

2.4 Relevant Planning History

- 2.4.1 It is understood that the smaller site (Site 1) has been the subject of a previous planning application (App Ref No. P/2010/1052), dated December 2010 which was refused by notice in June 2011. The applicant lodged an Appeal.
- 2.4.2 The Appeal was dismissed due to the lack of a suitable planning obligation, although the Inspector's response includes reference to car parking where he states "*I consider the main issue in this case to be whether the proposals would be likely to create on-street parking problems*".



2.4.3 It should also be noted however, that the associated planning obligation referred to mitigating the shortfall in car parking provision and these monies were related to UDP policy T8 which refers to measures to assist public transport or walking and cycling as appropriate, where implementation difficulties arise in making parking provision on site or nearby.

2.4.4 It is understood that there has been no previous planning history on the larger site (Site 2).

2.5 Local Highway Network

2.5.1 The A5152 Bridge Street runs in a broadly north-east to south-west alignment and forms the site's south-eastern boundary. In the vicinity of the site, it has a varying carriageway width of between approximately 6.6 metres and 7 metres but widens out to around 9.5 metres closer to the site boundary, on the approach to the junction with Brook Street to provide two lanes for northbound traffic at the signals.

2.5.2 Brook Street benefits from good standard footways of around 3 metres on both sides and has street lighting. It is noted that it is also subject to Traffic Regulation Orders (TRO's) in the form of double yellow lines, to prevent parking at any time.

2.5.3 To the south, the A5152 links to the A483 at Junction 3 or alternatively the A525 connects the site to the A483 at Junction 4 and beyond that to the A55, meaning the site is well located in terms of its connections to the local and wider road networks. Access to the wider motorway network is also provided via the A55 to the M56 and M53.

2.6 Site Visit

2.6.1 In order to establish the existing conditions around the site, a site visit was undertaken on Monday 19th March 2018.



- 2.6.2 The site visit included a walk around the area paying attention to pedestrian facilities, bus stop infrastructure, parking restrictions and the availability of on-street parking.
- 2.6.3 A series of photographs taken on site are contained within **Appendix 1**.
- 2.6.4 There is an existing loading bay adjacent to Site 1 (Central Building) on Brook Street, as identified in **Figure 2.1** below.



Figure 2.2 – Location of Existing Loading Bay on Brook Street

- 2.6.5 The loading bay was not used during the site visit, but it is likely that it is used on an ad-hoc basis by numerous commercial premises in the area. It is also noted that the both Bridge Street and Brook Street are subject to parking restrictions, which prevent any parking or loading as shown in **Figure 2.3** below.

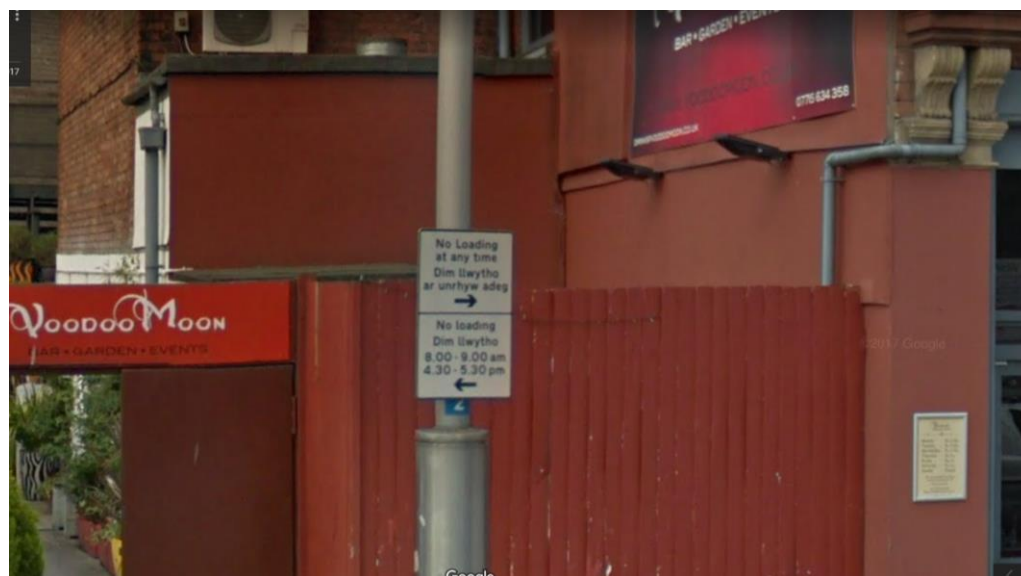


Figure 2.3 – Parking Restriction Notice on Bridge Street

- 2.6.6 As shown above, the current restrictions on Bridge Street prevent any loading between the signage and the signal junction but permits some loading in the other direction with the exception of between 8.00 am to 9.00 am or between 4.30 pm and 5.30 pm.
- 2.6.7 It is also noted that the both Bridge Street and Brook Street benefit from a number of free parking bays, as shown in **Figure 2.4** below.



Figure 2.3 – Parking Restriction Notice on Bridge Street

- 2.6.8 As can be seen above, the parking bays are subject to certain regulations and limits the maximum parking duration to 30 minutes between 8.00 am and 6.00 pm Monday to Saturday.
- 2.6.9 It should be noted that during the site visit, there were a substantial number of parking spaces available in the bays along Bridge Street and Brook Street, as demonstrated in the site photographs contained within Appendix 1.
- 2.6.10 Additional on-street parking bays are provided on Brewery Place, located approximately 120 metres to the west of the Bridge Street/Brook Street signal junction. Again, observations on-site show that parking bays were readily available.



2.7 Summary

- 2.7.1 On site observations showed that numerous spaces remained available for use, during the site visit.



3 CONSIDERATION OF PLANNING POLICY

3.1 Introduction

- 3.1.1 The national policy presented in this document focuses on the Planning Policy Wales (PPW) document (Edition 9, 2016) and sets out the Welsh Government's planning policies for achieving sustainable development.
- 3.1.2 National Planning Policy contained with Planning Policy Wales will also be reviewed along with Transport Advice Note 18 (TAN 18) - Transport.
- 3.1.3 This section will briefly outline the pertinent policies relating to the proposed development.

3.2 National Policy

Planning Policy Wales

- 3.2.1 The PPW sets out the planning policies on the delivery of sustainable development through the planning system. With regard to transport policy it aims to extend choice in transport and secure accessibility in a way which supports sustainable development and helps to tackle the causes of climate change.
- 3.2.2 Within the Transport chapter of the PPW it states that land-use planning can help achieve the Welsh Government's objectives for transport through the following;
- Reducing the need to travel, especially by private car, by locating development where there is good access by public transport, walking and cycling;
 - Locating development near other related uses to encourage multi-purpose trips to reduce the length of journeys;
 - Improving accessibility by walking, cycling and public transport;



- Ensuring that transport is accessible to all, taking into account the needs of disabled and other less mobile people;
- Promoting walking and cycling;
- Supporting the provision of high quality public transport;
- Supporting traffic management measures;
- Promoting sustainable transport options for freight and commerce;
- Supporting sustainable travel options in rural areas;
- Supporting necessary infrastructure improvements; and
- Ensuring that, as far as possible, transport infrastructure does not contribute to land take, urban sprawl or neighbourhood severance.

3.2.3 As will be demonstrated in Section 4, the site is highly accessible by non-car modes and as such, will comply with the aims of national planning policy.

Transport Advice Note 18 (TAN 18) - Transport

3.2.4 The 'TAN 18 Transport' document which was published in March 2007 provides transport guidance on how the objectives of the PPW should be achieved.

3.2.5 In terms of guidance specifically related to the proposed development, it states that;

"Some car free housing development may be appropriate in locations with good walking, cycling and public transport links and in areas where parking is controlled. On-site cycle and parking provision for those with disabilities will be required if such on-street parking cannot be provided".



- 3.2.6 It goes on to say that *"It is essential that, prior to occupation, the future residents should be made aware of the car free status of the development"*.
- 3.2.7 The proposed 10 apartment scheme will be marketed and promoted as 'car-free' so potential residents will be aware of there being no parking prior to them considering purchasing a property.

3.3 Planning Policy Summary

- 3.3.1 The proposed development accords with national policy for the following reasons:
- The site is located in close proximity to existing public transport infrastructure which will facilitate non-car travel to and from the proposed development.
 - A Travel Plan could also be provided as part of the proposed development to encourage sustainable transport and allow the use of sustainable modes to be maximised.
- 3.3.2 In conclusion, it is considered that the proposals conform to national planning policy in Wales and will assist in delivering the policies contained within.



4 ACCESSIBILITY BY NON-CAR MODES

4.1 Introduction

4.1.1 The accessibility of the potential development sites has been considered by the following modes of transport:

- Accessibility on foot.
- Accessibility by cycle.
- Accessibility by bus.
- Accessibility by rail.

4.2 Accessibility on Foot

4.2.1 Bridge Street benefits from footways of around 4 metres in width on each side. These footways provide pedestrian links throughout Wrexham and provide direct linkages to the nearby day to day amenities within the town centre. Similarly, Brook Street has good standard footways and the Bridge Street/Brook Street signalised junction has pedestrian crossing facilities on all arms, thus assisting the safe movement of pedestrians in the area.

4.2.2 The CIHT document 'Planning for Walking' from 2015 states, in paragraph 2.1, that in 2012 that 79% of all journeys made in the UK of less than a mile (1.6 kilometres) are carried out on foot. Within the Institution of Highways and Transportation (IHT) document, entitled "Guidelines for Providing for Journeys on Foot", Table 2.2 suggests distances for desirable, acceptable and preferred maximum walks to 'town centres', 'commuting/schools' and 'elsewhere'.



4.2.3 The 'preferred maximum' distances are shown below in **Table 3.1**.

Suggested Preferred Maximum Walk		
Town Centre	Commuting/School	Elsewhere
800m	2,000m	1,200m

Table 3.1 – IHT 'Providing for Journeys on Foot' Walk Distances

4.2.4 Reference to the 2,000 metre walk distance is also made in the now superseded Planning Policy Guidance (PPG) Note 13 which advised 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'.

4.2.5 Manual for Streets (MfS) continues the theme of the acceptability of the 2,000 metre distance in paragraph 4.4.1. This states that '*walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPS13 states that walking offers the greatest potential to replace short car trips, particularly those under 2 km'.*



4.2.6 **Table 3.2** below summarises this guidance in tabular form.

'Comfortable' Walk	'Preferred Maximum' Walk
800m	2,000m

Table 3.2 – Manual for Streets Walk Distances

4.2.7 More specific guidance on the distances that children will walk to school is found in the July 2014 document published by the Department for Education (DfE) entitled 'Home to School Travel and Transport' statutory guidance document. This suggests that the maximum walking distance to schools is 2 miles (3.2 kilometres) for children under 8 and 3 miles (4.8 kilometres) for children over the age of 8. This is summarised below in **Table 3.3**.

Children under 8 Walk Distance	Children over 8 Walk Distance
3,200m	4,800m

Table 3.3 – DfE Walk Distances to Schools

4.2.8 Further evidence that people will walk further than the suggested 'preferred maximum' distances in the IHT 'Providing for Journeys on Foot' is contained in a WYG Report entitled 'Accessibility – How Far do People Walk and Cycle'. This report refers to National Travel Survey (NTS) data for the UK as a whole, excluding London, that the 85th percentile walk distance for:

- All journey purposes – 1,930 metres.
- Commuting – 2, 400 metres.



- Shopping – 1,600 metres.
- Education – 3,200 or 4,800 metres.
- Personal business – 1,600 metres.

4.2.9 Overall, in Table 5.1, the document states that 1,950 square metres is the 85th percentile distance for walking as the main mode of travel. **Table 3.4** below summarises the various 85th percentile walk distances suggested as guidelines in the WYG Study.

85 th Percentile Walk Distances					Overall Recommen ded Preferred
All Journeys	Commuting	Shopping	Education	Personal	
1,950m	2,100m	1,600m	3,200/4,800m	1,600m	1,950m

Table 3.4 – WYG Report/NTS Data Walk Distances

4.2.10 In summary, it is considered that the distance of 1,950 metres, or around 2 kilometres, represents an acceptable maximum walking distance for the majority of land uses although clearly the DfE guidance for walking to school is up to 3.2 kilometres.

4.2.11 Section 3.1 of the CIHT guidance 'Planning for Walking' mentioned earlier in this report provides a useful reminder of the health benefits of walking. This states that:

'A brisk 20 minute walk each day could be enough to reduce an individual's risk of an early death'.

4.2.12 A 20 minute walk equates to a walking distance of around 1,600 metres.



- 4.2.13 In light of the above review, a pedestrian catchment of 2 kilometres from the centre of the site, using all available pedestrian routes, has been prepared and is shown in **Plan 2** and provides an illustrative indication of the areas that can be reached based on a leisurely walk from the site.
- 4.2.14 In addition, to the pedestrian catchment plan, a review of the proximity of local facilities has been undertaken and the location of these is also shown in Plan 2.
- 4.2.15 The 2,000 metre pedestrian catchment illustrates that the majority of Wrexham can be accessed along various amenities such as a Bowling Green Public House, Parciau Bellevue Park, McDonald's, ASDA, Argos, Maplin, Tesco Extra, Eagles Meadow Shopping Centre and Wrexham University.
- 4.2.16 **Table 3.5** below, shows the walking distance from the centre of the site to the local amenities in the vicinity of the site. The table also confirms whether or not the particular amenity is within the 'preferred maximum' walk distances using the above guideline criteria:



Local Amenity	Distance	Guidance Criteria	Meets with Guidance?
Bowling Green Public House	270m	1,600m	YES
Parciau Bellevue Park	320m	1,600m	YES
McDonald's	330m	1,600m	YES
ASDA	390m	1,600m	YES
Argos	450m	1,600m	YES
Maplin	460m	1,600m	YES
Tesco Extra	500m	1,600m	YES
Eagles Meadow Shopping Centre	620m	1,600m	YES
Wrexham University	1,280m	3,200m	YES

Table 3.5 - Distance from Site to Local Facilities

- 4.2.17 As can be seen in the above table, the site is located within close proximity to a number of local amenities including primary services, as well as leisure facilities.
- 4.2.18 All of the day to day amenities are well within the 'preferred maximum' walk distances described earlier in this section and indeed many, including the nearest food stores and University lie well within these distance criteria.
- 4.2.19 It is therefore considered that the existing pedestrian infrastructure will facilitate safe and direct pedestrian linkages between the site and local destinations.

4.3 Access by Cycle

- 4.3.1 An alternative mode of travel to the site could be achieved by bicycle.



4.3.2 A distance of 5 kilometres is generally accepted as a distance where cycling has the potential to replace short car journeys. This distance equates to a journey of around 25 minutes based on a leisurely cycle speed of 12 kilometres per hour and would encompass New Broughton, Rhostyllen, Pentre Broughton and Gresford.

4.3.3 While there are no formal cycle routes in the vicinity, the surrounding area is relatively flat and therefore conducive to trips by cycle.

4.3.4 The site can therefore be considered as being accessible by cycle.

4.4 Access by Bus

4.4.1 The nearest bus stops to the site are located to the west of the site on Brook Street with an approximate walking distance of just 50 metres consisting of a bus shelter, bus stop pole with passing services shown and a bus service timetable. All the nearest bus stops to the site are shown on Plan 2. A summary of the services available from the nearest bus stops from the development site is provided in **Table 3.6** below.

Service No	Route	Monday – Friday Frequency per hour				Sat	Sun
		AM Peak	Midday	PM Peak	Eve		
C56	Wrexham - Chester	0	1	0	0	0.5	0

Table 3.6 - Existing Bus Services Operating Past the Site

4.4.2 While these services may be limited, it is worth noting that bus service C56 travels to Wrexham bus station in around 2 minutes, where a much wider range of services can be accessed.



- 4.4.3 Furthermore, the potential to simply walk to Wrexham bus station also exists as it is only around 470 metres from the site, which equates to a walk of just over 5 minutes.
- 4.4.4 A summary of the services available from Wrexham bus station is provided in Table 3.7 below

Service No	Route	Monday – Friday Frequency per hour				Sat	Sun
		AM Peak	Midday	PM Peak	Eve		
1	Wrexham - Chester	5	6	6	2	5	2
2c	Wrexham - Oswestry	2	2	2	0	2	0
10	Wrexham - Minera	1	1	1	0	1	0
32	Wrexham - Wrexham	2	2	4	0	2	0.5
41	Wrexham – Redwither Tower	1	1	1	0	1	0

Table 3.7 - Existing Bus Services Operating Past the Site

- 4.4.5 As can be seen above, the bus station provides a wider selection of destinations with good or high frequencies, providing residents at the development with a choice about how they travel.
- 4.4.6 In order to further demonstrate the level of accessibility some example journey times by bus are presented below **Table 3.7** below.



Destination	Duration
Minera	25 minutes
Chester	29 minutes

Table 3.8 - Example Bus Journey Times from the Site

4.4.7 The above table demonstrates that Chester is just a 25-minute bus journey from the site and a bus journey to Chester takes less than half an hour.

4.4.8 It is therefore concluded that the site is accessible by bus.

4.5 Accessibility by Rail

4.5.1 The most accessible train station to the site is Wrexham Central which is situated approximately 380 metres away from the site. This train station is managed by Arriva Trains Wales and has 1 platform, offering 1 service per hour to destinations such as Buckley, Shotton and Bidston.

4.5.2 It is also worth noting that Wrexham General train station is located approximately 920 metres from the site. This train station is also managed by Arriva Trains Wales and has 4 platforms, offering 4 services per hour to destinations such as Holyhead, Cardiff Central and Birmingham International.

4.5.3 This provides opportunities for commuting/leisure opportunities from the site via rail.

4.6 Accessibility Summary

4.6.1 The potential development site (Sites 1 and 2) have been considered in terms of accessibility by non-car modes.



4.6.2 The following conclusions can be drawn from this section of the Report:

- The sites are accessible on foot with good standard footways and pedestrian infrastructure such as the controlled crossing at the Bridge Street/Brook Street junction.
- The area is relatively flat meaning there are also good opportunities for cycling, either as a main mode of travel or as part of a multi-modal trip with rail.
- The services from Wrexham bus station, travelling to Minera, Chester and Oswestry shows that the site development can be accessed by bus.
- The site is accessible via rail with Wrexham General and Wrexham Central both located within walking distance.

4.6.3 It is considered the site is highly accessible by non-car modes which will assist in the justification for no or reduced car parking on site.



5 POTENTIAL DEVELOPMENT AND TRAFFIC IMPACT

5.1 Introduction

5.1.1 This section of the note will consider the potential developments on the two sites including trip generation, car parking and access.

5.1.2 It is understood that there is potential to develop the two sites as follows;

- Site 1 – private apartments - 10 units - no parking; and
- Site 2 - private apartments with reduced parking provision.

5.2 Potential Development

5.2.1 As previously stated, there is potential to develop both land parcels for residential purposes.

5.2.2 This section of the report will consider the potential development of Site 1 for 10 private apartments and up to 32 private apartments on Site 2.

5.2.3 In order to establish the number of trips which the potential developments are forecast to generate the TRICS database has been used for the 'Residential – Private Apartments' range of sites. The assessment was based on the following parameters:

- Range between 0 and 215 dwellings;
- Monday to Friday surveys; and
- Greater London and Eire sites excluded.

5.2.4 The full TRICS output are contained within **Appendix 2**.



Site 1

- 5.2.5 The peak hour trip rates and forecast trip generation based on the provision of 10 private apartments are summarised within **Table 4.1**.

Peak Period	Trip Rate (per unit)		Number of Trips	
	Arr	Dep	Arr	Dep
AM Peak Hour	0.06	0.20	1	2
PM Peak Hour	0.20	0.10	2	1

Table 4.1 - Forecast Trip Generation of Private Apartments Development

- 5.2.6 As demonstrated above, based on the information contained within the TRICS database, the impact of the provision of 10 private apartments would be minimal in the AM and PM peak hours.

Site 2

- 5.2.7 The peak hour trip rates and forecast trip generation based on the provision of up to 32 private apartments are summarised within **Table 4.2**.



Peak Period	Trip Rate (per unit)		Number of Trips	
	Arr	Dep	Arr	Dep
AM Peak Hour	0.06	0.20	2	6
PM Peak Hour	0.20	0.10	6	3

Table 4.2 - Forecast Trip Generation of Private Apartments Development

5.2.8 As demonstrated above, based on the information contained within the TRICS database, the provision of up to 32 private apartments would result in approximately 8 two-way trips in the AM peak and around 9 two-way trips in the peak hour.

5.2.9 In light of the above, it is considered that both of the above schemes could be accommodated onto the local highway network and would not have a material impact.

5.3 Car Parking

5.3.1 As the potential apartments on Site 1 would not provide any car parking the Transport Statement would need to justify why a 'car-free' development should be deemed acceptable.

5.3.2 While the larger site, Site 2 will provide some parking, this is likely to be at a reduced rate of potentially 22 spaces and so will also need to be justified.

5.3.3 The justification would take two forms one relating to the sites sustainable accessibility credentials and the other by referring to the national statistics for the area in relation to car ownership.



- 5.3.4 In order to consider the parking situation, a review of the car ownership statistics has been undertaken using the 2011 Census data for Offa, the ward the site is located in.
- 5.3.5 A summary of the car availability levels for the Offa ward are summarised in **Table 4.2** below, while the data is contained within **Appendix 3**:

2011 Census Data	Offa Ward
No cars/vans in household	33%
1 car/van in household	43%
2 cars/vans in household	19%
3 cars/vans in household	4%
>4 cars/vans in household	1%
Total	100%

Table 4.2 - Car Ownership Data (2011 Census)

- 5.3.6 As can be seen above, the current car ownership statistics show that at present, approximately 33% of households do not own a car, while 43% of households only have one vehicle.
- 5.3.7 Households with 2 cars account for 19% of car ownership and 4% of households have 3 cars. Households with 4 or more vehicles equates to just 1%.
- 5.3.8 As such, if occupation of the apartments at the proposed development site were to follow the trends already established in the Offa ward, then it is not considered that potential occupiers of the dwellings would be multi-vehicle owners, and are much more likely to have one or no vehicles.



5.3.9 On this basis, it is considered that the provision of zero or reduced parking is considered to be sufficient, particularly, given the site's excellent accessibility credentials and close proximity to local services and facilities, as well as being close to existing public car parks and on-street parking bays.

5.3.10 The above Census statistics clearly shows that there is a significant market for accommodation in Wrexham occupied by people without cars and with regard to Site 2, which would have a reduced provision, there would be just as much demand for properties, as combined (no car or one car) equates to around 76%.

5.3.11 To further address the car parking shortfall, Croft would recommend the provision of 100% cycle parking, to encourage and facilitate sustainable travel and a Travel Plan so that the use of sustainable modes can be maximised.

5.3.12 There is also potential to introduce a Residents Parking Scheme on some of the surrounding roads, but this would need to be discussed fully with the local authority.

5.4 Vehicular Access

5.4.1 The length of Bridge Street running adjacent to the site benefits from good visibility in both directions.

5.4.2 It is considered that while there will be no vehicular access into Site 1, Site 2 has potential to be accessed directly from Bridge Street, via a simple priority junction.

5.4.3 Croft recommend that this be investigated further and discussed with highways officers at the Council, should the development of Site 2 be progressed.

5.5 Summary

5.5.1 This section of the Report has considered the impact of the potential developments in transport terms.



- 5.5.2 The TRICS assessment has demonstrated that the both potential sites would not have a material traffic impact and could be accommodated onto the local highway network, without giving rise to any highway issues.
- 5.5.3 The evidence shows that there would be a high demand for accommodation without car parking (based on 33% of residents not owning a car) and furthermore, given that when combined, the number of people not owning a car or only owning one vehicle (43%) is 76%, it is clear that development of a 'car-free' or reduced parking nature would be attractive to a large number of prospective buyers.
- 5.5.4 It can be concluded that the two sites could potentially be developed for residential purposes.



6 PROMOTING SMARTER CHOICES VIA TRAVEL PLANS

6.1 Introduction

- 6.1.1 The impact of any development can be mitigated by the implementation of Travel Plan measures to reduce reliance on the private car and assist in delivering highly sustainable development. The preparation and adoption of a Travel Plan is an important element of managing the demand for travel to all modern developments.

6.2 Travel Planning Guidance

- 6.2.1 The Department for Transport (DfT) have produced guidance on the preparation of Travel Plans. The document, entitled '*Good Practice Guidelines: Delivering Travel Plans through the Planning Process*' was published in August 2009.
- 6.2.2 The document sets out an overview of the process and delivery of Travel Plans and states that "*A Travel Plan is a long-term management strategy for an occupier or site that seeks to deliver sustainable transport objectives through positive action and is articulated in a document that is regularly reviewed.*"
- 6.2.3 Further guidance relating specifically to residential Travel Plans is presented in the DfT document entitled "*Making Residential Travel Plans Work*" published in June 2007.
- 6.2.4 The document states that:
- "Travel Planning is one of a range of measures known as smarter choices which have been found to be effective on reducing traffic and improving accessibility in residential areas".*
- 6.2.5 A Residential Travel Plan is a package of measures designed to reduce car use originating from new housing by supporting alternative forms of transport and reducing the need to travel in the first place.



- 6.2.6 They are an important tool to help deliver accessible, sustainable communities and offer clear benefits to all the parties involved – public, private and the community. They involve meeting the access needs of residents in a new way and require partnerships between developers, local authorities, local communities and new residents.
- 6.2.7 The objective of a Residential Travel Plan is the delivery of the objectives of the NPPF, i.e. to encourage residents to travel to work by bus, on foot and by bicycle.
- 6.2.8 However, the principle measure will consist of a Residents Travel Pack containing relevant material to promote non-car modes of travel and the provision of certain physical measures. The Travel Pack will contain information to inform residents of the existing long-term strategy for reducing the dependence of residents and visitors on travel by private car.
- 6.2.9 Section 4 has demonstrated that the site already benefits from excellent non-car accessibility and it should, therefore, be expected that the adoption of a Travel Plan would be particularly effective.

6.3 Summary

- 6.3.1 Croft would recommend that any planning application be accompanied by a Framework Residential Travel Plan which outlines physical and management measures that will be implemented to achieve this objective and allow the use of sustainable modes to be maximised.



7 CONCLUSIONS

7.1.1 Croft have prepared this note to provide initial advice on the highways implications of developing either one or two sites for residential use.

7.1.2 The following conclusions can be drawn:

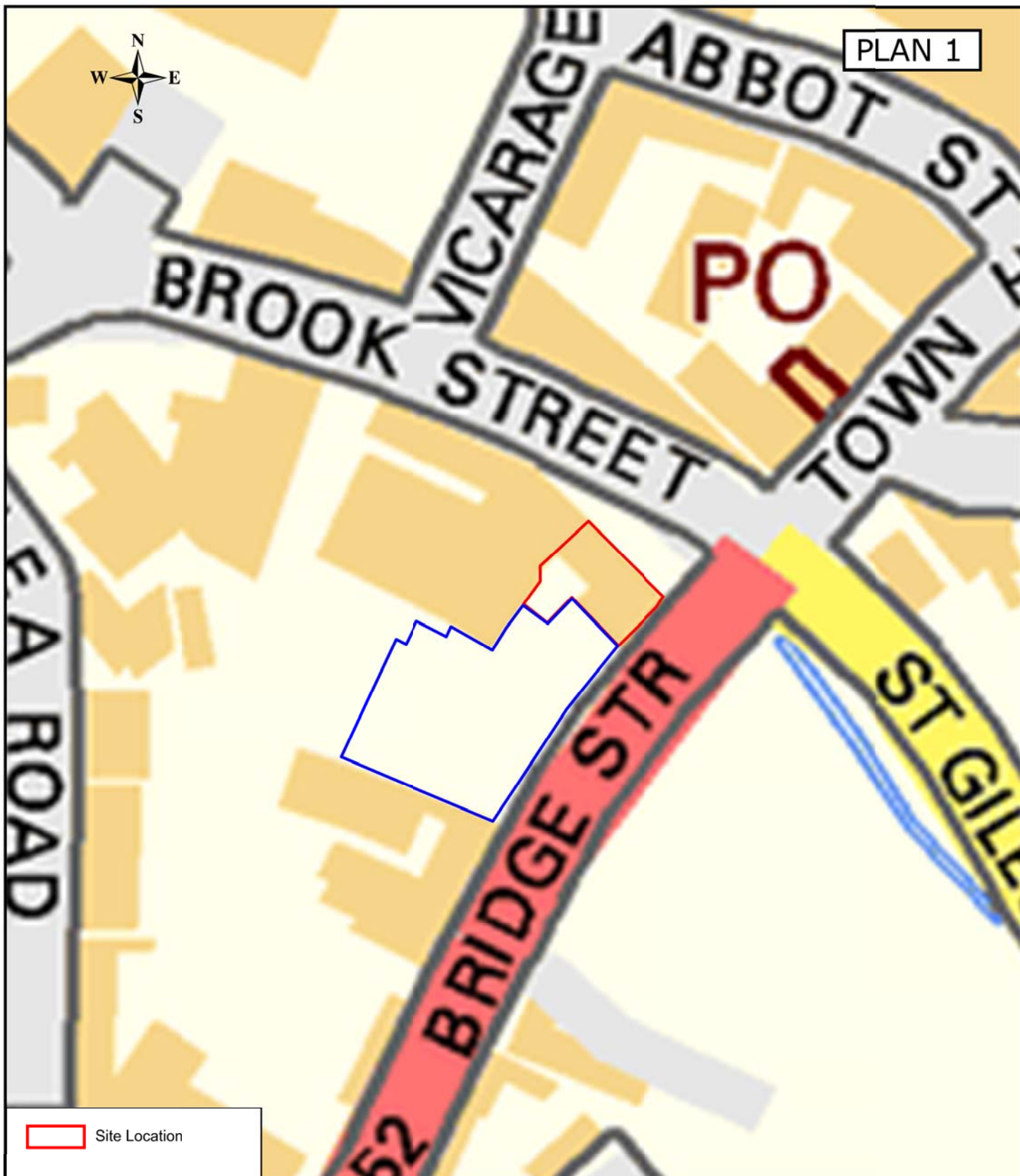
- The town centre location of the site mean it is highly accessible by non-car travel modes, such as walking and cycling.
- The site is also accessible by bus with bus stops within easy walking distance of the site on Brook Street, with an even greater number services available at Wrexham bus station which is only a 5 minute walk away.
- Wrexham central train station is also within a reasonable walking distance thus providing an even wider choice of sustainable modes.
- The traffic impact of Site 1, which could be developed for 10 private apartments has been assessed using the TRICS database and the assessment showed that the associated traffic impact would be minimal.
- The traffic impact of Site 2, which could be developed for 32 private apartments has been assessed using the TRICS database and the assessment showed that the proposals will not have a material impact or give rise to any highways related issues.
- While there would be no vehicular access to Site 1, Site 2 has potential to be accessed directly from Bridge Street, via a simple priority junction.



- There is also potential for some disabled parking to provide within Site 2, to cater for the needs of those residing at Site 1.
- The provision of a Travel Plan for the site will assist in creating a wider choice of travel to residents, whilst allowing the use of sustainable modes to be maximised.

7.1.3 In conclusion, it is considered that both sites have potential to be developed for residential use.

PLANS



LINGAR PROPERTIES					Croft Transport Planning & Design Hill Quays 9 Jordan Street Manchester M15 4PY Email: info@crofts.co.uk Tel: 0161 667 3746 Web: www.crofts.co.uk		 CROFT
BRIDGE STREET, WREXHAM SITE LOCATION PLAN							
DRAWN:	DATE:	CHECKED:	DATE:	SCALE:	DRAWING NUMBER:	REVISION:	
GM	29.03.18	MR	29.03.18	N.T.S	2171-01	.	



NOTES

- 800m Pedestrian Catchment
- 2km Pedestrian Catchment
- Site Location
- Car Park
- Bus Stops within 400m
- Train Station
- Eagles Meadow Shopping Centre
- Leisure/Sport
- Education
- Healthcare/Medical
- Cafe/Takeaway/Public House
- Retail
- Business/Employment/Industrial
- Post Office
- Wrexham Bus Station

PLAN 2

REV.	DETAILS	DRAWN	CHECKED	DATE
CLIENT: LINGAR PROPERTIES				
PROJECT: BRIDGE STREET, WREXHAM				
DRAWING TITLE: 800M & 2KM PEDESTRIAN CATCHMENT WITH AMENITIES				
SCALE: 15000 @ A3				
DRAWN: GM	CHECKED: MR	DATE: 29.03.18		
Croft Transport Planning & Design Hill Quays 9 Jordan Street Manchester M5 4PY Email: info@crofts.co.uk Tel: 0161 667 3746 Web: www.crofts.co.uk				CROFT
DRAWING NUMBER: 2171-01		REVISION: .		

APPENDICES

APPENDIX 1

Site Photographs



Existing loading bay adjacent to site on Brook Street



On street parking bays on Brook Street



On street parking bays on Bridge Street



On street parking bays on Brook Street



On street parking bays on Brook Street

APPENDIX 2

TRICS Output for Private Apartments

Calculation Reference: AUDIT-851401-171115-1150

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	2 days
	HC HAMPSHIRE	1 days
	OX OXFORDSHIRE	1 days
03	SOUTH WEST	
	BR BRISTOL CITY	1 days
	DC DORSET	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	NT NOTTINGHAMSHIRE	2 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	RI EAST RIDING OF YORKSHIRE	1 days
09	NORTH	
	CB CUMBRIA	2 days
	TV TEES VALLEY	1 days
10	WALES	
	FS FLINTSHIRE	1 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days
	SA SOUTH AYRSHIRE	1 days
	SR STIRLING	2 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: 6 to 135 (units:)
Range Selected by User: 6 to 215 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 11/11/16

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

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

Selected survey types:

Manual count	23 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 Centre	9
Suburban Area (PPS6 Out of Centre)	12
Edge of Town	2

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.

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 23 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:

1,001 to 5,000	4 days
10,001 to 15,000	8 days
15,001 to 20,000	3 days
20,001 to 25,000	2 days
25,001 to 50,000	6 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	1 days
25,001 to 50,000	1 days
50,001 to 75,000	7 days
75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	5 days
250,001 to 500,000	6 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	5 days
1.1 to 1.5	18 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 23 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 23 days

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

LIST OF SITES relevant to selection parameters

1	BR-03-C-01 CLARENCE ROAD BRISTOL Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 102 Survey date: MONDAY 09/11/09	FLATS & TERRACED	BRISTOL CITY	Survey Type: MANUAL
2	CA-03-C-02 WESTFIELD ROAD NETHERTON PETERBOROUGH Suburban Area (PPS6 Out of Centre) No Sub Category Total Number of dwellings: 44 Survey date: TUESDAY 18/10/11	BLOCK OF FLATS	CAMBRIDGESHIRE	Survey Type: MANUAL
3	CB-03-C-02 BRIDGE LANE PENRITH Edge of Town No Sub Category Total Number of dwellings: 35 Survey date: WEDNESDAY 11/06/14	BLOCK OF FLATS	CUMBRIA	Survey Type: MANUAL
4	CB-03-C-03 LOUND STREET KENDAL Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 33 Survey date: MONDAY 09/06/14	FLATS & BUNGALOWS	CUMBRIA	Survey Type: MANUAL
5	DC-03-C-02 PALM COURT SPA ROAD WEYMOUTH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 14 Survey date: FRIDAY 28/03/14	FLATS IN BLOCKS	DORSET	Survey Type: MANUAL
6	DS-03-C-01 DRAGE STREET LITTLE CHESTER DERBY Suburban Area (PPS6 Out of Centre) No Sub Category Total Number of dwellings: 8 Survey date: THURSDAY 25/06/09	BLOCK OF FLATS	DERBYSHIRE	Survey Type: MANUAL
7	EB-03-C-01 MYRESIDE ROAD CRAIGLOCKHART EDINBURGH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 32 Survey date: TUESDAY 26/05/15	BLOCKS OF FLATS	CITY OF EDINBURGH	Survey Type: MANUAL
8	EX-03-C-01 WESTCLIFF PARADE WESTCLIFF SOUTHEND-ON-SEA Edge of Town Centre Residential Zone Total Number of dwellings: 6 Survey date: TUESDAY 22/10/13	FLATS	ESSEX	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	EX-03-C-02	BLOCK OF FLATS	ESSEX	
	WESTCLIFF PARADE			
	WESTCLIFF			
	SOUTHEND-ON-SEA			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	94		
	Survey date: TUESDAY	22/10/13	Survey Type: MANUAL	
10	FS-03-C-01	BLOCK OF FLATS	FLINTSHIRE	
	WREXHAM STREET			
	MOLD			
	Edge of Town Centre			
	Built-Up Zone			
	Total Number of dwellings:	30		
	Survey date: MONDAY	06/07/09	Survey Type: MANUAL	
11	HC-03-C-02	FLATS	HAMPSHIRE	
	WORTING ROAD			
	BASINGSTOKE			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	16		
	Survey date: THURSDAY	21/10/10	Survey Type: MANUAL	
12	NF-03-C-01	BLOCKS OF FLATS	NORFOLK	
	PAGE STAIR LANE			
	KING'S LYNN			
	Edge of Town Centre			
	Built-Up Zone			
	Total Number of dwellings:	51		
	Survey date: THURSDAY	11/12/14	Survey Type: MANUAL	
13	NT-03-C-01	HOUSES (SPLIT INTO FLATS)	NOTTINGHAMSHIRE	
	LAWRENCE WAY			
	NOTTINGHAM			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:	56		
	Survey date: TUESDAY	08/11/16	Survey Type: MANUAL	
14	NT-03-C-02	HOUSES (SPLIT INTO FLATS)	NOTTINGHAMSHIRE	
	CASTLE MARINA ROAD			
	NOTTINGHAM			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:	135		
	Survey date: WEDNESDAY	09/11/16	Survey Type: MANUAL	
15	OX-03-C-01	BLOCK OF FLATS	OXFORDSHIRE	
	OXFORD ROAD			
	COWLEY			
	OXFORD			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	14		
	Survey date: WEDNESDAY	20/10/10	Survey Type: MANUAL	
16	RI-03-C-01	FLATS	EAST RIDING OF YORKSHIRE	
	465 PRIORY ROAD			
	HULL			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	20		
	Survey date: TUESDAY	13/05/14	Survey Type: MANUAL	

LIST OF SITES relevant to selection parameters (Cont.)

17	SA-03-C-01	BLOCK OF FLATS		SOUTH AYRSHIRE
	RACECOURSE ROAD			
	AYR			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	51		
	Survey date: TUESDAY	16/09/14	Survey Type: MANUAL	
18	SF-03-C-01	BLOCKS OF FLATS		SUFFOLK
	STATION HILL			
	BURY ST EDMUNDS			
	Edge of Town Centre			
	Built-Up Zone			
	Total Number of dwellings:	85		
	Survey date: THURSDAY	18/12/14	Survey Type: MANUAL	
19	SF-03-C-03	BLOCKS OF FLATS		SUFFOLK
	TOLLGATE LANE			
	BURY ST EDMUNDS			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	30		
	Survey date: WEDNESDAY	03/12/14	Survey Type: MANUAL	
20	SR-03-C-01	FLATS		STIRLING
	FORTH SIDE WAY			
	STIRLING			
	Edge of Town Centre			
	No Sub Category			
	Total Number of dwellings:	80		
	Survey date: WEDNESDAY	18/06/14	Survey Type: MANUAL	
21	SR-03-C-02	FLATS		STIRLING
	ROSEBERRY TERRACE			
	STIRLING			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	48		
	Survey date: WEDNESDAY	18/06/14	Survey Type: MANUAL	
22	TV-03-C-02	FLATS		TEES VALLEY
	ACKLAM ROAD			
	LINTHORPE			
	MIDDLESBROUGH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	85		
	Survey date: WEDNESDAY	29/06/11	Survey Type: MANUAL	
23	WM-03-C-04	BLOCKS OF FLATS		WEST MIDLANDS
	GILLQUART WAY			
	PARKSIDE			
	COVENTRY			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	55		
	Survey date: FRIDAY	11/11/16	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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	23	49	0.055	23	49	0.126	23	49	0.181
08:00 - 09:00	23	49	0.061	23	49	0.195	23	49	0.256
09:00 - 10:00	23	49	0.078	23	49	0.108	23	49	0.186
10:00 - 11:00	23	49	0.082	23	49	0.097	23	49	0.179
11:00 - 12:00	23	49	0.089	23	49	0.095	23	49	0.184
12:00 - 13:00	23	49	0.103	23	49	0.078	23	49	0.181
13:00 - 14:00	23	49	0.092	23	49	0.103	23	49	0.195
14:00 - 15:00	23	49	0.101	23	49	0.111	23	49	0.212
15:00 - 16:00	23	49	0.093	23	49	0.074	23	49	0.167
16:00 - 17:00	23	49	0.122	23	49	0.085	23	49	0.207
17:00 - 18:00	23	49	0.199	23	49	0.101	23	49	0.300
18:00 - 19:00	23	49	0.141	23	49	0.098	23	49	0.239
19:00 - 20:00	2	15	0.333	2	15	0.200	2	15	0.533
20:00 - 21:00	2	15	0.100	2	15	0.033	2	15	0.133
21:00 - 22:00	2	15	0.133	2	15	0.100	2	15	0.233
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	1.782			1.604			3.386		

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.

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Parameter summary

Trip rate parameter range selected:	6 - 135 (units:)
Survey date range:	01/01/09 - 11/11/16
Number of weekdays (Monday-Friday):	23
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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	23	49	0.005	23	49	0.005	23	49	0.010
08:00 - 09:00	23	49	0.000	23	49	0.000	23	49	0.000
09:00 - 10:00	23	49	0.001	23	49	0.001	23	49	0.002
10:00 - 11:00	23	49	0.003	23	49	0.003	23	49	0.006
11:00 - 12:00	23	49	0.004	23	49	0.004	23	49	0.008
12:00 - 13:00	23	49	0.001	23	49	0.001	23	49	0.002
13:00 - 14:00	23	49	0.003	23	49	0.003	23	49	0.006
14:00 - 15:00	23	49	0.004	23	49	0.004	23	49	0.008
15:00 - 16:00	23	49	0.002	23	49	0.002	23	49	0.004
16:00 - 17:00	23	49	0.005	23	49	0.005	23	49	0.010
17:00 - 18:00	23	49	0.004	23	49	0.003	23	49	0.007
18:00 - 19:00	23	49	0.004	23	49	0.004	23	49	0.008
19:00 - 20:00	2	15	0.000	2	15	0.000	2	15	0.000
20:00 - 21:00	2	15	0.000	2	15	0.000	2	15	0.000
21:00 - 22:00	2	15	0.000	2	15	0.000	2	15	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.036			0.035			0.071

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.

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Parameter summary

Trip rate parameter range selected:	6 - 135 (units:)
Survey date range:	01/01/09 - 11/11/16
Number of weekdays (Monday-Friday):	23
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	23	49	0.001	23	49	0.002	23	49	0.003
08:00 - 09:00	23	49	0.002	23	49	0.001	23	49	0.003
09:00 - 10:00	23	49	0.003	23	49	0.004	23	49	0.007
10:00 - 11:00	23	49	0.000	23	49	0.000	23	49	0.000
11:00 - 12:00	23	49	0.002	23	49	0.002	23	49	0.004
12:00 - 13:00	23	49	0.003	23	49	0.003	23	49	0.006
13:00 - 14:00	23	49	0.001	23	49	0.001	23	49	0.002
14:00 - 15:00	23	49	0.003	23	49	0.002	23	49	0.005
15:00 - 16:00	23	49	0.001	23	49	0.001	23	49	0.002
16:00 - 17:00	23	49	0.001	23	49	0.001	23	49	0.002
17:00 - 18:00	23	49	0.000	23	49	0.000	23	49	0.000
18:00 - 19:00	23	49	0.000	23	49	0.000	23	49	0.000
19:00 - 20:00	2	15	0.000	2	15	0.000	2	15	0.000
20:00 - 21:00	2	15	0.000	2	15	0.000	2	15	0.000
21:00 - 22:00	2	15	0.000	2	15	0.000	2	15	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.017			0.017			0.034

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.

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Parameter summary

Trip rate parameter range selected:	6 - 135 (units:)
Survey date range:	01/01/09 - 11/11/16
Number of weekdays (Monday-Friday):	23
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	23	49	0.000	23	49	0.000	23	49	0.000
08:00 - 09:00	23	49	0.000	23	49	0.000	23	49	0.000
09:00 - 10:00	23	49	0.000	23	49	0.000	23	49	0.000
10:00 - 11:00	23	49	0.001	23	49	0.001	23	49	0.002
11:00 - 12:00	23	49	0.001	23	49	0.001	23	49	0.002
12:00 - 13:00	23	49	0.000	23	49	0.000	23	49	0.000
13:00 - 14:00	23	49	0.000	23	49	0.000	23	49	0.000
14:00 - 15:00	23	49	0.001	23	49	0.001	23	49	0.002
15:00 - 16:00	23	49	0.001	23	49	0.000	23	49	0.001
16:00 - 17:00	23	49	0.001	23	49	0.002	23	49	0.003
17:00 - 18:00	23	49	0.001	23	49	0.001	23	49	0.002
18:00 - 19:00	23	49	0.000	23	49	0.000	23	49	0.000
19:00 - 20:00	2	15	0.000	2	15	0.000	2	15	0.000
20:00 - 21:00	2	15	0.000	2	15	0.000	2	15	0.000
21:00 - 22:00	2	15	0.000	2	15	0.000	2	15	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.006			0.012

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.

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Parameter summary

Trip rate parameter range selected:	6 - 135 (units:)
Survey date date range:	01/01/09 - 11/11/16
Number of weekdays (Monday-Friday):	23
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	23	49	0.005	23	49	0.009	23	49	0.014
08:00 - 09:00	23	49	0.003	23	49	0.010	23	49	0.013
09:00 - 10:00	23	49	0.004	23	49	0.004	23	49	0.008
10:00 - 11:00	23	49	0.002	23	49	0.005	23	49	0.007
11:00 - 12:00	23	49	0.004	23	49	0.004	23	49	0.008
12:00 - 13:00	23	49	0.004	23	49	0.004	23	49	0.008
13:00 - 14:00	23	49	0.001	23	49	0.003	23	49	0.004
14:00 - 15:00	23	49	0.002	23	49	0.002	23	49	0.004
15:00 - 16:00	23	49	0.005	23	49	0.004	23	49	0.009
16:00 - 17:00	23	49	0.004	23	49	0.001	23	49	0.005
17:00 - 18:00	23	49	0.006	23	49	0.000	23	49	0.006
18:00 - 19:00	23	49	0.008	23	49	0.001	23	49	0.009
19:00 - 20:00	2	15	0.000	2	15	0.000	2	15	0.000
20:00 - 21:00	2	15	0.000	2	15	0.000	2	15	0.000
21:00 - 22:00	2	15	0.000	2	15	0.000	2	15	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.048			0.047			0.095

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.

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APPENDIX 3

Car Ownership Statistics Data

KS404EW - Car or van availability

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population	All households; All cars or vans
units	Households
area type	2011 wards
area name	W05000269 : Offa
rural urban	Total

Cars

2011

	number	%
All categories: Car or van availa	1,137	100
No cars or vans in household	375	33
1 car or van in household	492	43
2 cars or vans in household	217	19
3 cars or vans in household	43	4
4 or more cars or vans in house	10	1

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.



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