



Village Bakery

Village Bakery, Wrexham Industrial Estate

Transport Statement

September 2021



Village Bakery

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Transport Statement

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APPENDICES

APPENDIX A Proposed Site Layout Plan

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APPENDIX B Swept Path Analysis

APPENDIX C Public transport Timetables

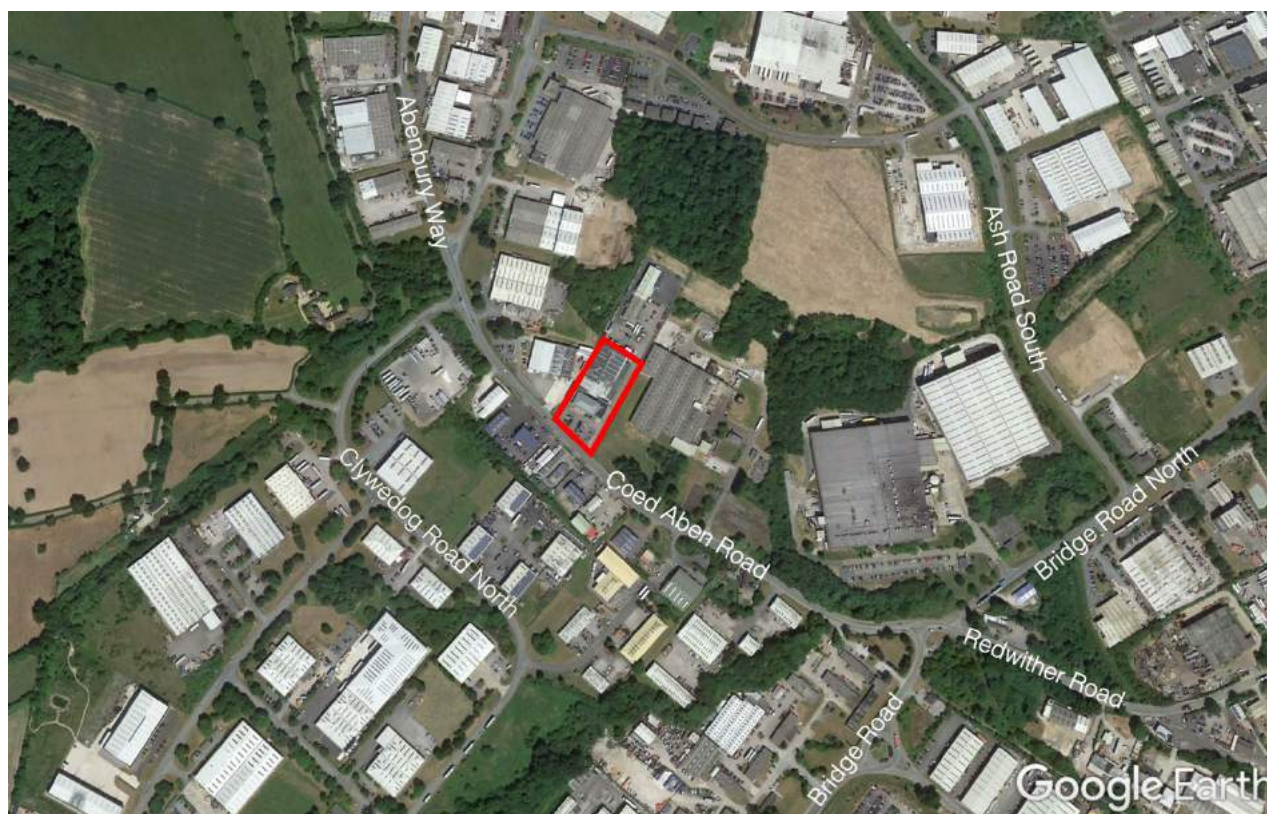
APPENDIX D TRICS Outputs

1. Introduction

1.1 Preamble

- 1.1.1 Mode Transport Planning ('Mode') has been appointed by Village Bakery (the 'Applicant') to provide transport and highways advice in relation to a proposed industrial development off Coed Aben Road on the Wrexham Industrial Estate, Wrexham.
- 1.1.2 The development comprises an industrial unit (Use Class B2 / B8) with a Gross Floor Area (GFA) of 2,800sqm. The scheme will also provide on-site parking, a service yard and associated landscaping. Vehicular and pedestrian access is proposed via an existing priority arrangement on Coed Aben Road. The indicative site redline boundary is shown in Figure 1.1.

Figure 1.1 : Indicative Site Redline Boundary (source: Google Earth)



- 1.1.3 This Transport Statement (TS) has been prepared to assess the development proposals, with particular consideration to expected trip generation, accessibility by sustainable modes of travel, servicing/delivery arrangements and on-site car parking provision.

1.2 Methodology

- 1.2.1 The methodology and scope of the TS adopts the guidance set out within the Welsh Government's Technical Advice Note (TAN) 18: Transport.

1.3 Report Structure

1.3.1 Following this introduction, the TS has been structured as follows:

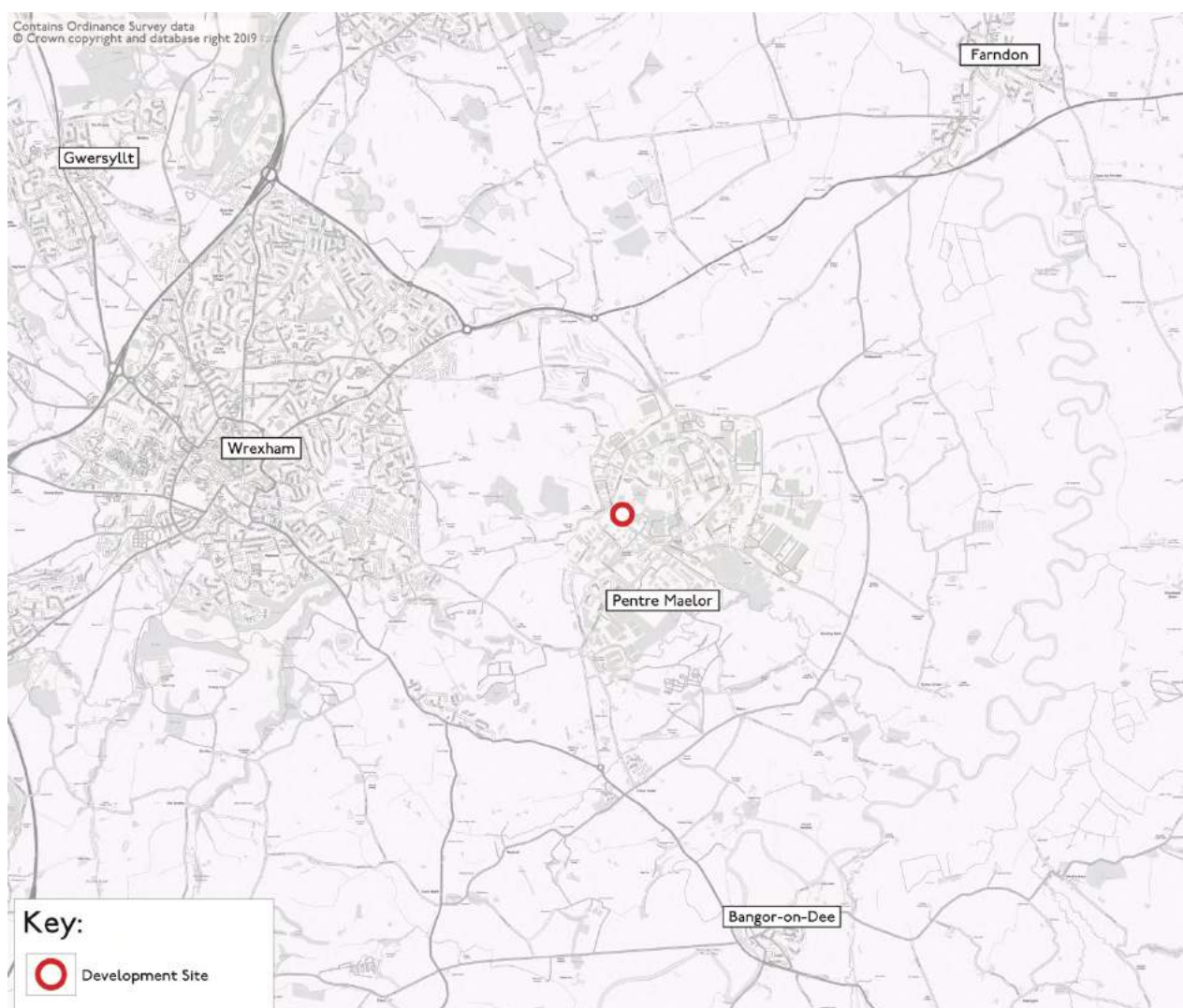
- Chapter 2 describes the site location, local highway network and collision data;
- Chapter 3 outlines the development proposals, vehicular access, servicing and parking;
- Chapter 4 details accessibility by non-car modes, including public transport, cycle and on foot;
- Chapter 5 details the expected trip generation;
- Chapter 6 details the car parking accumulation assessment for the proposed use; and
- Chapter 7 summarises and concludes the findings of the report.

2. Existing Conditions

2.1 Site Location and Existing Use

- 2.1.1 As shown in [Figure 2.1](#), the development site is located within Wrexham Industrial Estate, c.4km east of Wrexham Town Centre.

Figure 2.1 : Site Location

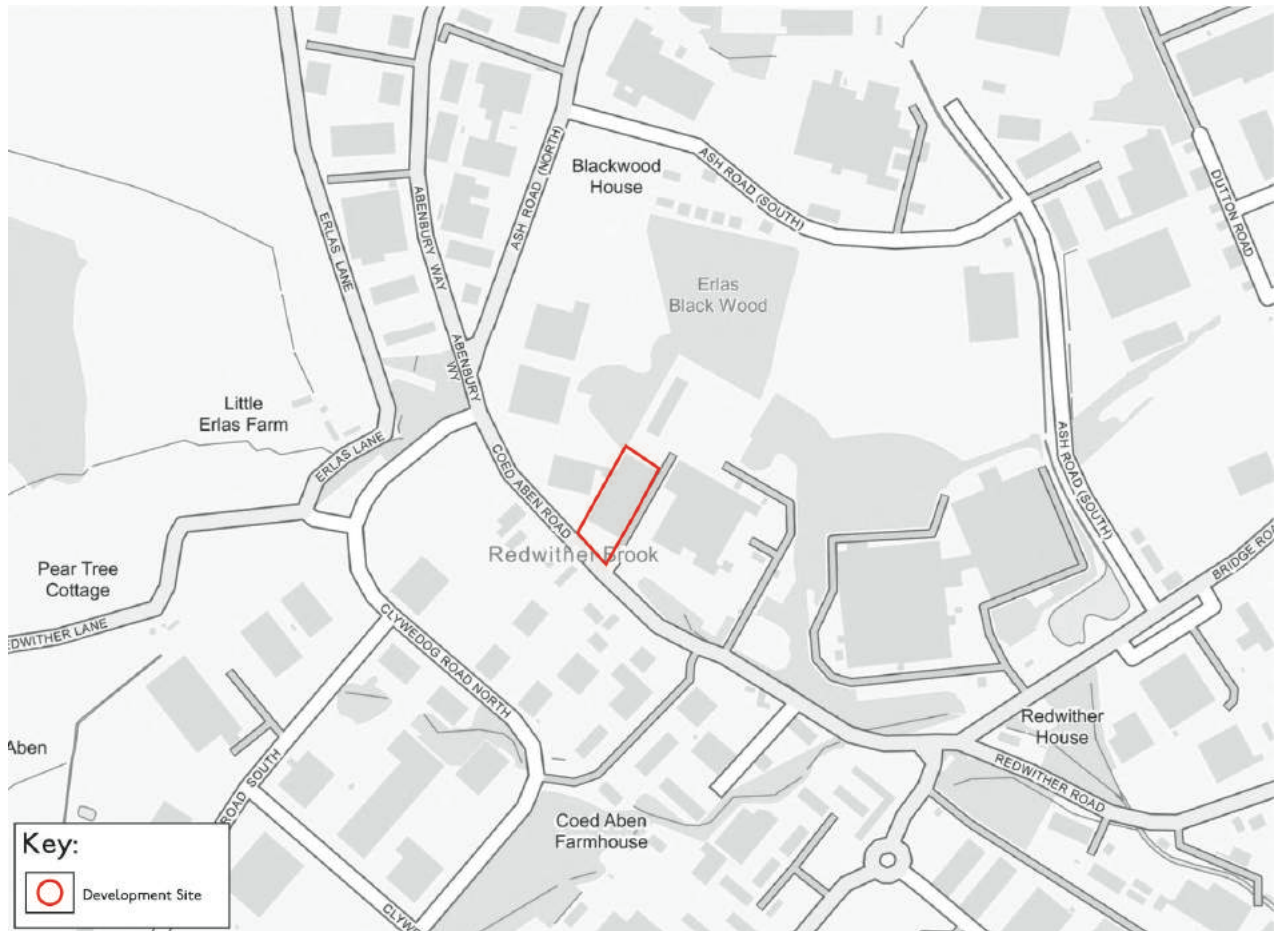


- 2.1.2 The site is bound to the north and west by existing industrial units that forms part of the wider Village Bakery site, to the east by the Novidon site and to the south by Coed Aben Road.

2.2 Local Highway Network

- 2.2.1 The location of the site in the context of the local highway network is shown in [Figure 2.2](#).

Figure 2.2 : Local Highway Network



Coed Aben Road

- 2.2.2 Coed Aben Road is located on the eastern site boundary and extends on a broadly southeast northwest alignment forming a c.700m long section of the internal ring road within the Wrexham Industrial Estate between Abenbury Way and Redwither Road.
- 2.2.3 Coed Aben Road provides vehicular and pedestrian access to/ from the site via an existing priority junction ([Photograph 2.1](#)) which also serves the existing industrial unit to the north. The existing access will remain and will continue to serve as the primary vehicular and pedestrian access into the site.
- 2.2.4 The site access provides c.2m footways on both sides that extend to the tangent point, at which an uncontrolled crossing point with dropped kerbs and tactile paving is provided ([Photograph 2.2](#)).
- 2.2.5 As shown in [Photograph 2.3](#), access to the existing car park is provided via a priority arrangement off the internal access road. This access is controlled by electronic gates and provides dropped kerbs and tactile paving allowing movement of pedestrians between the car park and the wider Village Bakery site.

Photograph 2.1 : Existing Site Access



Photograph 2.2 : Existing Site Access – Tactile Crossing



Photograph 2.3 : Internal Car Park Access



2.2.6 Adjacent to the site, Coed Aben Road has a carriageway width of c.7.5m providing one lane in each direction (Photograph 2.4) and is subject to a 40mph speed limit. As shown in Photograph 2.5, a network of street lighting columns is also provided

Photograph 2.4 : Coed Aben Road – Carriageway and Footway



Photograph 2.5 : Coed Aben Road – Street Lighting Columns



- 2.2.7 To the west of the site access, a c.2m footway is present on both sides of the carriageway which benefits from the presence of dropped kerbs across accesses and good quality surfacing. The northern footway provides access to the existing bus stop located c.100m to the west which consists of a flag and pole arrangement, as shown in [Photograph 2.6](#).
- 2.2.8 To the east of the site access, the northern footway extends for c.30m and forms a grass verge across the southern boundary of the Novidon Ltd site. Pedestrians would be required to utilise the southern footway for journeys to / from the east.
- 2.2.9 Both footways provide dropped kerbs across accesses and good quality surfacing, providing access along the extent of the route for all users, accounting for varying levels and types of disability, including visual impairment.
- 2.2.10 A further bus stop is located c.200m east of the site along Coed Aben Road consisting of a bus layby and sheltered waiting area, as shown [Photograph 2.7](#).

Photograph 2.6 : Coed Aben Road – Bus Stop to West



Photograph 2.7 : Coed Aben Road – Bus Stop to East



2.3 Road Safety

- 2.3.1 Collision data in the vicinity of the development site has been obtained from the CrashMap database (crashmap.co.uk) for the most recent period between 2015 and 2019.
- 2.3.2 The study area includes Coed Aben Road between Abenbury Way and Redwither Road. The extent of the study area and location of Personal Injury Collisions (PICs) is shown in **Figure 2.3**. A breakdown of the PICs reported within the study area is summarised in **Table 2.1**.

Figure 2.3 : Personal Injury Collision Data (source: Crashmap)

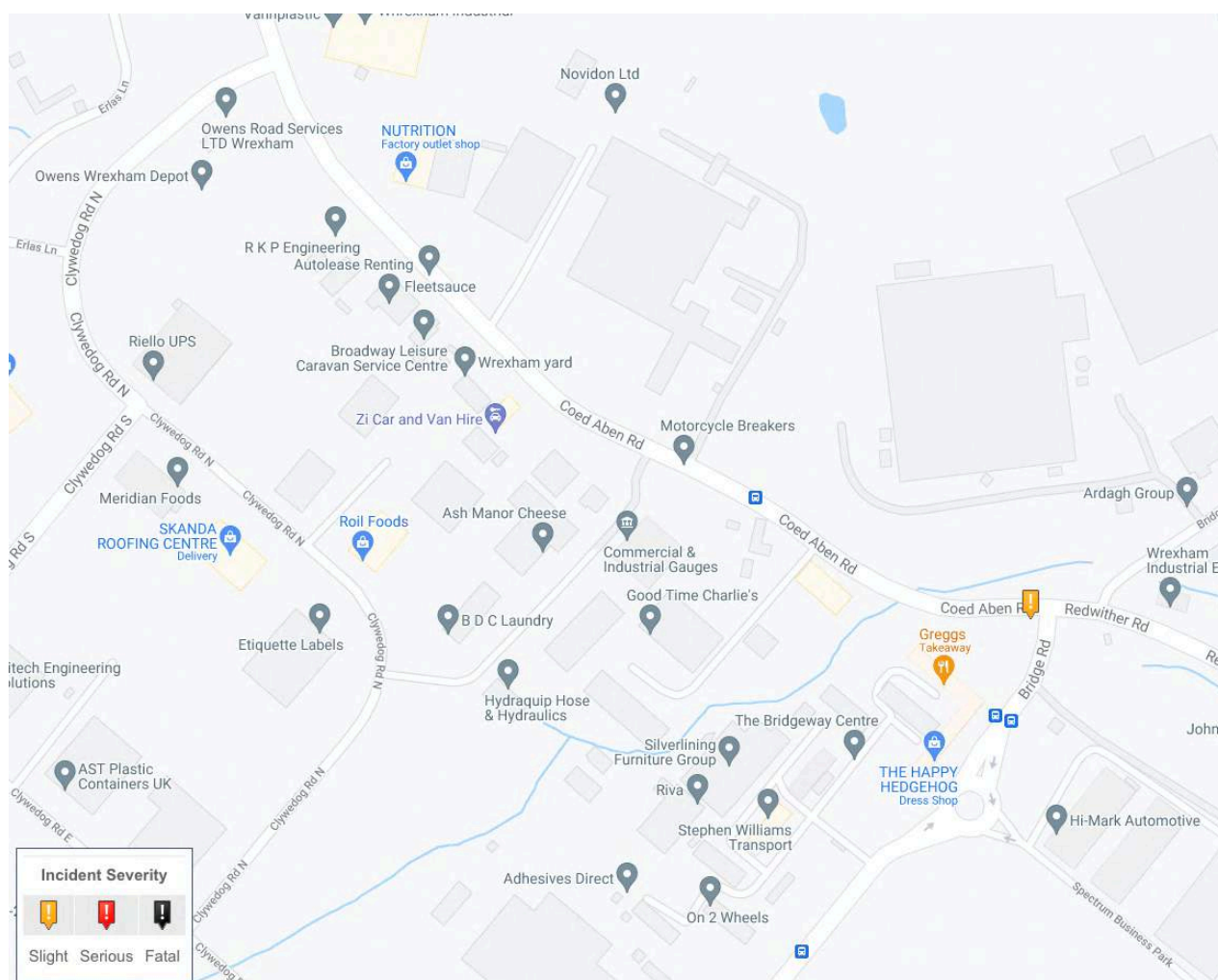


Table 2.1 : Personal Injury Collision Data Summary

Year	Location	Severity	Cars / LGVs Involved	Cyclists Involved	HGVs Involved	M/Cs Involved	Peds Involved
2016	Coed Aben Road / Bridge Road	Slight	2	0	0	0	0

- 2.3.3 The PIC data shows that 1no. collision, 'slight' in severity was reported on the local highway network during the study period. There were no reported 'serious' or 'fatal' collisions during the study period.
- 2.3.4 Based on the severity, location and frequency of collisions recorded, there is no evidence to suggest that the highway layout, design or condition are significant factors in PICs recorded across the study area.
- 2.3.5 There is also no evidence to suggest that the proposed development would increase risks of PICs in the surrounding area or have a detrimental impact on highway safety.

2.4 Public Rights of Way

- 2.4.1 There are no Public Rights of Way (PRoW) within the site boundary or immediate surrounding area.

2.5 Air Quality

- 2.5.1 According to the Department for Environment, Food and Rural Affairs (DEFRA), the development site is not located in an Air Quality Management Area (AQMA).

3. Development Proposals

3.1 Proposed Use

- 3.1.1 The development will include a new industrial unit on the Village Bakery site off Coed Aben Road on the Wrexham Industrial Estate. The proposed development comprises a single industrial unit (Use Class B2 / B8) with a Gross Floor Area (GFA) of 2,800sqm. The scheme will also provide on-site parking, a service yard and associated landscaping. Vehicular and pedestrian access is proposed via the existing priority arrangement on Coed Aben Road.
- 3.1.2 The proposed development site layout is shown in [Figure 3.1](#), with full layout drawings attached in [Appendix A](#).

Figure 3.1 : Proposed Site Layout (source: C4 Projects)



3.2 Site Access Arrangement

- 3.2.1 As shown in [Figure 3.1](#), vehicular and pedestrian access will be provided off Coed Aben Road via the existing priority access that currently serves the industrial unit abutting the northern site boundary.

- 3.2.2 The development proposals will retain the existing junction layout and maintain the required visibility splays.
- 3.2.3 Within the site, clear and direct pedestrian routes will be provided to the main entrance, allowing for the safe and convenient movement of pedestrians throughout the site, reducing the potential for conflict arise between pedestrian and motorised vehicles.

3.3 Servicing Arrangements

- 3.3.1 Swept path analysis has been undertaken at the site access for a 16.5m articulated HGV, which is the largest vehicle expected to regularly visit the site. The analysis shows that a 16.5m articulated HGV vehicle can enter and exit via the site access in a forward gear.
- 3.3.2 Swept path analysis is shown in [Figure 3.2](#) and [Figure 3.3](#) and **Drawing J32-5994-PS-001** attached in [Appendix B](#).

Figure 3.2 : Swept Path Analysis – Site Access Junction



Figure 3.3 : Swept Path Analysis – Service Yard



3.4 Proposed Parking Provision

- 3.4.1 The development proposals will include a total of 33no. on-site car parking spaces, including 2no. disabled car parking spaces.
- 3.4.2 The disabled parking spaces will be located within close proximity to the main entrance of each unit in order to provide safe and convenient access for all types of disability and visual impaired users.
- 3.4.3 The site will also include 4no. secure cycle parking spaces. The cycle parking will be provided in a secure cycle shelter located in close proximity to the car park access junction.
- 3.4.4 **Table 3.1** provides a summary of maximum car parking standards for the proposed land use, as specified in Wrexham County Borough Council's (WCBC) 'Local Planning Guidance Note 16 – Parking Standards'.

Table 3.1 : WCBC Car Parking Standards

Land Use	Car Parking (Maximum)	Cycle Parking (Minimum)
B2 General Industrial	1 space per 50sqm	1 cycle space / 500sqm
B8 Storage and Distribution	1 space per 100sqm	1 cycle space / 1,000sqm

3.4.5 **Table 3.2** shows the parking requirements, based on WCBC's parking standards and the GFA for the proposed industrial development. A 50/50 split of the total GFA (2,800sqm) has been assumed between B2 and B8 uses.

Table 3.2 : WCBC Car Parking Requirements

Land Use	Car Parking (Maximum)	Cycle Parking (Minimum)
B2 General Industrial (1,400sqm)	28 spaces	3 spaces
B8 Storage and Distribution (1,400sqm)	14 spaces	1 space
Total Parking Requirements	42 spaces	4 spaces

3.4.6 As shown in **Table 3.2**, the proposed parking provision of 33no. car parking spaces and 4no. cycle parking spaces comply with WCBC's maximum parking standards.

3.4.7 Further analysis of the proposed on-site car parking provision is detailed in **Chapter 6**, including a TRICS based parking accumulation assessment, which demonstrates that the proposed parking provision is sufficient to accommodate the expected parking demand generated by the development.

4. Sustainable Accessibility

4.1 Introduction

- 4.1.1 Current Government policy and guidance places significant emphasis on the promotion of sustainable transport modes for all new developments. This forms part of a long-term strategy to reduce the reliance on private car trips.
- 4.1.2 This includes the Active Travel (Wales) Act 2013 which requires local authorities, including FCC, to continuously improve facilities and routes for pedestrians and cyclists and to prepare maps identifying current and potential future routes for their use. The Act also requires new road schemes (including road improvement schemes) to consider the needs of pedestrians and cyclist at the design stage.
- 4.1.3 Through the Active Travel (Wales) Act 2013, statutory design guidance has been published by the Welsh Government which provides advice on the planning, design, construction and maintenance of active travel networks and infrastructure.
- 4.1.4 This chapter considers accessibility via sustainable modes of transport to the proposed development site, including access by public transport, cycle and on foot.

4.2 Pedestrian Accessibility

- 4.2.1 Guideline walking distances provided in the Chartered Institution of Highways and Transportation (CIHT) document '*Guidelines for Providing for Journeys on Foot (2000)*', are shown in [Table 4.1](#).

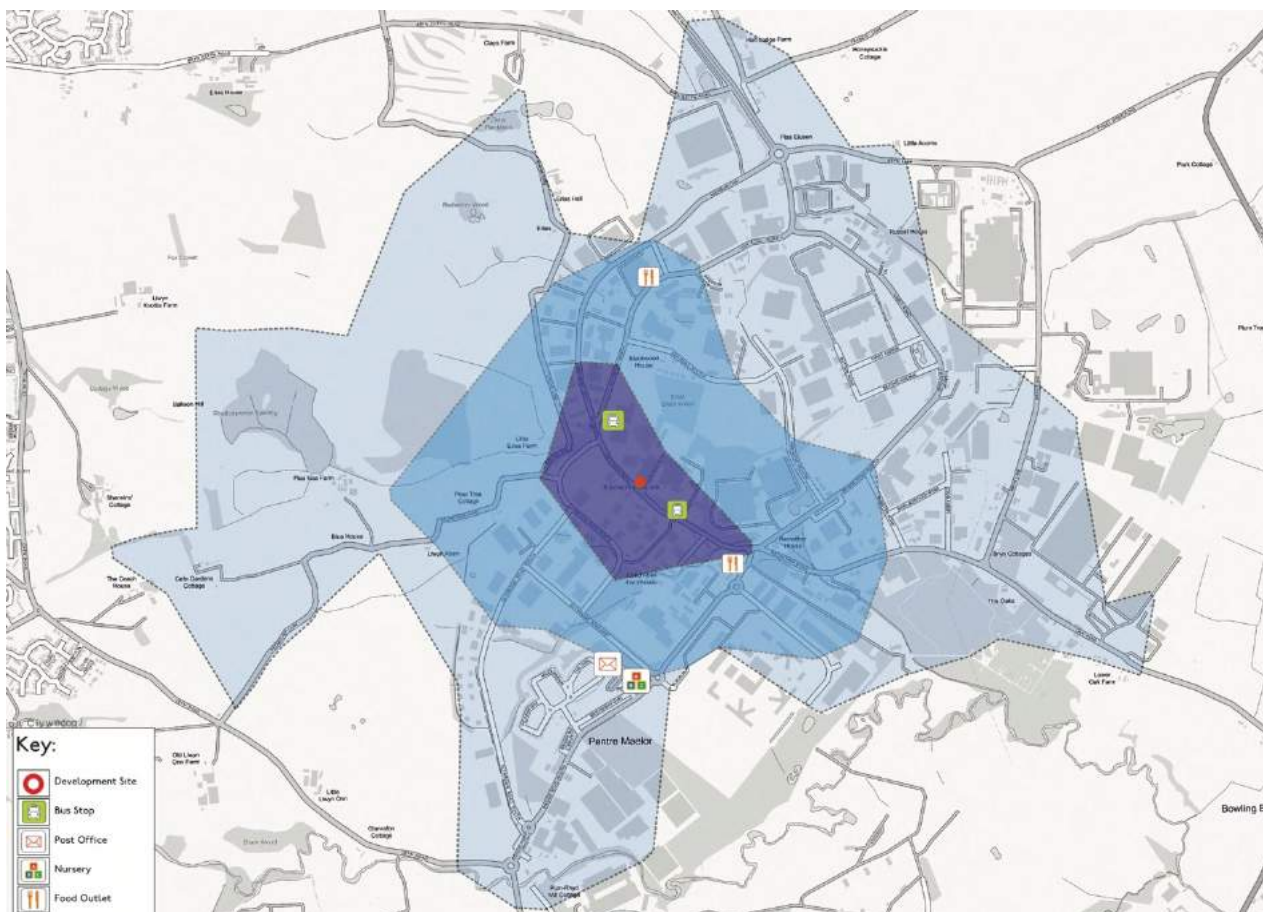
Table 4.1 : CIHT Guideline Acceptable Walking Distances

Criteria	Town Centre	Commuting/Sight Seeing	Elsewhere
Desirable	200m	500m	400m
Acceptable	400m	1,000m	800m
Preferred Maximum	800m	2,000m	1,200m

- 4.2.2 The CIHT guidelines shown in [Table 4.1](#) suggest that, for commuting purposes, up to 500m is a desirable walking distance, up to 1km is considered an acceptable walking distance and 2km is the preferred maximum walking distance.
- 4.2.3 Appropriate walking distances are dependent upon the location of the specific development. Similarly, appropriate walking distances are also dependent upon the standard of existing pedestrian infrastructure provision, with further walking distances achievable in locations with extensive and high-quality pedestrian footways, crossings and pedestrianised areas.

4.2.4 Figure 4.1 presents the local amenities and 500m, 1,000m and 2,000m walking catchments from the site, as specified in CIHT guidance for commuting purposes.

Figure 4.1 : Walking Catchment Area and Local Amenities



4.2.5 As shown in Figure 4.1, the site is located with a 500m catchment of bus stops on Coed Aben and a takeaway / café located along Bridge Road.

4.2.6 Table 4.2 provides an indication of the distances and approximate walking times to a selection of local amenities. The distances have been measured from the centre of the site; the times are based on an average walking speed of 1.4 metres per second and do not allow for waiting time to cross junctions.

Table 4.2 : Local Amenities – Distance and Walking Times

Amenity	Distance	Average Walking Time
Coed Aben Road Bus Stop (west)	100m	1 minute
Coed Aben Road Bus Stop (east)	230m	3 minutes
Greggs Bridge Road	500m	6 minutes
L's Kitchen	950m	11 minutes
Rise and Shine Day Nursery	1.2km	14 minutes
Pentre Maelor Post Office	1.2km	14 minutes

4.2.7 Table 4.2 shows that the site is approximately 100m (1-minute walk) and 230m (3-minute walk) from bus stops on Coed Aben Road. Greggs and L's Kitchen are located within 500m (6-minute walk) and 950m (11-minute walk) from the site respectively and provide café / takeaway food outlets for potential future employees. Furthermore, A day nursery and Post Office are located in Pentre Maelor, approximately 1.2km (14-minute walk) south of the site.

4.2.8 As described previously, the development will connect to a network of high-quality pedestrian infrastructure that benefits from dropped kerbs and a quality even surface, providing sufficient access for all users.

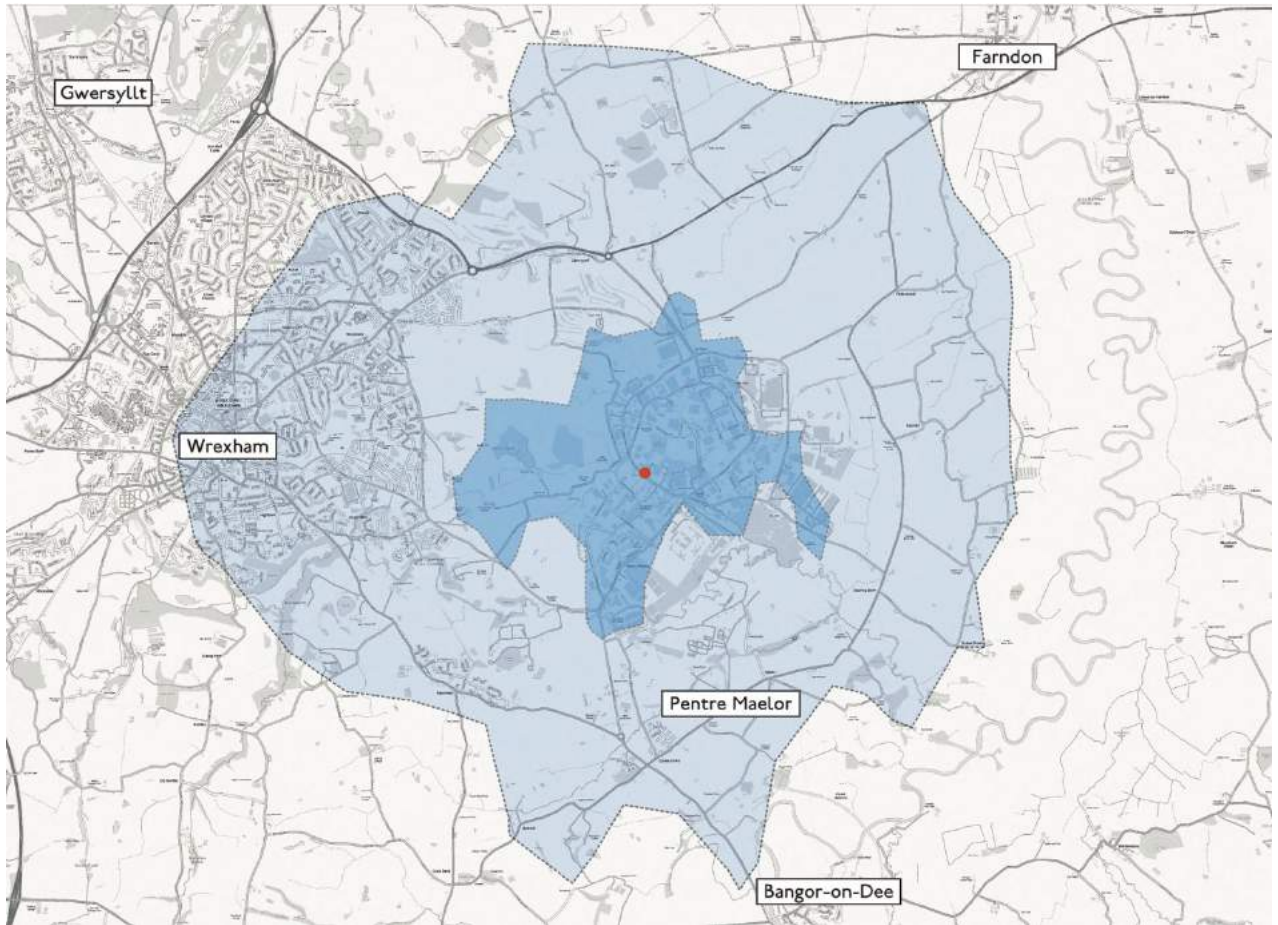
4.3 Cycle Accessibility

4.3.1 As with pedestrian accessibility, the level of a site's cycle accessibility depends upon a combination of the distance from local amenities and the standard of existing cycle infrastructure. It should, however, be noted that that cycle infrastructure can include facilities shared with vehicles and pedestrians as well as dedicated cycle infrastructure.

4.3.2 In respect of acceptable cycle distances, 'Local Transport Note 1/20: Cycle Infrastructure Design', published by DfT, states that *'two out of every three personal trips are less than five miles in length - which is an achievable distance to cycle for most people'*.

4.3.3 Figure 4.2 presents the cycling catchment area around the proposed development site for 2km and 5km.

Figure 4.2 : Cycling Catchment Area (2km and 5km)



- 4.3.4 Figure 4.2 shows that the wider Wrexham Industrial Estate site is located within a 2km catchment and Wrexham Town Centre and surrounding residential areas are located within a 5km catchment from the site.
- 4.3.5 Figure 4.3 presents local cycle routes in the vicinity of the site, which includes an advisory cycle route along Clywedog Road East and traffic free route along Bridge Road South.

Figure 4.3 : Local Cycle Routes and Infrastructure (source: Sustrans)



4.4 Public Transport

Local Bus Services

- 4.4.1 As detailed in Table 4.2, existing bus stops are available on Coed Aben Road c.100m (<1-minute walk) west and 200m east (2-minute walk) of the site.
- 4.4.2 Table 4.3 provides a summary of local bus services accessible from the bus stops located on Coed Aben Road. Full timetables are attached in Appendix C.

Table 4.3 : Local Bus Services

Service No.	Route	Approx. Two-Way Frequency (buses / hour)				
		AM	Off-Peak	PM	Sat	Sun
41 / 41A	Wrexham – Queensway – Wrexham Industrial Estate	2	2	2	2	No Service

- 4.4.3 Table 4.3 demonstrates that there are regular bus services accessible from the bus stops on Coed Aben Road, providing services to a range of local destinations during the day throughout the week, including services to Pentre Maelor and Wrexham Town Centre.

Rail Services

4.4.4 The nearest railway station to the site is Wrexham General which provides services to destinations including Bidston, Holyhead, Cardiff, Chester and Birmingham. Whilst the railway station is over 5km away from the site, the no. 41A bus service does connect to Wrexham Bus Station which is c.400m walk from Wrexham General railway station

4.5 Summary

4.5.1 In summary, the development site has been shown to be accessible by sustainable modes of travel including:

- Good quality footways within the site and on the local highway network providing safe walking routes to local amenities, including bus stops, a nursery, a school and a restaurant / take-away;
- A network of local cycle routes are available from the site, including Clywedog Road East and Bridge Street South.
- A bus service available from Coed Aben Road, providing services to Pentre Maelor and Wrexham Town Centre, providing connections to rail services available from Wrexham General Station.

4.5.2 Overall, the development site benefits from accessibility to a range of sustainable modes of travel, including walking routes, cycle routes and public transport services, which collectively offer an alternative to private car trips.

4.5.3 The site is therefore compliant with paragraph local and national policy, including PPW and TAN 18: Transport.

5. Trip Generation

- 5.1.1 To quantify the traffic impact of the development on the local highway network, a trip generation exercise has been undertaken for the proposed residential use.
- 5.1.2 Vehicle trip rates have been derived from the TRICS database (v7.8.2) using the “*Employment – Industrial Estate*” land use category.
- 5.1.3 TRICS surveys conducted after February 2020 were excluded due to the potential impact of the COVID19 pandemic on travel behaviour.
- 5.1.4 In line with the ‘*TRICS Good Practice Guide 2021*’, no surveys were excluded on the basis of geographical region.
- 5.1.5 The study undertaken by TRICS revealed that there is a significantly higher correlation between location type and resulting trip rates than there is between region and resulting trip rates.
- 5.1.6 The guidance recommends that regional selection should not be a major consideration when applying trip rate calculation filtering criteria. Instead, location type should be considered as a more influential factor in terms of trip generation and should be one of the main filtering considerations.
- 5.1.7 The vehicle TRICS trip rates during the AM and PM peaks are summarised in [Table 5.1](#). Full TRICS outputs are attached in [Appendix D](#).

Table 5.1 : TRICS Trip Rates (per 100sqm) – All Vehicles

TRICS Land Use Category	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Arrive	Depart	Total	Arrive	Depart	Total
‘Employment - Industrial Estate’ – TRICS Trip Rates per 100sqm	0.523	0.297	0.820	0.198	0.523	0.721
‘Employment - Industrial Estate’ All Vehicle Trips (2,800sqm)	15	8	23	6	15	21

- 5.1.8 As shown in [Table 5.1](#), the proposed development is expected to generate **23** two-way trips during the AM peak hour and **21** two-way trips during the PM peak hour.
- 5.1.9 Heavy Goods Vehicle (HGV) TRICS trip rates during the AM and PM peaks are summarised in [Table 5.2](#). Full TRICS outputs are attached in [Appendix D](#).

Table 5.2 : TRICS Trip Rates (per 100sqm) – HGVs

TRICS Land Use Category	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Arrive	Depart	Total	Arrive	Depart	Total
'Employment - Industrial Estate' – TRICS HGV Trip Rates per 100sqm	0.034	0.027	0.061	0.016	0.023	0.039
'Employment - Industrial Estate' HGV Trips (2,800sqm)	1	1	2	1	1	2

5.1.10 As shown in [Table 5.1](#), the proposed development is expected to generate **2** two-way HGV trips during the AM peak hour and **2** two-way trips during the PM peak hour.

5.1.11 Based on the HGV trip rates attached in [Appendix D](#), the proposed development is expected to generate **20** two-way HGV movements across a typical day.

5.2 Summary

5.2.1 In terms of traffic impact on the local highway network, the proposed development is expected to generate approximately 1 trip every 3 minutes on average during the AM and PM peak period.

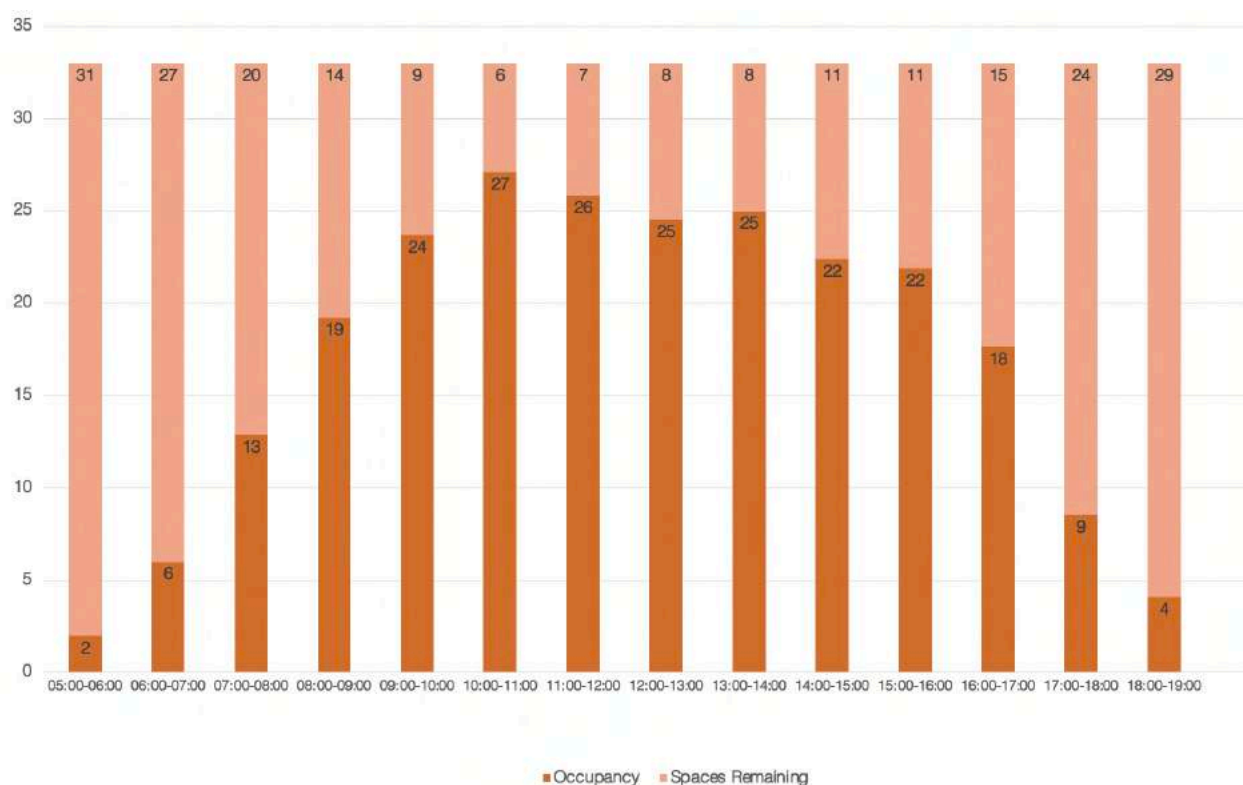
5.2.2 Overall, it can be concluded that the proposed development will have negligible traffic impact on the local highway network.

6. Car Parking Accumulation

6.1 Proposed Parking Provision

- 6.1.1 The development proposal includes a total of 33no. car parking spaces, of which 2no. are disabled parking spaces.
- 6.1.2 To provide evidence and re-assurance that the proposed level of parking provision is sufficient to accommodate the expected level of demand, a car park accumulation assessment has been undertaken using the TRICS trip rates attached in [Appendix D](#).
- 6.1.3 The car park accumulation assessment for the proposed industrial unit is presented in [Figure 6.1](#).

Figure 6.1 Car Park Accumulation Assessment



- 6.1.4 The car park accumulation assessment demonstrates that the peak car park accumulation is not expected to exceed 27no. vehicles across a typical day. Therefore, the proposed car parking provision of 33no. spaces will accommodate operational demands with a surplus allowing for occasional peaks.
- 6.1.5 In summary, the TRICS based car parking accumulation assessment shows that parking accumulation remains below capacity throughout the day, and therefore the proposed level of parking provision is expected to adequately serve the development parking demand.

7. Summary and Conclusion

7.1.1 Mode Transport Planning has been appointed by Village Bakery to provide transport and highways advice in relation to a proposed industrial development off Coed Aben Road on the Wrexham Industrial Estate, Wrexham.

7.1.2 The development comprises an industrial unit (Use Class B2 / B8) with a Gross Floor Area (GFA) of 2,800sqm. The scheme will also provide on-site parking, a service yard, associated landscaping. Vehicular and pedestrian access will be provided via an existing priority arrangement on Coed Aben Road.

7.1.3 The analysis in this report has been carried out in accordance with current policy, guidance, and best practice. The results demonstrate that:

- In accordance with local and national policy, the site is accessible by a range of sustainable modes of transport, including walking, cycling, and bus services, providing a realistic alternative to car travel, particularly for commuting to / from site;
- Following a review of the most recent personal injury collision records, there is no evidence to show the proposed development will have a detrimental impact on highway safety;
- Swept path analysis demonstrates that the largest vehicles associated with the development proposals, including a 16.5m articulated HGV, can enter and exit the site in a forward gear, and manoeuvre safely within the site and proposed servicing yards;
- In compliance with Wrexham County Borough Council's local parking standards, the scheme provides 33no. on-site car parking spaces, including 2no. disabled parking spaces and 4no. cycle parking spaces, provided at a secure and sheltered location;
- The car parking occupancy assessment demonstrates that the car parking provision will accommodate operational demands, allowing for occasional peaks in demand or varying occupier requirements; and
- Based on TRICS trip rates, the proposed development is expected to generate **23** two-way trips during the AM and **21** two-way trips during the PM peak hours. In terms of traffic impact on the local highway network, the proposed development is expected to generate approximately 1 trip every 3 minutes on average during the AM and PM peak period. It can be concluded that the proposed development will have negligible traffic impact on the local highway network.

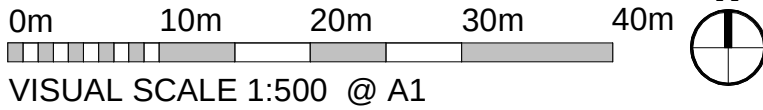
7.2 Conclusion

7.2.1 In conclusion, based on the evidence and analysis within this report, there should be no highways or transport planning reasons that prevent this planning application from being approved.

APPENDICES

APPENDIX A

Proposed Site Layout Plan



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PLANNING

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Hazard Identification

ref	hazard	date

Site		
Name	Area	Site Density %
Site	1.78 acres	33.366405

Note: Boundary Lines shown are indicative, based on information provided - Land Registry title ownership to be confirmed by client.

4 number of parking spaces project outside title ref CYM 246367

Site areas are subject to change to suit confirmed land title plans ,topographic survey data and any site related constraints.

Area Schedule (GIA)		
Name	Area	
	Metric	Imperial
GF GIA	2,400.00 m²	25,633 ft²
FF GIA	4,000.00 m²	43,200 ft²
TOTAL	2,800.00 m²	30,139 ft²

Parking Schedule	
Description	Count
Standard Car Parking Bay	31
Accessible Parking Bay	2
TOTAL	33

P2 Radius updated	BE	30.09.21
P1 Planning Issue	BE	23.08.21 DC
Rev	Revision Details	Drawn Date Checked

C4

Projects

Quayside,
Wilderspool Business Park,
Stockton Heath,
Warrington,
Cheshire,
WA4 6HL
t: 01555 751 852
e: info@c4projects.co.uk
www.c4projects.co.uk

Project Management • Architecture • Building Surveying • Cost Consultancy

Client
Village Bakery

Project
Village Bakery
Wrexham Industrial Estate

Drawing Title
Site Plan as Proposed

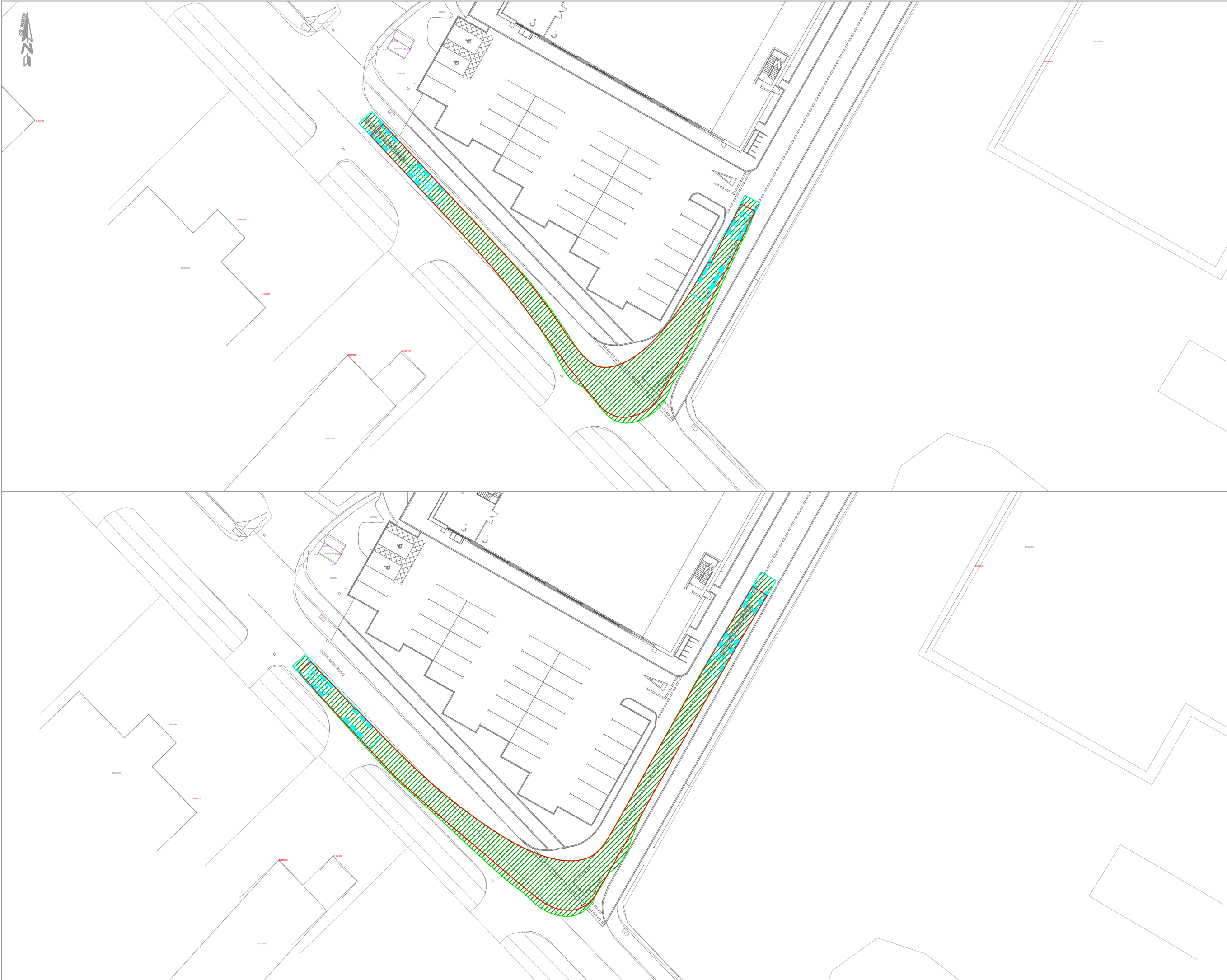
Status Purpose of Issue
S2 SUITABLE FOR INFORMATION

Drawn by	BE	Created	23.08.21
C4 Job no.	21077	Scale	As indicated @ A1

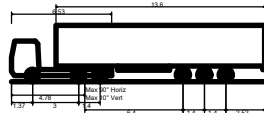
Drg no.	Rev
21077-C4P-AV-XX-DR-A-0501	P2

APPENDIX B

Swept Path Analysis



t 0161 464 9495
e info@modetransport.co.uk
w www.modetransport.co.uk



Max Legal Length (UK) Articulated Vehicle (16.5m)	16.500m
Overall Length	2.500m
Overall Width	3.601m
Overall Body Height	3.411m
Min Body Ground Clearance	2.500m
Max Track Width	6.000m
Lock to lock time	6.530m
Kerb to Kerb Turning Radius	6.530m

- notes:
1. this drawing is to be read in conjunction with all other relevant drawings, any discrepancies, errors or omissions to be brought to the attention of overseeing organisation.
 2. all dimensions to be checked before commencement of work on site.
 3. all dimensions in metres unless otherwise stated.
 4. the design is subject to approval of wrexham council.
 5. drawing based on drawing 21077-clp-av-xx-m2-a-0501_p1_site plan provided by client.

issue/revision		
-	30/09/2021	issued
i/r	date	description

client: village bakery
project: village bakery, wrexham
project number: J325994

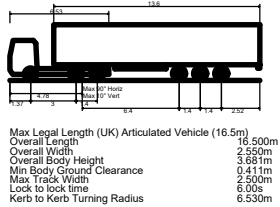
scale: 1:500@A3
drawing title:
swept path analysis

drawing number:
J32-5994-PS-001



transport planning

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- notes:
1. this drawing is to be read in conjunction with all other relevant drawings, any discrepancies, errors or omissions to be brought to the attention of overseeing organisation.
 2. all dimensions to be checked before commencement of work on site.
 3. all dimensions in metres unless otherwise stated.
 4. the design is subject to approval of wrexham council.
 5. drawing based on drawing 21077-clp-av-xx-m2-a-0501_p1_site plan provided by client.

issue/revision		
i/r	date	issued description
-	30/09/2021	

client: village bakery
project: village bakery, wrexham
project number: J325994
scale: 1:250@A3
drawing title:
swept path analysis
drawing number:
J32-5994-PS-002

APPENDIX C

Public transport Timetables

41A Wreccsam/Wrexham - Queensway - Ystad Ddiwydiannol Wreccsam / Wrexham Industrial Estate

Monday to Saturday except Bank Holidays : Llun i Sadwrn henblaw Gwyliau Cyhoeddus

ARRIVA BUSES WALES

Days / Dyddiau:												S	NS	S	NS
Wrexham, Bus Station [2]	0530	0630	0725	0825	0925	1025	1125	1225	1325	1425	1525	1625	1645	1725	1740
Market Street	0533	0633	0728	0828	0928	1028	1128	1228	1328	1428	1528	1628	1648	1728	1743
Queensway (West)	0540	0640	0735	0835	0935	1035	1135	1235	1335	1435	1535	1635	1655	1735	1750
Pentre Maelor	0545	0645	0740	0840	0940	1040	1140	1240	1340	1440	1540	1640	1700	1740	1755
Redwither Tower	0550	0650	0747	0847	0947	1047	1147	1247	1347	1447	1547	1645	1707	1745	1802

41A Ystad Ddiwydiannol Wreccsam / Wrexham Industrial Estate - Queensway - Wreccsam / Wrexham

Monday to Saturday except Bank Holidays : Llun i Sadwrn henblaw Gwyliau Cyhoeddus

ARRIVA BUSES WALES

Days / Dyddiau:												S	NS	
Redwither Tower	0605	0700	0750	0850	0950	1050	1150	1250	1350	1450	1550	1650	1710	1810
Pentre Maelor	0610	0705	0757	0857	0957	1057	1157	1257	1357	1457	1557	1655	1717	1817
Queensway (West)	0615	0710	0802	0902	1002	1102	1202	1302	1402	1502	1602	1700	1722	1822
Market Street	0622	0717	0809	0909	1009	1109	1209	1309	1409	1509	1609	1707	1729	1829
Wrexham, Bus Station	0625	0720	0812	0912	1012	1112	1212	1312	1412	1512	1612	1710	1732	1832

NS: Dim ar ddydd Sadwrn / Not Saturday
S: Dydd Sadwrn yn unig / Saturday Only

APPENDIX D

TRICS Outputs

Calculation Reference: AUDIT-754101-210930-0933

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : D - INDUSTRIAL ESTATE
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	2 days
03	SOUTH WEST	
	DV DEVON	1 days
06	WEST MIDLANDS	
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	LC LANCASHIRE	1 days
10	WALES	
	SW SWANSEA	2 days
13	MUNSTER	
	CR CORK	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: 2758 to 7280 (units: sqm)
 Range Selected by User: 1000 to 10000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 23/09/20

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
Wednesday	1 days
Thursday	1 days
Friday	4 days

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

Selected survey types:

Manual count	9 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	9
--------------	---

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

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:

Not Known

9 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 Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000

2 days

5,001 to 10,000

1 days

10,001 to 15,000

4 days

15,001 to 20,000

2 days

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

Population within 5 miles:

75,001 to 100,000

1 days

125,001 to 250,000

8 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

4 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

9 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

9 days

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

LIST OF SITES relevant to selection parameters

1	CR-02-D-02	INDUSTRIAL ESTATE	CORK
	EAST CORK PARKWAY		
	CORK		
	GLANMIRE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	4727 sqm	
	Survey date: MONDAY	14/10/19	Survey Type: MANUAL
2	DV-02-D-07	INDUSTRIAL ESTATE	DEVON
	BITTERN ROAD		
	EXETER		
	SOWTON IND. ESTATE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	3600 sqm	
	Survey date: MONDAY	03/07/17	Survey Type: MANUAL
3	EX-02-D-03	INDUSTRIAL ESTATE	ESSEX
	WYNCOLLS ROAD		
	COLCHESTER		
	SEVERALLS INDUSTRIAL PK		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	4876 sqm	
	Survey date: FRIDAY	18/05/18	Survey Type: MANUAL
4	EX-02-D-05	INDUSTRIAL ESTATE	ESSEX
	HECKWORTH CLOSE		
	COLCHESTER		
	SEVERALLS INDUSTRIAL PK		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	7280 sqm	
	Survey date: FRIDAY	18/05/18	Survey Type: MANUAL
5	LC-02-D-07	INDUSTRIAL ESTATE	LANCASHIRE
	CHAIN CAUL WAY		
	PRESTON		
	ASHTON-ON-RIBBLE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	4700 sqm	
	Survey date: FRIDAY	17/11/17	Survey Type: MANUAL
6	SW-02-D-01	INDUSTRIAL ESTATE	SWANSEA
	UPPER FOREST WAY		
	SWANSEA		
	SWANSEA ENTERPRISE PK		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	6822 sqm	
	Survey date: WEDNESDAY	09/10/19	Survey Type: MANUAL
7	SW-02-D-02	INDUSTRIAL ESTATE	SWANSEA
	CLARION COURT		
	SWANSEA		
	SWANSEA ENTERPRISE PK		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	5280 sqm	
	Survey date: THURSDAY	10/10/19	Survey Type: MANUAL
8	WO-02-D-01	INDUSTRIAL ESTATE	WORCESTERSHIRE
	SANDY LANE		
	STOURPORT-ON-SEVERN		
	Edge of Town		
	Commercial Zone		
	Total Gross floor area:	2758 sqm	
	Survey date: FRIDAY	23/05/14	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	WY-02-D-06	INDUSTRIAL ESTATE (PART)	WEST YORKSHIRE
	PIONEER WAY		
	CASTLEFORD		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	4328 sqm	
	Survey date: TUESDAY	23/05/17	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 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

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 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	3	5610	0.089	3	5610	0.018	3	5610	0.107
06:00 - 07:00	3	5610	0.202	3	5610	0.059	3	5610	0.261
07:00 - 08:00	9	4930	0.318	9	4930	0.072	9	4930	0.390
08:00 - 09:00	9	4930	0.523	9	4930	0.297	9	4930	0.820
09:00 - 10:00	9	4930	0.435	9	4930	0.275	9	4930	0.710
10:00 - 11:00	9	4930	0.426	9	4930	0.304	9	4930	0.730
11:00 - 12:00	9	4930	0.388	9	4930	0.433	9	4930	0.821
12:00 - 13:00	9	4930	0.372	9	4930	0.419	9	4930	0.791
13:00 - 14:00	9	4930	0.397	9	4930	0.381	9	4930	0.778
14:00 - 15:00	9	4930	0.331	9	4930	0.424	9	4930	0.755
15:00 - 16:00	9	4930	0.331	9	4930	0.349	9	4930	0.680
16:00 - 17:00	9	4930	0.331	9	4930	0.482	9	4930	0.813
17:00 - 18:00	9	4930	0.198	9	4930	0.523	9	4930	0.721
18:00 - 19:00	9	4930	0.074	9	4930	0.234	9	4930	0.308
19:00 - 20:00	3	5610	0.030	3	5610	0.256	3	5610	0.286
20:00 - 21:00	3	5610	0.018	3	5610	0.077	3	5610	0.095
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.463			4.603			9.066

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:	2758 - 7280 (units: sqm)
Survey date range:	01/01/13 - 23/09/20
Number of weekdays (Monday-Friday):	9
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.

mode transport limited Lombard House, 145 Great Charles Street Birmingham, B3 3LP

Licence No: 754101

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

OGVS

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 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	3	5610	0.000	3	5610	0.000	3	5610	0.000
06:00 - 07:00	3	5610	0.006	3	5610	0.024	3	5610	0.030
07:00 - 08:00	9	4930	0.007	9	4930	0.011	9	4930	0.018
08:00 - 09:00	9	4930	0.034	9	4930	0.027	9	4930	0.061
09:00 - 10:00	9	4930	0.047	9	4930	0.032	9	4930	0.079
10:00 - 11:00	9	4930	0.038	9	4930	0.036	9	4930	0.074
11:00 - 12:00	9	4930	0.027	9	4930	0.041	9	4930	0.068
12:00 - 13:00	9	4930	0.027	9	4930	0.029	9	4930	0.056
13:00 - 14:00	9	4930	0.036	9	4930	0.020	9	4930	0.056
14:00 - 15:00	9	4930	0.029	9	4930	0.043	9	4930	0.072
15:00 - 16:00	9	4930	0.032	9	4930	0.032	9	4930	0.064
16:00 - 17:00	9	4930	0.032	9	4930	0.029	9	4930	0.061
17:00 - 18:00	9	4930	0.016	9	4930	0.023	9	4930	0.039
18:00 - 19:00	9	4930	0.002	9	4930	0.014	9	4930	0.016
19:00 - 20:00	3	5610	0.006	3	5610	0.018	3	5610	0.024
20:00 - 21:00	3	5610	0.012	3	5610	0.000	3	5610	0.012
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.351			0.379			0.730

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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