

Our Ref: 2938-01/LK/1

25 October 2023

By email only:

FAO Gwyn Humphreys
Wrexham Borough Council
16 Lord Street
Wrexham
LL11 1LG

Dear Gwyn

ERECTION OF ONE CLASS B1 BUILDING (LIGHT INDUSTRIAL) AND ONE CLASS B8 BUILDING (WAREHOUSE BUILDING) ON LAND TO THE NORTH AND WEST OF MAELOR GAS WORKS, PICKHILL, CROSS LANES

RETROSPECTIVE PLANNING APPLICATION REFERENCE P/2023/0422

Introduction

I refer to the recent consultation response from the Local Highway Authority (LHA) dated 14th August 2023 in respect of the above planning application, which is enclosed with this letter for ease of reference.

It should be noted that the LHA's response was provided on the assumption that the two B1(c) use and B8 use buildings would both feature a 506sqm gross external area (GEA). However, it is the applicant's intention to reduce the size of the northern building (Building B on the site layout plan enclosed) to 408sqm GEA, by removing one 'cell' of the steel portal frame building. The final layout of the site will therefore feature some 914m² GEA of buildings.

The following sections of this letter provide our response to the issues raised in the LHA's comments, in the same order as originally presented therein.

Topic 1 – Traffic Generation

Comments: *"I would not normally be able to support any proposed development that is likely to generate any significant increase in vehicle movements compared with its previous use (ie/Wales Gas Transmission Offices / Business). However, this is an existing access and I understand the previous use did generate a significant number of vehicle movements..."*

"...I would therefore normally recommend that any proposed development is limited to what was previously experienced / permitted at the site. The previous Wales Gas Transmission Business would appear to have generated significantly more movements than are currently being generated at the site."

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“I would normally recommend that the applicant provides details of the current / previous daily traffic movements generated by the existing / former businesses through this access and details of what daily vehicle movements are anticipated for the proposed development. Although the applicant should submit details of the proposed daily traffic generation, it is unlikely that any previous traffic generation can be found for comparison purposes. I await the requested information.”

From the response above, it is clear that if it can be demonstrated that the traffic generating potential of the retrospective development is less than the traffic generation of the former use of the site, then the LHA would conclude that there is no intensification of the existing access junction, and by extension, that the application proposals are acceptable in this particular regard.

The following section therefore sets out estimates of the forecast net traffic generation of the retrospective development by comparison to the site's previous use.

Previous Use

The wider site can be described, in simple terms, as a former gas works. Indeed, part of the wider site is retained for this use by Flogas. The wider site is current the subject of a live planning application (ref P/2023/0120) for a lawful certificate of development for a mix of uses comprising B1 offices, B2 general industrial, B8 storage and distribution, D1 training and sui generis uses.

In terms of the subject site – i.e. that specific (north-western) part of the wider site that is the subject of this retrospective planning application - it has been determined through research that it formerly accommodated ‘purifier boxes’, a ‘concentrated liquor plant’ and a ‘benzol plant’.

These uses fall squarely into a B2 general industrial use planning class, which is in common with various other parcels of land on the wider gas works site. Therefore, to estimate the traffic-generating potential of the previous use on the subject application site, average trip rates from the industry standard TRICS Database have been obtained.

The following search criteria has been applied within TRICS to obtain trip rates for the previous light industrial use:

- i. Employment – Industrial Unit;
- ii. Sites in Greater London and Ireland excluded;
- iii. Weekday surveys only;
- iv. Only sites in ‘Edge of Town’ locations have been selected;
- v. Selection by site area (0.25ha to 1ha), given the unknown area of the uses that formerly occupied this parcel of land; and,
- vi. The default date range has been selected.

The full TRICS outputs are enclosed.

Table 1 shows the weekday peak hour vehicle trip rates and the resultant traffic forecasts when these trip rates are applied to the previous use (approximately 0.537ha site area):-

Table 1 – Previous Industrial Use Trip Generation

	AM Peak Hour (08:00-09:00)	PM Peak Hour (17:00-18:00)	Daily
Trip Rate (per 1ha)			
Arrivals	22.832	0	117.272
Departures	3.757	26.301	113.083
Two-way	26.589	26.301	230.355
Trip Generation (0.5ha)			
Arrivals	11	0	63
Departures	2	14	31
Two-way	14	14	124

As can be seen in **Table 1**, the previous site use was capable of generating around 14 two-way vehicle movements in the AM and PM peak hours and approximately 124 two-way vehicle movements over the course of a weekday.

Retrospective Development

B8 Warehousing Element

The traffic-generating potential of the retrospective development has also been forecast using trip rates from the industry-standard TRICS Database.

The following search criteria has been applied within TRICS to obtain suitable trip rates for the B8 warehousing element of the development (506sqm GEA):

- i. Employment – Warehousing;
- ii. Sites in Greater London and Ireland excluded;
- iii. Weekday surveys only;
- iv. Only sites in 'Edge of Town' and 'Free Standing' locations have been selected;
- v. Selection by GFA (250sqm – 1000sqm); and,
- vi. A date range of 01/01/00 to 29/06/11 has been selected.

The full TRICS outputs are enclosed.

Table 2 shows the weekday peak hour two-way vehicle trip rates and the resultant traffic forecasts when these trip rates are applied to the warehousing use:-

Table 2 - Warehouse Trip Generation

	AM Peak Hour (08:00-09:00)	PM Peak Hour (17:00-18:00)	Daily
Trip Rate (per 100sqm)			
Arrivals	0.366	0.244	1.342
Departures	0.122	0.244	1.525
Two-way	0.488	0.488	2.867
Trip Generation (398sqm)			
Arrivals	1	1	7
Departures	0	1	8
Two-way	2	2	15

As can be seen in **Table 2**, the B8 warehouse use is capable of generating around 2 two-way vehicle movements in both the AM and PM peak hours and approximately 15 two-way vehicle movements over the course of a weekday.

B1 Light Industrial

The following search criteria has been applied within TRICS to obtain suitable trip rates for the B1 light industrial element of the development (408sqm GEA):

- i. Employment – Industrial Unit;
- ii. Sites in Greater London and Ireland excluded;
- iii. Weekday surveys only;
- iv. Only sites in 'Edge of Town' locations have been selected;
- v. Selection by GFA (250sqm – 1000sqm); and,
- vi. The default date range (01/01/15 to 21/04/22) has been selected.

The full TRICS outputs are enclosed.

Table 3 shows the weekday peak hour two-way vehicle trip rates and the resultant traffic forecasts when these trip rates are applied to the light industrial use:-

Table 3 - Light Industrial Unit Trip Generation

	AM Peak Hour (08:00-09:00)	PM Peak Hour (17:00-18:00)	Daily
Trip Rate (per 100sqm)			
Arrivals	0.408	0.163	4.836
Departures	0.449	0.245	4.693
Two-way	0.857	0.408	9.529
Trip Generation (506sqm)			
Arrivals	2	1	24
Departures	2	1	24
Two-way	4	2	48

As can be seen in **Table 3**, the light industrial unit is capable of generating around 4 two-way vehicle movements in the AM peak hour and 2 two-way vehicle movements in the PM peak hour and approximately 48 two-way vehicle movements over the course of a weekday.

Total Proposed Uses Traffic Generation

The combined traffic generation of the warehousing and light industrial uses of the development is shown in **Table 4**.

Table 4 – Total Development Trip Generation

	AM Peak Hour (08:00-09:00)	PM Peak Hour (17:00-18:00)	Daily
Arrivals	4	2	31
Departures	2	2	32
Two-way	6	4	63

Table 4 shows that in total the retrospective development is expected to generate approximately 6 two-way vehicle movements in the AM peak hour and 4 two-way vehicle movements in the PM peak hour. Additionally, the development is expected to give rise to around 63 two-way vehicle movements over the course of a typical weekday.

Net Traffic Generation

The level of traffic generation of the retrospective development has been compared against the level of traffic generation of the potential light industrial use of the site. The net changes are shown in **Table 5**.

Table 5 – Net Trip Generation

	AM Peak Hour (08:00-09:00)	PM Peak Hour (17:00-18:00)	Daily
Arrivals	-9	2	-32
Departures	0	-12	-29
Two-way	-8	-10	-61

** includes rounding*

Table 5 shows that, compared against the previous use, the development results in a net reduction of 8 two-way vehicle movements in the AM peak hour and a net reduction of 10 two-way vehicle movements in the PM peak hour. Additionally, the proposed change of use results in a reduction of 61 two-way vehicle movements over the course of an average weekday.

The proposed change of use is therefore considered to be acceptable from a traffic generation perspective as it will result in an overall net reduction in trips.

With particular regard to the response provided by the LHA, it is therefore, it is considered that the existing access arrangements are suitable for the development.

Topic 2 – Parking and Swept Path Analysis

Comments: *“Parking provision at the development site will need to be provided in accordance with LPGN16 requirements. The proposed Class B8 Use (506m² gfa) business would normally require a maximum of 5 parking spaces. The proposed Class B1 Use (506m² gfa) business would normally require a maximum of 17 parking spaces equating to a total of 22 spaces (max).”*

“It is not clear from the submitted information what type of vehicles eg/ rigid, artic. HGVs etc (including length of largest vehicles) will be visiting the site and where they will turn around within the curtilage of the development site.”

As noted previously, the LHA’s response was provided on the assumption that both buildings A and B of the development would each feature buildings with a 506sqm GEA. However, it is the Applicant’s intention to reduce the GFA of building B from 506sqm to 408sqm. Therefore, it has been necessary to revisit the parking requirements set out in the LHA’s response.

WCBC’s “Local Planning Guidance Note 16” document (LPGN16) sets out the parking requirements of the proposal, as follows:-

Table 6 - Summary of WCBC’s Parking Standards

Requirement	Standards	As Applied to the Scheme
B1(C) Light Industrial Use (408sqm)		
General car parking (maximum)	1 space per 30m ² GFA	14 spaces (rounded up)
Cycling parking (minimum)	1 space per 300m ² GFA	1 space
B8 Warehousing Use Element (506sqm)		
General car parking (maximum)	1 space per 100m ² GFA	5 spaces
Cycling parking (minimum)	1 space per 300m ² GFA	2 spaces (rounded up)
Totals		
General car parking (maximum)	-	19 spaces
Cycling parking (minimum)	-	3 spaces

Drawing number 2938-01-ATR01, enclosed with this letter, illustrates how the requirement for 19 spaces can easily be met in the wide open area between the two buildings.

The drawing also illustrates the swept path manoeuvres of a large 16.5m articulate lorry entering into, turning around within, and exiting the site, via the two areas that sit in front of the loading bay doors to each building. The manoeuvres can take place fully within the red-line boundary curtilage of the application site.

It is therefore concluded that the scheme will operate safely and satisfactorily from a parking provision and servicing perspective.

In conclusion, it is therefore considered that this letter satisfactorily addresses the points raised in the LHA's consultation response dated 14th August 2023, and the scheme is therefore commended for approval to WBC.

I trust this is of assistance.

Yours faithfully

A black rectangular box redacting the signature of Lee Kendall.

Lee Kendall

Technical Director on behalf of Axis

Enc: Enclosure 1 – LHA Response Dated 14th August 2023
Enclosure 2 – Proposed Site Layout Plan
Enclosure 3 – TRICS Outputs
Enclosure 4 – Drawing Number 2938-01-ATR01 – Parking Layout and Swept Path Assessment

MEMORANDUM

From:	Chief Officer, Environment & Technical	To:	Chief Officer Planning & Regulatory
		FAO::	Gwyn Humphreys
Our Ref:	ET/DC/PP/P/2023/0422	Your Ref:	P/2023/0422
Date:	14/08/2023		

TOWN AND COUNTRY PLANNING ACT 1990

ADEILADU UN ADEILAD DOSBARTH B1 (DIWYDIANNOL YSGAFN) AC UN ADEILAD DOSBARTH B8 (ADEILAD WARWS) (OL-WEITHREDOL) / ERECTION OF ONE CLASS B1 BUILDING (LIGHT INDUSTRIAL) AND ONE CLASS B8 BUILDING (WAREHOUSE BUILDING) (IN RETROSPECT)

LAND TO THE NORTH AND WEST OF MAELOR GAS WORKS PICKHILL CROSS LANES
Grid Ref: E 338036.89 N 348207.62

I refer to your consultation / email dated 25/07/2023 in respect of the above.

Access

The proposed development site is accessed off the Maelor Works Complex which was previously occupied by the Wales Gas Transmission Offices / Business. The site currently appears to be used by a number of businesses ie/ Wales & West Utilities, Flo Gas, Quantum and Ningbo.

It is unclear if all of these businesses have planning consent to operate from this site.

The access is located off the B5130 which is a rural, classified road subject to a 40mph speed limit.

Any proposed / existing access in this location would normally be required to provide visibility splays of 2.4 x 120m in both directions in accordance with TAN 18. Visibility from the existing access appears adequate in the north easterly direction providing a splay in excess of 2.4 x 120m measured to the nearside edge of the adjoining highway. However, visibility in the south westerly direction is inadequate providing a splay of approximately 2.4 x 60m measured to the nearside edge of the adjoining highway. Visibility is impeded in this direction by the existing hedgerow / tree. I assume the applicant does not have control of this land to carry out improvements.

I would not normally be able to support any proposed development that is likely to generate any significant increase in vehicle movements compared with its previous use (ie/Wales Gas Transmission Offices / Business). However, this is an existing access and I understand the previous use did generate a significant number of vehicle movements.

The existing access onto the B5130 Holt Road is approximately 7.3m wide with 15m kerb radii. The access benefits from tapered slip lanes on both sides.

I would therefore normally recommend that any proposed development is limited to what was previously experienced / permitted at the site. The previous Wales Gas Transmission Business would appear to have generated significantly more movements than are currently being generated at the site.

I would normally recommend that the applicant provides details of the current / previous daily traffic movements generated by the existing / former businesses through this access and details of what daily vehicle movements are anticipated for the proposed development. Although the applicant should submit details of the proposed daily traffic generation, it is unlikely that any previous traffic generation data can be found for comparison purposes. **I await the requested information.**

Parking and Turning Provision

Parking provision at the development site will need to be provided in accordance with LPGN16 requirements. The proposed Class B8 Use (506m² gfa) business would normally require a maximum of 5 parking spaces. The proposed Class B1 Use (506m² gfa) business would normally require a maximum of 17 parking spaces equating to a total of 22 spaces (max).

A suitable layout plan indicating the proposed parking provision does not appear to have been provided. **I would recommend that this detail is provided on a suitably scaled layout plan.**

In terms of turning provision, I comment as follows:-

It is not clear from the submitted information what type of vehicles eg/ rigid, artic. HGVs etc (including length of largest vehicles) will be visiting the site and where they will turn around within the curtilage of the development site. **I would recommend that this detail is provided along with a suitably scaled layout plan.**

I await the requested information

Supplementary Notes

The applicant's attention should be drawn to item nos. 1, 2, 3, 4 & 5 of the supplementary notes.



Chief Officer, Environment & Technical

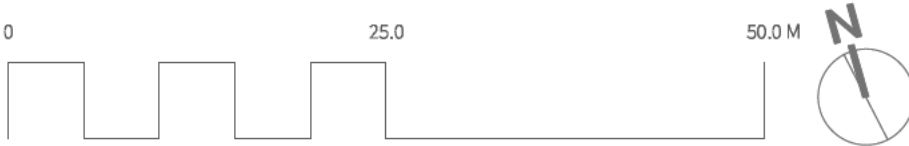


Key:

Building A - GEA
506m2

Proposed Building B - GEA
408m2

Rev	Date	Notes	Name
-	22.08.2023	Initial issue	CH



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Project:	E424 Maelor Works
Client:	Clover & Thomas Investments Ltd
Drawing Title:	Proposed Site Plan
Drawing no:	E424-100
Status:	RIBA Stage 3 - Statutory approval
Scale:	1:500@ A3
Date:	22.08.2023
Issue:	Unrevised
Drawn:	Chris Hatter

Calculation Reference: AUDIT-339901-231011-1016

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

03	SOUTH WEST	
	BR BRISTOL CITY	1 days
	GS GLOUCESTERSHIRE	1 days
04	EAST ANGLIA	
	PB PETERBOROUGH	1 days
08	NORTH WEST	
	EC CHESHIRE EAST	2 days
10	WALES	
	VG VALE OF GLAMORGAN	1 days
11	SCOTLAND	
	FI FIFE	1 days

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

Axis
76 Water Lane
Wilmslow
Licence No: 339901

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:

Site area

Actual Range:

0.26 to 0.91 (units: hect)

Range Selected by User:

0.25 to 1 (units: hect)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/15 to 20/04/23

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

Selected survey days:

Monday
1 days

Tuesday
1 days

Thursday
3 days

Friday
2 days

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

Selected survey types:

Manual count
7 days

Directional ATC Count
0 days

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

Selected Locations:

Edge of Town 7

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
6

Development 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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included
X days - Selected

Servicing vehicles Excluded
7 days - Selected

Secondary Filtering selection:

Use Class:

Not Known 7 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 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

Axis 76 Water Lane Wilmslow

Licence No: 339901

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	6 days

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

Population within 5 miles:

50,001 to 75,000	1 days
75,001 to 100,000	2 days
125,001 to 250,000	3 days
250,001 to 500,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	3 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	7 days
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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	7 days
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This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
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LIST OF SITES relevant to selection parameters

1	BR-02-C-02	STAINLESS FITTINGS	BRISTOL CITY
	SOUTH LIBERTY LANE BRISTOL		
	Edge of Town Industrial Zone		
	Total Site area:	0.35 hect	
	Survey date: TUESDAY	22/09/15	Survey Type: MANUAL
2	EC-02-C-01	OFFICE FURNITURE	CHESHIRE EAST
	BRUNEL ROAD MACCLESFIELD LYME GREEN BUS. PARK		
	Edge of Town Development Zone		
	Total Site area:	0.91 hect	
	Survey date: MONDAY	19/09/16	Survey Type: MANUAL
3	EC-02-C-02	FABRICS MANUFACTURE	CHESHIRE EAST
	CHARTER WAY MACCLESFIELD HURDSFIELD		
	Edge of Town Industrial Zone		
	Total Site area:	0.51 hect	
	Survey date: FRIDAY	07/05/21	Survey Type: MANUAL
4	FI-02-C-02	GLASS SPECIALISTS	FIFE
	DICKSON STREET DUNFERMLINE		
	Edge of Town Industrial Zone		
	Total Site area:	0.49 hect	
	Survey date: THURSDAY	20/04/23	Survey Type: MANUAL
5	GS-02-C-02	MARINE ENGINE PRODUCTION	GLOUCESTERSHIRE
	DAVY WAY GLOUCESTER HARDWICKE		
	Edge of Town Industrial Zone		
	Total Site area:	0.42 hect	
	Survey date: FRIDAY	23/04/21	Survey Type: MANUAL
6	PB-02-C-01	STEEL FABRICATOR	PETERBOROUGH
	NEWARK ROAD PETERBOROUGH FENGATE		
	Edge of Town Industrial Zone		
	Total Site area:	0.26 hect	
	Survey date: THURSDAY	29/09/22	Survey Type: MANUAL
7	VG-02-C-01	ALCOHOL ANALYSIS PRODUCTS	VALE OF GLAMORGAN
	VERLON CLOSE BARRY		
	Edge of Town Industrial Zone		
	Total Site area:	0.52 hect	
	Survey date: THURSDAY	06/05/21	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/C - INDUSTRIAL UNIT
TOTAL VEHICLES
Calculation factor: 1 hect
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	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	2	0.52	1.942	2	0.52	0.000	2	0.52	1.942
06:00 - 07:00	4	0.48	11.856	4	0.48	0.000	4	0.48	11.856
07:00 - 08:00	7	0.49	19.653	7	0.49	2.601	7	0.49	22.254
08:00 - 09:00	7	0.49	22.832	7	0.49	3.757	7	0.49	26.589
09:00 - 10:00	7	0.49	9.827	7	0.49	5.202	7	0.49	15.029
10:00 - 11:00	7	0.49	10.694	7	0.49	7.803	7	0.49	18.497
11:00 - 12:00	7	0.49	8.382	7	0.49	8.671	7	0.49	17.053
12:00 - 13:00	7	0.49	8.671	7	0.49	11.272	7	0.49	19.943
13:00 - 14:00	7	0.49	8.092	7	0.49	9.827	7	0.49	17.919
14:00 - 15:00	7	0.49	5.202	7	0.49	6.936	7	0.49	12.138
15:00 - 16:00	7	0.49	4.335	7	0.49	8.671	7	0.49	13.006
16:00 - 17:00	7	0.49	3.468	7	0.49	16.474	7	0.49	19.942
17:00 - 18:00	7	0.49	0.000	7	0.49	26.301	7	0.49	26.301
18:00 - 19:00	6	0.50	1.347	6	0.50	1.684	6	0.50	3.031
19:00 - 20:00	2	0.52	0.971	2	0.52	1.942	2	0.52	2.913
20:00 - 21:00	2	0.52	0.000	2	0.52	1.942	2	0.52	1.942
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			117.272			113.083			230.355

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:	0.26 to 0.91 (units: hect)
Survey date range:	01/01/15 - 20/04/23
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Calculation Reference: AUDIT-339901-231010-1014

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

11	SCOTLAND	
	HI HIGHLAND	1 days
	ML MIDLOTHIAN	1 days

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

Axis 76 Water Lane Wilmslow

Licence No: 339901

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: 750 to 890 (units: sqm)
Range Selected by User: 250 to 1000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 28/06/11

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:

Wednesday 2 days

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

Selected survey types:

Manual count 2 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 1
Free Standing (PPS6 Out of Town) 1

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

Selected Location Sub Categories:

Industrial Zone 2

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included X days - Selected
Servicing vehicles Excluded 2 days - Selected

Secondary Filtering selection:**Use Class:**

B8 2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 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

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Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	1 days
5,001 to 10,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
75,001 to 100,000	1 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
1.1 to 1.5	1 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	2 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	2 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	HI-02-F-01 B9039 NEAR INVERNESS DALCROSS IND. ESTATE Free Standing (PPS6 Out of Town) Industrial Zone Total Gross floor area: Survey date: WEDNESDAY	WAREHOUSING 890 sqm 24/05/06	HIGHLAND Survey Type: MANUAL
2	ML-02-F-01 UNIT 53 DALKEITH MAYFIELD IND. ESTATE Edge of Town Industrial Zone Total Gross floor area: Survey date: WEDNESDAY	WINDOWS 750 sqm 04/05/11	MIDLOTHIAN 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/F - WAREHOUSING (COMMERCIAL)
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	2	820	0.183	2	820	0.305	2	820	0.488
08:00 - 09:00	2	820	0.366	2	820	0.122	2	820	0.488
09:00 - 10:00	2	820	0.122	2	820	0.366	2	820	0.488
10:00 - 11:00	2	820	0.000	2	820	0.000	2	820	0.000
11:00 - 12:00	2	820	0.000	2	820	0.000	2	820	0.000
12:00 - 13:00	2	820	0.061	2	820	0.000	2	820	0.061
13:00 - 14:00	2	820	0.061	2	820	0.183	2	820	0.244
14:00 - 15:00	2	820	0.000	2	820	0.000	2	820	0.000
15:00 - 16:00	2	820	0.183	2	820	0.061	2	820	0.244
16:00 - 17:00	2	820	0.061	2	820	0.122	2	820	0.183
17:00 - 18:00	2	820	0.244	2	820	0.244	2	820	0.488
18:00 - 19:00	2	820	0.061	2	820	0.122	2	820	0.183
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.342			1.525			2.867

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:	750 - 890 (units: sqm)
Survey date range:	01/01/00 - 28/06/11
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Calculation Reference: AUDIT-339901-231010-1011

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

04	EAST ANGLIA	
	NF NORFOLK	1 days
08	NORTH WEST	
	LC LANCASHIRE	2 days
09	NORTH	
	CU CUMBERLAND	1 days

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

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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: 260 to 775 (units: sqm)
 Range Selected by User: 250 to 1000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/15 to 21/04/22

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:

Wednesday 1 days
 Thursday 2 days
 Friday 1 days

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

Selected survey types:

Manual count 4 days
 Directional ATC Count 0 days

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

Selected Locations:

Edge of Town 4

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

Selected Location Sub Categories:

Industrial Zone 4

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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included X days - Selected
 Servicing vehicles Excluded 4 days - Selected

Secondary Filtering selection:**Use Class:**

Not Known 4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 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

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	2 days
20,001 to 25,000	1 days

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

Population within 5 miles:

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

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

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	1 days

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

Travel Plan:

No	4 days
----	--------

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

PTAL Rating:

No PTAL Present	4 days
-----------------	--------

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
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Licence No: 339901

LIST OF SITES relevant to selection parameters

1	CU-02-C-01	STEEL FABRICATION	CUMBERLAND
	BLACKDYKE ROAD		
	CARLISLE		
	KINGSTOWN IND. ESTATE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	715 sqm	
	Survey date: FRIDAY	15/10/21	Survey Type: MANUAL
2	LC-02-C-05	NUTRITION MANUFACTURE	LANCASHIRE
	FURNESS DRIVE		
	POULTON-LE-FYLDE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	775 sqm	
	Survey date: WEDNESDAY	30/06/21	Survey Type: MANUAL
3	LC-02-C-06	STEEL FABRICATION	LANCASHIRE
	TOLLGATE ROAD		
	BURSCOUGH		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	700 sqm	
	Survey date: THURSDAY	21/04/22	Survey Type: MANUAL
4	NF-02-C-03	SHEET METAL CONTRACTOR	NORFOLK
	ELVIN WAY		
	NORWICH		
	HELLESDON		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	260 sqm	
	Survey date: THURSDAY	07/11/19	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/C - INDUSTRIAL UNIT
 TOTAL VEHICLES
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	700	0.000	1	700	0.000	1	700	0.000
06:00 - 07:00	1	700	0.429	1	700	0.143	1	700	0.572
07:00 - 08:00	4	613	0.612	4	613	0.122	4	613	0.734
08:00 - 09:00	4	613	0.408	4	613	0.449	4	613	0.857
09:00 - 10:00	4	613	0.408	4	613	0.367	4	613	0.775
10:00 - 11:00	4	613	0.653	4	613	0.531	4	613	1.184
11:00 - 12:00	4	613	0.367	4	613	0.367	4	613	0.734
12:00 - 13:00	4	613	0.408	4	613	0.367	4	613	0.775
13:00 - 14:00	4	613	0.245	4	613	0.367	4	613	0.612
14:00 - 15:00	4	613	0.408	4	613	0.286	4	613	0.694
15:00 - 16:00	4	613	0.449	4	613	0.653	4	613	1.102
16:00 - 17:00	4	613	0.204	4	613	0.490	4	613	0.694
17:00 - 18:00	4	613	0.163	4	613	0.245	4	613	0.408
18:00 - 19:00	4	613	0.082	4	613	0.163	4	613	0.245
19:00 - 20:00	1	700	0.000	1	700	0.143	1	700	0.143
20:00 - 21:00	1	700	0.000	1	700	0.000	1	700	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.836			4.693			9.529

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:	260 - 775 (units: sqm)
Survey date range:	01/01/15 - 21/04/22
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

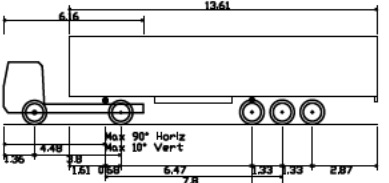
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B1(c) Light industrial parking spaces (14no. of)

B8 Warehousing use parking spaces (5no. of)

Design Vehicle



FTA Design Articulated Vehicle (1998)
Overall Length 16.48m
Overall Width 2.55m
Overall Body Height 3.87m
Min Body Ground Clearance 0.51m
Max Track Width 2.47m
Lock to lock time 2.00s
Kerb to Kerb Turning Radius 6.55m

0344 8700 007
axis.co.uk



Client

Clover Industrial Investments Ltd

Project

Maelor Gas Works Site, Wrexham

Drawing Title

Proposed Car Parking and Swept Path Assessment Plan

Scale

1:500 @A3

Date

25-10-23

Dwg no

2938-01-ATR01

Status

Prelim

Drawn

LK

Rev

LK