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Proposed Industrial Estate
Land at Knowle Lane, Fair Oak, SO50 7DZ

Transport Statement
January 2023

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1. Introduction

- 1.1. This Transport Statement has been commissioned by Parsons Construction Limited in support of a planning application submission to Eastleigh Borough Council for a Class B2 development at East Horton Business Park, Knowle Lane, Fair Oak, SO50 7DZ. The Location of the site is shown below.



- 1.2. The Statement describes the surrounding highway network and examines the ability to access the site by sustainable transport modes. It describes the access to the highway network and discusses the likely traffic impact that the development would be likely to generate, compared to previous planning permissions that are valid for the site.
- 1.3. The Transport Statement would then conclude that the proposed development is likely to result in a lesser traffic impact from that already consented.

2. Surrounding Highway Network

- 2.1. The site lies to the east of Knowle Lane, and north of the B SkyB Satellite Receiver Station. Knowle Lane connects with the B3037 Mortimer's Lane to the north, whilst to the south it forms a junction with B3354 Botley Road.
- 2.2. Knowle Lane has a two-lane carriageway of between 5.5m and 6.0m in width and benefits from a pedestrian footway along its western side. The site is linked to this footway via a section of footway around an existing bell-mouth junction with tactile paving on both sides of the road. This junction was the subject of a Section 278 Agreement linked to previous development proposals, more of which is discussed within the Planning History Section. The Road is also subject to a 40mph speed limit at this point.
- 2.3. A review of the Hampshire Constabulary Personal Injury Accident database has identified that over the last 5 years, there have been no recorded accidents involving injury at the site access junction with Knowle Lane, or within a kilometre of the site, which would suggest that the surrounding highway network is operating in a safe and efficient manner.

3. Access by Sustainable Modes

- 3.1. The roads between the site and Fair Oak are served by pedestrian footways, with the Square in Fair Oak lying some 1.1 miles to the north-west. Here the village has a range of facilities including a Post Office, shops, pubs and restaurants.
- 3.2. Whilst there are no designated on or off-road cycle facilities linking the site to Fair Oak or Eastleigh, Mortimers Lane is suitable for confident cyclists.
- 3.3. The nearest bus stop to the site is at the Knowle Lane / Mortimers Lane junction where Stagecoach operates the 69 Service. This provides an hourly service that runs between Winchester and Fareham, via Swanmore and Bishops Waltham.
- 3.4. The Bluestar 2 service runs between Fair Oak Square and Southampton via Eastleigh and Portswood, which provides buses every 15 minutes.
- 3.5. The Bluestar 3 services runs between Southampton centre and Eastleigh via Fair Oak Square, Hedge End and Botley. This is an hourly service which runs from Monday to Saturday.
- 3.6. Xelabus operate the X9 service which runs between Bishops Waltham and Eastleigh via Swanmore, Botley, Hedge End, Fair Oak Square and Colden Common. This too is an hourly service operating Monday to Friday with a bus every 2 hours on Saturdays.
- 3.7. The site is therefore considered to be located within a sustainable location.

4. Planning History

- 4.1. There is a considerable planning history to this site, and surrounding sites, which are relevant in this case, and these are listed below.

Planning Application F/17/80640 - HYBRID APPLICATION - seeking: 1) outline permission for thirty-four (34) dwellings with all matters reserved; and 2) full permission for four (4) office buildings (B1a Use Class) including access, parking, landscaping, pumping station and associated works following demolition and clearance of site.

This application was supported by a comprehensive Transport Statement, the content of which was considered by the Local Highway Authority (LHA). The Hybrid Application resulted in a total of 83 traffic movements in the AM peak, 78 Traffic movements in the PM peak and a total of 610 two-way daily traffic movements.

The LHA raised no highway objections to the application, subject to a Legal Agreement to cover the provision of a financial contribution to provide off-site highway improvements at the Knowle Lane / Mortimers Close junction.

Planning Application F/18/83954 - Construction of three (3) office buildings (B1a Use Class) including access, parking, landscaping, pumping station and associated works following demolition and clearance of site (partial amendment to application F/17/80640)

This application sought a slight increase in Office floor space, and whilst the Transport Statement submitted indicated that the volume of daily traffic would not be increased, this was a view that was not taken by HCC. In commenting, the LHA said:

A Transport Assessment has been submitted as part of the application, outlining the impacts that the additional development proposals will have in regard to trip generation.

Whilst the details as shown in section 7 are confusing, in that they appear to demonstrate that a reduction in traffic will result even though the development size is to increase, utilising the trip rates as shown, officer calculations demonstrate that for an increase in B1(a) of 806.4sqm as outlined on the application form:

- An additional 13 vehicle trips would be anticipated in the AM Peak;
- An additional 11 vehicle trips would be anticipated in the PM peak; and
- An additional 93 vehicle trips would be anticipated on a daily basis.

In terms of the peak hour trips, this would of course represent an average vehicle movement every (approximately) 4 minutes in the AM peak and every 5 1/2 minutes in the PM peak. It is not anticipated that this alone will have a measurable impact on the local highway junctions.

However, transport developer contributions will be required. Whilst the specific uplift in development quantum is relatively minor, given that the proposals will (accumulatively) have an impact on the local highway network, funding remains a requirement and in line with the calculation for the previously permitted development proposal, for the additional 806.4sqm (as outlined on the application form) of B1(a), an additional £34,386 developer contribution over and above that requested under F/17/80640 is required.

The application was subsequently approved, subject to a legal agreement to cover a financial contribution as identified by the LHA.

Planning Application F/20/87889 - Construction of 2no. office buildings (B1a Use Class) including parking and associated works.

This application sought to provide an additional 608sqm of Office development and when considering the highway implications, the LHA said:

There is no objection from HCC as Highway Authority. The application adds two further office buildings to the approved site application F/18/83954, which itself was an amendment to site application F/17/80640.

Under application F/18/83954, the site access and associated infrastructure was agreed in principle, subject to the S278 process, and this application makes no change to those proposals. As such, access remains acceptable in principle.

The Application was subsequently approved.

Planning Application F/21/89759 - Erection of 4no. three-storey residential buildings to provide 48 (24 x 1 bed and 24 x 2 bed) C3 dwellings with associated parking and landscaping.

Although this was refused planning consent, the application was accompanied with a comprehensive Transport Statement, the content of which was considered by HCC who in commenting said:

Access from the site to the highway is via an existing bell-mouth junction onto Knowle Lane, constructed as part of the wider site area which has already been built out, and as such, the access is deemed suitable for vehicular use. In terms of pedestrian access, a short footway leads out of the site, connecting into the wider pedestrian network on the west side of Knowle Lane via tactile drop kerbs.

This footway leads northwards to Mortimers lane, where a western walk sustainably connects to Fair Oak Village centre, and local schools beyond.

As outlined in the supporting TA, the change of use from the commercial development permitted, into residential dwellings as proposed will actually result in a reduction of trips as follows:

AM Peak - reduction of 43 trips

PM Peak - reduction of 36 trips

Daily - reduction of 258 trips

This reduction will be a benefit to the local highway network.

- 4.2. It is therefore evident that the LHA have previously considered a number of development proposals for this site which have been acceptable from a highway point of view. This includes the original hybrid application which would have resulted in an additional 610 daily traffic movements.

5. Proposed Development

- 5.1. The development now being proposed is shown on drawing numbered SL.01 which is included as [Appendix 1](#) to this Statement. The layout proposes 15 small Class B2 units of varying sizes of between 90 and 180 sqm.

- 5.2. Each unit will be provided with allocated parking, which is addressed further within this Statement. The full schedule of accommodation is given below.

Knowle Lane Development Site		
Unit Number	Size (sqm)	Allocated Parking (spaces)
5	202.5	4
6	270	4
7	135	2
8	135	2
9	222	3
10	135	2
11	135	2
12	202.5	3
13	202.5	3
14	165	3
15	202.5	3
16	202.5	3
17	202.5	4
18	202.5	4
19	202.5	4
Total	2817	45

6. Traffic Impact

- 6.1. The site already benefits from a consent for offices, whilst the last application for 4 number residential blocks was also considered by the LHA. That application included TRICS data for the permitted office development together with the likely traffic generated by the proposed flats. This data was accepted by the LHA when they raised no highway objections to the proposal.
- 6.2. The previous application sought to remove the 4 permitted office buildings with a total floor area of 3694 sqm and replace this with 48 apartments. A summary of the accepted TRICS data for the office use is given below, Whilst the full data is included as [Appendix 2](#) to this Statement.

Employment - Office			
	Arrivals	Departures	Total Two-way
AM Peak Hour	1.344	0.112	1.456
PM Peak Hour	0.100	0.133	1.233
Daily	5.486	4.647	10.133
Vehicle Trip Generation Based on 3694 sqm			
AM Peak Hour	49.64 (50)	4.14 (4)	54
PM Peak Hour	3.70 (4)	4.91 (5)	9
Daily	202.65 (203)	171.66 (171)	374

- 6.3. From the above, it can be seen that the permitted Office Units, B, C, D and E would have generated around 54 traffic movements in the AM peak, 9 in the PM peak and a total of some 374 two-way traffic movements.

6.4. In order to assess the likely traffic that the proposed Class E use would generate, again the TRICS Database has been interrogated. The parameters used are:

- Land Use – Employment – Industrial Estate
- Site Size – 1776 – 4876 sqm
- Date Range – 01/01/12 – 18/05/18
- Areas – Edge of Town
- Travel Plan – no

6.5.

Employment – Industrial Estate			
	Arrivals	Departures	Total Two-way
AM Peak Hour	0.717	0.496	1.213
PM Peak Hour	0.238	0.598	0.836
Daily	6.472	6.471	12.943
Vehicle Trip Generation Based on 2817 sqm			
AM Peak Hour	20.19 (20)	13.97 (14)	34
PM Peak Hour	6.7 (7)	16.85 (17)	24
Daily	182.32 (182)	182.23 (182)	364

6.6. From the above, it can be seen that the proposed Industrial Estate is likely to generate around 34 traffic movements in the AM peak, 24 in the PM peak and a total of some 362 two-way daily traffic movements. The TRICS data for the Industrial Estate is included as [Appendix 3](#) to this Statement.

6.7. It is therefore possible to make a comparison of the traffic likely to be generated by the existing permitted Office use and the proposed Industrial Estate and this is shown below.

Knowle Lane Proposed Industrial Estate			
	Existing Offices	Proposed Industrial	Difference
AM Peak	54	34	-20
PM Peak	9	24	+15
Daily Flow	379	364	-15

6.8. From the above it is evident that if permitted, the proposed Industrial Estate will see a reduction in traffic in the AM peak, a slight increase in traffic in the PM peak but a slight reduction of some 15 traffic movements across the whole day.

6.9. Given the above, it is considered that the proposed Industrial Estate and its associated reduction in traffic will have no detrimental impact to the local highway network.

7. Car and Cycle Parking

7.1. Whilst Eastleigh Borough Council have adopted Residential car parking standards, no such standard exists for Commercial development such as this. The LHA withdrew their car parking standards set out in the Hampshire Parking Strategy and Standards (2002) document in March 2008.

7.2. This proposed development is for a total of 2817 sqm 1n this layout provides a total of 45 spaces which is considered to be appropriate for the relatively small scale units now proposed.

- 7.3. With regard to cycle parking, it is anticipated that any secure cycle parking can be accommodated within the industrial units, without the need to provide additional exterior stores.

8. Servicing

- 8.1. It is anticipated that the vast majority of service vehicles that will visit the site will be smaller Transit type vans, 7.5 tonne wagons or 10.0m long 3 or 4 axle rigid chassis lorries. Whilst this cannot be controlled, the site has made allowance for the turning requirements of articulated vehicles at both the eastern and western ends of the site.
- 8.2. Drawing numbered NJC-001 is included as [Appendix 4](#) to this Statement which shows the ability of an articulated vehicle to enter the site, turn and leave in forward gear. As this is the largest vehicle that will be accommodated, all smaller vehicles will have no problem in servicing the site.

9. Summary and Conclusion

- 9.1. This Transport Statement has been commissioned by Parsons Construction Limited in support of a planning application for a Class B2 development at East Horton Business Park, Knowle Lane.
- 9.2. The site has been the subject of a number of previous planning applications where Hampshire County Council have been consulted and have raised no highway objections.
- 9.3. Through the use of TRICS data, it has been demonstrated that if permitted, the proposed Industrial Estate will generate less traffic than that of the previously permitted Office use.
- 9.4. Car and cycle parking is deemed to be sufficient in this instance and will not lead to any disbursement onto the public highway.
- 9.5. The site makes adequate provision for the turning of an articulated vehicle, deemed to be the largest, but most infrequent vehicle to service the site.
- 9.6. The application is therefore considered to be acceptable from a highway point of view.

Nick Culhane January 2023

Appendix 1

Site Plan



scale 1:500



Underground HV cables

Site Boundary

HGV Turning Area

SuDs Basin

Overhead cables

Trees to be trimmed

- C Block B and parking moved. Turning area updated
- B Tree canopies updated
- A Layout updated to suit tracking requirements

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Project
Knowle Lane,
Eastleigh
-

Title
Proposed Site Layout
-

Scale	Date	Drawn	Checked	Job No.	Drawing. No.	Revision
1:500 @ A3	Nov 22	RP	JD	116	SL01	C

Jan '23
Nov '22
Nov '22-

Appendix 2

Agreed Office TRICS Data

Calculation Reference: AUDIT-521501-180620-0640

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : A - OFFICE
 VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	BT BRENT	1 days
	HD HILLINGDON	1 days
02	SOUTH EAST	
	HC HAMPSHIRE	1 days
	SC SURREY	1 days
03	SOUTH WEST	
	DC DORSET	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	SF SUFFOLK	2 days
10	WALES	
	SW SWANSEA	1 days
12	CONNAUGHT	
	RO ROSCOMMON	1 days
13	MUNSTER	
	CR CORK	1 days
15	GREATER DUBLIN	
	DL DUBLIN	2 days
17	ULSTER (NORTHERN IRELAND)	
	AN ANTRIM	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 6483 to 15000 (units: sqm)
 Range Selected by User: 5650 to 22600 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 14/06/16

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	4 days
Tuesday	4 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	14 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	6
Suburban Area (PPS6 Out of Centre)	5
Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	1

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

Selected Location Sub Categories:

Industrial Zone	1
Commercial Zone	3
Development Zone	3
Residential Zone	2
Built-Up 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:

B1	14 days
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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	1 days
5,001 to 10,000	2 days
10,001 to 15,000	2 days
15,001 to 20,000	2 days
25,001 to 50,000	5 days
50,001 to 100,000	1 days
100,001 or More	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
25,001 to 50,000	2 days
125,001 to 250,000	5 days
250,001 to 500,000	3 days
500,001 or More	3 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	12 days
1.6 to 2.0	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:

Yes	6 days
No	8 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	12 days
4 Good	1 days
5 Very Good	1 days

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	10100	0.406	1	10100	0.030	1	10100	0.436
06:30 - 07:00	1	10100	0.703	1	10100	0.139	1	10100	0.842
07:00 - 07:30	14	9938	0.208	14	9938	0.014	14	9938	0.222
07:30 - 08:00	14	9938	0.477	14	9938	0.077	14	9938	0.554
08:00 - 08:30	14	9938	0.581	14	9938	0.074	14	9938	0.655
08:30 - 09:00	14	9938	0.679	14	9938	0.088	14	9938	0.767
09:00 - 09:30	14	9938	0.553	14	9938	0.100	14	9938	0.653
09:30 - 10:00	14	9938	0.329	14	9938	0.115	14	9938	0.444
10:00 - 10:30	14	9938	0.175	14	9938	0.101	14	9938	0.276
10:30 - 11:00	14	9938	0.152	14	9938	0.092	14	9938	0.244
11:00 - 11:30	14	9938	0.140	14	9938	0.123	14	9938	0.263
11:30 - 12:00	14	9938	0.125	14	9938	0.116	14	9938	0.241
12:00 - 12:30	14	9938	0.115	14	9938	0.133	14	9938	0.248
12:30 - 13:00	14	9938	0.132	14	9938	0.184	14	9938	0.316
13:00 - 13:30	14	9938	0.163	14	9938	0.167	14	9938	0.330
13:30 - 14:00	14	9938	0.155	14	9938	0.125	14	9938	0.280
14:00 - 14:30	14	9938	0.158	14	9938	0.122	14	9938	0.280
14:30 - 15:00	14	9938	0.109	14	9938	0.151	14	9938	0.260
15:00 - 15:30	14	9938	0.079	14	9938	0.195	14	9938	0.274
15:30 - 16:00	14	9938	0.098	14	9938	0.243	14	9938	0.341
16:00 - 16:30	14	9938	0.086	14	9938	0.442	14	9938	0.528
16:30 - 17:00	14	9938	0.079	14	9938	0.420	14	9938	0.499
17:00 - 17:30	14	9938	0.065	14	9938	0.661	14	9938	0.726
17:30 - 18:00	14	9938	0.063	14	9938	0.466	14	9938	0.529
18:00 - 18:30	14	9938	0.032	14	9938	0.355	14	9938	0.387
18:30 - 19:00	14	9938	0.014	14	9938	0.129	14	9938	0.143
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			5.876			4.862			10.738

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:	6483 - 15000 (units: sqm)
Survey date date range:	01/01/10 - 14/06/16
Number of weekdays (Monday-Friday):	14
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix 3

Industrial Estate TRICS Data

Calculation Reference: AUDIT-405201-221123-1132

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
03	SOUTH WEST	
	DV DEVON	1 days
06	WEST MIDLANDS	
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	3 days
08	NORTH WEST	
	LC LANCASHIRE	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: 1776 to 4876 (units: sqm)
 Range Selected by User: 1775 to 4876 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 18/05/18

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

Selected survey days:

Monday	3 days
Tuesday	1 days
Friday	3 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 undertaken using machines.

Selected Locations:

Edge of Town	7
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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
Commercial Zone	1
Development Zone	1
No Sub Category	1

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

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

LIST OF SITES relevant to selection parameters

The 'browse and select' feature in TRICS was used to choose the sites to be included in this selected set. The TRICS user browsed the full list of sites for this land use category and selected directly from this list.

1	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
2	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
3	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
4	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
5	WY-02-D-05	INDUSTRIAL ESTATE	WEST YORKSHIRE
	CARR WOOD ROAD		
	CASTLEFORD		
	Edge of Town		
	Development Zone		
	Total Gross floor area:	1776 sqm	
	Survey date: MONDAY	22/05/17	Survey Type: MANUAL
6	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
7	WY-02-D-07	INDUSTRIAL ESTATE	WEST YORKSHIRE
	THUNDERHEAD RIDGE RD		
	CASTLEFORD		
	GLASSHOUGHTON		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	3191 sqm	
	Survey date: MONDAY	15/05/17	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 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	7	3604	0.147	7	3604	0.048	7	3604	0.195
07:30 - 08:00	7	3604	0.341	7	3604	0.099	7	3604	0.440
08:00 - 08:30	7	3604	0.392	7	3604	0.262	7	3604	0.654
08:30 - 09:00	7	3604	0.325	7	3604	0.234	7	3604	0.559
09:00 - 09:30	7	3604	0.285	7	3604	0.226	7	3604	0.511
09:30 - 10:00	7	3604	0.317	7	3604	0.234	7	3604	0.551
10:00 - 10:30	7	3604	0.305	7	3604	0.277	7	3604	0.582
10:30 - 11:00	7	3604	0.384	7	3604	0.317	7	3604	0.701
11:00 - 11:30	7	3604	0.337	7	3604	0.353	7	3604	0.690
11:30 - 12:00	7	3604	0.369	7	3604	0.420	7	3604	0.789
12:00 - 12:30	7	3604	0.353	7	3604	0.400	7	3604	0.753
12:30 - 13:00	7	3604	0.349	7	3604	0.373	7	3604	0.722
13:00 - 13:30	7	3604	0.349	7	3604	0.353	7	3604	0.702
13:30 - 14:00	7	3604	0.289	7	3604	0.262	7	3604	0.551
14:00 - 14:30	7	3604	0.325	7	3604	0.381	7	3604	0.706
14:30 - 15:00	7	3604	0.254	7	3604	0.297	7	3604	0.551
15:00 - 15:30	7	3604	0.285	7	3604	0.242	7	3604	0.527
15:30 - 16:00	7	3604	0.281	7	3604	0.254	7	3604	0.535
16:00 - 16:30	7	3604	0.281	7	3604	0.357	7	3604	0.638
16:30 - 17:00	7	3604	0.202	7	3604	0.349	7	3604	0.551
17:00 - 17:30	7	3604	0.147	7	3604	0.412	7	3604	0.559
17:30 - 18:00	7	3604	0.091	7	3604	0.186	7	3604	0.277
18:00 - 18:30	7	3604	0.032	7	3604	0.087	7	3604	0.119
18:30 - 19:00	7	3604	0.032	7	3604	0.048	7	3604	0.080
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			6.472			6.471			12.943

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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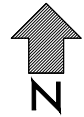
Parameter summary

Trip rate parameter range selected:	1776 - 4876 (units: sqm)
Survey date date range:	01/01/12 - 18/05/18
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

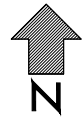
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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

Appendix 4

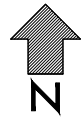
Swept Path Tracking



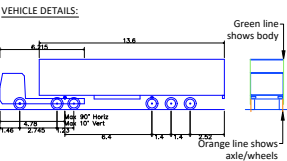
INGRESS



REVERSE



EGRESS



16.5M LONG ARTICULATED LORRY

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.692m
Min Body Ground Clearance	0.426m
Max Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	6.987m

Design speed 5kph for all Forward movements
Design speed 2.5kph for all Reverse movements

Client



Project

LAND AT KNOWLE LANE

Drawing Title

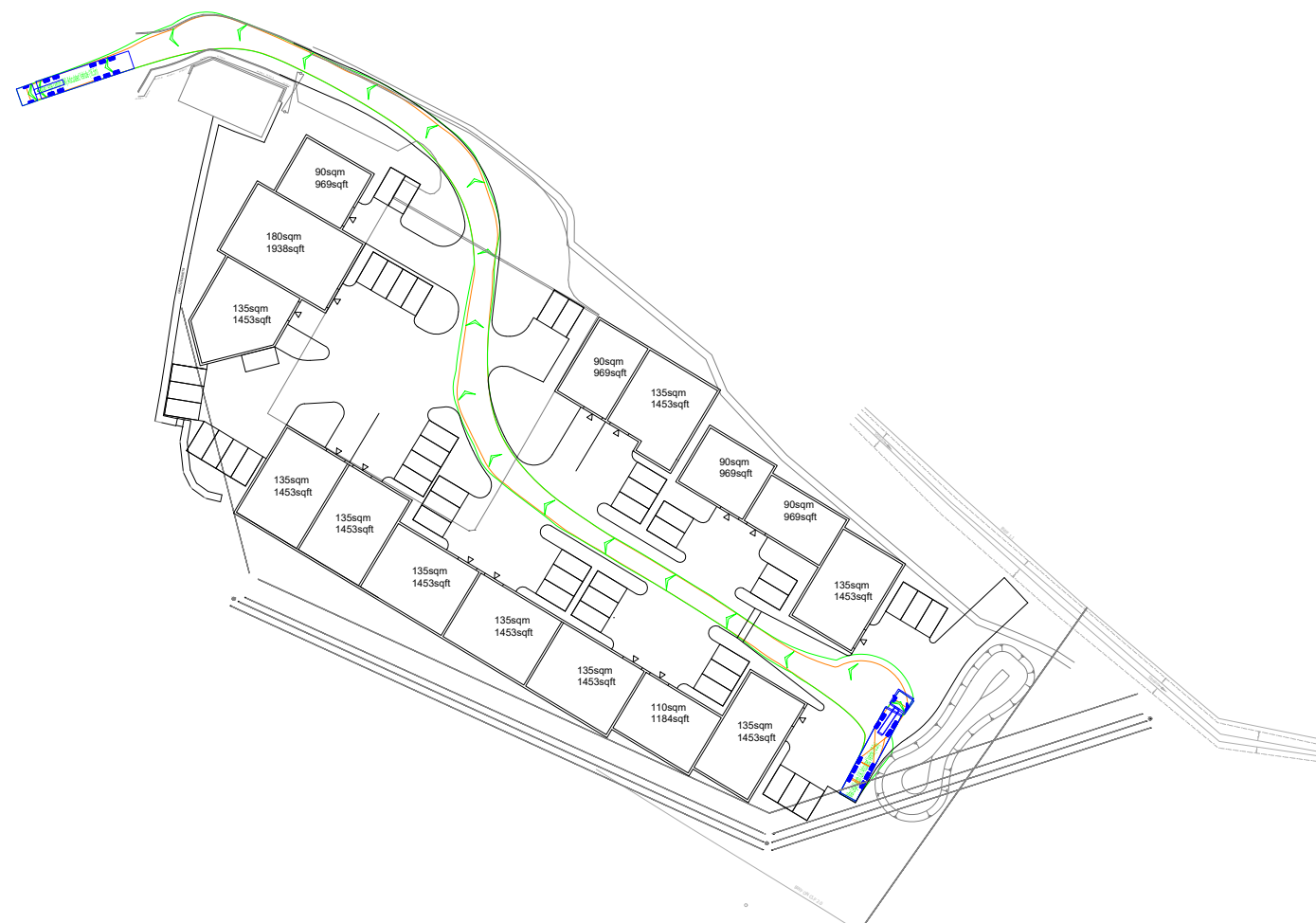
TRACKING

Drawing Status

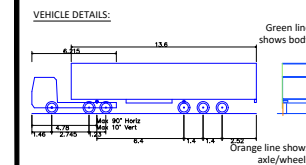
FOR INFORMATION

Date	Scale	Size
NOV 2022	1:500	A1

Drawing No.	Rev
NJC-001	-



EGRESS



Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.692m
Min Body Ground Clearance	0.426m
Max Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	6.987m

Design speed 5kph for all Forward movements
Design speed 2.5kph for all Reverse movements

Client



Project

LAND AT KNOWLE LANE

Drawing Title

TRACKING

Drawing Status	
1	1
2	2
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100	100

FOR INFORMATION

Date
NOV 2022

Scale
1:500

Size	A1
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Drawing No.

NJC-002

	Rev
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