Formby

Formby Development Site Forecasting Report
Sefton Council

16 October 2015

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1. Introduction

Sefton Council (SC) has commissioned Atkins to use the Formby update traffic model which was produced in February 2013 to analyse the transport impacts of two proposed employment land use developments on land to the east of the A565 Formby Bypass adjacent to the existing employment site at the B5195 Altcar Road. In addition to the employment developments, the impacts of three proposed residential development sites around the Formby area have also been included in this assessment. Details of the Formby update model are reported in the Formby SATURN Traffic Model Update Local Model Validation report.

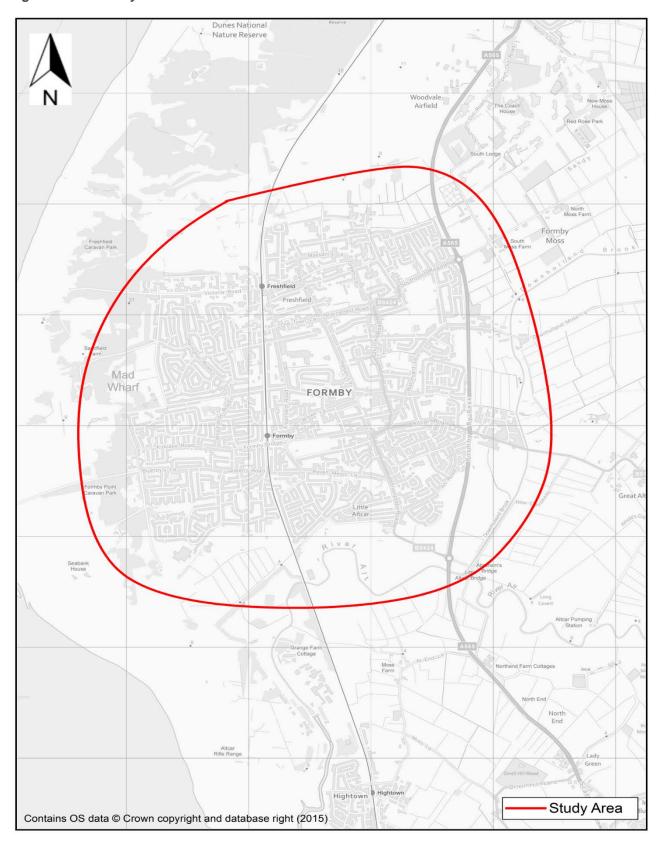
This report documents the impact of, and assumptions made in developing the forecast scenario for the development sites around the Formby area of Sefton.

The two employment development sites are located to the east of the Formby Bypass, the northern site is adjacent, and to the north of the existing industrial estate at the B5195 Altcar Road and takes its access via a signalised junction with the A565 Formby Bypass, the southern site is to the south of the existing industrial site, the access to this site is via a signalised junction with the A565 Formby Bypass, as well as a priority junction with the B5195 Altcar Road.

The three housing sites are located at Liverpool Road, land to the south of Andrews Close and land north of Brackenway, the site on land to the North of Brackenway also has a new signalised junction with the A565 Formby Bypass.

Figure 1-1 shows the general location of the study area.

Figure 1-1 Study Area



2. Methodology

Sefton Council requested that a forecast horizon year of 2030 should be should be tested to ascertain the effects of the development sites on the local road network.

2.1. Development Scenarios

Only one development Do-Something scenario has been assessed as part of this analysis, which is a 2030 forecast horizon year, with the full 2030 housing build out based on housing allocation data provided by Sefton Council.

The Do-Something scenario tested contains the following development sites:

- MN2.12 Land North of Brackenway (Housing);
- MN2.16 Land at Liverpool Road (Housing);
- MN2.19 Land at Andrews Close (Housing);
- MN2.48 Land North of Formby Industrial Estate. (Employment); and,
- MN2.49 Land South of Formby Industrial Estate (Employment).

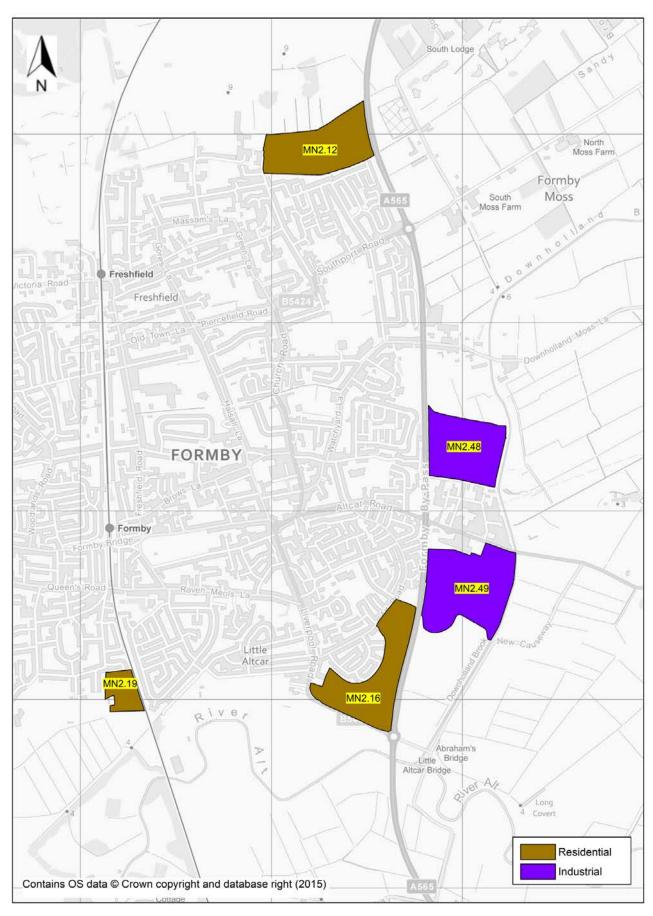
Table 2-1 details the land use and quantum of development at each site, as well as the zone in the SATURN traffic model which represents the development site.

Table 2-1 Development Quantum and Land Use Types

Land Use Type	MN2.12 (Zone 185) Land at North of Brackenway. (Dwellings)	MN2.16 (Zone 184) Land at Liverpool Road. (Dwellings)	MN2.19 (Zone 126) Land at Andrews Close. (Dwellings)	MN2.48 (Zone 186) Land North of Formby Industrial Estate. (GFA m2)	MN2.49 (Zone 187) Land North of Formby Industrial Estate. (GFA m2)	Total
Housing	286	319	87	N/A	N/A	676
B1a	N/A	N/A	N/A	8,175	0	1441
B1c	N/A	N/A	N/A	3,252	6,825	1728
B2	N/A	N/A	N/A	13,331	6,825	20,156
B8	N/A	N/A	N/A	14,074	13,650	27,724
Total	286	319	87	38,832	27,300	N/A

Figure 2-1 shows the location of each development site graphically.

Figure 2-1 2030 Development Site Locations.



2.2. Forecast Year Development Trips.

After discussions with council officers and interrogation of the TEMPRO 6.2 data sets, it was agreed that no underlying growth would be added to the Formby Update SATURN model base matrices, as growth in the Formby and wider Sefton areas of Merseyside is predicted to be neutral and possibly slightly negative for the forecast year developed for this analysis. As this study is primarily focussed on the impacts of development sites on the A565 Formby Bypass, five smaller housing sites around the Formby area which have less than 50 dwellings on each site have not been modelled, it was considered prudent not to model these sites as this would offset the negative TEMPRO growth in the Formby area and due to the sparsity of the modelled network in the area of the developments, the impact of the sites on the A565 Formby Bypass itself would be negligible.

2.2.1. Trip Rates

Following further discussion with Sefton council officers and to provide continuity with previous work undertaken for Sefton Council, it was agreed that the trip rates from the 'Land East of Maghull' development scenarios would be used for both the residential and employment elements of the developments. Additional trip rates were calculated for B1c land use which is employment starter units. Trip rates have been calculated using the TRICS data base.

Appendix A of this report details the Housing and Employment TRICS assessments.

The trip rates used in the assessment are tabulated in Table 2-2.

Table 2-2 Development Trip Rates

	Average Trip Rates (per Dwelling / 100 sqm)									
Land Use	Мо	rning (0800-09	000)	Evening (1700-1800)						
	Arrivals	Departures	Total	Arrivals	Departures	Total				
Housing	0.165	0.435	0.600	0.418	0.246	0.664				
B1 (Employment/A - Office)	1.597	0.261	1.858	0.203	1.262	1.465				
B1(Employment/C – Starter Units)	0.419	0.155	0.574	0.066	0.464	0.530				
B2 (Employment/B - Industrial)	0.450	0.213	0.663	0.107	0.391	0.498				
B8 (Employment/F - Warehousing)	0.200	0.094	0.294	0.076	0.157	0.233				

2.2.2. Trip Generation

Based on the trip rates and the quantum of development described above, a trip generation has been calculated. The trip generation for each of the development sites is tabulated in Table 2-3.

Table 2-3 2030 Development Site Trip Generation.

	Development Trips								
Site Reference	Moi	rning (0800-09	000)	Evening (1700-1800)					
	Arrivals	Departures	Total	Arrivals	Departures	Total			
MN2.12 Land at North of Brackenway (Model Zone 185)	47	124	172	120	70	190			
MN2.16 Land at Liverpool Road. (Model Zone 184)	53	139	191	133	78	212			
MN2.19 Land at Andrews Close. (Model Zone 126)	14	38	52	36	21	58			
MN2.48 Land North of Formby Industrial Estate. (Model Zone 186)	232	68	300	44	192	236			
MN2.49 Land South of Formby Industrial Estate. (Model Zone 187)	87	38	125	22	80	102			
Total	433	407	840	355	442	798			

2.2.1. Trip Distribution

Trip distributions for the Formby development sites have been taken from suitable adjacent donor zones. The residential development sites have used local residential zones, for the employment sites, the existing industrial area to the east of the Formby bypass at the B5195 Altcar Road has been used as the donor zone.

Figures 2-2 and 2-3 show the distribution patterns for the AM peak departures and PM peak arrivals for the residential development sites.

Figure 2-2 AM Peak Residential Site Departures.

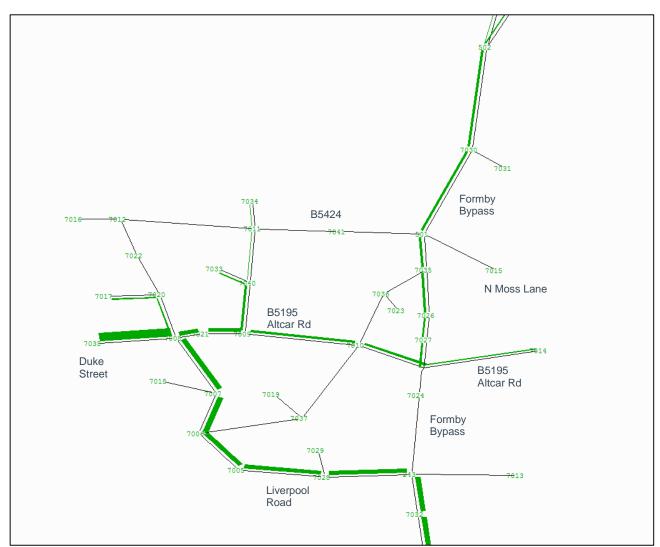
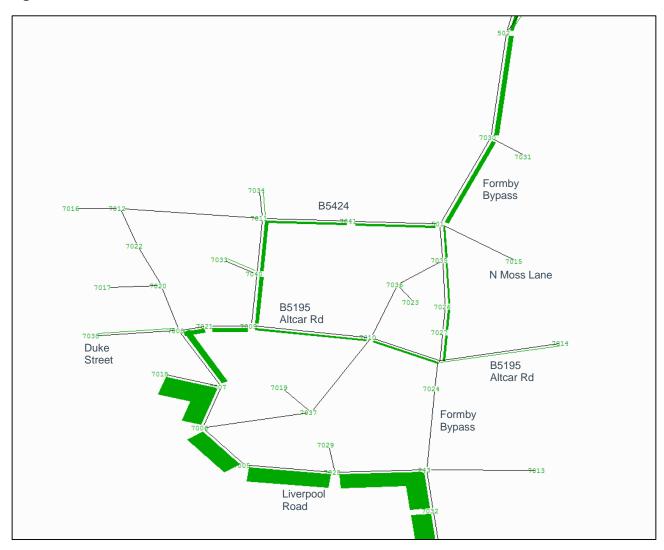


Figure 2-3 PM Peak Residential Site Arrivals



Figures 2-4 and 2-5 shows the AM arrivals and PM departure trip distributions for the employment development sites.

Figure 2-4 AM Peak Employment Site Arrivals.

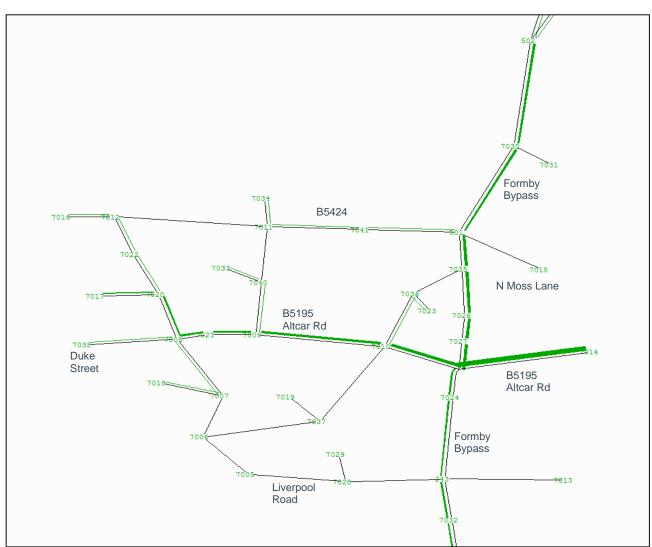
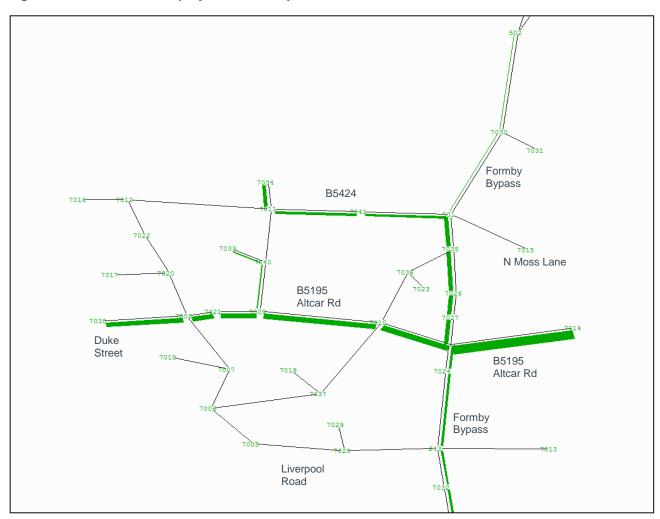


Figure 2-5 PM Peak Employment Site Departures.



3. Forecast Analysis

The following sections of the report detail the effects of the development scenario on the local road network in and around the Formby area.

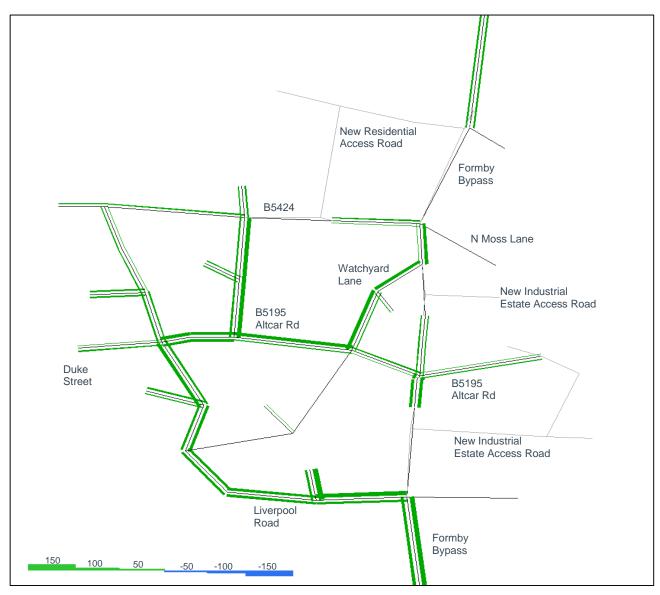
3.1. Network Analysis

3.1.1. Flow Difference

Analysis has been undertaken to compare the change in flows between the base assignments and the Do-Something scenarios. This analysis has been undertaken using SATURN difference plots for the AM and PM peak periods. Green bands denote an increase in flow in the Do-Something scenario and blue bands denote a decrease in flow in the Do-Something scenario, the width of the band indicates the magnitude of the flow changes

The difference plots are reproduced in Figures 3-1 and 3-2 below.

Figure 3-1 AM Peak Base against Do-Something Difference Plot.



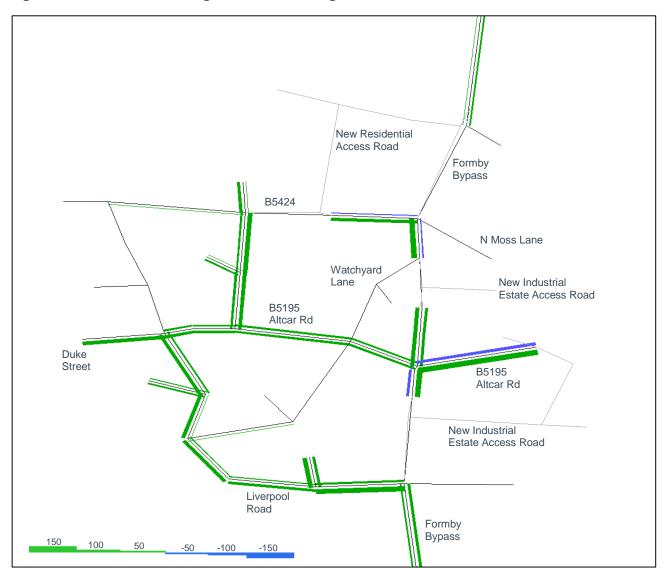


Figure 3-2 PM Peak Base against Do-Something Difference Plot.

Analysis comparing the Do-Something scenario with the Base scenario shows that during the AM peak period the most significant traffic flow difference observed is an increase in traffic flows on Watchyard Lane.

During the PM peak a decrease in traffic is observed on the A565 Formby Bypass to the south of the B5195 Altcar Road, traffic flows also decrease on the B5195 Altcar Road eastbound as traffic turns right at the new southern industrial area junction to access the existing industrial area at the B5195 Altcar Road.

There is also a small amount of re-routing from the residential developments away from the B5424 onto the B5195 Altcar Rd and Liverpool Road.

3.1.2. Junction Stress

Junction stress analysis has been undertaken for all of the junctions in the vicinity of the development site.

Both Volume to Ratio capacity (V/C) and Delay indicators have been assessed as part of the analysis.

Colour coded thematically mapped plots have been used to compare the Base against the Do-Something scenario at each junction, these colour codes are listed below:

Volume to Capacity Ratio

- Green Less than 85%
- Amber 85% to 100%
- Red 100% and above

Delay.

- Green Less than 15 seconds;
- Amber 15 to 60 seconds;
- Red 60 to 120 seconds; and,
- Black 120 seconds and over

The junction stress plots are represented in Figures 3-4 to 3-7 below.

Figure 3-3 AM Peak. Base - Do-Something Junction Delay Stress Plots

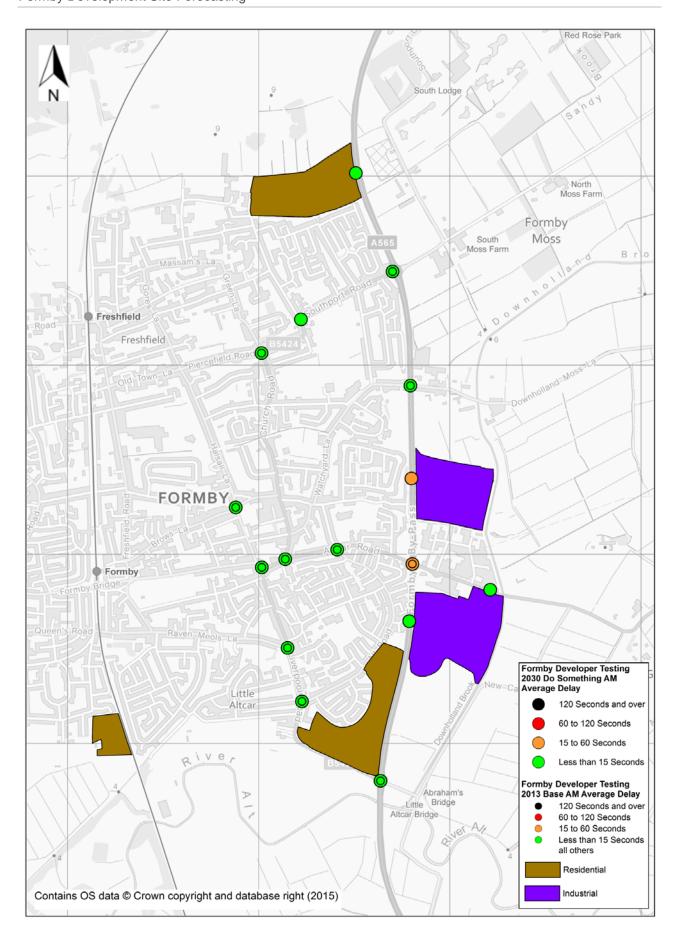


Figure 3-4 AM Peak. Base - Do-Something Junction V/C Stress Plots

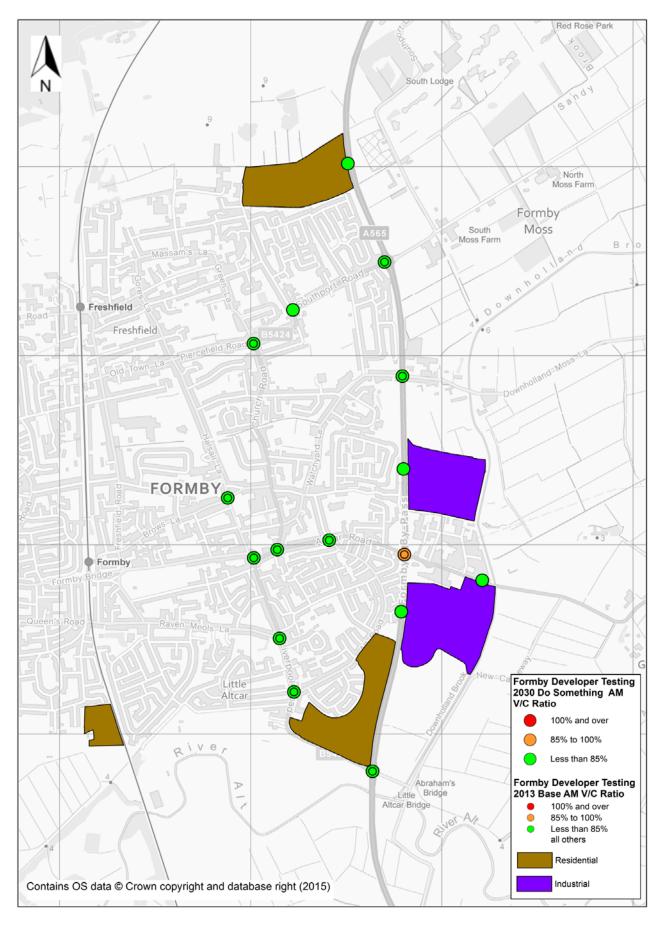


Figure 3-5 PM Peak. Base - Do-Something Junction Delay Stress Plots

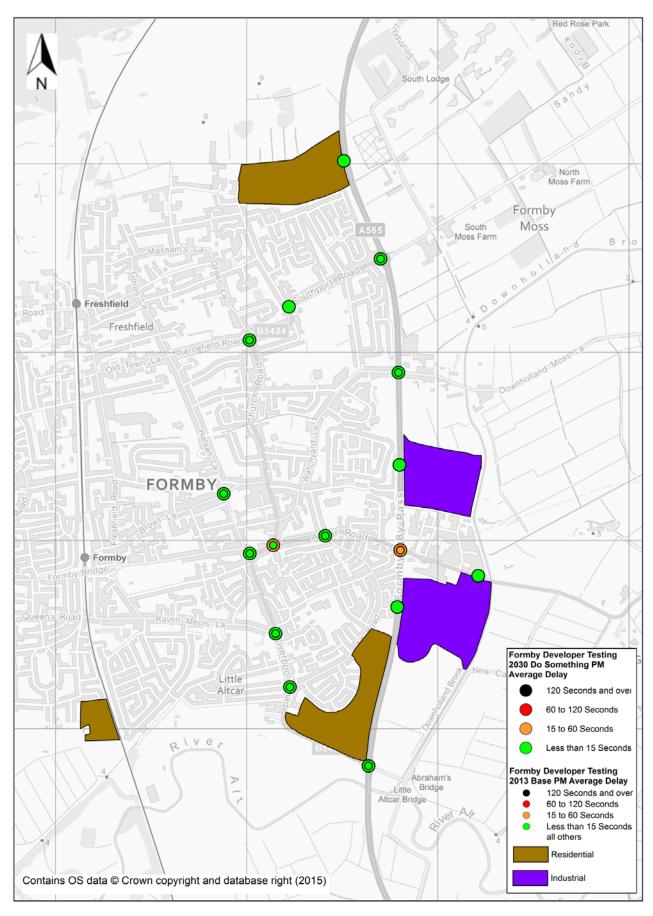
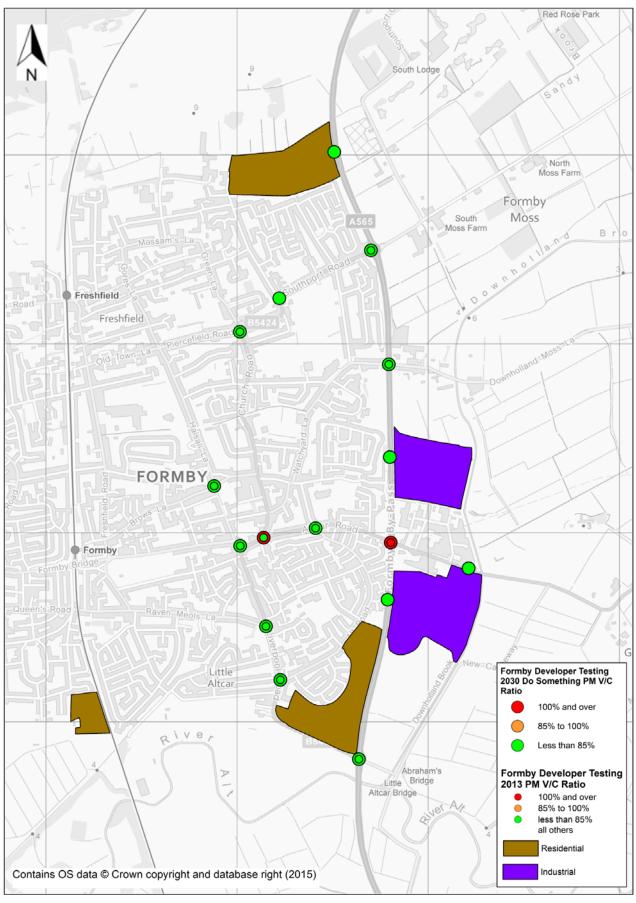


Figure 3-6 PM Peak. Base - Do-Something Junction V/C Stress Plots



The junction stress plots indicate that in general there are no junctions that show an increase in stress for either V/C or Delay in the Do-Something scenario, except for the junction between the B5195 Altcar Road / Watchyard Lane / Cross Green which is predicted to experience increased delays and V/C during the PM peak period.

4. Summary

The assessment of the development scenario for the residential and employment sites in and around the Formby area has been undertaken for a forecast horizon year of 2030.

Three residential housing sites from the Sefton housing allocation have been incorporated into the Formby update SATURN traffic model, which forms the basis of this assessment. Two employment sites including B1a, B1c, B2 and B8 land use types have also been modelled.

These developments form the background growth for the analysis, as TEMPRO data predicts that there will be no traffic growth for the forecast years across most of the Merseyside region.

Trip distributions from suitable adjacent residential and employment land zones in the SATURN model have been used to model the travel patterns to and from the development sites.

The impacts of the proposed development on the existing local Formby road infrastructure has been assessed by comparing the Base model levels of traffic delay and congestion, against the 2030 AM and PM peak scenarios with the proposed developments in place.

Flow difference plots comparing the Base and Do-Something scenario indicate that there will be localised flow increases around the area to the west of the Formby bypass in both the AM and PM peak periods.

During the AM peak the main re-routeing of traffic flow is predicted to be an increase of traffic on Watchyard Lane. During the PM peak, traffic flow is predicted to decrease northbound on Formby bypass on the approach to the B5195 Altcar Road, as traffic accesses the existing industrial area further south from the new signalised junction at the Formby south employment area

The traffic model results indicate that there will be very little increase in junction stress when V/C and Delay are analysed for the 2030 development scenarios, with the exception of the B5195 Altcar Road / Watchyard Lane / Cross Green junction.

Appendices



Appendix A. TRICS Output

A.1. Residential Sites TRICS Data

TRICS 2013(b)v6.12.2 281113 B16.07 (C) 2013 JMP Consultants Ltd on behalf of the TRICS Consortium Wednesday 18/12/13

Maghull Trip Rates Page 1

Atkins Faulkner Street Manchester Licence No: 803408
TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL

Category: A - HOUSES PRIVATELY OWNED

VEHICLES

Selected regions and areas:

02 SOUTH EAST EX ESSEX 1 days

03 SOUTH WEST

WL WILTSHIRE 1 days

04 EAST ANGLIA

SF SUFFOLK 2 days

05 EAST MIDLANDS

LN LINCOLNSHIRE 1 days

NT NOTTINGHAMSHIRE 1 days

06 WEST MIDLANDS

WM WEST MIDLANDS 1 days

07 YORKSHIRE & NORTH LINCOLNSHIRE

NY NORTH YORKSHIRE 1 days

08 NORTH WEST

CH CHESHIRE 1 days

09 NORTH

CB CUMBRIA 1 days

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

Filtering Stage 2 selection:

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

Parameter: Number of dwellings Actual Range: 71 to 237 (units:)

Range Selected by User: 50 to 4334 (units:)

Public Transport Provision: Selection by: Include all surveys Date Range: 01/01/05 to 22/10/12

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 3 days Wednesday 1 days Thursday 1 days Friday 1 days

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

Selected survey types: Manual count 10 days

Directional ATC Count 0 days

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

undertaking using machines.

Selected Locations:

Edge of Town 10

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:

Residential Zone 7

Out of Town 1

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Maghull Trip Rates Page 2

Atkins Faulkner Street Manchester Licence No: 803408

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.

Filtering Stage 3 selection:

Use Class:

C 3 10 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

5,001 to 10,000 4 days

10,001 to 15,000 1 days

15,001 to 20,000 3 days

20,001 to 25,000 2 days

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

Population within 5 miles:

25,001 to 50,000 2 days

50,001 to 75,000 1 days

100,001 to 125,000 3 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 4 days

1.1 to 1.5 6 days

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

Travel Plan:

No 10 days

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

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Maghull Trip Rates Page 3

Atkins Faulkner Street Manchester Licence No: 803408 LIST OF SITES relevant to selection parameters

1 CB-03-A-04 SEMI DETACHED CUMBRIA

MOORCLOSE ROAD

SALTERBACK

WORKINGTON

Edge of Town

No Sub Category

Total Number of dwellings: 8 2

Survey date: FRIDAY 24/04/09 Survey Type: MANUAL

2 CH-03-A-02 HOUSES/FLATS CHESHIRE

SYDNEY ROAD

CREWE

Edge of Town

Residential Zone

Total Number of dwellings: 174

Survey date: TUESDAY 14/10/08 Survey Type: MANUAL

3 EX-03-A-01 SEMI-DET. ESSEX

MILTON ROAD CORRINGHAM STANFORD-LE-HOPE Edge of Town Residential Zone

Total Number of dwellings: 2 3 7

Survey date: TUESDAY 13/05/08 Survey Type: MANUAL 4 LN-03-A-01 MIXED HOUSES LINCOLNSHIRE

BRANT ROAD BRACEBRIDGE LINCOLN Edge of Town Residential Zone

Total Number of dwellings: 1 5 0

Survey date: TUESDAY 15/05/07 Survey Type: MANUAL 5 NT-03-A-03 SEMI DETACHED NOTTINGHAMSHIRE

B6018 SUTTON ROAD KIRKBY-IN-ASHFIELD Edge of Town Residential Zone

Total Number of dwellings: 1 6 6

Survey date: WEDNESDAY 28/06/06 Survey Type: MANUAL 6 NY-03-A-05 HOUSES AND FLATS NORTH YORKSHIRE

BOROUGHBRIDGE ROAD

RIPON

Edge of Town No Sub Category

Total Number of dwellings: 7 1

Survey date: MONDAY 22/09/08 Survey Type: MANUAL 7 SF-03-A-02 SEMI DET./TERRACED SUFFOLK

STOKE PARK DRIVE MAIDENHALL IPSWICH

Edge of Town Residential Zone

Total Number of dwellings: 2 3 0

Survey date: THURSDAY 24/05/07 Survey Type: MANUAL

TRICS 2013(b)v6.12.2 281113 B16.07 (C) 2013 JMP Consultants Ltd on behalf of the TRICS Consortium Wednesday 18/12/13

Maghull Trip Rates Page 4

Atkins Faulkner Street Manchester Licence No: 803408 LIST OF SITES relevant to selection parameters (Cont.)

8 SF-03-A-03 MIXED HOUSES SUFFOLK

BARTON HILL FORNHAM ST MARTIN BURY ST EDMUNDS

Edge of Town Out of Town

Total Number of dwellings: 1 0 1

Survey date: MONDAY 15/05/06 Survey Type: MANUAL

9 WL-03-A-01 SEMI D./TERRACED W. BASSETT WILTSHIRE

MAPLE DRIVE WOOTTON BASSETT Edge of Town Residential Zone

Total Number of dwellings: 9 9

Survey date: MONDAY 02/10/06 Survey Type: MANUAL 10 WM-03-A-03 MIXED HOUSING WEST MIDLANDS

BASELEY WAY ROWLEYS GREEN COVENTRY Edge of Town Residential Zone

Total Number of dwellings: 8 4

Survey date: MONDAY 24/09/07 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.

MANUALLY DESELECTED SITES

Site Ref Reason for Deselection

CH-03-A-06 Train station within 1km

CW-03-A-02 Train station within 1km

DC-03-A-01 Suburban Area

LC-03-A-22 High frequency bus services

LN-03-A-02 Suburban Area

MS-03-A-01 Neighbourhood Centre

NF-03-A-02 High frequency bus services

NY-03-A-01 Train station within 1km

NY-03-A-06 Suburban Area

SF-03-A-01 Suburban Area

SH-03-A-04 Train station within 1km

TV-03-A-01 Suburban Area

WM-03-A-01 High frequency bus services

WO-03-A-03 Suburban Area

WO-03-A-06 Train station within 1km

TRICS 2013(b)v6.12.2 281113 B16.07 (C) 2013 JMP Consultants Ltd on behalf of the TRICS Consortium Wednesday 18/12/13

Maghull Trip Rates Page 5

Atkins Faulkner Street Manchester Licence No: 803408

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

ARRIVALS DEPARTURES TOTALS

No. Ave. Trip No. Ave. Trip No. Ave. Trip

Time Range Days DWELLS Rate Days DWELLS Rate Days DWELLS 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 10 139 0.090 10 139 0.313 10 139 0.403

08:00 - 09:00 10 139 0.165 **10 139 0.435** 10 139 0.600

09:00 - 10:00 10 139 0.170 10 139 0.223 10 139 0.393

10:00 - 11:00 10 139 0.155 10 139 0.204 10 139 0.359

11:00 - 12:00 10 139 0.209 10 139 0.182 10 139 0.391

12:00 - 13:00 10 139 0.212 10 139 0.192 10 139 0.404 13:00 - 14:00 10 139 0.185 10 139 0.171 10 139 0.356

14:00 - 15:00 10 139 0.198 10 139 0.192 10 139 0.390

15:00 - 16:00 10 139 0.341 10 139 0.232 10 139 0.573

16:00 - 17:00 10 139 0.325 10 139 0.208 10 139 0.533

17:00 - 18:00 10 139 0.418 10 139 0.246 10 139 0.664

18:00 - 19:00 10 139 0.286 10 139 0.225 10 139 0.511

19:00 - 20:00

20:00 - 21:00

21:00 - 22:00

22:00 - 23:00

23:00 - 24:00

Total Rates: 2.754 2.823 5.577

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.

rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 71 - 237 (units:) Survey date date range: 01/01/05 - 22/10/12 Number of weekdays (Monday-Friday): 10

Number of Saturdays: 0 Number of Sundays: 0

Surveys manually removed from selection: 15

A.2. Employment Land Sites TRICS Data

TRICS 7.2.3

Trip Rate Gross floor Parameter: area

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

Calculation Factor: 100 sqm Count Type: VEHICLES

			ARRIVAL	.S			DEPART	JRES			TOTALS
	No.	Ave.	Trip	No.		Ave.	Trip	No.		Ave.	Trip
Time Range	Days	GFA	Rate	Days		GFA	Rate	Days		GFA	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	5	3624	0.458		5	3624	0.033		5	3624	0.491
08:00-09:00	5	3624	0.419		5	3624	0.155		5	3624	0.574
09:00-10:00	5	3624	0.221		5	3624	0.143		5	3624	0.364
10:00-11:00	5	3624	0.121		5	3624	0.132		5	3624	0.253
11:00-12:00	5	3624	0.149		5	3624	0.116		5	3624	0.265
12:00-13:00	5	3624	0.11		5	3624	0.193		5	3624	0.303
13:00-14:00	5	3624	0.232		5	3624	0.182		5	3624	0.414
14:00-15:00	5	3624	0.221		5	3624	0.155		5	3624	0.376
15:00-16:00	5	3624	0.039		5	3624	0.116		5	3624	0.155
16:00-17:00	5	3624	0.094		5	3624	0.381		5	3624	0.475
17:00-18:00	5	3624	0.066		5	3624	0.464		5	3624	0.53
18:00-19:00	4	3305	0.008		4	3305	0.098		4	3305	0.106
19:00-20:00											
20:00-21:00											
21:00-22:00											
22:00-23:00											
23:00-24:00											
Daily Trip Rates:			2.138				2.168				4.306
е											

TRICS 7.2.1 040515 B17.13 (C) 2015 TRICS Consortium Ltd Thursday 14/05/15

Page 1

CBO Transport Ltd Fountain Street Manchester Licence No: 751701

Calculation Reference: AUDIT-751701-150514-0528

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 02 - EMPLOYMENT Category: B - BUSINESS PARK

VEHICLES

Selected regions and areas:

02 SOUTH EAST

BU BUCKINGHAMSHIRE 1 days HF HERTFORDSHIRE 1 days OX OXFORDSHIRE 1 days

06 WEST MIDLANDS

HE HEREFORDSHIRE 1 days SH SHROPSHIRE 1 days WM WEST MIDLANDS 1 days

10 WALES

CF CARDIFF 1 days CP CAERPHILLY 1 days

11 SCOTLAND

FA FALKIRK 1 days

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

Filtering Stage 2 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: 12000 to 33105 (units: sqm)

Range Selected by User: 10000 to 40000 (units: sqm)

Public Transport Provision: Selection by: Include all surveys Date Range: 01/01/03 to 24/10/13

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 4 days Wednesday 1 days

Thursday 1 days

Friday 2 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

undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre) 1

Edge of Town 7

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 2 Commercial Zone 5

Village 1

TRICS 7.2.1 040515 B17.13 (C) 2015 TRICS Consortium Ltd Thursday 14/05/15

Page 2

CBO Transport Ltd Fountain Street Manchester Licence No: 751701

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.

Filtering Stage 3 selection:

Use Class:

Not Known 1 days

B 1 8 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000 2 days

5,001 to 10,000 1 days

10,001 to 15,000 4 days

25,001 to 50,000 2 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

50,001 to 75,000 1 days

75,001 to 100,000 2 days

100,001 to 125,000 1 days

125,001 to 250,000 2 days

250,001 to 500,000 1 days

500,001 or More 1 days

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

Car ownership within 5 miles:

0.5 or Less 1 days

0.6 to 1.0 5 days

1.1 to 1.5 3 days

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

Travel Plan:

No 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.

TRICS 7.2.1 040515 B17.13 (C) 2015 TRICS Consortium Ltd Thursday 14/05/15

Page 3

CBO Transport Ltd Fountain Street Manchester Licence No: 751701

LIST OF SITES relevant to selection parameters

1 BU-02-B-01 BUSINESS PARK BUCKINGHAMSHIRE

LONDON ROAD

HIGH WYCOMBE

Edge of Town

No Sub Category

Total Gross floor area: 1 3 3 0 0 sqm

Survey date: THURSDAY 08/07/04 Survey Type: MANUAL

2 CF-02-B-01 BUSINESS PARK CARDIFF

FORTRAN ROAD

ST MELLONS

CARDIFF

Edge of Town

Industrial Zone

Total Gross floor area: 1 2 0 0 0 sqm

Survey date: WEDNESDAY 18/10/06 Survey Type: MANUAL

3 CP-02-B-01 BUSINESS PARK CAERPHILLY

VAN ROAD

CAERPHILLY

Edge of Town

Commercial Zone

Total Gross floor area: 1 4 4 5 0 sqm

Survey date: TUESDAY 17/07/12 Survey Type: MANUAL

4 FA-02-B-02 BUSINESS PARK FALKIRK

CALLENDAR BOULEVARD

CALLENDAR PARK

FALKIRK

Edge of Town Commercial Zone

Total Gross floor area: 1 6 0 0 0 sqm

Survey date: FRIDAY 31/05/13 Survey Type: MANUAL 5 HE-02-B-01 BUSINESS PARK HEREFORDSHIRE

A4103

WHITESTONE NEAR HEREFORD

Neighbourhood Centre (PPS6 Local Centre)

Village

Total Gross floor area: 18808 sqm

Survey date: TUESDAY 13/09/11 Survey Type: MANUAL 6 HF-02-B-01 BUSINESS PARK HERTFORDSHIRE

ST ALBANS ROAD WEST

HATFIELD Edge of Town Commercial Zone

Total Gross floor area: 2 6 0 0 0 sqm

Survey date: MONDAY 07/07/08 Survey Type: MANUAL 7 OX-02-B-01 BUSINESS PARK OXFORDSHIRE

GARSINGTON ROAD

COWLEY OXFORD Edge of Town Commercial Zone

Total Gross floor area: 3 3 1 0 5 sgm

Survey date: TUESDAY 21/10/03 Survey Type: MANUAL

TRICS 7.2.1 040515 B17.13 (C) 2015 TRICS Consortium Ltd Thursday 14/05/15

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CBO Transport Ltd Fountain Street Manchester Licence No: 751701

LIST OF SITES relevant to selection parameters (Cont.)

8 SH-02-B-01 BUSINESS PARK SHROPSHIRE

WELSHPOOL ROAD SHREWSBURY Edge of Town Commercial Zone

Total Gross floor area: 17197 sqm

Survey date: TUESDAY 14/06/05 Survey Type: MANUAL 9 WM-02-B-01 BUSINESS PARK WEST MIDLANDS

COURTALD WAY FOLESHILL COVENTRY

Suburban Area (PPS6 Out of Centre)

Industrial Zone

Total Gross floor area: 3 0 0 4 2 sqm

Survey date: FRIDAY 10/02/06 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.

MANUALLY DESELECTED SITES Site Ref Reason for Deselection TW-02-B-02 B8 Component TW-02-B-04 B8 Component

TRICS 7.2.1 040515 B17.13 (C) 2015 TRICS Consortium Ltd Thursday 14/05/15

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CBO Transport Ltd Fountain Street Manchester Licence No: 751701 TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

ARRIVALS DEPARTURES TOTALS

```
No. Ave. Trip No. Ave. Trip No. Ave. Trip
Time Range Days GFA Rate Days GFA Rate Days GFA 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 9 20100 0.181 9 20100 0.037 9 20100 0.218
07:30 - 08:00 9 20100 0.426 9 20100 0.065 9 20100 0.491
08:00 - 08:30 9 20100 0.751 9 20100 0.140 9 20100 0.891
08:30 - 09:00 9 20100 0.846 9 20100 0.121 9 20100 0.967
09:00 - 09:30 9 20100 0.584 9 20100 0.167 9 20100 0.751
09:30 - 10:00 9 20100 0.324 9 20100 0.154 9 20100 0.478
10:00 - 10:30 9 20100 0.179 9 20100 0.125 9 20100 0.304
10:30 - 11:00 9 20100 0.136 9 20100 0.103 9 20100 0.239
11:00 - 11:30 9 20100 0.140 9 20100 0.136 9 20100 0.276
11:30 - 12:00 9 20100 0.118 9 20100 0.151 9 20100 0.269
12:00 - 12:30 9 20100 0.167 9 20100 0.355 9 20100 0.522
12:30 - 13:00 9 20100 0.246 9 20100 0.310 9 20100 0.556
13:00 - 13:30 9 20100 0.312 9 20100 0.331 9 20100 0.643
13:30 - 14:00 9 20100 0.284 9 20100 0.177 9 20100 0.461
14:00 - 14:30 9 20100 0.178 9 20100 0.175 9 20100 0.353
14:30 - 15:00 9 20100 0.150 9 20100 0.190 9 20100 0.340
15:00 - 15:30 9 20100 0.125 9 20100 0.252 9 20100 0.377
15:30 - 16:00 9 20100 0.121 9 20100 0.268 9 20100 0.389
16:00 - 16:30 9 20100 0.092 9 20100 0.407 9 20100 0.499
16:30 - 17:00 9 20100 0.112 9 20100 0.484 9 20100 0.596
17:00 - 17:30 9 20100 0.112 9 20100 0.736 9 20100 0.848
17:30 - 18:00 9 20100 0.091 9 20100 0.526 9 20100 0.617
18:00 - 18:30 9 20100 0.051 9 20100 0.280 9 20100 0.331
18:30 - 19:00 9 20100 0.030 9 20100 0.125 9 20100 0.155
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: 5.756 5.815 1 1.571

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

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.

TRICS 7.2.1 040515 B17.13 (C) 2015 TRICS Consortium Ltd Thursday 14/05/15

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CBO Transport Ltd Fountain Street Manchester Licence No: 751701

Parameter summary

Trip rate parameter range selected: 12000 - 33105 (units: sqm)

Survey date date range: 01/01/03 - 24/10/13 Number of weekdays (Monday-Friday): 9

Number of Saturdays: 0 Number of Sundays: 0

Surveys manually removed from selection: 2

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Page 1

CBO Transport Ltd Fountain Street Manchester Licence No: 751701

Calculation Reference: AUDIT-751701-150514-0540

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 02 - EMPLOYMENT

Category: F - WAREHOUSING (COMMERCIAL)

VEHICLES

Selected regions and areas:

02 SOUTH EAST

HC HAMPSHIRE 1 days SC SURREY 1 days

03 SOUTH WEST

CW CORNWALL 1 days

10 WALES

BG BRIDGEND 1 days NW NEWPORT 1 days WR WREXHAM 1 days

17 ULSTER (NORTHERN IRELAND)

AN ANTRIM 2 days

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

Filtering Stage 2 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: 3050 to 16275 (units: sgm)

Range Selected by User: 3000 to 30000 (units: sqm)

Public Transport Provision: Selection by: Include all surveys Date Range: 01/01/03 to 13/10/14

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are

included in the trip rate calculation.

Selected survey days: Monday 1 days Tuesday 3 days Wednesday 1 days Thursday 2 days

Friday 1 days

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

Selected survey types:

Manual count 8 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:

Suburban Area (PPS6 Out of Centre) 1

Edge of Town 6

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 4 Commercial Zone 1 No Sub Category 3

TRICS 7.2.1 040515 B17.13 (C) 2015 TRICS Consortium Ltd Thursday 14/05/15

Page 2

CBO Transport Ltd Fountain Street Manchester Licence No: 751701

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,

of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

B 8 8 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,000 or Less 2 days

1,001 to 5,000 3 days

10,001 to 15,000 1 days

25,001 to 50,000 1 days

50,001 to 100,000 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 2 days

75,001 to 100,000 1 days

100,001 to 125,000 1 days

125,001 to 250,000 1 days

250,001 to 500,000 3 days

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

Car ownership within 5 miles:

0.6 to 1.0 4 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:

Yes 1 days

No 7 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.

TRICS 7.2.1 040515 B17.13 (C) 2015 TRICS Consortium Ltd Thursday 14/05/15

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CBO Transport Ltd Fountain Street Manchester Licence No: 751701

LIST OF SITES relevant to selection parameters

1 AN-02-F-01 SUPERSTORE DISTRIB. ANTRIM

BOUCHER ROAD

WINDSOR

BELFAST

Edge of Town

Commercial Zone

Total Gross floor area: 1 5 7 0 0 sqm

Survey date: THURSDAY 06/03/03 Survey Type: MANUAL 2 AN-02-F-02 DISTRIBUTION CENTRE ANTRIM

APOLLO ROAD

BELFAST

Suburban Area (PPS6 Out of Centre)

Industrial Zone

Total Gross floor area: 1 0 8 3 2 sqm

Survey date: THURSDAY 29/07/10 Survey Type: MANUAL 3 BG-02-F-01 LOGISTICS COMPANY BRIDGEND

PARC CRESCENT

WATERTON IND. EST.

BRIDGEND

Edge of Town

Industrial Zone

Total Gross floor area: 3 0 5 0 sqm

Survey date: MONDAY 13/10/14 Survey Type: MANUAL 4 CW-02-F-01 WAREHOUSING CORNWALL

A390

THREEMILESTONE NEAR TRURO Edge of Town No Sub Category

Total Gross floor area: 5 1 5 0 sgm

Survey date: TUESDAY 18/09/07 Survey Type: MANUAL

5 HC-02-F-01 WAREHOUSING HAMPSHIRE

MAURETANIA ROAD

NURSLING INDUSTRIAL ESTATE

SOUTHAMPTON Edge of Town Industrial Zone

Total Gross floor area: 4 0 0 0 sqm

Survey date: WEDNESDAY 21/11/07 Survey Type: MANUAL

6 NW-02-F-01 LOGISTICS CENTRE NEWPORT

TREDEGAR TERRACE

CROSSKEYS NEWPORT Edge of Town No Sub Category

Total Gross floor area: 1 6 2 7 5 sqm

Survey date: FRIDAY 12/10/07 Survey Type: MANUAL

7 SC-02-F-04 WAREHOUSING SURREY

PRETORIA ROAD CHERTSEY Edge of Town No Sub Category

Total Gross floor area: 4 4 6 0 sqm

Survey date: TUESDAY 27/11/07 Survey Type: MANUAL

8 WR-02-F-01 WAREHOUSE WREXHAM

UNIT 1-2 PACIFIC PARK WREXHAM IND. ESTATE

NEAR WREXHAM

Free Standing (PPS6 Out of Town)

Industrial Zone

Total Gross floor area: 9 0 0 0 sqm

Survey date: TUESDAY 18/10/11 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.

TRICS 7.2.1 040515 B17.13 (C) 2015 TRICS Consortium Ltd Thursday 14/05/15

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CBO Transport Ltd Fountain Street Manchester Licence No: 751701

MANUALLY DESELECTED SITES Site Ref Reason for Deselection SF-02-F-02 over 20,000

TRICS 7.2.1 040515 B17.13 (C) 2015 TRICS Consortium Ltd Thursday 14/05/15

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CBO Transport Ltd Fountain Street Manchester Licence No: 751701

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

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

ARRIVALS DEPARTURES TOTALS

No. Ave. Trip No. Ave. Trip No. Ave. Trip

Time Range Days GFA Rate Days GFA 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 8 8558 0.070 8 8558 0.082 8 8558 0.152
07:30 - 08:00 8 8558 0.115 8 8558 0.053 8 8558 0.168
08:00 - 08:30 8 8558 0.080 8 8558 0.044 8 8558 0.124
08:30 - 09:00 8 8558 0.120 8 8558 0.050 8 8558 0.170
09:00 - 09:30 8 8558 0.072 8 8558 0.061 8 8558 0.133
09:30 - 10:00 8 8558 0.057 8 8558 0.048 8 8558 0.105
10:00 - 10:30 8 8558 0.060 8 8558 0.054 8 8558 0.114
10:30 - 11:00 8 8558 0.053 8 8558 0.029 8 8558 0.082
11:00 - 11:30 8 8558 0.061 8 8558 0.051 8 8558 0.112
11:30 - 12:00 8 8558 0.044 8 8558 0.050 8 8558 0.094
12:00 - 12:30 8 8558 0.058 8 8558 0.045 8 8558 0.103
12:30 - 13:00 8 8558 0.064 8 8558 0.044 8 8558 0.108
13:00 - 13:30 8 8558 0.060 8 8558 0.056 8 8558 0.116
13:30 - 14:00 8 8558 0.072 8 8558 0.051 8 8558 0.123
14:00 - 14:30 8 8558 0.085 8 8558 0.085 8 8558 0.170
14:30 - 15:00 8 8558 0.101 8 8558 0.101 8 8558 0.202
15:00 - 15:30 8 8558 0.051 8 8558 0.126 8 8558 0.177
15:30 - 16:00 8 8558 0.056 8 8558 0.082 8 8558 0.138
16:00 - 16:30 8 8558 0.063 8 8558 0.083 8 8558 0.146
16:30 - 17:00 8 8558 0.038 8 8558 0.073 8 8558 0.111
17:00 - 17:30 8 8558 0.045 8 8558 0.074 8 8558 0.119
17:30 - 18:00 8 8558 0.031 8 8558 0.083 8 8558 0.114
18:00 - 18:30 8 8558 0.031 8 8558 0.056 8 8558 0.087
18:30 - 19:00 8 8558 0.026 8 8558 0.039 8 8558 0.065
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: 1.513 1.520 3.033

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.

rates are then rounded to 3 decimal places.

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Page 6

CBO Transport Ltd Fountain Street Manchester Licence No: 751701

Parameter summary

Trip rate parameter range selected: 3050 - 16275 (units: sqm)

Survey date date range: 01/01/03 - 13/10/14 Number of weekdays (Monday-Friday): 8

Number of Saturdays: 0 Number of Sundays: 0 Surveys manually removed from selection: 1

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.

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CBO Transport Ltd Fountain Street Manchester Licence No: 751701

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

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

ARRIVALS DEPARTURES TOTALS

No. Ave. Trip No. Ave. Trip No. Ave. Trip

Time Range Days GFA Rate Days GFA 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

03.00 - 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 8 8558 0.018 8 8558 0.026 8 8558 0.044

07:30 - 08:00 8 8558 0.022 8 8558 0.037 8 8558 0.059

08:00 - 08:30 8 8558 0.031 8 8558 0.034 8 8558 0.065

08:30 - 09:00 8 8558 0.031 8 8558 0.029 8 8558 0.060

09:00 - 09:30 8 8558 0.028 **8 8558 0.038** 8 8558 0.066

09:30 - 10:00 8 8558 0.019 8 8558 0.031 8 8558 0.050

10:00 - 10:30 8 8558 0.023 8 8558 0.025 8 8558 0.048

10:30 - 11:00 8 8558 0.020 8 8558 0.012 8 8558 0.032 11:00 - 11:30 8 8558 0.035 8 8558 0.034 8 8558 0.069

11:30 - 12:00 8 8558 0.022 8 8558 0.028 8 8558 0.050

12:00 - 12:30 8 8558 0.025 8 8558 0.016 8 8558 0.041

12:30 - 13:00 8 8558 0.020 8 8558 0.019 8 8558 0.039

13:00 - 13:30 8 8558 0.026 8 8558 0.019 8 8558 0.045

13:30 - 14:00 8 8558 0.037 8 8558 0.019 8 8558 0.056

14:00 - 14:30 **8 8558 0.039** 8 8558 0.029 8 8558 0.068 14:30 - 15:00 8 8558 0.037 8 8558 0.023 8 8558 0.060

15:00 - 15:30 8 8558 0.039 8 8558 0.032 **8 8558 0.071**

15:30 - 16:00 8 8558 0.035 8 8558 0.031 8 8558 0.066

16:00 - 16:30 8 8558 0.035 8 8558 0.028 8 8558 0.063

16:30 - 17:00 8 8558 0.023 8 8558 0.010 8 8558 0.033

17:00 - 17:30 8 8558 0.025 8 8558 0.010 8 8558 0.035

17:30 - 18:00 8 8558 0.018 8 8558 0.022 8 8558 0.040

18:00 - 18:30 8 8558 0.018 8 8558 0.025 8 8558 0.043

18:30 - 19:00 8 8558 0.015 8 8558 0.022 8 8558 0.037

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: 0.641 0.599 1.240

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: 3050 - 16275 (units: sqm)

Survey date date range: 01/01/03 - 13/10/14 Number of weekdays (Monday-Friday): 8

Number of Saturdays: 0 Number of Sundays: 0

Surveys manually removed from selection: 1

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

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