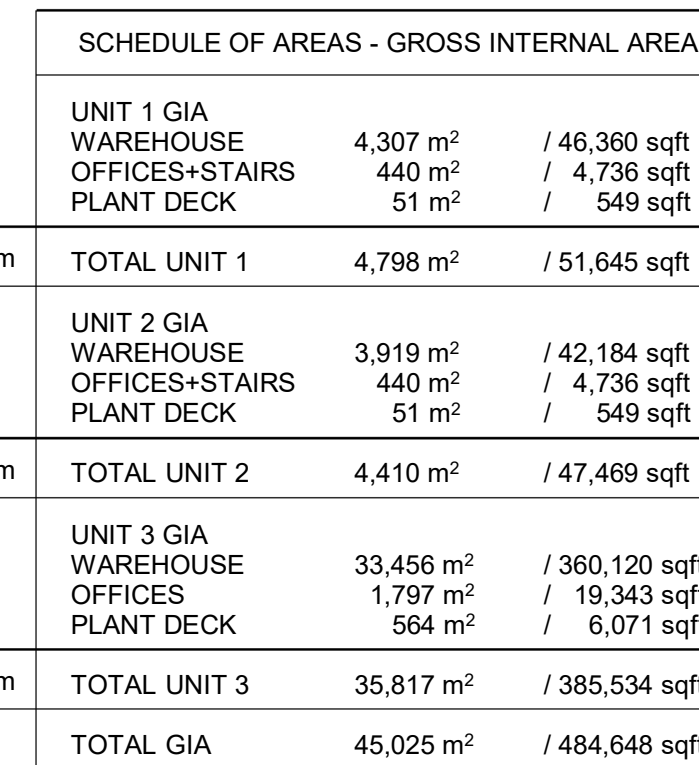
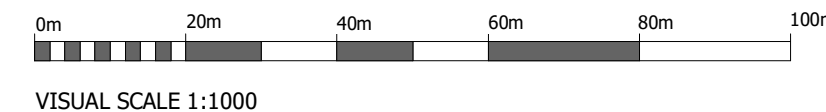


APPENDICES

APPENDIX 1: Site Layout



LANDSCAPING
 CONCRETE
 GRAVEL
 BLOCK PAVIORS
 ASPHALT
 GRASSCRETE
 BUILDINGS (WAREHOUSE+ANCILLARY)
 OFFICES
 2.4m HIGH PALADIN FENCE
 3m HIGH ACOUSTIC FENCE + GREEN WALL EXTERNALLY
 5m HIGH ACOUSTIC FENCE + GREEN WALL EXTERNALLY
 5m HIGH ACOUSTIC FENCE
 1m HIGH KNEE RAIL TIMBER FENCE
 1.8m VERTICAL CLOSE BOARDED TIMBER FENCE

1 : 1000



— SITE BOUNDARY: 11.152 Ha / 27.46 Acres

REV	DATE	DESCRIPTION
REVISIONS		

CLIENT

Trammell Crow Company

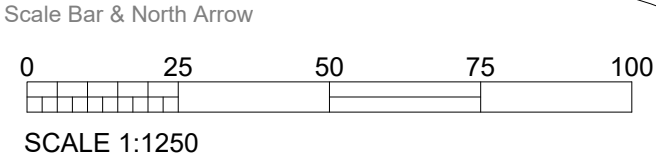
AshtonSmith
Beyond Design

Ashton Smith, Belvedere House, 2 Victoria Avenue, Harrogate, North Yorkshire, HG1 1EJ
Tel: 01423 522882 Fax: 01423 565104
www.ashtonsmith.co.uk

21157

JOB NO.

APPENDIX 2: Existing Site Plan



LOCATION PLAN:

NOTES:

— Site Boundary - 11.1152 hec / 27.46 acres

Do not scale this drawing
ashton smith to be notified of discrepancies in figured dimensions
Contractors must check all dimensions from site
This drawing is copyright and is for use on this site only
This drawing is to be used solely for information as entitled
For other information refer to the latest revision of any cross referenced drawing



P1	25.07.22	Initial drawing issue
REV	DATE	DESCRIPTION
REVISIONS		

JA	RR
DRAWN BY	CHECK BY

PROJECT TITLE MANCHESTER ROAD, HEYWOOD					
DRAWING TITLE SITE LOCATION PLAN					
RIBA STAGE N/A	STATUS PLANNING		DRAWN BY DH	CHECKED BY RR	
SHEET A1	SCALE 1 : 1250	DATE 25/07/2022	SUITABILITY S3	REVISION P1	
DRAWING NO. 21157 - ASA - 00 - ZZ.ZZ - D - A - 0001_ (S3 - P1)					

CLIENT	
Trammell CrowCompany	
Ashton Smith Beyond Design	
Ashton Smith, Belvedere House, 2 Victoria Avenue, Harrogate, North Yorkshire, HG1 1EL Tel: 01423 522882 Fax: 01423 565104 www.ashtonsmith.co.uk	

21157

APPENDIX 3: Strategic Site Walking & Cycling Strategy

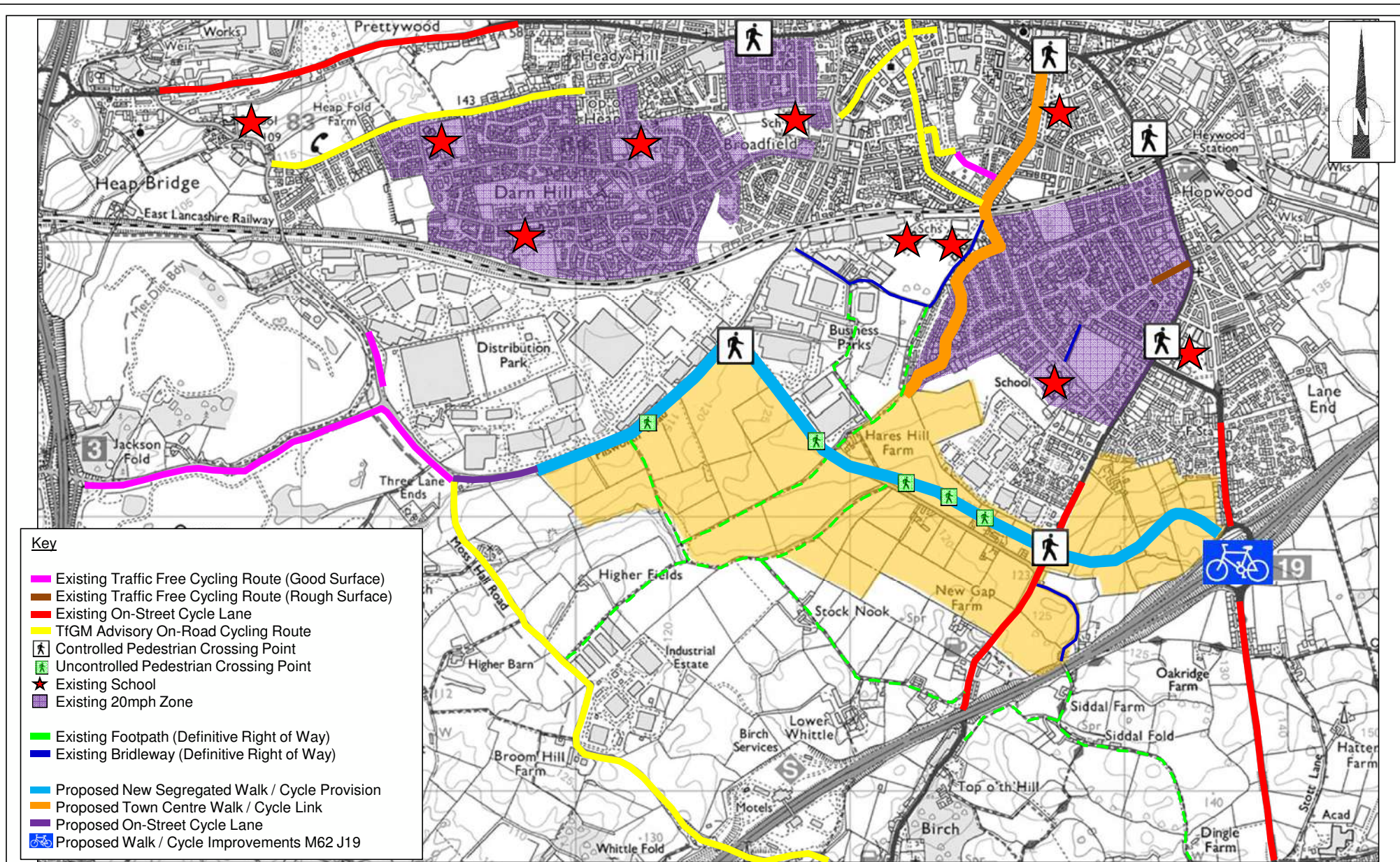


Figure 13.3

South Heywood Strategic Site Walking & Cycling Strategy

1962-01

South Heywood Strategic Site

October 2016



Camellia House
76 Water Lane,
Wilmslow
Cheshire, SK9 5BB

APPENDIX 4: Strategic Site Public Transport Strategy

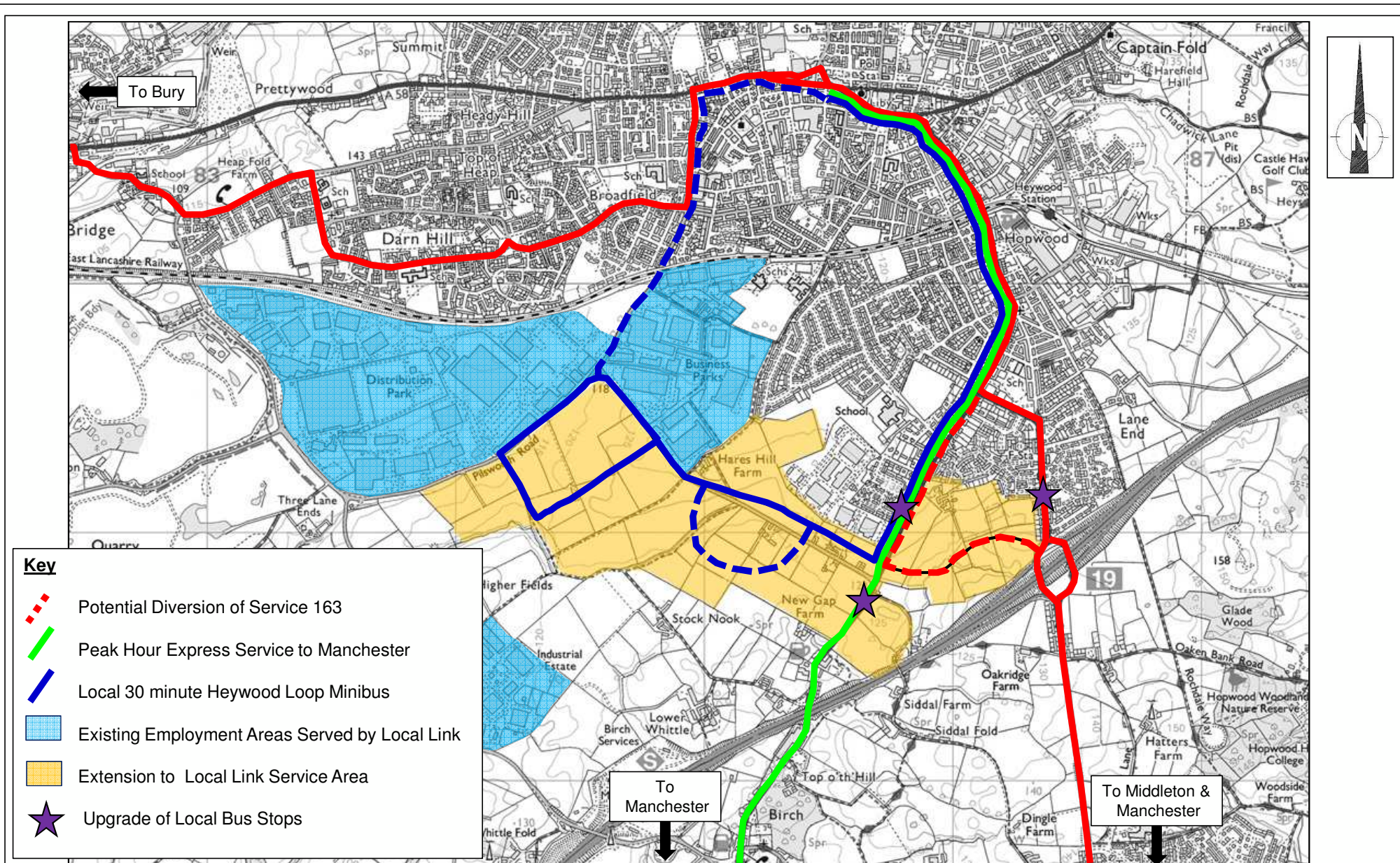


Figure 13.4

Options Under Consideration for Inclusion in South Heywood Strategic Site Public Transport Strategy

1962-01

South Heywood Strategic Site

October 2016



Camellia House
76 Water Lane,
Wilmslow
Cheshire, SK9 5BB

APPENDIX 5: 2020 No Link Rd/With Link Rd Flows

APPENDIX TA14 - Link Road Opening Year 2020: Junction Turning Data (All data in PCU's)

M62 J19 Roundabout

		AM		IP		PM	
From	To	DM	DS	DM	DS	DM	DS
Middleton Road N	M62 EB	349	180	149	64	308	179
Middleton Road N	Middleton Road S	225	211	163	157	184	180
Middleton Road N	M62 WB	356	384	205	216	258	253
Middleton Road N	Link Road	N/A	9	N/A	2	N/A	21
M62 WB	Middleton Road S	174	124	135	105	125	103
M62 WB	M62 WB	0	0	0	0	0	0
M62 WB	Link Road	N/A	379	N/A	328	N/A	408
M62 WB	Middleton Road N	240	75	135	53	368	178
Middleton Road S	M62 WB	121	107	78	80	145	115
Middleton Road S	Link Road	N/A	233	N/A	117	N/A	300
Middleton Road S	Middleton Road N	296	181	224	136	404	316
Middleton Road S	M62 EB	94	52	94	66	139	88
M62 EB	Link Road	N/A	121	N/A	82	N/A	135
M62 EB	Middleton Road N	239	266	217	230	339	272
M62 EB	M62 EB	0	0	0	0	0	0
M62 EB	Middleton Road S	153	142	85	72	248	198
Link Road	Middleton Road N	N/A	28	N/A	14	N/A	72
Link Road	M62 EB	N/A	415	N/A	363	N/A	299
Link Road	Middleton Road S	N/A	142	N/A	69	N/A	140
Link Road	M62 WB	N/A	41	N/A	34	N/A	111

Link Road / A6045 Manchester Road

		AM		IP		PM	
From	To	DM	DS	DM	DS	DM	DS
Manchester Rd N	Link Road E	N/A	133	N/A	29	N/A	117
Manchester Rd N	Manchester Rd S	391	299	177	141	214	164
Manchester Rd N	Hareshill Road (Link Road W)	132	54	59	41	147	27
Link Road E	Manchester Rd S	N/A	67	N/A	33	N/A	52
Link Road E	Hareshill Road (Link Road W)	N/A	598	N/A	474	N/A	726
Link Road E	Manchester Rd N	N/A	77	N/A	21	N/A	86
Manchester Rd S	Hareshill Road (Link Road W)	193	98	76	85	238	45
Manchester Rd S	Manchester Rd N	252	170	193	122	444	351
Manchester Rd S	Link Road E	N/A	50	N/A	57	N/A	50
Hareshill Road (Link Road W)	Manchester Rd N	39	34	61	40	118	57
Hareshill Road (Link Road W)	Link Road E	N/A	443	N/A	393	N/A	454
Hareshill Road (Link Road W)	Manchester Rd S	139	67	113	63	186	86

Link Road (Hareshill Road) / Pilsworth Road

		AM		IP		PM	
From	To	DM	DS	DM	DS	DM	DS
Pilsworth Rd NE	Hareshill Road (Link Road W)	155	309	99	168	149	249
Pilsworth Rd NE	Pilsworth Rd W	285	215	99	28	90	22
Hareshill Road (Link Road W)	Pilsworth Rd W	239	329	148	290	303	359
Hareshill Road (Link Road W)	Pilsworth Rd NE	105	319	55	232	240	483
Pilsworth Rd W	Pilsworth Rd NE	115	73	150	96	355	256
Pilsworth Rd W	Hareshill Road (Link Road W)	188	279	230	335	168	244

Pilsworth Road / Heywood Distribution Park

		AM		IP		PM	
From	To	DM	DS	DM	DS	DM	DS
Heywood Industrial Estate	Pilsworth Road E	38	68	72	107	149	160
Heywood Industrial Estate	Pilsworth Road W	211	181	278	243	250	239
Pilsworth Road E	Pilsworth Road W	258	258	180	229	304	230
Pilsworth Road E	Heywood Industrial Estate	266	285	67	88	89	151
Pilsworth Road W	Heywood Industrial Estate	269	249	199	177	206	144
Pilsworth Road W	Pilsworth Road E	265	284	308	324	374	341

Moss Hall Lane / Pilsworth Road

		AM		IP		PM	
From	To	DM	DS	DM	DS	DM	DS
Moss Hall Road	Pilsworth Road S	175	228	241	224	143	176
Moss Hall Road	Pilsworth Road W	9	10	0	0	15	42
Pilsworth Road S	Pilsworth Road W	451	450	477	488	430	377
Pilsworth Road S	Moss Hall Road	111	119	173	131	184	224
Pilsworth Road W	Moss Hall Road	66	93	45	58	97	162
Pilsworth Road W	Pilsworth Road S	487	449	374	364	543	451

A6045 Heywood Old Rd / Development Access B		AM		IP		PM	
From	To	DM	DS	DM	DS	DM	DS
Manchester Rd N	Access B	0	3	0	3	0	7
Manchester Rd N	Manchester Rd S	530	431	290	230	400	287
Access B	Manchester Rd S	0	5	0	1	0	3
Access B	Manchester Rd N	0	7	0	4	0	5
Manchester Rd S	Manchester Rd N	445	305	269	258	681	438
Manchester Rd S	Access B	0	2	0	2	0	5

A6045 Heywood Old Rd / Development Access C		AM		IP		PM	
From	To	DM	DS	DM	DS	DM	DS
Manchester Rd N	Manchester Rd S	530	429	290	232	400	292
Manchester Rd N	Access C	0	4	0	4	0	10
Manchester Rd S	Access C	0	1	0	1	0	2
Manchester Rd S	Manchester Rd N	445	311	269	261	681	440
Access C	Manchester Rd N	0	7	0	4	0	7
Access C	Manchester Rd S	0	5	0	1	0	1

APPENDIX 6: 2020 AADT No Link Rd/With Link Rd Flows

2020		ALL VEHICLES			HGVs		
Ref		Do Minimum	With Development	Change	Do Minimum	With Development	Change
Motorway Network							
M1	M62 J19 EB Entry Slip	4,570	6,725	47.1%	101	649	545.0%
M2	M62 J19 WB Entry Slip	4,517	5,065	12.1%	356	527	48.2%
M3	M62 J19 EB Exit Slip	4,763	5,485	15.2%	322	568	76.6%
M4	M62 J19 WB Exit Slip	4,913	6,915	40.8%	49	644	1217.8%
M5	M62 J18-J19	140,421	139,469	-0.7%	20588	20005	-2.8%
M6	M62 J19-J20	140,599	142,546	1.4%	20081	20214	0.7%
M7	M66 J3 - M62 J18	106,311	103,671	-2.5%	9757	8449	-13.4%
M8	M66 J3 - M66 J2	102,434	102,177	-0.3%	7532	7925	5.2%
Local Road Network							
LR1a	South Heywood Link Road (A6045 to M62 J19)	0	14,604	N/A	0	1551	N/A
LR1b	South Heywood Link Road (Immediate SE of Pilsworth Rd)*	7,993	14,431	80.5%	768	1,071	39.5%
LR2	A6045 Manchester Road East of Dev Access Point A	8,957	6,903	-22.9%	248	74	-70.3%
LR3	A6045 Heywood Old Road West Dev Access Point C	10,627	8,406	-20.9%	188	23	-87.8%
LR4	A6045 Heywood Old Road South of Whittle Lane	10,331	9,354	-9.5%	218	0	-100.0%
LR5	Langley Lane, Langley (E of Jnt with Heywood Old Road)	6,672	4,370	-34.5%	33	23	-29.4%
LR6	A6046 Hollin Lane (S of M62 J19)	13,321	14,494	8.8%	260	326	25.4%
LR7	A6046 Hollin Lane (N of A664 Rochdale Rd), Middleton	5,704	6,054	6.1%	39	131	237.9%
LR8	A6046 Coronation Avenue, Hopwood	17,110	12,677	-25.9%	647	832	28.5%
LR9	A6046 Middleton Road (S of Coronation Avenue)	18,100	13,661	-24.5%	647	832	28.5%
LR10	Green Lane (N of A6045 Manchester Road())	2,804	2,873	2.5%	371	403	8.7%
LR11	A6046 Manchester Street (N of Walton Street)	18,900	15,626	-17.3%	406	470	15.7%
LR12	Pilsworth Road (S of A58 Bury New Road)	6,835	8,047	17.7%	5	0	-100.0%
LR13	Egerton Street (East of Pilsworth Road)	3,564	2,158	-39.4%	19	34	80.9%
LR14	Argyle Street (West of Pilsworth Road)	6,727	6,594	-2.0%	24	34	45.5%
LR15	A58 Bridge Street (East of Pilsworth Road)	18,635	17,678	-5.1%	270	153	-43.3%
LR16	A58 Bury New Road (West of Pilsworth Road)	16,175	17,516	8.3%	271	153	-43.5%
LR17	Pilsworth Road to M66 J3 (East of M66)	10,595	10,625	0.3%	2081	1975	-5.1%
LR18	Heap Brow (N of Bury Old Road)	7,792	7,776	-0.2%	376	0	-100.0%
LR19	Bury Old Road (East of Moss Hall Road)	4,314	4,502	4.4%	162	0	-100.0%
LR20	Market Street (One Way Link)	8,318	7,800	-6.2%	136	79	-42.1%
LR21	Dawson Street (One Way Link)	8,685	8,243	-5.1%	136	77	-43.2%
LR22	Bamford Road	18,266	16,423	-10.1%	280	256	-8.7%
LR23	Market Place	22,725	20,434	-10.1%	416	334	-19.5%
LR24	York Street	14,199	12,658	-10.9%	271	173	-36.2%

*Hareshill Road in Do-Minimum Scenario

Appendix 13.2

FLOW COMPARISON TABLE (ALL VEHICLES & HGVS) 24hr AADT DO-MINIMUM V DO-SOMETHING 2020

1962-01

South Heywood Strategic Site

October 2016



Camellia House
76 Water Lane,
Wilmslow
Cheshire, SK9 5BB

APPENDIX 7: Scoping Note

TRANSPORT SCOPING NOTE

Heywood Stores, Rochdale



Project Name	Heywood Stores, Rochdale		
Document Number	MRR-BWB-GEN-XX-RP-TR-0001-Transport Scoping Note	Job Number	220785.00
Author	A. Bilkhu – Associate	Status	S2
Checked	M. Addison – Associate Director	Revision	P1
Approved	M. Addison – Associate Director	Date	20.05.2022

1. INTRODUCTION

Overview

- 1.1 BWB Consulting Ltd (BWB) has been appointed by Trammell Crow Company (Logistics) Limited ("the Applicant") to prepare this Transport Scoping Note (TSN) to agree the methodology for Transport Statement/Assessment with Rochdale Borough Council (RBC), Transport for Greater Manchester (TfGM) and National Highways (NH) concerning the proposed redevelopment of the Heywood Stores site located off Manchester Road in Heywood (the 'Site'). The Site Location is shown in **Figure 1.1**.

Figure 1.1: Site Location



- 1.2 The purpose of this Scoping Note is to agree the methodology for the Transport Statement/Assessment prior to proceeding so that the traffic and transport implications of the proposed development can be assessed to the satisfaction of RBC Highways, TfGM and NH given the proximity of the Site to the Strategic Road Network (SRN).

Pre-Application RBC Highways Discussions

- 1.3 A meeting between BWB and RBC Highways was held on 25th April 2022, and it was confirmed that the new signalised crossroad junction with the A6045 Manchester Road would need to be modelled as part of the Transport Statement/Assessment scope of work.
- 1.4 RBC Highways mentioned that the position of the site access would need to be determined from the outcome of the capacity assessment and a tracking assessment.
- 1.5 RBC Highways mentioned that the right-out movements from the access junction, would need to be tracked and a junction capacity assessment of the new signalised crossroads junction carried out, to ensure that this movement can be accommodated, BWB confirmed that this will be include in the Transport Statement/Assessment.
- 1.6 RBC Highways confirmed that the site is located on the TfGM Key Route Network and therefore TfGM Development Control and UTC Teams should be consulted.

2. EXISTING SITE AND TRIP GENERATON

Existing Site

- 2.1 The Site is located along the A6045 Manchester Road in Heywood.
- 2.2 The Site currently comprises of nine sheds with a total building floor area of 31,900 sq.m with vehicle access from the A6045 Manchester Road. The site has a certificate of lawful use for B8 Use Class (Planning Ref. 21/01298/CPE).
- 2.3 A copy of the Existing Site Plan is provided in **Appendix 1**.

South Heywood Link Road

- 2.4 Construction of the 2.2km link road started in Spring 2021. Once complete, it will connect M62 Junction 19 (at Heywood and Middleton) to the South Heywood employment area (Hareshill Road and Pilsworth Road).
- 2.5 The first section of new road, linking the M62 to Manchester Road, is now almost fully constructed.
- 2.6 This link road passes the southern boundary of the Site and forms a signalised crossroads junction with the A6045 Manchester Road.

Walking and Cycling Accessibility

- 2.7 The immediate local road network in the vicinity of the site provides footway provision and street lighting along both sides of the carriageway.
- 2.8 The A6045 Manchester Road has a dedicated footway separated from the main carriageway by a grass verge along most sections. The road is an on-road cycle route.

TRANSPORT SCOPING NOTE

Heywood Stores, Rochdale



- 2.9 Hareshill Road has a 2.0m wide footway on one side of the carriageway and is well-lit by street lighting.
- 2.10 The nearest pedestrian crossing point in the vicinity of the Site is located approximately 135 metres to the north to the Site on the A6045 Manchester Road, as shown in **Figure 2.1**.

Figure 2.1: Existing Pedestrian Crossing Points in the vicinity of the Site



- 2.11 As shown, the existing pedestrian crossings near the Site are uncontrolled crossing points with refuge islands.

Public Transport Accessibility

- 2.12 The nearest bus stops to the Site are located on the A6045 Manchester Road and within 20 metres walking distance of the Site access. Two bus stops are served by school bus services 764 and 781. Currently two bus stops are closed due to the road works on Manchester Road.
- 2.13 There are additional bus stops on Newhouse Road, which is to the north-east of the Site and with 490 metres walking distance of the Site access, which are only served by one bus service on weekdays as shown in **Table 2.1**. There is no service on Saturdays and Sundays.

Table 2.1: Summary of Weekday Bus Services

Service number and route	First Service		Last Service		Daytime Frequency
	'NW-bound' Route	'SE-bound' Route	'NW-bound'	'NW-bound'	
B8	8.35am	-	5.35pm	-	1 per hour

TRANSPORT SCOPING NOTE

Heywood Stores, Rochdale



Heywood - Hopwood - Fairfield General Hospital - Bury					
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- 2.14 There are more bus stops located further north along Manchester Road (circa 775m walking distance) and on Coronation Ave (circa 785m walking distance). Those bus stops are served by services 162 and 163 connecting the Site to Bury and Piccadilly Garden with a frequency of 3 buses per hour during the weekdays and at weekends.
- 2.15 **Figure 2.2** shows the bus stop locations and the associated bus services in the vicinity of the Site.

Figure 2.2: Bus Stops Location and Bus Services Near the Site



TRICS Approach

- 2.16 TRICS has been interrogated to identify sites of a similar nature to the existing development and the following criteria was applied to the TRICS category "Warehousing (Commercial)":
- Sites in London, Republic of Ireland, Northern Ireland were excluded;
 - Edge of Town Centre, Suburban Rea and Edge of Town sites were included; and

- Only weekday surveys were included.

2.17 Following the application of the above filtering criteria there were found to be 15 suitable survey sites, details of these are presented in the full TRICS printout provided in **Appendix 2**.

2.18 **Table 0.1** presents the average weekday peak hour vehicle trips rates taken from the 15 sites. This includes total vehicle and HGV ('OGV') trip rates extracted directly from the TRICS printouts. The 'lights' trip rates have been calculated by subtracting the HGV trip rates from the total vehicle trip rates.

Table 0.1: Existing B8 Development Vehicle Trip Generation

Time Period	Lights			HGVs			Total Vehicles		
	Arr.	Dep.	2-way	Arr.	Dep.	2-way	Arr.	Dep.	2-way
05:00-06:00	0.125	0.032	0.157	0.017	0.016	0.033	0.142	0.048	0.190
06:00-07:00	0.089	0.094	0.183	0.015	0.022	0.037	0.104	0.116	0.220
07:00-08:00	0.107	0.035	0.142	0.03	0.045	0.075	0.137	0.080	0.217
08:00-09:00	0.091	0.034	0.125	0.036	0.049	0.085	0.127	0.083	0.210
09:00-10:00	0.074	0.044	0.118	0.041	0.044	0.085	0.115	0.088	0.203
10:00-11:00	0.064	0.057	0.121	0.052	0.053	0.105	0.116	0.110	0.226
11:00-12:00	0.067	0.068	0.135	0.047	0.039	0.086	0.114	0.107	0.221
12:00-13:00	0.061	0.077	0.138	0.046	0.037	0.083	0.107	0.114	0.221
13:00-14:00	0.085	0.071	0.156	0.04	0.042	0.082	0.125	0.113	0.238
14:00-15:00	0.058	0.100	0.158	0.044	0.037	0.081	0.102	0.137	0.239
15:00-16:00	0.055	0.081	0.136	0.055	0.044	0.099	0.11	0.125	0.235
16:00-17:00	0.045	0.091	0.136	0.054	0.036	0.09	0.099	0.127	0.226
17:00-18:00	0.039	0.119	0.158	0.054	0.041	0.095	0.093	0.160	0.253
18:00-19:00	0.021	0.078	0.099	0.034	0.032	0.066	0.055	0.11	0.165
19:00-20:00	0.024	0.032	0.056	0.012	0.026	0.038	0.036	0.058	0.094
20:00-21:00	0.024	0.018	0.042	0.017	0.029	0.046	0.041	0.047	0.088
21:00-22:00	0.017	0.000	0.017	0.017	0.017	0.034	0.034	0.017	0.051

Note: Trip Rates are per 100sq.m

2.19 **Table 0.1** shows that the weekday peak hour total two-way trip rate would be 0.239 which occurs between 14:00 and 15:00.

2.20 The weekday network peak is assumed to be 08:00 to 09:00 in the morning and 17:00 to 18:00 in the evening. Therefore, the total weekday morning two-way trip rate would be 0.210 and the total weekday evening two-way trip rate would be 0.253.

2.21 The above B8 vehicle trip rates have been applied to the extant floor area (31,900 sq.m) and the potential existing traffic generation of the Site is shown in **Table 0.2**.

Table 0.2: Existing B8 Development Vehicle Trip Generation

Weekday Park	Lights			HGVs			Total Vehicles		
	Arr.	Dep.	2-way	Arr.	Dep.	2-way	Arr.	Dep.	2-way
08:00-09:00	29	11	40	11	16	27	40	27	67
17:00-18:00	12	38	50	17	13	30	29	51	80

TRANSPORT SCOPING NOTE

Heywood Stores, Rochdale



- 2.22 As shown, the existing B8 use of the Site has the potential to generate 67 and 80 two-way vehicle movements during the weekday morning and evening peak hours respectively.

3. PROPOSED DEVELOPMENT AND TRIP GENERATION

Introduction

- 3.1 This section introduces the proposed scheme and clarifies the proposed methodology used to estimate the vehicle trip generation associated with it.

Development Overview

- 3.2 The proposal is to redevelop the Site, albeit maintaining its current lawful land use for B8 Storage and Distribution uses. The proposal includes the demolition of all existing buildings, to provide 3 no. B8 Storage and Distribution units with associated access, parking, servicing, and landscaping.
- 3.3 The total gross floor area of the existing buildings is 31,900 sq.m and the combined floor area of the proposed buildings is 44,310 sq.m. Vehicular access is proposed to be retained at the existing junction location off the A6045 Manchester Road, albeit this is proposed to be widened to accommodate two-way HGV movements.
- 3.4 A comparison of the existing and proposed B8 Use Class floor areas is presented in **Table 3.1**.

Table 3.1: Floorspace Changes (Proposed minus Existing)

Scenario	Land Use	Floor Space (sq.m)
Existing Heywood Stores Floorspace	B8	31,900
Proposed Development	B8	44,310
Net Change following Proposal		+ 12,410

- 3.5 Therefore, the proposals will increase the B8 use floor area at the Site by 12,410 sq.m.

Site Access Arrangements

- 3.6 It is intended to utilise the existing site access onto A6045 Manchester Road. This existing junction will be widened to accommodate two-way HGV movements and footways either side of the carriageway.
- 3.7 An initial copy of the Proposed Site Layout is provided in **Appendix 3**.

Proposed Development Trip Generation

- 3.8 Again, like the existing B8 use, the average percentile vehicle trip rates used to support the approved South Heywood hybrid planning application (ref: 16/01399/HYBR) have been used to estimate the trip generation associated with the proposed development. These trip rates are presented in **Table 2.1** of this TN.
- 3.9 The peak hour vehicle trip rates (per 100 sq.m) have been applied to the proposed B8 floor area (44,310 sq.m) and the potential trip generation is presented in **Table 3.2**.

Table 3.2: Proposed B8 Development Vehicle Trip Generation

Weekday Park	Lights			HGVs			Total Vehicles		
	Arr.	Dep.	2-way	Arr.	Dep.	2-way	Arr.	Dep.	2-way
08:00-09:00	40	15	55	16	22	38	56	37	93
17:00-18:00	17	53	70	24	18	42	41	71	112

- 3.10 As shown, the proposed development has the potential to generate 93 two-way vehicle movements during the weekday morning peak hour and 112 in the evening peak hour.

4. RESIDUAL TRIP GENERATION

Introduction

- 4.1 This section identifies the likely residual trip generation associated with the redevelopment proposals during the weekday peak hours of the local highway network.

Residual Trip Generation

- 4.2 As noted previously, the Site benefits from an extant lawful B8 use for 31,900 sq.m of floor space.
- 4.3 **Table 4.1** provides a comparison of the trips generated by the extant B8 use with the trips generated by the proposed development.

Table 4.1: Proposed and Consented Vehicle Trip Comparison

Weekday Peak	Existing Site Trip Generation (31,900sqm Floor space)	Proposed Development Trip Generation (44,310sqm Floor space)	Net Difference
AM Arrivals	40	56	+16
AM Departures	27	37	+10
AM Totals	67	93	+26
PM Arrivals	29	41	+12
PM Departures	51	71	+20
PM Totals	80	112	+32

- 4.4 **Table 4.1** identifies the impact of the increase in B8 floor space of 12,410sq.m (44,410sqm minus 31,900sq.m = 12,410sq.m) as a result of the proposed development.
- 4.5 During the AM Peak hour, the additional B8 floor space will generate 16 additional arrival trips and 10 additional departure trips and overall, it would generate 26 additional two-way total vehicle movements.
- 4.6 In the PM Peak hour, the additional proposed B8 floor space will generate 12 additional arrival trips and 20 additional departure trips and overall, it will generate 32 additional two-way total vehicle movements.

- 4.7 In light of this projected low level of residual vehicle trip generation during the peak hours, it is considered that a Transport Statement (rather than a Transport Assessment assessing off-site junctions) would be sufficient to support the planning application for the proposed development.
- 4.8 Given that the gross B8 floor area proposed is above the TA threshold and the proposal includes multiple units, it is expected that a Framework Travel Plan would be sufficient to support the planning application alongside the Transport Statement.
- 4.9 However, as part of the M62 link road it may be appropriate to assess the proposed signalised crossroad junction with the A6045 Manchester Road to ensure that the additional residual trips associated with the proposals can be accommodated.

5. DISTRIBUTION OF RESIDUAL PROPOSED DEVELOPMENT TRAFFIC

Distribution Pattern

- 5.1 It is considered that the journey to work distribution pattern will relate to lights movements, and HGV movements will relate to the commercial movements in this case storage and distribution.
- 5.2 Therefore, two distribution patterns have been used: -
- **Journey To Work Distribution** – which are related to employees journey to work; and
 - **Commercial Distribution** – these are HGV movements relating to the commercial use.

Journey To Work Distribution Pattern (Light Vehicle trips)

- 5.3 Light vehicle trips will be distributed onto the road network using an assignment based on Journey to Work data for car-based trips among residents of Rochdale 020 Middle Layer Super Output Area (MSOA), Google Maps Directions has been utilised to determine the best route.

Commercial Distribution Pattern (HGV trips)

- 5.4 At the time of assessment, details of future end occupiers are unknown and therefore we are unable to quantify the distribution of HGV movements on first principles information. However, it is anticipated that all HGV trips would travel to and from the units via the South Heywood Link Road.
- 5.5 The South Heywood Link Road will provide easy access to the M62 via Junction 19 and the M66 via Junction 3.

6. FURTHER INFORMATION

Parking Guidelines

- 6.1 The level of parking at the proposed development will be considered in accordance with RBC's adopted parking standards, which are set out in Table 10 in Appendix 5 of

their 'Adopted Core Strategy' (October 2016). The car, cycle and powered two wheeled vehicle parking provision is set out in **Table 6.1** below: -

Table 6.1: Car, Cycle and Power Two Wheelers Parking Standards

Development Type	Maximum Standards for Car Parking Provision	Minimum Standard for Cycle Space Provision	Minimum Standard for Powered Two Wheeled Vehicle Parking Provision
B8 Storage / Distribution Warehousing	1 space per 100 sq.m	1 space per 850sq.m (min 2 spaces)	1 space per 4,000 sq.m (min 2 spaces)

- 6.2 Disabled parking standards are set in Table 11 also in Appendix 5 in Rochdale's 'Adopted Core Strategy' and are set out in **Table 6.2** below.

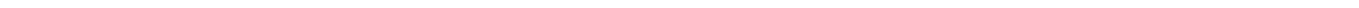
Table 6.2: Disabled Parking Standards

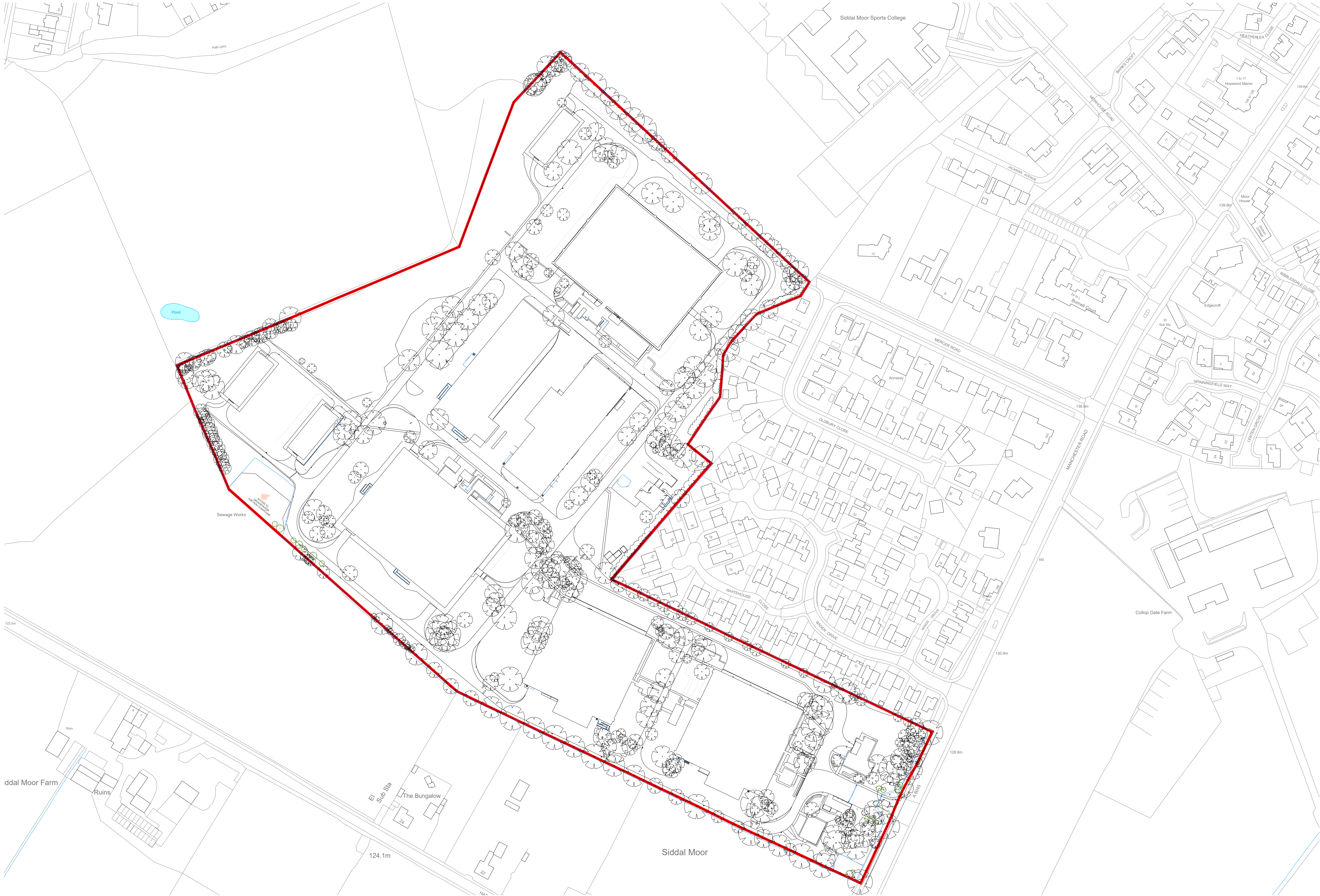
Total Number of General Parking Spaces Provided	Minimum Standard of Disabled Car Parking Provision to be Provided. (in addition to the general car parking provision)
Below 12 spaces	10% of the total capacity
12 to 200 spaces	3 bays or 6% of the total capacity (whichever is greater)
Over 200 spaces	4 bays plus 4% of the total capacity

- 6.3 There are no standards in the RBC guidelines for electric vehicle charge points (EVCP) and therefore clarification is sought from RBC on what they would consider an appropriate level of 'active' and 'passive' EVCP provision.
- 6.4 The proposals include 3 EVCP spaces and 2 accessible EVCP spaces.

APPENDICES

APPENDIX 1: Existing Site Plan





Do not scale this drawing
ashton smith to be notified of discrepancies in figured dimensions
Contractors must check all dimensions from site
This drawing is copyright and is for use on this site only
This drawing is to be used solely for information as entitled
For other information refer to the latest revision of any cross referenced drawing



LOCATION PLAN:

NOTES:

— Site Boundary - 11.1152 hec / 27.46 acres

REV	DATE	DESCRIPTION	DRAWN BY	CHECK BY
REVISIONS				

PROJECT TITLE			
Trammell Crow Manchester Road, Heywood			
DRAWING TITLE			
Existing Site Plan			
RIBA STAGE	STATUS	DRAWN BY	CHECKED BY
N/A	Preliminary	DH	RR
SHEET	SCALE	DATE	SUITABILITY
A1	1 : 1250	28/03/2022	SO
DRAWING NO.		REVISION	P1
21157 - ASA - XX - XX - D - A - 0018 _ (S0 - P1)			

CLIENT	
 Beyond Design	
Ashton Smith, Belvedere House, 2 Victoria Avenue, Harrogate, North Yorkshire, HG1 1EL Tel: 01423 532882 Fax: 01423 565104 www.ashtonsmith.co.uk	

APPENDIX 2: TRICS Data

Calculation Reference: AUDIT-714101-220513-0532

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	EX ESSEX	1 days
	HC HAMPSHIRE	2 days
	KC KENT	1 days
03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	SY SOUTH YORKSHIRE	1 days
	WY WEST YORKSHIRE	2 days
09	NORTH	
	TW TYNE & WEAR	1 days
10	WALES	
	BG BRIDGEND	1 days
11	SCOTLAND	
	LO WEST LOTHIAN	2 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: 190 to 80100 (units: sqm)
 Range Selected by User: 190 to 80100 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 22/11/21

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	2 days
Thursday	4 days
Friday	5 days

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

Selected survey types:

Manual count	15 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	1
Suburban Area (PPS6 Out of Centre)	3
Edge of Town	11

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:

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:

n/a	2 days
B8	13 days

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

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	2 days
5,001 to 10,000	4 days
10,001 to 15,000	3 days
15,001 to 20,000	2 days
20,001 to 25,000	1 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
25,001 to 50,000	2 days
50,001 to 75,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	7 days
250,001 to 500,000	2 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:

0.6 to 1.0	4 days
1.1 to 1.5	11 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	15 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	15 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
-----------------------	-----	--

LIST OF SITES relevant to selection parameters

1	BD-02-F-02 CAMBRIDGE ROAD BEDFORD	DRINKS WHOLESALER	BEDFORDSHIRE
	Edge of Town Industrial Zone Total Gross floor area: 3500 sqm Survey date: THURSDAY 15/10/20		Survey Type: MANUAL
2	BG-02-F-01 PARC CRESCENT BRIDGEND WATERTON IND. EST.	LOGISTICS COMPANY	BRIDGEND
	Edge of Town Industrial Zone Total Gross floor area: 3050 sqm Survey date: MONDAY 13/10/14		Survey Type: MANUAL
3	DV-02-F-01 ALDERS WAY PAIGNTON	OPTICS WAREHOUSE	DEVON
	Edge of Town Industrial Zone Total Gross floor area: 190 sqm Survey date: FRIDAY 29/03/19		Survey Type: MANUAL
4	EX-02-F-01 BRUNEL WAY COLCHESTER SEVERALLS INDUSTRIAL PK	SPORTS SUPPLEMENTS	ESSEX
	Edge of Town Industrial Zone Total Gross floor area: 6560 sqm Survey date: FRIDAY 18/05/18		Survey Type: MANUAL
5	HC-02-F-02 RUTHERFORD ROAD BASINGSTOKE	LOGISTICS	HAMPSHIRE
	Suburban Area (PPS6 Out of Centre) Commercial Zone Total Gross floor area: 13200 sqm Survey date: THURSDAY 16/06/16		Survey Type: MANUAL
6	HC-02-F-03 WARSASH ROAD PARK GATE	PPE DISTRIBUTION	HAMPSHIRE
	Edge of Town Industrial Zone Total Gross floor area: 3665 sqm Survey date: MONDAY 27/09/21		Survey Type: MANUAL
7	KC-02-F-02 MILLS ROAD AYLESFORD QUARRY WOOD	COMMERCIAL WAREHOUSING	KENT
	Edge of Town Industrial Zone Total Gross floor area: 11200 sqm Survey date: FRIDAY 22/09/17		Survey Type: MANUAL
8	LO-02-F-01 BATHGATE ROAD ARMADALE	LOGISTICS SERVICE	WEST LOTHIAN
	Edge of Town Residential Zone Total Gross floor area: 5855 sqm Survey date: TUESDAY 08/06/21		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	LO-02-F-02	HAULAGE COMPANY	WEST LoTHIAN
	INCHMUIR ROAD		
	BATHGATE		
	WHITEHILL IND. ESTATE		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	17626 sqm	
	Survey date: THURSDAY	11/11/21	Survey Type: MANUAL
10	SF-02-F-03	ROAD HAULAGE	SUFFOLK
	CENTRAL AVENUE		
	IPSWICH		
	WARREN HEATH		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	4700 sqm	
	Survey date: FRIDAY	18/09/15	Survey Type: MANUAL
11	SY-02-F-01	TESCO DISTRIBUTION CENTRE	SOUTH YORKSHIRE
	MIDDLE BANK		
	DONCASTER		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	80100 sqm	
	Survey date: TUESDAY	21/09/21	Survey Type: MANUAL
12	TW-02-F-01	ASDA DISTRIBUTION CENTRE	TYNE & WEAR
	MANDARIN WAY		
	WASHINGTON		
	PATTISON IND. ESTATE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	31000 sqm	
	Survey date: FRIDAY	13/11/15	Survey Type: MANUAL
13	WM-02-F-02	LOGISTICS FIRM	WEST MIDLANDS
	SOVEREIGN ROAD		
	BIRMINGHAM		
	KINGS NORTON		
	Edge of Town		
	Commercial Zone		
	Total Gross floor area:	3625 sqm	
	Survey date: MONDAY	09/11/15	Survey Type: MANUAL
14	WY-02-F-01	ELECTRONICS DISTRIBUTION	WEST YORKSHIRE
	MORTIMER STREET		
	CLECKHEATON		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	1507 sqm	
	Survey date: MONDAY	19/09/16	Survey Type: MANUAL
15	WY-02-F-02	DISTRIBUTION COMPANY	WEST YORKSHIRE
	STAITHGATE LANE		
	BRADFORD		
	NEWHALL		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	10446 sqm	
	Survey date: THURSDAY	14/03/19	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/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	6	19620	0.142	6	19620	0.048	6	19620	0.190
06:00 - 07:00	6	19620	0.104	6	19620	0.116	6	19620	0.220
07:00 - 08:00	15	13082	0.137	15	13082	0.080	15	13082	0.217
08:00 - 09:00	15	13082	0.127	15	13082	0.083	15	13082	0.210
09:00 - 10:00	15	13082	0.115	15	13082	0.088	15	13082	0.203
10:00 - 11:00	15	13082	0.116	15	13082	0.110	15	13082	0.226
11:00 - 12:00	15	13082	0.114	15	13082	0.107	15	13082	0.221
12:00 - 13:00	15	13082	0.107	15	13082	0.114	15	13082	0.221
13:00 - 14:00	15	13082	0.125	15	13082	0.113	15	13082	0.238
14:00 - 15:00	15	13082	0.102	15	13082	0.137	15	13082	0.239
15:00 - 16:00	15	13082	0.110	15	13082	0.125	15	13082	0.235
16:00 - 17:00	15	13082	0.099	15	13082	0.127	15	13082	0.226
17:00 - 18:00	15	13082	0.093	15	13082	0.160	15	13082	0.253
18:00 - 19:00	14	13908	0.055	14	13908	0.110	14	13908	0.165
19:00 - 20:00	6	19620	0.036	6	19620	0.058	6	19620	0.094
20:00 - 21:00	5	20018	0.041	5	20018	0.047	5	20018	0.088
21:00 - 22:00	1	5855	0.034	1	5855	0.017	1	5855	0.051
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			1.657			1.640			3.297

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:	190 - 80100 (units: sqm)
Survey date range:	01/01/14 - 22/11/21
Number of weekdays (Monday-Friday):	15
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

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

TAXIS

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	6	19620	0.001	6	19620	0.001	6	19620	0.002
06:00 - 07:00	6	19620	0.002	6	19620	0.002	6	19620	0.004
07:00 - 08:00	15	13082	0.002	15	13082	0.002	15	13082	0.004
08:00 - 09:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
09:00 - 10:00	15	13082	0.002	15	13082	0.002	15	13082	0.004
10:00 - 11:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
11:00 - 12:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
12:00 - 13:00	15	13082	0.000	15	13082	0.000	15	13082	0.000
13:00 - 14:00	15	13082	0.000	15	13082	0.000	15	13082	0.000
14:00 - 15:00	15	13082	0.000	15	13082	0.000	15	13082	0.000
15:00 - 16:00	15	13082	0.000	15	13082	0.000	15	13082	0.000
16:00 - 17:00	15	13082	0.002	15	13082	0.002	15	13082	0.004
17:00 - 18:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
18:00 - 19:00	14	13908	0.000	14	13908	0.000	14	13908	0.000
19:00 - 20:00	6	19620	0.001	6	19620	0.001	6	19620	0.002
20:00 - 21:00	5	20018	0.000	5	20018	0.000	5	20018	0.000
21:00 - 22:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			0.014			0.014			0.028

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.

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

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	6	19620	0.017	6	19620	0.016	6	19620	0.033
06:00 - 07:00	6	19620	0.015	6	19620	0.022	6	19620	0.037
07:00 - 08:00	15	13082	0.030	15	13082	0.045	15	13082	0.075
08:00 - 09:00	15	13082	0.036	15	13082	0.049	15	13082	0.085
09:00 - 10:00	15	13082	0.041	15	13082	0.044	15	13082	0.085
10:00 - 11:00	15	13082	0.052	15	13082	0.053	15	13082	0.105
11:00 - 12:00	15	13082	0.047	15	13082	0.039	15	13082	0.086
12:00 - 13:00	15	13082	0.046	15	13082	0.037	15	13082	0.083
13:00 - 14:00	15	13082	0.040	15	13082	0.042	15	13082	0.082
14:00 - 15:00	15	13082	0.044	15	13082	0.037	15	13082	0.081
15:00 - 16:00	15	13082	0.055	15	13082	0.044	15	13082	0.099
16:00 - 17:00	15	13082	0.054	15	13082	0.036	15	13082	0.090
17:00 - 18:00	15	13082	0.054	15	13082	0.041	15	13082	0.095
18:00 - 19:00	14	13908	0.034	14	13908	0.032	14	13908	0.066
19:00 - 20:00	6	19620	0.012	6	19620	0.026	6	19620	0.038
20:00 - 21:00	5	20018	0.017	5	20018	0.029	5	20018	0.046
21:00 - 22:00	1	5855	0.017	1	5855	0.017	1	5855	0.034
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			0.611			0.609			1.220

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.

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

CYCLISTS

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	6	19620	0.003	6	19620	0.000	6	19620	0.003
06:00 - 07:00	6	19620	0.002	6	19620	0.000	6	19620	0.002
07:00 - 08:00	15	13082	0.001	15	13082	0.000	15	13082	0.001
08:00 - 09:00	15	13082	0.005	15	13082	0.000	15	13082	0.005
09:00 - 10:00	15	13082	0.000	15	13082	0.001	15	13082	0.001
10:00 - 11:00	15	13082	0.002	15	13082	0.001	15	13082	0.003
11:00 - 12:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
12:00 - 13:00	15	13082	0.001	15	13082	0.000	15	13082	0.001
13:00 - 14:00	15	13082	0.002	15	13082	0.000	15	13082	0.002
14:00 - 15:00	15	13082	0.001	15	13082	0.003	15	13082	0.004
15:00 - 16:00	15	13082	0.003	15	13082	0.005	15	13082	0.008
16:00 - 17:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
17:00 - 18:00	15	13082	0.001	15	13082	0.003	15	13082	0.004
18:00 - 19:00	14	13908	0.001	14	13908	0.002	14	13908	0.003
19:00 - 20:00	6	19620	0.000	6	19620	0.007	6	19620	0.007
20:00 - 21:00	5	20018	0.000	5	20018	0.000	5	20018	0.000
21:00 - 22:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			0.024				0.024	0.048	

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.

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

CARS

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	6	19620	0.122	6	19620	0.030	6	19620	0.152
06:00 - 07:00	6	19620	0.080	6	19620	0.088	6	19620	0.168
07:00 - 08:00	15	13082	0.087	15	13082	0.021	15	13082	0.108
08:00 - 09:00	15	13082	0.075	15	13082	0.016	15	13082	0.091
09:00 - 10:00	15	13082	0.050	15	13082	0.027	15	13082	0.077
10:00 - 11:00	15	13082	0.041	15	13082	0.037	15	13082	0.078
11:00 - 12:00	15	13082	0.044	15	13082	0.043	15	13082	0.087
12:00 - 13:00	15	13082	0.043	15	13082	0.061	15	13082	0.104
13:00 - 14:00	15	13082	0.067	15	13082	0.055	15	13082	0.122
14:00 - 15:00	15	13082	0.045	15	13082	0.087	15	13082	0.132
15:00 - 16:00	15	13082	0.037	15	13082	0.064	15	13082	0.101
16:00 - 17:00	15	13082	0.033	15	13082	0.075	15	13082	0.108
17:00 - 18:00	15	13082	0.031	15	13082	0.105	15	13082	0.136
18:00 - 19:00	14	13908	0.018	14	13908	0.070	14	13908	0.088
19:00 - 20:00	6	19620	0.020	6	19620	0.028	6	19620	0.048
20:00 - 21:00	5	20018	0.021	5	20018	0.017	5	20018	0.038
21:00 - 22:00	1	5855	0.017	1	5855	0.000	1	5855	0.017
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			0.831				0.824	1.655	

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.

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

LGVS

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	6	19620	0.001	6	19620	0.002	6	19620	0.003
06:00 - 07:00	6	19620	0.008	6	19620	0.004	6	19620	0.012
07:00 - 08:00	15	13082	0.017	15	13082	0.011	15	13082	0.028
08:00 - 09:00	15	13082	0.014	15	13082	0.016	15	13082	0.030
09:00 - 10:00	15	13082	0.023	15	13082	0.016	15	13082	0.039
10:00 - 11:00	15	13082	0.020	15	13082	0.020	15	13082	0.040
11:00 - 12:00	15	13082	0.022	15	13082	0.023	15	13082	0.045
12:00 - 13:00	15	13082	0.016	15	13082	0.016	15	13082	0.032
13:00 - 14:00	15	13082	0.017	15	13082	0.016	15	13082	0.033
14:00 - 15:00	15	13082	0.013	15	13082	0.011	15	13082	0.024
15:00 - 16:00	15	13082	0.017	15	13082	0.016	15	13082	0.033
16:00 - 17:00	15	13082	0.010	15	13082	0.014	15	13082	0.024
17:00 - 18:00	15	13082	0.008	15	13082	0.012	15	13082	0.020
18:00 - 19:00	14	13908	0.003	14	13908	0.008	14	13908	0.011
19:00 - 20:00	6	19620	0.003	6	19620	0.003	6	19620	0.006
20:00 - 21:00	5	20018	0.003	5	20018	0.001	5	20018	0.004
21:00 - 22:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			0.195			0.189			0.384

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.

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

MOTOR CYCLES

Calculation factor: 100 sqm

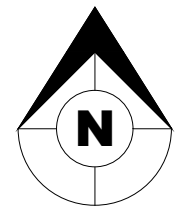
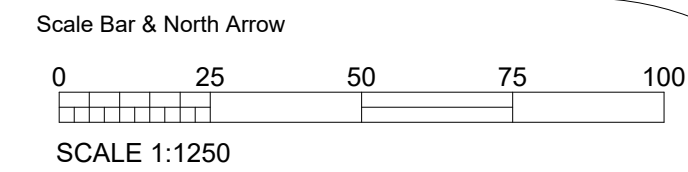
BOLD print indicates peak (busiest) period

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	6	19620	0.001	6	19620	0.000	6	19620	0.001
06:00 - 07:00	6	19620	0.000	6	19620	0.000	6	19620	0.000
07:00 - 08:00	15	13082	0.001	15	13082	0.000	15	13082	0.001
08:00 - 09:00	15	13082	0.001	15	13082	0.000	15	13082	0.001
09:00 - 10:00	15	13082	0.000	15	13082	0.000	15	13082	0.000
10:00 - 11:00	15	13082	0.001	15	13082	0.000	15	13082	0.001
11:00 - 12:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
12:00 - 13:00	15	13082	0.002	15	13082	0.000	15	13082	0.002
13:00 - 14:00	15	13082	0.001	15	13082	0.000	15	13082	0.001
14:00 - 15:00	15	13082	0.000	15	13082	0.002	15	13082	0.002
15:00 - 16:00	15	13082	0.000	15	13082	0.001	15	13082	0.001
16:00 - 17:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
17:00 - 18:00	15	13082	0.000	15	13082	0.001	15	13082	0.001
18:00 - 19:00	14	13908	0.000	14	13908	0.000	14	13908	0.000
19:00 - 20:00	6	19620	0.000	6	19620	0.000	6	19620	0.000
20:00 - 21:00	5	20018	0.000	5	20018	0.000	5	20018	0.000
21:00 - 22:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			0.009			0.006			0.015

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.

APPENDIX 3: Proposed Site Plan

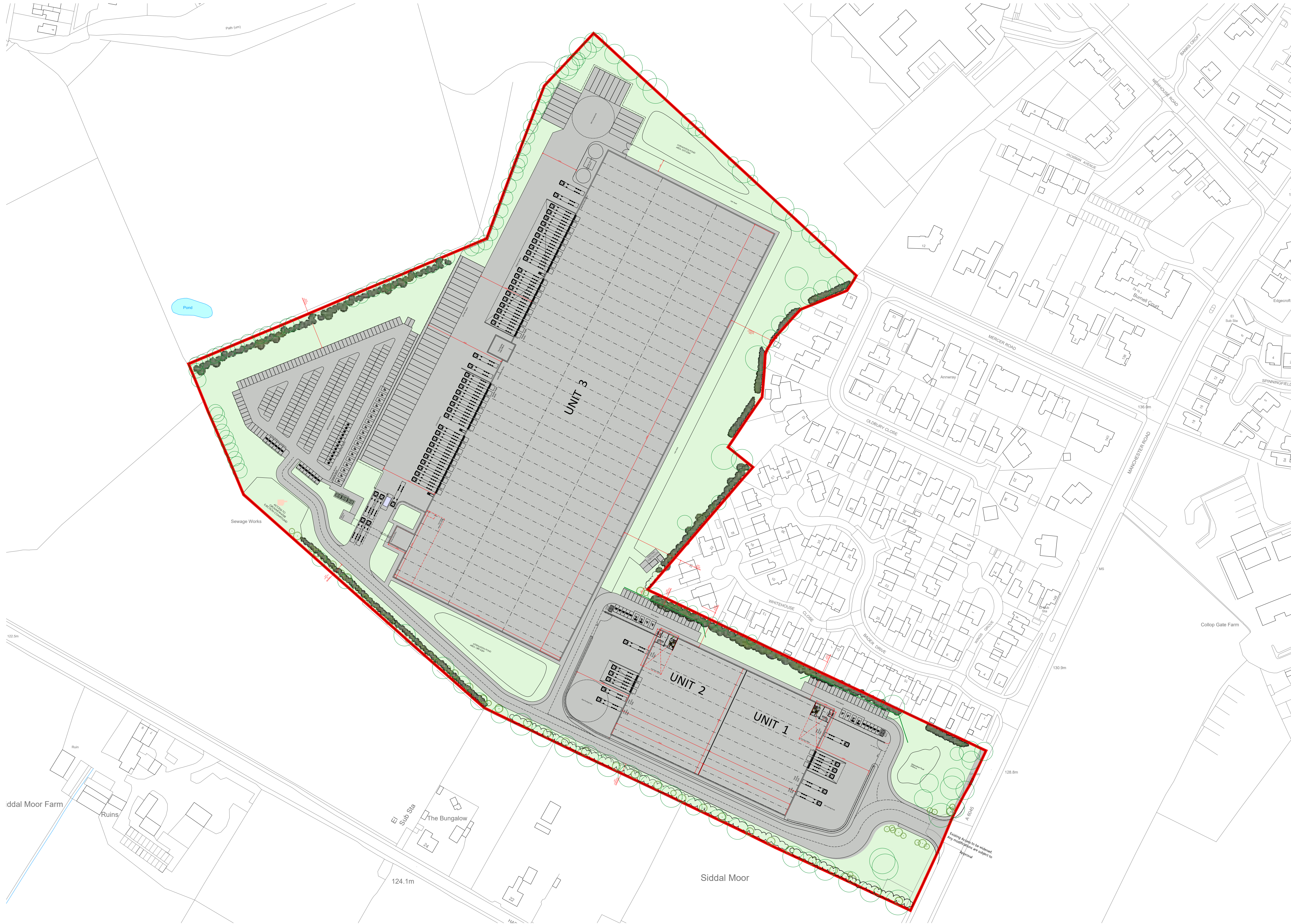


UNIT 1	
Warehouse	- 4,137m ² / 44,530ft ²
10% office	- 460m ² / 4,951ft ²
Total Building Area	- 4,597m ² / 49,481ft ²
HAUNCH	- 12.5m

UNIT 2	
Warehouse	- 4,137m ² / 44,530ft ²
10% office	- 460m ² / 4,951ft ²
Total Building Area	- 4,597m ² / 49,481ft ²
HAUNCH	- 12.5m

UNIT 3	
Warehouse	- 33,361m ² / 359,094ft ²
5% office (Incl. Hub Office)	- 1,755m ² / 18,890ft ²
Total Building Area	- 35,116m ² / 377,985ft ²
HAUNCH HEIGHT	- 18m

Total Floor Area - 44,310m²/ 476,949ft²



LOCATION PLAN:

NOTES:

- Site Boundary - 11.1152 hec / 27.46 acres
- CATEGORY A & B TREES TO BE RETAINED

PROJECT TITLE			
Trammell Crow Manchester Road, Heywood			
DRAWING TITLE			
Proposed Site Layout Option 17			
RIBA STAGE	STATUS	DRAWN BY	CHECKED BY
N/A	Preliminary	DH	RR
SHEET	SCALE	DATE	SUITABILITY
A1	1 : 1250	28/03/2022	S0
DRAWING NO.		REVISION	P1
21157-ASA-XX-XX-D-A-0017_(S0-P1)			

CLIENT	
 Beyond Design	
Ashton Smith, Belvedere House, 2 Victoria Avenue, Harrogate, North Yorkshire, HG1 1EL Tel: 01423 522882 Fax: 01423 565104 www.ashtonsmith.co.uk	



Do not scale this drawing
ashton smith to be notified of discrepancies in figured dimensions
Contractors must check all dimensions from site
This drawing is copyright and is for use on this site only
This drawing is to be used solely for information as entitled
For other information refer to the latest revision of any cross referenced drawing

REV	DATE	DESCRIPTION	DRAWN BY	CHECK BY
REVISIONS				

JOB NO. 21157

APPENDIX 8: TRICS Output

Calculation Reference: AUDIT-714101-220513-0532

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	EX ESSEX	1 days
	HC HAMPSHIRE	2 days
	KC KENT	1 days
03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	SY SOUTH YORKSHIRE	1 days
	WY WEST YORKSHIRE	2 days
09	NORTH	
	TW TYNE & WEAR	1 days
10	WALES	
	BG BRIDGEND	1 days
11	SCOTLAND	
	LO WEST LOTHIAN	2 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: 190 to 80100 (units: sqm)
 Range Selected by User: 190 to 80100 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 22/11/21

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	2 days
Thursday	4 days
Friday	5 days

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

Selected survey types:

Manual count	15 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	1
Suburban Area (PPS6 Out of Centre)	3
Edge of Town	11

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:

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:

n/a	2 days
B8	13 days

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

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	2 days
5,001 to 10,000	4 days
10,001 to 15,000	3 days
15,001 to 20,000	2 days
20,001 to 25,000	1 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
25,001 to 50,000	2 days
50,001 to 75,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	7 days
250,001 to 500,000	2 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:

0.6 to 1.0	4 days
1.1 to 1.5	11 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	15 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	15 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
-----------------------	-----	--

LIST OF SITES relevant to selection parameters

1	BD-02-F-02 CAMBRIDGE ROAD BEDFORD	DRINKS WHOLESALER	BEDFORDSHIRE
	Edge of Town Industrial Zone Total Gross floor area: 3500 sqm Survey date: THURSDAY 15/10/20		Survey Type: MANUAL
2	BG-02-F-01 PARC CRESCENT BRIDGEND WATERTON IND. EST.	LOGISTICS COMPANY	BRIDGEND
	Edge of Town Industrial Zone Total Gross floor area: 3050 sqm Survey date: MONDAY 13/10/14		Survey Type: MANUAL
3	DV-02-F-01 ALDERS WAY PAIGNTON	OPTICS WAREHOUSE	DEVON
	Edge of Town Industrial Zone Total Gross floor area: 190 sqm Survey date: FRIDAY 29/03/19		Survey Type: MANUAL
4	EX-02-F-01 BRUNEL WAY COLCHESTER SEVERALLS INDUSTRIAL PK	SPORTS SUPPLEMENTS	ESSEX
	Edge of Town Industrial Zone Total Gross floor area: 6560 sqm Survey date: FRIDAY 18/05/18		Survey Type: MANUAL
5	HC-02-F-02 RUTHERFORD ROAD BASINGSTOKE	LOGISTICS	HAMPSHIRE
	Suburban Area (PPS6 Out of Centre) Commercial Zone Total Gross floor area: 13200 sqm Survey date: THURSDAY 16/06/16		Survey Type: MANUAL
6	HC-02-F-03 WARSASH ROAD PARK GATE	PPE DISTRIBUTION	HAMPSHIRE
	Edge of Town Industrial Zone Total Gross floor area: 3665 sqm Survey date: MONDAY 27/09/21		Survey Type: MANUAL
7	KC-02-F-02 MILLS ROAD AYLESFORD QUARRY WOOD	COMMERCIAL WAREHOUSING	KENT
	Edge of Town Industrial Zone Total Gross floor area: 11200 sqm Survey date: FRIDAY 22/09/17		Survey Type: MANUAL
8	LO-02-F-01 BATHGATE ROAD ARMADALE	LOGISTICS SERVICE	WEST LOTHIAN
	Edge of Town Residential Zone Total Gross floor area: 5855 sqm Survey date: TUESDAY 08/06/21		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	LO-02-F-02	HAULAGE COMPANY	WEST LoTHIAN
	INCHMUIR ROAD		
	BATHGATE		
	WHITEHILL IND. ESTATE		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	17626 sqm	
	Survey date: THURSDAY	11/11/21	Survey Type: MANUAL
10	SF-02-F-03	ROAD HAULAGE	SUFFOLK
	CENTRAL AVENUE		
	IPSWICH		
	WARREN HEATH		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	4700 sqm	
	Survey date: FRIDAY	18/09/15	Survey Type: MANUAL
11	SY-02-F-01	TESCO DISTRIBUTION CENTRE	SOUTH YORKSHIRE
	MIDDLE BANK		
	DONCASTER		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	80100 sqm	
	Survey date: TUESDAY	21/09/21	Survey Type: MANUAL
12	TW-02-F-01	ASDA DISTRIBUTION CENTRE	TYNE & WEAR
	MANDARIN WAY		
	WASHINGTON		
	PATTISON IND. ESTATE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	31000 sqm	
	Survey date: FRIDAY	13/11/15	Survey Type: MANUAL
13	WM-02-F-02	LOGISTICS FIRM	WEST MIDLANDS
	SOVEREIGN ROAD		
	BIRMINGHAM		
	KINGS NORTON		
	Edge of Town		
	Commercial Zone		
	Total Gross floor area:	3625 sqm	
	Survey date: MONDAY	09/11/15	Survey Type: MANUAL
14	WY-02-F-01	ELECTRONICS DISTRIBUTION	WEST YORKSHIRE
	MORTIMER STREET		
	CLECKHEATON		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	1507 sqm	
	Survey date: MONDAY	19/09/16	Survey Type: MANUAL
15	WY-02-F-02	DISTRIBUTION COMPANY	WEST YORKSHIRE
	STAITHGATE LANE		
	BRADFORD		
	NEWHALL		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	10446 sqm	
	Survey date: THURSDAY	14/03/19	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/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	6	19620	0.142	6	19620	0.048	6	19620	0.190
06:00 - 07:00	6	19620	0.104	6	19620	0.116	6	19620	0.220
07:00 - 08:00	15	13082	0.137	15	13082	0.080	15	13082	0.217
08:00 - 09:00	15	13082	0.127	15	13082	0.083	15	13082	0.210
09:00 - 10:00	15	13082	0.115	15	13082	0.088	15	13082	0.203
10:00 - 11:00	15	13082	0.116	15	13082	0.110	15	13082	0.226
11:00 - 12:00	15	13082	0.114	15	13082	0.107	15	13082	0.221
12:00 - 13:00	15	13082	0.107	15	13082	0.114	15	13082	0.221
13:00 - 14:00	15	13082	0.125	15	13082	0.113	15	13082	0.238
14:00 - 15:00	15	13082	0.102	15	13082	0.137	15	13082	0.239
15:00 - 16:00	15	13082	0.110	15	13082	0.125	15	13082	0.235
16:00 - 17:00	15	13082	0.099	15	13082	0.127	15	13082	0.226
17:00 - 18:00	15	13082	0.093	15	13082	0.160	15	13082	0.253
18:00 - 19:00	14	13908	0.055	14	13908	0.110	14	13908	0.165
19:00 - 20:00	6	19620	0.036	6	19620	0.058	6	19620	0.094
20:00 - 21:00	5	20018	0.041	5	20018	0.047	5	20018	0.088
21:00 - 22:00	1	5855	0.034	1	5855	0.017	1	5855	0.051
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			1.657				1.640	3.297	

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:	190 - 80100 (units: sqm)
Survey date range:	01/01/14 - 22/11/21
Number of weekdays (Monday-Friday):	15
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

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

TAXIS

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	6	19620	0.001	6	19620	0.001	6	19620	0.002
06:00 - 07:00	6	19620	0.002	6	19620	0.002	6	19620	0.004
07:00 - 08:00	15	13082	0.002	15	13082	0.002	15	13082	0.004
08:00 - 09:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
09:00 - 10:00	15	13082	0.002	15	13082	0.002	15	13082	0.004
10:00 - 11:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
11:00 - 12:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
12:00 - 13:00	15	13082	0.000	15	13082	0.000	15	13082	0.000
13:00 - 14:00	15	13082	0.000	15	13082	0.000	15	13082	0.000
14:00 - 15:00	15	13082	0.000	15	13082	0.000	15	13082	0.000
15:00 - 16:00	15	13082	0.000	15	13082	0.000	15	13082	0.000
16:00 - 17:00	15	13082	0.002	15	13082	0.002	15	13082	0.004
17:00 - 18:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
18:00 - 19:00	14	13908	0.000	14	13908	0.000	14	13908	0.000
19:00 - 20:00	6	19620	0.001	6	19620	0.001	6	19620	0.002
20:00 - 21:00	5	20018	0.000	5	20018	0.000	5	20018	0.000
21:00 - 22:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			0.014				0.014	0.028	

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.

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

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	6	19620	0.017	6	19620	0.016	6	19620	0.033
06:00 - 07:00	6	19620	0.015	6	19620	0.022	6	19620	0.037
07:00 - 08:00	15	13082	0.030	15	13082	0.045	15	13082	0.075
08:00 - 09:00	15	13082	0.036	15	13082	0.049	15	13082	0.085
09:00 - 10:00	15	13082	0.041	15	13082	0.044	15	13082	0.085
10:00 - 11:00	15	13082	0.052	15	13082	0.053	15	13082	0.105
11:00 - 12:00	15	13082	0.047	15	13082	0.039	15	13082	0.086
12:00 - 13:00	15	13082	0.046	15	13082	0.037	15	13082	0.083
13:00 - 14:00	15	13082	0.040	15	13082	0.042	15	13082	0.082
14:00 - 15:00	15	13082	0.044	15	13082	0.037	15	13082	0.081
15:00 - 16:00	15	13082	0.055	15	13082	0.044	15	13082	0.099
16:00 - 17:00	15	13082	0.054	15	13082	0.036	15	13082	0.090
17:00 - 18:00	15	13082	0.054	15	13082	0.041	15	13082	0.095
18:00 - 19:00	14	13908	0.034	14	13908	0.032	14	13908	0.066
19:00 - 20:00	6	19620	0.012	6	19620	0.026	6	19620	0.038
20:00 - 21:00	5	20018	0.017	5	20018	0.029	5	20018	0.046
21:00 - 22:00	1	5855	0.017	1	5855	0.017	1	5855	0.034
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			0.611				0.609	1.220	

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.

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

CYCLISTS

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	6	19620	0.003	6	19620	0.000	6	19620	0.003
06:00 - 07:00	6	19620	0.002	6	19620	0.000	6	19620	0.002
07:00 - 08:00	15	13082	0.001	15	13082	0.000	15	13082	0.001
08:00 - 09:00	15	13082	0.005	15	13082	0.000	15	13082	0.005
09:00 - 10:00	15	13082	0.000	15	13082	0.001	15	13082	0.001
10:00 - 11:00	15	13082	0.002	15	13082	0.001	15	13082	0.003
11:00 - 12:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
12:00 - 13:00	15	13082	0.001	15	13082	0.000	15	13082	0.001
13:00 - 14:00	15	13082	0.002	15	13082	0.000	15	13082	0.002
14:00 - 15:00	15	13082	0.001	15	13082	0.003	15	13082	0.004
15:00 - 16:00	15	13082	0.003	15	13082	0.005	15	13082	0.008
16:00 - 17:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
17:00 - 18:00	15	13082	0.001	15	13082	0.003	15	13082	0.004
18:00 - 19:00	14	13908	0.001	14	13908	0.002	14	13908	0.003
19:00 - 20:00	6	19620	0.000	6	19620	0.007	6	19620	0.007
20:00 - 21:00	5	20018	0.000	5	20018	0.000	5	20018	0.000
21:00 - 22:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			0.024			0.024			0.048

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.

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

CARS

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	6	19620	0.122	6	19620	0.030	6	19620	0.152
06:00 - 07:00	6	19620	0.080	6	19620	0.088	6	19620	0.168
07:00 - 08:00	15	13082	0.087	15	13082	0.021	15	13082	0.108
08:00 - 09:00	15	13082	0.075	15	13082	0.016	15	13082	0.091
09:00 - 10:00	15	13082	0.050	15	13082	0.027	15	13082	0.077
10:00 - 11:00	15	13082	0.041	15	13082	0.037	15	13082	0.078
11:00 - 12:00	15	13082	0.044	15	13082	0.043	15	13082	0.087
12:00 - 13:00	15	13082	0.043	15	13082	0.061	15	13082	0.104
13:00 - 14:00	15	13082	0.067	15	13082	0.055	15	13082	0.122
14:00 - 15:00	15	13082	0.045	15	13082	0.087	15	13082	0.132
15:00 - 16:00	15	13082	0.037	15	13082	0.064	15	13082	0.101
16:00 - 17:00	15	13082	0.033	15	13082	0.075	15	13082	0.108
17:00 - 18:00	15	13082	0.031	15	13082	0.105	15	13082	0.136
18:00 - 19:00	14	13908	0.018	14	13908	0.070	14	13908	0.088
19:00 - 20:00	6	19620	0.020	6	19620	0.028	6	19620	0.048
20:00 - 21:00	5	20018	0.021	5	20018	0.017	5	20018	0.038
21:00 - 22:00	1	5855	0.017	1	5855	0.000	1	5855	0.017
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			0.831				0.824	1.655	

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.

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

LGVS

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	6	19620	0.001	6	19620	0.002	6	19620	0.003
06:00 - 07:00	6	19620	0.008	6	19620	0.004	6	19620	0.012
07:00 - 08:00	15	13082	0.017	15	13082	0.011	15	13082	0.028
08:00 - 09:00	15	13082	0.014	15	13082	0.016	15	13082	0.030
09:00 - 10:00	15	13082	0.023	15	13082	0.016	15	13082	0.039
10:00 - 11:00	15	13082	0.020	15	13082	0.020	15	13082	0.040
11:00 - 12:00	15	13082	0.022	15	13082	0.023	15	13082	0.045
12:00 - 13:00	15	13082	0.016	15	13082	0.016	15	13082	0.032
13:00 - 14:00	15	13082	0.017	15	13082	0.016	15	13082	0.033
14:00 - 15:00	15	13082	0.013	15	13082	0.011	15	13082	0.024
15:00 - 16:00	15	13082	0.017	15	13082	0.016	15	13082	0.033
16:00 - 17:00	15	13082	0.010	15	13082	0.014	15	13082	0.024
17:00 - 18:00	15	13082	0.008	15	13082	0.012	15	13082	0.020
18:00 - 19:00	14	13908	0.003	14	13908	0.008	14	13908	0.011
19:00 - 20:00	6	19620	0.003	6	19620	0.003	6	19620	0.006
20:00 - 21:00	5	20018	0.003	5	20018	0.001	5	20018	0.004
21:00 - 22:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			0.195			0.189			0.384

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.

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

MOTOR CYCLES

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	6	19620	0.001	6	19620	0.000	6	19620	0.001
06:00 - 07:00	6	19620	0.000	6	19620	0.000	6	19620	0.000
07:00 - 08:00	15	13082	0.001	15	13082	0.000	15	13082	0.001
08:00 - 09:00	15	13082	0.001	15	13082	0.000	15	13082	0.001
09:00 - 10:00	15	13082	0.000	15	13082	0.000	15	13082	0.000
10:00 - 11:00	15	13082	0.001	15	13082	0.000	15	13082	0.001
11:00 - 12:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
12:00 - 13:00	15	13082	0.002	15	13082	0.000	15	13082	0.002
13:00 - 14:00	15	13082	0.001	15	13082	0.000	15	13082	0.001
14:00 - 15:00	15	13082	0.000	15	13082	0.002	15	13082	0.002
15:00 - 16:00	15	13082	0.000	15	13082	0.001	15	13082	0.001
16:00 - 17:00	15	13082	0.001	15	13082	0.001	15	13082	0.002
17:00 - 18:00	15	13082	0.000	15	13082	0.001	15	13082	0.001
18:00 - 19:00	14	13908	0.000	14	13908	0.000	14	13908	0.000
19:00 - 20:00	6	19620	0.000	6	19620	0.000	6	19620	0.000
20:00 - 21:00	5	20018	0.000	5	20018	0.000	5	20018	0.000
21:00 - 22:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
22:00 - 23:00	1	5855	0.000	1	5855	0.000	1	5855	0.000
23:00 - 24:00									
Total Rates:			0.009				0.006	0.015	

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.

APPENDIX 9: PICADY Output Files

Junctions 10									
PICADY 10 - Priority Intersection Module									
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021									
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com									
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: Heywood Junction Model.j10

Path: \\bwbdeltetkfil\JOB FOLDERS\2022\220785-B8 Redevelopment, Rochdale\ProjectDelivery\01-WIP\DesignAndCalculations\Transport\Model\Junctions 10

Report generation date: 11/10/2022 08:55:55

»2020+Dev, AM

»2020+Dev, PM

»2038+Dev, AM

»2038+Dev, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2020+Dev									
Stream B-C	D1	0.0	7.07	0.02	A	D2	0.1	8.15	0.05	A
Stream B-A		0.2	10.07	0.15	B		0.3	11.60	0.21	B
Stream C-AB		0.1	6.16	0.05	A		0.0	6.86	0.01	A
	2038+Dev									
Stream B-C	D3	0.0	7.93	0.02	A	D4	0.1	8.57	0.05	A
Stream B-A		0.2	12.92	0.18	B		0.3	13.02	0.23	B
Stream C-AB		0.1	6.74	0.05	A		0.0	7.15	0.02	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	08/07/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	BWB\Robert.Wickenden
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)

		0.85	36.00	20.00
--	--	------	-------	-------

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2020+Dev	AM	ONE HOUR	08:00	09:30	15
D2	2020+Dev	PM	ONE HOUR	17:00	18:30	15
D3	2038+Dev	AM	ONE HOUR	08:00	09:30	15
D4	2038+Dev	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2020+Dev	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A6045 Manchester Road (S)		✓	334	100.000
B - Site Access		✓	67	100.000
C - A6045 Manchester Road (N)		✓	512	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - A6045 Manchester Road (S)	B - Site Access	C - A6045 Manchester Road (N)
	A - A6045 Manchester Road (S)	0	53	281
	B - Site Access	57	0	10
	C - A6045 Manchester Road (N)	486	26	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - A6045 Manchester Road (S)	B - Site Access	C - A6045 Manchester Road (N)
	A - A6045 Manchester Road (S)	0	0	0
	B - Site Access	0	0	0
	C - A6045 Manchester Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.02	7.07	0.0	A
B-A	0.15	10.07	0.2	B
C-AB	0.05	6.16	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	551	0.014	7	0.0	6.621	A
B-A	43	478	0.090	43	0.1	8.263	A
C-AB	20	629	0.032	20	0.0	5.910	A
C-A	366			366			
A-B	40			40			
A-C	212			212			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	9	538	0.017	9	0.0	6.799	A
B-A	51	454	0.113	51	0.1	8.944	A
C-AB	24	622	0.039	24	0.0	6.018	A
C-A	436			436			
A-B	48			48			
A-C	253			253			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	520	0.021	11	0.0	7.067	A
B-A	63	420	0.149	63	0.2	10.062	B
C-AB	30	615	0.049	30	0.1	6.153	A
C-A	534			534			
A-B	58			58			
A-C	309			309			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	520	0.021	11	0.0	7.068	A
B-A	63	420	0.149	63	0.2	10.072	B
C-AB	30	615	0.049	30	0.1	6.155	A
C-A	534			534			
A-B	58			58			
A-C	309			309			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	9	538	0.017	9	0.0	6.804	A
B-A	51	454	0.113	51	0.1	8.958	A
C-AB	24	622	0.039	24	0.0	6.021	A
C-A	436			436			
A-B	48			48			
A-C	253			253			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	551	0.014	8	0.0	6.625	A
B-A	43	478	0.090	43	0.1	8.285	A
C-AB	20	629	0.032	20	0.0	5.913	A
C-A	366			366			
A-B	40			40			
A-C	212			212			

2020+Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.14	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.14	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2020+Dev	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A6045 Manchester Road (S)		✓	562	100.000
B - Site Access		✓	98	100.000
C - A6045 Manchester Road (N)		✓	315	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - A6045 Manchester Road (S)	B - Site Access	C - A6045 Manchester Road (N)
From	A - A6045 Manchester Road (S)	0	68	494
	B - Site Access	77	0	21
	C - A6045 Manchester Road (N)	308	7	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - A6045 Manchester Road (S)	B - Site Access	C - A6045 Manchester Road (N)
From	A - A6045 Manchester Road (S)	0	0	0
	B - Site Access	0	0	0
	C - A6045 Manchester Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.05	8.15	0.1	A
B-A	0.21	11.60	0.3	B
C-AB	0.01	6.86	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	16	515	0.031	16	0.0	7.202	A
B-A	58	459	0.126	57	0.1	8.948	A
C-AB	5	578	0.009	5	0.0	6.290	A
C-A	232			232			
A-B	51			51			
A-C	372			372			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	494	0.038	19	0.0	7.569	A
B-A	69	432	0.160	69	0.2	9.907	A
C-AB	6	559	0.011	6	0.0	6.517	A
C-A	277			277			
A-B	61			61			
A-C	444			444			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	465	0.050	23	0.1	8.143	A
B-A	85	395	0.215	84	0.3	11.583	B
C-AB	8	533	0.015	8	0.0	6.855	A
C-A	339			339			
A-B	75			75			
A-C	544			544			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	465	0.050	23	0.1	8.147	A
B-A	85	395	0.215	85	0.3	11.605	B
C-AB	8	533	0.015	8	0.0	6.855	A
C-A	339			339			
A-B	75			75			
A-C	544			544			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-C	19	494	0.038	19	0.0	7.577	A
B-A	69	432	0.160	70	0.2	9.933	A
C-AB	6	559	0.011	6	0.0	6.518	A
C-A	277			277			
A-B	61			61			
A-C	444			444			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	16	515	0.031	16	0.0	7.210	A
B-A	58	459	0.126	58	0.1	8.980	A
C-AB	5	578	0.009	5	0.0	6.290	A
C-A	232			232			
A-B	51			51			
A-C	372			372			

2038+Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.81	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.81	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2038+Dev	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A6045 Manchester Road (S)		✓	553	100.000
B - Site Access		✓	67	100.000
C - A6045 Manchester Road (N)		✓	608	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - A6045 Manchester Road (S)	B - Site Access	C - A6045 Manchester Road (N)
From	A - A6045 Manchester Road (S)	0	53	500
	B - Site Access	57	0	10
	C - A6045 Manchester Road (N)	582	26	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - A6045 Manchester Road (S)	B - Site Access	C - A6045 Manchester Road (N)
From	A - A6045 Manchester Road (S)	0	0	0
	B - Site Access	0	0	0
	C - A6045 Manchester Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.02	7.93	0.0	A
B-A	0.18	12.92	0.2	B
C-AB	0.05	6.74	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	514	0.015	7	0.0	7.103	A
B-A	43	424	0.101	42	0.1	9.429	A
C-AB	20	592	0.034	20	0.0	6.292	A
C-A	438			438			
A-B	40			40			
A-C	376			376			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	9	494	0.018	9	0.0	7.423	A
B-A	51	389	0.132	51	0.1	10.643	B
C-AB	24	579	0.042	24	0.0	6.484	A
C-A	522			522			
A-B	48			48			
A-C	449			449			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	465	0.024	11	0.0	7.929	A
B-A	63	341	0.184	62	0.2	12.898	B
C-AB	30	565	0.054	30	0.1	6.735	A
C-A	639			639			
A-B	58			58			
A-C	551			551			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	465	0.024	11	0.0	7.931	A
B-A	63	341	0.184	63	0.2	12.924	B
C-AB	30	565	0.054	30	0.1	6.738	A
C-A	639			639			
A-B	58			58			
A-C	551			551			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-C	9	494	0.018	9	0.0	7.426	A
B-A	51	389	0.132	52	0.2	10.670	B
C-AB	24	579	0.042	24	0.0	6.486	A
C-A	522			522			
A-B	48			48			
A-C	449			449			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	514	0.015	8	0.0	7.107	A
B-A	43	424	0.101	43	0.1	9.461	A
C-AB	20	592	0.034	20	0.0	6.295	A
C-A	438			438			
A-B	40			40			
A-C	376			376			

2038+Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.10	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.10	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2038+Dev	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A6045 Manchester Road (S)		✓	646	100.000
B - Site Access		✓	98	100.000
C - A6045 Manchester Road (N)		✓	373	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - A6045 Manchester Road (S)	B - Site Access	C - A6045 Manchester Road (N)
From	A - A6045 Manchester Road (S)	0	68	578
	B - Site Access	77	0	21
	C - A6045 Manchester Road (N)	366	7	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - A6045 Manchester Road (S)	B - Site Access	C - A6045 Manchester Road (N)
From	A - A6045 Manchester Road (S)	0	0	0
	B - Site Access	0	0	0
	C - A6045 Manchester Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.05	8.57	0.1	A
B-A	0.23	13.02	0.3	B
C-AB	0.02	7.15	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	16	501	0.032	16	0.0	7.417	A
B-A	58	436	0.133	57	0.2	9.491	A
C-AB	5	563	0.009	5	0.0	6.458	A
C-A	276			276			
A-B	51			51			
A-C	435			435			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	477	0.040	19	0.0	7.858	A
B-A	69	405	0.171	69	0.2	10.719	B
C-AB	6	541	0.012	6	0.0	6.732	A
C-A	329			329			
A-B	61			61			
A-C	520			520			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	443	0.052	23	0.1	8.567	A
B-A	85	361	0.235	84	0.3	12.987	B
C-AB	8	512	0.015	8	0.0	7.145	A
C-A	403			403			
A-B	75			75			
A-C	636			636			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	443	0.052	23	0.1	8.572	A
B-A	85	361	0.235	85	0.3	13.022	B
C-AB	8	512	0.015	8	0.0	7.148	A
C-A	403			403			
A-B	75			75			
A-C	636			636			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-C	19	477	0.040	19	0.0	7.865	A
B-A	69	405	0.171	70	0.2	10.756	B
C-AB	6	541	0.012	6	0.0	6.735	A
C-A	329			329			
A-B	61			61			
A-C	520			520			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	16	501	0.032	16	0.0	7.429	A
B-A	58	436	0.133	58	0.2	9.530	A
C-AB	5	563	0.009	5	0.0	6.458	A
C-A	276			276			
A-B	51			51			
A-C	435			435			

APPENDIX 10: 2020 'Do Something' (DS) and 2038 DS LinSig Modelling Results



APPENDIX TA15

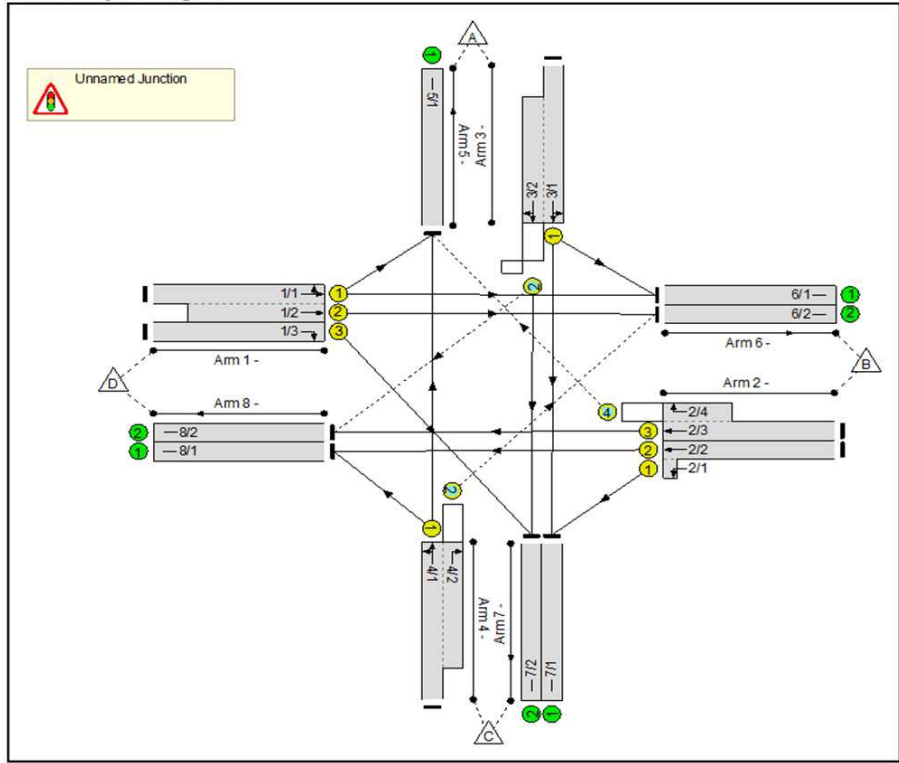
Appendix TA15(b) - Proposed New Link Road / Manchester Road LINSIG Assessment Results - 2020

Key

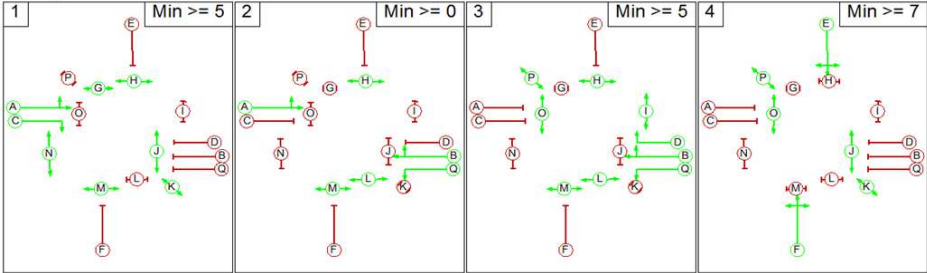
	0-89% DoS (within capacity conditions)
	90-99% DoS (variable operating conditions)
	100%+ DoS (over capacity conditions)

Proposed New Link Road / Manchester Road Junction			AM Peak			Inter Peak			PM Peak		
			2020 DS			2020 DS			2020 DS		
	Lane Description		Flow	Deg of Sat	MMQ	Flow	Deg of Sat	MMQ	Flow	Deg of Sat	MMQ
			-	53.50%	-	-	45.80%	-	-	67.70%	-
1/1+1/2	Link Road (w) Ahead Left		477	30.10%	4.5	433	30.60%	3.5	511	35.30%	5.1
1/3	Link Road (w) Right		67	26.90%	1.7	63	20.20%	1.2	86	34.50%	2.2
2/2+2/1	Link Road (e) Ahead Left		327	47.70%	6.6	238	41.10%	4	386	62.50%	8.8
2/3+2/4	Link Road (e) Ahead Right		415	53.50%	7.5	290	44.60%	4.7	478	67.70%	10.2
3/1+3/2	Manchester Road (n) Ahead Left Right		486	50.70%	5.7	211	27.60%	1.9	308	32.70%	3.3
4/1+4/2	Heywood Old Road (s) Ahead Left Right		318	50.20%	6.1	264	45.80%	3.9	446	66.30%	9.4
Junction PRC			68.4%			96.5%			32.9%		

Network Layout Diagram



Stage Diagram
Stage Stream: 1





APPENDIX TA21

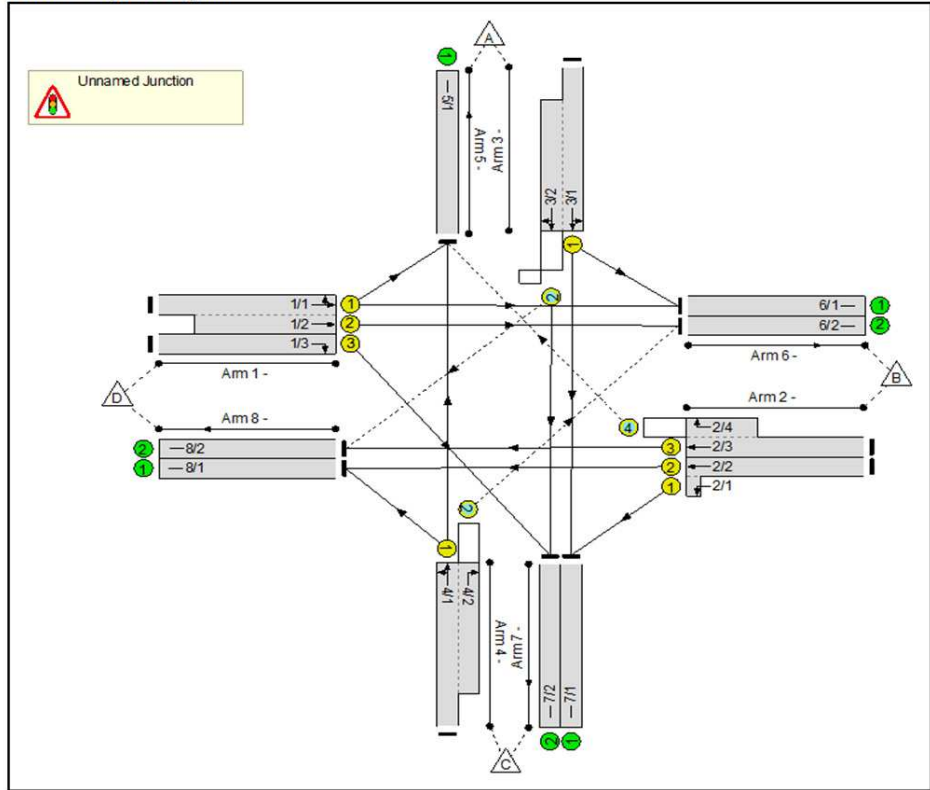
Appendix TA21(b) - Proposed New Link Road / Manchester Road LINSIG Assessment Results - 2038

Key

	0-89% DoS (within capacity conditions)
	90-99% DoS (variable operating conditions)
	100%+ DoS (over capacity conditions)

Proposed New Link Road / Manchester Road Junction		AM Peak			Inter Peak			PM Peak		
		2038 DS			2038 DS			2038 DS		
		Flow	Deg of Sat	MMQ	Flow	Deg of Sat	MMQ	Flow	Deg of Sat	MMQ
1/1+1/2	Link Road (w) Ahead Left	1018	60.80%	11	827	54.10%	7.3	932	54.30%	9.6
1/3	Link Road (w) Right	65	26.10%	1.6	104	33.40%	2.1	99	39.70%	2.6
2/2+2/1	Link Road (e) Ahead Left	555	76.30%	13.6	389	61.40%	7.1	572	76.30%	13.8
2/3+2/4	Link Road (e) Ahead Right	665	80.10%	15.2	497	67.30%	8.3	696	80.70%	15.7
3/1+3/2	Manchester Road (n) Ahead Left Right	582	74.90%	8	320	55.00%	3.3	366	62.70%	4.9
4/1+4/2	Heywood Old Road (s) Ahead Left Right	395	65.90%	8.2	328	65.10%	5.6	467	81.90%	11.5
Junction PRC		12.3%			33.7%			9.8%		

Network Layout Diagram



Stage Diagram
Stage Stream: 1

