

SITE CODE 23127-03
 LOCATION ATC03 - B1256 Dunmow Rd, Stansted
 LOC. DESC. 125m E of j/w Bedlars Green Rd / Esso garage
 START DATE Tue 25 Apr, 2023
 END DATE Mon 01 May, 2023
 SPEED LIMIT 40mph
 SURVEY TYPE 7-day ATC, 15min periods, 10 veh. classes

7-DAY AUTOMATIC TRAFFIC COUNT

A 7-day automatic traffic count on B1256 Dunmow Rd, Stansted, commencing Tue 25 Apr 2023, recorded a total of 57,925 vehicles. The posted speed limit of 40mph was exceeded by 33.9% of vehicles, and the seasonally adjusted, combined AADT value is 8,402 (see 'Equipment & methodology' below).

SUMMARY

COMBINED EAST- & WESTBOUND

Total recorded volume	57,925
Avg daily volume (based on 7 days)	8,275.0
Average daily speed (7 days)	33.9mph
Average daily 85%ile (7 days)	39.7mph
AAOT (annual average daily traffic)	8,402
Avg weekday volume (Mon-Fri, 24hrs)	9,438.4
Avg weekday speed (Mon-Fri, 24hrs)	34.0mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	7,549.0
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	33.2mph

The combined summary on the left shows the total volumes, average speeds, AADT and 85%iles recorded in both directions from all the recorded data, plus the Mon-Fri peak periods. Speeding vehicles are defined as those travelling 41mph and above.

The summaries below provide directionalised details including speeding percentages and weekday daytime details.

EASTBOUND

Total recorded volume	27,977
Avg daily volume (based on 7 days)	3,996.7
Average daily speed (7 days)	35.6mph
Average daily 85%ile (7 days)	40.8mph
% of vehicles exceeding 40mph	17.9%
Avg weekday volume (Mon-Fri, 24hrs)	4,647.6
Avg weekday speed (Mon-Fri, 24hrs)	35.6mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	3,660.4
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	35.1mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	40.0mph
AM avg peak vol period (Mon-Fri)	08:45 to 09:00
PM avg peak vol period (Mon-Fri)	16:15 to 16:30

WESTBOUND

Total recorded volume	29,948
Avg daily volume (based on 7 days)	4,278.3
Average daily speed (7 days)	32.2mph
Average daily 85%ile (7 days)	38.6mph
% of vehicles exceeding 40mph	9.9%
Avg weekday volume (Mon-Fri, 24hrs)	4,787.8
Avg weekday speed (Mon-Fri, 24hrs)	32.4mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	3,588.6
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	31.4mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	37.3mph
AM avg peak vol period (Mon-Fri)	07:30 to 07:45
PM avg peak vol period (Mon-Fri)	17:00 to 17:15

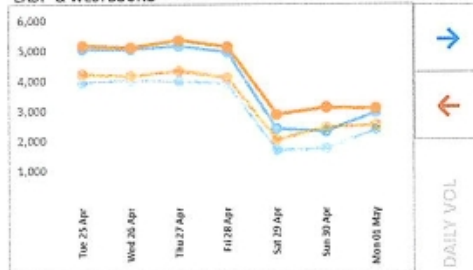
SITE LOCATION



LOCATION B1256 Dunmow Rd, Stansted
 DESC. 125m E of j/w Bedlars Green Rd / Esso garage
 DATES Tue 25 Apr to Mon 01 May Inc.
 OSGR 551952, 221465
 LAI / LMG 51, 871065, 0205750
 POST CODE CM22 7TA
 PSL 40mph
 BUS ROUTE Yes
 DIRECTION 1 → Eastbound
 DIRECTION 2 ← Westbound

DAILY VOLUMES

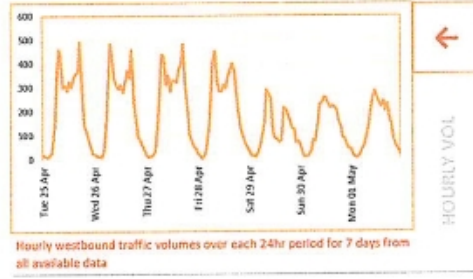
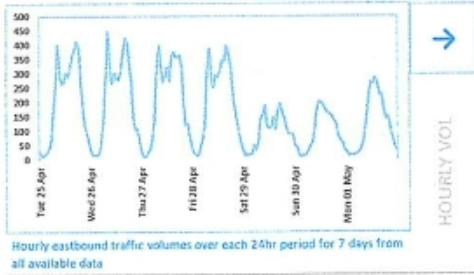
EAST- & WESTBOUND



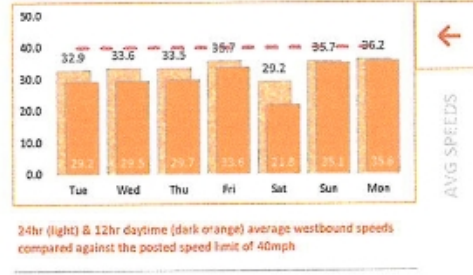
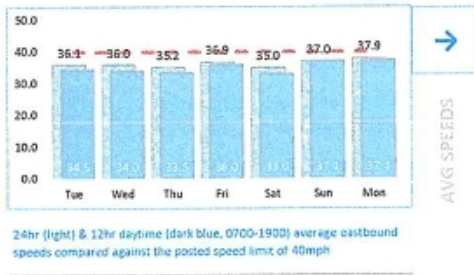
Total 24hr eastbound (solid, dark blue) and westbound (solid, dark orange) traffic volumes, with light blue and orange representing 12hr volumes (0700-1900), over 7 consecutive days from all available data.

Unusually, the lowest volumes were NOT recorded on a Sunday but on the Saturday, whilst the highest was on the Thursday.

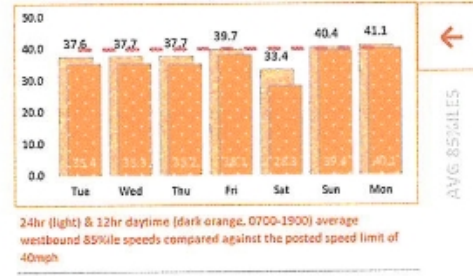
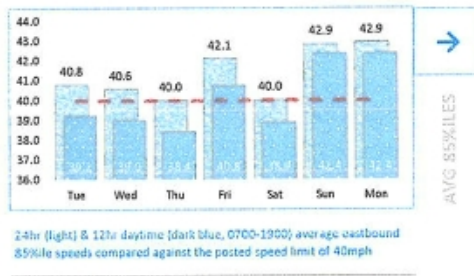
HOURLY VOLUMES



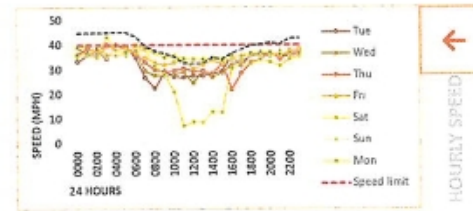
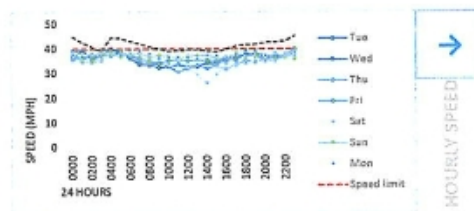
24hr & 12hr AVG SPEEDS



24hr & 12hr 85%ile SPEEDS



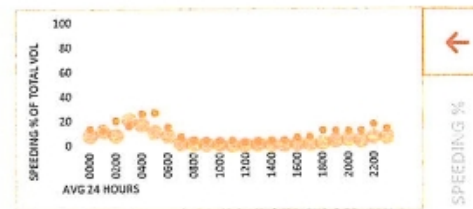
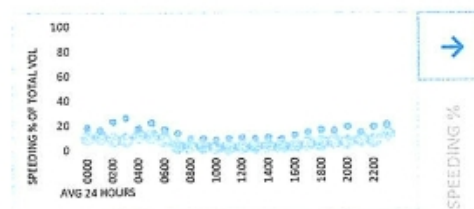
HOURLY SPEEDS



Average hourly speeds (solid thin colours) and 85%ile (dashed black) compared against 40mph posted speed limit (dashed red). The 85%ile is the speed at which 85% of all vehicles are observed to travel under free flowing conditions. A minimum of ten vehicles per speed bin is required for this calculation, hence the overnight low-volume 85%ile values may be zero.

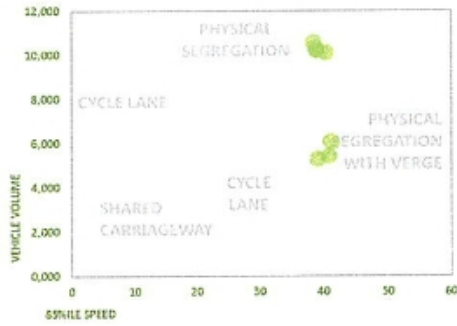
The peak eastbound daytime speed was 41.4mph at 18:00 on Mon 01 May, whilst the peak westbound speed was 40.9mph at 07:30 on Sun 30 Apr (based on 15min averages between 0700 & 1900).

SPEEDING % EXCEEDING 40mph



7-day average percentages of vehicles exceeding the posted speed limit each hour. The small, darker dots represent the percentage travelling between 40 and 45mph, whilst the larger markers represent those at 46mph and above. A high proportion of larger dots may indicate a potential speeding issue.

CYCLE PROVISION



The cycle provision diagram compares total daily traffic flow (vertical axis) against the average daily 85th percentile speed (horizontal axis) to demonstrate cyclist and vulnerable user considerations.

The guidelines are based on the Sustrans Design Manual (Apr 2014); Understanding User Needs, part 2.

Valid 85th Percentiles are required to plot the graph.

5-DAY AVERAGE CLASSES

EASTBOUND WEEKDAY AVG

TIME	MOTOR CYCLES	CARS / LGV1	LGV2 / MGV	HGV RIGID	HGV ARTIC'D	TOTAL
0000	0.2	26.2	2.6	0.2	0.0	29.2
0100	0.2	15.0	1.2	0.0	0.0	16.4
0200	0.0	14.4	2.6	0.0	0.6	17.6
0300	0.0	17.6	2.0	0.6	1.0	21.2
0400	0.0	26.8	4.8	2.0	1.6	35.2
0500	0.2	60.8	5.0	1.2	1.0	68.2
0600	2.0	99.0	9.6	1.8	1.6	114.0
0700	1.4	223.4	15.6	4.2	2.8	247.4
0800	5.4	303.6	23.2	6.8	2.2	341.2
0900	2.0	240.8	25.2	5.2	4.4	277.6
1000	1.0	212.2	29.4	10.4	2.4	255.4
1100	2.2	239.8	32.2	7.8	3.4	285.4
1200	3.8	251.0	28.0	6.4	2.8	292.0
1300	3.0	242.8	30.8	9.4	1.8	287.8
1400	2.4	275.6	28.8	10.0	3.2	320.0
1500	1.4	296.6	26.4	9.0	3.4	326.8
1600	2.6	328.8	24.6	1.2	1.8	359.0
1700	2.4	326.2	15.2	1.0	1.0	345.8
1800	1.0	294.6	14.6	0.2	1.6	312.0
1900	1.2	240.4	13.0	0.6	1.2	256.4
2000	1.0	149.8	11.0	0.0	0.4	162.2
2100	1.2	107.8	4.4	0.2	0.6	114.2
2200	0.6	88.8	5.0	0.2	0.4	95.0
2300	0.0	55.0	2.8	0.2	0.6	58.6
12hr TTL	28.6	3235.4	294.0	71.6	30.8	3660.4
24hr TTL	35.2	4137.0	358.0	78.6	39.8	4648.6
	1%	89%	8%	2%	1%	

WESTBOUND WEEKDAY AVG

TIME	MOTOR CYCLES	CARS / LGV1	LGV2 / MGV	HGV RIGID	HGV ARTIC'D	TOTAL
0000	0.0	21.0	3.8	0.0	0.2	25.0
0100	0.0	12.6	2.0	0.2	0.0	14.8
0200	0.0	8.2	2.2	0.0	0.4	10.8
0300	0.0	12.4	1.8	0.0	1.0	15.2
0400	0.0	27.8	6.0	0.4	1.0	35.2
0500	0.6	94.0	15.0	0.0	1.4	111.0
0600	1.4	199.0	22.8	5.2	5.6	234.0
0700	1.6	331.6	36.6	3.6	2.8	376.2
0800	2.0	337.8	30.6	2.8	3.2	376.4
0900	1.0	253.0	31.8	7.0	2.8	295.6
1000	2.4	258.0	32.0	5.0	4.8	302.2
1100	2.2	243.8	33.2	5.6	2.6	288.8
1200	2.0	266.0	31.0	5.4	3.6	308.0
1300	4.0	244.6	29.4	8.8	2.6	289.4
1400	4.0	263.4	32.4	9.0	2.2	311.0
1500	1.8	307.2	25.4	8.6	1.0	344.0
1600	2.0	317.2	17.6	4.0	1.6	342.4
1700	5.2	384.0	15.6	0.8	1.0	406.6
1800	2.2	233.8	13.0	0.2	0.8	250.0
1900	2.0	160.8	7.8	0.2	1.0	171.8
2000	0.8	95.8	7.8	0.2	1.6	106.2
2100	0.8	75.8	5.2	0.0	0.6	82.4
2200	0.6	51.8	3.8	0.4	0.6	56.6
2300	0.0	32.8	4.4	0.4	0.6	38.2
12hr TTL	30.4	3440.4	328.6	60.8	28.4	3888.6
24hr TTL	36.6	4232.4	411.2	67.8	41.8	4789.8
	1%	85%	9%	1%	1%	

Average weekday eastbound and westbound volumes by class (condensed to the AQMA scheme), including 12hr totals for 0700-1900 and overall average percentages. Calculated from all available data over 5 weekdays. See 'Equipment & Methodology' below for accuracy details.

METHODOLOGY

Equipment & methodology

Automatic traffic counts are undertaken using a pair of pneumatic tubes installed securely across the carriageway, one metre apart, recording air pulses to determine vehicle speed, class and volume. The ATC equipment generally remains in place for a consecutive seven day period, and the data analysed post-survey.

In queuing conditions, the accuracy of ATC recording equipment may reduce as follows:

- 20 – 30mph: potential reduction of 9% accuracy in volume values
- 10 – 20mph: potential reduction of 26% accuracy in volume values
- 00 – 10mph: potential reduction of 39% accuracy in volume values

These figures are based on multiple ATC results compared against accepted reference values from resident manual counts.

Weather & environmental

Incident conditions during winter months or outbreaks of unseasonable weather may affect survey data collection. This can result in distorted traffic flows or unusable data and should be considered prior to survey approval. Although forecast checks are made prior to the survey commencing, Essex Highways cannot be held responsible for the forecast accuracy.

Equipment damage, failure & calculations

Although checked intermittently the equipment remains unattended for much of the duration of the survey, and can potentially be interfered with, vandalised, damaged or stolen and Essex Highways cannot be held responsible for any periods where data has not been captured.

The equipment is located in accordance with the details provided by the client and Essex Highways cannot be held responsible for the accuracy of the data or loss of equipment due to theft and vandalism.

16hr AADTs are calculated using the seasonal COBA methodology; DMRB Vol. 13, Pt 4; Traffic Flow Input to COBA, with formulae available in the (hidden) config worksheet.

Roadworks & events

Where possible, roadworks checks are made 10 days before, and 48 hours before, the survey commences. Additionally, influencing major local events are also monitored, covering the immediate vicinity of the surveys and any routes likely to affect the outcome of the survey.

CLASS	ABBREVIATION	DESCRIPTION	AXLES	LENGTH	COBA	AQMA	MANUAL
1	MC	Motorcycle	2	Up to 1.7m	N/A	MC	MC
2	SV	Cars, taxis, 4WD, vans	2	1.7 to 3.2m	CAR & LGV	CAR	CAR & LGV1
3	SVT	Class 2 plus trailer	3, 4 or 5	2.1 to 3.2m	CAR & LGV	CAR	CAR & LGV1
4	TB2	Truck / bus	2	3.2m+	LGV & PSV	LGV & MGV	LGV2 / PSV
5	TB3	Truck / bus	3		OKRT	LGV & MGV	MGV / PSV
6	T4	Rigid	4		HGV RIGID	HGV1	HGV1
7	ART3	Articulated	3		HGV RIGID	HGV1	HGV1
8	ART4	Articulated	4		HGV RIGID	HGV1	HGV1
9	ART5	Articulated	5		HGV RIGID	HGV1	HGV1
10	ART6	Articulated	6+	HGV RIGID	HGV1	HGV1	

Vehicle classifications

Vehicles recorded by the ATC are placed into one of ten classes (bins) based on axle spacing and pattern. This scheme is based on the AustRoad 94 algorithm and modified for UK traffic, referred to as ARX. The table on the left aligns the ARX classifications with the COBA Chapter 8 (Vol 13, Sec 1) classifications, AQMA (air quality management standard) and the Essex 9-class, as used in manual junction counts undertaken by Essex Highways.

Under adverse conditions the accuracy of ATC classifications will deteriorate and an appropriate link count should be used for validation.

Disclaimer

Although every attempt is made to achieve accuracy, neither Essex County Council nor Essex Highways may be held liable for errors of fact or interpretation.

