

## Analysis of 2021 traffic surveys in Charing

This note reports on:

- i) A video survey of the A20/Station Road/High Street crossroads carried out by KCC Highways in September 2021
- ii) The pneumatic tube (ATC) surveys carried out for Charing Parish Council at the beginning of November 2021
- iii) Growth of traffic along Pluckley and Station Roads comparing results from these surveys with ones carried out in earlier years.

### i) Cross roads survey

The survey was carried out from Thursday September 9<sup>th</sup> to Wednesday 15<sup>th</sup>. Vehicles were recorded by 15 minute bins, which arm of the junction they came from and went to, and by 7 categories: cars; vans; 2-3 axle heavy vehicles; 4 or more axle heavy vehicles; buses; motorbikes; cycles. Unlike pneumatic tube surveys, where larger two-axle vans and two axle HGVs cannot typically be distinguished, the video survey enables this distinction to be made so that HGVs can be analysed as a category.

For the purposes of this initial analysis I have looked at daily or weekly totals and used three categories: cars and vans; heavy vehicles (inc buses of which there were very few); motorbikes and cycles. Obviously further analyses can be done if needed.

During this week just over 97,000 vehicles used the crossroads. Of these 93% were cars and vans, 5.3% were heavy vehicles and 1.7% were motorbikes and cycles. Not surprisingly weekdays were busier than weekends but there was also a change of types of vehicle. Weekends saw far fewer heavy vehicles and more motor bikes and cyclists (particularly on Sunday).

<b>Totals</b>	All vehicles	Light vehicles	Heavy vehicles	Mbks, Cycles	% heavy	% mbks & Cycls
<b>Thursday</b>	14,735	13,541	967	227	6.6	1.5
<b>Friday</b>	16,546	15,313	1,104	129	6.7	0.8
<b>Saturday</b>	11,769	11,199	262	308	2.2	2.6
<b>Sunday</b>	9,617	8,934	178	505	1.9	5.3
<b>Monday</b>	14,359	13,389	808	162	5.6	1.1
<b>Tuesday</b>	14,813	13,844	886	83	6.0	0.6
<b>Wednesday</b>	15,224	14,084	913	227	6.0	1.5
<b>Total</b>	97,084	90,308	5,118	1,641	5.3	1.7
<b>% by category</b>		93.0	5.3	1.7		

### Analysis by direction

The tables overleaf show daily averages of vehicles travelling to and from each arm according to where they were going to or coming from. 57% of cars and vans, 64% of heavy vehicles and 18% of bikes and cyclists travelled straight along the A20. However 27% of both cars and heavy vehicles turned into Station Road from the Maidstone direction or vice versa. 10% of cars and 7% of heavy vehicles turned into Station Road from the Ashford direction or vice versa. Nearly 40% of all vehicles

using the crossroads are entering or leaving Station Road. As expected flows into and out of the High Street are very light with very few heavy vehicles and most coming from/going to Station Road.

### Daily averages








Vehicles exiting High Street						Vehicles entering High Street					
Number	Total	Light vehicles	Heavy vehicles	Cyc& MB	% heavy vehicles		Total	Light vehicles	Heavy vehicles	Cyc& MB	% heavy vehicles
All Directions	368	345	9	13	2.6	From everywhere	457	439	6	12	1.3
Turning left (to Ashford)	84	80	2	2	2.4	From Ashford	100	98	1	1	1.3
Straight on (Station Rd)	216	201	5	10	2.4	From Station Road	253	241	3	9	1.1
Turning right (to Mdst)	67	63	2	1	3.4	From Maidstone	104	100	2	2	1.6
U-turn	1	1									
Vehicles coming from Ashford						Vehicles travelling to Ashford					
	Total	Light vehicles	Heavy vehicles	Cyc& MB	% heavy vehicles		Total	Light vehicles	Heavy vehicles	Cyc& MB	% heavy vehicles
All directions	4,804	4,448	273	82	5.7	From everywhere	4,658	4,325	246	87	5.3
To High Street	100	98	1	1	1.3	From High Street	84	80	2	2	2.4
To Station Road	684	655	24	6	3.4	From Station Road	620	588	25	7	4.0
Straight on	4,019	3,695	249	75	6.2	From Maidstone	3,954	3,657	219	78	5.5
U turn	0	0	0	0							
Vehicles coming from Station Road						Vehicles entering Station Road					
	Total	Light vehicles	Heavy vehicles	Cyc& MB	% heavy vehicles		Total	Light vehicles	Heavy vehicles	Cyc& MB	% heavy vehicles
All directions	2,787	2,621	130	36	4.7	From everywhere	2,747	2,583	126	39	4.6
To High Street	253	241	3	9	1.1	From High Street	684	655	24	6	3.4
Turning Rt (To Ashfd)	620	588	25	7	4.0	From Ashford	684	655	24	6	3.4
Turnng Lft (To Mdst)	1,914	1,791	102	21	5.3	From Maidstone	1,846	1,727	97	22	5.3
U-turn	0										
Vehicles coming from Maidstone						Vehicles travelling to Maidstone					
	Total	Light vehicles	Heavy vehicles	Cyc& MB	% heavy vehicles		Total	Light vehicles	Heavy vehicles	Cyc& MB	% heavy vehicles
All directions	5,906	5,486	318	103	5.4	From everywhere	6,000	5,550	353	97	5.9
Turning lft to H Street	104	100	2	2	1.6	From High Street	67	63	2	1	3.4
Straight on (To Ashfd)	3,954	3,657	219	78	5.5	From Ashford	4,019	3,695	249	75	6.2
Turning Rt (Station Rd)	1,846	1,727	97	22	5.3	From Station Road	1,914	1,791	102	21	5.3
U-turn	2	2	0	0	0.0						

Tiotal Vehicles		Number				% of total by direction			
		Total	Light vehicles	Heavy vehicles	Cyc& MB	Total	Light vehicles	Heavy vehicles	Cyc& MB
Total		13,866	12,900	731	234				
From A20 Ashford		4,804	4,448	273	82	34.6	34.5	37.4	35.1
From A20 Maidstone		5,906	5,486	318	103	42.6	42.5	43.5	43.8
From Station Road		2,787	2,621	130	36	20.1	20.3	17.8	15.4
From High Street		368	345	9	13	2.7	2.7	1.3	5.7
of which									
A20 not turning		7,973	7,352	468	153	57.5	57.0	64.0	65.3
Maidstone/Station		3,761	3,518	199	43	27.1	27.3	27.3	18.4
Ashford/Station		1,304	1,243	48	12	9.4	9.6	6.6	5.3
High Street/Station		469	442	8	19	3.4	3.4	1.1	8.2
Other		359	344	7	7	2.6	2.7	1.0	2.8

## ii) November Surveys

These were carried out for the week Monday 1<sup>st</sup> November to Sunday 7<sup>th</sup> November at a number of locations in the Parish where road problems were known or suspected. The aim was to assess where further actions to improve traffic management might be needed including where action feasible for the parish council to fund such as gates, road markings or vehicle activated speed reminders could be installed.

The following summary table was prepared by KCC Highways.

Charing Traffic Surveys 2021 (Summary Sheet)										
Survey document Ref:	Location	Site photograph	Posted Speed Limit	85th Percentile speeds	Percentage of vehicles recorded in excess of ACPO guide (Speed limit + 10% of limit +2MPH)	Total number of pedal cycles	Total number of Powered 2 Wheelers	Total number of cars/vans	Total number of LGV, HGV & PCV vehicles (combined)	Total number of all vehicles surveyed
EAST2021-62-A	Faversham Road East. 100m before Monkerly Lane.		Ø	44.8	0.03%	36	144	15407	2208	17795
EAST2021-62-B	Faversham Road West, Opp Little Impkin.		40	42.1	approx 5%	57	135	17036	2282	19510
EAST2021-62-C	The Hill Outside Old Hill Lodge		30	36.58	21.35%	48	52	5111	551	5762
EAST2021-62-D	Pluckley Road. Outside Century House.		30	41.2	49.14%	102	265	31371	4338	36076
EAST2021-62-E	Tile Lodge Road. Opposite Warren Houses		30	33.1	6.33%	43	18	8208	724	8993
EAST2021-62-F	Church Hill. Opp Hill View.		30	38.7	31.07%	67	20	3262	436	3785
EAST2021-63-G	Egerton Road. Near Wisteria House		30	37.7	27.48%	80	27	3899	419	4425

Notes to table: 85<sup>th</sup> percentile means that 85% of drivers drove below this speed and 15% higher. ACPO is the speed above which the Association of Chief Police Officers recommend issuing a fixed penalty notice or a recommendation for speed awareness courses. That is a 5% margin plus 2mph to allow for speedometers and machines not being entirely accurate. The ACPO cannot be calculated exactly for Faversham Road West since the company mistakenly thought it was subject to the national speed limit, and the ACPO limit of 46 mph does not coincide with the dividing line between the recorded speed bins.

### **General comments:**

It is noticeable that in all cases Monday traffic was significantly higher than on other weekdays. This has not been shown in earlier surveys. Possibly connected with Monday being the first day back after schools' half-term? Other reasons?

Weekdays generally showed morning and evening peaks, as would be expected. Weekend traffic was heaviest around the middle of the day.

Results of these surveys are provided by class of vehicle. However, the pneumatic counters are unable to distinguish between larger vans and two axle HGVs. We may be able to get an additional analysis to help with this.

### **Faversham Road**

Issues: There are periodic complaints from residents about the speed of traffic and amount of heavy vehicles. Coming from Charing the first section is subject to a 40mph speed limit but the rest of the road is only subject overall to the national speed limit although there are stretches where it is bendy and not particularly wide. However, leaving aside the junction with the A252, there have been only 5 injury accidents recorded in the past 5 years along the whole stretch of the road (not all of which is in Charing Parish), albeit one (in Throwley Parish) with a fatality. It does not meet the criteria where KCC are obliged to intervene.

Two surveys were carried out. One (Faversham Road East - near Monkery Lane) was at a place close to where some of the injury accidents and a number of non-injury accidents occurred and where the national speed limit applies. The other (Faversham Road West), carried out for comparison, was in a place where the road is clearer and the 40mph limit applies.

There was limited difference between the two sets of results although the Western spot had a higher level of traffic. The vast majority of drivers seem to be driving at a reasonable speed but speeds were slightly, but noticeably, higher in Faversham Road East where the national limit applies.

	Speed limit	No. of vehicles in the week	Average speed	85 <sup>th</sup> percentile	95 <sup>th</sup> percentile
Fav Rd West	40	19,510	37.12	42.10	45.80
Fav Rd East	60	17,795	39.25	44.80	48.70

### **The Hill**

There are concerns about speeding especially with fast traffic turning left into the road from the A252. A further issue is whether there is any evidence suggesting that cars are cutting through Charing.

The results do suggest that a significant proportion of drivers exceed both the speed and ACPO limits. The 95<sup>th</sup> percentile speed was 41.50. Not surprisingly, there was more evidence of speeding among those travelling south, having come from the A252, than those travelling north – the percentages exceeding the ACPO limit being 26.6% and 14.6% respectively. 3,200 cars travelled south during the week and 2,562 travelled north.

The weekday morning and evening peaks are far less noticeable than on the other surveys.

### ***Pluckley Road***

Issues here are the volume of traffic, the number of HGVs and wide vehicles and speed. Earlier surveys have confirmed these issues. The site chosen was in the middle of the straight bit where speeds are likely to be highest.

Speeds are indeed high with 82% of vehicles exceeding the speed limit and nearly 50% of vehicles exceeding the ACPO limit. The 95<sup>th</sup> percentile speed was 45.3 and 18% exceeded 40mph. A clear need to attempt to reduce speeds given that this is a residential road with a pavement on one side only. The number of vehicles is also high. See below for more.

### ***Tile Lodge Road***

There are particular concerns over speeding with school taxis frequently cited. However the data provides only limited supporting evidence. Compliance, at least at the survey point, seems generally good with only 6.3% exceeding the ACPO limit and a 95<sup>th</sup> percentile of 36.1mph. There were small clusters of vehicles travelling between 41 and 45 mph during the morning and evening peaks but only 8 cars exceeded 45mph. Average and 85<sup>th</sup> percentile speeds were 1-2 mph less than in the January 2019 survey carried out before the 30mph limits were introduced.

It is noticeable though that the road carries more traffic than the two other roads surveyed in Charing Heath. There is also noticeably more traffic than that recorded in the earlier, January 2019, survey – 8,993 vehicles over the week compared to 7,038, a 28% increase. However since January is a month with below average traffic flows part of this growth will be due to seasonal factors.

### ***Church Hill and Egerton Road***

Concerns in both cases were speeding. Average speeds are only just over the speed limits (31.8 mph for Church Hill and 31.4 for Egerton Road). However, these roads have a significant proportion of vehicles exceeding the ACPO limit with 85<sup>th</sup> percentiles at 38.7 and 37.7 respectively and 95<sup>th</sup> percentiles at 43.5 and 41.1.

The number of vehicles was again higher than in January 2019: for Church Hill an increase of 16% (3,785 compared to 3,252) but a substantial 37.5% increase for Egerton Road (4,425 compared to 3,218). But note comment on seasonality above. Speeds cannot be compared since the surveys were carried out at different places on the roads.

### **iii) Growth of traffic along Pluckley/Station Road and proportion of HGVs.**

The new figures can be compared with earlier surveys for Pluckley Road to show the growth in traffic. Average daily traffic was as follows:

March 2012: 4,101 (Survey for Biogas application)

October 2017: 4,649 (CPC survey in connection with Gladman application)

December 2017: 4,372 (ABC survey in connection with Gladman application)

January 2018: 4,039 (Survey for Gladman)

September 2021: 5,534 (Vehicles entering or leaving Station Rd: KCC video survey; some would go to/come from destinations before Pluckley Road)

November 2021: 5,153 (CPC survey)

Note that traffic flows are seasonal. For preference surveys should take place during the school term and not in winter months. The October 2017 survey is therefore to be preferred over the December 2017 and January 2018 ones.

Between March 2012 and November 2021, there was a 26% growth in the number of vehicles travelling along Pluckley Road. As a comparison, road traffic in Kent increased by just over 10% between 2012 and 2019 according to the Department for Transport, from 8,965 to 9,883 million vehicle miles. (Annual data for 2020-2022 are still affected by Covid and its aftermath.)

The earlier surveys were carried out at a different place (typically closer to the proposed entrance to the Gladman site) where speeds are naturally lower due to the bends. For reference in the October 2017 survey, the mean speed was just over 30 and the % exceeding the ACPO limit was 18.8% northbound and 26.8% southbound.

As mentioned above, in a typical pneumatic tube survey large vans cannot be distinguished from two-axle HGVs – the category contains two axle vehicles with an inter-axle length of 3.2 metres or more. In 2018 Colin Burns was able to get informal advice from the Head of Surveys at the Department of Transport who advised that up to an inter-axle length of around 3.8 metres vans would be more common than HGVs while above this the opposite applies. Based on this the October 2017 survey was re-run by the company splitting the category into inter-axle lengths of up to 3.75 metres (the closest possible to 3.8) and those above this length. Based on this the proportion of HGVs was just over 5%<sup>1</sup>. This is very heavy for a supposedly “minor” road and comparable with many A roads.

Since it was a video survey the crossroads survey above gives an accurate count of HGVs and other vehicles turning into and emerging from Station Roads. HGVs accounted for 4.6% of all traffic using Station Road. However a proportion of lighter vehicles will be going to or coming from the area between the A20 and the Railway Bridge which includes the Surgery and Station as well as a number of houses. Since there is no obvious destination or point of origin for heavy vehicles between the A20 and the Railway Bridge, it is a safe assumption that virtually all the heavy vehicles will travel down Pluckley Road while fewer light vehicles will do so. These figures are therefore broadly consistent with an HGV proportion of 5% for Pluckley Road.

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03/11/2023

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<sup>1</sup> A full explanation is available in the Note by Colin Burns prepared for the Gladman appeal in April 2018.