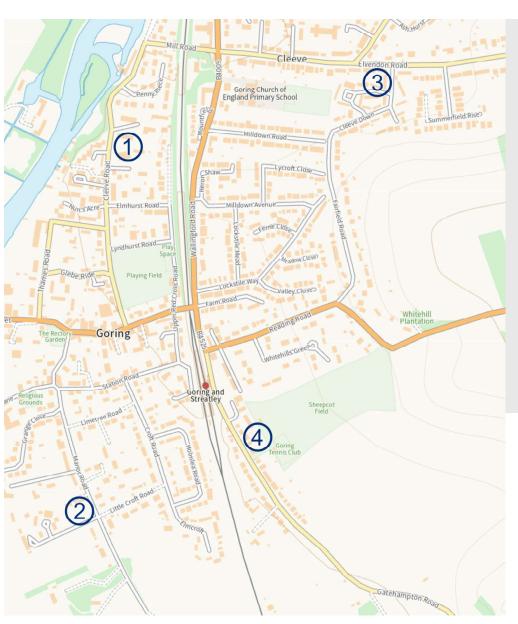
# Speed and vehicle data — sensor locations



Sensors were placed in four places

- 1. Cleeve Road top of slope
- 2. Manor Road by hedgehog sign
- 3. Elvendon Rd near Cleeve Down
- 4. Gatehampton Rd top of slope

Sensors recorded from Sun 1 Dec until Mon 9 Dec

Four detailed (and rather complicated) spreadsheets are available.

This deck presents a simpler view, based on raw data extracted from all four spreadsheets.

Toby Thurston – 20 December 2024

### **Metrocount sensors**



- Sensors connect to two rubber tubes
   A and B spaced 1m apart
- Boxes detect changes in air pressure when vehicles cross the tubes
- From this they calculate: type of vehicle, number of axles, speed, and direction
- Data is summarized into 15 minute "bins"
- Elvendon Rd "B tube" broke on last day





# Total vehicle counts (and percentages)

Road	Dir	Cycle	M/C	Car	LGV	Rig2	Rig3	Rig4	Art3	Art4	Art5+	Bus	Total
Cleeve Road	S->N	27	38	1411	306	42	0	0	0	0	0	0	1824
Cleeve Road	N->S	22	18	1951	281	47	1	1	0	0	0	0	2321
Manor Road	S->N	5	3	1237	227	35	7	0	1	0	1	1	1517
Manor Road	N->S	27	3	1162	176	33	9	0	0	0	1	0	1411
Elvendon Road	W->E	24	14	2961	627	117	4	3	8	0	0	0	3758
Elvendon Road	E->W	24	22	2900	726	110	2	2	6	0	0	0	3792
Gatehampton Road	S->N	28	30	1782	652	106	0	1	6	0	0	2	2607
Gatehampton Road	N->S	35	24	1681	713	110	1	0	7	0	1	4	2576
Total	Total	192	152	15085	3708	600	24	7	28	0	3	7	19806
Road	Dir	Cycle	M/C	Car	LGV	Rig2	Rig3	Rig4	Art3	Art4	Art5+	Bus	Total
Road Cleeve Road	Dir S->N	Cycle 1	M/C 2	Car 77	LGV 17	Rig2	Rig3	Rig4	Art3	Art4	Art5+	Bus 0	Total
		-				_	_						
Cleeve Road	S->N	1	2	77	17	2	0	0	0	0	0	0	100
Cleeve Road Cleeve Road	S->N N->S	1	2	77 84	17 12	2	0	0	0	0	0	0	100
Cleeve Road Cleeve Road Manor Road	S->N N->S S->N	1 1 0	2 1 0	77 84 82	17 12 15	2 2 2	<ul><li>Ø</li><li>Ø</li><li>Ø</li></ul>	0 0	<ul><li>Ø</li><li>Ø</li><li>Ø</li></ul>	<ul><li>Ø</li><li>Ø</li><li>Ø</li></ul>	<ul><li>Ø</li><li>Ø</li><li>Ø</li></ul>	<ul><li>Ø</li><li>Ø</li><li>Ø</li></ul>	100 100 100
Cleeve Road Cleeve Road Manor Road Manor Road	S->N N->S S->N N->S	1 1 0 2	2 1 0 0	77 84 82 82	17 12 15 12	2 2 2	0 0 0 1	<ul><li>0</li><li>0</li><li>0</li><li>0</li></ul>	<ul><li>0</li><li>0</li><li>0</li><li>0</li></ul>	<ul><li>0</li><li>0</li><li>0</li><li>0</li></ul>	<ul><li>0</li><li>0</li><li>0</li><li>0</li></ul>	<ul><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li></ul>	100 100 100 100
Cleeve Road Cleeve Road Manor Road Manor Road Elvendon Road	S->N N->S S->N N->S W->E	1 1 0 2	2 1 0 0	77 84 82 82 79	17 12 15 12 17	2 2 2 3	0 0 0 1	<ul><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li></ul>	<ul><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li></ul>	<ul><li>0</li><li>0</li><li>0</li><li>0</li><li>0</li></ul>	<ul><li>0</li><li>0</li><li>0</li><li>0</li><li>0</li></ul>	<ul><li>0</li><li>0</li><li>0</li><li>0</li><li>0</li></ul>	100 100 100 100 100
Cleeve Road Cleeve Road Manor Road Manor Road Elvendon Road Elvendon Road	S->N N->S S->N N->S W->E E->W	1 1 0 2 1	2 1 0 0 0	77 84 82 82 79 76	17 12 15 12 17 19	2 2 2 2 3 3	0 0 0 1 0	<ul><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li></ul>	<ul><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li></ul>	<ul><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li></ul>	<ul><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li><li>Ø</li></ul>	0 0 0 0 0	100 100 100 100 100 100

- 76% cars, 19% vans, and 3% lorries
- More cars enter village via Cleeve Rd than leave
- Manor Rd has fewest
- Elvendon has most
- Gatehampton gets more vans and lorries
- Rig2 = Rigid 2 axles,
   Art4 = Artic 4 axles, etc
   LGV = Vans, or more
   likely 4x4 vehicles
- Sensors are possibly not very good at counting two wheelers...
- Daily variations show some interesting patterns

# Total speed counts (and percentages)

Road	Dir	<10	<15	<20	<25	<30	<35	<40	<45	<50	<55	<60	Total
Cleeve Road	S->N	30	355	830	533	74	2	-	-	-	-	-	1824
Cleeve Road	N->S	87	347	929	810	140	7	1	-	-	-	-	2321
Manor Road	S->N	116	532	631	206	23	4	-	3	2	-	-	1517
Manor Road	N->S	172	366	570	267	32	1	3	-	-	-	-	1411
Elvendon Road	W->E	44	534	1558	1125	416	64	14	3	-	-	-	3758
Elvendon Road	E->W	108	1068	1159	986	399	60	11	1	-	-	-	3792
Gatehampton Road	S->N	50	244	912	944	360	83	11	3	-	-	-	2607
Gatehampton Road	N->S	38	142	646	1070	539	110	26	2	2	1	-	2576
Total	Total	645	3588	7235	5941	1983	331	66	12	4	1	-	19806
Road	Dir	<10	<15	<20	<25	<30	<35	<40	<45	<50	<55	<60	Mean
Road Cleeve Road	Dir S->N	<10	<15 19	<20 46	<25 29	<30 4	<35 -	<40 -	<45 -	<50 -	<55 -	<60 -	Mean 19
							<35 - -	<40 - -	<45 - -	<50 - -	<55 - -	<60 - -	
Cleeve Road	S->N	2	19	46	29	4	<35 - -	<40 - -	<45 - -	<50 - -	<55 - -	<60 - -	19
Cleeve Road Cleeve Road	S->N N->S	2	19 15	46 40	29 35	4	-	<40 - - -	<45 - - -	<50 - - -	<55 - - -	<60 - - -	19 19
Cleeve Road Cleeve Road Manor Road	S->N N->S S->N	2 4 8	19 15 35	46 40 42	29 35 14	4 6 2	-	<40 - - - -	<45 - - - -	<50 - - - -	<55	<60 - - - -	19 19 16
Cleeve Road Cleeve Road Manor Road Manor Road	S->N N->S S->N N->S	2 4 8 12	19 15 35 26	46 40 42 40	29 35 14 19	4 6 2 2	- - -	- - -	<45 - - - - -	< <b>50</b>	<55	<60 - - - -	19 19 16 17
Cleeve Road Cleeve Road Manor Road Manor Road Elvendon Road	S->N N->S S->N N->S W->E	2 4 8 12 1	19 15 35 26 14	46 40 42 40 41	29 35 14 19 30	4 6 2 2 11	- - - - 2	-	<45 - - - - - -	<50 - - - - -	<55 - - - - - -	-	19 19 16 17 20
Cleeve Road Cleeve Road Manor Road Manor Road Elvendon Road Elvendon Road Gatehampton Road	S->N N->S S->N N->S W->E E->W	2 4 8 12 1 3	19 15 35 26 14 28	46 40 42 40 41 31	29 35 14 19 30 26	4 6 2 2 11 11	- - - - 2	-	<45 - - - - - - -	<50 - - - - - -	<55 - - - - - - -	-	19 19 16 17 20 19
Cleeve Road Cleeve Road Manor Road Manor Road Elvendon Road Elvendon Road Gatehampton Road	S->N N->S S->N N->S W->E E->W	2 4 8 12 1 3 2	19 15 35 26 14 28 9	46 40 42 40 41 31 35 25	29 35 14 19 30 26 36 42	4 6 2 2 11 11 14 21	- - - 2 2 3 4	- - - - - - 1	-	-	<55 - - - - - -	-	19 19 16 17 20 19

- 58% under 20 mph, 97% under 30 mph, 3% too fast
- About one vehicle in eight is "speeding"
- Manor Rd lowest mean speed (with exceptions)
- Gatehampton highest mean speed
- Excessive speed happens rarely but at all times of the day – Manor Rd 8:00, 13:00, Gatehampton evening
- Consider physical speed controls – build outs or humps or raised tables – for Elvendon and Gatehampton
- The measurement points in both cases have houses on both sides and pavements exposed to traffic

## When busy? When speeding? — Cleeve Road

Date	Road	Counts	Mean	Max
Mon 09 07:45	Cleeve Road N->S	13 = Car: 12, LGV: 1	21	<30
Tue 03 08:15	Cleeve Road S->N	12 = Car: 7, LGV: 5	20	<30
Tue 03 08:45	Cleeve Road N->S	14 = Car: 11, Cycle: 1, LGV: 2	20	<30
Mon 02 08:45	Cleeve Road N->S	13 = Car: 12, Cycle: 1	21	<30
Wed 04 08:45	Cleeve Road N->S	13 = Car: 9, Cycle: 1, LGV: 3	18	<25
Mon 09 08:45	Cleeve Road N->S	12 = Car: 11, M/C: 1	19	<25
Fri 06 12:00	Cleeve Road N->S	13 = Car: 9, Cycle: 1, LGV: 3	15	<25
Fri 06 15:45	Cleeve Road N->S	13 = Car: 11, LGV: 2	18	<25

Date	Road	Counts	Mean	Max
Wed 04 04:45	Cleeve Road S->N	1 = Rig2: 1	28	<30 ← Lorry at night
Mon 02 06:30	Cleeve Road N->S	1 = Car: 1	28	<30
Tue 03 18:00	Cleeve Road S->N	1 = Car: 1	28	<30
Fri 06 20:30	Cleeve Road S->N	1 = Car: 1	28	<30
Mon 02 20:45	Cleeve Road N->S	1 = Car: 1	28	<30
Fri 06 21:45	Cleeve Road S->N	1 = Car: 1	28	<30
Thu 05 22:30	Cleeve Road S->N	1 = Car: 1	28	<30
Mon 02 22:45	Cleeve Road S->N	1 = Car: 1	28	<30

#### "Morning rush hour"

Busy time is 08:45

- Commuting to work?
- Back from school run?

Most traffic coming into the village (N to S)

Mostly less than 25 mph Speeding is not bad

- Single cars in quiet periods
- Mostly evening
- Mostly away from village (S to N)
- Never more than 30 mph

## When busy? When speeding? — Manor Road

Date	Road	Counts	Mean	Max
Mon 02 07:30	Manor Road N->S	11 = Car: 9, LGV: 2	18	<25
Wed 04 08:00	Manor Road S->N	14 = Car: 14	22	<45 ← late for sch
Fri 06 09:30	Manor Road N->S	11 = Car: 11	13	<15
Wed 04 13:45	Manor Road S->N	10 = Car: 8, LGV: 2	16	<25
Tue 03 16:00	Manor Road N->S	11 = Car: 9, LGV: 2	18	<25
Tue 03 16:15	Manor Road S->N	10 = Car: 8, LGV: 2	18	<25
Tue 03 16:45	Manor Road S->N	10 = Car: 8, LGV: 2	20	<25
Fri 06 17:15	Manor Road S->N	11 = Car: 9, LGV: 2	16	<25
Date	Road	Counts	Mean	Max
Sat 07 10:30	Manor Road N->S	3 = Car: 3	28	<30
Sun 08 12:15	Manor Road S->N	1 = Car: 1	28	<30
Mon 09 13:45	Manor Road S->N	5 = Car: 4, Rig2: 1	29	<50 ← no excuse
Mon 09 14:45	Manor Road N->S	7 = Car: 7	27	<40 ← at lunch
Mon 02 15:45	Manor Road N->S	1 = Car: 1	28	<30
Mon 09 17:45	Manor Road S->N	2 = LGV: 2	26	<30

28 <30

26 <30

Mon 02 18:45 Manor Road N->S 1 = Car: 1

Tue 03 22:15 Manor Road S->N 2 = Car: 2

#### School run + Builders

Busy 8 - 9 and 16 - 17

But not that busy

Traffic both ways

Mostly less than 25 mph

• with exceptions...

### Speeding by several cars

- Worst in middle of day
- Mon 09 may have been same 3 cars leaving at 13:45, returning 14:45
- No excuse for 50 mph here

## When busy? When speeding? — Elvendon Road

Date	Road	Counts	Mean	Max
Mon 02 07:45	Elvendon Road E->W	23 = Car: 19, LGV: 2, Rig2: 2	17	<30
Wed 04 07:45	Elvendon Road E->W	20 = Car: 15, LGV: 5	20	<40
Thu 05 08:00	Elvendon Road E->W	21 = Car: 16, LGV: 5	20	<30
Wed 04 10:15	Elvendon Road E->W	19 = Car: 16, LGV: 3	18	<35
Sat 07 12:45	Elvendon Road W->E	19 = Car: 14, LGV: 3, Rig2: 2	20	<30
Fri 06 16:00	Elvendon Road W->E	19 = Car: 16, LGV: 1, Rig3: 1	18	<30
Thu 05 16:30	Elvendon Road W->E	19 = Car: 18, LGV: 1	20	<30
Tue 03 17:15	Elvendon Road W->E	20 = Car: 16, LGV: 3, Rig2: 1	19	<25
Date	Road	Counts	Mean	Max
Date Sat 07 03:30			Mean 38	Max <40
	Elvendon Road E->W			
Sat 07 03:30	Elvendon Road E->W Elvendon Road W->E	1 = Car: 1	38	<40
Sat 07 03:30 Wed 04 05:00	Elvendon Road E->W Elvendon Road W->E Elvendon Road W->E	<pre>1 = Car: 1 1 = Rig2: 1 &lt;- same lorry 2 = Car: 1, LGV: 1</pre>	38 33	<40 <35
Sat 07 03:30 Wed 04 05:00 Fri 06 07:15	Elvendon Road E->W Elvendon Road W->E Elvendon Road W->E Elvendon Road W->E	<pre>1 = Car: 1 1 = Rig2: 1 &lt;- same lorry 2 = Car: 1, LGV: 1 1 = Car: 1</pre>	38 33 33	<40 <35 <40
Sat 07 03:30 Wed 04 05:00 Fri 06 07:15 Mon 02 21:15	Elvendon Road E->W Elvendon Road W->E Elvendon Road W->E Elvendon Road W->E Elvendon Road W->E	<pre>1 = Car: 1 1 = Rig2: 1 &lt;- same lorry 2 = Car: 1, LGV: 1 1 = Car: 1 1 = LGV: 1</pre>	38 33 33 33	<40 <35 <40 <35
Sat 07 03:30 Wed 04 05:00 Fri 06 07:15 Mon 02 21:15 Wed 04 22:00	Elvendon Road E->W Elvendon Road W->E	<pre>1 = Car: 1 1 = Rig2: 1 &lt;- same lorry 2 = Car: 1, LGV: 1 1 = Car: 1 1 = LGV: 1 1 = LGV: 1</pre>	38 33 33 33 38	<40 <35 <40 <35 <40

#### Station run?

Busy into village (E to W) in the morning

Busy other way (W to E) in late afternoon

- Usual some over 25 mph
- Includes lorries

### Speeding by individuals

- Early hours or late evening
- Max speeds over 30 mph, dangerous in residential road

### When busy? When speeding? — Gatehampton Road

Date	Road	Counts	Mean	Max
Sun 01 09:45	Gatehampton Road N->S	17 = Car: 13, LGV: 3	21	<40
Sun 01 10:30	Gatehampton Road N->S	17 = Car: 13, LGV: 4	21	<30
Sun 01 11:00	Gatehampton Road S->N	19 = Car: 17, LGV: 2	20	<30
Sun 01 12:15	Gatehampton Road S->N	21 = Car: 16, LGV: 5	18	<30
Sun 01 12:30	Gatehampton Road S->N	16 = Car: 14, LGV: 2	21	<30
Sun 01 12:45	Gatehampton Road S->N	25 = Car: 22, LGV: 3	19	<30
Wed 04 15:30	Gatehampton Road S->N	16 = Car: 14, LGV: 2	21	<30
Mon 09 16:30	Gatehampton Road S->N	19 = Car: 13, LGV: 6	22	<30
Date	Road	Counts	Mean	Max
Date Wed 04 00:30	Road Gatehampton Road N->S		Mean 43	Max <45
Wed 04 00:30	Gatehampton Road N->S	1 = LGV: 1 1 = Rig2: 1	43	<45
Wed 04 00:30 Mon 02 02:15	Gatehampton Road N->S Gatehampton Road S->N	1 = LGV: 1 1 = Rig2: 1 1 = LGV: 1	43 38	< <b>45</b> < <b>40</b>
Wed 04 00:30 Mon 02 02:15 Tue 03 06:15	Gatehampton Road N->S Gatehampton Road S->N Gatehampton Road N->S	1 = LGV: 1 1 = Rig2: 1 1 = LGV: 1 2 = Car: 1, LGV: 1	43 38 38	<45 <40 <40
Wed 04 00:30 Mon 02 02:15 Tue 03 06:15 Mon 02 18:00	Gatehampton Road N->S Gatehampton Road S->N Gatehampton Road N->S Gatehampton Road N->S	1 = LGV: 1 1 = Rig2: 1 1 = LGV: 1 2 = Car: 1, LGV: 1 1 = Car: 1	43 38 38 38	<45 <40 <40 <55
Wed 04 00:30 Mon 02 02:15 Tue 03 06:15 Mon 02 18:00 Wed 04 20:45	Gatehampton Road N->S Gatehampton Road S->N Gatehampton Road N->S Gatehampton Road N->S Gatehampton Road N->S Gatehampton Road N->S	1 = LGV: 1 1 = Rig2: 1 1 = LGV: 1 2 = Car: 1, LGV: 1 1 = Car: 1 1 = Car: 1	43 38 38 38 38	<45 <40 <40 <55 <40

#### Football club road

Busy on Sun 01 going to the match, and then returning

- Usual some over 25 mph
- LGVs = probably large 4x4

#### Speeding by individuals

- Early hours or late evening
- All cars leaving village
- Max speeds over 50 mph, antisocial and dangerous in residential road