

Report from Kent Highways on request of reduction of speed limit from 50mph to 40 mph

Following the installation of ATC Traffic surveys on the Orpington By-Pass by Kent Highways (on the request of the Parish Council) the proposals were referred to the Kent Planning and Advice. And this is the report that they have come back with:

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Request for a reduced speed limit from 50mph to 40mph

Working to DfT guidance we would look at the following factors to help inform any decision regarding speed limits:

- History of collisions
- Road geometry and engineering
- Road function
- Composition of road users
- Existing traffic speeds
- Road environment

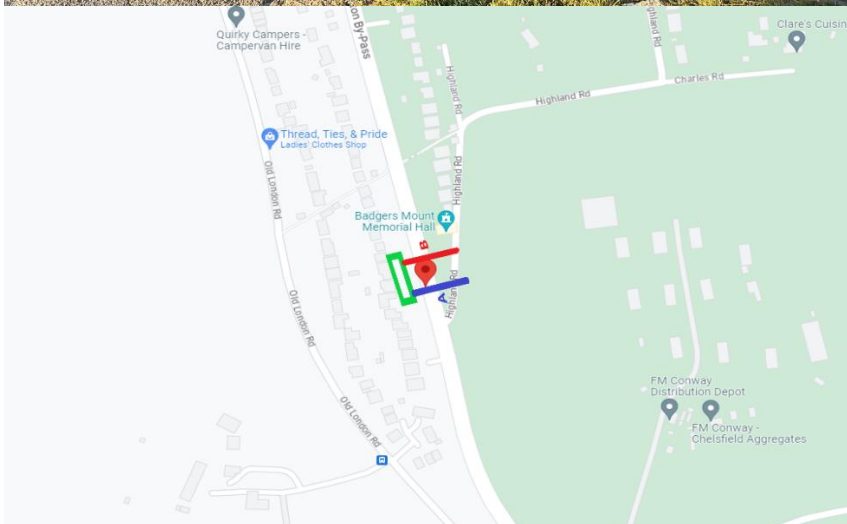
Having reviewed the crash data for the section of A224 between Badgers Mount Roundabout and the termination of the 50mph speed limit just north of Badgers Road I can advise that there are 2 recorded personal injury collisions (PIC) for the last three-year period; 1 serious and 1 slight. There is no pattern to the types of incidents and neither list speed as a contributory factor. There are no damage-only incidents recorded over this stretch of road. For the remaining NSL section up to Hewitts Roundabout there are a further 2 PICs recorded 1 serious and 1 slight, again neither attributed to speed. There is also one damage only incident within the NSL section which involved a deer running out into the carriageway.

The road is fairly wide with central hatching in some locations as well as traffic and pedestrian islands. The road is fairly straight with no significant bends, there are two junctions and numerous accesses. The road is an A road being the A224 Orpington Bypass and therefore is a strategic route linking Sidcup with Sevenoaks. The route has a predominant through traffic function.

There are footways present and streetlighting. A number of public rights of way emerge onto the A224. There is therefore some evidence of vulnerable road users.

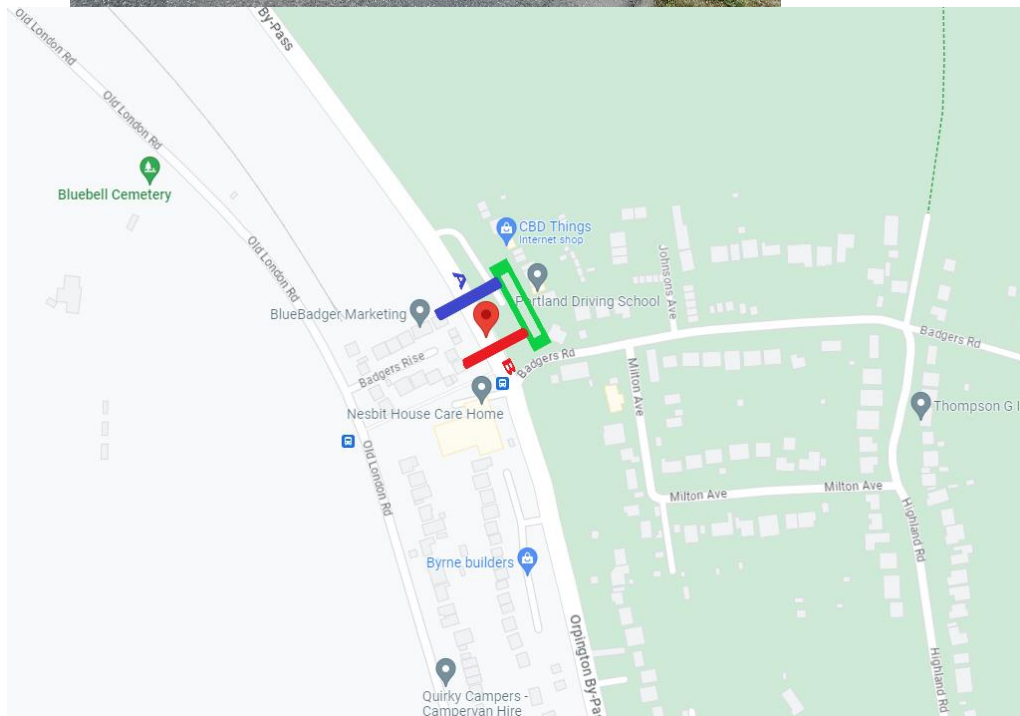
Existing traffic speeds indicate that the current 50mph speed limit is being well-observed. ATC traffic surveys were taken during the week of 24th September 2023 the results are as follows.

Location 1: North of junction with Highland Road



Northbound – (travelling towards Hewitts Roundabout)			Southbound – (travelling towards Badgers Mount Roundabout)		
Total Vehicles (no.)	85% speed (mph)	Mean speed (mph)	Total Vehicles (no.)	85% speed (mph)	Mean speed (mph)
32833	45.8	40.2	50418	45.5	40.3

Location 2: North of junction with Badgers Road



Northbound – (travelling towards Hewitts Roundabout)			Southbound – (travelling towards Badgers Mount Roundabout)		
Total Vehicles (no.)	85% speed (mph)	Mean speed (mph)	Total Vehicles (no.)	85% speed (mph)	Mean speed (mph)
33512	46.6	40.9	50948	46	40.4

The data suggests that average speeds are good being almost 10mph under the posted speed limit of 50mph. HADMS speed data would appear to support this also indicating average speeds significantly below the posted speed limit and generally around 40mph or a little either side. However, there would likely be poor overall compliance with a signed only 40mph speed limit with the ATC data predicting only 40%-50% compliance levels.

There is not significant development here and properties are predominately situated on one side of the road with those present being set back from the carriageway.

The DfT advises that a 40mph speed limit 'Should be considered where there are many bends, junctions or accesses, substantial development, a strong environmental or landscape reason, or where there are considerable numbers of vulnerable road users'. A 50mph speed limit is recommended 'for lower quality A and B roads that may have a relatively high number of bends, junctions or accesses.' A 50mph speed limit might also be considered 'where mean speeds are below 50 mph, so lower limit does not interfere with traffic flow.'

In conclusion whilst the ATC data would appear to support a 40mph speed limit this is only one of the factors that we take into account. We have to consider the function of the road as an A road and the characteristics of the road and its layout. Looking at the DfT guidance the current 50mph speed limit would appear to be the most appropriate for this type of road. It should also be noted that a signed only speed limit is likely to have little impact on the actual vehicle speeds with perhaps a 2-3mph reduction at best.

I note traffic calming is also requested which is a means of reducing vehicle speeds and that request is answered below:

Request for Traffic Calming

There are a number of reasons why we wouldn't look to install traffic calming at this location:

1. Our own policy (see Highway Information Pack) states that we use traffic calming to manage speeds where there is a speeding issue evidenced by average speeds of more than 10% +2mph above the posted speed limit. ATC results indicate that this is not the case here and in fact, speeds (on average) are significantly below the posted 50mph speed limit (more on this above).
2. Physical traffic calming is not usually permitted on A or B class roads; Orpington Bypass is the A224 and therefore forms part of a strategic route making it unsuitable for physical traffic calming.
3. LTN 1/07 advises that vertical calming such as speed humps and cushions should not be used on roads with a speed limit of 40mph or more outside of London. It further advises that 'According to the traffic calming regulations, the following self-enforcing measures are allowed on 40 mph limit roads: rumble devices, build-outs, chicanes, pinch points, narrowings, islands, pedestrian refuges, gateways and roundabouts', whilst these same measures are permitted on roads with a speed limit greater than 40mph 'it is recommended that chicanes or other measures with sudden kerb build-outs are not used on the higher speed limit roads... Generally, self-enforcing traffic calming measures on these roads have been limited to islands, pedestrian refuges, hatching, coloured surfaces and rumble devices.'

There are existing traffic calming features in the form of gateways, central hatching and traffic and pedestrian islands. There are also regular repeaters and roundels along the route. Given the good average speeds here these features would appear to be appropriate and working well.

In order to raise awareness of elderly residents being in the area and needing from time to time to cross this road, we would be prepared to install appropriate signage for vulnerable pedestrians at the appropriate crossing point leading to the memorial hall. I have copied the appropriate legislation for these signs below:

8.2 Vulnerable pedestrians 8.2.1. Where pedestrians frequently use a road without proper footways, diagram 544.1 (S2-2-23, see Figure 8-2) may be used to warn drivers of the likely presence of pedestrians in the carriageway. If a footway stops and resumes after some interval, a 'no footway for distance indicated' supplementary plate may be used, with the distance varied to show the length of the road which is without a footway.

8.2.2. The sign to diagram 544.2 (S2-2-24, see Figure 8-3) is used to warn of the likely presence of frail or disabled people. Its use should be restricted to sites where relatively high numbers of slow-moving pedestrians are likely to cross a road other than at a Zebra or signalled crossing. This might be near sheltered housing or nursing homes, where drivers need to be.