

SURREY COUNTY COUNCIL
LOCAL COMMITTEE (MOLE VALLEY)



DATE: 13 September 2017

LEAD OFFICER: Duncan Knox, Road Safety Team Manager

SUBJECT: A24 Dorking Road & London Road “Mickleham Bends”
Average Speed Camera Scheme

DIVISION: Dorking Hills

SUMMARY OF ISSUE:

The “Gatso” speed camera on the northbound A24 Dorking Road at Mickleham has been successful, since its installation in 2005, in encouraging greater compliance with the speed limit and reducing road death and injury in the vicinity of the camera. However the “wet film” technology it uses is becoming obsolete and needs to be replaced with digital technology. It is proposed that the existing camera be replaced with an average speed camera system that will enforce in both directions along a greater length of the A24 between “Givon’s Grove Roundabout” and “Burford Bridge Roundabout” junction with Old London Road.

RECOMMENDATIONS:

The Local Committee (Mole Valley) is asked to agree that:

- (i) An average speed camera system be installed to replace the aging “Gatso” spot speed camera on the northbound A24 Dorking Road. The new system will provide enforcement between Givon’s Grove Roundabout and Burford Bridge Roundabout in both directions.

And note that:

- (ii) The new average speed camera system will be paid for from the Wider Networks Benefit Project that has received funding from the C2C Local Enterprise Partnership, at no cost to the county council or police. The ongoing maintenance and running costs will be fully met from part of the fee that offending drivers pay to attend driver rehabilitation courses (such as speed awareness courses).

REASONS FOR RECOMMENDATIONS:

The wet film “Gatso” camera on this stretch of road has been successful in reducing speeding and road casualties. However the “Gatso” wet film technology is becoming obsolete and needs to be replaced. The proposals for an average speed camera system will ensure even greater compliance with the 50 mph speed limit and fewer casualties over a longer stretch of road, and in both directions. This will improve journey time reliability on this strategic route.

1. INTRODUCTION AND BACKGROUND:

- 1.1 Speeding increases the risk of collision and also increases the likely severity of injury should a collision occur. Speeding is also a prime concern of Surrey residents as it is anti-social and can make places less pleasant to live in. The use of speed cameras is one of the tools used by Surrey County Council and Surrey Police to encourage improved compliance with the speed limit. In Surrey, in accordance with national guidance, safety camera enforcement is prioritised at sites where there has been a serious history of collisions and where speeding has been confirmed as being part of the problem.
- 1.2 In 2004 the Surrey Safety Camera Partnership was created. Subsequently analysis of personal injury collisions recorded by the police showed that the A24 Dorking Road in Mickleham was a serious collision hotspot. Speed surveys also confirmed excessive speeding on this 50 mph dual carriageway. Consequently a safety scheme was implemented that consisted of:
- Spot speed “Gatso” camera enforcing in the northbound direction
 - Electronic vehicle activated signs that illuminate to remind drivers of the 50 mph speed limit and warn of the camera enforcement
 - Central reservation safety fencing
- 1.3 The photo in Figure 1, (taken in 2005), shows the “Gatso” camera with its bright yellow housing and conventional signing reminding drivers of the 50 mph speed limit and warning of the camera enforcement ahead. The photo in Figure 2 (also taken in 2005) shows the start of the 50 mph limit at Swanworth Lane (now moved to a point just north of Denbies Roundabout) and the vehicle activated signs that illuminate to remind drivers of the 50 mph speed limit and warn of the camera enforcement ahead should they be approaching too fast. The aim was to deter motorists from speeding without the need to issue penalties. However if despite the warnings drivers still exceeded the speed limit then they faced the risk of being issued with a penalty.

Figure 1: Existing “Gatso” spot speed camera (photo taken in 2005)



Figure 2: 50mph speed limit threshold near to Swanworth Lane and Vehicle Activated Signs (photo taken in 2005). Note that the speed limit threshold has now moved to a point just north of “Denbies Roundabout”



- 1.4 Prior to enforcement beginning in April 2005, there were 36 collisions in three years on the 1.5 km stretch of road in the vicinity of the camera. These collisions resulted in

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56 casualties, including seven suffering serious injury and two fatalities. In the three subsequent years after enforcement began there were 6 collisions resulting in slight injury to 6 people on the same 1.5 km stretch of road (an 83 per cent reduction in the number of collisions and 89 per cent reduction in the number of casualties). In the three most recent years to the end of April 2017 there were 8 collisions resulting in 9 casualties including one serious injury on the same stretch of road. This shows that the safety scheme resulted in a substantial reduction in road casualties, and this reduction has been enduring.

- 1.5 The "Gatso" camera uses "wet film" technology, whereby a camera and camera film is loaded and unloaded in the housing then taken by hand to be processed. This technology is becoming obsolete and the licensed supplier of "Gatso" products to the UK has indicated that they can no longer guarantee that they will be able to provide spare parts to maintain the cameras. Therefore to maintain the enforcement deterrent the existing camera needs to be replaced with new digital camera technology. This has the advantage of allowing offence images to be transmitted to the back office remotely without the need to visit the site. This reduces the time and risk of injury for personnel to load and unload the camera at the road side.

2. ANALYSIS:

2.1 The need to upgrade the existing speed camera has provided an opportunity to consider the latest types of speed enforcement systems now available. Average speed cameras are now in use in many locations across the country. The camera systems work by automatically reading the number plate of vehicles and noting the time that vehicles enter and exit the zone covered by the camera system. The system then calculates the average speed from the time taken to travel between the entry and exit cameras. If the average speed of a vehicle exceeds a set threshold over the posted speed limit then the details of the offence and images are sent electronically to the Police back office to be processed. Information and images of vehicles that do not exceed the speed limit are not retained. The enforcement zones are highlighted to drivers using "Average Speed Check" signing.

2.2 Average speed cameras have often been used to enforce a temporary lower speed limit on motorway road works schemes but are now increasingly being used as permanent installations on local roads. Anecdotally it is thought that average speed camera enforcement is preferred by motorists as they consider it fairer due to it being more forgiving of momentary lapses in concentration, and also because it is not possible to slow down at one location and then speed up again to avoid detection. Research published by the RAC Foundation¹ in 2016 showed that

- On average - having allowed for natural variation and overall trends - the number of fatal and serious collisions decreases by 36% after average speed cameras are introduced.
- The average reduction in personal injury collisions of all severities was found to be 16%.
- By the end of 2015 there were at least 50 stretches of road in Great Britain permanently covered by average speed cameras keeping a total length of 255 miles (410 km) under observation. The 50 stretches range in length from under half a mile in Nottingham to 99 miles (159 km) on the A9 between Dunblane and Inverness in Scotland.

2.3 A number of factors were taken into account when considering the possible introduction of an average speed camera system in place of the existing spot speed camera on this stretch of the A24 (shown in Appendix A).

- Since the speed camera was installed in 2005, the 50 mph speed limit was extended in May 2012 from a point near to Swanworth Lane further south to a point just to the north of the Denbies Roundabout junction with Pixham Lane. Therefore there is now a much greater length of continuous 50 mph speed limit. The use of average speed cameras could extend the enforcement zone beyond the comparatively smaller area of influence of a spot speed camera, and would operate in both north and southbound directions.
- The stretch of road has only a small number of minor side road entry and exits (e.g. Old London Road and Swanworth Lane). The overwhelming vast majority of vehicles travel north to south or vice-versa through the proposed zone.
- Analysis of collisions beyond the immediate influence of the existing spot speed camera (to the south of the junction with Swanworth Lane to Burford Bridge Roundabout) has shown that from the beginning of 2014 to the end of December

¹ Owen, Ursachi and Allsop (2016) Effectiveness of Average Speed Cameras in Great Britain, RAC Foundation, London.

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2016 there were 8 personal injury collisions, including 2 that resulted in serious injury.

- Speed surveys conducted in May 2015 showed that on the stretch south of the existing camera between Swanworth Lane and Burford Bridge, the average speeds were 54.6 mph northbound and 56.1 mph southbound. The 85 percentile speeds (the speed above which the fastest 15 per cent of vehicles travel) were 62.4 mph northbound and 64.7 mph southbound. Therefore there is evidence of excessive speeding by a significant proportion of vehicles on this length of the A24.
- Additional mobile camera van enforcement has been provided to the north and south of the existing fixed speed camera site to supplement the deterrent effect of the fixed spot speed camera. The provision of average speed camera enforcement will remove the need for this mobile camera van enforcement and these resources could be used elsewhere instead.
- The use of average speed cameras has been shown to improve journey time reliability. This is because the average speed camera system would reduce collisions and the disruption to vehicle flows associated with such incidents. The cameras also promote smoother vehicle flows. Consequently the option to implement average speed cameras on this stretch of road was included within the Wider Network Benefits Project that has received approval and funding from the C2C Local Enterprise Partnership.

2.4 The possibility of extending the average speed enforcement zone even further south to the start of the 50 mph speed limit just to the north of the Denbies Roundabout junction with Pixham Lane was also considered. Speed surveys conducted in June 2014 for this stretch showed average speeds of 50 mph northbound and 47.6 mph southbound and 85th percentile speeds of 59 mph northbound and 55.1 mph southbound. Therefore although there is some speeding, most vehicles are already travelling in compliance with the existing speed limit on this stretch. The cost of providing the additional entry and exit cameras that would be required to cover this stretch will exceed the current budget available. However if necessary an extension to the zone to cover this stretch could be considered in the future following evaluation of the initial scheme.

3. OPTIONS:

Option 1

3.1 Do nothing. This would result in the existing camera becoming obsolete and eventually being removed. There would be no permanent deterrent to speeding and so vehicle speeds and casualties would be highly likely to increase at a site that prior to enforcement was one of the worst collision hotspots in the county of Surrey. Therefore this option is not recommended.

Option 2

3.2 The existing “wet film” spot speed camera could be replaced with a similar spot speed camera that uses digital technology. This would maintain the existing level of enforcement deterrent. This would continue to need to be supplemented by mobile camera enforcement from time to time to deter speeding on other parts of this stretch of road. This could cost in the region of £20,000 to £50,000 to install and would require funding from Surrey Police and/or Surrey County Council. Therefore this option is not recommended.

Option 3

3.3 Alternatively an average speed camera system could be installed to replace the existing camera covering the zone shown in Appendix A. This would have the advantage of increasing compliance with the speed limit and reducing road casualties over a much greater length of road, in both directions. It would also have the advantage of reducing

the disruption to journey times that derive from road collisions to a much greater extent than a standard spot speed camera. It would also remove the need for supplementary mobile camera van enforcement which could be used elsewhere instead. It is expected that such a system will cost in the region of £100,000. The funding would be provided by the C2C Local Enterprise Partnership at no cost to Surrey County Council or Surrey Police. Therefore this is the recommended option.

4. CONSULTATIONS:

4.1 Surrey Police have been consulted and support the proposal to implement an average speed camera system on this stretch of road.

5. FINANCIAL AND VALUE FOR MONEY IMPLICATIONS:

5.1 The proposed average speed camera system will be funded by the C2C Local Enterprise Partnership at no cost to the county council or police. The ongoing costs of maintenance and processing of offences will be recovered by part of the fee paid by motoring offenders to attend driver rehabilitation courses (such as speed awareness courses). It is expected that the average speed camera system will cost in the region of £100,000 and will be procured in accordance with the county council's standard rules and procedures to ensure best value. There are four companies that have type approval from the Home Office to supply and install average speed camera systems that will be invited to quote.

5.2 The government's latest estimate (2015) of the value of preventing road collisions for use in cost benefit analysis thus:

Fatal collisions (where one or more casualties were killed)	£2,005,664
Serious collisions (where one or more casualties were seriously injured)	£229,757
Slight collisions (where one or more casualties were slightly injured)	£24,194
Average for all severities	£76,466

5.3 It can be seen therefore that if the implementation of the average speed camera results in a further reduction in the number of injury of collisions (as we very much expect), there is likely to be a substantial economic benefit to society.

6. EQUALITIES AND DIVERSITY IMPLICATIONS:

6.1 Safety camera enforcement by its very nature is indiscriminate. Increased compliance with the speed limit may improve the safety and ability of people with mobility impairment to cross the road safely.

7. LOCALISM:

7.1 The proposals for an average speed camera system presented here would benefit the local area by reducing the pain grief and suffering associated with road death and injury. It would also reduce the disruption to travel derived from collisions on this section of road network.

8. OTHER IMPLICATIONS:

Area assessed:	Direct Implications:
Crime and Disorder	Set out below.
Sustainability (including Climate Change and Carbon Emissions)	Set out below.
Corporate Parenting/Looked After Children	No significant implications arising from this report.
Safeguarding responsibilities for vulnerable children and adults	No significant implications arising from this report.
Public Health	Set out below.

8.1 Crime and Disorder implications

The proposals would improve compliance with the speed limit on this stretch of road and could help deter anti-social motorcycling.

8.2 Sustainability implications

The proposals would promote smoother vehicle flow and increased compliance with the speed limit and so would lead to a reduction in carbon emissions from vehicle engines.

8.3 Public Health implications

The proposals will reduce the risk of death and injury. They would also promote smoother vehicle flow and increased compliance with the speed limit and so would also lead to a reduction in reduce harmful vehicle emissions and improved air quality.

9. CONCLUSION AND RECOMMENDATIONS:

9.1 The wet film “Gatso” camera on this stretch of road has been successful in reducing speeding and road casualties. However it is becoming obsolete and needs to be replaced. The proposals for an average speed camera system will ensure even greater compliance with the speed limit and fewer casualties over a longer stretch of road, and in both directions.

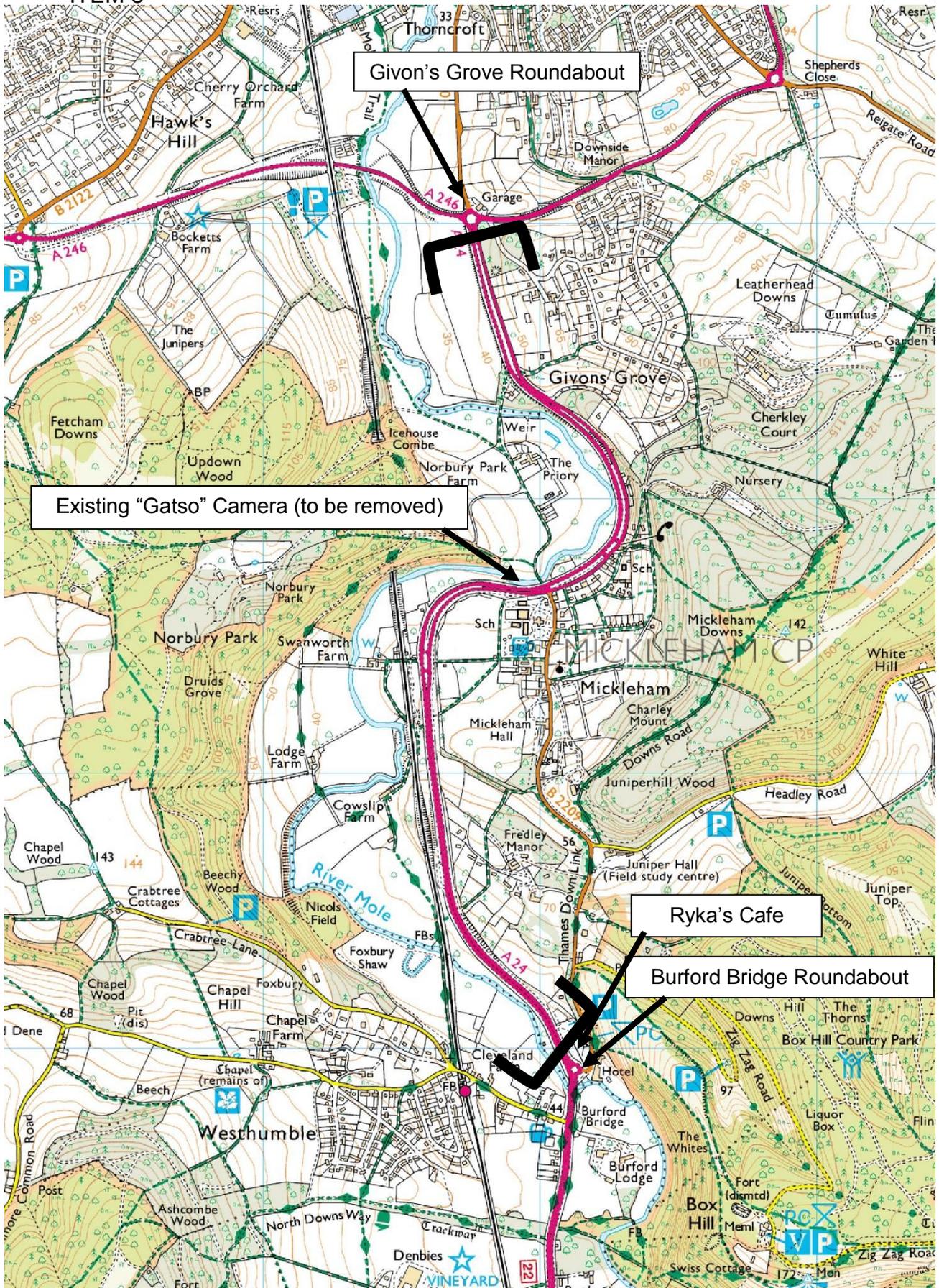
10. WHAT HAPPENS NEXT:

10.1 A specification will be finalised and agreed with Surrey Police. The companies that have equipment with Home Office Type Approval will be invited to quote to supply and install an average speed camera system and associated “Average Speed Check” signing before the end of the current financial year.

Duncan Knox Road Safety Manager
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Consulted:

Surrey Police Road Safety and Traffic Management Team



**Appendix A: A24 Mickleham Bypass
Average Speed Camera Scheme Site Extents**

Date Printed:	24/08/2017	Scale (approx):	N/A
Printed By:	DK	Drawing Number:	1

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