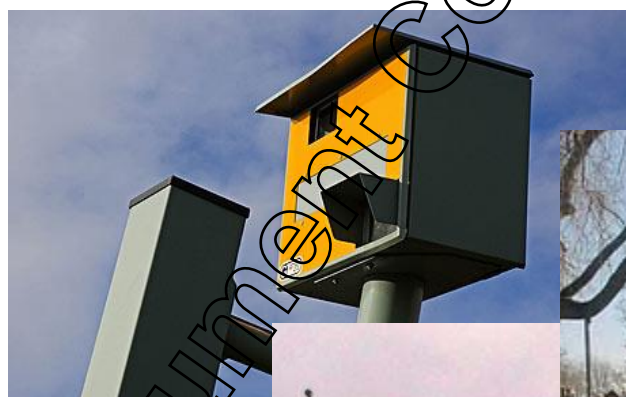


APPENDIX 2

**Review of Speed Camera Locations
including trial use of
Speed Indicating Devices**



Introduction

Across Derby, there are 19 fixed camera housings and 13 operational mobile camera routes. Fixed cameras were first installed in the mid-1990s, prior to the establishment of the Unitary Authority and Road Safety Partnership. Most fixed and all mobile sites have been created from around 2003 onwards.

Prior to 2001, fixed and red light cameras were installed based on a number of criteria set up by the individual Highways Authorities in collaboration with Derbyshire Constabulary. These included: evidence of speed problem, local residents concerned about speed, high casualties, proximity to vulnerable road users including children and the elderly.

From the introduction of the Partnerships in 2000, the Department for Transport provided a series of guidelines for camera installation, based specifically upon numbers of injury collisions and traffic speeds.

This report investigates performance at three fixed camera sites within Derby, by comparing injury collisions before and after the cameras were installed.

The three sites which were chosen are:

1. Site number 1088, Burton Road (Truvelo)
2. Site number 1074, Nottingham Road (near Pentagon roundabout) (Truvelo)
3. Site number 61, Chellaston Road, Shelton Lock (Gatso)

Furthermore, a trial was carried out at these three sites regarding speeds and offences, as follows:

- Average speeds were already available for two of the sites prior to this trial. The third site had no recent speed data.
- During the period 24 September 2010 to 8 November the three housings were deactivated and covered with a bag. A speed indicating device (SID) was installed nearby. Average speeds were measured during this 6 week period, to compare the effectiveness of speed indicating devices.
- Between 8 November and 17 December, both the housings and speed indicating devices were covered, to measure speeds with no measures on site.
- In error, the bags were removed from the housings during the period 8-14 November 2010. This accounts for the dip in traffic speeds on the following graphs.

Casualty data

Site number 1088, Burton Road

During the three year period prior to establishing this housing there were 11 slight casualties and no people killed or seriously injured.

In the most recent three year period, there were 9 casualties resulting in 8 slight and one serious injury.

This equates to an 18% reduction in casualties, saving the community around £61,200 per annum**.

Site number 1074, Nottingham Road (near Pentagon roundabout)

During the three year period prior to establishing this housing there were 10 slight casualties and no people killed or seriously injured.

In the most recent three year period, there were 4 casualties resulting in 3 slight and one serious injury.

This equates to a 70% reduction in casualties, saving the community around £183,000 per annum**.

Site number 61, Chellaston Road, Shelton Lock

During the three year period prior to establishing this housing there were 9 slight casualties and 3 people killed or seriously injured.

In the most recent three year period, there were 9 casualties resulting in 7 slight and two serious injuries.

This equates to a 25% reduction in casualties, saving the community around £91,000 per annum**.

4.6 These figures relate to injury collisions reported to or attended by Derbyshire Constabulary, within a 300m area of the safety camera housing.

** The Department for Transport gives the total cost of a collision at approximately £91,810 in a Built-up environment (2007 figures). From Reductions in the numbers of casualties, we can gauge the savings that can be achieved.

Speed and offence data

The following information gives a summary of averaged 85%ile speeds, and the number of people exceeding Police guidelines.

In Derbyshire, the Police enforce at or above 37mph in a 30mph speed limit.

In this instance, drivers caught between 37-42mph are currently offered a speed awareness course. This usually accounts for around 90% of all offences registered. Above 42mph, drivers will face a fixed penalty notice with penalty points, and the possibility of Court action if speeds are excessive.

Site number 1088, Burton Road

Average 85%ile speeds prior to trial starting: 28.8mph

Average 85%ile speeds while housing bagged with SID in use: 28.5mph

Average 85%ile speeds with housing and SID bagged: 29.6mph

Average number of people exceeding the enforceable speed limit threshold per day:-

Prior to the trial: 55 (*typically 0.54% of total traffic flow*)

while housing bagged with SID in use: 163 (*typical 1.94% of total traffic flow*)

with housing and SID bagged: 129 (*typically 1.4% of total traffic flow*)

Site number 1074, Nottingham Road (near Pentagon roundabout)

Average 85%ile speeds prior to trial starting: no data available

Average 85%ile speeds while housing bagged with SID in use: 28.9mph

Average 85%ile speeds with housing and SID bagged: 28.7mph

Average number of people exceeding the enforceable speed limit threshold per day:-

Prior to the trial: data not available

while housing bagged with SID in use: 112 (*typical 1.49% of total traffic flow*)

with housing and SID bagged: 108 (*typically 1.21% of total traffic flow*)

Site number 61, Chellaston Road, Shelton Lock

Average 85%ile speeds prior to trial starting: 29.1mph

Average 85%ile speeds while housing bagged with SID in use: 30.3mph

Average 85%ile speeds with housing and SID bagged: 29.9mph

Average number of people exceeding the enforceable speed limit threshold per day:-

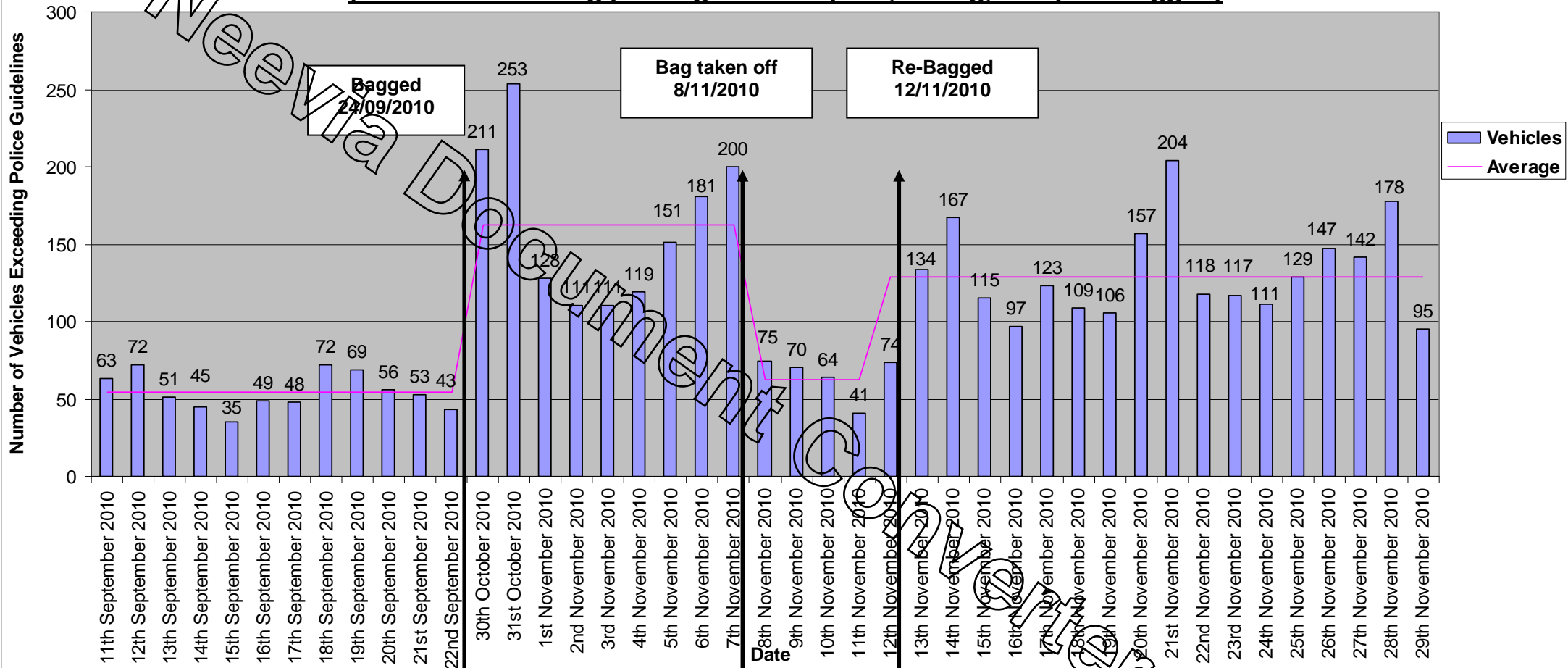
Prior to the trial: 37 (*typically 0.3% of total traffic flow*)

while housing bagged with SID in use: 216 (*typical 2.53% of total traffic flow*)

with housing and SID bagged: 167 (*typically 1.72% of total traffic flow*)

The following graphs show the data in an easier format....

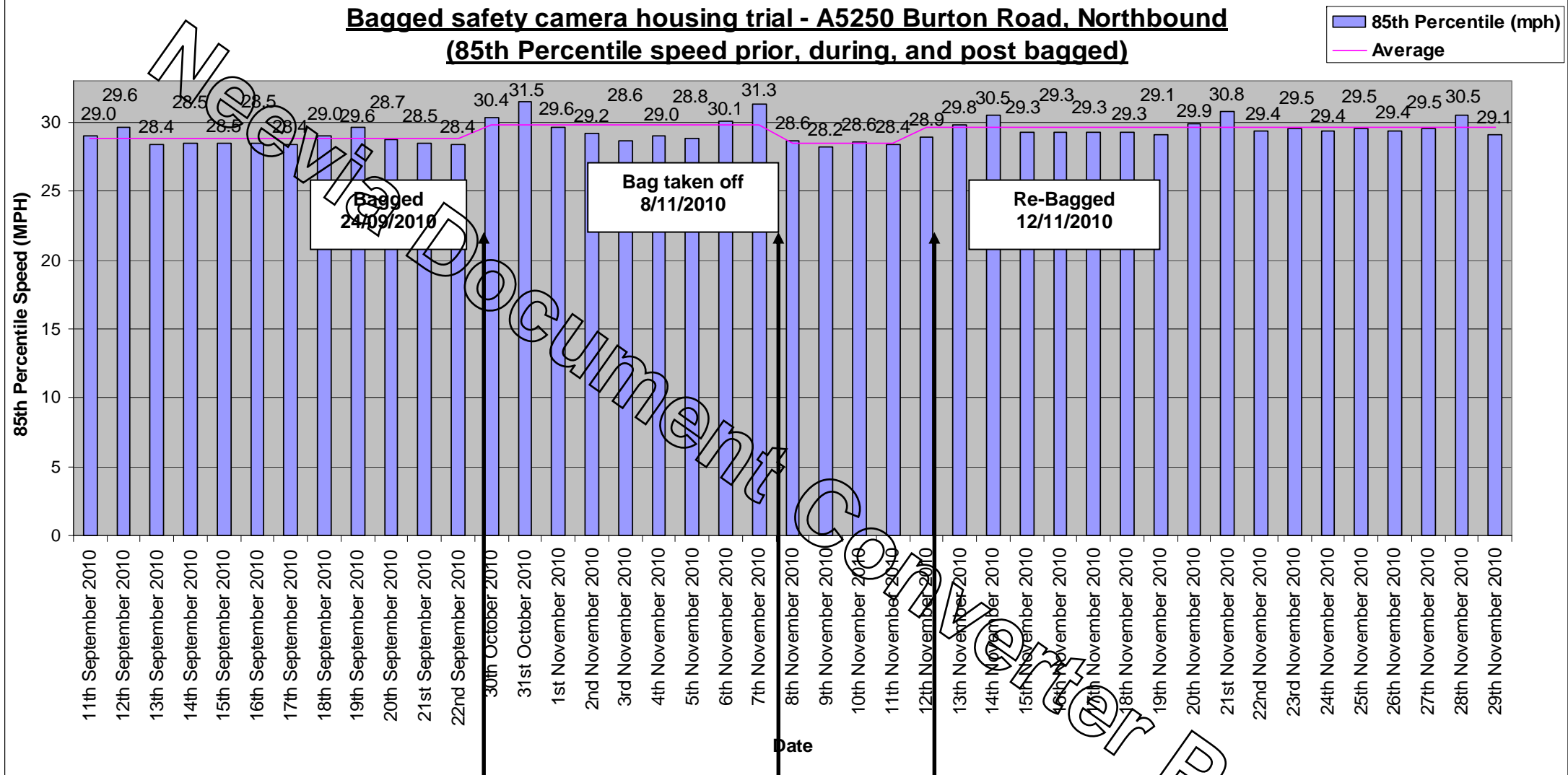
Bagged safety camera housing trial - A5250 Burton Road, Northbound **(Vehicles exceeding police guidelines prior, during, and post bagged)**



Average: 55	Average: 163	Average: 63	Average: 129
<u>Camera Not Bagged</u>	<u>Camera Bagged</u> <u>SID in use</u>	<u>Camera Not</u> <u>Bagged</u>	<u>Camera Bagged</u> <u>SID Bagged</u>

The average number of vehicles each day exceeding police guidelines prior to the camera housing being bagged was 55. Once the camera housing was bagged, the average number of vehicles exceeding police guidelines increased to 163 vehicles per day. Once the bag was removed from the camera housing, the average number of vehicles per day decreased to 63. The camera housing was then re-bagged four days later which showed the average number of vehicles exceeding police guidelines increase to 129 vehicles per day.

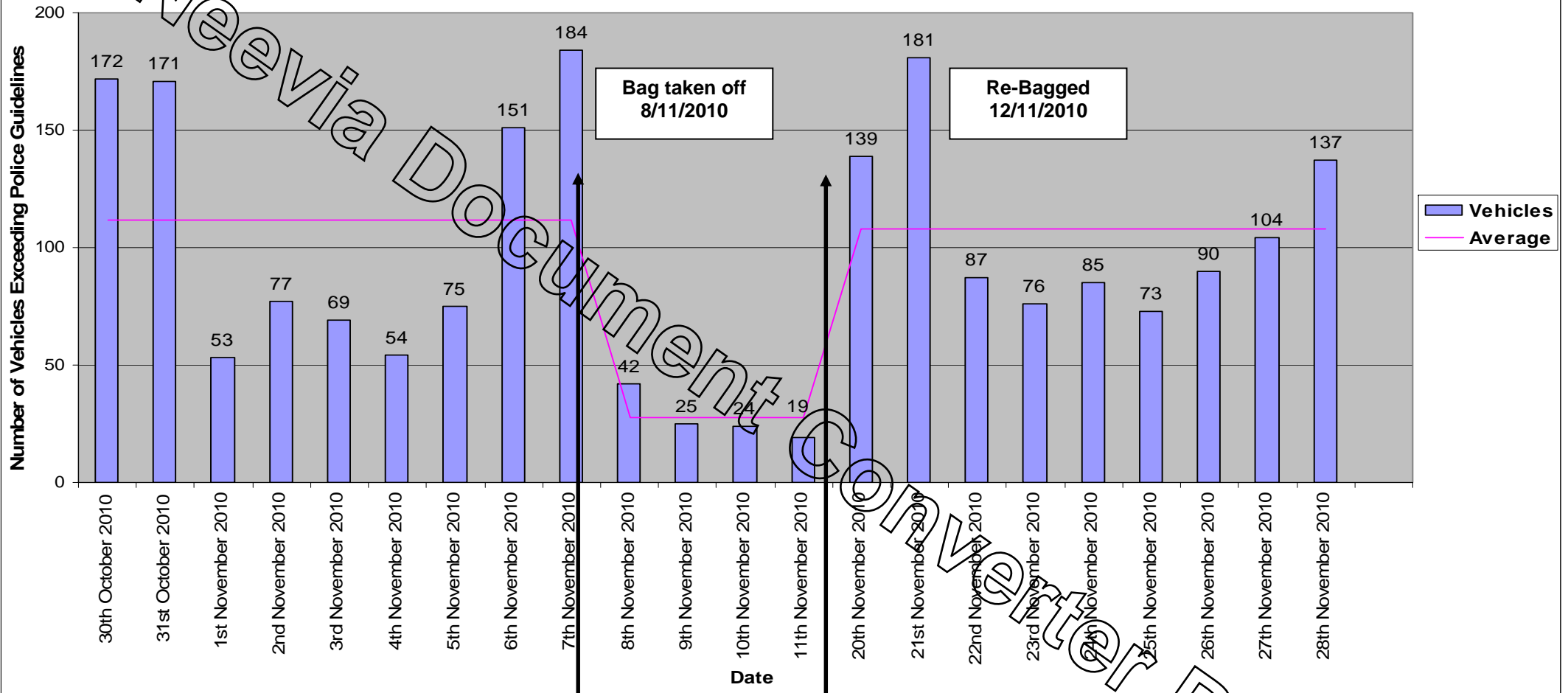
Bagged safety camera housing trial - A5250 Burton Road, Northbound **(85th Percentile speed prior, during, and post bagged)**



Average: 28.8 mph	Average: 29.6 mph	Average: 28.5 mph	Average: 29.6 mph
<u>Camera Not Bagged</u>	<u>Camera Bagged</u> <u>SID in use</u>	<u>Camera Not</u> <u>Bagged</u>	<u>Camera Bagged</u> <u>SID Bagged</u>

The average 85th percentile speed before the camera housing was bagged was 28.8 mph. Once the camera housing was bagged, the average 85th percentile speed increased to 29.8 mph. Once the bag was removed from the camera housing, the average 85th percentile speed decreased to 28.5 mph. The camera housing was then re-bagged four days later which showed the average 85th percentile speed increase to 29.6 mph.

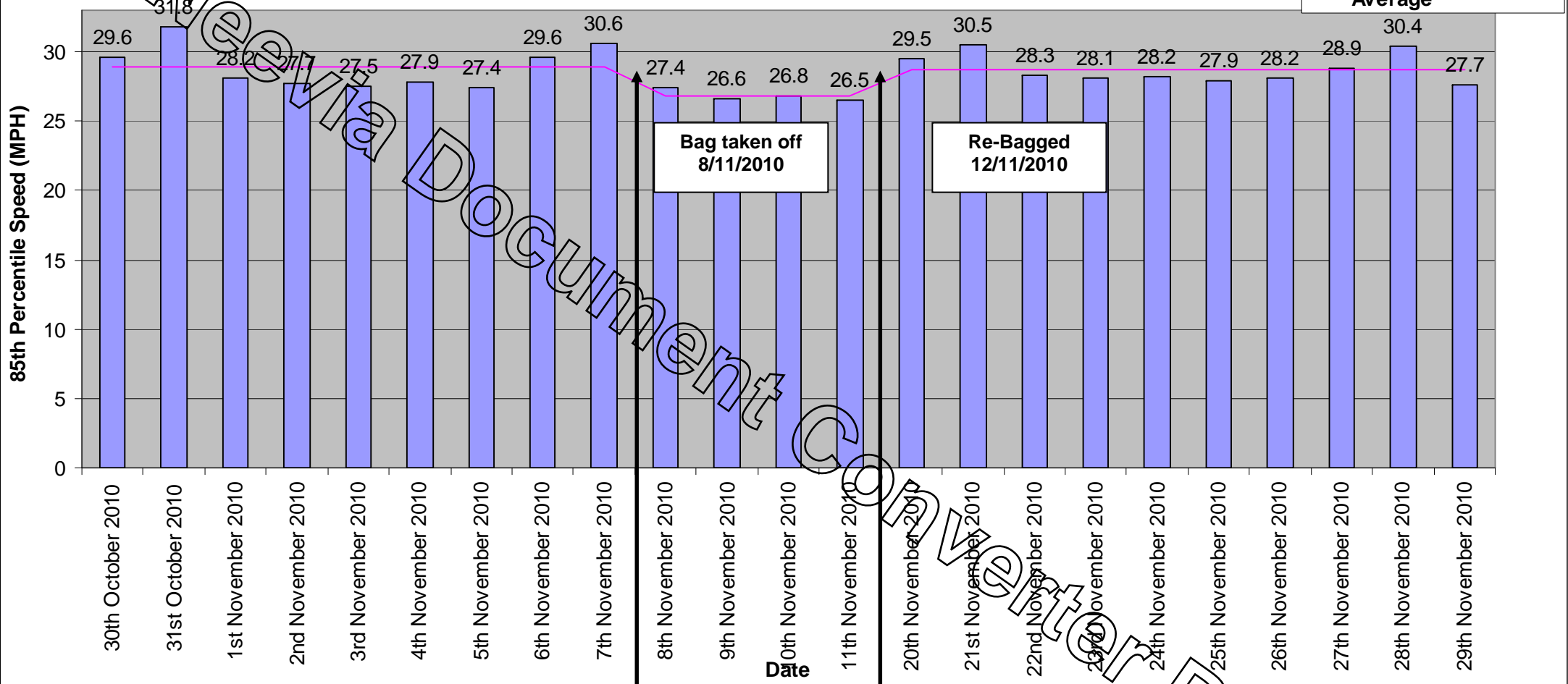
Bagged safety camera housing trial - A6005 Nottingham Road, Eastbound **(Vehicles exceeding police guidelines prior, during, and post bagged)**



Average: 112	Average: 28	Average: 108
<u>Camera Bagged</u> <u>SID in use</u>	<u>Camera Not Bagged</u>	<u>Camera Bagged</u> <u>SID Bagged</u>

The average number of vehicles each day exceeding ACPO guidelines whilst the camera housing was bagged was 112. Once the bag was removed from the camera housing, the average number of vehicles per day decreased to 28. The camera housing was then re-bagged four days later which showed the average number of vehicles exceeding ACPO increase to 108 vehicles per day.

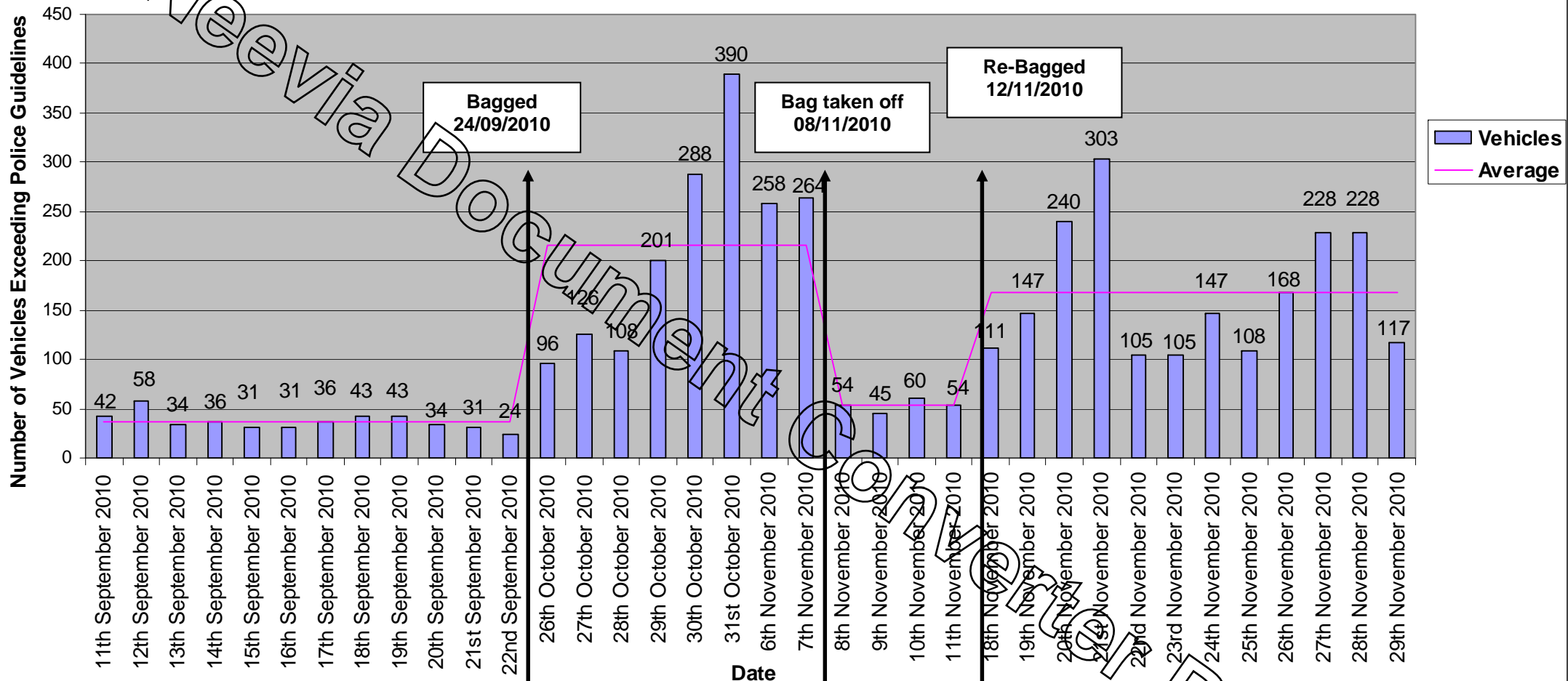
Bagged safety camera housing trial - A6005 Nottingham Road, Eastbound **(85th Percentile speed prior, during, and post bagged)**



Average: 28.9 mph	Average: 26.8 mph	Average: 28.7 mph
<u>Camera Bagged</u> <u>SID in use</u>	<u>Camera Not Bagged</u>	<u>Camera Bagged</u> <u>SID Bagged</u>

The average 85th percentile speed whilst the camera housing was bagged was 28.9 mph. Once the bag was removed from the camera housing, the average 85th percentile speed decreased to 26.8 mph. The camera housing was then re-bagged four days later which showed the average 85th percentile speed increase to 28.7 mph.

Bagged safety camera housing trial - A514 Shelton Lock, Northbound (Vehicles exceeding police guidelines prior, during, and post bagged)

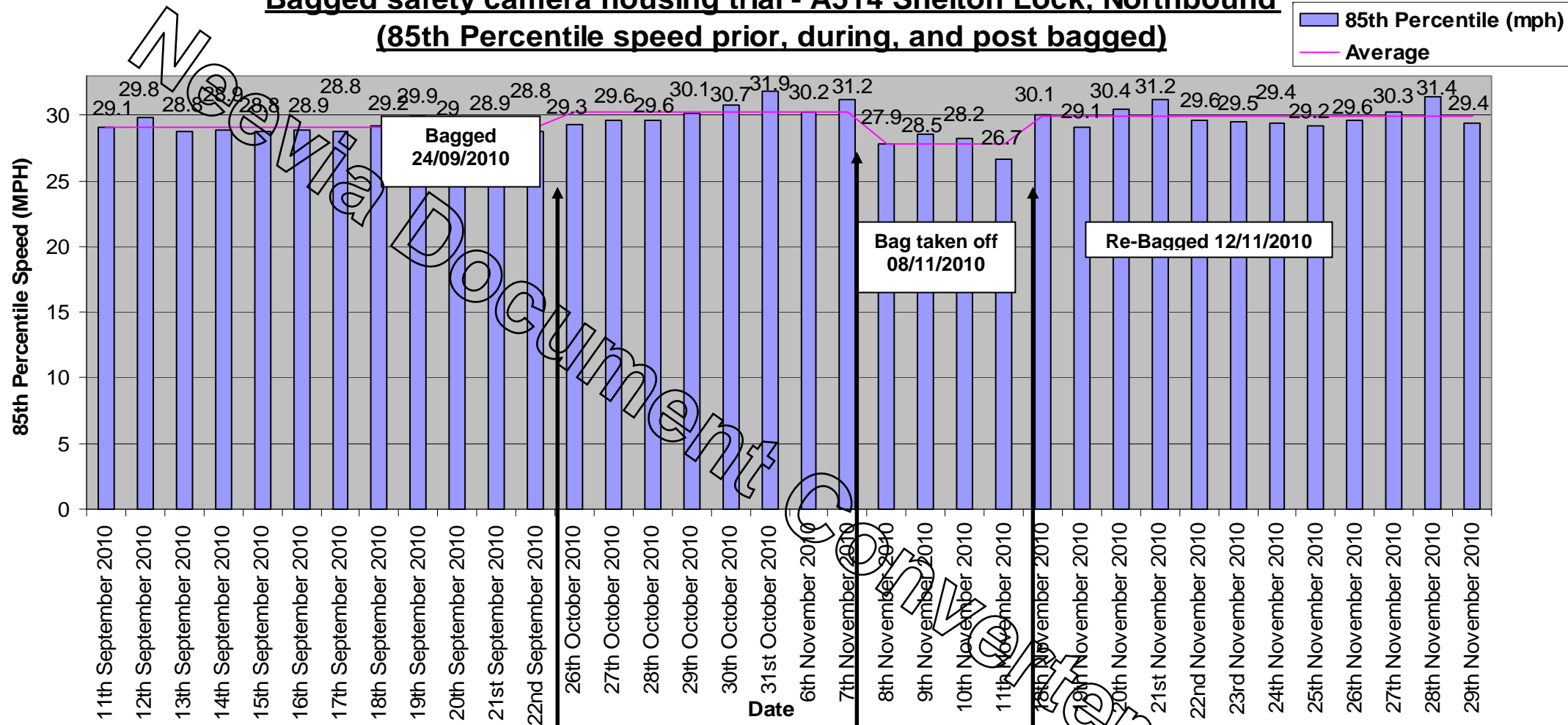


Average: 37	Average: 216	Average: 53	Average: 167
<u>Camera Not Bagged</u>	<u>Camera Bagged</u> <u>SID in use</u>	<u>Camera Not</u> <u>Bagged</u>	<u>Camera Bagged</u> <u>SID Bagged</u>

The average number of vehicles each day exceeding police guidelines prior to the camera housing being bagged was 37. Once the camera housing was bagged, the average number of vehicles exceeding police guidelines increased to 216 vehicles per day. Once the bag was removed from the camera housing, the average number of vehicles per day decreased to 53. The camera housing was then re-bagged four days later which showed the average number of vehicles exceeding police guidelines increase to 167 vehicles per day.

Bagged safety camera housing trial - A514 Shelton Lock, Northbound

(85th Percentile speed prior, during, and post bagged)



Average: 29.1mph	Average: 30.3 mph	Average: 27.8 mph	Average: 29.9 mph
<u>Camera Not Bagged</u>	<u>Camera Bagged</u> <u>SID in use</u>	<u>Camera Not Bagged</u>	<u>Camera Bagged</u> <u>SID Bagged</u>

The average 85th percentile speed before the camera housing was bagged was 29.1 mph. Once the camera housing was bagged, the average 85th percentile speed increased to 30.3 mph. Once the bag was removed from the camera housing, the average 85th percentile speed decreased to 27.8 mph. The camera housing was then re-bagged four days later which showed the average 85th percentile speed increase to 29.9 mph.

CONCLUSIONS

Burton Road

When we consider the speeds before the trial compared with speeds using SID and no measures, there was less than 1mph difference. The survey figures show that compliance with the speed limit is fairly well respected at this location. The reduction in casualties was minimal.

Most of the collisions took place at the junction with Farley Road, and the accident trends have continued since this housing was installed.

Although this housing has slightly reduced the casualty numbers, a different measure may prove to be more successful. During the Autumn of 2010, a pedestrian refuge was installed near this location to help pedestrians, slow traffic, and protect right-turning traffic at the junction. The effectiveness of the refuge will be monitored by the City Council casualty reduction team.

It is proposed that the camera be removed from this location. The effect of the pedestrian refuge on vehicle speeds and casualty statistics will be monitored. Burton Road should remain a mobile camera enforcement route and this type of enforcement should be used to target situations where inappropriate speed is a threat to road safety.

Nottingham Road (near Pentagon)

There is no doubt that this site has enjoyed some success with a safety camera, this is demonstrated by the 70% reduction in slight injuries in the last three years. However, the survey figures show that there was minimal change in speed during the trial, and compliance was fairly good. This leads me to believe that other factors may have contributed to casualty reduction at this location.

It is proposed that the camera be removed from this location. The location will continue to be monitored and should concerns emerge then the option to re-instate the camera should be available. In this situation the post and electricity supply for the camera should be retained.

Enforcement by mobile speed cameras, targeting situations where inappropriate speed is a threat to road safety, should be pursued.

Shelton Lock

Again, there was little change in speeds during the trial. However, there was a 486% increase in vehicles exceeding the speed enforcement threshold once the housing was covered. Compliance prior to the trial was extremely high, with only 0.3% of vehicles exceeding the threshold in a typical day. This rose to 2.53% once the housing was covered.

This location has not seen a reduction in casualty numbers since the camera was installed although there has been a slight change in the level of injury sustained.

It is proposed that the camera should be removed from this location. The location will continue to be monitored and should concerns emerge then the option to re-instate the camera should be available. In this situation the post and electricity supply for the camera should be retained.

Further surveys

It is recommended that we carry out further surveys for the remaining 16 housings within the City, throughout 2011/12.

This could entail a simpler survey to find speeds before and after the covering of a housing, and probably for a shorter period, say 8 weeks. These surveys would find locations which are meeting their aims, but would also identify fixed camera locations which haven't proved as successful as anticipated.