BRAG PROOF OF EVIDENCE 5

Accidents and cycle safety

UPDATED STATEMENT

by DIANA SCARROTT

1. Purpose of this response

a) This is a response on road safety to Simi Shah's proof of evidence and Camden's revised response document of October 6. It also updates BRAG's proof of evidence 5 which was prepared without final data on accidents in 2016. Our proof of evidence gave notice that we would probably need to do this.

b) In our proof of evidence 5 we looked at two questions: was the corridor dangerous before the trial and did the trial make a difference to the corridor's safety? We have looked again at these questions but we first make some general comments.

2. General comments

a) Camden's examination of accident data seems to have been quite cursory, given the importance of safety considerations. There has been no discussion of accident probabilities. Base data has not been agreed with groups with opinions on the ETO so that discussion can focus on interpretation. Data definitions have not been clarified: a count of collisions is not the same as a count of casualties, for example, because a collision might have more than one casualty. Camden say (October 6 response document, 4.1) that 'a number of parties rely on different collision data…'. But differences might have been avoided with a more collaborative approach from Camden. The need for this has become more apparent to us as the Inquiry has progressed.

b) We are also concerned about the lack of a pre-trial baseline, the point made in other Inquiry areas. We talk about the Torrington -Tavistock scheme as a 'trial' but it wasn't set up with any experimental rigour. When the scheme started, Camden's website said *the route suffered from a high casualty record, particularly due to collisions between motor vehicles and cyclists, cyclists and cyclists.* Paragraph 4.3 of Camden's Statement of Case says similarly that the ETO was introduced *to address safety concerns along the corridor,* as well as to improve provision for cyclists. But no measures of safety were proposed so the Inquiry is having to devise definitions of success or failure after the event.

c) Listing some concerns:

i) Firm conclusions are being drawn from only 14 months data, although Camden say that collision data should be reviewed over a longer three year period (Simi Shah's evidence 4.5)
ii) Even three years' data could be said to be too little to identify the underlying pre-trial accident pattern for an area where the number of accidents is small. A longer run of pre-trial data could have been used and we have tried to do this.
iii) Provisional accident data for the first half of 2017 is or will very shortly be available. BRAG does not have easy access to this data but Camden could obtain it for the Inquiry and we would like this to happen.
iv) The October 6 response notes no cyclist-pedestrian collisions in the first 14 months of the trial (4.9 again). But cyclist-pedestrian collisions were always rare. With a low average, zero cyclist-pedestrian collisions could have occured by chance and cannot safely be attributed to the ETO.

v) The post-trial absence of serious injury accidents is also noted by Camden but, again, this could be chance. There are several pre-trial years without serious accidents too.
vi) Percentages are being used to spin the data. In a pre-trial-post trial comparison, a 'more than 75% reduction in pedestrian casualties' is referred to several times in Camden's evidence (9 down to 2) without mentioning a large percentage increase in cyclist collisions (7 up to 11, using the table in 4.7 of Simi Shah's evidence). There are also several mentions of an increase in cycle use of 'up to 52% at peak hours' without referring to numbers behind this percentage. The percentage figure is not now defended, of course.
vii) The lack of reliable pre and post trial measures of cycle traffic has been mentioned many times in the Inquiry. It makes interpretation of trial accident data very difficult.

d) It may also be worth noting that motorist and motorcycle accidents along the corridor also occur. We all seem to forget these groups, but the corridor needs to be safe for all users.

We now return to the two questions that we identified at the start of this note and in our earlier proof of evidence.

3. Was the ETO justified by safety concerns? – ie did it 'suffer from a high casualty record'?

a) If there was evidence that the corridor was dangerous and that the trial improved safety then BRAG's arguments to the Inquiry would have been different. But we cannot find such evidence. We have examined collisions using the Crashmap website – see Annex 1 for the website's home page. Annex 2 then shows numbers of collisions involving cyclist and pedestrian injuries, going back to 1999.This is where twelve zeros can be seen for accidents involving serious injury in pre-trial years. There is just one fatality in the table – a pedestrian accident at the Marchmont Street-Tavistock Place junction in 2008. Changes were made to the junction in 2010-11 and there has been no fatality since.

b) One way to test whether the corridor was a safety problem is to eyeball maps. Annex 3 shows Crashmaps of the corridor and surrounding areas for years 2005-2016. The picture varies a little from year to year but certain streets stand out consistently as having frequent collisions (Hampstead Road – Tottenham Court Road, Euston Road, Woburn Place – Eversholt Street). The corridor does not stand out in the same way, even though it has always been a busy road. There are also some obvious clusters of accidents – Euston Road Tottenham Court Road, for example. Along the corridor, accidents at the junction with Woburn Place and at the west end of Gordon Square stand out. But Annex 3 is not showing the corridor as a developing black spot.

c) Another way of looking at the accident history is to show Annex 2 data in in three year blocks to smooth out spikes (three year blocks being Camden's preferred basis for comparison) . Figs 1 and 2 show cycle and pedestrian accidents respectively.

Fig 1 Collisions with cyclist injuries, 2001-2015

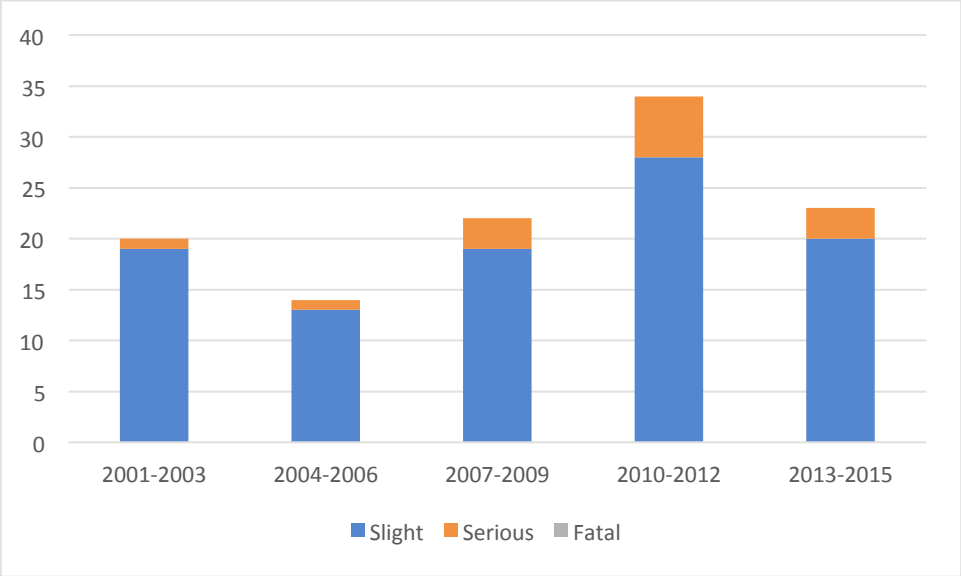
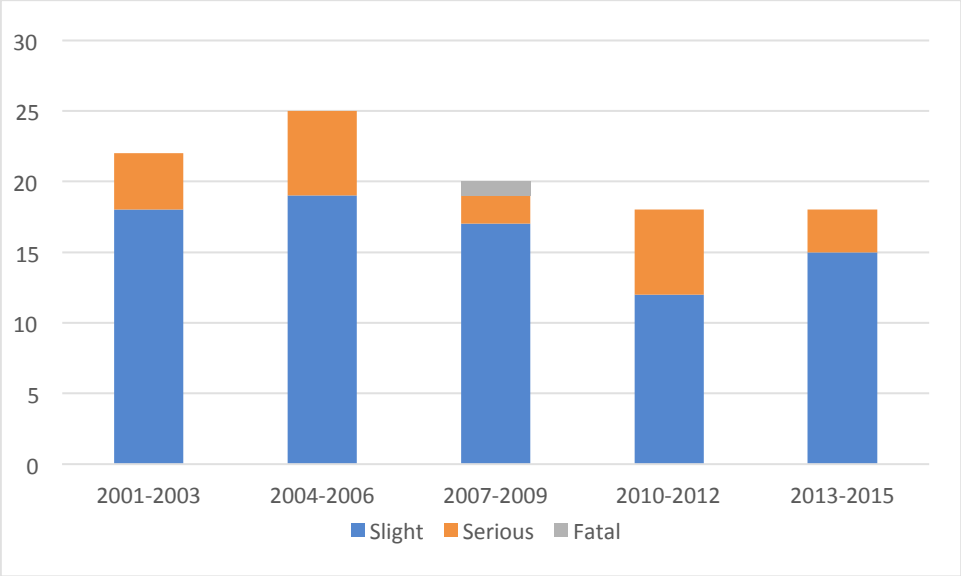


Fig 2 Collisions with pedestrian injuries, 2001-2015



d) For cyclists, accidents peaked in 2010-2012 but the accident total in 2013-2015 was almost exactly the same as in 2001-2003 and 2007-2009. If the number of cyclists was rising over the period, as seems likely, then the underlying trend could have been a falling accident risk for cyclists. For pedestrians, accidents peaked slightly in 2004-2006 but then fell back, with 2010-2015 accidents lower than in 2001-2009. Again, there does not seem to be evidence of a developing black spot. This is not to argue against the ETO. It is simply to say that the ETO should not have been justified on safety grounds.

4. Has anything changed during the trial? – ie is it safer?

a) In our proof of evidence, using provisional data for 2016, we compared a year of trial accidents with a year of pre-trial – November 23 2014-2015 with November 23 2015-16:

Casualties	Pre trial	Post trial
Pedestrians	4	1
Cyclists	6	10

b) Camden's evidence has taken a different trial start date (November 1) to make a 14 month comparison (Simi Shah's evidence, 4.7). Note that the 14 month pre-trial period starts in September 2014, not August 2014, as shown in Camden's table. The data shown is:

	Pre trial	Post trial
Pedestrians	9	2
Cyclists	7	11

c) We looked in Crashmap to see whether we could replicate the Camden data and we almost could. The accidents that we found in Crashmap are listed in Annex 4. This is the list we put in proof of evidence 5, with four trial and pre-trial accidents added. Annex 4 is summarised here:

	Pre trial	Post trial
Pedestrians	7	2
Cyclists	6	11

d) We are not able to explain the difference in pre-trial accidents between Camden's table and the Crashmap data. Camden may be including some motorcycling accidents. It would be helpful to have an agreed dataset, as we have already mentioned, for collisions and casualties. But setting that aside, the important question is – could what has been observed under the trial – ie cyclist accidents up and pedestrian accidents down - be down to chance or has the accident risk really changed?

e) One way to answer this is to ask whether anything like this has happened before:

i) There were two pedestrian accidents in a year in the trial (accidents on December 10 2015 and December 6 2016). There were two pedestrian accidents in 2010 – see Annex 2. Two in a year under the trial could simply be chance.

ii) There were eleven cyclist accidents in 14 months of trial – 9 or 10 annualised. But several recent years have seen accidents around this level. The trial count could also be chance.

f) We are dealing here with very small numbers over a very short period. Examining accident data is essentially an epidemiological problem – accidents are rare events, like most illnesses. There are statistical methods which might have been used to examine the probability of different numbers of accidents happening, given the corridor's accident history. But the amount of data is small and we suspect that the answer would be 'not proven' if such methods had been used.

g) We also have the problem that we don't know what has happened to traffic, along the corridor and in the surrounding area. We should be looking at risk of accidents, not absolute numbers. If we could be confident about Camden's 52% traffic rise estimate

for cyclists, it would remove any concern about cyclist accidents. But if all we can say is that cycling has not reduced during the trial – Louise McBride's evidence on October 10 – then cycling accidents clearly need to be watched.

h) We have also noted the October 6 response's analysis of accidents in a 'wider area' (defined by Euston Road, Gray's Inn Road, New Oxford Street/High Holborn/Holborn and Tottenham Court Road). Table 4.3 is used to compare the rate of accidents pre and post trial. Camden conclude that the trial did not increase collisions in the wider area. It is agreed that the figures indicate little change. But the more general point of this paper applies: '..collision data is usually reviewed over a three year period…' (Simi Shah's evidence 4.5) and sound statistical conclusions cannot be drawn from data from one period of 14 months.

5. Conclusion:

a) The ETO was <u>not</u> justified on the safety grounds cited by the Council – namely the assertion that the corridor had suffered from a high casualty record.

b) The ETO has <u>not</u> been shown at this stage to have either improved or worsened safety.

crashmap.co.uk

Map | Getting Started | About the Data | About Us | Definitions | My Account | Log Out

The official 2016 collision data is now live in CrashMap. We hope to feature provisional information for the first half of 2017 by the end of November.

With hundreds of searches per hour, the award-winning CrashMap website has been providing information about recorded injury collisions on the road of Great Britain since 2011. It has proved a valuable resource for concerned members of the public, local groups, charities, planners, independent auditors, local authorities, and many more. It also regularly features in newspaper articles and is a fantastic definitive map of the official GB road collision statistics. From September 2016 we are also available to offer a limited Northern Ireland dataset and are happy to work with other countries to expand our service.

We provide a free search service which displays information about locations, dates, times and the number of vehicles and casualties involved. There are also filters for casualty types e.g. pedestrians, and types of vehicle involved. We also offer more detailed reports for those who need to know more information*. Enter a location or postcode into the search box below to browse the map:

Enter location...

CrashMap only uses official data from incidents reported to the police so the results are the most reliable available. We rely on data provided from the Department for Transport and aim to keep the map as up-to-date as possible. Please see the About the Data section to find out more about our data sources and frequency of updates.

*Access to detailed reports requires user registration and report credits - For more information click on the 'Getting Started' button above.

Disclaimer: The data utilised in CrashMap is derived directly from a published government source and we therefore accept no liability for errors or inaccuracies in the information reported through this website. If your query is about the quality of the underlying data, please contact the Department for Transport (www.dft.gov.uk).

CORRIDOR ACCIDENTS BETWEEN TOTTENHAM COURT ROAD AND JUDD STREET

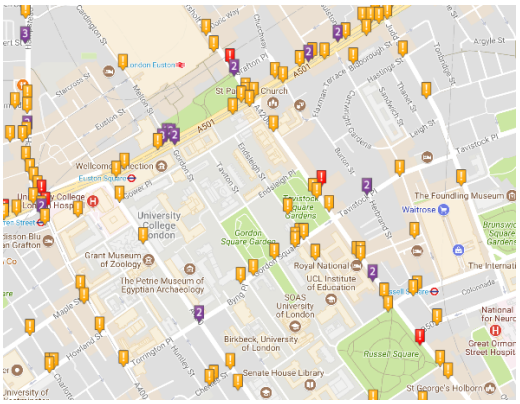
Source: Crashmap.com, data extracted on October 24, 2017

Cyclists	Injury			
	Slight	Serious	Fatal	All
1999	2	0	0	2
2000	5	1	0	6
2001	8	1	0	9
2002	5	0	0	5
2003	6	0	0	6
2004	7	1	0	8
2005	2	0	0	2
2006	4	0	0	4
2007	5	0	0	5
2008	9	2	0	11
2009	5	1	0	6
2010	5	1	0	6
2011	18	3	0	21
2012	5	2	0	7
2013	7	2	0	9
2014	7	1	0	8
2015	6	0	0	6
2016	9	0	0	9

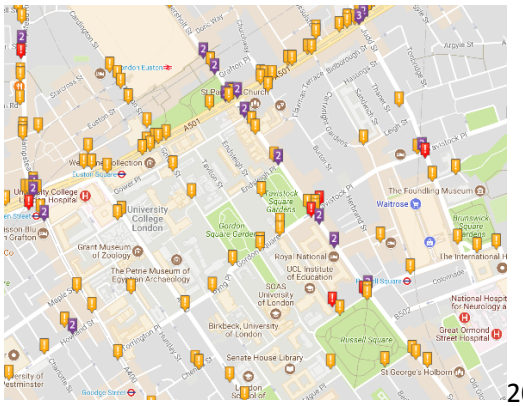
Pedestrians	Injury			
	Slight	Serious	Fatal	All
1999	8	0	0	8
2000	5	2	0	7
2001	5	1	0	6
2002	5	0	0	5
2003	8	3	0	11
2004	11	1	0	12
2005	4	2	0	6
2006	4	3	0	7
2007	5	0	0	5
2008	7	1	1	9
2009	5	1	0	6
2010	2	0	0	2
2011	6	3	0	9
2012	4	3	0	7
2013	6	0	0	6
2014	6	2	0	8
2015	3	1	0	4
2016	1	0	0	1

LOCATION OF COLLISIONS AROUND THE CORRIDOR, 2005-2016

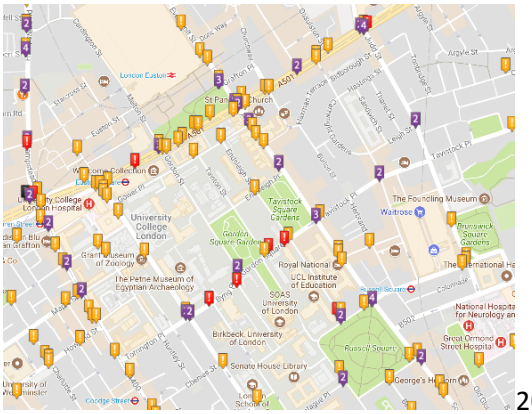
Extracted from Crashmap on 23 October 2017



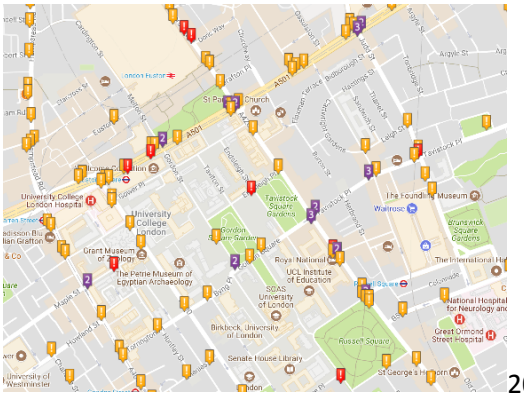
2016



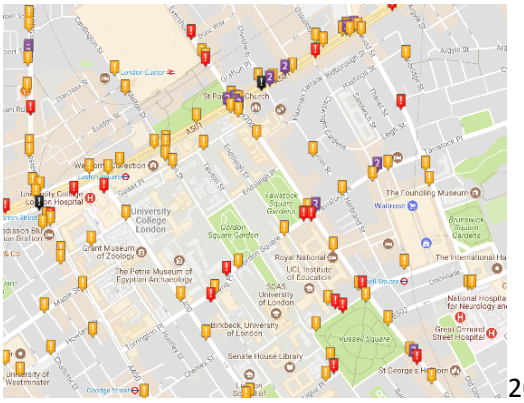
2015



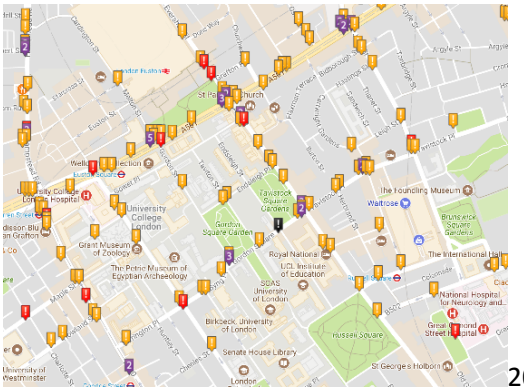
2014



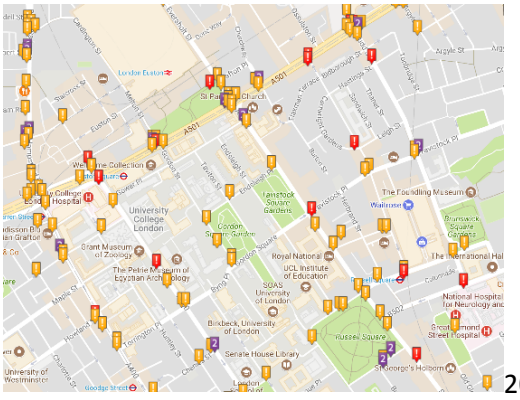
2013



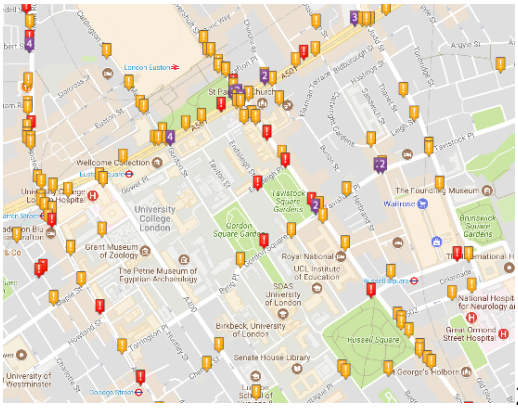
2012



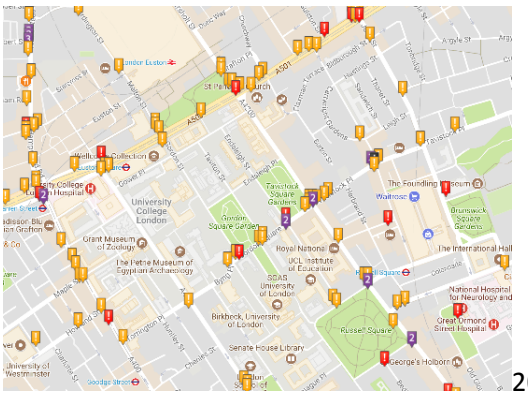
2011



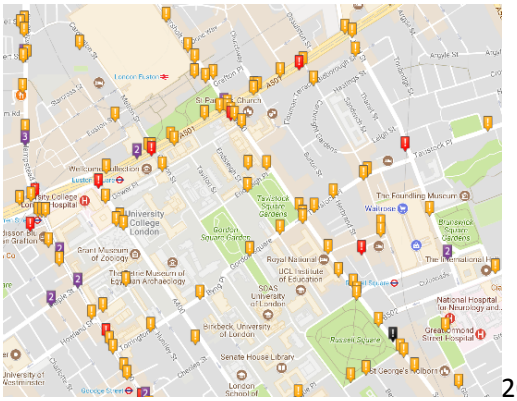
2010



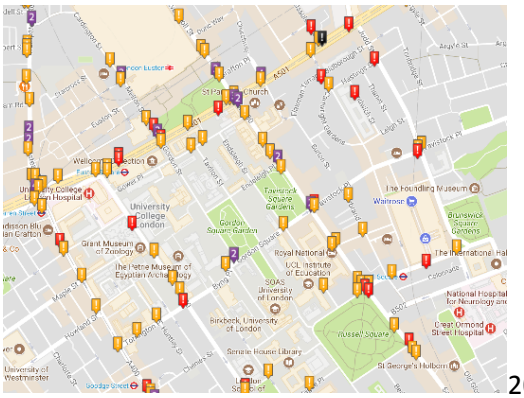
2009



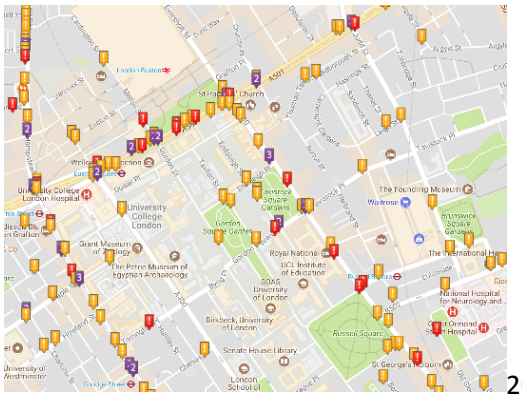
2008



2007



2006



2005

FOURTEEN MONTH COMPARISON OF ACCIDENTS PRE-TRIAL AND POST-TRIAL

Cyclist	2014	01-Dec	12	Slight
Cyclist	2014	22-Dec	12	Slight
Cyclist	2015	16-Apr	4	Slight
Cyclist	2015	29-May	5	Slight
Cyclist	2015	10-Sep	9	Slight
Cyclist	2015	23-Sep	9	Slight
Cyclist	2015	10-Dec	12	Slight
Cyclist	2015	21-Dec	12	Slight
Cyclist	2016	28-Jan	1	Slight
Cyclist	2016	25-Feb	2	Slight
Cyclist	2016	18-Mar	3	Slight
Cyclist	2016	24-Mar	3	Slight
Cyclist	2016	30-Mar	3	Slight
Cyclist	2016	19-Apr	4	Slight
Cyclist	2016	28-Apr	4	Slight
Cyclist	2016	26-Aug	8	Slight
Cyclist	2016	19-Oct	10	Slight
Pedestrian	2014	15-Oct	10	Serious
Pedestrian	2014	17-Oct	10	Slight
Pedestrian	2014	12-Nov	11	Slight
Pedestrian	2014	16-Dec	12	Slight
Pedestrian	2015	10-Jul	7	Serious
Pedestrian	2015	01-Oct	10	Slight
Pedestrian	2015	24-Oct	10	Slight
Pedestrian	2015	10-Dec	12	Slight
Pedestrian	2016	06-Dec	12	Slight