

# Bus/coach casualty trends: 2006-2015

## 1. Introduction

### 1.1 Bus Safety Programme

On the 1<sup>st</sup> February 2016 TfL launched our Bus Safety Programme consisting of six work streams. As part of the bus collision and casualty data analysis work stream we committed to making information more accessible and, as part of this, to provide a short illustration of long term bus trends for context.

### 1.2 Terminology and definitions

STATS-19 is the term used to refer to the data containing information about road casualties on a public highway reported to the police. This data is stored in a database called ACCSTATS.

Vehicles recorded in STATS-19 are classified by mode. However, within the data 'bus and coaches' are aggregated in one category; this means that when a vehicle is coded in STATS-19, there is no differentiation between TfL buses and other buses (such as tour buses) or coaches.

Any reference to casualties in the following paragraphs is casualties resulting from a collision that involved a bus or coach unless, otherwise specified.

Casualty severity in STATS-19 is defined as slight, serious or fatal. Serious and fatal casualties are referred to as KSI (killed and seriously injured) casualties.

## 2. Bus/coach involved casualties

'Bus/coach involved casualties' here means casualties of all modes that were injured in a collision involving a bus or coach.

A collision may involve a number of other vehicles and STATS-19 does not identify which vehicle 'caused' the collision. Therefore for the scope of this report no attempt was made to identify direct impacts.

### 2.1 Casualty Severity

Between 2006 and 2015, casualties resulting from a collision involving a bus or coach decreased by 13 per cent - from 2,811 to 2,436. During the same time, slight casualties have fallen by seven per cent – from 2,441 in 2006 to 2,270 in 2015; and KSI casualties saw a 55 per cent decrease from 370 in 2006 to 166 in 2015. This is shown in the charts and table below.



Figure 1 All casualties in collisions involving a bus or coach

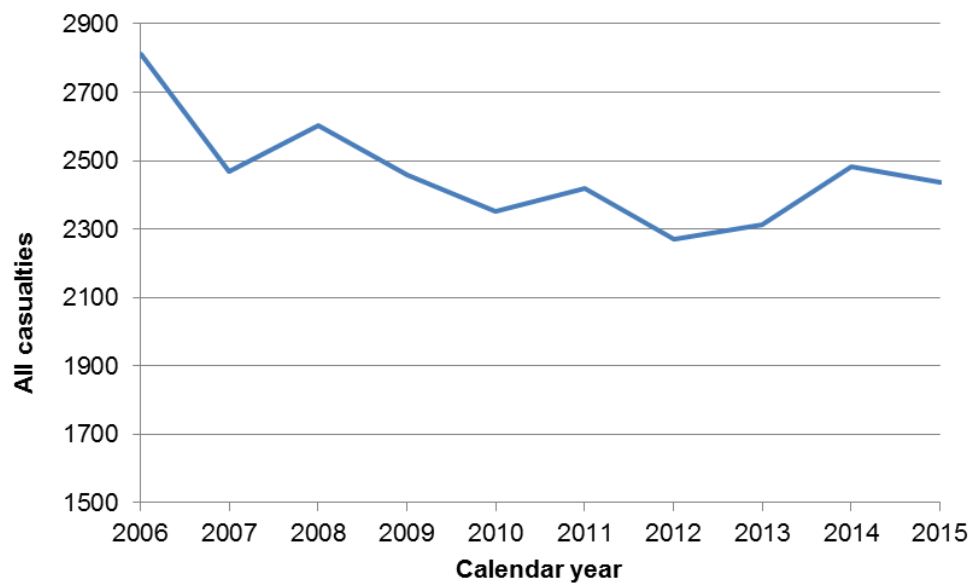


Figure 2 KSI casualties in collisions involving a bus or coach

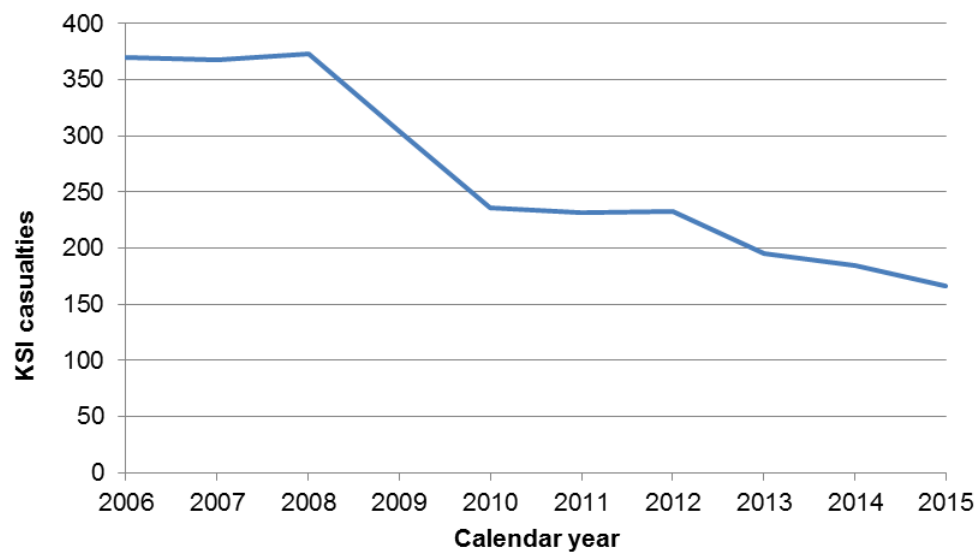


Table 1 Casualties in a collision where a bus or coach was involved (by severity)

Severity	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fatal	26	33	28	22	9	14	18	12	11	15
Serious	344	335	345	282	227	218	215	183	174	151
KSIs	370	368	373	304	236	232	233	195	185	166
Slight	2,441	2,099	2,228	2,152	2,114	2,188	2,036	2,119	2,297	2,270
All	2,811	2,467	2,601	2,456	2,350	2,420	2,269	2,314	2,482	2,436

## 2.2 Rates

The decrease in bus/coach related casualties should also be viewed in the context of increasing bus kilometres. During the period from 2006 to 2015 bus kilometres increased by eight per cent, with an average year-on-year increase of 0.9 per cent.

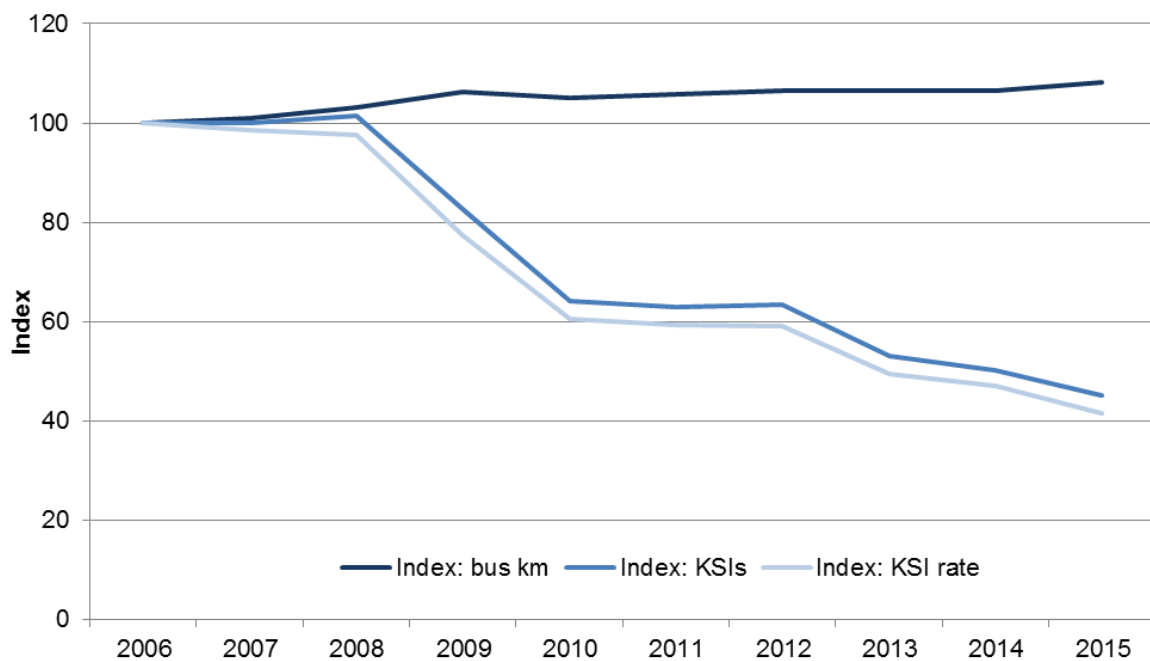
We can show the casualties as a 'rate' – the number of casualties from a collision that involved a bus/coach divided by the number of bus kilometres (in millions) each year. For KSIs, this shows:

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Operated bus kilometres (million)	459.88	464.02	474.67	488.90	483.73	486.09	489.33	489.37	489.66	497.92
Rate: KSIs per million km	0.8	0.8	0.8	0.6	0.5	0.5	0.5	0.4	0.4	0.3

In order to visualise the KSI number, operated bus kilometres and the rate together on one chart it is necessary to convert these figures to an index. This starts at 100 for the first value (2006 in this case) and represents change over time. For example, an index of 101 would represent a 1 per cent change from the baseline.

The decrease in KSIs, despite an increase in bus distances travelled, can be seen in the chart below. The dark blue line represents the increase in bus kilometres, the royal blue shows the number of KSIs and the pale blue is the rate of KSIs per million kilometres travelled.

**Figure 3 Rate: KSI casualties in collisions involving a bus or coach per million bus km**

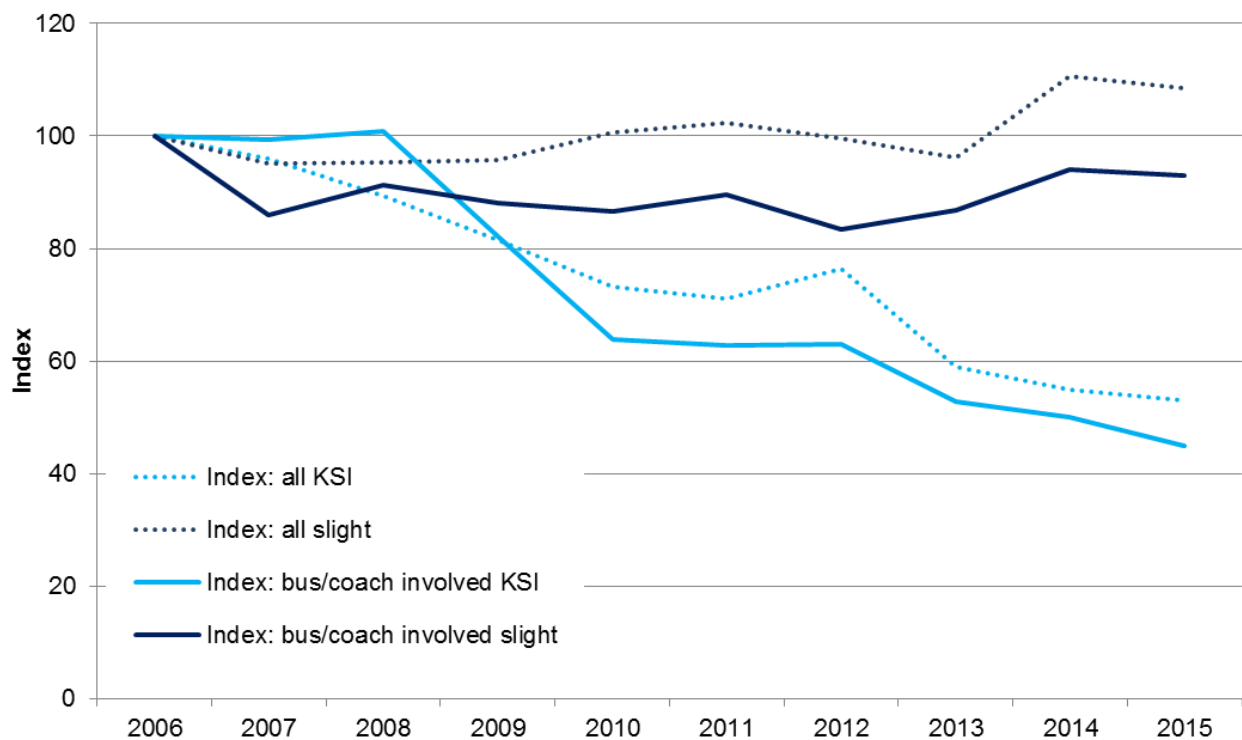


## 2.3 Background trends

Between 2006 to 2015 all recorded KSI road casualties decreased on average by 6.5 per cent year on year. For casualties in a collision involving a bus or coach, this decrease was higher – an average of 8.1 per cent annual decrease over the decade.

It is useful to index the number of casualties for all London and for casualties from collisions involving a bus or coach, so they can be viewed on the same chart for comparison purposes (Figure 4). This highlights that slight and KSI casualties involving a bus or coach (the solid lines) have declined at rates better than the background trend of all casualties in London.

**Figure 4 An index of casualties in collisions involving a bus or coach vs all casualties (slight and KSI)**



## 2.4 Casualty Mode

In 2015, of all casualties resulting from a collision where a bus or coach was involved, 65 per cent were bus or coach occupants, 14 per cent pedestrians and 11 per cent car occupants.

**Table 2 Casualties (all severity) in a collision where a bus or coach was involved (by mode)**

Casualty type	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bus or coach occupant	1,670	1,408	1,492	1,443	1,401	1,470	1,326	1,471	1,579	1,594
Pedestrian	506	462	472	433	425	391	373	356	367	341
Car	371	326	346	304	274	308	311	248	273	274
Pedal Cycle	140	142	133	139	152	142	148	140	134	102
Powered 2 Wheeler	68	80	90	81	63	72	73	62	87	70
Goods Vehicle	31	20	30	24	17	21	18	16	20	26
Taxi	18	15	19	23	13	12	18	16	16	27
Other Vehicle	7	13	18	9	5	4	2	5	6	2
Total	2,811	2,466	2,600	2,456	2,350	2,420	2,269	2,314	2,482	2,436

KSI casualties resulting from a collision where a bus or coach was involved fell across all casualty modes, with a 55 per cent decrease for bus or coach occupants themselves (159 in 2006 to 71 in 2015).

**Table 3 KSI casualties in a collision where a bus or coach was involved (by mode)**

Casualty type	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bus or coach occupant	159	134	152	124	98	86	94	90	71	71
Pedestrian	137	140	133	116	79	94	88	69	58	63
Car	35	45	41	20	27	13	18	14	19	8
Pedal Cycle	22	23	25	21	21	26	24	15	16	11
Powered 2 Wheeler	14	20	12	18	9	9	8	5	17	10
Goods Vehicle	3	2	1	3	2	2			2	2
Taxi		1	3	1		2	1	1		
Other Vehicle		3	6	1				1	2	1
Total	370	368	373	304	236	232	233	195	185	166

**Table 4 Slight casualties in a collision where a bus or coach was involved (by mode)**

<b>Casualty type</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Bus or coach occupant	1,511	1,274	1,340	1,319	1,303	1,384	1,232	1,381	1,508	1,523
Pedestrian	369	322	339	317	346	297	285	287	309	278
Car	336	281	305	284	247	295	293	234	254	266
Pedal Cycle	118	119	108	118	131	116	124	125	118	91
Powered 2 Wheeler	54	60	78	63	54	63	65	57	70	60
Goods Vehicle	28	18	29	21	15	19	18	16	18	24
Taxi	18	15	17	22	13	10	17	15	16	27
Other Vehicle	7	10	12	8	5	4	2	4	4	1
<b>Total</b>	<b>2,441</b>	<b>2,099</b>	<b>2,228</b>	<b>2,152</b>	<b>2,114</b>	<b>2,188</b>	<b>2,036</b>	<b>2,119</b>	<b>2,297</b>	<b>2,270</b>