

PROJECTIONS OF ROAD CASUALTIES IN GREAT BRITAIN TO 2030

ANNEX A Data and detailed results

This annex provides Excel files which contain all the data used in this study and which show the fitted and extrapolated trend lines for casualty rates and the calculated casualties for 2020, 2025 and 2030.

The two main data files are:-

Casualty forecast by road user; and

Casualty forecast by age group.

Casualty forecast by road user

This file contains three data sheets, titled 'Data pop casualties and rates', 'Data traf casualties and rates' and 'Data Traffic forecast 2013'.

The first two data sheets contain tables of numbers of casualties by road user type and severity, data on historic and projected population, driving licences, passenger kilometres travelled and traffic, and derived casualty rates per head of population, per driving licence, per passenger kilometre and per unit traffic. Trend lines are fitted to these casualty rates and extrapolated to 2030. Points on the extrapolated trend lines at 2010, 2015, 2020, 2025 and 2030 are shown after the tables of casualty rates, and displaced down by five rows to avoid falling in the arrays used to plot graphs of casualty rates. If the fitted points were allowed into the array, they would move the trend line being fitted. Extrapolations are shown for trend lines fitted over the whole period of the data, over the period 2000 to 2012, and an intermediate period, usually 1990 to 2012. In addition, an extrapolated line is shown parallel to the trend line fitted over the whole period, but moved to pass through the actual rates for the years 2010 to 2012. This is only done where a change of slope in the curve of casualty rates means that the trend line does not pass close to the most recent casualty rates.

These two sheets also calculate estimated numbers of casualties for 5 year intervals from 2010 to 2030, using the extrapolated casualty rates. For these estimates, population is taken from the ONS Principal Population projection based on 2010 and most traffic from the Department for Transport 2013 Road Traffic Forecasts, with two alternatives used for cycling (DfT and extrapolation of recent trends) and with motor cycling remaining unchanged.

Severities listed and forecast are killed, seriously injured, slightly injured, killed or seriously injured, and casualties of all severities.

The third data sheet summarises the road transport forecasts issued by the Department for Transport in 2013.

The figures in this file are arranged in a standardised way. For each type of road user figures show the casualty rates for killed, serious and slight casualties on one figure, killed, KSI and all severity on another. Rates are usually shown per unit traffic and per head of population, and where appropriate, per driving licence and per passenger kilometre. The figures are plotted with a logarithmic scale for rates. Each figure shows three historic trend curves, the exponential trend curve for the full period of data shown, and extrapolations for different fitted trend curves.

The figures for casualty rates are followed by forecasts, for the same type of road user, of the number of casualties. There is one figure for each of the five severities killed, KSI, serious, slight and all. Each figure shows all the forecast possibilities, based on different extrapolated rates and, for pedal cyclists, for the two forecasts of future traffic.

The figures start with the set for all road users and follow with those for car drivers, car occupants (drivers and passengers), motorcycle and moped users, pedestrians and pedal cyclists.

Casualty forecast by age group

This file contains five data sheets, named 'Data fatalities', 'Data KSI', 'Data all severities', 'Data serious' and 'Data slight'. Each sheet has an identical layout, to allow operations easily to combine data from several sheets. Each sheet has a list of casualties by age and road user type for the period 1975 to 2012, or whatever period the data are available (columns A to Y). This is followed by forecasts for 2010 to 2030 based on various fitted trend lines (columns AA to AZ). These are followed by rates per population (columns BB to BZ) with space for extrapolations for 2010 to 2030 (columns CI to DK). Rates per unit traffic are shown in columns DN to EK, extrapolated trend lines in columns EU to FM. Population data are given in rows 142 to 157, licencing data in rows 67 to 79, and traffic data in rows 160 to 176.

The figures follow the pattern of the previous file, showing graphs of rates with extrapolated trend lines, followed by graphs of forecasts. The user groups for which figures are given are children aged 0 to 15, young people aged 16 to 19, young and old car drivers, with the age groups for car drivers being 16 to 19, 20 to 29, 70 to 79, 80 and over, and 70 and over.

During the course of preparing this report, forecasts were prepared for children in the age groups 0 to 4, 5 to 7, 8 to 11 and 12 to 15. To limit the length of the file, these have been omitted. Forecasts of casualties killed, KSI and of all severity for the disaggregate age groups of children listed above are given in file 'Casualties by age in detail', which is included in this Annex. It is a working file, and has not been tidied as much as the two main files.

The file of forecasts of driving licence holding by age can be made available on request to Kit Mitchell, kitmitch@googlemail.com.