

## Roads and Traffic: Background notes and Definitions



This section presents brief definitions of terms used in tables about road traffic, free-flow speeds, road lengths and road congestion, from Transport Statistics Great Britain for 2012.

It gives sources for further tables, and for detailed information on methodology.

### Notes and definitions include:

- Brief definitions and sources
- Sources of further information
- Links to more detailed definitions
- Methodology

### 1. Road traffic

Annual estimates are mainly based on around 8,000 manual counts where trained enumerators count traffic by vehicle type over a 12 hour period. Traffic data are also collected continuously from a national network of around 180 Automatic Traffic Counters (ATCs). In addition to counting traffic, the ATCs record some of the physical properties of passing vehicles which are used to classify traffic by type.

These two data sources are combined with road lengths statistics to produce the number of vehicle miles travelled each year by vehicle type, road category and region.

### 2. Road lengths

These estimates are based on road length data from the Department for Transport major roads database and information from Local Authorities and Ordnance Survey. Road lengths are categorised by different road types, incorporating major and minor roads and also whether the roads are in urban or rural locations. Major roads are also split into trunk roads, which are centrally managed, and principal roads, which are managed by local authorities.

### 3. Free-flow speeds

These statistics provide insight into the speeds at which drivers choose to travel and their compliance with speed limits, but should not be taken as estimates of actual average speed across the road network.

These estimates are based on traffic speed data collected from a sample of 96 Automatic Traffic Counters (ATCs) from a national network of around 180 ATCs. This sample was deliberately chosen to include ATCs located where external factors which might restrict driver behaviour (including junctions, hills, sharp bends and speed enforcement cameras) are not present.

---

## 4. Congestion

Congestion on locally managed 'A' roads is measured by estimating the average speed achieved by vehicles during the weekday morning peak, 7am to 10am.

The data are based on GPS location reports from a fleet of probe vehicles and are weighted to take account of the relative traffic flow on each road.

## 5. Road taxation revenue

The net overall estimate of vehicle excise duty raised is provided by DVLA along with the total unique vehicles licensed during the year. The split between tax classes is estimated by calculating the average duty paid per tax class (using the average number of vehicles licensed per quarter in 2011/12) and using this to distribute the total figure.

Statistics on fuel duty raised comes from the Hydrocarbon Oils Duties, published by HMRC at <https://www.uktradeinfo.com/index.cfm?task=bulloil>.

## 6. Road expenditure and construction

The figures in TSGB0717 relate to gross expenditure. Figures on Motorways and trunk roads are obtained from the Highways Agency. Figures on local roads are derived from local authority returns to the Department for Communities and Local Government (DCLG).

The Tender Price Index of Road Construction (ROADCON) measures the movement of prices in tenders for road construction contracts in England, Scotland and Wales. Further information on this index is available at:

<http://www.bis.gov.uk/analysis/statistics/construction-statistics/prices-and-cost-indices>

The lane km quoted are net km - this is the total length of new lane kilometres (km) added to the strategic network including additional lanes (widening), bypasses, carriageway alignment etc. less the total length of lane kilometres removed from the strategic road network. The Route Km is the overall length of the improvement to the network (scheme length). Figures are obtained from the Highways Agency.

## 7. Further tables

The web tables give further detail of the key results presented in this commentary, and statistics on other related topics. They are available here:

- Road traffic, forecasts and speeds:  
(<https://www.gov.uk/government/organisations/department-for-transport/series/road-traffic-statistics>)
- Road lengths: (<https://www.gov.uk/government/organisations/department-for->

---

[transport/series/road-lengths-statistics](https://www.gov.uk/government/organisations/department-for-transport/series/road-lengths-statistics))

- Congestion: (<https://www.gov.uk/government/organisations/department-for-transport/series/road-congestion-and-reliability-statistics> )

## 8. Detailed definitions

Notes and definitions relating to these statistics and their sources can be found in the Transport Statistics Great Britain 2012 Notes and Definitions.

Road traffic estimates:

(<https://www.gov.uk/technical-guidance-for-transport-stats#traffic-statistics>)

Road length statistics:

(<https://www.gov.uk/technical-guidance-for-transport-stats#road-lengths-statistics>)

## 9. Full methodology

A short paper, *Annual road traffic estimates: Methodology note*, outlining the full methodology used to calculate annual traffic estimates, is available at:

(<https://www.gov.uk/technical-guidance-for-transport-stats#traffic-statistics>)

A methodology note on road length statistics is available at:

(<https://www.gov.uk/technical-guidance-for-transport-stats#traffic-statistics>)

A short paper outlining the methodology used to compile the local 'A' road congestion statistics is available at:

(<https://www.gov.uk/technical-guidance-for-transport-stats#traffic-statistics>)