Road Traffic Statistics

Metadata

This file provides guidance on the different datasets available to download for DfT traffic estimates

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A. What traffic data is available?

There are three websites where DfT traffic estimates for Great Britain are available. All the datasets have been produced using the methods described in the guidance notes, as set out below.

Guidance Notes and Technical Information

- Road traffic statistics guidance – contents page
  Containing methodological information on all aspects of the road traffic and other road related statistics.
  https://www.gov.uk/government/publications/road-traffic-statistics-guidance

Web publications

- Road Traffic Estimates in Great Britain
  The National Statistics publications of road traffic estimates for Great Britain are released on an annual and quarterly basis and provide summary statistics at national, regional, and local authority level.
  https://www.gov.uk/government/collections/road-traffic-statistics

- Street-level road traffic estimates
  Providing the most user friendly way to access and download all the road level data, with an interactive mapping tool. Data are available for 2000 onwards.
  https://roadtraffic.dft.gov.uk/

- Downloads of street-level road traffic estimates
  Seven downloadable files in ".csv" format, providing the underlying street-level data for 2000 onwards.
  http://data.gov.uk/dataset/gb-road-traffic-counts

  The seven downloadable files can be split into four categories listed below:

  Road level Annual Average Daily Flow (AADF) estimates
  - AADF Data by direction
  - AADF Data

  Raw manual counts data collected by our trained enumerators
  - Raw count data

  Summary road traffic estimates
  - Local authority level traffic estimates
  - Regional traffic estimates by vehicle type
  - Regional traffic estimates by road type

  Major roads model geography
  - Major road network – shape file format

  The model of the major roads network used to estimate major road traffic. This download requires specialist Geographic Information Systems software.

B. Contents of datasets

i. Estimated Annual average daily flows (AADFs) by direction

An AADF is the average over a full year of the number of vehicles passing a point in the road network each day. The file has the same structure to the major roads AADF file with the additional column 'Direction_of_travel'. Different directions can be summed up to give a total combined flow. However, for methodological reasons, the AADFs for different count points should not be added together. A description of how annual road traffic estimates are produced is available at https://www.gov.uk/government/publications/road-traffic-statistics-guidance

See data definitions for further information on key terms.

The 'AADF data by direction' file contains the following variables (variable names are in bold):

- **Count_point_id** – a unique reference for the road link that links the AADFs to the road network.
- **Year** – AADFs are shown for each year from 2000 onwards.
- **Region_id** – Website region identifier.
- **Region_name** – the name of the Region that the CP sits within.
- **Region_ons_code** – the Office for National Statistics code identifier for the region.
- **Local_authority_id** – Website local authority identifier.
- **Local_authority_name** – the local authority that the CP sits within
- **Local_authority_code** – the Office for National Statistics code identifier for the local authority.
- **Road_name** – this is the road name (for instance M25 or A3).
- **Road_category** – the classification of the road type (see data definitions for the full list).
- **Road_type** – Whether the road is a 'major' or 'minor' road.
- **Start_junction_road_name** – The road name of the start junction of the link
- **End_junction_road_name** – The road name of the end junction of the link
- **Easting** – Easting coordinates of the CP location.
- **Northing** – Northing coordinates of the CP location.
- **Latitude** – Latitude of the CP location.
- **Longitude** – Longitude of the CP location.
- **Link_length_km** – Total length of the network road link for that CP (in kilometres).
- **Link_length _miles** – Total length of the network road link for that CP (in miles).
- **Estimation_method** – the method used to estimate the AADF, for each CP and year.
- **Estimation_method_detailed** – the detailed method used to estimate the AADF.
- **Direction_of_travel** – Direction of travel.
- **Pedal_cycles** – AADF for pedal cycles.
- **Two_wheeled_motor_vehicles** – AADF for two-wheeled motor vehicles.
- **Cars_and_taxis** - AADF for Cars and Taxis.
- **Buses_and_coaches** – AADF for Buses and Coaches
- **LGVs** – AADF for LGVs.
- **HGVs_2_rigid_axle** – AADF for two-rigid axle HGVs.
- **HGVs_3_rigid_axle** – AADF for three-rigid axle HGVs.
- **HGVs_4_or_more_rigid_axle** – AADF for four or more rigid axle HGVs.
- **HGVs_3_or_4_articulated_axle** – AADF for three or four-articulated axle HGVs.
- **HGVs_5_articulated_axle** – AADF for five-articulated axle HGVs.
- **HGVs_6_articulated_axle** – AADF for six-articulated axle HGVs.
- **All_HGVs** – AADF for all HGVs.
- **All_motor_vehicles** – AADF for all motor vehicles.

ii. Estimated Annual average daily flows (AADFs)

An AADF is the average over a full year of the number of vehicles passing a point in the road network each day. For methodological reasons, the AADFs for different count points should not be added together. A description of how annual road traffic estimates are produced is available at https://www.gov.uk/government/publications/road-traffic-statistics-guidance

See data definitions for further information on key terms.

The 'AADF data' file contains the following variables (variable names are in bold):

- **Count_point_id** – a unique reference for the road link that links the AADFs to the road network.
- **Year** – AADFs are shown for each year from 2000 onwards.
- **Region_id** – Website region identifier.
- **Region_name** – the name of the Region that the CP sits within.
- **Region_ons_code** – the Office for National Statistics code identifier for the region.
- **Local_authority_id** – Website local authority identifier.
- **Local_authority_name** – the local authority that the CP sits within
- **Local_authority_code** – the Office for National Statistics code identifier for the local authority.
- **Road_name** – this is the road name (for instance M25 or A3).
- **Road_category** – the classification of the road type (see data definitions for the full list).
- **Road_type** – Whether the road is a 'major' or 'minor' road.
- **Start_junction_road_name** – The road name of the start junction of the link
- **End_junction_road_name** – The road name of the end junction of the link
- **Easting** – Easting coordinates of the CP location.
- **Northing** – Northing coordinates of the CP location.
- **Latitude** – Latitude of the CP location.
- **Longitude** – Longitude of the CP location.
- **Link_length_km** – Total length of the network road link for that CP (in kilometres).
- **Link_length _miles** – Total length of the network road link for that CP (in miles).
- **Estimation_method** – the method used to estimate the AADF, for each CP and year.
- **Estimation_method_detailed** – the detailed method used to estimate the AADF.
- **Pedal_cycles** – AADF for pedal cycles.
- **Two_wheeled_motor_vehicles** – AADF for two-wheeled motor vehicles.
- **Cars_and_taxis** - AADF for Cars and Taxis.
- **Buses_and_coaches** – AADF for Buses and Coaches
- **LGVs** – AADF for LGVs.
- **HGVs_2_rigid_axle** – AADF for two-rigid axle HGVs.
- **HGVs_3_rigid_axle** – AADF for three-rigid axle HGVs.
- **HGVs_4_or_more_rigid_axle** – AADF for four or more rigid axle HGVs.
- **HGVs_3_or_4_articulated_axle** – AADF for three or four-articulated axle HGVs.
- **HGVs_5_articulated_axle** – AADF for five-articulated axle HGVs.
- **HGVs_6_articulated_axle** – AADF for six-articulated axle HGVs.
- **All_HGVs** – AADF for all HGVs.
- **All_motor_vehicles** – AADF for all motor vehicles.

iii. Raw manual counts data

Raw manual counts dataset is the actual data collected by trained enumerators to feed into road traffic estimates. A description of how annual road traffic estimates are produced is available at https://www.gov.uk/government/publications/road-traffic-statistics-guidance.

A raw count represents the number of vehicles of each type that flowed past a given point on that day broken by direction and hour.

See data definitions for further information on key terms.

The 'Raw_Count' file contains the following variables (variable names are in bold):

- **Count_point_id** – a unique reference for the road link that links the AADFs to the road network.
- **Direction_of_travel** – Direction of travel.
- **Year** – Counts are shown for each year from 2000 onwards.
- **Count_date** – the date when the actual count took place.
- **Hour** – the time when the counts in questions took place where 7 represents between 7am and 8am, and 17 represents between 5pm and 6pm.
- **Region_id** – Website region identifier.
- **Region_name** – the name of the Region that the CP sits within.
- **Region_ons_code** – the Office for National Statistics code identifier for the region.
- **Local_authority_id** – Website local authority identifier.
- **Local_authority_name** – the local authority that the CP sits within
- **Local_authority_code** – the Office for National Statistics code identifier for the local authority.
- **Road_name** – this is the road name (for instance M25 or A3).
- **Road_category** – the classification of the road type (see data definitions for the full list).
- **Road_type** – Whether the road is a 'major' or 'minor' road.
- **Start_junction_road_name** – The road name of the start junction of the link
- **End_junction_road_name** – The road name of the end junction of the link
- **Easting** – Easting coordinates of the CP location.
- **Northing** – Northing coordinates of the CP location.
- **Latitude** – Latitude of the CP location.
- **Longitude** – Longitude of the CP location.
- **Link_length_km** – Total length of the network road link for that CP (in kilometres).
- **Link_length _miles** – Total length of the network road link for that CP (in miles).
- **Pedal_cycles** – Counts for pedal cycles.
- **Two_wheeled_motor_vehicles** – Counts for two-wheeled motor vehicles.
- **Cars_and_taxis** - Counts for Cars and Taxis.
- **Buses_and_coaches** – Counts for Buses and Coaches
- **LGVs** – Counts for LGVs.
- **HGVs_2_rigid_axle** – Counts for two-rigid axle HGVs.
- **HGVs_3_rigid_axle** – Counts for three-rigid axle HGVs.
- **HGVs_4_or_more_rigid_axle** – Counts for four or more rigid axle HGVs.
- **HGVs_3_or_4_articulated_axle** – Counts for three or four-articulated axle HGVs.
- **HGVs_5_articulated_axle** – Counts for five-articulated axle HGVs.
- **HGVs_6_articulated_axle** – Counts for six-articulated axle HGVs.
- **All_HGVs** – Counts for all HGVs.
- **All_motor_vehicles** – Counts for all motor vehicles.

iv. Local authority road traffic estimates

Traffic estimates provides the summary statistics on the distance travelled by vehicles on Great Britain's roads. A description of how annual road traffic estimates are produced is available at https://www.gov.uk/government/publications/road-traffic-statistics-guidance.

Traffic estimates are provided in units of 'vehicle kilometre/mile': One vehicle multiplied by one kilometre/mile travelled.

See data definitions for further information on key terms.

The 'local authority traffic' file contains the following variables (variable names are in bold):

- **Local_authority_id** – Website local authority identifier.
- **Name** – the name of the local authority.
- **ONS Code** – the Office for National Statistics code identifier for the local authority.
- **Year** – Traffic estimates are shown for each year from 1993 onwards.
- **Link_length_km** – Total length of the road network road link for that local authority (in kilometres).
- **Link_length_miles** – Total length of the network road link for that local authority (in miles).
- **Cars_and_taxis** – Annual road traffic estimate for Cars and Taxis in the given local authority.
- **All_motor_vehicles** – Annual road traffic estimate for all motor vehicles in the given local authority.

v. Regional traffic estimates

Traffic estimates provides the summary statistics on the distance travelled by vehicles on Great Britain's roads. A description of how annual road traffic estimates are produced is available at https://www.gov.uk/government/publications/road-traffic-statistics-guidance.

Traffic estimates are provided in units of 'vehicle kilometre/mile': One vehicle multiplied by one kilometre/mile travelled.

See data definitions for further information on key terms.

The 'regional traffic' file contains the following variables (variable names are in bold):

Regional traffic estimates by vehicle type

- **Year** – Traffic estimates are shown for each year from 1993 onwards.
- **Region_id** – Website region identifier.
- **Region_name** – the name of the region.
- **ONS_code** – the Office for National Statistics code identifier for the region.
- **Total_link_length_km** – Total length of the road network road link for that region (in kilometres).
- **Total_link_length_miles** – Total length of the network road link for that region (in miles).
- **Pedal_cycles** – Annual road traffic estimate for pedal cycles in the given region and road category.
- **Two_wheeled_motor_vehicles** – Annual road traffic estimate for two-wheeled motor vehicles in the given region and road category.
- **Cars_and_taxis** – Annual road traffic estimate for Cars and Taxis in the given region and road category.
- **Buses_and_coaches** – Annual road traffic estimate for Buses and Coaches in the given region and road category.
- **LGVs** – Annual road traffic estimate for LGVs in the given region and road category.
- **All_HGVs** – Annual road traffic estimate for all HGVs in the given region and road category.
- **All_motor_vehicles** – Annual road traffic estimate for all motor vehicles in the given region and road category.

Regional traffic estimates by road type

- **Year** – Traffic estimates are shown for each year from 1993 onwards.
- **Region_id** – Website region identifier.
- **Region_name** – the name of the region.
- **ONS_code** – the Office for National Statistics code identifier for the region.
- **Road_category_id** – the classification of the road type (see data definitions for the full list).
- **Road_category_name** – the classification of the road type (see data definitions for the full list).
- **Road_category_description** – the classification of the road type (see data definitions for the full list).
- **Total_link_length_km** – Total length of the road network road link for that region (in kilometres).
- **Total_link_length_miles** – Total length of the network road link for that region (in miles).
- **All_motor_vehicles** – Annual road traffic estimate for all motor vehicles in the given region and road category.

C. Data definitions

Count point: Traffic estimates are calculated for each link of Great Britain's major road network, with links' start and end points defined as where the link joins a major road junction. Each link has a uniquely referenced Count Point (CP), where the traffic is usually counted by enumerators. Enumerators are not employed where (a) the CP is dependent upon another CP, e.g. the traffic estimate is calculated for each side of a Local Authority boundary, or (b) the traffic estimate is derived from neighbouring CPs' traffic estimates. Unlike the major road network (where every link has a CP), there are only CPs on a sample of minor roads.

Road types

The following abbreviations are used in the 'Road Category' variable:

Category	Category Description
PM	M or Class A Principal Motorway
PA	Class A Principal road
TM	M or Class A Trunk Motorway
TA	Class A Trunk road
M	Minor road
Of which…	
MB	Class B road
MCU	Class C road or Unclassified road

The road definitions included in the traffic estimates are as follows:

Major roads: Includes motorways and all class 'A' roads. These roads usually have high traffic flows and are often the main arteries to major destinations.

Motorways (built under the enabling legislation of the Special Roads Act 1949, now consolidated in the Highways Acts of 1959 and 1980): Includes major roads of regional and urban strategic importance, often used for long distance travel. They are usually three or more lanes wide in each direction and generally have the maximum speed limit of 70mph.

'A' Roads: These can be trunk or principal roads. They are often described as the 'main' roads and tend to have heavy traffic flows though not as high as motorways.

- *Trunk roads* (designated by the Trunk roads Acts 1936 and 1946): Most motorways and many of the long distance rural 'A' roads are trunk roads. The responsibility for their maintenance lies with the Secretary of State and they are managed by the Highways Agency in England, the National Assembly of Wales in Wales and the Scottish Executive in Scotland (National Through Routes).

- *Principal roads:* These are major roads which are maintained by local authorities. They are mainly 'A' roads, though some local authorities do have responsibility for some motorways.

Minor Roads: These are ‘B’ and ‘C’ classified roads and unclassified roads (all of which are maintained by the local authorities), as referred to above.

'B' roads in urban areas can have relatively high traffic flows, but are not regarded as being as significant as 'A' roads, though in some cases may have similarly high flows. They are useful distributor roads often between towns or villages. 'B' roads in rural areas often have markedly low traffic flows compared with their 'A' road counterparts.

'C' Roads are regarded as of lesser importance than either 'B' or 'A' roads, and generally have only one carriageway of two lanes and carry less traffic. They typically have low traffic flows in rural areas.

Unclassified roads (referred to as ‘U’ in datasets) include residential roads both in urban and rural situations and rural lanes, the latter again normally having very low traffic flows. Most unclassified roads will have only two lanes, and in rural areas may only have one lane with ‘passing bays’ at intervals to allow for two-way traffic flow.

Area Type

Urban roads: These are major and minor roads within an urban area with a population of 10,000 or more. For 2017 traffic estimates onwards, the definition is based on the 2011 Census definition of Urban Settlements, as published by the Office for National Statistics: (https://data.gov.uk/dataset/15e3be7f-66ed-416c-b0f2-241e87668642/built-up-areas-december-2011-boundaries-v2).
Prior to 2017, the 2001 urban settlement definition was used.

Rural roads: These are major and minor roads outside urban areas (the urban areas have a population of more than 10,000 people).

Private Roads: These are included in the major roads as these private roads (usually toll roads, tunnels or bridges) are accessible to the general public, whereas private minor roads, not usually being accessible to the general public, are not included.

Measurements of traffic

Annual Average Daily Flow (AADF): The average over a full year of the number of vehicles passing a point in the road network each day.

Vehicle kilometre/mile: One vehicle multiplied by one kilometre/mile travelled (vehicle kilometres/miles are calculated by multiplying the AADF by the corresponding length of road). For example, one vehicle travelling one kilometre/mile a day for a year would be 365 vehicle kilometres/miles. This is sometimes referred to as the volume of traffic.

Direction of flow
In some files, the flow along a given road is separated by direction of travel where the data is available. The direction of travel is indicated by the letter in the data column ‘iDir’.

Category	Category Description
N	North
S	South
E	East
W	West
C	Combined (flows separated by the direction of travel unavailable).

Types of vehicle

Category	Category Description
All_MV	All Motor Vehicles
2WMV	Two-wheeled motor vehicles (e.g. motorcycles etc)
Car	Cars and Taxis
LGV	Light Goods Vans
HGV	Heavy Goods Vehicle total
HGVR2	2-rigid axle Heavy Goods Vehicle
HGVR3	3-rigid axle Heavy Goods Vehicle
HGVR4	4 or more rigid axle Heavy Goods Vehicle
HGVA3	3 and 4-articulated axle Heavy Goods Vehicle
HGVA5	5-articulated axle Heavy Goods Vehicle
HGVA6	6 or more articulated axle Heavy Goods Vehicle
PC	Pedal Cycles

The definitions for the vehicle types included in the traffic census are as follows:

All motor vehicles: All vehicles except pedal cycles.

Cars and taxis: Includes passenger vehicles with nine or fewer seats, three-wheeled cars and four wheel-drive 'sports utility vehicles' (SUV). Cars towing caravans or trailers are counted as one vehicle.

Motorcycles etc: Includes motorcycles, scooters and mopeds and all motorcycle or scooter combinations.

Buses and coaches: Includes all public service vehicles and works buses which have a gross weight greater than 3.5 tonnes.

Light vans: Goods vehicles not exceeding 3.5 tonnes gross vehicle weight. Includes all car-based vans and those of the next largest carrying capacity such as transit vans. Also included are ambulances, pickups and milk floats.

Heavy goods vehicles (HGV): Includes all goods vehicles over 3.5 tonnes gross vehicle weight.

Rigid heavy goods vehicles

- *Rigid HGV with two axles:* Includes all rigid heavy goods vehicles with two axles. Includes tractors (without trailers), road rollers, box vans and similar large vans. A two axle motor tractive unit without trailer is also included.

- *Rigid HGV with three axles:* Includes all non-articulated goods vehicles with three axles irrespective of the position of the axles. Excludes two axle rigid vehicles towing a single axle caravan or trailer. Three axle motor tractive units without a trailer are also included.

- *Rigid HGV with four or more axles:* Includes all non articulated goods vehicles with four axles, regardless of the position of the axles. Excludes two or three axle rigid vehicles towing a caravan or trailer.

Articulated heavy goods vehicles: When a heavy goods vehicle is travelling with one or more axles raised from the road (sleeping axles), then the vehicle is classified by the

number of axles on the road, and not by the total number of axles. Articulated goods vehicles with three or four axles are merged into one category, as they are not differentiated during manual traffic counts.

- *Articulated HGV with three axles (or with trailer):* Includes all articulated goods vehicles with three axles. The motor tractive unit will have two axles and the trailer one. Also included in this class are two axle rigid goods vehicles towing a single axle caravan or trailer.

- *Articulated HGV with four axles (or with trailer):* Includes all articulated vehicles with a total of four axles regardless of the position of the axles, i.e. two on the tractive unit with two on the trailer, or three on the tractive unit with one on the trailer. Also includes two axle rigid goods vehicles towing two axle close coupled or drawbar trailers.

- *Articulated HGV with five axles (or with trailer):* This includes all articulated vehicles with a total of five axles regardless of the position of the axles. Also includes rigid vehicles drawing close-coupled or drawbar trailers where the total axle number equals five and articulated vehicles where the motor tractive unit has more than one trailer and the total axle number equals five.

- *Articulated HGV with six or more axles (or with trailer):* This includes all articulated vehicles with a total of six or more axles regardless of the position of the axles. Also includes rigid vehicles drawing close coupled or drawbar trailers where the total axle number equals six or more and articulated vehicles where the motor tractive unit has more than one trailer and the total axle number equals six or more.

Pedal cycles: Includes all non-motorised cycles.