



Department
for Transport

Foreign registered vehicle estimates

Methodology Note



Estimates of the proportion of traffic from vehicles which are registered outside of the UK are published on the Department for Transport website biannually.

Tables [TRA3201](#), [TRA3202](#) and [TRA3203](#) show the proportion of vehicles in traffic which are registered outside the UK, by vehicle type, road type and region.

All other traffic estimates provided refer to all vehicles on the road, regardless of the national origin of the vehicle.

Data collection

During June a roadside survey is carried out collecting information about vehicles travelling on the road. The survey captures the registration marks from around 1.5 million vehicles at 236 sites in Great Britain. Vehicles with registration marks originating outside the United Kingdom, the Isle of Man and the Channel Islands have been identified and this information has been used to produce estimates of the rate of foreign registered vehicles on Britain's roads.

Calculation of the estimates

The overall rate of foreign vehicles in traffic is calculated by weighting the rate at each site by the annual average daily flow (AADF) for each motorway and 'A' site and by the actual number of observations at minor road sites.

In mathematical terms, this uses the following equation:

$$R_j = \frac{\frac{F_{ij}}{O_{ij}} \times T_i}{\sum T}$$

Where R_j is the GB rate of foreign vehicles in traffic for road type (or vehicle type) j ; F_{ij} is the number of foreign vehicles observed at site i of road type or vehicle type j ; O_{ij} is the total number of vehicles observed at site i of road type or vehicle type j ; and T_i is the traffic flow (using either the AADF or observed flow) at site i . The overall rate for all road types in Great Britain is created by weighting these figures by regional traffic totals for each road type.

National coverage

Although the roadside survey includes survey sites in Northern Ireland, the sample size for Northern Ireland is too small to produce any reliable estimates for either Northern Ireland or the United Kingdom. It would be expected that the rate of foreign vehicles in traffic would be considerably higher in Northern Ireland than the rest of Great Britain due to its land border with the Republic of Ireland.

Reliability of estimates

Although the survey observes over 1.5 million vehicles, only a small number of these are foreign registered. For example, in 2010 there were only 7,140 observations of foreign registered vehicles (roughly 0.48 per cent of all the observations). Over half of these were cars (4,116) and were the second most common were heavy goods vehicles (2,137). There were only 292 and 595 observations of buses and light vans. No images of motorbikes are captured so it is impossible to produce an estimate of these.

Due to the small sample size these estimates are not designated National Statistics and should be treated with caution.

Each table includes an upper and lower confidence interval associated with the overall GB and / or road type and / or vehicle type statistic. The confidence interval indicates the uncertainty attached to each estimate and it provides a range of values into which, if we repeated the survey many times, the result would fall 95 per cent of the time.

As an example, the overall rate for 2010 was 0.437 per cent with a lower interval of 0.427 per cent and an upper interval of 0.447 per cent. This means that the results from this set of data gives a rate of 0.437 per cent, but this is based on a sample of all the vehicles on the road only rather than every single vehicle. If we had observed a different set of vehicles (for instance, by filming at different sites or on different days) we would have got a slightly different answer. However, we estimate that had we carried out the survey 100 times, the overall result would have been somewhere between 0.427 and 0.447 per cent 95 times. This gives us our best estimate plus the confidence intervals.

In addition, the sample size is too small each year for some of the vehicle / road type combinations (especially related to minor roads, buses & coaches, and light vans) so no estimates have been produced. These are marked with an * in the tables.

For further information on these statistics please email vehicles.stats@dft.gov.uk

This methodology note relates to the “Foreign Vehicle” statistics (tables and charts) and statistical release published on the DfT website at:

<https://www.gov.uk/government/collections/road-traffic-statistics>