



Speed Compliance Tool- FAQs

Speed Compliance Tool: Frequently Asked Questions (FAQs)

Provided here is a series of frequently asked questions with answers that we hope will cover the common queries users might have with the information they need quickly and concisely.

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ABOUT THE TOOL

Q. WHAT IS THE SPEED COMPLIANCE TOOL?

The Speed Compliance Dashboard is an easy-to-use online tool providing access to information about speed limits and average and 85th percentile speeds on roads across your local area.

Q. WHAT TIME PERIODS IS THE SPEED DATA AVAILABLE IN?

- All Day, Everyday
- Monday – Friday AM Peak, 7am – 9am
- Monday - Friday Off Peak, 10am – 4pm
- Monday – Friday PM Peak, 4pm – 7pm
- Everyday Evening, 7pm – 11pm
- Everyday Night-time, Midnight – 4am
- Weekend, 7am – 7pm

Q. ACROSS WHAT PERIOD DOES THE SPEED DATA APPLY?

The data is captured across a 12-month period from April to March aligning with financial years and analysed to produce annual average speeds for each of the 7 individual time periods. In the future we may be able to provide other time periods or perhaps more regular updates.

ABOUT THE DATA

Q. WHAT SPEED DATA DOES IT USE?

The SCT uses vehicle speed data provided by Basemap which is then analysed and transformed into the dashboards and maps by Agilysis using the powerful ArcGIS Online tool by ESRI UK.

The speed data comes from hundreds of thousands of connected vehicles that have GPS devices installed such as vehicle trackers & sat nav devices. The data does not come from mobile phones or insurance 'black box' devices.

Q. WHAT IS THE SAMPLE SIZE IN MY AREA?

We do not have figures for precise sample sizes in each area as this is held by the supplier, but we do know that there are around 14 billion individual 'road segments' included in the dataset each year obtained from trillions of GPS data points.

Q. WHAT COVERAGE DOES THE DATA OFFER?

The data from GPS trackers is received from vehicles travelling on roads of all classes. The data has 99.9% coverage of Motorways, A roads and B roads in any given week.

Where insufficient data is collated for a given network link, the source data is infilled using various methods including reverse speed, road type, proximity. However, currently any infilled data not based on directly observed vehicles for an individual link during one of the individual daily time periods is excluded from the Speed Compliance Tool. All-day average speed calculations are always based on directly observed vehicles.

Q. DOES THE SAMPLE USE SPEED DATA FROM ALL TYPES OF VEHICLES?

Not quite. The data only comes from cars, HGV's and Taxis. Motorcycles typically do not have GPS trackers installed so have not contributed to this dataset.

Q. HOW IS TRAFFIC VOLUME DETERMINED?

We use a pioneering statistical approach to create 'modelled AADT' values for all road segments using individual vehicle counts. The modelling process uses official DfT count point surveys to fit a fully Bayesian model to produce these modelled AADT values for all roads. These modelled results are subject to higher levels of variation and accuracy on roads with lower traffic flows, so we provide results in AADT bands which reflects the estimated level of accuracy. This is an exciting innovation that we are continually reviewing and hope to increase accuracy of in the future.

Q. HOW IS THE SAFETY PERFORMANCE INDICATOR (SPI) CALCULATED?

The SPI is calculated as the estimated number of vehicles per day with speeds below the registered speed limit as a percentage of total modelled traffic (AADT).

Q. HOW IS THE SPEED DATA LINKED TO THE ROAD NETWORK?

Data summarised from all vehicles that pass along a road segment each year, broken down by individual time period, as well as an all-day average. This give us a unique ID that is matched to individual road segments in the Ordnance Survey MasterMap Highways Map.

Q. WHEN IS THE DATA UPDATED?

The vehicle speed data is updated annually. We receive the data in the summer and immediately process and review it for updates for clients. This roll-out will then be undertaken for clients one-by-one.

Speed Limit maps are updated quarterly – at the beginning of April/July/October/January. If there are significant changes on roads in an area we will look to offer one-off updates in-year outside of the normal speed data update timescales.

Q. CAN THE DATA BE FILTERED?

The Speed Compliance Tool offers a range of filters that users can apply to focus the information on display. This predominantly uses information from the road network e.g. road class or road number, but you can also use the other data (speed limit, modelled AADT) to view different roads. The background dataset however cannot be filtered, for example, to remove influence of fleet vehicles.

SPEED LIMIT INFORMATION

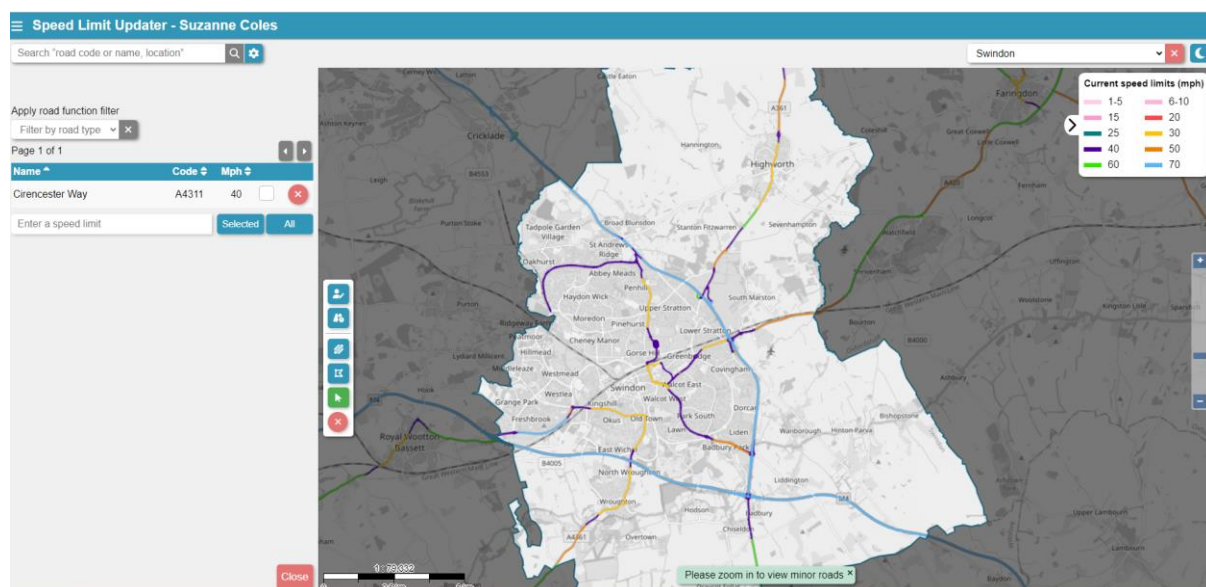
Q. WHERE DOES THE SPEED LIMIT INFORMATION COME FROM?

The speed limit data is provided to Ordnance Survey by Basemap having been collected by another third party – Insight Warehouse. Insight Warehouse are an associated company of Agilysis specialising in speed limit data for countries across Europe and this speed limit data is used by other mapping providers and technology companies for use by drivers, fleet managers and many others. The UK speed limit map has been created over the last decade using a variety of sources including surveys, digital maps and evidence from local authorities.

Q. CAN SPEED LIMIT INFORMATION BE CHANGED?

Yes. Where changes to speed limits have been implemented or an incorrect speed limit is recorded, this can be corrected by notifying Insight Warehouse of the changes required. Please contact speedmap@insight-warehouse.co.uk to provide information on data updates, if you can include any TROs or plans illustrating the extent of speed limits this will help the updating process.

In summer 2023 Insight Warehouse and Basemap have launched a new ‘Speed Limit Updater’ tool which is used by the team to make changes to individual roads. Access to this can be rolled out to local authorities and other users of the Speed Compliance Tool to advise of changes. If you would like to be a part of this programme please contact speedmap@insight-warehouse.co.uk to register for access to the tool.



Q. WHEN DOES SPEED LIMIT DATA GET UPDATED?

Changes to speed limits will be updated in the Speed Compliance Tool on a quarterly basis – at the beginning of April/July/October/January. If there are significant changes on roads in an area, we will look to offer one-off updates in-year outside of the normal speed data update process.

COMPARISONS WITH OTHER DATA SOURCES

Q. IS THE SPEED COMPLIANCE TOOL A REPLACEMENT FOR AUTOMATIC TRAFFIC COUNTS?

The data in the dashboard is not a direct replacement for traditional spot-surveys, such as ATCs or Speed Detection Radars (SDRs). These can give more detailed information over a shorter timescale (often 7 days) whilst the Speed Compliance Tool offers widespread network coverage, summarised over a longer time period to reduce temporal variations at a significantly lower cost.

In our experience, this is true of most connected vehicle data sources although Agilysis are exploring 'high volume' connected vehicle data sources that may offer something much closer to a traditional survey.

Q. WHY MIGHT SPEEDS BE LOWER THAN THOSE DETECTED BY AN ATC/SDR?

The speed values are based on vehicle speeds along an entire link, rather than spot speeds at the most free-flowing point along a link. As links are always split at a point where other roads intersect, the speeds take into account reduced speeds at junctions typically shown by a marginal suppression of vehicle speeds.

Q. HAVE COMPARISONS BEEN MADE BETWEEN SPEEDS IN THE SPEED COMPLIANCE TOOL AND THOSE COLLECTED VIA MORE TRADITIONAL METHODS?

Yes. Agilysis has taken a sample of speeds recorded from 154 ATCs across 5 different authorities. The results show close correlation, particularly in Evening average speeds when one would expect the traffic to be free flowing with low levels of congestion.

Analysis has also been undertaken on AADT figures, comparing modelled flow to DfT figures and ATC traffic volumes.

Further detail on the analysis undertaken is available [here](#).

USING THE DATA

Q. HOW CAN THE DATA BE USED?

The information could be used to assess speeding complaints from members of the public. Users can see average vehicle speeds in seconds to make judgements on the appropriate next steps, whether that is a simple response stating that there is no significant issue, a requirement for further investigation, or escalation as a part of a speed management strategy.

The data could be used to inform targeted enforcement activity to locations where speeds are shown to be high at particular time periods. It can also be used to verify speed camera enforcement locations within a given corridor to align enforcement to locations where speed compliance is lowest.

Local Highway Authorities may use the data to identify areas where average speeds are suitable for the consideration of 20mph limits. Alternatively, the data may inform areas within existing 20mph limits where additional speed management measures are required due to continued non-compliance.

As a data source of all speed limits across a designated network the SCT could be used to inform a Speed Limit Review process guiding changes to local speed limits or for managing highway assets associated with local speed limits.

The uses are endless!

Q. CAN THE DATA BE SHARED WITH OTHERS?

Data shown in the Speed Compliance Tool may be shared with others for information purposes only. Screenshots of speed data may be taken and used in correspondence with others, however a reference must be made to the appropriate Ordnance Survey Copyright Licence and source of the data. An example Copyright statement is shown below.

© Crown copyright and database rights [2023] OS [Authority name, OS Licence No.] *edit
© Agilysis – Speed Compliance Tool 2023. The data provided is for personal use only and must not be published without permission.*

Q. IS HISTORICAL DATA AVAILABLE FOR COMPARISON?

Historical data is not currently available. We are considering how users may be able to access historical data as a future improvement to the tool although users must have purchased speed data for more than 12 months to be eligible.

Agilysis are working with another supplier of connected vehicle data with an archive of up to 10 years of data for use in scenarios where immediate before and after analysis is required. We hope to develop a case-study for this in the months ahead.



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