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Department for Transport

Guidance

COVID-19 transport data: methodology note

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Annex: data periodicity and baseline by mode

The Department for Transport provides daily updates to the Cabinet Office for use in the government's daily media briefings on changes in:

1. road traffic in Great Britain;

2. rail passenger journeys in the UK;
3. rail station concourse footfall at a set of monitored stations;
4. Transport for London's (TfL) tube and bus routes; and
5. bus travel in Great Britain (excluding London)

The data is sent as near to real time as possible. This document sets out information on the data sources and methodology used to generate each of these headline measures. To find the latest data, please see the slides and datasets to accompany coronavirus press conferences.

Reminder on days of the week differences

Although daily data is being reported, direct comparisons of change should not be made between weekdays and weekends/bank holidays. For public transport there are typically different levels of service/timetable in place on weekends and bank holidays than on weekdays; and for road traffic, there is a different profile on weekend days compared to weekdays.

1. Road traffic

Coverage

The National Road traffic estimates include change in traffic on all road types in Great Britain and all motor vehicle types at GB level.

Data source

The analysis is based on around 275 automatic traffic count sites across Great Britain. These sites are used for DfT's Quarterly Road Traffic National Statistics series to estimate traffic change and as such the samples of automatic traffic counters are stratified by area, road type, and traffic flow levels and have been designed to be representative of national traffic.

Methodology

The daily road traffic estimates are suitable as an indication of traffic change rather than actual traffic volumes. The data provided is indexed to the first week of February and the comparison is to the same day of the week, i.e., 100 would mean that traffic is the same as the equivalent day in the first week of February. Over the course of the year, normal traffic can vary by +/– 20%."

Quality

In order to achieve a daily estimate of traffic change, lower levels of validation have been applied compared to normal statistical outputs. However, the data series is being verified against other sources and similar trends have been seen.

Further statistics

More information about DfT's statistics on road traffic can be found on ourRoad Traffic Statistics pages.

2. Rail passenger journeys

Coverage

Passenger journeys across the whole UK rail network.

Data source

Information on journeys comes from the Latest Earnings Networked Nationally Overnight (LENNON) data source. LENNON is the revenue settlement service for the train operating companies for UK passenger rail ticket sales and is the main source of data for UK rail fares revenue. The system processes information from the majority of UK train ticket sales, it then allocates daily revenue to each of the train operators within 24 hours of the ticket being purchased.

Methodology

Data labelled ‘National Rail’ on the CCS graph is calculated by summing the number of journeys for the week-to-date for 2020 and expressing this as a percentage of the equivalent week in 2019.

The number of journeys is calculated from LENNON by taking the number of ticket sales on that day and uplifting each sale by the number of likely journeys that would be taken with that ticket. For example: The purchase of an annual season ticket would be counted as 480 journeys, and an advanced return would be counted as two journeys.

Quality

Whilst fit for purpose for monitoring overall change in usage trends, there are a few quality issues with the LENNON journey data when using it for this purpose that should be borne in mind. These are mitigated to some extent by reporting the 2020 data as a percentage of 2019 rather than reporting journey numbers themselves:

- Data delay: The latest daily data covers ticket sales received up to the previous day, and generally includes 75–90% of the eventual sales receipts that will be included for that day (which will also reflect adjustments such as refunds). Data updates may therefore subsequently be made to previous days’ data from the start of each month. After 7 days the data is about 95% complete for a given date. Therefore, we recommend looking at trends rather than interpreting the exact figures.
- Journeys using annual season tickets are allocated an uplift of around 480 journeys (the estimated use over the course of the ticket’s validity, i.e., 240 return journeys) while a weekly ticket’s weighting is 10 journeys (5 return journeys). This could be an over or underestimate of usage, especially in the current climate.
- Journeys in LENNON are recorded based on the date of ticket sale, rather than the date of intended travel. There is therefore a risk of overestimating the number of journeys for season tickets and advanced tickets on a given day.
- LENNON does not cover some Passenger Transport Executives, local government bodies responsible for public transport in their areas.
- Daily passenger journey estimates and ticket sales are sensitive to occasional lump sum adjustments in LENNON. For example, TfL issue zonal season tickets which allow travel on National Rail. Earnings from these journeys are passed from TfL to train operating companies via LENNON. When these earnings are reported and dropped into LENNON, this could look like a considerable change in journeys or sales on a given day. Again, this supports looking at rolling weekly totals and comparing to the equivalent week in 2019.

Further statistics

More information about DfT’s rail passenger statistics can be found on ourRail Statistics pages.

3. Rail station concourse footfall

Coverage

Network Rail’s station footfall data covers 17 of the 20 Network Rail managed stations, including 8 central London termini. This covers a very small proportion of the approximately 2,500 stations in Great Britain, though they are some of the busiest stations in the country. Data is not currently collected at Clapham Junction, London Bridge and St Pancras International. While footfall data for Guildford is being collected, it is currently excluded from the totals provided by DfT as there is no comparable data from a year ago.

Data source

Footfall data is collected on a daily basis from a network of sensors that count how many people enter and exit the stations for all purposes, including those who do not use the train services e.g. for shopping, food and drink, use of the tube/taxis/buses, and people who are just passing through the station or waiting to meet others.

Methodology

As well as counting people entering and exiting the stations, the sensors count people using the stations’ retail facilities separately (except at Guildford). This provides separate ‘concourse’ and ‘retail’ footfall counts, which allow us to see the number of stations users who are also using retail facilities, i.e., the retail penetration for each station.

Quality

Data accuracy of the footfall counts is +/- 5%. Due to a lag in data processing from Network Rail’s Digital Footfall System, there are often revisions made to the daily data back-series, e.g., to include new data from an individual station. This has a minor impact on footfall totals for the following day, and by the following week the data is broadly finalised.

Further statistics

More information about rail station concourse footfall can be found onNetwork Rail's information pages.

4. Transport for London tube and bus routes

Coverage

Transport for London bus and tube routes

Data source

Operational data from Transport for London

Methodology

Usage is measured by entry/exit data from tube stations and bus boarding taps. This is then compared to equivalent data from 1 year ago and to other trends to gauge the extent to which travel has been reduced.

Quality

This is operational data considered fit for purpose for reporting changes in trends in usage

Further statistics

More information about TfL's tube and bus routes can be found on ourLight Rail and Tram Statistics and Bus Statistics pages.

5. Non-TfL buses

Coverage

Passenger boardings on around half of bus services in Great Britain outside London.

Data source

This data has been provided by Ticketer, based on operators which were using Ticketer in the January reference week (3rd week of January). Data from other sources (including non-Ticketer operators) has been used to validate these figures and is generally consistent with the trends presented.

Methodology

A figure of 100 means the same level as that seen on the same day in the third week of January. A figure higher than 100 shows an increase. A figure less than 100 shows a decrease.

Passenger boardings will include physical ticket sales, where money changes hands, as well as smart cards (commercial or concessionary), QR tickets, and where the driver counts passengers (such as school runs).

As a measure of comparability to "business as usual", data for Easter and other bank holidays has been adjusted to compare against typical usage for those dates. This is because it is known that operators offer a different service level for those dates when compared with the typical service levels for those days of the week.

Quality

This is operational data considered fit for purpose for reporting changes in trends in usage. It is not necessarily equivalent to existing National Statistics on buses. Its precise comparability will only be truly known once National Statistics for the period have also been collected and validated.

Further statistics

More information about non-TfL bus travel can be found on ourBus Statistics pages.

Annex: data periodicity and baseline by mode

Mode	Periodicity	Baseline
Roads	Daily figure	Equivalent day from first week of February 2020
Rail: passenger journeys	Rolling weekly total for week ending today	Equivalent week in 2019
Rail: station footfall	Daily figure	Equivalent day in 2019
Non-TfL bus	Daily figure	Equivalent day from third week of January 2020
TfL: tube and bus	Daily figure	Equivalent day in 2019

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