



Journey Time Statistics: Access to Services 2014

About this release

This Statistical Release presents estimates of travel times from where people live to key local services for England for 2014.

Statistics are published at national, regional, local authority and small area (Lower Super Output Area) level, for eight key local services and three modes of transport.

They are produced by calculating theoretical travel times from residential neighbourhoods to the nearest services of each type, using information on public transport timetables, the road network, and information on actual average traffic speeds on the road network.

This is the first release in a new series designed to encompass the existing accessibility and, in time, connectivity statistics products. The new series continues to provide similar types of analyses and outputs to the earlier series, but using new calculation methods, and in some cases new data and specifications.

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Journey Time Statistics: Access to Services is a new statistical series replacing the former accessibility statistics series.

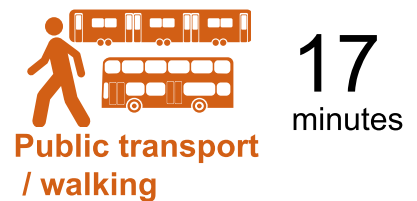
Across a range of 8 key local services, the average minimum journey times to access the services from where people live were 17 minutes by public transport / walking, 14 minutes by cycle, and 10 minutes by car.

The 8 key services are medium sized employment centres, primary schools, secondary schools, further education colleges, GPs, hospitals, foodstores and town centres.

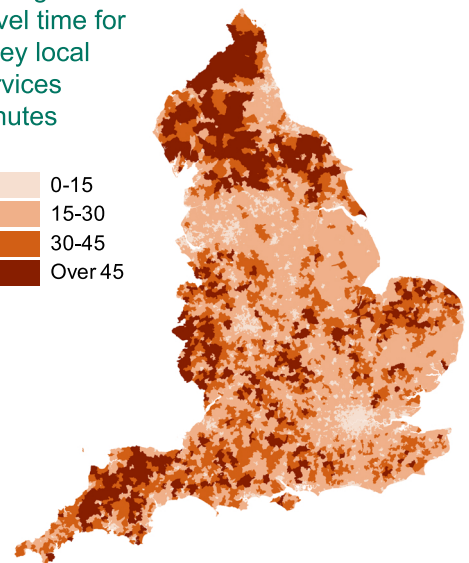
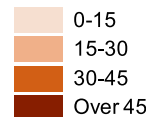
The average minimum travel time to the nearest service by public transport / walking was lowest for primary schools and food stores (9 minutes) and highest for hospitals (37 minutes).

The average minimum travel times across the range of 8 key services by public transport / walking were 15 minutes for urban areas and 27 minutes for rural areas.

Average minimum travel times to key services:



Average minimum travel time for 8 key local services minutes



This release is the first in a new series of Journey Time Statistics, based on modelling theoretical journey times from local neighbourhoods to a range of destination types.

The series continues the general approach of the earlier Accessibility Statistics and Connectivity Statistics releases, but uses a new calculation method to derive the statistics. Therefore the results are not comparable with those from before.

While making this change, the opportunity has been taken to review other aspects of the statistics in order that as many other changes as possible can be made at the same time.

The main changes are:

- use of a new software tool for the travel time calculations
- new sources for some destination data sets, using open data where possible
- revised minimum journey time assumptions
- improvements to default car speed assumptions
- focus on 'am peak' journey times
- simplification and rationalisation of the range of statistical measures produced
- updating to the 2011 Census geography

This release applies the new methods to the same range of local services covered in the former 'accessibility statistics' series. The new sub-title 'Access to Services' has been adopted because the term 'accessibility' is also very often used in the context of policies to improve disabled access to services.

What's next?

It is intended that similar work will be carried out in 2016 to apply the new methods to the continued development of journey time statistics for more strategic destinations covered by the experimental connectivity statistics published for 2011 and 2013.

What do you think?

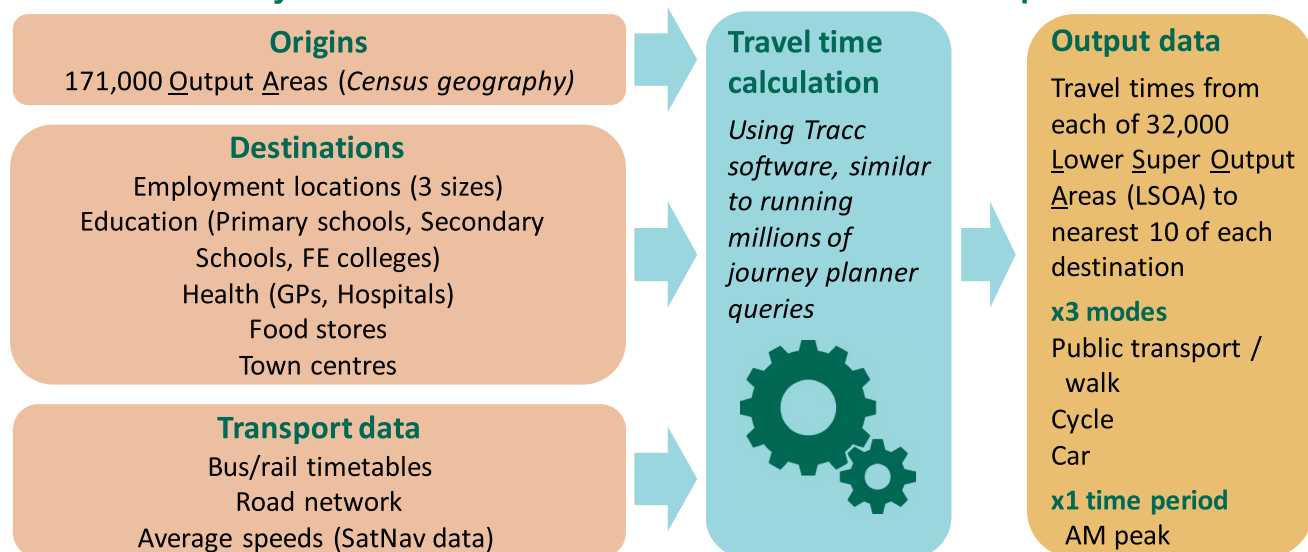
We are very interested in users views of these statistics and their future development. If you have comments or queries, please contact subnational.stats@dft.gsi.gov.uk.

For a limited time after publication there will also be a user survey available on the Journey Time Statistics home page.

Find out more

For more information on methods and data used, please see <https://www.gov.uk/government/publications/journey-time-statistics-guidance>

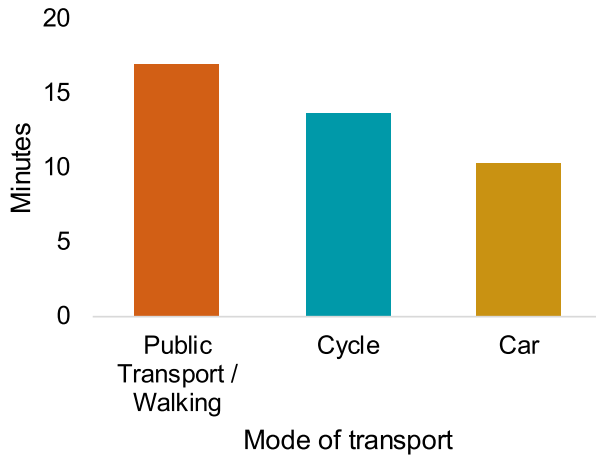
Outline of Journey Time Statistics: Access to Services calculation process



Minimum journey times - the national picture

For England as a whole in 2014, the average minimum travel time across eight key services was 17 minutes by public transport / walking, 14 minutes by cycling and 10 minutes by car.

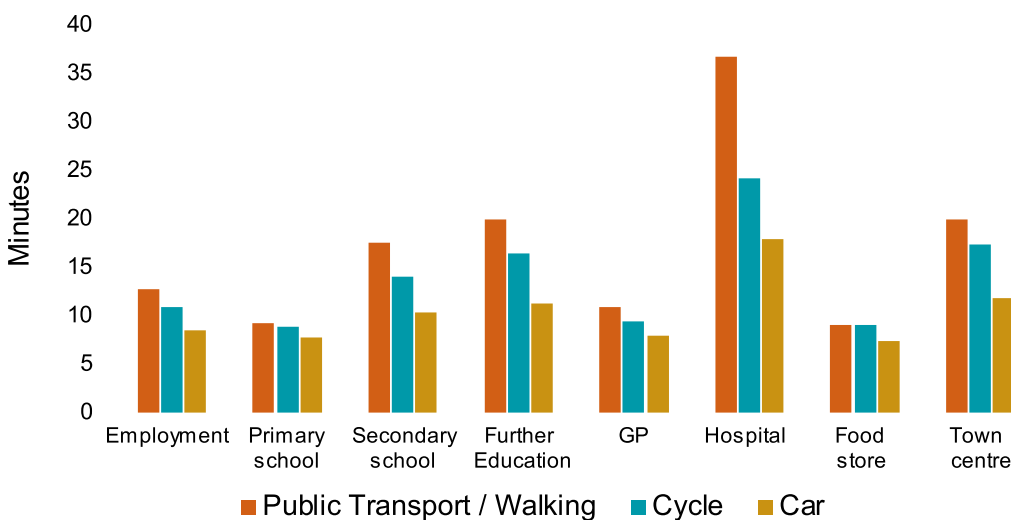
Average travel time to reach nearest key services, England, 2014



The average minimum travel time to the nearest service by public transport/walking was lowest for primary schools and food stores (9 minutes) and highest for hospitals (37 minutes). The pattern for travel by bicycle was similar, but with slightly less variation, from 9 minutes for primary schools, food stores and GPs to 24 minutes for hospitals. For cars there was even less variation, with 7-8 minutes for many destinations, and 18 minutes for hospitals.

The main reasons for the differences in travel times between the service types are the number of locations at which the services are available, how these are distributed throughout England, and how these locations relate to where people live.

Average travel time to reach nearest key services, England, 2014



Minimum journey times

The average minimum travel time is the shortest travel times to a given type of service by a particular mode of transport, averaged over a given area.

For cycle and car modes the minimum journey time will always be at least five minutes, because 5 minutes is added to the actual travelling time to make some allowance for parking times.

For public transport / walking journeys, five minutes is added to those journeys where a public transport service is used, to allow a margin for catching the service, but if a quicker walking journey is available this will be used, with nothing added.

Data tables

Travel time tables:

[JTS0101 to JTS0104](#)

Key services

The 8 key services for which average travel times are sometimes quoted are those shown in the chart to the left.

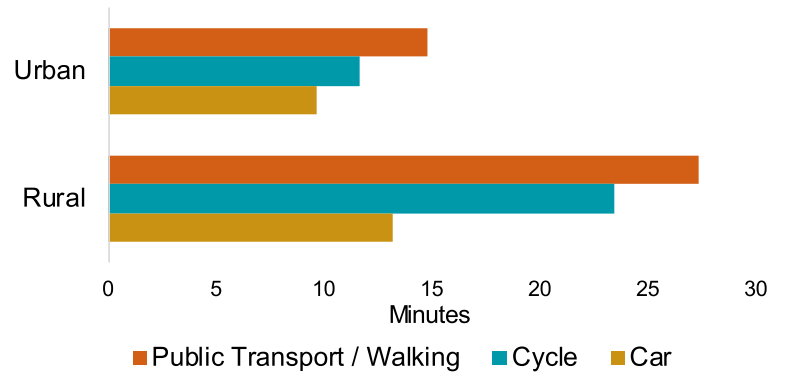
The data tables include results for employment centres of 3 different sizes - that used in the key services average is the medium one (500-4,999 jobs).

Urban and rural patterns

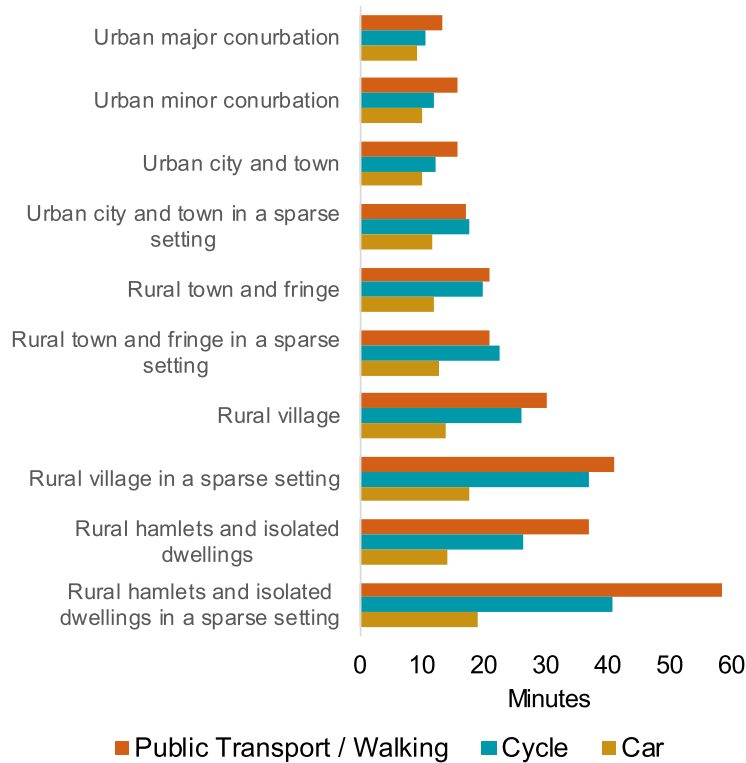
Average minimum access times were higher for users in rural areas compared with urban areas. In 2014 the average travel times to the range of 8 key services by public transport were 15 minutes for urban areas and 27 minutes across all rural areas.

There was also a marked difference between urban and rural access times by bicycle (12 and 23 minutes respectively), but less so for cars (10 and 13 minutes).

Average minimum travel times to a range of key services, urban and rural areas, England, 2014



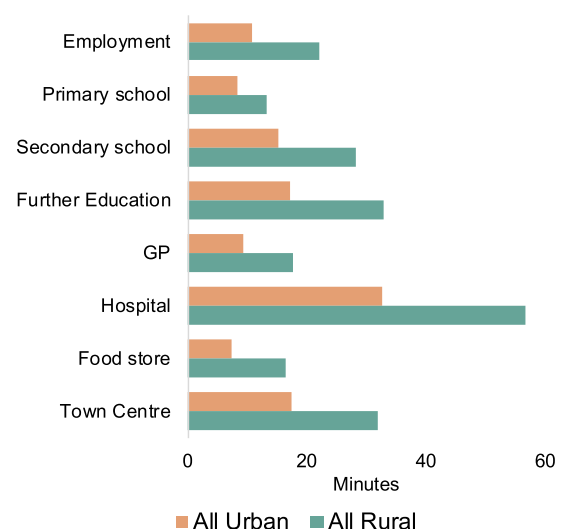
Average minimum travel times to a range of key services, by urban/rural area type, England, 2014



The chart to the left shows that within rural areas the average minimum access times ranged from 21 minutes for 'town and fringe' areas up to 58 minutes for hamlets and isolated dwellings in sparsely populated areas. There was rather less variation for travel by car.

For the public transport / walking mode, minimum journey times in rural areas were usually roughly double those of urban areas for most destination types, although this differential was less marked for primary schools (see chart below).

Average travel time by public transport / walking to reach nearest key services, urban and rural areas, England, 2014



Urban and rural definitions

This report uses the Defra Rural-Urban Classification, based on 2011 Output Areas.

See <https://www.gov.uk/government/collections/rural-urban-definition> for more details.

Local authorities

The results in the previous section were averages for England as a whole. Accessibility statistics are also produced for local authority areas, as well as smaller areas.

The charts to the right show how the average minimum travel times to the range of 8 key services varies between local authorities.

For public transport, the most common average minimum journey time was 15 minutes, with one quarter over 20 minutes. Very few authorities had average minimum public transport access times under 13 minutes.

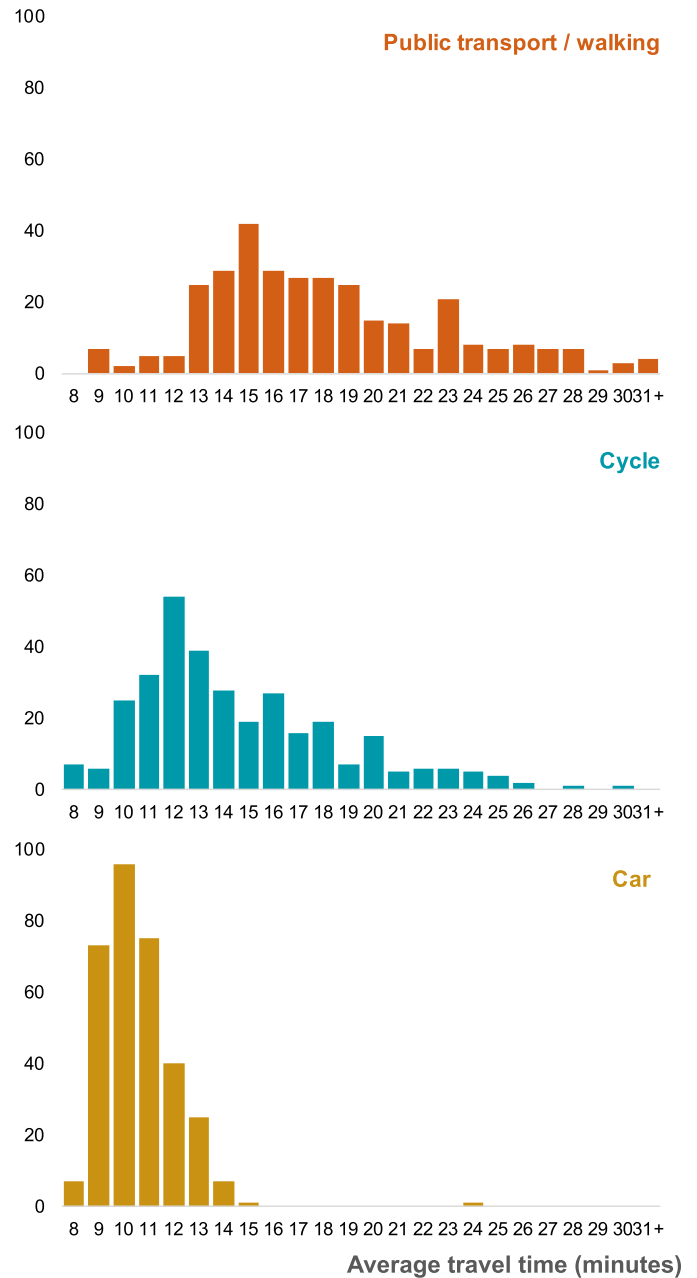
For travel by bicycle the most common average minimum travel time was 12 minutes, but the spread was much wider, with average minimum times over 20 minutes for about one in ten local authorities.

The most common average minimum travel time by car was 10 minutes, and almost never more than 15 minutes.

Most local authorities are quite diverse and so access times often vary considerably within them, usually strongly influenced by the rural or urban nature of the locality. This variability is captured in these statistics by calculating results for small neighbourhood-sized areas within local authorities. Some of these results are illustrated in the next section.

Travel time to reach nearest key services, local authority averages by transport mode, England, 2014

Number of local authorities



Local authorities

In some parts of England there are two tiers of local authorities, and in others a single unitary authority. Statistics have been calculated for both types of authority - around 360 in all. These vary considerably in size, from a population of a few tens of thousands, to over a million.

Lower layer Super Output Areas (LSOA)

These are the basis of the small area statistics published here. There are 32,844 LSOA in England, designed for use with the 2011 Census. They were defined so that they usually have a population of between 1,000 and 3,000.

Data tables

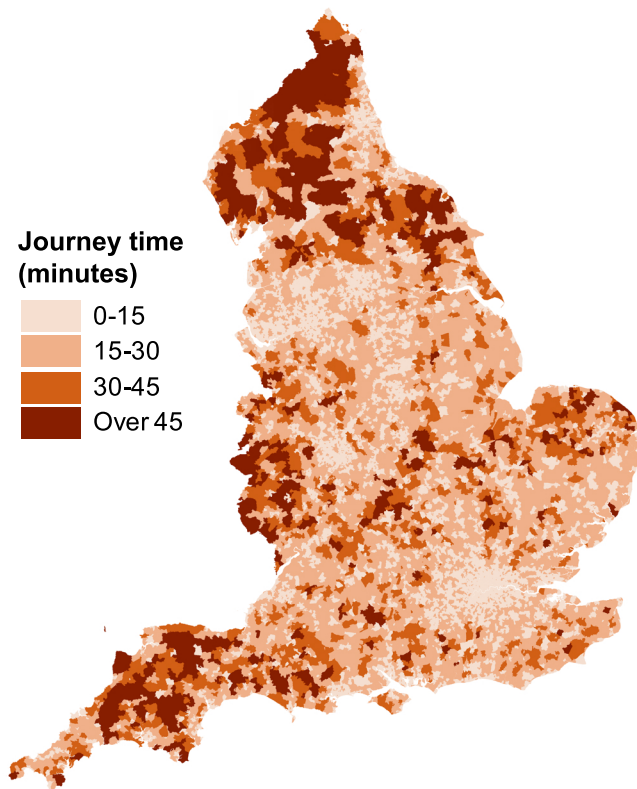
Tables for local authorities:

[JTS0104](#), [JTS0401 to JTS0408](#)

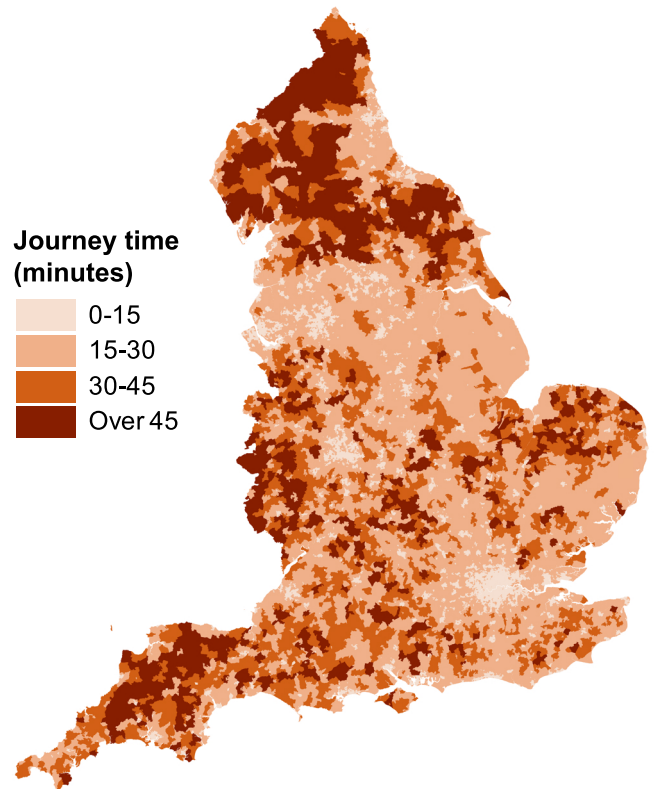
Small areas

The following maps illustrate some of the local variation in access times, using results which have been calculated for the 32,000 local neighbourhoods across the country. The map on the left shows minimum travel times for medium sized centres of employment, while the right hand map shows average minimum travel times across the range of 8 key local services. In both cases, major urban areas can clearly be made out with the lowest travel times.

Average minimum travel time to nearest medium centre of employment (500-4,999 jobs), by public transport/walking



Average minimum travel time for 8 key local services by public transport/walking



What are 'employment centres'?

For these statistics, NOMIS data has been obtained on the number of jobs available within each LSOA. The LSOAs containing more than 100 jobs have then been classified as small, medium and large employment centres as below, with journey times being calculated to the centre of the LSOA.

Type	Jobs	No. in England
Small	100-499	16,465
Medium	500-4,999	9,235
Large	5,000+	645

Based on the above LSOA map, the public transport travel time to the nearest area with 500 or more jobs is less than 15 minutes for about 71% of the working age population, and under 30 minutes for about 97%.

The average minimum journey time across the 8 key services is 15 minutes or less for about 46% of the population, and 30 minutes or less for around 96%.

Data tables

Tables for small areas (LSOAs):

[JTS0501 to JTS0508](#)

Destination indicators

For each destination type statistics have been produced showing the percentage of the service user population that can reach the nearest location providing that service within 15, 30, 45 or 60 minutes.

For example, 44% of the population of 11-15 year olds is within 15 minutes of at least one secondary school by walking or public transport.

Data tables

Tables for destination indicators:

[JTS0201 to JTS0205](#),

Tables for origin indicators:

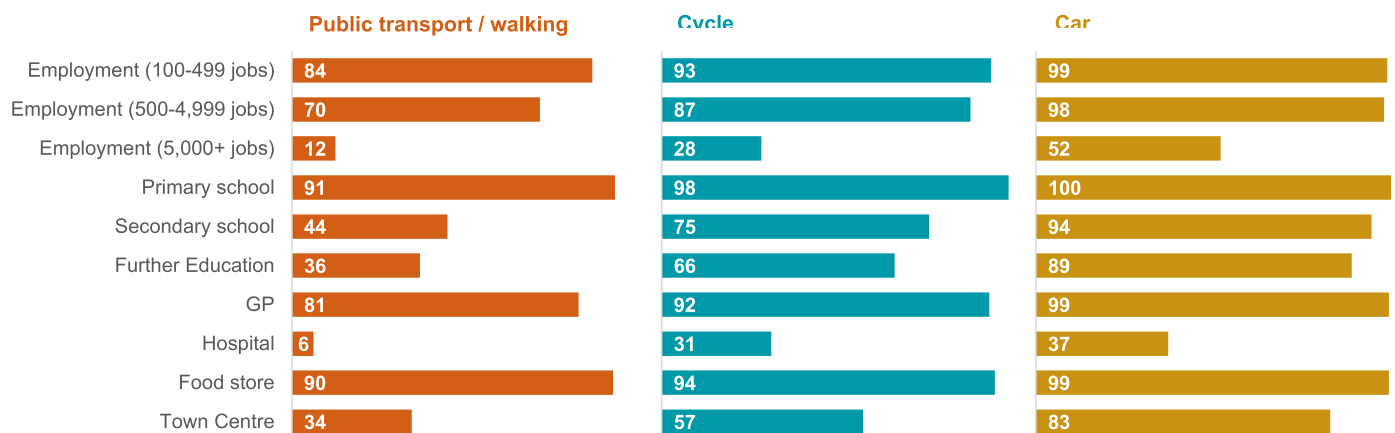
[JTS0301 to JTS0305](#),

Both also in:

[JTS0401 to JTS0408](#),

[JTS0501 to JTS0508](#)

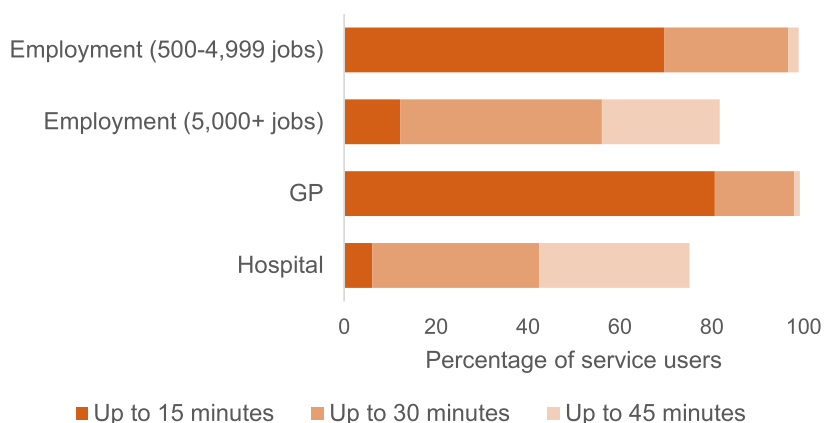
Percentage of service users able to access each service within 15 minutes, England, 2014



For the less numerous service locations, the proportion of the population able to access them in less than 15 minutes is clearly relatively low. For these, the longer journey time thresholds may be more useful.

For example, while only 12% of working age people live within 15 minutes of a large employment centre by public transport, about 80% live within 45 minutes of one.

Percentage of service users able to access selected services by public transport / walking within given times minutes, England, 2014



New destination and origin indicators

For these 2014 statistics, the destination and origin indicators have both been standardised to use the same journey time thresholds for every destination type.

The old 'continuous' destination indicators, which were calculated from the minimum journey times using a formula, have been discontinued.

The 'user' populations used for each service in the destination indicators are:

Employment	16-74 year olds
Primary schools	5-10 year olds
Secondary schools	11-15 year olds
Further education	16-19 year olds
All other services	All households

Origin indicators

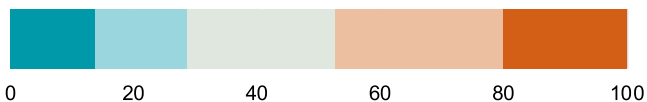
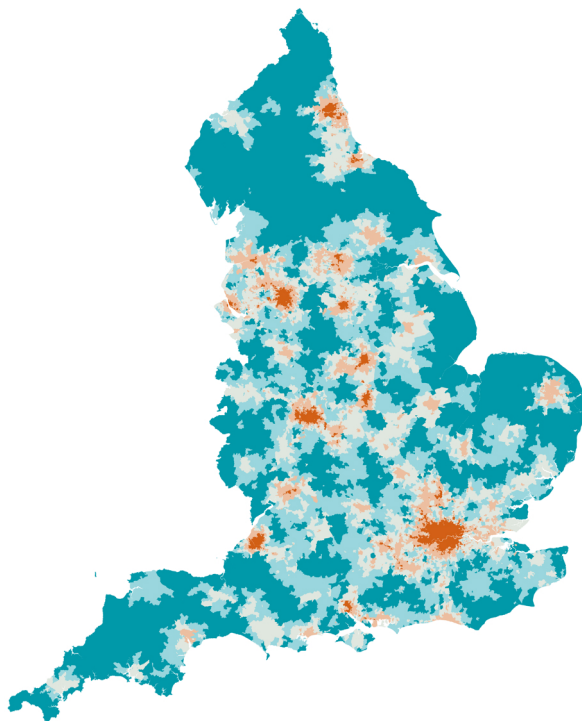
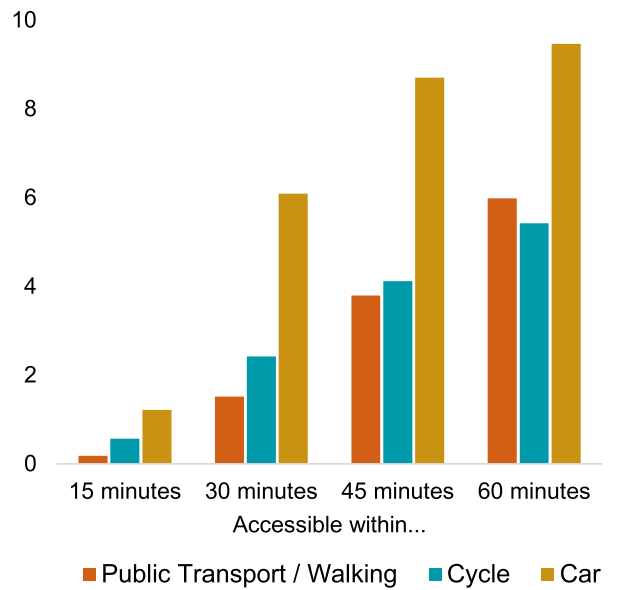
Large employment centres rarely exist outside large towns. Larger towns and cities may contain several together.

The chart to the right shows the average number of large employment locations (with 5,000 or more jobs) that can be reached within a range of journey times (up to a maximum of 10 locations).

The average number of such locations which can be reached by car within a given time is always higher than for the other two transport modes. However, the average number of locations that can be reached by public transport increases from a relatively low 1.5 within 30 minutes to 3.8 within 45 minutes and 6.0 within 60 minutes, probably reflecting the reach of relatively fast commuter services around cities.

These contrasting patterns for the larger employment locations are also explored in the maps below. The accompanying bars show that while 80% of the working age population can reach 7 or more large employment centres by car, this is true of only 20% by public transport.

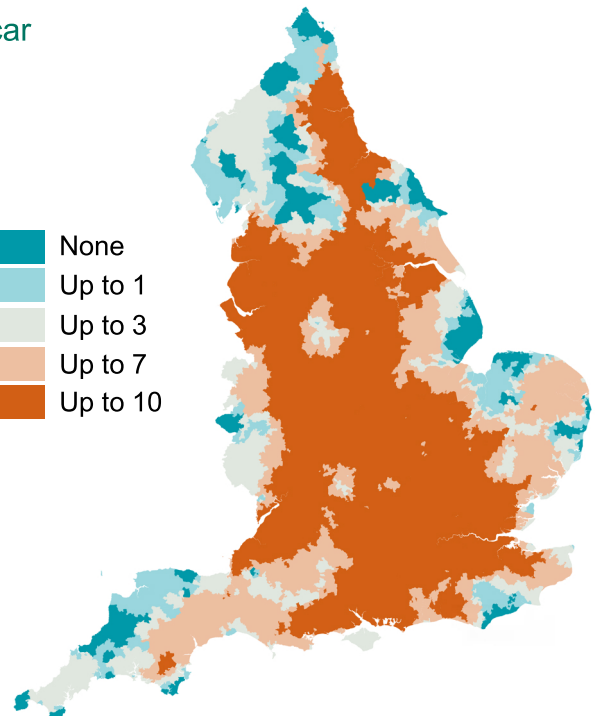
Average number of large employment centres within selected journey times, England, 2014



Percentage of working age population

...ce

...car



Percentage of working age population

Further information

Further information on the data sources, calculation methodology and strengths and weaknesses of these statistics can be found in the separate [Technical Documentation](#). It is important to note that due to the methodological changes introduced for this report, the results are not directly comparable with those in previous editions of Accessibility Statistics.

The full set of journey time statistics tables are available to download from the [Journey Time Statistics](#) home page.

Where contractual conditions permit, the locations of services used in the calculation of these Access to Services statistics will be available to download at <https://www.data.gov.uk> in due course.

Other DfT statistics containing information on the use of public transport include the [National Travel Survey](#) and [Bus Statistics](#).

Review update

Five potential areas for development were set out in the last edition of Accessibility Statistics. The first three of these have been completed with the publication of this report, namely: production of the raw data within DfT; simplifying the large range of indicators produced and reviewing the destination data used. The fourth potential development was producing more user-friendly outputs, especially for LA and small area results. It is hoped the simplification of the indicators produced will be of some benefit - but further consideration may be given to new types of outputs if the opportunity arises. The fifth area was incorporating new statistics based on experience with the experimental connectivity statistics - this will be considered along with the update of the connectivity statistics, but no further additions to the access to service indicators set beyond the small changes implemented in this release are currently planned.

While we are confident of the quality of the travel times produced using the new calculation method, some of the changes to the presentation of the results are necessarily more experimental. The Department is always keen to hear comments and feedback on its statistics, and these may be sent to subnational.stats@dft.gsi.gov.uk, or via the user survey on the Journey Time Statistics home page.

Strengths and weaknesses of the data

The key strengths and weaknesses of these statistics are discussed in the guidance note available from the [Technical Information](#) section of the web site. In summary however, the following points should be kept in mind:

- The statistics are based on the calculation of theoretical journey times, they are not based on real journeys
- They are however based on actual public transport times, and average traffic speeds on the

road network

- They are compiled on a consistent basis across the country
- Although the statistics are calculated to a high level of geographical detail, some assumptions and simplifications are necessary in the modelling (for example assigning the start point of journeys to a single point in each Output Area, road speeds, interchange times for public transport)
- For particular areas, local authorities and other experts may have more detailed information allowing them to produce more accurate or detailed models of the local situation
- Demand responsive services (e.g. bus services which have to be booked) are only included to the extent that they are included, and can be plausibly modelled, in the Traveline National Data Set.

National Statistics

These statistics are outside the scope of National Statistics. However, as official statistics they are produced in accordance with the Code of Practice for Official Statistics.

Details of ministers and officials who received pre-release access to these statistics up to 24 hours before release can be found at the Journey Time Statistics home page.