

# **Accessibility Statistics Guidance**

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This guidance has been developed to provide further information, in the form of frequently asked questions, on the accessibility statistics. If you require any further information or have any comments about the accessibility statistics, please contact [subnational.stats@dft.gsi.gov.uk](mailto:subnational.stats@dft.gsi.gov.uk).

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# 1. Introduction to the accessibility statistics

## 1.1 What is accessibility?

Accessibility is the extent to which individuals and households can access day to day services, such as employment, education, healthcare, food stores and town centres. Accessibility statistics will reflect both the current transport network and land use planning.

The accessibility statistics provide information on the services available to local communities by public transport/walking, cycling, and car modes.

## 1.2 What is the purpose of the statistics?

The accessibility statistics publication is intended to help local authorities develop their evidence base for their accessibility strategies, and to support the DfT accessibility indicator on households with good transport access to key services or work.

The statistics do not necessarily take account of local circumstances, such as residents of rural communities being more willing to travel further for services than in urban areas. The statistics should therefore be used with other evidence, particularly when making comparisons between dissimilar geographical areas.

For further information on the considerations to be taken into account when using the accessibility statistics, see Q3.6 of this guidance.

## 1.3 What is the coverage of the statistics?

Accessibility statistics are available for 2005<sup>1</sup>, and annually since 2007.

The accessibility statistics provide a nationally consistent dataset of the accessibility of services at local authority (LA) and lower super output area (LSOA)<sup>2</sup> level within England<sup>3</sup>.

Accessibility statistics are also available for Scotland and Wales. The statistics have been calculated for the Index of Multiple Deprivation, and show travel time to a range of services. For more information, see <http://www.scotland.gov.uk/Publications/2006/10/13142739/0> for the Scottish Index of Multiple Deprivation, and <http://wales.gov.uk/topics/statistics/theme/wimd/?lang=en> for the Welsh Index of Multiple Deprivation.

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<sup>1</sup> 2005 data are available at

<http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgpr/statistics/datatablespublications/ltp/coreaccessindicators2005>

<sup>2</sup> Lower layer super output areas (LSOAs) are one of the three layers used for the collection and publication of small area statistics, based on aggregations of Output Areas (OAs). LSOAs are built from groups of Output Areas (typically four to six) and have a minimum size of 1,000 residents and 400 households, but average 1,500 residents. There are 32,482 LSOAs in England. For more information, see [http://www.statistics.gov.uk/geography/census\\_geog.asp](http://www.statistics.gov.uk/geography/census_geog.asp).

<sup>3</sup> See question 3.1 for information on accessibility indicators in Scotland and Wales.

## 1.4 What services are included?

The accessibility statistics measure access to eight key services. These are:

- Employment centres
- Primary schools
- Secondary schools
- Further Education institutions
- GPs
- Hospitals
- Food stores
- Town Centres<sup>4</sup>

The data sources for each service (other than Town Centres) has changed over time. This means that any change in travel time might be as a result of an increase / decrease of the number of destinations in the dataset; an actual increase / decrease in the number of destinations in England; a change in public transport timetables, road layout, congestion or cycle routes; or a combination of all three.

## 1.5 What are the indicators?

DfT has published the 2010 indicators for eight services (see Q1.4) for England, regions, local authorities (LA) and lower layer super output areas (LSOA) in England.

There are three different types of indicator; travel time, destination and origin:

- Travel time indicators - have been published on the DfT website since 2007
- look at the average shortest time taken by users to reach the nearest destination
  - for example: the time taken to travel to the nearest employment centre.
- Destination indicators - have been published on the DfT website since 2005
- look at the proportion of users that can access a service within a certain time
  - for example: the percentage of 16-74 year olds within 20 minutes of an employment centre.
- Origin indicators - have been published on the DfT website since 2007
- look at the number of sites available to users in a particular area
  - for example: the number of jobs located within 20 minutes of an LA.

## 1.6 What are the differences between the destination, origin and travel time indicators?

The travel time indicators measure the time taken for users to reach the nearest service by mode of transport (public transport/walking, cycle and car).

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<sup>4</sup> Access to town centres has only been published since the 2009 indicators. All other key services have been published since 2005.

The destination indicators look at accessibility to eight destinations or services for a user and for an 'at risk' user within a particular LA or LSOA.

The origin indicators look at the number of services (using the same set of services as in the destination indicators) available<sup>5</sup> to a user within a particular area, for example LA or LSOA<sup>6</sup>.

See below for the definitions for the underlined terms.

Users represents the subset of the resident population relevant for the trip purpose and who would therefore be most likely to use that service. For example, for primary schools, the target population is children aged 5-10 years old.

For each service, except further education, 'at risk' users are also considered which looks at particular social groups at risk of exclusion. For example, for primary schools, the 'at risk' users are children aged 5-10 years old known to be eligible for free school meals.

The services are employment, food stores, health (GPs and hospitals) and education (primary school, secondary school and further education institutions). These are the 7 key services which were identified in the 2003 Social Exclusion Unit report 'Making the Connections'<sup>7</sup> In the 2009 and 2010 indicators, town centres were also added.

## 1.7 What is the difference between the two measures of destination and origin indicators?

For each service, accessibility is measured in two ways for both destination and origin indicators:

- Threshold indicators<sup>8</sup>:

	Definition	Example
Destination indicator	The proportion of users in a local area who can access a service within set time limits	The percentage of 5-10 year olds who can get to the nearest primary school by public transport or walking in less than 15 minutes
Origin indicator	The number of services accessible within set time limits to users of an area	The number of primary schools less than 15 minutes away by public transport or walking

- Continuous indicators:

This measure is based on the sensitivity of users to the travel time for each service, i.e. – the longer it takes to get to a particular service, the fewer people will go.

	Example
Destination indicator	The number of 5-10 year olds in a specific area weighted by the likelihood of travel given the time taken to get to the nearest primary school by public transport or walking
Origin	The number of primary schools accessible by public transport or

<sup>5</sup> The number of services available within a set time (i.e. – the opportunities available) is expressed as one of a range of numbers. For example, the number of hospitals within 30 minutes by PT/walk will be between 0 and 5, where 5 represents 5 or more accessible hospitals.

<sup>6</sup> The numbers in the spreadsheets may not be shown as whole numbers. This is because the published LA and LSOA level indicators are calculated by producing population-weighted averages of the output area (OA) level data.

<sup>7</sup> Report available on the Accessibility Statistics web page.

<sup>8</sup> See 1.10 of this guidance note for more information on the threshold times used.

indicator | walking from a specific area, weighted by the likelihood of travel

Whilst the continuous indicator is conceptually harder to interpret than the threshold indicator, the continuous indicator gives a more complete picture of accessibility as it distinguishes between an area which has a service within a few minutes and one where the target population will have to travel a greater distance. **The continuous indicators are therefore more sensitive to changes in accessibility.**

For more information on how the indicators are calculated, see Q2.1.

## 1.8 What are the modes of travel used in the statistics?

The accessibility statistics are constructed using four modes:

- Walking and/or public transport<sup>9</sup>;
- Cycling;
- Car<sup>10</sup>; and
- A composite mode based on walking, public transport and cycling<sup>11</sup> (this is not calculated for the origin or travel time indicators).

These allow for comparisons to be made between accessibility by different modes.

For more information on the composite mode, see Q1.9 of this guidance note.

## 1.9 Some of the statistics are expressed as 'by composite mode'. What does this mean?

The composite mode is produced by using the national mode split to weight the statistics by public transport, cycling and walking.

### **Method**

The public transport / walk time is weighted in a ratio of 31 / 34 and then combined with the cycling time using the ratio of 3 / 34<sup>Error! Bookmark not defined.</sup>. This means that the public transport/walking mode is given a greater weighting than the cycling mode in the composite mode indicator.

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<sup>9</sup> The public transport mode is made up of: Bus and coach, rail, metro and ferry transport modes.

<sup>10</sup> A car mode has been constructed for all users and 'at risk' users, including for the GPs, hospitals and food store services, where the 'at risk' population is households without a car. Since most people travel to these services in cars (either as private individuals or taking lifts from friends), it seems appropriate to include the car travel time which represents how long the door to door journey times are. It also allows the accessibility indicator by public transport to be compared to the car mode.

<sup>11</sup> A composite mode is not produced for the primary school, GP and hospital services, due to safety issues for these vulnerable road users, i.e. – it may not be safe or advisable for people requiring medical attention to cycle to a GP or hospital.

## 1.10 What are the lower and upper threshold times and how are they derived?

The lower and upper thresholds for the eight services are shown in the table below.

<b>Service</b>	<b>Lower threshold (mins)</b>	<b>Upper threshold (mins)</b>
Employment	20	40
Primary School	15	30
Secondary School	20	40
Further Education	30	60
GP	15	30
Hospital	30	60
Food store	15	30
Town centre	15	30

The lower threshold, for example 15 minutes for primary schools, is based on the median travel time for the specific trip purpose, produced from analysis of the National Travel Survey data. The upper threshold, for example 30 minutes for primary schools, is based on approximately 80-90% of all trips for that specific trip purpose, produced from analysis of the National Travel Survey data.

The lower threshold represents a national median of actual journeys, whilst the upper threshold represents the higher end of actual journey times.

## 2. Data and methodology

### 2.1 How are the statistics calculated?

Please see the methodology note which outlines how the statistics are calculated and is available on the Accessibility Statistics web page.

### 2.2 What data sources are used to construct the statistics?

#### Data sources for Destination Locations

The table below shows the data sources used for each service, population and 'at risk' population in the 2010 statistics. For information on the data sources used in previous year's statistics, please see Annexes B – D in the methodology note, available on the Accessibility Statistics web page.

Service	Data source for the locations of the service	Data source for users of the service	Data source for 'at risk' users of the service
Employment	<p><b>Data:</b> No. of jobs available in a LSOA in 2011.  <b>Source:</b> ONS Business Register Employment Survey<sup>12</sup>  <b>Further information:</b>  <a href="http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=15390">http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=15390</a></p>	<p><b>Data:</b> Number of 16-74 year olds in each output area  <b>Source:</b> 2001 Census + LSOA updates from ONS 2010 mid year population estimates  <b>Further information:</b> Census Key Statistic Table 02:  <a href="https://www.nomisweb.co.uk/home/census2001.asp">https://www.nomisweb.co.uk/home/census2001.asp</a>            ONS Mid year population estimates:  <a href="http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=14357">http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=14357</a></p>	<p><b>Data:</b> Number of people in receipt of jobseekers allowance in each lower super output area in December 2011.  <b>Source:</b> ONS Jobseekers allowance claimant data  <b>Further information:</b>  <a href="https://www.nomisweb.co.uk">https://www.nomisweb.co.uk</a></p>
Food stores	<p><b>Data:</b> Location of grocery/supermarkets or convenience stores in January 2012.  <b>Source:</b> Retail locations.  <b>Further information:</b>  <a href="http://www.retaillocations.co.uk/">http://www.retaillocations.co.uk/</a></p>	<p><b>Data:</b> Number of households in each output area.  <b>Source:</b> 2001 Census + LA updates from DCLG 2011 mid year household projections.  <b>Further information:</b> Census Key Statistic Table 17:  <a href="https://www.nomisweb.co.uk/home/census2001.asp">https://www.nomisweb.co.uk/home/census2001.asp</a>            CLG Mid year household projections:  <a href="http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/">http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/</a></p>	<p><b>Data:</b> Number of households without a car in each census output area.  <b>Source:</b> 2001 Census + LA updates from DCLG 2011 mid year household projections.  <b>Further information:</b> Census Key Statistic Table 17:  <a href="https://www.nomisweb.co.uk/home/census2001.asp">https://www.nomisweb.co.uk/home/census2001.asp</a>            CLG Mid year household projections:  <a href="http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/">http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/</a></p>
Primary school	<p><b>Data:</b> Location of all open primary schools on Sept 2011.  <b>Source:</b> DfE Edubase  <b>Further information:</b>  <a href="http://prolog.edubase.gov.uk/home.xhtml">http://prolog.edubase.gov.uk/home.xhtml</a></p>	<p><b>Data:</b> Number of 5-10 year olds in schools in each output area.  <b>Source:</b> DfE School census data (Jan 2010)  <b>Further information:</b>  <a href="http://www.teachernet.gov.uk/management/ims/datacollections/">http://www.teachernet.gov.uk/management/ims/datacollections/</a></p>	<p><b>Data:</b> Number of 5-10 year olds known to be eligible for free school meals in each output area.  <b>Source:</b> DfE School census data (Jan 2010)  <b>Further information:</b>  <a href="http://www.teachernet.gov.uk/management/ims/datacollections/">http://www.teachernet.gov.uk/management/ims/datacollections/</a></p>

<sup>12</sup> The Business Register Employment Survey data is available from the Office for National Statistics (ONS) but does have a charge associated to it (currently £150 per license). To request more information or to purchase these data, contact [annual.employment.figures@ons.gov.uk](mailto:annual.employment.figures@ons.gov.uk). Please note that prior to 2009, data was sourced from the ONS Annual Business Inquiry, which has now been superseded by the Business Register Employment Survey.

Service	Data source for the locations of the service	Data source for users of the service	Data source for 'at risk' users of the service
Secondary school	<b>Data:</b> Location of all open secondary schools on Sept 2011. <b>Source:</b> DfE Edubase <b>Further information:</b> <a href="http://prolog.edubase.gov.uk/home.xhtml">http://prolog.edubase.gov.uk/home.xhtml</a>	<b>Data:</b> Number of 11-15 year olds in schools in each output area. <b>Source:</b> DfE School census data (Oct 2010) <b>Further information:</b> <a href="http://www.teachernet.gov.uk/management/ims/datacollections/">http://www.teachernet.gov.uk/management/ims/datacollections/</a>	<b>Data:</b> Number of 11-15 year olds known to be eligible for free school meals in each output area. <b>Source:</b> DfE School census data (Oct 2010) <b>Further information:</b> <a href="http://www.teachernet.gov.uk/management/ims/datacollections/">http://www.teachernet.gov.uk/management/ims/datacollections/</a>
Further education	<b>Data:</b> Location of all open further education and sixth form colleges/school sixth form on Sept 2011. <b>Source:</b> DfE Edubase <b>Further information:</b> <a href="http://prolog.edubase.gov.uk/home.xhtml">http://prolog.edubase.gov.uk/home.xhtml</a>	<b>Data:</b> Number of 16-19 year olds in each output area. <b>Source:</b> 2001 Census + LA updates from ONS 2010 mid year population estimates <b>Further information:</b> Census Key Statistic Table 02: <a href="https://www.nomisweb.co.uk/home/census2001.asp">https://www.nomisweb.co.uk/home/census2001.asp</a> ONS Mid year population estimates: <a href="http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=14357">http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=14357</a>	
GP	<b>Data:</b> Locations of GP surgeries. <b>Source:</b> Point X GP Surgeries dataset. <b>Further information:</b> <a href="http://www.pointx.co.uk/">http://www.pointx.co.uk/</a>	<b>Data:</b> Number of households in each output area. <b>Source:</b> 2001 Census + LA updates from DCLG 2011 mid year household projections. <b>Further information:</b> Census Key Statistic Table 17: <a href="https://www.nomisweb.co.uk/home/census2001.asp">https://www.nomisweb.co.uk/home/census2001.asp</a> CLG Mid year household projections: <a href="http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/">http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/</a>	<b>Data:</b> Number of households without a car in each census output area. <b>Source:</b> 2001 Census + LA updates from DCLG 2011 mid year household projections. <b>Further information:</b> Census Key Statistic Table 17: <a href="https://www.nomisweb.co.uk/home/census2001.asp">https://www.nomisweb.co.uk/home/census2001.asp</a> CLG Mid year household projections - <a href="http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/">http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/</a>
Hospital	<b>Data:</b> Location of hospitals (with an A&E department, or with an outpatient department and 300 or more beds). <b>Source:</b> Point X Hospital dataset <b>Further information:</b> <a href="http://www.pointx.co.uk/">http://www.pointx.co.uk/</a>	<b>Data:</b> Number of households in each output area. <b>Source:</b> 2001 Census + LA updates from DCLG 2011 mid year household projections. <b>Further information:</b> Census Key Statistic Table 17: <a href="https://www.nomisweb.co.uk/home/census2001.asp">https://www.nomisweb.co.uk/home/census2001.asp</a> CLG Mid year household projections: <a href="http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/">http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/</a>	<b>Data:</b> Number of households without a car in each census output area. <b>Source:</b> 2001 Census + LA updates from DCLG 2011 mid year household projections. <b>Further information:</b> Census Key Statistic Table 17: <a href="https://www.nomisweb.co.uk/home/census2001.asp">https://www.nomisweb.co.uk/home/census2001.asp</a> CLG Mid year household projections - <a href="http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/">http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/</a>
Town Centre	<b>Data:</b> Location of town centres in 2004 <b>Source:</b> DCLG Town Centre and Retail planning statistics for England and Wales. <b>Further information:</b> <a href="http://www.planningstatistics.org.uk/">http://www.planningstatistics.org.uk/</a>	<b>Data:</b> Number of households in each output area. <b>Source:</b> 2001 Census + LA updates from DCLG 2011 mid year household projections. <b>Further information:</b> Census Key Statistic Table 17: <a href="https://www.nomisweb.co.uk/home/census2001.asp">https://www.nomisweb.co.uk/home/census2001.asp</a> CLG Mid year household projections: <a href="http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/">http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/</a>	<b>Data:</b> Number of households without a car in each census output area. <b>Source:</b> 2001 Census + LA updates from DCLG 2011 mid year household projections. <b>Further information:</b> Census Key Statistic Table 17: <a href="https://www.nomisweb.co.uk/home/census2001.asp">https://www.nomisweb.co.uk/home/census2001.asp</a> CLG Mid year household projections - <a href="http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/">http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/livatables-households/</a>



### **Data sources for Origin Locations**

The table below shows the data source used for the origin points used for all travel time calculations.

<b>Service</b>	<b>Data source for the origin points</b>
All	<b>Data:</b> Population centroid of each Output Area in 2001 <b>Source:</b> ONS 2001 Census Boundaries <b>Further information:</b> <a href="http://www.statistics.gov.uk/census2001/product_boun_oa_mid_mif.asp">http://www.statistics.gov.uk/census2001/product_boun_oa_mid_mif.asp</a>

### **Data sources for Transport modes**

The table below shows the data sources used for the different modes.

<b>Mode</b>	<b>Data source</b>	<b>Further information</b>
Public Transport	National Public Transport Data Repository (NPTDR) <sup>13</sup> database of transport services.	<a href="http://www.nptdr.org.uk/">http://www.nptdr.org.uk/</a>
Walk	Roads and footpaths walking network from Integrated Transport Network (ITN) <sup>14</sup>	<a href="http://www.ordnancesurvey.co.uk/oswebsites/products/osmastermap/layers/itn/">http://www.ordnancesurvey.co.uk/oswebsites/products/osmastermap/layers/itn/</a>
Cycle	Road network from Integrated Transport Network (ITN) – this includes cycle paths and bridleways.	<a href="http://www.ordnancesurvey.co.uk/oswebsites/products/osmastermap/layers/itn/">http://www.ordnancesurvey.co.uk/oswebsites/products/osmastermap/layers/itn/</a>
Car	Road network from Integrated Transport Network (ITN)	<a href="http://www.ordnancesurvey.co.uk/oswebsites/products/osmastermap/layers/itn/">http://www.ordnancesurvey.co.uk/oswebsites/products/osmastermap/layers/itn/</a>

## **2.3 What are the main factors effecting Accessibility Statistics?**

Any change in travel time between years in these statistics can be caused by one, or a combination, of three things:

- A change in the actual number or location of destinations in England
- A change in the number of destinations included in the datasets used, irrespective of any changes on the ground
- A change in the public transport timetables or frequencies, or a change in the road factors (including road layout, cycle lanes or congestion)

It is likely that the first two factors (changes in the number / location of destinations or about the destinations) will have the greatest affect on the statistics. Marginal changes to the public transport timetables are only likely to have a small affect on travel time, but the removal or addition of a service location can have significant affects on local travel times.

The town centres dataset is the only service dataset that has undergone no changes at all during the period the statistics have been published. Therefore measures of travel time to and from town centres tend to give the clearest indication of how the travel factors (time tables, roads, etc) have changed.

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<sup>13</sup> The National Public Transport Data Repository holds annual snapshots of public transport route and timetable data, including static data such as bus stop locations. For more information, see [www.data.gov.uk/dataset/nptdr](http://www.data.gov.uk/dataset/nptdr) or [www.nptdr.org.uk](http://www.nptdr.org.uk).

<sup>14</sup> The Integrated Transport Network (ITN) is an [Ordnance Survey](http://www.ordnancesurvey.co.uk) dataset containing details of the transport network for Great Britain. This covers details about each link of the network such as the road class, nature of road (e.g. single carriageway, dual carriageway) and the road routing information (e.g. one way streets).

## 3. Using the statistics

### 3.1 How can I find the accessibility statistics for my local authority?

As a result of feedback from users, the accessibility statistics are published at both lower and upper tier local authority level. A series of tables are available on the accessibility statistics web page in the Regional and Local section providing data since 2007.

The raw indicator data for each local authority are available in the spreadsheets ACS0401-ACS0408. These data can be used for GIS mapping, or other local accessibility analysis.

All published data are also available on the website in csv format.

### 3.2 How can I find the accessibility statistics for a set of lower layer super output areas (LSOA)<sup>15</sup>?

There are eight separate tables (Tables ACS0501 – ACS0508), one for each service, with the destination, travel time and origin accessibility indicators available at LSOA level. These present the data at a level equivalent to neighbourhoods.

These are available (in excel and csv format) via the webpage at <http://www.dft.gov.uk/data/>.

### 3.3 How can I find which destinations have been included in the accessibility statistics?

The raw destination location data are available at [data.gov.uk/dataset/accessibility-destination-datasets](http://data.gov.uk/dataset/accessibility-destination-datasets). These can be used to check which destinations have been included, for GIS mapping, or other local accessibility analysis.

This file excludes employment centre locations since these data are of a confidential nature at LSOA level and grocery shop locations as these data come from a commercial dataset.

If there are any corrections required to any of this data, please see question 3.4.

### 3.4 Not all of the services (e.g. GP surgeries) in my local authority are listed in the destination data files. Why is this?

The destination data are the most robust data available at time of publishing. The destination locations have been published in order to encourage users to feedback comments and add any details about the existing service facilities (for example – the

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<sup>15</sup> See Q1.2 for explanation of LSOAs.

number of beds available at hospitals) or provide data for missing service destinations, in order to improve the quality and coverage of data that the statistics are based on.

Please email any comments or changes/insertions/deletions to [subnational.stats@dft.gsi.gov.uk](mailto:subnational.stats@dft.gsi.gov.uk). Furthermore, if the change is for primary or secondary schools or further education colleges/ school sixth form, then please contact the Edubase helpdesk ([helpdesk@edubase.gov.uk](mailto:helpdesk@edubase.gov.uk) or 0870 120 2527) or update on the Edubase system directly. This will help to keep the Edubase system records correct and up to date.

### **3.5 Not all my public transport services have been included in the statistics. Why is this?**

Only registered public transport services within the regional Traveline datasets are included in the accessibility statistics calculations. This means Demand Responsive Transport (DRT), other flexibly routed services, and school transport services are usually not included. Therefore, especially in rural areas, the accessibility statistics are likely to be an underestimate of actual accessibility.

The (known) exception is in Lincolnshire and some parts of Cambridgeshire where Demand Responsive Transport services are registered, and these are therefore included in the National Public Transport Data Repository (NPTDR) and hence the accessibility statistics.

Where DRT services have been registered and are part of the NPTDR, most are coded in a way that is fit for purpose for journey planning. However they are often not in an appropriate format for the Department's accessibility statistics. For example, a service which enables users from three villages to access the main town centre is shown in the NPTDR that the service can travel from village A to village B and then from village B to village C in seconds, giving an unrealistic high speed. In reality the service would travel from one of village A or B or C to the main town centre depending on the demand for the service on each particular day. An adjustment was therefore applied to routes where there was a speed of greater than 80km/hr by applying a default speed of 15 km/hr to the stop-to-stop crow flies distances. This affected approximately 100 routes, mainly in Lincolnshire.

### **3.6 What should I take into consideration when using the statistics?**

The Statistical Release, available on the accessibility statistics web page, includes a section on the strengths and weaknesses. In addition, please see the information provided in response to the following questions.

#### **3.6.1 Are the 2011 statistics comparable with previous years?**

In 2011, DfT published revised versions of the 2007, 2008, 2009 and 2010 accessibility statistics which enables year-on-year comparisons for local authorities. The 2011 statistics published in 2012 have been produced with the same methodology so are comparable with the earlier years.

However, it is important to note that there have been improvements in data quality and coverage during these years, for example in the public transport data, and

therefore improvements in reported accessibility may not be attributable entirely to interventions made at a local level. The differences are:

- Car speed – In previous years default car speeds have been used for the car statistics. Since the 2010 statistics, Trafficmaster<sup>16</sup> data, which takes into account actual speeds and delay, has been used to give a more reliable speed for each road link. This is likely to improve the accuracy of the indicators. These statistics are referred to as the ‘car (new method)’ mode.
- Change in data source for the location of GPs, Hospitals, Food stores and Employment centres – The data sources for the locations of these key services have changed from previous years, moving to more comprehensive data extracts.

In 2010, the data source for the employment centre location, the Annual Business Inquiry (ABI), was replaced by a new survey called the Business Register and Employment Survey (BRES). This change of survey resulted in a 1% change overall in the 2008 data from the ABI and the 2008 data from the BRES (used in the 2009 statistics). However, there were much larger changes for individual LSOAs. The main reason for this is that the BRES collects information at the local unit level and calculates national and regional estimates directly from this level, as opposed to the ABI which collected employees data at the business (Reporting Unit) level to produce annual employment estimates, and then the local employment estimates were obtained by using an apportionment method, apportioning the Reporting Unit national estimates to local units. The BRES therefore provides a more accurate representation of employee jobs<sup>17</sup>.

As a result of an internal data review of the location data sources, the source of data for GPs and hospitals changed from NHS Choices to Point X, and the source of data locations for food stores changed from Pitney Bowes Mapinfo to Retail Locations. Checks were made between the old and new datasets. Whilst there have been changes in the location of a GP surgery or hospital, the majority are less than 100m which results in approximately 1.25 minutes walking time<sup>18</sup>. It was concluded that the new datasets provide a better data coverage and quality.

There have been no changes in the data sources used in 2011 from 2010. However, it should be noted that the data sources themselves might have improved in quality between the years which could result in some changes to travel times. See question 2.3 for further details.

- Demand Responsive Transport services - Where DRT services have been registered and are part of the NPTDR, most are coded in a way that is fit for purpose for journey planning. However they are often not in an appropriate format for the Department’s accessibility statistics. In the 2010 and 2011 statistics, an adjustment was therefore applied to routes where there was a speed of greater than 80km/hr by applying a default speed of 15km/hr to the stop-to-stop ‘crow flies’ distances. This has affected local authority and lower geographies statistics (approximately 100 routes, mainly in Lincolnshire). See Q3.5 for further information.

There have, however, been more substantial methodology changes<sup>19</sup> between the 2005 statistics and the 2007, 2008, 2009 and 2010 statistics. Therefore,

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<sup>16</sup> Trafficmaster data is generated from the movements of GPS-equipped ‘probe’ vehicles which are mapped to a representation of the road network in order to estimate average vehicle journey times across England.

<sup>17</sup> [http://www.statistics.gov.uk/downloads/theme\\_labour/bres/discontinuity-article.doc](http://www.statistics.gov.uk/downloads/theme_labour/bres/discontinuity-article.doc)

<sup>18</sup> Based on the assumption that 10 minutes travel time is equivalent to 800 metres in walk time.

<sup>19</sup> For further information on the changes in methodology made between the 2005 and original 2007 indicators, and the most recent year’s indicators (revised 2007, 2008 and 2009), see question 3.7 of the 2008 guidance document, available in the National Archives from the Accessibility Statistics web page.

comparisons between 2005 and more recent years should be undertaken with caution.

### **3.6.2 Why are frequency figures published only for the public transport mode?**

Frequency figures are not published for cycling and car modes since the assumption is that those journeys can be made throughout the day. Journeys using public transport mode, on the other hand, can only be made according to the timetable for that service. A frequency percentage is therefore published in the LA and LSOA tables (ACS0401 – ACS0408 and ACS0501 – ACS0508) to show how likely that journey can be made throughout the day.

Further analysis could be done to journeys according to their frequency and average travel time. This would overcome cases where, for example, only two bus services are available in the day but they are express services – giving a low average travel time but a low frequency percentage, and the other case where there are two express bus services and two stopping bus services, giving a higher average travel time but also a higher frequency. Looking only at average travel times, the first case may seem more desirable, but if you take into account frequency of the service, then it becomes less so.

## **3.7 Will DfT continue to publish the old accessibility National Indicator data?**

In 2010, there was a change in the local performance framework across Whitehall, which brought an end to Local Area Agreements and the National Indicator Set. This has meant that there is no longer a need for local authorities to provide a return for the NI 175 (local accessibility) and DfT to publish NI 176 data (Access to employment).

However, since the NI 176 data were taken directly from the accessibility statistics, this information will continue to be published as part of the publication outputs<sup>20</sup>. Data at local authority level can be found in table ACS0401, variables EMPLO062 (raw numbers) and EMPLO087 (percentage). Data at LSOA level can be found in table ACS0501, variables EMPLO063 (raw numbers) and EMPLO093 (percentage). Please note however that a minimum cycle travel time of 5 minutes was introduced in the 2009 indicators but not in the NI176 calculation (which uses both public transport/walking and cycling modes to produce a composite mode). Comparisons with previous NI176 data published will therefore not be based on a consistent basis.

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<sup>20</sup> NI 176 was taken from the proportion of the target population with reasonable access to employment centres by composite mode.

### **3.8 What is the Accessibility Business Plan Indicator?**

The Department for Transport issued a business plan<sup>21</sup> which outlines our vision, priorities, Departmental expenditure, and includes a transparency section setting out input and impact indicators and other data sources.

One of the impact indicators is 'Households with good transport access to key services or work', which is taken from the accessibility statistics publication. The measure combines accessibility data with car ownership data to give an indication of those areas where there is the greatest need to improve public transport accessibility. The formula is set out in section D of the methodology note.

The indicator is indexed where the England average in 2010 is equal to 100. Data are available at national, regional and local authority level. Where a value is below 100, this means it is below the England 2010 average, for example because public transport accessibility should be improved.

Comparisons over time will be possible. However, due to improvements in refining the underlying datasets quality and coverage, the 2007 – 2009 data have been published as experimental statistics only. Therefore the first year's data for this time series is for 2010. Any comparisons made between the years should be undertaken with caution, and any apparent increases or decreases in the accessibility index between 2009 and 2010 may not be attributed entirely to interventions made at a local level.

Data for this indicator are available on the accessibility statistics web tables ACS0108 – ACS0111.

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<sup>21</sup> The DfT business plan is available at <http://www.dft.gov.uk/publications/dft-business-plan-2011-2015/>