Department for Transport

England and Wales 'top ten' overcrowded train services: autumn 2011

Based on services arriving at or departing from major cities in England and Wales during the morning and afternoon peaks

The Department for Transport (DfT) collects rail passenger counts from train operating companies to monitor train crowding levels. All franchises let by DfT require the train operator to address crowding and to plan their timetables in such a way as to ensure, as far as possible, that crowding is not unduly concentrated on any particular route or individual service. The table included in this paper shows the ten most overcrowded peak services in the autumn 2011 passenger counts data.

The 'top ten' services in autumn 2011 were between 52 and 80 per cent over their capacity limit.

Methodology

These figures are taken from internal management information used for monitoring purposes. DfT is making this list public because of the demand for this kind of information. It should be noted that there are a number of data issues associated with passenger counts which must be considered when referring to the table below, and detailed notes follow the table.

The 'top ten' list is generated from arrivals into eleven major cities during the morning peak (07:00-09:59) and departures from these cities during the evening peak (16:00-18:59) on a 'typical' weekday, for franchised operators only. The passenger load figure is the count at the busiest point on the particular service. This can be an interchange point outside the city on the route concerned (e.g. Stratford or Ealing Broadway on approach to London) and does not always correspond to the terminal or city centre station.

In all cases, the autumn data were collected prior to the December 2011 timetable change. Some of these overcrowding figures are derived from one-off measurements of the passengers on a particular weekday and are not an average representation of overcrowding on the service over a period of time; so the figures represent a one-off snap-shot from autumn 2011 only and do not provide a guide to current overcrowding.

The 'top ten' list is determined based on 'load factor', which is the number of standard class passengers on a service expressed as a percentage of the maximum stated standard class passenger capacity for that service. For example, a train which has the same passenger load as the passenger capacity has a load factor of 100 per cent.

For shorter journeys, where the journey time between stations at the most crowded point is 20 minutes or less, the capacity figures given in the table take account of the number of standard seats plus a standing allowance, which is determined based on the type of rolling stock. For longer-distance services, where there is a gap longer than 20 minutes between stations, capacity is calculated as the number of standard seats only. A number of services included in the table have their capacity calculated as "seats plus standing" in line with the definition above.

This list is based on peak trains in Birmingham, Bristol, Cardiff, Leeds, Leicester, Liverpool, London, Manchester, Newcastle, Nottingham and Sheffield. These are the same cities that are included in the publication *Rail passenger numbers and crowding on weekdays in major cities in England and Wales: 2011*, which is based on the same data. It can be found at the following link: https://www.gov.uk/government/publications/rail-passenger-numbers-and-crowding-on-weekdays-in-major-cities-in-england-and-wales-2011

The ten most overcrowded peak train services in major cities in England and Wales; autumn 2011

Warning - Figures should be treated with extreme caution - please see notes on data issues.

Rank	City	Train Operating Company	Departure time	Origin station	Destination station	Arrival time	Number of cars	Standard class passenger capacity [1]	Standard class passenger load [2]	Count point [3]	Passengers in excess of capacity [4]	Standard class load factor [5]
1	London	First Great Western	07:44	Henley-on-Thames	London Paddington	08:29	3	225	404	London Paddington	179	180%
2	London	South West Trains	07:32	Woking	London Waterloo	08:19	12	738	1,209	London Waterloo	471	164%
3	London	London Midland	18:13	London Euston	Birmingham New Street	20:16	12	698	1,129	London Euston	431	162%
4	London	London Midland	16:48	London Euston	Birmingham New Street	19:01	8	452	722	London Euston	270	160%
5	London	First Great Western	06:30	Banbury	London Paddington	08:52	3	225	356	London Paddington	131	158%
6	Birmingham	London Midland	07:55	Stourbridge Junction	Stratford-upon-Avon	09:21	3	355	558	Jewellery Quarter	203	157%
7	Leeds	First TransPennine Express	06:23	Manchester Airport	Middlesbrough	09:21	3	166	257	Leeds	91	155%
8	London	National Express East Anglia	18:17	London Liverpool Street	Shenfield	18:59	8	864	1,329	Stratford	465	154%
9	London	South West Trains	07:14	Alton	London Waterloo	08:22	12	738	1,123	London Waterloo	385	152%
10	London	London Midland	17:46	London Euston	Birmingham New Street	20:03	12	738	1,121	London Euston	383	152%

Notes

(1) Includes the number of standard class seats on the train and may also include a standing allowance. No standing allowance is made for journeys of more than 20 minutes between the stations at the most crowded point. For journeys of 20 minutes or less, an allowance for standing room is also made. The allowance for standing varies with the type of rolling stock but, for modern sliding door stock, it is typically approximately 35 per cent of the number of seats.

(2) The number of standard class passengers on the service at its most crowded point on the journey into or out of the city.

(3) The point where the passenger load was recorded. For morning peak arrivals this is the station that the load was recorded on arrival at, and for afternoon peak departures this is the station that the load was recorded on departure from.

(4) The difference between the standard class passenger load and the standard class passenger capacity.

(5) The number of standard class passengers expressed as a percentage of the maximum allowable standard class passenger capacity for that service. For example, a train which has the same passenger load as the passenger capacity would have a load factor of 100%.

The ‘top ten’ services in autumn 2011

1. **07:44 service from Henley on Thames to London Paddington (load factor 180 per cent, 179 passengers in excess of its capacity of 225)**

   Capacity is based on seats only. Service has first class.

   First Great Western has recently strengthened this service by adding an additional carriage, so that the number of standard class seats has increased to 340.

2. **07:32 service from Woking to London Waterloo (load factor 164 per cent, 471 passengers in excess of its capacity of 738)**

   Capacity is based on seats only. Service has first class and train is at maximum length.

3. **18:13 service from London Euston to Birmingham New Street (load factor 162 per cent, 431 passengers in excess of its capacity of 698)**

   Capacity is based on seats only. Service has first class and train is at maximum length.

   From December 2012 London Midland will provide three Class 350/2 'high density' units for this train to maximise the number of seats. In the long term, London Midland has 10 new 4 car trains on order that will allow them to operate additional trains on this route from 2014.

4. **16:48 service from London Euston to Birmingham New Street (load factor 160 per cent, 270 passengers in excess of its capacity of 452)**

   Capacity is based on seats only. Service has first class.

   London Midland plans to increase the capacity on this service by lengthening it from 8 cars to 12 cars in December 2012. In the long term, London Midland has 10 new 4 car trains on order that will allow them to operate additional trains on this route from 2014.

5. **06:30 service from Banbury to London Paddington (load factor 158 per cent, 131 passengers in excess of its capacity of 225)**

   Capacity is based on seats only. Service has first class.

   From September 2012, this service has started from Oxford not Banbury, leaving Oxford at 07:00. It is now operated by a different type of rolling stock which provides a higher standard class seating capacity.

6. **07:55 service from Stourbridge Junction to Stratford-upon-Avon (load factor 157 per cent, 203 passengers in excess of its capacity of 355)**

   Capacity includes seats and a standing allowance.

   More recent counts suggest much lower loadings on this service.

7. **06:23 service from Manchester Airport to Middlesbrough (load factor 155 per cent, 91 passengers in excess of its capacity of 166)**

   Capacity is based on seats only. Service has first class.

   In the long term, from the May 2014 timetable period it is planned to introduce a fifth train per hour between Manchester and Leeds.

8. **18:17 service from London Liverpool Street to Shenfield (load factor 154 per cent, 465 passengers in excess of its capacity of 864)**

   Capacity includes seats and a standing allowance. Train is at maximum length.

9. **07:14 service from Alton to London Waterloo (load factor 152 per cent, 385 passengers in excess of its capacity of 738)**

   Capacity is based on seats only. Service has first class and train is at maximum length.

10. **17:46 service from London Euston to Birmingham New Street (load factor 152 per cent, 383 passengers in excess of its capacity of 738)**

    Capacity is based on seats only. Service has first class and train is at maximum length.

    In the long term, London Midland has 10 new 4 car trains on order that will allow additional trains to be operated on this route from 2014.

Passenger counts data issues

- Though a great deal of work is being undertaken in to improve the quality and quantity of passenger count data collected and the outputs derived from these data, this is work in progress. Whilst we believe that aggregate statistics are of reasonable quality, due to the nature of the data, statistics on individual services are not robust.

- The overcrowding figures for the 'top ten' services are often derived from one-off measurements of the passengers on each train on a particular weekday. They may not be an average representation of overcrowding on the service over a period of time. Furthermore, some of the passenger load numbers are obtained by manual counting and so there is a significant risk of human error. Hence **the figures should be treated with extreme caution**.

- As the figures included in this release are a one-off snap-shot from autumn 2011 they do not provide a reliable, accurate guide to current overcrowding. For example, extra capacity has already been introduced on some routes.

- It should be noted that some of the services in the 'top ten' list are atypical, in as much as they are services/routes on which additional capacity cannot be provided without unrealistic changes to infrastructure.

- The data collected are intended to represent a 'typical' weekday (usually Tuesday to Thursday). Historically, the department has only monitored crowding levels for London and South East operators. In co-operation with train operators, the Department has been expanding its capacity to monitor crowding in key regional cities, and published new statistics this year showing weekday passenger numbers and crowding in a number of major cities in England and Wales.

Further information about passenger counts can be found in the *Rail passenger numbers and crowding statistics: notes and definitions*, which can be found at the following link: https://www.gov.uk/government/publications/rail-passenger-numbers-and-crowding-on-weekdays-in-major-cities-in-england-and-wales-2011

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