



Department for Transport

# Light Rail and Tram Statistics: England 2015/16

## About this release

This statistical release presents the latest annual information on light rail and tram systems in England during the 2015/16 financial year. The release covers light rail use, infrastructure and revenue.

This publication covers eight urban systems that are predominantly surface-running (see table 1 for a list of systems covered). Smaller systems, e.g. heritage railway and airport transit systems, are not included. London and Glasgow undergrounds and Edinburgh Trams are also excluded but statistics for these systems are available online.

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**In 2015/16, light rail use in England continued to rise with record numbers of passenger journeys and vehicle miles since comparable records began in 1983.**

There were 252 million passengers journeys made on the eight light rail and tram systems in England, a 5.8% increase compared with the previous year.

The Docklands Light Railway and London Tramlink comprised 57% of all light rail journeys.

Vehicle mileage increased by 14.2% to 21 million miles mostly due to development of the Manchester Metrolink and Nottingham Express Transit systems.

**252 million**

passenger journeys

**↑5.8%**

since 2014/15

Passenger journeys:

**57%**

London

**43%**

England Outside London

**21 million**

vehicle miles

**↑14.2%**

since 2014/15

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## Summary figures

Table 1 summarises the latest light rail annual figures. Figures for England are shown for each tram system in London and England outside London.

**Table 1: Summary of the latest annual light rail figures (2015/16) compared with the previous year (2014/15)**

	Passenger journeys	Vehicle miles	Passenger revenue
	2015/16 figure (m=millions) and change compared with the previous year		Revenue % change in 2015/16 prices
<b>England</b>	<b>252.0m</b> ↑ <b>5.8%</b>	<b>21.0m</b> ↑ <b>14.2%</b>	<b>£336.9m</b> ↑ <b>9.3%</b>
<b>London systems</b>	<b>143.9m</b> ↑ <b>2.1%</b>	<b>5.7m</b> ↑ <b>2.4%</b>	<b>£184.7m</b> ↑ <b>9.6%</b>
Docklands Light Railway	116.9m ↑ 6.1%	3.8m ↑ 3.7%	£161.9m ↑ 12.3%
London Tramlink	27.0m ↓ -12.1%	2.0m ↔ 0.0%	£22.8m ↓ -6.7%
<b>England outside London systems</b>	<b>108.1m</b> ↑ <b>11.0%</b>	<b>15.3m</b> ↑ <b>19.4%</b>	<b>£152.2m</b> ↑ <b>9.0%</b>
Nottingham Express Transit	12.2m ↑ 50.2%	1.6m ↑ 102.1%	£13.6m ↑ 54.9%
Midland Metro	4.8m ↑ 10.4%	1.0m ↑ 6.1%	£8.6m ↑ 11.9%
Sheffield Supertram	11.6m ↑ 0.6%	1.4m ↑ 3.0%	£11.4m ↓ -10.2%
Tyne and Wear Metro	40.3m ↑ 5.7%	3.5m ↓ -0.5%	£50.2m ↑ 4.5%
Manchester Metrolink	34.3m ↑ 10.1%	7.2m ↑ 27.1%	£62.4m ↑ 9.7%
Blackpool Tramway	4.9m ↑ 20.3%	0.6m ↑ 10.3%	£6.1m ↑ 8.7%

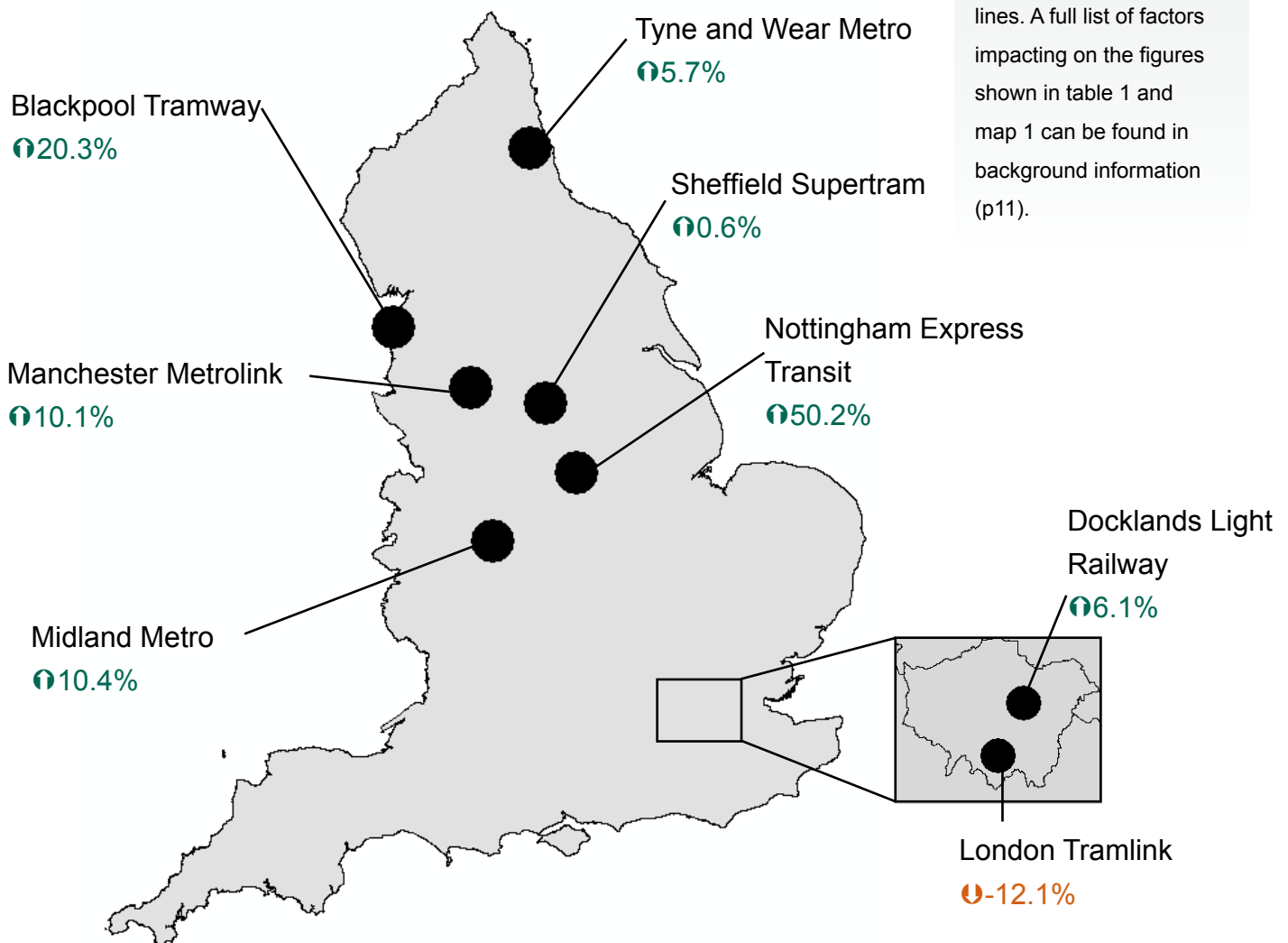
## Further Statistics

on the London Underground, Glasgow subway and Edinburgh Trams are available in tables [LRT9901](#), [LRT9902](#) and [LRT9903](#) respectively.

## In context

London Tramlink, Midland Metro and Sheffield Supertram were affected by engineering works resulting in part closures of lines. Nottingham Express Transit and Manchester Metrolink both extended their lines. A full list of factors impacting on the figures shown in table 1 and map 1 can be found in background information (p11).

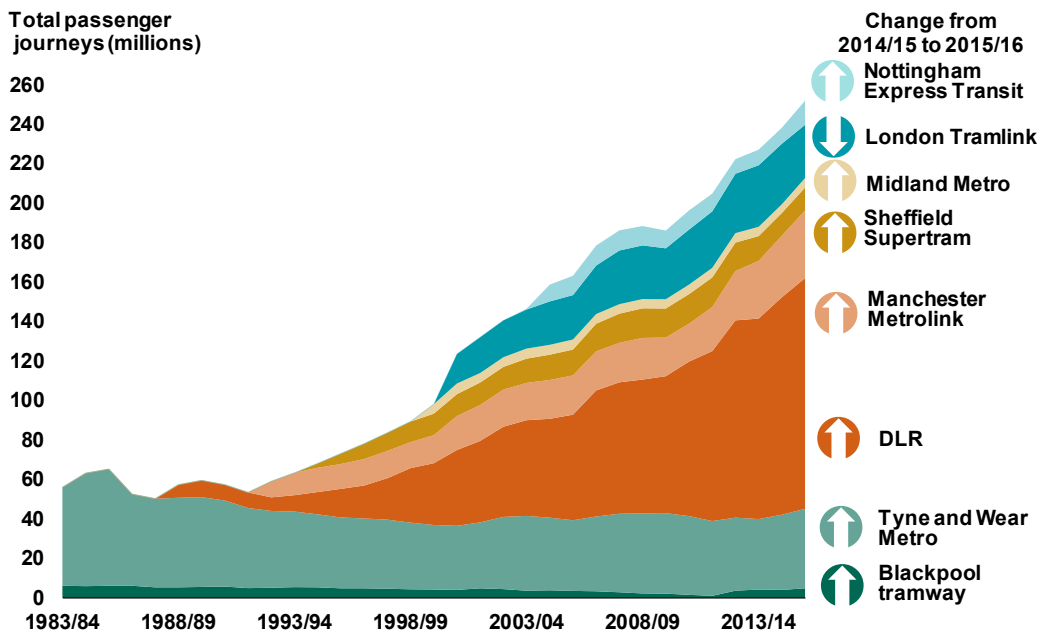
**Map 1: Location and latest annual change in passenger journeys of each light rail and tram system in England**



## Light rail passenger journeys

Passenger journeys on light rail systems increased by 5.8% in 2015/16 to 252.0 million when compared with the previous year (see chart 1). Since 2004/05, light rail passenger journeys have increased by 58.8%.

**Chart 1: Light rail passenger journeys by system: England, annually from 1983/84 (table [LRT0101](#))**



In 2015/16, the growth in passenger journeys occurred mainly in England outside London with a 11.0% increase to 108.1 million journeys (see chart 2). Opening of extensions to both Nottingham Express Transit and Manchester Metrolink systems were the main drivers of this growth.

In London, light rail passenger journeys increased by 2.1% to 143.9 million. Passenger journeys on Docklands Light Railway (DLR) increased by 6.1% continuing the year-on-year increasing trend seen since the early 1990s. Passenger journeys on London Tramlink declined by 12.1% compared with 2014/15 due to part closures of the system (see background notes for further information).

Over the past 11 years, growth in passenger journeys has mainly occurred in London. However, the larger increase in passenger journeys in England outside London in 2015/16 is in contrast to this trend. Since 2004/05, there has been a 99.6% rise in passenger journeys in London compared with a 24.8% increase in England outside London.

### In context

The eight light rail systems accounted for 2.9% of all journeys made by public transport in Great Britain in 2014/15 (table [TSGB0102](#)).

### Detailed statistics

on passenger journeys can be found in table [LRT0101](#).

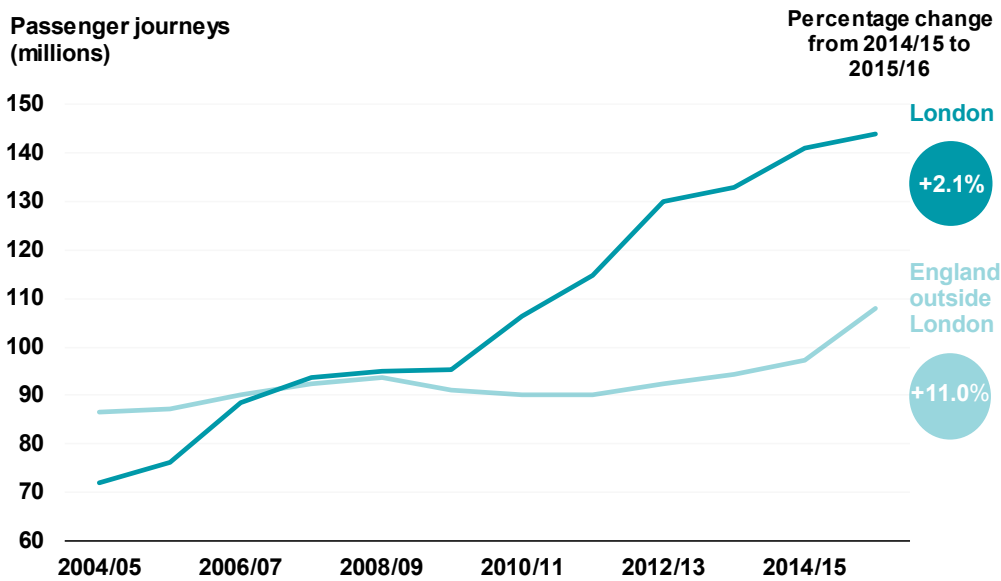
### Detailed statistics

Figures for passenger kilometres and passenger miles annually from 1983/84 can be found in tables [LRT0103](#) and [LRT0104](#) respectively.

### Accident statistics

Information on accidents involving light rail vehicles where they run on the public highway is covered by the Department's reported road casualty statistics. For further information please contact [roadacc.stats@dft.gsi.gov.uk](mailto:roadacc.stats@dft.gsi.gov.uk)

**Chart 2: Light rail passenger journeys: London and England outside London, annually from 2004/05 (table [LRT0101](#))**



### Journey length

The average light rail journey in 2015/16 was 4.2 miles in England. On the two London systems, average journey length was lower (3.4 miles) than England outside London (5.4 miles).

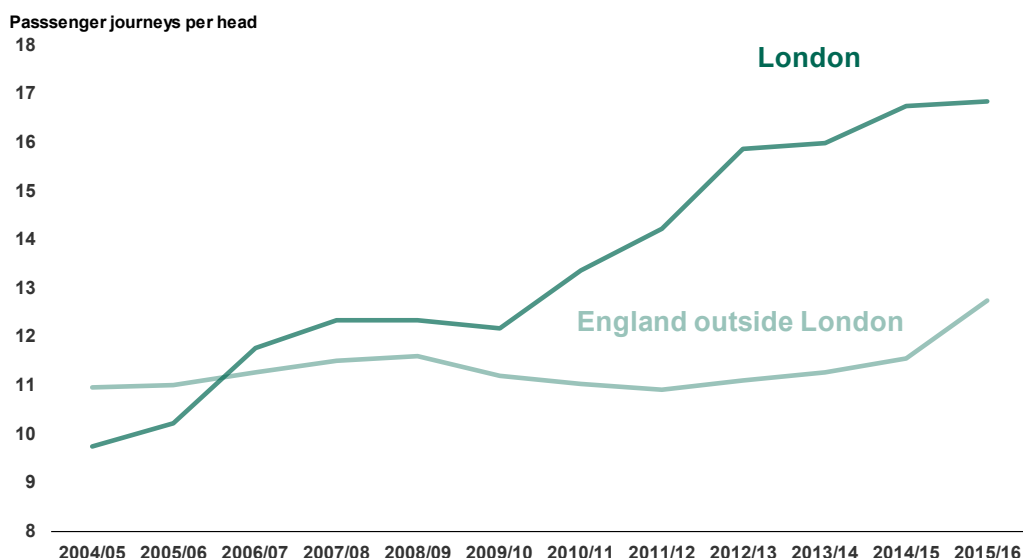
### Light rail passenger journeys per head

In England, the average number of light rail journeys per head was 14.8 in 2015/16, compared with 10.4 journeys per head in 2004/05. The main factor for this growth has been a more than doubling of passenger journeys per head on the DLR. As the population increases it is expected that the number of light rail journeys would increase as a result. The increase in journeys per head, however, shows that there has been a real increase in passenger journeys above that expected by population increase.

### Definition

Passenger journeys per head were calculated as passenger journeys divided by the number of people in the respective Passenger Transport Executives/higher tier authority. Population figures were based on the ONS 2014 mid-year population estimates.

**Chart 3: Light rail passenger journeys per head: London and England outside London, annually from 2004/05 (table [LRT0109](#))**



### Detailed statistics

on passenger journeys per head can be found in table [LRT0109](#).

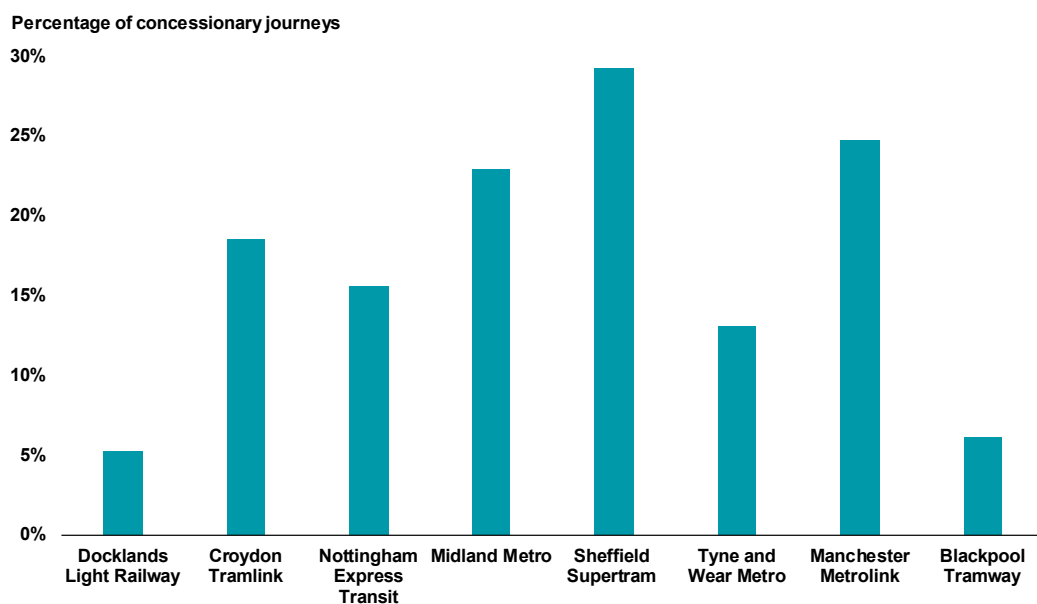
Average passenger journeys per head in London in 2015/16 were 32.3% higher than in England outside London (see chart 3).

Average passenger journeys per head in England outside London increased by 10.3% in 2015/16. Nottingham Express Transit and Blackpool Tramway had increases in passenger journeys per head of 48.6% and 21.1% respectively. Passenger journeys per head ranged between 1.7 on Midland Metro to 38.7 journeys on Nottingham Express Transit.

## Light rail concessionary journeys

In England, 12.6% of all light rail passenger journeys were concessionary remaining similar to 2014/15 (12.3%). The proportion of journeys that were concessionary ranged from 5.2% on the DLR to 29.3% on the Sheffield Supertram (see chart 4).

**Chart 4: Proportion of concessionary journeys on each light rail system: England 2015/16 (table [LRT0102](#))**



Concessionary travel represents a relatively small proportion of passenger journeys when compared with buses (34%). All light rail and tram schemes in England currently offer free off-peak travel to older and disabled residences in their local authority area. This is on a statutory basis in London and a discretionary basis elsewhere whereas this is statutory on buses everywhere in England.

### Definition

Concessionary journeys are those carried out by holders of a concessionary travel pass. These are issued by local authorities for use on buses as part of the English National Concessionary Travel Scheme. Local authorities outside of London can offer free travel on light rail systems as a discretionary extra to this scheme. In London, this is a statutory requirement.

### Detailed statistics

on concessionary light rail journeys can be found in table [LRT0102](#).

Further information on concessionary revenue can be found in table [LRT0302](#).

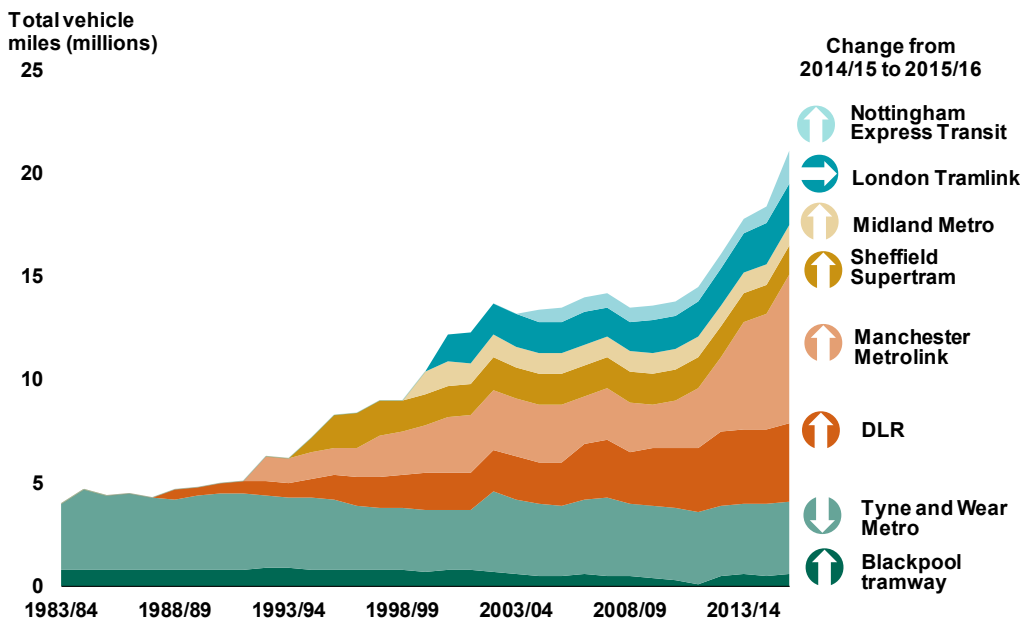
### Detailed statistics

on concessionary bus journeys can be found in table [BUS0105](#).

## Light rail vehicle miles

Vehicle mileage in England increased by 14.2% in 2015/16, largely driven by a 19.4% increase in England outside London. The extension to Nottingham Express Transit resulted in vehicle mileage doubling to 1.6 million miles and Manchester Metrolink vehicle mileage increased by 27.1% to 7.2 million miles (see chart 5).

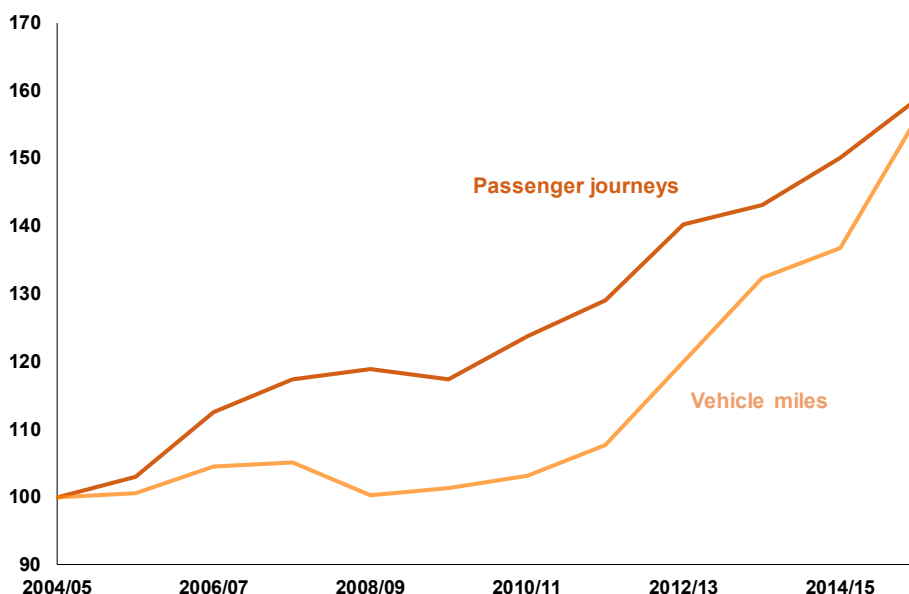
**Chart 5: Light rail vehicle miles: England, annually from 1983/84 (table [LRT0106](#))**



Vehicle mileage on light rail systems, along with passenger journeys, has increased since 2004/05: a 58.8% increase in passenger journeys has been met by a 56.3% increase in vehicle miles (see chart 6).

**Chart 6: Light rail passenger journeys and vehicle miles index: England, annually from 2004/05 (tables [LRT0101](#) and [LRT0106](#))**

Index: 2004/05 = 100



## Detailed statistics

on vehicle miles can be found in table [LRT0106](#) and also in kilometres in table [LRT0105](#).

On route length open for passenger traffic by system can be found in kilometres in table [LRT0203](#) and in miles in table [LRT0204](#).

## Infrastructure

211 route miles 7.0%  
 397 stations 8.2%  
 494 carriages 8.8%  
 All increases from 2014/15 to 2015/16 in England came mainly from the continuing expansion in Nottingham, Manchester and Midland Metro.

In London vehicle mileage has increased by 62.4% since 2004/05 to 5.7 million miles whereas in England outside London mileage has increased by 54.1% to 15.3 million miles (see chart 5).

## Light rail revenue

Light rail and tram revenue increased by 9.3% in real terms to £336.9 million in 2015/16 when compared with 2014/15. Average revenue per journey increased in real terms from £1.29 to £1.34 between 2014/15 and 2015/16. Revenue on the Docklands Light Railway increased by 12.3%, in real terms, to £161.9 million.

## Detailed statistics

on passenger and concessionary revenue at 2015/16 prices by system can be found in tables [LRT0301](#) and [LRT0302](#) respectively.

## Average vehicle occupancy on light rail and tram systems

The average number of passengers per tram in England decreased by 6.0% to 51 passengers per tram when compared with the previous year. This is 10.6% lower than the maximum occupancy reached in 2011/12 (57 passengers per tram).

This decrease in tram occupancy was driven mainly by systems in England outside London (see chart 7) with 13.4% and 8.7% decline in average occupancy on Manchester Metrolink and Nottingham Express Transit where both systems extended their lines in 2015/16. Vehicle occupancy decreased on both the Sheffield Supertram and London Tramlink due to engineering works resulting in part closures of the lines. All other light rail and tram systems had increased vehicle occupancy.

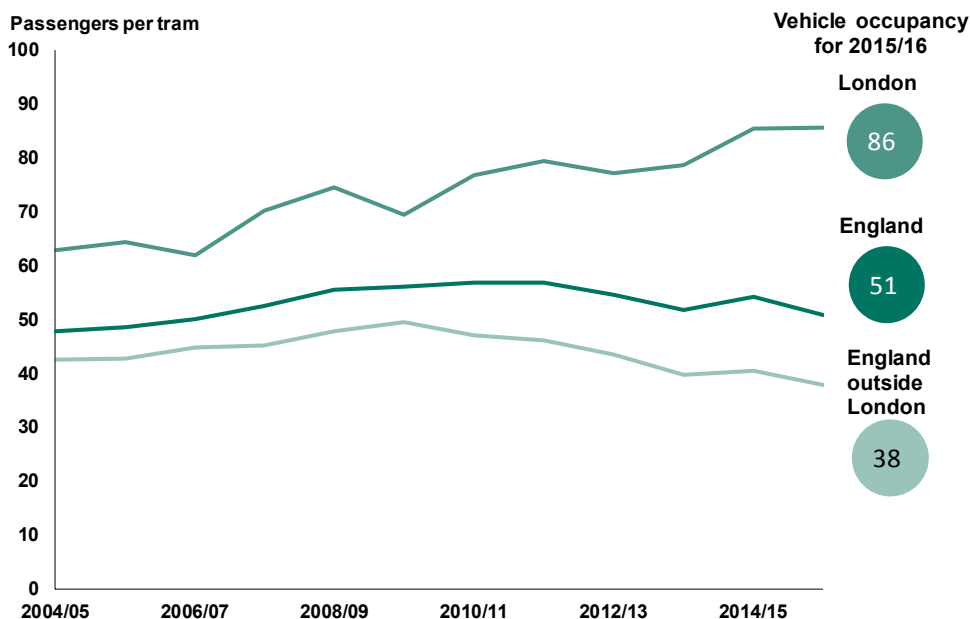
## Definition

Average vehicle occupancy is calculated as passenger miles divided by vehicle miles to estimate persons per vehicle.

## Detailed statistics

on average vehicle occupancy can be found in table [LRT0108](#).

**Chart 7: Light rail estimated vehicle occupancy: England annually from 2004/05 (table [LRT0108](#))**



## Passenger satisfaction on light rail and tram systems

The Department for Transport collects information on light rail and tram system use, infrastructure and revenue. Transport Focus measures the passenger experience of using light rail systems, gathering satisfaction levels at both overall and individual level. Comparing these two datasets allows a more complete understanding of light rail systems as a whole.

Passenger experience on five light rail systems in England outside of London were surveyed by Transport Focus. The five English systems surveyed were: Blackpool Tramway, Manchester Metrolink, Midland Metro, Nottingham Express Transit and Sheffield Supertram.

In 2015, overall journey satisfaction across all systems surveyed increased significantly to 92% from 90% in 2014, which was higher than both the National Rail Passenger Survey (83%) and Bus Passenger Survey (86%). This increase was driven by significant increases in Manchester Metrolink and Sheffield Supertram passenger satisfaction. Overall satisfaction ranged from 81% on Midland Metro to 98% on Nottingham Express Transit.

Value for money satisfaction also increased significantly to 69% in 2015 and was higher than bus passengers (63%) and much higher than rail passengers (48%) in 2015.

**Table 2: Passenger satisfaction, passenger journeys and passenger journeys per head by light rail system in 2015 and the change compared with the previous year (table [LRT0109](#))**

	Overall journey satisfaction <sup>1</sup>		Passenger journeys (millions)		Passenger journeys per head	
	<i>2015/16 figure and change compared with the previous year</i>					
Nottingham Express Transit	98%	2%	12.2	50%	38.7	49%
Blackpool Tramway	96%	1%	4.9	20%	35.0	21%
Midland Metro	81%	-9%	4.8	10%	1.7	9%
Sheffield Supertram	97%	5%	11.6	1%	8.5	0%
Manchester Metrolink	89%	4%	34.3	10%	12.6	9%

<sup>1</sup> Source: Transport Focus

Transport Focus found that passenger satisfaction with all of the key factors that make a satisfactory journey (length of time a journey took, value for money and punctuality) increased in 2015.

### Transport Focus

Transport Focus is an independent transport user watchdog and includes tram systems in England and Scotland. For more information see <http://www.transportfocus.org.uk/>

**Transport Focus statistics are not National Statistics.**

### Detailed statistics

Transport Focus Tram Passenger Survey can be found [here](#).



Overall journey satisfaction in 2015 tended to increase with decreasing total passenger journeys i.e. the highest overall journey satisfaction was associated with fewer people travelling. Also, overall journey satisfaction increased with increased passenger journeys **per head** i.e. passenger satisfaction increased as each passenger undertook more journeys. Furthermore, high value for money satisfaction tended to be associated with higher passenger journeys per head and lower total passenger journeys.

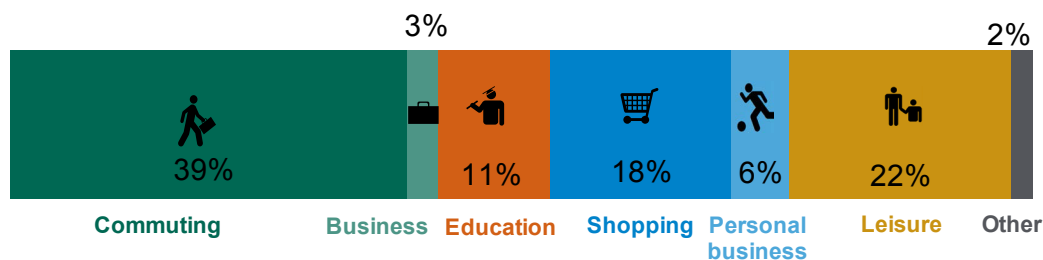
## User profiles (National Travel Survey data)

The National Travel Survey (NTS) gathers data on personal travel behaviour across England. NTS data can be used to analyse users of light rail systems.

### Why people travel on light rail systems

Commuting, leisure and shopping are the most common purposes for journeys using light rail systems (see chart 8). Commuting and business purposes accounted for 42% of stages on light rail systems (42%), double the proportion for the average of all modes (21%).

**Chart 8: Purpose for using light rail systems by the proportion of stages, England average 2007/14, (LRT0401a)**



Differences in why people travel on light rail systems between England outside London and London include:

- ▶ London light rail systems are used more for commuting and business purposes than systems in England outside London (55% of stages compared with 32%).
- ▶ Leisure and shopping purposes comprise a higher proportion of stages in England outside London (at 25% and 21%) than in London (17% and 12% respectively).
- ▶ Light rail systems are used more for education purposes in England outside London than in London (13% compared with 9%).

## National Travel Survey

The National Travel Survey is a household survey carried out on over 16,000 individuals in England every year. For more information see <https://www.gov.uk/government/collections/national-travel-survey-statistics>

## What is a stage?

Every trip can consist of one or more stages. A new stage is defined when there is a change in the mode of transport.

## Detailed statistics

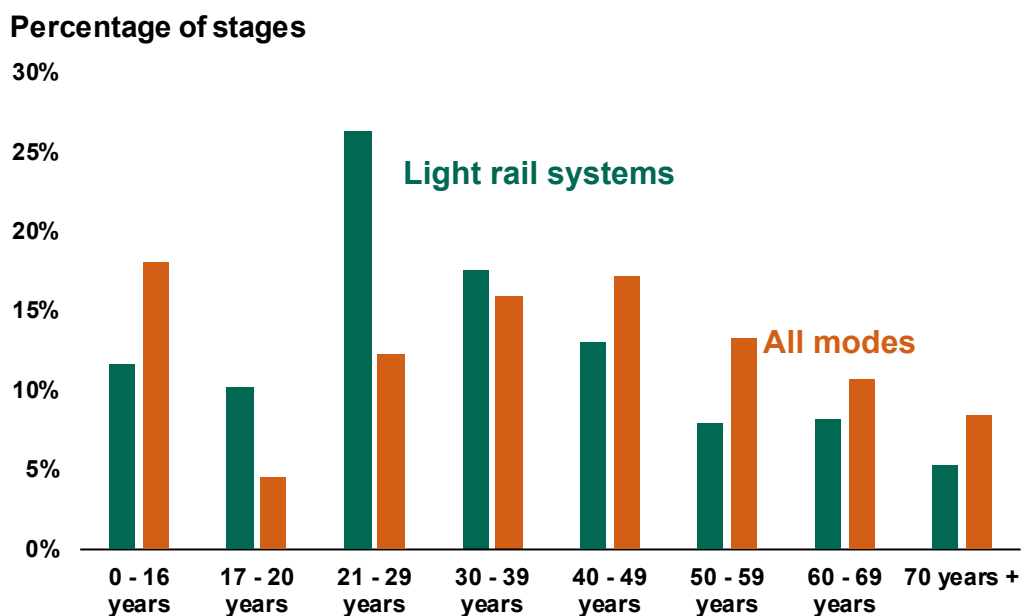
on the proportion of light rail and tram stages carried out by purpose can be found in table [LRT0401a](#).

## Who travels on light rail systems?

Young adults carry out the highest proportion of light rail stages of all age groups with 26% of stages being carried out by 21-29 year olds. Above this age, the proportion of light rail stages carried out generally decreases as age increases.

The proportion of light rail stages by 17 to 29 year olds (37%) is more than double the proportion for all modes (17%) (see chart 9).

**Chart 9: Age profile of users of light rail systems and all modes, England 2007/14 ([LRT0401b](#))**



Differences between England outside London and London include:

- ▶ On London light rail systems, users aged between 21 and 49 years old carry out 70% of light rail stages compared with 47% on systems in England outside London.
- ▶ Children (0 to 16 year olds) carry out a higher proportion of stages on light rail systems in England outside London than on systems in London (15% compared with 7%).
- ▶ People aged 60+ carry out a higher proportion of stages on light rail systems in England outside London than on systems in London (16% compared with 9%)

For all light rail systems, men and women on average carry out a similar number of stages per person per year, 4.9 compared with 4.7. There is a larger difference between genders on London systems with men making 4.7 stages per person per year compared with 3.9 for women. For all modes, women travel more than men in terms of the number of stages per person per year.

## Detailed methodology

In order to achieve a large enough sample size, eight years (2007 to 2014) of data were combined.

## London systems

Transport for London can provide detailed analysis for both London systems (London Tramlink and Docklands Light Railway) from their London Travel Demand Survey. For enquires please email [LTDSenquiries@tfl.gov.uk](mailto:LTDSenquiries@tfl.gov.uk)

## Detailed statistics

on the proportion of light rail and tram stages carried out by age can be found in table [LRT0401b](#).

## Detailed methodology

Stages on each light rail and tram systems could be distinguished by using trip origin and destination data.

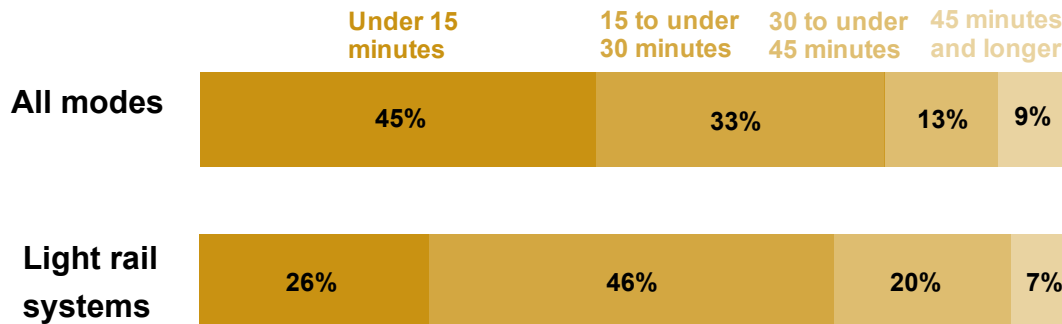
## Detailed statistics

on the proportion of light rail and tram stages carried out by gender can be found in table [LRT0401c](#).

## Duration of light rail stages

For all modes, most stages (45%) are less than 15 minutes. This compares with light rail systems where 26% are less than 15 minutes and most are between 15 to less than 30 minutes long (see chart 10). Light rail stages in England outside London had a higher proportion of stages lasting 30 minutes and longer than in London (32% compared with 21%).

**Chart 10: Proportion of stages by stage time on light rail systems and for all modes, England 2007/14 ([LRT0401d](#))**



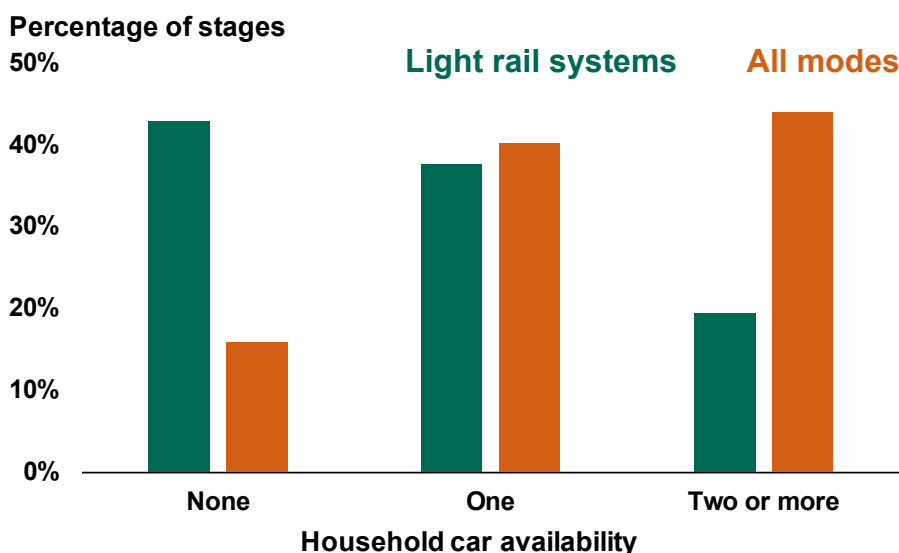
### Detailed statistics

on the proportion of light rail and tram stages by stage time can be found in table [LRT0401d](#).

## Light rail use and household car availability

The highest proportion (43%) of stages on light rail systems were carried out by individuals from households with no cars, compared with 16% for all transport modes. For all modes, people travel more as household car availability increases whereas for light rail as household car availability increases, the proportion of stages decreases.

**Chart 10: Proportion of stages by household car availability on light rail systems and the average for all modes, England 2007-2014 ([LRT0401e](#))**



### Detailed statistics

on the proportion of light rail and tram stages by household car availability can be found in table [LRT0401e](#).

In London, 51% of all light rail stages are carried out by individuals from households with no cars compared with 37% in England outside London. The proportion of stages carried out by individuals from households with two or more cars in England outside London is 26% compared with 10% in London.

## Background information

Factors impacting on annual light rail figures:

- London Tramlink was affected by part closures of the lines due to the London Borough of Croydon carrying out town centre pedestrian ambience works as well as line improvement works.
- Midland Metro was extended to Bull Street on 6 December 2015, which resulted in closure of part of the line between October and December 2015.
- Nottingham Express Transit opened its phase 2 extension on 23 August 2015, which added 10.9 miles and 27 new stops to the network.
- In Sheffield, engineering works between March and August 2015, as part of a five year £32 million rail replacement project, meant that trams were replaced by buses at different times in all areas of the tram system.
- In Blackpool, better management and control procedures were introduced with extra trams being used to deal with greater passenger numbers.
- Manchester Metrolink opened the first phase of the Second City Crossing on 6 December 2015. This year (2015/16) was also the first full financial year of the extension to Manchester Airport being operational (it opened on 4 November 2014 and added 15 stops and many route miles).

Manchester Metrolink mileage figures represent total mileage of each tram 'set' and when one train is formed of two sets, the kilometres travelled will be counted twice. Therefore, figures for the years after 2011/12 are not directly comparable with earlier ones (or with other systems) as the proportion of double sets has increased in recent years.

### Users and uses of these statistics

These statistics are collected to provide information on light rail systems within England to monitor trends in passenger journeys, service provision and revenue. They help to provide a comprehensive picture of public

### Further information

On the methods used to compile these statistics and background information about the systems covered can be found here: [www.gov.uk/government/publications/light-rail-and-tram-statistics-guidance](http://www.gov.uk/government/publications/light-rail-and-tram-statistics-guidance)

transport use in Great Britain.

Within DfT they are used as background information in the development of light rail policy, for ministerial briefing and to answer public enquiries. Outside DfT, known users include researchers, academics and Parliamentary groups with the main known use as context for reports related to light rail.

Feedback received from users suggests that they are generally satisfied with these statistics. However, we welcome feedback on the content, format or timing of the statistics by email to [bus.statistics@dft.gsi.gov.uk](mailto:bus.statistics@dft.gsi.gov.uk) or on 020 7944 3094.

### **Strengths and weaknesses of the data**

These figures are compiled from data provided by operators of the eight light rail and tram systems in England. Passenger journey figures are derived from different sources (most commonly ticket machine data), vehicle mileage is based on scheduled timetables less known lost mileage, and revenue figures are from operators' financial records.

A complete response has been received for many years. Data requested should be readily available to operators, or easy for them to extract. Returns are validated by comparison with previous years and seeking explanation where differences are large or unexpected. This means that figures for each system should be broadly comparable over time, and therefore we consider them appropriate for the uses outlined above.

As the figures are provided by eight operators, there are some differences in the methods used to count journeys or to estimate passenger or vehicle kilometres, which may affect comparisons between different systems. Although the effect of this is difficult to assess we consider it is unlikely to materially affect comparisons. On occasions operators may revise their methodology which could impact on the trends shown. As a result year-on-year changes should be treated with caution, though the effect on broad patterns is likely to be minimal.

### **Next release**

The next Light Rail and Tram Statistics release is due to be published summer 2017.

## **National statistics**

National Statistics are produced to high professional standards set out in the National Statistics Code of Practice. They undergo regular quality assurance reviews to ensure they meet customer needs: [www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html](http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html)

For details of ministers and officials who receive pre-release access to these statistics up to 24 hours before release: [www.gov.uk/government/publications/light-rail-and-tram-statistics-guidance](http://www.gov.uk/government/publications/light-rail-and-tram-statistics-guidance)