Estimates of station usage
April 2023 to March 2024

21 November 2024

Contents:

In Great Britain, **2,585 stations** were served by mainline rail services as at 31 March 2024, including seven new stations which opened during the year.

A total of 1,610 million passenger journeys were made between April 2023 and March 2024. This is an increase of 16% from the 1,380 million journeys made in the previous year (April 2022 to March 2023).

Most and least used stations

The most used station in the latest year was **London Liverpool Street** with an estimated **94.5 million entries and exits**. It was also the most used station in the previous year (April 2022 to March 2023), after the opening of the central section of the Elizabeth line which led to a large increase in its entries and exits. London Paddington, which also has Elizabeth line services, was the second busiest station. London Waterloo, which had been the busiest station in 17 of the previous 18 years prior to the Elizabeth line opening, was fourth busiest.

Table 1   Top five most used stations in Great Britain, April 2023 to March 2024

Rank	Station	Entries and exits	Rank one year ago
1	London Liverpool Street	94,500,000	1
2	London Paddington	66,900,000	2
3	Tottenham Court Road	64,200,000	7
4	London Waterloo	62,500,000	3
5	Stratford (London)	56,600,000	6

Birmingham New Street was the busiest station outside of London with 33.3 million entries and exits.

Of stations that were open during the year, **Denton** in Greater Manchester was the least used with 54 entries and exits.

All data tables, a quality and methodology report, frequently asked questions and an interactive dashboard associated with this release are published on the Estimates of station usage page of the data portal.

1. Introduction

Why are these statistics estimates?

These statistics on station usage are estimates based primarily on ticket sales. The data sources and methodology used is the best approach possible given Great Britain does not have a fully gated rail network or comprehensive and robust count data at every station.

There are a number of limitations using this approach which users should be aware of:

- Some ticket sales and ticketless travel are not included, which may mean that usage at some stations is *underestimated*. This will vary by station.

- Ticket sales data does not always specify precise journey origins and/or destinations, so these are estimated using alternative data sources.

- Methodology improvements, e.g. inclusion of ticket sales previously not available, better allocation of journeys to specific stations, means that estimates are not always comparable over time.

Further information on the methodology underlying these statistics and their limitations can be found in Annex 1 and in the [Quality and methodology report](#).

2. Station entries and exits

Stations with the most entries and exits

The most used station in the latest year (April 2023 to March 2024) was **London Liverpool Street** with an estimated **94.5 million entries and exits**. The station was also the busiest in the previous year (April 2022 to March 2023) having seen a large increase in its entries and exits following the opening of the central section of the Elizabeth line in May 2022.

Figure 2.1   London Liverpool Street was the most used station in Great Britain

Ten most used stations (entries and exits) in Great Britain, April 2023 to March 2024
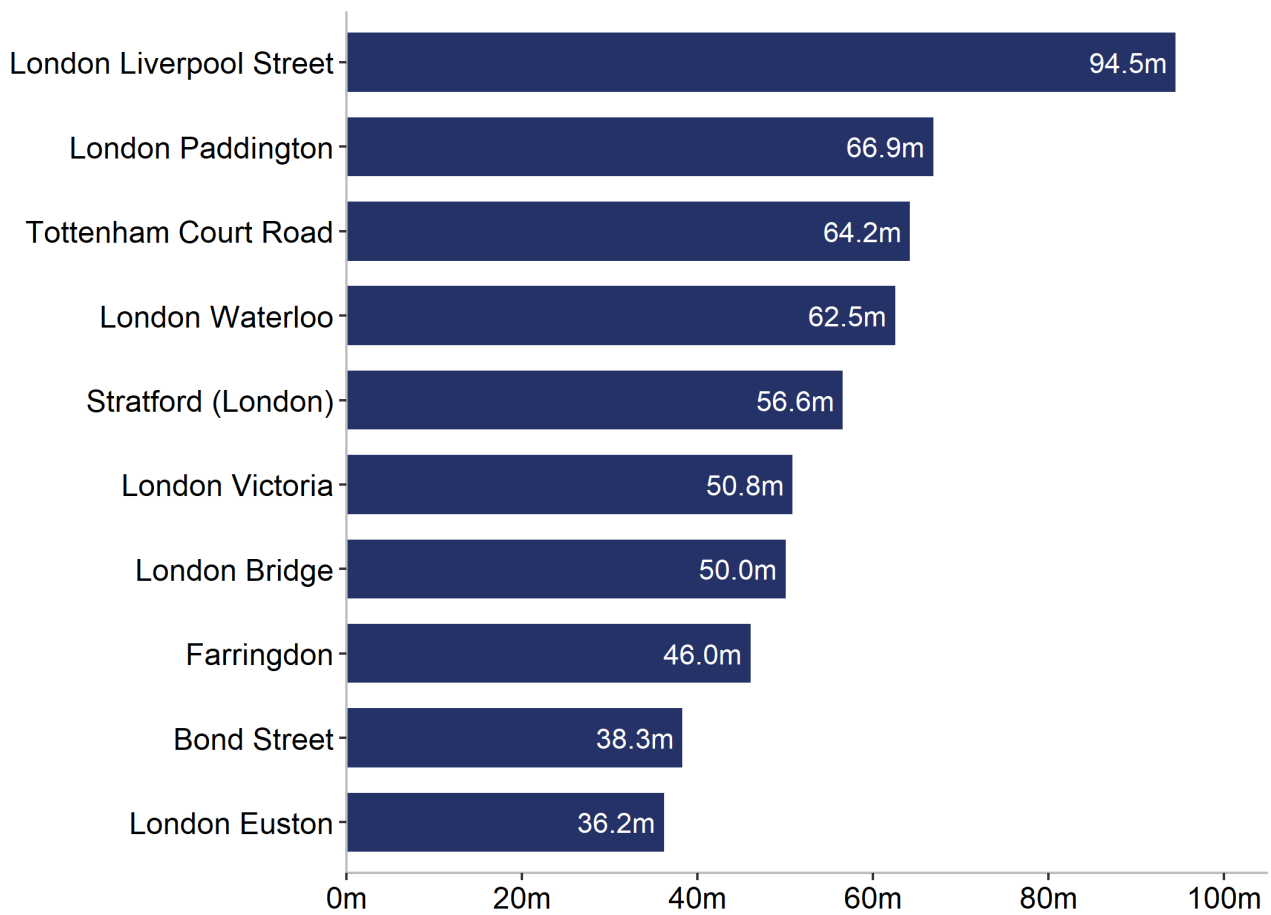
London Paddington and Tottenham Court Road, both also served by the Elizabeth line, were the second and third busiest stations in the latest year. London Waterloo was the fourth busiest station in the latest year. Prior to the opening of the Elizabeth line in May 2022, it had been the most used station for 17 out of the previous 18 years.

Figure 2.2   Birmingham New Street was the most used station outside of London

Ten most used stations (entries and exits) outside of London, April 2023 to March 2024
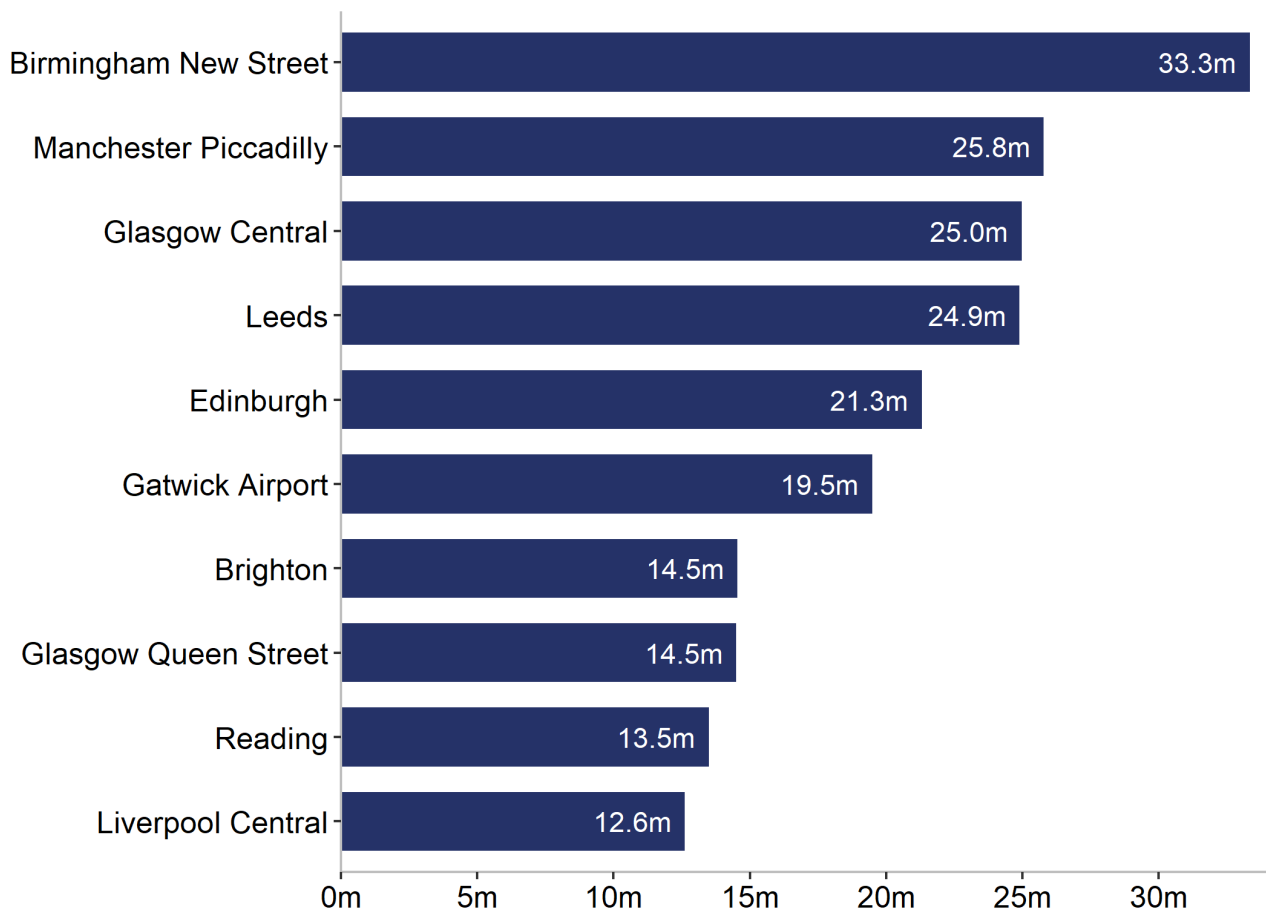
Outside of London, **Birmingham New Street** was the most used station with **33.3 million entries and exits** in the latest year. Glasgow Central was the most used station in Scotland with 25.0 million entries and exits. The most used station in Wales was Cardiff Central with 11.5 million entries and exits.

Stations with the least entries and exits

The stations at Stanlow and Thornton in Cheshire and Teesside Airport in County Durham had their mainline services suspended throughout all of the latest year (April 2023 to March 2024) and therefore had no recorded entries and exits. Services were suspended at Stanlow and Thornton due to safety concerns with the footbridge which is the only entrypoint to the station and at Teesside Airport due to the platform being classified as unsafe.

The least used station that was open during the year was **Denton** with 54 recorded entries and exits. This Greater Manchester station had the second lowest usage one year ago (April 2022 to March 2023) when it had 34 entries and exits.

Overall there were six open stations with 150 or fewer entries and exits in the latest year:

1. Denton, Greater Manchester (54 entries and exits)

2. Shippea Hill, Cambridgeshire (70)

3. Ince and Elton, Cheshire (86)

4. Polesworth, Warwickshire (118)

5. Reddish South, Greater Manchester (128)

6. Coombe Junction Halt, Cornwall (140)

The least used station in Scotland was Kildonan, on the Far North Line, with 240 entries and exits and the least used station in Wales was Roman Bridge with 680 entries and exits.

In previous years, usage at some of the least used stations presented as part of these statistics has greatly increased the following year. We understand that highlighting the least used stations within these statistics can encourage people to visit them.

Distribution of entries and exits

Across the mainline network, stations have very different characteristics.

Figure 2.3   Across Great Britain, 44 stations had more than 10 million entries and exits

Distribution of entries and exits by station, April 2023 to March 2024

Entries and exits	Stations	Percentage of stations
More than 10 million	44	2%
More than 1 million	501	19%
More than 100,000	1,695	66%
More than 10,000	2,350	91%
More than 1,000	2,530	98%
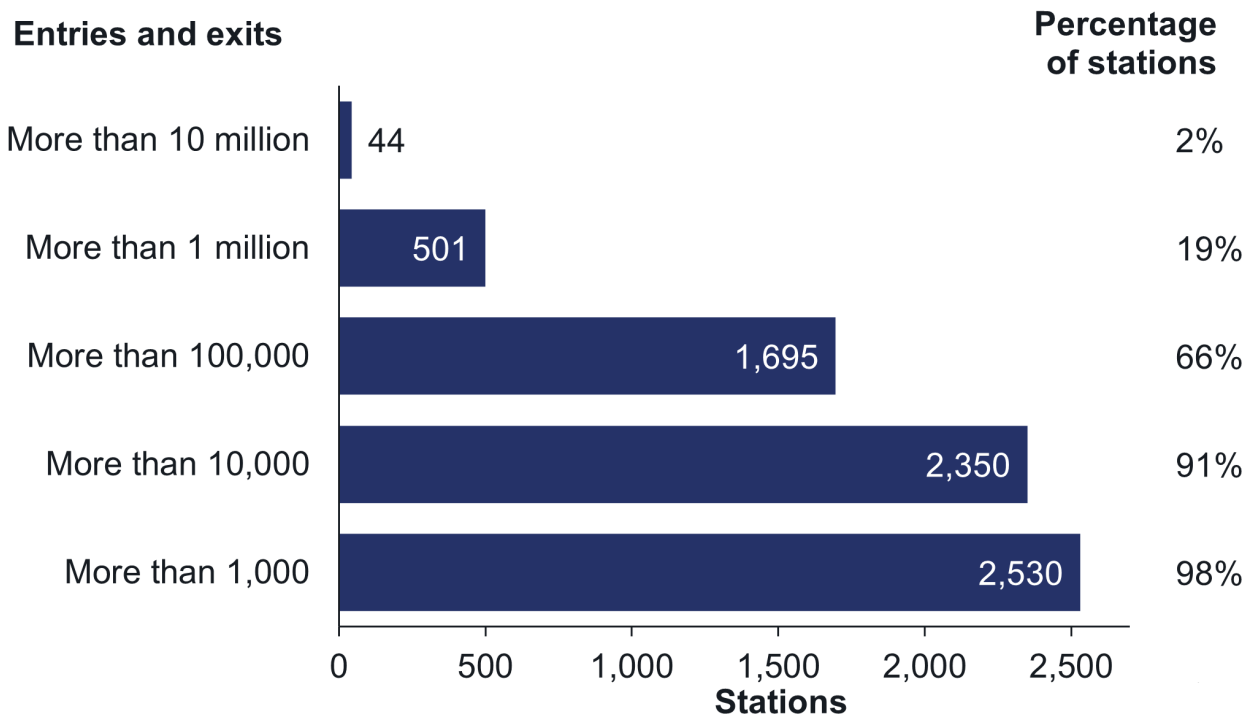
In the latest year, 501 out of 2,585 (19%) stations in Great Britain had more than 1 million entries and exits. Of these, 44 had more than 10 million.

New and closed stations

In Great Britain, 2,585 stations were served by mainline rail services as at 31 March 2024, as presented in our latest Rail infrastructure and assets statistics. This publication includes a dataset (Table 6329) containing geographic and other attribute information for each mainline station, including location co-ordinates (Easting and Northing), county, constituency and station facility owner.
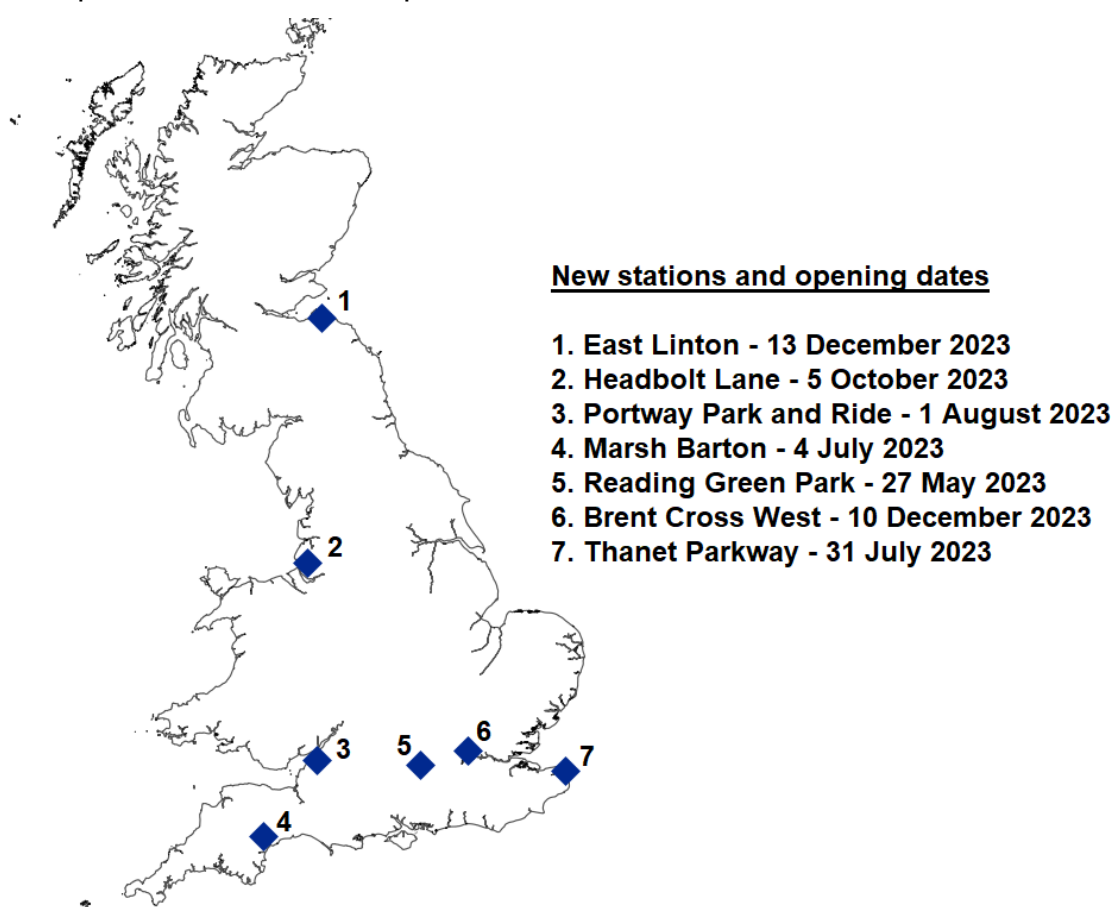
Seven new stations opened during the year April 2023 to March 2024 and no stations permanently closed to mainline services.

Figure 2.4   Seven new stations opened in latest year

Stations opened, Great Britain, April 2023 to March 2024

New stations and opening dates

1. East Linton - 13 December 2023
2. Headbolt Lane - 5 October 2023
3. Portway Park and Ride - 1 August 2023
4. Marsh Barton - 4 July 2023
5. Reading Green Park - 27 May 2023
6. Brent Cross West - 10 December 2023
7. Thanet Parkway - 31 July 2023

© Crown copyright and database rights (2012) Ordnance Survey (0100043420). Use of this data is subject to terms and conditions.

- **Brent Cross West** is served by Govia Thameslink Railway and opened 10 December 2023 – 140,000 entries and exits,
- **East Linton** is served by ScotRail and TransPennine Express and opened 13 December 2023 – 21,600 entries and exits,

- **Headbolt Lane** is served by Merseyrail and Northern Trains and opened 5 October 2023 – 411,000 entries and exits,
- **Marsh Barton** is served by Great Western Railway and opened 4 July 2023 – 62,600 entries and exits,
- **Portway Park and Ride** is served by Great Western Railway and opened 1 August 2023 – 30,200 entries and exits,
- **Reading Green Park** is served by Great Western Railway and opened 27 May 2023 – 141,000 entries and exits,
- **Thanet Parkway** is served by Southeastern and opened 31 July 2023 – 57,200 entries and exits.

Table 2.2   The three stations with most journeys to or from each new station, April 2023 to March 2024

Station name	Busiest flow (number of journeys)	Second busiest flow (number of journeys)	Third busiest flow (number of journeys)
Brent Cross West	London St Pancras International (23,600)	Farringdon (13,500)	West Hampstead Thameslink (11,200)
East Linton	Edinburgh Waverley (15,100)	Newcastle (2,010)	Dunbar (582)
Headbolt Lane	Liverpool Central (203,000)	Moorfields (39,100)	Fazakerley (17,900)
Marsh Barton	Exeter St David's (7,500)	Exmouth (6,970)	Exeter Central (6,750)
Portway Park and Ride	Bristol Temple Meads (13,000)	Clifton Down (7,760)	Bath Spa (1,170)
Reading Green Park	Reading (37,900)	London Paddington (26,200)	Basingstoke (11,400)
Thanet Parkway	London St Pancras International (32,800)	Canterbury West (8,660)	Stratford International (4,190)

Elizabeth line

The Elizabeth line is a mainline rail service in London and its suburbs. Its central section is new railway infrastructure which opened in 2022. It runs from London Paddington through to Abbey Wood, creating new journey opportunities for passengers. At the same time existing services between London Paddington and Reading, London Paddington and Heathrow and London Liverpool Street and Shenfield were rebranded as Elizabeth line trains. More details of the route can be found on the [Transport for London](#) website.

The stations on the new section of line are amongst the busiest in Great Britain. The addition of new infrastructure has lifted London Liverpool Street and London Paddington to become the two busiest stations in Great Britain. In terms of mainline rail services, Tottenham Court Road is only served by the Elizabeth line and was the third busiest station with 64.2 million entries and exits between April 2023 to March 2024.

Table 2.3   New Elizabeth line stations are already amongst the busiest in Great Britain

Entries and exits for stations on the central section of the Elizabeth line, April 2023 to March 2024

Station name	Served by	Entries and exits (all services)	National rank
London Paddington	Elizabeth line and other national rail services	66,900,000	2
Bond Street	Elizabeth line only	38,300,000	9
Tottenham Court Road	Elizabeth line only	64,200,000	3
Farringdon	Elizabeth line and other national rail services	46,000,000	8
Liverpool Street	Elizabeth line and other national rail services	94,500,000	1
Whitechapel	Elizabeth line and other national rail services	35,200,000	12
Canary Wharf	Elizabeth line only	14,800,000	26
Custom House	Elizabeth line only	9,240,000	49
Woolwich	Elizabeth line only	13,200,000	33
Abbey Wood	Elizabeth line and other national rail services	10,700,000	41

Estimates of station usage April 2023 to March 2024

Stations with the most entries and exits by region

Figure 2.5   The most used station in each region has remained the same

Top five most used stations in each region in England, Wales and Scotland, April 2023 to March 2024

SCOTLAND

Station	Total entries and exits
Glasgow Central	25,0 million
Edinburgh Waverley	21.3 million
Glasgow Queen Street	14.5 million
Paisley Gilmour Street	3.2 million
Edinburgh Haymarket	3.0 million

NORTH EAST

Station	Total entries and exits
Newcastle	9.1 million
Durham	2.6 million
Darlington	2.3 million
Middlesbrough	1.5 million
Berwick-Upon-Tweed	0.6 million

YORKSHIRE AND THE HUMBER

Station	Total entries and exits
Leeds	24.9 million
Sheffield	9.4 million
York	9.2 million
Doncaster	3.9 million
Huddersfield	3.0 million

NORTH WEST

Station	Total entries and exits
Manchester Piccadilly	25.8 million
Liverpool Central	12.6 million
Liverpool Lime Street	12.3 million
Manchester Victoria	7.7 million
Moorfields	5.6 million

EAST MIDLANDS

Station	Total entries and exits
Nottingham	7.1 million
Leicester	5.3 million
Derby	3.5 million
Northampton	2.6 million
Lincoln	2.1 million

WEST MIDLANDS

Station	Total entries and exits
Birmingham New Street	33.3 million
Coventry	6.5 million
Birmingham Moor Street	6.4 million
Wolverhampton	4.8 million
Birmingham Snow Hill	4.7 million

EAST OF ENGLAND

Station	Total entries and exits
Cambridge	10.0 million
Stansted Airport	9.3 million
Chelmsford	6.5 million
Shenfield	6.5 million
Watford Junction	6.5 million

WALES

Station	Total entries and exits
Cardiff Central	11.5 million
Newport	2.7 million
Swansea	2.2 million
Cardiff Queen Street	1.8 million
Bridgend	1.3 million

LONDON

Station	Total entries and exits
London Liverpool Street	94.5 million
London Paddington	66.9 million
Tottenham Court Road	64.2 million
London Waterloo	62.5 million
Stratford (London)	56.6 million

SOUTH EAST

Station	Total entries and exits
Gatwick Airport	19.5 million
Brighton	14.5 million
Reading	13.5 million
Oxford	6.8 million
Woking	6.0 million

SOUTH WEST

Station	Total entries and exits
Bristol Temple Meads	10.2 million
Bath Spa	6.1 million
Swindon (Wilts)	2.8 million
Exeter Central	2.8 million
Exeter St David's	2.7 million

Estimates of station usage April 2023 to March 2024

The most used station in each region in the latest year was the same as in the previous year.

The top five most used stations were the same in seven out of eleven regions as in the previous year, and in the same order in six regions. The only region to see a change of more than one station in the top five was London. Where Tottenham Court Road (3rd busiest) and Stratford (London) (5th busiest) replaced London Bridge and London Victoria.

Since the start of the pandemic (April 2019 to March 2020), only London has seen a change in the most used station, when London Waterloo was its busiest station.

3. Flows between stations

A flow represents all journeys, in both directions, between a pair of stations.

Busiest flows between pairs of stations

In the latest year, the busiest flow was between London Liverpool Street and Tottenham Court Road, with 8.2 million journeys.

Figure 3.1   Six of the ten busiest flows are on routes only served by the Elizabeth line

Ten busiest flows between pairs of stations in Great Britain, April 2023 to March 2024

Six of the ten busiest flows on are on routes only served by the Elizabeth line. These are between London Liverpool street and Tottenham Court Road (8.2 million journeys), between London Paddington and Tottenham Court Road (6.5 million journeys), between Bond Street and Tottenham Court Road (5.9 million journeys), between Bond Street and London Paddington (5.5 million journeys), between Farringdon and London Liverpool Street (4.8 million journeys) and between Tottenham Court Road and Stratford (London) (4.5 million journeys).

Elizabeth line journeys will also be included in journeys between London Liverpool Street and Stratford (London), however this flow is also served by other operators.

The flow between Stansted Airport and London Liverpool Street is the fifth busiest flow with 5.9 million journeys and the flow between Gatwick Airport and London Victoria is the seventh busiest flow with 5.4 million journeys. Heathrow Airport has three mainline rail stations. Across all three there were 5.9 million journeys in total between Heathrow Airport and London Paddington, of which, 3.1 million were to or from Terminal 2 and 3, 1.1 million were to or from Terminal 4, and 1.8 million were to or from Terminal 5.

Figure 3.2   The busiest flows including at least one station outside of London are all taking passengers to or from the capital

Ten busiest flows where at least one station is outside of London, April 2023 to March 2024
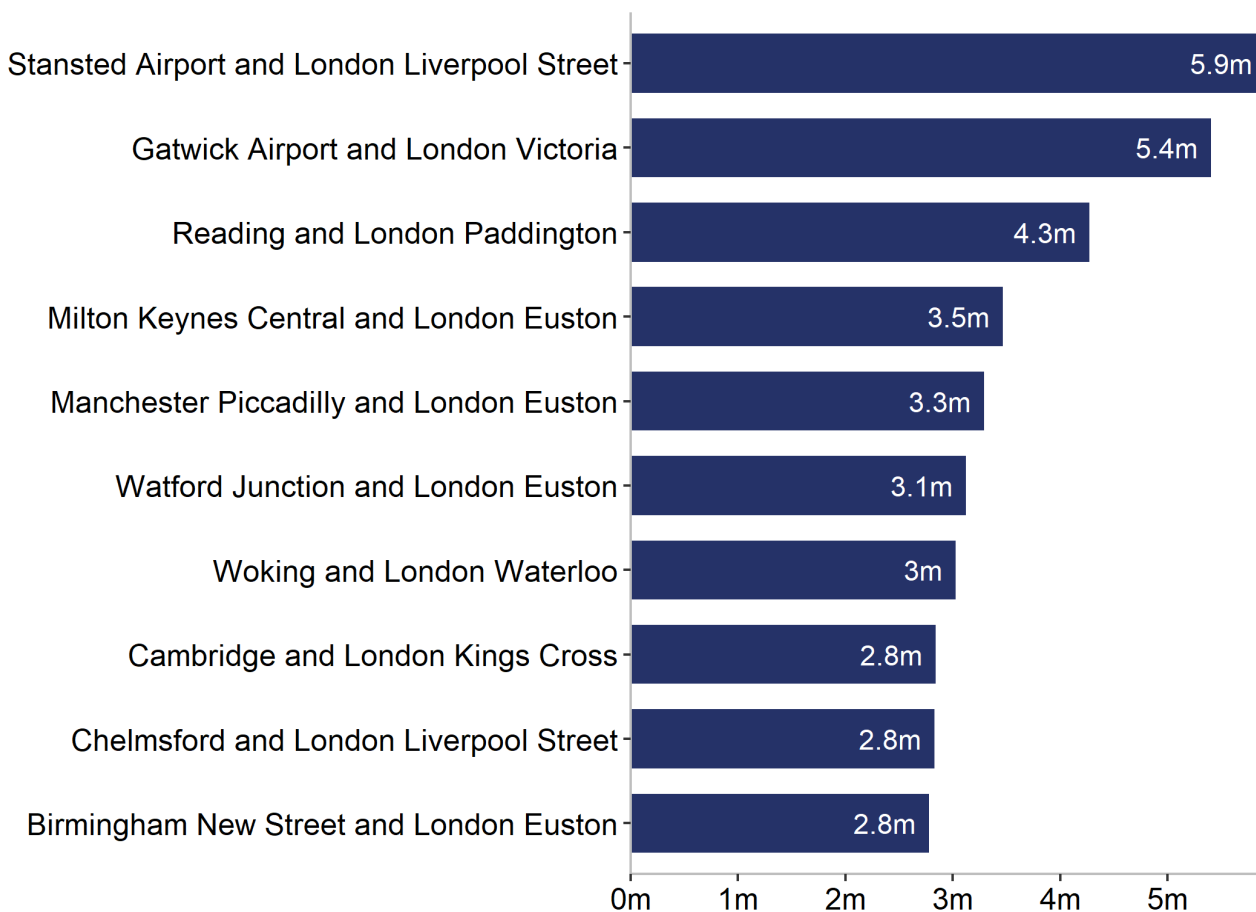
When only considering flows which involve at least one station outside of London, the busiest two flows were the flows described above between central London terminals and Stansted and Gatwick Airports.

Figure 3.3   The busiest flow outside of London was between Edinburgh Waverley and Glasgow Queen Street

Ten busiest flows where neither station is in London, April 2023 to March 2024
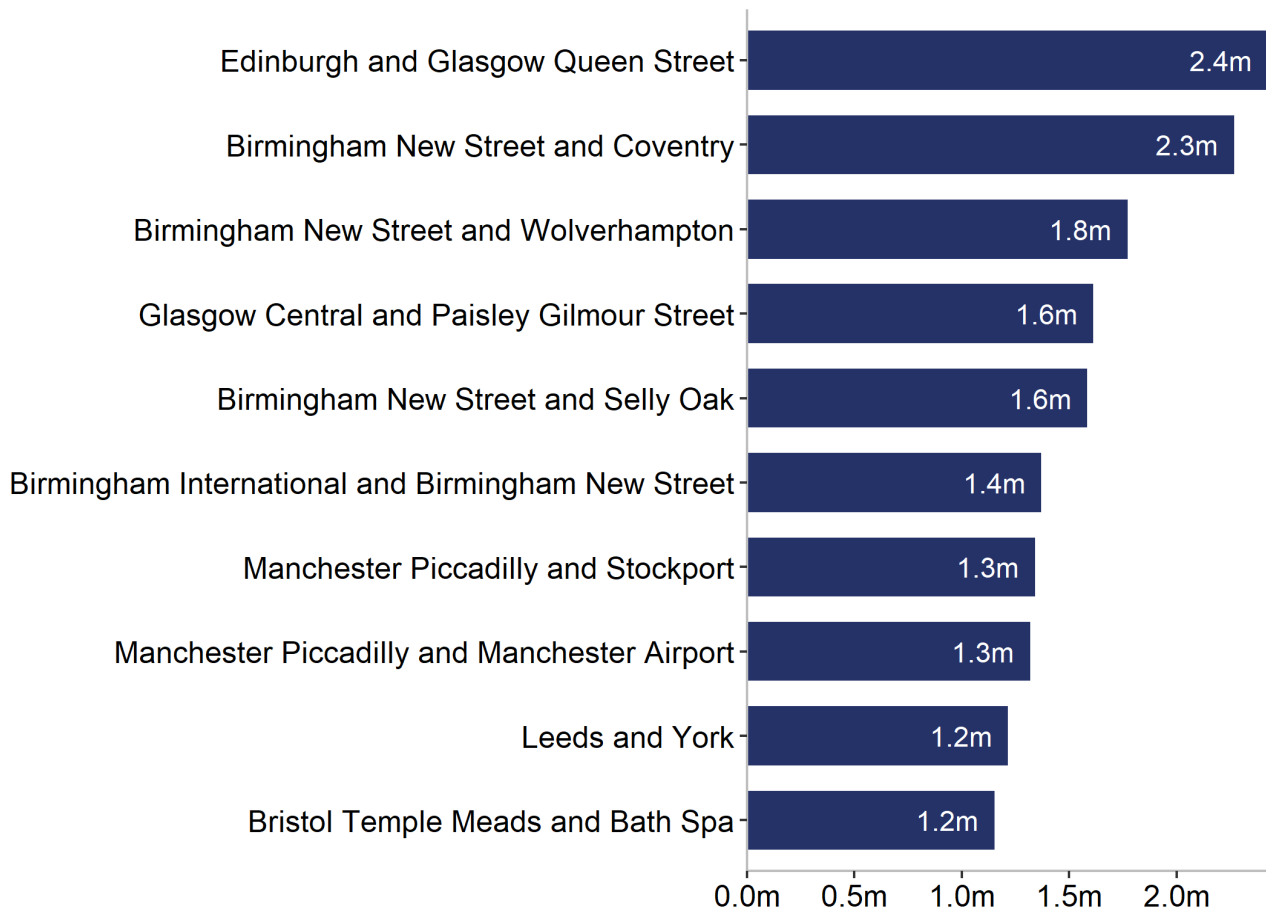
In the latest year, the busiest flow to include no London stations was between Edinburgh Waverley and Glasgow Queen Street (2.4 million journeys) followed by between Birmingham New Street and Coventry (2.3 million journeys). The busiest flow to include a station in Wales was the 1.1 million journeys between Cardiff Central and Newport.

4. Station interchanges

Stations with the most interchanges

An interchange is where a passenger needs to transfer from one train to another during their journey from origin to destination station.

In April 2023 to March 2024, the station with the highest number of interchanges was **Clapham Junction** with **20.4 million**. This station has had the highest number of interchanges each year since the comparable time series began in April 2004.

These estimates are made using a model which makes assumptions about the route taken travelling between specific origins and destinations and whether that route includes one or more interchanges.

For April 2023 to March 2024, we have not published estimates for interchanges taking place at London Liverpool Street and London Paddington. This is because we know that interchanges taking place to or from Elizabeth line services at these stations have not been included in the source file used to derive our interchange estimates. We would expect the magnitude of each of these interchanges to be large, but we are unable to confidently estimate this. It is possible that interchange estimates at other stations on the Elizabeth line route have been overestimated as they include some modelled interchanges that are likely to have actually taken place at London Liverpool Street or London Paddington.

Further information can be found in Annex 1 of this release and in the Quality and methodology report.

5. Annexes

Annex 1 – Quality and methodology

Data sources and methodology

These statistics on station usage are estimates primarily based on ticket sales, sourced from LENNON (Latest Earnings Networked Nationally Over Night), the rail industry's ticketing and revenue system and local ticketing data. These data sources and the methodology used provide the best approach possible given Great Britain does not have a fully gated rail network or robust count data for every station.

LENNON data feeds into a base matrix which is an input into the MOIRA2.2 rail planning tool. This is supplemented by local ticketing data for Passenger Transport Executive (PTE) areas. These sources are combined, and further adjustments are made to the data to address known issues with the MOIRA2.2 base matrix. These include an allocation of tickets sold to 'London Terminal', allocation of demand between individual stations in group stations outside of London and a number of cases where adjustments are made to selected stations to account for specific known issues, for example Digby and Sowton. Further information on the data sources and adjustments used to estimate usage at individual stations can be found in Table 1410 (column L).

Since the opening of the central section of the Elizabth line, there has been a known issue with LENNON overestimating contactless and Oyster Pay As You Go (PAYG) journeys on the Elizabeth line. To correct for this we have used data supplied by Transport for London (TfL) as a direct replacement for these ticket types in the LENNON data.

The resulting dataset is used to produce the Origin Destination Matrix (ODM), a comprehensive matrix of passenger flows throughout Great Britain. The ODM is then used to derive estimates for the number of entries and exits at each station in Great Britain.

Interchanges at stations have been estimated by combining the number of journeys made on each flow (from the ODM) with the information on passenger journeys taken from the Central Allocations File (CAF). The CAF is an output of the ORCATS (Operational Research Computerised Allocation of Tickets to Services) system which predicts passenger choices of rail route and train used.

Limitations

As the estimates of station usage are primarily based on ticket sales, there are a number of limitations that users should be aware of:

- Some ticket sales (e.g. Eurostar tickets) are not included, which may mean that usage at some stations is underestimated.

- Journeys with no associated ticket sales such as staff travel, and particularly fare evaders, are not included.
- Ticket sales data does not always specify precise journey origins and/or destinations, so these are estimated using alternative data sources.
- Methodology improvements, e.g. inclusion of ticket sales previously not available, means that estimates are not always comparable over time. Improvements should be taken into account when considering changes in usage between years.
- Assumptions are made about the number of journeys made with multi-use tickets e.g. that each weekly season ticket will be used to make 10.3 journeys.
- Passengers may purchase tickets from/to different stations to the ones they use in practice, e.g. to stations at the end of the fare zone.
- For April 2023 to March 2024, we have not published estimates for interchanges taking place at London Liverpool Street and London Paddington. This is because we know that interchanges taking place to or from Elizabeth line services at these stations have not been included in the December 2023 CAF file used to derive our interchange estimates. We would expect the magnitude of each of these interchanges to be large, but we are unable to confidently estimate this. It is possible that interchange estimates at other stations on the Elizabeth line route have been overestimated as they include some modelled interchanges that are likely to have actually taken place at London Liverpool Street or London Paddington.

Methodology changes

Whilst consistency with past datasets is important to enable comparisons to be made over time, users have indicated that they are keen to see improvements in station usage estimates, even where this reduces consistency with historic data, provided any changes are clearly explained.

Key methodology changes made for the April 2023 to March 2024 ODM and their impact on station usage estimates are listed below. These changes should be considered when comparing estimates with previous years.

- A methodological adjustment was used to account for journeys in the MOIRA2.2 base matrix that have the same origin and destination. This issue mainly occurred in the Oyster/CPAY area where passengers either did not tap in or tap out. The adjustment reallocates these journeys to other flows based on the underlying distribution of Oyster/CPAY journeys at the station.

- A methodological adjustment was used to exclude journeys that were paid for but never used. These are tickets that were not collected from 'Ticket on Departure' (TOD) machines. This removed 850,000 journeys.

- An updated distribution was used for allocating journeys using Strathclyde Partnership for Transport tickets. The updated distribution used April 2023 to March 2024 data (replacing pre-pandemic data), better reflecting post-pandemic travel patterns. This change did not affect the total number of journeys but it did impact their distribution across the network.

Further information is provided in the Quality and methodology report.

Revisions

There have been no revisions to previously published data. Details on any previous revisions can be found in the Revisions log.

Further details on data collection, the methodology used to calculate the estimates within this release and limitations of these estimates can be found in the Estimates of station usage quality and methodology report and Frequently Asked Questions document.

How these statistics can be used

- Monitoring the number of annual entries and exits or interchanges at individual stations e.g. to understand demand

- Monitoring how usage at individual stations changes over time (subject to methodology changes) and insights as to why

- Comparing the relative usage of stations within local areas, regions or across the whole of Great Britain

- To gauge the use of different ticket types at individual stations e.g. season vs reduced

How these statistics cannot be used

- Monitoring passenger rail usage at a national level, by train operating company or by ticket type (refer to Passenger rail usage statistics)

- Monitoring the number of passenger journeys between and within regions (refer to Regional rail usage statistics)

- Volume of entries compared to exits at an individual station (methodology makes these equal)

Annex 2 – List of outputs associated with this release and other related statistics

Data tables and other outputs

All data tables and other outputs associated with this release can be found on the Estimates of station usage page on the data portal.

(a) Passenger entries and exits and interchanges by station (April 2023 to March 2024) – Table 1410 (ods and csv)

(b) Time series of passenger entries and exits and interchanges by station (April 1997 to March 1998 to April 2023 to March 2024) – Table 1415 (ods)

(c) Interactive dashboard (Power BI)

(d) Animated graphics (MP4) and infographics (PDF)

Other related statistics

The ODM which contains the estimated number of journeys between each pair of mainline stations in Great Britain during April 2023 to March 2024 will be published on the Rail Data Marketplace at the end of November 2024. Annual datasets going back to April 2018 to March 2019 are available on the Rail Data Marketplace.

We publish Passenger rail usage statistics on a quarterly basis. These statistics include estimates of the number of passenger rail journeys in Great Britain, by sector (London and the South East, Regional, and Long distance), by operator and by ticket type. This publication also includes statistics on passenger kilometres and train kilometres.

We also publish annual statistics on Regional rail usage, which includes the number of rail journeys between and within regions. These statistics are also derived from the ODM used to produce these statistics, i.e. primarily based on the LENNON ticketing system and local ticketing data.

Network Rail publishes information on station footfall at 18 Network Rail managed stations only. These data are collected using a different method to the statistics in this release and include all people using the stations, e.g. visiting shops and restaurants who may not make a rail journey.

The Department for Transport (DfT) publishes Rail passenger numbers and crowding statistics providing information on the number of passengers travelling by rail into and out of major city centres in England and Wales. The statistics represent passengers on National Rail services on a 'typical' weekday. DfT also publishes daily estimates of transport use by mode.

Annex 3 – ORR's statistical publications

Our statistical practice is regulated by the Office for Statistics Regulation (OSR). OSR sets the standards of trustworthiness, quality and value in the Code of Practice for Statistics that all producers of official statistics should adhere to. You are welcome to contact us directly with any comments about how we meet these standards by emailing rail.stats@orr.gov.uk. Alternatively, you can contact OSR by emailing regulation@statistics.gov.uk or via the OSR website.

Statistical Releases

This publication is part of ORR's 'accredited official statistics', which consist of seven annual publications: **Estimates of station usage; Rail industry finance (UK); Rail fares index; Rail safety statistics; Rail infrastructure and assets; Rail environment; Regional rail usage;** one biannual publication: **Passenger rail service complaints;** and three quarterly publications: **Passenger rail performance; Freight rail usage and performance; Passenger rail usage**.

ORR also publishes a number of other official statistics, which consist of five annual publications: **Common Safety Indicators; Passenger satisfaction with complaints handling; Train operating company key statistics; Occupational health**; **Rail statistics compendium**; and four quarterly publications: **Signals passed at danger (SPADs); Delay compensation claims; Disabled Persons Railcards (DPRC); Passenger assistance.**

All the above publications are available on the data portal along with a list of publication dates for the next 12 months.

Accredited official statistics

Accredited official statistics are called National Statistics in the Statistics and Registration Service Act 2007. They are official statistics that have been independently reviewed by the Office for Statistics Regulation and found to comply with the standards of trustworthiness, quality and value in the Code of Practice for Statistics.

The majority of our statistical releases were independently reviewed by the OSR in June 2012. They comply with the standards of trustworthiness, quality and value in the Code of Practice for Statistics and are labelled accredited official statistics.

Since our review we have improved the content, presentation and quality of our statistical releases. In addition, in July 2019 we launched our new data portal. Therefore, in late 2019 we worked with the OSR to conduct a compliance check to ensure we are still meeting the standards of the Code. On 4 November 2019, OSR published a letter confirming that ORR's statistics should continue to be accredited official statistics.

OSR found many positive aspects in the way that we produce and present our statistics and welcomed the range of improvements made since the statistics were last assessed.

Estimates of station usage statistics were independently reviewed by OSR in November 2020 and their accreditation was confirmed on 1 December 2020.

For more information on how we adhere to the Code please see our compliance statements.

If you have any feedback or questions, please email rail.stats@orr.gov.uk.