

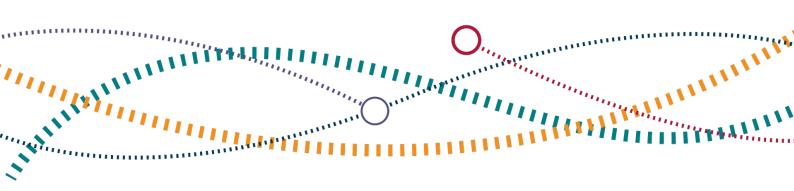


Rail infrastructure and assets: Quality and methodology report

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Contact information

Responsible statistician: J Willows
Public enquiries: rail.stats@orr.gov.uk
Media Enquiries: Tel: 07856 279808



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Introduction

This is a report on the quality and methodology of the annual Rail infrastructure and assets statistical release and associated data tables. It helps users to understand the quality of our statistics, and also ensures ORR is compliant with the three quality principles in the
Code of Practice for Official Statistics - Q1: Suitable data sources, Q2: Sound methods, and Q3: Assured quality. This report also provides information on the methodology and data sources used to produce the statistics.

This report covers the following areas:

- Data sources, methodology and definitions detail on the various data sources, methodology used to compile the statistics, and key definitions;
- Historic background a background to infrastructure and assets statistics and details
 of any changes throughout the time series;
- Relevance to users the users of the statistics, and our engagement;
- Accuracy and reliability the accuracy, data coverage and quality assurance of the statistics;
- Timeliness and punctuality our timescales for the production and publication of the statistics;
- Accessibility and clarity the format of our statistics and where they can be found;
- Coherence and comparability similar statistics published elsewhere and the degree in which the statistics can be compared over time.

Data sources, definitions and methodology

Data sources

The data contained within the release and the data tables are sourced from Network Rail, Amey Infrastructure Wales Limited (AIW), Transport for London (TfL), and Rail Safety and Standards Board (RSSB).

• Age of rolling stock and traction type data is from RSSB's R2 database (central asset management system). R2 holds details of every vehicle registered to operate on the railway in Great Britain and is the single repository for all vehicles and major components with full maintenance history. The data presented in this statistical release are for mainline operators in Great Britain, and therefore the data does not include Eurostar, London Underground, light rail, heritage and charter services.

Route and track length data:

- Network Rail's Integrated Network Model (INM) was introduced from 1 April 2017 and provides a geospatial view of the rail network. This enables users to visualise how all the track assets on the network are connected. The data supplied to ORR includes length of route open, track kilometres, electrified track, and new electrification projects for Network Rail managed infrastructure.
- The Core Valley Lines (CVL) network was transferred from Network Rail to Transport for Wales on 28 March 2020. Transport for Wales leases its assets to AIW who are the Infrastructure Manager for the CVL network. AIW supply data to ORR.
- o TfL manage the new Elizabeth line infrastructure (opened May 2022). The Crossrail Central Operating Section (CCOS) makes up most of the route used by Elizabeth line services that is not part of the Network Rail infrastructure. TfL provided data to ORR for the first time for the year April 2022 to March 2023. This included the length of new electrified track.
- Data for the following infrastructure is not provided and therefore not included in this statistical release: High Speed 1 line, Isle of Wight line, Heathrow Link Line.
- Number of mainline stations data is based on ORR's Estimates of station usage.
 This covers all stations on the rail network that are served by mainline services as at

31 March each year. Any stations where all services have been suspended temporarily are included, whereas stations closed permanently or where all services have been suspended permanently are not.

Definitions

- Rolling stock are railway vehicles, including both powered and unpowered vehicles, such as carriages, and freight wagons. The average age of rolling stock included in this release does not include locomotives or freight wagons.
- Traction type of the rolling stock refers to how the vehicle is powered. The vehicle
 may be powered from an electricity supply, or a diesel engine. Some vehicles are bimode, which can operate using electricity when running on electrified track or diesel
 along non electrified track. Locomotive hauled vehicles do not run under their own
 power, but instead have a locomotive at one (or both) ends of the train.
- Route kilometres are the total extent of routes available for trains to operate.
 Sidings and depots are excluded.
- Track kilometres takes into account multiple track routes (e.g. for each route kilometre where there is double track, there are two track kilometres). Sidings and depots are excluded.
- **Franchised operators** run services as part of contracts awarded by government (although no longer franchises we have retained this term for referring to these operators for consistency and until a new term is adopted across the industry).
- Non-franchised (open access) operators are licenced by ORR to run services on specific routes. The data tables that accompany this publication contain data for such operators: Grand Central, Heathrow Express, Hull Trains, Lumo (began running services on 25 October 2021).
- Authorisations are needed by law as no structural or vehicle subsystem can be put
 into use on or as part of the rail system in Great Britain unless ORR has provided an
 interoperability authorisation the placing in service of the subsystem.

Methodology

Traction type of rolling stock

The data for traction type is sourced from industry standard data. Using R2 data each vehicle is assigned one of the following classifications: electric, diesel, bi-mode and locomotive hauled.

Average age of rolling stock

From 1 April 2017 onwards the average age of rolling stock is sourced from the industry standard data which is available in the R2 database managed by RSSB. R2 was created by the merger of two previous systems, the Rolling Stock library, which held data on the different types of trains, and Ravers, which held data relating to the maintenance of trains.

The age of a vehicle is calculated as the time between the date it was built and the last day of the financial year. As all existing rolling stock will age by one year between one year and the next, any change in average age of less than 1.0 years is an indication of either the introduction of newer rolling stock or the removal of older stock from the fleet. A vehicle drops out of the calculation when its lease either expires or is terminated.

The average age of rolling stock is calculated by adding up the individual ages of all rail vehicles in service for each train operator, and dividing by the total number of rail vehicles they operate. R2 also contains data on rolling stock used by non-franchised (open access) operators, which have been included in the statistical release since 1 April 2017.

Within R2 each vehicle has a lifecycle status. This refers to whether the vehicle is registered operational, or another status (for example, withdrawn from use, under construction, or trial running). The vehicles included within ORR's analysis for average age and traction type were all those registered operational. This means they can in theory be used by the passenger operator, but may not have formed part of the revenue earning fleet in that year.

Route/track length and electrification data

From 1 April 2017 onwards this data is sourced from the Integrated Network Model (INM). INM provides a geospatial view of the rail network, enabling users to visualise how all the track assets on the network are connected. Data cleansing and improvement activity during the transition to INM from the previous system (GEOGIS) means there is a series break after 1 April 2017. Data on route and track route length is assessed by Network Rail every year for accuracy. During 2023 Network Rail undertook a reconciliation exercise between the data they publish in their Annual Return and that supplied to ORR back to year starting 1 April 2012. Revisions were made to both datasets for some or all measures in each year.

The data from IMN is supplemented with data from other sources (AIW and TfL) for the infrastructure not manged by Network Rail.

The entire rail network is not open to both passenger and freight traffic as some routes are open to freight traffic only and as such the length of route open for each type of traffic is reported. Some of the network is only open for freight train movements as it is deemed

that there is not adequate passenger demand for passenger services to be operated on these routes.

There is a mix of electrified and non-electrified track across Great Britain. Non-electrified track requires trains to be powered by diesel or other non-electrical methods. The electrification of routes has the benefit of lower fuel and maintenance operating costs compared to diesel, higher performance leading to journey time reductions, higher reliability and availability and lower leasing costs. Electric trains also tend to be quieter and have a significant role in reducing carbon emissions, both of which are beneficial to users, and non-users, of the rail network.

Electrified route can be either supplied by alternating current (AC) or direct current (DC). Alternating current is supplied from overhead power lines, usually at 25,000 volts. AC electrification through overhead lines can be seen on the East Coast Main Line between London and Edinburgh and West Coast Main Line.

Direct current electricity is supplied from additional rails at track level (often called 3rd rail though some systems also feature a 4th rail) which are in contact with electricity collection equipment on the train, not its wheels, with current usually supplied at 650 or 750 volts. DC electrification can be seen on the routes in Sussex and Wessex. There is also 37 kilometres of electrified route which is supplied through overhead DC at 1,500 volts which powers the Tyne and Wear Metro. This is the only system left in UK using this type of electrification.

Data on the length of electrified track added through various electrification projects that have taken place on the network since April 1995 in Great Britain is available in Table 6320.

Network Rail publish data on track length by region in their <u>Annual Return data tables</u>. Table 49: Network capability and Table 67: Electrification of the network (showing data on new and historic electrification projects).

Mainline stations

From 1 April 2015 the data source changed to be based on ORR's Estimates of station usage dataset and data was revised back to 1 April 1997. Previously the number of stations was sourced from Network Rail via the Operational Property Asset System (OPAS). OPAS was not designed for this type of statistical reporting and the Estimates of station usage data is of higher quality for the following reasons:

• Station usage data includes mainline stations only. This includes stations managed by Network Rail, Transport for London (TfL), and other organisations on

the mainline railway. Only stations open throughout the year are included, and closed stations are excluded. Estimates of station usage data only includes stations on the mainline rail network. Whereas stations on the Greater Manchester tram network and Tyne and Wear metro were included in the data provided by Network Rail.

- No double counted stations within Estimates of station usage data. Each station
 is counted once in the dataset; whereas the Network Rail source had some double
 counting due to a station being counted twice as higher and lower levels.
- Estimates of station usage data has clear methodology documentation for every year. Whereas the Network Rail data has a lack of documentation and some data quality issues throughout the time series.
- Not all new stations are recorded in the Network Rail source. Network Rail source the data from Operational Property Asset System (OPAS). Stations are included if they were deemed to be "live" and those with an operation status of "operational", "null" and "combined".

Historical background

Average age of rolling stock:

1 April 2017:

Data source changed to RSSB's R2 database.

Route/track length and electrification data:

1 April 2004:

Data source changed to GEOGIS - Network Rail's infrastructure asset register database.

1 April 2017:

Data source changed to Integrated Network Model (INM). INM is a new system that provides a geospatial view of the rail network, enabling users to visualise how all the track assets on the network are connected.

1 April 2019:

Network Rail reviewed all historic electrification projects. Data now available from 1 April 1995 on how much electrified track was added to the rail network for Great Britain as a whole and from 1 April 2012 split by country.

1 April 2020:

The Core Valley Lines (CVL) network was transferred from Network Rail to Transport for Wales on 28 March 2020. Transport for Wales leases its assets to AIW who are the Infrastructure Manager for the CVL network. AIW begin supplying data annually to ORR for CVL.

1 April 2022:

The central section of the Elizabeth line opened on 24 May 2022. This infrastructure is managed by TfL. Therefore TfL supplied data to ORR for the first time for the year April 2022 to March 2023.

Mainline stations:

1 April 2015:

Data source changed to ORR's Estimates of station usage dataset and revised back to 1 April 1997.

Average age of rolling stock

Prior to 1 April 2017 the average age of rolling stock was sourced from a manually curated dataset held by the Department for Transport (DfT). This dataset was not as accurate as

the R2 data, and therefore there is a break in the time series after 1 April 2017. The difference between the two data sources as of 31 March 2017 is shown in the table below.

Comparison of the two data sources as of 31 March 2017

| Train operating company | DfT dataset | R2 data | Difference |
|---------------------------|-------------|---------|---------------------|
| Arriva Trains Wales | 26.99 | 26.52 | -0.47 years (-1.8%) |
| c2c | 14.85 | 15.05 | 0.20 years (1.4%) |
| Caledonian Sleeper | 42.38 | 37.48 | -4.90 years |
| Chiltern Railways | 23.15 | 24.35 | 1.20 years (5.2%) |
| CrossCountry | 18.60 | 18.38 | -0.22 years (-1.2%) |
| East Midlands Trains | 25.30 | 23.20 | -2.10 years (-8.3%) |
| Govia Thameslink Railway | 15.70 | 14.18 | -1.52 years (-9.7%) |
| Great Western Railway | 31.98 | 30.06 | -1.92 years (-6.0%) |
| Greater Anglia | 27.59 | 26.02 | -1.57 years (-5.7%) |
| London Overground | 14.70 | 14.71 | 0.01 years (0.0%) |
| Merseyrail | 38.25 | 37.34 | -0.91 years (-2.4%) |
| Northern | 28.21 | 27.58 | -0.63 years (-2.2%) |
| ScotRail | 20.81 | 20.71 | -0.10 years (-0.5%) |
| South Western Railway | 20.93 | 19.82 | -1.11 years (-5.3%) |
| Southeastern | 17.44 | 17.17 | -0.27 years (-1.6%) |
| TfL Rail | 37.25 | 35.75 | -1.50 years (-4.0%) |
| TransPennine Express | 9.18 | 10.78 | 1.60 years (17.4%) |
| Virgin Trains East Coast | 31.28 | 30.71 | -0.57 years (-1.8%) |
| Virgin Trains West Coast | 12.39 | 12.53 | 0.14 years (1.1%) |
| West Midlands Trains | 13.08 | 12.75 | -0.33 years (-2.5%) |
| National (franchised) | 21.08 | 20.24 | -0.84 years (-4.0%) |
| Heathrow Express | n/a | 16.72 | n/a |
| Hull Trains | n/a | 14.95 | n/a |
| Grand Central | n/a | 26.73 | n/a |
| National (non-franchised) | n/a | 19.52 | n/a |
| National (all) | n/a | 20.23 | n/a |

The differences in the above table are mostly due to the assumptions and accuracy of the original data source. The original data sources included information taken from rail magazines, the Rail Delivery Group (RDG) and rolling stock companies. The main differences are due to the previous data source provided most of the assumed entry into service dates as a year, rather than the exact date, and for the entire fleet rather than individual vehicles.

Route and track length

Route kilometres are the total extent of routes available for trains to operate. This is different to track kilometres which takes into account multiple track routes (e.g. for each route kilometres where there is double track, there are two track kilometres).

Since the first locomotive-hauled public railway opened in 1825 the network has been continually developing with the total length of the network reaching a peak of 37,720 kilometres in the 1910s.

Historically one of the most significant impacts on the length of route was the effect of British Railways Board reports *The Reshaping of British Railways* (1963) and *The Development of the Major Railway Trunk Routes* (1965) which were written by Dr Richard Beeching and led to cuts to the network more commonly known as the "Beeching cuts". The first of these reports recommended that 9,700 kilometres, mostly rural and industrial lines, should be closed whilst the second concluded that only 4,800 kilometres of the trunk railway network, now mainline network, (out of a total of 12,100 kilometres) should be invested in. Although not all the recommended closures were implemented, the railway network length decreased dramatically. A number of the closed lines have been reopened over the past 25 years, however the length of the network remains much lower than at its peak.

Up to March 2004, route length data and electrification data was collected using various systems and collected on a semi-annual basis. These systems, whilst often the most accurate measures available at the time would not have provided as accurate a measure as the GEOGIS system and there is therefore a break in the time series, with GEOGIS recording data from April 2004. There is also a break in the time series from April 2006 onwards due to a new methodology where the route classification reference data was revamped. GEOGIS was Network Rail's infrastructure asset register database, which contained information on the physical location and type of track using four-digit track ID's to identify each individual location by track direction, track use, and track number.

There is a further break in the time series from April 2017 onwards due to Network Rail replacing GEOGIS, its master database for track assets, with a new system called INM (Integrated Network Model). This means any comparison of the current route length with previous years must be treated with caution.

During 2023 Network Rail undertook a reconciliation exercise between the data they publish in their Annual Return and that supplied to ORR back to year starting 1 April 2012. Revisions were made to both datasets for some or all measures in each year.

The Core Valley Lines (CVL) network was transferred from Network Rail to Transport for Wales on 28 March 2020. Transport for Wales leases its assets to AIW who are the

Infrastructure Manager for the CVL network. AIW begin supplying data annually to ORR for CVL to supplement the data provided by Network Rail which only covers their manged infrastructure.

TfL manage the new Elizabeth line infrastructure which opened on 24 May 2022. The Crossrail Central Operating Section (CCOS) makes up most of the route used by Elizabeth line services that is not part of the Network Rail infrastructure. TfL provided data to ORR for the first time for the year April 2022 to March 2023. This included the length of new electrified track.

Mainline stations

The number of passenger stations serving the rail network grew initially as the network grew in the latter half of the 19th Century and early part of the 20th Century, but as was experienced with the reduction in route length the number of stations decreased dramatically following the Beeching cuts. The cuts recommended closing over 2,300 stations on lines which were to close and also some on lines which were to remain open. As with the recent reopening of some routes, a number of these stations have also been reopened over the past 25 years. The overall number of stations provides an indication of catchment of rail services with an increased number of stations indicating a growth in the catchment area of the rail network and associated opportunity for increased rail usage.

From 1 April 2015 the data source changed to be based on ORR's Estimates of station usage dataset and data was revised back to 1 April 1997. Previously the number of stations was sourced from Network Rail via the Operational Property Asset System (OPAS).

Comparison of the time series between the two data sources

| Year | Source: Network Rail's OPAS | Source: ORR's Estimates of station usage |
|-------------------------------|--------------------------------|--|
| 1 April 1985 to 31 March 1986 | 2,385 | Not available |
| 1 April 1986 to 31 March 1987 | 2,405 | Not available |
| 1 April 1987 to 31 March 1988 | 2,426 | Not available |
| 1 April 1988 to 31 March 1989 | 2,470 | Not available |
| 1 April 1989 to 31 March 1990 | 2,471 | Not available |
| 1 April 1990 to 31 March 1991 | 2,488 | Not available |
| 1 April 1991 to 31 March 1992 | 2,468 | Not available |
| 1 April 1992 to 31 March 1993 | 2,468 | Not available |
| 1 April 1993 to 31 March 1994 | 2,493 | Not available |
| 1 April 1994 to 31 March 1995 | 2,489 | Not available |

| 4.4. "1.4005 (0.4.14 | 0.407 | N. (2.11 |
|-------------------------------|---------------|---------------|
| 1 April 1995 to 31 March 1996 | 2,497 | Not available |
| 1 April 1996 to 31 March 1997 | 2,498 | Not available |
| 1 April 1997 to 31 March 1998 | 2,495 | 2,518 |
| 1 April 1998 to 31 March 1999 | 2,499 | 2,515 |
| 1 April 1999 to 31 March 2000 | 2,503 | 2,491 |
| 1 April 2000 to 31 March 2001 | Not available | Not available |
| 1 April 2001 to 31 March 2002 | 2,508 | 2,496 |
| 1 April 2002 to 31 March 2003 | 2,508 | 2,497 |
| 1 April 2003 to 31 March 2004 | 2,507 | 2,498 |
| 1 April 2004 to 31 March 2005 | 2,508 | 2,504 |
| 1 April 2005 to 31 March 2006 | 2,510 | 2,508 |
| 1 April 2006 to 31 March 2007 | 2,520 | 2,522 |
| 1 April 2007 to 31 March 2008 | 2,516 | 2,522 |
| 1 April 2008 to 31 March 2009 | 2,516 | 2,522 |
| 1 April 2009 to 31 March 2010 | 2,516 | 2,529 |
| 1 April 2010 to 31 March 2011 | 2,532 | 2,535 |
| 1 April 2011 to 31 March 2012 | 2,535 | 2,537 |
| 1 April 2012 to 31 March 2013 | 2,532 | 2,539 |
| 1 April 2013 to 31 March 2014 | 2,550 | 2,541 |
| 1 April 2014 to 31 March 2015 | 2,552 | 2,543 |
| 1 April 2015 to 31 March 2016 | 2,556 | 2,557 |

Relevance to users

The degree to which the statistical product meets the user needs in both coverage and content.

This statistical release and the accompanying data tables published on our data portal are used by a range of individuals for planning, analysis, decision making and data validation.

ORR's last <u>user survey</u> took place from mid-January to mid-April 2020. The aim of the survey was to gather feedback on ORR's new data portal; this includes statistical releases, data tables and other supplementary material. There were 42 responses to the survey. ORR created an <u>implementation plan</u> following the 2020 user survey.

More detailed information on users of ORR statistics and meeting the needs of users is available on the ORR <u>user engagement webpage</u>.

How these statistics can be used



- Monitoring the number of mainline stations in Great Britain, and newly opened stations
- Comparing the average age of rolling stock by operator over time
- Comparing operators' rolling stock by traction type
- Monitoring new track electrification schemes, and total track and route lengths

How these statistics cannot be used



- Identifying specific rolling stock by operator this information is held in RSSB's R2 database
- Identifying passenger usage for mainline stations (refer to Estimates of station usage)
- Identifying number of trains running on specific sections of track
- Plans for operators to introduce new rolling stock in future years
- Information on rolling stock for freight operators or non-mainline operators (e.g. heritage)

Accuracy and reliability

The proximity between an estimate and the unknown true value.

Rail infrastructure data is obtained from three data sources: Network Rail's Integrated Network Model (INM), Amey Infrastructure Wales Limited (AIW) and Transport for London (TfL). INM is an improvement on the GEOGIS database which was previously the data source.

The average age of rolling stock is obtained from a single source for each train operator, RSSB's R2 database. This is an improvement on the previous manually curated dataset held by DfT and used as the data source.

We identified some data quality issues with RSSB's R2 database. This included some vehicles having the incorrect date for year built, as the date of refurbishment was used instead. This issue was resolved and corrected in the database. Another issue is that some old passenger vehicles which are no longer in use are still included in the database. We have manually removed known out of use or scrapped vehicles from the dataset used to produce these statistics, although some may remain.

RSSB (who have overall responsibility for the database) have been made aware of the issues we have found with this data. We will continue to work with RSSB on improving the accuracy and reliability of this data. As part of this, RSSB will need to engage with the rail industry to improve the accuracy of the data the operators provide and remove not in use vehicles.

Mainline station data are based on Estimates of station usage dataset rather than Network Rail's Operational Property Asset System (OPAS) as the data is of better quality and consistent with National Rail Enquiries. See the methodology section for more information.

Data coverage

The route and track data is for all Network Rail infrastructure, plus the Core Valley Lines and TfL managed infrastructure (Elizabeth line central section) which is available for trains to operate in Great Britain. Data for the following infrastructure is not provided and therefore not included in this statistical release: High Speed 1 line, Isle of Wight line, Heathrow Link Line. Sidings and depots are excluded.

The rolling stock data is for mainline operators in Great Britain. The data does not include Eurostar, London Underground, light rail, heritage and charter services.

The number of mainline stations is based on ORR's Estimates of station usage. This covers all stations on the rail network that are served by mainline services as of 31 March each year. Any stations where all services have been suspended temporarily are included, whereas stations closed permanently or where all services have been suspended permanently are not.

Quality assurance

The data supplied are subject to extensive validation checks by ORR. These data are then prepared for publication. The process includes quality assuring the tables and charts produced and providing supporting commentary regarding the key trends, methodology and quality measures. These reports are subject to peer review. The final stage of the quality assurance process is a sign off by the statistics Head of Profession confirming the statistics meets the quality standards and are fit for publication.

Revisions policy

ORR's statement on <u>orderly release and revisions policy</u> outlines ORR's revision policy. Details of any revisions are available in the <u>revisions log</u>. Further information on revisions and data series breaks can also be found in the data tables.

Timeliness and punctuality

Timeliness refers to the time gap between publication and the reference period. Punctuality refers to the gap between planned and actual publication dates.

ORR aims to publish these statistics as soon as possible after the end of the data reference period. This is usually around seven months after the end of the financial year.

The <u>publication schedule</u> available on the data portal outlines the publication dates for <u>'accredited official statistics'</u> quarterly and annual statistical releases and other official statistics up to 12 months in advance.

ORR is committed to releasing its statistics in an open and transparent manner that promotes confidence.

Accessibility and clarity

Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the metadata, illustrations and accompanying advice.

Statistics need to be presented in a clear and understandable form. All our rail statistics data tables can be accessed free of charge on the ORR <u>data portal</u>. Commentary about the statistics and trends are provided in the statistical releases. Interactive dashboards (PowerBI) are also available.

Our data portal and its content meet the accessibility standards of the Public Sector
Bodies Website Accessibility Regulations. We support our users by providing the information they need in a way that is clear and accessible. Our statistical releases use plain language, and any technical terms, acronyms and definitions are clearly defined and explained when this is appropriate, to ensure that the statistics can be used effectively. Our data tables are available at the highest level of detail that is practical and in accessible formats. All data tables are available in OpenDocument Spreadsheet (.ods) format. We can also provide data in csv format on request.

Please see the ORR <u>accessibility statement</u> for further details, including any non-accessible content.

Data tables

The tables associated with this release can be found under the Data tables heading at the bottom of the Rail infrastructure and assets page.

- Average age of rolling stock by operator

 Table 6313
- Rolling stock vehicles by traction type and operator Table 6314
- Infrastructure on the mainline Table 6320
- Stations on the mainline Table 6325
- Station attributes for all mainline stations in Great Britain Table 6329

Coherence and comparability

Coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar. Comparability is the degree to which data can be compared over time and domain.

Other related statistics

- Fuel consumption and estimates of associated emissions of passenger and freight operators are published on the <u>Rail emissions page</u> on the data portal. This includes estimates of emissions by electric and diesel vehicle kilometres. Passenger vehicle and train kilometres split by traction type is published on the <u>Passenger rail usage</u> page and freight vehicle and train kilometres split by traction type is published on the <u>Freight rail usage and performance page</u>.
- Network Rail publish data on track length by region in their <u>Annual Return data</u>
 <u>tables</u>. Table 49: Network capability and Table 67: Electrification of the network.
- Annual statistics covering Station Stewardship Measure (SSM) and Light Maintenance Depot Stewardship Measure (LMDSM) are published on the <u>Asset</u> <u>condition page</u> of the data portal.
- Estimates of entries/exits and interchanges at each mainline station in Great Britain is published annually in Estimates of Station Usage.
- <u>National Rail Enquires</u> have further information on all stations in Great Britain, e.g. location, opening times, accessibility, etc.

Comparability to European data

Eurostat publish <u>data on the total length of railway lines in European countries</u>, measured in route kilometres. Data is available for calendar years 2008 to 2022. As of 2022, the United Kingdom had a route length of 16,430 kilometres.

The <u>Independent Regulator's Group-Rail (IRG-Rail)</u> publish data on network length, electrified route length and high-speed route length. In 2022, the average proportion of electrified route length was 56% for member countries. The UK ranked 22nd out of 31 countries, with a proportion of 38%.

Length of comparable time series

| Measures | Start of time series | Any break in series |
|---|----------------------|---------------------|
| Average age of rolling stock by operator (Table 6313) | 1 April 2007 | After 1 April 2017 |
| Rolling stock vehicles by traction type and operator (Table 6314) | 1 April 2021 | None |
| Infrastructure on the mainline | 1 April 1985 | After 1 April 2004 |
| (Table 6320) | | After 1 April 2007 |
| | | After 1 April 2017 |
| Stations on the mainline (Table 6325) | 1 April 1985 | After 1 April 1997 |



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