Department for Transport

Rail Statistics Tables

Notes and Definitions

This document provides notes and definitions for the rail statistics tables published by the Department for Transport (DfT). These tables are published in five statistical datasets, which can be found on the following webpage: https://www.gov.uk/government/organisations/department-for-transport/series/rail-statistics.

The five rail statistics datasets are listed below:

RAI01 - Rail usage, infrastructure and performance

RAI02 - Rail passenger numbers and crowding on weekdays

RAI03 - Rail finance

RAI04 - Rail freight

RAI05 - Rail accidents and safety

Apart from a couple of exceptions showing passenger usage on the London Underground and Channel Tunnel, these statistics cover National Rail only. Statistics on light rail and tram systems can be found at the following link: https://www.gov.uk/government/organisations/department-for-transport/series/light-rail-and-tram-statistics.

Any enquiries can be addressed to the Rail Statistics & Research branch at the Department for Transport:

Telephone: 020 7944 2419
Email: rail.stats@dft.gsi.gov.uk

Other Department for Transport rail publications

Public attitudes towards train services provides information on adults' experiences of, and attitudes towards, rail travel in Great Britain, using a series of questions included in the Office for National Statistics (ONS) Opinions and Lifestyle survey. The latest results from February 2015 can be found at the following link: https://www.gov.uk/government/statistics/public-attitudes-towards-train-services-2015.

The *National Rail Travel Survey* is a survey of passenger trips on the national rail system in Great Britain. An overview report of the survey published in 2010 can be found at the following link: https://www.gov.uk/government/publications/national-rail-travel-survey-overview-report.

The Rail Statistics & Research team also release a collection of annual *factsheets* providing an overview of key statistics on national rail in Great Britain. These can be found at the following link: https://www.gov.uk/government/collections/rail-statistics.

Other publishers of rail statistics

Rail passenger numbers and crowding statistics are produced by the Department for Transport, however the majority of statistics about the rail industry are produced by other organisations. Therefore, more up to date and more detailed statistics than those published by DfT may be available from the organisation that produces them. The statistics in the tables in datasets RAI01, RAI03 and RAI04 are mainly published by the Office of Rail and Road (ORR), apart from the statistics in Table RAI0109 from Transport Focus, while those in dataset RAI05 are published by the Rail Safety and Standards Board (RSSB). Further information on these publishers can be found at following links:

- Office of Rail and Road - http://orr.gov.uk/statistics.
- Transport Focus - http://www.transportfocus.org.uk/research-publications/research/national-passenger-survey-introduction/.
- Rail Safety and Standards Board - https://www.rssb.co.uk/risk-analysis-and-safety-reporting/safety-intelligence/safety-performance-reports.

RAI01 - Rail usage, infrastructure and performance

Length of national railway route at year end, and passenger travel by national railway and London Underground: Table RAI0101

The figures shown for national rail passenger traffic prior to 1928 include all journeys on those 'London Railways' subsequently taken over by the London Passenger Transport Board in 1933. Additionally, in 1919 a journey using the services of more than one company was reported by each of them, with consequent duplication in the figures. The figures for journeys on the London Underground from 1948 include those originating on the former British Railways network (approximately 70 million journeys in 1948), and on those lines transferred to the London Transport Passenger Executive on 1 January 1948 (estimated at 62 million journeys in 1947).

Electrified route: Pre-1947 figures refer to track length, not route length, and include electrified sidings. In 1947, there were 3,370 electrified track kilometres.

National Railways passenger journeys and kilometres: Figures from 1986-87 to 2002-03 were based on tickets issued through the All Purpose Ticket Issuing System (APTIS) and are not comparable with earlier years. The rail series for passenger data changes after privatisation in 1994, with possible double counting of journeys. Post-privatisation, a journey involving a change of train would be classed as two journeys. This contrasts with results published prior to privatisation when a through-ticketed journey was counted only once, irrespective of the number of changes made.

Figures from 2003-04 are based on the rail industry's central ticketing and revenue database, LENNON (Latest Earnings Network Nationally Over Night). LENNON holds information on the vast majority of national rail tickets purchased in Great Britain and is used to allocate the revenue from ticket sales between train operating companies.

There is some underestimation of passenger journeys and kilometres in 1997-98 and 1998-99. This is because LENNON did not capture the passenger kilometres of certain ticket types, such as operator specific tickets and Passenger Transport Executive (PTE) multi-modal tickets. The figures were reviewed and revised by the Strategic Rail Authority (SRA) to include best estimates for non-LENNON data. This exercise was backdated to the start of 1999-00. Oyster Pay as you go (PAYG) journeys were included within LENNON from January 2010. Journey growth from the final quarter of 2009-10 may be partially driven by PAYG where people have switched from travelcards to point to point travel.

London Underground passenger kilometres: From 1965, passenger kilometres are those actually travelled. Prior to 1965, a different method of estimation was used, leading to slight overestimates of the order of 0.1 billion passenger kilometres per year.

Passenger kilometres and passenger train kilometres on national railways: Table RAI0103

Passenger revenue: Passenger revenue includes all ticket revenue and miscellaneous charges associated with passenger travel on national railways, e.g. car parking charges. For journeys involving some travel on London Transport, receipts have been apportioned appropriately. Passenger revenue does not include government support or grants.

New methodologies were applied in 2003-04 and in 2007-08 to improve the categorisation of ticket type, so there are breaks in series in both of these years.

Passenger kilometres: Estimates of passenger kilometres are made from LENNON. To record travel on season tickets appropriate factors are assumed for the number of journeys per season ticket.

For both the revenue and the passenger kilometres series, new methodologies were applied in 2003-04 and in 2007-08 to improve the categorisation of ticket type. Further details about the methodologies used to calculate revenue and passenger kilometres can be found on the ORR website: http://orr.gov.uk/statistics/published-stats/statistical-releases.

Passenger train kilometres: This refers to the number of train kilometres travelled by revenue earning passenger trains. The passenger train kilometres are derived from Network Rail's Track Access Billing System (TABS), which Network Rail use to bill train operators. This has replaced the previous measure, timetabled train kilometres, which shows the number of kilometres each train operating company would achieve according to the winter and summer train timetable if they were operating at full capacity. From 2015-16 quarter 3, ORR have replaced the timetabled train kilometres with passenger train kilometres measure as it is a measure of the volume of traffic actually travelling on the network rather than that which is timetabled but does not necessarily run.

Timetabled train kilometres: A new methodology was used from 2002-03 quarter 2 where previously timetabled train kilometres were published using data sourced from DfT. ORR revised the methodology behind these data, and used more comprehensive data supplied by the Rail Delivery Group (RDG) to generate these statistics. These data include non-franchised train operators.

National railways - Route and stations open for traffic at end of year: Table RAI0104

The length of route open for rail traffic is that managed by Network Rail. It does not include track managed by private companies or Passenger Transport Executive services operating on separately managed tracks.

Please note that route open is not the same as track open. For example, for a double track section of line, the figure for track will be double the figure for route open.

The break in the route open series between 2003-04 and 2004-05 is due to a change in the methodology for collection of the route length. Up until 2003-04 the data were collected on a semimanual basis from various systems. From 2004-05 the principal track engineers' database, GEOGIS, has been used. The apparent drop from 2004-05 to 2005-06 does not reflect an actual reduction in route kilometres open for traffic but is due to improvements in data collection and data quality that resulted in a restatement of route length. Data from 2007-08 are not consistent with earlier years as a new methodology has been introduced because of revisions to route classification data.

In 2015-16 the ORR changed the data source for statistics on the number of mainline stations in Great Britain, to harmonise with their 'estimates of stations usage' publication. The change was back-dated to 1997-98. See the ORR's 'Rail infrastructure, assets and environmental 2015-16' statistical release for more information on this change.

National railways - Public Performance Measure: Table RAI0105

Public Performance Measure (PPM) was introduced in 2000 by the then Shadow Strategic Rail Authority, replacing the Passengers' Charter as the main means of measuring passenger train performance. Unlike the Charter measure that only covered particular services, PPM covers all scheduled services, seven days a week, and combines the previously individual punctuality and reliability results into a single performance measure. PPM is measured against the planned timetable, which makes allowance for specific delays (e.g. engineering works) and so may differ from the previously published timetable. PPM is therefore the percentage of trains 'on time' compared to the total number of trains planned.

PPM is the main cross-industry measure of operational performance for all passenger services and is a key performance metric for evaluating the overall punctuality and reliability of train services. A train is defined as on time if it arrives within five minutes (i.e. four minutes and fifty-nine seconds, or less) of the planned destination arrival time for London and South East and regional operators; or ten minutes (i.e. nine minutes and fifty-nine seconds, or less) for long-distance operators.

Average age of national rail rolling stock: Table RAI0106

All rail vehicles (excluding locomotives) leased from rolling stock leasing companies (ROSCOs) by train operators that have a franchise agreement with DfT are included in the calculations of average age.

The age of each rail vehicle is the time between the date of entering into service and the end of each quarter; e.g. a vehicle which entered service in January 2000 would be, at the end of 2001-02 Q1 (30 June 2001), 1.5 years old. The date of entry into service is deemed to be the first day of the quarter in which the rail vehicle came into service; e.g. all rail vehicles which entered service between 1 April 2001 and 30 June 2001 are given a service entry date of 1 April.

Where the date of entry into service is not available (essentially for rail vehicles introduced prior to privatisation) the date used is either:

- 1 January in the year of manufacture of the relevant class of rail vehicle; or
- the midpoint of the period over which the relevant class of rail vehicle was manufactured, e.g. if a class of rail vehicle was manufactured over the time frame March 1972 to March 1976 then the midpoint would be March 1974.

A vehicle drops out of the calculations when its lease either expires or is terminated.

The average age is calculated by adding up the individual ages and dividing by the number of rail vehicles in service. The refurbishment or other improvement of a rail vehicle is not taken into account in calculating average age.

There is a series break for the all operators average age between 2006-07 and 2007-08. This is because it was found that the average age was being calculated incorrectly, as some long-distance fleet data were being omitted. This has now been rectified back to 2007-08, but it has not been possible to calculate an accurate all operators average age prior to 2007-08 due to electronic records not being available.

Channel Tunnel - Traffic to and from Europe: Table RAI0108

The Channel Tunnel opened for freight traffic in June 1994 and for passenger services in November of that year. Passenger shuttle services opened in December 1994.

Four different types of service operate through the Channel Tunnel, as follows:

- Freight shuttles - carrying road freight vehicles between Folkestone and Calais.
- Tourist shuttles - carrying passenger vehicles between Folkestone and Calais.
- Freight trains - through freight trains between Great Britain and Europe.
- Eurostar trains - carrying passengers between London, France and Belgium.

Commercial traffic is fare-paying traffic using the tunnel. Non-commercial traffic is non-fare-paying traffic (e.g. staff and authorised agents).

Passenger satisfaction in the National Rail Passenger Survey (NRPS): Table RAI0109

The National Rail Passenger Survey (NRPS), managed by Transport Focus, provides a network wide picture of passengers' satisfaction with rail travel. Passenger opinions of train services are collected twice a year (during spring and autumn) across Great Britain from a representative sample of passenger journeys using questionnaires that are handed out at stations to passengers about to board a train. Table RAI0109 provides the percentage of passengers surveyed in each wave who were satisfied overall with their last rail journey. Comparisons should always be made with the survey results one year previously (i.e. spring 2016 should be compared with spring 2015). While the main method of sampling is by questionnaires handed out at stations, a small proportion of surveying is undertaken on train services, and there is also an option to complete the survey online.

The survey is conducted across the entire franchised railway, and on four non-franchised train operating companies (Grand Central, Heathrow Connect, Heathrow Express and Hull Trains). Sample sizes vary from wave to wave. The results are presented to the nearest percent as is consistent with the NRPS reports. As such, percentage point comparisons may be inaccurate.

The NRPS is outside of the scope of National Statistics, but it is classified as Official Statistics. More information on the NRPS can be found on Transport Focus' website at the following link: http://www.transportfocus.org.uk/research-publications/research/national-passenger-survey-introduction/.

RAI02 - Rail passenger numbers and crowding on weekdays

These tables are part of the annual DfT publication *Rail passenger numbers and crowding on weekdays in major cities in England and Wales*. Notes and definitions for these tables can be found in the separate *Notes and definitions* document for this publication, which can be found at: https://www.gov.uk/government/publications/rail-statistics-guidance.

Passenger numbers statistics: Tables RAI0201, RAI0202 and RAI0203

This table shows the number of passengers arriving and departing major cities in England and Wales on an annual basis surveyed in autumn.

RAI0201 provides passenger numbers, the number of services and the total number of seats over the course of day, as well as during the 3-hour AM peak (07:00 to 09:59) for arrivals and during the 3-hour PM peak (16:00 to 18:59) for departures. RAI0201 provides these figures from autumn 2010 for major cities in England and Wales.

RAI0202 and RAI0203 provides arrivals into and departures from major cities and London stations in hourly time bands from autumn 2011 onwards.

Passenger numbers statistics for each city are based on passenger counts carried out on services on arrival to and departure from the city centre station(s). In London this includes all stations in Zone 1 of the TfL Travelcard area on routes into/from major London stations. The figures for passengers and total seats include both standard and first class combined.

To produce statistics for passenger numbers and total seats by hour of the day, the data for individual services are aggregated together. The timetabled arrival time at the first city centre station the service called at determines the time band the service is included in for arrivals, and the timetabled departure time from the final city centre station the service called at determines the time band for departures.

Note that where a service travels through a city but does not start or finish there, passengers travelling through the city will be included in both the arrival and departure counts for that city, despite not boarding or alighting there. Therefore these statistics show the number of passengers on board services arriving at and departing from each city, but they do not necessarily show the numbers boarding or alighting there. The exception to this is in London, where most of the stations where passenger numbers are recorded in Zone 1 are terminals, so all passengers on services at those points will have boarded or alighted at that station.

Crowding statistics: Tables RAI0209, RAI0210, RAI0211, RAI0212, RAI0213, RAI0214 and RAI0215

These tables show passengers in excess of capacity (PiXC) on weekday train services arriving at city centre stations during the 3-hour AM peak (07:00 and 09:59), and those departing during the 3-hour PM peak (16:00 and 18:59). The overall PiXC is derived by combining both peaks.

PiXC is a measure of overcrowding. The PiXC measure considers the planned standard class capacity of each service and the actual number of standard class passengers on the service at the point where the passenger load is highest. PiXC is the number of standard class passengers that exceed the planned standard class capacity for the service, so is the difference between the two if the number of passengers on the service is greater than the capacity, or zero if the number of passengers is within the capacity. The passenger loads for each service are based on passenger counts carried out by train operators on weekdays during school term time in the autumn period each year.

The standard class capacity is based on the booked formation of the service. It includes the number of standard class seats on the train and may include an allowance for standing room. No allowance for standing is made when a service has no stops for more than 20 minutes before (AM) or after (PM) the point where the passenger load is highest, but it is allowed when there is a stop within 20 minutes. 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. The PiXC values stated in the table are the total PiXC on all peak services expressed as a percentage of the total number of standard class passengers on all peak services at their highest load points.

RAI0209 provides PiXC statistics by city and major London station from autumn 2011 onwards.

RAI0210 provides PiXC statistics for London & South East train operators only, annually from 1990. ‘London & South East train operators’ only include commuter services to/from London, and excludes services to/from London which are run by Long Distance train operators. RAI0211 provides PiXC statistics for London & South East train operators, separated by AM and PM peak as well as by train operator, from 2011 onwards.

RAI0212 and RAI0213 provides further detail on PiXC statistics by one- and three-hour peaks at major cities in England and Wales and major London stations. RAI0212 and RAI0213 also provide statistics on the number of passengers standing, along with the percentage of peak train services that have PiXC and passenger standing.

RAI0214 and RAI0215 provides peak PiXC percentages by train operator at major cities in England and Wales and by major London station.

RAI03 - Rail finance

National railways - Passenger revenue: Table RAI0301

Passenger revenue: Passenger revenue includes all ticket revenue and miscellaneous charges associated with passenger travel on national railways, e.g. car parking charges. For journeys involving some travel on London Transport, receipts have been apportioned appropriately.

Passenger revenue does not include government support or grants. New methodologies were applied in 2003-04 and in 2007-08 to improve the categorisation of ticket type, so there are breaks in series in both of these years.

New methodologies were applied in 2003-04 and in 2007-08 to improve the categorisation of ticket type. Further details about the methodologies used to calculate revenue and passenger kilometres can be found on the ORR website: http://orr.gov.uk/statistics/published-stats/statistical-releases.

Government Support to the Rail Industry: Table RAI0302

Government support to the rail industry consists of DfT, Transport Scotland and Welsh Government support grants paid to Network Rail, Train Operating Companies, and Passenger Transport Executives (PTEs), and funding for major projects such as Crossrail and HS2 as well as other ad-hoc rail projects. Information is also provided on loans to Network Rail loan and rail freight grants that are paid by Government to encourage the movement of freight by rail.

Prior to 1994-95, Government support to the rail industry comprised grants to British Rail and the PTEs, and borrowing by British Rail from the National Loans Fund. Grants to British Rail consisted of Public Service Obligation (PSO) Grant and Level 1 Crossing Grant.

The privatisation of the rail industry in April 1994 led to changes in the basis of government funding. On 1 April 1994, PSO grants were replaced by Office of Passenger Rail Franchising (OPRAF) support and grants to British Rail and, from the point of franchise, to private sector train operating companies. In 2001 OPRAF support was replaced with Strategic Rail Authority support, which in 2005 was replaced with grants made by the Department for Transport (DfT), the Welsh Assembly Government and Transport Scotland.

Since 1994-95 Central Government grants have included franchise payments to/from train operators and performance receipts. Franchise payments are payments to or from train operators contracted in their franchise agreements. Performance receipts are payments that vary depending on the train operator, and can result in payments from an operator to the Government as well as from Government to the operator. Negative values show where the Government was in receipt of payments. From 2010-11, these figures also include contracted grant payments by the Department for Transport to Merseyrail and London Overground which are made under funding arrangements for devolved operations.

PTE grants are currently paid to the five Passenger Transport Executives and Transport for Greater Manchester. These figures include grants made to PTEs specifically for rail, so will not include any spending on rail made by PTEs from general grants. All grants to PTEs are currently made by the Department for Transport. Between 1995-96 and 2005-06 PTE rail funding also included loan repayments under Deeds of Assumption (DoA). These were payments to the PTEs relating to their past capital investment in the railway. They were made by British Rail and DoA Ltd until 2001, when the Strategic Rail Authority took over responsibility for the payments until they were paid off.

Since the creation of Network Rail in 2001 to replace Railtrack, a Network Grant has been paid to Network Rail. Prior to this, Railtrack was funded by network access charges paid by train operators. These 'Direct rail support' figures also include payments to London and Continental Railways during the construction of the High Speed 1 route. The year by year profile of Government support to the rail industry was affected by the decision in the Access Charges Review 2003 to re-profile Network Rail's income. This led to Government support being lower than it otherwise would have been in 2004-05 and 2005-06, with the shortfall being made up in later years.

Loans issued by DfT to Network Rail were made available as part of Network Rail's reclassification as a public body in 2014-15. Loans are provided by DfT to Network Rail to continue their programme of work on the national rail network.

'Other elements of Government support' includes a variety of other Government expenditure on national rail. While major projects such as HS2 and Crossrail are presented separately, other expenditure for example on rail pensions, support to arms-length bodies including the British Transport Police and Transport Focus, a grant to British Rail to finance its residual activities, and other ad hoc rail projects are grouped into miscellaneous spending. Prior to privatisation it chiefly comprised the changes in the net indebtedness (borrowing minus lending) of the rail industry. The proceeds from the sales of rolling stock operating companies (ROSCOs) and British Rail non-passenger business in 1995-96 and 1996-97 are also included in this category. The figures from 2008-09 were revised in 2015-16 to incorporate other elements of Government support that has previously not been included.

Private investment in the railway industry: Table RAI0303

The data for this table are collected by the Office for National Statistics (ONS) every quarter on behalf of the ORR. ORR select up to 40 companies to take part in the survey every quarter.

The survey asks for investment in the following categories:

- Track and signalling including new routes and new electrification.
- Rolling stock including eligible refurbishment work.
- Stations including retail outlet buildings.
- All other expenditure associated with the rail business, such as non-rail vehicles and business related costs such as IT and web related costs.

Negative numbers can occur due to a company's disposal of rail assets.

RAI04 - Rail freight

National Railways freight moved by commodity, and National Railways freight lifted by commodity: Tables RAI0401 and RAI0402

These tables summarise the performance of the freight business in terms of freight 'lifted' (measured in tonnes) and freight 'moved' (measured in tonne kilometres). These figures are provided in financial years.

In February 1996, British Rail's (BR) bulk freight operations were sold to North and South Railways, subsequently called English, Welsh and Scottish Railway (EWS). In 2007, EWS was bought by Deutsche Bahn and in January 2009 was re-named DB Schenker, which is now operating as DB Cargo UK. The other major companies in the rail freight sector are Freightliner Ltd (formerly the BR container business), Direct Rail Services (DRS) and First GB Railfreight.

Freight moved is measured in net tonne kilometres (NTKm). This takes into account the net weight (excluding the weight of the locomotive and wagons) of the goods carried (the freight lifted, measured in tonnes) and the distance carried. Although it is not included in the total NTKm, we have included a separate series on infrastructure traffic (goods used for railway engineering work). International comprises trains travelling through the Channel Tunnel; Domestic intermodal includes goods that have arrived by sea at ports.

Following the move of BR's bulk freight operations to the private sector there have been some changes in the way estimates of freight traffic have been compiled. In particular, the method of estimating tonne kilometres is different, with the result that recent estimates are not consistent with those for earlier periods.

Freight lifted is the mass of goods carried on the network. It excludes the weight of the locomotives and wagons. Unlike freight moved it takes no account of the distance travelled. Data pre- and post- privatisation are not directly comparable. These data are updated on a quarterly basis and can be found via the ORR Data Portal: http://dataportal.orr.gov.uk. A quarterly statistical release accompanies the statistics which can be found at the following link http://orr.gov.uk/statistics/published-stats/statistical-releases.

Some below for a list of discontinuities in the series:

1996-97: Exact rail comparisons pre and post privatisation are not possible.

1999-00: Change in source data from 1999/00.

2003-04: Break in the rail 'Goods Lifted' series. The increase was largely due to changes in collection methods.

2005-06: Break in the rail 'Goods Lifted' series. Figures from 2005/06 onwards include some of the tonnes lifted by GB Railfreight.

2007-08: Break in the rail 'Goods Lifted' series. Coal data was not supplied by GB Railfreight prior to 2007-08.

National Railways freight train movements, impacts on road haulage and Freight Performance Measure: Table RAI0403

This table shows the total number of train movements (including infrastructure trains) on the network and the equivalent distance that road vehicles would need to have travelled to move the amounts of freight carried on rail. It also shows the equivalent number of road vehicle trips necessary to move this freight. These measures provide an alternative to the traditional deadweight-based approach.

A new metric for rail freight performance was introduced in 2013-14, **the Freight Delivery Metric (FDM)**. This gives the percentage of commercial freight trains that arrive at planned destination within 15 minutes of scheduled time. Freight trains are only considered to have failed FDM where a delay is caused by Network Rail. This metric has superseded the previous metric, the **Freight Performance Measure**, which gave the percentage of freight trains arriving at their final destination on time, each train being 'on time' if it arrives within 10 minutes of its scheduled arrival time. Further details can be found via the ORR's Data Portal: http://dataportal.orr.gov.uk.

RAI05 - Rail accidents and safety

Railway accidents: Tables RAI0501, RAI0502 and RAI0503

These tables give the number of train accidents and casualties in incidents that occurred in stations, on trains, or elsewhere on Network Rail managed infrastructure in Great Britain, such as the track and trackside. Workforce fatalities that occur away from these locations, but during working time, are also included.

These data are subject to annual revision. Numbers may change as a result of late reporting or as more information, such as coroners' verdicts, becomes available.

Since 2011, these tables have been sourced from the Rail Safety and Standards Board (RSSB), where reports can be found at the following link: https://www.rssb.co.uk/risk-analysis-and-safety-reporting/safety-intelligence/safety-performance-reports. Previously the tables were based on accidents and casualties recorded by the ORR within a database called SIGNAL. However, to avoid the confusion caused by having two sets of data published, ORR now publishes the statistics collected by RSSB at the following page: http://orr.gov.uk/statistics/published-stats/statistical-releases. This means that there are a number of definitional differences between these figures and those published in TSGB prior to 2011. In particular the RSSB figures only cover National Rail, and do not cover accidents on Eurotunnel, London Underground, trams, other rail guided systems and trolley vehicle systems, which were all included in the previous figures from SIGNAL. The tables have been revised to fit RSSB definitions, and data from previous years have been revised to the RSSB figures to provide a consistent time series.
Most RSSB data are derived from the industry's Safety Management Information System (SMIS). SMIS records a wide range of incidents, including all injuries and all safety events that are reportable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 1995. The most serious incidents tend to be well reported so the statistics for these should be robust, but it is likely that there is some underreporting of minor injuries, and this may differ depending on the injured party and the cause. For further detail on how RSSB quality assure SMIS data, please refer to Chapter 10 of the RSSB Annual Safety Performance Report (ASPR) 2012/13.

RAI0501 provides casualties occurring in rail accidents. In this table a **passenger** is defined as a person on railway infrastructure who intends to travel, is in the process of travelling, or has travelled. This is regardless of whether he or she has a valid ticket. The exceptions are travellers who trespass or who commit, or attempt to commit suicide. People who are injured this way are classified as members of the public. A person is classified as a member of the **workforce** if he or she is working for the industry on railway activities, either as a direct employee or under contract. A person is considered a **member of the**

public if they are neither a passenger nor a member of the workforce. **Trespassers** are people deliberately going where they are never permitted to go, including those who deliberately jump from trains or platforms, or are climbing on the outside of overbridges, etc. People on level crossings are not classified as trespassers, even if they are misusing the crossing. **Suicides** include suicides, suspected suicides, and non-fatal injuries sustained by people attempting to commit suicide. Third party shock and trauma from witnessing suicides is included elsewhere, in the statistics for the person type affected (workforce, passenger or public). Where a coroner's verdict is not available, or a coroner returns an open verdict, intent is determined by applying the Ovenstone criteria (see Appendix 6 of the ASPR 2013/14). RSSB's reporting scope now includes non-fatal injuries in yards, depots and sidings (YDS). While there is no mandatory requirement to report non-fatal injuries in YDS, the collection of data to support safety analysis of these sites has been carried out on a voluntary basis, through agreement of the industry. This was formalised in a railway group standard in April 2010. The change is most noticeable for workforce major and minor injuries; the reporting of these injuries in YDS increased from 2001/02 and stabilised by 2007/08.

A **fatality** is someone who dies as a result of a rail accident, within a year of the accident occurring. **Major injuries** include injuries to passengers, staff or members of the public as defined in schedule 1 to RIDDOR 1995. This includes losing consciousness, most fractures, major dislocations and loss of sight (temporary or permanent) and other injuries that resulted in hospital attendance for more than 24 hours. **Minor injuries** include all other physical injuries. **Shock or trauma** includes cases resulting from being involved in or witnessing events that have serious potential of a fatal outcome, such as collisions and derailments, as well as cases resulting from other causes, such as verbal abuse and near misses.

RAI0502 is based on passenger casualties owing to train accidents and movement accidents involving people on board trains or in the act of boarding or alighting from them. Specifically, it covers passengers injured as a result of: (i) train accidents, (ii) falling or leaning from moving trains, (iii) sudden train movement, such as braking or lurching, and (iv) accidents while boarding or alighting from trains, whether they are stationary or moving. This is the basis for comparisons with other modes of transport. Note that the figures in RAI0502 are outside the scope of National Statistics.

RAI0503 provides the total number of RIDDOR reportable train accidents irrespective of whether personal injury was involved. Since the last publication RAI0503 in 2015, the category 'struck by large falling objects' is now given as a potentially high risk train accident (PHRTA), and the category 'striking level crossing gates/barriers' is now given as a non-potentially high risk train accident (non-PHRTA), to be consistent with what RSSB publish in their Annual Safety Performance Report. This will change the number of PHRTAs and non-PHRTAs from previous years, but RAI0503 shows the revised figures for the whole time-series.

Further details about the definitions used in these tables can be found in the RSSB Annual Safety Performance Report (ASPR): http://www.rssb.co.uk/risk-analysis-and-safety-reporting/safetyintelligence/safety-performance-reports.

Railway signals passed at danger: Table RAI0504

RAI0504 provides the number of signals passed at danger (SPADs). The rail industry uses the SPAD risk ranking tool to assign a numeric score to each incident. For each SPAD, the score reflects its accident potential (for example, how close it came to the conflict point) and the potential consequences if an accident had occurred (in the case of a collision, it takes into account speed, crashworthiness and passenger loadings). To assist with reporting, SPADs are grouped into severity bands: (i) no significant risk; (ii) potentially significant; and (iii) potentially severe.