



Rail Safety Statistics

2014-15 Annual Statistical Release

Publication date: 17 September 2015

Background

This release contains statistics on rail safety in Great Britain and Europe from 2002-03 up to 2014-15.

Rail safety statistics for Great Britain include information on train accidents and the number of fatalities and injuries affecting passengers, workforce and members of the public. Data are sourced from Rail Safety and Standards Board (RSSB), London Underground Limited (LUL) and Office of Rail and Road (ORR).

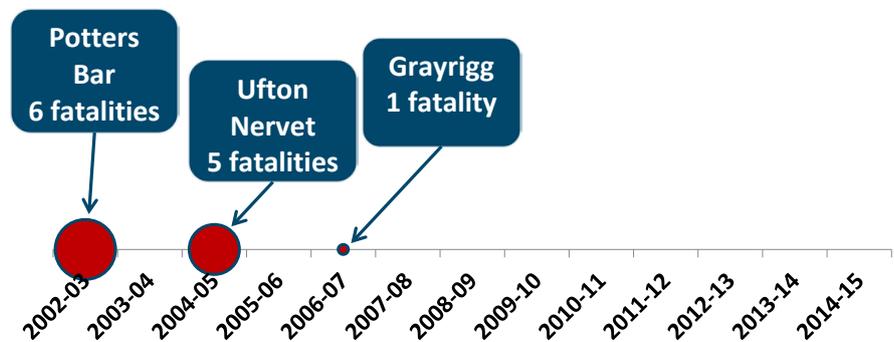
European statistics are sourced from the European Railway Agency (ERA) and compare safety risk for passengers, workforce, members of the public and level crossings.

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- There were no passenger fatalities in train accidents during 2014-15. This is the eighth year in succession that no passengers have died as a result of a train accident.

Passenger fatalities in train accidents



- There were four workforce fatalities in 2014-15. Two died as a result of electrocution and two in road traffic accidents. One of the electrocution fatalities was on the non-mainline, the first recorded fatality since 2006-07.
- There were 25 potentially higher risk train accidents (PHRTAs) in 2014-15. This was a fall from 32 in 2013-14 and represented the second best annual performance since the time series began in 2002-03.
- The number of level crossing users killed rose to ten in 2014-15, the highest number recorded since 2009-10. Eight of those killed were pedestrian users of level crossings (including one cyclist) and two were road vehicle occupants.

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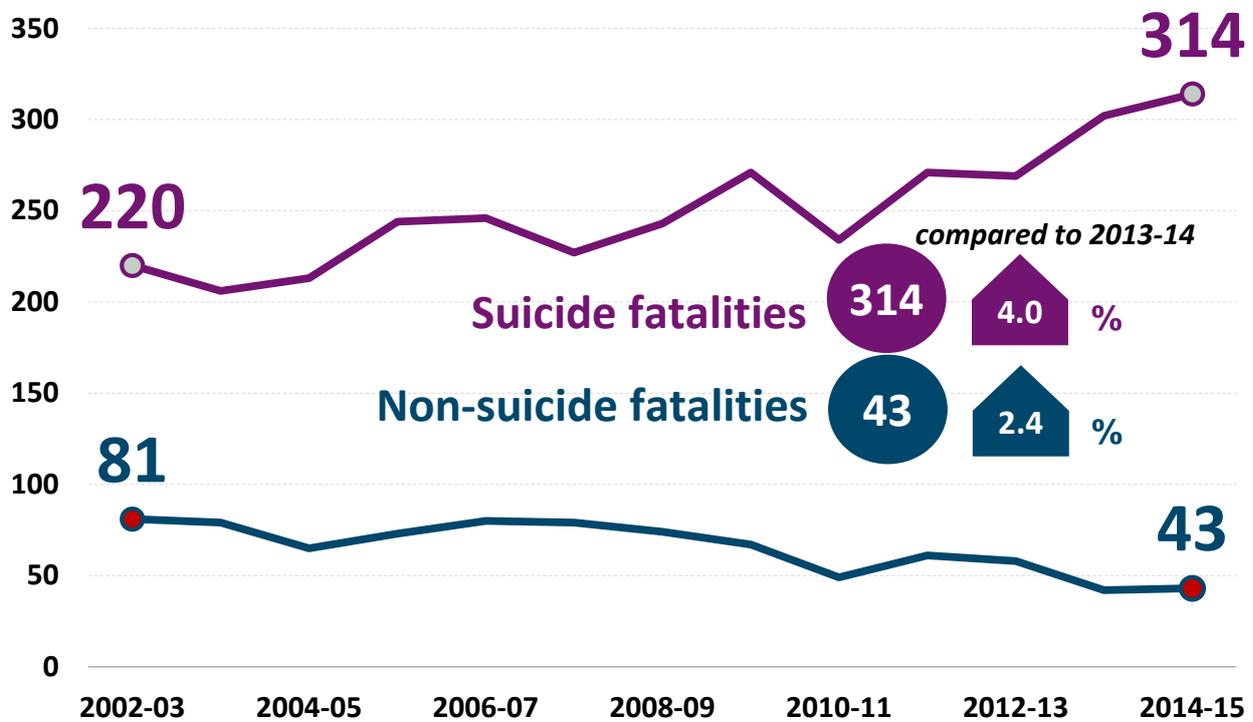
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Website: <http://orr.gov.uk/statistics/published-stats/statistical-releases>

1. Summary

Total fatalities on the railway network – Great Britain, 2002-03 to 2014-15

Fatalities



- There were 43 non-suicide fatalities in 2014-15, an increase of one compared to 2013-14. 39 passengers, workforce and members of the public were killed on the mainline, three on London Underground and one on the non-mainline¹.
- Suicides increased by 4.0% compared to 2013-14 with 293 on the mainline and 21 on London Underground.
- The number of workforce major injuries reported via RIDDOR fell by 2.7% in 2014-15 to 251. Mainline injuries accounted for 70% of these and they fell by 1.1% compared to 2013-14. Major injuries on the non-mainline reached a record high of 65, an increase of 14.0% on 2013-14.

Reporting of Diseases and Dangerous Occurrences Regulation (RIDDOR) 2013 requires employers and other people in control of work premises to record and report to enforcing authorities on fatalities, major and minor injuries, occupational diseases and dangerous occurrences. For details on definitions, please see [RIDDOR 2013](#)

Fatalities and injuries data are available on the Data Portal in: [Table 5.10](#).

¹ Heritage railways, tramways, light rail and metro systems.

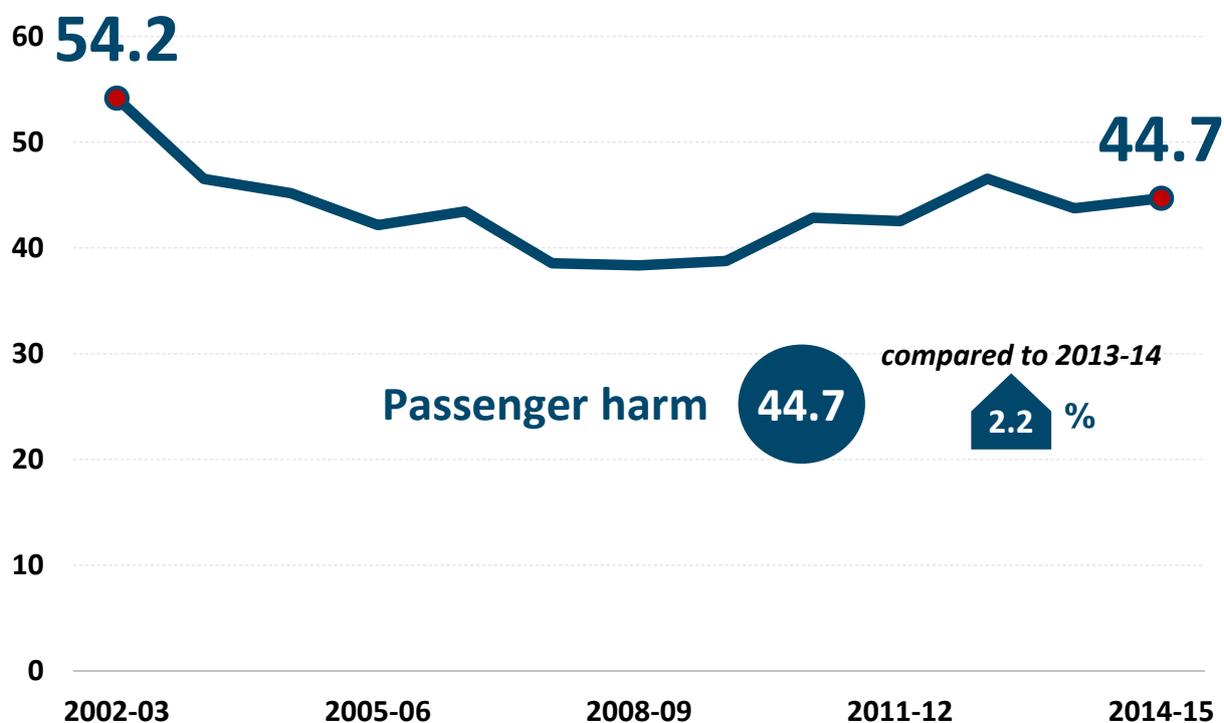
2. Passenger safety

- There were a total of four passenger fatalities in 2014-15, the lowest number since the time series began. Three occurred on the mainline and all were within stations; two at the platform/train interface, although not during the boarding or alighting trains and the third was a result of a fall at the station. The other fatality was on London Underground and was also at the platform/train interface.
- There were no passenger fatalities in train accidents during 2014-15. This is the eighth year in succession that no passengers have died as a result of a train accident. The last train accident to result in a fatality was the derailment at Grayrigg in 2006-07.

Passenger is a person on railway infrastructure who intends to travel, is in the process of travelling, or has travelled. This is regardless of whether they have a valid ticket. This does not include travellers who trespass or who commit, or attempt to commit suicide. People who are injured in this way are classified as members of the public.

Passenger harm on the mainline network – Great Britain, 2002-03 to 2014-15

Fatalities and weighted injuries (FWI)



- Passenger harm on the mainline, as measured by FWI, has risen 2.2% to 44.7 in 2014-15 though this has to be considered alongside a 4.2% increase in passenger journeys over the same period. Despite the number of fatalities falling, harm has increased due to a rise in the number of major injuries.
- The number of passenger major injuries on the mainline increased by 7.2% in 2014-15 to 296. The majority of these were slips, trips and falls, accounting for 187 of the reported injuries. There were 47 major injuries suffered at the platform/train interface, a fall of 6.0% this year and the lowest number reported since 2010-11.
- The number of on-board major injuries on the mainline increased from 28 to 35 in 2014-15 making it the highest number of these types of incidents in a given year since the time series began in 2002-03.
- The total number of injuries reported on London Underground exceeded 4,000 for the first time in 2014-15. There were 4,075 in 2014-15, a rise of 4.3% since 2013-14. The split between major injury, Class 1 and Class 2 minor injuries has changed in the last two years, primarily due to the changes in RIDDOR 2013 legislation. This led to a fall in RIDDOR reportable accidents (Class 1) that were deemed to be the fault of the injured party. However, these accidents are still captured in Class 2 minor injuries which have increased accordingly.

Fatalities and weighted injuries (FWI) is a single figure combining number of fatalities, major injuries, minor injuries and shock/trauma incidents. For weighting purposes, one fatality is equivalent to:

- 10 major injuries
- 200 RIDDOR reportable minor injuries (Class 1)
- 1000 non-RIDDOR reportable injuries (Class 2)
- 200 Class 1 shock/trauma (involved in or witness events that have potential of fatal outcomes)
- 1000 Class 2 shock/trauma (involved in or witness events such as verbal abuse, near misses or accidents of a typically non-fatal outcome)

Passenger safety statistics are available on the Data Portal in: [Table 5.18](#).

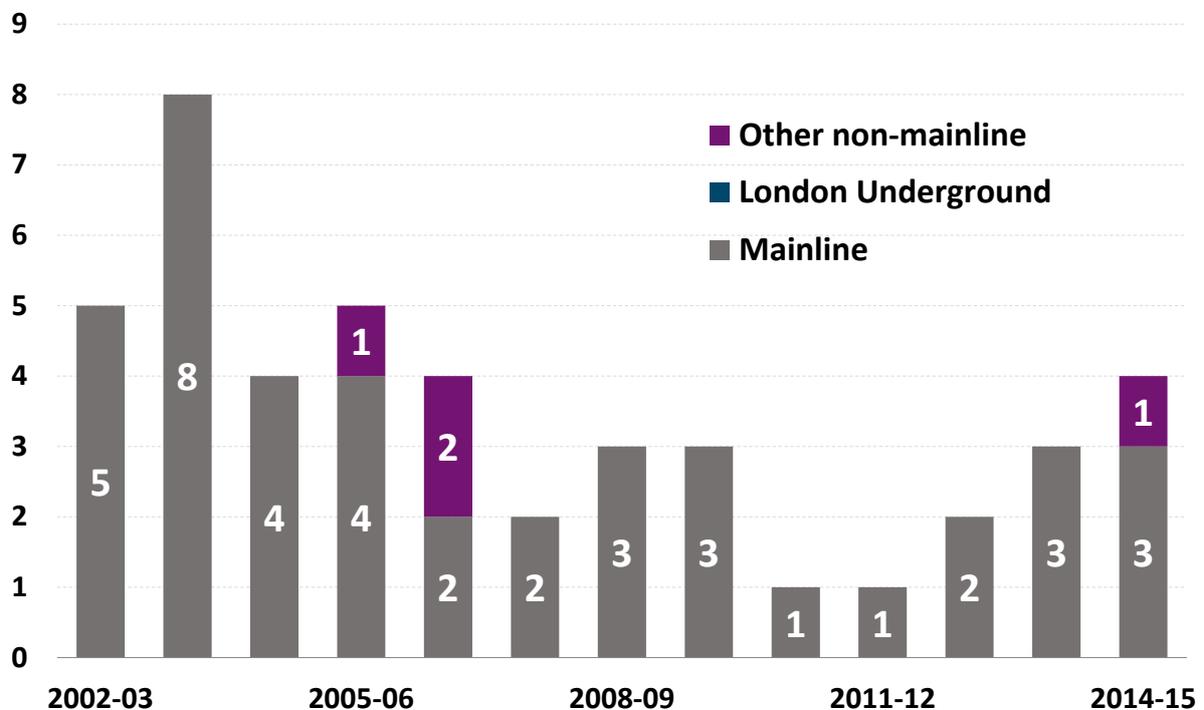
3. Workforce safety

Workforce is defined as a person working for the industry on railway activities either as a direct employee or under contract.

- There were four workforce fatalities in 2014-15. Two died as a result of electrocution and two in road traffic accidents. One of the electrocution fatalities was on the non-mainline, the first recorded fatality since 2006-07. No London Underground worker fatalities have been recorded in the 14 years where data is available.

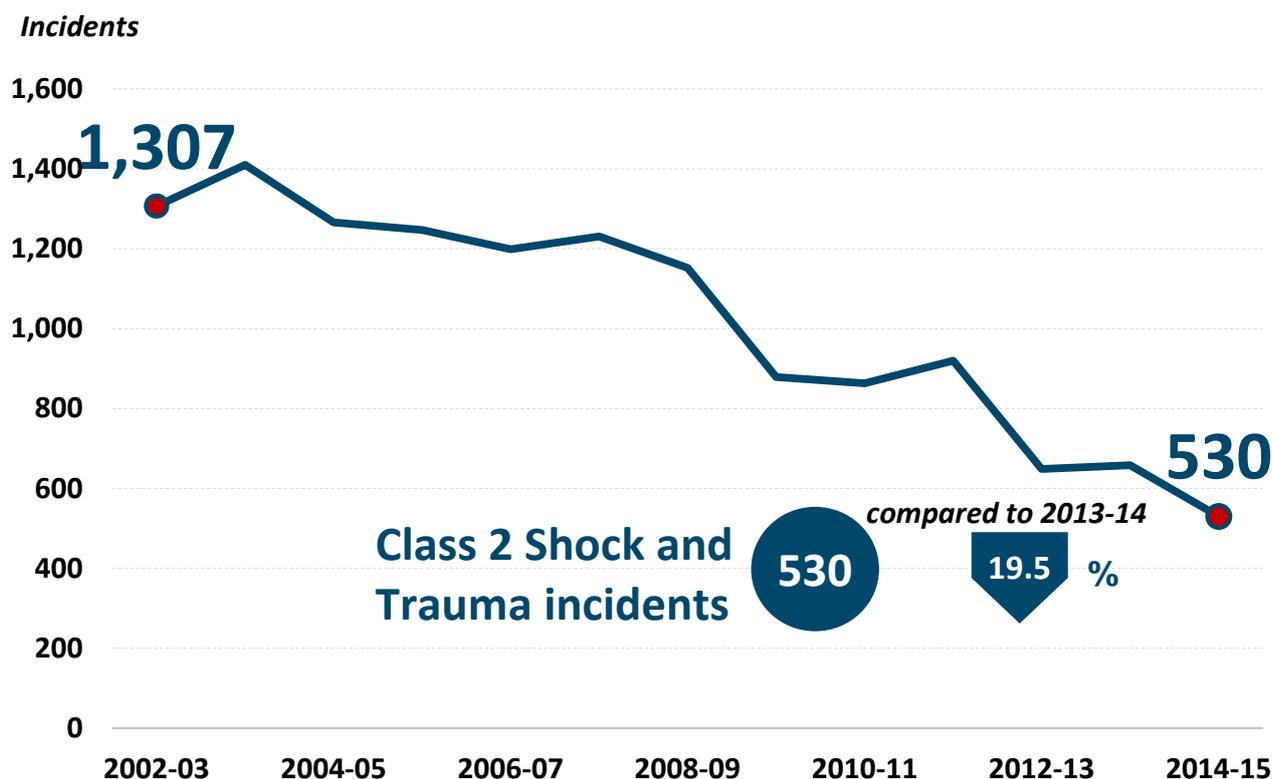
Workforce fatalities by network – Great Britain, 2002-03 to 2014-15

Workforce fatalities



- The number of major injuries reported on the mainline network fell by 1.1% to 175 in 2014-15. Infrastructure workers accounted for the majority of workforce major injuries and they fell 2.0% compared to 2013-14 to 100. On London Underground, the number of workforce major injuries fell to the lowest level since the time series began with 11 reported in 2014-15, down from 24 in 2013-14. In contrast, workforce major injuries on other non-mainline networks rose from 57 in 2013-14 to 65 in 2014-15. These primarily involved track and other maintenance staff.

Class 2 shock and trauma incidents on the mainline railway network – Great Britain, 2002-03 to 2014-15



- Despite an increase in the number of suicides on the mainline railway, reported cases of Class 1 shock/trauma fell by 21.3%. Train drivers remain those most likely to suffer from Class 1 shock/trauma, however the number of cases fell to 215 in 2014-15, 24.6% down on 2013-14.
- Incidents of Class 2 shock/trauma on the mainline fell by 19.5% to 530 in 2014-15. Verbal abuse is included in this category and, consequently, those in public facing roles such as on-board train crew, revenue protection staff and station staff account for a large proportion of reported cases. There was a reduction in the number of reported cases for all categories with the exception of revenue protection staff where incidents increased by 3.7%.
- There was a contrasting picture on London Underground where the trend of increasing shock/trauma incidents continued in 2014-15, particularly for Class 2 incidents. Class 1 shock/trauma incidents rose for a third successive year, increasing by 17.6% to 60 in 2014-15, whilst 2,881 incidents of Class 2 shock/trauma were recorded; a record high.

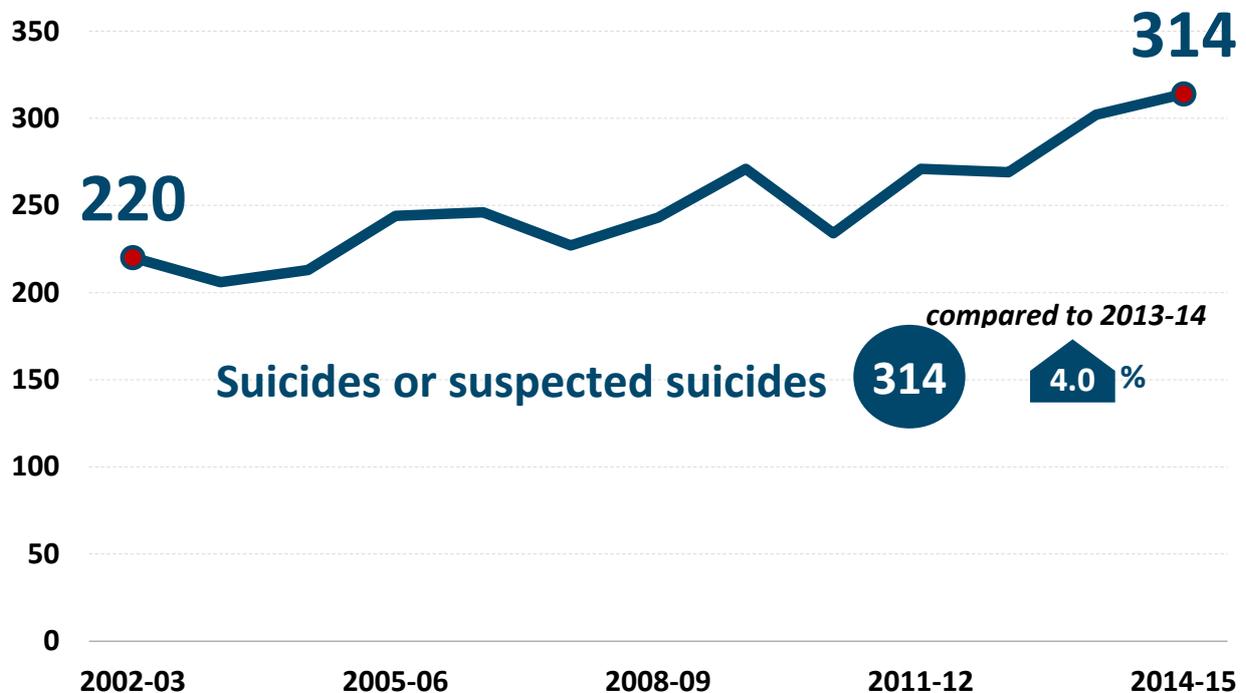
- Workforce harm on the mainline in 2014-15 is measured at 31.4 FWI, an improvement of 3.2% on 2013-14 and 17.4% on a decade ago. The improvement since last year is a combination of factors; reported major injuries falling, the reduction in the number of shock/trauma incidents and a fall of 3.4% in the number of minor injuries.

Workforce safety statistics are available on the Data Portal in: [Table 5.34](#).

4. Public safety

Number of suicides and suspected suicides on the mainline railway network and London Underground – 2002-03 to 2014-15

Number of suicides



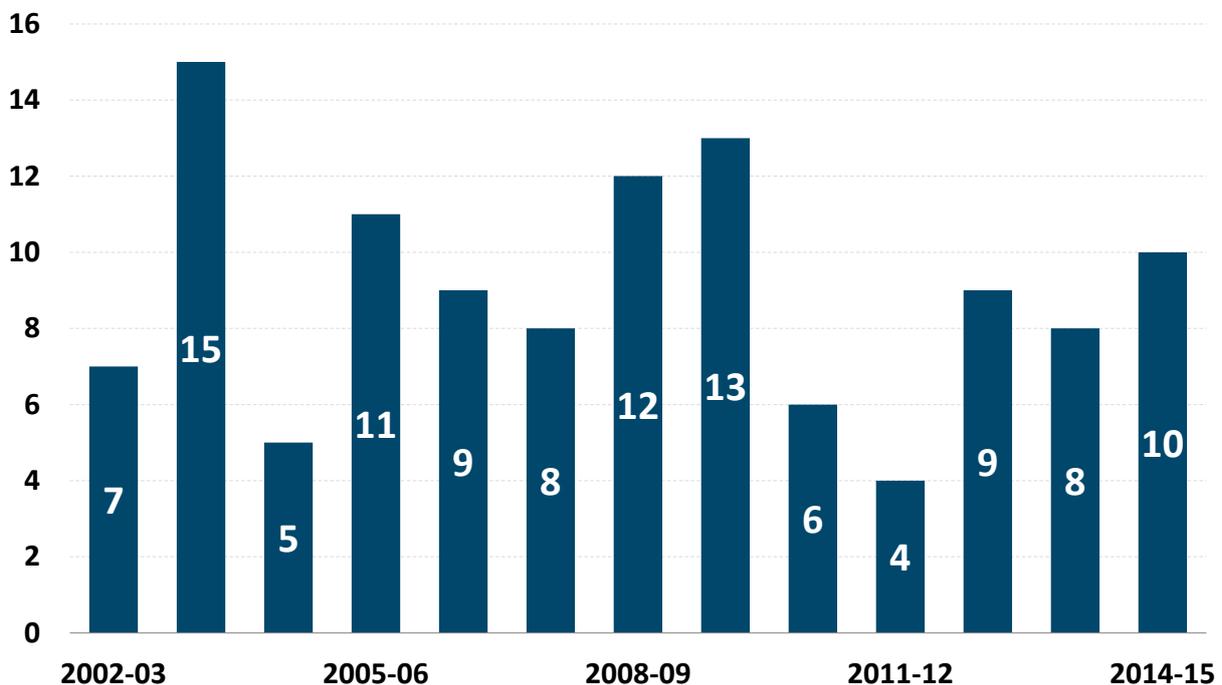
- The total number of public fatalities rose in 2014-15 to 326, an increase of 6.2% compared to 2013-14 and the highest number since the time series began in 2002-03. Suicides account for 90% of these fatalities and 314 suicides (or suspected suicides) were recorded in 2014-15, a 5.8% increase on 2013-14. 293 of these occurred on the mainline with 21 on London Underground. This was the lowest number of suicides on London Underground for the last seven years.

- Between 2013-14 and 2014-15, the number of major injuries fell by 16.7% to 95. Mainline incidents fell by 11.2%, driven by a fall in injuries suffered in trespasser incidents. Following three successive years of major injuries increasing on London Underground, 2014-15 saw the number halve from 16 to 8.

Members of the public are defined as neither passengers nor workforce. It also includes people who trespass or who commit, or attempt to commit, suicide.

Fatalities at level crossings on the mainline railway network – Great Britain, 2002-03 to 2014-15

Level crossing fatalities



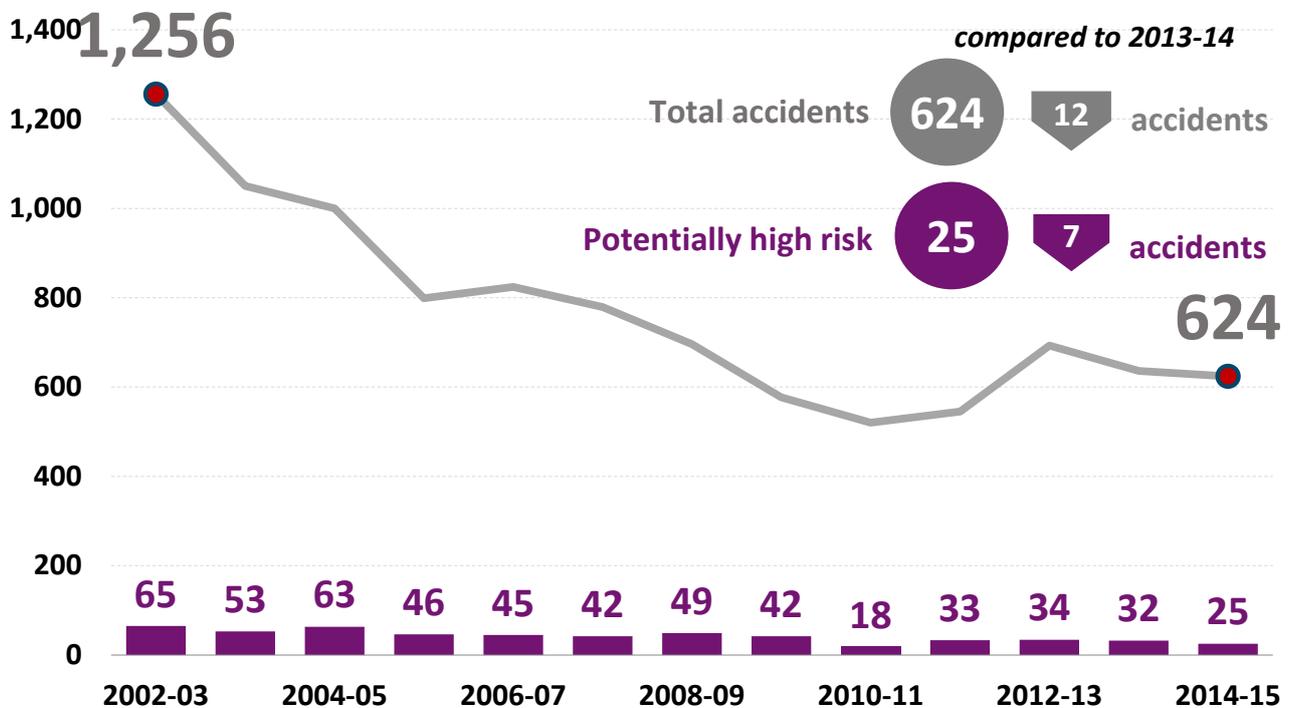
- The number of level crossing users killed rose to 10 in 2014-15 and is the highest number recorded since 2009-10. Eight of those killed were pedestrian users of level crossings (including one cyclist) and two were car occupants. Four of the pedestrian fatalities occurred at footpath crossings.
- There has also been a noticeable shift since 2013-14 in minor injuries from RIDDOR reportable to non-RIDDOR reportable incidents. London Underground believes this is due to a more rigorous assessment when classifying the incidents and primarily affects slips, trips and falls. Therefore comparisons with earlier years should be treated with caution.
- There were no member of the public fatalities on the non-mainline network but 13 were taken to hospital as a result of injuries sustained.

Public safety statistics are available on the Data Portal in: [Table 5.22](#).

5. Train accidents

Train accidents on the mainline network – Great Britain, 2002-03 to 2014-15

Number of accidents



- There were 25 potentially higher risk train accidents (PHRTAs) in 2014-15. This was a fall from 32 in 2013-14 and represented the second best annual performance since the time series began in 2002-03. The best performance came in 2010-11 when there were 18 PHRTAs.

- Two collisions between trains occurred in 2014-15, the joint best performance between 2002-03 and 2014-15. The two incidents were at low speed and both involved a passenger train and empty coaching stock in the station platform.

- The number of derailments increased from 11 in 2013-14 to 16 in 2014-15. This was the joint worst performance recorded in the last five years. For the second year

PHRTA is a Potentially Higher Risk Train Accident.

These are RIDDOR reportable accidents and are those that have the greatest chance of resulting in physical injury.

The majority of train accidents carry a notably lower potential for serious consequences and these are known as **non-PHRTAs**

in a row, none of the derailments involved a passenger train as 14 were freight trains and two were empty coaching stock.

- Despite an increase of 10.5% in the number of collisions with animals (325 in 2014-15), the total number of non-PHRTAs fell for the second year in a row to 599. This was primarily driven by a fall in the number of collisions with other objects from 214 to 179. The number of trains struck by missiles fell to its lowest point in the time series. There were 54 such incidents in 2014-15 compared to over 300 incidents a decade ago.
- There were 11 train accidents on the London Underground, three of which were potentially higher risk train accidents (PHRTAs); one collision between trains, one derailment and one train was struck by a large object. The total of 11 was the lowest number of accidents since 2010-11.
- The number of non-mainline accidents increased in 2014-15 to 110 from 24 the previous year, though this is primarily because of improved reporting in the tramway sector. Working with UKTram², ORR has provided clearer guidance in response to changes in RIDDOR regulations and this process highlighted the under-reporting of minor tram-road vehicle collisions. Furthermore, the extension of Manchester Metrolink has increased the likelihood of tram-road vehicle collisions.

Train accident statistics are available on the Data Portal in: [Table 5.26](#).

² Great Britain's light rail and tramway industry trade body

6. European safety benchmarking

The UK is required to submit Common Safety Indicators (CSIs) data to the European Railway Agency on an annual basis. They cover the following areas:

Train accidents

- Collisions
- Derailments
- Level crossing accidents
- Accidents to persons caused by rolling stock in motion
- Fires in rolling stock
- Other accidents

Accident pre-cursors

- Broken rails
- Broken wheels or axles
- Signals Passed At Danger (SPADs)

Fatalities and serious injuries

- Passengers
- Employees
- Level Crossing Users
- Unauthorised persons on railway premises
- Others

Common Safety

Indicators (CSIs) are a common set of rail safety data gathered to monitor the development of safety across the EU.

They were first collected in 2006 though member states were permitted to report to their own definitions up to 2009. From 2010 these definitions have been harmonised.

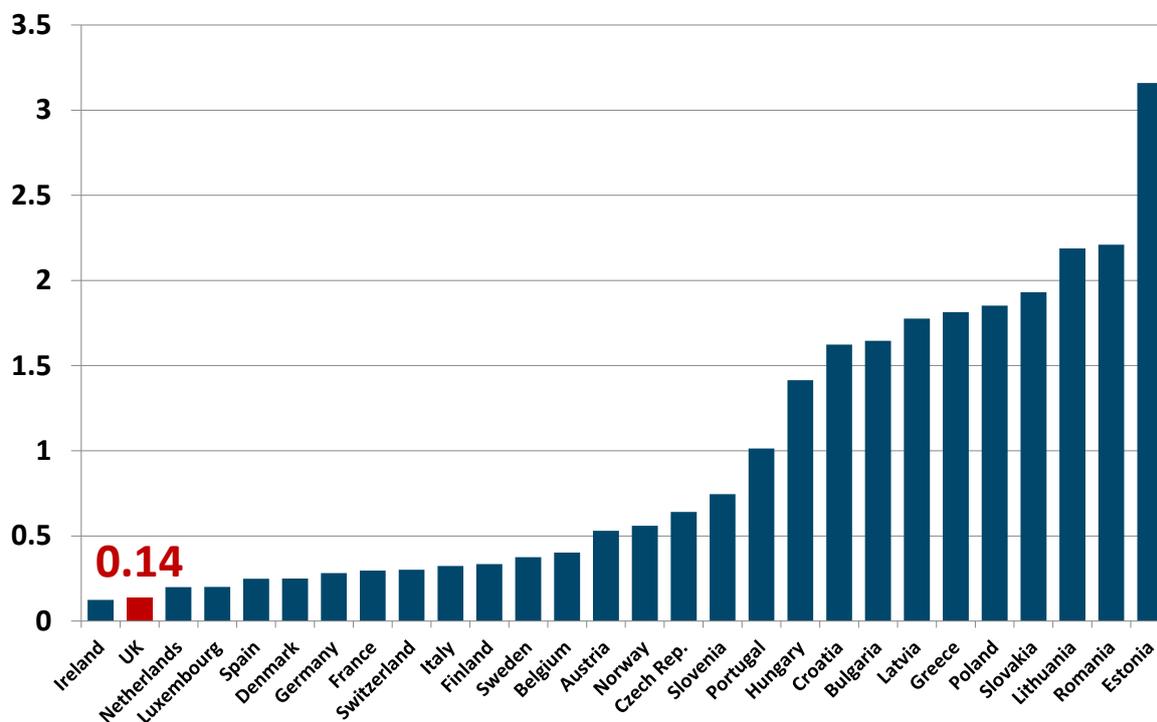
The data presented within this section is based on four-year averages between 2010 and 2013. These years have been chosen as the definitions were harmonised in 2010 which ought to mean they are comparable across member states³.

2014 data is not required to be submitted to the European Railway Agency until the end of September 2015 so this is not currently available.

³ 28 countries submit data to the European Railway Agency. These include 26 members of the European Union plus Norway and Switzerland. The two EU countries not to supply data are Cyprus and Malta as they do not operate a train service.

Train accidents on mainline railway networks per million train kilometre – Europe, 2010 to 2013

Average number of accidents per million train km (2010-2013)

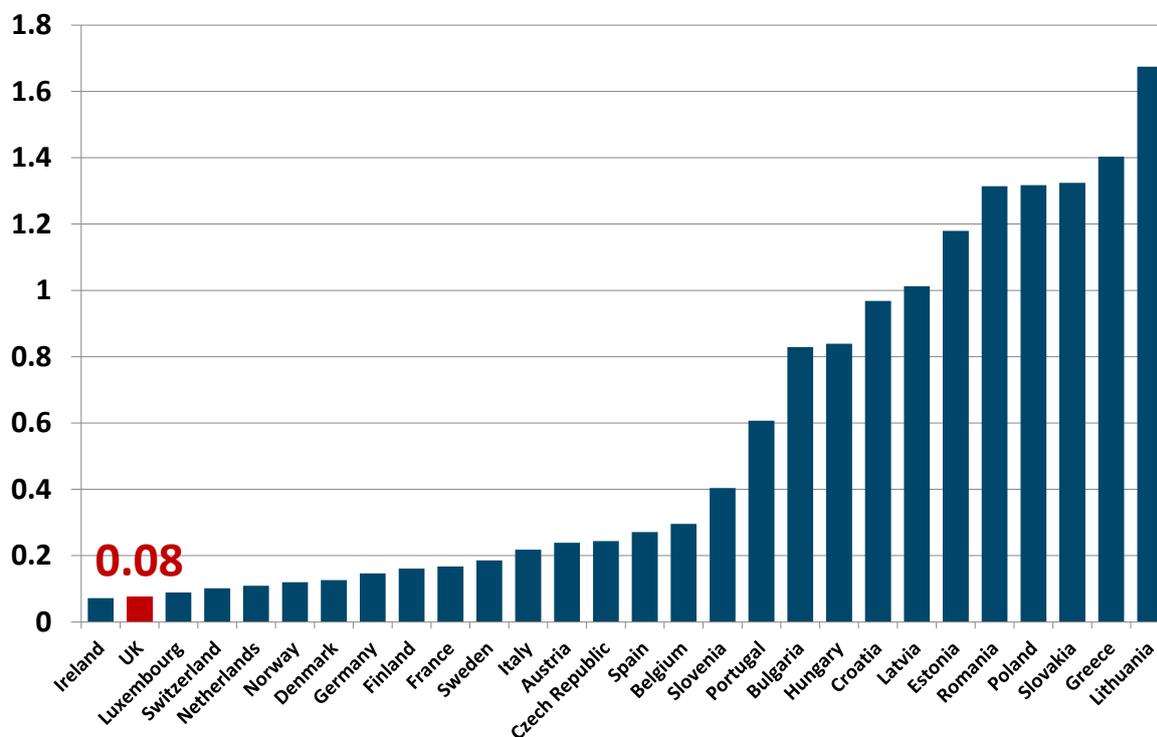


- The UK has the second best safety performance when looking at CSI reportable accidents over the four years between 2010 and 2013. The UK rate of 0.14 accidents per million train kilometres is only bettered by Ireland, who recorded a rate of 0.12 accidents per million train kilometres. Given that train miles in Ireland are around 30 times lower than the UK, the effect of one incident in Ireland is far greater than that for the UK.
- The UK is ranked first for safety performance in terms of level crossing accidents in Europe. UK has in excess of 6,500 level crossings (the sixth highest) and consistently report a lower number of accidents than countries with a similar number of level crossings such as Hungary and Italy.

To compare safety risk across all person categories, ERA use a similar methodology to the FWI calculations used by RSSB to assess harm on the UK mainline. The ERA version is Fatalities and Weighted Serious Injuries (FWSI) and is based on one fatality being equivalent to 10 serious injuries. Unlike the RSSB method, minor injuries are not taken into account by ERA.

Number of fatalities and weighted serious injuries per million train kilometre – Europe, 2010 to 2013

Average number of fatalities and weighted serious injuries per million train km (2010-2013)



■ As with train accidents, the UK is ranked second best for overall societal risk⁴ behind Ireland. Over the course of the four years, the UK has reported 156 fatalities and 63 serious injuries whilst Ireland has reported five fatalities and two serious injuries. When this is normalised by train kilometres, it results in Ireland being 6% better than the UK.

ORR will be publishing a full set of European safety benchmarking data later this year, covering safety performance across Europe for specific types of train accidents and for risk to individual person categories. This will be made available on the [ORR analytical and research reports](#) page of our website.

⁴ Societal risk covers all person categories (passenger, workforce, level crossing user, unauthorised and other).

Annex 1 – List of pre-created reports available on the ORR Data Portal

All data tables can be accessed on the data portal free of charge. The ORR data portal provides on screen data reports, as well as the facility to download data in Excel format and print the report. We can provide data in csv format on request.

Rail safety statistics

- Workforce assaults, threats and verbal abuse - [Table 5.7](#)
- Key statistics - Fatalities and injuries - [Table 5.10](#)
- Workforce near misses - [Chart 5.11](#)
- Passenger and public assault - [Table 5.15](#)
- Public fatalities occurring to children - [Chart 5.21](#)
- Key statistics - Public safety - [Table 5.22](#)
- Reported vandalism incidents - [Table 5.23](#)
- Key statistics - Road rail interface - [Table 5.24](#)
- Key statistics - Train accidents - [Table 5.26](#)
- Train accidents with passenger or workforce fatalities - [Table 5.27](#)
- Public injuries (FWI) at level crossings - [Chart 5.28](#)
- Broken rails and buckled rails - [Table 5.31](#)
- Key statistics - Workforce safety - [Table 5.34](#)
- Key statistics - Passenger safety - [Table 5.18](#)

Revisions: There have been revisions to the previously published tables associated with this statistical release. Further details can be found at: [Revisions Log](#)

Annex 2

Statistical Releases

This publication is part of the statistical releases which cover the majority of reports that were previously released through the NRT Data Portal. The statistical releases combine the previous quarterly reports into four quarterly and four annual themed releases. The four annual statistical releases in the series are:

Annual

- Rail Finance;
- Rail Safety Statistics;
- Rail Infrastructure, Assets and Environmental;
- Regional Rail Usage.

Quarterly

- Passenger and Freight Rail Performance;
- Freight Rail Usage;
- Passenger Rail Usage;
- Passenger Rail Service Satisfaction.

A full list of publication dates for the next twelve months can be found in the [release schedule](#) on the ORR website.

This is an annual release and the data in this release refer to financial year 2014-15 with the exception of the European safety benchmarking, which covers calendar year data. All the data contained and referred to within the release for Great Britain can be accessed via the [Data Portal](#). The European data is available from the [European Railway Agency](#).

For more detail on data collection and the methodology used to calculate the statistics within this release please see the accompanying [Rail Safety Statistics Quality Report](#).

National Statistics

The United Kingdom Statistics Authority designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods; and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

For more details please contact the Statistics Head of Profession Lyndsey Melbourne on 020 7282 3978 or contact rail.stats@orr.gsi.gov.uk.

The Department for Transport (DfT) also publishes a range of rail statistics which can be found at [DfT Rail Statistics](#)

Related publications

The Rail Safety and Standards Board (RSSB) publish an Annual Safety Performance Report that covers safety on the mainline railway network. This can be found at [RSSB Safety Performance Report](#)

In addition to this statistical release, ORR also publishes an annual Health & Safety Report which sets out the current state of health and safety on our railways, trams, heritage and metro systems. The 2014-15 report can be found at [Health and Safety Report](#)

The European Railway Agency publishes an annual Railway Safety Performance in the European Union



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