



Freight Rail Usage and Performance 2019-20 Q4 Statistical Release

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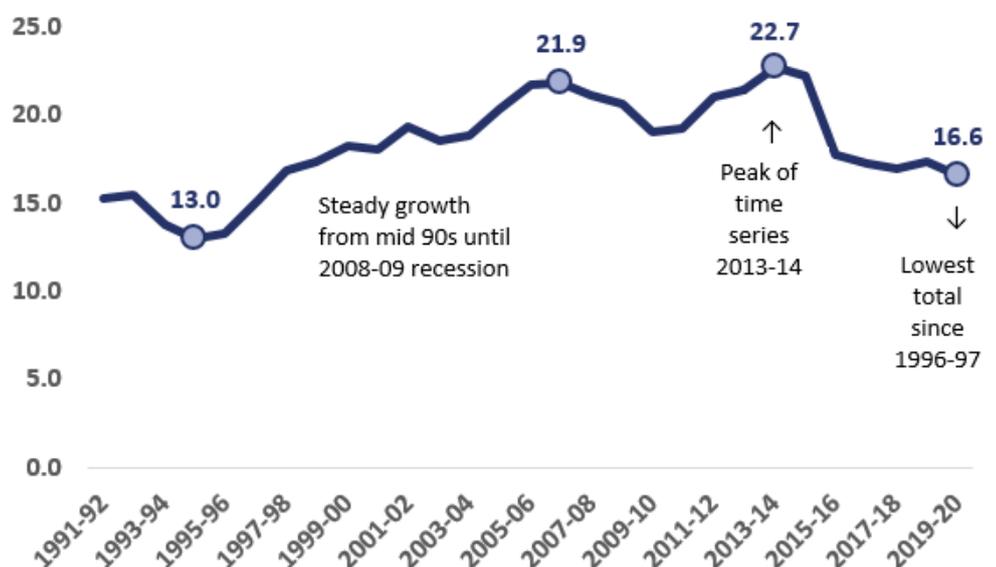
Background

This statistical release contains information on rail freight usage and performance in Great Britain with the latest quarterly and annual data to 31 March 2020.

The statistics cover **freight moved, freight lifted, freight delivery metric (FDM), freight delays per 100 train km, freight train km by operator** and **freight market indicators**.

Data are sourced from Network Rail, Freight Operating Companies (FOCs) and the Department for Transport (DfT).

Freight moved by rail (billion net tonne km), Great Britain 1991-92 to 2019-20



The total volume of rail **freight moved** dropped to 16.6 billion net tonne kilometres in the financial year 2019-20, its lowest total in 23 years. This is a 5% decrease from the total in 2018-19. The total amount of **freight lifted** fell to 68.1 million tonnes, which is a 10% decrease from 2018-19 and is now the lowest total since 1984-85.

The **Freight Delivery Metric (FDM)** recorded its lowest quarterly percentage (91.1%), down 3.9 percentage points from 2018-19 Q4. The quarterly FDM moving annual average (MAA) was 92.8%.

These Q4 freight statistics have been affected by the Coronavirus (Covid-19) pandemic, although the impact is small given the number of days affected up to the end of March 2020. We expect to see a more noticeable impact in the next statistical release, 2020-21 Q1 (April to June 2020).

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1. Freight moved



Freight moved data, measured in net tonne kilometres, shows the amount of freight which is moved on the railway network, taking into account the weight of the load and the distance carried.

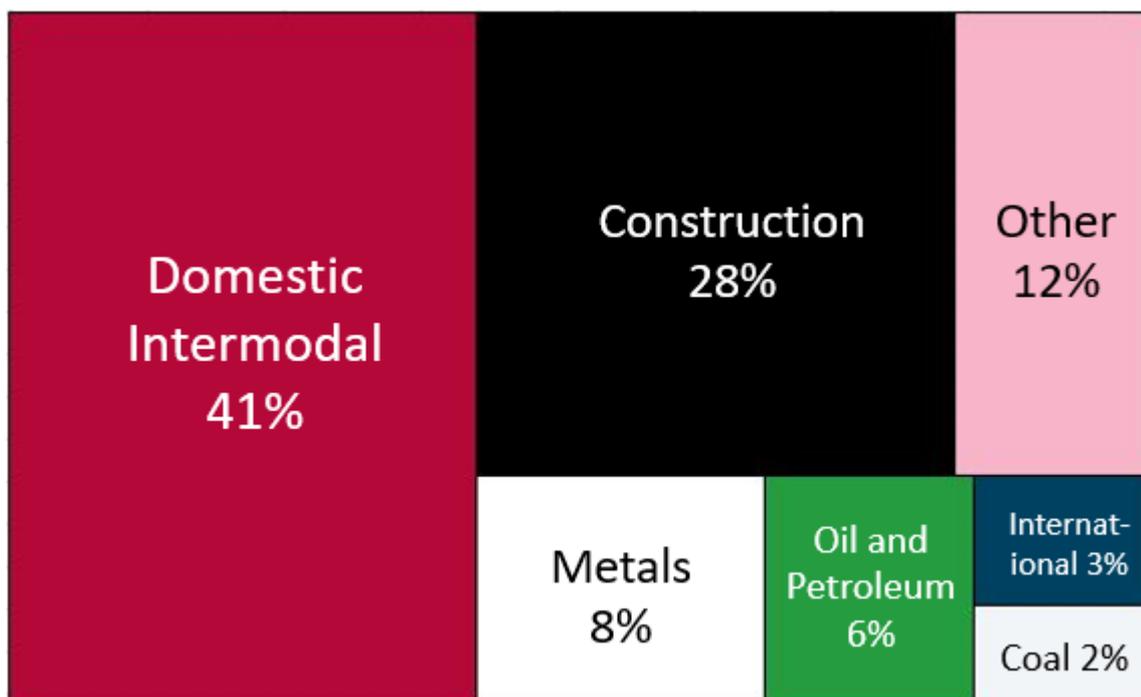
Freight moved is disaggregated by seven commodities which are also summed to provide an overall total freight moved. The seven commodities are coal, metals, construction, oil and petroleum, international, domestic intermodal and other.

In addition to the seven commodities listed above, the amount of goods used for railway engineering work is also reported, under the 'infrastructure' category. This is not included in the totals published in the freight moved tables and charts.

Annual 2019-20

The total volume of rail freight moved fell to 16.6 billion net tonne kilometres in the financial year 2019-20, a 5% decrease from the total in 2018-19. The total has fallen significantly since it peaked in 2013-14 and 2019-20 is the lowest total recorded for freight moved in 23 years. The proportion of each commodity moved in 2019-20 is represented in figure 1.01.

Figure 1.01: The proportion of rail **freight moved** by commodity, Great Britain, 2019-20 (Table 13.7)



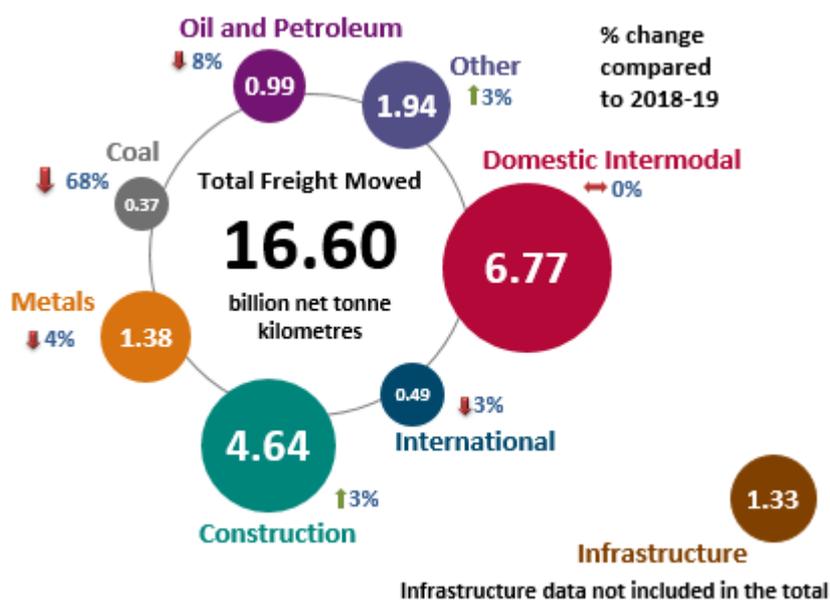
Domestic Intermodal (which includes retail stocks transported by rail) retains the largest share in 2019-20, with a 41% share (6.77 billion net tonne kilometres).

The second largest, Construction, rose by 3% in 2019-20 taking it to its largest total (4.64 billion net tonne kilometres) since the time series began in 1998-99. Construction freight moved by rail has been rising steadily every year since 2012-13 and has increased by 52% in that time.

The only other increase on last year was in the 'Other' category, which increased by 3% to 1.94 billion net tonne kilometres. (A full breakdown of the Other category is detailed on page 13 of the [Freight Methodology and Quality Report](#).)

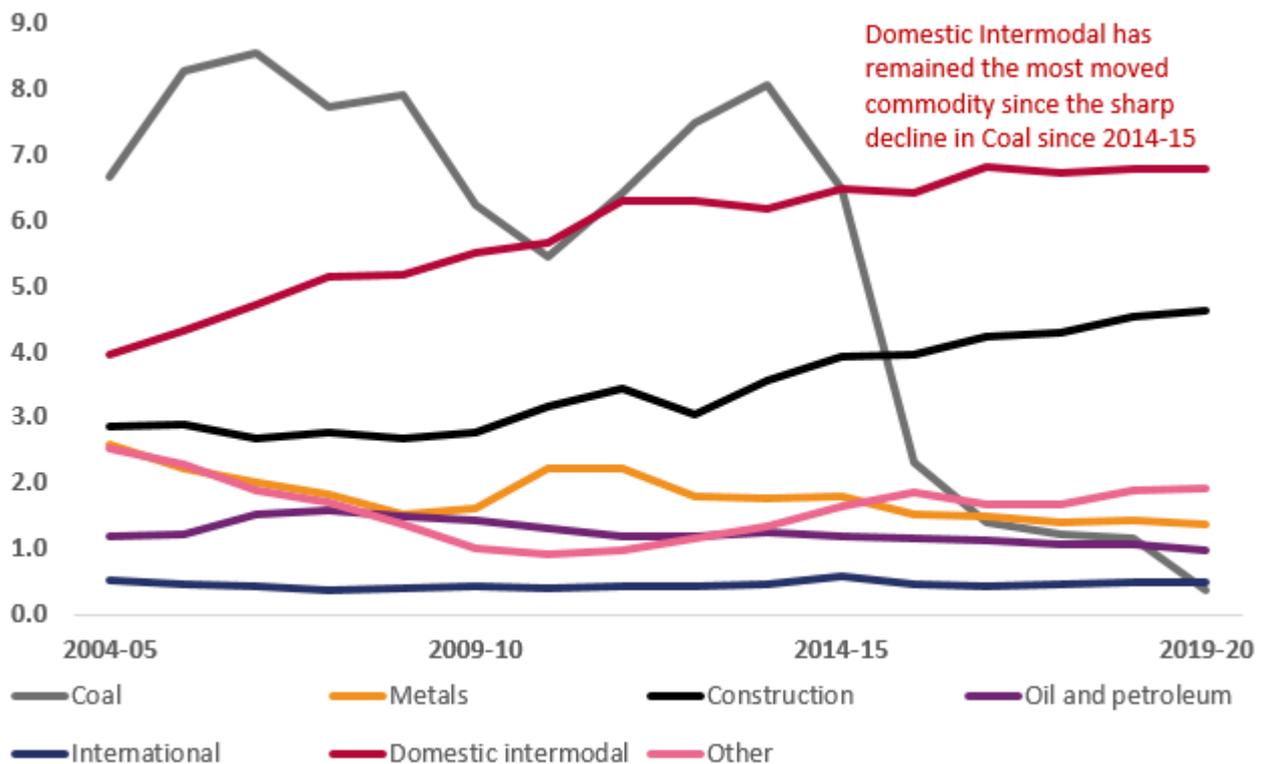
All the remaining commodities recorded a decrease from the previous year, most notably Coal, which dropped by 68% to only 0.37 billion net tonne kilometres in 2019-20.

Figure 1.02: **Freight moved** by commodity (billion net tonne km), Great Britain 2019-20 (Table 13.7)



The longer term trend for each commodity is expressed in figure 1.03, showing the sharp fall in Coal in the last 5 years and the steady rises in Construction and Domestic Intermodal.

Figure 1.03: Rail **freight moved** by commodity (billion net tonne kilometres), Great Britain 2004-05 to 2019-20



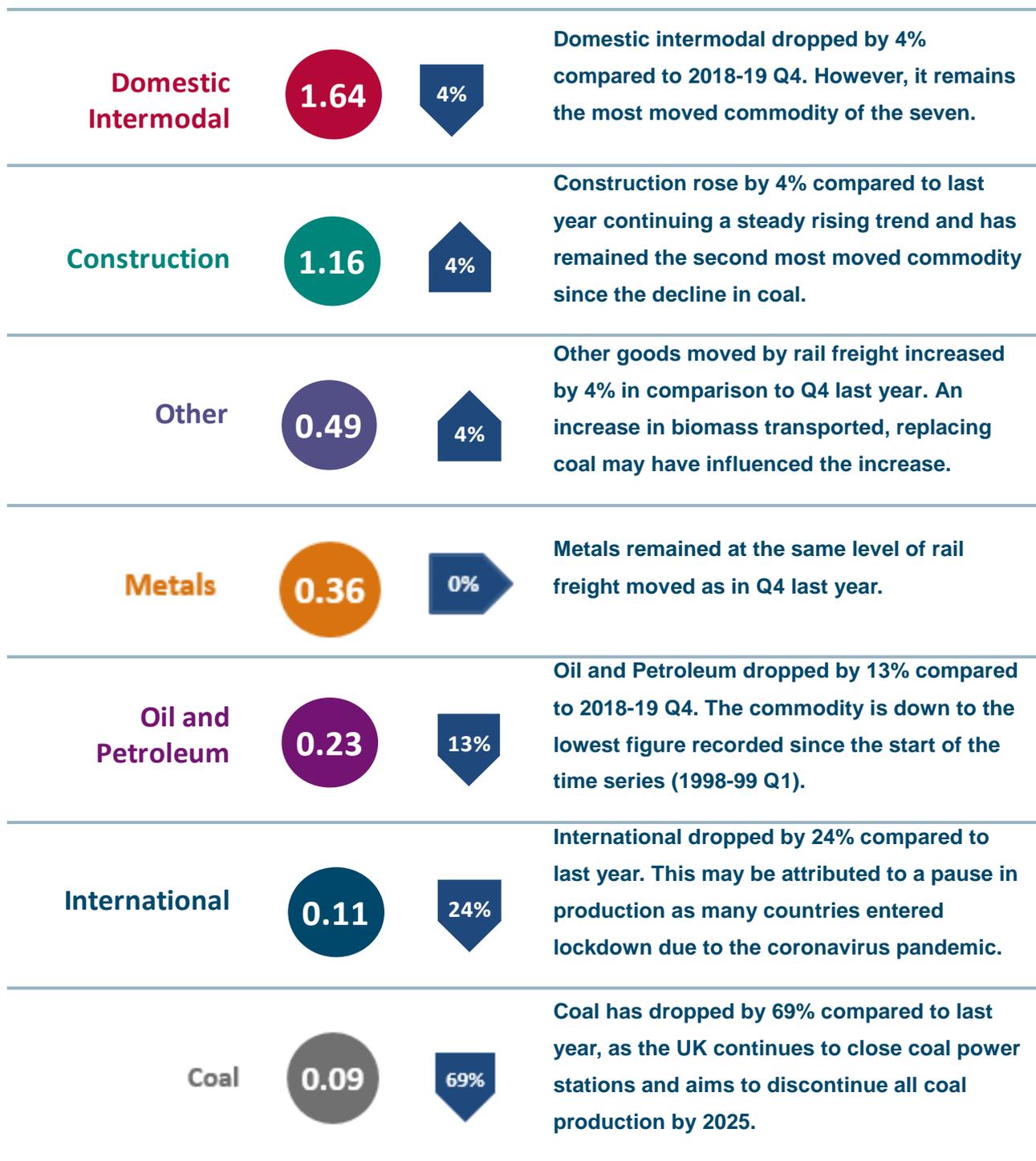
2019-20 Quarter 4

In 2019-20 Q4, total freight moved was 4.1 billion net tonne kilometres, a decrease of 0.3 billion net tonne kilometres (down 6%) on 2018-19 Q4. This was the lowest ever total for Q4 in the time series, however it was a little higher than 2019-20 Q3, which was 4.0 billion net tonne kilometres.

Only two of the commodities increased, one (Metals) stayed the same and four decreased compared to the same quarter last year. Domestic Intermodal freight retained the highest share, although it dropped by 4%.

Significant decreases were seen in Coal (down 69%), Oil and Petroleum (down 13%) and International (down 24%). In keeping with recent trends, Other and Construction rose by 4%. Construction recorded its highest volume for a Q4 with 1.2 billion net tonne kilometres.

Figure 1.04: The volume of rail **freight moved** (billion net tonne km), 2019-20 Q4 compared to 2018-19 Q4 (Table 13.7)



■ Quarterly freight moved data are available on the [data portal](#) in Table 13.7.

2. Freight lifted



Annual 2019-20

In 2019-20, the total amount of freight lifted in Great Britain fell to 68.1 million tonnes, which is a 10% decrease from the level in 2018-19 and now the lowest total since the miner's strike in 1984-85.

Coal freight lifted was 6.3 million tonnes this year, which is a 40% decrease from last year and the lowest total since the start of the time series in 1982-83.

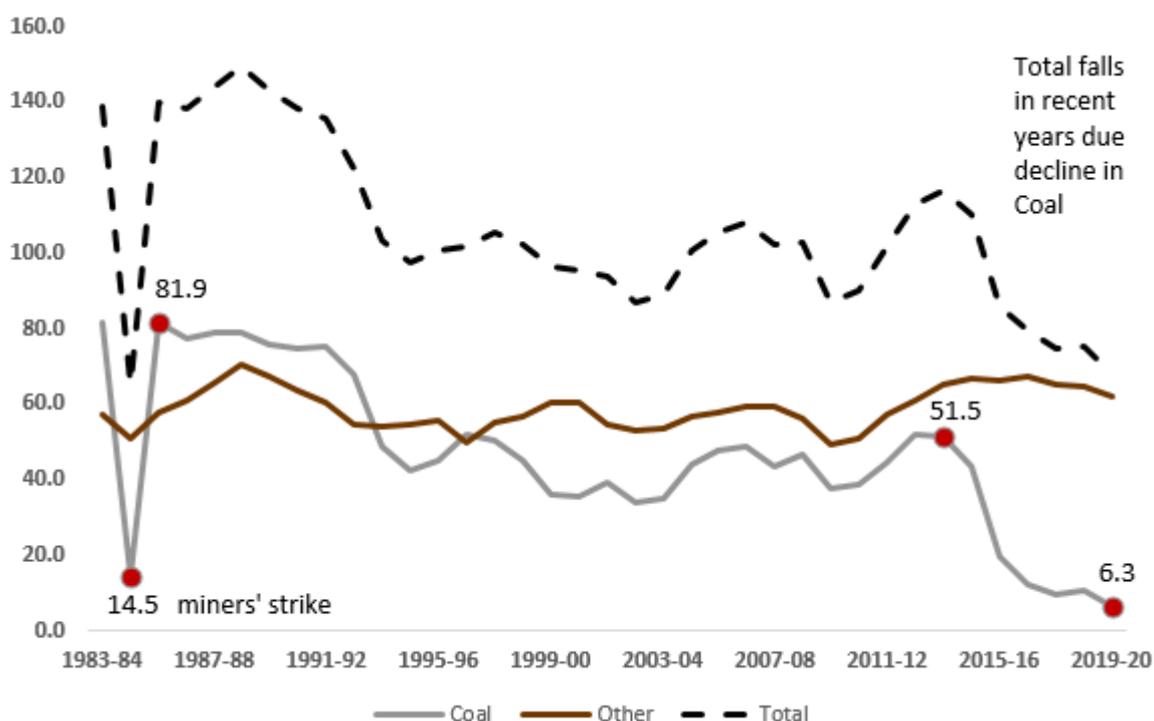
The total for all other goods combined was also down with a 5% drop to 61.8 million tonnes.

The highest annual total of freight lifted in this time series was 149.5 million tonnes in 1988-89.

Freight lifted is the mass of goods carried on the rail network measured in tonnes, excluding the weight of the locomotives and wagons. Unlike freight moved it takes no account of the distance travelled.

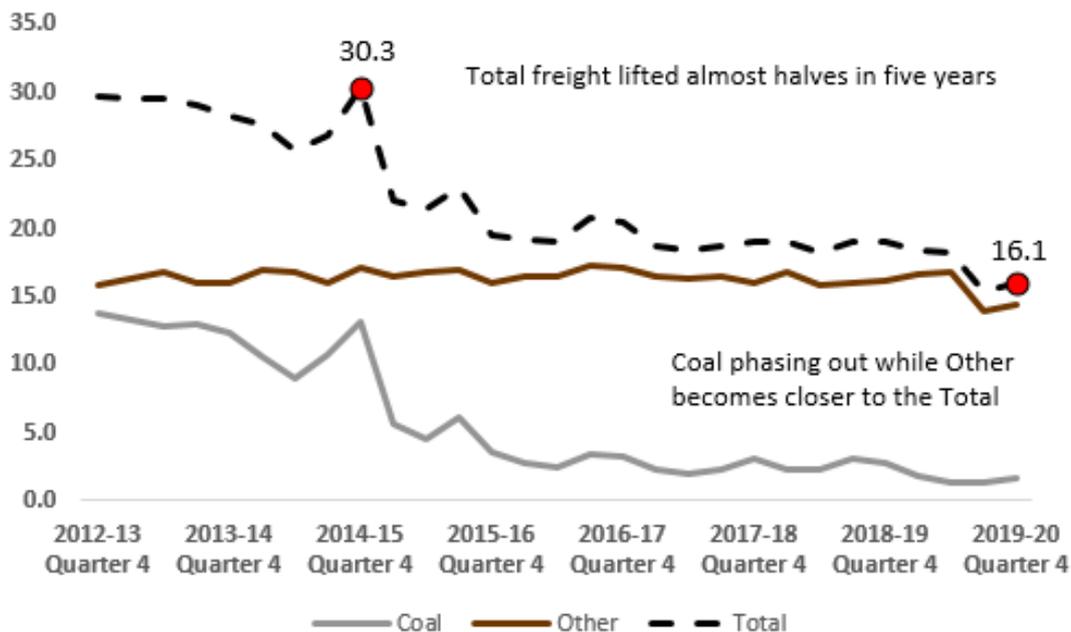
Freight lifted information is sourced from the four major Freight Operating Companies (FOCs): DB Cargo UK, Freightliner Ltd, Direct Rail Services (DRS) and GB Railfreight.

Figure 2.01: The mass of rail **freight lifted** (million tonnes) in Great Britain, 1983-84 to 2019-20 (Table 13.6)



2019-20 Quarter 4

Figure 2.02: **Freight lifted** (million tonnes), Great Britain, 2012-13 Q4 to 2019-20 Q4 (Table 13.6)



The total amount of freight lifted in 2019-20 Q4 was 16.1 million tonnes, a 16% decrease from 2018-19 Q4. However, this was a slight increase from the amount lifted in 2019-20 Q3 (15.3 million tonnes).

The amount of Coal lifted in 2019-20 Q4 dropped by 41% to 1.7 million tonnes and the amount of Other freight lifted (in this case meaning all the other commodities combined) decreased by 11% to 14.4 million tonnes compared with 2018-19 Q4.

The coal produced in the UK has been being phased out since the introduction of the carbon tax in 2015 with an initial target to bring it down to zero by 2025. [Recent articles suggest this can now be achieved by 2024](#). This can account for the sharp drop in the volumes of Coal being transported by rail freight, however the Other total has also seen a decline in the last year.

■ Quarterly freight lifted data are available on the [data portal](#) in Table 13.6

3. Freight Delivery Metric

The **Freight Delivery Metric (FDM)** measures the percentage of commercial freight services that arrive at planned destination within 15 minutes of their booked arrival time or with less than 15 minutes of Network Rail or passenger operator delay. The **moving annual average (MAA)** reflects the proportion of trains that met FDM in the past 12 months. In Q4, the MAA also represents the FDM for the financial year.

This metric is also available for each Network Rail Region (**FDM-R**) and is one of the key measures used by ORR for the routine monitoring and assessment of Network Rail's freight performance. ORR monitors delivery against annual FDM-R targets and regulatory floors set for each of the five Regions.

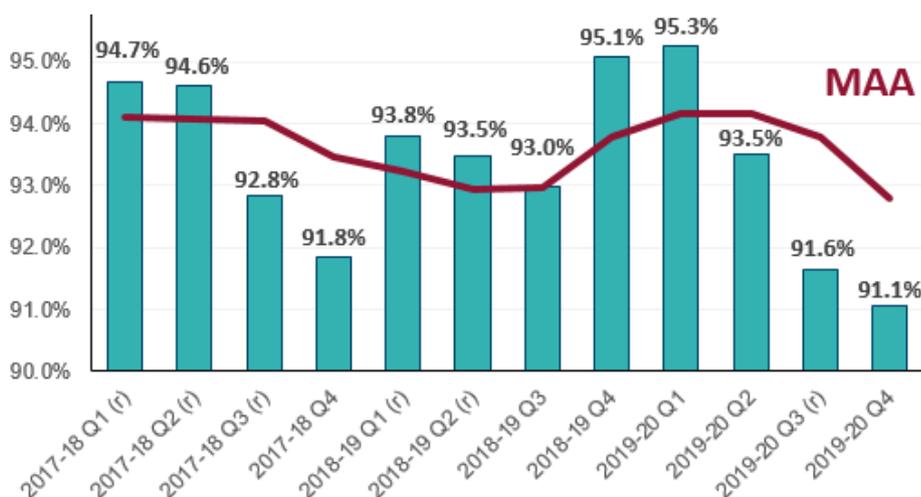
A higher score indicates better performance.

2019-20 Q4 (revised 24 June 2020)

In 2019-20 Q4, the Freight Delivery Metric was 91.1%, which is the lowest in the time series (beginning in 2012-13 Quarter 4) and down 4.0 percentage points compared to a year ago. Storms and significant flooding across Britain in February saw delays to many train services across the network, therefore affecting the Q4 performance.

The quarterly FDM moving annual average (MAA) stands at 92.8%, which is 1.0 percentage points lower than it was in 2018-19 Q4.

Figure 3.01: FDM, Great Britain, 2017-18 Q1 to 2019-20 Q4 (Table 3.41)



- Quarterly Freight Delivery Metric (FDM) data are available on the [data portal](#) in Table 3.41
- Periodic Freight Delivery Metric by Region (FDM-R) data are available on the [data portal](#) in Table 1324

4. Freight delay per 100 train kilometres



Freight delay per 100 train kilometres usually peaks in Q3 and Q4 each year, coinciding with the expected periods of adverse weather, during autumn and winter.

Annual 2019-20

Normalised freight delay fell to 11.2 minutes per 100 train kilometres in 2019-20, which is a 3% improvement from delays in 2018-19.

2019-20 Quarter 4

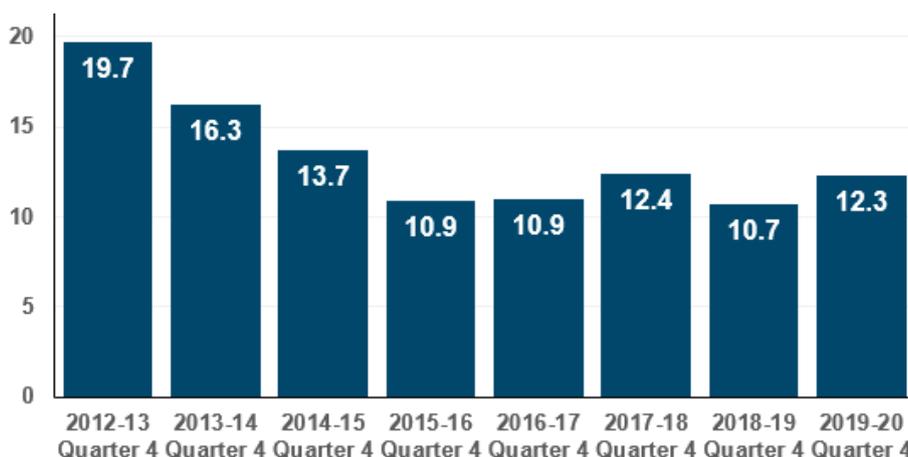
Freight delay in 2019-20 Q4 was 12.3 minutes per 100 train kilometres, a 14% increase in delays from the same quarter last year. This may be partly attributed to the storms and flooding in February, which caused significant delays and cancellations on the rail network including at the Drax power station in Yorkshire¹.

Freight delay per 100 train kilometres is a normalised measure of delay experienced by FOCs (Freight Operating Companies).

The measure is calculated from the total delay experienced by all GB freight operators divided by their train mileage.

Freight train mileage can fluctuate depending on demand so a normalised measure allows for comparison over time regardless of changing levels of freight traffic on the network.

Figure 3.01: Normalised Freight delay per 100 train kilometres, Great Britain, 2012-13 Q4 to 2019-20 Q4 (Table 13.5)



■ Quarterly freight delays per 100 train km data are available on the [data portal](#) in Table 13.5

¹ <https://www.railfreight.com/railfreight/2020/04/14/britain-has-the-energy-to-recover-from-winter-flooding-and-more/>

5. Freight train kilometres by operator

Annual 2019-20

Total freight train kilometres fell by 1% to 33.2 million kilometres in 2019-20. The total has remained low in the last few years since the peak of the time series in 2013-14 (42.0 million kilometres).

DB Cargo UK and GB Railfreight both decreased by 3% compared to last year and Freightliner by 7%. However, these three FOCs accounted for 83% of the total freight train kilometres ran on the rail network in 2019-20.

The most significant increase was for Direct Rail Services, whose total freight train kilometres increased by 40% in 2019-20 compared to 2018-19.

Freight train kilometres is the actual mileage in kilometres operated by Freight Operating Companies (FOCs) on Network Rail infrastructure

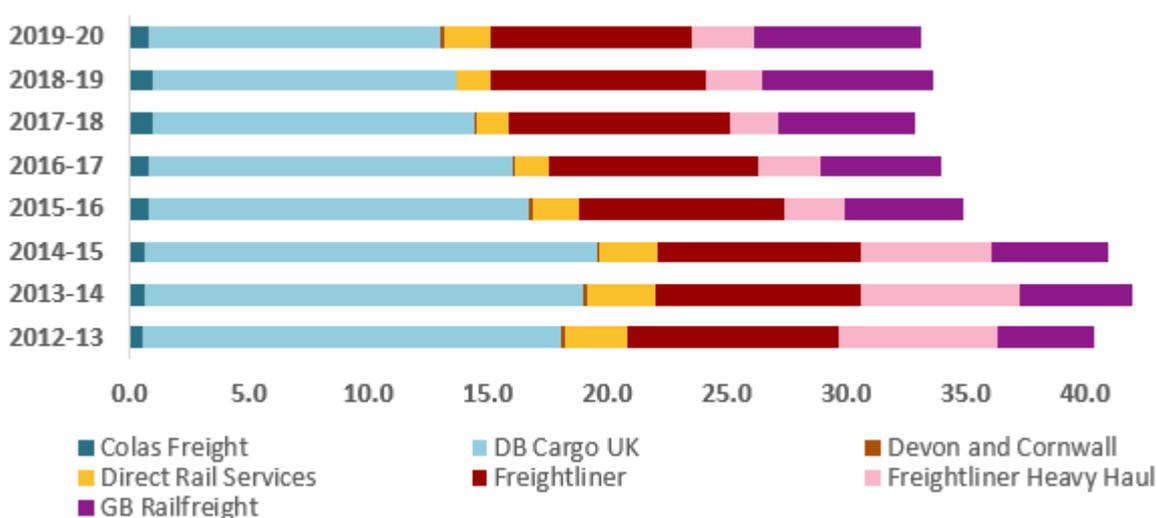
The data is sourced from Network Rail's Track Access Billing System (TABS) and covers only the mileages charged through TABS.

Competition between freight operators means we would expect a greater level of variation in mileage from year to year than in the passenger market.

Not all freight operators have been in operation throughout the time-series, therefore total year on year comparison should be treated with caution.

Please see the accompanying [quality report](#) for more information.

Figure 5.01: Freight train kilometres by operator, Great Britain, 2012-13 to 2019-20 (Table 13.25)



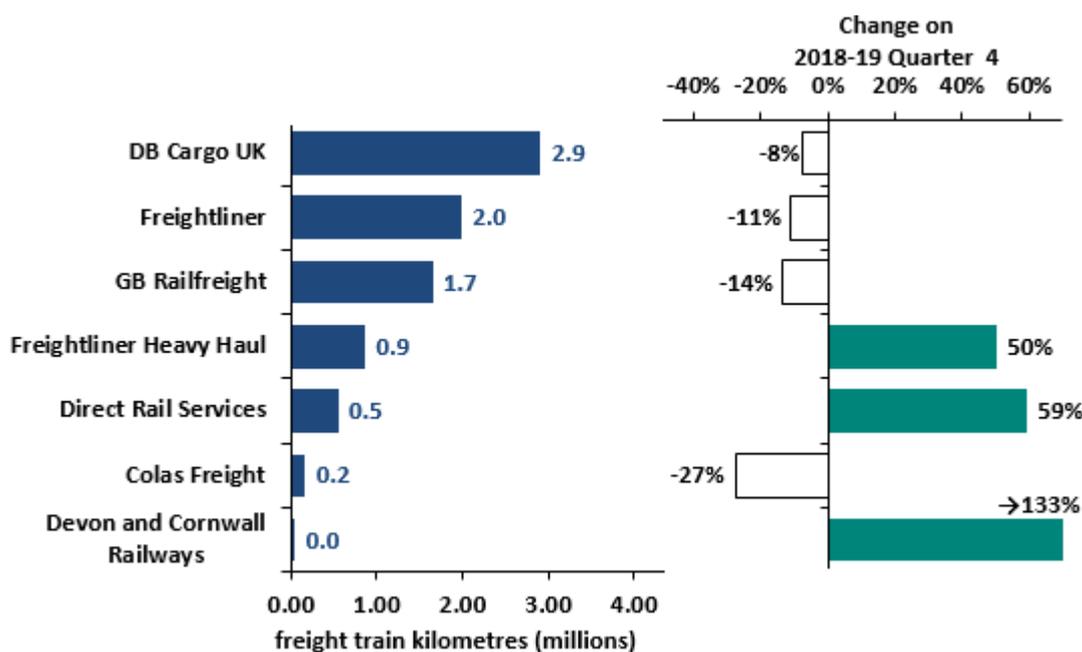
2019-20 Quarter 4

In 2019-20 Q4, total freight train kilometres was 8.2 million kilometres, a 4% decrease compared with the same quarter last year.

There was a significant increase in the track covered by Direct Rail Services (up 59%) and Freightliner Heavy Haul (up 50%) compared to Q4 last year. This was offset by decreases in the three most prominent FOCs, DB Cargo UK (down 8%), Freightliner (down 11%) and GB Railfreight (down 14%) compared to 2018-19 Q4.

Despite the fall, DB Cargo UK still accounted for the most freight train kilometres travelled with a 36% share, followed by Freightliner (24%), and GB Railfreight (20%). Devon & Cornwall have increased their freight train kilometres run by 133% since the same quarter last year, but still account for just 1% of the overall distance covered by freight trains.

Figure 5.02: Freight train kilometres by FOC, Great Britain, 2019-20 Q4 (Table 13.25)



■ Quarterly freight kilometres by operator data are available on the [data portal](#) in Table 13.25.

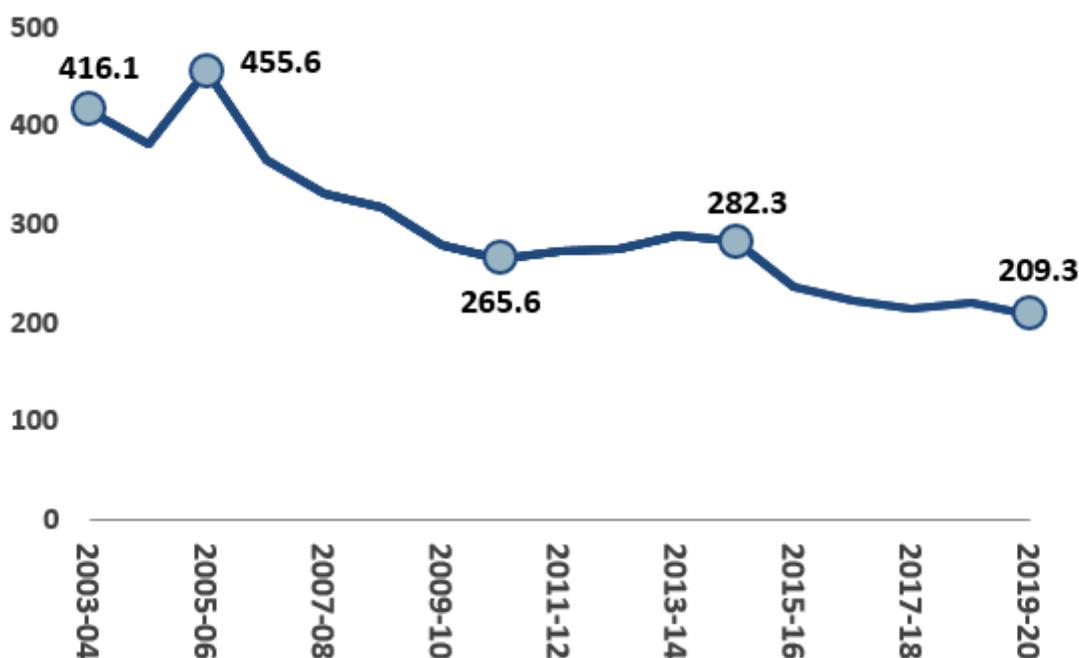
6. Freight market indicators

Freight market indicators comprise three measures: number of freight train movements on the network (data available up to 2019-20), impact on road haulage (2018-19), and rail market share (calendar year 2018).

Number of freight train movements

Number of freight train movements shows the volume of freight trains on the railway network each year.

Figure 6.01: Number of freight **train movements** (thousands), Great Britain, 2003-04 to 2019-20 (Table 13.10)



In 2019-20, the number of freight train movements was 209,281, which is a 5% decrease from 2018-19 and the lowest since the start of the time series in 2003-04. This represents a 50% decrease in the number of freight train movements compared to 16 years ago.

■ Annual freight train movement data are available on the [data portal](#) in Table 13.10

Impact on road haulage

Impact on road haulage consists of two measures; **rail freight lorry kilometres equivalent** and **avoided lorry journeys**.

Rail freight lorry kilometres equivalent measures an equivalent distance that road vehicles (HGVs) would need to have travelled to move the amounts of freight carried on rail.

Avoided lorry journeys is the equivalent number of road vehicle trips necessary to move the freight.

In 2018-19, the number of lorry kilometres in Great Britain required to transport the amount of freight moved by rail was 1.6 billion kilometres, a 6% increase on 2017-18.

There were 7.0 million lorry journeys avoided in 2018-19 through the use of rail freight, 3% fewer than the previous year. This is the lowest number of avoided lorry journeys recorded since 2004-05. This reflects the overall decrease in rail freight that has been moved in recent years.

■ Annual impact on road haulage data are available on the [data portal](#) in Table 13.8.

Rail market share

In 2018, 5% of all freight lifted in Great Britain was on rail (75.4 million tonnes). The proportion of freight lifted on the rail network (5%) was the same as it was in 2017. Freight lifted by road (HGV) was 89% and 6% was taken by water.

The proportion of freight moved on the rail network was 9% in 2018, with 17.2 billion net tonne kilometres. This was the same proportion as in 2017. The percentage moved by road (HGV) increased by 1 percentage point to 79% and 13% was by water.

The slightly higher proportion represented in rail freight moved than freight lifted reflects the fact that rail is used for longer distances.

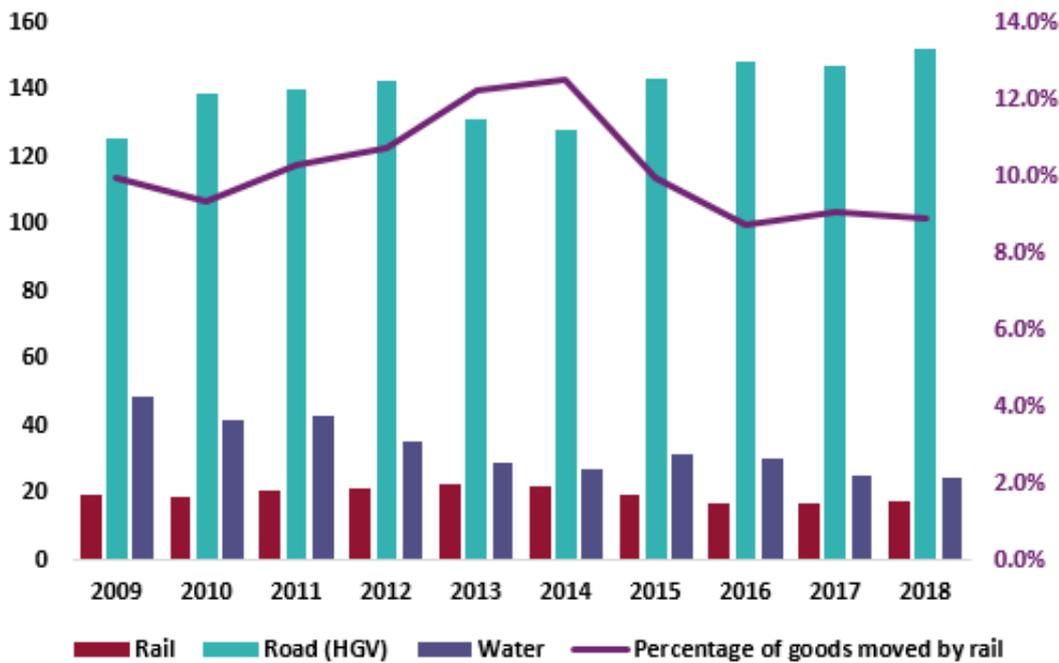
Rail market share statistics show the volumes of freight moved and freight lifted on different modes of transport; rail, road, pipeline and water.

Road data is calculated based on HGVs only as data for other vehicle types is not available.

Pipeline data are not available after 2011 therefore it has been excluded from the annual totals and the calculations of market share.

The overall trend in the annual time series going back to 2009 shows that the share of the freight market on rail peaked in 2013 for freight lifted and 2014 for freight moved; reflecting when volumes were the highest and it has since come down significantly.

Figure 6.02: **Freight moved** by Rail, Road and Water (market share in billion net tonne kilometres), Great Britain, 2009 to 2018 (Table 13.12)



■ Annual rail market share data are available on the [data portal](#) in Table 13.12.

Annex 1 – List of data tables available on the ORR data portal

All data tables can be accessed on the [ORR data portal](#) free of charge and can be downloaded in Excel format. We can also provide data in csv or ods format on request.

Freight moved

- Freight moved, 1982-83 to 2019-20 (annual), 1998-99 Q1 to 2019-20 Q4 (quarterly) – Table 13.7

Freight lifted

- Freight lifted, 1982-83 to 2019-20 (annual), 1996-97 Q1 to 2019-20 Q4 (quarterly) – Table 13.6

Freight delivery metric (FDM)

- FDM, 2012-13 Q4 to 2019-20 Q4 (quarterly) – Table 3.41
- FDM-R, 2014-15 period 1 to 2019-20 period 13 (periodic) – Table 13.24

Freight delay minutes per 100 train kilometres

- Normalised freight delay, 2007-08 to 2019-20 (annual), 2007-08 Q1 to 2019-20 Q4 (quarterly) – Table 13.5

Freight train kilometres by operator

- Freight train kilometres, 2010-11 to 2019-20 (annual), 2010-11 Q1 to 2019-20 Q4 (quarterly) – Table 13.25

Freight market indicators (Q4/annual publications only)

- Number of freight train movements, 2003-04 to 2019-20 – Table 13.10
- Impact on rail haulage, 2004-05 to 2018-19 – Table 13.8

Revisions

The Freight Delivery Metric figures between 2017-18 and 2019-20 have been revised on 24 June 2020.

The revisions are due to multiple versions of the source data being used to calculate quarterly and moving annual average (MAA) data. The revisions have primarily impacted on the MAA calculations due to some quarterly data being double counted, thereby giving a greater weight in the calculations to those quarters.

For the revisions to quarterly data, double counting on its own would not impact on the percentages displayed. However, we mark these data as provisional because there can be small differences in the underlying data from one quarter to the next as we receive refreshed historic data every quarter. As a result, there have also been some minor revisions to quarterly figures.

Further details can be found in the [Revisions Log](#).

Methodology

For more information on data collection and the methodology used to calculate the statistics in this release please see the accompanying [Quality Report](#).

Annex 2

Statistical Releases

ORR's [National Statistics](#) accredited statistical releases consist of annual and quarterly themed releases:

Annual

- Rail Finance
- Rail Fares Index
- Rail Safety Statistics
- Rail Infrastructure and Assets
- Rail Emissions
- Regional Rail Usage

In addition to the above, ORR publishes the following Official Statistics on the [data portal](#):

Annual

- Estimates of Station Usage
- Train Operating Company Key Statistics
- Rail Statistics Compendium
- Occupational Health

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

The Department for Transport (DfT) also publishes a range of rail statistics which can be found at [DfT Rail Statistics](#). For example, Rail passenger numbers and overcrowding on weekdays in major cities.

Transport Focus publish the [National Rail Passenger Survey](#) (NRPS).

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.

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the Authority's regulatory arm - Office for Statistics Regulation (OSR). The OSR considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is ORR's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the OSR promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

Our statistical releases hold National Statistics status since being assessed² in 2012. Since our assessment we have improved the content, presentation and quality of our statistical releases. Also, in July 2019 we launched our new data portal. Therefore in late 2019 we worked with the OSR to conduct a compliance check to ensure we are still meeting the standards of the Code. A letter³ was published on 4 November 2019 confirming that ORR's statistics should continue to be designated as National Statistics. OSR found many positive aspects in the way that we produce and present our statistics and welcomed the range of improvements made since the statistics were last assessed in 2012. OSR identified some areas that we could consider that may enhance the value of the statistics further and we are working on these.

² <https://dataportal.orr.gov.uk/media/1334/ukxa-assessment.pdf>

³ <https://www.statisticsauthority.gov.uk/correspondence/compliance-check-office-rail-and-road-statistics/>

For more information on how we adhere to the Code please see our compliance statements at: dataportal.orr.gov.uk/code-of-practice/.

For more details, please contact the Statistics Head of Profession Lyndsey Melbourne at rail.stats@orr.gov.uk.



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