



# Freight Rail Usage

## 2015-16 Q4 Statistical Release

Publication date: 19 May 2016 (Revised 23 November 2016)

### Background

This release contains information on rail freight usage in Great Britain with the latest quarterly data referring to January, February and March of 2016.

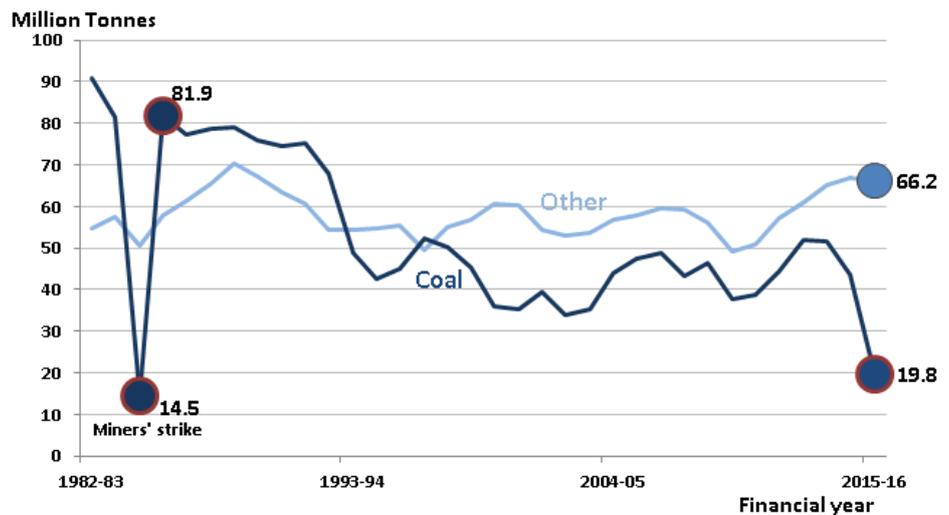
The statistics cover **freight moved** (disaggregated by seven commodities), **freight lifted**, **freight delays per 100 train km** and **freight train kilometres by operator**. Also included are **freight market indicators** which show comparisons with other modes of transport.

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

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### Freight lifted, Great Britain, 1982-83 to 2015-16



- The total amount of **freight lifted** fell to 86.0 million tonnes in 2015-16 from 110.5 million tonnes in 2014-15, a decrease of 22.2%. This is the lowest annual amount of total freight lifted since 1984-85. The amount of **coal lifted** was 19.8 million tonnes in 2015-16, a decrease of 54.6% since last year, and also the lowest since 1984-85.
- The total volume of **freight moved** in 2015-16 was 17.8 billion net tonne kilometres, a decrease of 20.0% on 2014-15. Of the seven commodities recorded, **coal** fell by the most with a reduction of 64.2% to 2.3 billion net tonne kilometres.
- **Freight train movements** continued their downward trend falling to 236,290 in 2015-16, a decrease of 16.3% since last year. This is the lowest number of movements since the time series began in 2003-04.
- Total **freight train kilometres** fell to 34.9 million kilometres, a decrease of 14.9% compared to last year.

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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.

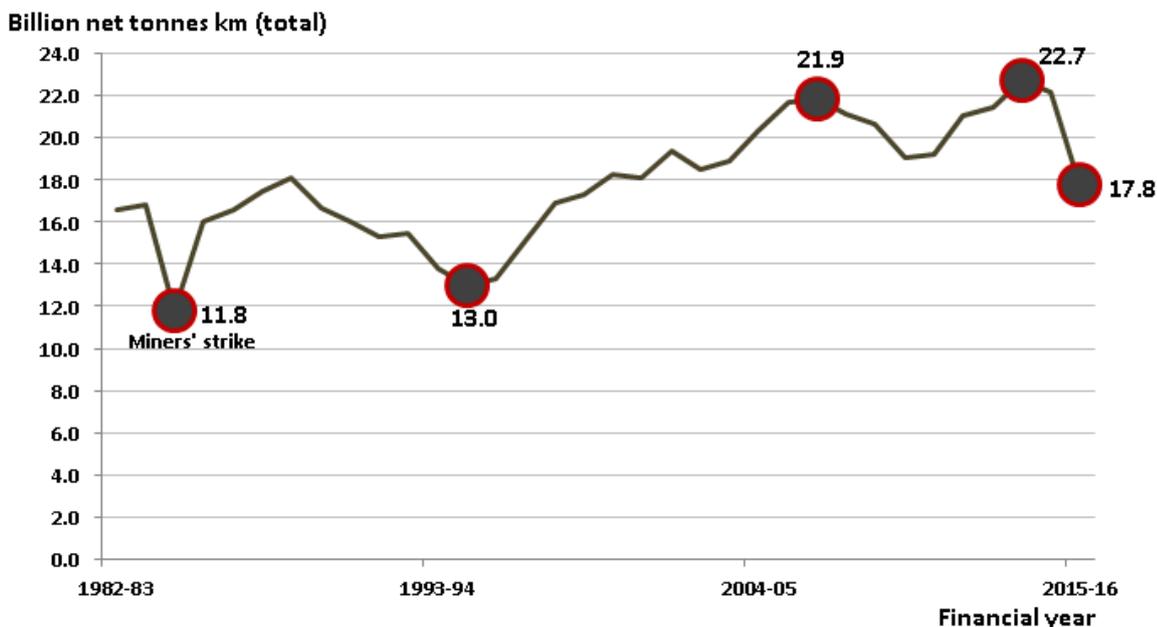
Freight moved is disaggregated by seven commodities which are also summed to provide an overall total freight moved. The seven commodities by which freight moved is disaggregated are coal, metals, construction, oil and petroleum, international, domestic intermodal and other.

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 2015-16

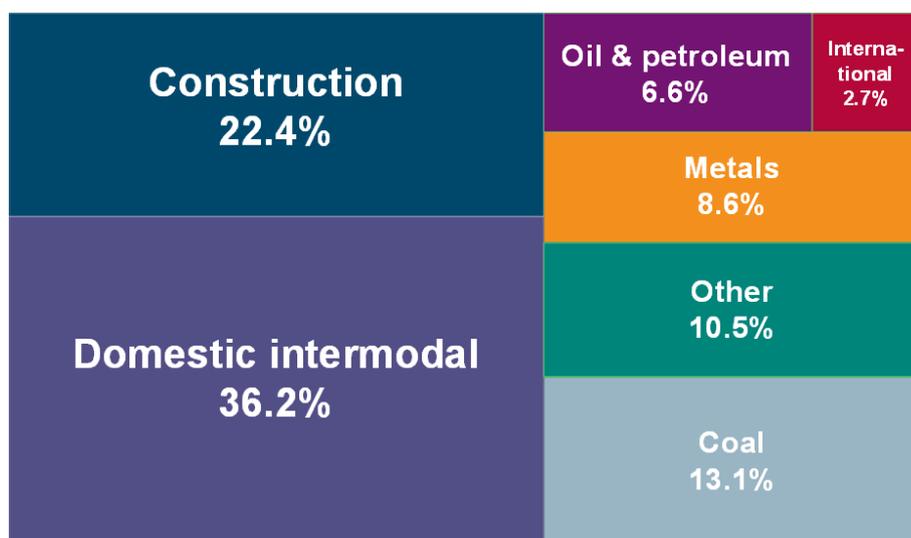
- In 2015-16, the total volume of freight moved was 17.8 billion net tonne kilometres, a decrease of 20.0% on 2014-15. The largest annual decrease in total freight moved (-29.8%) was between 1983-84 and 1984-85 caused by the miners' strike. Total freight moved grew steadily from 1995-96, peaking at 22.7 billion net tonne kilometres in 2013-14.

Freight moved (total) – chart ([Table 13.7](#))  
Great Britain data 1982-83 to 2015-16



- Domestic intermodal accounted for the largest proportion of freight moved during 2015-16 (36.2%) – this was the first year since 2010-11 that this commodity recorded the biggest share. International had the lowest share (2.7%) in 2015-16.

Freight moved by commodity – chart ([Table 13.7](#))  
Great Britain data 2015-16



- Of all seven commodities, coal experienced the biggest decrease in freight moved in 2015-16 compared to 2014-15, with a 64.2% reduction to 2.3 billion net tonne kilometres. This was the largest fall since the miners' strike, when the volume of coal moved fell by 85.5% between 1983-84 and 1984-85. Major contributory factors to the latest decrease in coal moved were the doubling of UK's top-up carbon tax from 1 April 2015 and the gradual move to renewable energy which impacted the amount of coal moved to power plants, with the net effect that outputs from these plants are reduced when compared to the previous year.<sup>1</sup>
- International recorded the next highest decrease in freight moved in 2015-16 compared to 2014-15, with a 20.5% reduction. This was partly due to the migrant crisis at Calais which disrupted Eurotunnel channel tunnel traffic.
- The volume of metal moved is at its lowest level since 2008-09, falling to 1.5 billion net tonne kilometres in 2015-16, a reduction of 15.7% on the previous year. Imported steel and steel overproduction, coupled with factory closures<sup>2</sup> contributed to the drop in the amount of metal moved by rail.

<sup>1</sup> <http://www.theguardian.com/environment/2016/mar/31/rapid-decline-of-coal-use-leads-to-drop-in-uk-emissions>

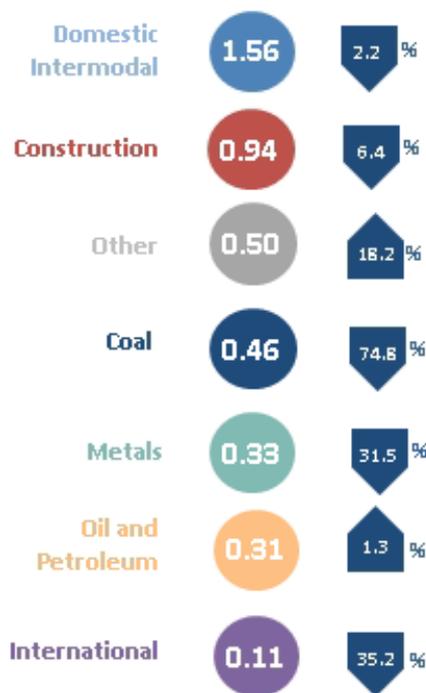
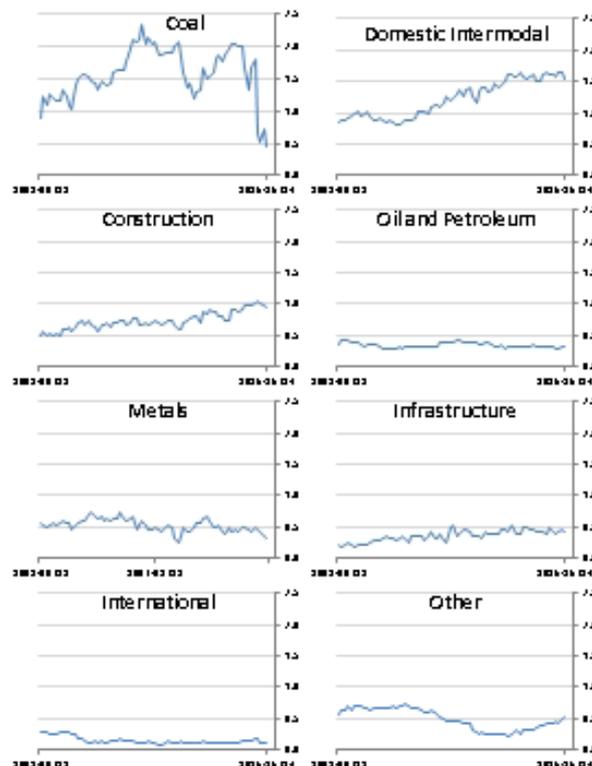
<sup>2</sup> <https://www.theguardian.com/business/2016/mar/29/tata-set-to-announce-sale-of-uk-steel-business-port-talbot>

## 2015-16 Quarter 4 Results

Freight moved by quarter – charts ([Table 13.7](#))

Great Britain data 1998-99 Q1 to 2015-16 Q4 (billion net tonne kilometres)

- In 2015-16 Q4, total freight moved was 4.2 billion net tonne kilometres, a reduction of 1.6 billion net tonne kilometres (27.4%) on 2014-15 Q4. The commodity driving this overall drop was coal, which fell by 1.4 billion net tonne kilometres.
- The amount of coal moved, 0.46 billion net tonne kilometres in 2015-16 Q4, is the lowest amount of coal moved in any quarter since the start of the quarterly time series in 1998-99.Q1.
- During 2015-16 Q4, domestic intermodal accounted for the largest proportion (37.0%) of total freight moved, with 1.6 billion net tonne kilometres, followed by construction, with 22.5% (0.9 billion net tonne kilometres moved).



Compared to 2014-15 Q4

- Five of the seven commodities recorded a decrease this quarter compared to 2014-15 Q4.

## Possible reasons for change in 2015-16 Q4

- The amount of coal moved by rail decreased this quarter compared with last year, with further closure of another coal fired power station, Longannet<sup>3</sup>. The closure of the coal powered stations reduces the amount of coal that can be moved by rail to these power stations.
- The tightened security at Calais (due to the migrant crisis) continues to affect the international category. This has caused a reduction in Eurotunnel channel tunnel traffic<sup>4</sup> and amount of freight moved in the international category compared to 2014-15 Q4.
- The fall in price of metals, drop in global demand for steel allied with competition from imported steel and plant closures, reduced UK production of steel affecting the metal category this quarter<sup>5</sup>. Imported metal can also be inter-hauled (moved by lorry) with less freight to move between plants by rail.
- Construction recorded a decrease<sup>6</sup> compared with same quarter last year due to a slow-down in new orders<sup>7</sup>, with less freight moved by rail in the quarter.
- The data for biomass is included in other category; more biomass is being converted and used in place of coal part explaining the increase this quarter compared with last year.
- More household heating was required to cope with the wintry spells<sup>8</sup> this quarter compared to 2014-15 Q4, resulting in more freight moved by rail, increasing the oil and petroleum category.

Full quarterly freight moved data are available on the data portal in: [Table 13.7](#)

Freight moved disaggregated by commodity type: [ORR Data Portal Wizard](#)

<sup>3</sup> <http://www.theguardian.com/environment/2016/mar/24/longannet-power-station-closes-coal-power-scotland>

<sup>4</sup> <http://www.eurotunnelgroup.com/uploadedFiles/assets-uk/Media/Press-Releases/2016-Press-Release/160421-Traffic-Revenue-Q1-2016.pdf> (page 4, railway network)

<sup>5</sup> <http://www.bbc.co.uk/news/business-34581945>

<sup>6</sup> <http://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/grossdomesticproductpreliminaryestimate/januarytomarch2016> (5, industry analysis, construction)

<sup>7</sup> <http://www.bbc.co.uk/news/business-35470675>

<sup>8</sup> <http://www.telegraph.co.uk/news/weather/12159068/UK-weather-Britain-continues-to-shiver-ahead-of-widespread-snow-by-midweek.html>

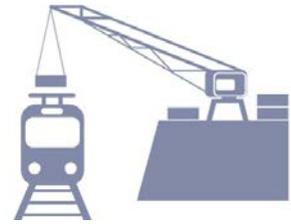
## European comparison

- In 2014<sup>9</sup>, there was 22.1 billion net tonne kilometres moved in the UK. This resulted in the UK being ranked 4<sup>th</sup> for the volume of freight moved on the network. Only Germany (112.6 billion ntkm), Poland (50.1) and France (32.2) moved more freight than the UK.
- 25 of the 28 member countries have submitted data to Eurostat for both 2013 and 2014. Over that period, freight moved in the EU has increased by 1.1% compared with a 1.2% fall in the UK. The key drivers for that growth were Sweden (21.3 billion net tonne kilometres, up 1.6%), Austria (20.5, up 6.3%) and Italy (20.1, up 5.4%). These are ranked 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> in terms of market size.

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<sup>9</sup> Data are provided to Eurostat for calendar years. The 2015 data is due to be supplied to Eurostat at the end of May 2016.

## 2. Freight lifted



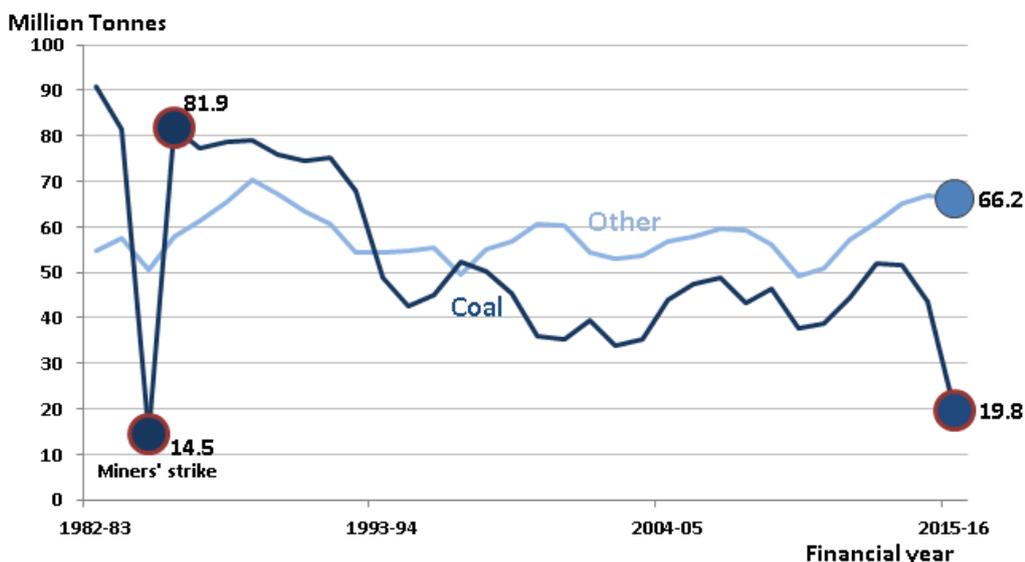
### Annual 2015-16

- The total amount of freight lifted in Great Britain fell to 86.0 million tonnes in 2015-16 from 110.5 million tonnes a year earlier, a fall of 22.2%. Annual freight lifted reached its peak in 1988-89 with 149.5 million tonnes, followed by a fall in each of the next six years.
- The lowest annual amount of freight lifted recorded was 65.2 million tonnes in 1984-85, which was due to the miners' strike, which contributed to the lowest amount of coal lifted with 14.5 million tonnes. 2015-16 marked the lowest total annual freight lifted since 1984-85.
- The amount of coal lifted in 2015-16 was 19.8 million tonnes, a decrease of 54.6% on 2014-15.
- Despite a fall of 1.2% compared to last year, the amount of other freight lifted was the fourth highest amount in 2015-16 with 66.2 million tonnes. The highest amount was in 1988-89 (70.3 million tonnes), followed by 1989-90 (67.3 million tonnes), and 2014-15 (67.0 million tonnes).

**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.

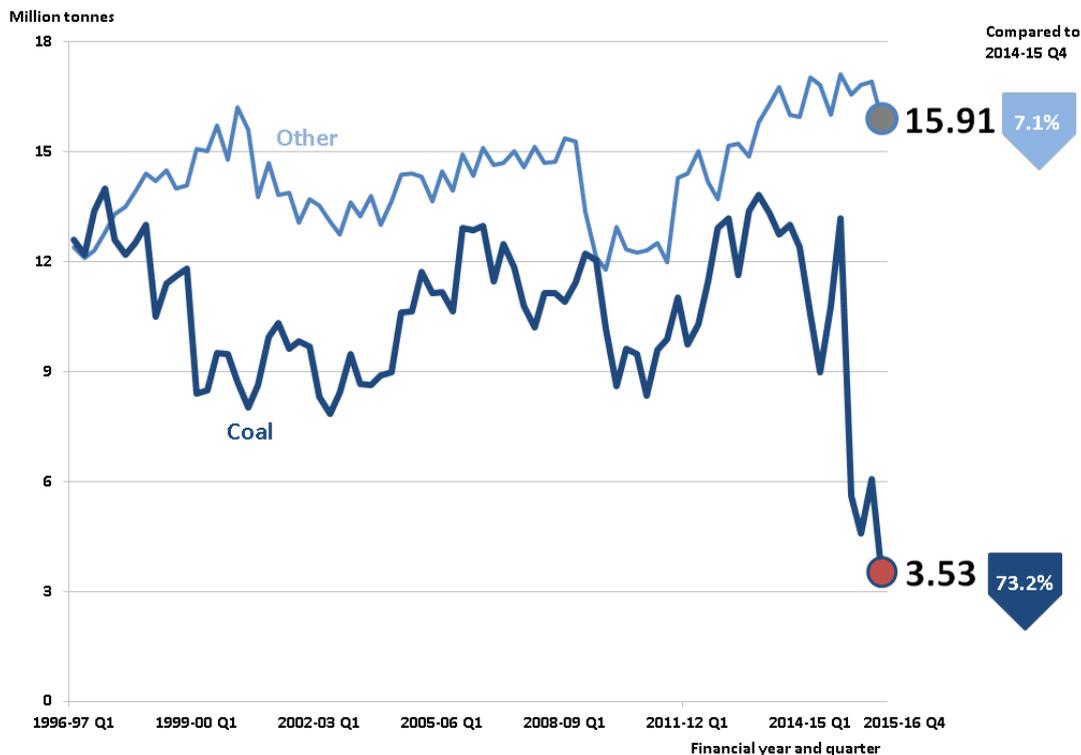
Freight lifted information is sourced from the four major FOCs: DB Schenker Rail (formerly EWS), Freightliner Ltd (formerly the BR container business), Direct Rail Services (DRS) and GB Railfreight.

Freight lifted – chart ([Table 13.6](#))  
Great Britain data 1982-83 to 2015-16



## 2015-16 Quarter 4 Results

Freight lifted by quarter – chart ([Table 13.6](#))  
Great Britain data 1996-97 Q1 to 2015-16 Q4



- In 2015-16 Q4, the total amount of freight lifted was 19.4 million tonnes, a decrease of 35.8% compared to 2014-15 Q4.
- During 2015-16 Q4, the amount of coal lifted was 3.5 million tonnes, a decrease of 73.2% compared to the same quarter last year. This is the lowest across all quarters since the start of the time series in 1996-97.
- The amount other freight lifted in 2015-16 Q4 was 15.9 million tonnes, a decrease of 7.1% compared to 2014-15 Q4.

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

## European comparison

- In 2014<sup>10</sup>, there was 108.5 million tonnes lifted in the UK. Despite a fall of 7.8% since 2013, the UK was still ranked 3<sup>rd</sup> in terms of the freight lifted volumes. Germany (365.0 million tonnes) and Poland (227.8) were ranked 1<sup>st</sup> and 2<sup>nd</sup> but they also recorded falls compared to 2013. Germany fell by 8.7 million tonnes (2.3%) and Poland fell by 4.8 million tonnes (2.1%).
- As with freight moved, 25 of the 28 member countries have submitted data to Eurostat for both 2013 and 2014. The overall total freight lifted in the EU fell by 0.3% between the two years. The decreases in the largest markets listed above were offset by strong growth elsewhere, including 7.6 million tonnes in Czech Republic (9.1%), 3.5 million tonnes in Spain (14.0%) and 2.9 million tonnes in Italy (3.3%).

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<sup>10</sup> Data are provided to Eurostat for calendar years. The 2015 data is due to be supplied to Eurostat at the end of May 2016.



### 3. Freight delay per 100 train kilometres

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

#### Annual 2015-16

- Normalised freight delay improved by 21.7% to 10.8 minutes in 2015-16. This represents the largest year on year drop since the time series began in 2007-08 and over that time, normalised freight delay has more than halved. .

#### 2015-16 Quarter 4 Results

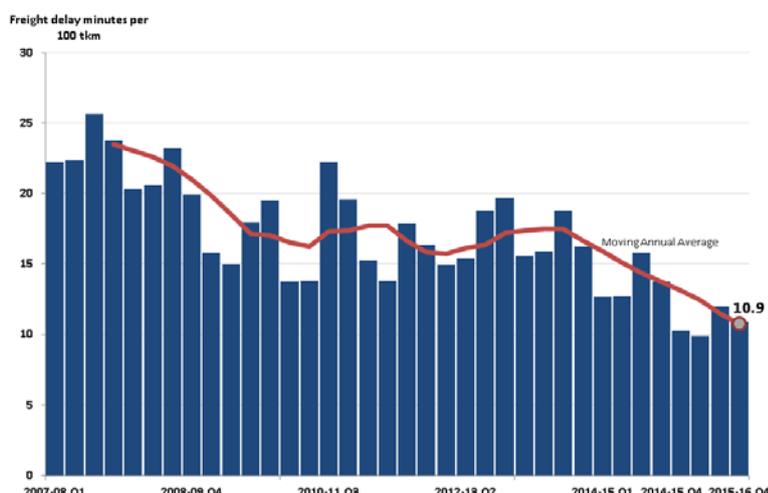
- Freight delay fell to 10.9 minutes per 100 train kilometres in 2015-16 Q4, a reduction of 20.6% compared to 2014-15 Q4. The Q4 freight delay per 100 train kilometres is the lowest Q4 figure (2015-16 Q2 is the lowest in the time series and the only time it has fallen below 10 minutes) since the time series began in 2007-08 Q1. One factor in the downward trend may be the ability to revise a freight train schedule at a much shorter notice than a passenger train and thereby minimise the impact of delays.

**Freight delay per 100 train kilometres** is a normalised measure of delay experienced by FOCs.

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.

Freight delay per 100 train kilometres – chart ([Table 13.5](#))  
Great Britain data 2007-08 Q1 to 2015-16 Q4 (P)



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

(P) This dataset is provisional as delay data is often revised as part of the delay attribution process (please see the Freight Rail Usage quality report for further details).

## 4. Freight train kilometres by operator

Freight train kilometres by operator data was previously published annually on the data portal, however it is now available by quarter and included for the first time in this release.

### Annual 2015-16

- In 2015-16, total freight train kilometres fell to 34.9 million kilometres, a decrease of 6.1 million kilometres (14.9%) compared to 2014-15. This is the lowest amount recorded since the time series began in 2010-11 and is reflective of the fall in freight lifted and freight moved.
- Four out of seven operators recorded a decrease in 2015-16 compared to 2014-15; the two largest operators, DB Schenker and Freightliner Heavy Haul fell by 3.0 million (-15.6%) and 2.9 million (-53.5%) train kilometres respectively. The other operators to record a decrease were Direct Rail Services (-19.0%) and, GB Railfreight (-0.5%).
- Though they account for less than 1 million freight train kilometres between them, Devon and Cornwall Railways (42.5%) and Colas Freight (15.1%) both recorded an increase during 2015-16. Freightliner Intermodal also increased by 1.1% compared to last year.

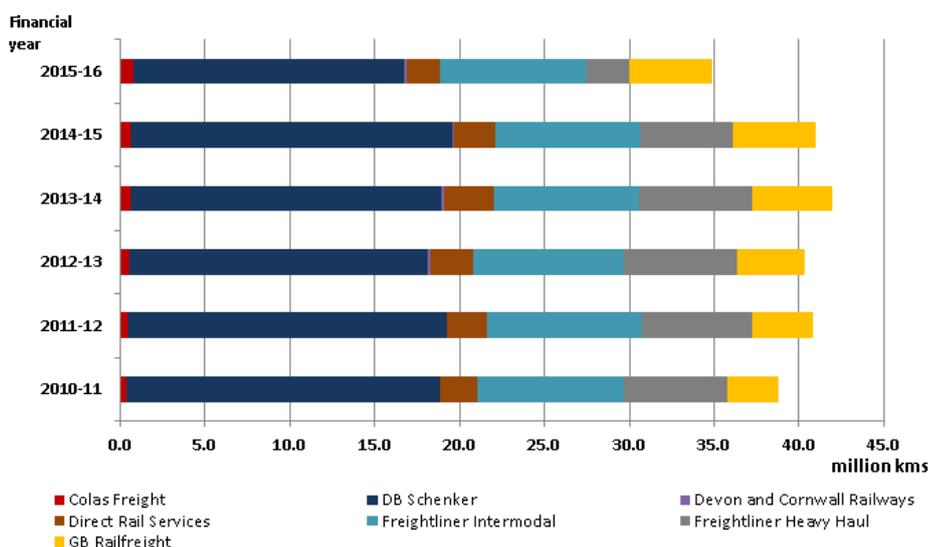
**Freight train kilometres** is the actual mileage in kilometres operated by FOCs on Network Rail Infrastructure

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. See the Quality report for more information.

Freight train kilometres by operator – chart ([Table 13.25](#)) Great Britain 2010-11 to 2015-16



## 2015-16 Quarter 4 Results

- Total freight train kilometres decreased by 2.3 million (21.7%) in 2015-16 Q4 compared to 2014-15 Q4.
- During 2015-16 Q4, five out of seven operators experienced a reduction in freight train kilometres compared to 2014-15 Q4; DB Schenker fell by more than a quarter to 3.7 million train kilometres whilst Freightliner Heavy Haul more than halved from 1.3 million train kilometres in 2014-15 Q4 to 0.6 million in this quarter. The other operators that recorded a fall were Direct Rail Services (-30.2%), GB Railfreight (-11.0%) and Freightliner Intermodal (-2.0%).
- Colas Freight (10.3%) and Devon and Cornwall Railways (2.5%) recorded increases in freight train kilometres in 2015-16 Q4 compared to the same quarter last year. However, these increases only accounted for 21,000 train kilometres.
- The closure of Lamington Viaduct<sup>11</sup> resulted in less distance covered by a number of operators. This closure as well as the land slip on the Cumbrian line due to bad weather most affected Direct Rail Services out of Sellafield.
- The introduction of the carbon tax on 1 April 2015 and reduction in the movement of coal, has affected Freightliner Heavy Haul's movement of coal and the distance covered by those services<sup>12</sup>.

Quarterly freight kilometres by operator data are available on the data portal in:

[Table 13.25](#)

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<sup>11</sup> <http://www.bbc.co.uk/news/uk-scotland-glasgow-west-35626165>

<sup>12</sup> <http://www.railmagazine.com/news/network/2016/02/25/flhh-axes-145-jobs-as-coal-cuts-bite>

## 5. Freight market indicators

Freight market indicators comprise three measures: number of freight train movements on the network (data available up to 2015-16), impact on road haulage (2014-15), and rail market share (calendar year 2014).

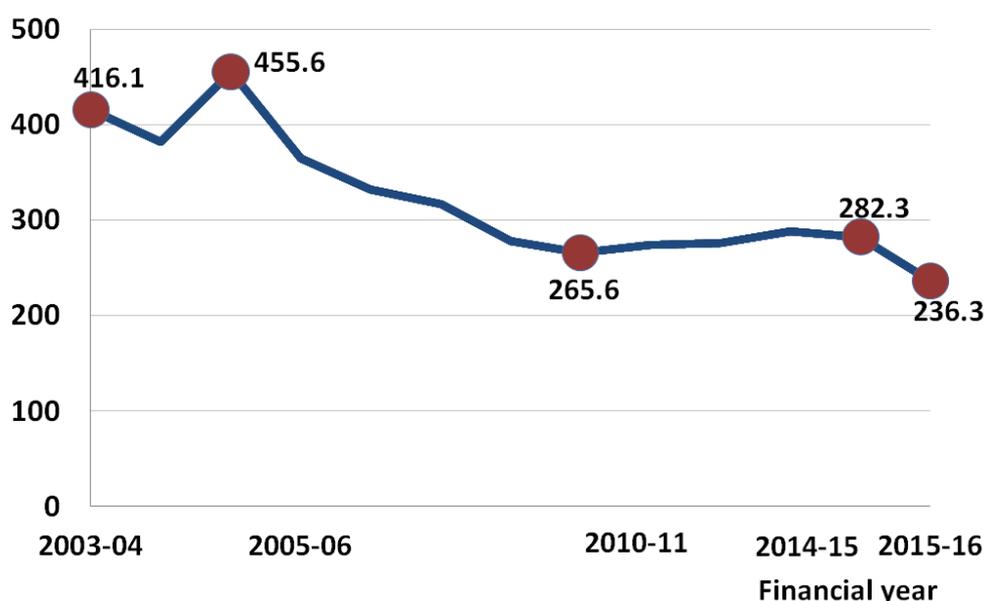
### Number of freight train movements

Number of freight train movements – chart ([Table 13.10](#))  
Great Britain data 2003-04 to 2015-16

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

The data is sourced from Network Rail and is based on chargeable train movements.

Number of freight trains movement  
(Thousands)



- There has been a decrease in freight train movements over time. A peak of 455,561 movements was recorded in 2005-06 which coincided with strong levels of freight moved and freight lifted. The lowest recorded number of freight train movements is in 2015-16.
- The reductions over time could be due to improved utilisation of freight capacity as the levels of freight being lifted and moved in the four year prior to 2015-16 were similar to those in the mid-2000s but with much fewer trains.
- In 2015-16, the number of freight movements decreased by 16.3% compared to last year from 282,304 to 236,290. The likely reason for the fall in 2015-16 is the fall in the use of coal in coal powered plants and closure of steel plants, with less coal and steel required to be carried by rail.

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

## Impact on road haulage

- In 2014-15 (latest year which data is available), the number of lorry kilometres required to transport the amount of freight moved by rail was 1.54 billion kilometres, a 13.6% decrease on 2013-14. This is the highest year on year decrease since 2004-05. The highest recorded was in 2007-08 at 2.17 billion kilometres.
- There were 9.91 million lorry journeys avoided in 2014-15 through the use of rail freight, 20.9% higher than the previous year. 2014-15 is the highest number of avoided lorry journeys recorded since 2004-05. The lowest avoided lorry journeys recorded is 7.85 million in 2010-11.

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

## Rail market share

- In 2014, 6.4% of all freight lifted was on rail, with 109 million tonnes. The proportion of freight lifted on the rail network decreased by 0.6 percentage points compared to 2013. Between 2013 and 2014, road freight (HGV) increased by 1.0%.
- In 2014, 12.0% of all freight moved was on the railway network, with 22 billion net tonne kilometres. The proportion of freight moved by rail increased (revised 23 November 2016 - previously said "decreased") by 0.2 percentage points compared to the previous year. Between 2013 and 2014, road freight (HGV) decreased by 2.4% on the previous year.

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

**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** he equivalent number of road vehicle trips necessary to move the freight.

**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 now calculated based on HGVs only as data for other vehicle types no longer available.

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

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

All data tables can be accessed on the [data portal](#) free of charge. The 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.

### Freight moved

- Freight moved – [Table 13.7](#)

### Freight lifted

- Freight lifted – [Table 13.6](#)

### Freight delay minutes per 100 train kilometres

- Normalised freight delay – [Table 13.5](#)

### Freight train kilometres by operator

- Freight train kilometre – [Table 13.25](#)

### Freight market indicators (annual publications only)

- Number of freight train movements – [Table 13.10](#)
- Impact on rail haulage – [Table 13.8](#)
- Rail market share – [Table 13.12](#)

Further user created freight usage tables can be created through the [Data Portal Wizard](#).

**Revisions:** There have been some minor revisions to the previously published dataset. 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 [Data Portal](#). The statistical releases consist of four annual and four quarterly themed releases:

#### Annual:

- Rail Finance & Rail Fares Index;
- 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.

For more information on data collection and the methodology used to calculate the statistics in this release please see the accompanying [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.

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. The Authority 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 Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

For more details please contact the Statistics Head of Profession Lyndsey Melbourne on 020 7282 3978 or contact [rail.stats@orr.gsi.gov.uk](mailto: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](#). They also publish road freight statistics which can be found at [Road freight: domestic and international statistics](#).



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