

# Assessment of compliance with the Code of Practice for Official Statistics

## Statistics on Rail Passenger Numbers and Crowding

*(produced by the Department for Transport)*

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### **About the UK Statistics Authority**

The UK Statistics Authority is an independent body operating at arm's length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the *Statistics and Registration Service Act 2007*.

The Authority's overall objective is to promote and safeguard the production and publication of official statistics that serve the public good. It is also required to promote and safeguard the quality and comprehensiveness of official statistics, and good practice in relation to official statistics.

The Statistics Authority has two main functions:

1. oversight of the Office for National Statistics (ONS) – the executive office of the Authority;
2. independent scrutiny (monitoring and assessment) of all official statistics produced in the UK.

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# **Assessment of compliance with the Code of Practice for Official Statistics**

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## ASSESSMENT AND DESIGNATION

The *Statistics and Registration Service Act 2007* gives the UK Statistics Authority a statutory power to assess sets of statistics against the *Code of Practice for Official Statistics*. Assessment will determine whether it is appropriate for the statistics to be designated as National Statistics.

Designation as National Statistics means that the statistics comply with the *Code of Practice*. The *Code* is wide-ranging. Designation can be interpreted to mean that the statistics: meet identified user needs; are produced, managed and disseminated to high standards; and are explained well.

Designation as National Statistics should not be interpreted to mean that the statistics are always correct. For example, whilst the *Code* requires statistics to be produced to a level of accuracy that meets users' needs, it also recognises that errors can occur – in which case it requires them to be corrected and publicised.

Assessment reports will not normally comment further on a set of statistics, for example on their validity as social or economic measures. However, reports may point to such questions if the Authority believes that further research would be desirable.

Assessment reports typically provide an overview of any noteworthy features of the methods used to produce the statistics, and will highlight substantial concerns about quality. Assessment reports also describe aspects of the ways in which the producer addresses the 'sound methods and assured quality' principle of the *Code*, but do not themselves constitute a review of the methods used to produce the statistics. However the *Code* requires producers to "seek to achieve continuous improvement in statistical processes by, for example, undertaking regular reviews".

The Authority may grant designation on condition that the producer body takes steps, within a stated timeframe, to fully meet the *Code's* requirements. This is to avoid public confusion and does not reduce the obligation to comply with the *Code*.

The Authority grants designation on the basis of three main sources of information:

- i. factual evidence and assurances by senior statisticians in the producer body;
- ii. the views of users who we contact, or who contact us, and;
- iii. our own review activity.

Should further information come to light subsequently which changes the Authority's analysis, it may withdraw the Assessment report and revise it as necessary.

It is a statutory requirement on the producer body to ensure that it continues to produce the set of statistics designated as National Statistics in compliance with the *Code of Practice*.

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# 1 Summary of findings

## 1.1 Introduction

- 1.1.1 This is one of a series of reports<sup>1</sup> prepared under the provisions of the *Statistics and Registration Service Act 2007*<sup>2</sup>. The Act allows an appropriate authority<sup>3</sup> to request an assessment of official statistics against the *Code of Practice for Official Statistics*<sup>4</sup> in order for them to gain National Statistics status. This report is in response to such a request. The report covers the set of statistics reported in *Rail passenger numbers and crowding on weekdays in major cities in England and Wales*<sup>5</sup> (*Rail Passenger Statistics*), produced by the Department for Transport (DfT).
- 1.1.2 Section 3 of this report adopts an ‘exception reporting’ approach – it includes text only to support the Requirements made to strengthen compliance with the *Code* and Suggestions made to improve confidence in the production, management and dissemination of these statistics. This abbreviated style of report reflects the Head of Assessment’s consideration of aspects of risk and materiality<sup>6</sup>. The Assessment team nonetheless assessed compliance with all parts of the *Code of Practice* and has commented on all those in respect of which some remedial action is recommended.
- 1.1.3 This report was prepared by the Authority’s Assessment team, and approved by the Board of the Statistics Authority on the advice of the Head of Assessment.

## 1.2 Decision concerning designation as National Statistics

- 1.2.1 The Statistics Authority judges that the statistics covered by this report are readily accessible, produced according to sound methods and managed impartially and objectively in the public interest, subject to any points for action in this report. The Statistics Authority has determined that the statistics published in the product listed in paragraph 1.1.1 can be designated as new National Statistics products, subject to the Department for Transport implementing the enhancements listed in section 1.5 and reporting them to the Authority by May 2013.

## 1.3 Summary of strengths and weaknesses

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<sup>1</sup> <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html>

<sup>2</sup> [http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga\\_20070018\\_en.pdf](http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga_20070018_en.pdf)

<sup>3</sup> Subsection 12(7) of the Act defines ‘appropriate authority’ as Ministers of the Crown, Scottish Ministers, Welsh Ministers, Northern Ireland departments or the National Statistician

<sup>4</sup> <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

<sup>5</sup> <https://www.gov.uk/government/publications/rail-passenger-numbers-and-crowding-on-weekdays-in-major-cities-in-england-and-wales-2011>

<sup>6</sup> <http://www.statisticsauthority.gov.uk/assessment/assessment/guidance-about-assessment/criteria-for-deciding-upon-the-format-of-an-assessment-report.pdf>

- 1.3.1 The statistics in *Rail Passenger Statistics* are clearly presented and accompanied by helpful commentary. Additional contextual information explaining possible reasons for the trends shown could usefully be provided.
- 1.3.2 The release provides a high level summary of passenger numbers and crowding. Some users contacted as part of this assessment noted that although they found the statistics useful, they requested more detailed data, for example by route rather than aggregated by train operating companies. DfT told us that this was not possible due to the commercial nature of the data, which are considered to be confidential in accordance with the National Rail Franchise Terms agreed between the Secretary of State for Transport and the train operating companies.

#### **1.4 Detailed recommendations**

- 1.4.1 The Assessment team identified some areas where it felt that DfT could strengthen its compliance with the *Code*. Those which the Assessment team considers essential to enable designation as National Statistics are listed in section 1.5. Other suggestions, which would improve the statistics and the service provided to users but which are not formally required for their designation, are listed at annex 1.

#### **1.5 Requirements for designation as National Statistics**

<b>Requirement 1</b>	Publish users' views of the statistics (para 3.1).
<b>Requirement 2</b>	Publish more detailed quality information, particularly about the accuracy and timeliness of the statistics in relation to the range of potential uses (para 3.2).
<b>Requirement 3</b>	Provide information about comparability with data produced by other UK countries and related statistics published by the Office of Rail Regulation (para 3.5).

## 2 Subject of the assessment

- 2.1 Rail passenger statistics are compiled from passenger counts data. These data are collected by franchised train operators using counts of passengers on board trains at certain points along certain routes. The counts are either collected manually<sup>7</sup> or by electronic<sup>8</sup> counting equipment fitted to trains.
- 2.2 Train operators are required to carry out periodic counts of the number of passengers travelling on their services and provide these data to DfT as part of their contracts with the Department. In recent years the amount of passenger count data collected by train operators has increased and new statistics on passenger numbers and crowding were made available for the first time in 2011 (based on 2010 data). The 2011 statistics, published in 2012, were the first to be published by DfT and showed peak service provision, passenger demand and crowding information for London terminals and for other major cities in England and Wales. The statistics were also published by the Office of Rail Regulation<sup>9</sup> (ORR) one week after the DfT statistics.
- 2.3 DfT uses passenger counts data to publish a periodic list *England and Wales 'top ten' overcrowded train services*<sup>10</sup>. DfT told us that this is in response to user demand and the publication highlights the quality issues with using passenger counts for individual services.
- 2.4 Passenger counts are carried out on weekdays during the autumn<sup>11</sup> each year as this is the time when commuter demand is highest. Passenger numbers are based on counts carried out on services on arrival and departure from city centre stations<sup>12</sup>. Crowding statistics are based on services arriving into cities in the three hour morning peak<sup>13</sup> and departing from cities in the three hour afternoon peak<sup>14</sup>. Crowding is measured by comparing the standard class critical load<sup>15</sup> with the capacity of the service. The difference between the standard class critical load and the standard class capacity is the number of passengers in excess of capacity (PiXC).
- 2.5 *Rail passenger numbers and crowding on weekdays in major cities in England and Wales (Rail Passenger Statistics)* is the only set of statistics relating to the national rail industry that DfT publishes. All other rail statistics are published by the ORR whose statistics were assessed in Assessment Report 212 *Rail*

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<sup>7</sup> Manual counts are either carried out on board the train by guards on long-distance services where there is a sufficiently long gap between stations, or by counting passengers on platforms at stations. For through trains this can also involve making an assessment of the number of passengers in each carriage through the train windows

<sup>8</sup> Electronic or automatic counts are collected in one of two ways: either by equipment fitted to trains that weighs the train at certain points and then estimates the number of passengers on board by assuming an average weight per passenger, or using infra-red sensors fitted to each train to count passengers boarding and alighting, which allows the number of passengers on board to be calculated

<sup>9</sup> <http://dataportal.orr.gov.uk/displayreport/report/html/a19e561b-ade4-4124-bbb0-35502215ab8b>  
<sup>10</sup> <https://www.gov.uk/government/publications/top-10-overcrowded-train-services-england-and-wales>

<sup>11</sup> Mid-September to mid-December, excluding school half term holidays

<sup>12</sup> In London this means stations in the Zone 1 travelcard area

<sup>13</sup> 07:00 to 09:59

<sup>14</sup> 16:00 to 18:59

<sup>15</sup> Critical load point is the location where the passenger load on a service is highest on arrival at or departure from a city. The number of standard class passengers on the service at this point is called the standard class critical load and this is the passenger load upon which the crowding statistics are based



*Statistics*<sup>16</sup>, with the exception of the National Rail Passenger Survey<sup>17</sup> published by Passenger Focus.

2.6 In the past DfT used PiXC to monitor crowding for London commuter services and set limits on the level of acceptable PiXC. DfT now sets a variety of performance targets for its individual franchise holders although the PiXC measure is still calculated and shown in the published statistics. The statistics and underlying data are used by:

- train operators to monitor crowding, manage timetables and manage rolling stock deployment;
- the government to inform decisions on infrastructure, station and rolling stock investment; and
- devolved transport organisations to monitor passenger numbers at major terminals.

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<sup>16</sup> <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/assessment-report-212---rail-statistics.pdf>

<sup>17</sup> <http://www.passengerfocus.org.uk/research/national-passenger-survey-introduction>

### 3 Assessment findings

- 3.1 DfT receives regular ad hoc queries about the statistics published in *Rail Passenger Statistics*. These queries have assisted DfT in understanding the uses of the statistics and users' needs. DfT attends the Rail Statistics Management Group meetings to engage with users and published a user consultation survey alongside *Rail Passenger Statistics 2011*. DfT has not published the user feedback that it has received nor has it published information about the extent to which the statistics meet users' needs, including details of the types of decisions they inform. As part of the designation as National Statistics, DfT should publish users' views of the statistics<sup>18</sup> (Requirement 1). *Rail Passenger Statistics* includes a section about uses of these statistics, which contains a list of contexts in which the statistics are used. It could provide more detail about known uses. We suggest that DfT improve the published information about the use made of the statistics, and in doing so refer to the types of use put forward in the release *Annual Bus Statistics: 2011-12*<sup>19</sup> published by DfT. We also suggest DfT refer to the Statistics Authority's Monitoring Brief, *The Use Made of Official Statistics*<sup>20</sup> when documenting use.
- 3.2 DfT publishes a notes and definitions document<sup>21</sup> at the same time as *Rail Passenger Statistics* which provides useful information about the methods that it uses to compile the statistics. Although helpful, this document does not provide sufficient information about the accuracy and timeliness of the statistics. For example, the document states that 'as more automatic counting equipment has become available across the rail network the accuracy of these statistics has improved over time'; although no further information is given on either the size of the improvement, or the accuracy of the estimates. The document highlights some quality issues with the data, such as differences in coverage of counts across train operators and differences in the methods used to collect the data (manual or automatic passenger counts), but the document does not provide users with information about the implications of these methods for the use of the statistics. The counts also exclude days when services were disrupted by engineering work or bad weather and this is not made clear in the release. DfT collects the data in the autumn each year but the statistics are not released until July the following year. DfT does not include any information in *Rail Passenger Statistics* about the reason for this delay. As part of the designation as National Statistics, DfT should publish more detailed quality information, particularly about the accuracy and timeliness of these statistics in relation to the range of potential uses<sup>22</sup> (Requirement 2).
- 3.3 ORR is responsible for publishing the majority of official statistics on the rail industry. ORR re-publishes the tables that are included in *Rail Passenger Statistics* on its data portal<sup>23</sup> with little commentary but with a longer time series back to 2008. We suggest that DfT make it clear for users where they are able

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<sup>18</sup> In relation to Principle 1, Practice 5 of the *Code of Practice*

<sup>19</sup> <https://www.gov.uk/government/publications/annual-bus-statistics-2011-12>

<sup>20</sup> <http://www.statisticsauthority.gov.uk/assessment/monitoring/monitoring-reviews/index.html>

<sup>21</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/9078/rail-notes-definitions.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/9078/rail-notes-definitions.pdf)

<sup>22</sup> In relation to Principle 8, Practice 1 and Protocol 2, Practice 1 of the *Code of Practice*

<sup>23</sup> <http://dataportal.orr.gov.uk/>

to find coherent statistics on the rail industry as a whole and include more prominent links to ORR's website in *Rail Passenger Statistics*.

- 3.4 *Rail Passenger Statistics* is clear and well laid out and includes some helpful commentary to aid user interpretation of the statistics. However, *Rail Passenger Statistics* would benefit from the presentation of a longer time series and better contextual information. For example, no information is given about the possible reasons for the increase in numbers of passengers arriving into central London; similarly no explanation is given for the increase in overcrowding. *Rail Passenger Statistics* presents statistics for 2011 and the commentary makes comparisons with statistics for 2010 but includes no further information about the availability of data for longer time series. We suggest that DfT should improve the commentary in the release so that it aids user interpretation of the statistics. We also suggest that DfT should consider the points detailed in annex 2.
- 3.5 The statistics in *Rail Passenger Statistics* are for England and Wales. The Scottish Government publishes rail statistics in an annual transport compendium: *Scottish Transport Statistics*<sup>24</sup> which includes figures on crowding in Scotland and points users to the ORR website for statistics for Great Britain. The Department for Regional Development in Northern Ireland publishes<sup>25</sup> summary rail statistics in a quarterly and annual publication. *Rail Passenger Statistics* does not point users to where they are able to find comparable statistics for the UK. As part of the designation as National Statistics, DfT should provide information about comparability with data produced by other UK countries and related statistics published by ORR<sup>26</sup> (Requirement 3).
- 3.6 The Assessment team did not find *Rail Passenger Statistics* easily accessible on the [www.gov.uk](http://www.gov.uk) website, which now hosts DfT's web pages. Neither statistics nor producer department web pages are signposted from the landing page. Once at the DfT landing page, it is not easy to find the link to statistics. We understand that the functionality, relating to the publication of official statistics, of [www.gov.uk](http://www.gov.uk) is still being developed, and that the statistical Head of Profession for DfT is part of a working group liaising with the Government Digital Service, which is developing [www.gov.uk](http://www.gov.uk), and that adequate provision for accessibility will be forthcoming.

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<sup>24</sup> <http://www.transportscotland.gov.uk/strategy-and-research/publications-and-consultations/j205779-89.htm>

<sup>25</sup> <http://www.drdni.gov.uk/index/statistics/stats-catagories.htm>

<sup>26</sup> In relation to Principle 4, Practice 6 of the *Code of Practice*

## Annex 1: Suggestions for improvement

A1.1 This annex includes some suggestions for improvement to *Rail Passenger Statistics*, in the interest of the public good. These are not formally required for designation, but the Assessment team considers that their implementation will improve public confidence in the production, management and dissemination of official statistics.

- |                     |   |
|---------------------|---|
| <b>Suggestion 1</b> | Improve the published information about the use made of the statistics, and in doing so refer to the types of use put forward in the release <i>Annual Bus Statistics: 2011-12</i> published by DfT (para 3.1). |
| <b>Suggestion 2</b> | Refer to the Statistics Authority's Monitoring Brief, <i>The Use Made of Official Statistics</i> when documenting use (para 3.1).   |
| <b>Suggestion 3</b> | Make it clear for users where they are able to find coherent statistics on the rail industry as a whole and include more prominent links to ORR's website in <i>Rail Passenger Statistics</i> (para 3.3).       |
| <b>Suggestion 4</b> | Improve the commentary in the release so that it aids user interpretation of the statistics (para 3.4).   |
| <b>Suggestion 5</b> | Consider the points detailed in annex 2, in seeking to improve the statistical release (para 3.4).  |

## **Annex 2: Compliance with Standards for Statistical Releases**

- A2.1 In October 2010, the Statistics Authority issued a statement on *Standards for Statistical Releases*<sup>27</sup>. While this is not part of the *Code of Practice for Official Statistics*, the Authority regards it as advice that will promote both understanding and compliance with the *Code*. This annex comments on compliance of *Rail passenger numbers and crowding on weekdays in major cities in England and Wales* with the statement on standards.
- A2.2 In implementing any Requirements of this report (at paragraph 1.5) which relate to the content of statistical releases, we encourage the producer body to apply the standards as fully as possible.

### **Appropriate identification of the statistics being released**

- A2.3 The title of *Rail Passenger Statistics* describes the coverage of the statistics, although the period to which the statistics relate is not made clear in the title, since the statistics relate only to the autumn.
- A2.4 'Background notes' to *Rail Passenger Statistics* state that the bulletin is annual and when the next release will be.
- A2.5 The release follows a standard DfT format, it does not include the National Statistics logo since the statistics are currently official statistics.
- A2.6 The release includes the DfT logo on its front page, the name of the responsible statistician and contact details for further information.
- A2.7 The front page of the release includes a contents section but does not include a brief account of what is included in the release, in terms of tables and subjects discussed.

### **Include commentary that is helpful to the non-expert and presents the main messages in plain English**

- A2.8 The release contains key findings on the front page, but does not clearly draw out the main messages from these findings.
- A2.9 The language used in the release is straightforward. The release includes some helpful explanations of the findings and makes comparisons between areas within the country and over time. The release uses graphs to illustrate comparisons although links to relevant tables are not provided. Use language that is impartial, objective and professionally sound.
- A2.10 The text used in the release is impartial and descriptive statements are consistent with the statistics and professionally sound. Non-sampling variability is discussed within the notes and definitions document.

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<sup>27</sup> <http://www.statisticsauthority.gov.uk/news/standards-for-statistical-releases.html>

## **Include information about the context and likely uses**

A2.11 The notes and definitions document includes some information about the policy and operational context in which the statistics have been produced and will be used but this is limited. No information is given, for example, on the performance targets for individual franchise holders. This document provides information about the reliability of the statistics, but does not comment on the quality and reliability of the statistics in relation to the range of potential uses. For example, it does not make clear that the passenger numbers quoted in the release are aggregate figures. Page 2 of *Rail Passenger Statistics 2011* states 'Four hundred and forty three thousand passengers departed from central London during the afternoon peak' when this is a one-off measurement of passengers on a weekday, and not an average measure of passengers over a period of time.

## **Include, or link to, appropriate metadata**

A2.12 The notes and definitions document contains information about the data source, definitions and methods used. It does not include information about how the methods and definitions used relate to European Union or international concepts and classifications. Neither does the release or associated documents include information about comparability with data produced by other UK countries and related statistics published by ORR.

## **Annex 3: Summary of assessment process and users' views**

A3.1 This assessment was conducted from October to December 2012.

A3.2 The Assessment team – Catherine Barham and Emma Bowditch – agreed the scope of and timetable for this assessment with representatives of the Department for Transport in October. The Written Evidence for Assessment was provided on 4 October. The Assessment team communicated with the Department for Transport during November to review compliance with the *Code of Practice*, taking account of the written evidence provided and other relevant sources of evidence.

### **Summary of users contacted, and issues raised**

A3.3 Part of the assessment process involves our consideration of the views of users. We approach some known and potential users of the set of statistics, and we invite comments via an open note on the Authority's website. This process is not a statistical survey, but it enables us to gain some insights about the extent to which the statistics meet users' needs and the extent to which users feel that the producers of those statistics engage with them. We are aware that responses from users may not be representative of wider views, and we take account of this in the way that we prepare Assessment reports.

A3.4 The Assessment team received 4 responses from the user consultation. The respondents were grouped as follows:

Public sector	2
Private sector	2

A3.5 Users of *Rail Passenger Statistics* generally noted that the statistics were useful for their needs although the majority requested that more detailed data on crowding levels by train and route be made available. One user noted some issues with the data which could be made clearer in the release to avoid misinterpretation.

### **Key documents/links provided**

Written Evidence for Assessment document







