# Train loading data description

Version control

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| **Version** | **Date** | **Comments** |
| v1.0 | 09 Sept 16 | Document created |
| v1.1 | 22 May 17 | Update to ‘Data currency’ |

This document provides a description of the *Train Loading* dataset, pertaining to the passenger loading level of London Underground (LU) trains.

Description of dataset

|  | Train Loading |
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| Description of dataset | This dataset describes the typical LU train loading, for each 15 minute period of the day, between every pair of consecutive stations on each LU line, in both directions.  Train loading is expressed on a scale of 1 to 6, as defined in the train loading scale table below. |
| Origin of dataset | The data set is created by TfL and forms part of the annual Rolling Origin and Destination Survey (RODS).  RODS is an ongoing programme to capture information about journeys on the LU network. Data is reconciled to annual passenger counts as well as summary statistics from the Underground Users Survey. The RODS data is also reconciled to Oyster Origin and Destination flows for stations that have sufficient information. |
| Data currency | The data set reflects surveys and other supporting data collected and processed on an annual basis. |
| Data coverage and geographic description | The data includes train loading between every pair of consecutive stations on each London Underground line.  Stations represent the start and end point for each train loading record. These are grouped by London Underground line and direction of travel. |
| Data lifecycle | The data is updated annually and follows a process of survey and data collection completed late in the calendar year, a period of analysis and collation and followed by a publication early in the following calendar year. |
| Data quality | The data reflects November counts and represents the number of people travelling on a typical (or average) weekday. Therefore, year-on-year RODS fluctuations do not necessarily reflect whole-year annual demand changes. The data is adjusted to remove any abnormal circumstances that may affect demand such as industrial action or long-term closures. |
| Data vocabulary | Train loading is calculated using data that represents the average number of passengers per train which provides the average loading over each 15 minute period.  The data represents train loading between two stations, ‘A’ and ‘B’, for a 15 minute period. Therefore, the data describes the depart train loading from station ‘A’ and the arriving train loading at station ‘B’. |
| Data ownership | The data is owned by Transport for London |
| Data model | The data model for this dataset is described in the section below |

Train loading scale

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| Scale | Definition | Actual measure on train |
| **1** | Very quiet | zero to all seats taken |
| **2** | Quiet | 0 to 2 customer per m2 |
| **3** | Fairly busy | 2 to 3 customers per m2 |
| **4** | Busy | 3 to 4 customers per m2 |
| **5** | Very busy | 4 to 5 customers per m2 |
| **6** | Exceptionally busy | > 5 customers per m2 |

Data model

Train Loading data model

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| Data Field | Data type | Data Description |
| From\_station | Text | Start station (LU station train has departed from) |
| To\_station | Text | End station (LU station train is arriving at) |
| Line | Text | London Underground Line for which train loading is described. One of either:   * Bakerloo * Central * Circle * District * Hammersmith & City * Jubilee * Metropolitan * Northern * Piccadilly * Victoria * Waterloo & City |
| Line\_Direction | Text | Direction of travel of a line. Line direction is binary, in that for each line (in its entirety) there are only two possible, opposing directions\*. One of either:   * EB – eastbound * NB – northbound * SB – southbound * WB – westbound * IR – inner rail (anti-clockwise on Circle Line) * OR – outer rail (clockwise on Circle Line)   \*NB: the circular section of the Circle line has *Line\_Direction* options IR/OR, as defined above, whereas the 2009 Circle line extension section to Hammersmith Underground Station has *Line\_Direction* options EB/WB. |
| Platform\_ Direction | Text | Cardinal point-based direction of travel from a platform, representing the direction physically observed/described when on the platform/in the station. One of either:   * EB – eastbound * NB – northbound * SB – southbound * WB – westbound   NB: *Line\_Direction* does not always align with *Platform\_Direction*. For example, whilst part of the Circle line’s *Line\_Direction* is represented as IR or OR, the *Platform\_Direction* observed on actual platforms is largely EB or WB. |
| NAPTAN\_From | Alphanumeric | National Public Transport Access Node (NAPTAN) reference for station the train has departed from.  NAPTAN is the UK standard for describing points of access to public transport.  NAPTAN is provided in stop area level format, i.e. 940GZZLU(xxx) |
| NAPTAN\_To | Alphanumeric | National Public Transport Access Node (NAPTAN) reference for station the train is arriving at.  NAPTAN is the UK standard for describing points of access to public transport.  NAPTAN is provided in stop area level format, i.e. 940GZZLU(xxx)  NB: Hammersmith, Edgware Road and Paddington Underground Stations have two possible NAPTAN values, depending on the physical station/service being described |
| 0500-0515 | Integer | Typical train loading by time period in 15 minute increments from 0500 to 0200 (following day) expressed on a scale of 1-6 as defined in the above train loading scale table. |
| 0515-0530…n | Integer |