

# ***Rail Delivery Group***

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## **RDG Supplementary Reference Data**

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## Documentation Management

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## Version History

Version	Comments
05-01	STD-1591 Clarifications Required to Descriptions of Flexi Season Tickets (section 7) Undo one of the STD-1591 changes (date format in section 7.4) as the specification was correct all along

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## Terms and Definitions

Term	Meaning
CRS code	A 3-character code issued to every railway station in Britain.
CSV	Comma Separated Values; a standard file format.
Darwin	A system which provides real-time arrival and departure predictions, platform numbers, delay estimates, schedule changes and cancellations. Takes data directly from all TOCs.
JSON	JavaScript Object Notation; a lightweight data-interchange format.
NLC	National Location Code, a four-character alphanumeric code assigned to every retailing location and railway station in Britain..
RDG	Rail Delivery Group.
TIS	Ticket Issuing System. A system accredited by RDG to sell GB rail tickets
TOC	Train Operating Company.
UTF-8	<b>Unicode Transformation Format 8-bit.</b> Is a variable-width encoding that can represent every character in the Unicode character set.  <a href="http://www.utf-8.com/">http://www.utf-8.com/</a> <a href="https://tools.ietf.org/html/rfc3629">https://tools.ietf.org/html/rfc3629</a>
UTF-8 BOM	UTF-8 with <b>Byte Order Mark</b> . In UTF-8 the BOM signature will always appear as the octet sequence EF BB BF as the beginning of the file.  <a href="http://www.utf-8.com/">http://www.utf-8.com/</a> <a href="https://tools.ietf.org/html/rfc3629#page-6">https://tools.ietf.org/html/rfc3629#page-6</a>
WEF	With Effect From (aka Start Date) – date from which the data is valid. For example, a WEF of 01/01/2024 means the data is valid from (and including) the 1 <sup>st</sup> January 2024
WEU	With Effect Until (aka End Date) – date until the data is valid. For example, a WEU of 25/03/2024 means the data is valid up to (and including) the 25 <sup>th</sup> March 2024

# 1. Introduction

## 1.1 General

1.1.1 The purpose of this document is to provide information on, and rules for using, the following RDG Supplementary location reference data:

- 
- PlusBus excluded station pairs.
- PlusBus Scheme (website) data.
- Fare Group Invalid Stations.
- CRS Stations.
- Welsh Station Names.
- Flexi products.
- Darwin Average Train Loading data.
- Supplement fulfilment methods data.

## 1.2 Data definitions and use

1.2.1 The CSV details are included against each data type below.

1.2.2 Data in the JSON and CSV variants is identical, consumers are free to choose whichever format best suits their needs/application.

1.2.3 The data is published as a full refresh. Flexi product data is linked to daily updates so can change on a daily basis.

1.2.4 Where start and end dates are specified, if converted into timestamps then start dates start at 00:00:00 and end dates finish at 23:59:59. For example:

Field	Date	Timestamp equivalent
Start date	23-11-2020	23-11-2020 00:00:00
End Date	31-12-2020	31-12-2020 23:59:59

## 2. PlusBus excluded station pairs

### 2.1 Overview

2.1.1 PlusBus product rules state that a PlusBus add-on is only valid for journeys to or from a PlusBus zone. PlusBus add-on tickets must not be issued for travel between two locations within the same PlusBus zone.

Examples:

- Derby and Buxton are both stations with PlusBus add-ons, but not in the same PlusBus zone. Therefore, for journeys between these locations a TIS *may* offer a PlusBus add-on for one or both locations.
- Buxton and Matlock stations are both available with PlusBus add-ons, but are within the same PlusBus zone, so TIS must not offer PlusBus add-ons when travel is between these two locations.

2.1.2 The excluded station pairs data must be used by TIS to determine whether a PlusBus fare can be offered as an add-on at either end of a rail journey.

2.1.3 The data is updated as and when required by RDG, TIS should check on a weekly basis for updates (the data includes a 'last updated' field) to ensure the latest data is used.

2.1.4 The data consists of a list of station pairs between which a PlusBus add-on ticket is **not** valid. It must be checked prior to offering a PlusBus add-on to ensure invalid PlusBus add-on tickets are not offered for sale.

2.1.5 Each station is identified by its NLC and each record includes a 'With Effect From' ('wef') and 'With Effect Until' ('weu') date to indicate its period of validity.

2.1.6 The station pairs are reversible, such that a record specifying 'from' station A 'to' station B also applies 'from' station B 'to' station A.

### 2.2 Access points

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/PlusbusExcludedStationPairs02-00.csv>

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/PlusbusExcludedStationPairs02-00.json>

### 2.3 JSON: PlusbusExcludedStationPairsnn-nn.json

```
{
  "lastUpdated": "2018-08-21T15:20:55.029Z",
  "excludedPairs": [
    {
      "wef": "2018-05-20",
      "weu": "2018-09-01",
      "stations": [
        {
          "fromNlc": "3982",
          "toNlc": "3981"
        },
        {
          "fromNlc": "8976",
          "toNlc": "8905"
        }
      ]
    }
  ]
}
```

```

        "fromNlc": "2552",
        "toNlc": "2576"
    },
    Etc...

```

**2.4 CSV: PlusbusExcludedStationPairsnn-nn.csv**

Key	Field	Field Name	Data Type	Max Length	Description
Y	1	With Effect From	Date	10	Date from which the record takes effect. Format YYYY-MM-DD.
Y	2	With Effect Until	Date	10	Date until the record is valid. Format YYYY-MM-DD.
Y	3	From Station	String	4	NLC for first station in station pair.
Y	4	To Station	String	4	NLC for second station of station pair.



### 3. PlusBus scheme web pages

#### 3.1 Overview

3.1.1 Each PlusBus scheme has an associated web page published containing information relating to that scheme such as interchange stations and zone maps. For example, the following page gives information relating to the York PlusBus scheme.

<https://www.plusbus.info/york>

3.1.2 Each entry in the data contains an NLC and the associated web page URL.

#### 3.2 Access points

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/PlusBusWebPages01-00.csv>

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/PlusBusWebPages01-00.json>

#### 3.3 JSON: PlusBusWebPages01-00.json

```
{
  "lastUpdated": "2022-06-20T14:41:18.000Z",
  "plusBusWebPages": [
    {
      "nlc": "K962",
      "webPage": "www.plusbus.info/morpeth"
    },
    {
      "nlc": "H813",
      "webPage": "www.plusbus.info/aberdare"
    },
    {
      "nlc": "H814",
      "webPage": "www.plusbus.info/aberdeen"
    }
  ],
  ...
}
```

#### 3.4 CSV: PlusBusWebPages01-00.csv

Key	Field	Field Name	Data Type	Max Length	Description
Y	1	PlusBus location code	String	4	NLC for the scheme location.
	2	PlusBus URL	String	255	URL linking to a web page containing information relating to that scheme.

## 4. Fare Group Invalid Stations data

### 4.1 Overview

- 4.1.1 Fares may be priced to/from fare groups, enabling ticket validity to two or more locations (e.g. a ticket priced to 'Colchester Stations' fare group enables the customer to travel to either 'Colchester' or 'Colchester Town').
- 4.1.2 However, which locations are included within a fare group is not always clear and can cause confusion for customers as to the locations they can travel to/from with the ticket they have purchased, and additional work for staff to manage/help those customers.
- 4.1.3 For example, it is reasonable for customers to assume that a ticket priced to 'Birmingham Stations' allows them travel to/from 'Birmingham International'; however, 'Birmingham Stations' only covers travel to/from 'Birmingham New Street', 'Birmingham Moor Street' or 'Birmingham Snow Hill' and tickets to/from 'Birmingham Stations' are **not** valid to/from 'Birmingham International'.
- 4.1.4 The Fare Group Invalid Stations data is provided to *optionally* enable TIS and other information systems to **inform** customers of relevant locations which are not covered by a respective fare group.

### 4.2 Access points

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/FareGroupInvalidStations02-00.csv>

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/FareGroupInvalidStations02-00.json>

### 4.3 JSON: FareGroupInvalidStationsnn-nn.json

```
{
  "lastUpdated": "2019-05-24T14:52:44.000Z",
  "invalidStationsDateRanges": [
    {
      "wef": "2019-05-23",
      "weu": "2999-12-31",
      "invalidStations": [
        {
          "fareGroup": "0418",
          "invalidStation": "1215"
        },
        {
          "fareGroup": "0438",
          "invalidStation": "2961"
        },
        {
          "fareGroup": "0411",
          "invalidStation": "7457"
        },
        {
          "fareGroup": "0411",
          "invalidStation": "4787"
        }
      ]
    }
  ]
}
```

**4.4 CSV: FareGroupInvalidStationsnn-nn.csv**

Key	Field	Field Name	Data Type	Max Length	Description
Y	1	With Effect From	Date	10	Date from which the record takes effect. Format YYYY-MM-DD.
Y	2	With Effect Until	Date	10	Date until the record is valid. Format YYYY-MM-DD.
Y	3	Fare Group	String	4	NLC for fare group.
Y	4	Station	String	4	NLC for an invalid location

## 5. Welsh Station Names data<sup>1</sup>

### 5.1 Overview

- 5.1.1 The franchise for Transport for Wales has been let with commitments to promote the use of the Welsh language and to provide a fully bi-lingual service.
- 5.1.2 RDG currently support station aliases which includes Welsh station names in some instances. However, the aliases are not identified as Welsh station names and are indistinguishable from other aliases (e.g. Paragon for Hull)
- 5.1.3 The data contains the Welsh station names with and without diacritics. Diacritics are marks placed above or below (or sometimes next to) a letter in a word to indicate pronunciation. The Welsh name with diacritics should be used **unless** a system cannot display diacritics, in which case the name without diacritics can be used as an English approximation. For example, Aberdâr should be used wherever possible, but if not possible then Aberdar can be used.
- 5.1.4 This data, sourced from Transport for Wales Rail Services, contains a list of stations with the approved Welsh language station name. The data is supplied to RDG in a Microsoft Excel format and exported into the json and csv formats provided under this standard. To support diacritics the files are exported using UTF-8 BOM encoding (Note: use of UTF-8 BOM is imposed by Microsoft, source: [https://en.wikipedia.org/wiki/Byte\\_order\\_mark](https://en.wikipedia.org/wiki/Byte_order_mark)).
- 5.1.5 The stations provided in this list may be outside of Wales, as some services which serve Welsh locations also call at these locations.

### 5.2 Access points

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/WelshStationNames02-00.csv>

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/WelshStationNamesByNlc02-01.csv>

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/WelshStationNames02-00.json>

### 5.3 JSON: WelshStationNamesnn-nn.json

```
{
  "lastUpdated": "2020-10-20T14:20:44.000Z",
  "welshNamesDateRanges": [
    {
      "wef": "2019-11-20",
      "weu": "2099-12-31",
      "welshNames": [
        {
          "crs": "ABA",
          "description": "Aberdâr",
          "descriptionWithoutDiacritics": "Aberdar"
        },
        {
          "nlc": "H813",
          "description": "Aberdâr+Bus",
          "descriptionWithoutDiacritics": "Aberdar+Bus"
        },
        Etc...
      ]
    }
  ]
}
```

---

<sup>1</sup> The data is maintained by Transport for Wales Rail Services (TfWRS).

**5.4 CSV: WelshStationNames02-00.csv**

Key	Field	Field Name	Data Type	Max Length	Description
Y	1	With Effect From	Date	10	Date from which the record takes effect. Format YYYY-MM-DD.
Y	2	With Effect Until	Date	10	Date until the record is valid. Format YYYY-MM-DD.
Y	3	CRS code	String	3	CRS code for station.
	4	Welsh Station Name	String	254	Welsh Station name, including diacritics where appropriate.
	5	Welsh station Name without diacritics	String	254	Welsh station name with diacritics removed.

**5.5 CSV: WelshStationNamesByNlc02-01.csv and above**

5.5.1 An NLC file has been added to support locations which do not have CRS codes (e.g. PlusBus locations).

Key	Field	Field Name	Data Type	Max Length	Description
Y	1	With Effect From	Date	10	Date from which the record takes effect. Format YYYY-MM-DD.
Y	2	With Effect Until	Date	10	Date until the record is valid. Format YYYY-MM-DD.
Y	3	NLC	String	4	NLC code for a location
	4	Welsh Station Name	String	254	Welsh Station name, including diacritics where appropriate.
	5	Welsh station Name without diacritics	String	254	Welsh station name with diacritics removed.

## 6. Flexi products

### 6.1 Overview

- 6.1.1 The Department for Transport has asked Train Operating Companies (TOCs) to introduce flexi products, aimed at part-time commuters, on most routes that currently offer a seven-day season ticket.
- 6.1.2 These flexi products, which may be either a flexi-season or one of two forms of a flexi-carnet (see Authority to travel table below) provide a bundle of tickets valid for use within a specified period.

Authority to travel	Flexi-Season a pass that gives an unlimited number of journeys, between origin and destination, on the day of travel, subject to Route restrictions.	Flexi-Carnet (Single) a ticket for a single journey either from origin to destination or from destination to origin	Flexi-Carnet (Return) a ticket for a return journey between an origin and destination
<b>RSPS5045: TKT_TYPE</b>	N	S	R

For example: TOC A may choose to offer a flexi-ticket with a Flexi-Season style authority to travel, whereas TOC B may choose to offer a flexi-ticket with a Flexi-Carnet (Return) style authority to travel.

- 6.1.3 These flexi products will only be available via the fulfilment methods defined in RCS data. See RSPS2001: 'Retail Control Service - Interface Control Document'.
- 6.1.4 Like regular season tickets, these flexi products will be available only to single passengers (i.e. Min and Max passenger count both equal to 1).
- 6.1.5 As a short-term solution, attributes that cannot be defined in RSPS5045: 'Fares and Associated Data Feed Interface Specification' have been added to the data set. In the longer-term, it is intended that these attributes will be captured, along with others, in a new RDG Standard for Fares and Associated Data. These attributes are:
  - 6.1.5.1 **Bundle size:** to define the number of journeys/days travel allowed;
  - 6.1.5.2 **Bi-directional:** to define whether a ticket can be used in either direction (i.e. the same way a season ticket can be used in both directions), and
  - 6.1.5.3 **Transferable:** defines whether a ticket can be transferred to another passenger for use.
- 6.1.6 This feed uses a daily update file from retrieve the latest product (ticket type) data. It will align with the data in RSPS5045, using the same ticket type, WEU key defined in that standard. This should make it easy for consumers to combine this data with RSPS5045 data, but it does mean that data in this standard may seem to be duplicated across different WEF/WEU periods. This is not a data error but a natural result of maintaining alignment to RSPS5045.
- 6.1.7 This data has been created for national flexi products requested by the DfT. However, if TOCs choose to introduce new products, or update existing products, to align with 6.1.2 - above, these may also be added to this feed (at the discretion/request of the relevant TOC).

### 6.2 Access points

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/FlexiProducts02-01.csv>

http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/FlexiProducts02-01.json

### 6.3 JSON: FlexiProductsnn-nn.json

```
{
  "lastUpdated": "2020-08-20T08:24:27",
  "ticketCodes": [{
    "FL1": [{
      "startDate": "2016-04-30",
      "endDate": "2999-12-31"
      "bundleSize": "2",
      "bi-directional": "1",
      "transferable": "0"
    }],
    "FL2": [{
      "startDate": "2019-11-07",
      "endDate": "2020-07-21"
      "bundleSize": "10",
      "bi-directional": "0",
      "transferable": "0"
    }], {
      "startDate": "2020-07-22",
      "endDate": "2999-12-31"
      "bundleSize": "10",
      "bi-directional": "0",
      "transferable": "0"
    }
  ]
}
```

Etc...

### 6.4 CSV: FlexiProductsnn-nn.csv

Key	Field	Field Name	Data Type	Max Length	Description
Y	1	Ticket Code	String	3	3-character ticket type, e.g. FL1
	2	Start Date	Date	10	With Effect From date. Format: YYYY/MM/DD
Y	3	End Date	Date	10	With Effect Until date. Format: YYYY/MM/DD

Key	Field	Field Name	Data Type	Max Length	Description
	4	Bundle size	Integer		<p>Number of journeys allowed (flexi carnet style). i.e. a bundle of 10 allows 10 single or return journeys only (depending on the TKT_Type)</p> <p>Number of days travel allowed (flexi season style). i.e. a bundle of 10 allows 10 days of travel with unlimited number of journeys on those days</p>
	5	Bi-directional	Integer		<p>1 = True 0 = False</p> <p>If True, then the ticket can be used in either direction (i.e. the same way a season ticket can be used in both directions).</p>
	6	Transferable	Integer		<p>1 = True 0 = False</p> <p>If True, then the ticket can be transferred to another passenger for use.</p> <p>If False, the ticket can only be used by an associated passenger (e.g. the same way a season ticket can only be used in conjunction with a photocard).</p>



## 7. Rail stations

### 7.1 Overview

7.1.1 This data may be used to determine whether a location, defined by its CRS code, is a GB rail station.

7.1.2 This data is optional and provided for information purposes only. It should not be used to impact journey planning/ticket selection or sales.

### 7.2 Access points

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/RailStations02-00.csv>

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/RailStations02-00.json>

### 7.3 JSON: RailStationsnn-nn.json

```
{
  "lastUpdated": "2018-08-21T15:20:55.029Z",
  "stations": [
    "AAP",
    "AAT",
    "ABA",
    etc...
```

### 7.4 CSV: RailStationsnn-nn.csv

Key	Field	Field Name	Data Type	Max Length	Description
Y	1	CRS code	String	3	CRS code for a GB rail station.

## 8. Supplement fulfilment methods data

### 8.1 Overview

- 8.1.1 One of the features of the eTicket specification is support for the fulfilment of standalone supplements to eTicket. However, it is not possible to define the permitted fulfilment methods as supplements do not have a flow (unlike conventional ticket types).
- 8.1.2 Standalone supplements are issued separate to and unconnected to a travel ticket, unlike advance or package fares.
- 8.1.3 This data feed identifies which 'flow level maintained' fulfilment methods that each TOC accepts for a given supplement. Supplements that are not 'flow level maintained' will use a dummy TOC code value. Note that, currently, only eTicket data is maintained.

### 8.2 Access points

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/SupplementFulfilment01-00.csv>

<http://datafeeds.rdg.s3.amazonaws.com/RSPS5052/SupplementFulfilment01-00.json>

### 8.3 JSON: SupplementFulfilment01-00.json

The following example indicates that:

- supplement 1FX on TOC SN may be fulfilled to RCS fulfilment methods 00006 and 00007.
- supplement 1FX on TOC XC may be fulfilled to RCS fulfilment method 00006.
- supplement 1LS on TOC SN may be fulfilled to RCS fulfilment method 00006.

```
{
  "lastUpdated": "2022-11-24T16:03:35+00:00",
  "supplements": [
    {
      "code": "1FX",
      "tocs": [
        {
          "toc": "SN",
          "fulfilmentMethods": ["00006", "00007"]
        },
        {
          "toc": "XC",
          "fulfilmentMethods": ["00006"]
        }
      ]
    },
    {
      "code": "1LS",
      "tocs": [
        {
          "toc": "SN",
          "fulfilmentMethods": ["00006"]
        }
      ]
    }
  ],
  "Etc..."
}
```

**8.4 CSV: SupplementFulfilment01-00.csv**

Key	Field	Field Name	Data Type	Max Length	Description
Y	1	Supplement code	String	3	3-character Supplement code as defined in RSPS5045: 'Fares and Associated Data Feed Interface Specification'.  See Supplements   Supplement record.
Y	2	TOC ID	String	2	2-character TOC ID as defined in RSPS5045: 'Fares and Associated Data Feed Interface Specification'.  See TOCs   TOC record.  Or dummy TOC code ZZ.
Y	3	Fulfilment method code	String	5	5-character code as defined in RSPS2001: 'Retail Control Service - Interface Control Document'.  See Reference Data   Fulfilment Method Type   Fulfilment Method Code.

End.