

Rail Delivery Group



IPTIS Data Management Service Reference Data

**Subject Ref: RSPS5044
Version: P-04-01**

Documentation Management

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The Version Control and Release Management of this documentation is managed by the Rail Delivery Group's Compliance Standards team (Compliance.Standards@raildeliverygroup.com).

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Glossary

Term	Meaning
CRS/CRS Code	A 3-digit alpha code issued to every railway station in Britain
IDMS	IPTIS Data Management Service
IPTIS	Integrated Public Transport Information System
NLC	National Location Code
NRE	National Rail Enquires
OJP	NRE's 'Online Journey Planner'
RSP	Rail Settlement Plan
TIPLOC	Timing point location
TIS	Ticket Issuing System
XML	eXtensible Markup Language
XSD	XML Schema Definition

1. Introduction

1.1 General

1.1.1 The purpose of this document is to provide information on the use of IPTIS Data Management Service (IDMS) data.

1.1.2 IDMS is a system used by National Rail Enquires (NRE) to maintain data used in their websites and other channels.

1.1.3 IDMS distributes a standard and enhanced set of reference data to provide consistency within the customer experience.

1.1.4 Ticket Issuing System (TIS) suppliers must incorporate the following IDMS data into their systems.

- Fare Locations Reference Data
- Stations Reference Data
- Fare Route Restrictions Reference Data
- Ticket Types Reference Data
- Discount Schemes Reference Data
- Fare Group Permitted Stations Reference Data
- Group Location NLC to CRS Reference Data

1.1.5 Additional IDMS data is available as follows.

- Fare Group Members Reference Data
- Rail Rovers Reference Data
- Service Providers Reference Data
- Fixed Links Reference Data

1.1.6 For information on how to obtain the data, visit the [Rail Data Marketplace](https://raildata.org.uk) at <https://raildata.org.uk> .

2. Data definitions and use

2.1 General

2.1.1 Distribution

TIS must download the latest IDMS data and update their systems on a daily basis.

2.1.2 Attended and Unattended TIS Elements

The <AttendedTIS> and <UnattendedTIS> elements are redundant and should be ignored by TIS.

2.1.3 OJPEntabled Element

The <OJPEntabled> element indicates whether NRE show the data in their Online Journey Planner. The element contains either true or false. The element is of no relevance to TIS.

2.1.4 Date and Time of Data

Start and end dates shall be converted into timestamps using the format below:

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

3. Fare Locations Reference Data

3.1 Overview

This data must be used when printing or displaying Fare Locations.

The hierarchy to be used:

For fulfilment media printing/display

1st	RSP Display Name	<RSPDisplayName>
2nd	OJP Display Name	<OJPDisplayName>
3rd	Industry Data	<Name>

For non-fulfilment display on screens

1st	OJP Display Name	<OJPDisplayName>
2nd	Industry Data	<Name>

3.2 Version 1.2

3.2.1 XML

FareLocationsRefData.xml

3.2.2 XSD

FareLocationsRefData_v1.2.xsd

3.2.3 XML Extract

```
<FareLocation>
  <Nlc>0254</Nlc>
  <Name>COLCHESTER STNS</Name>
  <OJPEnabled>true</OJPEnabled>
  <OJPDisplayName>Colchester or Colchester
  Town</OJPDisplayName>
  <RSPDisplayName>Colchester/Colchester
  Town</RSPDisplayName>
  <AttendedTIS>true</AttendedTIS>
  <UnattendedTIS>true</UnattendedTIS>
</FareLocation>
```

4. Stations Reference Data

4.1 Overview

4.1.1 These are the geographic station names output from journey planning.

The hierarchy to be used:

For fulfilment media printing/display

1st	RSP Display Name	<RSPDisplayName>
2nd	OJP Display Name	<OJPDisplayName>
3rd	Industry Data	<Name>

For non-fulfilment display on screens

1st	OJP Display Name	<OJPDisplayName>
2nd	Industry Data	<Name>

4.1.2 Note that a single location may have multiple Timing Point Locations (TIPLOCs) (For example, Clapham Junction) and where this happens there will be a separate record in this data set for each CRS/TIPLOC combination.

4.1.3 Note that <OJPAdviceMessage> element is of no relevance to TIS.

4.2 Version 1.2

4.2.1 XML

StationsRefData.xml

4.2.2 XSD

StationsRefData_v1.2.xsd

4.2.3 XML Extract

```
<Station>
  <Nlc>3579</Nlc>
  <Name>Devonport</Name>
  <Tiploc>DEVNPRT</Tiploc>
  <CRS>DPT</CRS>
  <OJPEnabled>>true</OJPEnabled>
  <OJPDisplayName>Devonport (Devon)</OJPDisplayName>
  <OJPAdviceMessage />
  <RSPDisplayName />
  <AttendedTIS>>true</AttendedTIS>
  <UnattendedTIS>true</UnattendedTIS>
</Station>
```


5. Fare Route Restrictions Reference Data

5.1 Overview

5.1.1 This data delivers more meaningful and simpler route descriptions.

5.1.2 The data contains Start Date and End Date information. The TIS derives which text to print by using the first valid date of outward travel for the product being fulfilled.

The hierarchy to be used:

For fulfilment media printing/display

1st	RSP Display Name	<RSPDisplayName>
2nd	OJP Display Name	<OJPDisplayName>
3rd	Industry Data	<Name>

For non-fulfilment display on screens

1st	OJP Display Name	<OJPDisplayName>
2nd	Industry Data	<Name>

5.2 Version 1.2

5.2.1 XML

FareRouteRestrictionsRefData.xml

5.2.2 XSD

FareRouteRestrictionsRefData_v1.2.xsd

5.2.3 XML Extract

```
<FareRouteRestriction>
  <Code>00003</Code>
  <Name>STRATFORD/LONDON</Name>
  <Description>STRATFORD/LONDON</Description>
  <StartDate>1996-11-14</StartDate>
  <EndDate>2999-12-31</EndDate>
  <OJPDisplayName>
    Valid only for travel via (changing trains or passing
    through) Stratford or London Terminals.
  </OJPDisplayName>
  <RSPDisplayName>
    Valid only for travel via Stratford or London
    Terminals
  </RSPDisplayName>
</FareRouteRestriction>
```

6. Ticket Types Reference Data

6.1 Overview

Provides a consistent set of data for Ticket Type information. Advice text is available for explanatory text to assist the seller and customer.

The hierarchy to be used:

For fulfilment media printing/display

1st	RSP Display Name	<RSPDisplayName>
2nd	OJP Display Name	<OJPDisplayName>
3rd	Industry Data	<Name>

For non-fulfilment display on screens

1st	OJP Display Name	<OJPDisplayName>
2nd	Industry Data	<Name>

For Advice

1st	RSP Advice	<RSPAdvice>
2nd	OJP Advice	<OJPAdviceMessage>
3rd	No Advice	

6.2 Version 1.2

6.2.1 XML

TicketTypesRefData.xml

6.2.2 XSD

TicketTypesRefData_v1.2.xsd

6.2.3 XML Extract

```
<TicketType>
  <Code>W1A</Code>
  <Name>ADVANCE 1ST</Name>
  <OJPEnabled>>true</OJPEnabled>
  <OJPDisplayName>Advance Single (1st Class)</OJPDisplayName>
  <OJPAdviceMessage />
  <RSPDisplayName>Advance Single 1st</RSPDisplayName>
  <RSPAdvice />
  <AttendedTIS>>true</AttendedTIS>
  <UnattendedTIS>>false</UnattendedTIS>
</TicketType>
```

7. Discount Schemes Reference Data

7.1 Overview

This contains the various discount schemes available. It includes both national and local schemes.

The hierarchy to be used:

For fulfilment media printing/display

1st	RSP Display Name	<RSPDisplayName>
2nd	OJP Display Name	<OJPDisplayName>
3rd	Industry Data	<Name>

For non-fulfilment display on screens

1st	OJP Display Name	<OJPDisplayName>
2nd	Industry Data	<Name>

7.2 Version 1.0

7.2.1 XML

RailcardsRefData.xml

7.2.2 XSD

RailcardsRefData_v1.2.xsd

7.2.3 XML Extract

```
<Railcard>
  <Name>WEST HIGHLAND RAILCD</Name>
  <Code>WHC</Code>
  <OJPEnabled>>false</OJPEnabled>
  <OJPDisplayName>Highland Railcard : West Scotland</OJPDisplayName>
  <RSPDisplayName>West Highland Railcard</RSPDisplayName>
  <AttendedTIS>>true</AttendedTIS>
  <UnattendedTIS>>true</UnattendedTIS>
</Railcard>
```

8. Fare Group Permitted Stations Reference Data

For ease of reading, for the purposes of this section a FareGroupNlc / FareLocationNlc / RouteCode / StartDate / EndDate combination will be referred to as a “Group Flow”.

8.1 Overview

8.1.1 This data maps fare groups to specific origins / destinations. It is provided to enable TIS to **inform** customers, for a given fare, which specific group members the fare is valid for.

8.1.2 The data is reversible, so that permitted stations listed for a Group Flow are valid for tickets from the FareLocationNlc to the FareGroupNlc **or** for tickets from the FareGroupNlc to the FareLocationNlc.

8.1.3 For all fare groups **except** London Terminals (1072), if no Fare Group Permitted Stations data is supplied for a Group Flow, then the TIS can inform customers that fares on that flow are valid to all members of the group.

8.1.4 For London Terminals (1072), if no Fare Group Permitted Stations data is supplied for a Group Flow then no information is available regarding which stations (within the London Terminals fare group) the fare is valid to/from. i.e. the customer should be informed that no information is available as to which London Terminals the ticket is valid to/from and warned they may wish to check before purchase/travel, rather than the journey be marked as invalid in any way.

8.1.5 When a journey starts at a station which is part of a Group Station, it must be clear that the first rail leg of the journey has to be made on National Rail services from a valid station within the group.

When a journey finishes at a station which is part of a Group Station, it must be clear that the last rail leg of the journey has to be made on National Rail services to a valid station within the group.

When a journey both starts and ends at a station which is part of a Group Station, it must be clear that both the first rail leg and last rail leg of the journey have to be made on National Rail services.

8.2 Version 1.0

8.2.1 XML

FareGroupPermittedStations_v1.0.xml

8.2.2 XSD

FareGroupPermittedStations_v1.0.xsd

8.2.3 XML Extract

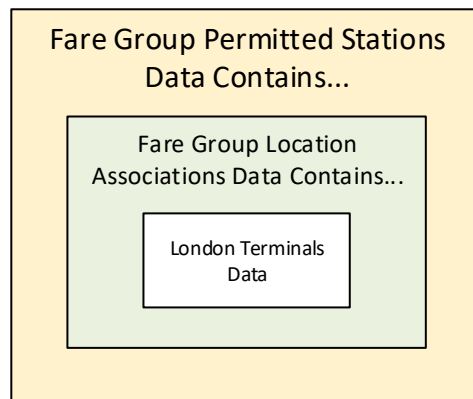
```

<PermittedStations
  FareGroupNlc="1072" FareLocationNlc="6836" RouteCode="00000"
  StartDate="2015-08-27" EndDate="2999-12-31">
  <Crs>LST</Crs>
</PermittedStations>
<PermittedStations
  FareGroupNlc="0259" FareLocationNlc="0375" RouteCode="00000"
  StartDate="2017-01-02" EndDate="2999-12-31">
  <Crs>EBR</Crs>
  <Crs>EBT</Crs>
</PermittedStations>
<PermittedStations
  FareGroupNlc="0259" FareLocationNlc="0375" RouteCode="00411"
  StartDate=
  "2017-01-02" EndDate="2999-12-31">
  <Crs>EBR</Crs>
  <Crs>EBT</Crs>
</PermittedStations>
    
```

8.2.4 Notes

Note this reference data extends and supersedes the Fare Group Location Associations Reference Data (which in turn extended and superseded the London Terminals Reference Data).

Diagrammatically this can be expressed as:



8.2.5 Worked Examples

For the avoidance of doubt, wording in these worked examples is for *indicative* purposes only. RDG does not mandate how TIS present Fare Group Permitted Stations Data, only that when presented it is accurate (i.e., reflects the supplied data feed).

8.2.5.1 Example 1 – location to group

Assume Fare Group Permitted Stations data specifies the following:

```
<PermittedStations
  FareGroupNlc="0429" FareLocationNlc="1534"
  RouteCode="00000"
  StartDate="2018-05-21" EndDate="2999-12-31">
  <Crs>DCH</Crs>
</PermittedStations>
```

For an “Any Permitted” ticket printed as “Leagrave to Dorchester Stations” (or vice versa), this data allows a TIS to inform users that:

“This ticket is only valid between Leagrave and Dorchester South. It is not valid between Leagrave and Dorchester West. The last rail leg of the journey must be made on National Rail services.”

8.2.5.2 Example 2 – group to group, both specified

Assume Fare Group Permitted Stations data specifies the following:

```
<PermittedStations
  FareGroupNlc="0438" FareLocationNlc="1072"
  RouteCode="00129"
  StartDate="2018-05-21" EndDate="2999-12-31">
  <Crs>DGT</Crs>
  <Crs>MAN</Crs>
  <Crs>MCO</Crs>
</PermittedStations>

<PermittedStations
  FareGroupNlc="1072" FareLocationNlc="0438"
  RouteCode="00129"
  StartDate="2018-05-21" EndDate="2999-12-31">
  <Crs>KGX</Crs>
  <Crs>LST</Crs>
  <Crs>MOG</Crs>
  <Crs>OLD</Crs>
  <Crs>STP</Crs>
</PermittedStations>
```

For a “via Chesterfield” ticket printed as “Manchester Stations to London Terminals” (or vice versa), this data allows a TIS to inform users that:

*“This ticket is only valid **between** Deansgate or Manchester Piccadilly or Manchester Oxford Road **and** London Kings Cross or London Liverpool Street or Moorgate or Old Street or London Saint Pancras International. It is not valid between any other*

Manchester and London stations. The first and last rail leg of the journey must be made on National Rail services.”

8.2.5.3 Example 3 – group to group, one specified

Assume Fare Group Permitted Stations data specifies the following:

```
<PermittedStations
  FareGroupNlc="0411" FareLocationNlc="0254"
  RouteCode="00000"
  StartDate="2018-05-21" EndDate="2999-12-31">
  <Crs>SOV</Crs>
</PermittedStations>
```

For an “Any Permitted” ticket printed as “Colchester Stations to Southend Stations” (or vice versa), this data allows a TIS to inform users that:

*“This ticket is only valid **between** Colchester or Colchester Town **and** Southend Victoria. It is not valid **between** Colchester or Colchester Town **and** Southend Central. The first and last rail leg of the journey must be made on National Rail services.”*

9. Group Location NLC to CRS Reference Data

9.1 Overview

This contains Group Location NLC to CRS code mappings. This data is required to produce some e-tickets, where CRS codes are mandatory fields for all locations.

9.2 Version 1.0

9.2.1 XML

Group_Location_NLC_TO_CRIS_CODE_Mapping.xml

9.2.2 XSD

group_locations.xsd

9.2.3 XML Extract

```
<group_locations
xmlns="http://www.rdg.co.uk/schema/groupnlctocrs" >
  <location nlc="0254" crs="CCL" />
  <location nlc="0258" crs="CAF" />
  <location nlc="0259" crs="EDE" />
  <location nlc="0260" crs="FBO" />
  <location nlc="0262" crs="PNG" />
  <location nlc="0438" crs="MCR" />
  <location nlc="0440" crs="POS" />
  <location nlc="0441" crs="NWK" />
  <location nlc="0443" crs="TYM" />
  <location nlc="0444" crs="WAK" />
  <location nlc="0445" crs="WRG" />
  <location nlc="0446" crs="WIG" />
  <location nlc="0447" crs="WRC" />
  <location nlc="0449" crs="CYD" />
  <location nlc="1072" crs="LON" />
  <location nlc="1780" crs="BOO" />
  <location nlc="4452" crs="THK" />
  <location nlc="5564" crs="LAT" />
  <location nlc="7468" crs="TIB" />
  <location nlc="7934" crs="BCR" />
  <location nlc="H584" crs="LHR" />
  <location nlc="M190" crs="BLF" />
  .
  .
</group_locations>
```


10. Fare Group Members Reference Data

10.1 Overview

10.1.1 This data provides information on which Fare Locations are within a Fare Group. For example, NLC 0254, 'Colchester or Colchester Town' contains location NLCs 6853, 'Colchester Town' and 6861, 'Colchester'.

10.1.2 This data is derived from RSPS5045: 'Fares and Associated Data Feed Interface Specification' – any user already consuming location data from RSPS5045 can ignore this dataset.

10.2 Version 1.0

10.2.1 XML

FareGroupMembers_v1.0.xml

10.2.2 XSD

FareGroupMembers_v1.0.xsd

10.2.3 XML Extract

```
<FareGroup>
  <Nlc>0254</Nlc>
  <FareLocation>
    <Nlc>6853</Nlc>
  </FareLocation>
  <FareLocation>
    <Nlc>6861</Nlc>
  </FareLocation>
</FareGroup>
<FareGroup>
  <Nlc>0258</Nlc>
  <FareLocation>
    <Nlc>5047</Nlc>
  </FareLocation>
  <FareLocation>
    <Nlc>5077</Nlc>
  </FareLocation>
</FareGroup>
```

11. Rail Rovers Reference Data

11.1 Overview

Contains customer friendly display name data for the 'active' Rovers and Rangers. It includes both national and local schemes.

The hierarchy to be used:

For fulfilment media printing/display

1st	OJP Display Name	<OJPDisplayName>
2nd	Industry Data	<Description>

For non-fulfilment display on screens

1st	OJP Display Name	<OJPDisplayName>
2nd	Industry Data	<Description>

11.2 Version 1.0

11.2.1 XML

RailRoversRefData_v1.0.xml

11.2.2 XSD

RailRoversRefData_v1.0.xsd

11.2.3 XML Extract

```
<RailRover>
  <Code>14R</Code>
  <Description>ALL LINE ROVER 14DAY </Description>
  <OJPEnabled>false</OJPEnabled>
  <OJPDisplayName>All Line Rover 14 Days</OJPDisplayName>
</RailRover>
```

Note: The <Description> element may contain trailing spaces as per the example above. Trailing spaces should be removed when used.

12. Service Providers Reference Data

12.1 Overview

Contains customer friendly operator display names.

The hierarchy to be used:

For fulfilment media printing/display

1st OJP Display Name <OJPDisplayName>

2nd Industry Data <Name>

For non-fulfilment display on screens

1st OJP Display Name <OJPDisplayName>

2nd Industry Data <Name>

12.2 Version 1.1

12.2.1 XML

ServiceProvidersRefData_v1.1.xml

12.2.2 XSD

ServiceProvidersRefData_v1.1.xsd

12.2.3 XML Extract

```
<ServiceProvider>
  <Id>14</Id>
  <Name>Chiltern Railways Co.</Name>
  <TocCode>CH</TocCode>
  <OJPEnabled>true</OJPEnabled>
  <OJPDisplayName>Chiltern Railways</OJPDisplayName>
  <OJPSalesNumber />
  <OJPKnowledgeBase />
</ServiceProvider>
```

Note: The <OJPSalesNumber> and <OJPKnowledgeBase> elements are not maintained and should be ignored. The <Id> element is specific to IDMS and can either be ignored or user as a unique key for the Service Provider. The <TocCode> element will also be unique for each Service Provider entry.

13. Fixed Links Reference Data

13.1 Overview

13.1.1 Defines NRE added fixed links to/from Zone1/DLR locations to help with origin and destination journey planning.

13.1.2 Whilst this feed does not include the RSP fixed links, the format is designed to closely align with the Additional Fixed Link File format specified in RSPS5046: 'Timetable Information Data Feed Interface Specification' v03-00 and above, to enable users to easily merge the two sources of fixed links together.

13.2 Version 1.0

13.2.1 XML

FixedLinks_v1.0.xml

13.2.2 XSD

FixedLinks_v1.0.xsd

13.2.3

XML Extract

```
<FixedLink>
  <Origin>
    <CRS>1DA</CRS>
    <Name>Tower Gateway</Name>
    <Nlc>DL27</Nlc>
  </Origin>
  <Destination>
    <CRS>SRA</CRS>
    <Name>Stratford (London)</Name>
    <Nlc>6969</Nlc>
    <Tiploc>STFD</Tiploc>
  </Destination>
  <TransportMode>TRANSFER</TransportMode>
  <StartDate>2010-10-01</StartDate>
  <EndDate>2999-12-31</EndDate>
  <StartTime>00:00</StartTime>
  <EndTime>05:29</EndTime>
  <DaysOfWeek>
    <Day>Mon</Day>
    <Day>Tue</Day>
    <Day>Wed</Day>
  </DaysOfWeek>
  <DaysMask>1110000</DaysMask>
  <Duration>60</Duration>
  <Priority>4</Priority>
  <LondonZones>
    <MinZone>1</MinZone>
    <MaxZone>3</MaxZone>
  </LondonZones>
  <AdviceMessage>During times when the London Underground and Docklands Light Railway Network are closed customers are advised to use either Taxis or the Night Bus Network to continue their journey.</AdviceMessage>
</FixedLink>
```

13.2.4 Notes

13.2.4.1 The <CRS> elements may contain 'dummy' CRS codes. These dummy CRS codes contain digits whereas 'real' CRS codes do not. For example, 1DA in the above XML is a dummy CRS code. These are used by NRE to identify DLR locations. <TIPLoc> elements are not provided if the <CRS> element is a dummy.

13.2.4.2 The <Nlc> elements may also contain 'dummy' Nlc codes. These dummy Nlc codes contain two characters followed by two digits whereas 'real' Nlc codes do not. For example, DL27 in the above XML is a dummy Nlc code. These are used by NRE to identify DLR locations.

13.2.4.3 The <TransportMode> currently supports the following options, although more may be added over time:

- Bus
- Train
- Ferry
- Walk
- Underground
- Taxi
- Metro
- Tramlink
- Transfer (means 'make your own way')
- Tram
- DLR
- DLR/Tube (combination of DLR and Underground services)
- Walk/Tube (combination of walking and Underground services)
- Walk/DLR (combination of walking and DLR services)
- Walk/Tube/DLR (combination of walking, DLR and Underground services)

13.2.4.4 The file provides details of applicable days in two forms to support different users.

- The <DaysOfWeek> contains a list of up to seven applicable <Day> elements specifying each applicable day using the stand 3-character abbreviation (e.g. Mon, Tue, etc.).
- The <DaysMask> element specifies the **same** information using 7 consecutive digits which can be set to either 0 (not applicable to that day) or 1 (applicable to that day), for days Monday to Sunday respectively.

13.2.4.5 <Duration> contains the duration of the Fixed Link as the number of Minutes.

13.2.4.6 Where more than one link joins a pair of stations on a given day/time, then the choice of which link should be used in a journey is determined by the <Priority> element where 1 is the lowest priority.

13.2.4.7 The <LondonZones> provides details of the travelcard zones covered by the Fixed Link.

The <AdviceMessage> contains a customer friendly description of the recommended travel route (during normal operation) between the specified origin and destination.

End.