

# ***Rail Delivery Group***

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## **National Rail Enquiries Knowledgebase Data Feeds Specification**

**Subject Ref: RSPS5050  
Version: P-03-00**

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## Version History

| Version | Comments                        |
|---------|---------------------------------|
| P-03-00 | Addition of Stations JSON feed. |

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## Terms and Definitions

| Term       | Meaning                                                                                                                         |
|------------|---------------------------------------------------------------------------------------------------------------------------------|
| ASSIST     | Accreditation Standards Site Integrating System Toolset.                                                                        |
| CCTV       | Closed Circuit Television.                                                                                                      |
| CMS        | Content Management System.                                                                                                      |
| CRS Code   | A 3-character code issued to every railway station in Britain.                                                                  |
| IP Address | Internet Protocol address.                                                                                                      |
| JSON       | JavaScript Object Notation; a lightweight data-interchange format.                                                              |
| KB / iKB   | NRE KnowledgeBase.                                                                                                              |
| Mand       | Mandatory.                                                                                                                      |
| Mult       | Multiple.                                                                                                                       |
| NaPTAN     | National Public Transport Access Node.                                                                                          |
| NLC        | National Location Code, a four-character alphanumeric code assigned to every retailing location and railway station in Britain. |
| NRDP       | National Rail Data Portal.                                                                                                      |
| NRE        | National Rail Enquiries.                                                                                                        |
| NSI        | National Service Indicator.                                                                                                     |
| RDM        | Rail Data Marketplace.                                                                                                          |
| REST       | Representational State Transfer.                                                                                                |
| SLA        | Service Level Agreement.                                                                                                        |
| STD        | Subscriber Trunk Dialling.                                                                                                      |
| TIPLOC     | Timing Point Location.                                                                                                          |
| TOC        | Train Operating Company.                                                                                                        |
| URI        | Uniform Resource Identifier.                                                                                                    |
| URL        | Uniform Resource Locator.                                                                                                       |
| WCF        | Microsoft Windows Communication Foundation framework.                                                                           |
| XML        | eXtensible Markup Language.                                                                                                     |
| XSD        | XML Schema file.                                                                                                                |

## **1. Introduction**

### **1.1 General**

- 1.1.1 The purpose of this document is to provide information on the use of National Rail Enquiries (NRE) KnowledgeBase (KB) data.
- 1.1.2 KnowledgeBase is a system used by NRE which maintains data used in their websites and other channels and is the official source of train information for the industry.
- 1.1.3 Train companies are responsible for updating their own information using the backend CMS to KB, all other data is updated via NRE content editors.
- 1.1.4 This document will be updated and distributed following any update of the JSON or XML schemas.
- 1.1.5 The XML Schemas are available for download from ASSIST or the NRE website.
- 1.1.6 The JSON schema details are available within the Open API Specifications. It includes the endpoints and request/response structures (including examples) that the API exposes. Specs are available for download from ASSIST or the NRE website.
- 1.1.7 This document details the 'Full Service' in section 1.2 and gives information on the 'Open Data' versions via the 'Rail Data Marketplace' in section 1.3.
- 1.1.8 The data feeds are documented in section 2 'Data definitions and use'.

### **1.2 Full Service access**

- 1.2.1 The service is for TOCs, TOC 3<sup>rd</sup> parties and WebTIS.
- 1.2.2 The 'Full Service' works to a '24/7' 99.99% SLA.
- 1.2.3 Only approved and static IP addresses can gain full access to the data feeds via a data feed licence.
- 1.2.4 To request access, please use the Rail Data Marketplace.

### **1.3 Rail Data Marketplace**

- 1.3.1 Since November 2023, the data feeds have been made be available via the 'Rail Data Marketplace' (RDM) which replaces 'National Rail Data Portal' (NRDP).
- 1.3.2 RDM is a self-signup service for 'open data' users at no cost for the data but with lower Service Level Agreements (SLAs) than the 'Full Service' and different usage terms and conditions.
- 1.3.3 RDM is available at <https://raildata.org.uk>.
- 1.3.4 Support: There is no formal support direct from the supplier for open data users however minimal support is available via the RDM platform.

### **1.4 Alerts and Notifications**

- 1.4.1 If you would like to receive release or incident notification's, you can sign up for notification's by following this link - <http://eepurl.com/6TvTT>.

## 2. Data definitions and use

### 2.1 XML and JSON feed configuration

2.1.1 The feeds are configured as web services following a resource-oriented design, allowing clients to request specific feed resources through defined endpoints.

2.1.2 These services handle incoming requests for feeds and return the corresponding resource data based on the request parameters in XML or JSON format depending on the particular endpoint used.

### 2.2 Data feeds and Versions

2.2.1 Each KB data feed is listed below along with version availability information.

| Data feed                  | Type | Version | Available from | Withdrawn date | Poll frequency                |
|----------------------------|------|---------|----------------|----------------|-------------------------------|
| TOCs                       | XML  | 4.0     | Now            | None           | At least once every 24 hours. |
| Ticket Types               | XML  | 4.0     | Now            | None           | At least once every 24 hours. |
| Ticket Restrictions        | XML  | 4.0     | Now            | None           | At least once every 24 hours. |
| Stations                   | XML  | 4.0     | Now            | None           | Once every 24 hours.          |
| Stations                   | JSON | 1.0     | Now            | None           | Once every 24 hours.          |
| Promotions                 | XML  | 4.0     | Now            | None           | At least once every 24 hours. |
| National Service Indicator | XML  | 4.0     | Now            | None           | Recommend every 5 minutes.    |
| Incidents                  | XML  | 5.0     | Now            | None           | Recommend every 5 minutes.    |

### 3. 'TOC' schema

#### 3.1 Overview

3.1.1 This section defines the structure and provides a high-level description of the TOC XML tags.

3.1.2 Where a tag is marked mandatory ('Mand'), consumers can rely upon the presence of this tag. Tags not marked mandatory are optional, i.e., consumers should not rely on these elements existing. Child tags marked as mandatory are only mandatory if their parent tag exists.

3.1.3 Where a tag is marked multiple ('Mult'), this means that this tag can be repeated, tags not marked as multiple will not be repeated.

#### 3.2 Version 4.0

##### 3.2.1 NRE website

3.2.1.1 The NRE website displays this data at the following URL:

<https://www.nationalrail.co.uk/travel-information/find-a-train-company/>

In addition, the following URL may be used where ?? is a two-character TOC code such as 'LE' or 'XC':

<https://www.nationalrail.co.uk/travel-information/operators/??>

For example:

<https://www.nationalrail.co.uk/travel-information/operators/aw>

##### 3.2.2 XSD

3.2.2.1 `nre-toc-v4-0.xsd`

##### 3.2.3 Elements

###### 3.2.3.1 Root

| Field                     | Mandatory | Multiple | Type/Values | Description                                                                                    |
|---------------------------|-----------|----------|-------------|------------------------------------------------------------------------------------------------|
| TrainOperatingCompanyList | Y         | N        | See § 0     | Root element for Train Operating Companies feed which will contain one or more child elements. |

### 3.2.3.2 Train Operating Company

| Field                 | Mand | Mult | Type/Values   | Description                          |
|-----------------------|------|------|---------------|--------------------------------------|
| TrainOperatingCompany | N    | Y    | See § 3.2.3.3 | Container for TOC level information. |

### 3.2.3.3 Train Operating Company Structure

| Field                    | Mand | Mult | Type/Values   | Description                                                                        |
|--------------------------|------|------|---------------|------------------------------------------------------------------------------------|
| ChangeHistory            | Y    | N    | See § 11.2.1  | Last changed by details.<br>e.g., Changed by Joe Bloggs @ 11:00 on 23rd June 2015. |
| AtocCode                 | Y    | N    | String (2)    | Two-character TOC code.<br>e.g., 'LE' or 'XC'.                                     |
| AtocMember               | N    | N    | Boolean       | Is the operator a member of ATOC?<br>e.g., 'true'.                                 |
| StationOperator          | N    | N    | Boolean       | Does the operator manage stations?<br>e.g., 'false'.                               |
| Name                     | Y    | N    | String        | Brand name of the operator.<br>e.g., 'Greater Anglia'.                             |
| LegalName                | Y    | N    | String        | Legal name of the operator.<br>e.g., 'London Eastern Railways'.                    |
| ManagingDirector         | N    | N    | String        | Name of operator's managing director.<br>e.g., 'John Smith'.                       |
| Logo                     | N    | N    | URI           | URI to operator's logo on NRE desktop website.                                     |
| NetworkMap               | N    | N    | URI           | URI to operator's network map, usually on their own website.                       |
| OperatingPeriod          | N    | N    | See § 3.2.3.4 | Operating period of operator, usually a start date of their franchise.             |
| HeadOfficeContactDetails | N    | N    | See § 11.2.9  | Address and phone details of operator's head office.                               |
| CompanyWebsite           | N    | N    | URI           | URI of operator's main desktop website.                                            |
| SupportAndInformation    | N    | N    | See § 3.2.3.5 | Various operator support details, such as lost property and cycling.               |
| TicketingAndFares        | N    | N    | See § 3.2.3.6 | Various operator details relating to ticket and fare policies.                     |

### 3.2.3.4 Operating Period Structure

| Field     | Mand | Mult | Type/Values | Description                                                           |
|-----------|------|------|-------------|-----------------------------------------------------------------------|
| StartDate | N    | N    | Date        | Start date of operator's operating period.<br>e.g., 12 June 2013.     |
| EndDate   | N    | N    | Date        | Start date of operator's operating period.<br>e.g., 1 September 2019. |

### 3.2.3.5 Support and Information Structure

| Field           | Mand | Mult | Type/Values  | Description                                                                                                                                                         |
|-----------------|------|------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CustomerService | N    | N    | See § 11.2.4 | Operator's Customer Service information.                                                                                                                            |
| LostProperty    | N    | N    | See § 11.2.4 | Operator's lost property information.                                                                                                                               |
| AssistedTravel  | N    | N    | See § 11.2.4 | Operator's Assisted Travel policies and information.                                                                                                                |
| CyclePolicyUrl  | N    | N    | URI          | URI of the operator's cycling policy (if known).<br>e.g.<br><a href="http://www.arrivatrainswales.co.uk/Bicycles/">http://www.arrivatrainswales.co.uk/Bicycles/</a> |

### 3.2.3.6 Ticketing and Fares Structure

| Field            | Mand | Mult | Type/Values   | Description                                                                                                                                                                                                   |
|------------------|------|------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TeleSales        | N    | N    | See § 11.2.4  | Operator's telesales information.                                                                                                                                                                             |
| GroupTravel      | N    | N    | See § 11.2.4  | Operator's Group travel policies and information.                                                                                                                                                             |
| BusinessTravel   | N    | N    | See § 11.2.4  | Operator's business travel policies and information.                                                                                                                                                          |
| SeatReservations | N    | N    | See § 11.2.4  | Operator's seat reservation policies and information.                                                                                                                                                         |
| PenaltyFaresUrl  | N    | N    | URI           | URI to information regarding operator's penalty fare policies.<br>e.g.<br><a href="http://www.c2c-online.co.uk/assistance/faqs/penalty-fares/">http://www.c2c-online.co.uk/assistance/faqs/penalty-fares/</a> |
| BuyingTickets    | N    | N    | See § 11.2.11 | Operator's ticket purchasing policies and information.                                                                                                                                                        |

## 4. 'Ticket Types' schema

### 4.1 Overview

- 4.1.1 This section defines the structure and provides a high-level description of the Ticket Types XML tags.
- 4.1.2 Where a tag is marked mandatory, consumers can rely upon the presence of this tag. Tags not marked mandatory are optional, i.e., consumers should not rely on these elements existing. Child tags marked as mandatory are only mandatory if their parent tag exists.
- 4.1.3 Where a tag is marked multiple, this means that this tag can be repeated, tags not marked as multiple will not be repeated.
- 4.1.4 Errors and omissions can be reported to [rdgretailapprover@raildeliverygroup.com](mailto:rdgretailapprover@raildeliverygroup.com).

### 4.2 Version 4.0

#### 4.2.1 NRE website

- 4.2.1.1 The NRE website displays this data at the following URL:

<https://www.nationalrail.co.uk/ticket-types/ticket-validity-finder/>

In addition, the following URL may be used where ??? is a three-character ticket type code such as 'GOR':

<https://www.nationalrail.co.uk/ticket-types/tickets/???>

For example:

<https://www.nationalrail.co.uk/ticket-types/tickets/GOR>

#### 4.2.2 XSD

- 4.2.2.1 `nre-ticket-v4-0.xsd`

#### 4.2.3 Elements

##### 4.2.3.1 Root

| Field                     | Mandatory | Multiple | Type/Values   | Description                                                                       |
|---------------------------|-----------|----------|---------------|-----------------------------------------------------------------------------------|
| TicketTypeDescriptionList | Y         | N        | See § 4.2.3.2 | Root element for Ticket Types feed which will contain one or more child elements. |

##### 4.2.3.2 Ticket Type Description

| Field                 | Mand | Mult | Type/Values | Description                                  |
|-----------------------|------|------|-------------|----------------------------------------------|
| TicketTypeDescription | N    | Y    | See § 0     | Container for Ticket Type level information. |

### 4.2.3.3 Ticket Type Description Structure

| Field                  | Mand | Mult | Type/Values                      | Description                                                                                                                     |
|------------------------|------|------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| TicketTypeIdentifier   | Y    | N    | String (32)                      | Unique identifier for entry in XML.<br>e.g., '297422B8CC2D477192F0021CFFBABD1F'.                                                |
| TicketTypeCode         | Y    | Y    | String (3)                       | List of ticket type codes these terms and conditions apply to.<br>e.g., 'SOS', 'FDS', '1SD', etc.                               |
| TicketTypeName         | Y    | N    | String                           | Customer friendly description of ticket.<br>e.g., 'Advance (Day)'.                                                              |
| Description            | Y    | N    | String                           | Overview of ticket type's properties.<br>e.g., 'Advance tickets are single (one-way) tickets...' etc.                           |
| Class                  | Y    | N    | First,<br>Standard,<br>Other     | Class of travel.                                                                                                                |
| SingleReturn           | Y    | N    | Single,<br>Return                | Whether ticket type(s) valid for a single journey or a return journey.                                                          |
| ApplicableTocs         | N    | N    | See § 4.2.3.4                    | A list of TOCs.                                                                                                                 |
| Validity               | N    | N    | See § 4.2.3.5                    | Outward and Return validity information.                                                                                        |
| BreakOfJourney         | N    | N    | See § 4.2.3.6                    | Outward and Return break of journey information.                                                                                |
| FareCategory           | Y    | N    | Open,<br>Flexible,<br>Restricted | Fare category of ticket type(s):<br>- Open equals "Anytime".<br>- Flexible equals "Off-Peak".<br>- Restricted equals "Advance". |
| Conditions             | N    | N    | String                           | General conditions for ticket type(s).<br>e.g., 'You must be at the departure station shown on the ticket...' etc.              |
| Availability           | N    | N    | String                           | Availability conditions for ticket type(s).<br>e.g., 'Tickets are valid ONLY on the date and...' etc.                           |
| Retailing              | N    | N    | String                           | Retailing instructions for ticket type(s).<br>e.g., 'Ticket offices, travel centres and travel agents...' etc.                  |
| BookingDeadlines       | N    | N    | String                           | Booking deadlines for ticket type(s).<br>e.g., 'Tickets must be bought by 18:00...' etc.                                        |
| CompulsoryReservations | N    | N    | String                           | Does the ticket require a reservation to be valid?<br>e.g., 'Yes'                                                               |
| ChangesToTravelPlans   | N    | N    | String                           | Terms and conditions relating to changes to travel plans.<br>e.g., 'Changes to time or date of travel must...' etc.             |
| Refunds                | N    | N    | String                           | Terms and Conditions relating to refunds.<br>e.g., 'Your ticket is non-refundable.'                                             |
| Discount               | N    | N    | See § 4.2.3.7                    | Discounts permitted for the ticket type(s).                                                                                     |
| SpecialConditions      | N    | N    | String                           | Special conditions for ticket type(s).<br>e.g., 'Tickets are only available from...' etc.                                       |

#### 4.2.3.4 Applicable TOCs Structure

| Field        | Mand | Mult | Type/Values   | Description                                                              |
|--------------|------|------|---------------|--------------------------------------------------------------------------|
| IncludedTocs | N    | N    | See § 11.2.21 | List of TOCs which are included in the ticket type(s). e.g., 'LE', 'VT'. |

OR

| Field        | Mand | Mult | Type/Values   | Description                                                                |
|--------------|------|------|---------------|----------------------------------------------------------------------------|
| ExcludedTocs | N    | N    | See § 11.2.21 | List of TOCs which are excluded from the ticket type(s). e.g., 'AW', 'NT'. |

#### 4.2.3.5 Validity Structure

| Field       | Mand | Mult | Type/Values | Description                                                                                                                    |
|-------------|------|------|-------------|--------------------------------------------------------------------------------------------------------------------------------|
| DayOutward  | N    | N    | String      | Description of the Outward day validity conditions. e.g., 'Valid only on the date shown on the ticket.'                        |
| DayReturn   | N    | N    | String      | Description of the Return day validity conditions. e.g., 'Not applicable.'                                                     |
| TimeOutward | N    | N    | String      | Description of the Outward time validity conditions. e.g., 'Valid only at the specified time and train printed on the ticket.' |
| TimeReturn  | N    | N    | String      | Description of the Return time validity conditions. e.g., 'Valid any time.'                                                    |

#### 4.2.3.6 Break of Journey Structure

| Field       | Mand | Mult | Type/Values | Description                                                                                                             |
|-------------|------|------|-------------|-------------------------------------------------------------------------------------------------------------------------|
| OutwardNote | N    | N    | String      | Description of the Outward break of journey conditions. e.g., "Break of journey is allowed on all Anytime Day tickets." |
| ReturnNote  | N    | N    | String      | Description of the Return break of journey conditions. e.g., "Not applicable."                                          |

#### 4.2.3.7 Discount Structure

| Field    | Mand | Mult | Type/Values   | Description                      |
|----------|------|------|---------------|----------------------------------|
| Child    | N    | N    | See § 4.2.3.8 | Discounts relating to children.  |
| RailCard | N    | N    | See § 4.2.3.8 | Discounts relating to Railcards. |
| Group    | N    | N    | See § 4.2.3.8 | Discounts relating to groups.    |

#### 4.2.3.8 Discount Detail Structure

| Field     | Mand | Mult | Type/Values | Description                                                                                                                   |
|-----------|------|------|-------------|-------------------------------------------------------------------------------------------------------------------------------|
| Permitted | N    | N    | Boolean     | Do the ticket type(s) offer this type of discount? e.g., 'true'.                                                              |
| Note      | N    | N    | String      | Description of discount amounts, terms, and conditions. e.g., 'Children (aged 5 to 15 inclusive) are offered a 50% discount.' |

## 5. 'Ticket Restrictions' schema

### 5.1 Overview

- 5.1.1 This section defines the structure and provides a high-level description of the Ticket Restrictions XML tags.
- 5.1.2 Where a tag is marked mandatory, consumers can rely upon the presence of this tag. Tags not marked mandatory are optional, i.e., consumers should not rely on these elements existing. Child tags marked as mandatory are only mandatory if their parent tag exists.
- 5.1.3 Where a tag is marked multiple, this means that this tag can be repeated, tags not marked as multiple will not be repeated.
- 5.1.4 TIS/JP must not assume that entries in Fares data have corresponding entries in KnowledgeBase data.
- 5.1.5 Errors and omissions can be reported to [rdgretailapprover@raildeliverygroup.com](mailto:rdgretailapprover@raildeliverygroup.com).

### 5.2 Version 4.0

#### 5.2.1 NRE website

- 5.2.1.1 The NRE website displays this data at the following URL:  
<https://www.nationalrail.co.uk/ticket-types/ticket-validity-finder/>
- In addition, the following URL may be used where ?? is a two-character restriction code such as '1A' or 'WC', for example:  
<https://www.nationalrail.co.uk/ticket-types/validity/1A>

#### 5.2.2 XSD

- 5.2.2.1 `nre-ticket-restriction-v4-0.xsd`

#### 5.2.3 Elements

##### 5.2.3.1 Root

| Field              | Mandatory | Multiple | Type/Values   | Description                                                                              |
|--------------------|-----------|----------|---------------|------------------------------------------------------------------------------------------|
| TicketRestrictions | Y         | N        | See § 5.2.3.2 | Root element for Ticket Restrictions feed which will contain one or more child elements. |

##### 5.2.3.2 Ticket Restriction

| Field             | Mand | Mult | Type/Values   | Description                                         |
|-------------------|------|------|---------------|-----------------------------------------------------|
| TicketRestriction | N    | Y    | See § 5.2.3.3 | Container for Ticket Restriction level information. |

### 5.2.3.3 Ticket Restriction Structure

| Field                       | Mand | Mult | Type/Values   | Description                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------|------|------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                        | Y    | N    | String (>1)   | Restriction code Name – usually the same as restriction code. e.g., '1A'.                                                                                                                                                                                                                                                                                   |
| LinkToDetailPage            | Y    | N    | String        | URI of restriction page on NRE desktop website.<br>e.g.<br><a href="http://www.nationalrail.co.uk/times_fares/ticket_types/64259.aspx">http://www.nationalrail.co.uk/times_fares/ticket_types/64259.aspx</a>                                                                                                                                                |
| RestrictionCode             | Y    | N    | String (>1)   | Industry restriction code, currently 2 characters but may increase to 5 characters in due course.<br>e.g., '1A', 'WC', 'XF456'.                                                                                                                                                                                                                             |
| TicketRestrictionIdentifier | Y    | N    | String        | Unique identified for this restriction within knowledgebase.<br>e.g., '35CB817C8EBC46D78935525727BB39EA'.                                                                                                                                                                                                                                                   |
| ApplicableDays              | Y    | N    | String (>1)   | Free text capture of what days a restriction applies to.<br>e.g., 'Mondays to Fridays'.                                                                                                                                                                                                                                                                     |
| Easement                    | N    | N    | String        | Free text description of any easements.<br>e.g., 'Clacton-on-Sea to London Liverpool Street service...' etc.                                                                                                                                                                                                                                                |
| Notes                       | N    | N    | String        | Free text notes relating to restriction.<br>e.g., 'For journeys to/from East Anglia via Ely...' etc.                                                                                                                                                                                                                                                        |
| SeasonalVariations          | N    | N    | String        | Free text description of any seasonal variations applicable to this restriction.<br>e.g., 'Evening peak restrictions from Liverpool Street...' etc.                                                                                                                                                                                                         |
| OutwardDirection            | Y    | N    | String        | Captures what type of direction applies to the outward journey restriction.<br><br>One of:<br><br>'Outward Travel', 'Morning Travel', 'Eastbound Travel', 'Northbound Travel', 'Southbound Travel', 'Westbound Travel', 'From London', 'Towards London', 'Outward', 'Return'.                                                                               |
| ReturnDirection             | Y    | N    | String        | Captures what type of direction applies to the return journey restriction.<br><br>One of:<br><br>'Return Travel', 'Evening Travel', 'Westbound Travel', 'Southbound Travel', 'Northbound Travel', 'Eastbound Travel', 'From London', 'Towards London', 'Outward', 'Return'.                                                                                 |
| ReturnStatus                | N    | N    | String        | Free text description of conditions applying to the return direction.<br>e.g., 'By any train'                                                                                                                                                                                                                                                               |
| OutwardStatus               | N    | N    | String        | Free text description of conditions applying to the return direction.<br>e.g., 'Not valid for travel until:'                                                                                                                                                                                                                                                |
| RestrictionsType            | Y    | N    | 2 or 4        | Set to either '2' or '4' to indicate a basic restriction type (i.e., a 2-column restriction) or a complex restriction type (i.e., a 4-column restriction).<br><br><i>Note: basic restriction type (2) does not imply the restriction terms will themselves be basic. 4-column (complex) restriction type has been deprecated and is not currently used.</i> |
| Restrictions                | Y    | N    | See § 5.2.3.4 | The main restriction terms and conditions.                                                                                                                                                                                                                                                                                                                  |

### 5.2.3.4 Restriction

| Field       | Mand | Mult | Type/Values   | Description                                                                 |
|-------------|------|------|---------------|-----------------------------------------------------------------------------|
| Restriction | Y    | Y    | See § 5.2.3.5 | Splits the main restriction terms and conditions into one or more sections. |

### 5.2.3.5 Restriction Structure

| Field           | Mand | Mult | Type/Values | Description                                                                                                                                  |
|-----------------|------|------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| StationOutward  | N    | N    | String (3)  | Applicable station in outward direction.<br>e.g., 'COL'.                                                                                     |
| StationReturn   | N    | N    | String (3)  | Applicable station in return direction.<br>e.g., 'LST'.                                                                                      |
| DetailsOutward  | Y    | N    | String (>1) | Free text description on restriction's outward terms and conditions.<br>e.g., 'Not valid on trains timed to depart London Terminals...' etc. |
| DetailsReturn   | N    | N    | String      | Free text description on restriction's return terms and conditions.<br>e.g., 'Not valid on trains timed to depart London Terminals...' etc.  |
| CommentsOutward | N    | N    | String      | Free text additional comments on outward restriction.                                                                                        |
| CommentsReturn  | N    | N    | String      | Free text additional comments on return restriction.                                                                                         |

## 6. 'Stations' JSON Schema

### 6.1 Overview

6.1.1 The JSON structure and description of the Stations JSON tags is defined within the JSON Schema - Open API Specification:

`stations-feed-open-api-spec-v1-0.json`

6.1.2 The content of this API is updated overnight; Poll frequency should only be once every 24 hours.

6.1.3 Non-prod (or UAT) is only available to:

- Government or other public body
- Rail industry body (such as National Rail, Rail Safety and Standards Board)
- Train or freight operating company

Production is available to all.

### 6.2 Version 1.0

6.2.1 The API is supported in the URL of the request:

For example: `/json/1.0/stations/eus`

6.2.2 Access Points via RDM interface:

Production:

TBC – This will be updated when Production is made available.

6.2.3 Endpoints

| HTTP Method | Path                              | Description                                                                                                                                                                                                                                                       |
|-------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GET         | <code>/stations</code>            | Get details for all stations. Please note the <code>/stations</code> endpoint returns a large payload, which may impact page performance. If the Specification tab takes extra time to load, try testing the request with a REST client or directly in your code. |
| GET         | <code>/stations/{crs}</code>      | Get details for a particular station by the 3-character CRS Code.                                                                                                                                                                                                 |
| GET         | <code>/stations/tocs/{toc}</code> | Get all stations that are operated by a particular TOC by the 2-character TOC code.                                                                                                                                                                               |

### 6.3 Authentication

6.3.1 An API Key will be required to access the JSON feed via RDM.

## 7. 'Stations' XML schema

### 7.1 Overview

- 7.1.1 This section defines the structure and provides a high-level description of the Stations XML tags.
- 7.1.2 Where a tag is marked mandatory, consumers can rely upon the presence of this tag. Tags not marked mandatory are optional, i.e., consumers should not rely on these elements existing. Child tags marked as mandatory are only mandatory if their parent tag exists.
- 7.1.3 Where a tag is marked multiple, this means that this tag can be repeated, tags not marked as multiple will not be repeated.

### 7.2 Version 4.0

#### 7.2.1 NRE website

- 7.2.1.1 The NRE website displays this data at the following URL:

<https://www.nationalrail.co.uk/find-a-station/>

Full station names or three-character station CRS codes, such as 'BHM' or 'KGX', may be used. For example:

<https://www.nationalrail.co.uk/stations/Birmingham-new-street/>

or

<https://www.nationalrail.co.uk/stations/bhm/>

#### 7.2.2 XSD

- 7.2.2.1 nre-station-v4-0.xsd

#### 7.2.3 Elements

##### 7.2.3.1 Root

| Field       | Mandatory | Multiple | Type/Values   | Description                                                                   |
|-------------|-----------|----------|---------------|-------------------------------------------------------------------------------|
| StationList | Y         | N        | See § 7.2.3.2 | Root element for Stations feed which will contain one or more child elements. |

##### 7.2.3.2 Stations

| Field   | Mand | Mult | Type/Values | Description                        |
|---------|------|------|-------------|------------------------------------|
| Station | N    | Y    | See § 0     | Container for Station information. |

### 7.2.3.3 Station Structure

| Field                   | Mand | Mult | Type/Values    | Description                                                                                        |
|-------------------------|------|------|----------------|----------------------------------------------------------------------------------------------------|
| ChangeHistory           | Y    | N    | See § 11.2.1   | Who changed the data most recently?                                                                |
| CrsCode                 | Y    | N    | String (3)     | Three-character CRS code identifying a station.                                                    |
| AlternativeIdentifiers  | Y    | N    | See § 0        | Alternative identifiers for this station.                                                          |
| Name                    | Y    | N    | String         | The canonical name of the station. This is the full name of the station.<br>e.g., 'North Wembley'. |
| SixteenCharacterName    | Y    | N    | String (1-16)  | A unique name for the station with maximum 16 characters.                                          |
| Address                 | N    | N    | See § 11.2.8   | Address of the station.                                                                            |
| Longitude               | Y    | N    | Decimal        | The longitude of the station as supplied by NaPTAN.<br>e.g., -0.3039843835                         |
| Latitude                | Y    | N    | Decimal        | The latitude of the station as supplied by NaPTAN.<br>e.g., 51.5626022528                          |
| StationOperator         | Y    | N    | String (2)     | The operator of the station: a TOC or Network Rail.                                                |
| Staffing                | Y    | N    | See § 7.2.3.6  | Information about the staffing of the station.                                                     |
| InformationSystems      | N    | N    | See § 7.2.3.8  | Details of the passenger information available at the station.                                     |
| Fares                   | N    | N    | See § 0        | Fare related information for this location.                                                        |
| PassengerServices       | N    | N    | See § 7.2.3.13 | Contact information and opening hours of passenger services offered at this station.               |
| StationFacilities       | N    | N    | See § 7.2.3.14 | Availability of facilities at this station.                                                        |
| Accessibility           | N    | N    | See § 0        | Accessibility information for this station.                                                        |
| Interchange             | N    | N    | See § 7.2.3.17 | Information about changing between services at the station.                                        |
| StationAlerts           | N    | N    | See § 7.2.3.22 | Alerts affecting the station.                                                                      |
| TrainOperatingCompanies | Y    | N    | See § 7.2.3.23 | TOCs who operate at this location.                                                                 |
| StationCategory         | N    | N    | String         | Not used.                                                                                          |

### 7.2.3.4 Alternative Identifiers Structure

| Field                | Mand | Mult | Type/Values  | Description                                |
|----------------------|------|------|--------------|--------------------------------------------|
| NationalLocationCode | Y    | N    | String (4-7) | NLC code for this station. e.g., '1444'.   |
| Tiplocs              | N    | N    | See § 0      | A list of TIPLOCs located at this station. |

### 7.2.3.5 TIPLOC Structure

| Field  | Mand | Mult | Type/Values  | Description                                                                                                      |
|--------|------|------|--------------|------------------------------------------------------------------------------------------------------------------|
| Tiploc | N    | Y    | String (4-7) | Timing Point Location code. There may be more than one of these per station.<br>e.g., 'CLPHMJC', 'CLPHMJM', etc. |

### 7.2.3.6 Staffing Structure

| Field                   | Mand | Mult | Type/Values                         | Description                                |
|-------------------------|------|------|-------------------------------------|--------------------------------------------|
| StaffingLevel           | N    | N    | fullTime,<br>partTime,<br>unstaffed | Whether the station is staffed.            |
| ClosedCircuitTelevision | Y    | N    | See § 7.2.3.7                       | Is there CCTV in operation at the station? |

### 7.2.3.7 CCTV Structure

| Field     | Mand | Mult | Type/Values | Description                                          |
|-----------|------|------|-------------|------------------------------------------------------|
| Available | Y    | N    | Boolean     | Whether the station has CCTV or not.<br>e.g. 'true'. |

### 7.2.3.8 Information Systems Structure

| Field                         | Mand | Mult | Type/Values                                           | Description                                               |
|-------------------------------|------|------|-------------------------------------------------------|-----------------------------------------------------------|
| InformationAvailableFromStaff | N    | Y    | String                                                | Staff information point available?<br>e.g., 'Yes'.        |
| InformationServicesOpen       | N    | N    | See § 11.2.6                                          | Opening times of information services.                    |
| CIS                           | N    | Y    | DepartureScreens,<br>ArrivalScreens,<br>Announcements | Facilities available for the Customer Information System. |
| CustomerHelpPoints            | N    | N    | See § 11.2.3                                          | Is there an information point / desk / kiosk?             |

### 7.2.3.9 Fares Structure

| Field                      | Mand | Mult | Type/Values    | Description                                                          |
|----------------------------|------|------|----------------|----------------------------------------------------------------------|
| TicketOffice               | N    | N    | See § 11.2.3   | Ticket Office for the station.                                       |
| PrepurchaseCollection      | N    | N    | See § 0        | Whether pre-purchased tickets can be collected at this station.      |
| TicketMachine              | N    | N    | See § 7.2.3.11 | Details on the Ticket Machine facilities at the station.             |
| OystercardIssued           | N    | N    | Boolean        | Whether you can use Oyster/Pre-Pay at this station.<br>e.g., 'true'. |
| OystercardTopup            | N    | N    | See § 0        | Whether you can Top Up Oyster cards at this station.                 |
| UseOystercard              | N    | N    | Boolean        | Validate Oyster cards at the station.<br>e.g., 'false'.              |
| OysterComments             | N    | N    | See § 11.2.11  | Oyster card related comments.                                        |
| AlwaysShowOysterCardFields | N    | N    | Boolean        | Always show the oyster card fields.<br>e.g., 'false'.                |
| SmartcardIssued            | N    | N    | Boolean        | Can a smartcard be issued at the station?<br>e.g., 'true'.           |
| SmartcardTopup             | N    | N    | See § 0        | Whether you can Top Up Smartcards at the station.                    |
| SmartcardValidator         | N    | N    | Boolean        | Validate Smartcards at the station.<br>e.g., 'true'.                 |
| SmartcardComments          | N    | N    | See § 11.2.11  | Smartcard related comments.                                          |
| Travelcard                 | N    | N    | See § 11.2.5   | Travelcard information for this station.                             |
| PenaltyFares               | N    | N    | See § 7.2.3.12 | Information of penalty fares at this station.                        |

### 7.2.3.10 Ticket Pickup Structure

| Field         | Mand | Mult | Type/Values | Description                                   |
|---------------|------|------|-------------|-----------------------------------------------|
| TicketOffice  | N    | N    | Boolean     | Pre-purchase collection method. e.g., 'true'. |
| TicketMachine | N    | N    | Boolean     | Pre-purchase collection method. e.g., 'true'. |

OR

| Field        | Mand | Mult | Type/Values | Description                                          |
|--------------|------|------|-------------|------------------------------------------------------|
| NotAvailable | N    | N    | Boolean     | Pre-purchase collection not available. e.g., 'true'. |

### 7.2.3.11 Ticket Machine Structure

| Field     | Mand | Mult | Type/Values | Description                                                       |
|-----------|------|------|-------------|-------------------------------------------------------------------|
| Available | N    | N    | Boolean     | Whether there is a Ticket Machine at this station. e.g., 'false'. |

### 7.2.3.12 Penalty Fares Structure

| Field         | Mand | Mult | Type/Values | Description                                                                                                                                                                                       |
|---------------|------|------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TrainOperator | N    | Y    | String      | Two-character TOC code. e.g., 'AW'.                                                                                                                                                               |
| Url           | N    | N    | URI         | URL for station operator's penalty fares policy.<br>e.g.<br><a href="http://www.arrivatrainswales.co.uk/revenueenforcementpolicy">http://www.arrivatrainswales.co.uk/revenueenforcementpolicy</a> |

### 7.2.3.13 Passenger Services Structure

| Field           | Mand | Mult | Type/Values  | Description                                                      |
|-----------------|------|------|--------------|------------------------------------------------------------------|
| CustomerService | N    | N    | See § 11.2.4 | Customer service contact details for the station.                |
| TeleSales       | N    | N    | See § 11.2.4 | Contact details for buying tickets for travel from this station. |
| LeftLuggage     | N    | N    | See § 11.2.4 | Information about any left luggage facilities at the station.    |
| LostProperty    | N    | N    | See § 11.2.4 | Contact details for lost property enquiries at the station.      |

### 7.2.3.14 Station Facilities Structure

| Field              | Mand | Mult | Type/Values  | Description                                                      |
|--------------------|------|------|--------------|------------------------------------------------------------------|
| Annotation         | N    | N    | See § 0      | Station facilities notes.                                        |
| FirstClassLounge   | N    | N    | See § 11.2.3 | Does the station have a first-class lounge?                      |
| SeatedArea         | N    | N    | See § 11.2.3 | Does the station have an area with seats?                        |
| WaitingRoom        | N    | N    | See § 11.2.3 | Does the station have a general waiting room?                    |
| Trolleys           | N    | N    | See § 11.2.3 | Are luggage trolleys available at the station for passenger use? |
| StationBuffet      | N    | N    | See § 11.2.3 | Does the station have a Buffet?                                  |
| Toilets            | N    | N    | See § 11.2.3 | Details on station toilets.                                      |
| BabyChange         | N    | N    | See § 11.2.3 | Does the station have facilities to change baby's nappies?       |
| Showers            | N    | N    | See § 11.2.3 | Does the station have showers?                                   |
| Telephones         | N    | N    | See § 11.2.7 | Details the stations telephone facilities.                       |
| WiFi               | N    | N    | See § 11.2.3 | Does the station have a public 802.11 wireless network?          |
| WebKiosk           | N    | N    | See § 11.2.3 | Does the station have a Kiosk?                                   |
| PostBox            | N    | N    | See § 11.2.3 | Does the station have a post box?                                |
| TouristInformation | N    | N    | See § 11.2.3 | Does the station have tourist information available?             |
| AtmMachine         | N    | N    | See § 11.2.3 | Does the station have an ATM Machine?                            |
| BureauDeChange     | N    | N    | See § 11.2.3 | Does the station have a Bureau de Change?                        |
| Shops              | N    | N    | See § 11.2.3 | Does the station have shops?                                     |

### 7.2.3.15 Accessibility Structure

| Field                             | Mand | Mult | Type/Values    | Description                                                                                      |
|-----------------------------------|------|------|----------------|--------------------------------------------------------------------------------------------------|
| Helpline                          | N    | N    | See § 11.2.4   | Impaired access helpline for station.                                                            |
| StaffHelpAvailable                | N    | N    | See § 11.2.3   | Are there staff available to help customers with impaired access?                                |
| InductionLoop                     | N    | N    | Boolean        | Is there an Induction Loop for Deaf people at the station?<br>e.g., 'true'.                      |
| AccessibleTicketMachines          | N    | N    | See § 11.2.3   | Are Ticket Machines Accessible to all Disabled people?                                           |
| HeightAdjustedTicketOfficeCounter | N    | N    | See § 11.2.3   | Has the booking office got a low-level/split level counter?                                      |
| RampForTrainAccess                | N    | N    | See § 11.2.3   | Is there a ramp for train access available at the station?                                       |
| AccessibleTaxis                   | N    | N    | See § 11.2.3   | Are accessible taxis available?                                                                  |
| AccessiblePublicTelephones        | N    | N    | See § 11.2.3   | Are there low-level/text phones available?                                                       |
| NearestStationsWithMoreFacilities | N    | N    | See § 11.2.20  | List of recommended nearby stations with more impaired access facilities. Specified by CRS code. |
| NationalKeyToilets                | N    | N    | See § 11.2.3   | Is there an Impaired Access toilet run as part of the National Key Scheme at the station?        |
| StepFreeAccess                    | N    | N    | See § 7.2.3.16 | Information on step free access to the station.                                                  |
| TicketGates                       | N    | N    | See § 11.2.3   | Are ticket gates available at the station?                                                       |
| ImpairedMobilitySetDown           | N    | N    | See § 11.2.3   | Is there an Impaired Mobility set down point at or near to the entrance to the station?          |
| WheelchairsAvailable              | N    | N    | See § 11.2.3   | Are there wheelchairs available at the station?                                                  |

### 7.2.3.16 Step Free Access Structure

| Field      | Mand | Mult | Type/Values                                                                      | Description                                                                                         |
|------------|------|------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Annotation | N    | N    | See § 0                                                                          | Step free access notes                                                                              |
| Coverage   | N    | N    | wholeStation,<br>partialStation,<br>allPlatforms,<br>noPartOfStation,<br>unknown | Indicates how much of the station is accessible. Further details should be given in the annotation. |

### 7.2.3.17 Interchange Structure

| Field                   | Mand | Mult | Type/Values    | Description                                              |
|-------------------------|------|------|----------------|----------------------------------------------------------|
| CycleStorage            | Y    | N    | See § 7.2.3.18 | Availability of Cycle Storage facilities.                |
| CarPark                 | N    | Y    | See § 7.2.3.19 | Car park availability and information.                   |
| RailReplacementServices | N    | N    | See § 0        | Information on Rail Replacement Services.                |
| TaxiRank                | N    | N    | See § 0        | Is there a taxi rank at the station?                     |
| OnwardTravel            | N    | N    | See § 0        | The onward travel available from this station.           |
| MetroServices           | N    | N    | See § 0        | The metro services available from this station.          |
| Airport                 | N    | N    | See § 0        | Does the Station give access to an Airport?              |
| Port                    | N    | N    | See § 0        | Does the Station give access to a Port or ferry service? |
| CarHire                 | N    | N    | See § 0        | Can cars be hired at or near the station?                |
| CycleHire               | N    | N    | See § 0        | Can cycles be hired at or near the station?              |

### 7.2.3.18 Cycle Storage Structure

| Field      | Mand | Mult | Type/Values                        | Description                                                                      |
|------------|------|------|------------------------------------|----------------------------------------------------------------------------------|
| Spaces     | N    | N    | Integer                            | Number of spaces available. e.g., 55                                             |
| Sheltered  | N    | N    | Yes,<br>No,<br>Partial,<br>Unknown | Degree of shelter for the Cycle Storage area.                                    |
| Cctv       | N    | N    | Boolean                            | If the Cycle Storage area is completely covered by CCTV coverage. e.g., 'false'. |
| Location   | N    | N    | See § 11.2.11                      | The location in the station of the Cycle Storage.                                |
| Annotation | N    | N    | See § 11.2.11                      | Any additional information related to Cycle Storage.                             |
| Type       | N    | Y    | String                             | Type of Cycle Storage Available. e.g., 'Lockers'.                                |

### 7.2.3.19 Car Park Structure

| Field                          | Mand | Mult | Type/Values | Description                                                                                      |
|--------------------------------|------|------|-------------|--------------------------------------------------------------------------------------------------|
| Name                           | N    | N    | String      | Name of the car park. e.g., 'Station'.                                                           |
| Spaces                         | N    | N    | Integer     | Total number of spaces available. e.g., 450                                                      |
| Charges                        | N    | N    | See § 0     | Description of parking charges.                                                                  |
| NumberAccessibleSpaces         | N    | N    | Integer     | Number of accessible spaces available. e.g., 10                                                  |
| AccessibleSpacesNote           | N    | N    | String      | Additional information about accessible spaces. e.g., 'Next to rear entrance'.                   |
| AccessibleCarParkEquipment     | N    | N    | Boolean     | Does the car park have accessible equipment available? e.g., 'true'.                             |
| AccessibleCarParkEquipmentNote | N    | N    | String      | Additional information about accessible car park equipment. e.g., 'This car park is accredited'. |
| Cctv                           | N    | N    | Boolean     | If the car park area is covered by CCTV coverage. e.g., 'false'.                                 |

### 7.2.3.20 Charges Structure

| Field        | Mand | Mult | Type/Values | Description                                                                                                                                               |
|--------------|------|------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Off-peak     | N    | N    | String      | Price at this time/rate, if applicable. e.g., '£6.40'                                                                                                     |
| PerHour      | N    | N    | String      | Price at this time/rate, if applicable. e.g., 'N/A'                                                                                                       |
| Daily        | N    | N    | String      | Price at this time/rate, if applicable. e.g., '£6.40'                                                                                                     |
| Weekly       | N    | N    | String      | Price at this time/rate, if applicable. e.g., '£6.40'                                                                                                     |
| Monthly      | N    | N    | String      | Price at this time/rate, if applicable. e.g., '£6.40'                                                                                                     |
| ThreeMonthly | N    | N    | String      | Price at this time/rate, if applicable. e.g., 'N/A'                                                                                                       |
| SixMonthly   | N    | N    | String      | Price at this time/rate, if applicable. e.g., '£6.40'                                                                                                     |
| Annual       | N    | N    | String      | Price at this time/rate, if applicable. e.g., '£6.40'                                                                                                     |
| Saturday     | N    | N    | String      | Price at this time/rate, if applicable. e.g., '£6.40'                                                                                                     |
| Sunday       | N    | N    | String      | Price at this time/rate, if applicable. e.g., '£6.40'                                                                                                     |
| Note         | N    | N    | String      | Car park pricing additional information. e.g., 'Season permit holder and disabled parking only at this station, no daily or weekly parking is available'. |

OR

| Field | Mand | Mult | Type/Values | Description                                                                                                                                               |
|-------|------|------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Free  | Y    | N    | Boolean     | Is it free to park at this station? e.g., 'true'.                                                                                                         |
| Note  | N    | N    | String      | Car park pricing additional information. e.g., 'Season permit holder and disabled parking only at this station, no daily or weekly parking is available'. |

### 7.2.3.21 Rail Replacement Structure

| Field              | Mand | Mult | Type/Values | Description                                                                                                            |
|--------------------|------|------|-------------|------------------------------------------------------------------------------------------------------------------------|
| Annotation         | N    | N    | See § 0     | General information about rail replacement services. e.g., 'Rail replacement buses stop in the main station car park'. |
| RailReplacementMap | N    | Y    | URI         | URI to a map showing the station in the local area.                                                                    |

### 7.2.3.22 Station Alert Structure

| Field     | Mand | Mult | Type/Values | Description                                                                                                                                                                                                                                                                                                               |
|-----------|------|------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AlertText | N    | N    | String      | Alert information for the station. Generally, contains information on events having a long-term impact at the station. e.g., 'National Rail services no longer run between Moorgate and Farringdon...' or 'Lifts for Platforms 2 & 3 are currently being refurbished and will be out of public use until April 2017' etc. |

### 7.2.3.23 Train Operating Companies Structure

| Field  | Mand | Mult | Type/Values | Description                         |
|--------|------|------|-------------|-------------------------------------|
| TocRef | Y    | Y    | String (2)  | Two-character TOC code. e.g., 'LE'. |

## 8. 'Promotions' schema

### 8.1 Overview

- 8.1.1 This section defines the structure and provides a high-level description of the Promotions XML tags.
- 8.1.2 Where a tag is marked mandatory, consumers can rely upon the presence of this tag. Tags not marked mandatory are optional, i.e., consumers should not rely on these elements existing. Child tags marked as mandatory are only mandatory if their parent tag exists.
- 8.1.3 Where a tag is marked multiple, this means that this tag can be repeated, tags not marked as multiple will not be repeated.

### 8.2 Version 4.0

#### 8.2.1 NRE website

- 8.2.1.1 The NRE website displays this data at the following URL:  
<https://www.nationalrail.co.uk/ticket-types/promotions/?promotion>

#### 8.2.2 XSD

- 8.2.2.1 `nre-promotion-v4-0.xsd`

#### 8.2.3 Elements

##### 8.2.3.1 Root

| Field         | Mandatory | Multiple | Type/Values   | Description                                                                     |
|---------------|-----------|----------|---------------|---------------------------------------------------------------------------------|
| PromotionList | Y         | N        | See § 8.2.3.2 | Root element for Promotions feed which will contain one or more child elements. |

##### 8.2.3.2 Promotions

| Field     | Mand | Mult | Type/Values   | Description                          |
|-----------|------|------|---------------|--------------------------------------|
| Promotion | N    | Y    | See § 8.2.3.3 | Container for Promotion information. |

##### 8.2.3.3 Promotion Structure

| Field               | Mand | Mult | Type/Values    | Description                                                                                               |
|---------------------|------|------|----------------|-----------------------------------------------------------------------------------------------------------|
| ChangeHistory       | Y    | N    | See § 11.2.1   | Who changed the data most recently?                                                                       |
| PromotionIdentifier | Y    | N    | String (32)    | Unique Identifier of the promotion within the knowledge base.<br>e.g., 'prd359000a04000200b5da61f1e92b72' |
| Type                | Y    | N    | String         | Types of promotions.<br>e.g., 'RangerRover'.                                                              |
| NearestStation      | N    | N    | See § 8.2.3.13 | List of stations promotion is applicable to.                                                              |
| InterchangeStations | N    | N    | String         | Interchange stations – not used.                                                                          |
| PromotionName       | Y    | N    | String         | The name of the Promotion.<br>e.g., '16-25 Railcard'.                                                     |
| Summary             | Y    | N    | String         | Summary details of the Promotion.                                                                         |

| Field                              | Mand | Mult | Type/Values                                                                                                     | Description                                                                                                 |
|------------------------------------|------|------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
|                                    |      |      |                                                                                                                 | e.g., 'Aged 16-25 or a full-time student aged 26 or over? Save 1/3 off...' etc.                             |
| OfferDetails                       | N    | N    | See § 8.2.3.6                                                                                                   | Details of the Promotion. Who is eligible and other further conditions.                                     |
| ValidityPeriod                     | N    | N    | See § 11.2.16                                                                                                   | Period during which tickets bought under the promotion may be used.                                         |
| ValidityDayAndTime                 | N    | N    | See § 11.2.6                                                                                                    | Period during which the promotion is valid in terms of days and time.                                       |
| AvailableFromDate                  | N    | N    | See § 11.2.16                                                                                                   | Date from which the promotion is available for purchase by public. May be earlier than the validity period. |
| Region                             | N    | Y    | 'BM', 'BS', 'CB', 'GB', 'HL', 'LDN', 'LS', 'MR', 'NC', 'NO', 'NT', 'OX', 'PY', 'SCOTLAND', 'SO', 'TW', 'WALES'. | Region within which the promotion applies – Not Used.                                                       |
| AreaMap                            | N    | N    | See § 8.2.3.6                                                                                                   | Link to a map showing where the promotion applies.                                                          |
| TimetableLinks                     | N    | N    | See § 8.2.3.7                                                                                                   | Not Used.                                                                                                   |
| LeadToc                            | N    | N    | String (2)                                                                                                      | Two-character TOC code of the lead toc who created the promotion.                                           |
| ApplicableTocs                     | Y    | N    | See § 8.2.3.12                                                                                                  | List of TOCs for which promotion is applicable.                                                             |
| Operators                          | N    | N    | String                                                                                                          | Not used.                                                                                                   |
| ExcludedServices                   | N    | N    | String                                                                                                          | Not used.                                                                                                   |
| ProductPrices                      | N    | N    | See § 8.2.3.14                                                                                                  | Cost of Promotion, if applicable.                                                                           |
| ApplicableOriginStationGroups      | N    | N    | See § 11.2.22                                                                                                   | List of station groups for the origin(s).                                                                   |
| ApplicableOrigins                  | N    | N    | See § 11.2.23                                                                                                   | List of station CRS codes at which journey must start.                                                      |
| ApplicableDestinationStationGroups | N    | N    | See § 11.2.22                                                                                                   | List of station groups for the destination(s).                                                              |
| ApplicableDestinations             | N    | N    | See § 11.2.23                                                                                                   | List of station CRS codes at which journey must end.                                                        |
| ApplicableZoneOfStationGroups      | N    | N    | See § 11.2.22                                                                                                   | List of station groups for the zones.                                                                       |
| ApplicableZoneOfStations           | N    | N    | See § 11.2.23                                                                                                   | Zone containing station CRS codes at which offer applies for use of promotion.                              |
| Reversible                         | Y    | N    | Boolean                                                                                                         | Is promotion valid travelling in both directions? e.g., 'true'.                                             |
| PromotionFlows                     | N    | N    | See § 0                                                                                                         | What are the flows and exceptions for this promotion?                                                       |
| FurtherInformation                 | N    | N    | See § 8.2.3.6                                                                                                   | Further information about the Promotion.                                                                    |
| TicketValidityConditions           | N    | N    | See § 8.2.3.6                                                                                                   | Description of the Ticket Validity Conditions for the Promotion.                                            |
| BookingConditions                  | N    | N    | See § 8.2.3.6                                                                                                   | Booking conditions that apply to the promotion.                                                             |
| PurchaseDetails                    | N    | N    | See § 8.2.3.6                                                                                                   | How and where to purchase the promotion.                                                                    |
| Passengers                         | N    | N    | See § 8.2.3.16                                                                                                  | Number of Passengers.                                                                                       |
| PromotionRailCards                 | N    | N    | See § 8.2.3.4                                                                                                   | Which Railcards are applicable to this promotion?                                                           |
| PromotionCode                      | N    | N    | String (3,4)                                                                                                    | Three or four-character code identifying a Promotion. E.g., 'BV1' for the 'Bittern Line Ranger'.            |
| NlcCode                            | N    | N    | String                                                                                                          | If applicable, NLC code of Promotion.                                                                       |
| TocContact                         | N    | N    | See § 11.2.9                                                                                                    | Information about contact at TOC.                                                                           |

| Field              | Mand | Mult | Type/Values                      | Description                                                       |
|--------------------|------|------|----------------------------------|-------------------------------------------------------------------|
| InternalInfo       | N    | N    | See § 8.2.3.17                   | Internal information about the promotion (not visible to public). |
| TicketName         | N    | N    | String                           | Name of ticket. e.g., 'DAY RANGER'.                               |
| AdultFares         | N    | N    | See § 0                          | Adult fares available under the promotion.                        |
| ChildFares         | N    | N    | See § 0                          | Child fares available under the promotion.                        |
| FamilyFares        | N    | N    | See § 0                          | Family fares available under the promotion.                       |
| ConcessionFares    | N    | N    | See § 0                          | Concession fares available under the promotion.                   |
| GroupFares         | N    | N    | See § 0                          | Group fares available under the promotion.                        |
| DayTicket          | N    | N    | See § 8.2.3.19                   | Not Used.                                                         |
| SeasonTicket       | N    | N    | See § 8.2.3.20                   | Not Used.                                                         |
| ViewableBy         | Y    | N    | 'Public', 'Internal', 'xmlFeed'. | Who can view the promotion?                                       |
| DiscountsAvailable | N    | N    | See § 8.2.3.21                   | Any other discounts available for this Promotion?                 |

### 8.2.3.4 Promotion Railcard List Structure

| Field             | Mand | Mult | Type/Values   | Description                                 |
|-------------------|------|------|---------------|---------------------------------------------|
| PromotionRailCard | Y    | Y    | See § 8.2.3.5 | A structure containing a list of railcards. |

### 8.2.3.5 Promotion Railcard Structure

| Field      | Mand | Mult | Type/Values | Description                                                                                                                    |
|------------|------|------|-------------|--------------------------------------------------------------------------------------------------------------------------------|
| RailCardId | Y    | N    | String      | Name of Railcard. e.g., 'Annual Gold Card'.                                                                                    |
| Price      | N    | N    | String      | Price with Railcard. e.g., 24.40.                                                                                              |
| Details    | N    | N    | String      | Any Additional details about the discount available for this promotion with this railcard. e.g., 'Can only be used on...' etc. |

### 8.2.3.6 Link and Details Structure

| Field   | Mand | Mult | Type/Values | Description                                                                                                                                                                                                                                    |
|---------|------|------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Uri     | N    | Y    | URI         | Hyperlink to the referenced material.<br>e.g.<br><a href="https://www.scotrail.co.uk/sites/default/files/assets/download_ct/central_rover_map.pdf">https://www.scotrail.co.uk/sites/default/files/assets/download_ct/central_rover_map.pdf</a> |
| Details | N    | N    | String      | Qualifying detail about referenced material.<br>e.g. 'View area of validity map for this product'.                                                                                                                                             |

### 8.2.3.7 Link Structure

| Field | Mand | Mult | Type/Values | Description                                                                                                                                                                                                                                    |
|-------|------|------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Uri   | Y    | Y    | URI         | Hyperlink to the referenced material.<br>e.g.<br><a href="https://www.scotrail.co.uk/sites/default/files/assets/download_ct/central_rover_map.pdf">https://www.scotrail.co.uk/sites/default/files/assets/download_ct/central_rover_map.pdf</a> |

### 8.2.3.8 Promotion Flows Structure

| Field              | Mand | Mult | Type/Values    | Description                                             |
|--------------------|------|------|----------------|---------------------------------------------------------|
| Exceptions         | N    | N    | See § 8.2.3.9  | Flow exceptions applicable to this Promotion.           |
| Flows              | N    | N    | See § 8.2.3.10 | Flows applicable to this Promotion.                     |
| ExceptionsAndFlows | N    | N    | String         | Flows and Flow Exceptions applicable to this Promotion. |

### 8.2.3.9 Exceptions Structure

| Field     | Mand | Mult | Type/Values    | Description          |
|-----------|------|------|----------------|----------------------|
| Exception | Y    | Y    | See § 8.2.3.11 | Exception container. |

### 8.2.3.10 Flows Structure

| Field | Mand | Mult | Type/Values    | Description     |
|-------|------|------|----------------|-----------------|
| Flow  | Y    | Y    | See § 8.2.3.11 | Flow container. |

### 8.2.3.11 Flow Structure

| Field       | Mand | Mult | Type/Values   | Description                           |
|-------------|------|------|---------------|---------------------------------------|
| Origin      | Y    | N    | String (3)    | CRS code of Origin.                   |
| Destination | Y    | N    | String (3)    | CRS code of Destination.              |
| Reversible  | Y    | N    | Boolean       | Is the flow reversible? e.g., 'true'. |
| Station     | N    | N    | String (3)    | CRS code of applicable station.       |
| Tocs        | N    | N    | See § 11.2.21 | List of TOCs.                         |

### 8.2.3.12 Promo Applicable TOCs Structure

| Field   | Mand | Mult | Type/Values | Description                                     |
|---------|------|------|-------------|-------------------------------------------------|
| AllTocs | Y    | N    | Boolean     | Promotion applicable to All TOCs. e.g., 'true'. |

### OR

| Field  | Mandatory | Multiple | Type/Values | Description                                                    |
|--------|-----------|----------|-------------|----------------------------------------------------------------|
| TocRef | Y         | Y        | String (2)  | List of TOCs, as two-character codes, applicable to Promotion. |

### 8.2.3.13 Nearest Station Structure

| Field   | Mand | Mult | Type/Values | Description                                      |
|---------|------|------|-------------|--------------------------------------------------|
| CrsCode | Y    | Y    | String (3)  | List of nearest stations identified by CRS code. |

### 8.2.3.14 Product Prices Structure

| Field       | Mandatory | Multiple | Type/Values    | Description             |
|-------------|-----------|----------|----------------|-------------------------|
| ProductType | Y         | Y        | See § 8.2.3.15 | List of Product prices. |

### 8.2.3.15 Product Type Structure

| Field               | Mand | Mult | Type/Values   | Description                                |
|---------------------|------|------|---------------|--------------------------------------------|
| Name                | N    | N    | String        | Name of Product.                           |
| Valid               | N    | N    | String        | Validity of Product.                       |
| AdultPrice          | N    | N    | String        | Adult price of Product.                    |
| ChildPrice          | N    | N    | String        | Child price of Product.                    |
| FamilyPrice         | N    | N    | String        | Family price of Product.                   |
| GroupPrice          | N    | N    | String        | Group Price of Product.                    |
| StaffDiscountAdult  | N    | N    | String        | Adult Staff discount.                      |
| StaffDiscountChild  | N    | N    | String        | Child Staff discount.                      |
| StaffDiscountFamily | N    | N    | String        | Staff family discount.                     |
| StaffDiscountGroup  | N    | N    | String        | Staff group discount.                      |
| PromotionRailCards  | N    | N    | See § 8.2.3.4 | List of railcards applicable to Promotion. |

### 8.2.3.16 Passenger Structure

| Field       | Mand | Mult | Type/Values | Description                                                                                      |
|-------------|------|------|-------------|--------------------------------------------------------------------------------------------------|
| Note        | N    | N    | String      | Free text notes regarding passengers.<br>e.g., 'Only valid with specified number of passengers'. |
| MinAdults   | N    | N    | Integer     | Minimum number of adults. e.g., 1                                                                |
| MaxAdults   | N    | N    | Integer     | Maximum number of adults. e.g., 1                                                                |
| MinChildren | N    | N    | Integer     | Minimum number of children. e.g.,                                                                |
| MaxChildren | N    | N    | Integer     | Maximum number of children. e.g., 2                                                              |

### 8.2.3.17 Internal Info Structure

| Field               | Mand | Mult | Type/Values | Description                                                                                                        |
|---------------------|------|------|-------------|--------------------------------------------------------------------------------------------------------------------|
| IssuingInstructions | N    | N    | String      | Issuing instructions for Promotion.<br>e.g., 'Issued as a Ranger: Ticket type OEO (Oxford Evening Out) ...' etc.   |
| Details             | N    | N    | String      | Further details for staff regarding Promotion.<br>e.g., 'PRV and PRD Discounts are not available on this product.' |

### 8.2.3.18 Promotion Fare Details Structure

| Field   | Mand | Mult | Type/Values | Description                                                                                   |
|---------|------|------|-------------|-----------------------------------------------------------------------------------------------|
| Price   | N    | N    | String      | Price information for Promotion. e.g., 30.00.                                                 |
| Details | N    | N    | String      | Further details regarding price of Promotion. e.g. .£30.00 for a 1 year; £70.00 for 3 years'. |

### 8.2.3.19 Day Ticket Structure

| Field    | Mand | Mult | Type/Values | Description                                                                  |
|----------|------|------|-------------|------------------------------------------------------------------------------|
| Adult    | N    | N    | Decimal     | Adult price for day ticket. e.g., 10.20                                      |
| Child    | N    | N    | Decimal     | Child price for day ticket. e.g., 5.10                                       |
| Railcard | N    | N    | Decimal     | Railcard discounted price for day ticket. e.g., 7.35                         |
| Note     | N    | N    | String      | Additional information. e.g., 'day ticket not available for this Promotion'. |

### 8.2.3.20 Season Ticket Structure

| Field       | Mand | Mult | Type/Values | Description                                                                      |
|-------------|------|------|-------------|----------------------------------------------------------------------------------|
| SevenDays   | N    | N    | Decimal     | Weekly season ticket price for Promotion. e.g., 25.00                            |
| OneMonth    | N    | N    | Decimal     | Monthly season ticket price for Promotion. e.g., 100.00                          |
| ThreeMonths | N    | N    | Decimal     | Quarterly season ticket price for Promotion. e.g., 300.00                        |
| OneYear     | N    | N    | Decimal     | Annual season ticket price for Promotion. e.g., 1100.00                          |
| Note        | N    | N    | String      | Additional information. e.g., 'Season tickets not available for this Promotion'. |

### 8.2.3.21 Discounts Available Structure

| Field           | Mand | Mult | Type/Values    | Description                    |
|-----------------|------|------|----------------|--------------------------------|
| DiscountDetail  | N    | Y    | See § 8.2.3.22 | Detail of available discounts. |
| PlusBus         | N    | N    | String         |                                |
| SleeperServices | N    | N    | String         |                                |
| OtherDiscounts  | N    | N    | String         |                                |

### 8.2.3.22 Discount Detail

| Field             | Mand | Mult | Type/Values | Description                                |
|-------------------|------|------|-------------|--------------------------------------------|
| TicketTypeName    | N    | N    | String      |                                            |
| TicketTypeCode    | N    | Y    | String (3)  | List of three-character ticket type codes. |
| CardHolder        | N    | N    | String      |                                            |
| AccompanyingAdult | N    | N    | String      |                                            |
| AccompanyingChild | N    | N    | String      |                                            |
| Note              | N    | N    | String      | Additional information.                    |

## 9. ‘National Service Indicator’ schema

### 9.1 Overview

- 9.1.1 This section defines the structure and provides a high-level description of the National Service Indicator XML tags.
- 9.1.2 Where a tag is marked mandatory, consumers can rely upon the presence of this tag. Tags not marked mandatory are optional, i.e., consumers should not rely on these elements existing. Child tags marked as mandatory are only mandatory if their parent tag exists.
- 9.1.3 Where a tag is marked multiple, this means that this tag can be repeated, tags not marked as multiple will not be repeated.

### 9.2 Version 4.0

#### 9.2.1 NRE website

- 9.2.1.1 The NRE website displays this data at the following URL:  
<https://www.nationalrail.co.uk/status-and-disruptions/?mode=train-operator-status>

#### 9.2.2 XSD

- 9.2.2.1 `nre-service-indicator-v4-0.xsd`

#### 9.2.3 Elements

##### 9.2.3.1 Root

| Field | Mandatory | Multiple | Type/Values   | Description                                                                                     |
|-------|-----------|----------|---------------|-------------------------------------------------------------------------------------------------|
| NSI   | Y         | N        | See § 9.2.3.2 | Root element for National Service Indicator feed which will contain one or more child elements. |

##### 9.2.3.2 National Service Indicator List Structure

| Field | Mand | Mult | Type/Values   | Description                              |
|-------|------|------|---------------|------------------------------------------|
| TOC   | N    | Y    | See § 9.2.3.3 | Container for TOC level NSI information. |

### 9.2.3.3 National Service Indicator Structure

| Field                | Mand | Mul | Type/Values   | Description                                                                                                  |
|----------------------|------|-----|---------------|--------------------------------------------------------------------------------------------------------------|
| TocCode              | Y    | N   | String (2)    | Two-character TOC code. e.g., 'LE' or 'XC'.                                                                  |
| TocName              | Y    | N   | String        | TOC Brand Name. e.g., 'Arriva Trains Wales'.                                                                 |
| Status               | Y    | N   | String        | Shows the status of the TOC's NSI. e.g., 'Good service', 'Minor delays on all routes'.                       |
| StatusImage          | N    | N   | String        | Status image filename. e.g., icon-disruption.png                                                             |
| StatusDescription    | N    | N   | String        | Description of overall status of TOC's services. e.g., 'Good service', 'Minor delays on all routes'.         |
| ServiceGroup         | N    | Y   | See § 9.2.3.4 | Description of individual incidents affecting a TOC.                                                         |
| TwitterAccount       | N    | N   | String        | Twitter account name used by NRE to communicate updates on disruption for that TOC. e.g., 'NRE_ArrivaWales'. |
| AdditionalInfo       | N    | N   | String        | Top level additional information regarding the service status. e.g., 'Follow us on Twitter'.                 |
| CustomAdditionalInfo | N    | N   | String        | More detailed additional information.                                                                        |

### 9.2.3.4 NSI Service Group Structure

| Field             | Mand | Mult | Type/Values | Description                                                                                                                                                                                              |
|-------------------|------|------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GroupName         | N    | N    | String      | The service group descriptive name. e.g., 'Cambridge Route'.                                                                                                                                             |
| CurrentDisruption | N    | N    | String (32) | A unique ID of the service disruption associated to the group. e.g., '174B2A58D5C04FE3B32EF1D64BA45DF1'.                                                                                                 |
| CustomDetail      | N    | N    | String      | Details of the service group. e.g., 'Read about this disruption'.                                                                                                                                        |
| CustomURL         | N    | N    | URI         | URL of the service disruption on the NRE desktop website. e.g. <a href="http://www.nationalrail.co.uk/service_disruptions/158481.aspx">http://www.nationalrail.co.uk/service_disruptions/158481.aspx</a> |

## 10. 'Incidents' schema

### 10.1 Overview

- 10.1.1 This section defines the structure and provides a high-level description of the Incidents XML tags.
- 10.1.2 Where a tag is marked mandatory, consumers can rely upon the presence of this tag. Tags not marked mandatory are optional, i.e., consumers should not rely on these elements existing. Child tags marked as mandatory are only mandatory if their parent tag exists.
- 10.1.3 Where a tag is marked multiple, this means that this tag can be repeated, tags not marked as multiple will not be repeated.

### 10.2 Version 5.0

#### 10.2.1 NRE website

- 10.2.1.1 The NRE website displays this data at the following URL:

<https://www.nationalrail.co.uk/status-and-disruptions/>

#### 10.2.2 XSD

- 10.2.2.1 `nre-incident-v5-0.xsd`

#### 10.2.3 Elements

##### 10.2.3.1 Root

| Field     | Mandatory | Multiple | Type/Values    | Description                                                                    |
|-----------|-----------|----------|----------------|--------------------------------------------------------------------------------|
| Incidents | Y         | N        | See § 10.2.3.2 | Root element for Incidents feed which will contain one or more child elements. |

##### 10.2.3.2 Incidents

| Field       | Mand | Mult | Type/Values | Description                         |
|-------------|------|------|-------------|-------------------------------------|
| PtlIncident | N    | Y    | See § 0     | Container for Incident information. |

### 10.2.3.3 PtIncident Structure

| Field               | Mand | Mult | Type/Values    | Description                                                                                                                                                         |
|---------------------|------|------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CreationTime        | Y    | N    | dateTime       | Time of creation of incident.<br>e.g., 2016-12-25T15:00:00+00:00                                                                                                    |
| ChangeHistory       | Y    | N    | See § 11.2.1   | Who changed the data most recently?                                                                                                                                 |
| ParticipantRef      | N    | N    | String         |                                                                                                                                                                     |
| IncidentNumber      | Y    | N    | String (32)    | Unique ID for the incident within KnowledgeBase.<br>e.g., '8B68D83E08C1415A906022178722BDCB'.                                                                       |
| Version             | N    | N    | Integer        | Version of the incident, of the form YYYYMMDDHHMMSS.<br>e.g., 20170225125201                                                                                        |
| Source              | N    | N    | See § 10.2.3.4 | Information about source of information.                                                                                                                            |
| OuterValidityPeriod | N    | N    | See § 11.2.18  | Not Used.                                                                                                                                                           |
| ValidityPeriod      | Y    | Y    | See § 11.2.18  | Overall inclusive Period of applicability of incident.                                                                                                              |
| Planned             | Y    | N    | Boolean        | Set to true if the incident is planned engineering work, false if an unplanned service disruption.<br>e.g., 'true'.                                                 |
| Summary             | Y    | N    | String (>0)    | A summary of the incident.<br>e.g., 'Disruption at Haymarket expected until 14:00'.                                                                                 |
| Description         | Y    | N    | String (>0)    | Detailed description of incident.<br>e.g., 'The overhead wires at Haymarket have been rectified, allowing all trains to resume running through the station...' etc. |
| InfoLinks           | N    | N    | See § 10.2.3.5 | Hyperlink(s) to other resources associated with incident.                                                                                                           |
| Affects             | N    | N    | See § 10.2.3.6 | Structured model identifying parts of transport network affected by incident.                                                                                       |
| ClearedIncident     | N    | N    | Boolean        | Set to true if the incident is over. Incidents may be retained for a period of time after completion to inform users that incident has cleared.<br>e.g., 'true'.    |
| IncidentPriority    | Y    | N    | Integer        |                                                                                                                                                                     |
| P0Summary           | Y    | N    | String         |                                                                                                                                                                     |

### 10.2.3.4 Source Structure

| Field          | Mand | Mult | Type/Values | Description                                                          |
|----------------|------|------|-------------|----------------------------------------------------------------------|
| TwitterHashtag | N    | N    | String      | Twitter hashtag assigned to an incident.<br>e.g., '#LondonWaterloo'. |

### 10.2.3.5 InfoLink Structure

| Field | Mand | Mult | Type/Values | Description                                                                                                                                                                    |
|-------|------|------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Uri   | Y    | N    | URI         | URI for the hyperlink<br>e.g.<br><a href="http://www.nationalrail.co.uk/static/documents/maps/wat2502.pdf">http://www.nationalrail.co.uk/static/documents/maps/wat2502.pdf</a> |
| Label | N    | N    | String      | Label for the hyperlink.<br>e.g., Additional Maps                                                                                                                              |

### 10.2.3.6 Affects Structure

| Field          | Mand | Mult | Type/Values    | Description                                                                                                                                                                                                         |
|----------------|------|------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operators      | N    | N    | See § 10.2.3.7 | Operators affected by the Incident.                                                                                                                                                                                 |
| RoutesAffected | N    | N    | String         | Free text description of the stations and routes impacted by an incident.<br>e.g., 'ScotRail between Milngavie / Helensburgh Central and Edinburgh; TransPennine Express between Manchester Airport and Edinburgh'. |

### 10.2.3.7 Operators Structure

| Field            | Mand | Mult | Type/Values    | Description                                 |
|------------------|------|------|----------------|---------------------------------------------|
| AffectedOperator | Y    | Y    | See § 10.2.3.8 | Operators of services affected by incident. |

### 10.2.3.8 Affected Operator Structure

| Field        | Mand | Mult | Type/Values | Description                                 |
|--------------|------|------|-------------|---------------------------------------------|
| OperatorRef  | Y    | N    | String (2)  | Two-character TOC code. e.g., 'AW'.         |
| OperatorName | N    | N    | String      | Operator name. e.g., 'Arriva Trains Wales'. |

## 11. Common data

### 11.1 Overview

11.1.1 The KB XML feeds share several common data elements which, rather than repeat in each schema, are captured in a 'Common' schema described below.

### 11.2 Version 4.0

#### 11.2.1 XSD

11.2.1.1 `nre-common-v4-0.xsd`

#### 11.2.2 Change History Structure

| Field                        | Mandatory | Multiple | Type/Values | Description                                                              |
|------------------------------|-----------|----------|-------------|--------------------------------------------------------------------------|
| ChangedBy                    | Y         | N        | String      | Describes the last change made to this document.                         |
| ChangedBy - @ tocAffiliation | N         | N        | String (2)  | Two-character TOC code.                                                  |
| LastChangedDate              | Y         | N        | dateTime    | Date and time of last alteration.<br>e.g., 2016-07-12T14:48:00.000+01:00 |

#### 11.2.3 Available Facility Structure

| Field      | Mand | Mult | Type/Values   | Description                                 |
|------------|------|------|---------------|---------------------------------------------|
| Annotation | N    | N    | See § 0       | Annotation container structure.             |
| Open       | N    | N    | See § 11.2.6  | Opening hours of this facility.             |
| Location   | N    | N    | See § 11.2.11 | Free text information relating to location. |

OR

| Field      | Mand | Mult | Type/Values   | Description                                                                               |
|------------|------|------|---------------|-------------------------------------------------------------------------------------------|
| Annotation | N    | N    | See § 0       | Annotation container structure.                                                           |
| Available  | N    | N    | Boolean       | A value of true indicates that opening hours are unknown or not applicable. e.g., 'true'. |
| Location   | N    | N    | See § 11.2.11 | Free text information relating to location.                                               |

#### 11.2.4 Service Structure

| Field          | Mand | Mult | Type/Values  | Description                                                                               |
|----------------|------|------|--------------|-------------------------------------------------------------------------------------------|
| Annotation     | N    | N    | See § 0      | Annotation container structure.                                                           |
| ContactDetails | N    | N    | See § 11.2.9 | Contact details for TOC.                                                                  |
| Available      | N    | N    | Boolean      | A value of true indicates that opening hours are unknown or not applicable, e.g., 'true'. |
| OperatorName   | N    | N    | String       | Name of Operator.                                                                         |

OR

| Field          | Mand | Mult | Type/Values  | Description                     |
|----------------|------|------|--------------|---------------------------------|
| Annotation     | N    | N    | See § 0      | Annotation container structure. |
| ContactDetails | N    | N    | See § 11.2.9 | Contact details for TOC.        |
| Open           | N    | N    | See § 11.2.6 | Opening hours of this service.  |
| OperatorName   | N    | N    | String       | Name of Operator.               |

### 11.2.5 Travelcards Structure

| Field          | Mand | Mult | Type/Values | Description                                            |
|----------------|------|------|-------------|--------------------------------------------------------|
| TravelcardZone | N    | Y    | String      | The London Travelcard zone in which this station lies. |

### 11.2.6 Opening Hours Structure

| Field                  | Mand | Mult | Type/Values   | Description                                                                                    |
|------------------------|------|------|---------------|------------------------------------------------------------------------------------------------|
| Annotation             | N    | N    | See § 0       | Annotation container structure.                                                                |
| DayAndTimeAvailability | N    | Y    | See § 11.2.12 | Each DayAndTimeAvailability element provides the opening hours for a particular range of days. |

### 11.2.7 Telephone Structure

| Field     | Mand | Mult | Type/Values                       | Description                                                     |
|-----------|------|------|-----------------------------------|-----------------------------------------------------------------|
| Exists    | Y    | N    | Boolean                           | Does the station have telephones? e.g., 'true'.                 |
| UsageType | N    | N    | Cards,<br>Coins,<br>CardsAndCoins | How is it operated? With coins or cards or both? e.g., 'Cards'. |

### 11.2.8 Postal Address Structure

| Field         | Mand | Mult | Type/Values  | Description                                                  |
|---------------|------|------|--------------|--------------------------------------------------------------|
| PostalAddress | N    | N    | See § 12.1.1 | Address of the station based on 5-line address and postcode. |

### 11.2.9 Contact Details Structure

| Field                             | Mand | Mult | Type/Values    | Description                                                                                                             |
|-----------------------------------|------|------|----------------|-------------------------------------------------------------------------------------------------------------------------|
| Annotation                        | N    | N    | See § 0        | Annotation container structure.                                                                                         |
| PrimaryTelephoneNumber            | N    | N    | See § 11.2.19  | Public telephone number for this service.                                                                               |
| AlternatePublicTelephoneNumbers   | N    | N    | See § 11.2.19  | Alternate telephone numbers available to the public.                                                                    |
| AlternateInternalTelephoneNumbers | N    | N    | See § 11.2.19  | Alternate telephone numbers only available to staff.                                                                    |
| FaxNumber                         | N    | N    | See § 11.2.19  | A fax number for this service.                                                                                          |
| PrimaryMinicomNumber              | N    | N    | See § 11.2.19  | A minicom number for this service.                                                                                      |
| AlternateMinicomNumber            | N    | N    | See § 11.2.19  | An alternate minicom number for this service.                                                                           |
| PrimaryTextphoneNumber            | N    | N    | See § 11.2.19  | A textphone number for this service.                                                                                    |
| AlternateTextphoneNumber          | N    | N    | See § 11.2.19  | An alternative textphone number for this service.                                                                       |
| PostalAddress                     | N    | N    | See § 12.1.2   | Publicly available postal address of the service.                                                                       |
| EmailAddress                      | N    | N    | String (1-255) | Publicly available email address for this service.                                                                      |
| AlternativeEmailAddress           | N    | N    | String (1-255) | Alternative email address for this service.                                                                             |
| Url                               | N    | N    | URI            | Publicly available web site for this service.<br>e.g. <a href="http://nationalrail.co.uk">http://nationalrail.co.uk</a> |

## 11.2.10 Annotated Structure

| Field      | Mandatory | Multiple | Type/Values   | Description                     |
|------------|-----------|----------|---------------|---------------------------------|
| Annotation | N         | N        | See § 11.2.11 | Annotation container structure. |

## 11.2.11 Annotation Content

| Field | Mandatory | Multiple | Type/Values | Description                                   |
|-------|-----------|----------|-------------|-----------------------------------------------|
| Note  | Y         | Y        | String      | Free text note.<br>e.g., 'This is some text'. |

## 11.2.12 Day and Time Availability Structure

| Field        | Mandatory | Multiple | Type/Values   | Description                                                                               |
|--------------|-----------|----------|---------------|-------------------------------------------------------------------------------------------|
| DayTypes     | Y         | N        | See § 11.2.13 | Pattern of days.                                                                          |
| OpeningHours | Y         | N        | See § 0       | Hours on the specified day or holiday type when the facility is available or unavailable. |

## 11.2.13 Days Group

| Field           | Mandatory | Multiple | Type/Values | Description                                   |
|-----------------|-----------|----------|-------------|-----------------------------------------------|
| Monday          | N         | N        | Boolean     | Available on Monday. e.g., 'true'.            |
| Tuesday         | N         | N        | Boolean     | Available on Tuesday. e.g., 'true'.           |
| Wednesday       | N         | N        | Boolean     | Available on Wednesday. e.g., 'true'.         |
| Thursday        | N         | N        | Boolean     | Available on Thursday. e.g., 'true'.          |
| Friday          | N         | N        | Boolean     | Available on Friday. e.g., 'true'.            |
| Saturday        | N         | N        | Boolean     | Available on Saturday. e.g., 'true'.          |
| Sunday          | N         | N        | Boolean     | Available on Sunday. e.g., 'true'.            |
| AllBankHolidays | N         | N        | Boolean     | Available on all bank holidays, e.g., 'true'. |

**OR**

| Field           | Mandatory | Multiple | Type/Values | Description                                   |
|-----------------|-----------|----------|-------------|-----------------------------------------------|
| MondayToFriday  | N         | N        | Boolean     | Available on Monday to Friday. e.g., 'true'.  |
| AllBankHolidays | N         | N        | Boolean     | Available on all bank holidays. e.g., 'true'. |

**OR**

| Field           | Mandatory | Multiple | Type/Values | Description                                   |
|-----------------|-----------|----------|-------------|-----------------------------------------------|
| MondayToSunday  | N         | N        | Boolean     | Available on Monday to Sunday. e.g., 'true'.  |
| AllBankHolidays | N         | N        | Boolean     | Available on all bank holidays. e.g., 'true'. |

**OR**

| Field           | Mandatory | Multiple | Type/Values | Description                                     |
|-----------------|-----------|----------|-------------|-------------------------------------------------|
| Weekend         | N         | N        | Boolean     | Available on Saturday and Sunday. e.g., 'true'. |
| AllBankHolidays | N         | N        | Boolean     | Available on all bank holidays. e.g., 'true'.   |

### 11.2.14 Daily Opening Hours Structure

| Field           | Mandatory | Multiple | Type/Values | Description                                                                    |
|-----------------|-----------|----------|-------------|--------------------------------------------------------------------------------|
| TwentyFourHours | Y         | N        | Boolean     | Open 24hrs on the specified days (defined as 00:00 until 23:59). e.g., 'true'. |

OR

| Field      | Mandatory | Multiple | Type/Values   | Description                                                                                                                            |
|------------|-----------|----------|---------------|----------------------------------------------------------------------------------------------------------------------------------------|
| OpenPeriod | Y         | Y        | See § 11.2.15 | Each time range indicates an open period. Multiple ranges can be used to indicate separate opening hours in the morning and afternoon. |

OR

| Field       | Mandatory | Multiple | Type/Values | Description                                        |
|-------------|-----------|----------|-------------|----------------------------------------------------|
| Unavailable | Y         | N        | Boolean     | Not available on this specified day. e.g., 'true'. |

### 11.2.15 Closed Time Range Structure

| Field     | Mandatory | Multiple | Type/Values | Description                                |
|-----------|-----------|----------|-------------|--------------------------------------------|
| StartTime | Y         | N        | Time        | The (inclusive) start time. e.g., 07:00:00 |
| EndTime   | Y         | N        | Time        | The (inclusive) end time. e.g., 17:00:00   |

### 11.2.16 Half Open Date Range Structure

| Field     | Mandatory | Multiple | Type/Values | Description                                                                                                                     |
|-----------|-----------|----------|-------------|---------------------------------------------------------------------------------------------------------------------------------|
| StartDate | Y         | N        | Date        | The (inclusive) start date. e.g., 2017-01-20                                                                                    |
| EndDate   | N         | N        | Date        | The (inclusive) end date. If omitted, the range end is open-ended, that is, it should be interpreted as 'until further notice'. |

### 11.2.17 Half Open Time Range Structure

| Field     | Mandatory | Multiple | Type/Values | Description                                                                                                                                    |
|-----------|-----------|----------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| StartTime | Y         | N        | Time        | The (inclusive) start time. e.g., 07:00:00                                                                                                     |
| EndTime   | N         | N        | Time        | The (inclusive) end time. If omitted, the range end is open-ended, that is, it should be interpreted as 'until further notice'. e.g., 17:00:00 |

### 11.2.18 Half Open Timestamp Range Structure

| Field     | Mandatory | Multiple | Type/Values | Description                                                                                                                                          |
|-----------|-----------|----------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| StartTime | Y         | N        | dateTime    | The (inclusive) start time stamp. e.g., 07:00:00                                                                                                     |
| EndTime   | N         | N        | dateTime    | The (inclusive) end time stamp. If omitted, the range end is open-ended, that is, it should be interpreted as 'until further notice'. e.g., 17:00:00 |

### 11.2.19 Telephone Number Structure

| Field              | Mandatory | Multiple | Type/Values   | Description                                    |
|--------------------|-----------|----------|---------------|------------------------------------------------|
| TelNationalNumber  | Y         | N        | String (1-20) | Full telephone number including STD prefix.    |
| TelExtensionNumber | N         | N        | String (1-6)  | Any additional extension number.               |
| TelCountryCode     | N         | N        | String (1-3)  | Two-character country prefix, e.g., 44 for UK. |

## 11.2.20 Crs Code List Structure

| Field      | Mandatory | Multiple | Type/Values | Description                                                         |
|------------|-----------|----------|-------------|---------------------------------------------------------------------|
| Annotation | N         | N        | See § 0     | Annotation container structure.                                     |
| CrsCode    | N         | Y        | String (3)  | Three-character CRS code identifying a station. e.g., 'KGX', 'GLC'. |

## 11.2.21 Atoc List Structure

| Field  | Mandatory | Multiple | Type/Values | Description                            |
|--------|-----------|----------|-------------|----------------------------------------|
| TocRef | Y         | Y        | String (2)  | A list of TOC codes. e.g., 'CS', 'ME'. |

## 11.2.22 Station Group List Structure

| Field           | Mandatory | Multiple | Type/Values | Description                            |
|-----------------|-----------|----------|-------------|----------------------------------------|
| StationGroupRef | Y         | Y        | String      | A list of station groups. e.g., London |

## 11.2.23 Station List Structure

| Field      | Mandatory | Multiple | Type/Values | Description                             |
|------------|-----------|----------|-------------|-----------------------------------------|
| StationRef | Y         | Y        | String (3)  | A list of stations. e.g., PAD, OXF, RDG |

## 11.2.24 Simple Types

| Field                    | Type/Values                                                                                                     | Description                                                                                                      |
|--------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| AtocCodeType             | String (2)                                                                                                      | A list of toc codes. e.g., 'CS', 'ME'.                                                                           |
| StartDateType            | Date                                                                                                            | Start of miscellaneous period. e.g., 2017-02-02                                                                  |
| EndDateType              | Date                                                                                                            | End of miscellaneous period. Default value is '9999-09-09' representing 'until further notice'. e.g., 2017-12-31 |
| CrsCodeType              | String (3)                                                                                                      | A list of stations. e.g., 'PAD', 'OXF', 'RDG'.                                                                   |
| NationalLocationCodeType | String (4-7)                                                                                                    | NLC code for a location. e.g., '1444'.                                                                           |
| TiplocCodeType           | String (4-7)                                                                                                    | Timing Point Location code. e.g., 'LIVST'.                                                                       |
| PopulatedStringType      | String (>0)                                                                                                     | A string that requires at least one character of text. e.g., 'some text'.                                        |
| SixteenCharacterNameType | String (16)                                                                                                     | A max 16-character version of a station name. e.g., 'ST PANCRAS'.                                                |
| TicketTypeCodeType       | String (3)                                                                                                      | Three-character code identifying a ticket type. e.g., 'SOS', '1AF'.                                              |
| NlcCodeType              | String                                                                                                          | NLC code for a location. e.g., '1444'.                                                                           |
| BbcRegionEnumeration     | 'BM', 'BS', 'CB', 'GB', 'HL', 'LDN', 'LS', 'MR', 'NC', 'NO', 'NT', 'OX', 'PY', 'SCOTLAND', 'SO', 'TW', 'WALES'. | The list of BBC Region codes.                                                                                    |

## 12. Address Types

### 12.1 Version 2.0

The following are common elements from AddressTypes-v2-0.xsd.

#### 12.1.1 UK Address Structure

| Field                         | Mandatory | Multiple | Type/Values  | Description                                     |
|-------------------------------|-----------|----------|--------------|-------------------------------------------------|
| BS7666Address                 | Y         | N        | See § 13.1.1 | Address container.                              |
| UniquePropertyReferenceNumber | N         | N        | Integer      | Unique Property Reference Number.<br>e.g., 1234 |
| SortCode                      | N         | N        | String (5)   | Mail sort code.<br>e.g., 'ght73'.               |

OR

| Field                         | Mandatory | Multiple | Type/Values  | Description                                     |
|-------------------------------|-----------|----------|--------------|-------------------------------------------------|
| BS7666Address                 | Y         | N        | See § 13.1.1 | Address container.                              |
| UniquePropertyReferenceNumber | N         | N        | Integer      | Unique Property Reference Number.<br>e.g., 1234 |
| WalkSort                      | N         | N        | String (8)   | Mail walk sort code.<br>e.g., 'hjgu73h6'.       |

OR

| Field                         | Mandatory | Multiple | Type/Values  | Description                                    |
|-------------------------------|-----------|----------|--------------|------------------------------------------------|
| A_5LineAddress                | Y         | N        | See § 12.1.2 | 5-line address container.                      |
| BS7666Address                 | N         | N        | See § 13.1.1 | Address container.                             |
| UniquePropertyReferenceNumber | N         | N        | Integer      | Unique Property Reference Number<br>e.g., 1234 |
| SortCode                      | N         | N        | String (5)   | Mail sort code. e.g., 'ght73'.                 |

OR

| Field                         | Mandatory | Multiple | Type/Values  | Description                                    |
|-------------------------------|-----------|----------|--------------|------------------------------------------------|
| A_5LineAddress                | Y         | N        | See § 12.1.2 | 5-line address container.                      |
| BS7666Address                 | N         | N        | See § 13.1.1 | Address container.                             |
| UniquePropertyReferenceNumber | N         | N        | Integer      | Unique Property Reference Number<br>e.g., 1234 |
| WalkCode                      | N         | N        | String (8)   | Mail walk sort code<br>e.g., 'hjgu73h6'.       |

#### 12.1.2 UK Postal Address Structure

| Field    | Mandatory | Multiple | Type/Values   | Description                              |
|----------|-----------|----------|---------------|------------------------------------------|
| Line     | Y         | Y (2-5)  | String (1-35) | Address line. e.g., '10 Downing Street'. |
| PostCode | N         | N        | String (8)    | UK postcode. e.g., 'WC1N 1BY'.           |

## 13. BS7666 Address

### 13.1 Version 2.0

The following are common elements from `bs7666-v2-0.xsd`.

#### 13.1.1 BS7666 Address

| Field              | Mandatory | Multiple | Type/Values  | Description                  |
|--------------------|-----------|----------|--------------|------------------------------|
| BSAddressStructure | Y         | N        | See § 13.1.2 | Address structure container. |

#### 13.1.2 BS Address Structure

| Field                         | Mandatory | Multiple | Type/Values    | Description                                      |
|-------------------------------|-----------|----------|----------------|--------------------------------------------------|
| SAON                          | N         | N        | See § 13.1.3   | Secondary Addressable Object.                    |
| PAON                          | Y         | N        | See § 13.1.3   | Primary Addressable Object.                      |
| StreetDescription             | Y         | N        | String (1-100) | Description of street. e.g., 'This is a street'. |
| UniqueStreetReferenceNumber   | N         | N        | Integer        | Unique Street Reference Number. e.g., 45637      |
| Locality                      | N         | N        | String (1-35)  | Locality definition.                             |
| Town                          | N         | N        | String (1-30)  | Town definition.                                 |
| AdministrativeArea            | N         | N        | String (1-30)  | Admin area definition.                           |
| PostTown                      | N         | N        | String (1-30)  | Post down definition.                            |
| PostCode                      | N         | N        | String (8)     | UK postcode. e.g., 'WC1N 1BY'.                   |
| UniquePropertyReferenceNumber | N         | N        | Integer        | Unique Property Reference Number. e.g., 1234     |

#### 13.1.3 AON structure

| Field       | Mandatory | Multiple | Type/Values  | Description                             |
|-------------|-----------|----------|--------------|-----------------------------------------|
| StartRange  | Y         | N        | See § 13.1.4 | Start range structure.                  |
| EndRange    | N         | N        | See § 13.1.4 | End range structure.                    |
| Description | N         | N        | String (90)  | Description. e.g., 'This is the range'. |

OR

| Field       | Mandatory | Multiple | Type/Values | Description                             |
|-------------|-----------|----------|-------------|-----------------------------------------|
| Description | N         | N        | String (90) | Description. e.g., 'This is the range'. |

#### 13.1.4 AON range Structure

| Field  | Mandatory | Multiple | Type/Values | Description        |
|--------|-----------|----------|-------------|--------------------|
| Number | Y         | N        | Integer     | Number? e.g., 45   |
| Suffix | N         | N        | String (1)  | Suffix? e.g., 'G'. |

End.