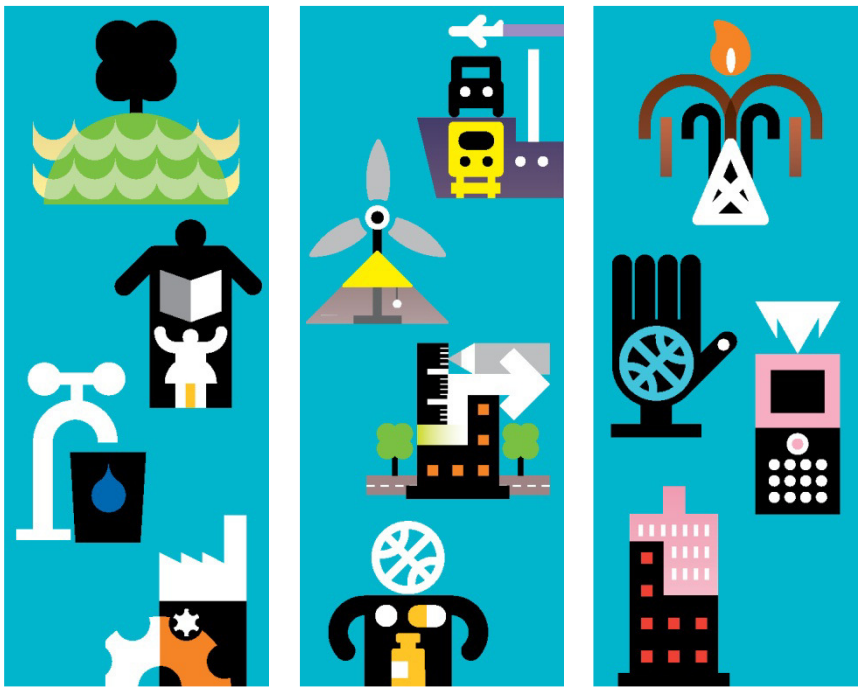

Tyne and Wear Open Data Services Platform

API Specification

February 2014

Newcastle City Council

Mott MacDonald

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Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
A	15 Jan 2014	S. Wheeler	C. Morrison	F. Macdonald	Initial draft revision for comment and feedback.
B	27 Jan 2014	C. Morrison	S. Wheeler	F. Macdonald	Add additional data feeds. No subscription snapshot. Notification actions added.
C	31 Jan 2014	C. Morrison	S. Wheeler	F. Macdonald	Incorporate comments after review.
D	17 Feb 2014	M. Watson	C. Morrison	F. Macdonald	Field updates. Minor typo fixes.

Standard

Contents

1 Introduction

1.1 Overview of the Tyne and Wear Open Data Services Platform

The Tyne and Wear Open Data Service Platform provides an API to deliver a number of data sets currently captured by the Tyne and Wear UTMC (Urban Traffic Management and Control) system to third party applications.

The Tyne and Wear Open Data Services Platform provides both an on-demand and an asynchronous notification API. API access is over HTTPS with all data sent and received as JSON.

The on-demand API will allow a third party application to retrieve the latest set of information as and when required. This is the simplest API to use. See section 3 for more information.

The asynchronous API will allow a third party application to subscribe to any of the available data sets. After receiving an initial snapshot of the latest state, a third party application will then receive further HTTP POST notifications for each subsequent data update. See section 4 for more information.

1.2 Types of data available

The following data sets are available:

Table 1.1: List of data types available from the Tyne and Wear Open Data Services Platform

Data set	Summary	Section	Availability
Accidents	The latest set of accidents impacting the road network.	19	24th Feb 2014
Air Quality daily average information	Various air quality fields averaged for last 24 hours.	15	24th Feb 2014
Air Quality static information	The location of the air quality stations	14	24th Feb 2014
Car park dynamic information	The latest car park occupancy information.	6	24th Feb 2014
Car park static information	Describes the car park names, locations and capacities.	5	24th Feb 2014
CCTV dynamic information	The latest update times of the camera images.	8	24th Feb 2014
CCTV image	The latest captured images from the cameras	9	24th Feb 2014
CCTV static information	Describes the CCTV camera locations.	7	24th Feb 2014
Events	The latest set of events impacting the road network.	20	24th Feb 2014
Incidents	The latest set of incidents impacting the road network.	18	24th Feb 2014
Journey time dynamic information	Journey time readings captured from the HA and bus corridors.	17	10th Mar 2014
Journey time static information	The location of journey time sites.	16	10th Mar 2014
Roadworks	The latest set of roadworks impacting the road network.	21	10th Mar 2014
SCOOT dynamic information	Speed, flows and congestion captured from the SCOOT sites.	11	24th Feb 2014
SCOOT static information	Describes the SCOOT site location	10	24th Feb 2014
Weather station dynamic information	Various weather readings captured by the weather stations.	13	24th Feb 2014

Data set	Summary	Section	Availability
Weather station static information	The location of weather stations.	12	24th Feb 2014

1.3 Terms and conditions of use

The terms and conditions for use and access to the data feeds are presented to end users when registering a new user account on the www.netraveldata.co.uk website. The terms and conditions must be accepted before access is granted to the data feeds.

2 Getting started

2.1 Seeing what is available

The Open Data Service website contains details of the API and other information relating to the use and future developments of the Open Data Service.

2.2 Requesting access

During the user account registration process, end users will be required to accept the terms and conditions for use of the data feeds described in this document. Once a user account has been created, the end user will automatically be granted permission to access the data feeds using the username and password entered during the registration process.

2.3 Using your access credentials

All data requests are protected by HTTP Basic Authentication. You will need to supply a username and password that has been registered previously (see section 2.2). For example

```
$ curl –u username:password
https://www.netraveldata.co.uk/api/v1/carparks/static
```

2.4 Data formats

All API access is over HTTPS and is accessed from the www.netraveldata.co.uk domain. All data is sent and received as JSON.

Blank fields are included as `null`.

All timestamps are returned in ISO 8601 format e.g. `YYYY-MM-DDTHH:MM:SS.SSSZ`

3 On demand API

3.1 Data requests

The latest data can be retrieved using a HTTP GET URL e.g.

```
GET https://www.netraveldata.co.uk/api/v1/:dataset
```

The `:dataset` parameter will be the URL location of the data set. For example, the following request will retrieve static information (such as location and capacity) for all car parks.

```
GET https://www.netraveldata.co.uk/api/v1/carparks/static
```

3.2 Success responses

A successful response will return a HTTP 200 status.

The JSON body content of the HTTP message will be specific to the requested data set. Continuing our example of retrieving the latest car park static information, the above GET request would return a JSON array of the form below.

```
Status:200
[
    {
        “systemCodeNumber” : “CP1”,
        “definitions” : [
            {
                “shortDescription” : “Town Centre”,
                “longDescription” : “Car park in Newcastle Town Centre”,
                “point” : {
                    “easting” : 999999,
                    “northing” : 199999
                }
            }
        ],
        “configurations” : [
            {
                “carParkCapacity”: 200
```

```
                }
            ]
        },
        {
            "systemCodeNumber" : "CP2",
            "definitions" : [
                {
                    "shortDescription" : "Park and Ride",
                    "longDescription" : "Park and Ride to north west",
                    "point" : {
                        "easting" : 999999,
                        "northing" : 199999
                    }
                 }
            ],
            "configurations" : [
                {
                    "carParkCapacity": 620
                }
            ]
        }
    ]
```

3.3 Error responses

The following HTTP error status can be returned.

Table 3.1: Error response codes

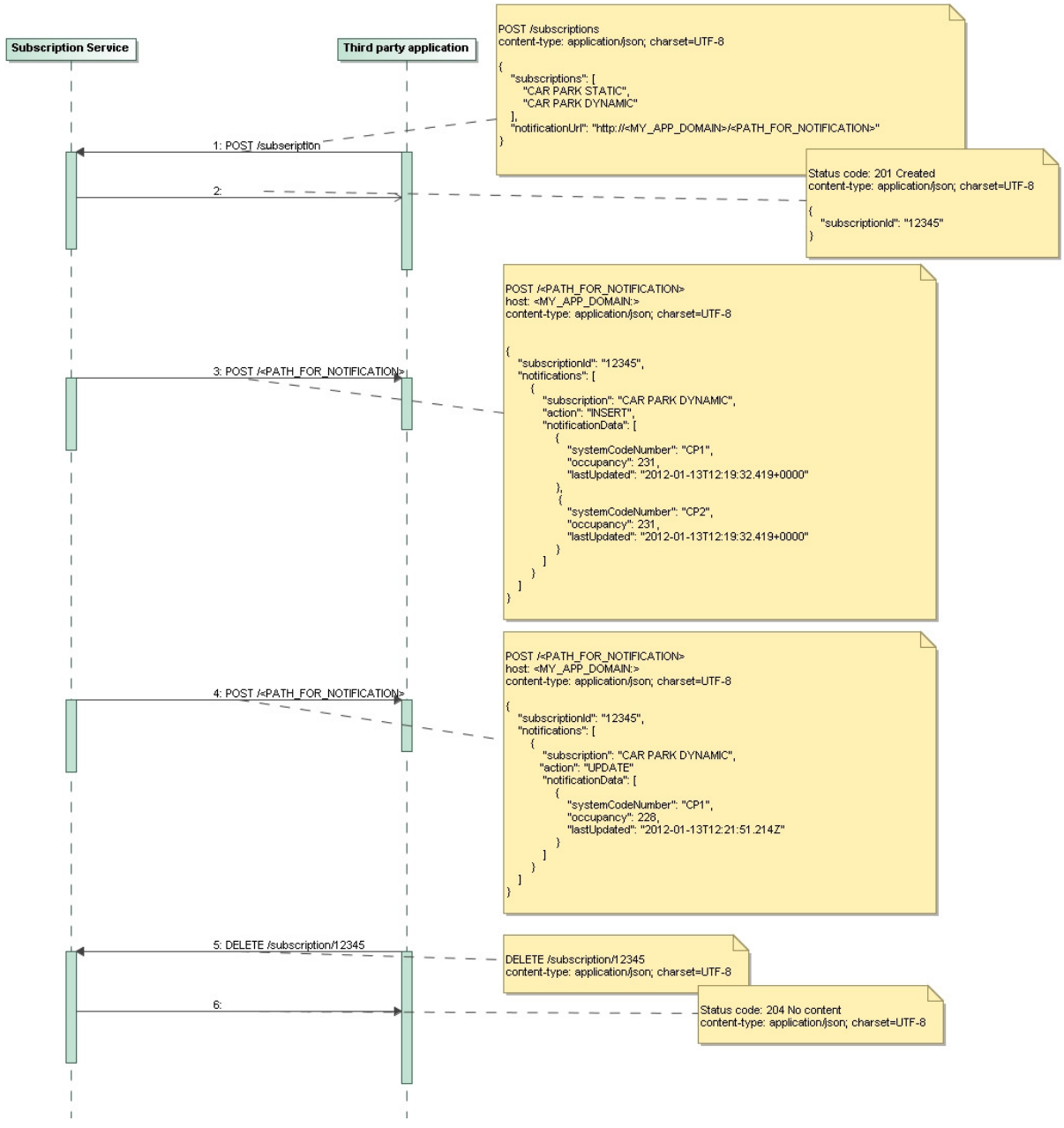
HTTPS status	Description
401	This error will be returned when no or invalid authentication details have been provided.
404	This error will be returned when the URL path does not reference an available data set.
50x	This error code will be returned if an internal error has occurred.

4 Subscription API

4.1 Overview

The REST subscription API provides a mechanism so that a third party application can register and be asynchronously notified of data updates via HTTP messages. Figure 4.1 illustrates the typical sequence of events.

Figure 4.1: Example sequence of HTTP messages for the subscription API



1. The third party application will subscribe to one or more data sets by submitting a POST to the API subscription service specifying the data sets to subscribe to and the URL to send notifications to e.g. http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>.

2. If successful, the response will contain a unique identifier for the subscription.

   At this point the third party application will be registered to receive data update notifications. The third party application must provide an HTTP interface where the notifications can be sent. This should match the URL specified in the subscription request.

   It is left up to the 3rd party application to determine if an initial snapshot of the data is required. This is achieved using the GET request mechanism detailed in section 3.

3. Thereafter any updates will be sent to the HTTP interface of the third party application.

   The interface will send all data updates for the registered data sets. If a third party application is only interested in a subset of data e.g. a single car park or CCTV camera, then it will be the responsibility of the third party application to filter the information.

4. The third party application DELETEs its subscription.

5. The response confirms the deletion. No further data pushes are sent to the third party application.

4.2 Subscribing

4.2.1 Request

To subscribe to one or more data sets, a JSON message of the format below should be posted to the subscriptions API URL.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
     "CAR PARK STATIC",
     "CAR PARK DYNAMIC"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

Table 4.1: Fields for creating a subscription

Field	Description
subscriptions	**Required -** A comma separated list of data sets to subscribe to.
notificationURL	**Required** - The URL to send the HTTP notifications to. This should be a publically accessible HTTP address. Notifications will only be sent to an HTTP port (port 80).

4.2.2 Success response

```
Status: 201 Created
Location: https://www.netraveldata.co.uk/api/v1/subscription/12345
```

```
{
  "subscriptionId": "12345"
}
```

Table 4.2: Response fields for successful subscription creation

Field	Description
subscriptionId	The unique subscription identifier.

Once subscribed to a data set, the third party application will receive an initial snapshot of the data via the notification mechanism (section 4.3).

4.2.3 Error responses

The following HTTP error status can be returned.

Table 4.3: Error response codes

HTTPS status	Description
400	This error will be returned if a parameter is missing from the subscription request.
401	This error will be returned when no or invalid authentication details have been provided.
404	This error will be raised in the subscription URL cannot be found.
50x	This error will be returned if there is a failure registering the subscription.

4.3 Handling data notifications

Data notifications will be sent via a HTTP POST to a URL specified by the subscription. The subscribed third party application must provide an HTTP interface on port 80 and should process the message in a timely manner returning a valid HTTP status.

4.3.1 Data notification request

The following JSON message will be pushed asynchronously to the subscribed third party application. Note that the `notifications.notificationData` portion of this message will vary depending on the subscription data being pushed and can be an array of one or more data items.

An action can be associated with each notification (`notifications.action`). This can have one of the following values

Table 4.4: Action field description.

Action	Description
INSERT	A new row of data has been inserted.
UPDATE	A row of data has been updated.
DELETE	The data has been deleted. Typically only the system code number will be supplied. See section 4.4.1.
REFRESH	A refresh of all data is required. Typically no data will be supplied. See section 4.4.2

```
POST http://<MYAPPDOMAIN>/<PATH_FOR_NOTIFICATION>
{
    "subscriptionId": "12345",
    "notifications": [
        {
            "subscription": "CAR PARK DYNAMIC",
            "action" : "INSERT"
            "notificationData": [
                {
                    "systemCodeNumber": "CP1",
                    "occupancy": 231,
                    "lastUpdated": "2012-01-13T12:19:32.419+0000”
                },
                {
                    "systemCodeNumber": "CP2",
                    "occupancy": 87,
                    "lastUpdated": "2012-01-13T12:19:40.516+0000”
                }
```

```
                    ]
                }
            ]
        }
```

Table 4.5: Fields in a pushed data notification request

Field	Description
subscriptionId	The unique identifier of the subscription returned when creating the subscription.
notifications	The array of notification data. There can be multiple notifications for different data sets in one message.
notifications.subscription	The name of the subscription.
notifications.action	The action to perform on the subscription. Can be one of INSERT, UPDATE, DELETE or REFRESH.
notifications.notificationData	The array of data that has been updated. There can be multiple items in a single notification. The content each object in this array will vary depending on the data set subscribed to.

4.3.2 Expected response

Third party applications should process the message in a timely manner and return a HTTP 20X status to confirm that they have accepted the message. If a non 20X status is returned, then the subscription will be dropped.

4.4 Handling other types of notifications

4.4.1 Delete notification request

Certain types of data will exist only for a finite period of time, for example incident and road works. When they expire, the UTMC system will send a DELETE notification.

The following JSON message will be sent. This is similar in format to section 4.3.1 but the data section will only contain the system code number.

```
POST http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>
{
    "subscriptionId": "12345",
    "notifications": [
        {
            "subscription": "INCIDENTS",
            "action" : "DELETE"
```

```
                    "notificationData": [
                        {
                            "systemCodeNumber": "INCIDENT1"
                        }
                    ]
                }
            ]
        }
```

Table 4.6: Fields in a pushed data notification request

Field	Description
subscriptionId	The unique identifier of the subscription returned when creating the subscription.
notifications	The array of notification data. There can be multiple notifications for different data sets in one message.
notifications.subscription	The name of the subscription.
notifications.action	The action to perform on the subscription. This will be DELETE.
notifications.notificationData	The array of data that has been deleted.
notification.data.systemCodeNumber	The unique identifier of the item being deleted.

4.4.2 Refresh notification request

If the Open Data Service experiences any communications issues with the UTMC system, it will be likely that UTMC notifications will not have been processed, resulting in no data notification requests being sent to third party applications.

Upon restoration of communications with the UTMC, the Open Data Service will completely refresh its current view of the UTMC data on a feed by feed basis. As each feed is refreshed, the Open Data Service will send a Refresh notification to subscribed third parties. This notification indicates that the third party should perform a refresh of their data using the on demand API as defined in section 3.

The following JSON message will be pushed asynchronously to the subscribed third party application. Note that the `notifications` portion of this message can be an array of one or more subscriptions.

```
POST http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>
{
    "subscriptionId": "12345",
```

```
        "notifications": [
            {
                "subscription": "INCIDENTS",
                "action" : "REFRESH"
                "notificationData": []
            }
        ]
    }
```

Table 4.7: Fields in a pushed refresh notification request

Field	Description
subscriptionId	The unique identifier of the subscription returned when creating the subscription.
notifications	The array of notification data. There can be multiple refresh notifications for different subscriptions in one message.
notifications.subscription	The name of the subscription to be refreshed.
notifications.action	The action to perform on the subscription. This will be REFRESH.
notifications.notificationData	For refresh notifications, the data tag will be empty.

4.4.3 Expected response

Third party applications should process the message in a timely manner and return a HTTP 20X status to confirm that they have accepted the message. If a non 20X status is returned, then the subscription will be dropped.

4.5 Checking subscriptions

4.5.1 Request

To view the list of current subscriptions for a third party application, the following HTTP GET request should be sent

```
    GET https://www.netraveldata.co.uk/api/v1/subscription
```

If successful, then a HTTP status of 200 with the following JSON will be returned. This will contain an array of all active subscriptions for the third party application user identifier.

```
    Status:200
    [
```

```
{
  "subscriptionId": "12345",
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
  "created": "2012-01-13T12:19:32.419+0000",
  "subscriptions": [
    "CAR PARK DYNAMIC",
    "CAR PARK STATIC"
  ]
}
]
```

Table 4.8: Fields in a successful list subscriptions response

Field	Subscription
subscriptionId	The unique identifier of the subscription returned when creating the subscription.
notificationUrl	The URL where the subscription notifications will be posted to.
created	Date and time (in ISO 8601 format) when the subscription was created.
subscriptions	List of subscriptions.

4.6 Removing subscriptions

4.6.1 Request

To remove a subscription, a HTTP DELETE should be sent to the following URL

```
DELETE
https://www.netraveldata.co.uk/api/v1/subscription/:subscriptionId
```

Table 4.9: Parameters to delete a subscription

Parameter	Description
:subscriptionId	The unique identifier of the subscription. This subscription id will have been returned from the subscription creation.

4.6.2 Response

```
Status:204 (No content)
```

5 Static car park information

5.1 Overview

The static car park information provides details on the car park names, locations and capacity.

5.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/carpark/static
```

5.3 Subscription request

To subscribe to this data set, specify the subscription `CAR PARK STATIC` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
    "CAR PARK STATIC"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

5.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of static car park information of the format below. The example below illustrates a single car park object.

```
[
  {
        "systemCodeNumber" : "CP1",
        "definitions" : [
            {
                "shortDescription" : "Town Centre",
                "longDescription" : "Car park in Newcastle Town Centre",
                "point" : {
                    "easting" : 999999,
                    "northing" : 199999
                },
```

```
                    "lastUpdated": "2012-01-13T12:19:32.419+0000"
                }
            ],
            "configurations" : [
                {
                    "capacity": 200,
                    "configurationDate": "2012-01-13T12:19:32.419+0000"
                }
            ]
        }
    ]
```

Table 5.1: Data fields for static car park information

Field	Description
systemCodeNumber	The unique identifier of the car park.
definitions	An array of car park definitions – typically one.
definitions.shortDescription	A brief description of the car park, usually the car park name.
definitions.longDescription	A longer description of the car park.
definitions.point	The OSNGR location of the car park.
definitions.point.easting	The OSNGR easting.
definitions.point.northing	The OSNGR northing.
definitions.lastUpdated	The date and time (in ISO 8601 format) when the definition was last updated.
configurations	An array of configuration for the car park – typically one.
configurations.capacity	The capacity of the car park.
configurations.configurationDate	The date and time (in ISO 8601 format) when the configuration was changed.

6 Dynamic car park information

6.1 Overview

The dynamic car park information provides the latest occupancy information for the car parks.

6.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/carpark/dynamic
```

6.3 Subscription request

To subscribe to this data set, specify the subscription `CAR PARK DYNAMIC` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
    "CAR PARK DYNAMIC"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

6.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of dynamic car park information of the format below. The example below illustrates a single car park dynamic.

```
[
    {
        “systemCodeNumber” : “CP1”,
        “dynamics” : [
            {
                "occupancy": 231,
                “stateDescription”: “SPACES”,
                “lastUpdated": "2012-01-13T12:19:32.419+0000”
            }
        ]
    }
```

```
        ]
```

Table 6.1: Data fields for dynamic car park information

Field	Description
systemCodeNumber	The unique identifier of the car park.
dynamics	An array of car park dynamics – typically one.
dynamics.occupancy.	The occupancy.
dynamics.stateDescription	A description of the car park state. See Appendix E.
dynamics.lastUpdated	The date and time (in ISO 8601 format) when the dynamics were last updated.

7 Static CCTV information

7.1 Overview

The static CCTV information provides details on the CCTV camera locations.

7.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/cctv/static
```

7.3 Subscription request

To subscribe to this data set, specify the subscription `CCTV STATIC` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
      "CCTV STATIC"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

7.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of static CCTV camera information of the format below. The example below illustrates a single CCTV camera.

```
[
    {
        “systemCodeNumber” : “CCTV007”,
        “definitions” : [
            {
                “shortDescription” : “A167 Durham Road”,
                “longDescription” : “A167 Durham Road – Outside St
George's Church”,
                “point” : {
                    “easting” : 999999,
                    “northing” : 199999
```

```
                    },
                    "lastUpdated": "2012-01-13T12:19:32.419+0000"
                }
            ],
        }
    ]
```

Table 7.1: Data fields for static CCTV camera information

Field	Description
systemCodeNumber	The unique identifier of the CCTV camera.
definitions	An array of CCTV definitions – typically one.
definitions.shortDescription	A brief description of the CCTV camera.
definitions.longDescription	A longer description of the CCTV camera.
definitions.point	The OSNGR location of the CCTV camera.
definitions.point.easting	The OSNGR easting.
definitions.point.northing	The OSNGR northing.
definitions.lastUpdated	The date and time (in ISO 8601 format) the definition was last updated.

8 Dynamic CCTV information

8.1 Overview

The dynamic CCTV information provides details when the CCTV camera images were updated and the where to retrieve CCTV images.

8.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/cctv/dynamic
```

8.3 Subscription request

To subscribe to this data set, specify the subscription `CCTV DYNAMIC` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
    "CCTV DYNAMIC"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

8.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of dynamic CCTV camera information of the format below. This example illustrates a single CCTV dynamic.

```
[
    {
        “systemCodeNumber” : “CCTV007”,
        “dynamics” : [
            {
                “image” :
“https://www.netraveldata.co.uk/api/v1/cctv/images/BBC01a.jpg”,
                “lastUpdated”: "2012-01-13T12:19:32.419+0000”
             }
         ],
```

```
            }
        ]
```

Table 8.1: Data fields for dynamic CCTV camera information

Field	Description
systemCodeNumber	The unique identifier of the CCTV camera.
dynamics	An array of CCTV dynamics – typically one.
dynamics.image	A URL to the image.
dynamics.lastUpdated	The date and time (in ISO 8601 foramt) when the image was updated.

9 CCTV images

9.1 Overview

This API provides the latest CCTV images.

9.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/cctv/images/:cctvImage
```

Table 9.1: Parameters to retrieve a CCTV image

Parameter	Description
:cctvImage	The file name of the CCTV image to retrieve.

The actual URL will be specified by the CCTV dynamic (see section 8).

9.3 Subscription request

This API does not support subscriptions. Updates to images will be notified via changes to the CCTV dynamic (see section 8).

9.4 Data content

The CCTV image will be supplied in JPEG format.

10 Static SCOOT information

10.1 Overview

SCOOT coordinates the operation of all traffic signals in an area to give good progression of vehicles. As part of this it detects vehicles at the start of each approach and gathers various data including average speed, travel time and flows.

The static SCOOT information provides the locations and configuration of various SCOOT sites. A SCOOT site has a start and end location covering a stretch of road.

10.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/scoot/static
```

10.3 Subscription request

To subscribe to this data set, specify the subscription `SCOOT STATIC` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
    "SCOOT STATIC"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

10.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of static SCOOT site information of the format below. This example illustrates a single SCOOT site.

```
[
    {
        “systemCodeNumber” : “SCOOT01”,
        “definitions” : [
            {
                “shortDescription” : “FELLING BYPASS / STONEYGATE SLIP”,
                “longDescription” : “FELLING BYPASS / STONEYGATE SLIP”,
```

```
                    "point" : {
                        "easting" : 999999,
                        "northing" : 199999
                    },
                    "endPoint" : {
                        "easting" : 999999,
                        "northing" : 199999
                    },
                    "lastUpdated": "2012-01-13T12:19:32.419+0000"
                }
            ]
        }
    ]
```

Table 10.1: Data fields for static SCOOT site information

Field	Description
systemCodeNumber	The unique identifier of the SCOOT site.
definitions	An array of SCOOT definitions – typically one.
definitions.shortDescription	A brief description of the SCOOT site.
definitions.longDescription	A longer description of the SCOOT site.
definitions.point	The starting OSNGR location of the SCOOT site.
definitions.point.easting	The OSNGR easting.
definitions.point.northing	The OSNGR northing.
definitions.endPoint	The end OSNGR location of the SCOOT site.
definitions.endPoint.easting	The OSNGR easting.
definitions.endPoint.northing	The OSNGR northing.
definitions.lastUpdated	The date and time (in ISO 8601 format) the definition was last updated.

11 Dynamic SCOOT information

11.1 Overview

The dynamic SCOOT information provides various dynamic data collected by the SCOOT sites including

- Average speed
- Travel times
- Congestion rates

11.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/scoot/dynamic
```

11.3 Subscription request

To subscribe to this data set, specify the subscription `SCOOT DYNAMIC` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
     "SCOOT DYNAMIC"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

11.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of dynamic SCOOT information of the format below. This example illustrates a single SCOOT dynamic.

```
[
    {
        "systemCodeNumber" : "N0514",
        "dynamics" : [
            {
                "congestionPercent" : 1,
                "currentFlow" : 19,
                "averageSpeed" : 40,
                "linkStatus" : 0,
```

```
                    "linkTravelTime": 29,
                    "lastUpdated": "2012-01-13T12:19:32.419+0000"
                }
            ],
        }
    ]
```

Table 11.1: Data fields for dynamic SCOOT information

Field	Description
systemCodeNumber	The unique identifier of the SCOOT site.
dynamics	An array of SCOOT dynamics for the site – typically one.
dynamics.congestionPercent	Congestion percentage.
dynamics.currentFlow	Flow of passenger car units (per 5 mins.).
dynamics.averageSpeed	Average speed in km per hour.
dynamics.linkStatus	UTMC standard status of the link. Possible value are 0 = NORMAL or 1 = SUSPECT.
dynamics.linkTravelTime	Travel time in seconds.
dynamics.lastUpdated	The date and time (in ISO 8601 format) when the dynamics were last updated.

12 Static weather station information

12.1 Overview

The static Weather Station information provides the locations and configuration of various Weather Station sites.

12.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/weatherstation/static
```

12.3 Subscription request

To subscribe to this data set, specify the subscription `WEATHER STATION STATIC` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
    "WEATHER STATION STATIC"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

12.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of static weather site information of the format below.

```
[
    {
        “systemCodeNumber” : “MET0001”,
        “definitions” : [
            {
                “shortDescription” : “B1318”,
                “longDescription” : “B1318 Great North Road”,
                “point” : {
                    “easting” : 999999,
                    “northing” : 199999
                },
```

```
                    "lastUpdated": "2012-01-13T12:19:32.419+0000"
                }
            ]
        }
    ]
```

Table 12.1: Data fields for static weather site information

Field	Description
systemCodeNumber	The unique identifier of the weather site.
definitions	An array of weather site definitions – typically one.
definitions.shortDescription	A brief description of the weather site.
definitions.longDescription	A longer description of the weather site.
definitions.point	The OSNGR location of the weather site.
definitions.point.easting	The OSNGR easting.
definitions.point.northing	The OSNGR northing.
definitions.lastUpdated	The date and time (in ISO 8601 format) when the definition was last updated.

13 Dynamic weather station information

13.1 Overview

The weather information provides various dynamic data collected by the Weather sites.

13.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/weatherstation/dynamic
```

13.3 Subscription request

To subscribe to this data set, specify the subscription `WEATHER STATION DYNAMIC` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
     "WEATHER STATION DYNAMIC"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

13.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of dynamic weather information of the format below. The example below illustrates a single dynamic. Most fields are optional and their population will depend on the capabilities of the weather site gathering the information. A null value will be returned when there is no reading is available.

```
[
    {
        “systemCodeNumber” : “MET0001”,
        “dynamics” : [
            {
                “airTemperature”: 3.5,
                “dewPointTemperature”: null,
                “liquidFreezingTemperature” : -0.2,
                “maxWindDirection” : 306
```

```
                    "maxWindSpeed": 1.7,
                    "precipitationTotal" : 0.1,
                    "rainIntensity": 0,
                    "rainOnOff": "Rain detector off",
                    "rainState": "Invalid",
                    "relativeHumidity": 94.80,
                    "surfaceState1": "Invalid",
                    "surfaceTemperature1": 10.8,
                    "waterLayer": 0,
                    "waterThickness": 1.1,
                    "windDirection":274,
                    "windSpeed": 1.2,
                    "lastUpdated": "2012-01-13T12:19:32.419+0000"
                }
            ],
        }
    ]
```


Table 13.1: Data fields for dynamic weather station information

Field	Description
systemCodeNumber	The unique identifier of the Weather site.
dynamics	An array of weather dynamics for the site – typically one.
dynamics.airTemperature	Air temperature in °C.
dynamics.dewPointTemperature	Dew point temperature in °C.
dynamics.liquidFreezingTemperature	Liquid freezing temperature in °C.
dynamics.maxWindDirection	Max wind direction in °.
dynamics.maxWindSpeed	Max wind speed in m/s.
dynamcs.precipitationTotal	Total precipitation in mm.
dynamics.rainIntensity	Rain intensity in mm/h.
dynamics.rainOnOff	Rain on off state value. See Appendix I.
dynamics.rainState	Rain state. See Appendix I.
dynamics.relativeHumidity	Relative humidity %.
dynamics.surfaceState1	Surface state. See Appendix I.
dynamics.surfaceTemperature1	Surface temperature in °C.
dynamics.waterLayer	Water layer in mm.
dynamics.waterThickness	Water thickness in mm.
dynamics.windDirection	Wind direction in °.

Field	Description
dynamics.windSpeed	Wind speed in m/s.
dynamics.lastUpdated	Date and time (in ISO 8601 format) when the dynamic was last updated.

14 Static air quality information

14.1 Overview

The static Air Quality information provides the locations and configuration of various Air Quality sites.

14.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/airquality/static
```

14.3 Subscription request

To subscribe to this data set, specify the subscription `AIR QUALITY STATIC` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
     "AIR QUALITY STATIC"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

14.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of static weather site information of the format below. This example illustrates a single air quality site.

```
[
    {
        “systemCodeNumber” : “AQ0001”,
        “definitions” : [
            {
                “longDescription” : “Bottle Bank”,
                “point” : {
                    “easting” : 999999,
                    “northing” : 199999
                },
                “lastUpdated": "2012-01-13T12:19:32.419+0000”
```

```
                        }
                    ]
        }
        ]
```

Table 14.1: Data fields for static Air Quality site information

Field	Description
systemCodeNumber	The unique identifier of the air quality site.
definitions	An array of air quality site definitions – typically one.
definitions.longDescription	A longer description of the air quality site.
definitions.point	The OSNGR location of the air quality site.
definitions.point.easting	The OSNGR easting.
definitions.point.northing	The OSNGR northing.
definitions.lastUpdated	The date and time (in ISO 8601 format) when the definition was last updated.

15 Daily average air quality information

15.1 Overview

The Daily Average Air Quality information includes various measurements averaged over the last day.

15.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/airquality/dailyaverage
```

15.3 Subscription request

To subscribe to this data set, specify the subscription `AIR QUALITY DAILY AVERAGE` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
    "subscriptions": [
        "AIR QUALITY DAILY AVERAGE"
    ],
    "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

15.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of daily average air quality information of the format below. This example illustrates a single dynamic. Note that the specific data supplied will be dependent on the capabilities of the various air quality sites. A null value will be returned when there is no reading is available.

```
[
    {
        “systemCodeNumber” : “N0514”,
        “dynamics” : [
            {
                “avgTemperature” : null,
                “avgRack” : null,
                “avgFilter” : null,
                “avgPressure” : null,
                “avgNo”: null,
```

```
                    "avgNo2": null,
                    "avgNox": null,
                    "avgPm10": null,
                    "lastUpdated": "2012-01-13T12:19:32.419+0000"
                }
            ],
        }
    ]
```

Table 15.1: Data fields for dynamic air quality information

Field	Description
systemCodeNumber	The unique identifier of the air quality site.
dynamics	An array of daily average air quality dynamics for the site – typically one.
dynamics.avgTemperature	Average temperature in °C.
dynamics.avgRack	Average rack temperature in °C.
dynamics.avgFilter	Average filter %.
dynamics.avgPressure	Average pressure in mBar.
dynamics.avgNo	Average Nitrogen Monoxide in part per billion (ppb).
dynamics.avgNo2	Average Nitrogen Dioxide in part per billion (ppb).
dynamics.avgNox	Average Nitrogen Oxides in part per billion (ppb).
dynamics.avgPm10	Average pm10 particulates in micrograms per cubic meter ($\mu g/m^3$).
dynamics.lastUpdated	The date and time (in ISO 8601 format) when the dynamics were last updated.

16 Static journey time information

16.1 Overview

The static journey time information provides details on the journey time links. Journey time links are provided for Highways Agency roads (via National Traffic Control Centre) and 16 bus corridors split into individual links.

16.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/journeytime/static
```

16.3 Subscription request

To subscribe to this data set, specify the subscription `JOURNEY TIME STATIC` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
     "JOURNEY TIME STATIC"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

16.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of static journey time information of the format below. The example below illustrates a single journey time link.

```
[
    {
        “systemCodeNumber” : “CAJT01”,
        “definitions” : [
            {
                “shortDescription” : “Newcastle – B6324 Stamfordham Rd”,
                “longDescription” : “Newcastle – B6324 Stamfordham Rd
Westbound – Birchvale Ave to Westward Ct”,
                “point” : {
```

```
                        "easting" : 999999,
                        "northing" : 199999
                    },
                    "endPoint" : {
                        "easting" : 999999,
                        "northing" : 199999
                    },
                    "lastUpdated": "2012-01-13T12:19:32.419+0000"
                }
            ]
        }
    ]
```

Table 16.1: Data fields for static journey time information

Field	Description
systemCodeNumber	The unique identifier of the journey time link.
definitions	An array of journey time link definitions – typically one.
definitions.shortDescription	A brief description of the journey time link.
definitions.longDescription	A longer description of the journey time link.
definitions.point	The starting OSNGR location of the journey time link.
definitions.point.easting	The OSNGR easting.
definitions.point.northing	The OSNGR northing.
definitions.endPoint	The end OSNGR location of the journey time link.
definitions.endPoint.easting	The OSNGR easting.
definitions.endPoint.northing	The OSNGR northing.
definitions.creationDate	The date and time (in ISO 8601 format) when the definition was created.

17 Dynamic journey time information

17.1 Overview

The dynamic journey time information provides the latest journey times for the journey time links.

17.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/journeytime/dynamic
```

17.3 Subscription request

To subscribe to this data set, specify the subscription `JOURNEY TIME DYNAMIC` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
     "JOURNEY TIME DYNAMIC"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

17.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of dynamic journey time information of the format below. The example below illustrates a single journey time dynamic.

```
[
    {
        “systemCodeNumber” : “CAJT01”,
        “dynamics” : [
            {
                "linkTravelTime”: 180,
                “lastUpdated": "2012-01-13T12:19:32.419+0000”
            }
        ]
    }
]
```

Table 17.1: Data fields for dynamic journey time information

Field	Description
systemCodeNumber	The unique identifier of the journey time link.
dynamics	An array of journey time link dynamics – typically one.
dynamics.linkTravelTime	Actual link travel time in seconds.
dynamics.lastUpdated	The date and time (in ISO 8601 format) when the dynamics were last updated.

18 Incident information

18.1 Overview

This data stream will provide the latest incidents. Only confirmed and currently active incidents (or recently closed) will be available.

18.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/traffic/incident
```

18.3 Subscription request

To subscribe to this data set, specify the subscription `TRAFFIC INCIDENT` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
    "subscriptions": [
        "TRAFFIC INCIDENT"
    ],
    "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

18.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of incident information of the format below. This example illustrates a single incident. All dates are supplied in ISO 8601 format.

```
[
    {
        “systemCodeNumber” : “N0514”,
        “type” : “Incident”,
        “incidentTypeDescription” : “BROKEN DOWN VEHICLE(S)”,
        “shortDescription” : “On the A19 southbound”,
        “longDescription” : “On the A19 southbound exit slip to the A182
, minor delays are possible due to a broken down vehicle closing one
lane. Normal traffic conditions expected from 2 pm.”,
        “point” : {
```

```
                    "easting" : 999999,
                    "northing" : 199999
            },
            "locationDescription": "A19 southbound exit for A182 near
    Murton",
            "creationDate": "2012-01-13T12:00:00.000+0000",
            "dataSourceTypeRef": "NTCC DATEX II",
            "confirmedDate": "2012-01-13T12:00:00.000+0000",
            "modifiedDate": "2012-01-13T13:19:32.419+0000"
            "severityTypeRefDescription": "MEDIUM",
            "lanesAffectedTypeRefDescription": "||T",
            "diversionInForce": "Y",
            "phaseTypeRef": "CURRENT",
            "incidentTime": "2012-01-13T12:00:00.000+0000",
            "endTime" : "2012-01-13T13:00:00.000+0000",
        }
    ]
```


Table 18.1: Data fields for incident information

Field	Description
systemCodeNumber	The unique identifier of the incident.
type	The type, normally "Incident".
incidentTypeDescription	A textual description of the incident type. See Appendix A.
shortDescription	Summary of incident.
longDescription	Description of the incident.
point	The OSGNR location of the incident.
point.easting	The OSGNR easting.
point.northing	The OSGNR northing.
locationDescription	Location description.
creationDate	The date and time the incident was created.
dataSourceTypeRef	The source system that created the incident.
confirmedDate	When the incident was confirmed.
modifiedDate	The data and time when the incident was last modified.
severityTypeRefDescription	The severity description as defined by the UTMC standard. See Appendix F.
lanesAffectedTypeRefDescription	Textual description of the lanes affected. See Appendix G.
diversionsInForce	Y when diversions are in force.
phaseTypeRef	A description of the phase the incident is in. See Appendix H.

Field	Description
incidentTime	The time of the incident.
endTime	When the incident will be cleared.

19 Accident information

19.1 Overview

This data stream will provide the latest accidents. Only confirmed and currently active accidents (or recently closed) will be available.

19.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/traffic/accident
```

19.3 Subscription request

To subscribe to this data set, specify the subscription `TRAFFIC ACCIDENT` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
     "TRAFFIC ACCIDENT"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

19.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of accident information of the format below. This example illustrates a single accident. All dates are supplied in ISO 8601 format.

```
[
    {
        “systemCodeNumber” : “N0515”,
        “type” : “Accident”,
        “accidentTypeDescription” : “COLLISION”,
        “shortDescription” : “On the A19 southbound”,
        “longDescription” : “On the A19 southbound exit slip to the A182
, minor delays are possible due to a 2 car collision. Normal traffic
conditions expected from 2 pm.”,
        “point” : {
```

```
                    "easting" : 999999,
                    "northing" : 199999
            },
            "locationDescription": "A19 southbound exit for A182 near
    Murton",
            "creationDate": "2012-01-13T12:00:00.000+0000",
            "dataSourceTypeRef": "NTCC DATEX II",
            "confirmedDate": "2012-01-13T12:00:00.000+0000",
            "modifiedDate": "2012-01-13T13:19:32.419+0000"
            "severityTypeRefDescription": "MEDIUM",
            "lanesAffectedTypeRefDescription": "||T",
            "diversionInForce": "Y",
            "phaseTypeRef": "CURRENT",
            "accidentTime": "2012-01-13T12:00:00.000+0000",
            "endTime" : "2012-01-13T13:00:00.000+0000",
        }
    ]
```


Table 19.1: Data fields for incident information

Field	Description
systemCodeNumber	The unique identifier of the accident.
type	The type, normally "Accident".
accidentTypeDescription	A textual description of the accident type. See Appendix B.
shortDescription	Summary of accident.
longDescription	Description of the accident.
point	The OSGNR location of the accident.
point.easting	The OSGNR easting.
point.northing	The OSGNR northing.
locationDescription	Location description.
creationDate	The date and time the accident was created.
dataSourceTypeRef	The source system that created the accident.
confirmedDate	When the accident was confirmed.
modifiedDate	The data and time when the accident was last modified.
severityTypeRefDescription	The severity description as defined by the UTMC standard. See Appendix F.
lanesAffectedTypeRefDescription	Textual description of the lanes affected. See Appendix G.
diversionsInForce	Y when diversions are in force.
phaseTypeRef	A description of the phase the accident is in. See Appendix H.

Field	Description
accidentTime	The time of the accident.
endTime	When the accident will be cleared.

20 Event information

20.1 Overview

This data stream will provide the latest events. Only confirmed and currently active events (or recently closed) will be available.

20.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/traffic/event
```

20.3 Subscription request

To subscribe to this data set, specify the subscription `TRAFFIC EVENT` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
  "subscriptions": [
    "TRAFFIC EVENT"
  ],
  "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

20.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of event information of the format below. This example illustrates a single event. All dates are supplied in ISO 8601 format.

```
[
    {
        “systemCodeNumber” : “N0514”,
        “type” : “Event”,
        “eventTypeDescription” : “EXHIBITION”,
        “shortDescription” : “On the A19 southbound”,
        “longDescription” : “On the A19 southbound exit slip to the A182
, minor delays are possible due to statue exhibition. Normal traffic
conditions expected from 2 pm.”,
        “point” : {
```

```
                    "easting" : 999999,
                    "northing" : 199999
            },
            "locationDescription": "A19 southbound exit for A182 near
    Murton",
            "creationDate": "2012-01-13T12:00:00.000+0000",
            "dataSourceTypeRef": "NTCC DATEX II",
            "confirmedDate": "2012-01-13T12:00:00.000+0000",
            "modifiedDate": "2012-01-13T13:19:32.419+0000"
            "severityTypeRefDescription": "MEDIUM",
            "lanesAffectedTypeRefDescription": "||T",
            "diversonRoute": "Lane 3 closed",
            "diversionInForce": "Y",
            "phaseTypeRef": "CURRENT",
            "planned": {
                 "startTime": "2012-01-13T12:00:00.000+0000",
                 "endTime" : "2012-01-13T13:00:00.000+0000"
            },
            "organiser": "N.U.F.C.",
            "venueName": "St. James Park"
        }
    ]
```


Table 20.1: Data fields for incident information

Field	Description
systemCodeNumber	The unique identifier of the event.
type	The type, normally "Event".
eventTypeDescription	A textual description of the event type. See Appendix C.
shortDescription	Summary of event.
longDescription	Description of the event.
point	The OSGNR location of the event.
point.easting	The OSGNR easting.
point.northing	The OSGNR northing.
locationDescription	Location description.
creationDate	The date and time the event was created.
dataSourceTypeRef	The source system that created the event.

Field	Description
confirmedDate	When the event was confirmed.
modifiedDate	The data and time when the event was last modified.
severityTypeRefDescription	The severity description as defined by the UTMC standard. See Appendix F.
lanesAffectedTypeRefDescription	Textual description of the lanes affected. .See Appendix G.
diversionsInForce	Y when diversions are in force.
phaseTypeRef	A description of the phase the event is in. See Appendix H.
planned	The planned start/end time of the event.
planned.startTime	The start time of the event.
planned.endTime	The end time of the event.
organiser	The organiser of the event.
venueName	The name of the venue for the event.

21 Roadwork information

21.1 Overview

This data stream will provide the latest roadworks. Only confirmed and currently active roadworks (or recently closed) will be available.

21.2 On demand request

```
GET https://www.netraveldata.co.uk/api/v1/traffic/roadwork
```

21.3 Subscription request

To subscribe to this data set, specify the subscription `TRAFFIC ROADWORK` e.g.

```
POST https://www.netraveldata.co.uk/api/v1/subscription
{
    "subscriptions": [
        "TRAFFIC ROADWORK"
    ],
    "notificationUrl": "http://<MY_APP_DOMAIN>/<PATH_FOR_NOTIFICATION>"
}
```

21.4 Data content

The data content of the on demand request or the `notifications.notificationData` field of the notification can contain an array of roadwork information of the format below. This example illustrates a single roadwork. All dates are supplied in ISO 8601 format.

```
[
    {
        “systemCodeNumber” : “N0514”,
        “type” : “Roadwork”,
        “roadworksTypeDescription” : “CENTRAL RESERVATION WORK”,
        “shortDescription” : “On the A19 southbound”,
        “longDescription” : “On the A19 southbound exit slip A182”,
        “point” : {
                “easting” : 999999,
                “northing” : 199999
```

```
            },
            "locationDescription": "A19 southbound exit for A182 near
    Murton",
            "creationDate": "2012-01-13T12:00:00.000+0000",
            "dataSourceTypeRef": "NTCC DATEX II",
            "confirmedDate": "2012-01-13T12:00:00.000+0000",
            "modifiedDate": "2012-01-13T13:19:32.419+0000"
            "severityTypeRefDescription": "MEDIUM",
            "lanesAffectedTypeRefDescription": "||T",
            "diversionInForce": "Y",
            "phaseTypeRef": "CURRENT",
            "planned": {
                 "startTime": "2012-01-13T12:00:00.000+0000",
                 "endTime" : "2012-01-13T13:00:00.000+0000"
            },
            "actual": {
                 "startTime": "2012-01-13T12:00:00.000+0000",
                 "endTime" : "2012-01-13T13:00:00.000+0000"
            },
            "contractor": "B. Builder",
            "trafficSignals": "Y",
            "contraflow": "Y"
        }
    ]
```


Table 21.1: Data fields for roadwork information

Field	Description
systemCodeNumber	The unique identifier of the roadwork.
type	The type, normally "Roadwork".
roadworksTypeDescription	A textual description of the roadwork type. See Appendix D.
shortDescription	Summary of roadwork.
longDescription	Description of the roadwork.
point	The OSGNR location of the roadwork.
point.easting	The OSGNR easting.
point.northing	The OSGNR northing.
locationDescription	Location description.

Field	Description
creationDate	The date and time the roadwork was created.
dataSourceTypeRef	The source system that created the roadwork.
confirmedDate	When the roadwork was confirmed.
modifiedDate	The data and time when the roadwork was last modified.
severityTypeRefDescription	The severity description as defined by the UTMC standard. See Appendix F.
lanesAffectedTypeRefDescription	Textual description of the lanes affected. See Appendix G.
diversionsInForce	Y if diversions are in force.
phaseTypeRef	A description of the phase the roadwork is in. See Appendix H.
planned	The planned start/end time of the roadwork.
planned.startTime	The start time of the roadwork.
planned.endTime	The end time of the roadwork.
actual	The actual start/end time of the roadwork.
actual.startTime	The start time of the roadwork.
actual.endTime	The end time of the roadwork.
contractor	The contractor.
trafficSignals	Y if temporary traffic signals are in place.
contraflow	Y if a contraflow is in place.

Appendices

Appendix A. Incident Types

The following list contains all possible Incident type values.

- ABNORMAL LOAD(S)
- AIR CRASH
- AIR RAID
- ANIMALS ON THE ROAD
- ATTACK ON VEHICLE
- AVALANCHES
- BLASTING WORK
- BRIDGE BLOCKED
- BRIDGE CLOSED
- BRIDGE DEMOLITION WORK
- BRIDGE MAINTENANCE WORK
- BRIDGE OPENING
- BROKEN DOWN BUS(ES)
- BROKEN DOWN HEAVY LORRY(IES)
- BROKEN DOWN VEHICLE(S)
- BURST PIPE
- BURST WATER MAIN
- BUS DISRUPTION
- BUS LANE BLOCKED
- BUS LANE CLOSED
- CENTRE LANE(S) BLOCKED
- CENTRE LANE(S) CLOSED
- CHEMICAL SPILLAGE ACCIDENT(S)
- CHILDREN ON ROADWAY
- CIVIL EMERGENCY
- CIVIL EMERGENCY CANCELLED
- CLOSED DUE TO SMOG ALERT
- CONGESTION
- CONTRAFLOW
- CONVOY(S)
- CROWD
- CYCLISTS ON ROADWAY
- DIVERSION
- EMERGENCY ALERT (EXTRA GENERATED TRAFFIC)
- FACILITIES CLOSED
- FAULT
- FIRE
- FLOOD
- FLOW
- FOG
- GAWKING TRAFFIC - RUBBER NECKERS
- GUNFIRE ON ROADWAY
- HAIL

- HEAVY FLOW
- ICE
- LANE CLOSURE
- LIGHT FAULT
- OBSTRUCTION
- PEOPLE ON ROADWAY
- POLLUTION
- POWER FAILURE
- PUBLIC DISTURBANCE
- QUEUE
- RADIOACTIVE LEAK
- RAIN
- RIOT
- ROAD CLOSURE
- ROADSIDE FIRE
- SANDSTORMS
- SECURITY ALERT
- SECURITY INCIDENT
- SIGHTSEERS OBSTRUCTING ACCESS
- SNOW
- SPEED RESTRICTION
- SPILLAGE
- SPRAY HAZARD
- STRUCTURAL DAMAGE
- TELEPHONE FAULT
- TEMPORARY SIGNAL
- TERRORIST INCIDENT
- TORNADOES
- TRAFFIC SIGNAL FAULT
- TRAIN DISRUPTION
- UNEXPLAINED DAMAGE
- UNEXPLAINED EVENT
- WASHOUT
- WIND
- OTHER INCIDENT

Appendix B. Accident Types

The following list contains all possible Accident type values.

- ACCIDENT
- BUS ACCIDENT
- COLLISION
- ACCIDENT INVESTIGATION WORK
- ACCIDENT HISTORY
- CHEMICAL SPILLAGE ACCIDENT
- FUEL SPILLAGE ACCIDENT
- HAZARDOUS MATERIALS ACCIDENT
- HEAVY LORRY ACCIDENT
- JACK-KNIFED ARTICULATED LORRY
- JACK-KNIFED CARAVAN
- JACK-KNIFED TRAILER
- MULTI-VEHICLE ACCIDENT
- OIL SPILLAGE ACCIDENT
- OVERTURNED HEAVY LORRY
- OVERTURNED VEHICLE
- SECONDARY ACCIDENT
- SERIOUS ACCIDENT
- SHED LOAD
- VEHICLE SPUN AROUND
- OTHER ACCIDENT

Appendix C. Event Types

The following list contains all possible Event type values.

- BALL GAME
- BOXING TOURNAMENT
- ATHLETICS MEETING
- CYCLE RACE
- DEMONSTRATION
- EVENT
- EXHIBITION
- FAIR
- FESTIVAL
- FOOTBALL MATCH
- FUNFAIR
- GOLF TOURNAMENT
- INTERNATIONAL SPORTS MEETING
- MAJOR EVENT
- MARATHON
- MARCH
- MARKET
- MATCH
- PARADE
- PROCESSION
- RACE MEETING
- RUGBY MATCH
- SHOW
- SHOW JUMPING
- SPORTS EVENT
- SPORTS MEETING
- STATE OCCASION
- STRIKE
- TENNIS TOURNAMENT
- TOURNAMENT
- TRADE FAIR
- WATER SPORTS MEETING
- WINTER SPORTS MEETING
- OTHER EVENT

Appendix D. Roadworks Types

The following list contains all possible Roadworks type values.

- CENTRAL RESERVATION WORK
- GENERAL ROADWORKS
- OVERHEAD ROADWORKS
- SURFACE ROADWORKS
- VERGE ROADWORKS
- WATER MAIN WORK
- OTHER ROADWORKS
- STREETWORKS

Appendix E. Car Park States

The following list contains all possible car park state values:

- FAULTY
- SPACES
- ALMOST FULL
- FULL
- CLOSED
- UNKNOWN
- OPEN

Appendix F. Severity Types

The following list contains all possible severity type values:

- Unknown
- Low
- Medium
- High
- Other

Appendix G. Lanes Affected Types

The following list contains all possible lanes affected type values:

-
- T
- I
- I T
- T I
- T T
- I I
- I I I
- I I T
- T I I
- I T T
- T T I
- T T T
- I I I I
- T I I I
- I I I T
- T T I I
- I I T T
- T T T I
- I T T T
- T T T T

Appendix H. Phase Types

The following list contains all possible phase type values:

- Future
- Current
- Grace
- Past
- Archive
- Deleted

Appendix I. Weather Station types

The following list contains all possible rainOnOff type values:

- Rain detector off
- Rain detector on

The following list contains all possible rainState type values:

- Invalid
- No Precipitation
- Recent Precipitation
- Precipitation Now
- Light Precipitation
- Medium Precipitation
- Heavy Precipitation
- Light Snow
- Medium Snow
- Heavy Snow

The following list contains all possible surface state type values:

- Invalid
- Unknown
- Short
- Slushy
- Dry
- Moist
- Wet
- Wet and Treated
- Frost
- Snow
- Ice
- Trace of Chemical