

## Acknowledgement of Country

Transport for NSW acknowledges the traditional custodians of the land on which we work and live.

We pay our respects to Elders past and present and celebrate the diversity of Aboriginal people and their ongoing cultures and connections to the lands and waters of NSW.

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional Songlines, trade routes and ceremonial paths in Country that our nation's First Peoples followed for tens of thousands of years.

Transport for NSW is committed to honouring Aboriginal peoples' cultural and spiritual connections to the lands, waters and seas and their rich contribution to society.

# Table of Contents

<b>1.</b>	<b>Definitions .....</b>	<b>5</b>
<b>2.</b>	<b>Introduction .....</b>	<b>6</b>
2.1.	Purpose .....	6
2.2.	Scope .....	6
<b>3.</b>	<b>Traffic Hazards.....</b>	<b>6</b>
3.1.	Details.....	6
3.2.	File Structure .....	8
3.3.	Feature Structure.....	9
3.3.1.	Feature Geometry.....	9
3.3.2.	Feature Properties.....	10
3.3.3.	Arrangement Attachment.....	16
3.3.4.	Arrangement Element.....	17
3.3.5.	Encoded Polyline .....	18
3.3.6.	Impacted Lane .....	19
3.3.7.	Period .....	20
3.3.8.	Road .....	23
3.3.9.	Web Link.....	25
3.4.	Traffic Hazard Examples .....	26
3.4.1.	Simple Incident.....	26
3.4.2.	Complex Incident.....	28
3.4.3.	Roadworks.....	31
3.4.4.	Fire.....	34
<b>3.</b>	<b>Live Traffic Cameras.....</b>	<b>35</b>
3.5.	Details.....	35
3.5.1.	File Structure.....	35

3.6.	Feature Structure.....	35
<b>4.</b>	<b>Site Status.....</b>	<b>37</b>
4.1.	Details.....	38
4.2.	File Structure .....	38
4.3.	Object Properties .....	38
<b>5.</b>	<b>Appendix A: .....</b>	<b>39</b>
5.1	Changes since version 1.0 .....	39
5.2	Changes since version 1.1 .....	39
5.3	Changes since version 1.2 .....	39
5.4	Changes since version 1.3 .....	40
5.5	Changes since version 1.4 .....	40
5.6	Changes since version 1.5 .....	40

## Document control

<b>Authors</b>	Manager Digital Products, Customer Journey Communication
<b>Document owner</b>	Manager Digital Products, Customer Journey Communication
<b>Approved by</b>	Director Customer Journey Communication
<b>Branch</b>	Customer Journey Management
<b>Division</b>	Greater Sydney
<b>Review date</b>	October 2023

## Versions

Version	Amendment notes
1.0	Original version released in 2012
1.1	Deprecated properties subCategoryB, ubdRef, roadClosureUrl, and specialEventClearwaysUrl. Added new property publicTransport. Extended properties arrangementAttachments and arrangementElements from Major Events to all hazard types. Replaced attendingGroups value of "Heavy tow truck" with "Transport Operator"
1.2	Deleted properties ubdRef, roadClosureUrl, and specialEventClearwaysUrl. Added new property incidentKind. Updated descriptions for properties mainCategory, subCategoryA and isNewIncident. Added references to the new M2 travel time JSON file.
1.3	Updated document to reflect the move from <a href="http://livetraffic.rta.nsw.gov.au">livetraffic.rta.nsw.gov.au</a> to <a href="http://data.livetraffic.com">data.livetraffic.com</a> . See "Appendix A: Changes since version 1.0" for details of the changes to create version 1.3
1.4	Deleted Travel Times
1.5	Updated references from HTTP to HTTPS
1.6	Inclusion of new fields: expectedDelay, adviceC, geometry collections (Point, Polygon)
1.7	Introduction of new files: lga-incident.json and lga-participation.json
1.8	Passing polyline directional information to the json files, for both single and both directions. Incident category icon field added. Introduction of new field on whether the incident is on a Local Road or State Road.
1.9	Formatted for Transport for NSW Open Data Hub

# 1. Definitions

Term	Definition
TfNSW	Transport for NSW
TMC	Transport Management Centre

## 2. Introduction

### 2.1. Purpose

This document describes the format and interpretation of data files made available to developers via the Live Traffic NSW web site.

### 2.2. Scope

Data used by the Live Traffic NSW web site is available as a set of plain text GeoJSON files over HTTP, from various subdirectories of [api.transport.nsw.gov.au/v1/live/](http://api.transport.nsw.gov.au/v1/live/). The GeoJSON format is described at <http://www.geojson.org>.

The data files fall into two broad categories:

#### 1. **Traffic hazards:**

There are 7 types of traffic hazard separated into two categories, 'planned' and 'unplanned'. The hazards that fall under the 'unplanned' category are:

- Incident
- Fire
- Flood
- Alpine

The hazards under the 'planned' category are:

- Major Event
- Roadwork

#### 2. **Live traffic cameras:**

There is a single GeoJSON file containing metadata about the traffic cameras whose images appear on the Live Traffic web site. The metadata for each camera specifies the URL of the actual camera image.

Each of these categories is covered in a separate section of this document.

## 3. Traffic Hazards




### 3.1. Details

Traffic Hazards are divided into seven basic types:

- Incidents
- Fire
- Flood
- Alpine conditions
- Major Events
- Roadworks
- Local roads (containing a combination of the above six types)

For the purposes of this document, Major Events and Roadworks may be termed "Planned Hazards" and the other four hazard types as "Unplanned Hazards". Planned hazards are scheduled in advance of their occurrence. Unplanned hazards occur spontaneously as a result of

circumstances.

Planned hazards are displayed in two different ways on the Live Traffic web site, depending on whether those plans currently have an impact on the road network or not. Major Events and Roadworks whose `impactingNetwork` property has the value `true` are marked with  and  respectively. Roadworks whose `impactingNetwork` property has the value `false` are marked with  to indicate a low impact roadwork..

There are three GeoJSON files produced for each type of hazard. Each file contains hazards of the same type.

Hazard	Open	Closed	Open & Closed
Alpine	alpine-open.json	alpine-closed.json	alpine.json
Fire	fire-open.json	fire-closed.json	fire.json
Flood	flood-open.json	flood-closed.json	flood.json
Incident	incident-open.json	incident-closed.json	incident.json
Major Events	majorevent-open.json	majorevent-closed.json	majorevent.json
Roadworks	roadwork-open.json	roadwork-closed.json	roadwork.json
Local roads	/regional/lga-incidents.json	/regional/lga-incidents-open.json	/regional/lga-incidents-closed.json

Table 1 GeoJSON files published for each type of hazard

GeoJSON files whose name ends in `-open` contain:

- Unplanned hazards that are currently having an impact on the road network
- Planned hazards whose scheduled period of operation has not yet concluded

GeoJSON files whose name ends in `-closed` contain:

- Unplanned hazards that are no longer having an impact on the road network
- Planned hazards whose scheduled period of operation has concluded

GeoJSON files not ending in `-open` or `-closed`:

- Contain the union of the hazards in the corresponding `-open` and `-closed` files.

All the above JSON files have a base URL of <https://api.transport.nsw.gov.au/v1/live/hazards/>.

The json files are updated whenever a hazard they contain changes in some way. Do not expect them to all be updated at once or with some minimum frequency.

Note that the GeoJSON data files are generally not pretty-printed, having all their data on a single line of text. To make them more human readable, use an online JSON formatter such as <http://www.jsonlint.com> or <http://jsonformatter.curiousconcept.com>.

Note: GeoJSON samples in this document have been pretty-printed to increase readability.

Also note that at the present time, the hazard data files include many empty or null property values, such as:

- Empty arrays: e.g. "webLinks":[ ]
- Empty strings: e.g. "quadrant":""
- Whitespace-only strings: e.g. "subCategoryB":" "
- Arrays with empty elements: e.g. "attendingGroups":[" " ]
- Null values e.g. "end":null

Please disregard all properties with empty or null values. They will be removed from the files in future. They have been removed from examples presented in this document, for brevity and clarity.

### 3.2. File Structure

All hazard data files conform to the same basic GeoJSON format, as follows:

```
{  
  "type": "FeatureCollection",  
  "rights": {  
    "copyright": String,  
    "licence": String  
  },  
  "layerName": String,  
  "lastPublished": Number,  
  "features": [ { Feature object } ]  
}
```

Each hazard file contains exactly one GeoJSON `FeatureCollection` object, which aggregates zero or more `Feature` objects. Properties of that `FeatureCollection` object are described in the following table.

Property	Type	Description
<code>features</code>	[Object]	Array of <code>Feature</code> objects where each <code>Feature</code> object corresponds to a traffic hazard. All the traffic hazards are of the same type, which is identified by the <code>layerName</code> property. The ordering of <code>Feature</code> objects within the array is undefined.
<code>lastPublished</code>	Number	When a new version of this file was last published to the Live Traffic web server, as a number of milliseconds since January 1, 1970 00:00:00 GMT (Unix Epoch). This corresponds approximately to the timestamp on the file.
<code>layerName</code>	String	Type of hazard that appears in this file. Possible values are: <ul style="list-style-type: none"><li>• Incident</li><li>• Fire</li><li>• Flood</li><li>• Alpine</li><li>• RoadWork</li><li>• MajorEvent</li></ul>
<code>rights</code>	Object	Copyright and licensing details for the data in this file
<code>type</code>	String	Always "FeatureCollection", as per the GeoJSON standard.

Table 2 Feature collection properties



### 3.3. Feature Structure

Each `Feature` in the file represents a traffic hazard, and has the following general format:

```
{
  "type": "Feature",
  "id": Number,
  "geometry": { Geometry object },
  "properties": { Properties object }
}
```

Properties of the `Feature` object are described in the following table.

Property	Type	Description
<code>geometry</code>	Object	See feature geometry below for details.
<code>id</code>	Number	Uniquely identifies this hazard from all other hazards in the same layer (see <code>layerName</code> above).
<code>properties</code>	Object	See Feature properties below for details
<code>type</code>	String	Always 'Feature', as per the GeoJSON standard

Table 3 Feature properties

#### 3.3.1. Feature Geometry

Each `Feature` in the file has a mandatory single `geometry` property with the following general format:

```
"geometry": {
  "type": "Point",
  "coordinates": [ Number, Number ]
}
```

Each hazard's `geometry` property defines the geographic coordinate at which it occurs. Map markers are placed at this point. Note that any polylines associated with a feature are not considered part of its GeoJSON geometry, and are defined in the `encodedPolylines` property.

Property	Type	Description
<code>coordinates</code>	[Number]	The primary geographic point at which the hazard occurs. In the case of hazards that cover a broad area, this point is set to the approximate centroid of the area. This array always contains two numeric elements. The first element is a latitude in decimal degrees, the second element is a longitude in decimal degrees. Both values are expressed in the WGS84 coordinate system.
<code>type</code>	String	Always "POINT", as per the GeoJSON standard

Table 4 Feature Geometry properties

Each `Feature` in the file may have multiple additional `geometry` properties including secondary map markers and polygons, with the following general format:

## Transport for NSW

```

"collections": [
  {
    "type": "Point",
    "coordinates": [
      Number,
      Number
    ]
  },
  {
    "type": "Polygon",
    "coordinates": [
      [
        [
          Number,
          Number
        ],
        [
          Number,
          Number
        ],
        [
          Number,
          Number
        ]
      ]
    ]
  }
]

```

### 3.3.2. Feature Properties

The bulk of a traffic hazard's description is contained within the "properties" part of the Feature. The properties which can appear here are described in the following table. Some properties are only relevant to hazards from particular layers.

Property	Type	Layers	Description
<code>additionalInfo</code>	[String]	All	Circumstantial information that supplements what appears in e.g. "Site cleared", "Persons trapped"
<code>adviceA</code>	String	All	<p>The first standard piece of advice to motorists. At the present time, the following values are possible:</p> <ul style="list-style-type: none"> <li>• Allow extra travel time</li> <li>• Avoid the area</li> <li>• Check signage</li> <li>• Delay journey</li> <li>• Exercise caution</li> <li>• Expect delays</li> <li>• Police directing traffic</li> <li>• Reduce speed</li> <li>• Reduced speed limit</li> <li>• Snow chains required</li> <li>• Stay away</li> <li>• Turn around, go back</li> <li>• Use alternative route</li> <li>• Use diversions</li> <li>• Use public transport</li> </ul>

			<ul style="list-style-type: none"> <li>• Never drive through Floodwater</li> <li>• Vehicle salvage in progress</li> <li>• Plan your journey</li> </ul>
<code>adviceB</code>	String	All	The second standard piece of advice to motorists. The possible values for <code>adviceB</code> are the same as the possible values for <code>adviceA</code> , however <code>adviceB</code> and <code>adviceA</code> cannot have the same values.
<code>advice</code>	String	All	The third standard piece of advice to motorists. The possible values for <code>adviceC</code> are the same as the possible values for <code>adviceA</code> and <code>adviceB</code> , however they cannot have the same values.
<code>arrangementAttachments</code>	[Object]	All	<p>Hazards can have PDF documents associated with them, containing maps pertaining to the event. Each PDF document corresponds to an <code>Arrangement Attachment</code> object. The Live Traffic web site displays these attachments in the same order in which they appear in the <code>arrangementAttachments</code> array, in a section whose title is always “Download maps”. The “Download maps” titled section always appears after any titled sections specified by the <code>arrangementElements</code> property.</p> <p>See the “<b>Error! Reference source not found.</b>” section below for details.</p>
<code>arrangementElements</code>	[Object]	All	<p>Hazards can have a large amount of descriptive information associated with them. To aid readability, this information can be broken down into titled sections. Each titled section corresponds to an <code>Arrangement Element</code> object. Example section titles include “Road Closures”, “Special Event Clearways” and “Other Information”. The Live Traffic web site displays these sections in the same order in which the elements appear in the <code>arrangementElements</code> array.</p> <p>See the “<b>Error! Reference source not found.</b>” section below for details.</p>
<code>attendingGroups</code>	[String]	All	An array of strings, each one being the name of a group that is attending the scene of the traffic hazard. At the time of writing, the following values are possible:

			<ul style="list-style-type: none"> <li>• Emergency Services</li> <li>• Transport for NSW</li> <li>• Tow Truck</li> <li>• Motorway Crew</li> <li>• Utility Company</li> <li>• Local Council</li> <li>• Rural Fire Service</li> <li>• Helicopter</li> <li>• Heavy Vehicle Inspectors</li> <li>• Heavy Vehicle Tow Truck</li> <li>• Crash Investigation Unit</li> <li>• Mechanic</li> </ul>
			There may be an additional, free-form values entered by our staff.
<b>created</b>	Number	All	Date and time at which a record of the hazard was created in our internal tracking system, as a number of milliseconds since January 1, 1970 00:00:00 GMT. This property is a counterpart to the ended property.
<b>displayName</b>	String	All	Describes the particulars of a hazard. The description generally begins with a general hazard category in upper case, followed by details in lower case e.g. "ACCIDENT Two cars", "HAZARD Fallen tree". The displayName is incorporated into headings in both the Map View and Text View of the Live Traffic web site.
<b>diversions</b>	String	All	Summary of any traffic diversions in place. The text may contain HTML markup.
<b>duration</b>	String	Planned	Planned duration of the hazard. This property is rarely used.
<b>encodedPolylines</b>	[Object]	All	<p>A hazard may have zero or more polylines associated with it, representing stretches of road affected by the hazard. Rather than capture the polylines as a raw series of coordinates, that series is encoded into a string of printable characters. Each element of the array is an Encoded Polyline object associated with this hazard. The order of the polylines in the encodedPolylines array is undefined. The polylines needed not be contiguous.</p> <p>See the "<b>Error! Reference source not found.</b>" section below for details.</p>
<b>end</b>	Number	Planned	Date on which a planned hazard is scheduled to end, as a number of milliseconds since

			January 1, 1970 00:00:00 GMT. This property is a counterpart to the <code>start</code> property.
<code>ended</code>	Boolean	All	<code>true</code> if the hazard has ended, otherwise <code>false</code> . Once ended, the hazard's record in our internal tracking system is closed and further modification becomes impossible unless the record is later re-opened. This property is a counterpart to the <code>created</code> property. When <code>true</code> , the <code>lastUpdated</code> property of the hazard will be the date/time when the hazard's record in the tracking system was closed.
<code>expectedDelay</code>	Number	All	The value is a numeric representation of expected delay in minutes. A value of 0 or -1 indicates that there is no delay information available.
<code>headline</code>	String	All	A one-line summary of the hazard, including its type, location and other high level details. The headline text of major hazards appears in the yellow "Major Incident Ticker" above the map in Map View.
<code>impactingNetwork</code>	Boolean	All	True if the hazard is currently having some impact on traffic on the road network.
<code>incidentKind</code>	String	All	Identifies the hazard as either Planned or Unplanned. The values for this property include: <ul style="list-style-type: none"> <li>Planned</li> <li>Unplanned</li> </ul> A Planned hazard must have the properties: <code>start</code> and <code>end</code> . And optionally the properties: <code>duration</code> and <code>periods</code> . An Unplanned hazard will not contain these properties.
<code>isInitialReport</code>	Boolean	Unplanned	True if the hazard has been reported to us by an external source but not yet confirmed by staff or police.
<code>isMajor</code>	Boolean	All	True if this hazard is regarded as having a particularly significant impact on the road network. The <code>headline</code> text of hazards with an <code>isMajor</code> value of <code>true</code> appear in the red "Major Hazard Ticker" above the map in Map View.
<code>isNewIncident</code>	Boolean	All	True if the hazard is new.
<code>lastUpdated</code>	Number	All	When the data for this hazard was last updated by our staff, as a number of

			milliseconds since January 1, 1970 00:00:00 GMT
<code>mainCategory</code>	String	All	The broad hazard category description assigned to the hazard by TMC Communications. Used internally by TMC Communications for reporting hazard statistics. Please note the values used by this property are subject to change and should not be relied upon.
<code>media</code>	[Object]	All	<b>Unused</b>
<code>name</code>			<b>Unused</b>
<code>otherAdvice</code>	String	All	Free form text containing advice to motorists, to supplement the standard advice conveyed in the <code>adviceA</code> and <code>adviceB</code> properties. This text may contain HTML markup.
<code>periods</code>	[Object]	Planned	Array of <code>Period</code> objects, each being a planned period of operation within which the road network will potentially be impacted. Each <code>Period</code> represents a series of consecutive days over which the same operating times apply. The order of elements in the <code>periods</code> array is undefined.  See the “ <b>Error! Reference source not found.</b> ” section below for details.
<code>publicTransport</code>	String	All	Free form text containing information about the public transport impact of this hazard. This text may contain HTML markup.
<code>queueLength</code>	Number	All	
<code>roads</code>	[Object]	All	Array of <code>Road</code> objects, each being a road that is impacted by this hazard.  See the “ <b>Error! Reference source not found.</b> ” section below for details.
<code>speedLimit</code>	Number	All	A special, restricted speed limit in km/h which is in force around this hazard. A value of 0 or -1 indicates that there is no such restriction in force. This field will only contain a value greater than 0 if <code>adviceA</code> , <code>adviceB</code> or <code>adviceC</code> equals “Reduced speed limit”.
<code>start</code>	Number	Planned	The date on which a planned hazard is scheduled to begin, as a number of milliseconds since 1970-01-01 00:00:000 (YYYY-MM-DD hh:mm:ss:nnn). This property is a counterpart to the end property.

<b>subCategoryA</b>	String	All	An optional refining hazard description for the assigned <code>mainCategory</code> . Used internally by TMC for reporting hazard statistics. Please note the values used by this property are subject to change and should not be relied upon.
<b>subCategoryB</b>	String	All	<b>Unused.</b>
<b>webLinkName</b>	String	All	<b>Unused.</b>
<b>webLinks</b>	[Object]	All	Array of <code>WebLink</code> objects in the order in which they should appear, top to bottom. Each <code>WebLink</code> represents a hyperlink to an external web site that provides information pertaining to the hazard. See the “ <b>Web Link</b> ” section below for details.
<b>webLinkUrl</b>			<b>Unused.</b>
<b>orgName</b>	String	lga- incidents	Name of the council
<b>orgWebsite</b>	String	lga- incidents	Website of the council
<b>orgContact</b>	String	lga- incidents	Contact number for the council

Table 5 Feature properties

The following sections describe each of the Object types referenced in the table above.

### 3.3.3. Arrangement Attachment

The following example illustrates how an Arrangement Attachment object is represented in the Text View of the Live Traffic web site.

```

"arrangementAttachments": [{
  "displayName": "Sydney Olympic Park NSW Health Vaccination Centres - transport and parking map",
  "fileName": "SCO_2087_OLYMPIC PARK VACCINATION CENTRE MAP_09AUG21_V005.pdf",
  "fileType": "PDF",
  "linkName": "Sydney Olympic Park NSW Health Vaccination Centres - transport and parking map",
  "sizeInBytes": 1524535,
  "uniqueFileName":
"20210809111020512_SCO_2087_OLYMPICPARKVACCINATIONCENTREMAP_09AUG21_V005.pdf"
}],

```

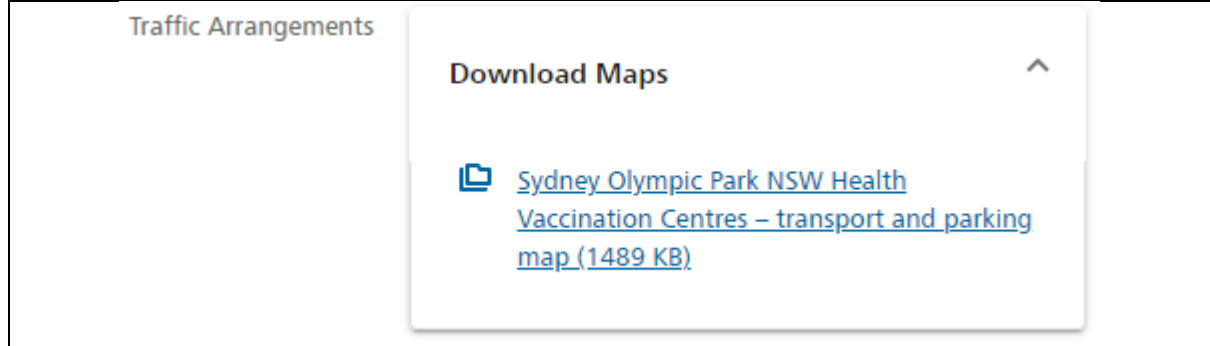


Table 6 Arrangement Attachment Example

Attachments are stored in the directory <http://data.livetraffic.com/traffic/attach>. Append the uniqueFileName to this base URL to get the complete URL of the document. The document will only be present in that directory so long as the associated hazard is open.

Note that revisions to an attachment document result in a new value for uniqueFileName.

Property	Type	Description
displayName	string	Unused
fileName	String	Name the document originally had when first uploaded to our internal tracking system.
fileType	String	Code for the document type. At the time of writing only pdf is possible.
linkName	String	Text of the hyperlink to the document
sizeInBytes	Number	Size of the document file in bytes
uniqueFileName	String	Name of the document including an automatically generated suffix which ensures uniqueness amongst all attachments.

Table 7 Arrangement Attachment properties



### 3.3.4. Arrangement Element

The following example illustrates how an Arrangement Attachment object is represented in the Text View of the Live Traffic web site.

```

"arrangementElements": [
  {
    "html": "<p><strong>SYDNEY CBD / THE ROCKS ... ",
    "title": "Road Closures & shared pathway closures",
    "id": "14075"
  },
  {
    "html": "<p><strong>CHANGED ACCESS\nARRANGEMENTS DURING CLOSURE ... ",
    "title": "Local access arrangements",
    "id": "14076"
  }
],

```



Table 8 Arrangement Element Example

Properties of an Arrangement Element object are as follows:

Property	Type	Description
html	string	HTML content of the element
title	String	The title of the element

Table 9 Arrangement Element properties

### 3.3.5. Encoded Polyline

The following is an example of an `encodedPolylines` property whose value is an array containing a single or double Encoded Polyline object:

```
"encodedPolylines": [
  {
    "coords": "hbb{Dgeya\\...",
    "direction": "ONE DIRECTION","levels": "A??AA@..."
  },
  {
    "coords": "hbb{Dgeya\\...",
    "direction": "hbb{Dgeya\\...",
    "levels": "A??AA@..."
  }
}]
```

Table 10 Encoded Polyline example (ellipses indicate string truncation)

Properties of an Encoded Polyline object are as follows:

Property	Type	Description
<code>coords</code>	String	<p>The vertexes of a polyline accompanying this hazard in order from first to last. The polyline is encoded using the Google Maps algorithm for polyline encoding as presented in the following code:</p> <p><a href="https://developers.google.com/maps/documentation/utilities/polylinealgorithm">https://developers.google.com/maps/documentation/utilities/polylinealgorithm</a></p> <p>All Live Traffic polylines are encoded with 'forceEndpoints' set to true.</p> <p>For those using the Google Maps V3 API, these polylines may be decoded using the <code>decodePath</code> method of the class <code>com.google.gwt.maps.client.geometrylib.EncodingUtils</code>.</p>
<code>levels</code>		<b>Unused.</b>
<code>Direction</code>	Array of Strings	<p>Represents the direction of the polyline.</p> <p>Example Value: "ONE DIRECTION"</p>

Table 11 Encoded Polyline properties

### 3.3.6. Impacted Lane

The following examples illustrate how various `Impacted Lane` objects are represented in the Text View of the Live Traffic web site.

<pre>"impactedLanes": [   {     "affectedDirection": "Northbound",     "closedLanes": "1",     "description": "Lane 2",     "extent": "Lanes closed",     "numberOfLanes": "3"   } ]</pre>	<div style="border: 1px solid #ccc; padding: 5px; text-align: center;">1 of 3 northbound lanes closed (lane 2).</div>
<pre>"impactedLanes": [   {     "affectedDirection": "Westbound",     "extent": "traffic affected"   } ]</pre>	<div style="border: 1px solid #ccc; padding: 5px; text-align: center;">Westbound traffic affected.</div>
<pre>"impactedLanes": [   {     "affectedDirection": "Both directions",     "extent": "Closed",     "roadType": "Road"   } ]</pre>	<div style="border: 1px solid #ccc; padding: 5px; text-align: center;">Road closed in both directions.</div>

Table 12 Impacted Lane examples




Properties of an `Impacted Lane` object are interpreted as follows:

Property	Type	Description
<code>affectedDirection</code>	String	Direction/s of travel in which traffic is affected
<code>closedLanes</code>	String	Number of lanes closed
<code>description</code>	String	Description of the closed lane/s e.g. the lane number
<code>extent</code>	String	Nature of the impact
<code>numberOfLanes</code>	String	Number of lanes in total, including <code>closedLanes</code> .
<code>roadType</code>	String	Type of carriageway.

Table 13 Impacted Lane properties

### 3.3.7. Period

The following examples illustrate how various Period objects are represented in the popup bubbles in Map View of the Live Traffic web site.

<pre>"periods": [{   "closureType": "LANE_CLOSURE",   "roadextent": "Lanes closed",   "roadtype": "",   "direction": "Both directions",   "finishTime": "5:00pm",   "fromDay": "Weekdays",   "startTime": "7:00am",   "toDay": "" }],</pre>	 Scheduled roadwork Weekdays (7:00am to 5:00pm) Lanes closed in both directions
<pre>"periods": [{   "closureType": "ROAD_CLOSURE",   "roadextent": "Affected",   "roadtype": "",   "direction": "Both directions",   "finishTime": "6:00am",   "fromDay": "Weekday Nights",   "startTime": "6:00pm",   "toDay": "" }], {   "closureType": "ROAD_CLOSURE",   "roadextent": "Affected",   "roadtype": "",   "direction": "Both directions",   "finishTime": "6:00am",   "fromDay": "Weekend Nights",   "startTime": "6:00pm",   "toDay": "" }],</pre>	 Scheduled roadwork Weekday Nights (6:00pm to 6:00am) Traffic affected both directions  Weekend Nights (6:00pm to 6:00am) Traffic affected both directions
<pre>"periods": [{   "closureType": "ROAD_CLOSURE",   "roadextent": "Closed",   "roadtype": "Tunnel",   "direction": "Eastbound",   "finishTime": "4:00am",   "fromDay": "Monday",   "startTime": "10:00pm",   "toDay": "" }], {   "closureType": "ROAD_CLOSURE",   "roadextent": "Closed",   "roadtype": "Tunnel",   "direction": "Eastbound",   "finishTime": "4:00am",   "fromDay": "Tuesday",   "startTime": "10:00pm",   "toDay": "" }], {   "closureType": "ROAD_CLOSURE",   "roadextent": "Closed",   "roadtype": "Tunnel",   "direction": "Eastbound",   "finishTime": "4:00am",   "fromDay": "Wednesday",   "startTime": "10:00pm",   "toDay": "" }], {   "closureType": "ROAD_CLOSURE",   "roadextent": "Closed",   "roadtype": "Tunnel",   "direction": "Eastbound",   "finishTime": "4:00am",   "fromDay": "Thursday",   "startTime": "10:00pm",   "toDay": "" }],</pre>	 Scheduled roadwork Mon (10:00pm to 4:00am) Tunnel closed eastbound  Tue (10:00pm to 4:00am) Tunnel closed eastbound  Wed (10:00pm to 4:00am) Tunnel closed eastbound  Thu (10:00pm to 4:00am) Tunnel closed eastbound

Transport  
for NSW



<pre>"toDay": "" }}, "periods": [{   "closureType": "ROAD_CLOSURE",   "roadextent": "Affected",   "roadtype": "Road",   "direction": "Both directions",   "finishTime": "",   "fromDay": "Every Day",   "startTime": "all day",   "toDay": "" }],</pre>	<p>  Scheduled roadwork      Every Day (all day)      Road affected both directions   </p>
<pre>"periods": [{   "closureType": "ROAD_CLOSURE",   "roadextent": "Affected",   "roadtype": "",   "direction": "Both directions",   "finishTime": "11:59pm",   "fromDay": "Friday",   "startTime": "8:00pm",   "toDay": "" }], {   "closureType": "ROAD_CLOSURE",   "roadextent": "Affected",   "roadtype": "",   "direction": "Both directions",   "finishTime": "",   "fromDay": "Saturday",   "startTime": "all day",   "toDay": "" }], {   "closureType": "ROAD_CLOSURE",   "roadextent": "Affected",   "roadtype": "",   "direction": "Both directions",   "finishTime": "",   "fromDay": "Sunday",   "startTime": "all day",   "toDay": "" }], {   "closureType": "ROAD_CLOSURE",   "roadextent": "Affected",   "roadtype": "",   "direction": "Both directions",   "finishTime": "6:00am",   "fromDay": "Monday",   "startTime": "12:00am",   "toDay": "" }], }],</pre>	<p>  Scheduled roadwork      Fri (8:00pm to 11:59pm)      Traffic affected both directions       Sat (all day)      Traffic affected both directions       Sun (all day)      Traffic affected both directions       Mon (12:00am to 6:00am)      Traffic affected both directions   </p>

Table 16 Period examples

Properties of the `Period` object are as follows:

Property	Type	Description
<code>closureType</code>	String	Symbolic constant representing the type of planned closure. Possible values are: <ul style="list-style-type: none"><li>• <code>ROAD_CLOSURE</code></li><li>• <code>LANE_CLOSURE</code></li></ul>
<code>direction</code>	String	Direction/s in which closure will occur
<code>finishTime</code>	String	The time at which closure will end each day in this period
<code>fromDay</code>	String	The final day of this period
<code>startTime</code>	String	The time at which closure will commence each day in this period
<code>toDay</code>	String	The first day of this period

Table 17 Period properties

### 3.3.8. Road

The following examples illustrate how various Road objects are represented in the popup bubbles in Map View of the Live Traffic web site.






<pre>"roads":[   {     "crossStreet":"M1 Pacific Motorway",     "locationQualifier":"at",     "mainStreet":"Tungun Tunnel Entrance",     "region":"",     "suburb":"Tweed Heads West"   } ]</pre>	 <b>Tweed Heads West</b> M1 Pacific Motorway At Tugun Tunnel Entrance
<pre>"roads":[   {     "crossStreet":"Factory Street ",     "locationQualifier":"between",     "mainStreet":"Church Street",     "region":"",     "secondLocation":"Macquarie Street",     "suburb":"Parramatta"   } ]</pre>	 <b>Parramatta</b> Church Street Between Factory Street And Macquarie Street
<pre>"roads": [{   "conditionTendency": "",   "crossStreet": "Sunnyholt Road",   "delay": "",   "impactedLanes": [     {       "affectedDirection": "Westbound",       "closedLanes": "1",       "description": "Lane 2",       "extent": "Lanes closed",       "numberOfLanes": "2",       "roadType": ""     }   ],   "locationQualifier": "approaching",   "mainStreet": "M7 Motorway",   "quadrant": "",   "queueLength": 0,   "region": "SYD_WEST",   "secondLocation": " ",   "suburb": "Kings Langley",   "trafficVolume": "Heavy" }]</pre>	 <b>Kings Langley</b> M7 Motorway Approaching Sunnyholt Road  <div style="border: 1px solid #ccc; padding: 5px; margin: 5px 0;">  1 of 2 westbound lanes closed (lane 2).         </div>  <b>CRASH Car</b> Heavy traffic conditions

Table 18 Road examples

Properties of a `Road` object are as follows:

Property	Type	Description
<code>conditionTendency</code>	String	<b>Unused</b>
<code>crossStreet</code>	String	Nearest street crossing this road
<code>delay</code>	String	Approximate magnitude of the delay to motorists on this road. Possible values are: <ul style="list-style-type: none"> <li>Minimal</li> <li>Significant</li> <li>30 mins</li> <li>&gt; 2 hrs</li> </ul>
<code>impactedLanes</code>	[Object]	An array of <code>Impacted Lane</code> objects which captures the lane/s of the road influenced by this hazard. The ordering of elements in the array is undefined. See the <b>Error! Reference source not found.</b> section for details.
<code>locationQualifier</code>	String	String separator that goes between the <code>mainStreet</code> and <code>crossStreet</code> when displayed. Describes the physical relationship between the two.
<code>mainStreet</code>	String	Name of this road
<code>quadrant</code>	String	<b>Unused</b>
<code>queueLength</code>	Number	Length of traffic queued along this road, in kilometres. A value of 0 or -1 indicates there is no queue.
<code>region</code>	String	The geographic region in which this road is located. Possible values are: <pre>"region": "Sydney"</pre> <pre>"region": "Blue Mountains"</pre> <pre>"region": "Central Coast"</pre> <pre>"region": "Central NSW"</pre> <pre>"region": "Far West NSW"</pre> <pre>"region": "Hunter"</pre> <pre>"region": "New England North West"</pre> <pre>"region": "North Coast NSW"</pre> <pre>"region": "Riverina"</pre> <pre>"region": "Snowy Mountains"</pre> <pre>"region": "South Coast"</pre> <pre>"region": "Southern Highlands"</pre> <pre>"region": "The Murray"</pre>
<code>secondLocation</code>	String	Displayed after <code>locationQualifier</code> in the format “and <code>secondLocation</code> ”
<code>suburb</code>	String	Name of the suburb in which this road is located



<b>trafficVolume</b>	String	One word description of the traffic volume on this road. Possible values are: <ul style="list-style-type: none"> <li>• Light</li> <li>• Moderate</li> <li>• Heavy</li> </ul>
----------------------	--------	---

Table 19 Road properties

### 3.3.9. Web Link

The following examples illustrate how various `Web Link` objects are represented in the popup bubbles in Map View of the Live Traffic web site.

<pre>"webLinks": [   {     "linkText": "Parramatta Light Rail",     "linkURL":     "https://www.parramattalightrail.nsw.gov.au/"   } ]</pre>	
<pre>"webLinks": [   {     "linkText": "WestConnex - M4-M5 Link Rozelle Interchange notifications",     "linkURL": "https://www.westconnex.com.au/documen t-library/?q=&amp;rp=M4-M5+Link+Rozelle+Interchange"   },   {     "linkText": "MySydney Rozelle Interchange maps",     "linkURL": "https://www.mysydney.nsw.gov.au/rozel leinterchange"   } ]</pre>	

Table 20 Web Link examples

Properties of the `Web Link` object are interpreted as follows:

Property	Type	Description
<code>linkText</code>	String	The text of the hyperlink
<code>linkURL</code>	String	The URL of the hyperlink

Table 21 Web Link properties

### 3.4. Traffic Hazard Examples

This section contains some examples of traffic hazards as presented on the Live Traffic web site, with an emphasis on how the contents of the GeoJSON files describing them has been translated into an on-screen representation.

#### 3.4.1. Simple Incident

```

categoryicon: BREAKDOWN
"impactedLanes": [
  {
    "affectedDirection": "All directions",
    "closedLanes": "1",
    "description": "Lane 2",
    "extent": "Affected",
    "numberOfLanes": "2",
    "roadType": ""
  }
],
"attendingGroups": [
  "Transport for NSW"
],
"adviceA": "Exercise caution",
"adviceB": "Prepare to merge",
"adviceC": ""

```

BREAKDOWN Car  
Moderate traffic conditions

State road

**Granville**  
Parramatta Road at Bold Street

**Started today 10:09am**

Last checked today 10:09am

All directions traffic affected (lane 2).

**Attending**  
Transport for NSW

---

**Advice**  
Exercise caution, Prepare to merge

---

**Reported By**  
[Transport for NSW](#)

## Transport for NSW

```
"expectedDelay":-1,
"ended":false,
"isNewIncident":true,
"publicTransport":"","
"impactingNetwork":true,
"subCategoryB":null,
"arrangementAttachments":[
],
"isInitialReport":false,
"created":1699312161000,
"isMajor":false,
"name":null,
"subCategoryA":"Car",
"adviceA":"Exercise caution",
"adviceB":"Prepare to merge",
"adviceC":"","
"incidentKind":"Unplanned",
"mainCategory":"BREAKDOWN",
"lastUpdated":1699312161426,
"otherAdvice":"","
"arrangementElements":[
],
"diversions":"","
"additionalInfo":[
],
"weblinkName":null,
"attendingGroups":[
  "Transport for NSW"
],
"encodedPolylines":[
],
"displayName":"BREAKDOWN Car",
"roads":[
  {
    "conditionTendency":"","
    "crossStreet":"Bold Street",
    "delay":"","
    "impactedLanes":[
      {
        "affectedDirection":"All directions",
```

```

        "closedLanes": "1",
        "description": "Lane 2",
        "extent": "Affected",
        "numberOfLanes": "2",
        "roadType": ""
    }
],
"locationQualifier": "at",
"mainStreet": "Parramatta Road",
"quadrant": "",
"queueLength": 0,
"region": "Sydney",
"secondLocation": "",
"suburb": "Granville",
"trafficVolume": "Moderate"
}
],
"isLocalRoad": "State road",
"CategoryIcon": "Breakdown"
}
}

```

### 3.4.2. Complex Incident

=

"CategoryIcon": "Crash"

**CRASH 2 cars**

State road "isLocalRoad": "State road"

**Arncliffe**

"suburb": "Arncliffe" Marsh Street On-Ramp to M5 East

"locationQualifier": "to",  
"mainStreet": "Marsh Street on-ramp",  
"crossStreet": "M5 East"  Started yesterday 3:41pm "created": 1699245681000

Ended yesterday 4:41pm

"lastUpdated":  
1699249263436

On-ramp closed in eastbound direction.

**Attending**

Transport for NSW  
Emergency services  
Motorway Crew  
Tow Truck

**Advice**

Exercise caution, Use an alternative route

**Other Advice**

Consider using Airport Dr, Qantas Dr, Joyce Dr and Southern Cross Dr.

"attendingGroups": [  
"Transport for NSW",  
"Emergency services",  
"Motorway Crew",  
"Tow Truck"  
],

"impactedLanes": [  
{  
"affectedDirection": "Eastbound",  
"closedLanes": "",  
"description": "",  
"extent": "Closed",  
"numberOfLanes": "",  
"roadType": "On-ramp"  
},  
],

"adviceA": "Exercise caution",  
"adviceB": "Use an alternative route",  
"adviceC": "",

"otherAdvice": "<p>Consider using Airport Dr, Qantas Dr, Joyce Dr and Southern Cross Dr.</p>"

## Transport for NSW

```
{
  "type": "Feature",
  "id": "174968",
  "geometry": {
    "type": "Point",
    "coordinates": [
      151.1553055,
      -33.9396123
    ],
    "collections": [
    ]
  },
  "properties": {
    "webLinks": [
    ],
    "headline": "CRASH 2 cars ARNCLIFFE Marsh Street on-ramp to M5 East",
    "periods": [
    ],
    "speedLimit": -1,
    "weblinkUrl": null,
    "expectedDelay": -1,
    "ended": true,
    "isNewIncident": false,
    "publicTransport": "",
    "impactingNetwork": true,
    "subCategoryB": null,
    "arrangementAttachments": [
    ],
    "isInitialReport": false,
    "created": 1699245681000,
    "isMajor": true,
    "name": null,
    "subCategoryA": "2 cars",
    "adviceA": "Exercise caution",
    "adviceB": "Use an alternative route",
    "adviceC": " ",
    "incidentKind": "Unplanned",
    "mainCategory": "CRASH",
    "lastUpdated": 1699249263436,
    "otherAdvice": "<p>Consider using Airport Dr, Qantas Dr, Joyce Dr and Southern Cross Dr.</p>",
    "arrangementElements": [
    ],
    "diversions": "",
    "additionalInfo": [
    ],
    "weblinkName": null,
    "attendingGroups": [
      "Transport for NSW",
      "Emergency services",
      "Motorway Crew",
      "Tow Truck"
    ],
    "encodedPolylines": [
    ],
    "displayName": "CRASH 2 cars",
    "roads": [
      {
        "conditionTendency": "",
        "crossStreet": "M5 East",
        "delay": "",
        "impactedLanes": [
          {
            "affectedDirection": "Eastbound",
            "closedLanes": "",
            "description": "",
            "extent": "Closed",
            "numberOfLanes": "",
            "roadType": "On-ramp"
          }
        ],
        "locationQualifier": "to",
        "mainStreet": "Marsh Street on-ramp",
        "quadrant": "",
        "queueLength": 0,
        "region": "Sydney",
      }
    ]
  }
}
```

Transport  
for NSW

```
        "secondLocation": "",  
        "suburb": "Arncliffe",  
        "trafficVolume": ""  
    }  
],  
    "isLocalRoad": "State road",  
    "CategoryIcon": "Crash"  
}
```

### 3.4.3. Roadworks

The screenshot shows a notification for 'SCHEDULED ROADWORK Nelligen Bridge replacement project'. The notification includes details about the location (Nelligen, Kings Highway between Old Nelligen Road and Reid Street), dates (Mon 22 Feb 2021 to Tue 31 Dec 2024), and scheduled roadwork times (Weekdays 7:00am to 6:00pm, Saturday 8:00am to 1:00pm). It also features a 'Websites' section with a link to the project page and an 'Advice' section with text about reduced speed limits and signage. The JSON annotations on the left and right map these elements to a structured data format.

```

{
  "closureType": "ROAD_CLOSURE",
  "roadextent": "Affected",
  "roadtype": "",
  "direction": "Both directions",
  "finishTime": "6:00pm",
  "fromDay": "Weekdays",
  "startTime": "7:00am",
  "toDay": ""
},
{
  "closureType": "ROAD_CLOSURE",
  "roadextent": "Affected",
  "roadtype": "",
  "direction": "Both directions",
  "finishTime": "1:00pm",
  "fromDay": "Saturday",
  "startTime": "8:00am",
  "toDay": ""
}
],
"adviceA": "Reduced speed limit",
"adviceB": "Check signage",
"adviceC": ""
}

```

```

"roads": [
  {
    "conditionTendency": "",
    "crossStreet": "Old Nelligen Road",
    "delay": "",
    "impactedLanes": [
    ],
    "locationQualifier": "between",
    "mainStreet": "Kings Highway",
    "quadrant": "",
    "queueLength": 0,
    "region": "South Coast",
    "secondLocation": "Reid Street",
    "suburb": "Nelligen",
    "trafficVolume": ""
  }
]

```

```

"webLinks": [
  {
    "linkText": "Nelligen Bridge replacement project",
    "linkURL": "https://www.rms.nsw.gov.au/projects/nelligen-bridge/index.html"
  }
]

```

```

"otherAdvice": "<p>Alternating (stop/slow) traffic conditions will be in place during weekday work.</p><p>Reduced speed limits will be in place during and outside of work hours.</p>"

```

```

{
  "type": "Feature",
  "id": 82681,
  "geometry": {
    "type": "Point",
    "coordinates": [
      150.1431796,
      -35.6474524
    ]
  },
  "collections": [
  ]
},
"properties": {
  "webLinks": [
    {
      "linkText": "Nelligen Bridge replacement project",
      "linkURL": "https://www.rms.nsw.gov.au/projects/nelligen-bridge/index.html"
    }
  ],
  "headline": "",
  "periods": [
    {
      "closureType": "ROAD_CLOSURE",

```

## Transport for NSW

```
    "roadextent": "Affected",
    "roadtype": "",
    "direction": "Both directions",
    "finishTime": "6:00pm",
    "fromDay": "Weekdays",
    "startTime": "7:00am",
    "toDay": ""
  },
  {
    "closureType": "ROAD_CLOSURE",
    "roadextent": "Affected",
    "roadtype": "",
    "direction": "Both directions",
    "finishTime": "1:00pm",
    "fromDay": "Saturday",
    "startTime": "8:00am",
    "toDay": ""
  }
],
"speedLimit": 40,
"weblinkUrl": null,
"expectedDelay": -1,
"ended": false,
"isNewIncident": false,
"publicTransport": "",
"impactingNetwork": true,
"subCategoryB": null,
"arrangementAttachments": [
],
"isInitialReport": false,
"created": 1613102486000,
"isMajor": false,
"name": null,
"subCategoryA": "null",
"adviceA": "Reduced speed limit",
"adviceB": "Check signage",
"adviceC": " ",
"end": 1735628400000,
"incidentKind": "Planned",
"mainCategory": "SCHEDULED ROADWORK",
"lastUpdated": 1678574710604,
```



## Transport for NSW

"otherAdvice": "<p>Alternating (stop/slow) traffic conditions will be in place during weekday work.</p><p>Reduced speed limits will be in place during and outside of work hours.</p>",

```
"arrangementElements": [

],

"diversions": "",

"additionalInfo": [

],

"weblinkName": null,

"attendingGroups": null,

"encodedPolylines": [

],

"duration": null,

"start": 1613912400000,

"displayName": "SCHEDULED ROADWORK Nelligen Bridge replacement project",

"media": [

],

"roads": [

  {

    "conditionTendency": "",

    "crossStreet": "Old Nelligen Road",

    "delay": "",

    "impactedLanes": [

    ],

    "locationQualifier": "between",

    "mainStreet": "Kings Highway",

    "quadrant": "",

    "queueLength": 0,

    "region": "South Coast",

    "secondLocation": "Reid Street",

    "suburb": "Nelligen",

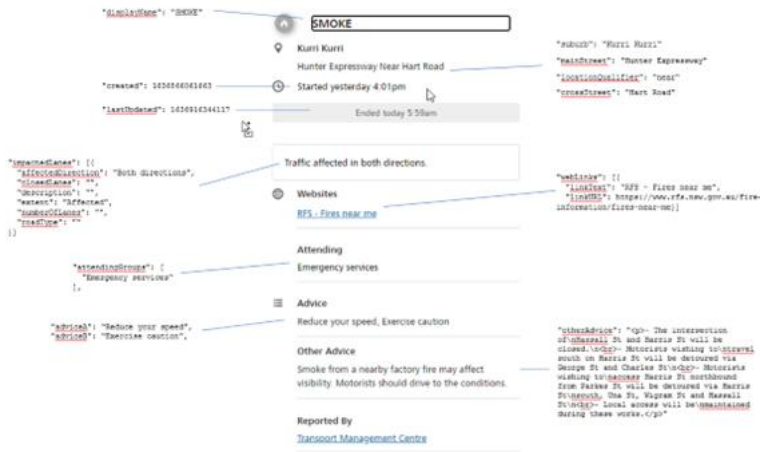
    "trafficVolume": ""

  }

]

}
```

### 3.4.4. Fire



```

{
  "type": "Feature",
  "id": 105123,
  "geometry": {
    "type": "POINT",
    "coordinates": [
      151.48092080200807,
      -32.8001240696357
    ]
  },
  "properties": {
    "webLinks": [
      {
        "linkText": "RFS - Fires near me",
        "linkURL": "https://www.rfs.nsw.gov.au/fire-information/fires-near-me"
      }
    ],
    "headline": "SMOKE - KURRI KURRI Hunter Expressway near Hart Road, Loxford",
    "periods": [],
    "speedLimit": -1,
    "webLinkUrl": null,
    "expectedDelay": null,
    "ended": true,
    "isNewIncident": false,
    "publicTransport": "",
    "impactingNetwork": true,
    "subCategoryB": "",
    "arrangementAttachments": [],
    "isInitialReport": false,
    "created": 1636866061663,
    "isMajor": false,
    "name": null,
    "subCategoryA": null,
    "adviceB": "Exercise caution",
    "adviceA": "Reduce your speed",
    "incidentKind": "Unplanned",
    "mainCategory": "Smoke",
    "lastUpdated": 1636916344117,
    "otherAdvice": "Smoke from a nearby factory fire may affect visibility. Motorists should drive to the conditions.",
    "arrangementElements": [],
    "diversions": "",
    "additionalInfo": [
      ""
    ],
    "webLinkName": null,
    "attendingGroups": [
      "Emergency services"
    ],
    "displayName": "SMOKE",
    "media": [],
    "roads": [
      {
        "conditionTendency": "",
        "crossStreet": "Hart Road",
        "delay": "",
        "impactedLanes": [

```

```

        {
            "affectedDirection": "Both directions",
            "closedLanes": "",
            "description": "",
            "extent": "Affected",
            "numberOfLanes": "",
            "roadType": ""
        },
        ],
        "locationQualifier": "near",
        "mainStreet": "Hunter Expressway",
        "quadrant": "",
        "queueLength": 0,
        "region": "REG_NORTH",
        "secondLocation": " ",
        "suburb": "Kurri Kurri",
        "trafficVolume": ""
    }
}
}
}

```

## 4. Live Traffic Cameras

### 4.1. Details

Traffic camera data resides in a GeoJSON file that can be accessed from

<https://api.transport.nsw.gov.au/v1/live/cameras>

.

#### 4.1.1. File Structure

The basic format of the `traffic-cam.json` GeoJSON file is as follows:

```

{
  "type": "FeatureCollection",
  "rights": {
    "copyright": String,
    "licence": String
  },
  "features": [ { Feature object } ]
}

```

Properties of the `FeatureCollection` object are described in the following table.

Property	Type	Description
<code>features</code>	[Object]	Array of <code>Feature</code> objects where each <code>Feature</code> object corresponds to a traffic camera. The ordering of <code>Feature</code> objects within the array is undefined.
<code>rights</code>	Object	Copyright and licensing details for the data in this file
<code>type</code>	String	Always “FeatureCollection”, as per the GeoJSON standard.

Table 22 Feature Collection properties

### 4.2. Feature Structure

The following example illustrates how a GeoJSON Feature corresponds to a single traffic camera.

<pre>{   "type": "Feature",   "id": "d2e386",   "geometry": {     "type": "Point",     "coordinates": [       151.10533,       -34.02977     ]   },   "properties": {     "region": "SYD_SOUTH",     "title": "5 Ways (Miranda)",     "view": "5 ways at The Boulevard looking west towards Sutherland.",     "direction": "W",     "href":       "http://www.rms.nsw.gov.au/trafficreports/cameras/camera_images/5ways.jpg"   } }</pre>	 <p>5 ways at The Boulevard looking west towards Sutherland.</p>
--	--

Table 23 Traffic Camera example

Properties of the Feature are as follows:

Property	Type	Description
<code>direction</code>	String	The direction the camera is facing. Possible values are: <ul style="list-style-type: none"> <li>• N</li> <li>• S</li> <li>• E</li> <li>• W</li> <li>• N-W</li> <li>• N-E</li> <li>• S-W</li> <li>• S-E</li> </ul>
<code>href</code>	String	URL of the camera image. The image is always in JPEG format. Note that the date, time and URL of live traffic are part of the image.
<code>region</code>	String	The name of an area used to segment NSW within which the camera is located.
<code>title</code>	String	Short name of this camera
<code>view</code>	String	Single sentence description of the view the camera has

Table 24 Camera properties

## 5. LGA Participation

### 5.1. Details

A list of councils currently providing information via Live Traffic NSW is summarised in the JSON file

<https://api.transport.nsw.gov.au/v1/live/hazards/regional-lga-participation/all>

### 5.2. File Structure

Each `Feature` in the file represents a participating local council, and has the following general format:

```
{  
  "type": "Feature",  
  "properties": {  
    "website": String  
    "name": String,  
    "email": String,  
    "contact": String  
  },  
  "id": Number  
},
```

### 5.3. Object Properties

Properties of the `Feature` are as follows:

Property	Type	Description
<code>website</code>	String	URL of the council website
<code>name</code>	String	Name of the council
<code>email</code>	String	Email address of the council
<code>contact</code>	String	Phone number of the council
<code>id</code>	Number	System-generated number (unused on Live Traffic NSW)

Table 25 Object properties

## 6. Site Status

### 6.1. Details

The current status of the Live Traffic web site as a whole is summarised in the JSON file <https://api.transport.nsw.gov.au/v1/live/status>

### 6.2. File Structure

This file contains a single object with three properties.

```
{  
  "status": "AVAILABLE",  
  "topLine": "",  
  "bottomLine": ""  
}
```

If the status is not `AVAILABLE` this does not necessarily mean that the data in the GeoJSON files described here is invalid or out of date.

### 6.3. Object Properties

This properties of the object are as follows:

Property	Type	Description
<code>bottomLine</code>	String	Second line of message in case of status not being <code>AVAILABLE</code> . This generally describes when the site is expected to be available again e.g. "Normal service will resume at approximately 3pm today."
<code>status</code>	String	Under normal circumstances the status is <code>AVAILABLE</code> . If it is anything else, the site is off line.
<code>topLine</code>	String	First line of message in case of status not being <code>AVAILABLE</code> . This generally describes why the site is offline. E.g. "The Live Traffic NSW website is down for planned maintenance."

Table 26 Object properties

## 7. Appendix A:

### 7.1. Changes since version 1.0

The following summarises the differences between versions 1.0 and 1.1 of this document.

- The properties `subCategoryB`, `ubdRef`, `roadClosureUrl` and `specialEventClearwaysUrl` are no longer in use. GeoJSON properties with these names will still appear against GeoJSON objects but their values will be the empty string.
- The `arrangementAttachments` and `arrangementElements` properties are no longer limited to hazards of type Major Event. These properties may now be supplied for hazards of any type.
- A new property called `publicTransport` has been introduced to hazards of all types. It's value is a String which may contain HTML.
- The list of possible values of the `attendingGroups` property now excludes the value "Transport Operator", and includes the new value "Heavy tow truck" in its place.

### 7.2. Changes since version 1.1

The following summarises the differences between versions 1.1 and 1.2 of this document.

- The properties `ubdRef`, `roadClosureUrl` and `specialEventClearwaysUrl` have been removed from the GeoJSON properties section of all hazard types.
- The new property `incidentKind` has been added to the GeoJSON properties section of all hazard types.
- Updated descriptions for properties `mainCategory`, `subCategoryA` and `isNewIncident`.
- Updated Travel Time section to include references to the new M2 travel time JSON file.

### 7.3. Changes since version 1.2

The following summarises the differences between versions 1.2 and 1.3 of this document.

- Updated the RMS document image to TfNSW image.
- Removed RMS contact details and the Copyright statement.
- Changed URL references from `livetraffic.rta.nsw.gov.au` to `data.livetraffic.com`.
- Removed references to 131500 in JSON examples.
- Changed URL reference from <http://www.131500.com.au> to <http://www.transportnsw.info> in JSON examples.
- Changed URL references from <http://livetraffic.rta.nsw.gov.au/data-2/traffic-cam.json> to <http://data.livetraffic.com/cameras/traffic-cam.json>
- Changed URL reference from [www.rta.nsw.gov.au](http://www.rta.nsw.gov.au) to [www.rms.nsw.gov.au](http://www.rms.nsw.gov.au) in JSON examples.

- Changed text references from F3 to M1
- Removed the Map Options section from the document. The files previously described in this section:

hvcs.json	Heavy vehicle checking stations
stc.json	Safe-T-Cams
rest-area.json	Rest areas

will not be available from `data.livetraffic.com` and are for use in the Live Traffic Website only.

## 7.4. Changes since version 1.3

The following summarises the differences between versions 1.3 and 1.4 of this document.

- Removed the Travel Times section from the document. The files previously described in this section:

f3.json	M1 Pacific Motorway
m2.json	M2 Motorway
m4.json	M4 Western Motorway
m7.json	M7 Motorway

will not be available from `data.livetraffic.com` and are for use in the Live Traffic Website only.

## 7.5. Changes since version 1.4

The following summarises the differences between versions 1.4 and 1.5 of this document.

- Updated references from HTTP to HTTPS

## 7.6. Changes since version 1.5

The following summarises the differences between versions 1.5 and 1.6 of this document.

- Inclusion of new fields:
  - `expectedDelay`
  - `adviceC`
  - `geometry` → `collections`
    - `Point`
    - `Polygon`

## 7.7. Changes since version 1.6

The following summarises the differences between versions 1.6 and 1.7 of this document.

- Inclusion of local road information files
  - `https://data.uat.livetraffic.com/traffic/hazards/regional/lga-incidents.json`



- <https://data.uat.livetraffic.com/traffic/hazards/regional/lga-incidents-open.json>
- <https://data.uat.livetraffic.com/traffic/hazards/regional/lga-incidents-closed.json>
- **Inclusion of LGA Participation file**
  - <https://data.uat.livetraffic.com/traffic/hazards/regional/lga-participation.json>

## 7.8. Changes since version 1.7

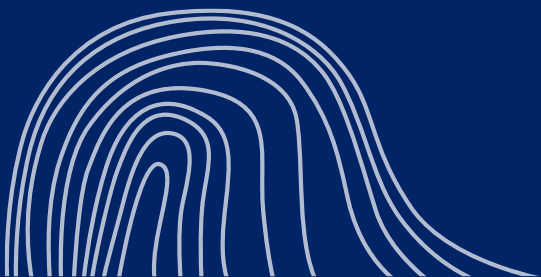
The following summarises the differences between versions 1.7 and 1.8 of this documents.

- Inclusion of Local and State Road field for incidents
- Inclusion of categoryIcon field for all incidents
- Inclusion of Single and Double polylines

## 7.9. Changes since version 1.8

The following summarises the differences between versions 1.7 and 1.8 of this documents.

- Update of data.livetraffic.com to api.transport.nsw.gov.au



**© Transport for New South Wales**

Users are welcome to copy, reproduce and distribute the information contained in this report for non-commercial purposes only, provided acknowledgement is given to Transport for NSW as the source.