



Electronic notification service
for the movement of abnormal indivisible loads





**Non-ESDAL Notifications (NEN)
SOAP API
Usage Guide**

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1 Scope

1.1 Identification

This document is the manual for developing an interface for the Non-ESDAL Notifications (NEN) SOAP Receiver module, used for submitting notifications to ESDAL through SOAP.

1.2 System Overview

A non-ESDAL using Haulier can send notifications to ESDAL through a Machine to Machine interface on a SOAP API.

Hauliers who want to automatically send notifications to ESDAL from their back-end system can use the NEN SOAP interface for this purpose.

Document Overview

Section	Details
Section 1 - Scope	Scope, Identification and System Overview
Section 2 – General interface	The communication interface details
Section 3 – General requirements and use case	The requirements and use case for communication interface
Section 4 – Interface NEN SOAP Receiver and Client application	The message description
Section 5 - XML inputs	The format and description of the input parameters
Section 6 – XML output	The format and description of the output parameters
Section 7 – Error Codes	The list of error codes used by the module
Section 8- Appendix	Includes the sample xml request and wsdl

2 General Interface

The interface between the NEN SOAP Receiver and Client application is defined as:

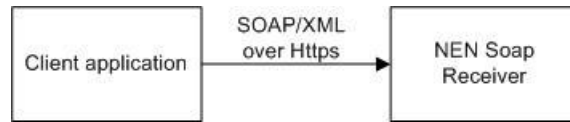


Figure 1 Basic interface Client application and NEN SOAP Receiver.

2.1 Interface between client application and NEN SOAP Receiver

This SOAP interface between Client application and NEN SOAP Receiver is used to exchange information between these modules regarding:

- Non-ESDAL notifications

2.2 Security

All communication between Client application and NEN SOAP Receiver shall be over HTTPS, HTTP will not be allowed.

In addition, the NEN SOAP Receiver will only accept notifications from authenticated users. All other requests will be discarded. An authentication key needs to be obtained from the ESDAL Helpdesk to send notifications through the SOAP interface. Please contact the Helpdesk on 0300 470 3733 or esdalenquiries@nationalhighways.co.uk

3 General requirements and use case

3.1 Haulier sends SOAP notification

The Haulier pushes the notification to the NEN SOAP Receiver from the SOAP Client application.

3.2 Use Cases

3.2.1 Main Flow

Use case	Haulier sends NEN to ESDAL using SOAP client
Actors	Haulier who is not registered with ESDAL
Preconditions	<ol style="list-style-type: none"> a. Haulier already has their own client to send notification to ESDAL SOAP API in the agreed xsd format. b. Haulier uses the authentication key generated and provided by the help desk to access the SOAP API. <ol style="list-style-type: none"> c. The SOA or Police organisation names included in the SOAP request must be the same name of the organisation in ESDAL. The SOA and Police organisation names can be downloaded from www.esdal2.com/nonesdal.html by selecting the 'Download full authority list as xml' button. This download link will be accessible to the public.
Trigger	Haulier sends NEN to ESDAL using SOAP client
Description	<ol style="list-style-type: none"> 1. The validated xml data is then validated using validate SOAP notification use case. 2. The validated notification is then sent to SOAs/Police whose email address is included in the xml using Submit NEN Notification use case. 3. System assigns a NEN reference number to the notification in the format <i>NEN<uniqueincreasingnumber></i> 4. Where there is a previous NEN unique number referred in the SOAP notification xml then the new notification is considered as a renotification and unique increasing number will be same as the old notification. Based on the renotification count. The NEN reference number will be in the format <i>NEN<previousnotificationnumber>#<renotifyingcount></i> 5. System responds back to the SOAP request with the following information <ul style="list-style-type: none"> • Status of the notification submission. • The NEN reference number assigned to the notification • The list of affected SOA/Police to whom the notification has been forwarded through ESDAL.

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	<ul style="list-style-type: none">• The list of SOA or Police organisation names received in the SOAP push but couldn't be matched with an organisation in ESDAL.• In case the notification is sent outside the required notice period then an imminent alert warning will also be included in the response.• Notification failed due to system error. User must contact helpdesk.
Exceptions	If an error occurs while sending the NEN, this is returned in the response message with error code.
Post-conditions	NEN has been received by system through SOAP API response given back to SOAP client. The Haulier system must keep the NEN reference number received in the response in case a renotification has to be sent.

4 Interface NEN SOAP receiver and client application

4.1 Introduction interface

The interface between NEN SOAP Receiver and Client application uses the following techniques:

- SOAP (a standard based on XML)
- WSDL (a standard based on XML)
- Secure HTTP (HTTPS)

The NEN SOAP XML can be downloaded from:

www.esdal2.com/nonesdal.html (select the 'Download full authority list as xml' button)

XML, SOAP and WSDL standards are maintained by The World Web Consortium (W3c):

<http://www.w3.org>

Note: UDDI (Universal Description, Discovery and Integration) is not used for the interface. UDDI is a standard to publish web services via a kind of "yellow pages".

4.2 Methods NEN SOAP Receiver

The following sections describe the methods that are provided by NEN SOAP Receiver module.

4.2.1 Method NENNotification

This method is called by Client application whenever the Haulier sends a notification to the NENSOAP Receiver.

INPUT (XSD type: NENNotificationInput)

- Authentication
- - Haulier
- - AuthenticationKey
- PreviousNotificationNo
- Authority [1..*]
- - AuthorityName
- HaulierInfo
- - OrgName
- - Address
- - - AddressLine1
- - - AddressLine2
- - - AddressLine3
- - - AddressLine4
- - - AddressLine5
- - ContactName
- - OtherContactInfo
- - Email
- - TelephoneNo
- - OperatorRefNo

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- - OperatorLicenseNo
- - OnBehalfOf
- LoadInfo
 - - LoadDescription
 - - NoOfLoads
 - - Notes
- MovementInfo
 - - StartDateTime
 - - EndDateTime
 - - FromAddress
 - - ToAddress
 - - FromPostCode
 - - ToPostCode
 - - RouteDescription
 - - HasIndemnity
 - - IncludeReturnLeg
 - - ReturnLegDescription
- VehicleInfo
 - - MovementClassification
 - - VehicleType
 - - ConfigurationType
 - - VR1No
 - - SpecialOrderNo
 - - SpecialOrderNo
 - - TotalLength
 - - ReducibleHeight
 - - RigidLength
 - - GrossWeight
 - - OverallWidth
 - - FrontProjection
 - - RearProjection
 - - LeftProjection
 - - RightProjection
 - - AxleCount
 - - WheelCount
 - - MaxAxleWeight
 - - ComponentCount
 - - RegistrationIdList
 - - - RegistrationId [0...*]
 - - AxleInfoList
 - - - Axles [0...*]
 - - - - IsTractor
 - - - - NoOfWheels
 - - - - MaxAxleWeight
 - - - - NextAxleDistance
- WayPointLocationsInfo
 - - WayPointLocation [0...*]
 - - - Address
 - - - PostCode

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- - - Easting
- - - Northing
- .

OUTPUT (XSD type: NENNotificationResponse)

- Status
- Reference
- SentToRecipients
- - OrgName
- ImminentMessage
- ErrorInfo
- - Error
- - - ErrorCode
- - - Description

5 XML Input

The SOAP xml input can be divided into the following sections:

1. Authentication
2. PreviousNotificationNo
3. Authority
4. HaulierInfo
5. LoadInfo
6. MovementInfo
7. VehicleInfo
8. WayPointLocationsInfo

These sections together constitute the NEN notification input. Each section is explained in detail below.

5.1 Authentication

Parameter	Datatype	Description	Mandatory
Haulier	string	The name of the haulier which will be used for authenticating the user. This should match the one available in the ESDAL system for SOAP authentication.	Y
AuthenticationKey	string	The unique key provided to the haulier to identify them as a valid user.	Y

5.2 PreviousNotificationNo

Parameter	Datatype	Description	Mandatory
PreviousNotificationNo	string	In case of renotification, the user needs to provide the ESDAL reference number of the current version of the notification to be renotified. For a new notification this can be left empty.	N

5.3 Authority

Parameter	Datatype	Description	Mandatory
AuthorityName	Array [] string	This is the list of authorities to whom the notification needs to be forwarded to.	Y

5.4 HaulierInfo

Parameter	Datatype	Description	Mandatory
OrgName	string	The name of the organisation to which the haulier belongs to.	Y
Address	Address	The address of the haulier organisation. The 'Address' datatype is constituted by the individual AddressLines (ranging from 1 to 5) which is of 'string' datatype.	Y

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ContactName	string	The contact name for the haulier organisation	Y
OtherContactInfo	string	Additional information regarding the haulier contact can be added if available.	N
Email	string	The email address of the haulier contact	Y
TelephoneNo	string	The telephone number of the haulier contact. This should be of minimum length 10 digits and maximum length 15 digits.	Y
OperatorRefNo	string	The reference number of the operator	N
OperatorLicenseNo	string	The license number of the operator	Y
OnBehalfOf	string	Name of haulier for whom the notification is being submitted	N

5.5 LoadInfo

Parameter	Datatype	Description	Mandatory
LoadDescription	string	This description of the load used for the movement	Y
NoOfLoads	int	The total number of loads used for the movement. Note: <i>The minimum value should be 0.</i>	Y
Notes	string	Any additional notes regarding the movement may be added here.	N

5.6 MovementInfo

Parameter	Datatype	Description	Mandatory
StartDateTime	dateTime	The start date and time of the movement.	Y
EndDateTime	dateTime	The end date and time of the movement.	Y
FromAddress	string	The address of the start location of the movement	Y
ToAddress	string	The address of the end location of the movement	Y
FromPostCode	string	The post code of the start location of the movement	N
ToPostCode	string	The post code of the end location of the movement	N
RouteDescription	string	The description of the route	N
HasIndemnity	boolean	To be provided if the notification has indemnity Note: <i>The value should be provided either 'true' or 'false'</i>	Y

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IncludeReturnLeg	boolean	To be provided if there is a return leg Note: <i>The value should be provided either 'true' or 'false'</i>	Y
ReturnLegDescription	string	The description of the proposed return leg route.	N

5.7 VehicleInfo

Parameter	Datatype	Description	Mandatory
MovementClassification	string	Movement classification of vehicle. The following codes are used to denote this. <ul style="list-style-type: none"> • CNU = C&U • STGOVR1 = STGO requiring VR1 • STGO = STGO not requiring VR1 • SO = Special Order • VSO = Vehicle Special Order • TRACKED = Tracked 	Y
VehicleType	string	The vehicle type. The following codes are to be used to denote this <ul style="list-style-type: none"> • CRANE-A = STGO Mobile Crane Cat-A • CRANE-B = STGO Mobile Crane Cat-B • CRANE-C = STGO Mobile Crane Cat-C • ENG-WHEELED = STGO Engineering Plant – Wheeled • ENG-TRACKED = STGO Engineering Plant – Tracked • RECOVERY = STGO Road Recovery Operation • CAT-1 = STGO AIL Cat-1 • CAT-2 = STGO AIL Cat-2 • CAT-3 = STGO AIL Cat-3 • CAT-1-CU = STGO AIL Cat-1 or C&U • CNU = Construction and Use • VSO = Vehicle Special Order • SO = Special Order • TRACKED = Tracked <p>Note: The code CAT-1-CU should be used for both 'STGO Cat 1' and 'C and U' vehicles under the category 'STGO vehicles not requiring VR1'</p>	Y

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ConfigurationType	string	The vehicle configuration type. The following codes are to be used to denote this <ul style="list-style-type: none"> • RIGID = Rigid vehicle • SEMI = Semi trailer • DRAWBAR = Drawbar trailer • SPMT = SPMT • TRACKED = Tracked 	Y
VR1No	string	The VR1 number if applicable	N
SpecialOrderNo	string	The Special order or Vehicle Special order number if applicable	N
MaxHeight	decimal	Maximum height of the vehicle Note: <i>The minimum value should be 0</i>	Y
TotalLength	decimal	The total length of the vehicle Note: <i>The minimum value should be 0</i>	Y
ReducibleHeight	decimal	The reducible height of the vehicle Note: <i>The minimum value should be 0</i>	Y
RigidLength	decimal	The rigid length of the vehicle Note: <i>The minimum value should be 0</i>	Y
GrossWeight	integer	The gross weight of the vehicle Note: <i>The minimum value should be 0</i>	Y
OverallWidth	decimal	The overall width of the vehicle Note: <i>The minimum value should be 0</i>	Y
FrontProjection	decimal	The front projection of the vehicle Note: <i>The minimum value should be 0</i>	Y
RearProjection	decimal	The rear projection of the vehicle Note: <i>The minimum value should be 0</i>	Y
LeftProjection	decimal	The left projection of the vehicle Note: <i>The minimum value should be 0</i>	Y
RightProjection	decimal	The right projection of the vehicle Note: <i>The minimum value should be 0</i>	Y
AxleCount	int	The total number of axles Note: <i>The minimum value should be 0</i>	Y
WheelCount	int	The total number of wheels Note: <i>The minimum value should be 0</i>	Y
MaxAxleWeight	int	The maximum axle weight Note: <i>The minimum value should be 0</i>	Y

ComponentCount	int	The total number of components Note: <i>The minimum value should be 0</i>	Y
----------------	-----	---	---

5.7.1 RegistrationIdList

Parameter	Datatype	Description	Mandatory
RegistrationId	Array [] string	Registration no. of motor vehicle or substitutes	Y

5.7.2 AxleInfoList

Parameter	Datatype	Description	Mandatory
Axles	Array [] AxleDetails	Vehicle axle details. Note: The axle details are not required for C and U vehicles.	N

5.7.3 AxleDetails

Parameter	Datatype	Description	Mandatory
IsTractor	boolean	Indicates whether the axle details belong to a tractor or trailer. Note: <i>The value should be provided either 'true' or 'false'</i>	Y
NoOfWheels	int	The number of wheels belonging to the tractor or trailer component Note: <i>The minimum value should be 0</i>	Y
MaxAxleWeight	int	The maximum axle weight for the tractor or trailer component Note: <i>The minimum value should be 0</i>	Y
NextAxleDistance	decimal	The distance to next axle or the axle spacing to following value. Note: <i>The minimum value should be 0. The value of the last component should always be 0.</i>	Y

5.8 WayPointLocationsInfo

Parameter	Datatype	Description	Mandatory
WayPointLocation	Array[]LocationDetails	The way point details	N

5.8.1 LocationDetails

Parameter	Datatype	Description	Mandatory
Address	string	Address of the waypoint location	N
PostCode	string	Postcode of the waypoint location	N

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Easting	integer	Easting co-ordinate of the waypoint location Note: <i>The default value should be 0 if the WaypointsLocationInfo is populated</i>	Y
Northing	integer	Northing co-ordinate of the waypoint location Note: <i>The default value should be 0 if the WaypointsLocationInfo is populated</i>	Y

Note: The user needs to provide either the address or the co-ordinate values when adding the waypoint details. It is not mandatory to enter both the values at the same time.

```
<WayPointLocationsInfo xsi:type="urn:WayPointLocationDetails">
  <!--Optional:--> <WayPointLocationsInfo xsi:type="urn:WayPointLocationDetails">
  <!--Optional:-->
  <WayPointLocation xsi:type="urn:ArrayOfLocationDetails" soapenc:arrayType="urn:LocationDetails[]">
    <Item>
      <Address>4 Broomhill, Bath Road, Beenham, READING</Address>
      <PostCode>RG7 5QB</PostCode>
      <Easting>0</Easting>
      <Northing>0</Northing>
    </Item>
    <Item>
      <Address></Address>
      <PostCode></PostCode>
      <Easting>455090</Easting>
      <Northing>228177</Northing>
    </Item>
    <Item>
      <Address>4 Broomhill, Bath Road, Beenham, READING</Address>
      <PostCode></PostCode>
      <Easting>0</Easting>
      <Northing>0</Northing>
    </Item>
  </WayPointLocation>
</WayPointLocationsInfo>
```

Figure 2: Waypoint details

6 XML output

The SOAP xml response contains the following parameters:

6.1 NENNotificationOutput

Parameter	Datatype	Description	Output
Status	string	Indicates whether the notification was successfully submitted or not.	Success/Failed
Reference	string	The reference number for future communication for the submitted notification	Eg: NEN/463/1#1
SentToRecipients	Array[] string	List of organisation names to whom the notification was forwarded to	
ImminentMessage	string	The message to be displayed for imminent movements	
ErrorInfo	Array[] Error	The list of error objects containing the error code and error description	

6.1.1 NENNotificationOutput

Parameter	Datatype	Description	Output
ErrorCode	string	The unique code defined for each error type	E001
Description	string	The error description	NENNotificationRequest object received is null

7 Error Codes

Error Code	Description
E001	NENNotificationRequest object received is null
E002	List of authorities is missing
E003	Your company/organisation name is missing
E004	Your company/organisation address is missing
E005	Your contact name is missing
E006	Email address of named contact is missing
E007	Email address of named contact is invalid
E008	Telephone number is missing
E009	Telephone number should be at least 10 digits
E010	Operator license number is missing
E011	Load description is missing
E012	Number of load is missing
E013	Invalid number of load
E014	Movement start date is missing
E015	Movement end date is missing
E016	Your movement start date is greater than movement end date
E017	Start date/End date is in the past
E018	Movement start location address is missing

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E019	Movement end location address is missing
E020	Movement classification not specified
E021	Vehicle type not specified
E022	Configuration type not specified
E023	Registration number of vehicle is missing
E024	Invalid input received for <Max Height, Total length, Reducible height, rigid length, gross weight, front projection, rear projection, left projection, right projection, overall width>
E025	Haulier name missing from authentication details
E026	Authentication key is missing
E027	Invalid user - Haulier name/Authentication key provided is wrong
E028	Provided reference number is not a valid reference for your re-notification request
E029	Provided reference number isn't the latest for your re-notification request
E030	Your notification could not be processed. Please retry and if unsuccessful contact the ESDAL Helpdesk.
E031	Provided vehicle movement classification is invalid
E032	Special Order number is not valid
E033	Special Order SPMT vehicle should have only one component
E034	VR1 number is not valid
E035	Axle details for vehicle are missing
E036	Provided vehicle configuration type is invalid
E037	Provided vehicle type is invalid

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E038	The dimensions you have entered are below the C & U / STGO regulations threshold for notification
E039	For C & U vehicle gross weight should be less than or equal to 44000kg
E040	For C & U vehicle width should be less than or equal to 4.3m
E041	For C & U vehicle rigid length should be less than or equal to 27.4m
E042	For C & U Rigid vehicle rigid length should be equal to overall length of vehicle
E043	C & U Rigid vehicle should have only one component
E044	C & U Semi trailer vehicle should have 2 components
E045	For Special Order SPMT vehicle rigid length should be equal to overall length of vehicle
E046	For C & U vehicle max height should be less than or equal to 50m
E047	For C & U vehicle max height should be greater than or equal to 2m
E048	For STGO AIL-Cat 1 gross weight should range between 44000kg - 50000kg
E049	For STGO AIL-Cat 1 vehicle axle count should be at least 5 for the gross weight
E050	For STGO AIL-Cat 1 vehicle axle count should be at least 6 for the gross weight
E051	For STGO AIL SPMT vehicle rigid length should be equal to overall length of vehicle
E052	For STGO AIL-Cat 1 Max axle weight should be less than or equal to 11500kg
E053	For STGO AIL-Cat 2 Gross weight should range between 50000kg - 80000kg
E054	For STGO AIL-Cat 2 Max axle weight should be less than or equal to 12500kg
E055	STGO-AIL SPMT vehicle should have only one component
E056	For STGO AIL-Cat 3 Gross weight should range between 80000kg - 150000kg

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E057	Vehicle Special Order Rigid vehicle should have only one component
E058	For STGO AIL-Cat 3 Max axle weight should be less than or equal to 16500kg
E059	The dimensions you have entered do not meet the requirements for STGO Mobile Crane Cat A notification
E060	For STGO AIL-Mobile Crane Cat A vehicle axle count should be at least 5 for the gross weight
E061	For STGO AIL-Mobile Crane Cat A vehicle axle count should be at least 6 for the gross weight
E062	For STGO AIL-Mobile Crane Cat A Max axle weight should be less than or equal to 11500kg
E063	For STGO-Mobile Crane vehicle rigid length should be equal to overall length of vehicle
E064	Vehicle Special Order SPMT vehicle should have only one component
E065	For STGO AIL-Mobile Crane vehicle should have only one component
E066	The dimensions you have entered do not meet the requirements for STGO Mobile Crane Cat B notification
E067	For STGO AIL-Mobile Crane Cat B Max axle weight should be less than or equal to 12500kg
E068	For width greater than 6.1m Special Order notification is required
E069	For Tracked vehicle rigid length should be equal to overall length of vehicle
E070	Tracked vehicle should have only one component
E071	Your movement from date is earlier than the current date
E072	For gross weight more than 150000kg Special Order notification is required
E073	For STGO AIL-Mobile Crane Cat C Max axle weight should be less than or equal to 16500kg
E074	Vehicle Special Order Semi trailer vehicle should have more than or equal to 2 components
E075	Special Order Semi trailer vehicle should have more than or equal to 2 components

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E076	For Vehicle Special Order Rigid vehicle rigid length should be equal to overall length of vehicle
E077	For STGO Engineering Plant - Wheeled vehicle rigid length should be equal to overall length of vehicle
E078	For Vehicle Special Order SPMT vehicle rigid length should be equal to overall length of vehicle
E079	For STGO Engineering Plant - Wheeled rigid vehicle should have only one component
E080	STGO Engineering Plant - Wheeled vehicle should have more than or equal to 2 components
E081	<reserved for future>
E082	<reserved for future>
E083	<reserved for future>
E084	STGO Road Recovery Operation vehicle should have more than or equal to 2 components
E085	Sum of axle spacing should be less than vehicle length
E086	Axle weight should be less than or equal to gross weight
E087	For STGO-AIL Rigid vehicle rigid length should be equal to overall length of vehicle
E088	STGO-AIL Rigid vehicle should have only one component
E089	STGO-AIL Semi trailer vehicle should have more than or equal to 2 components
E090	For width greater than 5m VR1 is required
E091	For VR1 vehicle width should be less than or equal to 6.1m
E092	For Special Order Rigid vehicle rigid length should be equal to overall length of vehicle
E093	You have exceeded the permissible limit for submitting notifications. Please contact the ESDAL Helpdesk.
E094	For STGO AIL-Cat 1 (including C&U weight vehicles exceeding 4.3m but not exceeding 5.0m overall width) gross weight should be less than or equal to 50000kg

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E095	Special Order Rigid vehicle should have only one component
E096	For STGO Engineering Plant - Tracked vehicle rigid length should be equal to overall length of vehicle
E097	<reserved for future>
E098	<reserved for future>
E099	This is not a valid organisation in ESDAL -
E100	<reserved for future>
E101	For STGO Engineering Plant - Tracked vehicle rigid length should be equal to overall length of vehicle
E102	STGO Engineering Plant - Tracked vehicle should have only one component
E103	For rigid length greater than 30m Special Order notification is required
E104	Telephone number should not exceed 15 digits
E105	No: of loads should be less than or equal to 99
E106	Invalid postcode
E107	Invalid movement classification-vehicle type-configuration type combination

8 Appendix

8.1 WSDL

```
<wsdl:definitions xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/"
xmlns:tns="http://tempuri.org/"
xmlns:wsa="http://schemas.xmlsoap.org/ws/2004/08/addressing"
xmlns:wsx="http://schemas.xmlsoap.org/ws/2004/09/mex"
xmlns:wsap="http://schemas.xmlsoap.org/ws/2004/08/addressing/policy"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"
xmlns:msc="http://schemas.microsoft.com/ws/2005/12/wsdl/contract"
xmlns:i0="NENSoapReceiver"
xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy"
xmlns:wsa10="http://www.w3.org/2005/08/addressing"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"
name="NENSoapReceiver" targetNamespace="http://tempuri.org/">
<wsdl:import namespace="NENSoapReceiver"
location="http://10.129.75.12:8092/NENSoapReceiver.svc?wsdl=wsdl0"/>
<wsdl:types/>
<wsdl:binding name="BasicHttpBinding_INENSoapReceiver"
type="i0:INENSoapReceiver">
<soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="rpc"/>
<wsdl:operation name="NENNotification">
<soap:operation soapAction="NENSoapReceiver/INENSoapReceiver/NENNotification"
style="rpc"/>
<wsdl:input name="NENNotificationRequest">
<soap:body use="encoded" namespace="http://tempuri.org"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding"/>
</wsdl:input>
<wsdl:output name="NENNotificationResponse">
<soap:body use="encoded" namespace="http://tempuri.org"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding"/>
</wsdl:output>
</wsdl:operation>
</wsdl:binding>
<wsdl:service name="NENSoapReceiver">
<wsdl:port name="BasicHttpBinding_INENSoapReceiver"
binding="tns:BasicHttpBinding_INENSoapReceiver">
<soap:address location="http://10.129.75.12:8092/NENSoapReceiver.svc"/>
</wsdl:port>
</wsdl:service>
</wsdl:definitions>
```

8.2 XSD

```
<xs:schema elementFormDefault="qualified" targetNamespace="urn:UNENSoapReceiver"
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:tns="urn:UNENSoapReceiver">
<xs:import schemaLocation="http://10.129.75.12:8092/NENSoapReceiver.svc?xsd=xsd1"
namespace="NENSoapReceiver/encoded"/>
<xs:import namespace="http://schemas.xmlsoap.org/soap/encoding"/>
<xs:import namespace="http://schemas.xmlsoap.org/wsdl"/>
```



```
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="Email" type="xs:string"/>
  <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="TelephoneNo"
type="xs:string"/>
  <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="OperatorRefNo"
type="xs:string"/>
  <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="OperatorLicenseNo"
type="xs:string"/>
  <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="OnBehalfOf"
type="xs:string"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Address">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="AddressLine1"
type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="AddressLine2"
type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="AddressLine3"
type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="AddressLine4"
type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="AddressLine5"
type="xs:string"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="LoadDetails">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="LoadDescription"
type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="NoOfLoads"
type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="Notes" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="MovementDetails">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="StartDateTime"
type="xs:dateTime"/>
    <xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="EndDateTime"
type="xs:dateTime"/>
    <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="FromAddress"
type="xs:string"/>
```

```
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="ToAddress"
type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="FromPostCode"
type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="ToPostCode"
type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="RouteDescription"
type="xs:string"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="HasIndemnity"
type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="IncludeReturnLeg"
type="xs:boolean"/>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="ReturnLegDescription"
type="xs:string"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="VehicleDetails">
<xs:sequence>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="MovementClassification"
type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="VehicleType"
type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="ConfigurationType"
type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="VR1No" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="SpecialOrderNo"
type="xs:string"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="MaxHeight"
type="xs:decimal"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="TotalLength"
type="xs:decimal"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="ReducibleHeight"
type="xs:decimal"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="RigidLength"
type="xs:decimal"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="GrossWeight"
type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="OverallWidth"
type="xs:decimal"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="FrontProjection"
type="xs:decimal"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="RearProjection"
type="xs:decimal"/>
```

```
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="LeftProjection"
type="xs:decimal"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="RightProjection"
type="xs:decimal"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="AxleCount" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="WheelCount"
type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="MaxAxleWeight"
type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="ComponentCount"
type="xs:int"/>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="RegistrationIdList"
type="tns:RegistrationIdList"/>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="AxleInfoList"
type="tns:AxleList"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="RegistrationIdList">
<xs:sequence>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="RegistrationId"
type="q2:ArrayOfString" xmlns:q2="NENSoapReceiver/encoded"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="AxleList">
<xs:sequence>
<xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="Axles"
type="tns:ArrayOfAxleDetails"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfAxleDetails">
<xs:complexContent mixed="false">
<xs:restriction base="q3:Array" xmlns:q3="http://schemas.xmlsoap.org/soap/encoding/">
<xs:attribute a:arrayType="tns:AxleDetails[]" ref="q3:arrayType"
xmlns:a="http://schemas.xmlsoap.org/wsdl/" />
</xs:restriction>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="AxleDetails">
<xs:sequence>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="IsTractor"
type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="NoOfWheels"
type="xs:int"/>
```

```
<xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="MaxAxleWeight"
type="xs:int"/>
  <xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="NextAxleDistance"
type="xs:decimal"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="WayPointLocationDetails">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="WayPointLocation"
type="tns:ArrayOfLocationDetails"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfLocationDetails">
  <xs:complexContent mixed="false">
    <xs:restriction base="q4:Array" xmlns:q4="http://schemas.xmlsoap.org/soap/encoding/">
      <xs:attribute a:arrayType="tns:LocationDetails[]" ref="q4:arrayType"
xmlns:a="http://schemas.xmlsoap.org/wsdl/" />
    </xs:restriction>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="LocationDetails">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="Address"
type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="PostCode"
type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="Easting" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" form="unqualified" name="Northing" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="NENNotificationOutput">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" form="unqualified" name="Response"
type="xs:string"/>
  </xs:sequence>
</xs:complexType>
</xs:schema>
```

8.3 SOAP XML Request

```
<soapenv:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:tem="http://tempuri.org"
xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/">
```

```
<soapenv:Header/>
<soapenv:Body>
  <tem:NENNotification soapenv:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
    <nenNotificationInput xsi:type="urn:NENNotificationInput" xmlns:urn="urn:UNENSoapReceiver">
      <Authentication xsi:type="urn:Authentication">
        <!--type: string-->
        <Haulier xsi:type="xsd:string">testUser</Haulier>
        <!--type: string-->
        <AuthenticationKey xsi:type="xsd:string">qwertyuiop</AuthenticationKey>
      </Authentication>
      <!--type: string-->
      <PreviousNotificationNo xsi:type="xsd:string"/>
      <Authority xsi:type="urn:AuthorityList">
        <AuthorityName xsi:type="enc:ArrayOfString" soapenc:arrayType="xsd:string[]"
xmlns:enc="NENSoapReceiver/encoded">
          <string>Thames Valley Police</string >
          <string >West Berkshire Council Unitary Authority</string >
        </AuthorityName>
      </Authority>
      <HaulierInfo xsi:type="urn:HaulierDetails">
        <!--type: string-->
        <OrgName xsi:type="xsd:string">ARS</OrgName>
        <Address xsi:type="urn:Address">
          <!--type: string-->
          <AddressLine1 xsi:type="xsd:string">ARS TT</AddressLine1>
          <!--type: string-->
          <AddressLine2 xsi:type="xsd:string">Nassaulaan 25</AddressLine2>
          <!--type: string-->
          <AddressLine3 xsi:type="xsd:string">2514 JT</AddressLine3>
          <!--type: string-->
          <AddressLine4 xsi:type="xsd:string">Hague</AddressLine4>
          <!--type: string-->
          <AddressLine5 xsi:type="xsd:string">Netherlands</AddressLine5>
        </Address>
        <!--type: string-->
        <ContactName xsi:type="xsd:string">ARS Haulier</ContactName>
        <!--type: string-->
        <OtherContactInfo xsi:type="xsd:string"/>
        <!--type: string-->
        <Email xsi:type="xsd:string">arstestnen@gmail.com</Email>
        <!--type: string-->
        <TelephoneNo xsi:type="xsd:string">01234567891236</TelephoneNo>
        <!--type: string-->
      </HaulierInfo>
    </nenNotificationInput>
  </tem:NENNotification>
</soapenv:Body>
```



```
<OperatorRefNo xsi:type="xsd:string"/>
<!--type: string-->
<OperatorLicenseNo xsi:type="xsd:string">ABC123</OperatorLicenseNo>
<!--type: string-->
<OnBehalfOf xsi:type="xsd:string"/>
</HaulierInfo>
<LoadInfo xsi:type="urn:LoadDetails">
  <!--type: string-->
  <LoadDescription xsi:type="xsd:string">Test load</LoadDescription>
  <!--type: int-->
  <NoOfLoads xsi:type="xsd:int">2</NoOfLoads>
  <!--type: string-->
  <Notes xsi:type="xsd:string"/>
</LoadInfo>
<MovementInfo xsi:type="urn:MovementDetails">
  <!--type: dateTime-->
  <StartDateTime xsi:type="xsd:dateTime">2018-03-15T12:20:00</StartDateTime>
  <!--type: dateTime-->
  <EndDateTime xsi:type="xsd:dateTime">2018-03-19T12:20:00</EndDateTime>
  <!--type: string-->
  <FromAddress xsi:type="xsd:string">Key Garage, Unit 6, Esgors Farm, High Road, Thornwood,
EPPING, Essex</FromAddress>
  <!--type: string-->
  <ToAddress xsi:type="xsd:string">Flat 1, Half Moon Yard, 63 Portsmouth Road, COBHAM,
Surrey</ToAddress>
  <!--type: string-->
  <FromPostCode xsi:type="xsd:string">CM16 6LY</FromPostCode>
  <!--type: string-->
  <ToPostCode xsi:type="xsd:string">KT11 1JQ</ToPostCode>
  <!--type: string-->
  <RouteDescription xsi:type="xsd:string">Test route description</RouteDescription>
  <!--type: boolean-->
  <HasIndemnity xsi:type="xsd:boolean">>false</HasIndemnity>
  <!--type: boolean-->
  <IncludeReturnLeg xsi:type="xsd:boolean">>true</IncludeReturnLeg>
  <!--type: string-->
  <ReturnLegDescription xsi:type="xsd:string">Test return leg</ReturnLegDescription>
</MovementInfo>
<VehicleInfo xsi:type="urn:VehicleDetails">
  <!--type: string-->
  <MovementClassification xsi:type="xsd:string">STGO</MovementClassification>
  <!--type: string-->
  <VehicleType xsi:type="xsd:string">CAT-2</VehicleType>
```

```
<!--type: string-->
<ConfigurationType xsi:type="xsd:string">RIGID</ConfigurationType>
<!--type: string-->
<VR1No xsi:type="xsd:string"/>
<!--type: string-->
<SpecialOrderNo xsi:type="xsd:string"/>
<!--type: decimal-->
<MaxHeight xsi:type="xsd:decimal">4.5</MaxHeight>
<!--type: decimal-->
<TotalLength xsi:type="xsd:decimal">16</TotalLength>
<!--type: decimal-->
<ReducibleHeight xsi:type="xsd:decimal">4.2</ReducibleHeight>
<!--type: decimal-->
<RigidLength xsi:type="xsd:decimal">16</RigidLength>
<!--type: int-->
<GrossWeight xsi:type="xsd:int">60000</GrossWeight>
<!--type: decimal-->
<OverallWidth xsi:type="xsd:decimal">3.22</OverallWidth>
<!--type: decimal-->
<FrontProjection xsi:type="xsd:decimal">1.2</FrontProjection>
<!--type: decimal-->
<RearProjection xsi:type="xsd:decimal">1.5</RearProjection>
<!--type: decimal-->
<LeftProjection xsi:type="xsd:decimal">0.35</LeftProjection>
<!--type: decimal-->
<RightProjection xsi:type="xsd:decimal">0.32</RightProjection>
<!--type: int-->
<AxleCount xsi:type="xsd:int">6</AxleCount>
<!--type: int-->
<WheelCount xsi:type="xsd:int">12</WheelCount>
<!--type: int-->
<MaxAxleWeight xsi:type="xsd:int">10750</MaxAxleWeight>
<ComponentCount xsi:type="xsd:int">1</ComponentCount>
<RegistrationIdList xsi:type="urn:RegistrationIdList">
  <RegistrationId xsi:type="enc:ArrayOfString" soapenc:arrayType="xsd:string[]"
xmlns:enc="NENSoapReceiver/encoded">
    <string>REG123</string>
  </RegistrationId>
</RegistrationIdList>
<AxleInfoList xsi:type="urn:AxleList">
  <Axles xsi:type="urn:ArrayOfAxleDetails" soapenc:arrayType="urn:AxleDetails[]">
    < AxleDetails >
      <IsTractor>true</IsTractor>

```

```
<NoOfWheels>2</NoOfWheels>
<MaxAxleWeight>9000</MaxAxleWeight>
<NextAxleDistance>1.35</NextAxleDistance>
</ AxleDetails >
< AxleDetails >
  <IsTractor>true</IsTractor>
  <NoOfWheels>2</NoOfWheels>
  <MaxAxleWeight>10750</MaxAxleWeight>
  <NextAxleDistance>1.35</NextAxleDistance>
</ AxleDetails >
< AxleDetails >
  <IsTractor>true</IsTractor>
  <NoOfWheels>2</NoOfWheels>
  <MaxAxleWeight>10250</MaxAxleWeight>
  <NextAxleDistance>3.66</NextAxleDistance>
</ AxleDetails >
< AxleDetails >
  <IsTractor>true</IsTractor>
  <NoOfWheels>2</NoOfWheels>
  <MaxAxleWeight>9600</MaxAxleWeight>
  <NextAxleDistance>1.45</NextAxleDistance>
</ AxleDetails >
< AxleDetails >
  <IsTractor>true</IsTractor>
  <NoOfWheels>2</NoOfWheels>
  <MaxAxleWeight>9400</MaxAxleWeight>
  <NextAxleDistance>1.55</NextAxleDistance>
</ AxleDetails >
< AxleDetails >
  <IsTractor>true</IsTractor>
  <NoOfWheels>2</NoOfWheels>
  <MaxAxleWeight>10000</MaxAxleWeight>
  <NextAxleDistance>0</NextAxleDistance>
</ AxleDetails >
</Axles>
</AxleInfoList>
</VehicleInfo>
<WayPointLocationsInfo xsi:type="urn:WayPointLocationDetails">
  <WayPointLocation xsi:type="urn:ArrayOfLocationDetails"
soapenc:arrayType="urn:LocationDetails[]"/>
  </WayPointLocationsInfo>
</nenNotificationInput>
</tem:NENNotification>
```

</soapenv:Body>

</soapenv:Envelope>

8.4 Abbreviations

NEN	Non ESDAL Notification
ESDAL	Electronic Service Delivery for Abnormal Loads
SOAP	Simple Object Access Protocol
XML	eXtensible Mark-up Language
WSDL	Web Services Description Language