API Specification

Royal Mail Group

Online Postage API (SOAP)
Technical User Guide

This API specification details the requirements for integrating with the Online Postage API (SOAP). It specifically covers how the Online Postage API can be used by any Royal Mail approved third party. The API provides customers the ability to purchase and print their own postage labels off a third party Marketplace website. This document provides the technical information required to call this API.

28th November 2015   Version 1.0

Contents

1 Document Control

1.1 Terms and Abbreviations

Term	Meaning
HTTPS	Hypertext Transfer Protocol over SSL
IP	Internet Protocol
OLP	Online Postage
SOAP	Originally an acronym for Simple Object Access Protocol, is a protocol specification for exchanging structured information in the implementation of web services
WSDL	Web Service Description Language
XSD	XSD is XML Schema Definition – this defines a specific template for the XML used by particular systems
XML	eXtensible Markup Language, a flexible standard for data inside a hierarchical structure of named data items

Table 1 – Terms and Abbreviations

1.2 Version History

Version	Author	Date	Notes
1.0	Mark Cornforth	28/11/2015	Document created

Table 2 – Document Version History

2   Overview

The Royal Mail Online Postage (OLP) API provides any Royal Mail approved third party Marketplace website the ability to print their own postage labels. The API provides the functionality to obtain a country list for a given carrier, obtain terms and conditions associated with the mail services for each country, obtain the postage price for an individual item, obtain the postage for an individual mail item and spoil (cancel) that unused postage.

The API only supports Royal Mail consumer based postal products and services.

Using the Online Postage API will require development costs that will be covered by the third party developing the solution. Royal Mail will not accept any responsibility for these development, implementation and testing costs.

Customers who are interested should contact their Royal Mail account handler to check eligibility.

3   Purpose

This document is to provide any approved Royal Mail's third party with guidelines and detailed specifications for integrating with the Online Postage API SOAP web service.

The document details:

- The specification for the web service interface

- Description of errors the API can return

- Non-functional characteristics of the API including response times, service availability and security considerations.

This document is primarily intended to be read by developers and other technical roles involved with integrating customer systems' with the Online Postage API. This document should be read in conjunction with the following artefacts which are available from the Online Postage API page on the Royal Mail API (Developer) Portal:

- Online Postage API WSDL

- Online Postage API XSDs

- Online Postage API Reference Data

4 Introduction to the Online Postage API

4.1 Overview

The Online Postage API provides the functionality for customers to purchase and print their own postage labels off a third party Marketplace website. The API offers a suite of methods, which will deliver the following capabilities:

- Obtain a country list for a given carrier
- Obtain details in the form of terms and conditions of the different mail services for each country
- Obtain the postage price for an individual item
- Obtain the postage per item
- Spoil (cancel) the postage per item
- Obtain a status message in relation to the availability of the service

4.2 Interface Components

Please see Figure 1 below for a graphical representation of the interface between Royal Mail and customers for the Online Postage API. This document covers what information is to be exchanged, how this information is structured and the means by which it is transferred.
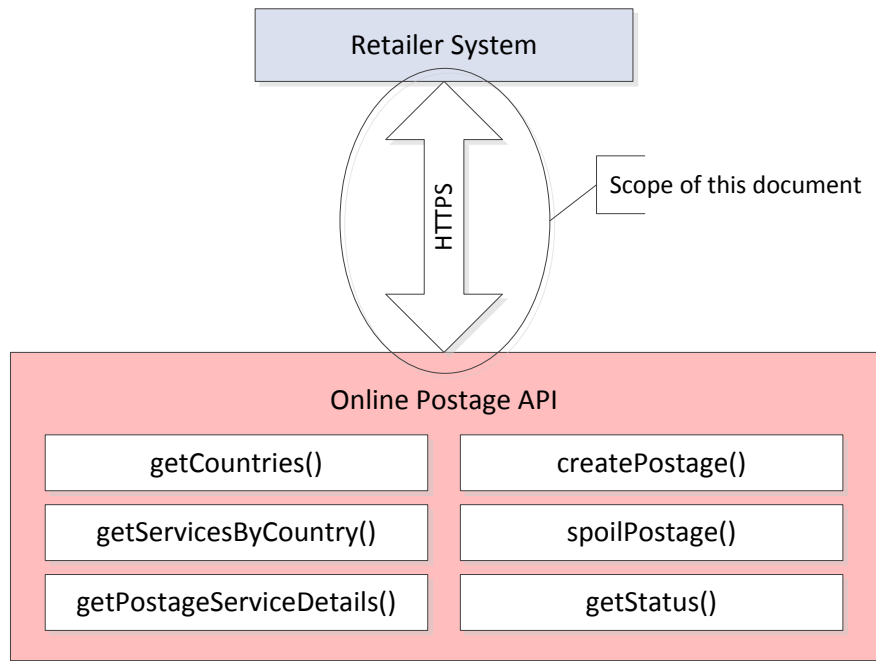
Figure 1 – Online Postage API

5 Integrating with the Online Postage API

The high-level process associated with integrating with Online Postage API is represented in the diagram below and described in the sections which follow.
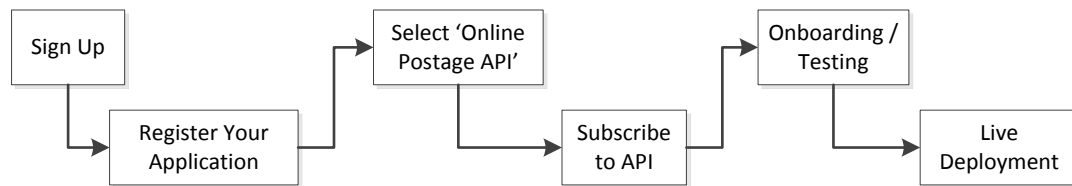
Figure 2 – Process for Integrating with the API

Access to the service is managed through RMG's API Management system.

New users of the system will need to:

1. Sign up for an account and accept the terms and conditions on the Royal Mail API (Developer) Portal.

2. Register the customer side 'application' which will be calling the API. When the application is registered, it will be assigned a unique system-generated Client ID and Secret which is needed to securely access the API. It is important that these credentials are noted and securely stored.

3. Request to subscribe to the API. This will result in an e-mail being automatically generated and sent to the Royal Mail Customer Solutions team.

4. Once approved, testing can be performed against the API in a sandboxed onboarding environment that allows you to test the integration.

5. Once all required testing has completed in the onboarding environment, access to the Live production system will be provided at a mutually agreed date/time.

Existing users who already have an account with Royal Mail's API Management system will need to perform step 2 onwards if the application accessing the API is different to any currently registered applications. If the application accessing the API is already registered, existing customers will need to perform step 3 onwards.

5.1 Terms & Conditions

You must accept the Royal Mail Terms and Conditions when creating your customer account. These cover the ways in which the service may be used and any integration activities must abide by these.

Of particular note to developers:

- The onboarding environment may not be used for performance testing. This is a small scale system for functional testing only.

- Where specified, weights should be accurate. Discrepancies between reported and actual weights will be investigated by Royal Mail.

- All Royal Mail APIs impose a cap on the number of transactions per second for each customer. Excessive volumes of traffic within a short period will result in transactions being rejected.

- The Customer Data will be held by us on our servers for a limited period of time to enable users to run activity reports. Thereafter, we may delete or remove such Customer Data without further notice.

5.2 API Access

Both onboarding and live access to the API is obtained via the following URL:

https://api.royalmail.net/onlinepostage/v1

Please note that the Client ID and Secret must be provided in the HTTP header of all API requests otherwise access to the API will be rejected and a HTTP 401 (Unauthorised) will be returned. The Client ID and Secret are obtained by registering an application on the RMG API Management site.

You must complete all required test activities in the onboarding environment prior to being permitted access to the live environment by the Royal Mail Customer Solutions Team. The onboarding test environment has the same functionality as live (though with a reduced capacity) and allows you to test your integration without data being passed through to the Royal Mail operational and billing systems and without incurring any charges against your account.

You will be provided with a contact in Royal Mail who will take you through the onboarding process.

Please see section 0 for a full list of technical and business error codes which are returned from this API.

5.3 Live Deployment

Once you have successfully demonstrated that your system works with ours, and that you can produce labels to the required level of quality, you will be granted access to the live system.

5.4 API Versioning

Royal Mail is continuously working to improve its technology, and as part of this process updates to the services provided may on occasion necessitate a new WSDL version. Royal Mail will look to maintain three versions of the WSDL; as new versions are introduced, previous versions move down the stack until they are ultimately removed completely:

- Latest version

- Previous version

- Deprecated version

Customers will always be encouraged to integrate against the latest version as this will give them the longest stable period without the need to change, but if they have already begun integration activities when a new version is released then they will be able to

integrate against the previous version. Customers should not integrate against the deprecated version.

6 Online Postage Services

6.1 Business Services

The Online Postage API allows customers to obtain a country list for a given carrier, obtain the postal terms and conditions for each country, obtain the postage price for an individual item, obtain the electronic stamp (indicia) for the item and, if required, spoil (cancel) the postage for an individual item.

Table 1 provides an overview of the business services that are supported by this interface.

Business Service	Web Service Operation	Description	Technology	Conversation Style
Get Countries	getCountries	Request a list of supported countries for a given carrier	SOAP over HTTPS	Synchronous Request / Response
Get Services by Country	getServicesByCountry	Provides details (T&C) of different mail services for a given country	SOAP over HTTPS	Synchronous Request / Response
Get Postage Service Details	getPostageServiceDetails	Provides the postage price of an individual item	SOAP over HTTPS	Synchronous Request / Response
Create Postage	createPostage	Provides the postage per item	SOAP over HTTPS	Synchronous Request / Response
Spoil Postage	spoilPostage	Cancel the postage per item	SOAP over HTTPS	Synchronous Request / Response
Get Status	getStatus	Provides a message on the status of the service	SOAP over HTTPS	Synchronous Request / Response

Table 1 – Business Services

7   Message Structure

The structure of the Online Postage API SOAP request and response messages is represented by the diagram below.
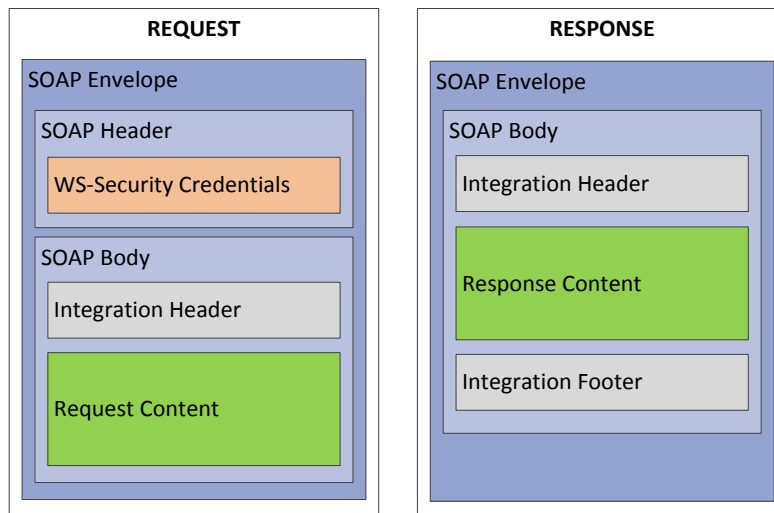
Figure 3 – API Structure

Each of the Online Postage API operations (see section 6.1) is defined as a SOAP operation, with separate request / response message parts. Technical details are documented in the WSDL and XSD schemas which accompany this document.

Within the SOAP body tags, each request or response message is supplemented with an integrationHeader element and is described in Sections 8.5.1 and 8.6.1. Response messages may contain an integrationFooter element that contains details of any errors or warnings and this is described in Section 8.6.3.

8 Message Definition and Schemas

8.1 Notation

The API elements described in this section are constructed using Royal Mail's Enterprise Canonical Data Model. The schema structures are described in XMLSpy notation with graphical representation meanings explained in the table below.
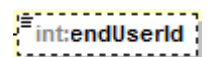
Graphical Representation	Meaning
int:applicationId	A solid line around an element indicates it is a mandatory field that will/must always be present.
int:endUserId	A dashed line around an element indicates the field is optional and may or may not be present. An optional element is one that indicates the data and enclosing XML tags may or may not be present in either a request or response.
	The *sequence* identifier represents an ordered set of elements.
	The *choice* identifier represents a selection of elements.

Figure 4 – Notation used to describe this API

Royal Mail's Enterprise Canonical Data Model contains optional fields not used by the Online Postage API web service. If an element is not listed in the sections below, it is not used by the Online Postage API web service and data should not be placed in those elements. Any elements not used in the Online Postage API implementation are shaded in grey and indicated as such in the supporting text. Elements described in more detail later are shaded in purple.

In the context of the tables defined in this section:

- All data types are defined in the Data Types schema (see section 8.2).

- All 'Occurs' values signify whether each data entity is mandatory or optional in the context of Online Postage API. Although an element may be defined as optional in the Canonical Data Model, it may still be considered as being mandatory for an Online Postage API request. Particular conditions under which an element needs to be populated are defined in the 'Description' column.

8.2 WSDL and Schemas

The following table lists the documents that should be referenced for the RMG-defined canonical data types used by Online Postage API. The XML schema documents themselves are provided in supporting files. Each schema file contains descriptions of every type using the "xs:documentation" element.

WSDL / XML Schema File	Description
OnlinePostageAPI_V1_2_4.wsdl	WSDL describing the functionality offered by Royal Mail Online Postage API.
OnlinePostageAPI_V1_2_3.xsd	Royal Mail schema for the public API which is built from the RMG defined canonical data types. This file defines the actual request and response message structures.
oasis-200401-wss-wssecurity-secext-1.0.xsd	OASIS schema defining the standards for OASIS WS Security
oasis-200401-wss-wssecurity-utility-1.0.xsd	OASIS schema that supplements the OASIS WS Security schema
xml.xsd	Schema for the XML language, used to support the Oasis schema files.
xmldsig-core-schema.xsd	XML Signature schema used to support the Oasis WS Security standard.
CalendarV2_1.xsd	Royal Mail schema for calendar.
CommonClassesV2_1.xsd	Royal Mail schema which defines common objects such as "address" which are complex types with a defined structure based on RMG defined simple data types as well as reference data types.
CommonIntegrationSchemaV1_5.xsd	Royal Mail schema which defines a common header and footer definition to be used for request and response messages.
DatatypesV2_1.xsd	Royal Mail defined simple types that are commonly required, such as "date" and "name". This schema is the foundation for the other schema files.
FunctionalLocationV2_1.xsd	The Functional Location is a key Royal Mail master data set and is a reference to a node/point in the Royal Mail supply chain which mails are collected from, forwarded to or delivered to in its path to its destination. Functional locations typically have some throughput and related attributes and grouped around the path and steps a mail piece has to go through, e.g. Mail Centre, Collection Hub, POL Outlet, Delivery Office, SPDO, Airport, etc.
ReferenceDataV2_1.xsd	Royal Mail schema which defines a set of types for common reference data such as address fields that are defined using the RMG simple data types.

Table 2 – API Schemas

8.3 HTTP Header Information

8.3.1 Description

The purpose of the HTTP header is to support security and logging functionally within the Royal Mail systems and it is mandatory that it is provided in the request message.

8.3.2 Request Message

All service requests to this API will be authorised in accordance with the Client ID and Secret passed in the HTTP headers. Please see table below for the elements which need to be populated in the HTTP header.

Parameter	Optional	Description
Accept	No	This attribute accepts requests in application/soap+xml format.
X-IBM-Client-Id	No	Similar to a client username. Required to access the API.
X-IBM-Client-Secret	No	Similar to a client password. Required to access the API.

Table 3 – HTTP Header Information in the API Request

8.3.3 Example Data

Example request data for the HTTP Header:

Parameter	Value
Accept	application/soap+xml
X-IBM-Client-Id	f0e4f151-2041-4df2-b31d
X-IBM-Client-Secret	kT0lB2dK0wF6mK0rD8sD7oE7vP2mG7l

Table 4 – Example HTTP Header Information for API Request

8.4 Security Credentials

8.4.1 Description

Each request message to the Online Postage API web service must include valid security credentials in order to be accepted by the Royal Mail system. The Online Postage API implements WS-Security which is used to enforce the integrity and confidentiality of messages flowing between the service requester organisation and Royal Mail.

The WS-Security specification describes enhancements to SOAP messaging to provide quality of protection through message integrity and confidentiality.

Integrity: The API uses message signing to ensure that information is not changed, altered, or lost in an unauthorized or accidental way. An XML digital signature therefore needs to be generated on the contents of each SOAP request message. If the message data changes illegally, the signature is not validated. This prevents anyone from using tampering techniques to intercept a SOAP message between the client and server and then modify it.

Confidentiality: The API uses message encryption to ensure that no unauthorized party or process can access or disclose the information in the message. When the SOAP message is encrypted, only a service that knows the key for confidentiality can decrypt and read the message. This prevents an attacker from being able to read any intercepted information.

Royal Mail will provide you with an internally generated certificate (signed by Royal Mail's Certificate Authority) and you will need to generate your own private key. These will need

to be used to create the digital signature which is populated in the WS-Security header of each request message. If you are already a Royal Mail customer and currently have a RM generated certificate and private key, these can be used to access this API on the provision that the certificate has not expired.

Royal Mail will not generate a corresponding WS-Security for the response message which is returned to your system.

8.4.2   Example Security data

Full XML examples of SOAP requests and responses are provided on the 'Online Postage API (SOAP)' page on the Royal Mail API (Developer) Portal. This section provides a simplified example to illustrate the WS-Security header only.

```xml
<soapenv:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">
        <wsse:BinarySecurityToken EncodingType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-
message-security-1.0#Base64Binary" ValueType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-x509-token-
profile-1.0#X509PKIPathv1" wsu:Id="X509-
73E51663DB9A66F0A51384514433170241">0123456789==</wsse:BinarySecurityToken>
        <ds:Signature Id="SIG-81" xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
            <ds:SignedInfo>
                <ds:CanonicalizationMethod Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
                <ds:SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>
                <ds:Reference URI="#id-11">
                    <ds:Transforms>
                        <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#">
                            <InclusiveNamespaces PrefixList="oas v1 v11" xmlns="http://www.w3.org/2001/10/xml-exc-c14n#"/>
                        </ds:Transform>
                    </ds:Transforms>
                    <ds:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>
                    <ds:DigestValue>1234567890/123456/123456789=</ds:DigestValue>
                </ds:Reference>
            </ds:SignedInfo>
            <ds:SignatureValue>12345678901234567890123456789=</ds:SignatureValue>
            <ds:KeyInfo Id="KI-73E51663DB9A66F0A51384514433171242">
                <wsse:SecurityTokenReference wsse11:TokenType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
x509-token-profile-1.0#X509PKIPathv1" wsu:Id="STR-73E51663DB9A66F0A51384514433171243"
xmlns:wsse11="http://docs.oasis-open.org/wss/oasis-wss-wssecurity-secext-1.1.xsd">
                    <wsse:Reference URI="#X509-73E51663DB9A66F0A51384514433170241" ValueType="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-x509-token-profile-1.0#X509PKIPathv1"/>
                </wsse:SecurityTokenReference>
            </ds:KeyInfo>
        </ds:Signature>
    </wsse:Security>
</soapenv:Header>
```

8.4.3   References

For further details around the key concepts of WS-Security please see the following Microsoft Technet article on WS-Security:

http://msdn.microsoft.com/en-gb/library/ms977327.aspx

8.5   getCountriesRequest

The getCountriesRequest operation either results in a list of countries being provided (which are supported by a given carrier) or an appropriate error / warning message being returned to the customer. To invoke the getCountriesRequest operation, the customer system constructs a SOAP request message as described in Section 7.

The getCountriesRequest element is contained in the SOAP Body and contains the following:

- An integrationHeader element (see section 8.5.1)

- A genericRequestStructure element (see section 8.5.2)

Figure 5 – getCountriesRequest Structure

All elements in the table below are relative to the root getCountriesRequest element.

Element	Occurs	Data Type	Description
integrationHeader	1-1	element	As described in section 8.5.1
genericRequestStructure	1-1	element	Common request structure definition expected at the top of every service request. It contains the request header which holds the carrier indicator for the service call. Please see section 8.5.2 for more information.

Table 5 – getCountriesRequest Element

8.5.1   integrationHeader

The purpose of this element is to support security and logging functionally within Royal Mail systems, and it is mandatory that it is provided in all request messages. The integrationHeader element will also be present in all response messages.

Please see diagram below for a representation of the integrationHeader element:
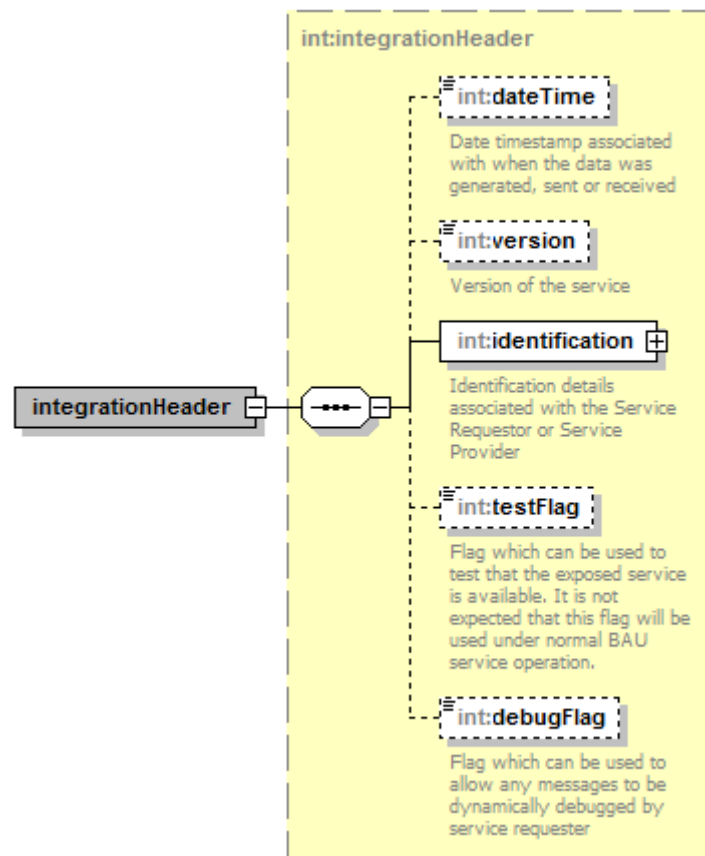
Figure 6 – integrationHeader Structure

All elements defined below are relative to the integrationHeader element in the request message.

Element	Occurs	Data Type	Description
dateTime	0-1	dateTime	This should be populated with the date timestamp when the message was generated.
version	0-1	decimal	The version of the API currently being used (currently 1.0).
identification	1-1	element	Identification element used to hold the identity and transaction details associated with the customer. See identification table below for structure.
testFlag	0-1	boolean	Not used in the Online Postage API implementation.
debugFlag	0-1	boolean	Not used in the Online Postage API implementation.

Table 6 – integrationHeader Element (Request)

Please see diagram below for a representation of the identification element:
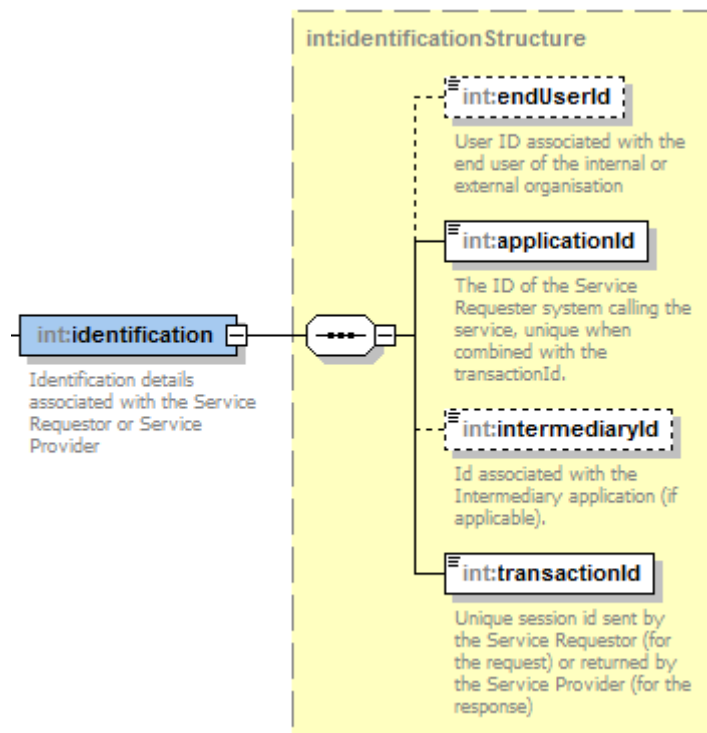
Figure 7 – identification Structure

All elements defined below are relative to the integration element in the integrationHeader.

Element	Occurs	Data Type	Description
enduserID	0-1	identifier	This can be used to store the details of the end-user making the request.
applicationId	1-1	identifier	This is the ten digit Customer Account Number allocated by Royal Mail.
intermediaryId	0-1	identifier	Not used in the Online Postage API implementation.
transactionId	1-1	identifier	This is a unique number used to identify the transaction as provided by the customer system. It allows the consuming application to correlate the response message to its request.

Table 7 – integrationHeader identification Element

8.5.2 genericRequestStructure

The genericRequestStructure element acts as a container for the common request structure definition which is expected at the top of every service request. It contains the request header which holds the carrier indicator for the service call.
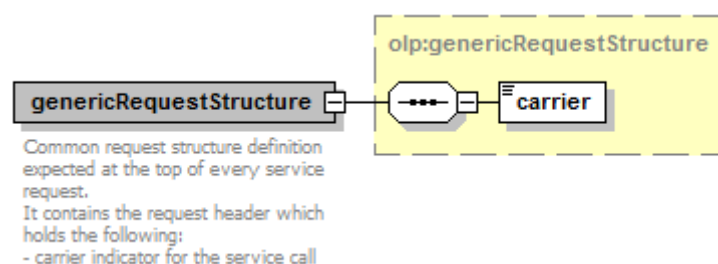
Figure 8 – genericRequestStructure Structure

All elements in the table below are relative to genericRequestStructure.

Element	Occurs	Data Type	Description
carrier	1-1	name	The name of carrier. Supported values are 'RMG' and 'PFW'.

Table 8 – genericRequestStructure Element

8.5.3   Example Data

Full XML examples of SOAP requests and responses are provided on the Royal Mail API (Developer) Portal. This section provides a simplified extract to illustrate the getCountriesRequest only. Please note that the WS-Security and SOAP envelope have been removed for simplicity.

```xml
<v1:getCountries>
    <integrationHeader>
        <v11:identification>
            <v11:applicationId>123456789</v11:applicationId>
            <v11:transactionId>transId1</v11:transactionId>
        </v11:identification>
    </integrationHeader>
    <genericRequestStructure>
        <carrier>RMG</carrier>
    </genericRequestStructure>
</v1:getCountries>
```

8.6   getCountriesResponse

The response for a requested getCountries operation is constructed as a SOAP response message as described in Section 7. The getCountriesResponse element is contained in the SOAP Body element and contains the following:

- An integrationHeader element (see section 8.6.1)

- An optional getCountriesReturn element (see section 8.6.2) which will be populated on completion of having successfully fulfilled the request. This element will not be present in the response if an error occurred in the processing of the request – the error details will be included in the integrationFooter element.

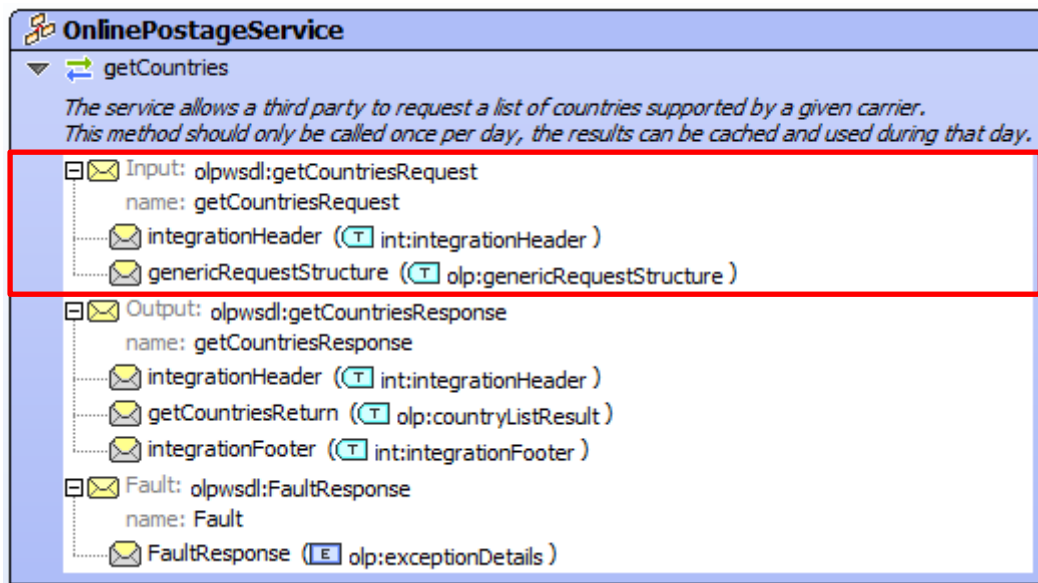- An optional integrationFooter element (see section 8.6.3)
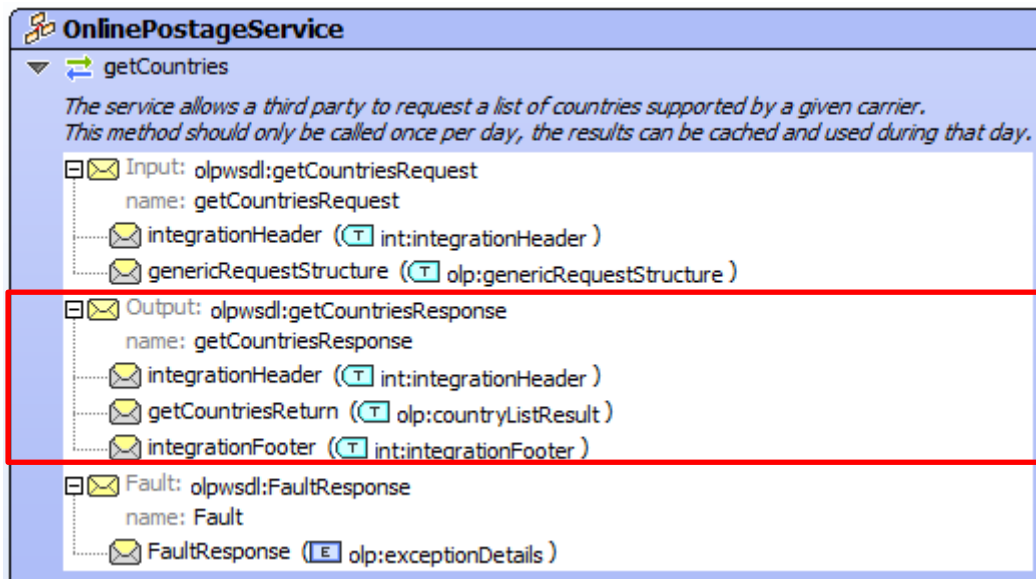
Figure 9 – getCountriesResponse Structure

All elements in the table below are relative to the root getCountriesResponse element.

Element	Occurs	Data Type	Description
integrationHeader	1-1	element	As described in section 8.6.1
getCountriesReturn	0-1	element	The results of the supported country list for a given carrier definition. See section 8.6.2 below for more information.
integrationFooter	0-1	element	Container for any error or warning messages associated with the API operation. Please see section 8.6.3 for more information.

Table 9 – createShipmentResponse Element

8.6.1   integrationHeader

The integrationHeader element will also be present in all response messages. Please see diagram in Figure 6 in section 8.5.1 for a representation of the integrationHeader element:

Element	Occurs	Data Type	Description
dateTime	0-1	dateTime	This is always returned and contains the same value provided in the request.
version	0-1	decimal	This is always returned and contains the same value provided in the request.
identification	1-1	element	This is always returned and contains the same values provided in the request.
testFlag	0-1	boolean	Not used in the Online Postage API implementation.
debugFlag	0-1	boolean	Not used in the Online Postage API implementation.

Table 10 – integrationHeader Element (Response)

The integrationHeader contains an identification element which is described below.

Element	Occurs	Data Type	Description
enduserID	0-1	identifier	This can be used to store the details of the end-user making the request.
applicationId	1-1	identifier	This is always returned with the same ten digit Customer Account Number provided in the request.
intermediaryId	0-1	identifier	Not used in the Online Postage API implementation.

Element	Occurs	Data Type	Description
transactionId	1-1	identifier	This is always returned with the same unique transaction number provided in the request

<div align="center">Table 11 – intgrationHeader identification Element (Response)</div>

8.6.2   getCountriesReturn (countryListResult)

The getCountriesReturn (countryListResult) element is a container for results of the supported country list for a given carrier definition.
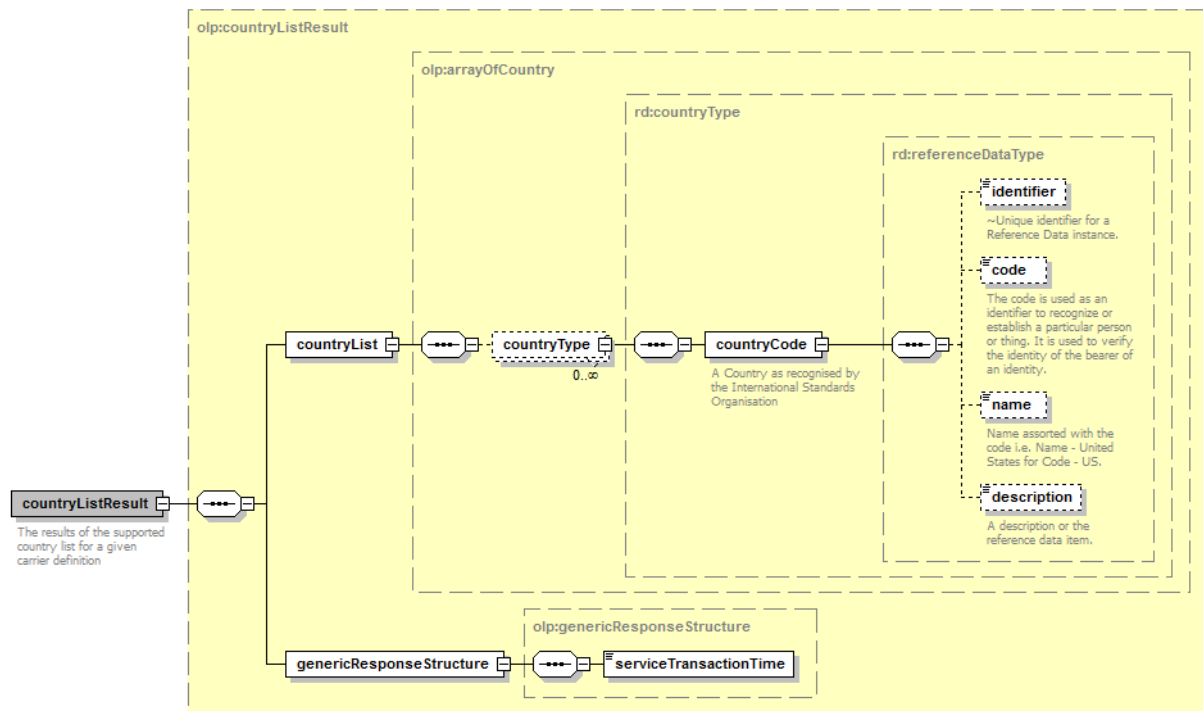
<div align="center">Figure 10 – getCountriesReturn (countryListResult) Structure</div>

All elements in the table below are relative to the getCountriesReturn (countryListResult) element.

Element	Occurs	Data Type	Details
countryList	1-1	element	Container for the supported country list for the carrier
countryList.countryType	0-∞	element	Container for supported countries
countryList.countryType.countryCode	1-1	element	Container for country details
countryList.countryType.countryCode.identifier	0-1	identifier	Identifier associated with the country.
countryList.countryType.countryCode.code	0-1	identifier	Code associated with the country.
countryList.countryType.countryCode.name	0-1	longName	Name associated with the country.
countryList.countryType.countryCode.description	0-1	description	Description of the country.
genericResponseStructure	1-1	element	Container for the service transaction time which is returned in all API responses.
genericResponseStructure.serviceTransactionTime	1-1	dateTime	The transaction time prior to returning the response to the calling party in the yyyy-MM-dd HH:mm:ss:SSS format. SSS is optional.

<div align="center">Table 12 – getCountriesReturn (countryListResult) Element</div>

8.6.3 integrationFooter

The purpose of this element is to return any business error and warning messages back to the customer. The integrationFooter element will only be present in a response message if there are any business errors or warnings associated with processing a web service request. Please note that all technical exceptions will result in a SOAP fault being generated.
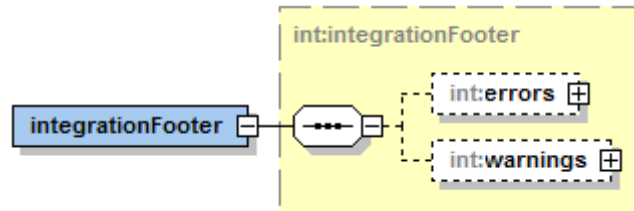
Figure 11 – integrationFooter Structure

All elements in the table below are relative to the integrationFooter element.

Element	Occurs	Data Type	Description
errors	0-1	element	See table below for structure. This will contain details of any errors encountered in processing a web service request. Please see the Online Postage API page on the Royal Mail API (Developer) Portal for the full list of all errors which can be returned.
warnings	0-1	element	See table below for structure. This will contain details of any warnings encountered in processing a web service request. Please see the Online Postage API page on the Royal Mail API (Developer) Portal for the full list of all warnings which can be returned.

Table 13 – integrationFooter Element

errors
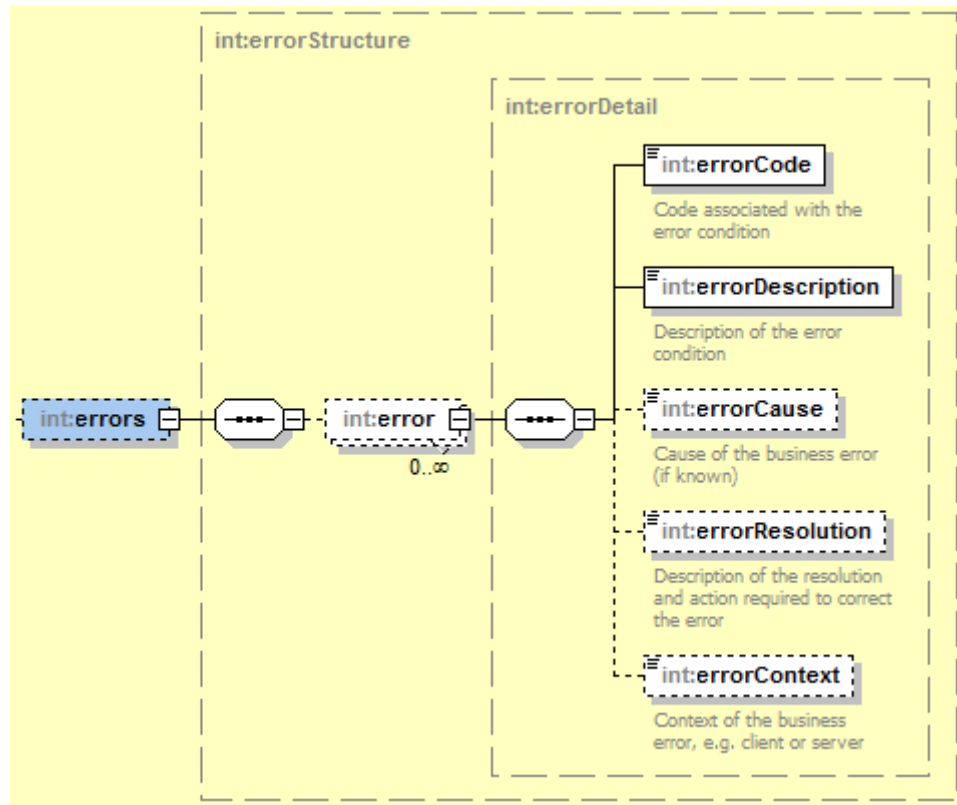
Figure 12 – integrationFooter errors Structure

All elements in the table below are relative to the errors element.

Element	Occurs	Data Type	Description
error	0-∞	element	Element containing from zero to many errors.
error.errorCode	1-1	identifier	This is the code for the error message.
error.errorDescription	1-1	description	This is the description associated with the error code.
error.errorCause	0-1	description	This is the cause of the error (if known). Not used in the implementation of the Online Postage API.
error.errorResolution	0-1	description	This is the description of the resolution and action required to correct the error (if known). Not used in the implementation of the Online Postage API.
error.errorContext	0-1	description	This is the context of the error, e.g. client or server. Not used in the implementation of the Online Postage API.

Table 14 – integrationFooter errors Element

warnings
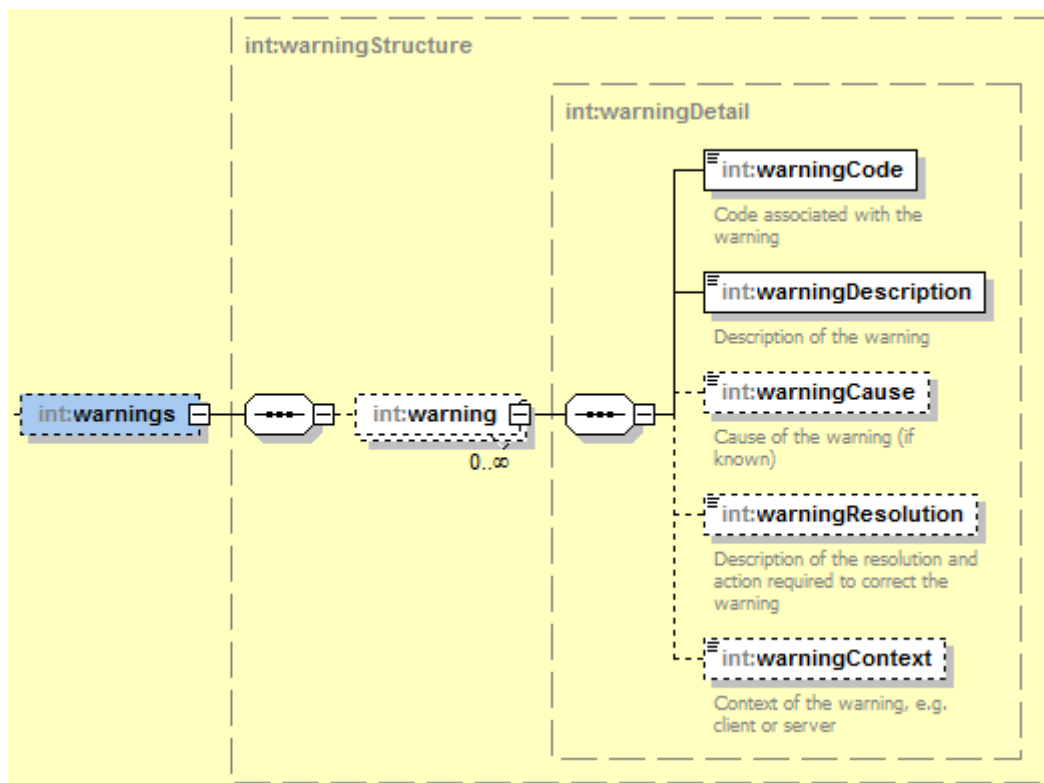
Figure 13 – integrationFooter warnings Structure

All elements in the table below are relative to the warnings element.

Element	Occurs	Data Type	Description
warning	0-∞	element	Element containing from zero to many warnings.
warning.warningCode	1-1	identifier	This is the code for the warning message.
warning.warningDescription	1-1	description	This is the description associated with the warning code
warning.warningCause	0-1	description	This is the cause of the warning if known. Not used in the implementation of the Online Postage API.
warning.warningResolution	0-1	description	This is the description of the resolution and action required to correct the warning if known. Not used in the implementation of the Online Postage API.
warning.warningContext	0-1	description	This is the context of the warning, e.g. client or server. Not used in the implementation of the Online Postage API.

Table 15 – integrationFooter warnings Element

8.6.4   Example Data

Full XML examples of SOAP requests and responses are provided on the Royal Mail API (Developer) Portal. This section provides a simplified example to illustrate the getCountriesResponse without the SOAP wrappers.

```
<NS1:getCountriesResponse xmlns:NS1="http://www.royalmailgroup.com/api/onlinePostage/V1">
   <integrationHeader>
     <NS2:identification xmlns:NS2="http://www.royalmailgroup.com/integration/core/V1">
       <NS2:applicationId>123456789</NS2:applicationId>
       <NS2:transactionId>1</NS2:transactionId>
     </NS2:identification>
   </integrationHeader>
```

```xml
<getCountriesReturn>
  <countryList>
    <countryType>
      <countryCode>
        <identifier>AD</identifier>
        <code>AD</code>
        <name>ANDORRA</name>
        <description>ANDORRA</description>
      </countryCode>
    </countryType>
    <countryType>
      <countryCode>
        <identifier>AE</identifier>
        <code>AE</code>
        <name>UNITED ARAB EMIRATES</name>
        <description>UNITED ARAB EMIRATES</description>
      </countryCode>
    </countryType>
    <countryType>
      <countryCode>
        <identifier>AF</identifier>
        <code>AF</code>
        <name>AFGHANISTAN</name>
        <description>AFGHANISTAN</description>
      </countryCode>
    </countryType>
    <countryType>
      <countryCode>
        <identifier>AG</identifier>
        <code>AG</code>
        <name>ANTIGUA AND BARBUDA</name>
        <description>ANTIGUA AND BARBUDA</description>
      </countryCode>
    </countryType>
    <countryType>
      <countryCode>
        <identifier>AI</identifier>
        <code>AI</code>
        <name>ANGUILLA</name>
        <description>ANGUILLA</description>
      </countryCode>
    </countryType>
    <countryType>
      <countryCode>
        <identifier>AL</identifier>
        <code>AL</code>
        <name>ALBANIA</name>
        <description>ALBANIA</description>
      </countryCode>
    </countryType>
  </countryList>
  <genericResponseStructure>
    <serviceTransactionTime>2015-11-29T23:56:17.482638</serviceTransactionTime>
  </genericResponseStructure>
</getCountriesReturn>
<integrationFooter/>
</NS1:getCountriesResponse>
```

8.7   getServicesByCountryRequest

The getServicesByCountry operation returns a list of mail services including their terms and conditions for a given country.

Figure 14 – getServicesByCountryRequest Structure

All elements in the table below are relative to the getServicesByCountryRequest element.

Element	Occurs	Data Type	Description
integrationHeader	1-1	element	As described in section 8.5.1
genericRequestStructure	1-1	element	As described in section 8.5.2
isoCountryCode	1-1	element	Container for country code value. See section 0.

Table 16 – updateShipmentRequest Element

8.7.1 isoCountryCode (countryType)

The purpose of this element is to hold the country code value.
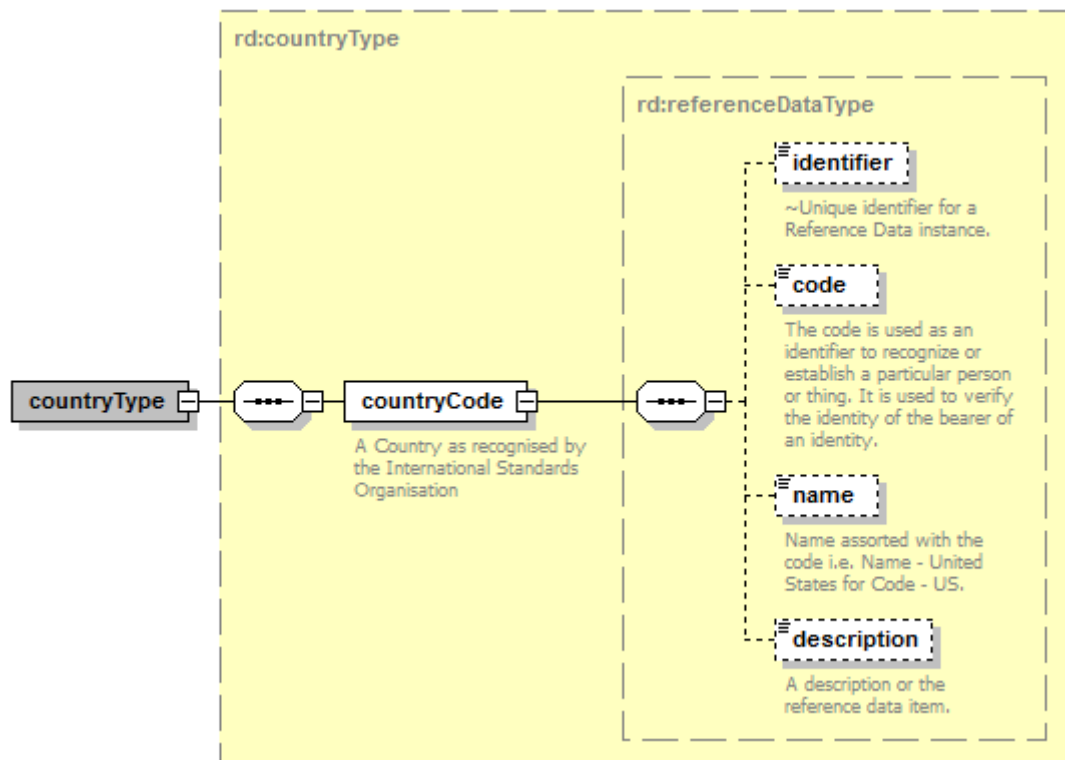
Figure 15 – isoCountryCode (countryType) Structure

All elements in the table below are relative to the isoCountryCode (countryType) element.

Element	Occurs	Data Type	Description
countryCode	1-1	element	Container for the country code details
countryCode.identifier	0-1	identifier	Identifier associated with the country (e.g. GB)
countryCode.code	0-1	identifier	Code associated with the country (e.g. GB)
countryCode.name	0-1	longName	Name associated with the country (e.g. UNITED KINGDOM).
countryCode.description	0-1	description	Description of the country.

Table 17 – isoCountryCode (countryType) Element

8.7.2 Example Data

Full XML examples of SOAP requests and responses are provided on the Royal Mail API (Developer) Portal. This section provides a simplified example to illustrate the getServicesByCountryRequest without the SOAP wrappers and associated WS-Security elements.

```
<v1:getServicesByCountry>
        <integrationHeader>
                <v11:identification>
                        <v11:applicationId>123456789</v11:applicationId>
                        <v11:transactionId>transId1</v11:transactionId>
                </v11:identification>
        </integrationHeader>
        <genericRequestStructure>
                <carrier>RMG</carrier>
        </genericRequestStructure>
```

```
        <isoCountryCode>
                <countryCode>
                        <identifier>GB</identifier>
                        <code>GB</code>
                        <name>UNITED KINGDOM</name>
                </countryCode>
        </isoCountryCode>
</v1:getServicesByCountry>
```

8.8   getServicesByCountryResponse

The response for a getServicesByCountry operation is constructed as a SOAP message with the getServicesByCountryResponse element contained in SOAP Body. The getServicesbyCountryResponse element is described in the figure and table below:
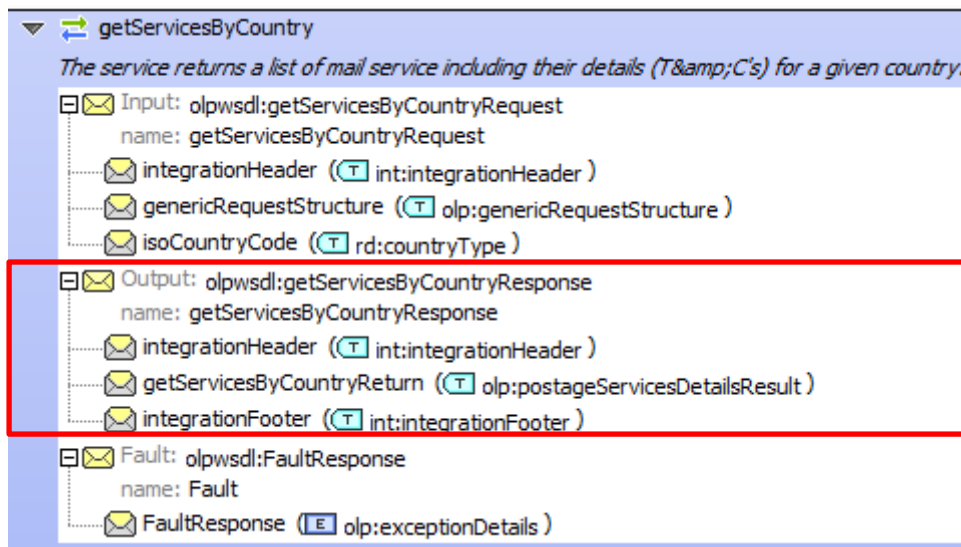
Figure 16 – getServicesByCountryResponse Structure

All elements in the table below are relative to the getServicesByCountryResponse element.

Element	Occurs	Data Type	Description
integrationHeader	1-1	element	See section 8.6.1
getServicesByCountryReturn	1-1	element	Container for common postage service details and related forms, options and meta-data definition. See section 0.
integrationFooter	0-1	element	Container for any error or warning messages associated with the getServicesByCountryResponse operation. Please see section 8.6.3 for more information.

Table 18 – getServicesByCountryResponse Element

8.8.1 getServicesByCountryReturn (postageServicesDetailsResult)

The purpose of this element is to hold the common postage service details and related forms, options and meta-data definition.
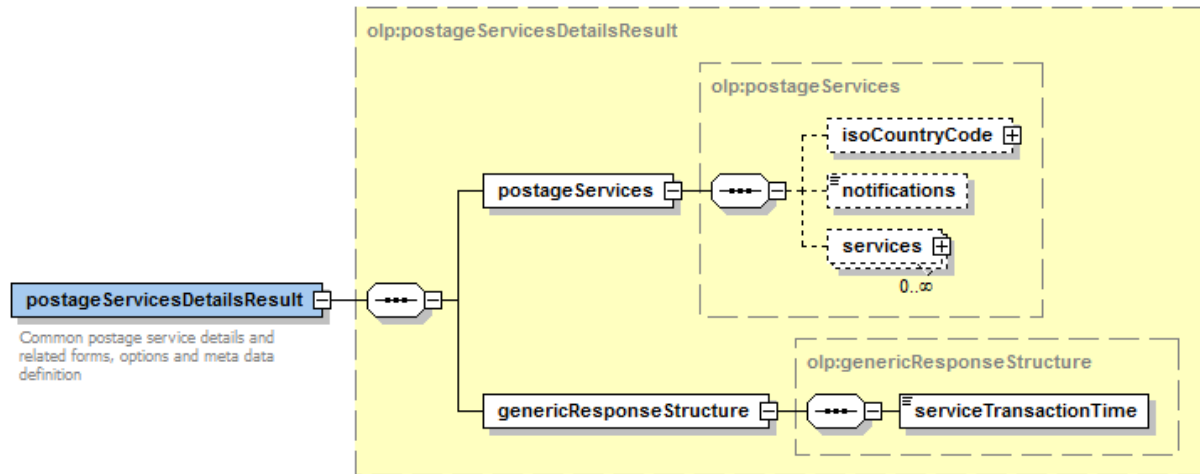
Figure 17 – getServicesByCountryReturn (postageServicesDetailsResult) Structure

All elements in the table below are relative to the getServicesByCountryReturn (postageServicesDetailsResult) element.

Element	Occurs	Data Type	Description
postageServices	1-1	element	Container for common postage service details and related forms, options and meta-data definition.
postageServices.isoCountryCode	0-1	element	Country details associated with the getServicesByCountry call. See section 0.
postageServices.notifcations	0-1	longDescription	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServices.services	0-∞	element	Container for common postage service details. Please see section 8.8.1.1 below for more information.
genericResponseStructure	1-1	element	Container for the service transaction time which is returned in all API responses.
genericResponseStructure.serviceTransactionTime	1-1	dateTime	The transaction time prior to returning the response to the calling party in the yyyy-MM-dd HH:mm:ss:SSS format. SSS is optional.

Table 19 – isoCountryCode (countryType) Element

8.8.1.1 services
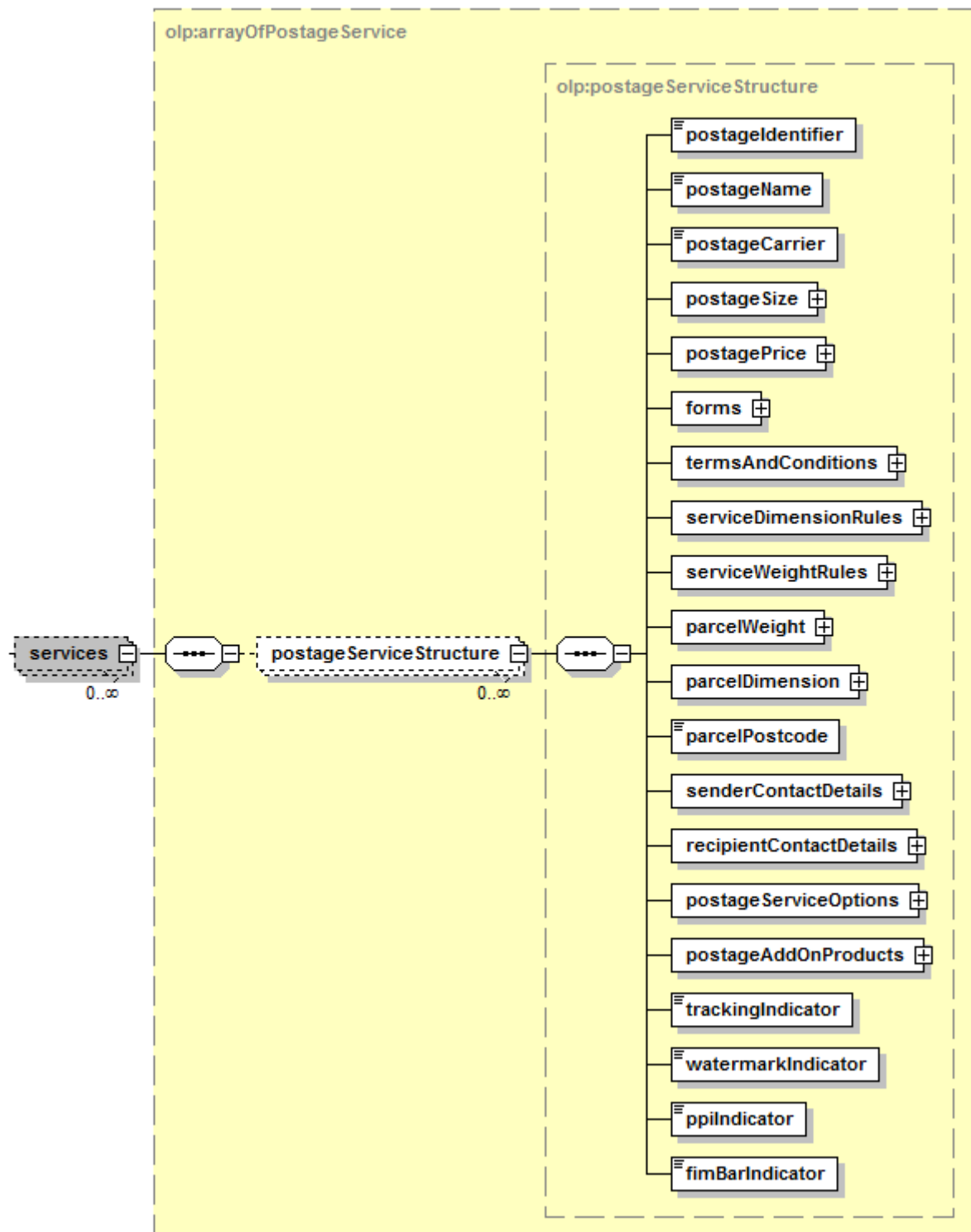
Figure 18 – services Structure

All elements in the table below are relative to the services element.

Element	Occurs	Data Type	Description
postageServiceStructure	0-∞	element	Container for postage service details.
postageServiceStructure.postageIdentifier	1-1	identifier	The postage identifier for a given carrier and country, e.g. Royal Mail Special Delivery Guaranteed by 1pm

Element	Occurs	Data Type	Description
postageServiceStructure.postageName	1-1	name	The postage identifier for a given carrier and country, e.g. Royal Mail Special Delivery Guaranteed by 1pm
postageServiceStructure.postageCarrier	1-1	name	The name of the carrier, e.g. 'RMG' or 'PFW'.
postageServiceStructure.postageSize	1-1	element	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServiceStructure.postagePrice	1-1	element	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServiceStructure.forms	1-1	element	Container for form details which apply to the service. Please see section 8.8.1.2 below for more information.
postageServiceStructure.termsAndConditions	1-1	element	Container for terms and conditions (e.g. restrictions, prohibitions etc) associated with the service. Please see section 8.8.1.3 below for more information.
postageServiceStructure.serviceDimensionRules	1-1	element	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServiceStructure.serviceWeightRules	1-1	element	Container for weight rules associated with the service. Please see section 8.8.1.4 below for more information.
postageServiceStructure.parcelWeight	1-1	element	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServiceStructure.parcelDimension	1-1	element	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServiceStructure.parcelPostcode	1-1	identifier	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServiceStructure.senderContactDetails	1-1	element	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServiceStructure.recipientContactDetails	1-1	element	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServiceStructure.postageServiceOptions.	1-1	element	Container for postage service options (e.g. insurance). Please see section 8.8.1.5 below for more information.
postageServiceStructure.postageAddOnProducts	1-1	element	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServiceStructure.trackingIndicator	1-1	identifier	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServiceStructure.watermarkIndicator	1-1	identifier	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServiceStructure.ppiIndicator	1-1	identifier	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.
postageServiceStructure.fimBarIndicator	1-1	identifier	Not used in the implementation of the Online Postage API getServicesByCountryResponse operation.

Table 20 – services Element

8.8.1.2　forms
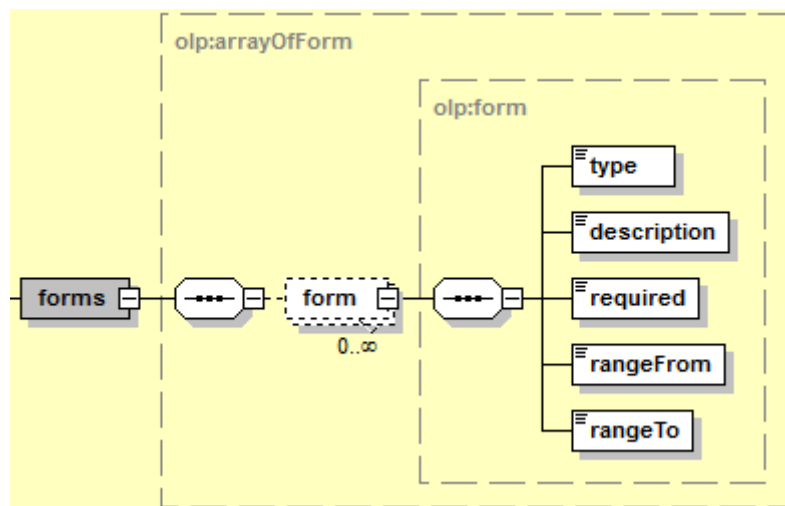
Figure 19 – forms Structure

All elements in the table below are relative to the forms element.

Element	Occurs	Data Type	Description
form	0-∞	element	Container for form information
form.type	1-1	name	The type of form that applies to the service, for example: • additional compensation doc • certificate of post • CN22 and CN23 for international destinations outside of the EU.
form.description	1-1	description	Description regarding the usage of the form, for example: • This document is required for any additional compensation. • certificate of postage documents
form.required	1-1	boolean	Indicates if the form is optional or mandatory
form.rangeFrom	1-1	decimal	The starting value of the item that drives the usage of the form in the case of CN22 and CN23.
form.rangeTo	1-1	decimal	The end value of the item that drives the usage of the form in the case of CN22 and CN23.

Table 21 – forms Element

8.8.1.3　termsAndConditions
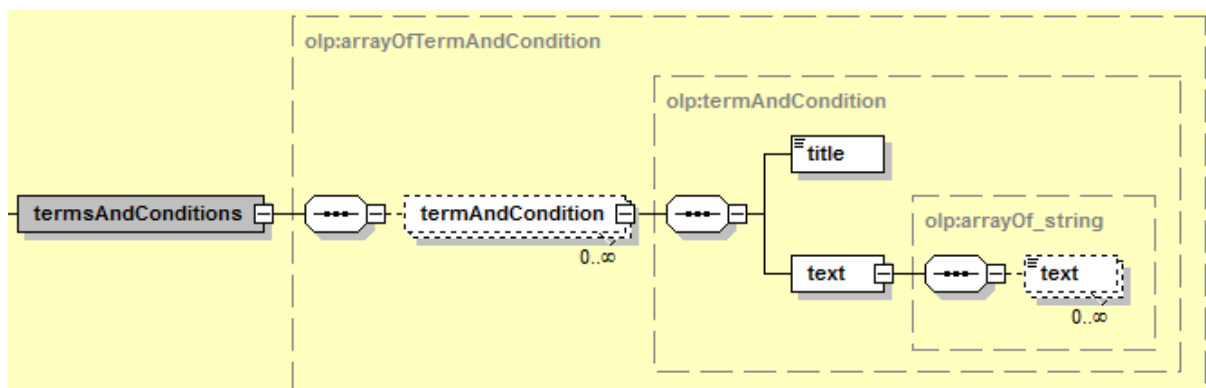
Figure 20 – termsAndConditions Structure

All elements in the table below are relative to the termsAndConditions element.

Element	Occurs	Data Type	Description
termAndCondition	0-∞	element	Container for terms and conditions information
termAndCondition.title	1-1	Name	Category or title associated with the term and condition (e.g. "Restrictions", "Prohibitions" etc)
termAndCondition.text	1-1	element	Container for the details associated with the term and condition
termAndCondition.text.text	0-∞	string	Textual description of the term and condition (e.g. "General prohibitions apply. Additional Prohibitions: Isle of Man only – hay, straw, peatmoss, litter (unless used as packaging) and many fresh meat and fresh meat products except under the authority of a license issued by the Manx authorities.")

Table 22 – termsAndConditions Element

8.8.1.4 serviceWeightRules
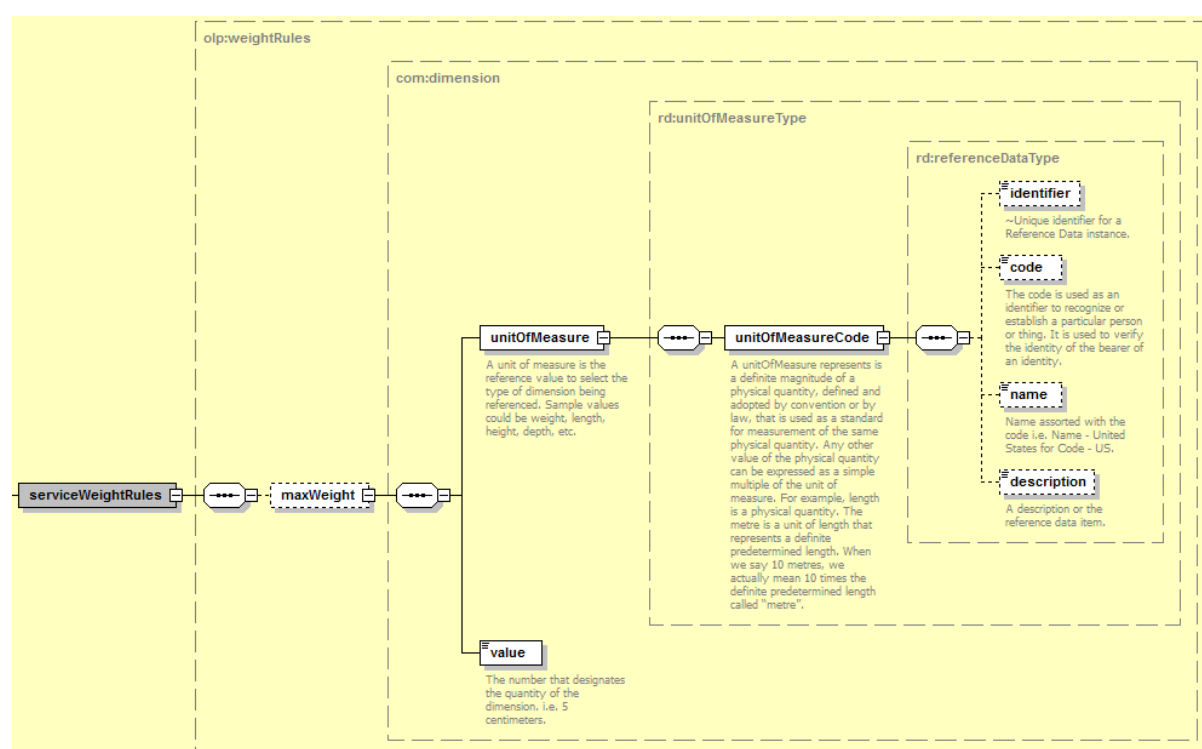
Figure 21 – serviceWeightRules Structure

All elements in the table below are relative to the serviceWeightRules element.

Element	Occurs	Data Type	Description
maxWeight	0-1	element	Container for maximum weight rules
maxWeight.unitOfMeasure	1-1	element	Container for unit of measure
maxWeight.unitOfMeasure.unitOfMeasureCode	1-1	element	Container for unit of measure code
maxWeight.unitOfMeasure.unitOfMeasureCode.identifier	0-1	identifier	Identifier associated with the unit of measure (e.g. KGS)
maxWeight.unitOfMeasure.unitOfMeasureCode.code	0-1	identifier	Code associated with the unit of measure (e.g. KGS)
maxWeight.unitOfMeasure.unitOfMeasureCode.name	0-1	longName	Name associated with the unit of measure (e.g. KGS)

Element	Occurs	Data Type	Description
maxWeight.unitOfMeasure.unitOfMeasureCode.description	0-1	description	Not used in the implementation of the Online Postage API.
maxWeight.value	1-1	float	The maximum weight limit for a given service (e.g. 20)

Table 23 – serviceWeightRules Element

8.8.1.5 postageServiceOptions
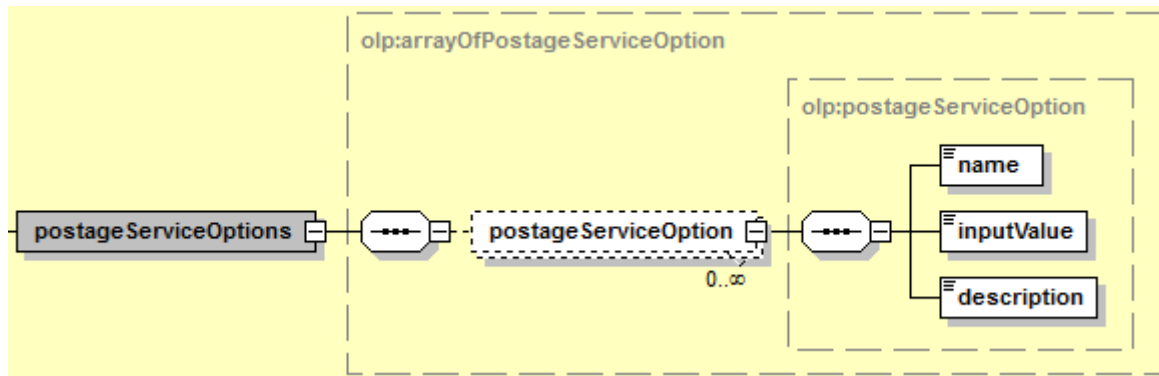
Figure 22 – postageServiceOptions Structure

All elements in the table below are relative to the postageServiceOptions element.

Element	Occurs	Data Type	Description
postageServiceOption	0-∞	element	Container for postage service options
postageServiceOption.name	1-1	longName	Describes the mail service option (add on) such as Additional Compensation.
postageServiceOption.inputValue	1-1	decimal	The value of the additional service requested.
postageServiceOption.description	1-1	description	Not used in the implementation of the Online Postage API. Please leave this element unpopulated.

Table 24 – postageServiceOptions Element

8.8.2 Example Data

Full XML examples of SOAP requests and responses are provided on the Royal Mail API (Developer) Portal. This section provides a simplified example to illustrate the getServicesByCountryResponse without the SOAP wrappers.

```xml
<NS1:getServicesByCountryResponse xmlns:NS1="http://www.royalmailgroup.com/api/onlinePostage/V1">
  <integrationHeader>
    <NS2:identification xmlns:NS2="http://www.royalmailgroup.com/integration/core/V1">
      <NS2:applicationId>123456789</NS2:applicationId>
      <NS2:transactionId>0123456789</NS2:transactionId>
    </NS2:identification>
  </integrationHeader>
  <getServicesByCountryReturn>
    <postageServices>
      <isoCountryCode>
        <countryCode>
          <identifier>GB</identifier>
          <code>GB</code>
          <name>UNITED KINGDOM</name>
        </countryCode>
      </isoCountryCode>
      <notifications/>
      <services>
        <postageServiceStructure>
```

```xml
<postageIdentifier>Royal Mail Special Delivery Guaranteed by 1pm</postageIdentifier>
<postageName>Royal Mail Special Delivery Guaranteed by 1pm</postageName>
<postageCarrier>RMG</postageCarrier>
<postageSize>
  <postageSizeCode/>
</postageSize>
<postagePrice/>
<forms>
  <form>
    <type>additional compensation doc</type>
    <description>This document is required for any additional compensation</description>
    <required>true</required>
    <rangeFrom>0.0</rangeFrom>
    <rangeTo>0.0</rangeTo>
  </form>
</forms>
<termsAndConditions>
  <termAndCondition>
    <title>Restrictions</title>
    <text>
      <text>General restrictions apply.</text>
    </text>
  </termAndCondition>
  <termAndCondition>
    <title>Prohibitions</title>
    <text>
      <text>General prohibitions apply. Additional Prohibitions: Isle of Man only - hay, straw, peatmoss, litter
(unless used as packaging) and many fresh meat and fresh meat products except under the authority of a license issued by the
Manx authorities.</text>
    </text>
  </termAndCondition>
</termsAndConditions>
<serviceDimensionRules/>
<serviceWeightRules>
  <maxWeight>
    <unitOfMeasure>
      <unitOfMeasureCode>
        <identifier>KGS</identifier>
        <code>KGS</code>
        <name>KGS</name>
        <description/>
      </unitOfMeasureCode>
    </unitOfMeasure>
    <value>20</value>
  </maxWeight>
</serviceWeightRules>
<parcelWeight/>
<parcelDimension/>
<parcelPostcode/>
<senderContactDetails/>
<recipientContactDetails/>
<postageServiceOptions>
  <postageServiceOption>
    <name>Additional Compensation</name>
    <inputValue>2500.0</inputValue>
    <description/>
  </postageServiceOption>
</postageServiceOptions>
<postageAddOnProducts/>
<trackingIndicator/>
<watermarkIndicator/>
<ppiIndicator/>
<fimBarIndicator/>
</postageServiceStructure>
<postageServiceStructure>
  <postageIdentifier>Royal Mail Signed For 2nd Class stamps</postageIdentifier>
  <postageName>Royal Mail Signed For 2nd Class stamps</postageName>
  <postageCarrier>RMG</postageCarrier>
  <postageSize>
    <postageSizeCode/>
  </postageSize>
  <postagePrice/>
  <forms/>
  <termsAndConditions>
    <termAndCondition>
```

```xml
            <title>Restrictions</title>
            <text>
              <text>General restrictions apply.</text>
            </text>
          </termAndCondition>
          <termAndCondition>
            <title>Prohibitions</title>
            <text>
              <text>General prohibitions apply. Additional Prohibitions: Isle of Man only - hay, straw, peatmoss, litter
(unless used as packaging) and many fresh meat and fresh meat products except under the authority of a license issued by the
Manx authorities.</text>
            </text>
          </termAndCondition>
        </termsAndConditions>
        <serviceDimensionRules/>
        <serviceWeightRules>
          <maxWeight>
            <unitOfMeasure>
              <unitOfMeasureCode>
                <identifier>KGS</identifier>
                <code>KGS</code>
                <name>KGS</name>
                <description/>
              </unitOfMeasureCode>
            </unitOfMeasure>
            <value>20</value>
          </maxWeight>
        </serviceWeightRules>
        <parcelWeight/>
        <parcelDimension/>
        <parcelPostcode/>
        <senderContactDetails/>
        <recipientContactDetails/>
        <postageServiceOptions/>
        <postageAddOnProducts/>
        <trackingIndicator/>
        <watermarkIndicator/>
        <ppiIndicator/>
        <fimBarIndicator/>
      </postageServiceStructure>
      <postageServiceStructure>
        <postageIdentifier>Royal Mail Signed For 1st Class stamps</postageIdentifier>
        <postageName>Royal Mail Signed For 1st Class stamps</postageName>
        <postageCarrier>RMG</postageCarrier>
        <postageSize>
          <postageSizeCode/>
        </postageSize>
        <postagePrice/>
        <forms/>
        <termsAndConditions>
          <termAndCondition>
            <title>Restrictions</title>
            <text>
              <text>General restrictions apply.</text>
            </text>
          </termAndCondition>
          <termAndCondition>
            <title>Prohibitions</title>
            <text>
              <text>General prohibitions apply. Additional Prohibitions: Isle of Man only - hay, straw, peatmoss, litter
(unless used as packaging) and many fresh meat and fresh meat products except under the authority of a license issued by the
Manx authorities.</text>
            </text>
          </termAndCondition>
        </termsAndConditions>
        <serviceDimensionRules/>
        <serviceWeightRules>
          <maxWeight>
            <unitOfMeasure>
              <unitOfMeasureCode>
                <identifier>KGS</identifier>
                <code>KGS</code>
                <name>KGS</name>
                <description/>
              </unitOfMeasureCode>
```

```xml
          </unitOfMeasure>
          <value>20</value>
        </maxWeight>
      </serviceWeightRules>
      <parcelWeight/>
      <parcelDimension/>
      <parcelPostcode/>
      <senderContactDetails/>
      <recipientContactDetails/>
      <postageServiceOptions/>
      <postageAddOnProducts/>
      <trackingIndicator/>
      <watermarkIndicator/>
      <ppiIndicator/>
      <fimBarIndicator/>
    </postageServiceStructure>
    <postageServiceStructure>
      <postageIdentifier>Royal Mail 2nd Class stamps</postageIdentifier>
      <postageName>Royal Mail 2nd Class stamps</postageName>
      <postageCarrier>RMG</postageCarrier>
      <postageSize>
        <postageSizeCode/>
      </postageSize>
      <postagePrice/>
      <forms>
        <form>
          <type>certificate of post</type>
          <description>certificate of postage documents</description>
          <required>false</required>
          <rangeFrom>0.0</rangeFrom>
          <rangeTo>0.0</rangeTo>
        </form>
      </forms>
      <termsAndConditions>
        <termAndCondition>
          <title>Restrictions</title>
          <text>
            <text>General restrictions apply.</text>
          </text>
        </termAndCondition>
        <termAndCondition>
          <title>Prohibitions</title>
          <text>
            <text>General prohibitions apply. Additional Prohibitions: Isle of Man only - hay, straw, peatmoss, litter
(unless used as packaging) and many fresh meat and fresh meat products except under the authority of a license issued by the
Manx authorities.</text>
          </text>
        </termAndCondition>
      </termsAndConditions>
      <serviceDimensionRules/>
      <serviceWeightRules>
        <maxWeight>
          <unitOfMeasure>
            <unitOfMeasureCode>
              <identifier>KGS</identifier>
              <code>KGS</code>
              <name>KGS</name>
              <description/>
            </unitOfMeasureCode>
          </unitOfMeasure>
          <value>20</value>
        </maxWeight>
      </serviceWeightRules>
      <parcelWeight/>
      <parcelDimension/>
      <parcelPostcode/>
      <senderContactDetails/>
      <recipientContactDetails/>
      <postageServiceOptions/>
      <postageAddOnProducts/>
      <trackingIndicator/>
      <watermarkIndicator/>
      <ppiIndicator/>
      <fimBarIndicator/>
    </postageServiceStructure>
```

```xml
<postageServiceStructure>
  <postageIdentifier>Royal Mail 1st Class stamps</postageIdentifier>
  <postageName>Royal Mail 1st Class stamps</postageName>
  <postageCarrier>RMG</postageCarrier>
  <postageSize>
    <postageSizeCode/>
  </postageSize>
  <postagePrice/>
  <forms>
    <form>
      <type>certificate of post</type>
      <description>certificate of postage documents</description>
      <required>false</required>
      <rangeFrom>0.0</rangeFrom>
      <rangeTo>0.0</rangeTo>
    </form>
  </forms>
  <termsAndConditions>
    <termAndCondition>
      <title>Restrictions</title>
      <text>
        <text>General restrictions apply.</text>
      </text>
    </termAndCondition>
    <termAndCondition>
      <title>Prohibitions</title>
      <text>
        <text>General prohibitions apply. Additional Prohibitions: Isle of Man only - hay, straw, peatmoss, litter (unless used as packaging) and many fresh meat and fresh meat products except under the authority of a license issued by the Manx authorities.</text>
      </text>
    </termAndCondition>
  </termsAndConditions>
  <serviceDimensionRules/>
  <serviceWeightRules>
    <maxWeight>
      <unitOfMeasure>
        <unitOfMeasureCode>
          <identifier>KGS</identifier>
          <code>KGS</code>
          <name>KGS</name>
          <description/>
        </unitOfMeasureCode>
      </unitOfMeasure>
      <value>20</value>
    </maxWeight>
  </serviceWeightRules>
  <parcelWeight/>
  <parcelDimension/>
  <parcelPostcode/>
  <senderContactDetails/>
  <recipientContactDetails/>
  <postageServiceOptions/>
  <postageAddOnProducts/>
  <trackingIndicator/>
  <watermarkIndicator/>
  <ppiIndicator/>
  <fimBarIndicator/>
</postageServiceStructure>
        </services>
      </postageServices>
      <genericResponseStructure>
        <serviceTransactionTime>2015-11-30T22:41:47.837601</serviceTransactionTime>
      </genericResponseStructure>
    </getServicesByCountryReturn>
    <integrationFooter/>
  </NS1:getServicesByCountryResponse>
```

8.9   getPostageServiceDetailsRequest

The getPostageServiceDetailsRequest operation provides the postage price of an individual item. To invoke the getPostageServiceDetails operation, the customer system constructs a

SOAP message (see section 7) with the getPostageServiceDetailsRequest element contained within the SOAP Body. The getPostageServiceDetailsRequest element is described in the figure and table below:
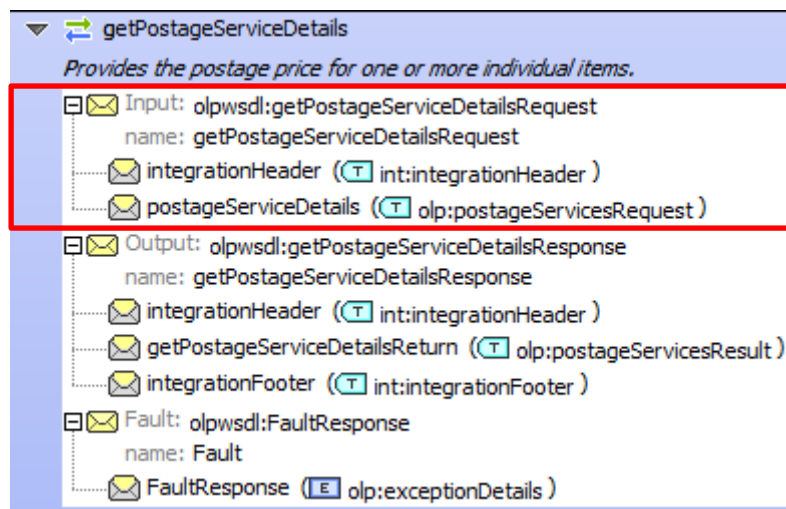
Figure 23 – getPostageServiceDetailsRequest Structure

All elements in the table below are relative to the getPostageServiceDetailsRequest element.

Element	Occurs	Data Type	Description
integrationHeader	1-1	element	As described in section 8.5.1
postageServiceDetails	1-1	element	The request definition to obtain the postage service details including the price. It contains the details of the list of postage services to price. See section 8.9.1.

Table 25 – cancelShipmentRequest Element

8.9.1   postageServiceDetails (postageServicesRequest)

The postageServiceDetails contains the request definition to obtain the postage service details including the price. It contains the details of the list of postage services to price.
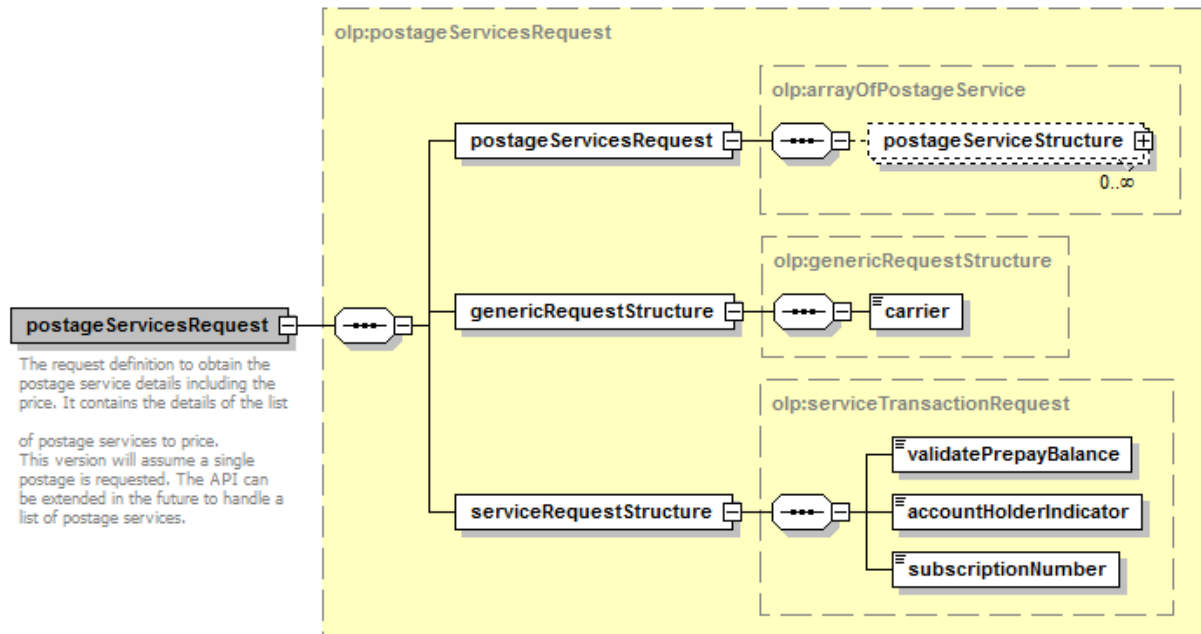
Figure 24 – postageServiceDetails (postageServicesRequest) Structure

All elements in the table below are relative to the postageServiceDetails (postageServicesRequest) element.

Element	Occurs	Data Type	Description
postageServicesRequest	1-1	element	Container for postage service
postageServicesRequest.postageServiceStructure	0-∞	element	Container for postage service details. See section 8.9.1.1 below.
genericRequestStructure	1-1	element	Container for the common request structure definition
genericRequestStructure.carrier	1-1	name	The name of carrier. Supported values are 'RMG' and 'PFW'.
serviceRequestStructure	1-1	element	Container for service request details.
serviceRequestStructure.validatePrepayBalance	1-1	boolean	Reserved. Set as false.
serviceRequestStructure.accountHolderIndicator	1-1	identifier	Reserved. Set as false.
serviceRequestStructure.subscriptionNumber	1-1	identifier	Reserved. Set as false.

Table 26 – postageServiceDetails (postageServicesRequest) Element

8.9.1.1 postageServiceStructure
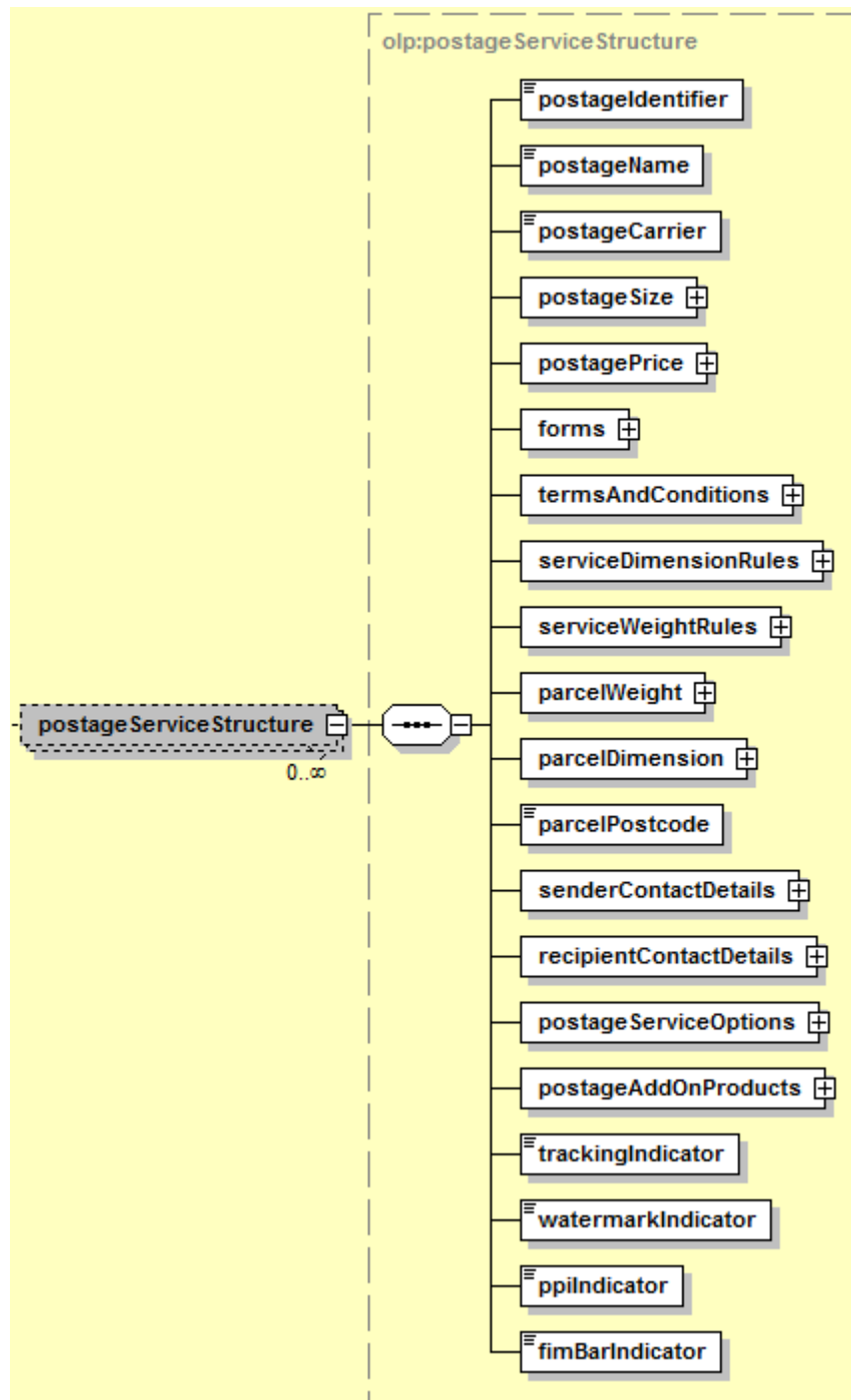
Figure 25 – postageServiceStructure Structure

All elements in the table below are relative to the postageServiceStructure element.

Element	Occurs	Data Type	Description
postageIdentifier	1-1	identifier	The postage service identifier returned by the getServicesByCountry method. Expected values: • Royal Mail 1st Class stamps • Royal Mail 2nd Class stamps • Royal Mail Signed For 1st Class stamps • Royal Mail Signed For 2nd Class stamps • Royal Mail Special Delivery Guaranteed by 1pm • International Standard • International Signed
postageName	1-1	name	The name of the service that details are being requested for. Not required for the API operation.
postageServiceStructure.postageCarrier	1-1	name	The name of the carrier, e.g. 'RMG' or 'PFW'.
postageServiceStructure.postageSize	1-1	element	Container for postage size information. See section 8.9.1.2 below.
postageServiceStructure.postagePrice	1-1	element	Container for the postage price information. See section 8.9.1.3 below.
postageServiceStructure.forms	1-1	element	Not required for the API operation.
postageServiceStructure.termsAndConditions	1-1	element	Not required for the API operation.
postageServiceStructure.serviceDimensionRules	1-1	element	Container for service dimension rules. Not required for the getPostageServiceDetailsRequest operation.
postageServiceStructure.serviceWeightRules	1-1	element	Not required for the getPostageServiceDetailsRequest operation.
postageServiceStructure.parcelWeight	1-1	element	Container for parcel weight information. See section 8.9.1.4 below.
postageServiceStructure.parcelDimension	1-1	element	Container for parcel dimension information. See section 8.9.1.5 below.
postageServiceStructure.parcelPostcode	1-1	identifier	The postcode of the postage location address, e.g. AB12 4GH.
postageServiceStructure.senderContactDetails	1-1	element	Container for sender contact details. See section 8.9.1.6 below.
postageServiceStructure.recipientContactDetails	1-1	element	Container for recipient contact details. See section 8.9.1.7 below.
postageServiceStructure.postageServiceOptions	1-1	element	Container for postage service options (e.g. insurance). Please see section 8.9.1.8 below for more information.
postageServiceStructure.postageAddOnProducts	1-1	element	Not used in the implementation of the Online Postage API operation.
postageServiceStructure.trackingIndicator	1-1	identifier	Not used in the implementation of the Online Postage API operation.
postageServiceStructure.watermarkIndicator	1-1	identifier	Not used in the implementation of the Online Postage API operation.
postageServiceStructure.ppiIndicator	1-1	identifier	Not used in the implementation of the Online Postage API operation.
postageServiceStructure.fimBarIndicator	1-1	identifier	Not used in the implementation of the Online Postage API operation.

Table 27 – postageServiceStructure Element

8.9.1.2   postageSize
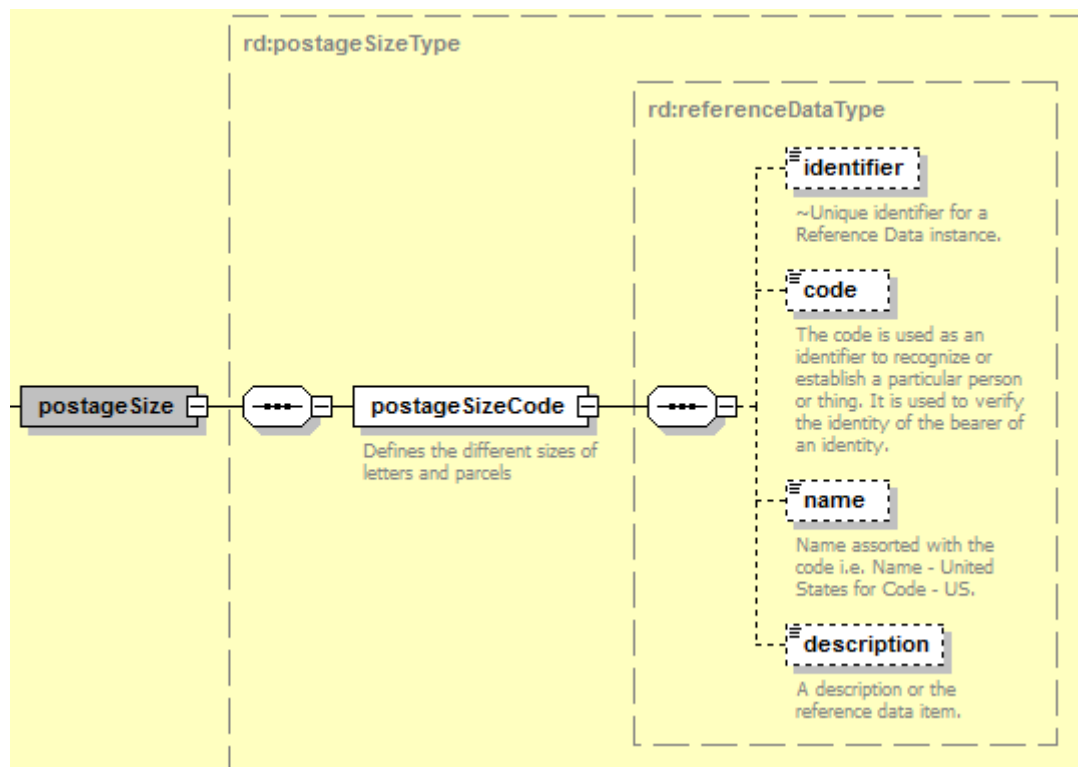
Figure 26 – postageSize Structure

All elements in the table below are relative to the postageSize element.

Element	Occurs	Data Type	Description
postageSizeCode	1-1	element	Container for postage size code
postageSizeCode.identifier	0-1	identifier	Not used
postageSizeCode.code	0-1	identifier	Not used
postageSizeCode.name	0-1	longName	The descriptive size of the item to post. Example values: • Small Parcel • Medium Parcel (Domestic Only) • Large Letter (Domestic only) • Letter
postageSizeCode.description	0-1	description	Not used.

Table 28 – postageSize Element

8.9.1.3 postagePrice

Figure 27 – postagePrice Structure

All elements in the table below are relative to the postagePrice element. Please note that any elements not referenced below are not used in the request operation.

Element	Occurs	Data Type	Description
totalPrice	0-1	element	Container for total price information
totalPrice.creditIndicator	1-1	boolean	Set to false for debit and true for credit. Set to false by default.
totalPrice.currency	1-1	element	Container for currency information
totalPrice.currencyCode	1-1	element	Container for currency code
totalPrice.currencyCode.identifier	0-1	identifier	Not used
totalPrice.currency.currencyCode.code	0-1	identifier	The currency used for this service is GBP.
totalPrice.currencyCode.name	0-1	longName	Not used
totalPrice.currencyCode.description	0-1	description	Not used
totalPrice.value	1-1	decimal	Identifies the total price of the service being sought. Not used in the request.
basePrice	0-1	element	Container for base price information
basePrice.creditIndicator	1-1	boolean	Set to false for debit and true for credit. Set to false by default
basePrice.currency	1-1	element	Not used in the request
basePrice.value	1-1	decimal	Identifies the base price of the service being sought. Not required for the request.
taxes	0-1	element	Container for tax information

Element	Occurs	Data Type	Description
taxes.taxStructure	0-∞	element	Container for tax structure details
taxes.taxStructure.value	1-1	element	Container for tax value information
taxes.taxStructure.value.creditIndicator	1-1	boolean	Set to false for debit and true for credit. Set to false by default.
taxes.taxStructure.value.value	1-1	decimal	Identifies the level of taxation applied to the service being sought. Not required for the request.
options	0-1	element	Container for service options. Not used in the request.

Table 29 – postagePrice Element

8.9.1.4 parcelWeight
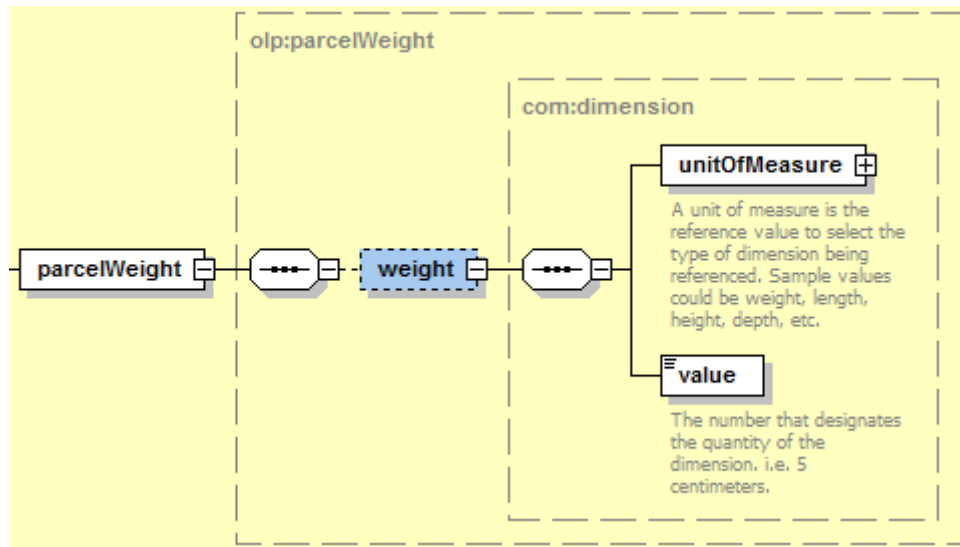
Figure 28 – parcelWeight Structure

All elements in the table below are relative to the parcelWeight element. Please note that any elements not referenced below are not used in the request operation.

Element	Occurs	Data Type	Description
weight	0-1	element	Container for weight information
weight.unitIfMeasure	1-1	element	Container for unit of measure information
weight.unitIfMeasure.unitOfMeasureCode	1-1	element	Container for unit of measure code
weight.unitIfMeasure.unitOfMeasureCode.identifier	0-1	identifier	Not currently used.
weight.unitIfMeasure.unitOfMeasureCode.code	0-1	identifier	Code for the unit of measure for weight of the item to be posted. Expected value: KGS. Please note that LBS is also supported although this will be converted to metric in the response.
weight.unitIfMeasure.unitOfMeasureCode.name	0-1	longName	Not currently used.
weight.unitIfMeasure.unitOfMeasureCode.description	0-1	description	Not currently used.
weight.value	1-1	float	The weight of the item that will be posted in the specified unit, e.g. 0.100

Table 30 – parcelWeight Element

8.9.1.5   parcelDimension
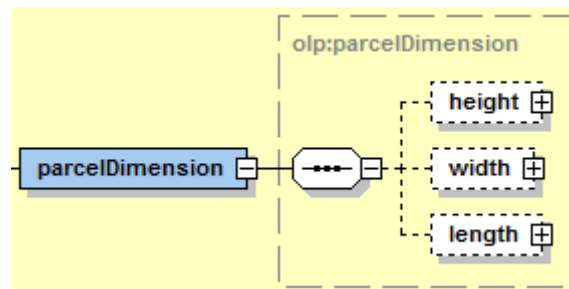
Figure 29 – parcelDimension Structure

All elements in the table below are relative to the parcelDimension element. Please note that any elements not referenced below are not used in the request operation.

Element	Occurs	Data Type	Description
height	0-1	element	Container used for parcel height information
height.unitOfMeasure	1-1	element	Container for unit of measure details
height.unitOfMeasure,unitOfMeasureCode	1-1	element	Container for unit of measure code
height.unitOfMeasure.unitOfMeasureCode.code	1-1	identifier	Identifies the unit of measure used to describe the height of the item to be posted. All dimensions must have the same unit of measure. Expected value: CM. Please note that IN (inches) is also supported although will be converted to metric in the response.
height.value	1-1	float	The height, in the specified unit, of the item for which postage services are being sought, e.g. 10
width	0-1	element	Container used for parcel width information
width.unitOfMeasure	1-1	element	Container for unit of measure details
width.unitOfMeasure,unitOfMeasureCode	1-1	element	Container for unit of measure code
width.unitOfMeasure.unitOfMeasureCode.code	1-1	identifier	Identifies the unit of measure used to describe the width of the item to be posted. All dimensions must have the same unit of measure. Expected value: CM
width.value	1-1	float	The width of the item for which postage services are being sought, e.g. 10
length	0-1	element	Container used for parcel length information
length.unitOfMeasure	1-1	element	Container for unit of measure details
length.unitOfMeasure,unitOfMeasureCode	1-1	element	Container for unit of measure code
length.unitOfMeasure.unitOfMeasureCode.code	1-1	identifier	Identifies the unit of measure used to describe the length of the item to be posted. All dimensions must have the same unit of measure. Expected value: CM
length.value	1-1	float	The length of the item for which postage services are being sought, e.g. 10

Table 31 – parcelDimension Element

8.9.1.6 senderContactDetails
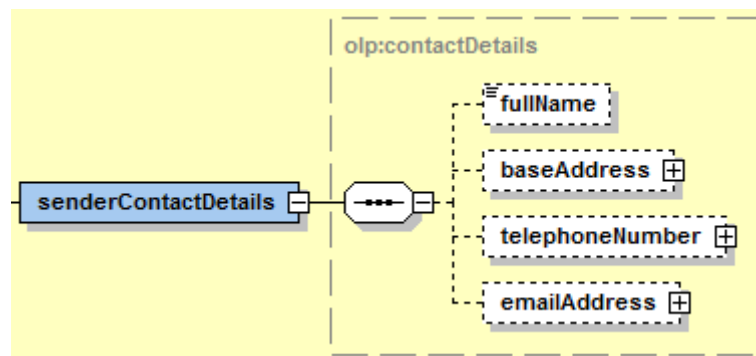
Figure 30 – senderContactDetails Structure

All elements in the table below are relative to the senderContactDetails element. Please note that any elements not referenced below are not used in the request operation.

Element	Occurs	Data Type	Description
fullName	0-1	longName	The full name of the sender, e.g. Jane Doe
baseAddress.addressLine1	1-1	description	The first line of the sender's street address
baseAddress.addressLine2	0-1	description	The second line of the sender's street address
baseAddress.addressLine3	0-1	description	The third line of the sender's street address
baseAddress.postTown	0-1	name	The town of the sender's address
emailAddress.electronicAddress	1-1	description	The email address of the sender, e.g. jane.doe@email.co.uk

Table 32 – senderContactDetails Element

8.9.1.7 recipientContactDetails
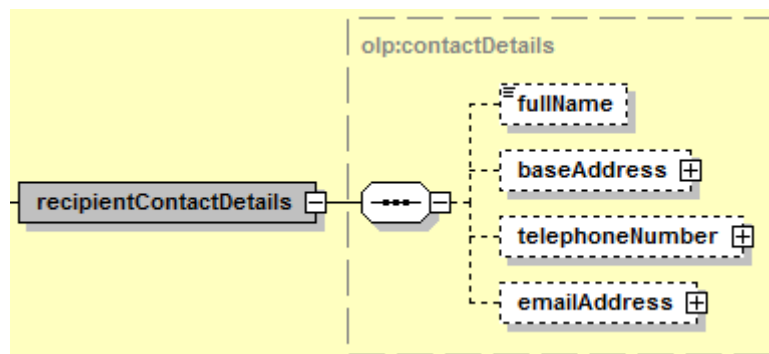
Figure 31 – recipientContactDetails Structure

All elements in the table below are relative to the recipientContactDetails element. Please note that any elements not referenced below are not used in the request operation.

Element	Occurs	Data Type	Description
fullName	0-1	longName	The full name of the person that the item is being posted to, e.g. John Doe
baseAddress.addressLine1	1-1	description	The first line of the recipient's street address, e.g. 20 Anytown Road
baseAddress.addressLine2	0-1	description	The second line of the recipient's street address, e.g. Harrow on the Hill

Element	Occurs	Data Type	Description
baseAddress.addressLine3	0-1	description	The third line of the recipient's street address, e.g. Harrow
baseAddress.postTown	0-1	name	The town of the recipient's address, e.g. London
baseAddress.country.country Code.code	0-1	identifier	The country code of the recipient's address, e.g. GB, IT, BR.
emailAddress.electronicAddre ss	1-1	description	The email address of the person that the item is being posted to, e.g. john.doe@email.co.uk

Table 33 – recipientContactDetails Element
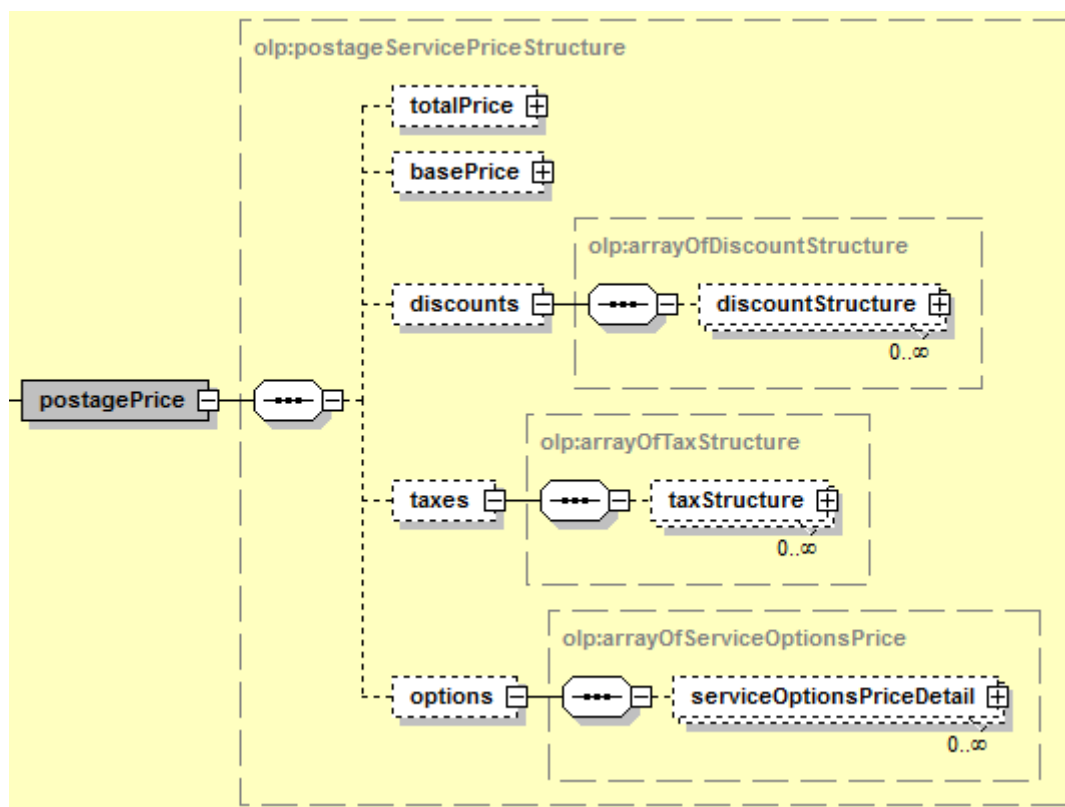
8.9.1.8 postageServiceOptions
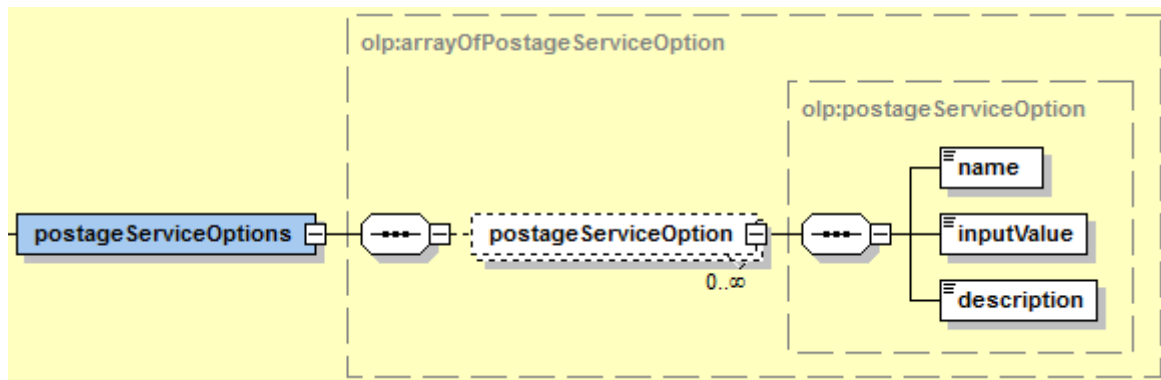
Figure 32 – postageServiceOptions Structure

All elements in the table below are relative to the postageServiceOptions element. Please note that any elements not referenced below are not used in the request operation.

Element	Occurs	Data Type	Description
postageServiceOption	0-∞	element	Container for postage service option information
postageServiceOption.name	1-1	longName	The name of the postage service option (E.g. insurance) that is being requested for this postage service request. Expected values: Additional Compensation.
postageServiceOption.inputV alue	1-1	decimal	The value associated with the additional postage service option, e.g. 500.
postageServiceOption.descrip tion	1-1	description	Not used in the implementation of the Online Postage API. Please leave this element blank.

Table 34 – postageServiceOptions Element

8.9.2 Example Data

Full XML examples of SOAP requests and responses are provided on the Royal Mail API (Developer) Portal. This section provides a simplified example to illustrate the getPostageServiceDetailsRequest without the SOAP wrappers and associated security elements.

```
<v1:getPostageServiceDetails>
        <integrationHeader>
                <v11:identification>
                        <v11:applicationId>123456789</v11:applicationId>
                        <v11:transactionId>123456789</v11:transactionId>
                </v11:identification>
        </integrationHeader>
        <postageServiceDetails>
```

```xml
<postageServicesRequest>
    <postageServiceStructure>
        <postageIdentifier>Royal Mail Special Delivery Guaranteed by 1pm</postageIdentifier>
        <postageName>Royal Mail Special Delivery Guaranteed by 1pm</postageName>
        <postageCarrier>RMG</postageCarrier>
        <postageSize>
            <postageSizeCode>
                <name>Small Parcel</name>
            </postageSizeCode>
        </postageSize>
        <postagePrice>
            <totalPrice>
                <creditIndicator>false</creditIndicator>
                <currency>
                    <currencyCode/>
                </currency>
                <value>0</value>
            </totalPrice>
            <basePrice>
                <creditIndicator>false</creditIndicator>
                <currency>
                    <currencyCode/>
                </currency>
                <value>0</value>
            </basePrice>
            <discounts xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <taxes>
                <taxStructure>
                    <name xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
                    <type>
                        <taxCode/>
                    </type>
                    <value>
                        <creditIndicator>false</creditIndicator>
                        <currency>
                            <currencyCode/>
                        </currency>
                        <value>0</value>
                    </value>
                </taxStructure>
            </taxes>
            <options xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
        </postagePrice>
        <forms>
            <form>
                <type xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
                <description xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
                <required>false</required>
                <rangeFrom>0</rangeFrom>
                <rangeTo>0</rangeTo>
            </form>
        </forms>
        <termsAndConditions xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
        <serviceDimensionRules>
            <maxLength>
                <unitOfMeasure>
                    <unitOfMeasureCode/>
                </unitOfMeasure>
                <value>0</value>
            </maxLength>
            <maxWidth>
                <unitOfMeasure>
                    <unitOfMeasureCode/>
                </unitOfMeasure>
                <value>0</value>
            </maxWidth>
            <maxHeight>
                <unitOfMeasure>
```

```xml
                                <unitOfMeasureCode/>
                        </unitOfMeasure>
                        <value>0</value>
                </maxHeight>
                <maxGirth>
                        <unitOfMeasure>
                                <unitOfMeasureCode/>
                        </unitOfMeasure>
                        <value>0</value>
                </maxGirth>
        </serviceDimensionRules>
        <serviceWeightRules>
                <maxWeight>
                        <unitOfMeasure>
                                <unitOfMeasureCode/>
                        </unitOfMeasure>
                        <value>0</value>
                </maxWeight>
        </serviceWeightRules>
        <parcelWeight>
                <weight>
                        <unitOfMeasure>
                                <unitOfMeasureCode>
                                        <code>KGS</code>
                                </unitOfMeasureCode>
                        </unitOfMeasure>
                        <value>1</value>
                </weight>
        </parcelWeight>
        <parcelDimension>
                <height>
                        <unitOfMeasure>
                                <unitOfMeasureCode>
                                        <code>CM</code>
                                </unitOfMeasureCode>
                        </unitOfMeasure>
                        <value>1</value>
                </height>
                <width>
                        <unitOfMeasure>
                                <unitOfMeasureCode>
                                        <code>CM</code>
                                </unitOfMeasureCode>
                        </unitOfMeasure>
                        <value>1</value>
                </width>
                <length>
                        <unitOfMeasure>
                                <unitOfMeasureCode>
                                        <code>CM</code>
                                </unitOfMeasureCode>
                        </unitOfMeasure>
                        <value>1</value>
                </length>
        </parcelDimension>
        <parcelPostcode>AB 1 C 2</parcelPostcode>
        <senderContactDetails>
                <fullName>Random Name</fullName>
                <baseAddress>
                        <addressLine1>Clements Road</addressLine1>
                        <postTown>London</postTown>
                        <country>
                                <countryCode/>
                        </country>
                </baseAddress>
                <telephoneNumber xsi:nil="true"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
                <emailAddress>
                        <electronicAddress>abc@gmail.com</electronicAddress>
                </emailAddress>
        </senderContactDetails>
        <recipientContactDetails>
                <fullName>Destination Name</fullName>
                <baseAddress>
                        <addressLine1>Camel Road</addressLine1>
```

```xml
                                                <postTown>London 2</postTown>
                                                <country>
                                                        <countryCode>
                                                                <code>JE</code>
                                                        </countryCode>
                                                </country>
                                        </baseAddress>
                                        <telephoneNumber xsi:nil="true"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
                                        <emailAddress>
                                                <electronicAddress>def@gmail.com</electronicAddress>
                                        </emailAddress>
                                </recipientContactDetails>
                                <postageServiceOptions>
                                        <postageServiceOption>
                                                <name>Additional Compensation</name>
                                                <inputValue>2500</inputValue>
                                                <description xsi:nil="true"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
                                        </postageServiceOption>
                                </postageServiceOptions>
                                <postageAddOnProducts xsi:nil="true"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
                                        <trackingIndicator xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance"/>

                                        <watermarkIndicator xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance"/>

                                        <ppiIndicator xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance"/>

                                        <fimBarIndicator xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance"/>
                                </postageServiceStructure>
                        </postageServicesRequest>
                        <genericRequestStructure>
                                <carrier>RMG</carrier>
                        </genericRequestStructure>
                        <serviceRequestStructure>
                                <validatePrepayBalance>false</validatePrepayBalance>
                                <accountHolderIndicator>false</accountHolderIndicator>
                                <subscriptionNumber>false</subscriptionNumber>
                        </serviceRequestStructure>
                </postageServiceDetails>
        </v1:getPostageServiceDetails>
```

8.10 getPostageServiceDetailsResponse

The response for a getPostageServiceDetails operation is constructed as a SOAP message with the getPostageServiceDetailsResponse element contained in SOAP Body. The getPostageServiceDetailsResponse element is described in the figure and table below:

All elements in the table below are relative to the getPostageServiceDetailsResponse element.

Element	Occurs	Data Type	Description
integrationHeader	1-1	element	See section 8.6.1
getPostageServiceDetailsReturn	1-1	element	Container for the response definition for a postage service request. It contains the details of the list of postage services found in the request. See section 8.10.1.
integrationFooter	0-1	element	Container for any error or warning messages associated with the API operation. Please see section 8.6.3 for more information.

Table 35 – getPostageServiceDetailsResponse Element

8.10.1   getPostageServiceDetailsReturn (postageServicesResult)

The purpose of this element is to hold the response definition for a postage service request.
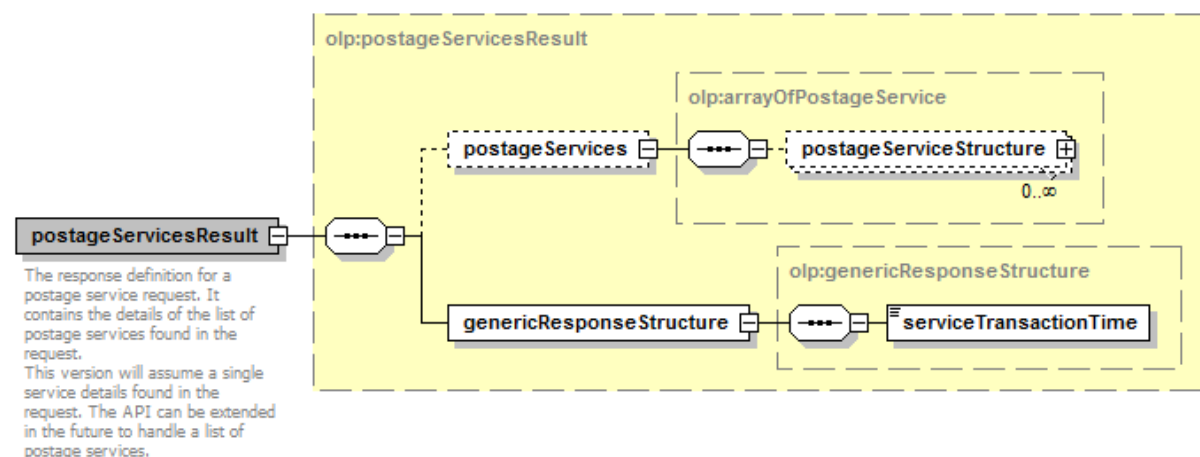
Figure 34 – getPostageServiceDetailsReturn (postageServicesResult) Structure

All elements in the table below are relative to the getPostageServiceDetailsReturn (postageServicesResult) element.

Element	Occurs	Data Type	Description
postageServices	0-1	element	Container for common postage service details.
postageServices.postageServiceStructure	0-∞	element	Container for postage service structure. Please see section 8.10.1.1 below for more information.
genericResponseStructure	1-1	element	Container for the service transaction time which is returned in all API responses.
genericResponseStructure.serviceTransactionTime	1-1	dateTime	The transaction time prior to returning the response to the calling party in the yyyy-mm-dd hh:mm:ss:SSS format. SSS is optional.

Table 36 – getPostageServiceDetailsReturn (postageServicesResult) Element

8.10.1.1   postageServiceStructure

Please see Figure 25 for a graphical representation of the postageServiceStructure element. All elements in the table below are relative to the postageServiceStructure element.

Element	Occurs	Data Type	Description
postageIdentifier	1-1	identifier	The postage service identifier returned by the getServicesByCountry method. Expected values: • Royal Mail 1st Class stamps • Royal Mail 2nd Class stamps • Royal Mail Signed For 1st Class stamps • Royal Mail Signed For 2nd Class stamps • Royal Mail Special Delivery Guaranteed by 1pm • International Standard • International Signed
postageName	1-1	name	The name of the service for which details are being requested. Expected values: • Royal Mail 1st Class stamps • Royal Mail 2nd Class stamps • Royal Mail Signed For 1st Class stamps • Royal Mail Signed For 2nd Class stamps • Royal Mail Special Delivery Guaranteed by 1pm • International Standard • International Signed
postageServiceStructure.postageCarrier	1-1	name	The name of the carrier, e.g. 'RMG' or 'PFW'.
postageServiceStructure.postageSize	1-1	element	Container for postage size information. See section 8.10.1.2 below.
postageServiceStructure.postagePrice	1-1	element	Container for the postage price information. See section 8.10.1.3 below.
postageServiceStructure.forms	1-1	element	Container for service form information (that applies to the service). See section 8.10.1.4 below.
postageServiceStructure.termsAndConditions	1-1	element	Container for terms and conditions (e.g. restrictions, prohibitions etc) associated with the service. Not provided in the API response operation.
postageServiceStructure.serviceDimensionRules	1-1	element	Container for service dimension rules. Not provided in the API response operation.
postageServiceStructure.serviceWeightRules	1-1	element	Container for service weight rules. See section 0 below.
postageServiceStructure.parcelWeight	1-1	element	Container for parcel weight information. See section 8.10.1.6 below.
postageServiceStructure.parcelDimension	1-1	element	Container for parcel dimension information. See section 8.10.1.7 below.
postageServiceStructure.parcelPostcode	1-1	identifier	The postcode of the postage location address, e.g. AB12 4GH.
postageServiceStructure.senderContactDetails	1-1	element	Container for sender contact details. See section 0 below.
postageServiceStructure.recipientContactDetails	1-1	element	Container for recipient contact details. See section 8.10.1.9 below.
postageServiceStructure.postageServiceOptions	1-1	element	Container for postage service options (e.g. insurance). See section 8.10.1.10 below.
postageServiceStructure.postageAddOnProducts	1-1	element	Not used in the implementation of the API response operation.

Element	Occurs	Data Type	Description
postageServiceStructure. trackingIndicator	1-1	identifier	Not used in the implementation of the API response operation.
postageServiceStructure. watermarkIndicator	1-1	identifier	Not used in the implementation of the API response operation.
postageServiceStructure. ppiIndicator	1-1	identifier	Not used in the implementation of the API response operation.
postageServiceStructure. fimBarIndicator	1-1	identifier	Not used in the implementation of the API response operation.

Table 37 – postageServiceStructure Element

8.10.1.2   postageSize

Please see Figure 26 for a graphical representation of the postageSize element. All elements in the table below are relative to the postageSize element.

Element	Occurs	Data Type	Description
postageSizeCode	1-1	element	Container for postage size code
postageSizeCode.identifier	0-1	identifier	Not used
postageSizeCode.code	0-1	identifier	Not used
postageSizeCode.name	0-1	longName	The descriptive size of the item to post. Example values: • Small Parcel • Medium Parcel (Domestic Only) • Large Letter (Domestic only) • Letter
postageSizeCode.description	0-1	description	Not used.

Table 38 – postageSize Element

8.10.1.3   postagePrice

Please see Figure 27 for a graphical representation of the postagePrice element. All elements in the table below are relative to the postagePrice element. Please note that any elements not referenced below are not used in the response operation.

Element	Occurs	Data Type	Description
totalPrice	0-1	element	Container for total price information
totalPrice.creditIndicator	1-1	boolean	Set to false for debit and true for credit.
totalPrice.currency	1-1	element	Container for currency information
totalPrice.currencyCode	1-1	element	Container for currency code
totalPrice.currencyCode.identifier	0-1	identifier	Identifier for the currency code (i.e. GBP)
totalPrice.currency.currencyCode.code	0-1	identifier	The currency used for this service (i.e. GBP)
totalPrice.currencyCode.name	0-1	longName	The name of the currency (i.e. United Kingdom Pound)
totalPrice.currencyCode.description	0-1	description	The description of the currency (i.e. United Kingdom Pound)
totalPrice.value	1-1	decimal	Identifies the total price of the service being sought (e.g. 0.63).
basePrice	0-1	element	Container for base price information
basePrice.creditIndicator	1-1	boolean	Set to false for debit and true for credit.
basePrice.currency	1-1	element	Container for currency information
basePrice.currencyCode	1-1	element	Container for currency code

Element	Occurs	Data Type	Description
basePrice.currencyCode.identifier	0-1	identifier	Identifier for the currency code (i.e. GBP)
basePrice.currency.currencyCode.code	0-1	identifier	The currency used for this service (i.e. GBP)
basePrice.currencyCode.name	0-1	longName	The name of the currency (i.e. United Kingdom Pound)
basePrice.currencyCode.description	0-1	description	The description of the currency (i.e. United Kingdom Pound)
basePrice.value	1-1	decimal	Identifies the base price of the service being sought (e.g. 0.63).
taxes	0-1	element	Container for tax information
taxes.taxStructure	0-∞	element	Container for tax structure details
taxes.taxStructure.name	1-1	name	Name of tax (e.g. No VAT)
taxes.taxStructure.value	1-1	element	Container for tax value information
taxes.taxStructure.value.creditIndicator	1-1	boolean	Set to false for debit and true for credit.
taxes.taxStructure.value.currency	1-1	element	Container for tax currency information
taxes.taxStructure.value.currencyCode	1-1	element	Container for tax currency code
taxes.taxStructure.value.currencyCode.identifier	0-1	identifier	Identifier for the tax currency code (i.e. GBP)
taxes.taxStructure.value.currency.currencyCode.code	0-1	identifier	The tax currency used for this service (i.e. GBP)
taxes.taxStructure.value.currencyCode.name	0-1	longName	The name of the tax currency (i.e. United Kingdom Pound)
taxes.taxStructure.value.currencyCode.description	0-1	description	The description of the tax currency (i.e. United Kingdom Pound)
taxes.taxStructure.value.value	1-1	decimal	Identifies the level of taxation applied to the service being sought (e.g. 0.0).
options	0-1	element	Container for service options.
options.serviceOptionsPriceDetail	0-∞	element	Container for service options price information
options.serviceOptionsPriceDetail.name	1-1	longName	Name of service option (e.g. Additional Compensation)
options.serviceOptionsPriceDetail.price	1-1	element	Container for service option price
options.serviceOptionsPriceDetail.price.creditIndicator	1-1	boolean	Set to false for debit and true for credit.
options.serviceOptionsPriceDetail.price.currency	1-1	element	Container for service option currency
options.serviceOptionsPriceDetail.price.currency.currencyCode	1-1	element	Container for service option currency code
options.serviceOptionsPriceDetail.price.currency.currencyCode.identifier	0-1	identifier	Identifier for service option currency code (e.g. GBP)
options.serviceOptionsPriceDetail.price.currency.currencyCode.code	0-1	identifier	Service option currency code (e.g. GBP)
options.serviceOptionsPriceDetail.price.currency.currencyCode.name	0-1	longName	Name of service option currency code (e.g. GBP)
options.serviceOptionsPriceDetail.price.currency.currencyCode.description	0-1	description	Not used.
options.serviceOptionsPriceDetail.price.value	1-1	decimal	Identifies the price of the service being sought (e.g. 0.0).

Element	Occurs	Data Type	Description
options.serviceOptionsPriceDetail.inputValue	1-1	decimal	The value entered by the user for the add on

<p align="center">Table 39 – postagePrice Element</p>

8.10.1.4   forms

Please see Figure 19 for a graphical representation of the forms element. All elements in the table below are relative to the forms element.

Element	Occurs	Data Type	Description
form	0-∞	element	Container for form information
form.type	1-1	name	The type of form that applies to the service, for example: • additional compensation doc • certificate of post • CN22 and CN23 for international destinations outside of the EU.
form.description	1-1	description	Description regarding the usage of the form, for example: • This document is required for any additional compensation. • certificate of postage documents
form.required	1-1	boolean	Indicates whether the form is optional or mandatory
form.rangeFrom	1-1	decimal	The starting value of the item that drives the usage of the form in the case of CN22 and CN23.
form.rangeTo	1-1	decimal	The end value of the item that drives the usage of the form in the case of CN22 and CN23.

<p align="center">Table 40 – forms Element</p>

8.10.1.5   serviceWeightRules
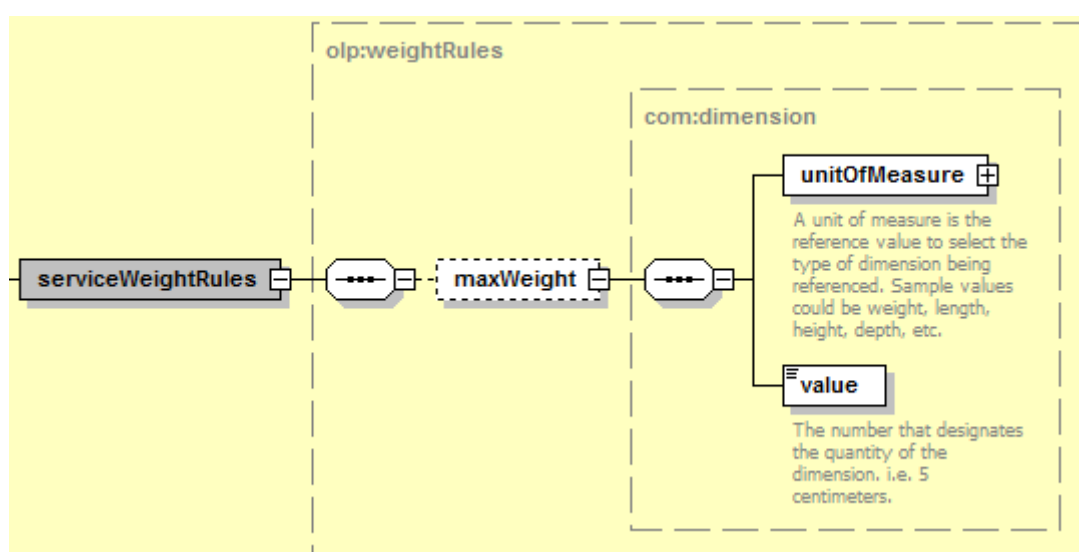
Figure 35 – serviceWeightRules Structure

All elements in the table below are relative to the serviceWeightRules element. Please note that any elements not referenced below are not used in the request operation.

Element	Occurs	Data Type	Description
maxWeight	1-1	element	Container for maximum weight information
maxWeight.UnitOfMeasure	1-1	element	Unit of measure information for maximum weight
maxWeight.UnitOfMeasure.identifier	0-1	identifier	Identifier for the weight (i.e. KGS)
maxWeight.UnitOfMeasure.code	0-1	identifier	Code for the weight (i.e. KGS)
maxWeight.UnitOfMeasure.name	0-1	longName	The name of the weight (i.e. KGS)
maxWeight.value	1-1	float	Value of the maximum weight (e.g. 20)

Table 41 – serviceWeightRules Element

8.10.1.6   parcelWeight

Please see Figure 28 for a graphical representation of the forms element. All elements in the table below are relative to the forms element. Please note that any elements not referenced below are not used in the request operation.

Element	Occurs	Data Type	Description
weight	0-1	element	Container for weight information
weight.unitIfMeasure	1-1	element	Container for unit of measure information
weight.unitIfMeasure.unitOfMeasureCode	1-1	element	Container for unit of measure code
weight.unitIfMeasure.unitOfMeasureCode.identifier	0-1	identifier	Identifier for unit of measure for weight of the item to be posted. Expected value: KGS
weight.unitIfMeasure.unitOfMeasureCode.code	0-1	identifier	Code for the unit of measure for weight of the item to be posted. Expected value: KGS
weight.unitIfMeasure.unitOfMeasureCode.name	0-1	longName	Name of the unit of measure for weight of the item to be posted. Expected value: KGS
weight.unitIfMeasure.unitOfMeasureCode.description	0-1	description	Not currently used.

Element	Occurs	Data Type	Description
weight.value	1-1	float	The weight of the item that will be posted in kilograms, e.g. 0.100

Table 42 – parcelWeight Element

8.10.1.7   parcelDimension

Please see Figure 29 for a graphical representation of the parcelDimension element. All elements in the table below are relative to the parcelDimension element.

Element	Occurs	Data Type	Description
height	0-1	element	Container used for parcel height information
height.unitOfMeasure	1-1	element	Container for unit of measure details
height.unitOfMeasure,unitOfMeasureCode	1-1	element	Container for unit of measure code
height.unitOfMeasure.unitOfMeasureCode.code	1-1	identifier	Identifies the unit of measure used to describe the height of the item to be posted. All dimensions must have the same unit of measure. Expected value: CM
height.value	1-1	float	The height of the item for which postage services are being sought, e.g. 10
width	0-1	element	Container used for parcel width information
width.unitOfMeasure	1-1	element	Container for unit of measure details
width.unitOfMeasure,unitOfMeasureCode	1-1	element	Container for unit of measure code
width.unitOfMeasure.unitOfMeasureCode.code	1-1	identifier	Identifies the unit of measure used to describe the width of the item to be posted. All dimensions must have the same unit of measure. Expected value: CM
width.value	1-1	float	The width of the item for which postage services are being sought, e.g. 10
length	0-1	element	Container used for parcel length information
length.unitOfMeasure	1-1	element	Container for unit of measure details
length.unitOfMeasure,unitOfMeasureCode	1-1	element	Container for unit of measure code
length.unitOfMeasure.unitOfMeasureCode.code	1-1	identifier	Identifies the unit of measure used to describe the length of the item to be posted. All dimensions must have the same unit of measure. Expected value: CM
length.value	1-1	float	The length of the item for which postage services are being sought, e.g. 10

Table 43 – parcelDimension Element

8.10.1.8   senderContactDetails

Please see Figure 30 for a graphical representation of the senderContactDetails element. All elements in the table below are relative to the senderContactDetails element. Please note that any elements not referenced below are not used in the request operation.

Element	Occurs	Data Type	Description
fullName	0-1	longName	The full name of the sender, e.g. Jane Doe
baseAddress.addressLine1	1-1	description	The first line of the sender's street address
baseAddress.addressLine2	0-1	description	The second line of the sender's street address
baseAddress.addressLine3	0-1	description	The third line of the sender's street address
baseAddress.postTown	0-1	name	The town of the sender's address

Table 44 – senderContactDetails Element

8.10.1.9   recipientContactDetails

Please see Figure 31 for a graphical representation of the recipientContactDetails element. All elements in the table below are relative to the recipientContactDetails element. Please note that any elements not referenced below are not used in the request operation.

Element	Occurs	Data Type	Description
fullName	0-1	longName	The full name of the person that the item is being posted to, e.g. John Doe
baseAddress.addressLine1	1-1	description	The first line of the recipient's street address, e.g. 20 Anytown Road
baseAddress.addressLine2	0-1	description	The second line of the recipient's street address, e.g. Harrow on the Hill
baseAddress.addressLine3	0-1	description	The third line of the recipient's street address, e.g. Harrow
baseAddress.postTown	0-1	name	The town of the recipient's address, e.g. London
baseAddress.country.country Code.identifier	0-1	identifier	Country identifier for recipient's address, e.g. GB, IT, BR
baseAddress.country.country Code.code	0-1	identifier	The country code of the recipient's address, e.g. GB, IT, BR.
baseAddress.country.country Code.name	0-1	longName	Name of the country of the recipient's address, e.g. GB, IT, BR
baseAddress.country.country Code.description	0-1	description	Description of the country, e.g. United Kingdom.

Table 45 – recipientContactDetails Element

8.10.1.10   postageServiceOptions

Please see Figure 22 for a graphical representation of the postageServiceOptions element. All elements in the table below are relative to the postageServiceOptions element.

Element	Occurs	Data Type	Description
postageServiceOption	0-∞	element	Container for postage service option information
postageServiceOption.name	1-1	longName	The name of the postage service option (E.g. insurance) that is being requested for this postage service request. Expected values: Additional Compensation.
postageServiceOption.inputV alue	1-1	decimal	The value associated with the additional postage service option, e.g. 20.

Element	Occurs	Data Type	Description
postageServiceOption.descrip tion	1-1	description	Not used.

<div align="center">Table 46 – postageServiceOptions Element</div>

8.11   createPostageRequest

The createPostageRequest provides the postage for an individual mail item. To invoke the createPostage operation, the customer system constructs a SOAP message (see section 7) with the createPostageRequest element contained within the SOAP Body. The createPostageRequest element is described in the figure and table below:
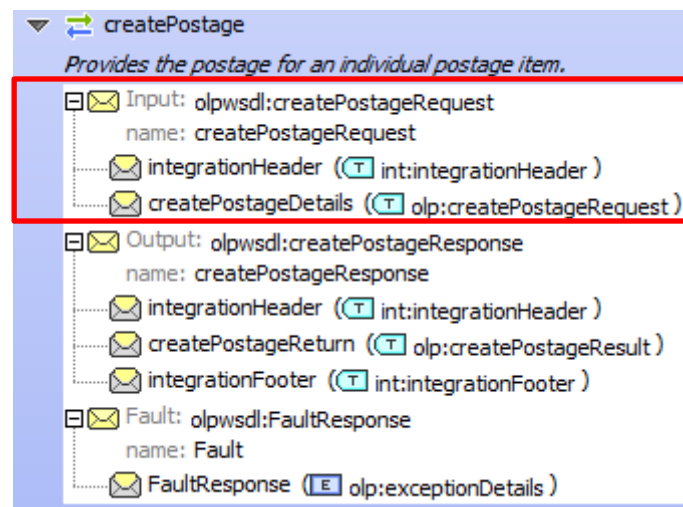
<div align="center">Figure 36 – createPostageRequest Structure</div>

All elements in the table below are relative to the createPostageRequest element.

Element	Occurs	Data Type	Description
integrationHeader	1-1	element	As described in section 8.5.1
createPostageRequest	1-1	element	Common create postage items request structure definition. See section 8.11.1.

<div align="center">Table 47 – createPostageRequest Element</div>

8.11.1   createPostageRequest

The createPostageRequest contains the request definition to create the postage for an individual mail item.
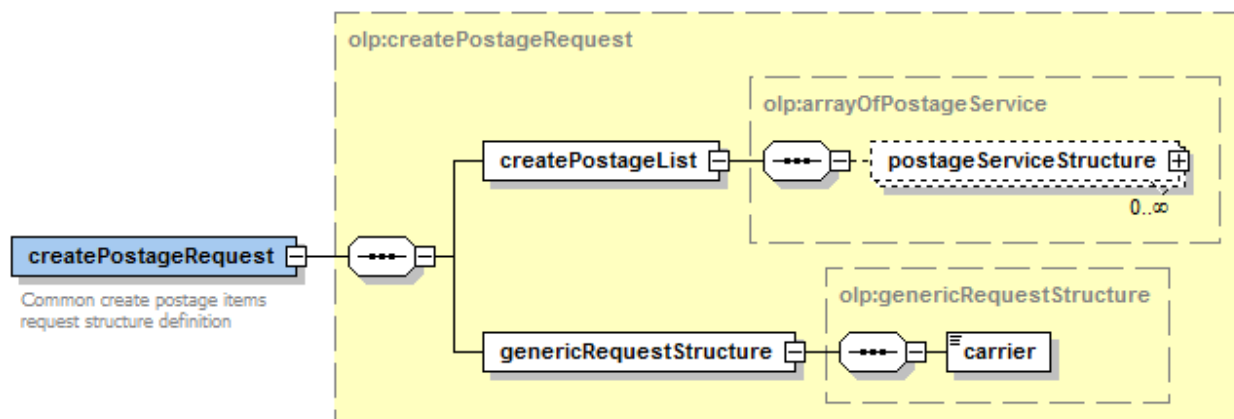
Figure 37 – createPostageRequest Structure

All elements in the table below are relative to the createPostageRequest element.

Element	Occurs	Data Type	Description
createPostageList	1-1	element	Container for postage creation details
postageServicesRequest.postageServiceStructure	0-∞	element	Container for postage service details. See below.
genericRequestStructure	1-1	element	Container for the common request structure definition
genericRequestStructure.carrier	1-1	name	The name of carrier. Supported values are 'RMG' and 'PFW'.

Table 48 – createPostageRequest Element

8.11.1.1   postageServiceStructure

Please see 8.9.1.1 for a graphical representation of the postageServiceStructure element. All elements in the table below are relative to the postageServiceStructure element.

Element	Occurs	Data Type	Description
postageIdentifier	1-1	identifier	The postage service identifier. Expected values: • Royal Mail 1st Class stamps • Royal Mail 2nd Class stamps • Royal Mail Signed For 1st Class stamps • Royal Mail Signed For 2nd Class stamps • Royal Mail Special Delivery Guaranteed by 1pm • International Standard • International Signed
postageName	1-1	name	The name of the service for which details are being requested. Not used in the implementation of the API operation.
postageServiceStructure.postageCarrier	1-1	name	The name of the carrier, e.g. 'RMG' or 'PFW'.
postageServiceStructure.postageSize	1-1	element	Container for postage size information. See section 8.9.1.2.
postageServiceStructure.postagePrice	1-1	element	Container for the postage price information. See section 8.10.1.3.
postageServiceStructure.forms	1-1	element	Container for postage forms and documents. See section 8.10.1.4
postageServiceStructure.termsAndConditions	1-1	element	Container for terms and conditions (e.g. restrictions, prohibitions etc) associated with the service. Not used in this API operation.

Element	Occurs	Data Type	Description
postageServiceStructure.serviceDimensionRules	1-1	element	Container for service dimension rules. Not used in this API operation.
postageServiceStructure.serviceWeightRules	1-1	element	Container for postage service weight rules. See section 0.
postageServiceStructure.parcelWeight	1-1	element	Container for parcel weight information. See section 8.10.1.6.
postageServiceStructure.parcelDimension	1-1	element	Container for parcel dimension information. See section 8.10.1.6.
postageServiceStructure.parcelPostcode	1-1	identifier	The postcode of the postage location address, e.g. AB12 4GH.
postageServiceStructure.senderContactDetails	1-1	element	Container for sender contact details. See section 0.
postageServiceStructure.recipientContactDetails	1-1	element	Container for recipient contact details. See section 8.10.1.9.
postageServiceStructure.postageServiceOptions	1-1	element	Container for postage service options (e.g. insurance). See section 8.10.1.10.
postageServiceStructure.postageAddOnProducts	1-1	element	Not used in the implementation of the API operation.
postageServiceStructure.trackingIndicator	1-1	identifier	Not used in the implementation of the API operation.
postageServiceStructure.watermarkIndicator	1-1	identifier	Not used in the implementation of the API operation.
postageServiceStructure.ppiIndicator	1-1	identifier	Not used in the implementation of the API operation.
postageServiceStructure.fimBarIndicator	1-1	identifier	Not used in the implementation of the API operation.

Table 49 – postageServiceStructure Element

8.11.2   Example Data

Full XML examples of SOAP requests and responses are provided on the Royal Mail API (Developer) Portal. This section provides a simplified example to illustrate the createPostageRequest without the SOAP wrappers and WS-Security elements.

```xml
<v1:createPostage>
        <integrationHeader>
                <v11:dateTime>2015-12-01T09:38:50</v11:dateTime>
                <v11:identification>
                        <v11:endUserId>ABC</v11:endUserId>
                        <v11:applicationId>123456789</v11:applicationId>
                        <v11:transactionId>1818577681</v11:transactionId>
                </v11:identification>
        </integrationHeader>
        <createPostageDetails>
                <createPostageList>
                        <postageServiceStructure>
                                <postageIdentifier>Royal Mail 1st Class stamps</postageIdentifier>
                                <postageName>Royal Mail 1st Class stamps</postageName>
                                <postageCarrier>RMG</postageCarrier>
                                <postageSize>
                                        <postageSizeCode>
                                                <name>Letter</name>
                                        </postageSizeCode>
                                </postageSize>
                                <postagePrice>
                                        <totalPrice>
                                                <creditIndicator>true</creditIndicator>
                                                <currency>
                                                        <currencyCode>
                                                                <identifier>GBP</identifier>
                                                                <code>GBP</code>
```

```xml
                                                            <name>United Kingdom Pound</name>
                                                            <description>United Kingdom
Pound</description>
                                                        </currencyCode>
                                                    </currency>
                                                    <value>0.63</value>
                                                </totalPrice>
                                                <basePrice>
                                                    <creditIndicator>true</creditIndicator>
                                                    <currency>
                                                        <currencyCode>
                                                            <identifier>GBP</identifier>
                                                            <code>GBP</code>
                                                            <name>United Kingdom Pound</name>
                                                            <description>United Kingdom
Pound</description>
                                                        </currencyCode>
                                                    </currency>
                                                    <value>0.63</value>
                                                </basePrice>
                                                <discounts/>
                                                <taxes>
                                                    <taxStructure>
                                                        <name>No VAT</name>
                                                        <type>
                                                            <taxCode/>
                                                        </type>
                                                        <value>
                                                            <creditIndicator>true</creditIndicator>
                                                            <currency>
                                                                <currencyCode>
                                                                    <identifier>GBP</identifier>
                                                                    <code>GBP</code>
                                                                    <name>United Kingdom
Pound</name>
                                                                    <description>United
Kingdom Pound</description>
                                                                </currencyCode>
                                                            </currency>
                                                            <value>0.0</value>
                                                        </value>
                                                    </taxStructure>
                                                </taxes>
                                                <options>
                                                    <serviceOptionsPriceDetail>
                                                        <name>Additional Compensation</name>
                                                        <price>
                                                            <creditIndicator>0</creditIndicator>
                                                            <currency>
                                                                <currencyCode>
                                                                    <identifier>GBP</identifier>
                                                                    <code>GBP</code>
                                                                    <name>GBP</name>
                                                                </currencyCode>
                                                            </currency>
                                                            <value>0.0</value>
                                                        </price>
                                                        <inputValue>20</inputValue>
                                                    </serviceOptionsPriceDetail>
                                                </options>
                                            </postagePrice>
                                        <forms>
                                            <form>
                                                <type>certificate of post</type>
                                                <description>certificate of postage documents</description>
                                                <required>false</required>
                                                <rangeFrom>0.0</rangeFrom>
                                                <rangeTo>0.0</rangeTo>
                                            </form>
                                        </forms>
                                        <termsAndConditions/>
                                        <serviceDimensionRules>
                                            <maxLength>
```

```xml
                <unitOfMeasure>
                        <unitOfMeasureCode/>
                </unitOfMeasure>
                <value>0</value>
        </maxLength>
        <maxWidth>
                <unitOfMeasure>
                        <unitOfMeasureCode/>
                </unitOfMeasure>
                <value>0</value>
        </maxWidth>
        <maxHeight>
                <unitOfMeasure>
                        <unitOfMeasureCode/>
                </unitOfMeasure>
                <value>0</value>
        </maxHeight>
        <maxGirth>
                <unitOfMeasure>
                        <unitOfMeasureCode/>
                </unitOfMeasure>
                <value>0</value>
        </maxGirth>
</serviceDimensionRules>
<serviceWeightRules>
        <maxWeight>
                <unitOfMeasure>
                        <unitOfMeasureCode>
                                <identifier>KGS</identifier>
                                <code>KGS</code>
                                <name>KGS</name>
                        </unitOfMeasureCode>
                </unitOfMeasure>
                <value>20</value>
        </maxWeight>
</serviceWeightRules>
<parcelWeight>
        <weight>
                <unitOfMeasure>
                        <unitOfMeasureCode>
                                <identifier>KGS</identifier>
                                <code>KGS</code>
                                <name>KGS</name>
                        </unitOfMeasureCode>
                </unitOfMeasure>
                <value>0.1</value>
        </weight>
</parcelWeight>
<parcelDimension>
        <height>
                <unitOfMeasure>
                        <unitOfMeasureCode>
                                <code>CM</code>
                        </unitOfMeasureCode>
                </unitOfMeasure>
                <value>0.1</value>
        </height>
        <width>
                <unitOfMeasure>
                        <unitOfMeasureCode>
                                <code>CM</code>
                        </unitOfMeasureCode>
                </unitOfMeasure>
                <value>1.0</value>
        </width>
        <length>
                <unitOfMeasure>
                        <unitOfMeasureCode>
                                <code>CM</code>
                        </unitOfMeasureCode>
                </unitOfMeasure>
                <value>1.0</value>
        </length>
</parcelDimension>
<parcelPostcode/>
```

```xml
<senderContactDetails>
    <fullName>Random Name</fullName>
    <baseAddress>
        <domesticIndicator>false</domesticIndicator>
        <addressLine1>Clements Road</addressLine1>
        <addressLine2/>
        <addressLine3/>
        <stateOrProvince>
            <stateOrProvinceCode>
                <identifier/>
                <code/>
                <name/>
            </stateOrProvinceCode>
        </stateOrProvince>
        <postTown>London</postTown>
        <postcode/>
        <country>
            <countryCode>
                <identifier/>
                <code/>
                <name/>
            </countryCode>
        </country>
    </baseAddress>
</senderContactDetails>
<recipientContactDetails>
    <fullName>Destination Name</fullName>
    <baseAddress>
        <domesticIndicator>false</domesticIndicator>
        <addressLine1>Camel Road</addressLine1>
        <addressLine2/>
        <addressLine3/>
        <stateOrProvince>
            <stateOrProvinceCode>
                <identifier/>
                <code/>
                <name/>
            </stateOrProvinceCode>
        </stateOrProvince>
        <postTown>London</postTown>
        <postcode>EC1A 1AA</postcode>
        <country>
            <countryCode>
                <identifier>GB</identifier>
                <code>GB</code>
                <name>GB</name>
                <description>United Kingdom</description>
            </countryCode>
        </country>
    </baseAddress>
</recipientContactDetails>
<postageServiceOptions>
    <postageServiceOption>
        <name>Additional Compensation</name>
        <inputValue>20</inputValue>
        <description/>
    </postageServiceOption>
</postageServiceOptions>
<postageAddOnProducts/>
<trackingIndicator/>
<watermarkIndicator/>
<ppiIndicator/>
<fimBarIndicator/>
                                </postageServiceStructure>
                        </createPostageList>
                        <genericRequestStructure>
                                <carrier>RMG</carrier>
                        </genericRequestStructure>
                </createPostageDetails>
        </v1:createPostage>
```

8.12 createPostageResponse

The response for a requested createPostage operation is constructed as a SOAP message described (see section 7) with the createPostageResponse element contained within the SOAP Body. The createPostageResponse element is described in the figure and table below.

Figure 38 – createPostageResponse Structure

All elements in the table below are relative to the createPostageResponse element.

Element	Occurs	Data Type	Description
integrationHeader	1-1	element	See section 8.6.1
createPostageResult	1-1	element	Common create postage items response structure definition. See section 8.12.1.
integrationFooter	0-1	element	Container for any error or warning messages associated with the API operation. Please see section 8.6.3 for more information.

Table 50 – createPostageResponse Element

8.12.1   createPostageResult

The purpose of this element is to hold the common create postage items response structure definition.
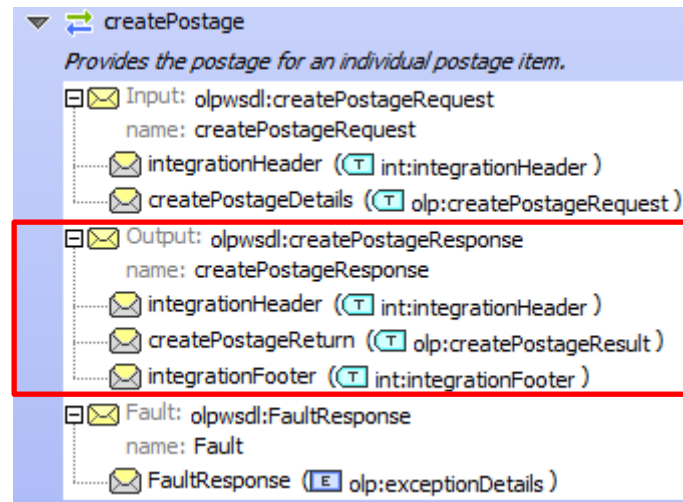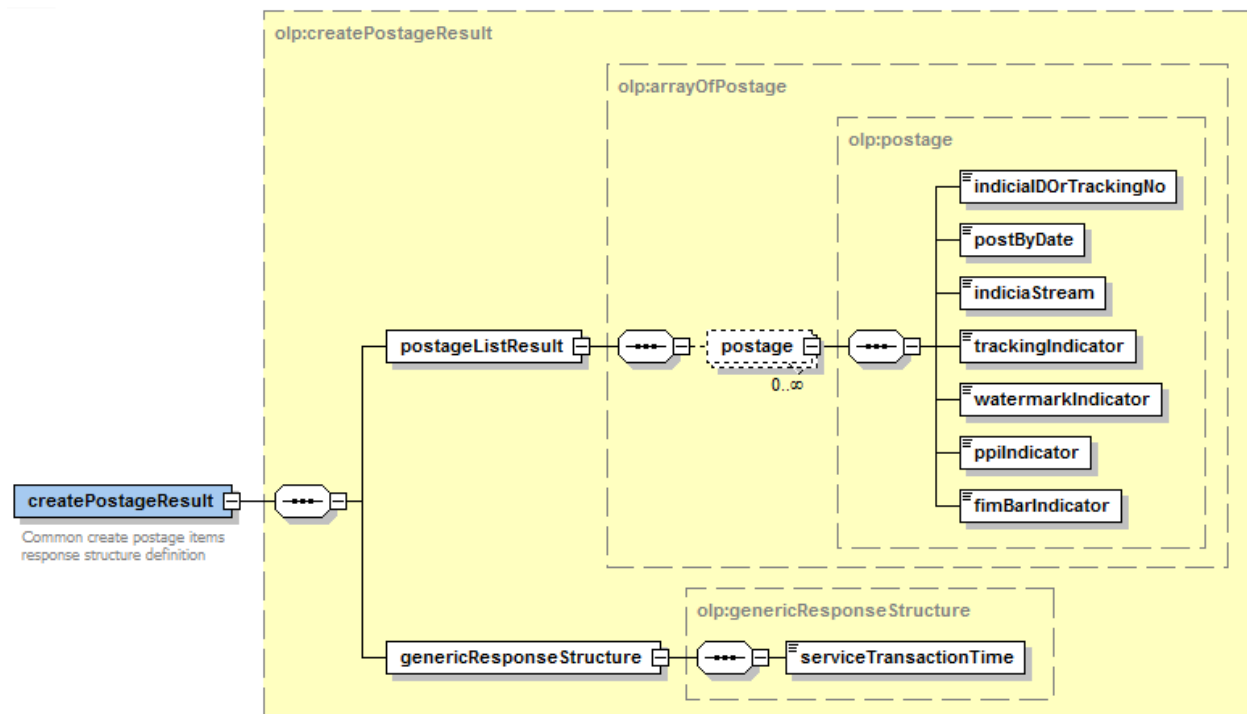
Figure 39 – createPostageResult Structure

All elements in the table below are relative to the createPostageResult element.

Element	Occurs	Data Type	Description
postageListResult	1-1	element	Container for postage details
postageListResult.postage	1-∞	element	Container for postage item details
postageListResult.postage. indicialDOrTrackingNo	1-1	identifier	The indicia ID that identifies the online postage reference
postageListResult.postage. postByDate	1-1	date	The date by which the postage has to be sent.
postageListResult.postage. indiciaStream	1-1	twoDBbarcode	The 2D barcode base64 encoded stream to use when constructing the 2D barcode using a barcode generator.
postageListResult.postage. trackingIndicator	1-1	identifier	Not used in API response
postageListResult.postage. watermarkIndicator	1-1	identifier	Not used in API response
postageListResult.postage. ppiIndicator	1-1	identifier	Not used in API response
postageListResult.postage. fimBarIndicator	1-1	identifier	Not used in API response
genericResponseStructure	1-1	element	Container for the service transaction time which is returned in all API responses.
genericResponseStructure.se rviceTransactionTime	1-1	dateTime	The transaction time prior to returning the response to the calling party in the yyyy-MM-dd HH:mm:ss:SSS format. SSS is optional.

Table 51 – createPostageResult Element

8.12.2   Example Data

Full XML examples of SOAP requests and responses are provided on the Royal Mail API (Developer) Portal. This section provides a simplified example to illustrate the createPostageResponse without the WS-Security elements and SOAP wrappers.

```xml
<NS1:createPostageResponse xmlns:NS1="http://www.royalmailgroup.com/api/onlinePostage/V1">
        <integrationHeader>
                <NS2:dateTime xmlns:NS2="http://www.royalmailgroup.com/integration/core/V1">2015-12-
01T09:38:50</NS2:dateTime>
                <NS3:identification xmlns:NS3="http://www.royalmailgroup.com/integration/core/V1">
                        <NS3:endUserId>ABC</NS3:endUserId>
                        <NS3:applicationId>123456789</NS3:applicationId>
                        <NS3:transactionId>1818577681</NS3:transactionId>
                </NS3:identification>
        </integrationHeader>
        <createPostageReturn>
                <postageListResult>
                        <postage>
                                <indiciaIDOrTrackingNo>06000000026</indiciaIDOrTrackingNo>
                                <postByDate>2015-12-02</postByDate>

        <indiciaStream>SkdCIDgyMTcxQTA2MDAwMDAwMDI2MDAwMDEwMDEwMDA2MzAxMTIxNTAwNiAgICAgICAgIC
AgICAgICAgICBFQzFBMUFBICBHQiAgICAgICBAiAgICAgICAgICAg</indiciaStream>
                                <trackingIndicator/>
                                <watermarkIndicator/>
                                <ppiIndicator/>
                                <fimBarIndicator/>
                        </postage>
                </postageListResult>
                <genericResponseStructure>
                        <serviceTransactionTime>2015-12-01T09:38:53.736566</serviceTransactionTime>
                </genericResponseStructure>
        </createPostageReturn>
        <integrationFooter/>
</NS1:createPostageResponse>
```

8.13 spoilPostageRequest

The spoilPostageRequest allows the postage to the spoiled (cancelled) for an individual mail item. To invoke the spoilPostage operation, the customer system constructs a SOAP message (see section 7) with the spoilPostageRequest element contained within the SOAP Body. The spoilPostageRequest element is described in the figure and table below:

Figure 40 – spoilPostageRequest Structure

All elements in the table below are relative to the spoilPostageRequest element.

Element	Occurs	Data Type	Description
integrationHeader	1-1	element	As described in section 8.5.1. **Please note that the value of the transactionId element must be equal to the transactionId of the createPostage request for the postage to be spoilt.**
spoilPostageRequest	1-1	element	Common create postage items request structure definition. See section 8.13.1.

Table 52 – createPostageRequest Element

8.13.1   spoilPostageRequest

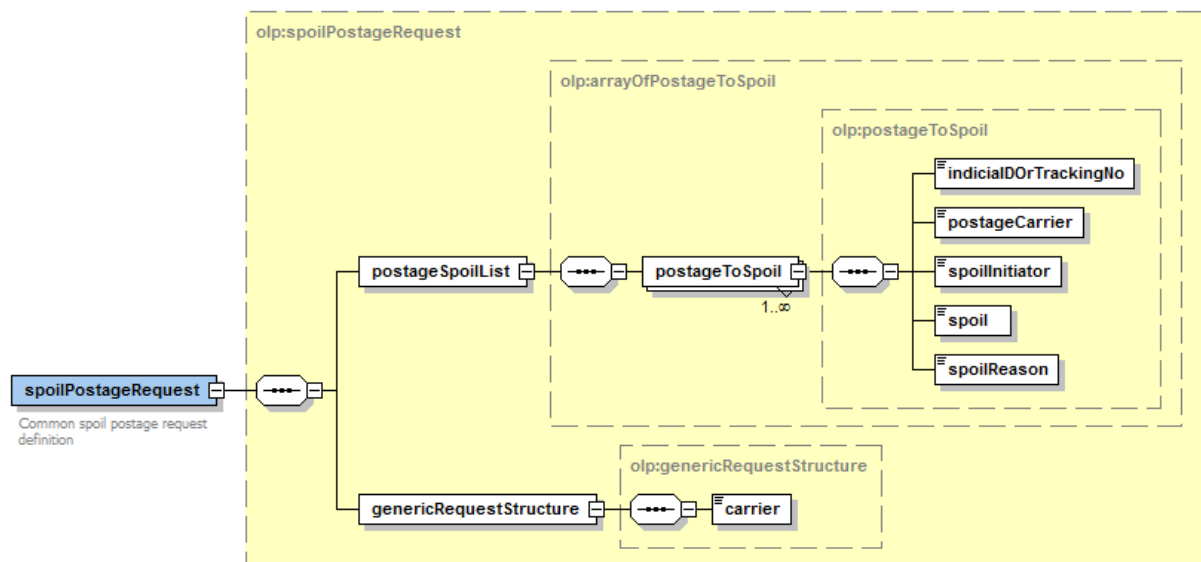The spoilPostageRequest contains the request definition to spoil the postage for an individual mail item.

Figure 41 – spoilPostageRequest Structure

All elements in the table below are relative to the spoilPostageRequest element.

Element	Occurs	Data Type	Description
postageSpoilList	1-1	element	Container for postage spoil details
postageSpoilList.postageToSpoil	1-∞	element	Container for postage to spoil information. See below.
postageSpoilList.postageToSpoil.indicialDOrTrackingNo	1-1	identifier	The indicia Identifier returned by the createPostage response. This may be null; for example, in case of timeouts. Example value: 375A4X0X
postageSpoilList.postageToSpoil.postageCarrier	1-1	name	The name of carrier. Supported values are 'RMG' and 'PFW'.
postageSpoilList.postageToSpoil.spoilInitiator	1-1	identifier	The source of the spoil request. It is either system generated due to an internal fault or user triggered in the event of refund. Example values: Use the applicationId in the case of system triggered and the customer identifier in the case of customer refund.
postageSpoilList.postageToSpoil.spoil	1-1	boolean	Set to true to spoil the postage previously created using the createPostage call.

Element	Occurs	Data Type	Description
postageSpoilList.postageToSpoil.spoilReason	1-1	description	The reason for spoiling the postage.
genericRequestStructure	1-1	element	Container for the common request structure definition
genericRequestStructure.carrier	1-1	name	The name of carrier. Supported values are 'RMG' and 'PFW'.

<div align="center">Table 53 – spoilPostageRequest Element</div>

8.13.2   Example Data

Full XML examples of SOAP requests and responses are provided on the Royal Mail API (Developer) Portal. This section provides a simplified example to illustrate the spoilPostageRequest without the SOAP wrappers and WS-Security elements.

```xml
<v1:spoilPostage>
        <integrationHeader>
                <v11:dateTime>2015-12-01T10:05:43</v11:dateTime>
                <v11:identification>
                        <v11:endUserId>ABC</v11:endUserId>
                        <v11:applicationId>123456789</v11:applicationId>
                        <v11:transactionId>374577911</v11:transactionId>
                </v11:identification>
        </integrationHeader>
        <spoilPostageDetails>
                <postageSpoilList>
                        <postageToSpoil>
                                <indiciaIDOrTrackingNo>06000000064</indiciaIDOrTrackingNo>
                                <postageCarrier>RMG</postageCarrier>
                                <spoilInitiator>123456789</spoilInitiator>
                                <spoil>true</spoil>
                                <spoilReason>Insufficient funds</spoilReason>
                        </postageToSpoil>
                </postageSpoilList>
                <genericRequestStructure>
                        <carrier/>
                </genericRequestStructure>
        </spoilPostageDetails>
</v1:spoilPostage>
```

8.14 spoilPostageResponse

The response for a requested spoilPostage operation is constructed as a SOAP message (see section 7) with the spoilPostageResponse element contained within SOAP Body. The spoilPostageResponse element is described in the figure and table below:
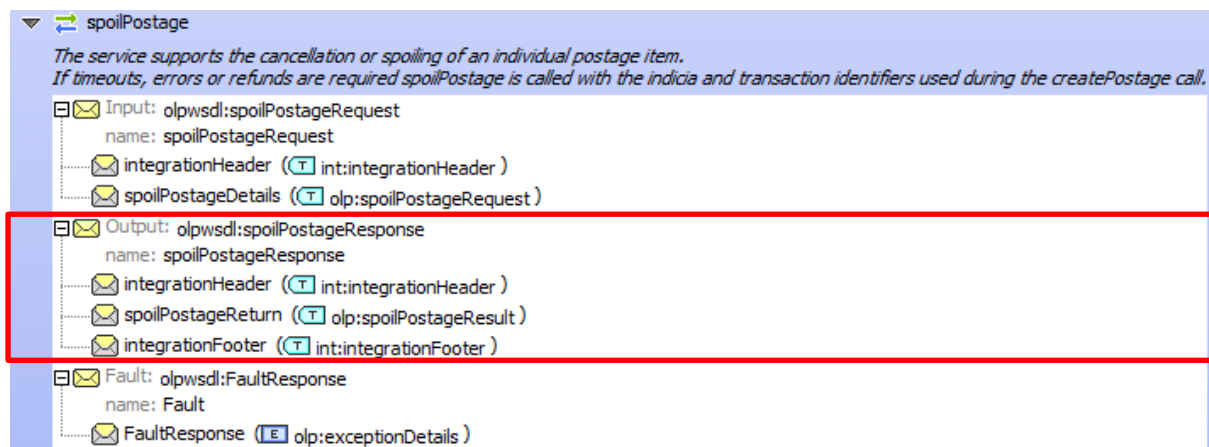
Figure 42 – spoilPostageResponse Structure

All elements in the table below are relative to the spoilPostageResponse element.

Element	Occurs	Data Type	Description
integrationHeader	1-1	element	As described in section 8.5.1
spoilPostageResult	1-1	element	Common spoil postage items response structure definition. See section 8.14.1.
integrationFooter	0-1	element	Container for any error or warning messages associated with the API operation. Please see section 8.6.3 for more information.

Table 54 – createPostageRequest Element

8.14.1   spoilPostageResult

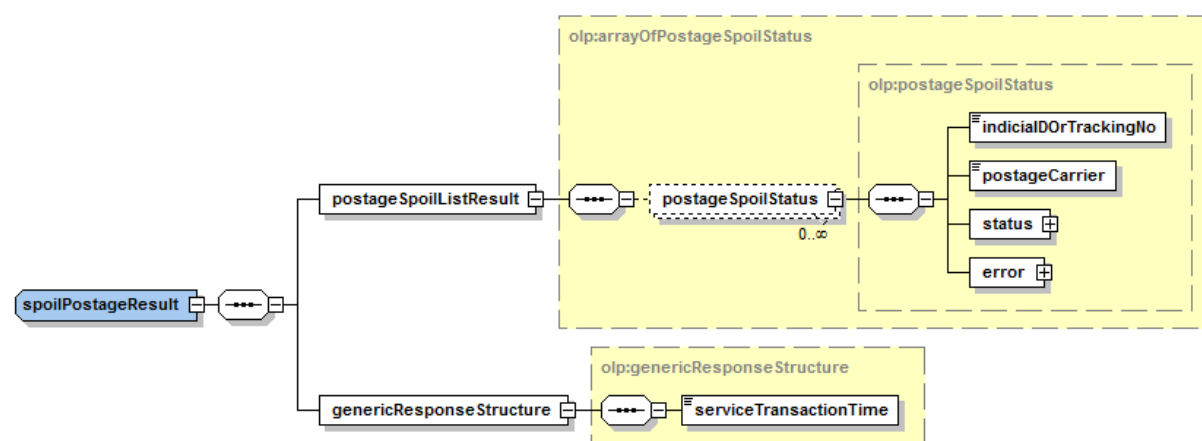The purpose of this element is to hold the common spoil postage items response structure definition.

Figure 43 – spoilPostageResult Structure

All elements in the table below are relative to the spoilPostageResult element.

Element	Occurs	Data Type	Description
postageSpoilListResult	1-1	element	Container for postage spoil details
postageSpoilStatus	1-∞	element	Container for postage spoil item details
postageListResult.postage.indicialDOrTrackingNo	1-1	identifier	The indicia ID that identifies the postage reference being spoilt
postageListResult.postage.postageCarrier	1-1	name	The name of carrier. Supported values are 'RMG' and 'PFW'.
postageListResult.postage.status	1-1	element	Container for the status of the spoil postage operation
postageListResult.postage.status.statusCode	1-1	element	Container for the status code for the spoil postage operation
postageListResult.postage.status.statusCode.name	0-1	longName	Status description of the spoil postage request (e.g. ACKNOWLEDGED)
postageListResult.postage.error	1-1	element	Container for error information
postageListResult.postage.error.code	1-1	identifier	Code associated with the error condition
postageListResult.postage.error.cause	1-1	description	Cause of the error condition

Element	Occurs	Data Type	Description
postageListResult.postage.error.type	1-1	description	Type of error condition
postageListResult.postage.error.message	1-1	description	Error message
genericResponseStructure	1-1	element	Container for the service transaction time which is returned in all API responses.
genericResponseStructure.serviceTransactionTime	1-1	dateTime	The transaction time prior to returning the response to the calling party in the yyyy-mm-dd hh:mm:ss:SSS format. SSS is optional.

<div align="center">

Table 55 – spoilPostageResult Element

</div>

8.14.2   Example Data

Full XML examples of SOAP requests and responses are provided on the Royal Mail API (Developer) Portal. This section provides a simplified example to illustrate the spoilPostageResponse without the WS-Security elements and SOAP wrappers.

```xml
<NS1:spoilPostageResponse xmlns:NS1="http://www.royalmailgroup.com/api/onlinePostage/V1">
        <integrationHeader>
                <NS2:dateTime xmlns:NS2="http://www.royalmailgroup.com/integration/core/V1">2015-12-
01T10:05:43</NS2:dateTime>
                <NS3:identification xmlns:NS3="http://www.royalmailgroup.com/integration/core/V1">
                        <NS3:endUserId>ABC</NS3:endUserId>
                        <NS3:applicationId>123456789</NS3:applicationId>
                        <NS3:transactionId>374577911</NS3:transactionId>
                </NS3:identification>
        </integrationHeader>
        <spoilPostageReturn>
                <postageSpoilListResult>
                        <postageSpoilStatus>
                                <indiciaIDOrTrackingNo>06000000064</indiciaIDOrTrackingNo>
                                <postageCarrier>RMG</postageCarrier>
                                <status>
                                        <statusCode>
                                                <name>ACKNOWLEDGED</name>
                                        </statusCode>
                                </status>
                                <error>
                                        <code/>
                                        <cause/>
                                        <type/>
                                        <message/>
                                </error>
                        </postageSpoilStatus>
                </postageSpoilListResult>
                <genericResponseStructure>
                        <serviceTransactionTime>2015-12-01T10:05:47.098391</serviceTransactionTime>
                </genericResponseStructure>
        </spoilPostageReturn>
        <integrationFooter/>
</NS1:spoilPostageResponse>
```

8.15 getStatusRequest

The getStatusRequest provides a message on the status of the service. To invoke the getStatus operation, the customer system constructs a SOAP message (see section 7) with the getStatusRequest element contained within the SOAP Body. The getStatusRequest element is described in the figure and table below:
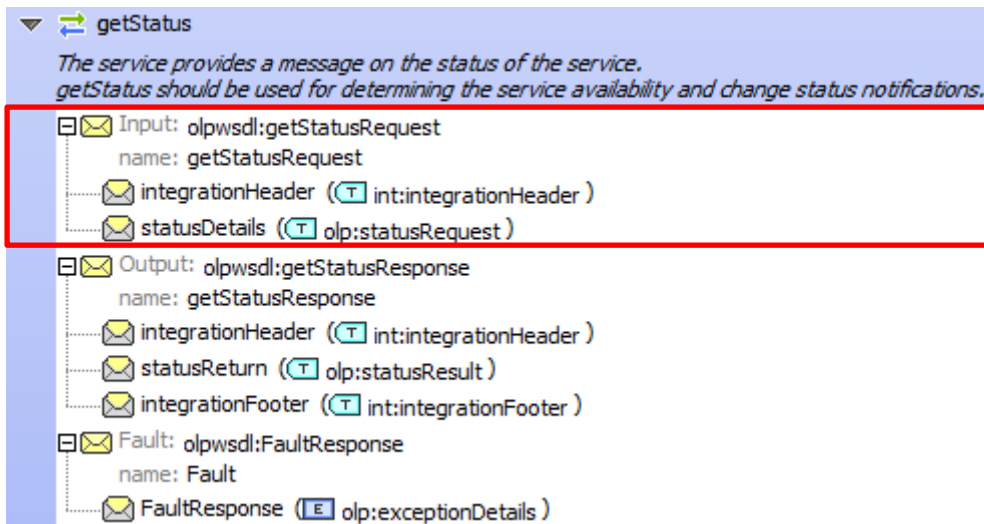
Figure 44 – getStatusRequest Structure

All elements in the table below are relative to the getStatusRequest element.

Element	Occurs	Data Type	Description
integrationHeader	1-1	Element	As described in section 8.5.1
statusDetails	1-1	Element	Common API service status request definition. See section 8.15.1.

Table 56 – getStatusRequest Element

8.15.1   statusDetails

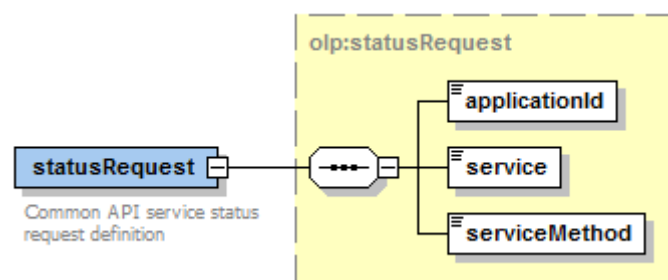The statusDetails (statusRequest) contains the definition to query the status of an API operation.

Figure 45 – statusDetail (statusRequest) Structure

All elements in the table below are relative to the statusDetails (statusRequest) element.

Element	Occurs	Data Type	Description
applicationId	1-1	identifier	The applicationId used when calling the service.
service	1-1	name	The name of the web service that a status update is being requested for. Expected value: OnlinePostageService

Element	Occurs	Data Type	Description
serviceMethod	1-1	name	The name of the service method that a status update is being requested for. Expected values: • getCountries • getServicesByCountry • getPostageServiceDetails • createPostage • spoilPostage

<div align="center">Table 57 – spoilPostageRequest Element</div>

8.15.2 Example Data

Full XML examples of SOAP requests and responses are provided on the Royal Mail API (Developer) Portal. This section provides a simplified example to illustrate the spoilPostageRequest without the SOAP wrappers and WS-Security elements.

```xml
<v1:getStatus>
        <integrationHeader>
                <v11:identification>
                        <v11:applicationId>q6g420yL07</v11:applicationId>
                        <v11:transactionId>1790087103</v11:transactionId>
                </v11:identification>
        </integrationHeader>
        <statusDetails>
                <applicationId>q6g420yL07</applicationId>
                <service>OnlinePostageService</service>
                <serviceMethod>getCountries</serviceMethod>
        </statusDetails>
</v1:getStatus>
```

8.16 getStatusResponse

The getStatus operation returns a message on the status of the service. To invoke the getStatus operation, the customer system constructs a SOAP message (see section 7) with the getStatusResponse element contained within the SOAP Body. The getStatusResponse element is described in the figure and table below:
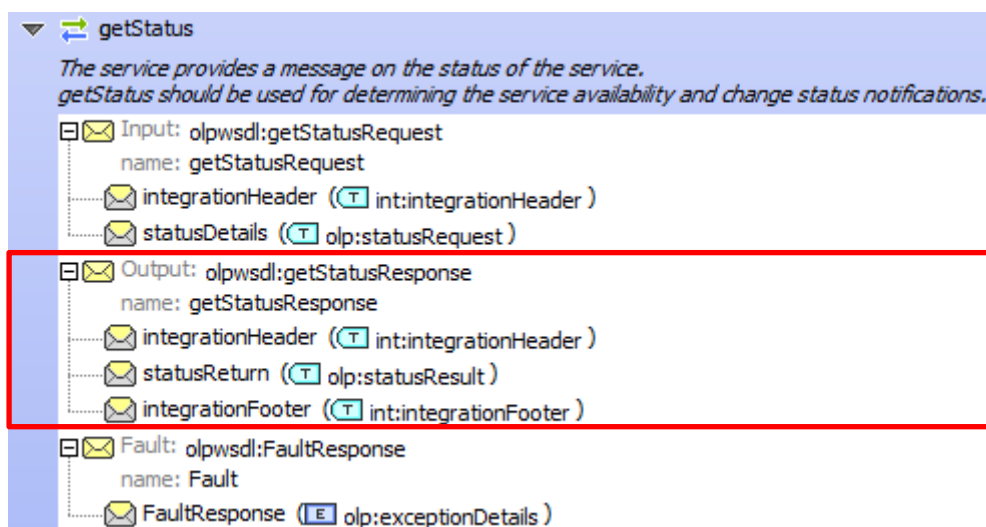

<div align="center">Figure 46 – getStatusResponse Structure</div>

All elements in the table below are relative to the getStatusResponse element.

Element	Occurs	Data Type	Description
integrationHeader	1-1	element	As described in section 8.6.1
statusReturn	1-1	element	Common API service status response definition.
integrationFooter	0-1	element	Container for any error or warning messages associated with the API operation. Please see section 8.6.3 for more information.

Table 58 – getStatusResponse Element

8.16.1   statusReturn

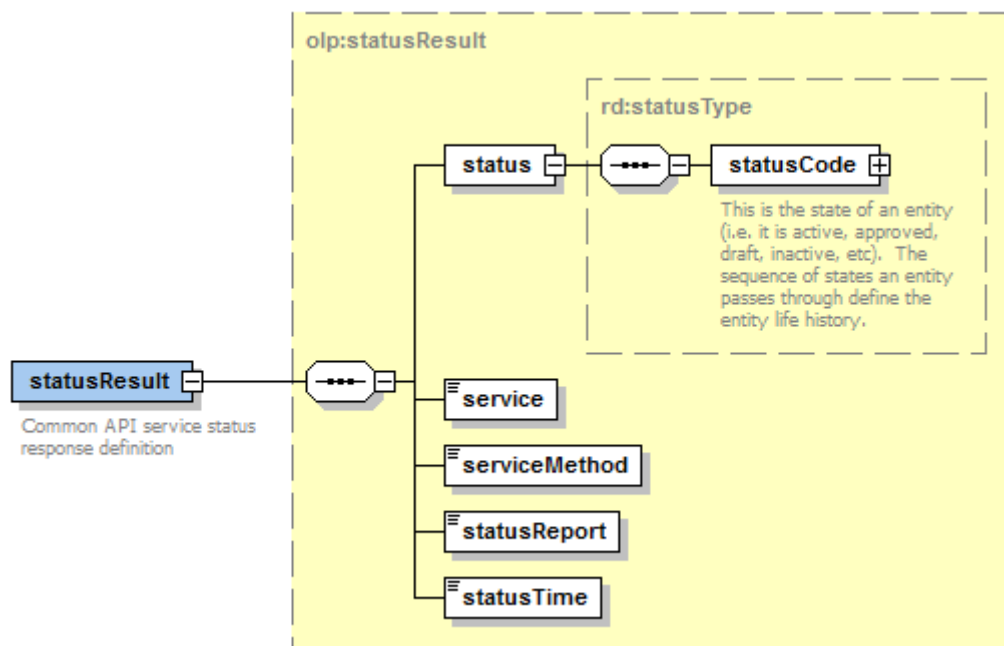The purpose of this element is to hold the common API service status response definition.

Figure 47 – statusReturn Structure

All elements in the table below are relative to the statusReturn element.

Element	Occurs	Data Type	Description
status	1-1	element	Container for status details
status.statusCode	1-1	element	Container for status code information
status.statusCode.identifier	0-1	identifier	The status code identifier for the service. Possible values include ACTIVE and INACTIVE
service	1-1	name	The name of the web service that a status update is being requested for. Expected value: OnlinePostageService
serviceMethod	1-1	name	The name of the service method that a status update is being requested for. Expected values: • getCountries • getServicesByCountry • getPostageServiceDetails • createPostage • spoilPostage

Element	Occurs	Data Type	Description
statusReport	1-1	dt:longDescription	A detailed service message (e.g. getCountries service is up and running).
statusTime	1-1	dt:dateTime	Date and time of associated with then the status query was made.

<div align="center">Table 59 – statusReturn Element</div>

8.16.2   Example Data

Full XML examples of SOAP requests and responses are provided on the Royal Mail API (Developer) Portal. This section provides a simplified example to illustrate the getStatusResponse without the SOAP wrappers.

```xml
<NS1:getStatusResponse xmlns:NS1="http://www.royalmailgroup.com/api/onlinePostage/V1">
        <integrationHeader>
                <NS2:identification xmlns:NS2="http://www.royalmailgroup.com/integration/core/V1">
                        <NS2:applicationId>q6g420yL07</NS2:applicationId>
                        <NS2:transactionId>1790087103</NS2:transactionId>
                </NS2:identification>
        </integrationHeader>
        <statusReturn>
                <status>
                        <statusCode>
                                <identifier>ACTIVE</identifier>
                        </statusCode>
                </status>
                <service>OnlinePostageService</service>
                <serviceMethod>getCountries</serviceMethod>
                <statusReport>getCountries service is up and running</statusReport>
                <statusTime>2015-12-01T09:17:15.657233</statusTime>
        </statusReturn>
        <integrationFooter/>
</NS1:getStatusResponse>
```

9 Error Handling

9.1 Overview

The Online Postage API service can communicate issues in three ways:

1. **Technical Errors**
   Highlights fundamental problems with either the system or the request. All technical errors (e.g. schema validation failure, service unavailable etc.) are returned as SOAP Faults to the service requester.

2. **Business Errors**
   While the request was correctly formatted; it contained invalid data that cannot be automatically corrected. All business errors are returned in the integrationFooter of the SOAP response message.

3. **Warnings**
   While the request was correctly formatted and the data was mostly accurate, there were minor corrections or assumptions that the system had to make to allow the request to be processed. All warnings are returned in the integrationFooter of the SOAP response message.

Errors and warnings are the same in both the onboarding and live environments. Please refer to the Online Postage API page on the [Royal Mail API (Developer) Portal](#) for the full list of all error and warning codes which can be returned from this API.

9.2 Technical Errors

Technical Errors highlight that there is either a problem with the Royal Mail system or there is a fundamental problem with the messages being sent to Royal Mail by the customer. Examples of technical errors caused by the customer would include the submission of a request message that failed schema validation.

Technical errors indicate that the request was not successful, and has not been processed by Royal Mail (e.g. createPostage requests that receive a Technical Error will not result in a postage being created on the system).

Technical errors may also be an indication of serious problems with the interaction between the customer and Royal Mail, and customer systems should be built in such a way that these errors are gracefully handled, captured and reported to the relevant technical resources. Failure to do so may result in a disruption to service.

All technical exceptions are returned to the customer using the SOAP Fault message construct. Please see figure below for a graphical representation of the SOAP Fault construct which has been extended by the Royal Mail Group to specify a number of sub-elements under the <detail> element.
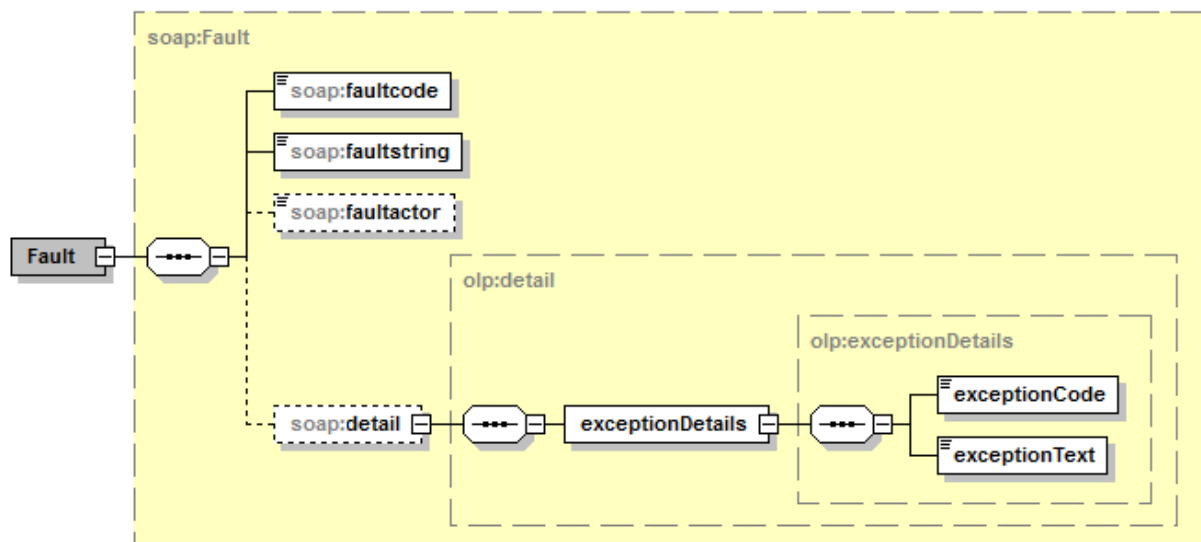
Figure 48 – SOAP Fault Structure

The SOAP Fault element has the following sub-elements:

Element	Occurs	Data Type	Description
faultcode	1-1	QName	A code for identifying the fault
faultstring	1-1	string	A human readable explanation of the fault
faultactor	0-1	anyURI	Information about who caused the fault to happen.
detail	0-1	element	Container for application specific error information
detail.exceptionDetails	1-1	identifier	Container for exception details
detail.exceptionDetails.exceptionCode	1-1	string	Error code associated with the technical exception.
detail.exceptionDetails.exceptionText	1-1	string	A meaningful human-readable error description of the error condition.

Table 60 – SOAP Fault Elements

Please see the Online Postage API page on the Royal Mail API (Developer) Portal for the full set of technical errors that may be returned by the API and the values which will be populated in the above fields for each error condition.

9.3   Business Errors

Business errors indicate that the data provided in the request, while correctly formatted, is not valid. Business errors indicate that the request was not successful and has not been processed by Royal Mail.

All business errors are returned in the integrationFooter of the SOAP response message and are returned with a HTTP 200 status code. Please see the Online Postage API page on the Royal Mail API (Developer) Portal for the set of business errors that may be returned by the API.

9.4   Warnings

Warning messages are received when the data supplied to Royal Mail in the request is not completely accurate, but the system is able to make assumptions or corrections automatically. Requests that result in a warning message may still be processed by the system.

All warnings are returned in the integrationFooter of the SOAP response message. Please see the Online Postage API page on the [Royal Mail API (Developer) Portal](#) for the set of warnings that may be returned by the API.

10 Non-Functional Characteristics

10.1 Availability

10.1.1 Service Hours

The Online Postage API is available 24 hours per day x 365 days per year.

10.1.2 Maintenance Windows

Royal Mail Online Services Terms and Conditions define the maintenance for this service.

10.1.3 Unavailability

In the unlikely event of the Online Postage API being unavailable, customer systems must be able to handle this appropriately. Royal Mail will endeavour to proactively contact customers in the event of an outage to this API, using the email address provided to us during onboarding.

If you experience issues with the availability of this API please contact a Royal Mail Support representative by visiting the Royal Mail API (Developer) Portal Support pages.

10.2 Performance

Performance testing has validated that the Online Postage API responds to SOAP calls in less than 4 seconds on average when invoked from the edge of Royal Mail's UK data centre. To avoid issues associated with slower response times during periods of heavy traffic, customers are strongly advised to spread their traffic out throughout the day (wherever possible).

10.3 Security

All API service calls will be made using mutually authenticated HTTPS bound SOAP web services. The Online Postage API exposes the services using SOAP version 1.1 with a document / literal document-style encoding.

All service requests via the API Management solution will be authorised in accordance with the Client ID and Secret passed in the HTTP headers. This will ensure that any external service requests are authorised and authenticated in line with RMG Security Policies and Standards.

11 Frequently Asked Questions

Please see the [FAQ page](#) on the [Royal Mail API (Developer) Portal](#) for a general list of frequently asked questions with responses.

11.1 Application Compatibility

Question: What Software Development Kits or tools have been proven to work with the Online Postage API?

Answer: The following applications are known to be compatible with the Royal Mail Online Postage API: SoapUI.