

WHOLESALE



## HOW TO VALIDATE A SERVICE ADDRESS

For PSTN New and External Relocation

Version 1, 30 June 2010

# DOCUMENT CONTROL SHEET

## Contact for Enquiries and Proposed Changes

If you have any questions regarding this document contact:

Name: Mitali Ross  
Designation: Manager, Online Automation and Customer Engagement  
Phone: (03) 9632 7120

Issue No.	Issue Date	Nature of Amendment
1.0	30/06/2010	First Issue

The information contained in this document is accurate and correct at date of publication.

© Copyright Telstra Corporation Limited (ACN 051 775 556) 2007. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the written permission of Telstra Corporation Limited.

# TABLE OF CONTENTS

1	<a href="#">How To: Validate an address</a>	4
1.1	The importance of matching an address	4
1.2	Address search - optional or mandatory?	4
1.3	Telstra core system addresses vs. other sources	4
1.4	State Information	4
2	<a href="#">Web Service Transaction Flow</a>	5
3	<a href="#">Address Web Services</a>	6
3.1	Address Web Service hierarchy	7
4	<a href="#">Business rules and XML examples</a>	9
4.1	Find Site Address by CSN	9
4.2	Locality and Postcode search	10
4.3	Street search	11
4.4	Street number and sub-address search	12
4.5	Set Full Address	14
4.6	Find Inplace CSNs at the Address	14

# 1 How To: Validate an address

This guide details the four different address search web service calls in LOLIG that are used during the creation of a New Service and External Relocation multiple step request. The document also outlines how to correctly call each address web service to increase the chance of a successful address match in Telstra core systems.

## 1.1 The importance of matching an address

Matching an end-user's address to the address stored in Telstra core systems is critical to the success of a search request. If an address cannot be matched during the creation of a request, LOLIG will send the request for manual processing by a Telstra Wholesale consultant, potentially delaying the order. If TW can not match the address the request will be rejected.

By correctly using the four address search web services the chances of LOLIG matching the address and indentifying inplace records will be greatly increased. This allows greater potential for the automation of the request. This also eliminates any delay that is incurred if the request had required manual assessment and also allows LOLIG to return an appointment at the time of request submission.

## 1.2 Address search - optional or mandatory?

While not part of the mandatory workflow, the four address web services should always be used to successfully match an address and reduce the chance of the request requiring manual assessment.

This design allows for flexibility when searching for an address. The search can be conducted at any point prior to submitting the address and searches can be run multiple times until a successful match is found.

## 1.3 Telstra core system addresses vs. other sources

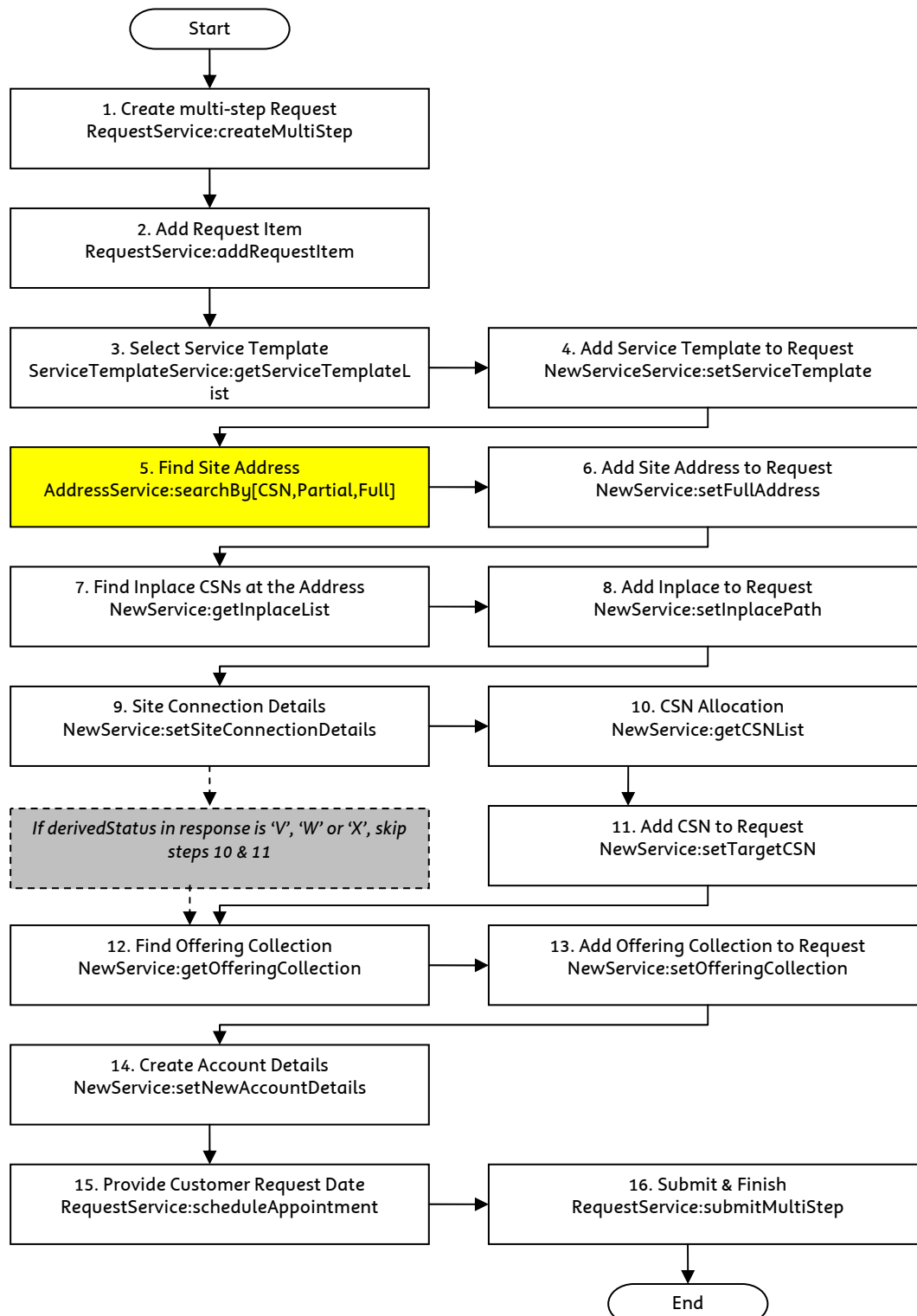
Often addresses supplied by an end user or supplied by other parties (e.g. Australia Post) vary to the records in Telstra's systems. Telstra relies on the address in its internal systems to identify inplace records and connect services. Therefore an address supplied by an end user or supplied by other parties should not be relied on and the four available address search web service in LOLIG should be used to confirm an address.

## 1.4 State Information

Creating a New Service or External Relocation request involves calling a sequence of web services that share information between them. At any given point in the process the information previously and currently sent is referred to as "state." It is important that state between web services calls are maintained, as outputs from one web service call can be used as inputs into the next or subsequent web services further along the process.

## 2 Web Service Transaction Flow

When performing a New Service or External Relocation multi-step conversational transaction, an address search can be done to determine the site address of the service. The simple scenario shown below illustrates at which point in the flow, this search is to be done. The associated business rules around address matching are detailed in sections two and three.



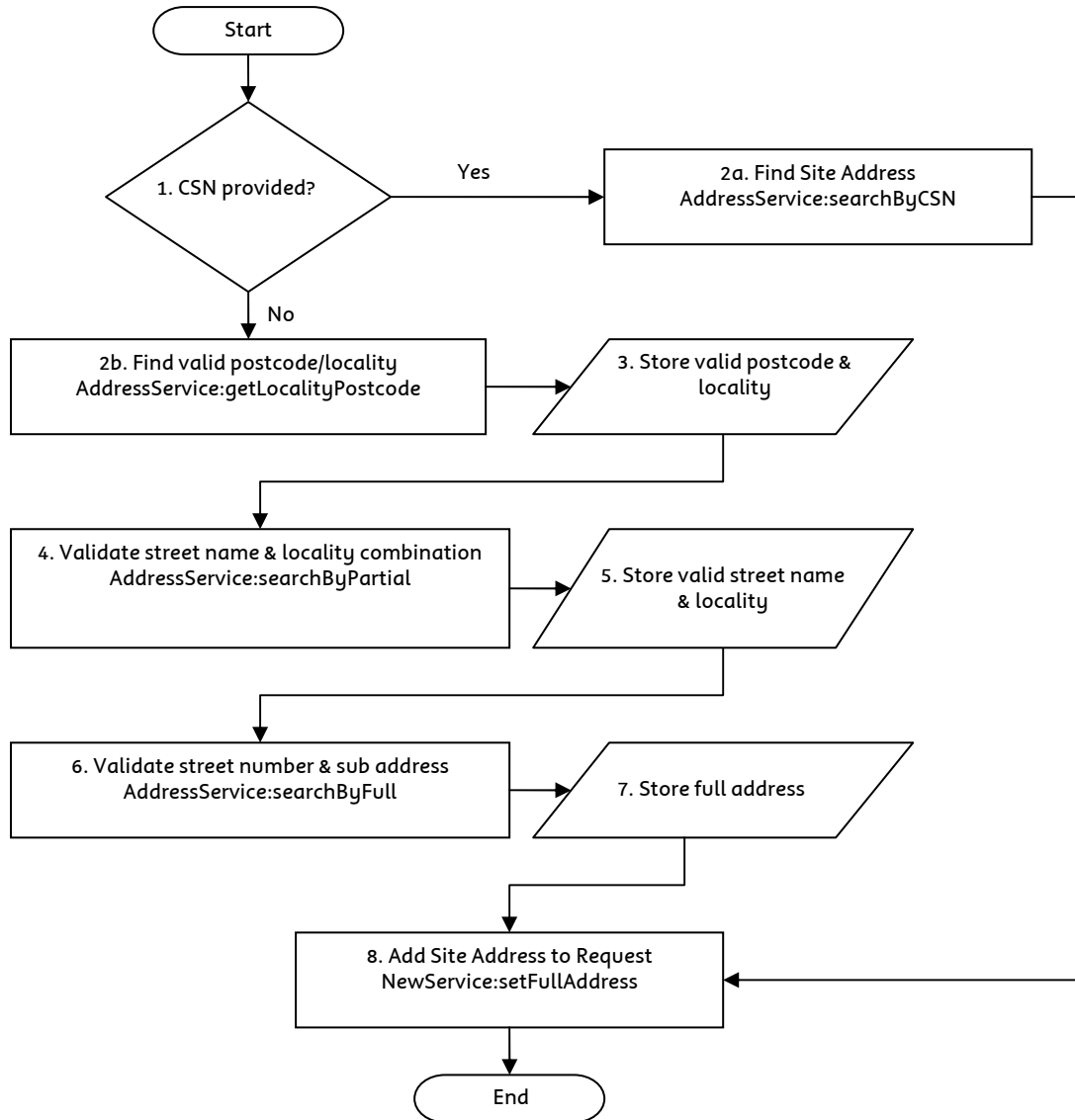
### 3 Address Web Services

The following web services can be used when performing an address search:

Web Service	Web Service Operation	Description	State
Address	searchByCSN	Find addresses associated with the supplied CSN.	Stateless
Address	getLocalityPostcode	Find valid combinations of postcode and locality.	Stateless
Address	searchbyPartial	Find valid street name & locality combination. Also provides valid street number ranges in the supplied street.	Stateless
Address	searchByFull	Find valid street number and sub address for supplied street name & locality.	Stateless

### 3.1 Address Web Service hierarchy

Using the address web services in a structured hierarchy greatly increases the chance of successfully matching an address in Telstra systems. The correct hierarchy is mapped in the below diagram:



### 3.1.1 Address Search Flow explained

Referring to the steps from Section 3.1, the following explains the address search flow in more detail. For detailed inputs, business rules and example XML refer to section four (Business rules and XML Examples).

1. If possible use a CSN which is active or has previously been working at the desired address.
2. (a) CSN available - one or more addresses will be returned. The appropriate address should be copied and used as the input for setFullAddress web service.
3. (b) No CSN – check the postcode (locality and postcode) to confirm correct combination and spelling.
4. From the returned data (step 2b) store the valid locality and postcode combination. This will be used as an input in step four (AddressService:searchByPartial).
5. Check that the street name can be found in the locality supplied (from step 3) and that the spelling is correct. This search will attempt to return similar street names if the spelling is not correct.
6. From the returned data (step four) store the appropriate street name, street type, locality & postcode. This will be used as an input in step six (AddressService:searchByFull).
7. Check that the street number and sub address details can be matched with Telstra records. This search will not check for alternate street names as it assumes this has already been performed in step four. Results returned in capital letters are confirmed addresses.
8. From the returned data (step 7) store the appropriate full address. This will be used as an input in step six (AddressService:searchByFull).
9. Enter the full address from step seven in capital letters and proceed with the normal work flow.

## 4 Business rules and XML examples

### 4.1 Find Site Address by CSN

<b>Web Service:</b>	AddressService:searchByCSN
<b>Description:</b>	This web service will return all known addresses associated to a CSN in Telstra systems.
<b>Business Rules:</b>	
<ol style="list-style-type: none"><li>1. One parameter is required &lt;customerServiceNumber&gt;.</li><li>2. Multiple addresses may be returned for one CSN, this is due to both active and inactive service records being returned.</li><li>3. The appropriate address should be copied exactly (<b>keeping the address in capitals</b>) as the input for NewService:setFullAddress or ExternalRelocationService:setFullAddress (refer to section 4.5).</li></ol>	
<b>Example Request:</b>	
<pre>&lt;ADSearchByCSNRequest xmlns="http://telstra.com/lolo2/b2b/parts/2004/10/10"&gt;   &lt;customerServiceNumber&gt;0733591234&lt;/customerServiceNumber&gt; &lt;/ADSearchByCSNRequest&gt;</pre>	
<b>Example Response:</b>	
<pre>&lt;ADSearchByCSNResponse xmlns="http://telstra.com/lolo2/b2b/parts/2004/10/10"&gt;   &lt;address&gt;     &lt;streetNumber&gt;37&lt;/streetNumber&gt;     &lt;streetName&gt;SMITH&lt;/streetName&gt;     &lt;streetType&gt;ST&lt;/streetType&gt;     &lt;locality&gt;KEDRON&lt;/locality&gt;     &lt;postCode&gt;4031&lt;/postCode&gt;   &lt;/address&gt;   &lt;address&gt;     &lt;streetNumber&gt;12&lt;/streetNumber&gt;     &lt;streetName&gt;FIRST&lt;/streetName&gt;     &lt;streetType&gt;AVE&lt;/streetType&gt;     &lt;locality&gt;KEDRON&lt;/locality&gt;     &lt;postCode&gt;4031&lt;/postCode&gt;   &lt;/address&gt;   &lt;address&gt;     &lt;subAddressType&gt;SHOP&lt;/subAddressType&gt;     &lt;subAddressNumber&gt;126&lt;/subAddressNumber&gt;     &lt;streetNumber&gt;52&lt;/streetNumber&gt;     &lt;streetName&gt;MAIN&lt;/streetName&gt;     &lt;streetType&gt;RD&lt;/streetType&gt;     &lt;locality&gt;CHERMSIDE&lt;/locality&gt;     &lt;postCode&gt;4032&lt;/postCode&gt;   &lt;/address&gt; &lt;/ADSearchByCSNResponse&gt;</pre>	

## 4.2 Locality and Postcode search

<b>Web Service:</b>	AddressService:getLocalityPostcode
<b>Description:</b>	This transaction will provide a list of valid Locality and Postcode combinations based upon input of Locality (suburb) and/or Postcode.
<b>Business Rules</b>	
<ol style="list-style-type: none"> <li>1. Only one parameter either &lt;locality&gt; or &lt;postCode&gt; is required, however both parameters can be submitted together.</li> <li>2. All matching records in Telstra systems will be returned for the parameter/s entered. Therefore, the same locality can be returned with multiple postcodes and the same postcode can be returned with multiple localities.</li> <li>3. The recommended search option is to use both locality and postcode together; this will ensure all possible locality and postcode combinations for the submitted parameters are returned in one search rather than two (refer to example XML below).</li> <li>4. If the input locality is spelt incorrectly or an invalid postcode entered, no results relating to the incorrect input will be returned.             <ol style="list-style-type: none"> <li>a. If only one parameter is entered in this scenario an error will be returned.</li> <li>b. If both locality and postcode are entered and one is incorrect, the results for the correct parameter will be returned without any errors.</li> </ol> </li> <li>5. The appropriate locality postcode combination that was returned by LOLIG should be used as inputs into the AddressService:searchByPartial (refer to section 4.3).</li> </ol>	
<b>Example request:</b>	
<pre> &lt;ADGetLocalityPostcodeRequest xmlns="http://telstra.com/lolo2/b2b/parts/2004/10/10"&gt;   &lt;postcodeLocality&gt;     &lt;locality&gt;Wishart&lt;/locality&gt;     &lt;postCode&gt;4123&lt;/postCode&gt;   &lt;/postcodeLocality&gt; &lt;/ADGetLocalityPostcodeRequest&gt; </pre>	
<b>Example Response:</b>	
<pre> &lt;ADGetLocalityPostcodeResponse xmlns="http://telstra.com/lolo2/b2b/parts/2004/10/10"&gt;   &lt;postcodeLocality&gt;     &lt;locality&gt;ROCHEDALE&lt;/locality&gt;     &lt;postCode&gt;4123&lt;/postCode&gt;   &lt;/postcodeLocality&gt;   &lt;postcodeLocality&gt;     &lt;locality&gt;WISHART&lt;/locality&gt;     &lt;postCode&gt;0822&lt;/postCode&gt;   &lt;/postcodeLocality&gt;   &lt;postcodeLocality&gt;     &lt;locality&gt;WISHART&lt;/locality&gt;     &lt;postCode&gt;4122&lt;/postCode&gt;   &lt;/postcodeLocality&gt;   &lt;postcodeLocality&gt;     &lt;locality&gt;ROCHEDALE SOUTH&lt;/locality&gt;     &lt;postCode&gt;4123&lt;/postCode&gt;   &lt;/postcodeLocality&gt; &lt;/ADGetLocalityPostcodeResponse&gt; </pre>	

## 4.3 Street search

<b>Web Service:</b>	AddressService:searchByPartial
<b>Description:</b>	This transaction is used to find a valid street name & locality combination and will provide valid street number ranges if a valid street name & locality combination is found.
<b>Business Rules</b>	
<ol style="list-style-type: none"> <li>1. Do <b>not</b> enter the parameter &lt;streetNumberSuffix&gt;, submitting data in this field will make no difference in the results returned and may result in the search erroring.</li> <li>2. Required parameters &lt;streetName&gt;, &lt;locality&gt; and &lt;postCode&gt;. Optional parameter &lt;streetNumber&gt;.</li> <li>3. The values for the Locality and Postcode parameters should be the returned results from a pervious AddressService:getLocalityPostcode search.</li> <li>4. If an identical match can not be found in Telstra systems, one or more similar street names in the supplied locality can be returned. <ol style="list-style-type: none"> <li>a. This will only occur if the first 3 letters of the street name match a Telstra record in the supplied locality.</li> <li>b. If the first 3 letters do not match any records an error (No Records Found.) will be returned.</li> </ol> </li> <li>5. If a street name is found in Telstra systems one or more valid street number ranges will be returned. It is recommended that the optional street number parameter is used as part of the search to refine the street number range search results. This is most beneficial when searching addresses in CBD areas, where a street can return a large number of street number ranges.</li> <li>6. This search does not check if an individual street number is valid, it only checks if the supplied street number falls in a valid range. Individual street number validation is preformed in the AddressService:searchByFull search.</li> <li>7. The appropriate street name, street type, locality &amp; postcode combination that was returned by LOLIG should be used as inputs in AddressService:searchByFull (refer to section 4.4).</li> </ol>	
<b>Example Request:</b>	
<pre> &lt;ADSearchByPartialRequest xmlns="http://telstra.com/lolo2/b2b/parts/2004/10/10"&gt;   &lt;address&gt;     &lt;streetNumber&gt;52&lt;/streetNumber&gt;     &lt;streetName&gt;Ann&lt;/streetName&gt;     &lt;locality&gt;Brisbane&lt;/locality&gt;     &lt;postCode&gt;4000&lt;/postCode&gt;   &lt;/address&gt; &lt;/ADSearchByPartialRequest&gt; </pre>	
<b>Example Response:</b>	
<pre> &lt;ADSearchByPartialResponse xmlns="http://telstra.com/lolo2/b2b/parts/2004/10/10"&gt;   &lt;address&gt;     &lt;rangeType&gt;EVEN&lt;/rangeType&gt;     &lt;streetNumberLower&gt;50&lt;/streetNumberLower&gt;     &lt;streetNumberUpper&gt;82&lt;/streetNumberUpper&gt;     &lt;streetName&gt;ANN&lt;/streetName&gt;     &lt;streetType&gt;ST&lt;/streetType&gt;     &lt;locality&gt;BRISBANE&lt;/locality&gt;     &lt;postCode&gt;4000&lt;/postCode&gt;     &lt;exchangeServiceArea&gt;EDSN&lt;/exchangeServiceArea&gt;     &lt;facsRealm&gt;10&lt;/facsRealm&gt;   &lt;/address&gt; &lt;/ADSearchByPartialResponse&gt; </pre>	

## 4.4 Street number and sub-address search

<b>Web Service:</b>	AddressService:searchByFull
<b>Description:</b>	This transaction will search for matching street number and sub address records for a valid street name & locality combination.
<b>Business Rules</b>	
<ol style="list-style-type: none"> <li>1. <b>Inputs for this search (other than street type) should be supplied in lower case. If a match is found in Telstra systems the out put will be returned in CAPITAL letters, allowing easy validation of the returned results.</b> <ol style="list-style-type: none"> <li>a. &lt;streetType&gt; is the only field required in capital letters, if this field is supplied in lower case an error may occur.</li> <li>b. If the output is returned in lower case, all parameters should be checked and confirmed with the customer before using the address in the setFullAddress web service. As unmatched addresses will be checked manually by Telstra and may be rejected if the supplied information is invalid/unclear.</li> </ol> </li> <li>2. Required parameters &lt;streetName&gt;, &lt;streetType&gt;, &lt;locality&gt; and &lt;postCode&gt;. Optional parameters &lt;streetNumber&gt;, &lt;additionalAddress&gt;, &lt;subAddressType&gt;, &lt;subAddressNumber&gt;, &lt;streetNumberSuffix&gt; &amp; &lt;streetSuffix&gt;.</li> <li>3. It is recommended to always supply a street number. As searching without a street number may result in large volumes of records being returned, errors, long delays and/or timeouts. If the address does not have a street number an additional address parameter should be entered.</li> <li>4. When searching addresses with sub addresses it is recommended to use both a sub address type &amp; sub address number to reduce the number of records returned.</li> <li>5. This search assumes that a partial address search (AddressService:searchByPartial) has already been performed i.e. a valid street name has been entered (with spelling as per Telstra systems).</li> <li>6. If a partial address search has not been performed and an invalid street name is entered, this web service will <b>NOT</b> return an error, will <b>NOT</b> find valid inplace services and will <b>NOT</b> automate.</li> <li>7. The appropriate full address that was returned by LOLIG should be used as inputs in either NewService:setFullAddress or ExternalRelocationService:setFullAddress (refer to section 4.5).</li> </ol>	
<b>Example Request:</b>	
<pre> &lt;ADSearchByFullRequest xmlns="http://telstra.com/lolo2/b2b/parts/2004/10/10"&gt;   &lt;address&gt;     &lt;streetNumber&gt;25&lt;/streetNumber&gt;     &lt;streetName&gt;Victoria&lt;/streetName&gt;     &lt;streetType&gt;TCE&lt;/streetType&gt;     &lt;locality&gt;Gordon park&lt;/locality&gt;     &lt;postCode&gt;4031&lt;/postCode&gt;   &lt;/address&gt; &lt;/ADSearchByFullRequest&gt; </pre>	

**Example Response:**

**Note:** As per the below example, the spelling of sub addresses can vary at the same address (eg UNIT vs UN). This is why it is important to use the output exactly when inputting in setFullAddress.

```
<ADSearchByFullResponse
xmlns="http://telstra.com/lolo2/b2b/parts/2004/10/10">
  <address>
    <subAddressType>UNIT</subAddressType>
    <subAddressNumber>4</subAddressNumber>
    <streetNumber>25</streetNumber>
    <streetName>VICTORIA</streetName>
    <streetType>TCE</streetType>
    <locality>GORDON PARK</locality>
    <postCode>4031</postCode>
    <exchangeServiceArea>LCHE</exchangeServiceArea>
  </address>
  <address>
    <subAddressType>UN</subAddressType>
    <subAddressNumber>6</subAddressNumber>
    <streetNumber>25</streetNumber>
    <streetName>VICTORIA</streetName>
    <streetType>TCE</streetType>
    <locality>GORDON PARK</locality>
    <postCode>4031</postCode>
    <exchangeServiceArea>LCHE</exchangeServiceArea>
  </address>
  <address>
    <subAddressType>UN</subAddressType>
    <subAddressNumber>3</subAddressNumber>
    <streetNumber>25</streetNumber>
    <streetName>VICTORIA</streetName>
    <streetType>TCE</streetType>
    <locality>GORDON PARK</locality>
    <postCode>4031</postCode>
    <exchangeServiceArea>LCHE</exchangeServiceArea>
  </address>
  <address>
    <subAddressType>UN</subAddressType>
    <subAddressNumber>5</subAddressNumber>
    <streetNumber>25</streetNumber>
    <streetName>VICTORIA</streetName>
    <streetType>TCE</streetType>
    <locality>GORDON PARK</locality>
    <postCode>4031</postCode>
    <exchangeServiceArea>LCHE</exchangeServiceArea>
  </address>
  <address>
    <subAddressType>UN</subAddressType>
    <subAddressNumber>2</subAddressNumber>
    <streetNumber>25</streetNumber>
    <streetName>VICTORIA</streetName>
    <streetType>TCE</streetType>
    <locality>GORDON PARK</locality>
    <postCode>4031</postCode>
    <exchangeServiceArea>LCHE</exchangeServiceArea>
  </address>
  <address>
    <subAddressType>UN</subAddressType>
    <subAddressNumber>1</subAddressNumber>
```

```

    <streetNumber>25</streetNumber>
    <streetName>VICTORIA</streetName>
    <streetType>TCE</streetType>
    <locality>GORDON PARK</locality>
    <postCode>4031</postCode>
    <exchangeServiceArea>LCHE</exchangeServiceArea>
  </address>
</ADSearchByFullResponse>

```

## 4.5 Set Full Address

<b>Web Service:</b>	NewService:setFullAddress or ExternalRelocationService:setFullAddress
<b>Description:</b>	This transaction captures the full address of the new location for the connection of a new service or an external relocation.
<b>Business Rules</b>	
<ol style="list-style-type: none"> <li>1. All inputs for this web service should be supplied in CAPITAL letters, or the Request will be sent manual to be checked by Telstra.</li> <li>2. Addresses that have not been confirmed using the four address searches should not be entered. While inplace records may be returned, the request may still require manual assessment if a confirmed address is not entered.</li> <li>3. If the next operation option of getOfferingCollection appears and not getInplaceList, LOLIG has determined that the Request will need to be manually checked.</li> </ol>	

## 4.6 Find Inplace CSNs at the Address

<b>Web Service:</b>	NewService:getInplaceList or ExternalRelocation:getInplaceList
<b>Description:</b>	This transaction returns inplaces at the address provided in the set full address web service.
<b>Business Rules</b>	
<ol style="list-style-type: none"> <li>1. Some addresses with sub addresses may return the sub address type and number in the additionalAddress field rather than the individual sub address fields. See example response below.</li> <li>2. The inplace id corresponding to the inplace that is to be used, should be copied and used as the input in the NewService:setInplaceList or ExternalRelocation:setInplaceList web service.</li> </ol>	
<b>Example Response:</b>	
<pre> &lt;NSGetInplaceListResponse xmlns="http://telstra.com/lolo2/b2b/parts/2004/10/10"&gt;   &lt;inplaceDetails&gt;     &lt;inplaceId&gt;400000055579_6628965099610&lt;/inplaceId&gt;     &lt;customerServiceNumber&gt;0738575963&lt;/customerServiceNumber&gt;     &lt;derivedStatus&gt;I&lt;/derivedStatus&gt;     &lt;status&gt;I&lt;/status&gt;     &lt;availability&gt;28/04/2009&lt;/availability&gt;     &lt;preProvisionedFlag&gt;N&lt;/preProvisionedFlag&gt;     &lt;address&gt;       &lt;additionalAddress&gt;UNIT 6&lt;/additionalAddress&gt;       &lt;streetNumber&gt;25&lt;/streetNumber&gt;     &lt;/address&gt;   &lt;/inplaceDetails&gt; &lt;/NSGetInplaceListResponse&gt; </pre>	

```
<streetName>VICTORIA</streetName>
<streetType>TCE</streetType>
<locality>GORDON PARK</locality>
<postCode>4031</postCode>
</address>
<infrastructureType>PSTN</infrastructureType>
</inplaceDetails>
<nextOperation>NewServiceService:setInplacePath</nextOperation>
<nextOperation>NewServiceService:cancelRequestItem</nextOperation>
<nextOperation>RequestService:cancelMultiStep</nextOperation>
</NSGetInplaceListResponse>
```