



Postcodes4u Webservice Developer API

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Webservice Developer API

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1. Webservice Developer API Introduction

This document is intended to assist developers in integrating the Postcodes4u UK address lookup service into a bespoke website or software application, or when our existing free Postcodes4u plugins do not match your requirement.

To access the Postcodes4u service, you must have a Postcodes4u account, if you do not have an account you can sign up for free.

Full details can be found on our website www.Postcodes4u.co.uk.

Selecting an address using Postcodes4u consists of 2 stages.

1. The Address Search

This is where a summary list of address is returned that matches either a Postcode or a Latitude and Longitude position.

The **Postcode Address Search** is detailed at Section 2 of this Document

The **Latitude & Longitude Address Search** is detailed at Section 3 of this Document.

2. The Address Selection

This is where the Full Details of the required address is returned using the unique Postcodes4u address ID which was included in the Postcode or latitude and Longitude Address Search Summary data.

The returned data can be used to populate a web form or passed into your application. The Address Selection is detailed at Section 4 of this document.

2. Postcode Address Search

Postcode Address Search returns a summary list of addresses specified by a postcode.

2.1. Postcode Address Search – Calling Parameters

The Postcode Address Search is carried out by a Webservice Call using the **HTTP GET** method as detailed below:

URL :

```
http( or https)
://services.3xsoftware.co.uk/Search/ById/{FORMAT}?username={USERNAME}
&key={KEY}&postcode={POSTCODE}&callback={CALLBACK}
```

This operation supports JSONP responses. The call-back function name is optional.

Parameters

<i>Parameter</i>	<i>Description</i>	<i>Data type</i>	<i>Values</i>
{FORMAT}	The format parameter indicates the format of the data returned from the service. Currently the service will return either XML or JSON	String	'XML' , 'JSON'
{USERNAME}	The username parameter is the username associated with your Postcodes4u account.	String	A valid Postcodes4u account username.
{KEY}	The key parameter is the product key that is currently associated with your account.	String	A valid 16-digit product key e.g. AB12-CD34-EF56-GH78
{POSTCODE}	The postcode parameter is search term to return a list of addresses from the service.	String	A full or partial UK postcode e.g. LL29 8HT
{CALLBACK} (Optional)	The callback parameter is the name of function that is executed when the data is returned and is an optional parameter that can only be specified when the format parameter is set to json.		

2.2. Postcode Address Search – Response

The Postcode Address Search can return data in JSON or XML depending in the format value used in the Webservice Call. The data returned for these calls will now be detailed.

2.2.1 Postcode Address Search – Call with JSON Response

An example Postcode Address Search with a JSON response is detailed below:

<http://services.3xsoftware.co.uk/Search/ByPostcode/json?username=uuuuuuu&k ey=xxxx-xxxx-xxxx-xxxx &postcode=ll298ht&callback=yourCallbackFunctionName>

JSON Response:

```
yourCallbackFunctionName({"Summaries":[{"Id":14668457,"StreetAddress":"3X Software Ltd","Place":"23 Princes Drive Colwyn Bay"}, {"Id":14668460,"StreetAddress":"Aslets The Letting Agents Ltd","Place":"23 Princes Drive Colwyn Bay"}, {"Id":14668449,"StreetAddress":"Barclays Bank Plc","Place":"Raymond Court Princes Drive Colwyn Bay"}, {"Id":14668444,"StreetAddress":"Clybiau Plant Cymru Kids Clubs","Place":"19 Princes Drive Colwyn Bay"}, {"Id":14668459,"StreetAddress":"Curvasure Ltd","Place":"23 Princes Drive Colwyn Bay"}, {"Id":14668455,"StreetAddress":"D I P","Place":"13 Princes Drive Colwyn Bay"}, {"Id":14668453,"StreetAddress":"Emmanuel Solicitors","Place":"25 Princes Drive Colwyn Bay"}, {"Id":14668447,"StreetAddress":"Evans Wolfenden Partnership Llp","Place":"27 Princes Drive Colwyn Bay"}, {"Id":14668441,"StreetAddress":"Flat 1","Place":"15 Princes Drive Colwyn Bay"}, {"Id":14668461,"StreetAddress":"Flat 2","Place":"15 Princes Drive Colwyn Bay"}, {"Id":14668462,"StreetAddress":"Flat 3","Place":"15 Princes Drive Colwyn Bay"}, {"Id":14668452,"StreetAddress":"Glyn Owen & Co","Place":"25 Princes Drive Colwyn Bay"}, {"Id":14668458,"StreetAddress":"Jackson Accounting Ltd","Place":"23 Princes Drive Colwyn Bay"}, {"Id":14668451,"StreetAddress":"Manor Service Station Ltd","Place":"Princes Drive Colwyn Bay"}, {"Id":14668448,"StreetAddress":"Mark Roberts Environmental","Place":"27 Princes Drive Colwyn Bay"}, {"Id":14668442,"StreetAddress":"Mcintyre & Daughters Ltd","Place":"Alliance House 21 Princes Drive Colwyn Bay"}, {"Id":14668456,"StreetAddress":"Nacro","Place":"13 Princes Drive Colwyn Bay"}, {"Id":14668454,"StreetAddress":"Quality Solicitors Edward Hughes","Place":"25 Princes Drive Colwyn Bay"}, {"Id":14668446,"StreetAddress":"Ravenscroft Homes N W Ltd","Place":"27 Princes Drive Colwyn Bay"}, {"Id":14668443,"StreetAddress":"T Brackstone & Co","Place":"19 Princes Drive Colwyn Bay"}, {"Id":14668450,"StreetAddress":"Thornley Leisure Parks","Place":"William Sutcliffe Suite Raymond Court Princes Drive Colwyn Bay"}, {"Id":14668445,"StreetAddress":"Y Gadwyn","Place":"19 Princes Drive Colwyn Bay"}, {"Id":14668463,"StreetAddress":"17 Princes Drive","Place":"Colwyn Bay"}]});
```

A detailed description of the data returned for a Postcode Address Search using JSON is described below.

<pre>yourCallbackFunctionName</pre>	The name of the callback function you want to call to process the returned address summaries as specified in the request.
<pre> ({"Summaries": [</pre>	Summaries is an array of the summary addresses that match the specified postcode
<pre> { "Id":14668457,</pre>	FIRST ADDRESS 1 st Address Postcodes4u Address Reference/Id
<pre> "StreetAddress":"3X Software Ltd",</pre>	1 st Street Address Summary
<pre> "Place":"23 Princes Drive Colwyn Bay"</pre>	1 st Place name Summary
<pre> },</pre>	
<pre> . . . Other Addresses...</pre>	. . .
<pre> },</pre>	
<pre> {"Id":14668463,</pre>	LAST ADDRESS Last Address Postcodes4u Address Reference
<pre> "StreetAddress":"17 Princes Drive",</pre>	Last Street Address Summary
<pre> "Place":"Colwyn Bay"</pre>	Last Place name Summary
<pre> }]});</pre>	

2.2.2 Postcode Address Search – Call with XML Response

An example Postcode Address Search with a XML response is detailed below:

`http://services.3xsoftware.co.uk/Search/ByPostcode/xml?username=uuuuuuu&key=xxxx-xxxx-xxxx-xxxx &postcode=11298ht&callback=yourCallbackFunctionName`

XML Response:

```
<Results xmlns="http://schemas.datacontract.org/2004/07/PostcodeAPI.Classes" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
  <Summaries>
    <Summary>
      <Id>14832125</Id>
      <StreetAddress>3X Software Ltd</StreetAddress>
      <Place>23 Princes Drive Colwyn Bay</Place>
    </Summary>
    <Summary>
      <Id>14832128</Id>
      <StreetAddress>Aslets The Letting Agents Ltd</StreetAddress>
      <Place>23 Princes Drive Colwyn Bay</Place>
    </Summary>
    <Summary>
      <Id>14832119</Id>
      <StreetAddress>Barclays Bank Plc</StreetAddress>
      <Place>Raymond Court Princes Drive Colwyn Bay</Place>
    </Summary>
    ... Further Address Summary Entries ... Finally, ...
    <Summary>
      <Id>14832130</Id>
      <StreetAddress>17 Princes Drive</StreetAddress>
      <Place>Colwyn Bay</Place>
    </Summary>
  </Summaries>
</Results>
```

The XML Values returned for each address, stored as a ‘Summaries’ array of ‘Summary’ entries, is detailed below:

- | | |
|------------------------------|------------------------------------|
| <Id> | - Postcodes4u Address Reference/Id |
| <StreetAddress> | - Street Address Summary |
| <Place> | - Place Name Summary |

2.3 Example ASP Code for Postcode Address Search

```
private DataSet PostcodeSearch(string searchTerm)
{
    string format = "xml";
    string key = "AB12-CD34-EF56-GH78";
    string username = "OurPc4uUserName";
    string url = "http://services.3xsoftware.co.uk/search/bypostcode/";
    url += System.Web.HttpUtility.UrlEncode(format);
    url += "?username=" + System.Web.HttpUtility.UrlEncode(username);
    url += "&key=" + System.Web.HttpUtility.UrlEncode(key);
    url += "&postcode=" + System.Web.HttpUtility.UrlEncode(searchTerm);

    //Create the dataset
    var ds = new DataSet();
    ds.ReadXml(url);

    //Check for an error
    if ((ds.Tables["Error"] != null) && (ds.Tables["Error"].Columns["Description"] != null))
    {
        string exc = ds.Tables["Error"].Rows[0]["Description"].ToString();
        throw new Exception(exc);
    }

    if (ds.Tables["Summary"] != null)
    {
        ds.Tables["Summary"].Constraints.Clear();
    }

    ds.Relations.Clear();
    if (ds.Tables["Summaries"] != null)
    {
        ds.Tables.Remove("Summaries");
    }

    //Return the dataset
    return ds;
    //FYI: The dataset contains the following columns:
    //Id
    //StreetAddress
    //Place
}
```

3. Latitude and Longitude Address Search

Longitude and latitude search returns a list of addresses specified by a longitude and latitude position.

3.1 Latitude and Longitude Address Search – Calling Parameters

The Latitude and Longitude Address Search is carried out by a Webservice Call using the **HTTP GET** method as detailed below:

Url:

```
http( or https)
://services.3xsoftware.co.uk/Search/ByLatLong/{FORMAT}?username={USERNAME}
&key={KEY}&lat={LATITUDE}&long={LONGITUDE}&callback={CALLBACK}
```

This operation supports JSONP responses.

Parameters

<i>Parameter</i>	<i>Description</i>	<i>Data type</i>	<i>Values</i>
{FORMAT}	The format parameter indicates the format of the data returned from the service. Currently the service will return either XML or JSON	String	'XML' , 'JSON'
{USERNAME}	The username parameter is the username associated with your Postcodes4u account.	String	A valid Postcodes4u account username.
{KEY}	The key parameter is the product key that is currently associated with your account.	String	A valid 16-digit product key e.g. AB12-CD34-EF56-GH78
{LATITUDE}	The latitude parameter specified must be a valid latitude that falls within the UK.	String	The latitude parameter specified must be a valid latitude that falls within the UK.
{LONGITUDE}	The longitude parameter is a valid longitude that falls within the UK.	String	The longitude parameter is a valid longitude that falls within the UK.
{CALLBACK} (Optional)	The callback parameter is the name of function that is executed when the data is returned and is an optional parameter that can only be specified when the format parameter is set to json.		

3.2 Latitude and Longitude Address Search – Response

The Latitude and Longitude Address Search can return data in JSON or XML depending in the format value used in the Webservice Call. The data returned for these calls will now be detailed.

3.2.1 Latitude and Longitude Address Search – Call with JSON Response

An example Latitude and Longitude Address Search with a JSON response is detailed below:

`http://services.3xsoftware.co.uk/Search/ByLatLong/json?username=uuuuu&key=xxxx-xxxx-xxxx-xxxx &lat=53.297&long=-3.829&callback=yourCallbackFunctionName`

JSON Response:

```
callbackfuncname({"GeoSummaries":[{"Id":14850437,"StreetAddress":"1 Rathbone Terrace","Place":"Deganwy Conwy","Postcode":"LL319EQ"}, {"Id":14850440,"StreetAddress":"2 Rathbone Terrace","Place":"Deganwy Conwy","Postcode":"LL319EQ"}, {"Id":14850441,"StreetAddress":"3 Rathbone Terrace","Place":"Deganwy Conwy","Postcode":"LL319EQ"}, {"Id":14850442,"StreetAddress":"4 Rathbone Terrace","Place":"Deganwy Conwy","Postcode":"LL319EQ"}, {"Id":14850443,"StreetAddress":"5 Rathbone Terrace","Place":"Deganwy Conwy","Postcode":"LL319EQ"}, {"Id":14850444,"StreetAddress":"6 Rathbone Terrace","Place":"Deganwy Conwy","Postcode":"LL319EQ"}, {"Id":14850445,"StreetAddress":"7 Rathbone Terrace","Place":"Deganwy Conwy","Postcode":"LL319EQ"}, {"Id":14850446,"StreetAddress":"8 Rathbone Terrace","Place":"Deganwy Conwy","Postcode":"LL319EQ"}, {"Id":14850447,"StreetAddress":"9 Rathbone Terrace","Place":"Deganwy Conwy","Postcode":"LL319EQ"}, {"Id":14850438,"StreetAddress":"10 Rathbone Terrace","Place":"Deganwy Conwy","Postcode":"LL319EQ"}, {"Id":14850439,"StreetAddress":"11 Rathbone Terrace","Place":"Deganwy Conwy","Postcode":"LL319EQ"}]});
```

A detailed description of the data returned for a Latitude and Longitude Address Search using JSON is described below.

<code>yourCallbackFunctionName</code>	The name of the callback function you want to call to process the returned address summaries as specified in the request.
<pre>{ "GeoSummaries": [</pre>	GeoSummaries is an array of the summary addresses that match the specified latitude and longitude position
<pre> { "Id":14860809,</pre>	FIRST ADDRESS
<pre> "StreetAddress":"1 Rathbone Terrace",</pre>	1 st Address Postcodes4u Address Reference/Id
<pre> "Place":"Deganwy Conwy"</pre>	1 st Street Address Summary
<pre> "Postcode":"LL319EQ"</pre>	1 st Address Place Name Summary
<pre> },</pre>	1 st Address Postcode
<pre> { "Id":14550439,</pre>Other Addresses
<pre> "StreetAddress":"11 Rathbone Terrace",</pre>	LAST ADDRESS
<pre> "Place":"Deganwy Conwy"</pre>	Last Address Postcodes4u Address Reference
<pre> "Postcode":"LL319EQ"</pre>	Last Street Address Summary
<pre> }</pre>	Last Address Place Name Summary
<pre>]});</pre>	Last Address Postcode

3.2.2 Latitude and Longitude Address Search – Call with XML Response

An example Latitude and Longitude Address Search with a XML response is detailed below:

`http://services.3xsoftware.co.uk/Search/ByPostcode/xml?username=uuuuuuu&key=xxxx-xxxx-xxxx-xxxx &postcode=ll298ht&callback=yourCallbackFunctionName`

XML Response:

```
<Results xmlns="http://schemas.datacontract.org/2004/07/PostcodeAPI.Classes" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
  <GeoSummaries>
    <GeoSummary>
      <Id>14850437</Id>
      <StreetAddress>1 Rathbone Terrace</StreetAddress>
      <Place>Deganwy Conwy</Place>
      <Postcode>LL319EQ</Postcode>
    </GeoSummary>
    <GeoSummary>
      <Id>14850440</Id>
      <StreetAddress>2 Rathbone Terrace</StreetAddress>
      <Place>Deganwy Conwy</Place>
      <Postcode>LL319EQ</Postcode>
    </GeoSummary>
    ... etc ...
    <GeoSummary>
      <Id>14850439</Id>
      <StreetAddress>11 Rathbone Terrace</StreetAddress>
      <Place>Deganwy Conwy</Place>
      <Postcode>LL319EQ</Postcode>
    </GeoSummary>
  </GeoSummaries>
</Results>
```

The XML Values returned for each address, stored as a 'GeoSummaries' array of 'GeoSummary' entries, as detailed below:

<Id>	- Postcodes4u Address Reference/Id
<StreetAddress>	- Street Address Summary
<Place>	- Place Name Summary
<Postcode>	- Address Postcode

3.3 Example ASP Code for Longitude & Latitude Search

```
private DataSet LongLatSearch(string longitude, string latitude)
{
    string format = "xml";
    string key = "AB12-CD34-EF56-GH78";
    string username = "OurPc4uUserName";
    string url = "http://services.3xsoftware.co.uk/search/byid/";
    url += System.Web.HttpUtility.UrlEncode(format);
    url += "?username=" + System.Web.HttpUtility.UrlEncode(username);
    url += "&key=" + System.Web.HttpUtility.UrlEncode(key);
    url += "&id=" + System.Web.HttpUtility.UrlEncode(postCodeId.ToString());

    //Build the url
    if (!url.StartsWith("http://"))
    {
        url = "http://" + url;
    }
    if (!url.EndsWith("/"))
    {
        url = url + "/";
    }
    //Create the dataset
    var ds = new DataSet();
    ds.ReadXml(url);
    //Check for an error
    if (ds.Tables.Count == 1 && ds.Tables[0].Columns.Count == 4 &&
        ds.Tables[0].Columns[0].ColumnName == "Error")
        throw new Exception(ds.Tables[0].Rows[0].ItemArray[1].ToString());

    DataTable dtAddress = ds.Tables[0];
    if (dtAddress.Rows.Count > 0)
    {
        address.Address1 = dtAddress.Rows[0]["Line1"].ToString();
        address.Address2 = dtAddress.Rows[0]["Line2"].ToString();
        address.City = dtAddress.Rows[0]["PostTown"].ToString();
        if (address.City == address.Address2) address.Address2 = string.Empty;
        var county = dtAddress.Rows[0]["County"] != null
            ? dtAddress.Rows[0]["County"].ToString() : "";
        var sp = StateProvinceManager.GetStateProvinceByName(county);
        if (sp != null)
        {
            address.StateProvinceId = sp.StateProvinceId;
        }
        address.ZipPostalCode = dtAddress.Rows[0]["Postcode"].ToString();
        address.Company = dtAddress.Rows[0]["Company"].ToString();
    }
    address.CountryId = 80;
    return address;
}
```

4. Postcode Address Select

The Postcode Address Select returns all the data for a single address specified by a Postcodes4u address Id.

4.1 Address Select – Calling Parameters

The Address Selection is carried out by a Webservice Call using the **HTTP GET** method as detailed below:

URL :

http(or https)

://services.3xsoftware.co.uk/Search/ById/{**FORMAT**}?username={**USERNAME**}&key={**KEY**}&id={**ID**}&callback={**CALLBACK**}

This operation supports JSONP responses.

Parameters

<i>Parameter</i>	<i>Description</i>	<i>Data type</i>	<i>Values</i>
{ FORMAT }	The format parameter indicates the format of the data returned from the service. Currently the service will return either XML or JSON	String	'XML' , 'JSON'
{ USERNAME }	The username parameter is the username associated with your Postcodes4u account.	String	A valid Postcodes4u account username.
{ KEY }	The key parameter is the product key that is currently associated with your account.	String	A valid 16-digit product key e.g. AB12-CD34-EF56-GH78
{ ID }	The id parameter is the Postcodes4u Address ID/Reference for a single Address within the Postcodes4u Data.	String	Postcodes4u Address ID e.g. 14832125
{ CALLBACK } (Optional)	The callback parameter is the name of function that is executed when the data is returned and is an optional parameter that can only be specified when the format parameter is set to json.		

4.2 Postcode Address Select – Response

The Address Select can return data in JSON or XML depending in the format value used in the Webservice Call. The data returned for these calls will now be detailed.

4.2.1 Postcode Address Select – Call with JSON Response

An example Address Select call with a JSON response is detailed below:

`http://services.3xsoftware.co.uk/Search/ById/json?username=uuuuu&key=xxxx-xxxx-xxxx-xxxx& id=14832125&callback=yourCallbackFunctionName`

JSON Response:

```
yourCallbackFunctionName({"Address":{"AddressId":14832125,"AdministrativeCounty":"Conwy","Barcode":"","BuildingName":"","BuildingNumber":"23","Company":"3X Software Ltd","CountryName":"","County":"Clwyd","DeliveryPointSuffix":"1F","Department":"","DependentLocality":"","DoubleDependentLocality":"","Easting":284817,"Latitude":53.2973366,"LatitudeShort":53.297,"Line1":"3X Software Ltd","Line2":"23 Princes Drive","Line3":"Colwyn Bay","Line4":"LL29 8HT","Longitude":-3.72968817,"LongitudeShort":-3.729,"Northing":379215,"Pobox":"","PostTown":"Colwyn Bay","PostalCounty":"Clwyd","Postcode":"LL29 8HT","PrimaryStreet":"Princes Drive","PrimaryStreetName":"Princes","PrimaryStreetType":"Drive","SecondaryStreet":"","SecondaryStreetName":"","SecondaryStreetType":"","StreetAddress1":"3X Software Ltd","StreetAddress2":"23 Princes Drive","StreetAddress3":null,"SubBuilding":"","TraditionalCounty":"Denbighshire","Type":""}});
```

A detailed description of the data returned for a Postcode Address Selection using JSON is described below.

yourCallbackFunctionName	The name of the callback function you want to call to process the returned address summaries as specified in the request.
({ "Address": {	Address is the data item of the full address details.
"AddressId": 14832125,	Postcodes4u Address Reference/Id
"AdministrativeCounty": "Conwy",	Administrative County Name
"Barcode": "",	Post Office Barcode Data
"BuildingName": "",	Building Name
"BuildingNumber": "23",	Building Number
"Company": "3X Software Ltd",	Company Name
"CountryName": "",	Country Name
"County": "Clwyd",	County Name
"DeliveryPointSuffix": "1F",	Post Office Delivery Point Suffix Value
"Department": "",	Department Name
"DependentLocality": "",	Post Office Dependent Locality
"DoubleDependentLocality": "",	Post Office Double Dependent Locality
"Easting": 284817,	Post Office 'Easting Position Value'
"Latitude": 53.2973366,	Postcode Position Full 'Latitude' in degrees.
"LatitudeShort": 53.297,	Postcode Position Short 'Latitude' in degrees (3dec places)

Postcode Address Selection using JSON continued.

```
"Line1": "3X Software Ltd",
"Line2": "23 Princes Drive",
"Line3": "Colwyn Bay",
"Line4": "LL29 8HT",

"Longitude": -3.72968817,
"LongitudeShort": -3.729,

"Northing": 379215,
"PObox": "",
"PostTown": "Colwyn Bay",
"PostalCounty": "Clwyd",
"Postcode": "LL29 8HT",
"PrimaryStreet": "Princes Drive",
"PrimaryStreetName": "Princes",
"PrimaryStreetType": "Drive",

"SecondaryStreet": "",
"SecondaryStreetName": "",
"SecondaryStreetType": "",
"StreetAddress1": "3X Software Ltd",
"StreetAddress2": "23 Princes Drive",
"StreetAddress3": null,

"SubBuilding": "",
"TraditionalCounty": "Denbighshire",
"Type": ""
}});
```

Processed/Summarised Address Line1
Processed/Summarised Address Line2
Processed/Summarised Address Line3
Processed/Summarised Address Line4

Postcode Position Full 'Longitude' in degrees.
Postcode Position Short 'Longitude' in degrees
(3dec places)
Post Office 'Northing Position Value'
PO Box
Post Town
Postal County Name
Postcode
Primary Street
Primary Street Name
Primary Street Type

Secondary Street
Secondary Street Name
Secondary Street Type
Street Address 1
Street Address 2
Street Address 3

Sub Building
Traditional County Name
Post Office Address Type

4.2.2 Address Select – Call with XML Response

An example Postcode Address Selection call using XML is detailed below:

<http://services.3xsoftware.co.uk/Search/ById/xml?username=uuuuu&key=xxxx-xxxx-xxxx-xxxx&id=14832125&callback=yourCallbackFunctionName>

XML Response:

```
<Results xmlns="http://schemas.datacontract.org/2004/07/PostcodeAPI.Classes"
  xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
  <Address>
    <AddressId>14832125</AddressId>
    <AdministrativeCounty>Conwy</AdministrativeCounty>
    <Barcode/>
    <BuildingName/>
    <BuildingNumber>23</BuildingNumber>
    <Company>3X Software Ltd</Company>
    <CountryName/>
    <County>Clwyd</County>
    <DeliveryPointSuffix>1F</DeliveryPointSuffix>
    <Department/>
    <DependentLocality/>
    <DoubleDependentLocality/>
    <Easting>284809</Easting>
    <Latitude>53.29737</Latitude>
    <LatitudeShort>53.297</LatitudeShort>
    <Line1>3X Software Ltd</Line1>
    <Line2>23 Princes Drive</Line2>
    <Line3>Colwyn Bay</Line3>
    <Line4>LL29 8HT</Line4>
    <Longitude>-3.72980952</Longitude>
    <LongitudeShort>-3.729</LongitudeShort>
    <Northing>379219</Northing>
    <Pobox/>
    <PostTown>Colwyn Bay</PostTown>
    <PostalCounty>Clwyd</PostalCounty>
    <Postcode>LL29 8HT</Postcode>
    <PrimaryStreet>Princes Drive</PrimaryStreet>
    <PrimaryStreetName>Princes</PrimaryStreetName>
    <PrimaryStreetType>Drive</PrimaryStreetType>
    <SecondaryStreet/>
    <SecondaryStreetName/>
    <SecondaryStreetType/>
    <StreetAddress1>3X Software Ltd</StreetAddress1>
    <StreetAddress2>23 Princes Drive</StreetAddress2>
    <StreetAddress3 i:nil="true"/>
    <SubBuilding/>
    <TraditionalCounty>Denbighshire</TraditionalCounty>
    <Type/>
  </Address>
</Results>
```

A detailed description of the data returned for a Postcode Address Selection using XML is described below.

<AddressId>	Postcodes4u Address Reference/Id
<AdministrativeCounty>	Administrative County Name
<Barcode>	Post Office Barcode Data
<BuildingName>	Building Name
<BuildingNumber>	Building Number
<Company>	Company Name
<CountryName>	Country Name
<County>	County Name
<DeliveryPointSuffix>	Post Office Delivery Point Suffix Value
<Department>	Department Name
<DependentLocality>	Post Office Dependent Locality
<DoubleDependentLocality>	Post Office Double Dependent Locality
<Easting>	Post Office 'Easting Position Value'
<Latitude>	Postcode Position Full 'Latitude' in degrees.
<LatitudeShort>	Postcode Position Short 'Latitude' in degrees (3dec places)
<Line1>	Processed/Summarised Address Line1
<Line2>	Processed/Summarised Address Line2
<Line3>	Processed/Summarised Address Line3
<Line4>	Processed/Summarised Address Line4
<Longitude>	Postcode Position Full 'Longitude' in degrees.
<LongitudeShort>	Postcode Position Short 'Longitude' in degrees (3dec places)
<Northing>	Post Office 'Northing Position Value'
<Pobox>	PO Box
<PostTown>	Post Town
<PostalCounty>	Postal County Name
<Postcode>	Postcode
<PrimaryStreet>	Primary Street
<PrimaryStreetName>	Primary Street Name
<PrimaryStreetType>	Primary Street Type
<SecondaryStreet>	Secondary Street
<SecondaryStreetName>	Secondary Street Name
<SecondaryStreetType>	Secondary Street Type
<StreetAddress1>	Street Address 1
<StreetAddress2>	Street Address 2
<StreetAddress3>	Street Address 3
<SubBuilding>	Sub Building
<TraditionalCounty>	Traditional County Name
<Type>	Post Office Address Type

4.3 Example ASP Code for Address Select by ID

```
public static Address GetAddressById(decimal postCodeId)
{
    string format = "xml";
    string key = "AB12-CD34-EF56-GH78";
    string username = "OurPc4uUserName";
    string url = "http://services.3xsoftware.co.uk/search/byid/";
    url += System.Web.HttpUtility.UrlEncode(format);
    url += "?username=" + System.Web.HttpUtility.UrlEncode(username);
    url += "&key=" + System.Web.HttpUtility.UrlEncode(key);
    url += "&id=" + System.Web.HttpUtility.UrlEncode(postCodeId.ToString());

    //Build the url
    if (!url.StartsWith("http://"))
    {
        url = "http://" + url;
    }
    if (!url.EndsWith("/"))
    {
        url = url + "/";
    }
    //Create the dataset
    var ds = new DataSet();
    ds.ReadXml(url);
    //Check for an error
    if (ds.Tables.Count == 1 && ds.Tables[0].Columns.Count == 4 &&
        ds.Tables[0].Columns[0].ColumnName == "Error")
        throw new Exception(ds.Tables[0].Rows[0].ItemArray[1].ToString());

    DataTable dtAddress = ds.Tables[0];
    if (dtAddress.Rows.Count > 0)
    {
        address.Address1 = dtAddress.Rows[0]["Line1"].ToString();
        address.Address2 = dtAddress.Rows[0]["Line2"].ToString();
        address.City = dtAddress.Rows[0]["PostTown"].ToString();
        if (address.City == address.Address2) address.Address2 = string.Empty;
        var county = dtAddress.Rows[0]["County"] != null
            ? dtAddress.Rows[0]["County"].ToString() : "";
        var sp = StateProvinceManager.GetStateProvinceByName(county);
        if (sp != null)
        {
            address.StateProvinceId = sp.StateProvinceId;
        }
        address.ZipPostalCode = dtAddress.Rows[0]["Postcode"].ToString();
        address.Company = dtAddress.Rows[0]["Company"].ToString();
    }

    address.CountryId = 80;
    return address;
}
```