

ORDNANCE SURVEY GB

OS Open UPRN - Technical Specification

Version History

Version	Date	Description
1.0	01/07/2020	Initial release

Purpose of this Document

This is the Technical Specification (from now on referred to as the 'Specification') for the OS Open UPRN product. This Specification provides information on the contents and structure of this product. For greater insight into the product and its potential applications, please refer to the OS Open ID Family Overview.

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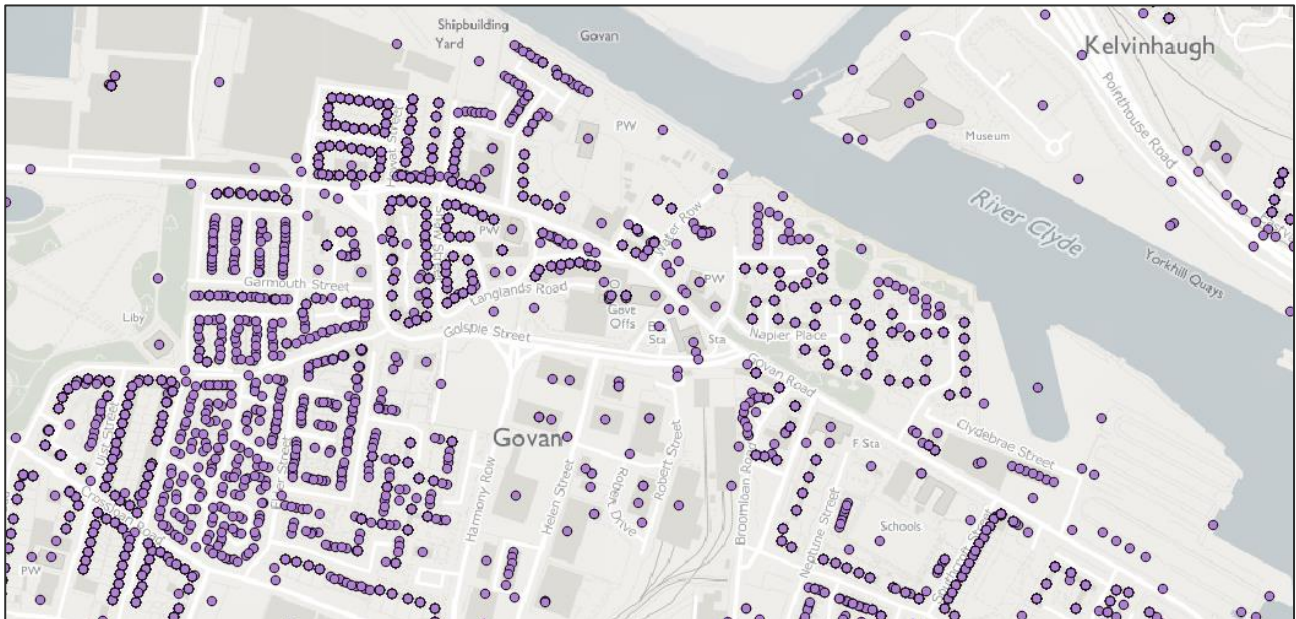
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Contents

1.	Introduction.....	3
1.1	Data formats.....	3
1.2	Supply and update.....	4
1.3	Coordinate Reference System (CRS).....	4
1.4	Unique Property Reference Number (UPRN).....	4
2.	Product Structure.....	5
2.1	Data Structure.....	5
2.2	Geometry.....	6

1. Introduction



OS Open UPRN is a dataset that contains the position of each record held within AddressBase Premium along with the unique identifier - the Unique Property Reference Number (UPRN).

The product allows users to link and associate datasets by using either the UPRN or the position of the address point. It is designed to bridge the gap between disparate data sets and enable the wider adoption of the UPRN to encourage greater data sharing.

This data is usable in a GIS application, and can also be integrated into a spatial database.

1.1 Data formats

The OS Open UPRN product will be distributed as a Comma-Separated Value (CSV) file or GeoPackage (GPKG).

CSV

The CSV format of AddressBase Core means:

1. Column headers will be included in the file.
2. There will be one record per line in each file.
3. Fields will be separated by commas.
4. No comma will be placed at the end of each row in the file.
5. Records will be terminated by Carriage Return / Line Feed.

For customer orders being placed for the entirety of Great Britain, one file will be produced containing all records.

GeoPackage

GeoPackage (GPKG) is an open, standards-based, platform-independent data format for transferring geospatial information as defined by the Open Geospatial Consortium (OGC). It is designed to be a lightweight format that can contain large amounts of varied and complex data in a single, easy to distribute and ready-to use file.

GeoPackage offers the following benefits:

1. The single file is easy to transfer and offers the end-user a rich experience.
2. Attribute names are not limited in length making it customer friendly.
3. No file size limit, so lots of data can be easily accommodated.
4. Supports raster, vector and database formats making it a highly versatile solution.
5. Conforms to OGC standard.
6. In most cases, it is a plug-in-and-play format.

1.2 Supply and update

This product will be supplied as a full Great Britain set only and can be downloaded from the OS Data Hub website. A single file will be provided containing all records with headers already included (CSV) or the structure already defined (GeoPackage).

Areas of interest orders and change only updates are not available.

The product will be refreshed on a six-weekly basis in line with the AddressBase [Epoch dates](#).

1.3 Coordinate Reference System (CRS)

AddressBase Core has two Coordinate Reference Systems (CRS) present within the data:

1. British National Grid (BNG).
2. European Terrestrial Reference System 89 (ETRS89).

BNG uses the OSGB36 geodetic datum and a single Transverse Mercator projection for the whole of Great Britain. Positions on this projection are described using Easting and Northing coordinates in units of metres. The BNG is a horizontal spatial reference system only; it does not specify a vertical (height) reference system.

ETRS89 is the EU recommended frame of reference for European data and is represented as Latitude and Longitude values. ETRS89 is a horizontal spatial reference system only; it does not specify a vertical (height) reference system.

View our [guide](#) to coordinate systems in Great Britain.

1.4 Unique Property Reference Number (UPRN)

A UPRN is a unique numeric identifier for every addressable location in Great Britain. The UPRN is the persistent identifier providing consistency across the AddressBase product range.

Each address record has a UPRN, assigned by Local Authorities in England, Wales and Scotland or Ordnance Survey depending on the type of address. This is the primary key of the AddressBase Core product.

Throughout its lifecycle, information on the address of a property can change. This may be due to a change of name, change of use, or the eventual demolition of the property. Independent of any changes being made the UPRN associated to an address is never changed, meaning the unique identifier remains persistent and reliable.

2. Product Structure

2.1 Data Structure

This section describes the features which make up the OS Open UPRN product, giving the following information about each attribute:

Name and Definition

The name of the attribute and what it is describing.

Condition

A condition associated with this attribute. (Optional)

Attribute Type

The nature of the attribute, for example a numeric value or a code list value.

Size

The maximum length of the values in the attribute.

Multiplicity

Describes how many times this element is expected to be populated in the data. An attribute may be optional or mandatory within the AddressBase Core product. These are denoted by:

3. '1' – Mandatory - There must be a value.
4. '0..1' – Optional – If populated a maximum of one attribute will be returned.

FID (only in GeoPackage)		
Definition: A non-persistent integer which is autogenerated and is required within the OGC GeoPackage format.		
Type: Integer		Multiplicity: [1]
UPRN		
Definition: Unique Property Reference Number (UPRN) assigned by the LLPG Custodian or Ordnance Survey.		
Type: Integer	Size: 12	Multiplicity: [1]
X_COORDINATE		
Definition: A value in metres defining the x location in accordance to the British National Grid.		
Type: Float	Size: (precision, scale) – (8, 2)	Multiplicity: [1]
Y_COORDINATE		
Definition: A value in metres defining the y location in accordance to the British National Grid.		
Type: Float	Size: (precision, scale) – (9, 2)	Multiplicity: [1]
LATITUDE		
Definition: A value defining the Latitude location in accordance with the ETRS89 coordinate reference system.		
Type: Float	Size: (precision, scale) – (9, 7)	Multiplicity: [1]
LONGITUDE		
Definition: A value defining the Longitude location in accordance with the ETRS89 coordinate reference system.		
Type: Float	Size: (precision, scale) – (8, 7)	Multiplicity: [1]

2.2 Geometry

All records are provided as point geometry in the GeoPackage. The point geometry represents the location of the address record. The geometry is provided in British National Grid using the X and Y coordinates of the attribute table.

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