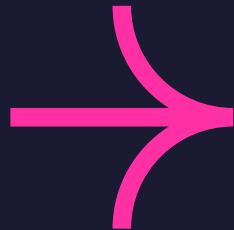
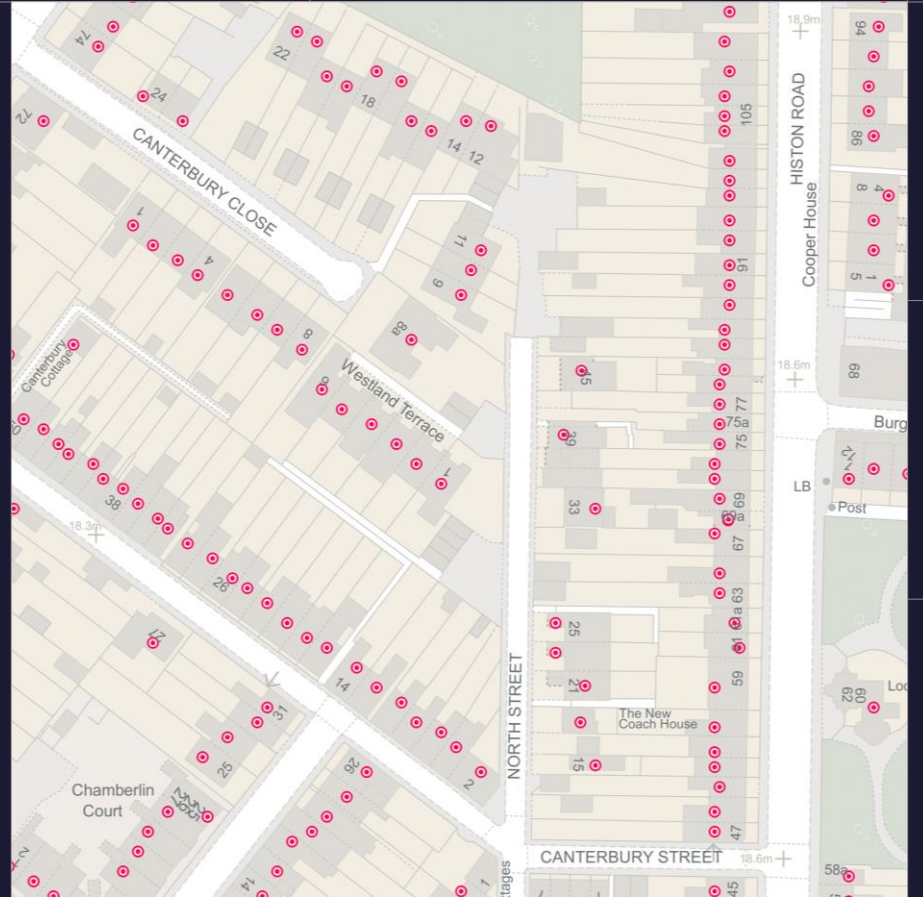


UPRNs in practice: Accessing, using and applying address data

(Unique Property Reference Numbers)

Nathan Davis

Senior Geospatial Consultant



4th December 2025

The Unique Property Reference Number

e.g. 200010019924

Unique identifier

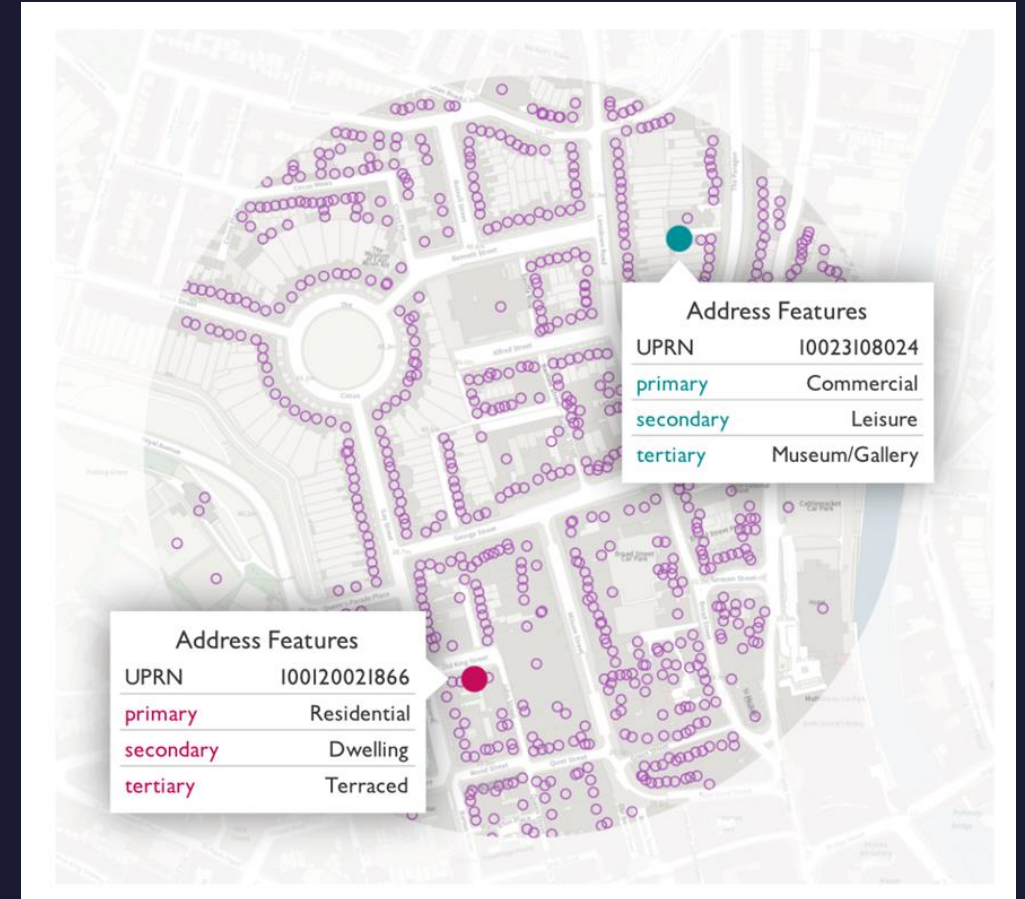
Represents the building or property

Persistent throughout the whole lifecycle

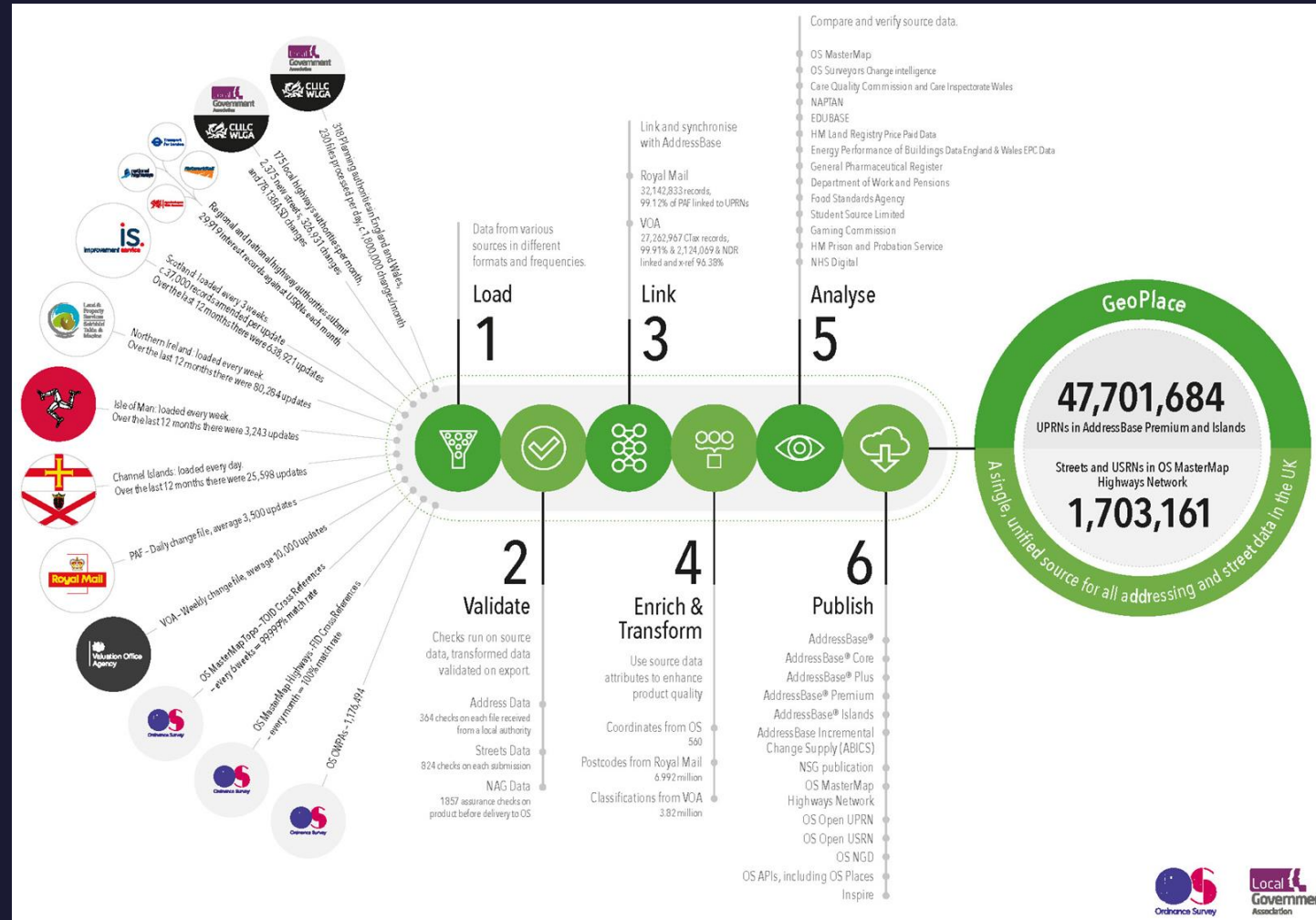
Well managed

Openly available

Mandated by government



How are addresses created?



Why use them?

200010019924

ORDNANCE SURVEY,
SOUTHAMPTON,
SO16 0AS

ORDNANCE SURVEY,
ADANAC DRIVE,
NURSLING, HAMPSHIRE

4, ADANAC DRIVE,
NURSLING, HAMPSHIRE

OS, ADANAC DRIVE,
NURSLING, HAMPSHIRE,
SO16

ORDNANCE SURVEY, 4,
ADANAC DRIVE,
SOUTHAMPTON,
HAMPSHIRE, SO16 0AS

ORDNANCE SURVEYS,
4, ADANAC DRIVE,
NURSLING, HAMPSHIRE,
SO16 8AS

ORDNANCE SURVEY,
4, ADANAC DRIVE,
NURSLING, HANTS,
SO16 0AS

EXPLORER HOUSE,
ADANAC DRIVE,
NURSLING, HAMPSHIRE,
SO16 0AS

4, ADANAC DRIVE,
NURSLING, HAMPSHIRE,
SO16 0AS

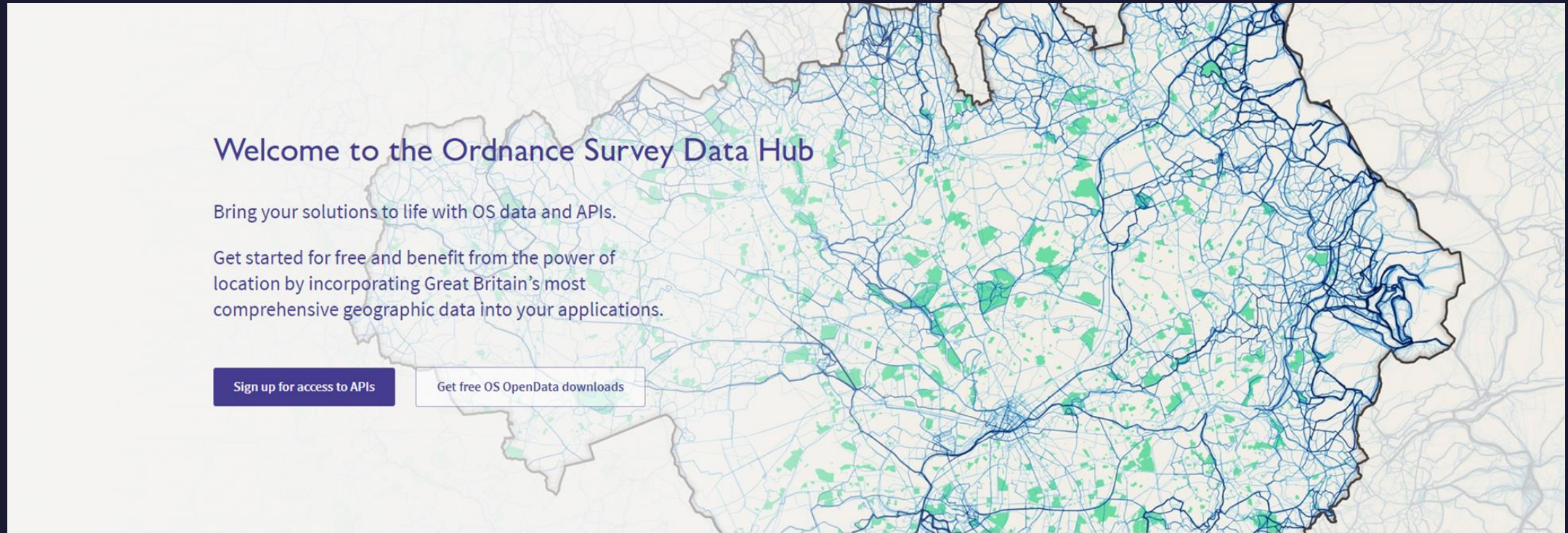
ORDNANCE SURVEY,
4, ADANAC DRIVE,
NURSLING, HAMPSHIRE,
SO160AS

ORDNANCE SURVEY,
ADANAC DRIVE,
NURSLING, HAMPSHIRE,
SO16 0AS

ORDNANCE SURVEY,
4 ADANAC DRIVE,
NURSLING, HAMPSHIRE,
SO16 0AS



OS Data Hub

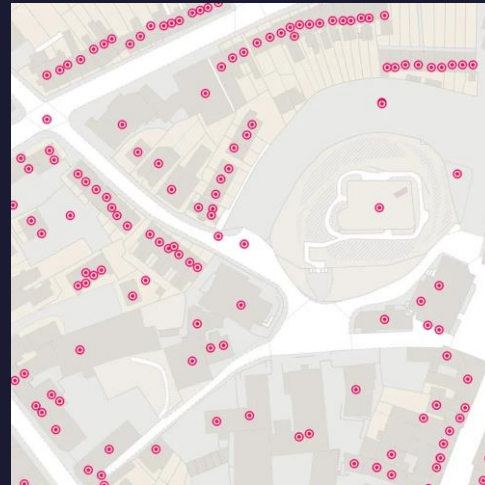


<https://osdatahub.os.uk/>

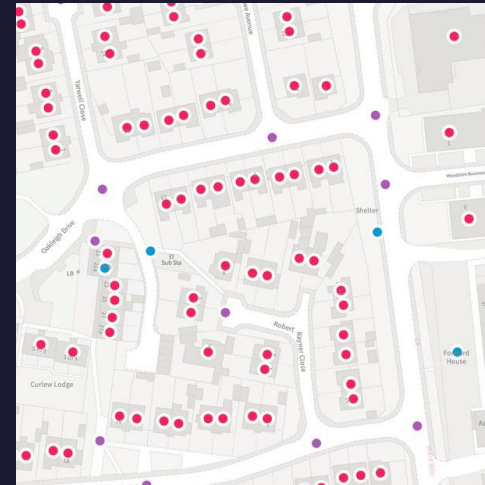
Address Products



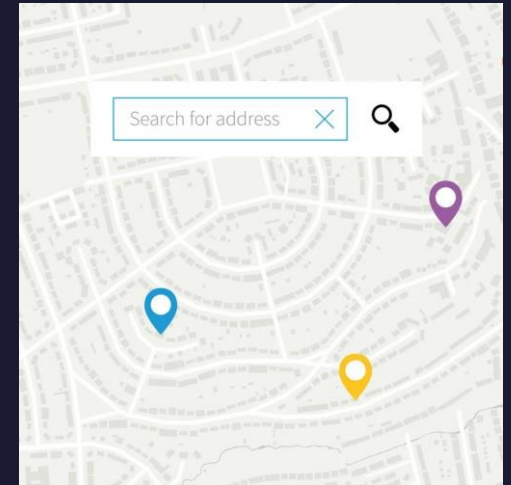
AddressBase Core



AddressBase
Premium



OS NGD Address



OS Places API

OS Addressbase Core

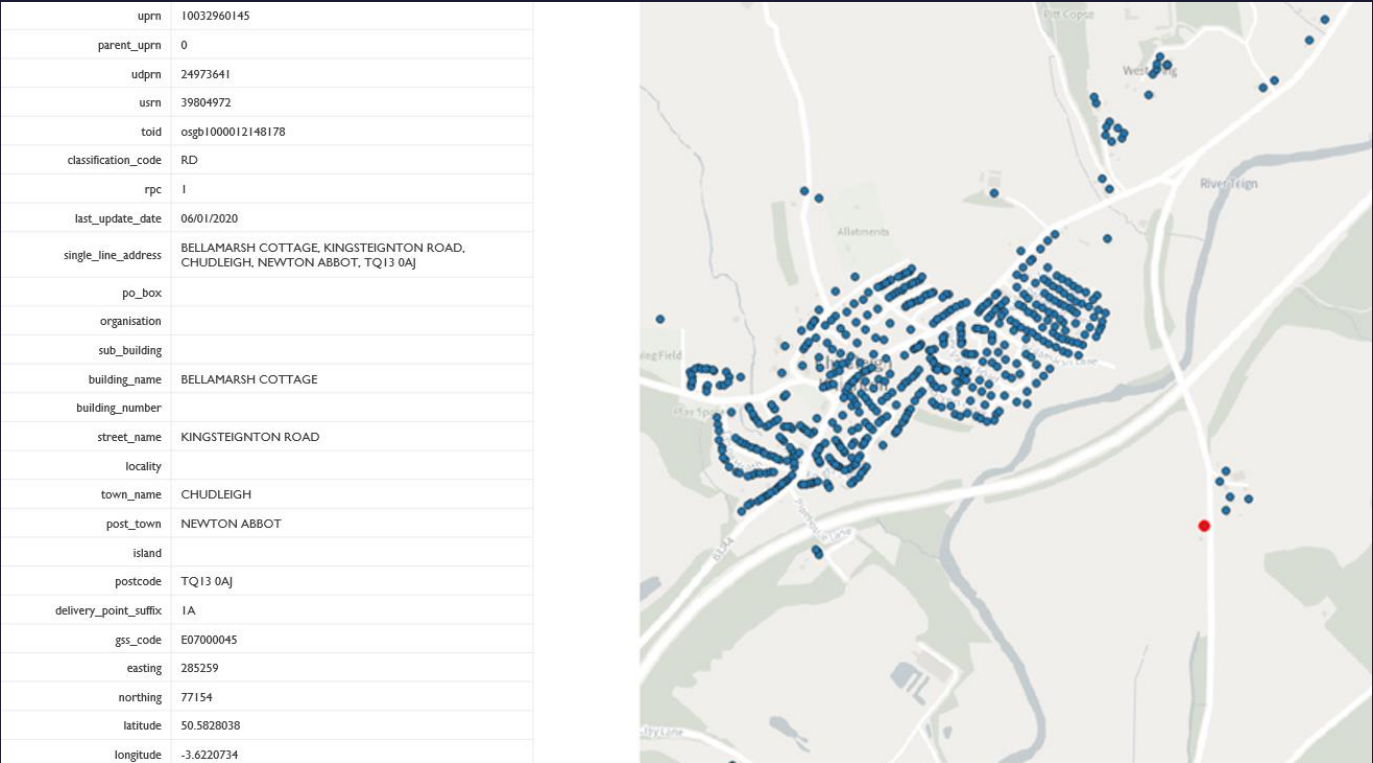
- **Format:** CSV and GeoPackage
- Approximately 33 million address records covering England, Wales and Scotland
- includes Postcode Address File (PAF) addresses matched to a UPRN, and additional UPRNs provided by the Local Authority's LLPG, with their secondary level property classification type
- **Weekly update**

Classification:
Primary: Commercial
Secondary: Community
Services



UDPRN

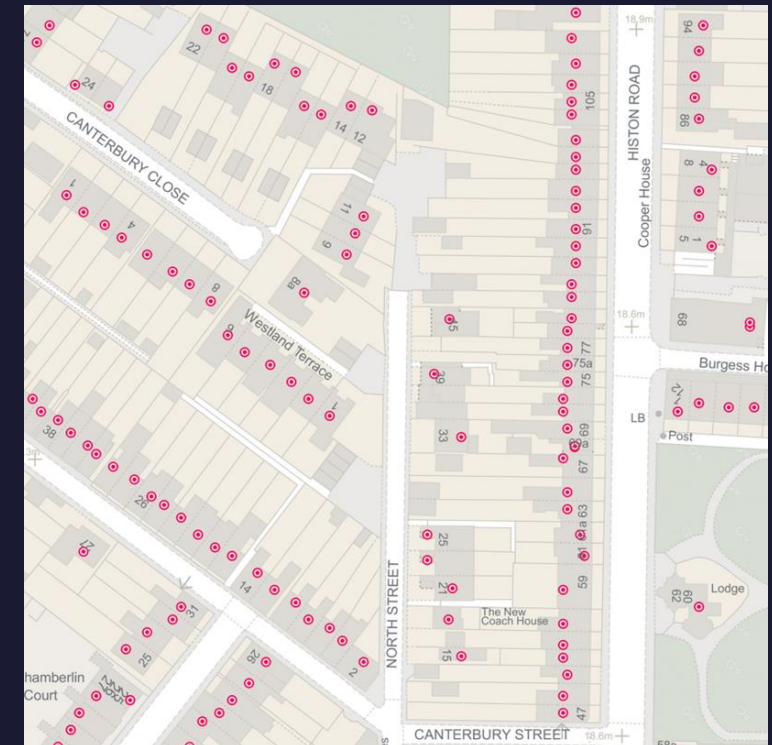
USRN



OS Addressbase Premium









- **Format:** CSV and GeoPackage
- Approximately 40 million address records covering England, Wales and Scotland
- 100 million cross references to Valuation Office Agency (VOA) data, OS MasterMap Topography Layer, and OS Highways Network Layer
- uses the Unique Property Reference Number (UPRN) as its unique identifier to link data
- **6 Weekly update**

Classification:
Primary: Commercial
Secondary: Community Services
Tertiary: Public / Village Hall / Other Community Facility
Quaternary: Youth Recreational / Social Club



Structure

- **Application Cross Reference:** lookup table between AddressBase Premium UPRN and the unique identifiers of other relevant third-party data
- **Basic Land and Property Unit (BLPU):** point feature defined as a real-world object that is an 'area of land', 'property', or 'structure' of fixed location
- **Main Classification:** address use classification code which defines the use of the BLPU
- **Delivery Point Address:** the Royal Mail address used when delivering mail
- **Local Property Identifier (LPI):** detailed description of the BLPU. Each BLPU can have more than one LPI, but will only have one 'current' with any others classed as 'historic'
- **Organisation:** the 'non-domestic' occupier name of the BLPU
- **Street:** line feature defined as a way or thoroughfare providing a right of way on foot, cycle, or by motor vehicle, or access to more than one property
- **Street Descriptor:** detail about the street feature such as street name, locality, town name

Name	Type
 main.application_xref	Table
 main.blpu	Feature Class
 main.classification	Table
 main.delivery_point_address	Table
 main.lpi	Table
 main.organisation	Table
 main.street	Feature Class
 main.street_descriptor	Table

OS NGD Address

- **Format:** CSV and GeoPackage
- Built Address
- Historic Address
- Non-Addressable Object
- Pre-Build Address
- Street Address - USRN.
- Royal Mail Address
- **Up to daily currency!**

OS NGD Address

Features types within NGD Address



OS NGD Address
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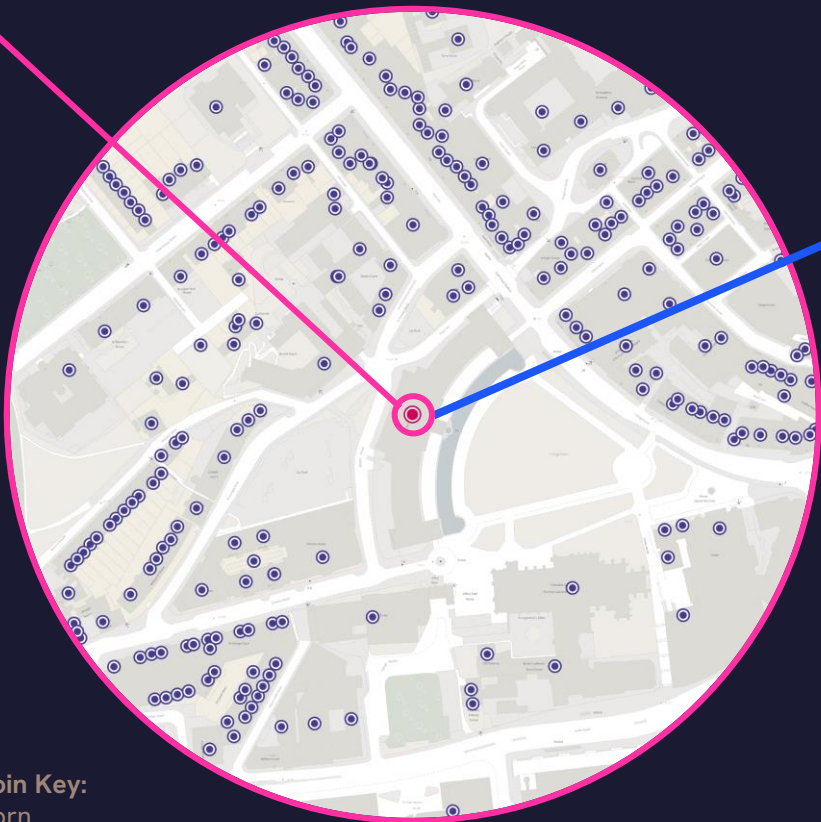
NGD Address design vs AddressBase Premium

NGD Address (v1 & v2)

GB Built Address	
uprn	1
description	Postal Address
organisationname	Bristol City Council
name	City Hall
streetname	College Green
locality	City Centre
townname	Bristol
postcode	BS1 5TR
country	England
classificationcode	CO0ILG
buildstatus	Built In Use
postcodesource	A Record Which Is Linked To PAF
usrn	4553919
localcustodiancode	116

Royal Mail 'Postal Address' Component
...as per the DPA

Example address:
Bristol City Council



Join Key:
uprn

AddressBase Premium

Organisation	
organisation	Bristol City Council
Join Key: uprn	

LPI	
pao_text	City Hall
Join Key: uprn	
Join Key: usrn/language	

BLPU	
uprn	1
blpu_state	2
local_custodian_code	116
country	England
addressbase_postal	D
Join Key: uprn	

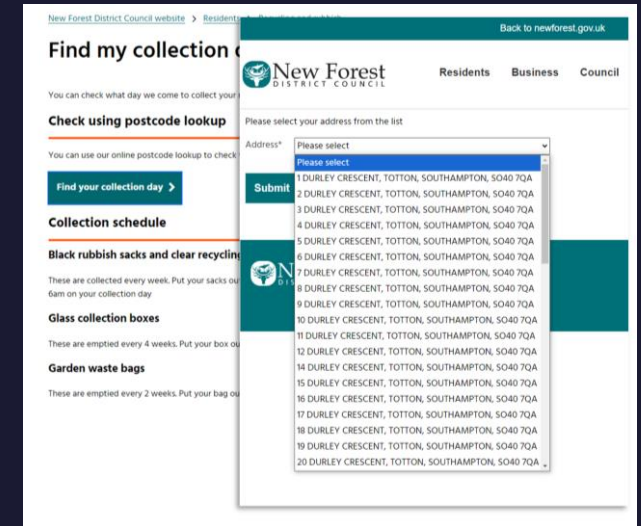
Street Descriptor	
streetname	College Green
usrn	4553919

Classification	
classification_code	CO0ILG

DPA	
organisation_name	Bristol City Council
building_name	City Hall
thoroughfare	College Green
dependant_locality	City Centre
post_town	Bristol
postcode	BS1 5TR
Join Key: uprn	

OS Places API

- Reduce address input errors
- Improve operational efficiency and data accuracy by capturing accurate addresses.
- Enhance user experience
- Enhance the user experience of your applications by speeding up address entry with autocomplete functionality.
- Up-to-date address data
- Providers accurate and continuously updated address data.

The screenshot shows the 'Find my collection' page of the New Forest District Council website. At the top, there's a navigation bar with 'Residents', 'Business', and 'Council' links. Below the header, a search bar prompts the user to 'Please select your address from the list'. An autocomplete dropdown menu is open, displaying a list of addresses starting with '1 DURLY CRESCENT, TOTTON, SOUTHAMPTON, SO40 7QA' through '20 DURLY CRESCENT, TOTTON, SOUTHAMPTON, SO40 7QA'. A 'Submit' button is visible next to the search bar. To the left of the dropdown, there's a 'Find your collection day' button. Below the search bar, the page is divided into sections: 'Collection schedule', 'Black rubbish sacks and clear recycling', 'Glass collection boxes', and 'Garden waste bags', each with a brief description of the service.

Access: API

Format: geoJSON XML

Coverage: United Kingdom, Isle of Man, Jersey and Guernsey

Scale: 1:1250 to 1: 10000

Update: Daily

Addressing Classification Levels

The Addressing classification scheme provides varying levels of classification for addressable objects which are captured and maintained by the Local Authorities and Ordnance Survey.

Primary Level Classification		Secondary Level Classification		Tertiary Level Classification		Quaternary Level Classification	
R	Residential	RD	Residential Dwelling	RD02	Detached House		
C	Commercial	CH	Hotel/Motel/ Boarding/ Guest House	CH01	Boarding/Guest House/ Bed And Breakfast/Youth Hostel	CH01YH	Youth Hostel

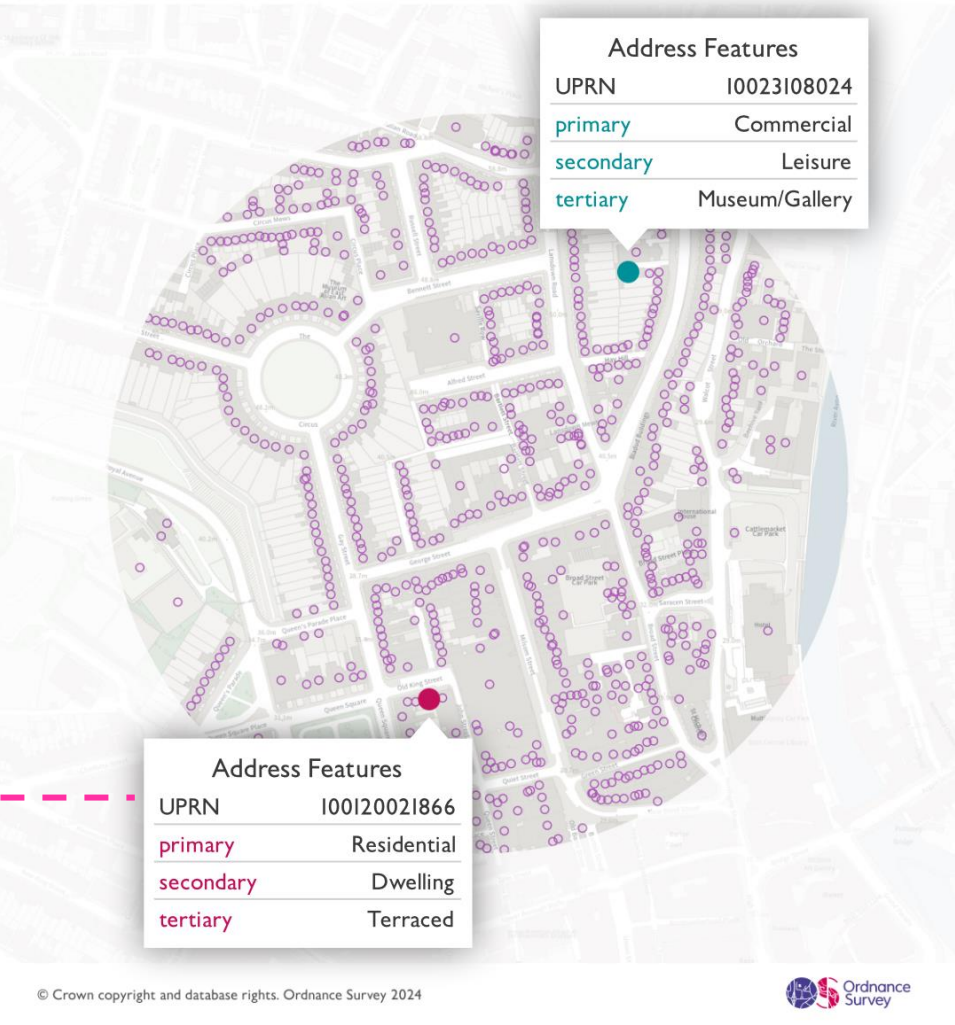
The full list of classification codes can be found [here](#).

Classification Example

UPRNs are found in AddressBase and NGD Address products, alongside other attributes

NGD Address Classifications



Skip look-up tables; find what you're searching for



Product Comparison


Product	UPRN	Update	Single Line Address	Primary	Secondary	Tertiary	Quaternary
Addressbase Core	Yes	Weekly	Yes	Yes	Yes	No	No
Addressbase Premium	Yes	6 Weekly	No	Yes	Yes	Yes	Yes
NGD Address	Yes	4 weekly/Daily	Yes	Yes	Yes	Yes	Yes

Errors and Omissions Tool

[Data Hub](#)[Data](#)[Support](#)[Plans](#)[Error Reporting](#)[Vernacular Names](#)[Documentation](#) Nathan

My Errors

Report an error



Looks like you're new here

Use this tool to tell Ordnance Survey about any errors you find in our data.

Report your first error

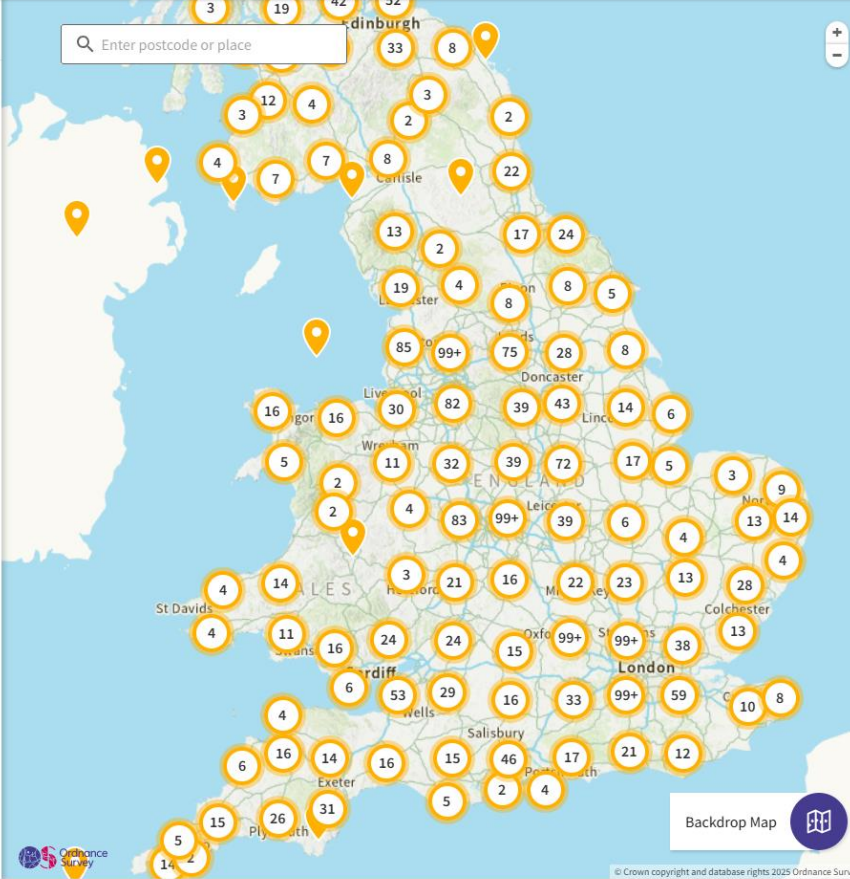
Once an error is created

Your error report will be sent to our Data Investigation team. They will review it and decide on the appropriate action. Legitimate errors will be actioned by us and will feed back into our data products for the benefit of all our customers.


We'll keep you informed

After you've submitted your error you'll be asked if you want to be kept informed of the progress of that error by email. If you choose to be kept informed we'll drop you an email each time we update the status of your error. You'll be able to see its progress from submission to completion.

Enter postcode or place



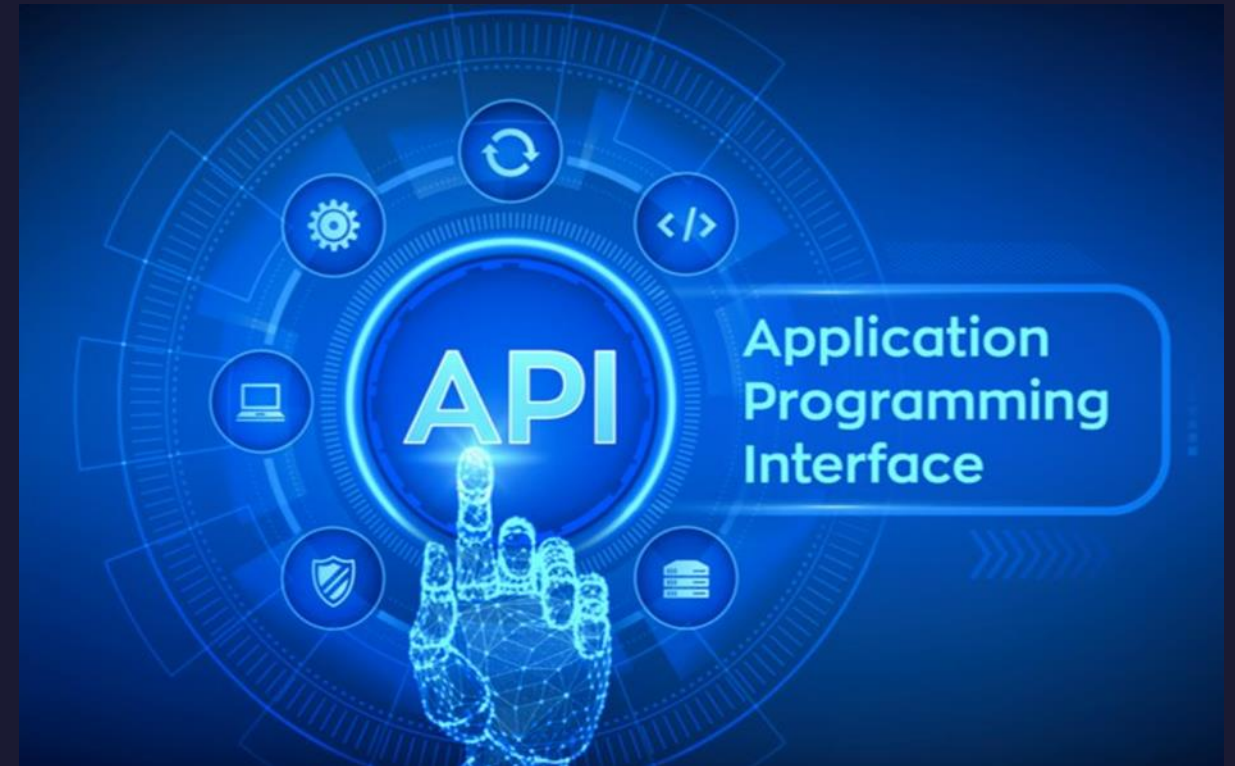
Backdrop Map

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[© Ordnance Survey 2025](#) | [Privacy Policy](#) | [Cookies](#) | [OS Website Terms](#) | [Legal Terms](#)

OS Downloads API

- **Format:** API
- Released October 2021
- The service uses a URL to perform requests to retrieve and download data packages
- Available for any dataset available on OS Data Hub
- Available to all PSGA members
- Requires an OS Data Hub account
- This is a service, not new data.



Why Use Downloads API?

Automate

downloads and remove
manual handling

Currency

Always have the most up-
to-date data

Integrate

Join to data loading to
fully automate your data
updates

Reliable

Reduce/eliminate
download and loading
errors

Efficiency

Save time and resources
by not manually handling

Convenient

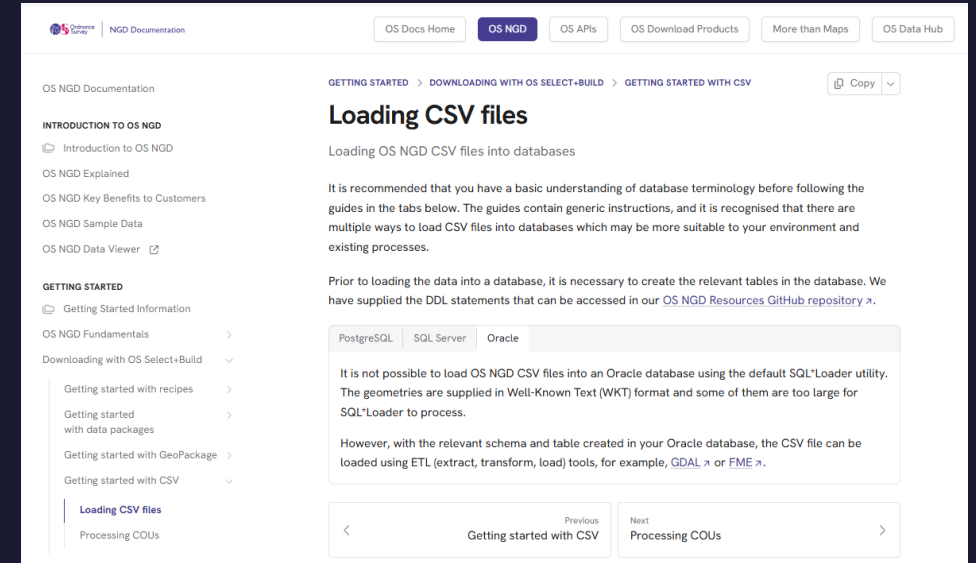
Can be scheduled to run
out of hours or at any
time

Loading the data

Hugely dependent on your infrastructure and software

Advice loading CSV data into PostgreSQL, MS SQL Server and Oracle databases can be found on the OS NGD Docs site

Advice on processing Change only updates (COU's) also available



Processing COUs

Change-Only Update (COU) files are only available for CSV data supplies of the OS NGD. Further information about COU data supplies can be found on the [COU supplies](#) page.

The process to load the COU files will depend on a number of factors based on your own environment and requirements, including:

- Database software
- Data loading method or software
- Feature retention and lifecycle requirements

<https://docs.os.uk/osngd/getting-started/downloading-with-os-select+build/getting-started-with-csv/loading-csv-files>

Full Supply or COU?

It all comes down to customer preference...

	Update Frequency	Size of Download	Processing	What happens if there is an issue?
Full Supply	4 Weekly	Large	4 Weekly	Reload the latest supply
Change Only Update	Daily	Small	Daily	Unpick issues if possible, otherwise restart the COU

Often it is a compromise between how up to date you need data to be, compared to the overhead of downloading and processing it

Only consider Daily supply if you can automate it end to end

Public Sector Contractor Licence

- The Public Sector Contractor Licence should be used where a contractor provides works or services to you under a formal agreement, which is typically charged.
- This licence doesn't allow the contractor to make additional money, take part in competing activities or publication.
- This data provided under this licence can only be used for the contract outlined in the licence



Licence agreement	
Use cases	
<ul style="list-style-type: none">• Use where a contractor provides works or services to you under a formal agreement, which is typically charged.	
Customer suitability	PSGA members
Length of licence	Per contractor; lifespan dependent upon the scope of the works and/or service being provided.
Licence fee	Free with PSGA member licence

<https://www.ordnancesurvey.co.uk/licensing/public-sector-contractor-licence>

Even more value... OS NGD

9 Themes

12 Collections

80+ Datasets



OS NGD Select & Build

The National Geographic Database

Take the data you want...

For the area that you want...

Rather than having to take the whole set

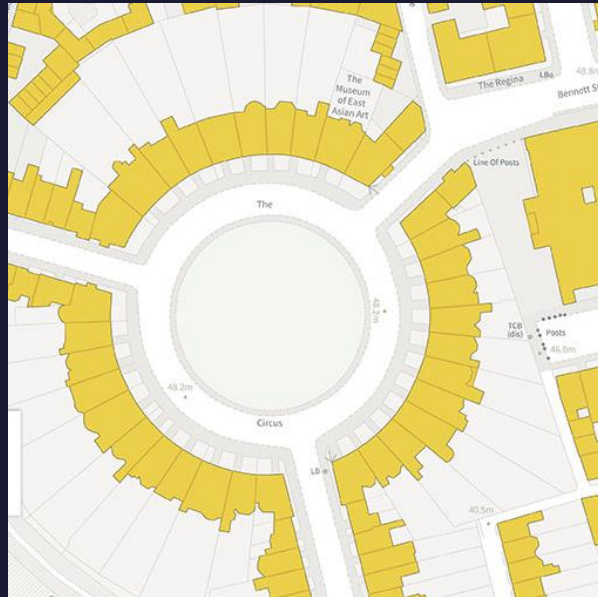
A bit like a Lego Pick and Build wall!



Which OS NGD Datasets can be linked by UPRN?

OS NGD Buildings - Building Feature

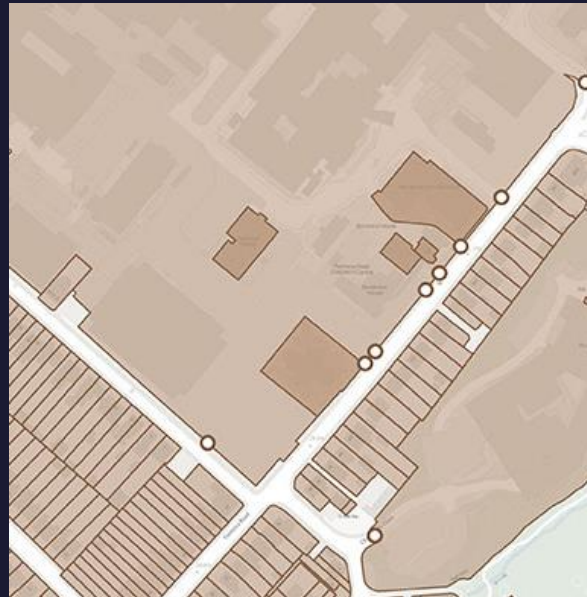
Cross reference table via UPRN



OS NGD Land Use - Site

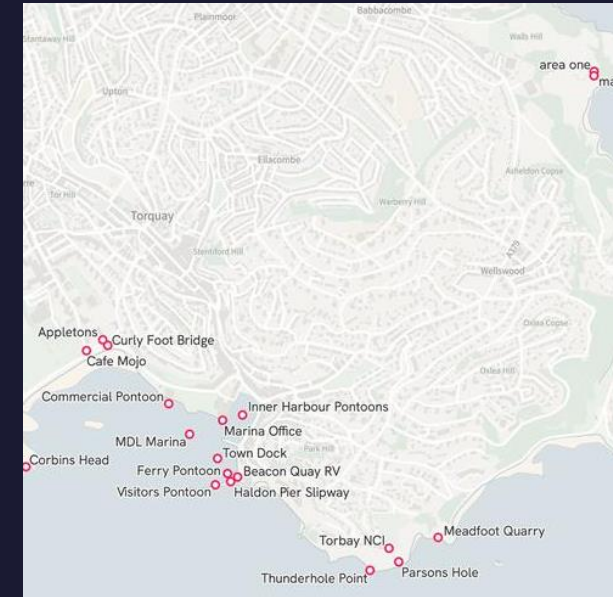
Cross reference table mapping

Site to Address using UPRN



OS NGD Crowd Sourced - Name Point

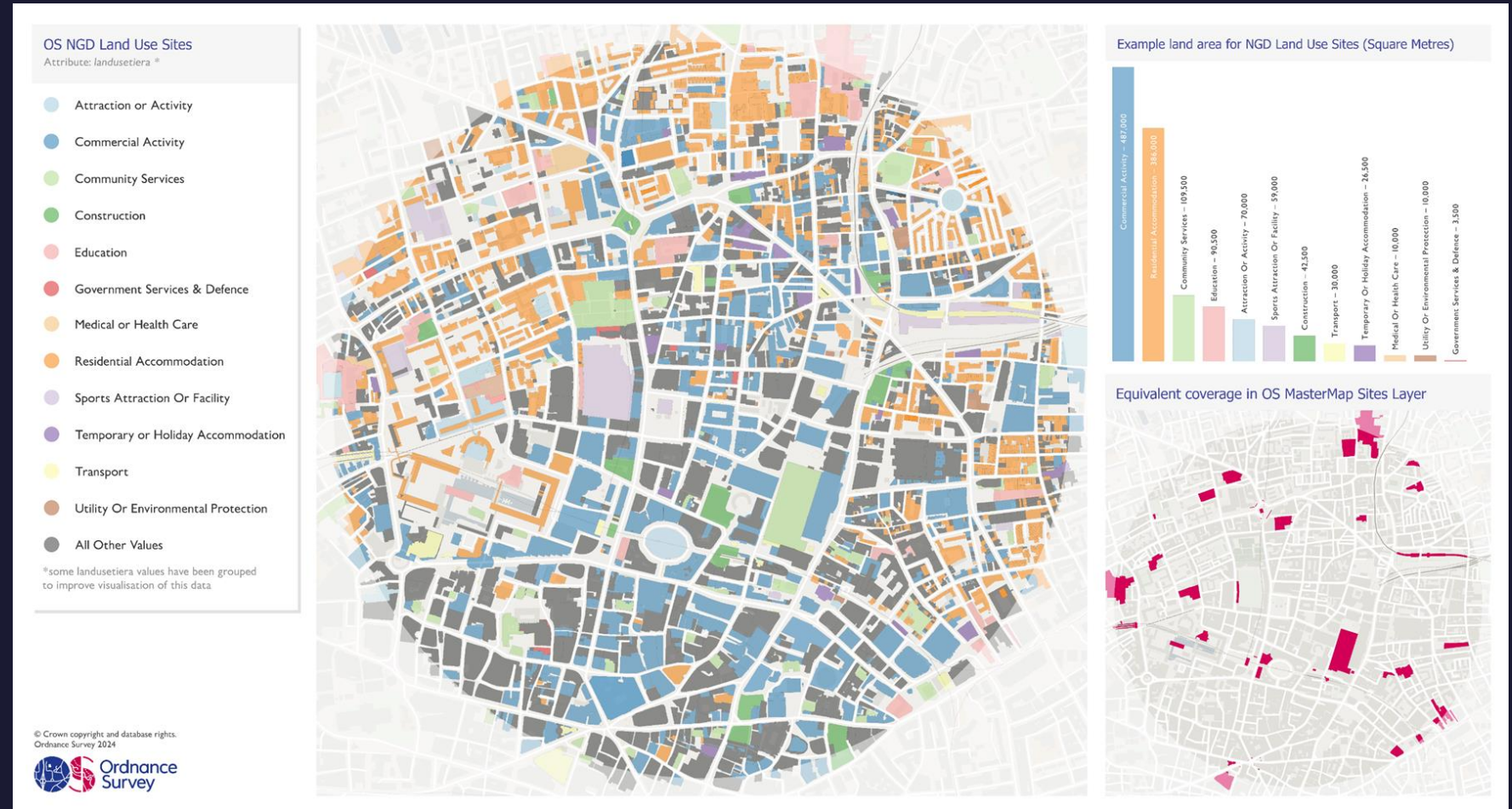
UPRNs for matched Address that
crowd sourced names



OS NGD Land Use Sites

Features which are geographical representations of areas identified as having a specific purpose (such as schools, universities, and caravan parks), as well as information about access to such areas.

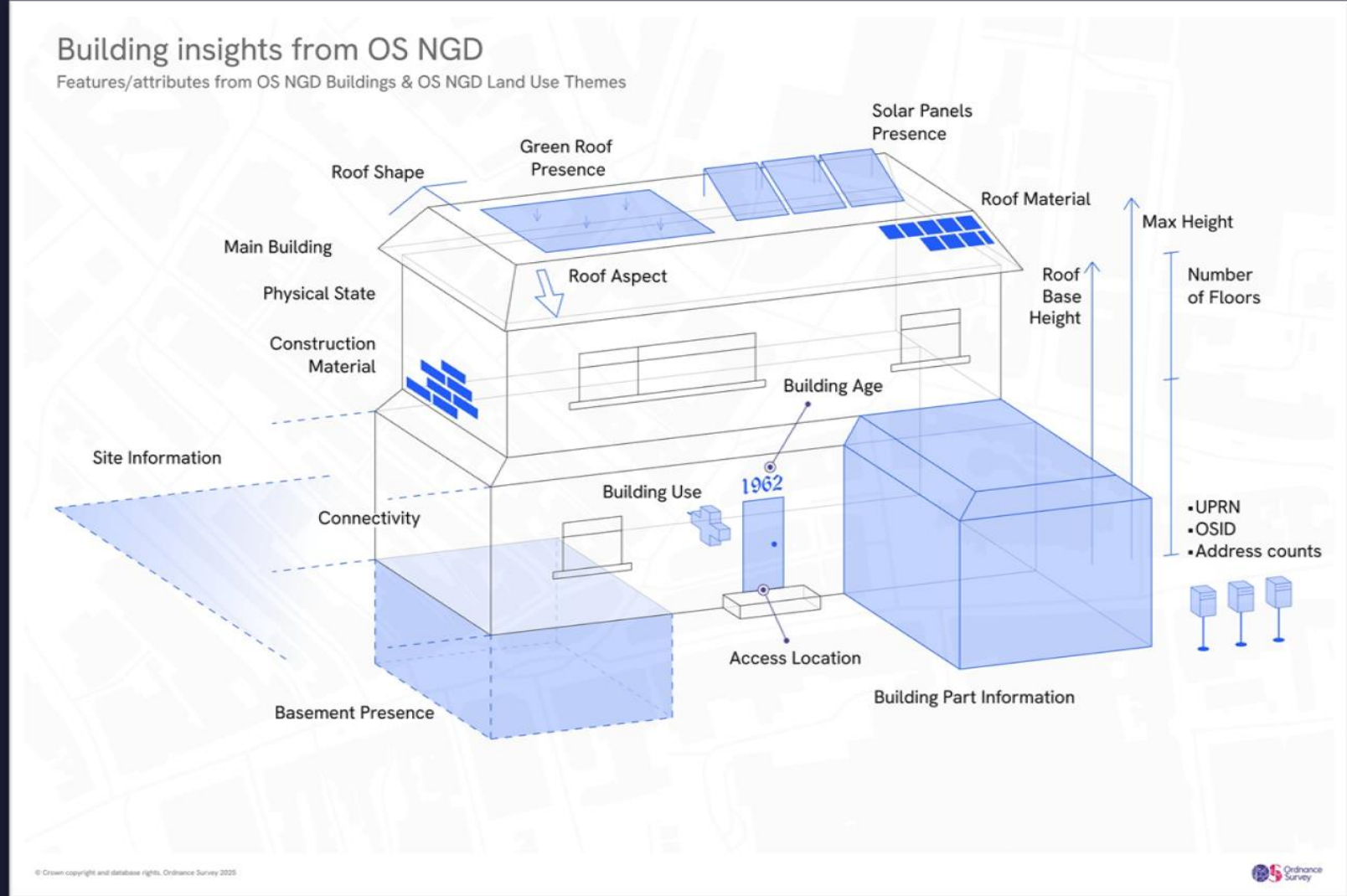
Contains **UPRN**, address counts and land use information



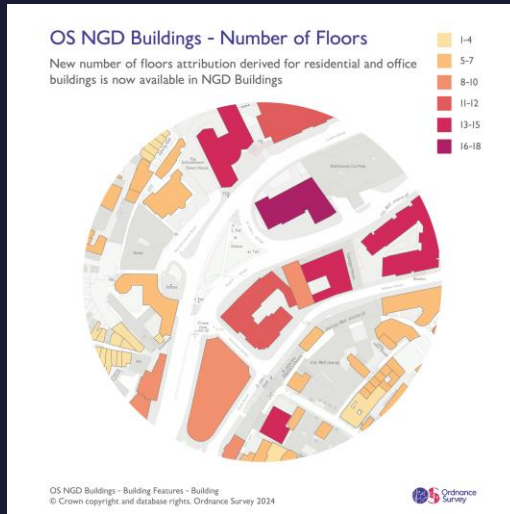
OS NGD Buildings

Definition: Building features which meet the definition of a permanent roofed construction, usually with walls.

UPRN linked



Why link OS NGD Datasets through UPRN?



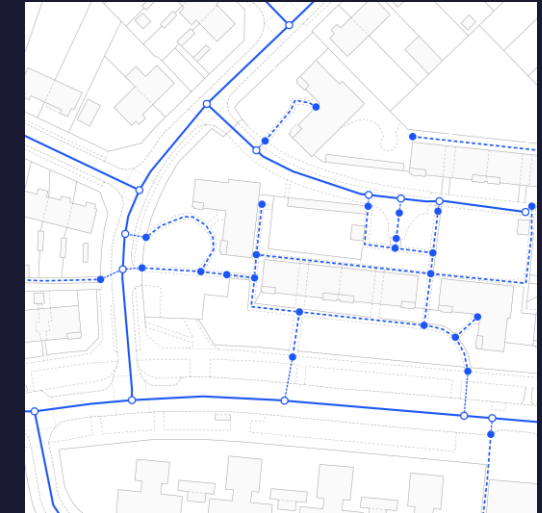
Associate Address with Building attributes e.g. building age, material, basement presence, number of floors, solar panel presence



Connecting Address to a site for easier view of addresses falling under specific sites e.g. University



Looking at blocks of flats, which will have both a parent and child UPRN, to better visualise which child UPRNs fall under the same building



Contextual information about nearby routes and locations can help streamline support to the areas that need it

Linking UPRN to External Datasets



Can link information in records created by land registration e.g. EPCs, planning permissions, council tax assessments



Linking address data to other datasets to identify vulnerable areas and provide support e.g. NHS Numbers, property and fire service data



Creation of digital tools e.g. Asset Register, linking properties with UPRN to data such as planning and parking, or Land Terrier, linking address to legal checks and boundary clarity

ASTRID

Address Street and Information Directory

A pilot initiative in response to feedback received directly from OS' s public sector customers


An online searchable directory and register for UPRN and USRN data

Raise awareness and visibility of UPRN and USRN attributed data within the public sector

Aligned with the Government Digital Service (GDS) mandate issued in July 2020

Currently in testing – watch the PSGA Newsletter for more information!

[Home](#) | [Directory Table](#) | [Input Form](#) | [Data for Consideration](#) | [Bulk Uploads](#) | [Contact Us](#) | [Q](#) | [John Doe](#) •

 **Address and Street Information Directory**

Bulk data uploads in CSV formatted files, please use the template for column headings and table structure

In uploading information to the directory you give permission to Ordnance Survey to publish this in the open data registry.

Instructions

1. Download the template file.
2. Add you records to the template and save as an comma separated file (.csv).
3. Complete the upload form and upload the file.
4. Click on submit, this will run an automated process to add your records to the table.
5. You email is only for notifying you of progress and will be deleted on completion.

Type of data

Select data type from the drop down menu


Data theme

Theme(s) the data relates to

Organisation *

Name of organisation responsible for the data

Record entry data *

M/D/YYYY 

Submitted by

OS NGD Docs

OS NGD Key Benefits to Customers

Find out what the key benefits of the OS NGD are.

OS NGD Sample Data

Download OS NGD sample data or visualise it online.

OS NGD News

Learn about new data enhancements and service updates released for the OS NGD, the change log, improvements, planned future data enhancements and recent announcements.

Data and Service Status

Find out about OS NGD planned maintenance, any live service disruption, current data issues and resolved data issues.

OS NGD Fundamentals

OS NGD Fundamentals covers the core elements of OS NGD design, including available data formats and file naming, data schema versioning, access methods, data ordering and currency, attribute information for feature types, unique identifiers and coordinate reference systems.

Getting Started

Our getting started guides will help you access, use and style OS NGD data.

You'll also find in-depth information on OS NGD design, and webinars, tutorials and case studies.

FAQs

View frequently asked questions about OS NGD data and access methods (OS Select+Build and OS NGD APIs).

Data Structure


Learn about the OS NGD data structure and the data available for each theme, collection and feature type.

Code Lists

Access all of the code lists for the OS NGD.

OS NGD Docs: <https://docs.os.uk/osngd>

More Than Maps



Ask or Search Ctrl + K

More than Maps

GEOGRAPHIC DATA VISUALISATION

Guide to cartography >

Guide to data visualisation >

GeoDataViz resources >

DATA IN ACTION

Examples

TUTORIALS

GIS >

Web >

APIs >

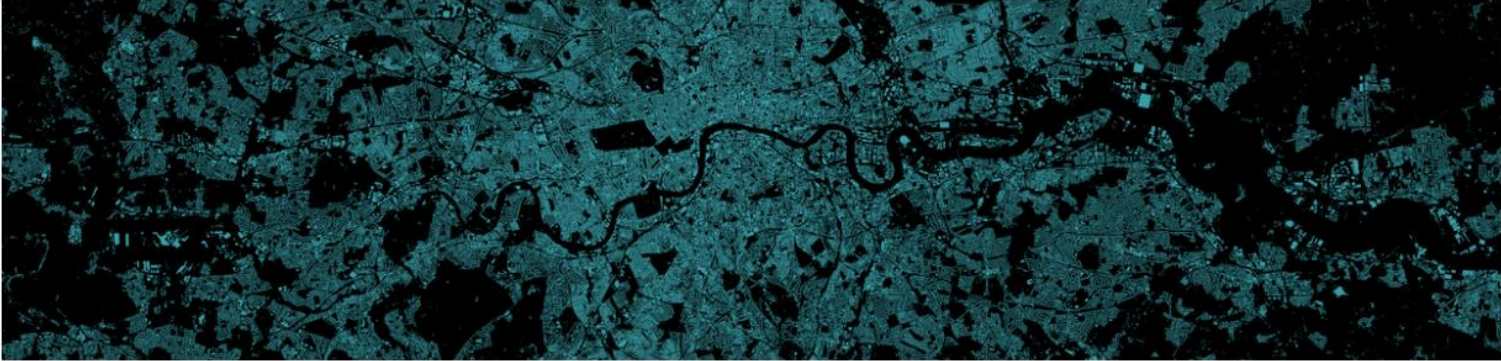
DEEP DIVE


Introduction to address matching

Guide to routing for the Public Sector >

Unlocking the Power of Geospatial Data

Using Blender for Geospatial Projects



 **More than Maps**

More than Maps is a new self-serve platform that provides a **one-stop shop for all your technical geospatial support**. Access a range of information via an easy-to-use site that includes tutorials, demonstrators and case studies.

If you are looking for the Ordnance Survey National Geographic Database (OS NGD) gitbook then you can find that using the link below.

[Ordnance Survey National Geographic Database \(OS NGD\)](#)

Geographic data visualisation

Data in action


Tutorials

Deep dive

Demonstrators

Code

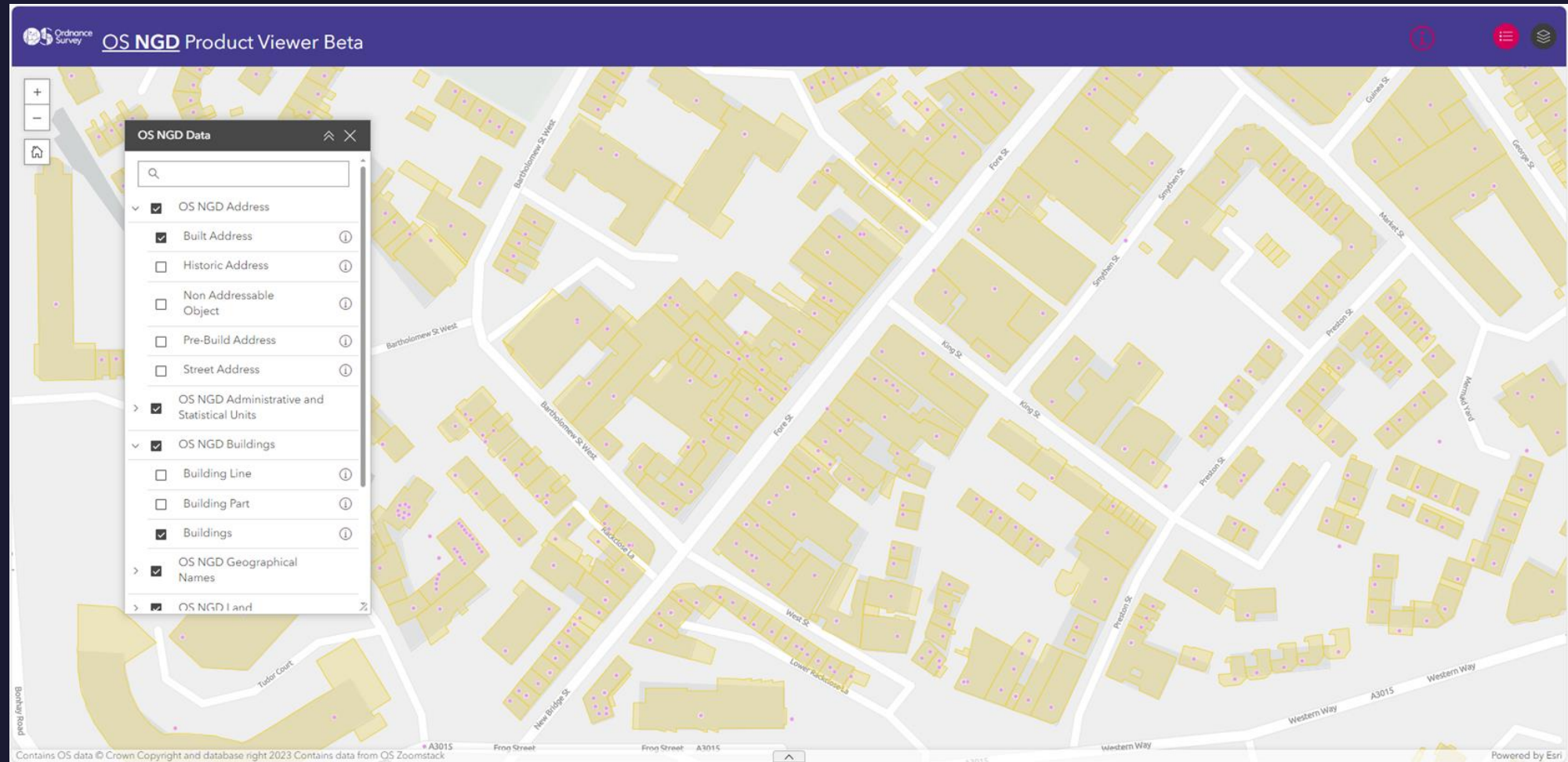
Was this helpful?



OS More Than Maps: <https://docs.os.uk/more-than-maps>

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OS NGD Data Viewer



Thank you

Questions