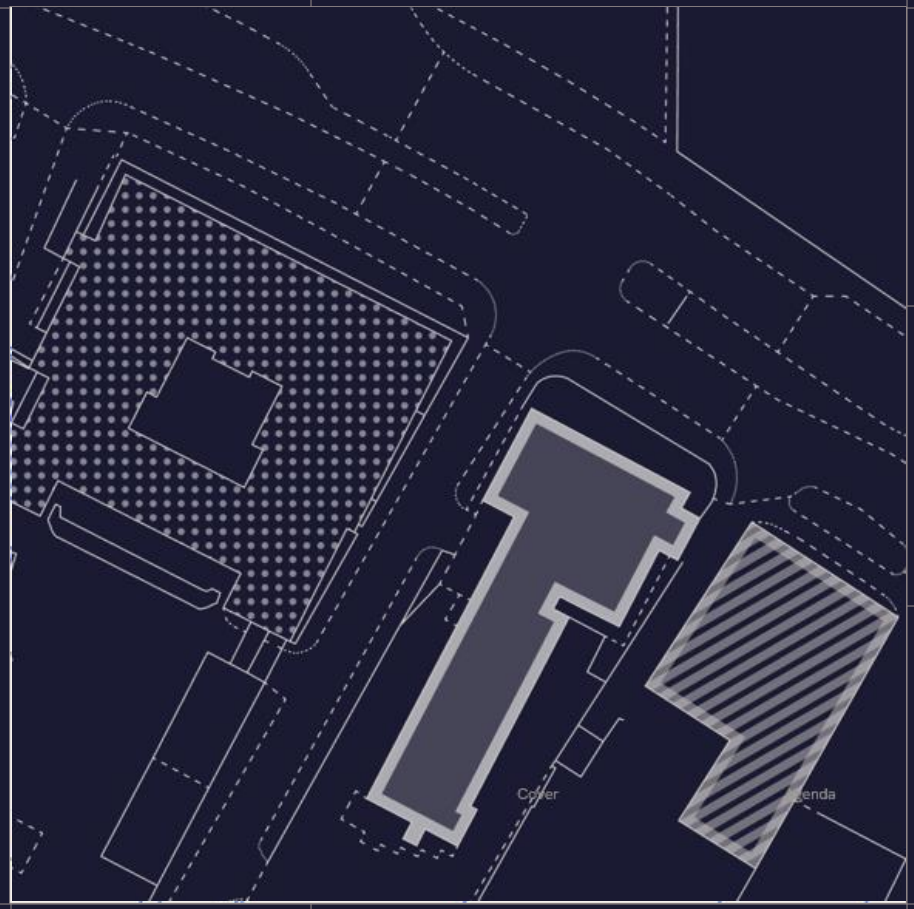
OS NGD Buildings for the Housing Market



Lily Brown – Product Manager

Agenda

- Who we are
- OS NGD Overview
- OS NGD Buildings
- New Buildings Features
- Use Cases
- Benefits

Who we are?

We are **Great Britain's** National Mapping Service

- Established over 230 years ago
- Trusted source of geospatial data
- Supporting national infrastructure, public services, and innovation

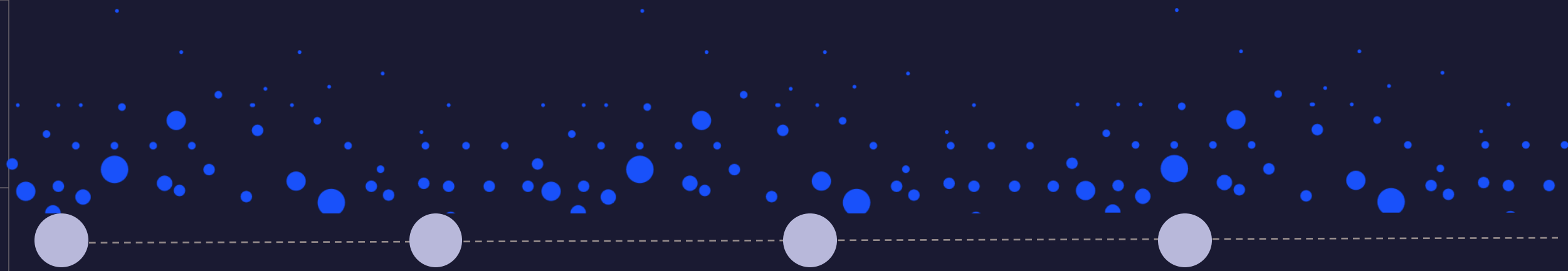
WHAT IS THE OS NGD AND HOW IS IT TRANSFORMING OS DATA?

- **OS National Geographic Database (NGD)** is Ordnance Survey's next-generation geospatial platform.

- It provides **highly detailed, authoritative data** on buildings, land, transport, and more for Great Britain.

- Designed for **continuous updates**, ensuring users always have the most current information.

Features of the OS NGD



Up-to date

OS NGD data is updated daily providing you with the latest data updates

Personalised Selection

Select by feature, attribute or area to tailor the data you receive

Richer data

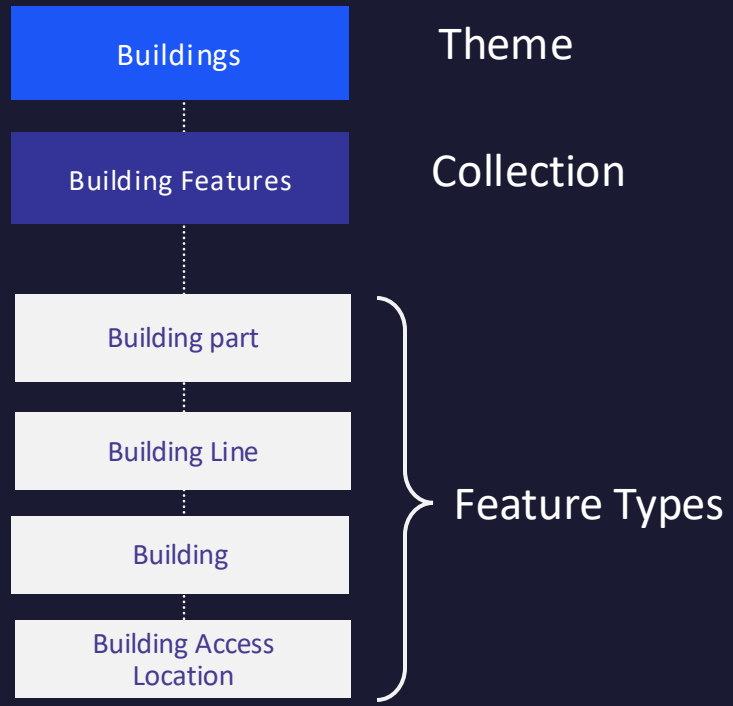
Enhanced attribution and new datasets providing you with greater insights

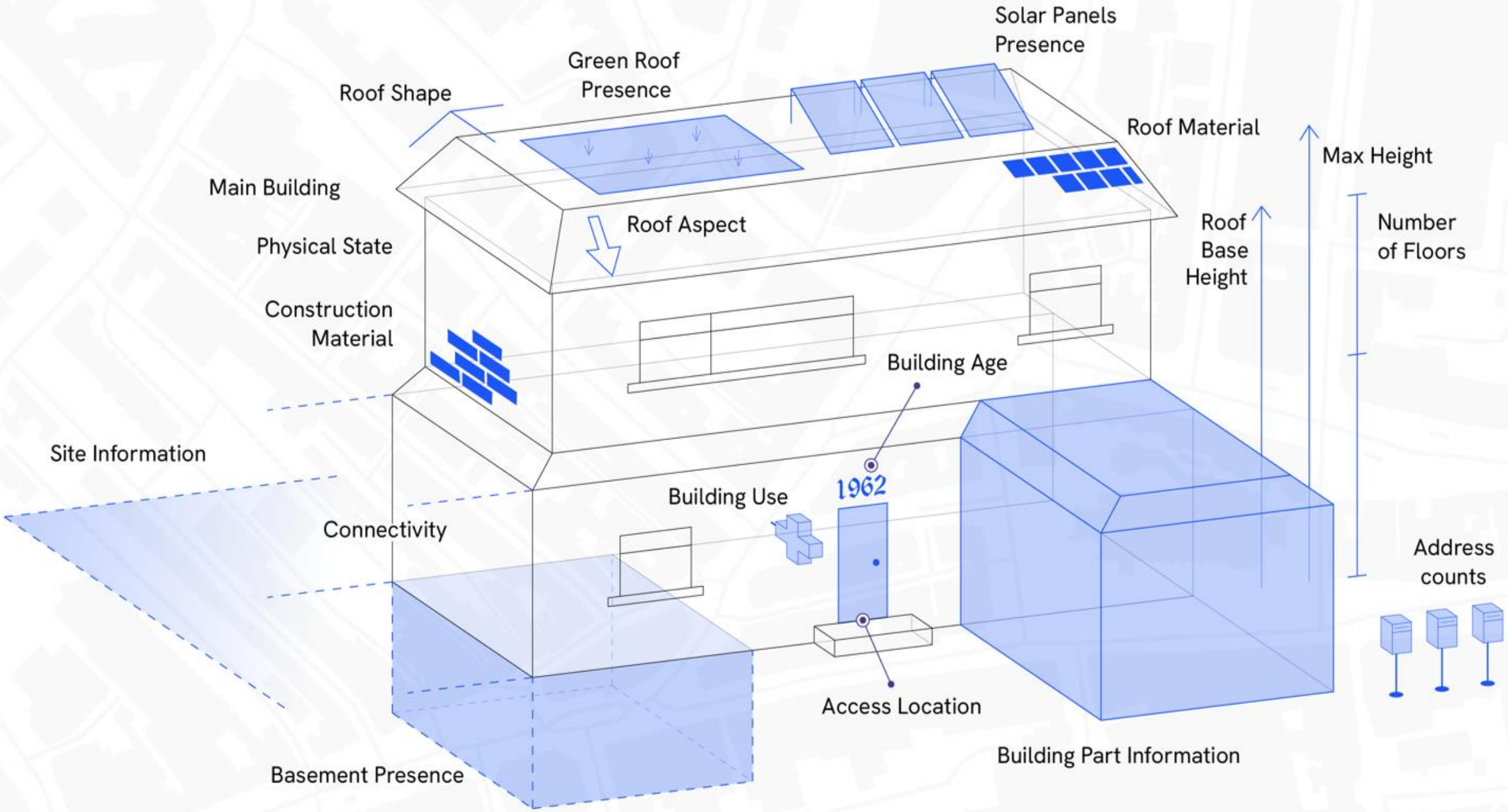
Full Documentation

New searchable, online documentation platform, including videos and tutorials

OS NGD Buildings

One collection made-up of four feature types




Solar Panels Presence
Green Roof Presence
Roof Shape
Roof Material
Max Height
Main Building
Roof Aspect
Roof Base Height
Number of Floors
Physical State
Construction Material
Building Age
Site Information
1962
Building Use
Connectivity
Address counts
Access Location
Building Part Information
Basement Presence

OS NGD Building Feature

A new building geometry to represent a single building footprint for easier selection of a single building feature

v.1

Building feature type

Cross Referencing

Main Building Flag

Connectivity

Building Use

Address Counts

v.2

Building Age

Construction Material

Basement Presence

Building Description

v.3

Number of Floors

v.4

Roof Material

Roof Aspect

Roof Shape

Green Roof Presence

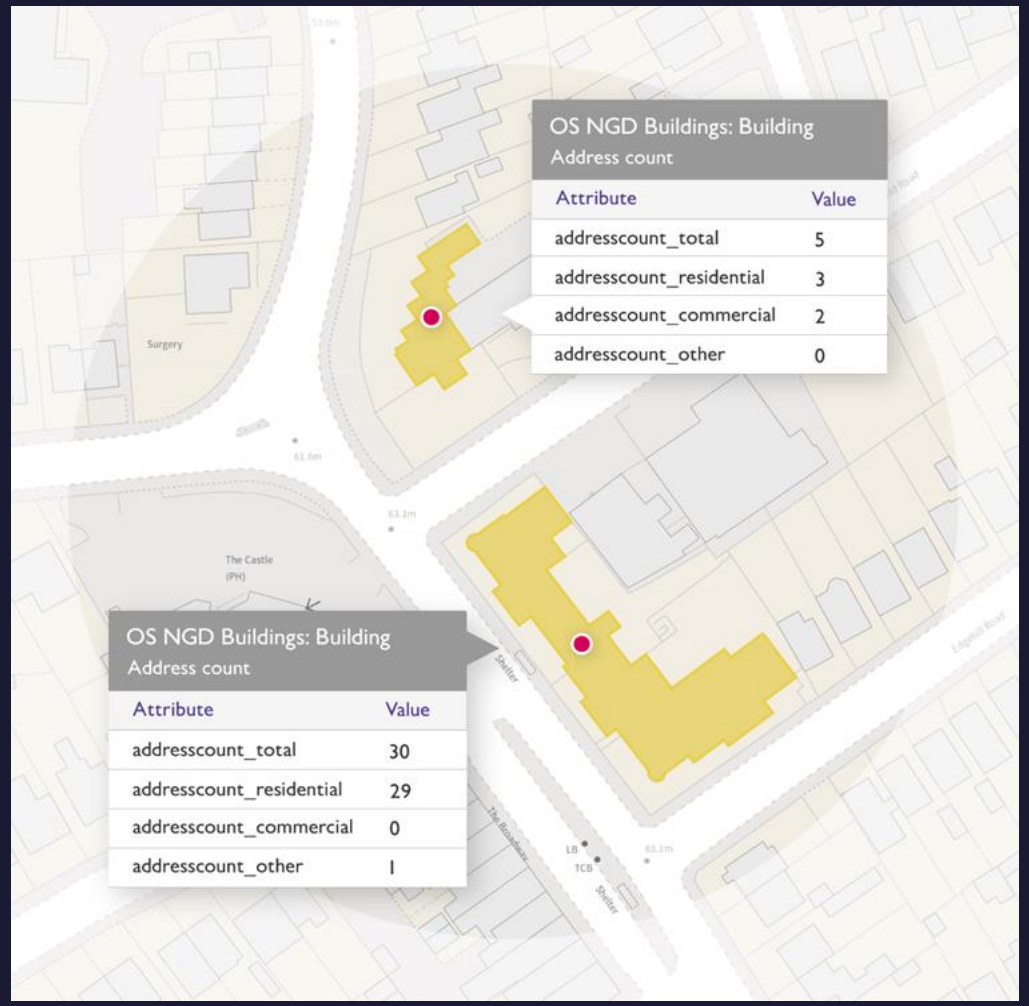
Solan Panel Presence

Physical State

Building Access Location Feature Type

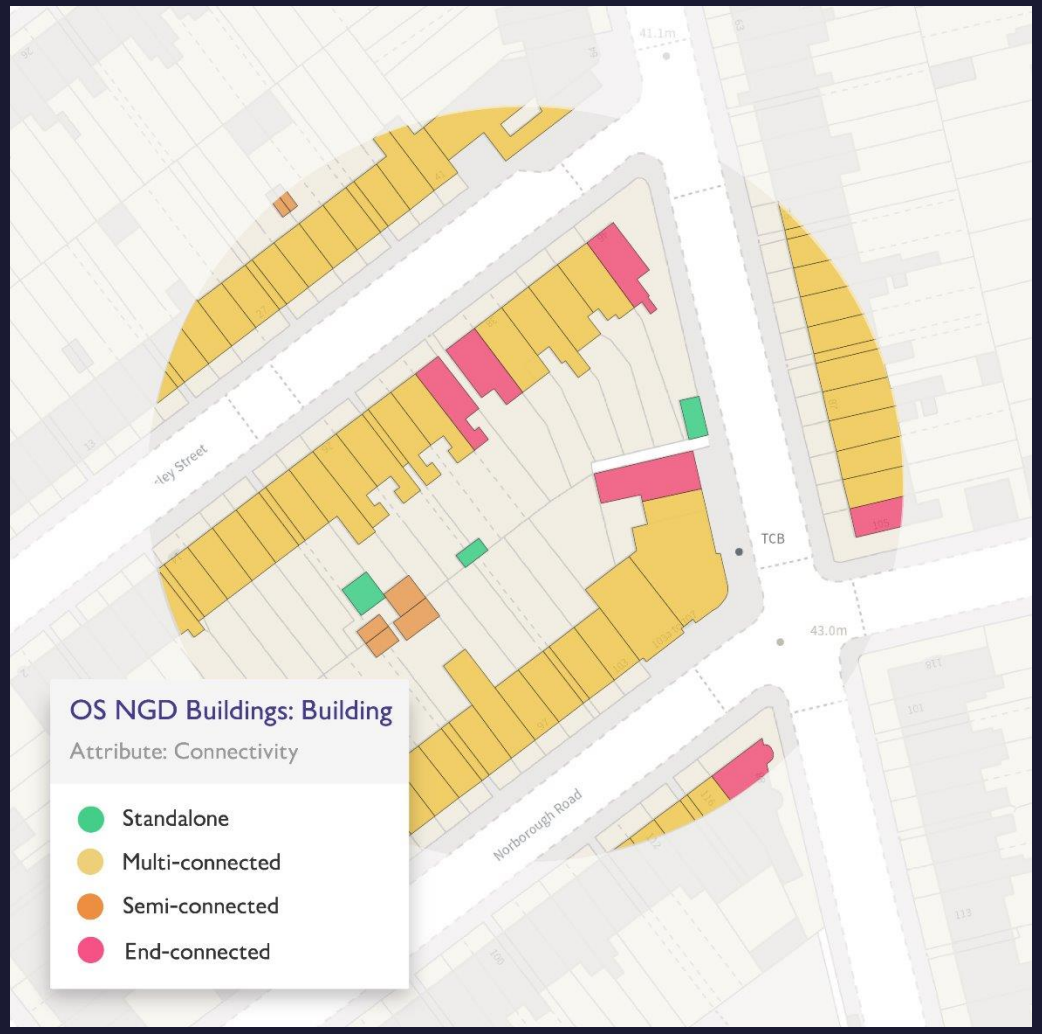
Address Count

Four new attributes for the count of built in-use address UPRNs associated with the building



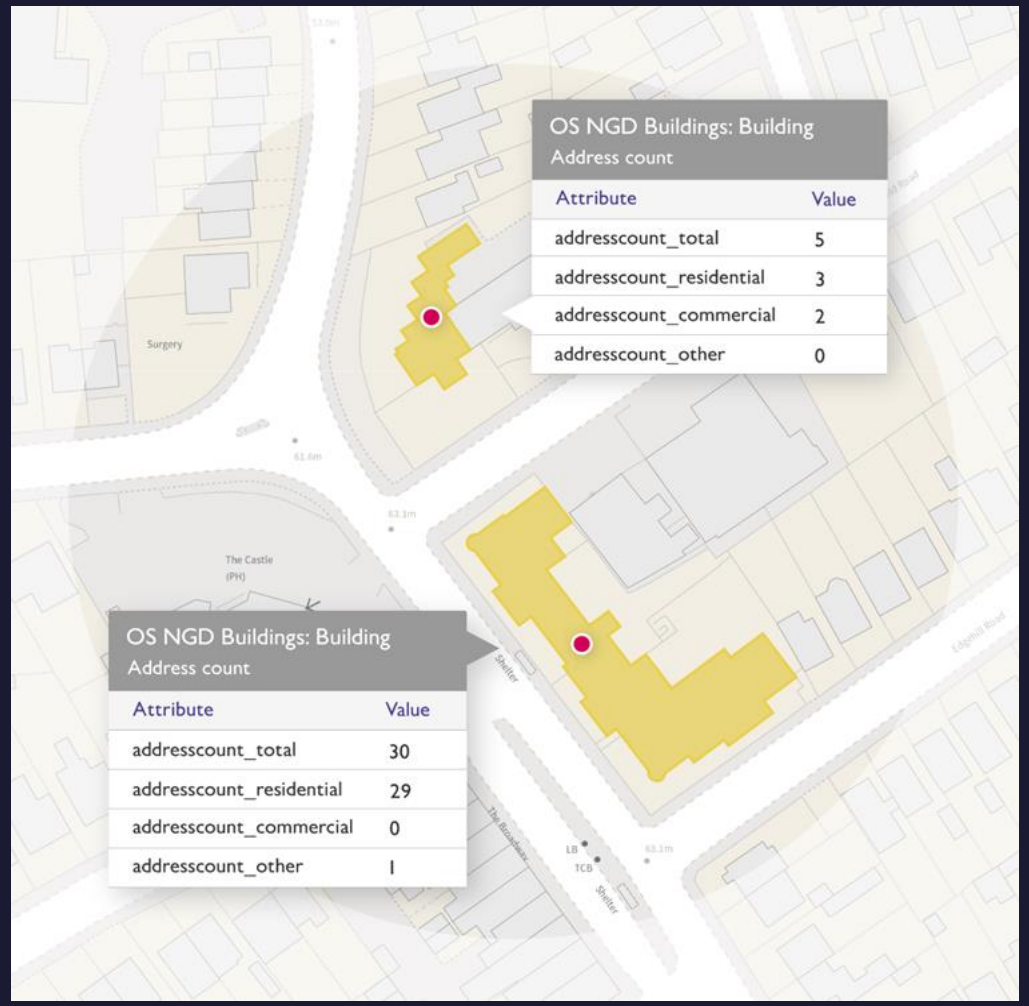
Building Connectivity

A count of how many unique ‘Building’ polygons a building shares a boundary with.



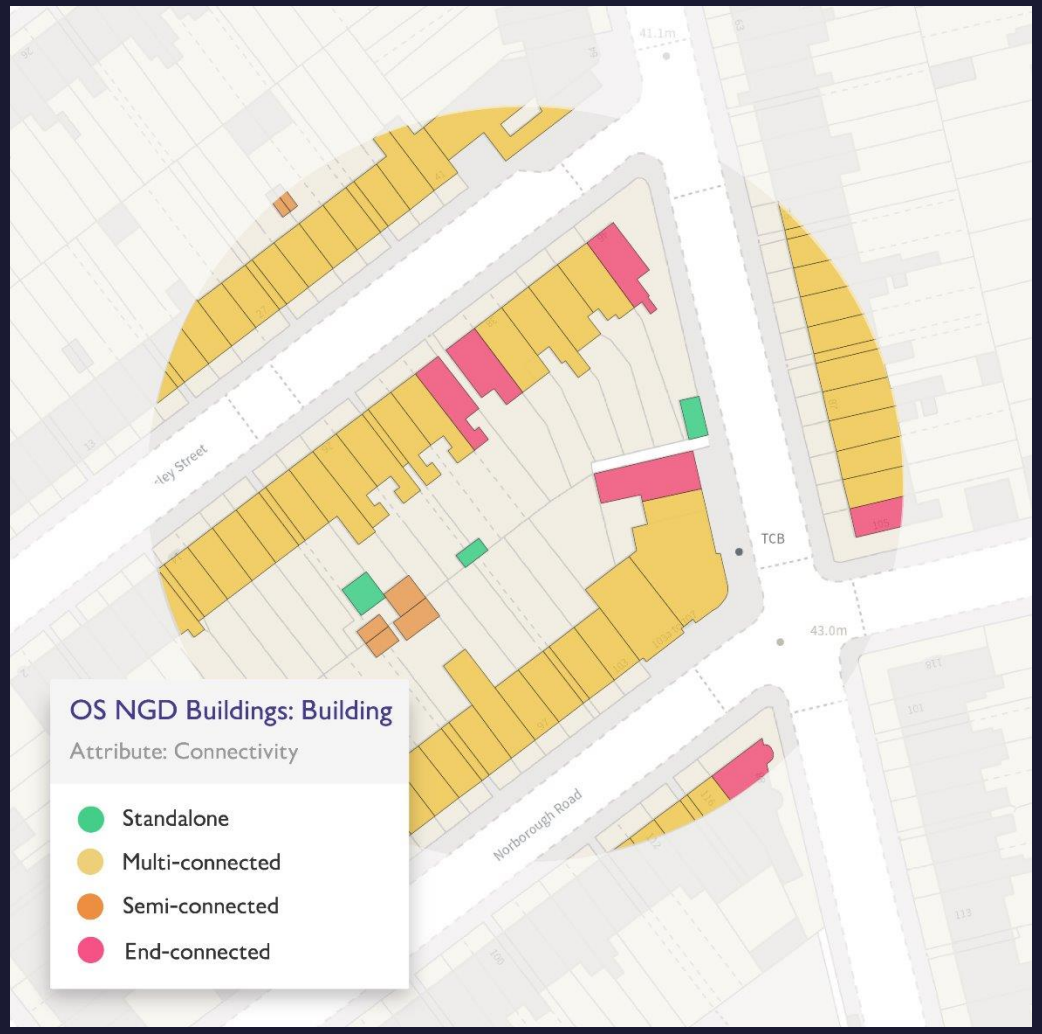
Building Use

The primary function (use) that a building is being utilised for



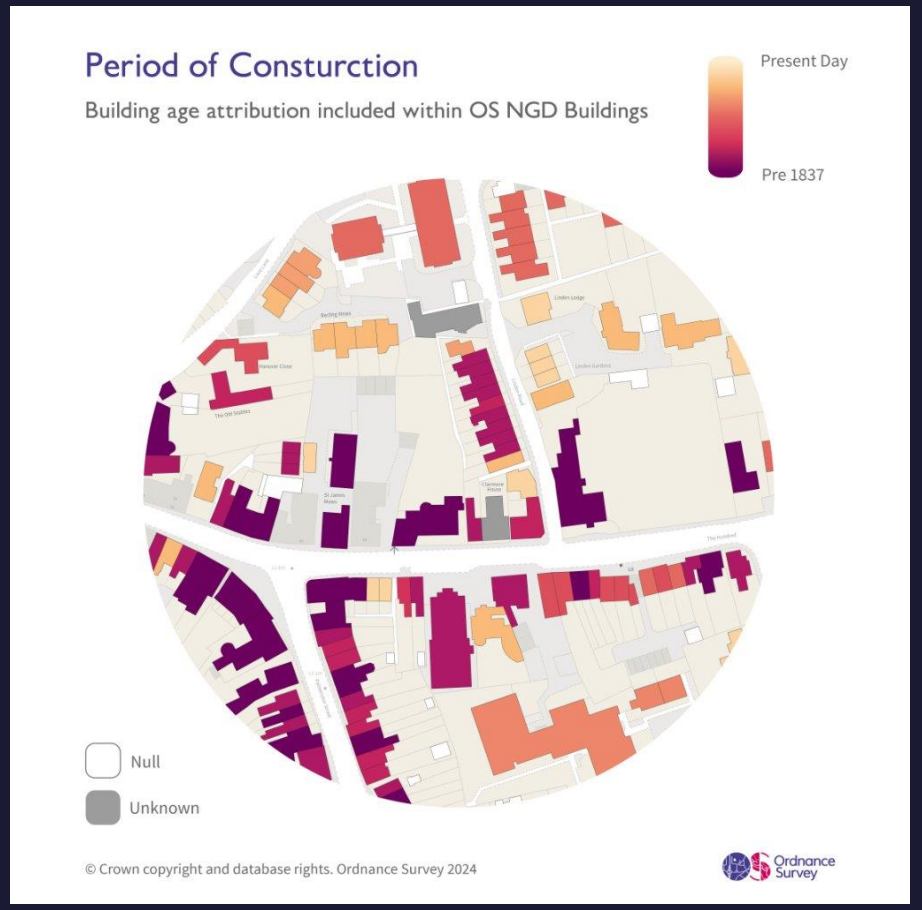
Main Building Flag

A new attribute to indicate whether the building is the primary building within the site



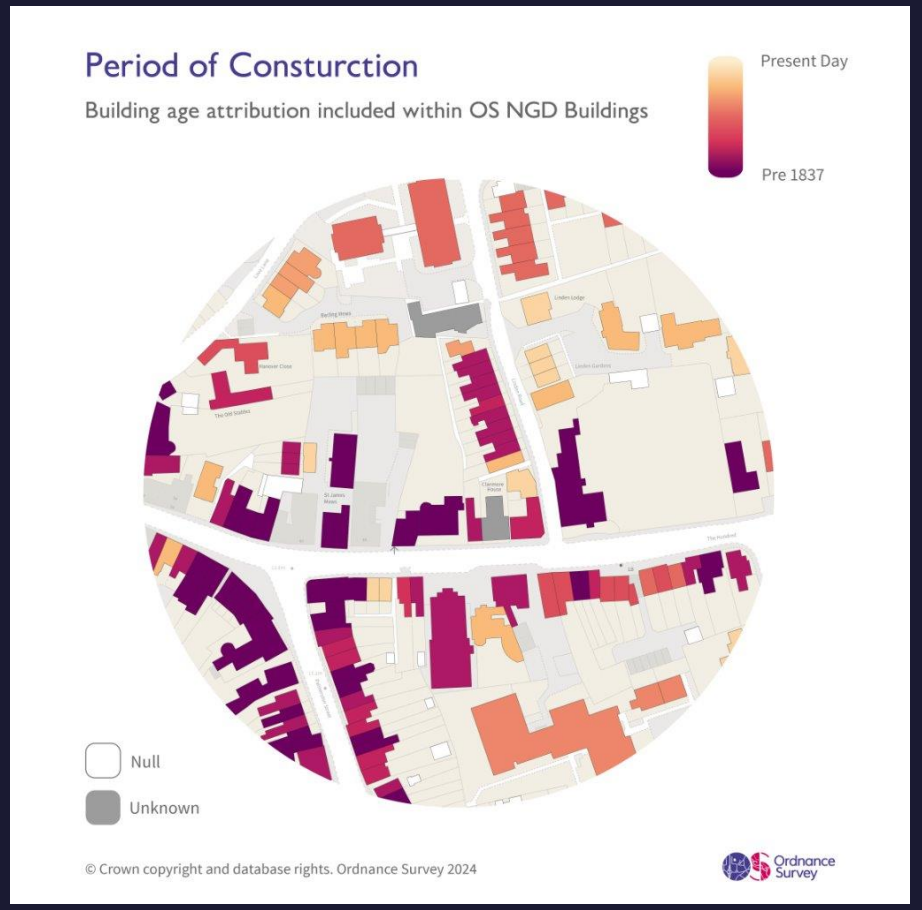
Building Age

The age of the main building in a site, created using third party data and supplemented with OS data. Two main attributes – a period of construction and year of construction, where available.
The period of construction ranges vary for earlier periods and move to consistent decadal ranges from 1980 onwards.



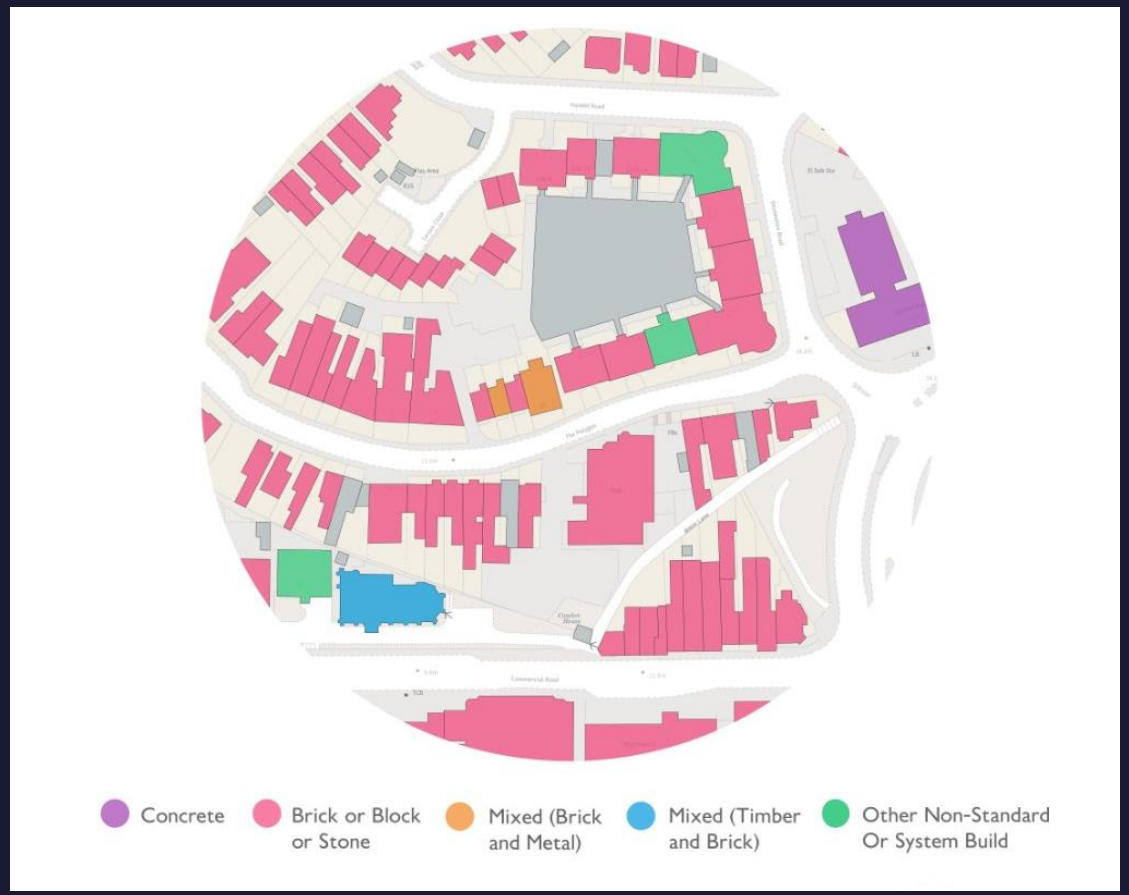
Building Age

The age of the main building in a site, created using third party data and supplemented with OS data. Two main attributes – a period of construction and year of construction, where available.
The period of construction ranges vary for earlier periods and move to consistent decadal ranges from 1980 onwards.



Construction Material

The primary construction material of the main building in a site, with an address. This attribute is created using primarily third party data and supplemented with OS data.



Basement Presence | Building Description

Indication the presence of a basement and or a self-contained flat

A simple, concise building description.

Number of Floors

New attribute to indicate the maximum number of occupiable floors at or above ground level within a residential or office building.

Roof Materials

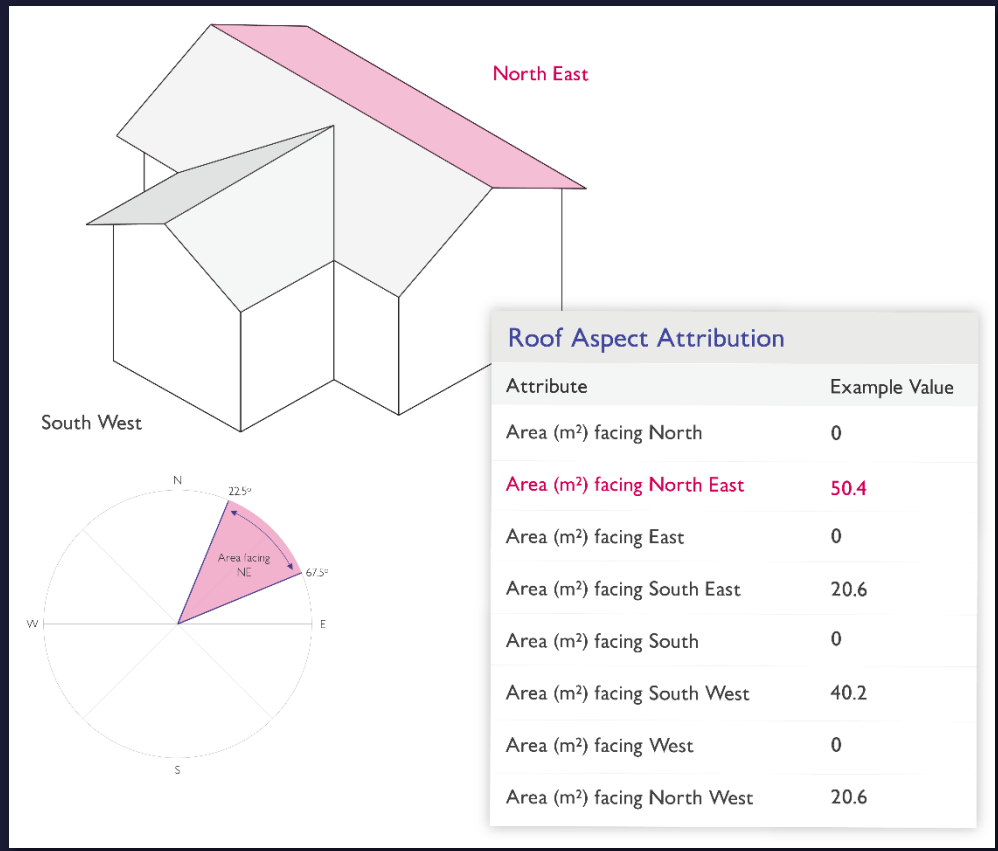
New attribute to indicate the maximum number of occupiable floors at or above ground level within a residential or office building.

Roof Shape

A simple description of the predominant form of the roof

Roof Aspect

An indication of the general shape characteristic of the roof of the building (eight attributes in m^2 – for directions N, NE, E, SE, S, SW, W, NW)

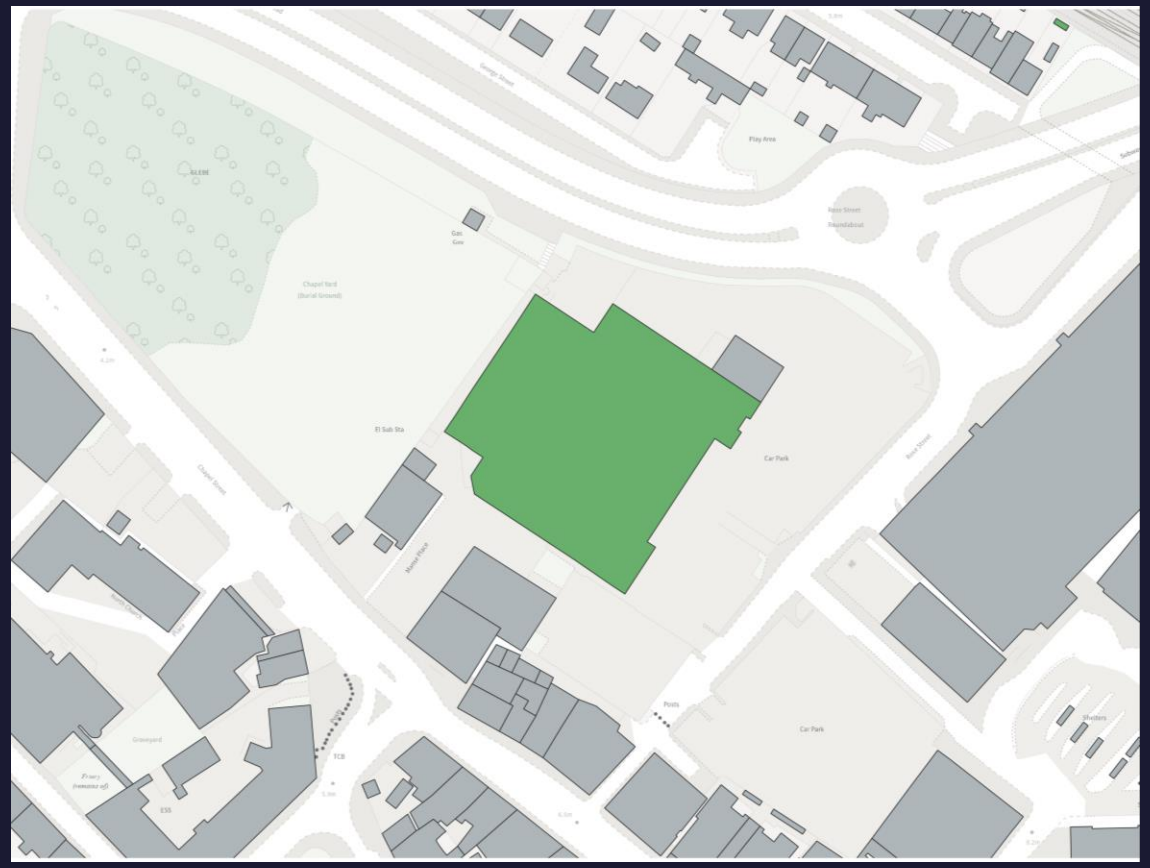


Roof Aspect Attribution

Attribute	Example Value
Area (m^2) facing North	0
Area (m^2) facing North East	50.4
Area (m^2) facing East	0
Area (m^2) facing South East	20.6
Area (m^2) facing South	0
Area (m^2) facing South West	40.2
Area (m^2) facing West	0
Area (m^2) facing North West	20.6

Green Roof Presence

Indicates if the roof of the building is at least partially covered with installed vegetation



Solar Panel Presence

Indicates if solar panels are present on the roof of the building

Suitability of buildings for solar panels

Using OS NGD Building attribution to explore the suitability of buildings for solar panels

Area of roof facing south > 20m²

Solar panels not already present

Roof type is pitched

OS NGD Building

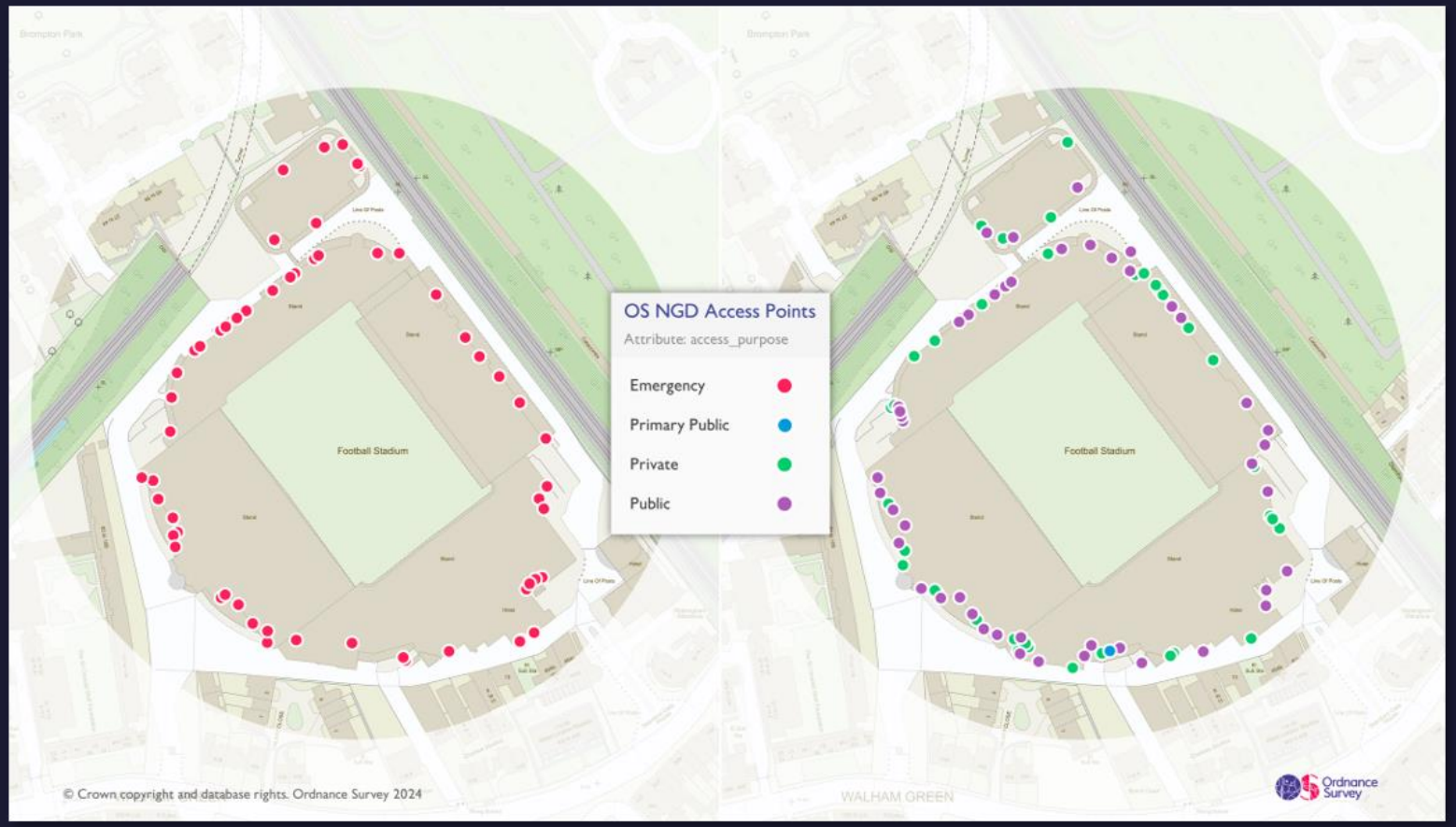
Ordnance Survey

Building Access Points

The locations identified by OS where vehicle, pedestrians or both can enter and/or leave a building

Scope – Key Public Buildings

- ☑ Hospitals
- ☑ Stadiums and Sports Arenas (>5000 capacity)
- ☑ Shopping Centres (>50 retail units)
- ☑ Railway Stations
- ☑ Major Transport Interchanges (airports, ferry terminals etc.)
- ☑ Conference Centres (>500 capacity)
- ☑ Concert Venues (>1000 people)



Building Cross References

Cross reference tables provided to allow customers to relate identifiers between Building Part, Land Use Sites, Addresses and the Building.

Building to Building Part

Provides the OSID references between the OS NGD Building feature type and all of the OS NGD Building Part features which make it up

Building to Land Use Site

Provides the OSID reference for the OS NGD Land Use Theme, Site features which the OS NGD Building feature type falls within.

Building to Address

Provides the UPRNs for all the OS NGD ‘Built Address’ features with a build status of ‘In Use’ which fall within the OS NGD Building feature type.

Provided as separate CSV files in the CSV format, separate tables in the Geopackage format and within the single response in the OS NGD API - Features

Use Cases

Asset Management & Maintenance

- Integrate NGD Buildings data into asset systems for accurate stock condition analysis.
- Enable predictive maintenance and reduce operational costs.

Retrofit & Energy Efficiency

- Identify hard-to-heat homes and prioritise retrofit programmes.
- Assess solar potential and support net zero initiatives.

Risk & Compliance

- Improve flood risk modelling and fire safety checks.
- Ensure compliance with building safety regulations.

Planning & Development

- Optimise site selection for new housing projects.
- Support zoning and infrastructure planning with accurate building footprints.

Market Insights & Forecasting

- Combine NGD data with demographic datasets for demand forecasting.
- Enhance valuation models with detailed building attributes.

Where can OS NGD help?

Property profiling, grading and evaluation

Planning retrofit projects

Meeting new regulation

Rent yield modelling

Identifying development opportunities

Managing maintenance for tenants

Meeting environmental targets

Informing acquisition and disposal process

Managing portfolio

Managing property density

Meeting sustainability targets

Studying what makes a successful community

OS NGD Buildings benefits for the housing market

Smarter Planning & Development

Identify suitable sites for new housing

Support zoning and infrastructure planning

Energy Efficiency & Sustainability

Target retrofit programmes
Identification of hard-to-heat homes

Support net zero initiatives

Risk Assessment & Compliance

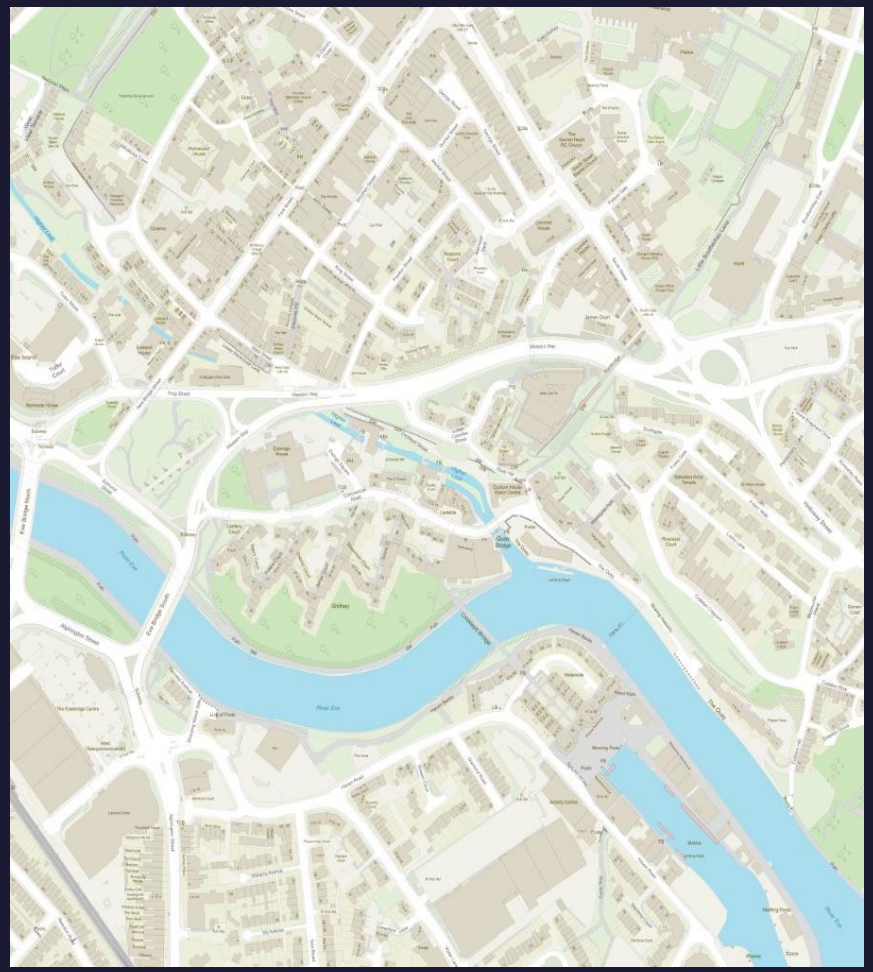
Flood risk modelling, fire safety checks, and insurance underwriting.

Resilience planning

Operational Efficiency

Streamline stock condition analysis and maintenance planning

OS MasterMap Topography Layer End of Life



OS MasterMap Topography Layer End of Life Product

- → Nearly 25 years old
- → OSMM Topo does not easily integrate with NGD, limits unlocking the value of NGD enhancements
- → Poorly suited to new customers, difficult to adopt

Date of Notice: Summer 2028

End of Life: Summer 2030

Subject to product development

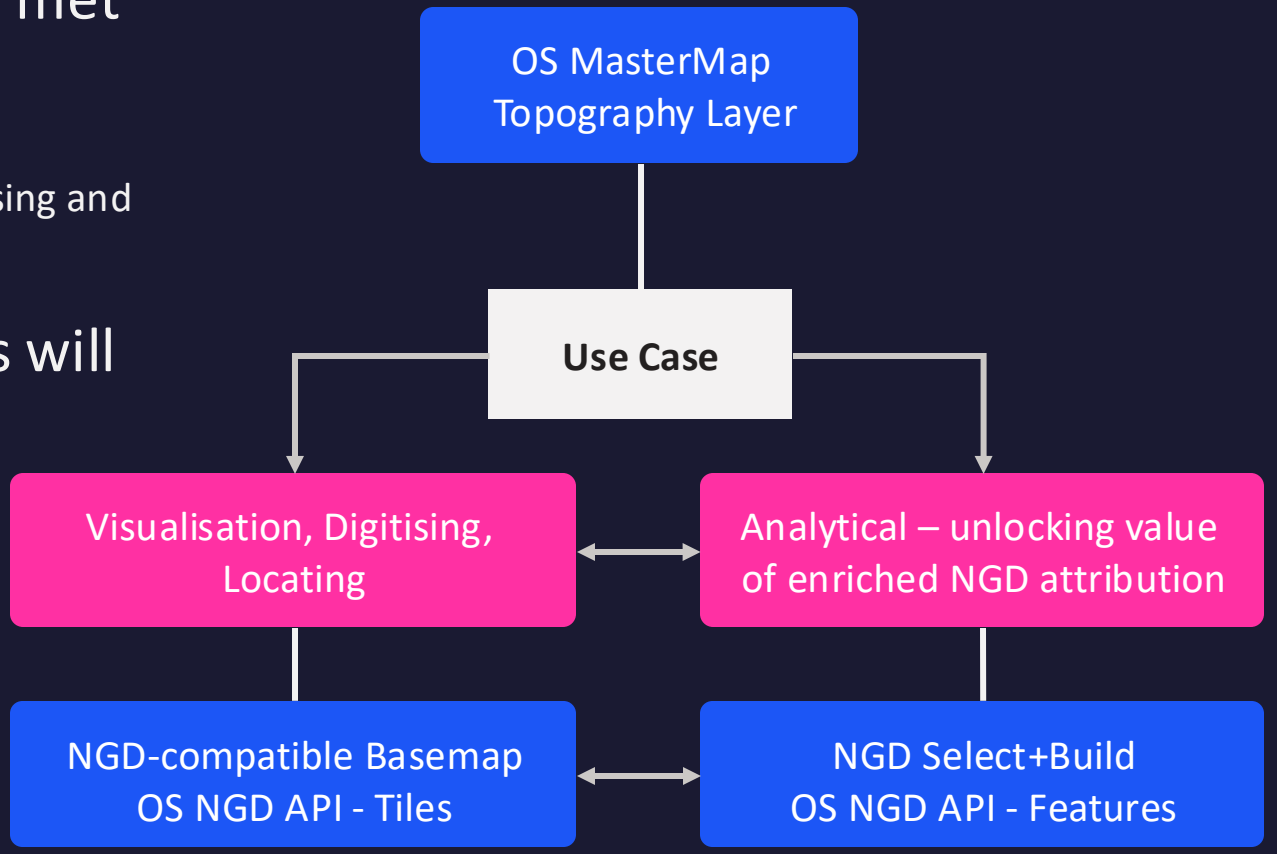
OSMM Topography Layer Migration Pathways

→ NGD Analytical use cases can already be met with NGD

- Setting, monitoring and evolving government policy on housing and development

→ Visualising, Locating, Digitising use cases will be met with NGD-compatible basemap

- Property and asset management



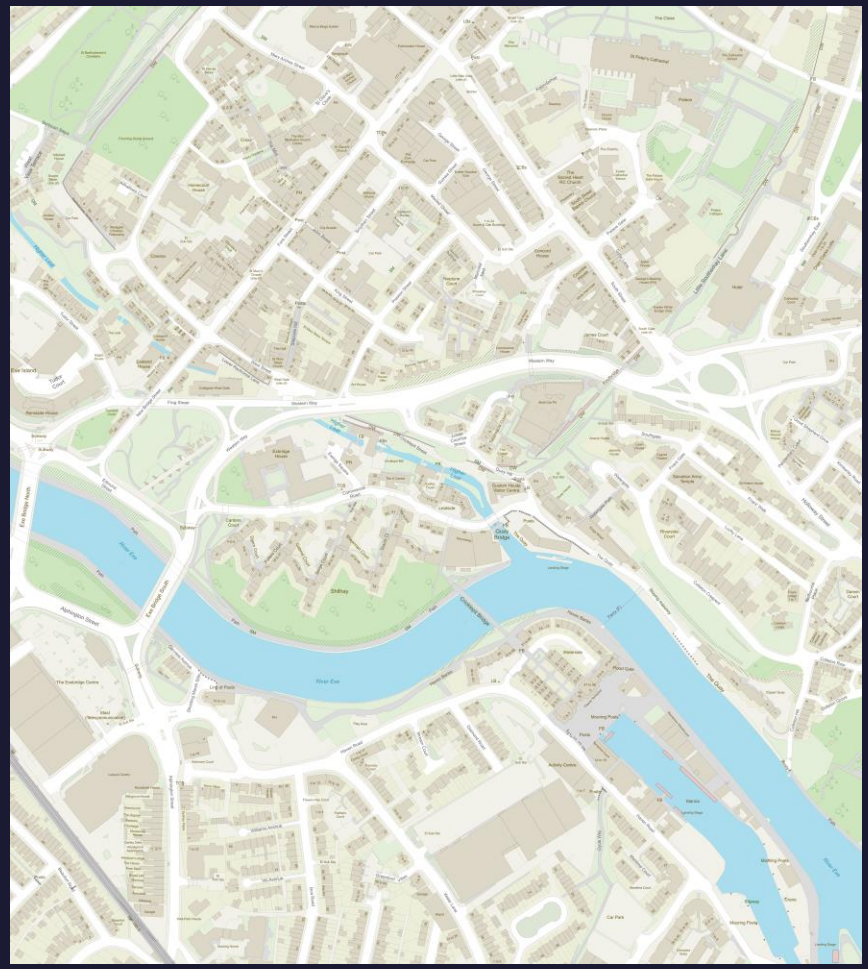
What is an NGD-compatible basemap?

→ Trusted, authoritative, detailed, accurate, cartographically styled national map of GB enabling a wide range of uses

- Suitable for modern applications and systems

→ Easy to use with analytical data already available in NGD to unlock even more value for you

→ Visualising, locating and digitising and basic analysis



Why migrate to an NGD-compatible basemap?

- → Continue using the trusted, authoritative national map of GB
- → Unlock the value of analytical data in NGD by adding attribution to a basemap
- → Benefit from the improved customer experience and journey of NGD
- → Easy to use, with standard formats
- → Improved data currency

NGD-compatible basemap timeline

Prototype

Key feature tests

(Closed Group)

Alpha

Limited features

GB Coverage

(Limited Group)

Alpha 1.1

Full set of features

Most functionality

(Wide Group)

Beta

Full product

Quality assured and stable

V1 schema

(All Customers)

Full Launch

Thank you!

Lily Brown – Product Manager

Lily.Brown@os.uk