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OS National Geographic Database (OS NGD)

Our user-friendly guide to Britain's next-generation geospatial data platform

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Guide to OS NGD

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Introduction

Ordnance Survey's National Geographic Database (OS NGD) is changing how geospatial data is created, accessed, and used across Great Britain. But if you're new to it, it can feel quite complex.
So what exactly is the OS NGD - and why does it matter?
In this guide, we explain everything in simple terms, from what it is to how organisations are already using it.

What is the OS NGD?

The OS National Geographic Database (NGD) is a single, unified database that contains detailed location data for Great Britain.

It brings together over 500 million geographic features - including buildings, roads, rivers, and addresses - into one consolidated system. In simple terms, it's like a live, digital map of Britain that you can search, analyse, and integrate within your GIS and CAD systems.

Key Facts

- A single source of geospatial data for Great Britain
- Over 500 million mapped features
- Updated daily or near real-time
- Accessible via APIs and data downloads
- Designed for analytics, integration, scalability, and modern applications

Why was the OS NGD created?

Before the NGD, Ordnance Survey data was delivered through multiple separate data products.

This created common challenges:

- Data stored and managed in different places
- Large downloads - even when only small amounts of data were needed
- Difficulty combining datasets (eg. variations in scale of capture across data products)
- Complex licensing and management

The OS NGD solves this by providing a single plat-form-based approach. This means you access just the data you need, when you need it.

What does the OS NGD replace?

OS NGD will take time to fully embed as it is a gradual rollout, so the NGD won't immediately replace legacy Ordnance Survey data products. What it does is lay the foundations for their future evolution.

As a result, there will be dual running with legacy datasets.

Over time, organisations can expect:

- Gradual migration away from traditional OS data products like OS MasterMap and OS AddressBase
- New products and services built directly on the NGD
- Legacy formats becoming less central

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How the OS NGD works (a simple explanation)

The NGD organises data in a way that's much easier to understand and use.

It uses three levels:

- Themes – broad categories (eg. Buildings, Land, or Transport)
- Collections – groups of related data within each theme
- Features – individual real-world objects (like a specific building or road)

Think of it like folders on your computer:

- Themes are the main folders
- Collections are the subfolders
- Features are individual files

This structure makes it easy to find and extract exactly what you need.

The nine OS NGD themes explained

THEME	COLLECTIONS	EXAMPLE FEATURES
Address	Comprehensive UK address data, including residential, commercial, postcodes, and pre-build properties	A point showing an address or an area indicating the extent of a post-code unit
Administrative & Statistical Units	Boundaries and geographic areas such as electoral units, postcodes, and functional areas	An area showing a Local Authority boundary or a Census area
Buildings	Detailed building footprints, individual parts, and access points	An area showing the extent of a building/property
Geographical Names	Named locations including towns, villages, landmarks, and natural features	A point locating a place
Land	Natural and man-made surfaces - land cover data showing natural features and man-made surfaces	An area showing the extent of a sports field
Land Use	How land is used - information on how land is used, such as schools, hospitals, and commercial sites	Indicating industrial area land parcels or farmland
Structures	Man-made features that are not buildings, including bridges, masts, and monuments	A line or points indicating the extent of a bridge over a canal
Transport	Road, rail, and transport network features supporting routing and infrastructure analysis	A line showing the extent of a section of a motorway or a segment of a railway line
Water	Rivers, lochs, lakes, canals, and other water features for hydrology and environmental insights	A polygon showing the extent of a loch, or a line showing a section of river

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What makes the OS NGD different?

A single source of data - all data sits in one system, improving consistency and accuracy.

More detailed data - each feature includes useful information (called attributes), such as:

- Building height and age
- Number of floors
- Construction materials

Near real-time updates - data is updated frequently (often daily), so it's always current.

Flexible access - you can access data in different ways:

- APIs (for apps and live systems)
- Downloads (for GIS and analysis)
- Modern formats like GeoJSON

Query only what you need - instead of downloading entire datasets, you can extract:

- A specific area
- A single feature type
- Selected attributes

What this means for your organisation or business

The OS NGD changes how organisations work with geospatial data.

Traditional approach:

- Download large datasets
- Store static files
- Update occasionally
-

With OS NGD:

- Access data via APIs
- Integrate with cloud systems
- Work with continuously updated data
- Faster, more flexible, and more scalable workflows

Common use cases across industries

The OS NGD supports a wide range of sectors:

- Urban planning – managing land use and development
- Transport & logistics – route optimisation and network planning
- Utilities & energy – asset management and risk analysis
- Emergency services – faster response with accurate location data
- Environmental analysis – flood modelling and land monitoring
- Property & real estate – site selection and valuation
- Telecommunications – network planning and coverage analysis
- Retail – choosing the best locations for stores

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OS NGD data currently available from us

Join thousands of users who use our platform to make ordering and managing digital maps easier.

- OS GB Address
- OS Transport Network
- OS GB Postcodes
- OS Water Network

The latest releases of OS NGD are available to buy through Mapshop, giving you instant access to available OS NGD in the format you want, any time you need it.

Are there any challenges?
Moving to the OS NGD may require:

- Updating older GIS systems
- Learning new data structures
- Adapting to API-based workflows

These challenges should lead to long-term benefits.

Why the OS NGD matters
The OS NGD reflects a bigger shift in how geospatial data is used:

- From static datasets to live data platforms
- From siloed tools to connected systems
- From complex access to easy, flexible use.

As organisations rely more on location data, platforms like the NGD are becoming essential. The OS National Geographic Database is more than just a new dataset - it's a new way of working with geospatial data.

For organisations, it means:

- Easier access to data
- Better data quality
- More powerful, real-time insights

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Ready to get started with OS NGD?

Whether you're just beginning to explore the OS National Geographic Database or planning to integrate it into existing workflows, our team is here to help.

From choosing the right datasets to accessing data through APIs or downloads, we can help you make the most of Britain's next-generation geospatial platform.

How we can help?

Expert advice
Speak to our geospatial specialists for guidance on OS NGD products, licensing and implementation.

Access the latest data
Order the latest available OS NGD datasets through Mapshop in the format that works for you.

Support your migration
Whether you're moving from legacy OS products or building new applications, we'll help make the transition as straightforward as possible.

Trusted by thousands
For more than 20 years, organisations across government, utilities, planning, property and infrastructure have relied on Emapsite for authoritative mapping and location data.

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