

Great Britain

Ordnance Survey

Enhancing geospatial data quality to meet evolving user needs in Great Britain

“2024 has seen Ordnance Survey embark on a new journey to evolve our role in supplying foundational geospatial data to serve as a valuable resource for decision-makers and customers across Great Britain. Our Better Data, More Destinations strategy seeks to ensure that OS is able to keep pace with our users’ demands, by designing and executing workflows for greater effectiveness, while safeguarding the reliability and trust in the data. From building our capabilities in AI and automation, through to unlocking additional potential in existing data, we can enhance our value to users, while maintaining our authoritative role as the National Mapping Service for the country.”

Nick Bolton
Chief Executive,
Ordnance Survey
Great Britain

Ordnance Survey’s (OS) Better Data, More Destinations strategy is leveraging advanced technologies to enhance geospatial data quality and meet evolving user needs.

Initiatives being delivered include innovative data products and models, collaborations, and skills development.

The implementation of automatic feature extraction (AFE) models in production has enabled the creation of a range of new national-scale products. These are generated using machine learning and geospatial post-processing to produce cartographically suitable data and metadata. The data provides information on roof materials, solar panels, and green roofs, as well as updated landcover datasets with detailed percentage cover information, and a field boundaries dataset with height and width attributes. In addition, the training of geospatial foundation model, using both current and historical imagery, is handling changes such as shadows and atmospheric conditions and benchmarked using manually labelled land cover data.

By providing essential geospatial context, OS’s collaboration with the National Centre for Earth Observation (NCEO) is unlocking the potential of Land Surface Temperature data. This is transforming Earth Observation (EO) data into actionable insights, ensuring its value is accessible to a broader audience beyond those with specialised skillsets.

Within the organisation, there has been a focus on AI adoption and skills development for employees. The emphasis is on responsible use underpinned by a Generative AI policy, modification of the software approvals process to include AI considerations, and the organisation of virtual training sessions alongside ‘promptathon’ hack days.

Benefits

- **Efficient data generation:** Automatic creation of datasets using OS aerial imagery and machine learning enhances data accuracy and availability.
- **Scalable updates:** Reusable data processing pipelines allow for efficient and large-scale updates, ensuring data remains current.
- **Enhanced model performance:** Improved production model performance leads to more reliable and actionable insights.
- **Resource efficiency:** Lower training data requirements and reduced model training time decrease costs and carbon footprint.
- **Increased productivity:** Streamlined processes and automation boost overall productivity by decreasing need for manual editing in certain workflows, improving efficiency and reducing human error.
- **Skill development:** Comprehensive training programs enhance digital skills among employees, benefiting the workforce and ensuring we keep pace with our users and the ambitions of the UK Government around the deployment of AI.
- **Informed decision-making:** EO data supports increased currency and better responsiveness to user requirements. For instance, the creation of climate adaptation plans for high temperatures, helping identify and protect at-risk areas, businesses, and people.

Green Roof Presence in NGD Buildings

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

■ Present
■ Not Present



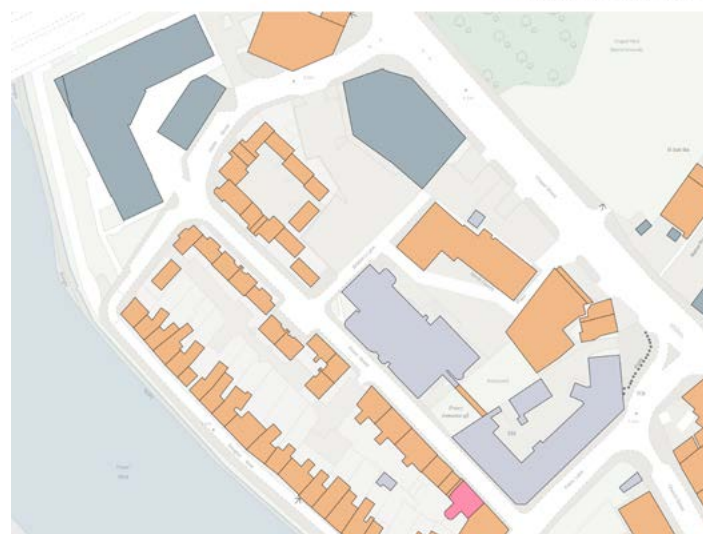
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Roof Material for NGD Buildings

The primary roof material present on a building

■ Metal
■ Mixed
■ Tile Or Stone Or Slate
■ Waterproof Membrane Or Concrete



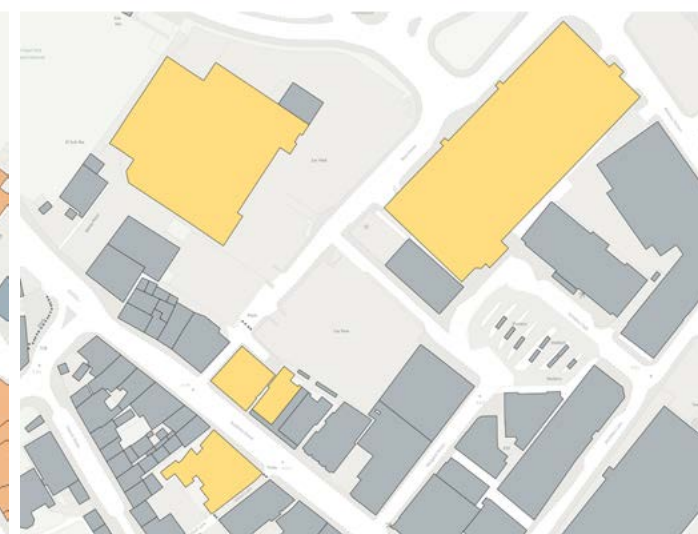
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Solar Panel Presence in NGD Buildings

Indicates if Solar Panels are present on the roof of a building

■ Present
■ Not Present



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