

Great Britain

Ordnance Survey

Mapping out buried infrastructure with an authoritative digital platform

“Ordnance Survey GB is proud to have been entrusted by the UK Government with operating the National Underground Asset Register (NUAR). By consolidating underground asset data within a single trusted and authoritative digital platform, we’re not only showcasing our enduring strength as Great Britain’s national mapping service but also forging new partnerships across the public and private sectors and unlocking significant economic value for the country.”

Nick Bolton
Chief Executive,
Ordnance Survey GB,
Great Britain

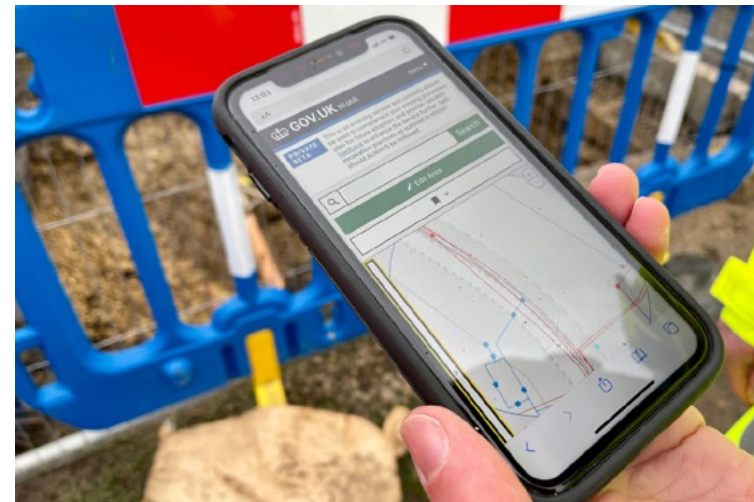
Ordnance Survey has taken on operational responsibility for the National Underground Asset Register (NUAR), establishing a single authoritative digital service for sharing a map of underground asset data.

The NUAR covers England, Wales, and Northern Ireland (Scotland has its own underground asset register) with data currently supplied from more than 350 asset owners, resulting in over 3.2 million kms of pipes and cables published – more than 80% of known underground assets.

A working group, including data scientists from the Open Geospatial Consortium, an international panel of experts, and members of Ordnance Survey, formed to create a concept – the Model for Underground Data Definition and Integration. Known as MUDDI for short, it creates an international standard for mapping geospatial data underground. The MUDDI model was used to enable the standardised data view of the underground asset data in the NUAR, transforming and harmonising the source data from asset owners which comes in different shapes and sizes.

Ordnance Survey GB works with underground asset owners to bring their data into NUAR and enable instant access to a centralised secure and standardised map. As a result, the government digital service covers underground pipes and cables in England, Wales, and Northern Ireland for Telecommunication, Energy, Pipeline, Water, Transport, Local Authority, and Highways Authority assets, to improve the efficiency and safety of buried infrastructure installation, maintenance, operation, and repair.

Being entrusted with the operation of a critical national asset reflects Ordnance Survey GB’s central role in NUAR’s conception and development. It reinforces confidence in the national mapping service’s long standing capabilities and highlights its strength in bringing together partners across both the public and private sectors.



Benefits

- Delivers major economic gains. There are around 60,000 accidental strikes on underground assets every year, costing the UK economy £2.4 billion per annum and putting workers’ safety and lives at risk. NUAR is envisaged to deliver over £400 million per year of economic growth through increased efficiency, reduced asset strikes and reduced disruptions for the public and businesses.
- Improving safety and reducing strikes through providing excavators with access to more data to help prevent accidental strikes and improve their safety.
- Standardises data in a single secure service by replacing inconsistent formats with one authoritative, harmonised view.
- Improves planning and coordination by simplifying the previously complex process of aligning varied formats and scales from each asset owner.
- Increases efficiency across infrastructure works, Before NUAR, workers had to contact multiple organisations to get information, waiting on average over six days. Now they have instant access to a consolidated map, reducing this time to 60 seconds.
- Provides a trusted and continuously updated national dataset ensuring that utilities, government, and contractors work with the most accurate view of underground networks.
- Enhances security and protects sensitive data through strong, nationally recognised safeguards recognising the value of this asset.
- Strengthens government decision making and regulatory compliance through the supply of standardised, updated and auditable data to a centralised nationally recognised register.
- Offers a flexible service that can grow and adapt to reflect future user needs and emerging government priorities.