

Using ONS Geography Linked Data

This document explains how to use the new 'Atlas' section of the ONS Geography Linked Data site, <http://statistics.data.gov.uk>

Overview

The Atlas tab on the homepage takes you to the Atlas section. This allows you to

- browse for areas via lists of statistical and administrative areas and an interactive map window. Each area name, its type (eg electoral ward / police force area), its code, what areas it lies within and what other areas are nearby will all show on the page when selected.
- view how what smaller areas are nested within the selected area
- view what larger areas the selected area lies within
- view the area of interest on a map
- view the linked data identifier and all available associated metadata for an area, by clicking on the linked data button below the lists
- download a machine readable description of the selected area in a variety of linked data formats: N-Triples, Turtle, JSON-LD and RDF/XML.

Step by step guide

Go to the tab for Atlas in the top toolbar of the statistics.data.gov.uk homepage

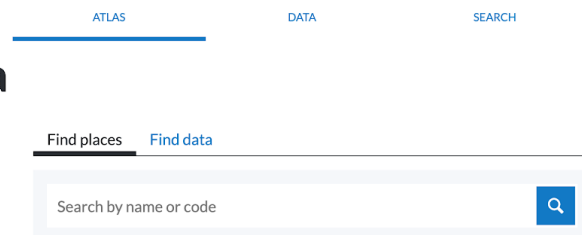


GEOGRAPHY LINKED DATA

ONS Geography Linked Data

This is the access point for information on statistical geographies required to support the use of official statistics. It is designed to allow users to discover, view and use geospatial data.

This site is complementary to the [ONS Open Geography Portal](#). It allows access directly to data within the geography products, in machine-readable form and using an Application Programming Interface.



Click on that to get to the [Atlas](#) page.

K02 United Kingdom

United Kingdom

Status

live

Code

K02000001

Operational

2009-01-01



The default view of the Atlas page contains a static map of the UK, a search box to filter area type and a list of area types per country. Below this is a linked data section, which you can expand to view all available metadata for the area you're viewing (in this case, the UK), and below that is the option to download this linked data in a variety of formats (N-Triples, Turtle, JSON-LD and RDF-XML).

Find an area

In Atlas, go to the 'Related areas' section beneath the static map. The first box contains a list of statistical geography types, for each country in the UK. Here, you can either scroll to browse all area types...

Q find area type

ENGLAND

- E00 Output Areas**
171372 in United Kingdom
- E01 Super Output Areas, Lower Layer**
32844 in United Kingdom
- E02 Super Output Areas, Middle Layer**
6791 in United Kingdom
- E04 Civil Parishes**
10460 in United Kingdom
- E05 Electoral Wards/Divisions**
7446 in United Kingdom
- E06 Unitary Authorities**
56 in United Kingdom
- E07 Non-metropolitan Districts**
201 in United Kingdom
- E08 Metropolitan Districts**

... or use the search box above it which responds to search suggestions.

A search box containing the text 'eu' is at the top. Below it, a list of results is shown, grouped by region:

- ENGLAND**
 - [E15 European Electoral Regions](#)
9 in United Kingdom
- NORTHERN IRELAND**
 - [N07 European Electoral Regions](#)
1 in United Kingdom
- OTHER**
- SCOTLAND**
 - [S15 European Electoral Regions](#)
1 in United Kingdom
- WALES**
 - [W08 European Electoral Regions](#)
1 in United Kingdom

All blue text on the site is clickable. Click on any blue text in the list on the left to view an alphabetical list of areas of the chosen type, within the area currently selected, alongside an interactive map to view the area of interest in more detail.

The page title is 'Related: E15 European Electoral Regions in United Kingdom'. It features a search box with 'eu' and a 'Show obsolete places' checkbox. The left sidebar shows the same list of regions as the previous screenshot, with 'E15 European Electoral Regions' selected. The main content area displays an alphabetical list of regions:

- [E East Midlands](#)
- [Eastern](#)
- [L London](#)
- [N North East](#)
- [North West](#)
- [S South East](#)
- [South West](#)
- [W West Midlands](#)
- [Y Yorkshire and The Humber](#)

On the right, there is a map of the United Kingdom and surrounding areas, with the United Kingdom highlighted in blue. The map includes labels for Ireland, United Kingdom, France, Belgium, Netherlands, Germany, Denmark, Norway, and the North Sea. A toolbar at the top of the map allows switching between 'Map' and 'Satellite' views. The Google logo and 'Map data ©2019 Google, ORION ME Terms of Use' are visible at the bottom of the map.

Note: you can also find an area by searching for it by place name, area code or postcode using the toolbar on the [homepage](#) or under the [search](#) tab. When you've entered the search term, you get a list of results. Select the result you want, and this will take you to its Atlas page.

View an area in detail

Once you have selected an area (in this example, I chose the North East EU electoral region from the 9 such regions in England), you get to the Atlas page for that area. On this page there is a static map of the area name, alongside details of the type of area it is, its code and the larger areas it is nested within.

Below this are lists of smaller areas within the one selected. In this example the options are Westminster Parliamentary Constituencies and Postcodes. The parliamentary constituencies are shown in an alphabetical list and the map can be used to zoom to, and select, an area of interest.

The other related areas here are postcodes.

Finding Postcodes and their Areas

If you know the postcode you want then enter it in the search box on either the homepage or search page.

If you know the area the postcode is in, but not the postcode itself:

- search for an area type that you know the postcode sits in or
- use the interactive map to navigate to a smaller related area.

In the below example I'm looking for postcodes in Middlesbrough. I searched for Middlesbrough, which returns a list of all the areas with 'Middlesbrough' in their name, organised by type of area. I selected Unitary Authorities from this list, then followed the link through to the page for Middlesbrough unitary authority. From the related area section, you can use the map or list to choose a smaller area within Middlesbrough.

Related: E00 Output Areas in Middlesbrough Show obsolete places

find area type

ENGLAND	E
E00 Output Areas 442 in Middlesbrough	E00060556
E01 Super Output Areas, Lower Layer 86 in Middlesbrough	E00060557
E02 Super Output Areas, Middle Layer 19 in Middlesbrough	E00060558
E04 Civil Parishes 2 in Middlesbrough	E00060559
E05 Electoral Wards/Divisions 20 in Middlesbrough	E00060560
E33 Workplace Zones 123 in Middlesbrough	E00060561
E36 Census Merged Wards 23 in Middlesbrough	E00060562
OTHER	E00060563
	E00060564
	E00060565
	E00060566
	E00060567
	E00060568
	E00060569
	E00060570
	E00060571

Zooming in on the map allows you to select the area you want to view postcodes for (in this example, an output area in central Middlesbrough):

Clicking on that area code takes me to the Atlas page for that specific output area in Middlesbrough. Like every Atlas page, I get a static map showing where that area is in the UK and the larger areas it sits within. I also get a list of postcodes for that output area.

Related: Postcodes in E00060624

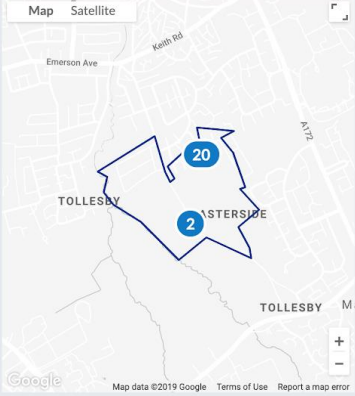
find area type

OTHER

Postcodes
11 in E00060624

- T TS4 3JD
- TS4 3JE
- TS4 3JF
- TS4 3JG
- TS4 3JH
- TS4 3JL
- TS4 3JP
- TS4 3JQ
- TS4 3JU
- TS4 3JW
- TS4 3JY

Show obsolete places

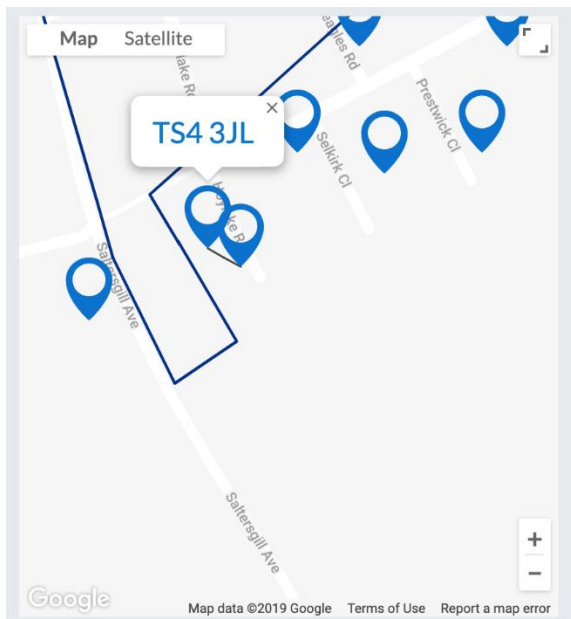


Map Satellite

Emerson Ave
Kellie Rd
ASTERSIDE
TOLLESBY
TOLLESBY M

Map data ©2019 Google Terms of Use Report a map error

Zooming in on the map further shows you the precise location of the postcode centroids.



Linked Data

To see all attributes of the selected area, go to the Linked Data section below. It looks like this:



Click on the plus sign to expand this section. This is a screenshot of the identifier and some of the metadata for the London Borough E09000001 (City of London). Note: all available metadata

for each area is available on the site. This image is a screenshot of just part of the metadata available for this area.

Linked Data

Identifier
http://statistics.data.gov.uk/id/statistical-geography/E09000001

Metadata
graph: http://statistics.data.gov.uk/graph/geography

Land hectareage http://statistics.data.gov.uk/def/measurement#hasLandHectareage	290.4 xsd:float
label http://www.w3.org/2000/01/rdf-schema#label	E09000001 xsd:string
Inland water hectareage http://statistics.data.gov.uk/def/measurement#hasInlandWaterHectareage	0.0 xsd:float

Downloading Data

To download any statistical for administrative geography, find the area you want and then go to the foot of the page, where you can download it in a format of your choice.

Downloads

Download this linked data resource as:

 N-Triples Linked Data	 Turtle Linked Data	 JSON-LD Linked Data	 RDF/XML Linked Data
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Geometry

The system also holds the geometry of each resource. For areas, this is a polygon representing the boundary. For a postcode, it is a point representing the postcode centroid. The geometry data is held in Well Known Text (WKT) format as latitudes and longitudes in the WGS84 coordinate reference system. In most cases the boundary polygons are generalised, i.e the number of points in the polygon has been reduced from the full definition, so that the size of the data is not too big.

To find the geometry, go to the Linked Data section, then click on the link that appears as the value of the 'hasGeometry' attribute. This can be viewed on screen or downloaded in the usual selection of linked data formats (JSON-LD and so on).