

Package: boundr (via r-universe)

October 4, 2024

Version 0.3.99

Title Retrieve Area Boundaries and Data from the ONS Open Geography Portal

Description The main purpose of this package is to download area lookups and boundaries (in GeoJSON format) using the ONS Open Geography API, for all areas at a specified level within a specified area.

License MIT + file LICENSE

Encoding UTF-8

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.2

Imports assertthat (>= 3.4.0), dplyr (>= 1.1.0), glue (>= 1.3.2), httr2 (>= 1.0.0), janitor (>= 1.0.0), jsonlite, purrr (>= 1.0.0), rlang (>= 0.4.0), sf (>= 1.0-7), stringr (>= 1.5.0), tibble (>= 3.0.0), tidyr (>= 1.1.4), tidyselect (>= 1.2.0)

Depends R (>= 4.1.0)

Suggests ggplot2, testthat (>= 3.0.0), tmap, usethis (>= 1.5.0)

URL <https://codeberg.org/francisbarton/boundr>,
<https://francisbarton.github.io/boundr/>,
<https://francisbarton.codeberg.page/boundr/docs>

BugReports <https://codeberg.org/francisbarton/boundr/issues>

Config/testthat/edition 3

Repository <https://francisbarton.r-universe.dev>

RemoteUrl <https://codeberg.org/francisbarton/boundr>

RemoteRef HEAD

RemoteSha 34e4446e10677cc0377acbcba219212fba8c173a

Contents

| | |
|---------------------------------|---|
| add_geometry_to_table | 2 |
| boundr_options | 3 |
| bounds | 4 |
| lookup | 5 |
| res_codes | 6 |

| | |
|--------------|----------|
| Index | 8 |
|--------------|----------|

add_geometry_to_table *Use an existing tibble as the basis for a spatial query*

Description

If you have a tibble such as those produced by `lookup()` - that is, there is a column of geographical ONS codes ending in 'cd' - simply use this table as the basis for retrieving the relevant boundaries or centroids. `add_geometry_to_table()` will use the lefthand-most column ending with "cd".

Usage

```
add_geometry_to_table(
  tbl,
  opts = boundr_options(),
  geometry = c("boundaries", "centroids")
)
```

```
add_geometry(
  tbl,
  opts = boundr_options(),
  geometry = c("boundaries", "centroids")
)
```

Arguments

| | |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>tbl</code> | A tibble with a column containing ONS geographical codes. |
| <code>opts</code> | Should be set with the <code>boundr_options()</code> function. See <code>?boundr_options</code> for detail on what can be set by the user, and on the default values. |
| <code>geometry</code> | character. Two options: "boundaries" (the default) and "centroids". By default, <code>bounds()</code> will return area boundaries. Set this explicitly to "centroids" to get area centroids instead. |

Value

If successful, will return the initial table with an additional geometry column added. Duplicate rows will be removed.

Examples

```
tibble::tibble(wd23cd = c("S13003001", "N08000520", "W05001522")) |>
  add_geometry_to_table()
```

| | |
|----------------|----------------------------------------------------|
| boundr_options | <i>Use this to set custom options for bounds()</i> |
|----------------|----------------------------------------------------|

Description

opts() is an alias for this function.

Usage

```
boundr_options(
  resolution = res_codes(),
  return_width = c("tidy", "full", "minimal"),
  crs = 4326,
  query_option = NULL
)
```

```
opts(
  resolution = res_codes(),
  return_width = c("tidy", "full", "minimal"),
  crs = 4326,
  query_option = NULL
)
```

Arguments

| | |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| resolution | character. See res_codes() for the potential options. How generalised should the boundary be, and whether coastal boundaries should adhere to the coastline or to the full territorial extent. BGC by default (G = Generalised (20m), C = limited to the coastline.) F indicates Full resolution; S indicates Super-generalised (200m); U indicates Ultra- generalised (500m) boundary resolution. Use E instead of C for full extent boundaries (e.g. BFE). Not all combinations are available. Ignored if geometry is set to "centroids". |
| return_width | character. How many of the possible columns in the returned table to keep. Options are "tidy", "full" or "minimal". "Tidy" aims to return four data columns (usually) - two columns for the lookup level codes and names, and two for the within level codes and names. Plus a geometry column. "Full" aims to return all data columns from the lookup. "Minimal" aims to return just the two (usually!) data columns relating to lookup_level. If within is not supplied then "tidy" will be equivalent to "minimal". |
| crs | The Coordinate Reference System (CRS) code to use |
| query_option | numeric. Defaults to 1, which means that the URL will just be the first one from the list of possible services resulting from the level and year filters above. If this does not give you what you want, you can run the function again with a different option from the list. |

Examples

```
boundr_options(crs = 27700) # Set the CRS to British National Grid
boundr_options(return_width = "full") # Ask boundr to return all data columns
```

| | |
|--------|-------------------------------------------------------------------------------|
| bounds | <i>Return boundary data at a specified level and area from the ONS OG API</i> |
|--------|-------------------------------------------------------------------------------|

Description

Return boundary data at a specified level and area from the ONS OG API

Usage

```
bounds(
  lookup_level,
  within_level = NULL,
  within_names = NULL,
  within_codes = NULL,
  lookup_year = NULL,
  within_year = NULL,
  opts = boundr_options(),
  geometry = c("boundaries", "centroids")
)
```

Arguments

lookup_level character. Lower level area code eg "lsoa", "wd", "lad".

within_level character. Higher level area code eg "lad", "cty", "icb". (That is, higher (conceptually) than lookup_level; aka larger than lookup!). If not supplied, this uses the default NULL, and just data for lookup_level will be returned. In this case, within_names and within_codes (if supplied) will instead be taken to refer to, and used to filter at, the lookup_level level.

within_names, within_codes character. In order to restrict data returned to a specific area, either within_names or within_codes must be provided. Otherwise all available boundaries at that level will be retrieved. Use place names eg "Essex" to restrict to a certain geographical area. Or use ONS area codes eg "W02000103" likewise (this is useful with wards, where there are many that share identical names). To use this argument to filter within_level, the within_level must be specified! Otherwise {boundr} will apply them to lookup_level instead. See examples. Vectors of multiple names or multiple codes can be supplied. If you supply both within_names and within_codes, only within_names will be used; (within_codes will be ignored).

| | |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| lookup_year | numeric or character. A specific year for data relating to lookup_level, if you need it. Defaults to NULL, which then aims to return data for the most recent year available. Provide as YYYY. |
| within_year | numeric or character. A specific year for data relating to within_level, if you need it. Defaults to NULL, which then aims to return data for the most recent year available. Provide as YYYY. |
| opts | Should be set with the boundr_options() function. See ?boundr_options for detail on what can be set by the user, and on the default values. |
| geometry | character. Two options: "boundaries" (the default) and "centroids". By default, bounds() will return area boundaries. Set this explicitly to "centroids" to get area centroids instead. |

Value

an sfc tibble (data frame with geometry)

See Also

boundr_options

Examples

```
bounds("msoa", "lad", "Swansea")
bounds("wd", "lad", "Shepway", within_year = 2016) # Shepway no longer exists
bounds("rgn", opts = boundr_options(resolution = "BUC"))
bounds("par", "lad", "Isles of Scilly") # par = "parish"
bounds("spr")
bounds("npark", within_names = "Bannau Brycheiniog")
bounds("msoa", "utla", "Swindon", geometry = "centroids")
```

lookup

Create a lookup table by querying the ONS OpenGeography API

Description

Create a lookup table by querying the ONS OpenGeography API

Usage

```
lookup(
  lookup_level,
  within_level = NULL,
  within_names = NULL,
  within_codes = NULL,
  lookup_year = NULL,
  within_year = NULL,
  opts = boundr_options()
)
```

Arguments

| | |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| lookup_level | character. Lower level area code eg "lsoa", "wd", "lad". |
| within_level | character. Higher level area code eg "lad", "cty", "icb". (That is, higher (conceptually) than lookup_level; aka larger than lookup!). If not supplied, this uses the default NULL, and just data for lookup_level will be returned. In this case, within_names and within_codes (if supplied) will instead be taken to refer to, and used to filter at, the lookup_level level. |
| within_names, within_codes | character. In order to restrict data returned to a specific area, either within_names or within_codes must be provided. Otherwise all available boundaries at that level will be retrieved. Use place names eg "Essex" to restrict to a certain geographical area. Or use ONS area codes eg "W02000103" likewise (this is useful with wards, where there are many that share identical names). To use this argument to filter within_level, the within_level must be specified! Otherwise {boundr} will apply them to lookup_level instead. See examples. Vectors of multiple names or multiple codes can be supplied. If you supply both within_names and within_codes, only within_names will be used; (within_codes will be ignored). |
| lookup_year | numeric or character. A specific year for data relating to lookup_level, if you need it. Defaults to NULL, which then aims to return data for the most recent year available. Provide as YYYY. |
| within_year | numeric or character. A specific year for data relating to within_level, if you need it. Defaults to NULL, which then aims to return data for the most recent year available. Provide as YYYY. |
| opts | Should be set with the boundr_options() function. See ?boundr_options for detail on what can be set by the user, and on the default values. |

Value

A tibble

Examples

```
lookup("msoa", "lad", "Swindon")
lookup("wd", "sener", opts = opts(return_width = "full"))
```

res_codes

A list of all available resolutions for boundary geometries in the current OpenGeography schema. Not all resolutions are available for all area types! The most common ones are listed first, with the "generalised" (20m resolution) BGC being the preferred option if you don't specify one.

Description

A list of all available resolutions for boundary geometries in the current OpenGeography schema. Not all resolutions are available for all area types! The most common ones are listed first, with the "generalised" (20m resolution) BGC being the preferred option if you don't specify one.

Usage

`res_codes()`

Index

`add_geometry (add_geometry_to_table)`, [2](#)
`add_geometry_to_table`, [2](#)

`boundr_options`, [3](#)
`bounds`, [4](#)

`lookup`, [5](#)

`opts (boundr_options)`, [3](#)

`res_codes`, [6](#)