# USING THE OS DOWNLOADS API IN R

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Ordnance Survey
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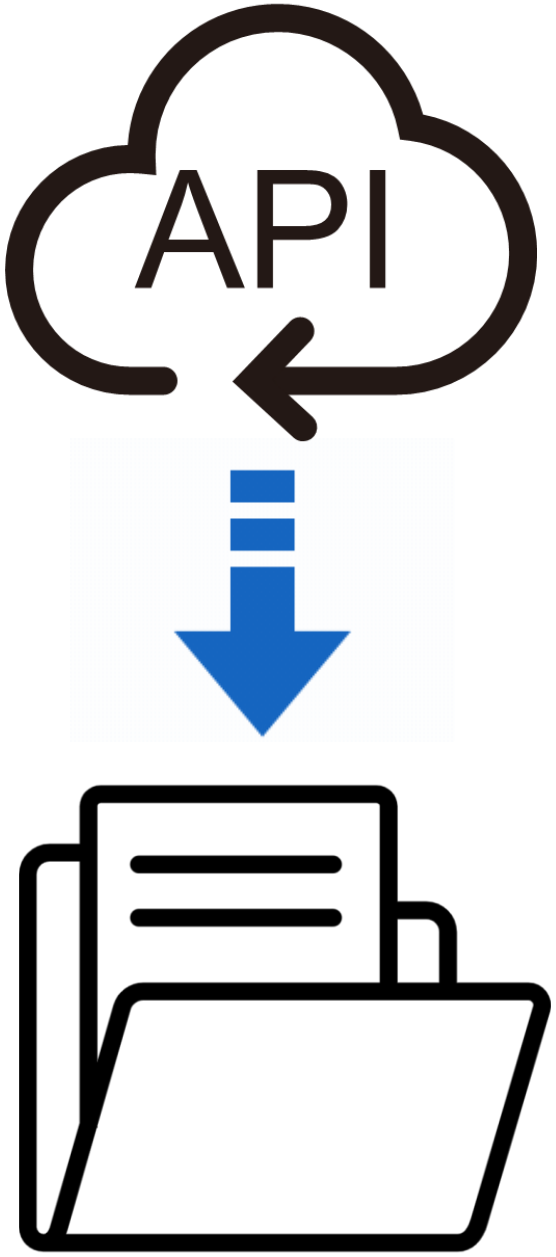
# What is the OS Downloads API?

The OS Downloads API lets you script and automate your downloads. This can be a huge time saver and make your data pipelines more efficient.

The service uses a URL to perform requests and retrieve the datasets.

Allows you to download OS OpenData and OS Premium Data outside of OS Data Hub.



# Why Use Downloads API?

Automate downloads, so you don't have to do it manually

Can be scheduled

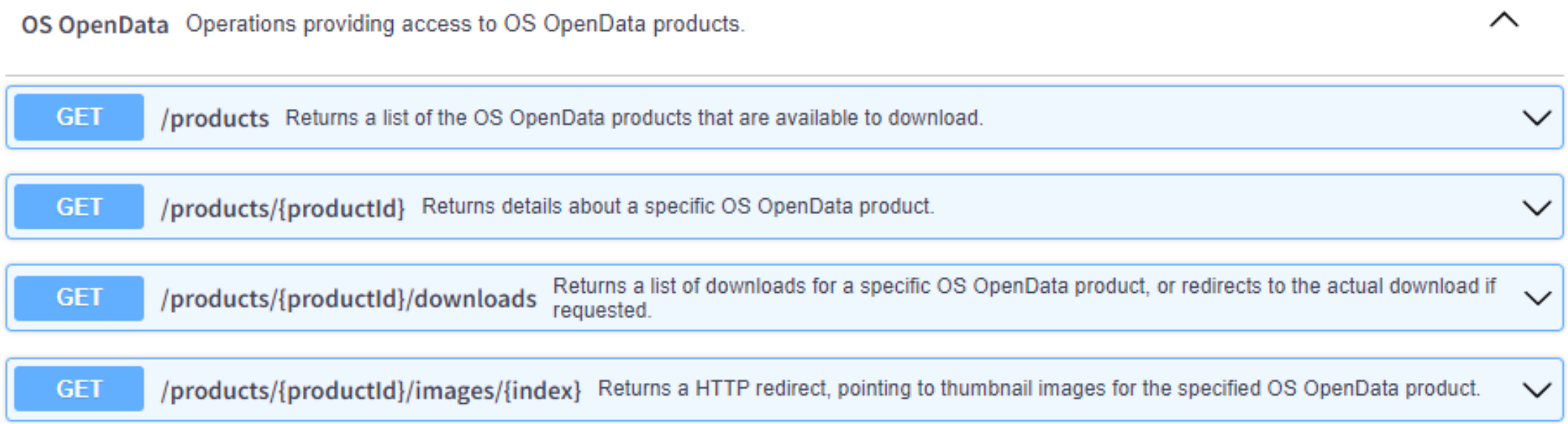
Always have the most up-to-date data

Reduce/eliminate loading errors

Save time

Integrate it with data loading to fully automate

# Downloads API Operations



# OS Open Built Up Areas

A consistent and automated process generates built-up area data for GB. Identified as built up from source topographic and land use data e.g. buildings, residential gardens, made surfaces.

## BUILT-UP AREAS

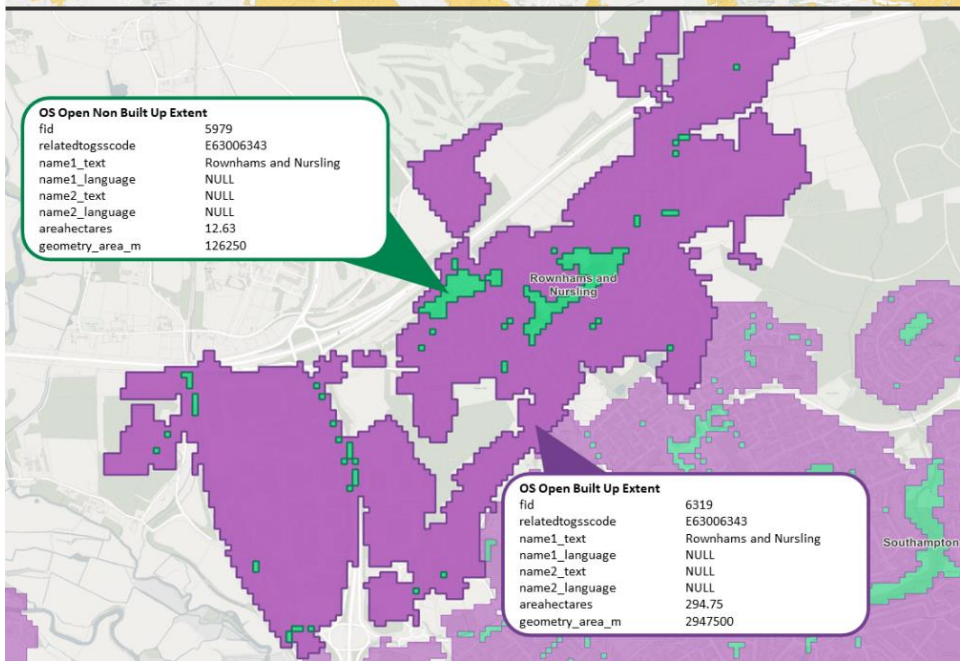
- Is the aggregation of Built Up Extents and Non Built Up Extents

## BUILT-UP EXTENTS

- Is the representation of built-up areas within the extent of Built Up Areas.

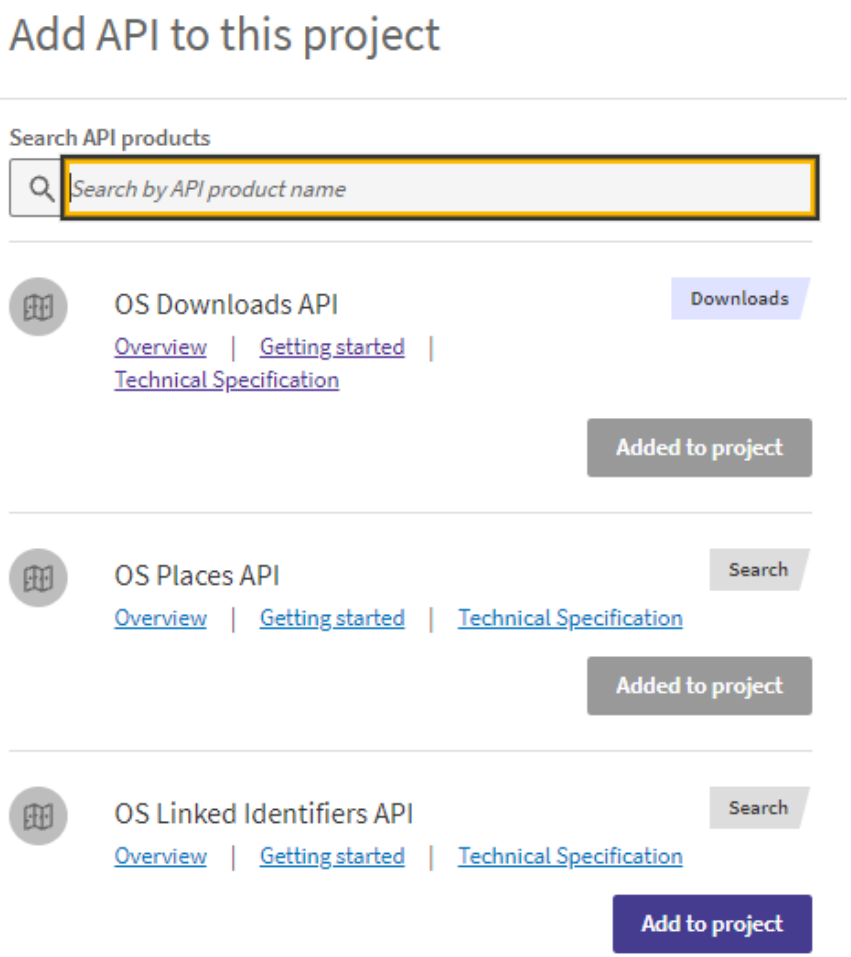
## NON BUILT-UP EXTENTS

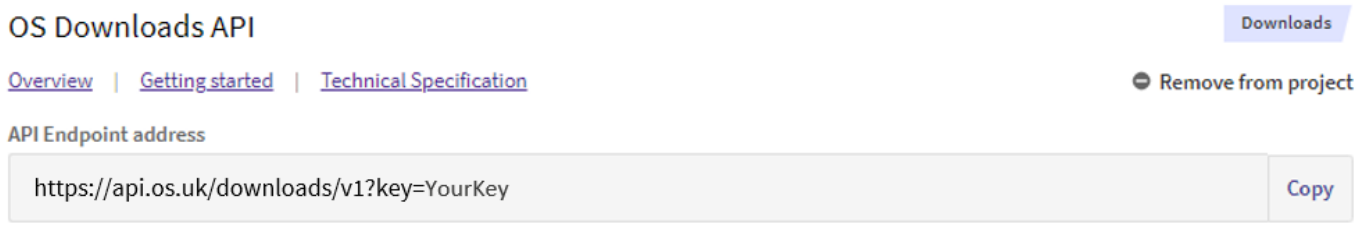
- Is the representation of non built-up areas within the extent of Built Up Areas

# How to get your API Key?

- Create a new project or open an existing project in the API Dashboard tab.
- Click ‘Add API’ button.
- Click on the ‘Add to Project’ button for the OS Downloads API to add it to this project.
- Your OS Downloads API Key will be generated and listed in your API list.
- Should your API Key ever be compromised or you wish prevent access (e.g. a contractor) you can click ‘Actions’ near the project name and ‘Regenerate API Key’ to create a new API Key.



# /products endpoint

```r
#adding the libraries
library(httr)
library(jsonlite)

#INSERT the API Key
key = "YOUR API KEY"
#accessing the API
res = GET(paste("https://api.os.uk/downloads/v1/products?key=", key))
res

#Looking through the data packages ID to find the one that you intend to download.
data = fromJSON(rawToChar(res$content))
View(data)
```

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| | id | name | description |
|---|---|---|---|
| 1 | 250kScaleColourRaster | 1:250 000 Scale Colour Raster™ | Get the regional view of towns and villages, roads and places |
| 2 | BoundaryLine | Boundary-Line™ | From Euro constituencies to council wards, Boundary-Line™ r |
| 3 | BuiltUpAreas | OS Open Built Up Areas | OS Open Built Up Areas represents the built-up areas of Grea |
| 4 | CodePointOpen | Code-Point® Open | Free and open postcode location data. Can be used for geog |
| 5 | GBOverviewMaps | GB Overview Maps | Our simplest maps of the British Isles. |
| 6 | LIDS | OS Open Linked Identifiers | A comprehensive dataset of cross-referenced identifiers, betv |
| 7 | MiniScale | MiniScale® | A simple overview map of Great Britain. |
| 8 | OpenGreenspace | OS Open Greenspace | Covering a range of greenspaces in urban and rural areas inc |
| 9 | OpenMapLocal | OS OpenMap - Local | Map, visualise and truly understand your data at street level. |
| 10 | OpenNames | OS Open Names | A comprehensive dataset of place names, roads numbers and |
| 11 | OpenRivers | OS Open Rivers | Understand how watercourses in Great Britain join up. |
| 12 | OpenRoads | OS Open Roads | Get a high-level view of the road network, from motorways t |
| 13 | OpenTOID | OS Open TOID | An open dataset providing access to a generalised location t |
| 14 | OpenUPRN | OS Open UPRN | An open dataset containing all the Unique Property Referenc |
| 15 | OpenUSRN | OS Open USRN | An open dataset of all Unique Street Reference Numbers (US |
| 16 | OpenZoomstack | OS Open Zoomstack | A comprehensive basemap of Great Britain showing coverage |
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#accessing the data package location
downurl = GET(paste("https://api.os.uk/downloads/v1/products/",productid,"/downloads?key=",key, sep=""))

data2 = fromJSON(rawToChar(downurl$content))
names(data2)

filesname <- data2$fileName
url<-data2$url
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```
for(i in 1:length(filesname)) {
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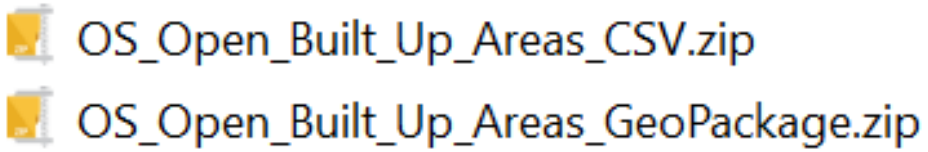


*Untitled Project — QGIS

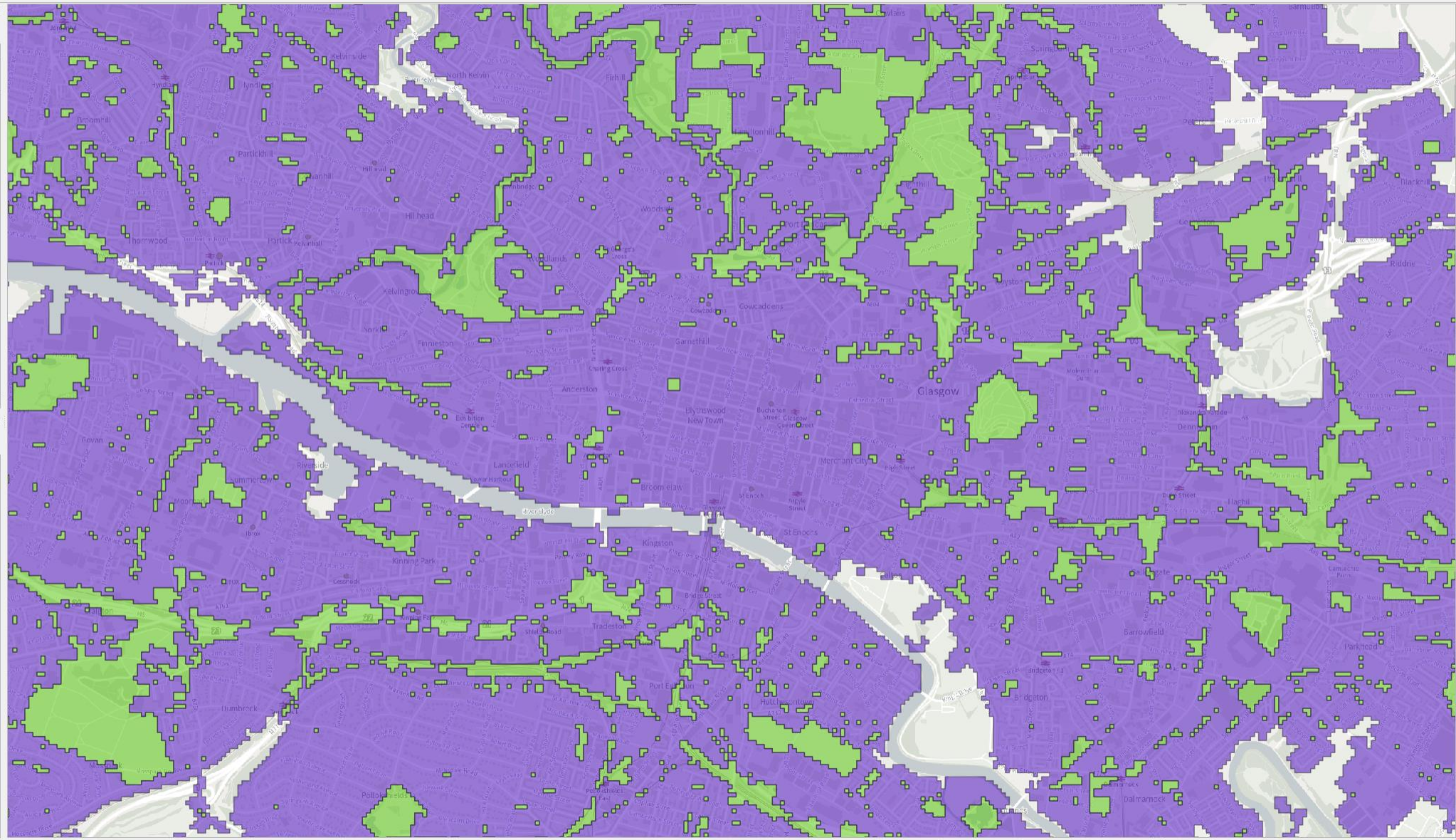
Project Edit View Layer Settings Plugins Vector Raster Database Web Mesh Processing Help

Browser

- Home
- C:\
- GeoPackage
- SpatiaLite
- PostGIS
- MSSQL
- Oracle
- DB2
- WMS/WMTS
- Vector Tiles
- XYZ Tiles
  - OpenStreetMap
- WCS
- WFS / OGC API - Features
  - OS features API
- OWS
- ArcGIS Map Service
- ArcGIS Feature Service
- GeoNode

Layers

- OS_Open_Built_Up_Areas OS_Open_Built_Up_Extents
- OS_Open_Built_Up_Areas OS_Open_Non_Built_Up_Extents
- OS_Open_Built_Up_Areas OS_Open_Built_Up_Areas
- Light_27700

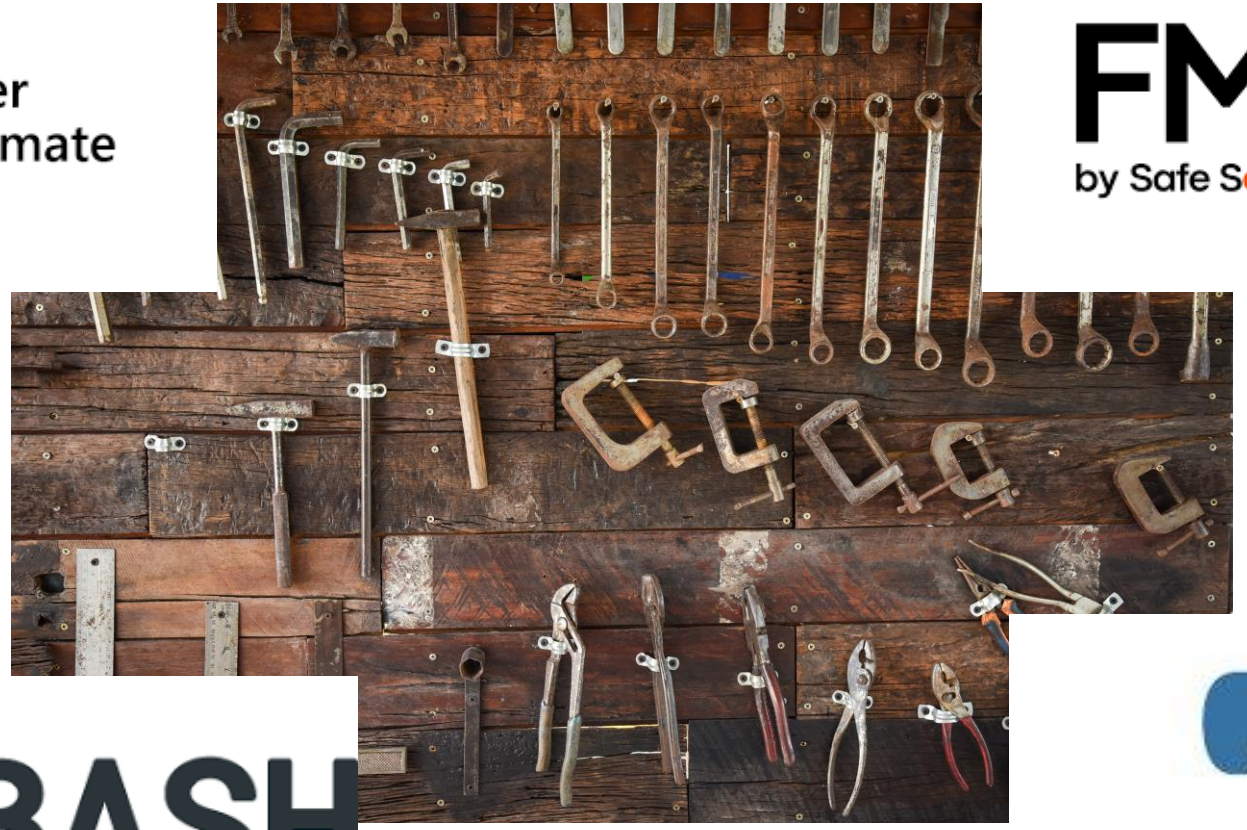



Type to locate (Ctrl+K) Ready

Coordinate 254917,665788 Scale 1:25099 Magnifier 100% Rotation 0.0 ° Render EPSG:27700

# Some tools you could use…

Power Automate



FME by Safe Software

BASH
THE BOURNE-AGAIN SHELL

python™

# Useful Links

## Getting Started Guide

https://osdatahub.os.uk/docs/downloads/gettingStarted

## Technical Specification

https://osdatahub.os.uk/docs/downloads/technicalSpecification

# THANK YOU

Brian Johnston (Brian.Johnston@os.uk)