ORDNANCE SURVEY GB

OS OPEN NAMES™ – GETTING STARTED GUIDE

Ordnance Survey

Version history

Version	Date	Description
1.1	2019	First release of the document.
2.0	01/2023	Full restructure and update of the content

Purpose of this document

This document provides information about and insight into the OS Open Names product and its potential applications. For information on the contents and structure of OS Open Names, please refer to the Overview and Technical Specification.

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Contact details

OS website 'Contact us' page (https://www.ordnancesurvey.co.uk/contact-us).

Contents

1. Introduction to the product

OS Open Names is a geographic directory that contains basic information about identifiable places in Great Britain. The content is divided into themes based on type and local type classification values. The data contains accurate and current settlement names, road names and numbers, postcodes and their locations, additional contextual information and links to other datasets. The primary use of the product is to provide the location of named places to support a wealth of activities, such as discovery, identification, visualisation, geocoding, routing and navigation, and linking of diverse information.

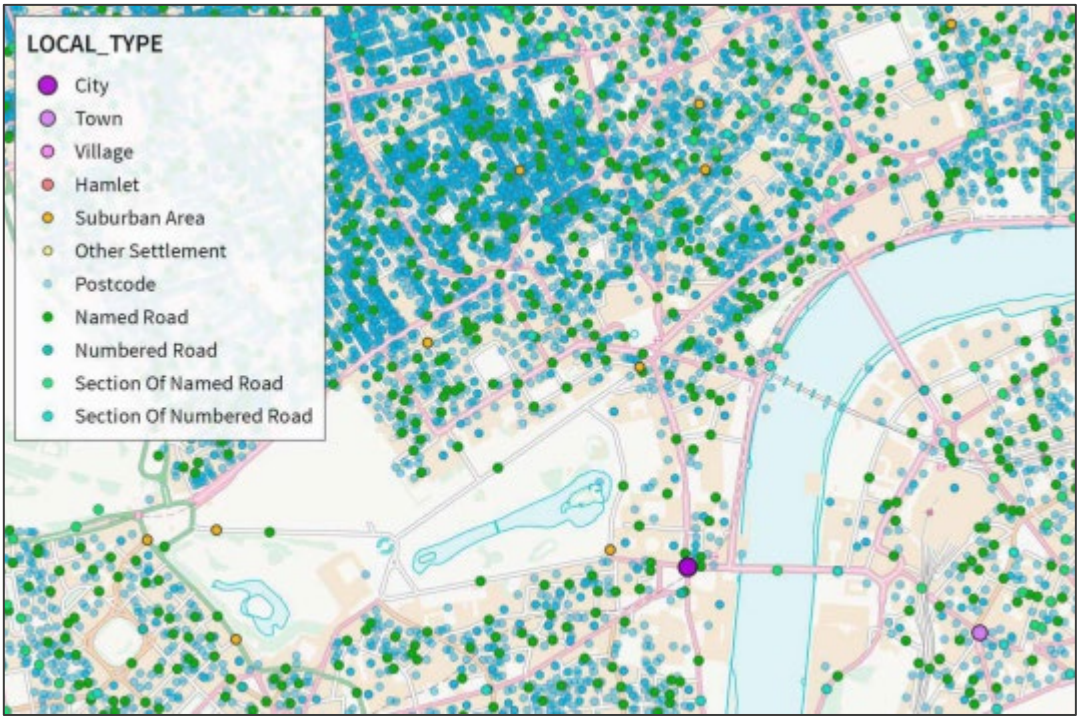


Figure 1: OS Open Names example map showing geographical locations for identifiable places.

This getting started guide focusses on using the product in comma-separated values (CSV) format.

For guidance on using the product in GeoPackage format, please see the separate *Getting started with GeoPackage* guide, which is available on the OS Open Names support page of the OS website (https://www.ordnancesurvey.co.uk/business-government/tools-support/open-map-names-support).

2. Obtaining OS Open Names data

2.1 Product supply

The OS Open Names product is supplied in three formats (CSV, GML and GeoPackage) as an online download and as an application programming interface (API), both of which can be accessed from the OS Data Hub (https://osdatahub.os.uk/).

2.2 Update schedule

Updates are supplied quarterly (January, April, July and October) and are provided as a complete resupply. Any features that are deleted between supplies are not included in the resupply.

2.3 Coverage

OS Open Names covers named places for Great Britain.

2.4 File size

The approximate file size of each data format is as follows:

- CSV: 1.65Gb
- GML: 9.1Gb
- GeoPackage: 2.1Gb

2.5 File structure

2.5.1 CSV

The file structure of OS Open Names CSV format supply is:

- Root folder: *Readme.txt* (summary of supplied data).
    - Doc folder: *OS_Open_Names_Headers.csv* (description of column headers) and *licence.txt* (important licencing information).
    - Data folder: 819 files in CSV format.
      Each file contains data for a 20x20km area labelled with the corresponding grid reference, for example HP40.csv.

The structure of OS Open Names supplied in CSV is described in the Technical Specification available on the OS Open Names support page of the OS website (https://www.ordnancesurvey.co.uk/business-government/tools-support/open-map-names-support).

2.5.2 GeoPackage

The file structure of OS Open Names GeoPackage format supply is:

- Root folder: *Readme.txt* (summary of supplied data).
    - Doc folder: *licence.txt* (important licencing information).
    - Data folder: *opname_gb.gpkg* (single file in GeoPackage format).
      This file is a self-contained database.

The structure of OS Open Names supplied in GeoPackage is described in the Technical Specification available on the OS Open Names support page of the OS website (https://www.ordnancesurvey.co.uk/business-government/tools-support/open-map-names-support).

2.5.3 GML

The file structure of OS Open Names GML format supply is:

- Root folder: *Readme.txt* (summary of supplied data).
    - Doc folder: *OS_Open_Names_Headers.csv* (description of column headers) and *licence.txt* (important licencing information).
    - Data folder: 819 files in GML format.
      Each file contains data for a 20x20km area labelled with the corresponding grid reference, for example HP40.gml.

The structure of OS Open Names supplied in GML format is described in the product's Technical Specification, which is available on the OS Open Names support page of the OS website (https://www.ordnancesurvey.co.uk/business-government/tools-support/open-map-names-support).

2.6 Metadata

OS Open Names metadata is ISO 19115 UK GEMINI 2 compliant. For more information, see OSOpenNames.xml (https://www.ordnancesurvey.co.uk/xml/products/OSOpenNames.xml) on the Product and service metadata page of the OS website (http://www.ordnancesurvey.co.uk/oswebsite/xml/products/).

3. CSV file processing

As OS Open Names data is supplied in separate CSV files labelled by two-digit grid references, the files require processing before you can load them into a GIS.

3.1 Moving the header CSV file

The first step is to combine the individual CSV files with the header CSV file.

To move and rename the header CSV file:

1. Extract *opname_csv_gb.zip* to a folder on your computer.
2. Open the Doc folder and either move or copy *OS_Open_Names_Header.csv* into the Data folder.
3. Rename *OS_Open_Names_Header.csv* to *a_OS_Open_Names_Header.csv*.

   Adding the "a_" prefix ensures that the files will be merged in the correct order. The header file will be added first in the output file as it is now at the top of the file list.

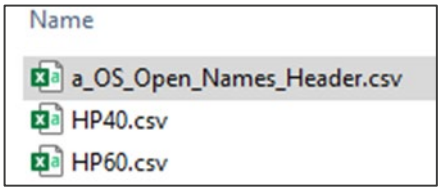


Figure 2: Screenshot in Windows Explorer showing renamed header CSV displayed at the top of the file list.

3.2 Combining multiple CSV files

This section contains an example of one way to combine the individual CSV files into a single file using a batch (.bat) file.

Note: The combined CSV file will be approximately 1.7Gb with about 2.9 million records. If opened in Microsoft Excel, only the first million records can be seen as the software cannot display more than this.

To combine the CSV files using a batch function:

1. Copy the following text and paste it into a new Notepad file: *copy *.csv outputfile.csv*.
2. Save the Notepad file with the .bat file extension (for example, *combine_csv.bat*) in the Data folder that contains the 819 CSV files.
3. Close the .bat file, navigate to the Data folder and double click on the batch (.bat) file that you saved in the previous step.

   A MS-DOS window will open automatically and then close when the process is complete.

4. A new CSV file named *outputfile.csv* will display in the Data folder. You can now delete the other CSV files if you like.

   outputfile.csv contains the content previously in the 819 individual CSV files that was copied over during the batch file process.

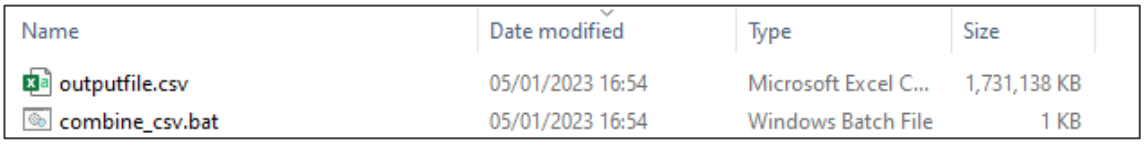


Figure 3: Screenshot in Windows Explorer showing *outputfile.csv* and *combine_csv.bat*.

You will now have an output file that is ready to be used in a GIS application or database.

Note: outputfile.csv might be too large to be opened in a text editor.

4. Loading the data in a GIS

This section describes how to load the combined CSV output file into five commonly-used GIS applications:

- QGIS
- ArcGIS Pro
- ArcMap
- MapInfo Pro
- Cadcorp SIS Desktop

4.1 QGIS

The following step-by-step instructions show you how to load OS Open Names CSV files into QGIS. They were prepared using QGIS Desktop version 3.

QGIS is an open-source GIS in which you can create, edit, visualise and publish geographic information. You can download it for free from the Download QGIS for your platform page of the QGIS website (http://www.qgis.org/en/site/forusers/download.html).

4.1.1 Loading and displaying the CSV supply

To load and display CSV data in QGIS:

1. Open an existing project in QGIS or create a new one.

2. From the *Layer* tab, click *Add Layer* > *Add Delimited Text Layer*… or click in the Manage Layers toolbar.

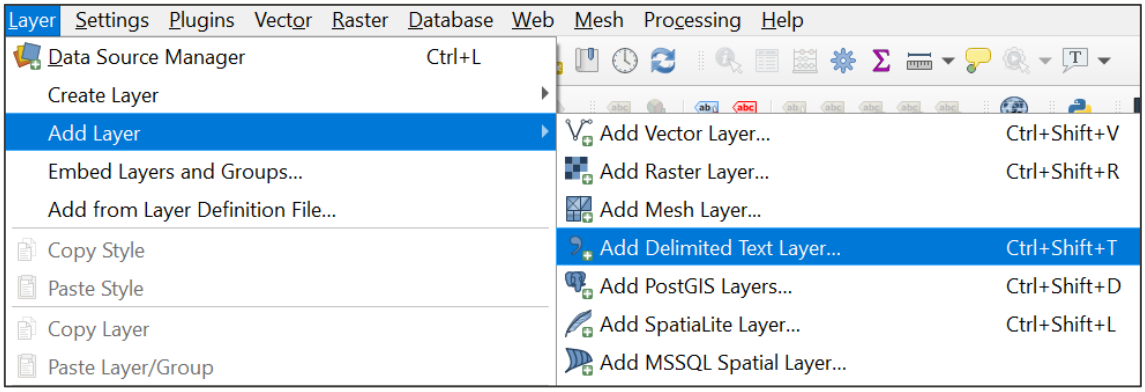


Figure 4: QGIS UI showing the *Layer* > *Add Layer* > *Add Delimited Text Layer* menu option.

3. In the Data Source Manager | Delimited Text dialog:

   a. File name: Click the ellipsis button (…), then navigate to and select the saved *outputfile.csv*.

   b. File Format: Select *CSV (comma separated values)*.

   c. Record and Fields Options: Select *First Record has field names*.

   d. Geometry Definition:

      i) Point coordinates: Select this option.

      ii) X field: Choose *Eastings* (or *EA* if the abbreviated column header was selected).

      iii) Y field: Choose *Northings* (or *NO* if the abbreviated column header was selected).

      iv) Geometry CRS: Select *EPSG:27700 – OSGB 1936 / British National Grid*.

   e. Click *Add*.

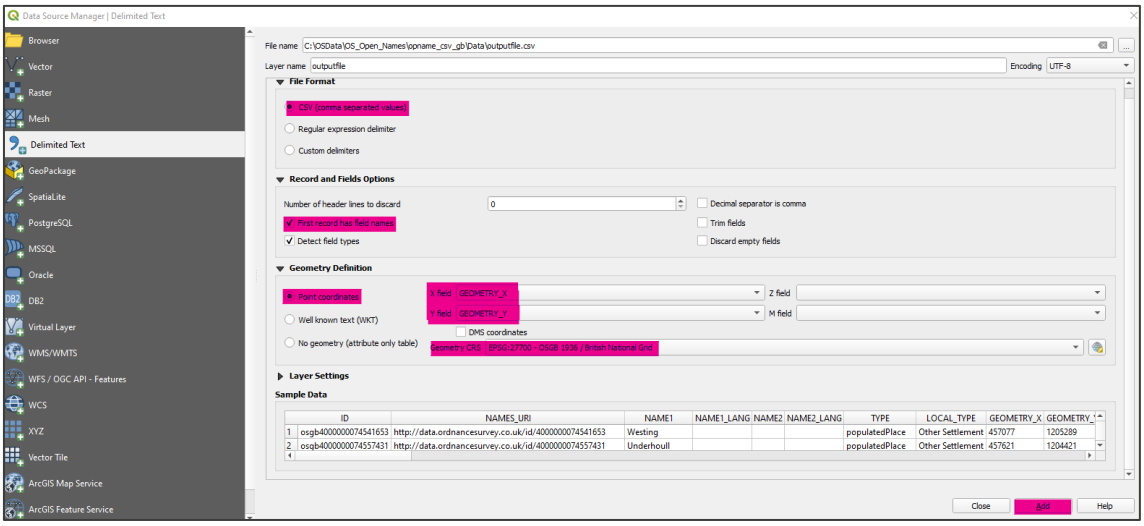


Figure 5: QGIS Data Source Manager | Delimiter Text dialog.

It may take a while for the data to load into the map pane. The result will look similar to the example below. OS Maps API Light 27700 was used as the background map for this example.

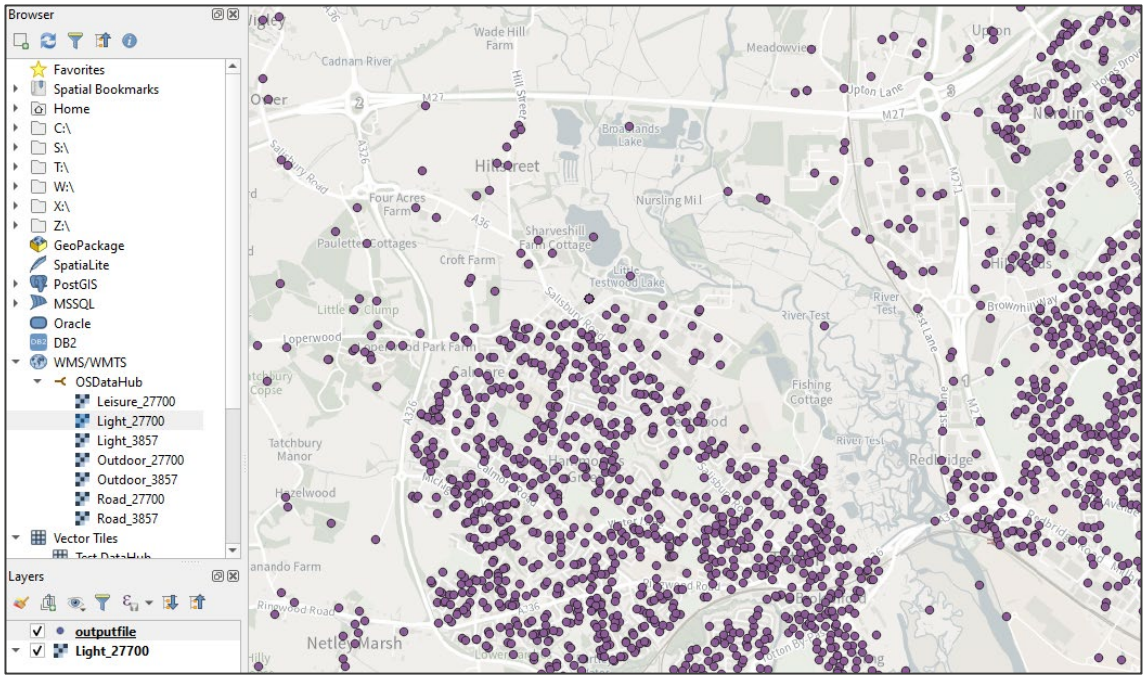


Figure 6: QGIS UI showing loaded OS Open Names data in the map pane.

4. Save *outputfile* in the format of your choosing.

   This will avoid having to repeat the process of geoprocessing outputfile.csv every time you need to use it.

4.2 ArcGIS Pro

The following step-by-step instructions show you how to load OS Open Names CSV files into ArcGIS Pro. They were prepared using version 3.0.

4.2.1 Loading and displaying the CSV supply

To load and display CSV data in ArcGIS Pro:

1. Open ArcGIS Pro and create a new project.
2. In the Create a New Project dialog:
    a. Name: Enter a project name.
    Open_Names in this example.
    b. Location: Browse to and select the location to which you want to save the project.
    c. Create a new folder for this project: Leave this option selected (default setting).
    d. Click *OK*.

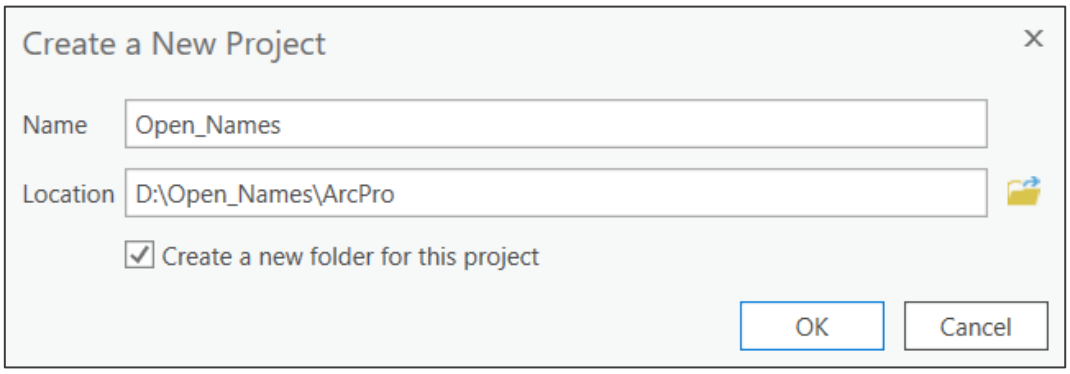


Figure 7: ArcGIS Pro Create a New Project dialog,

3. When the project opens, add a background map for geographic context.

    OS Maps API Light 27700 was added as the background map in this example.

4. From the *Map* tab, click *Add Data* > *XY Point Data.*

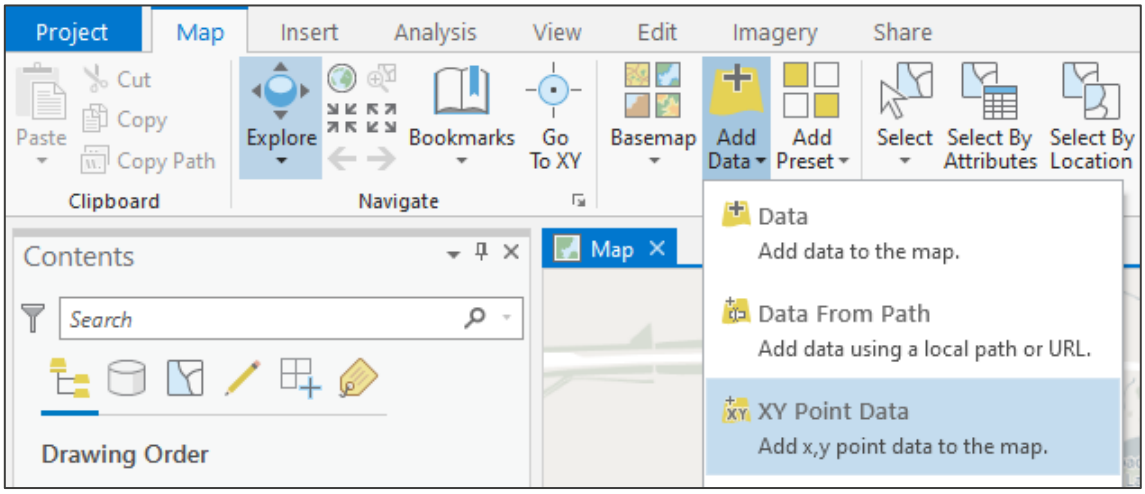


Figure 8: ArcGIS Pro UI showing the *Map* > *Add Data* > *XY Point Data* menu option.

A Geoprocessing pane will open to the right side of the map pane.

5. In the Geoprocessing pane:

   a. Input Table: Click to navigate to and select *outputfile.csv*.

   b. Output Feature Class: This will auto-populate.

   c. X Field: Select *GEOMETRY_X*

   d. Y Field: Select *GEOMETRY_Y*

   e. Coordinate System: Select *Current Map [Map]*.

      This will populate as British National Grid as OS Maps API Light 27700 map was added as a background map (step 3. above).

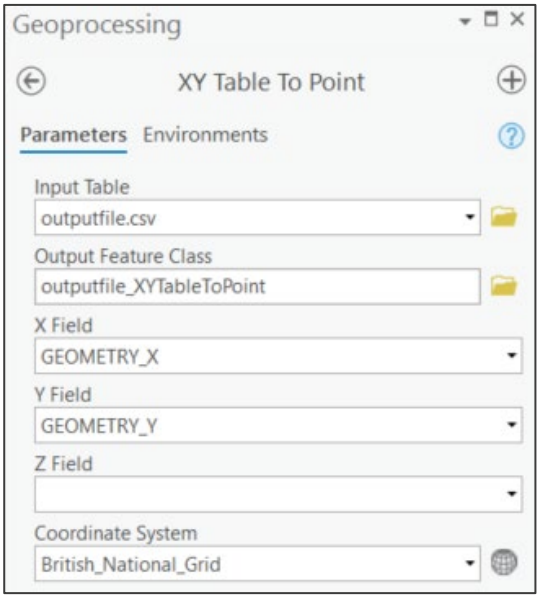


Figure 9: ArcMap Pro Geoprocessing pane showing Parameters field options.

f. Click *Run* at the bottom right of the Geoprocessing pane.

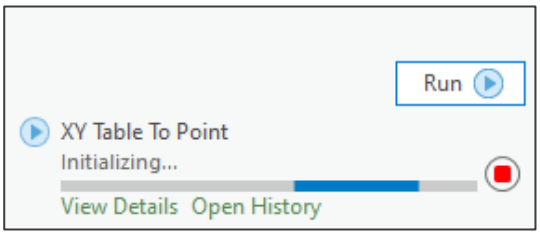


Figure 10: ArcMap Pro Geoprocessing pane showing *Run* button and initialization progress.

It may take a while for the data to load into the map pane. The result will look similar to the example below.

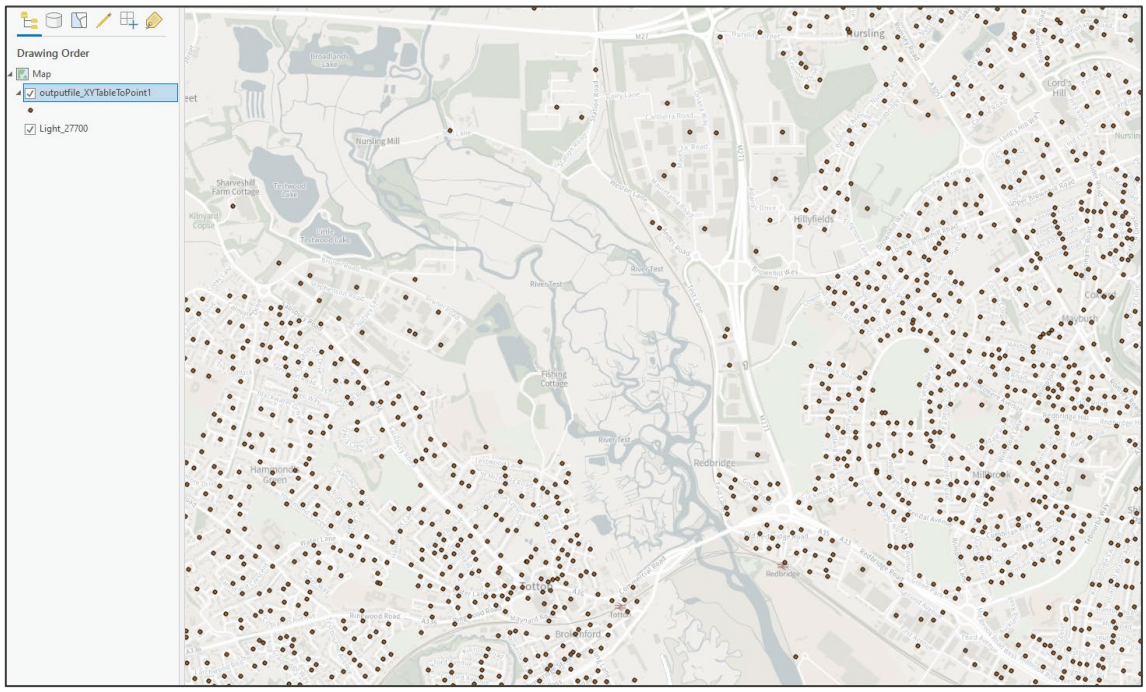


Figure 11: ArcGIS Pro UI showing loaded OS Open Names data in the map pane.

This process results in the creation of a new file geodatabase in the new folder that was selected when the project was created (step 2. above).

4.3 ArcMap

The following step-by-step instructions show you how to load OS Open Names CSV files into ArcMap. They were prepared using version 10.7.1.

4.3.1 Loading and displaying the CSV supply

To load and display CSV data in ArcMap:

1. Open ArcMap.
2. Click (Add Data button) in the toolbar.

Figure 12: ArcMap toolbar.

3. In the Add Data dialog, navigate to and select *outputfile.csv*, and then click *Add*.

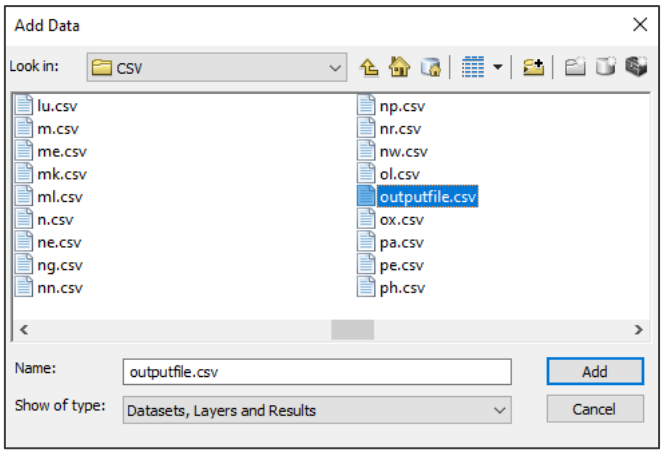


Figure 13: ArcMap Add Data dialog.

4. The file will now display in the Table Of Contents.

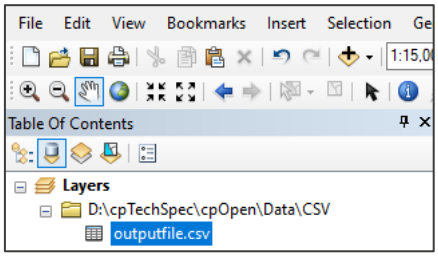


Figure 14: ArcMap Table Of Contents.

5. Right-click *outputfile.csv* in the Table of Contents and select *Display XY data…* in the context menu.

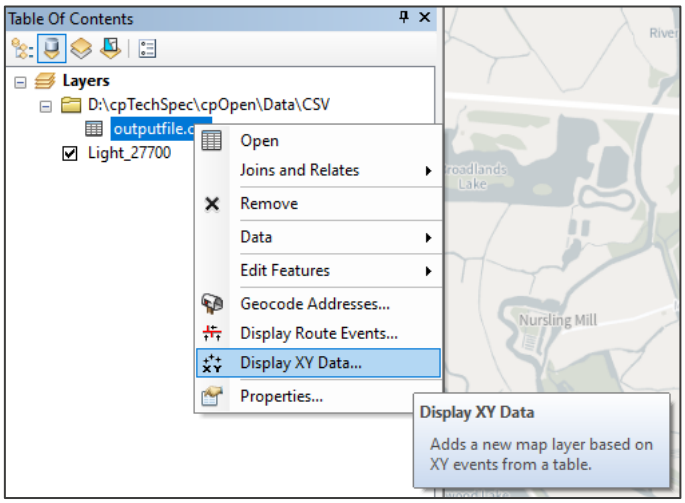


Figure 15: ArcMap Table Of Contents showing the *Display XY Data…* action selected in the context menu.

6. In the Display XY Data dialog:
    a. X Field: Select *GEOMETRY_X*
    b. Y Field: Select *GEOMETRY_Y*
    c. Coordinate System of the Input Coordinates: Select *British National Grid*.
    d. Click *OK*.

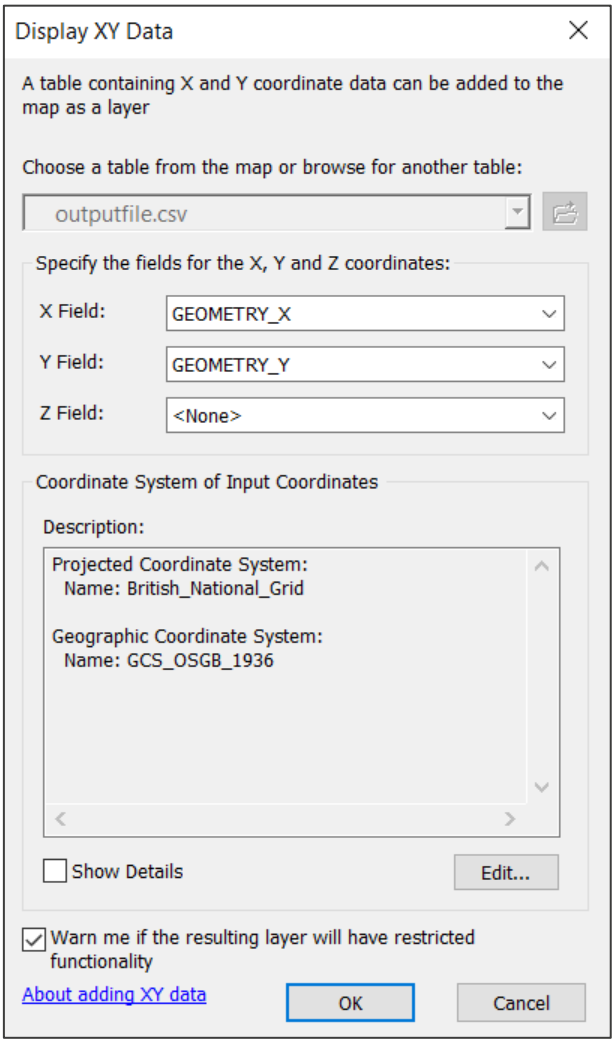


Figure 16: ArcMap Display XY Data dialog.

e. Click OK to close the warning dialog.

The Table Does Not Have Object-ID Field warning dialog alerts you to the fact that the resulting layer file is only a temporary table and needs to be saved (see step 7. below).

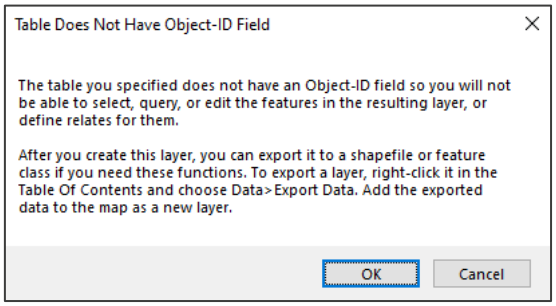


Figure 17: ArcMap Table Does Not Have Object-ID Field warning dialog.

It may take a while for the data to load into the map pane. The result will look similar to the example below. OS Maps API Light 27700 was used as the background map for geographic context.

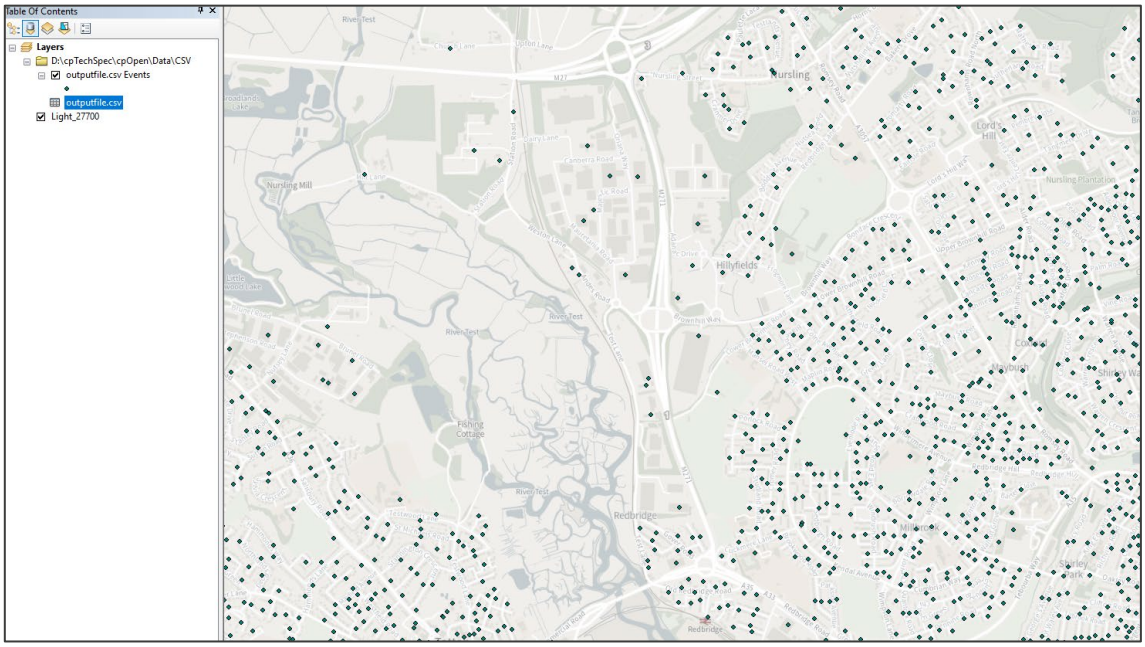


Figure 18: ArcMap UI showing loaded OS Open Names data in the map pane.

To use the points in a meaningful way, you need to save the layer as a shapefile.

7. To save the layer as a shapefile:

   a. Right-click *outputfile.csv Events* in the Layers panel and then click *Export* in the context menu.

   b. In the Export Data dialog, browse to and select a filename for the data, and then click *OK*.

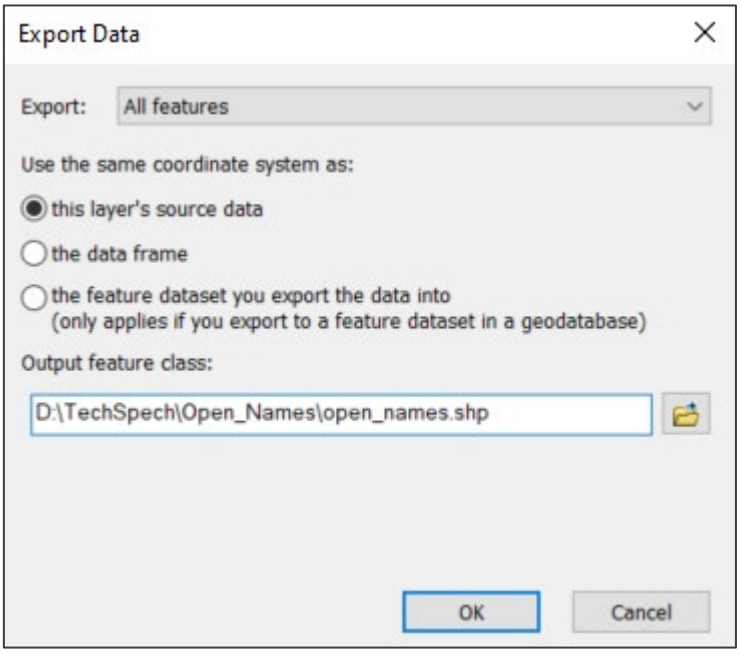


Figure 19: ArcMap Export Data dialog showing selected shapefile.

The shapefile may take a while to create. You can monitor the progress in the Export Progress window that opens automatically. This window will close when the export is complete.

8. You will be given the option to add the newly created data to the workspace. Click Yes, to create a shapefile (and associated files) at the chosen location.

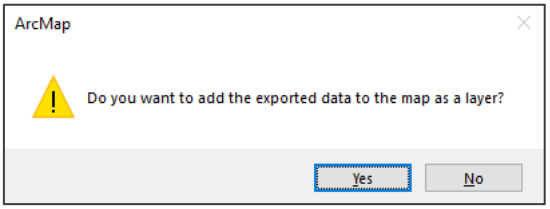


Figure 20: ArcMap alert dialog providing the option to add exported shapefile to the map as a layer.

4.4 MapInfo Pro

The following step-by-step instructions show you how to load OS Open Names CSV files into MapInfo. They were prepared using version MapInfo Pro 2019 (release build 58).

4.4.1 Loading and displaying the CSV supply

To load and display CSV data in MapInfo Pro:

1. Open MapInfo Pro.

2. Select *Open* > *Blank Workspace*.

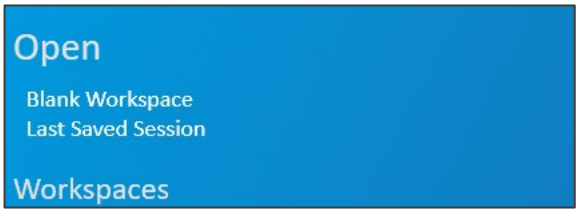


Figure 21: MapInfo Pro *Open* > *Blank Workspace* action.

3. Add a background map for geographic context.

   OS Maps API Light 27700 was added as the background map in this example.

4. From the *HOME tab*, click *Open Table*.

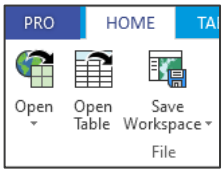


Figure 22: MapInfo Pro *Home* > *Open Table* action.

5. In the Open dialog:

   a. Files of type: Change *MapInfo.tab* to *Comma delimited CSV (*.csv)*.

   b. Browse to and select *outputfile.csv*.

   c. Click *Open*.

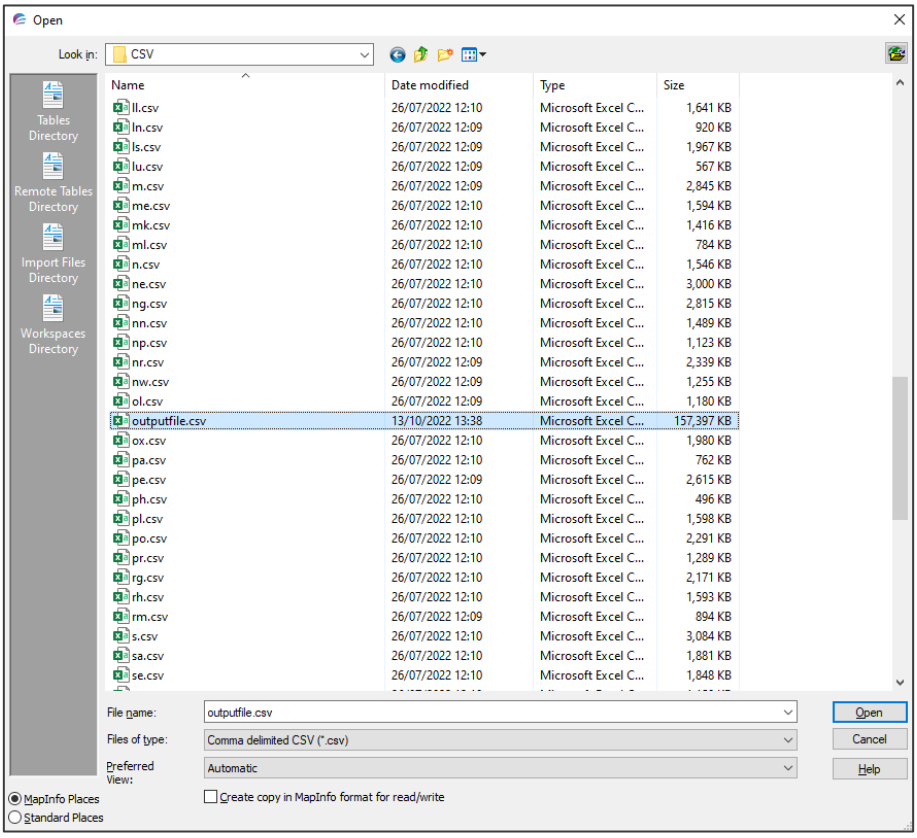


Figure 23: MapInfo Pro Open dialog showing *outputfile.csv* selected.

6. In the Comma Delimited CSV Information dialog:

   a. Delimiter: Ensure that *Other* is checked and that a comma is visible in the box next to it.

   b. Check the *Use First Line for Column Titles* option.

   c. Click *OK*.

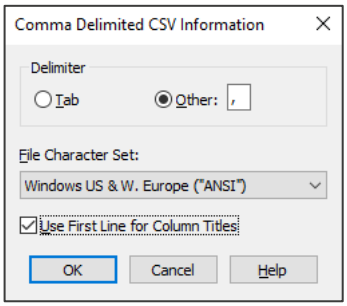
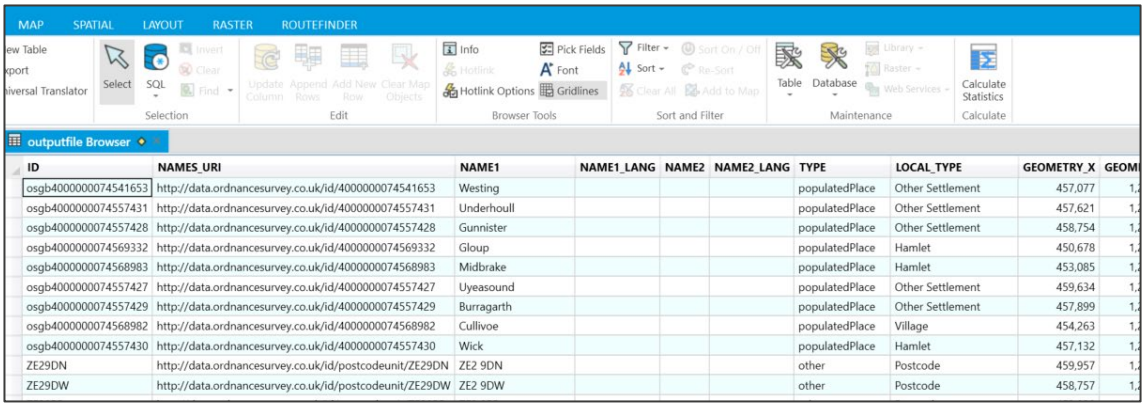


Figure 24: MapInfo Pro Comma Delimited CSV Information dialog.

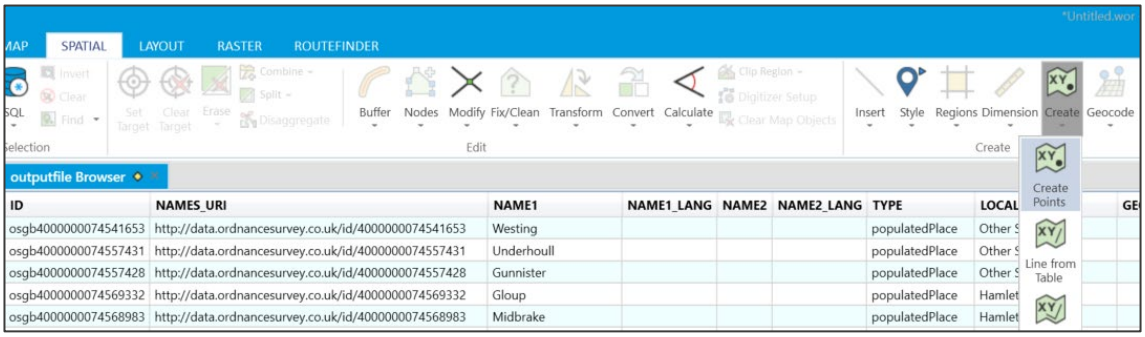
When the table has loaded, the outputfile Browser window will open. This may take a while.



ID	NAMES_URI	NAME1	NAME1_LANG	NAME2	NAME2_LANG	TYPE	LOCAL_TYPE	GEOMETRY_X	GEOM
osgb4000000074541653	http://data.ordnancesurvey.co.uk/id/4000000074541653	Westing				populatedPlace	Other Settlement	457,077	1,2
osgb4000000074557431	http://data.ordnancesurvey.co.uk/id/4000000074557431	Underhoull				populatedPlace	Other Settlement	457,621	1,2
osgb4000000074557428	http://data.ordnancesurvey.co.uk/id/4000000074557428	Gunnister				populatedPlace	Other Settlement	458,754	1,2
osgb4000000074569332	http://data.ordnancesurvey.co.uk/id/4000000074569332	Gloup				populatedPlace	Hamlet	450,678	1,2
osgb4000000074568983	http://data.ordnancesurvey.co.uk/id/4000000074568983	Midbrake				populatedPlace	Hamlet	453,085	1,2
osgb4000000074557427	http://data.ordnancesurvey.co.uk/id/4000000074557427	Uyeasound				populatedPlace	Other Settlement	459,634	1,2
osgb4000000074557429	http://data.ordnancesurvey.co.uk/id/4000000074557429	Burragarth				populatedPlace	Other Settlement	457,899	1,2
osgb4000000074568982	http://data.ordnancesurvey.co.uk/id/4000000074568982	Cullivoe				populatedPlace	Village	454,263	1,2
osgb4000000074557430	http://data.ordnancesurvey.co.uk/id/4000000074557430	Wick				populatedPlace	Hamlet	457,132	1,2
ZE29DN	http://data.ordnancesurvey.co.uk/id/postcodeunit/ZE29DN	ZE2 9DN				other	Postcode	459,957	1,2
ZE29DW	http://data.ordnancesurvey.co.uk/id/postcodeunit/ZE29DW	ZE2 9DW				other	Postcode	458,757	1,2

Figure 25: MapInfo Pro *outputfile Browser* window

7. To create the points from the table, from the *SPATIAL tab* click *Create* > *Create Points*.



ID	NAMES_URI	NAME1	NAME1_LANG	NAME2	NAME2_LANG	TYPE	LOCAL
osgb4000000074541653	http://data.ordnancesurvey.co.uk/id/4000000074541653	Westing				populatedPlace	Other
osgb4000000074557431	http://data.ordnancesurvey.co.uk/id/4000000074557431	Underhoull				populatedPlace	Other
osgb4000000074557428	http://data.ordnancesurvey.co.uk/id/4000000074557428	Gunnister				populatedPlace	Other
osgb4000000074569332	http://data.ordnancesurvey.co.uk/id/4000000074569332	Gloup				populatedPlace	Hamlet
osgb4000000074568983	http://data.ordnancesurvey.co.uk/id/4000000074568983	Midbrake				populatedPlace	Hamlet

Figure 26: MapInfo Pro UI showing the *Spatial* > *Create* > *Create Points* action and the *outputfile Browser* window.

8. In the Create Points dialog:

   a. Projection: Change this from Longitude / Latitude (WGS 84) to British National Grid [EPSG:27700].

      The easiest way to do this is to click the ellipsis button (to the right of the Projection field), press B on your keyboard 6 times, highlight British National Grid [EPSG:27700] in the results, and then click OK.

   b. using Symbol: Optionally, change the symbol from a square (default style) by clicking the symbol button and following the instructions.

      This example uses a red star that is more visible than the default square.

   c. Leave the other settings as they are (including Get X Coordinates from: *GEOMETRY_X* and Get Y Coordinates from: *GEOMETRY_Y*).

   d. Click *OK*.

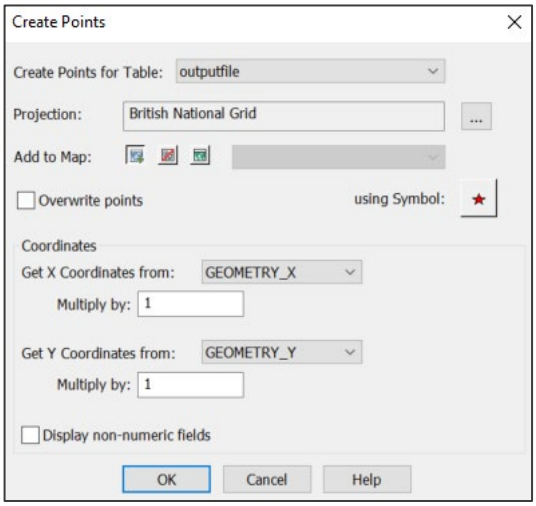


Figure 27: MapInfo Pro Create Points dialog.

A progress bar will display and then close automatically when the geoprocessing is complete.

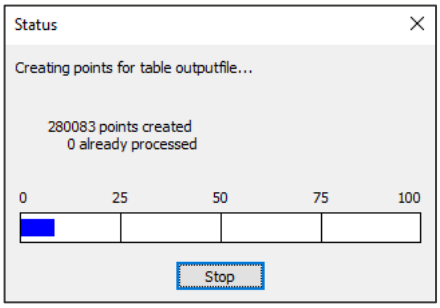


Figure 28: MapInfo Pro geoprocessing Status dialog.

When the process is complete, the points will display in the map pane in your chosen point style. The result will look similar to the example below:

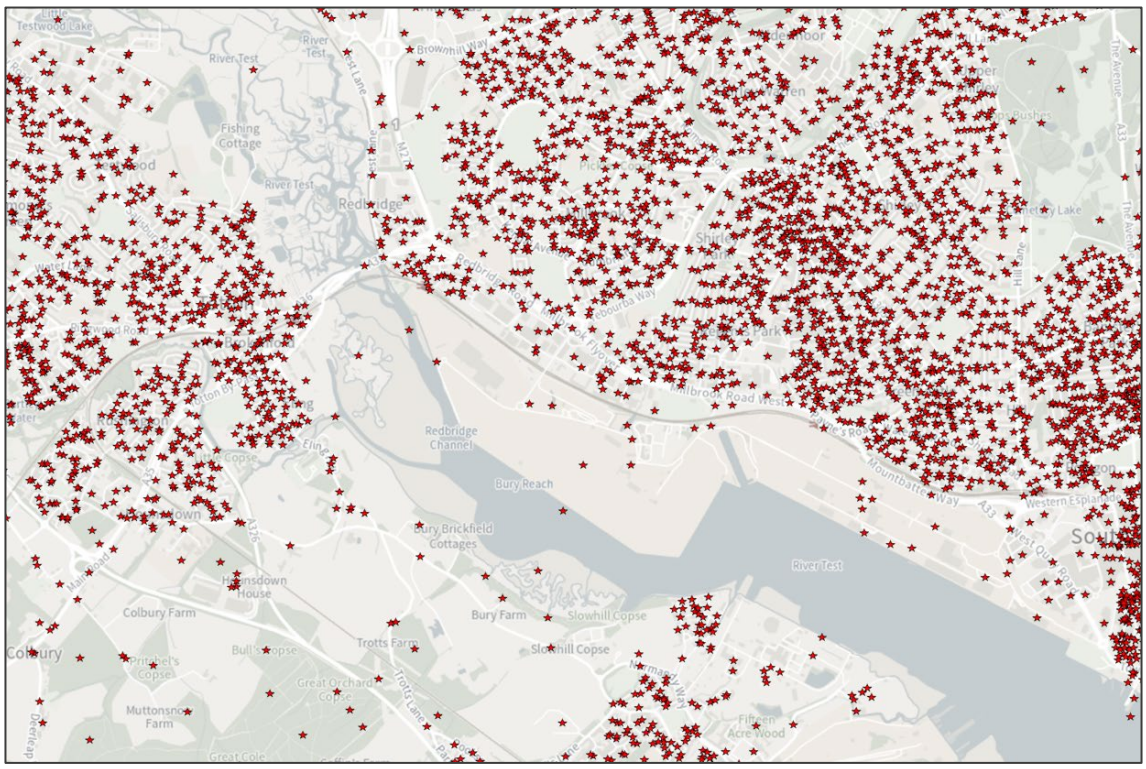


Figure 29: MapInfo Pro UI showing loaded OS Open Names data in the map pane.

A .tab file (and associated .MAP and .ID files) is automatically created in the same folder as outputfile.csv. However, these are temporary files created as part of the point creation process and are difficult to query.

9. To save the *outputfile* layer as a true .tab file:

   a. From the *HOME* tab, click *Save* > *Save Copy As*.

   b. In the Save Copy As dialog, select *outputfile* and click *Save As…*

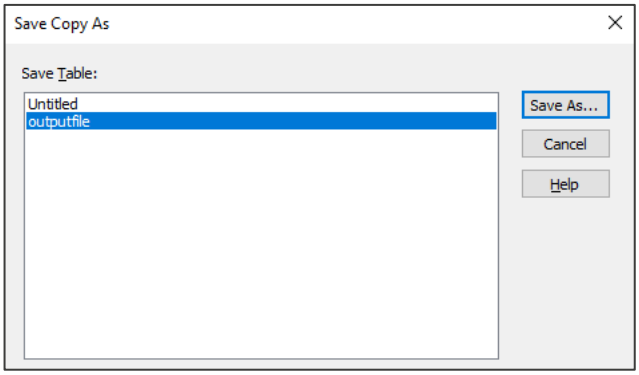


Figure 30: MapInfo Pro Save Copy As dialog with *outputfile* selected.

   c. In the Save Copy of Table As dialog, navigate to the location where you would like to save the .tab file, name the file, select *MapInfo Extended (*.tab)* in the Save as type field, and then click *Save*.

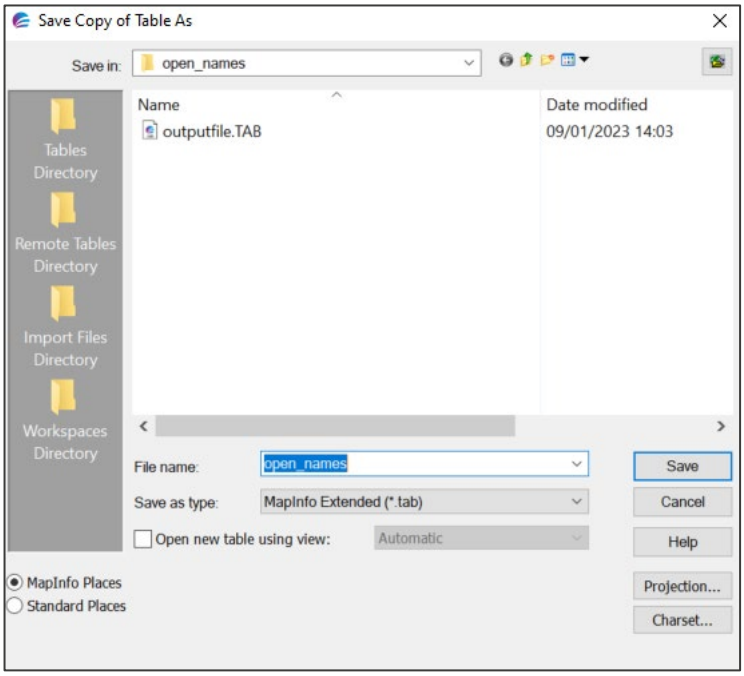


Figure 31: MapInfo Pro Save Copy of Table As dialog showing how to save *outputfile* as a true .tab file.

A progress bar will once again appear and then disappear when the save has completed.

The new .tab file, which is far easier to query, will now be available to use in MapInfo.

4.5 Cadcorp SIS Desktop

The following step-by-step instructions show you how to load OS Open Names CSV files into Cadcorp SIS. They were prepared using version 9.0.2275.64 9 (build date July 17, 2020).

4.5.1 Loading and displaying the CSV supply

To load and display CSV data in Cadcorp SIS:

1. Open Cadcorp
2. From the File tab, click *New* > *Blank Map*.

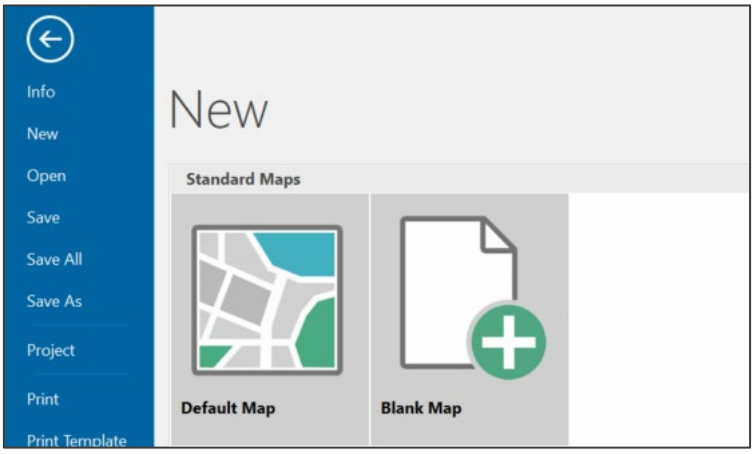


Figure 32: Cadcorp UI showing the *File* > *New* > *Blank Map* action.

3. Add a background map for geographic context:

   Cadcorp has incorporated the OS Data Hub Web Map Tile Service into their Overlays.

   a. Click *Add Overlay* > *Ordnance Survey (GB)* > *OS (GB) Data Hub* > *OS Maps API*.

   b. In the OS (GB) Data Hub confirmation dialog, select:

      i) *Yes,* to use the default Cadcorp AKI key.

      ii) *No,* to enter your own API key.

   c. Click *Next*>.

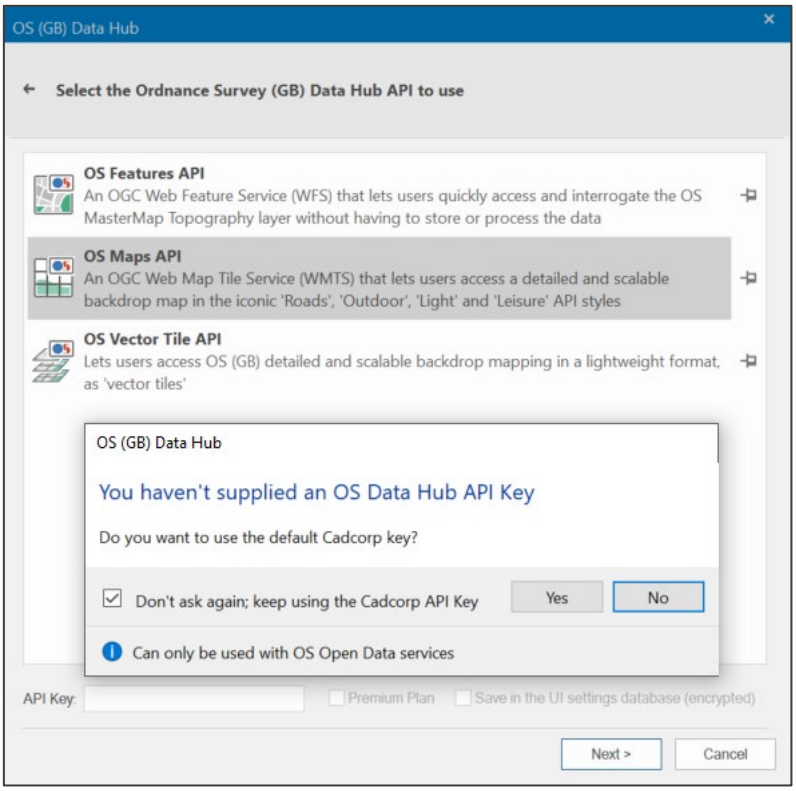


Figure 33: Cadcorp OS (GB) Data Hub dialog with the *OS Maps API* option selected.

d. Select your layer style and then click *Finish*.

There are four styles in two projections to choose from.

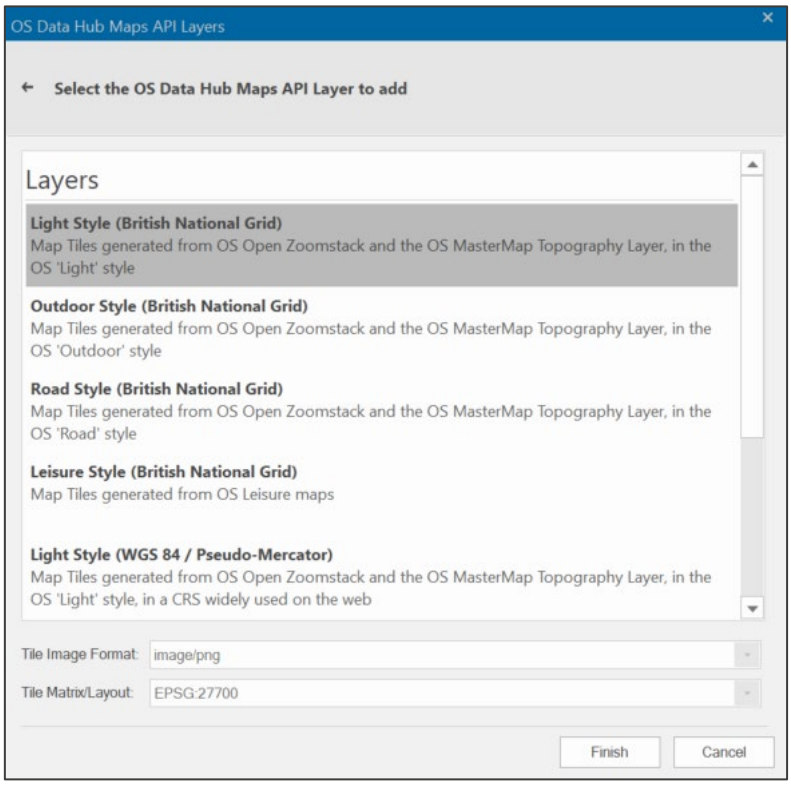


Figure 34: Cadcorp OS Data Hub Maps API Layers dialog.

You should now see the OS Maps API in your SIS Workspace Definitions.

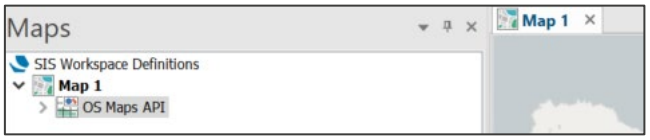


Figure 35: Cadcorp UI showing *OS Maps API* in SIS Workspace Definitions.

4. From the *Create* tab, click *Insert* > *Insert Points from CSV File*.

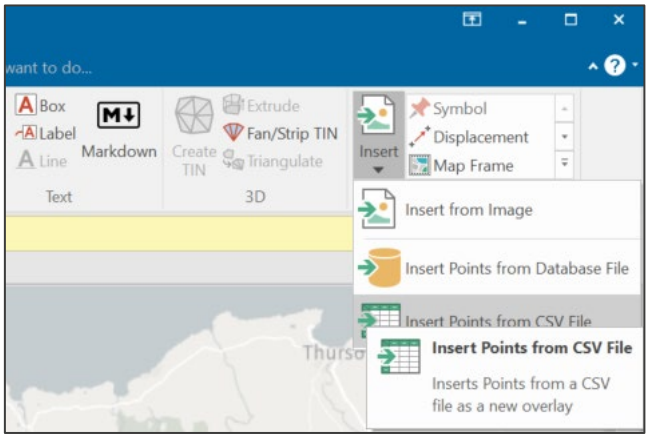


Figure 36: Cadcorp UI showing *Create* > *Insert* > *Insert Points from a CSV File* action.

5. Browse to and select *outputfile.csv*, and then click *Next*>.

6. In the Database file dialog:

   a. File Type: Select *Delimited*.

   b. Click *Next*>.

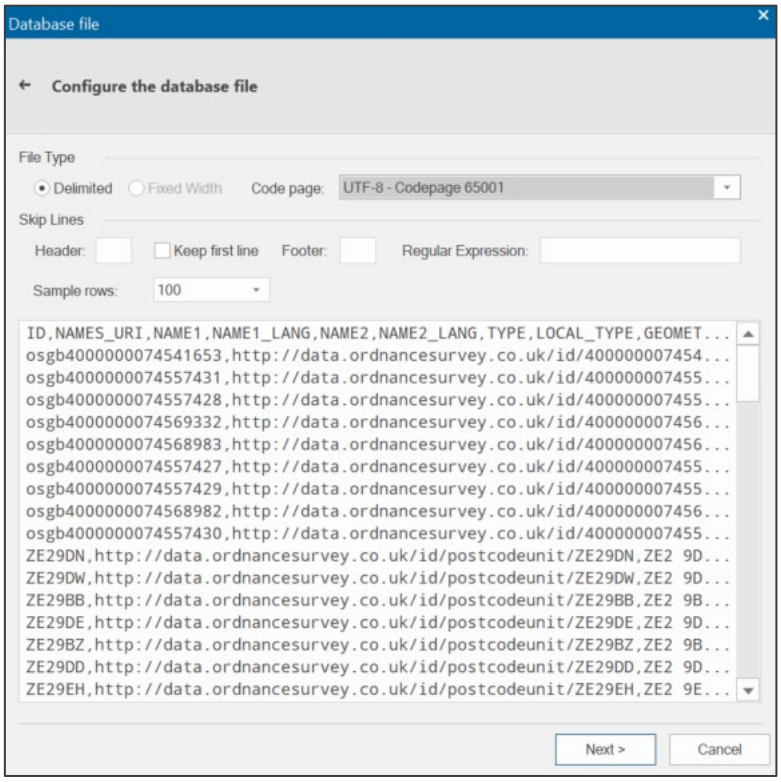


Figure 37: Cadcorp Database file dialog showing *Delimited* option selected.

7. In the File format dialog:

   a. Field Delimiter: Select *Comma*.

b. Select *First Row Contains Field Names*.

c. Click *Next>*.

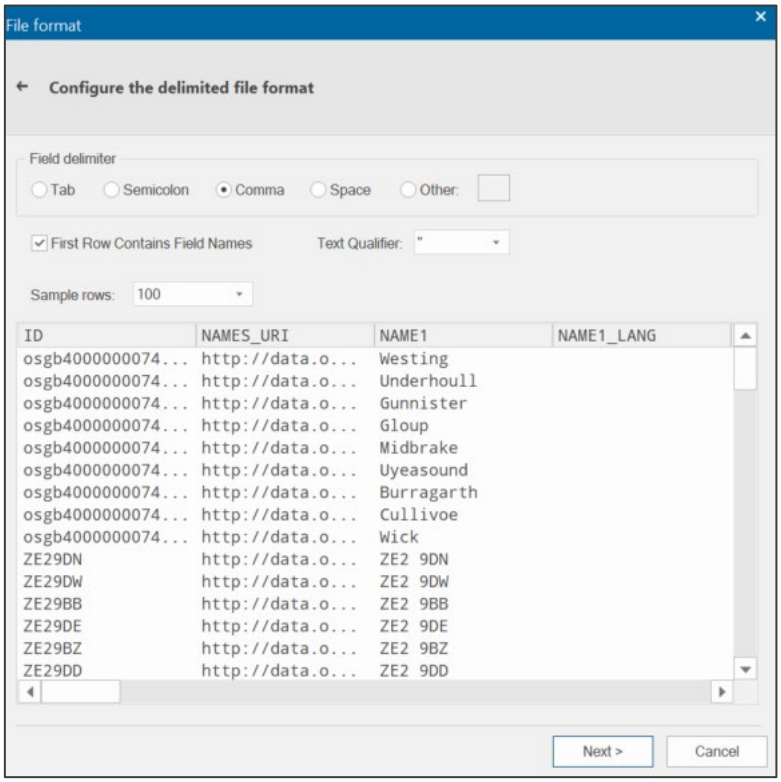


Figure 38: Cadcorp File format dialog showing *Comma* and *First Row Contains Field Names* options selected.

8. In the Database columns dialog, click *Next>*.

9. In the Recordset dialog, select which columns can be queried:

   a. To select all columns, click *outputfile* in the Database Tables/Columns field and then click (forward icon).

      This adds all columns to the Selected columns field on the right.

   b. Click *Next>*.

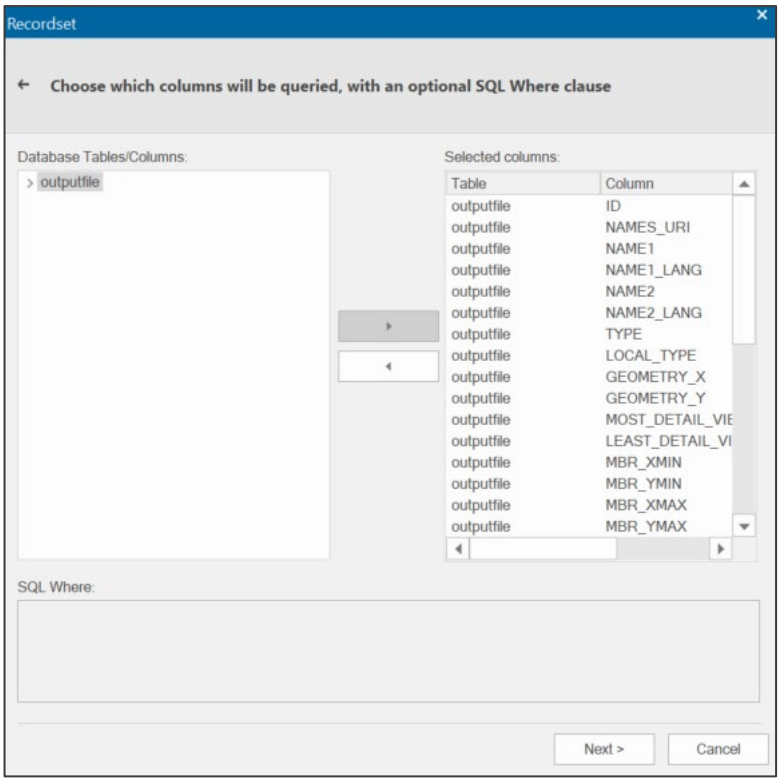


Figure 39: Cadcorp Recordset dialog showing all output file columns in the Selected columns field.

10. In the View Points dialog:

    a. X Field: Select *Geometry_X*.

    b. Y Field: Select *Geometry_Y*.

       The above settings determine which fields have your Easting and Northing.

    c. Click *Finish*.

       You can view the points created counter on the bottom left of the dialog.

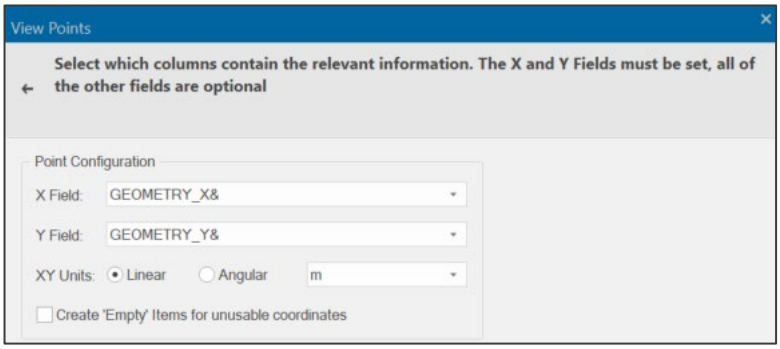


Figure 40: Cadcorp View Points dialog showing Point Configuration field options.

It may take a while for the table to load in the map pane. The result will look similar to the example below.

Figure 41: Cadcorp UI showing loaded OS Open Names data in the map pane.

11. To make the points more visible:

    a. Right-click *Imported outputfile* in SIS Workspace Definitions and then click *Properties* in the context menu.

    b. In Geometry, select the *Override* checkbox next to the Pen, Brush and Symbol fields.

    c. In Scale Overrides, change the entry in the Point field to *-0.1*.

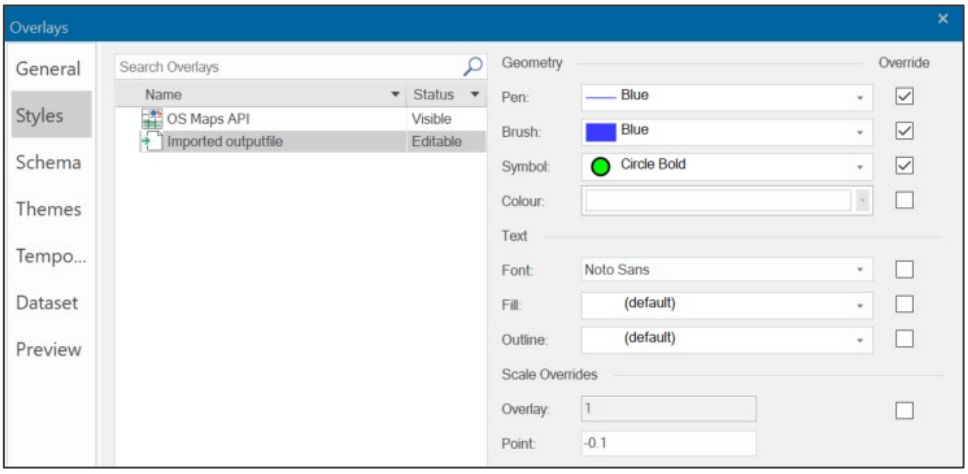


Figure 42: Cadcorp Overlays dialog showing *Styles* tab options.

The points will now be visible and will look similar to the example below.

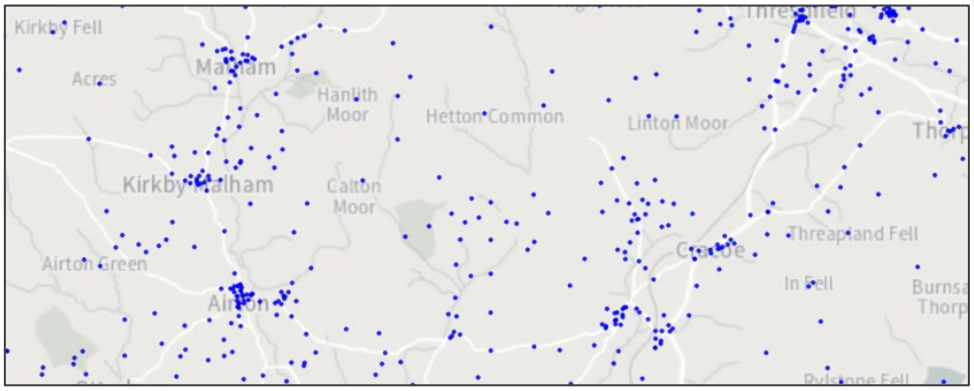


Figure 43: Cadcorp UI showing loaded OS Open Names data with visible points in the map pane.