How To Import OS Superplan Data Files into CAD Systems

So you want import OS Superplan data into your CAD system?

Perhaps you have just received an email or disk containing Superplan data files in .zip or .dxf format and you are not sure what to do next, maybe you are wanting a few tips on how to best use the data, or you are just researching the whole subject of vector mapping and Superplan data, then it is my hope that this paper will lead you in the right direction

This paper's main objective is guide you in the process of importing Superplan Data into a CAD system, the paper also briefly covers the type of information included in Superplan Data and few tips on manipulating the data inside a CAD system.

Whilst not a pre-requisite to reading this paper, it would be very handy if you had access to both a CAD system and some Superplan Data files. If you haven't got access to you own Superplan Data files that you can download a couple of samples by visiting www.conesoftware.com/whitepapers

What Is Superplan Data?

Superplan is the most detailed mapping of Great Britain and Ordnance Survey's most easily available business-to-business mapping.

The data is designed to allow you to add your own information and overlay it against an industry standard, recognised dataset. It is supplied in DXF format that is compatible with most CAD systems.

If you are new to Superplan Data or accidentally came across this paper then may you may wish to read two other documents in the series named:

High resolution aerial photographs and large scale vector maps
they are easier to obtain and cheaper than you think

How to import OS Superplan Data - Large Scale Digital Vector Maps Into CAD systems

Both are freely available from the following website

www.conesoftware.com/whitepapers

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How is Superplan Data Supplied?

Superplan Data is supplied in Drawing Interchange Format (DXF) that is fully compatible with AutoCAD release 12 onwards. The data is delivered via email or CD-ROM and is supplied as-is and does not include any software for you to use it as it stands.

In order to import the Superplan Data you will need software that can read drawings in DXF. Most modern CAD packages can import DXF files and this paper describes the import methods for the following popular types:

AutoCAD (including specific packages such as Autodesk Map and ADT)
AutoCAD LT
Autosketch
AutoCAD Clones such as Intellicad
CorelDraw

If your CAD package is not amongst those listed above then you may want to search your system documentation for topics like Import and DXF

If your Superplan Data files were supplied by email they will probably be in the form of a compressed zip file. If so, the file name is the drawing reference number suffixed by .zip, for example, 18000234.zip

Before loading into CAD, you will need to decompress the file to recreate the original DXF file. If you haven't got any Unzipping facilities on your computer then you are advised to download the latest WinZip program from http://www.winzip.com/

If your Superplan Data files were supplied on CD ROM then they will be uncompressed and you can import the .dxf file into your CAD system immediately

Importing DXF Files into AutoCAD, AutoCAD LT and AutoCAD Clones

Start an AutoCAD session.

1. From the File menu, choose Open.
2. In the Select File dialog box, in the Files of Type box, select DXF (*.dxf).
3. Find and select the DXF file you want to import, or enter the name of the DXF file at File Name.
4. Choose Open.
5. From the View menu, choose Zoom then Extents
6. From the File Menu choose Save As to save the drawing as a .DWG file

Once a '.DWG' file has been created in this way, the original .DXF file is redundant and you can now move on to the **Tips and Tricks** section

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Importing DXF Files into AutoSketch

Start an Autosketch session.

1. From the File menu, choose Open.
2. In the Select File dialog box, in the Files of Type box, select Drawing Interchange (*.dxf).
3. Find and select the DXF file you want to import, or enter the name of the DXF file at File Name.
   Choose Open.
4. Select Metres from the Linear Scale Factor units pop-down list
5. From the File Menu choose Save As to save the drawing as a .SKF or .DWG file

Once an .SKF or '.DWG' file has been created in this way, the original .DXF file is redundant and you can now move on to the **Tips and Tricks** section

Importing DXF Files into CorelDraw

Start a CorelDraw session.

1. Click **File > Open**
2. Locate the folder where the file is stored.
3. Choose **DXF - AutoCAD** from the **Files of type** list box.
4. Click the filename.
5. Click **Open**.
6. In the **Import AutoCAD file** dialog box, choose a plane projection of a three-dimensional object as seen from a given focal point from the **3D projection** list box.
7. If you want to reduce the number of nodes on the imported object, enable **Auto-reduce nodes**.
8. In the **Scaling area**, enable one of the following options:
   a. **Automatic** — scales the drawing using the scale of the AutoCAD source file
   b. **English (1 unit = 1 inch)** — lets you scale the drawing in inches
   c. **Metric (1 unit = 1 mm)** — lets you scale the drawing in millimeters
9. From the File Menu choose Save As to save the drawing as a .CDR file

Once an .SKF or '.DWG' file has been created in this way, the original .DXF file is redundant and you can now move on to the **Tips and Tricks** section

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Tips and Tricks

Save It

No matter what CAD system you import the Superplan Data DXF file into I recommend that you save the resultant drawing in the CAD systems native file format.

.DWG for AutoCAD, AutoCAD LT and clones
.SKF for Autosketch
.CDR for CorelDraw

Have you got the right scale?

One of the best uses of vector maps such as Superplan Data inside a CAD system is the ability to accurately measure distances between points on the map (i.e. The width or length of a road or building etc.) If you used the Open DXF methods as described above then the units should be set to metres and if you measure the distance between any two vertical or horizontal grid lines the answer should be 100. (The distance between grids is 100 metres)

In AutoCAD use pull down Tools > Inquiry > Distance
Pick 2 points, the result is given at the command line

In Autosketch use pull down Inquire > Distance
Pick 2 points and then select the pull down list to see the distance in a number of different units

In CorelDraw use the dimension fly-out from the freehand tool icon
Pick 2 points, the result is given in the status bar

If the distance is not 100 then I recommend you scale the map accordingly for example if the distance between two grid lines is 2540.0 then you should scale the map by 100 / 2540.0 = 0.01

Sort out those Layers

You will probably notice that there are quite a number of layers (up to 60 in fact) and these have very unmemorable names such as G8030001 and G8030021.

Layers are pretty useful things to have on a map it will allow you to turn the visibility of certain objects such as buildings, trees, water features, piping etc On or Off.

A useful tip is to turn all the map layers OFF and then selectively turn each layer ON in turn to see the effect and to get used to the layer naming convention.

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I also recommend that you rename the layers that you are going to be using frequently and switch off the layers you will not be using

i.e. Rename G8030001 to **Building Outlines** and rename G8030021 to **Road Edge** etc.

The table below lists all layers that can be found in Superplan Data. The BS1192 Pt 5 layers are in numerical order. Also shown for each layer are a description (common name) and Colour. The colours shown are default and may vary according to your system and software's configuration.

I recommend that you rename the layers that you are going to be using frequently and switch off the layers you will not be using

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Layer	Description	Colour
G8030001	Building outline	red
G8030004	Building outline (overhead)	red
G8030007	Civil Parish/Community Boundary	magenta
G8030008	District/London Borough Boundary	magenta
G8030009	County Boundary	magenta
G8030010	Electoral Division/Ward	magenta
G8030011	Boundary post/stone	magenta
G8030013	Boundary mereing symbol	magenta
G8030014	Railway (narrow gauge)	blue
G8030015	Railway (standard gauge)	blue
G8030021	Road (public) edge of metalling	blue
G8030025	Triangulation point	blue
G8030026	Bench mark	blue
G8030027	Spot height	blue
G8030030	General line/ minor building detail	white
G8030032	General ground level/ minor overhead detail	white
G8030033	Underground detail/ course of antiquity	blue
G8030035	Vegetation/ landform limit (secondary)	green
G8030036	Vegetation/ landform limit	green
G8030043	Overhead detail	blue
G8030049	Pylon	blue
G8030052	Minor detail	white
G8030057	Point feature	white
G8030059	Water detail	cyan
G8030069	Flow arrow	cyan
G8030071	Mean High Water (Springs)	cyan
G8030072	Mean Low Water (Springs)	cyan
G8030079	European/Westminster Boundary	magenta
G8030321	Roofed building indicator	red
G8030323	Glasshouse indicator	white
G8030372	Positioned coniferous tree	green
G8030373	Positioned non-coniferous tree	green
G8030374	Top of slope	red
G8030375	Top of cliff	red
G8030376	Bottom of slope or cliff	brown
G8030377	Boulders	brown
G8030378	Boulders (scattered)	brown
G8030379	Coniferous trees	green

Layer	Description	Colour
G8030380	Coniferous trees (scattered)	green
G8030381	Coppice/ osiers	green
G8030382	Marsh/ saltmarsh/ reeds	green
G8030384	Non-coniferous trees	green
G8030385	Non-coniferous trees (scattered)	green
G8030386	Orchard	green
G8030387	Heath	green
G8030388	Rock	brown
G8030389	Rock (scattered)	brown
G8030390	Rough grassland	green
G8030392	Scrub	green
G8030395	Upper level of communication indicator	magenta
G8030396	Cliff indicator	brown
G8030397	Slope indicator	brown
G8030400	Water indicator	cyan
G8030570	Copyright symbol	white
G8030571	Footnotes, scale bar, logo, etc	white
G8030572	Internal gridlines and values	white
G8030573	Neat line and corner values	white
G8030574	Customer reference title	white
G8030575	Drawing reference number	white
G8031000	Road name/ number	white
G8031005	Boundary text	magenta
G8031006	House number/ building name	red
G8031009	Miscellaneous text	blue
G8031010	Water text	cyan
G8031013	Land parcel number	green
G8031210	Scree	brown
G8031211	Positioned boulder	brown
G8031212	Ridge/ rock line	red

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Where to go from here

This paper is one of six papers in the series the others being:

High Resolution Aerial Photographs and Large Scale Vector Maps their easier to obtain and cheaper than you think

How to easily obtain OS Superplan Data - Large Scale Digital Vector Maps

How to easily obtain High Resolution Aerial Photography and OS MasterMap Topographic information

How to import Aerial Photography, OS MasterMap Topographic and Other Raster Map Images Into CAD systems

How To Best Use Maps (Raster or Vector) and Aerial Photography when producing Road Traffic Control Diagrams

All are freely available from the following website

www.conesoftware.com/whitepapers

About The Author

Peter Booth is sole owner of CADaptor Solutions a UK company who are the sole developers and distributors of CONE, a software package that aids the production of temporary traffic control diagrams and route diversion schemes.

CONE is used extensively in the Road Traffic Industry and has a 12-year pedigree. You can find out more about CONE by visiting www.conesoftware.com

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