

Shape Files Import of Roads

SP Net info 90

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When only a single or a few roads are to be created it is manageable to digitize the roads manually. The properties are established with the first point. From the emission calculation window you can also open the Road Day Histogram library and key in your own traffic distribution if none of the predefined types fit your needs.

However, in medium size and big projects the roads and their properties must be imported.

ESRI shape file and Ascii Table import are the most widely used import types. The import procedure is pretty much the same for those two file types. Here the shape files import is explained with standard RTN96.

For the import to be successful it is important that all libraries to which the imported objects need links are created BEFORE the import menu is accessed. This counts in general for all object types and for all import types. For RTN96-roads the Road Day Histogram library must be created as the first step. This is where you define the distribution of vehicles over the 24 hours. Click the library button in the SP Manager and launch Libraries > Project > Road Day Histograms > Others, see Fig 1:

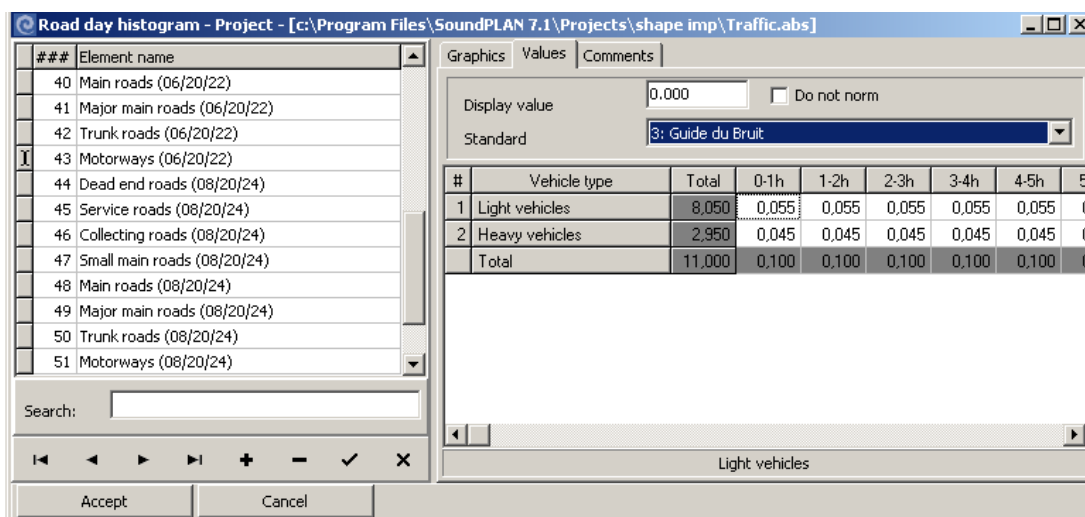


Fig 1 Road Day Histogram to go with RTN96

If you have created a global road day histogram library a copy of this will be created automatically and stored in your project. If you haven't yet created a global library a copy of the road day histogram System library will be copied into the project. Now you can add your own records to this library if none of the predefined distributions fit your needs. During the following import you can create links to the relevant records by referring to the record number (just left to the element name), see below.

Please note that you must select a standard from the drop down list that is matching your vehicle types, with RTN96 please select standard <3: Guide du Bruit; RTN96> with 'Light' and 'Heavy' vehicles (in older versions than Ver 7.1 the producer forgot to add 'RTN96' after Guide du Bruit).

Once the Road Day Histogram library contains the relevant distributions of vehicles it is time to perform the import of master alignment, road profile, ADT etc etc: Open GeoDatabase and go to File > Import > ESRI Shape file, browse to the file and click open, and the import mask will pop up, see Fig 2.

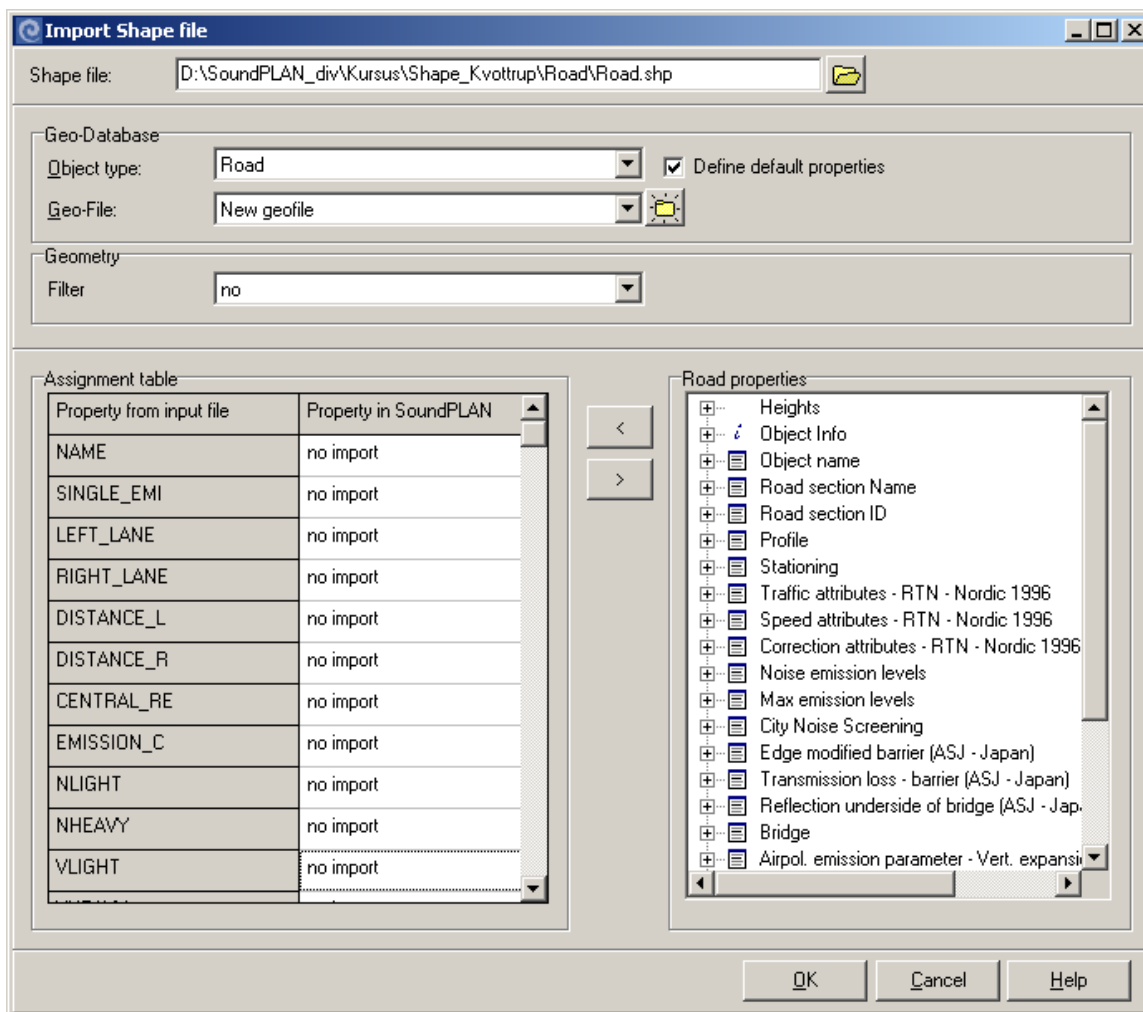


Fig 2 The Shape files import mask

Select the object type Road from the drop down list. The import will be stored in the geofile selected under Geo-File. If you keep the tick mark for 'Define default properties' the first window that will pop up after the import will be the usual road property window; this gives you a chance to define a property that is not included in the shape file. Please be aware that the property defined in this way will be the same for all imported roads.

It is possible to filter imported line objects, here roads. Road sections with no bends do not need a lot of intermediate points. If the shape file contains a lot of such intermediate points they can be weeded out with this filter. From the drop down list you can select a filter width which means that points within this distance from the straight line will be deleted during the import.

The lower part of the window shows to the right a list with all usual road properties and to the left the field headers used in the shape file. Now links between relevant properties and the matching field can be created either by double clicking on the property while the relevant field is marked or with the left pointing arrow between the two parts of the window. An incorrect link can be removed with the right pointing arrow.

The first time these links should be created it is a great help if the field headers contain an informative text, maybe even the same names as used for road properties in SoundPLAN.

Once the first import has been completed SoundPLAN will remember the links so next time a shape file of the same format is imported, the links will be created automatically.

The import mask is the same no matter what input type and what standard was selected for the calculation. The property list is therefore rather extended. Some of the properties have informative names whereas others are not that obvious. Hopefully Fig 3 helps:

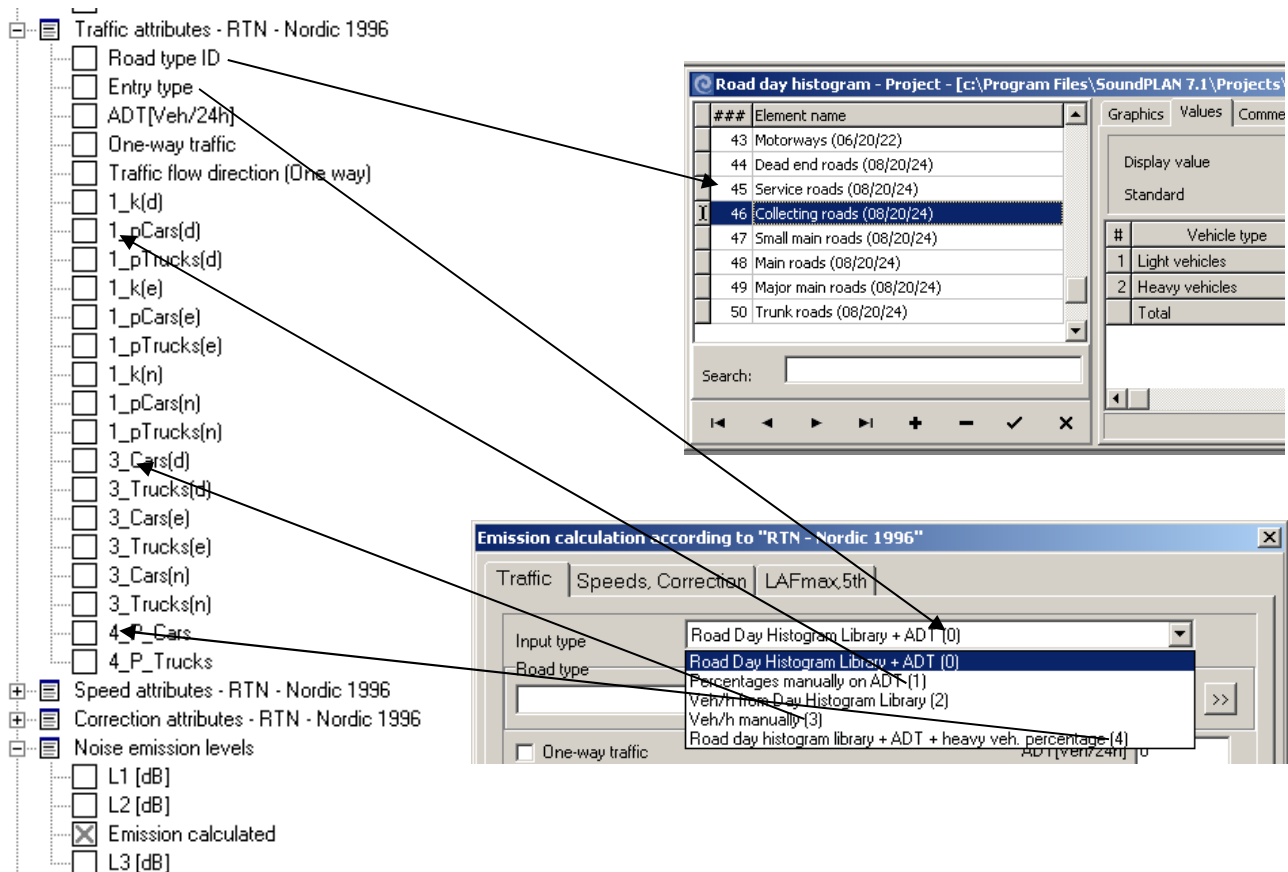


Fig 3 Definition of road properties

Road type ID refers to the record number in the Road Day Histogram library, e. g. 45.

Entry type refers to the number in bracket after the input type, e. g. 3 if your traffic data is number of light and heavy vehicles during day, evening and night. This number is reused in the traffic flow properties (on the screen dump above 1, 3 or 4).

If the shape file does not include the numbers for Road type ID and Entry type (which often is the case because the producer of the file is not familiar with these parameters) you should keep the tick mark for 'Define default properties' and select the two references in the road property window popping up after the import. If all properties are included in the shape files you should deactivate 'Define default properties'.