

How to Import Places

Do you have a database of your customers? You can easily import your customers as a *.csv or *.xls file into the Road Control Schedule. You only have to follow the required format.

1. Source File Format

The base import format is *.csv (comma separated values). However, a MS Excel file¹ (*.xls) format is eligible as well. Each place is represented as a row. Place properties are represented with columns. The columns are separated with a semi-colon ";". The character set encoding in the import *.csv file should correspond to the system locale settings (e.g. CP-1250 for Central European languages).

2. Required and Supported Properties

Multiple properties can be defined for each place in the import file:

COLUMN NAME	DESCRIPTION	DEFAULT VALUE						
DESCRIPTION	Place name or description	-						
TYPE	Type of the place. Allowed values: <table border="1" data-bbox="422 997 1185 1081"> <tr> <td>DEPOT</td> <td>the place serves as a depot</td> </tr> <tr> <td>REQUEST</td> <td>the place is a customer requiring a service</td> </tr> </table>	DEPOT	the place serves as a depot	REQUEST	the place is a customer requiring a service	REQUEST		
DEPOT	the place serves as a depot							
REQUEST	the place is a customer requiring a service							
ID	Unique place identifier. If omitted Road Control assigns its own identifier.	-						
TIME1_FROM	Start of the first time window (hh:mm) ²	00:00						
TIME1_UNTIL	End of the first time window (hh:mm)	00:00						
SERVICETIME1_MIN	Service time of the first time window minutes (minutes or hh:mm)	0						
TIME2_FROM	Start of the second time window (hh:mm)	-						
TIME2_UNTIL	End of the second time window (hh:mm)	-						
SERVICETIME2_MIN	Service time of the second time window (minutes or hh:mm)	-						
DEMAND_KG	Place demand (kg)	0						
DEMAND_M3	Place demand (cubic meters)	0						
DEMAND_NUM	Place demand (pcs)	0						
DEMAND_L	Place demand (liters)	0						
LATTITUDE	Place latitude Examples of accepted formats in WGS-84: <table border="1" data-bbox="422 1627 1185 1743"> <tr> <td>dd°mm'ss'''''' N</td> <td>e.g. 50°04'26.81'''''' N</td> </tr> <tr> <td>dd°mm.mm' N</td> <td>e.g. 50°04.4436' N</td> </tr> <tr> <td>dd.dddd° N</td> <td>e.g. 50.074000° N</td> </tr> </table>	dd°mm'ss'''''' N	e.g. 50°04'26.81'''''' N	dd°mm.mm' N	e.g. 50°04.4436' N	dd.dddd° N	e.g. 50.074000° N	-
dd°mm'ss'''''' N	e.g. 50°04'26.81'''''' N							
dd°mm.mm' N	e.g. 50°04.4436' N							
dd.dddd° N	e.g. 50.074000° N							
LONGITUDE	Place longitude Examples of accepted formats in WGS-84:	-						

¹ Road Control only supports xls format. If you have a xlsx file, you need to save it to an earlier xls format.

² MS Excel might use its own format for time values. If the import fails, use the cell format "Text" for time values.

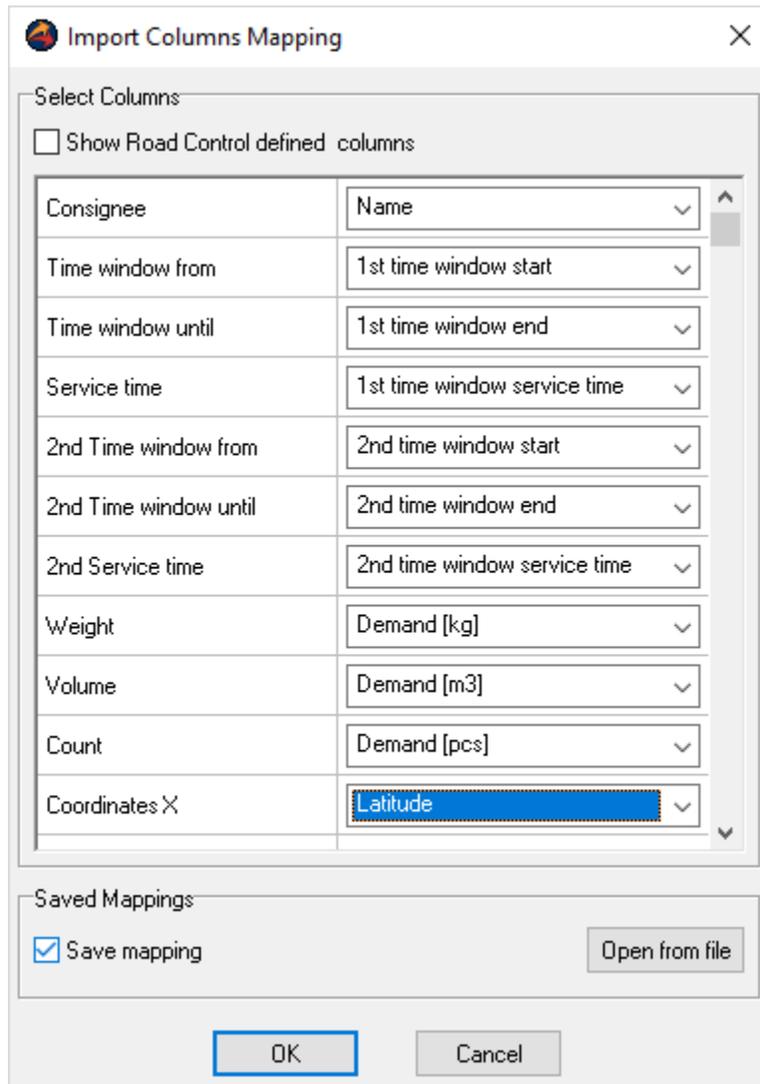
	dd°mm'ss'''''' E	e.g. 14°26'01.86'''''' E	
	d°m.mm' E	e.g. 14°26.0219' E	
	d.dddd° E	e.g. 14.433719° E	
PROJECTION	Coordinates projection (e.g. WGS-84)		WGS-84
REQUIRED	Vehicle features required by the customer. Several features can be set to force the service of the place with a particular vehicle. The features are separated with the character . Example: platform refrigerated solo		-
FORBIDDEN	Vehicle features forbidden by the customer. Several features can be set to forbid the service of the place with a particular vehicle. The features are separated with the character . Example: 12 tons semi-trailer tilt		-
COUNTRY	Address component – country		-
STATE	Address component – state		-
COUNTY	Address component – county		-
CITY	Address component – city		-
POSTCODE	Address component – postcode		-
STREET	Address component – street		-
HOUSE_NUMBER	Address component – house number		-
NOTE	Note or additional place information		-

3. Custom Column Names

Road Control gives you total freedom in naming columns. In your import file, you can either use the column names defined by Road Control (listed in the table above), or any column names associated with those properties. If Road Control finds unknown column names in your import file, it displays a dialog box where you can specify which property each column represents. An example of pairing columns with defined site properties is shown in Figure 1. On the left, the column names present in the import file are listed, the appropriate location property can be selected on the right. If some columns in the import file do not match any defined space properties, you can either omit them from the import or import them as additional information about the location (Figure 2).

Hint: If you do not see all the column names you created in your import file in the Pair Import Columns dialog, you have used a Road Control name for some columns. If you want to view all the columns, simply check the "Show columns defined in Road Control" field.

Figure 1

A screenshot of a software dialog box titled "Import Columns Mapping". The dialog has a close button (X) in the top right corner. It is divided into two main sections: "Select Columns" and "Saved Mappings".

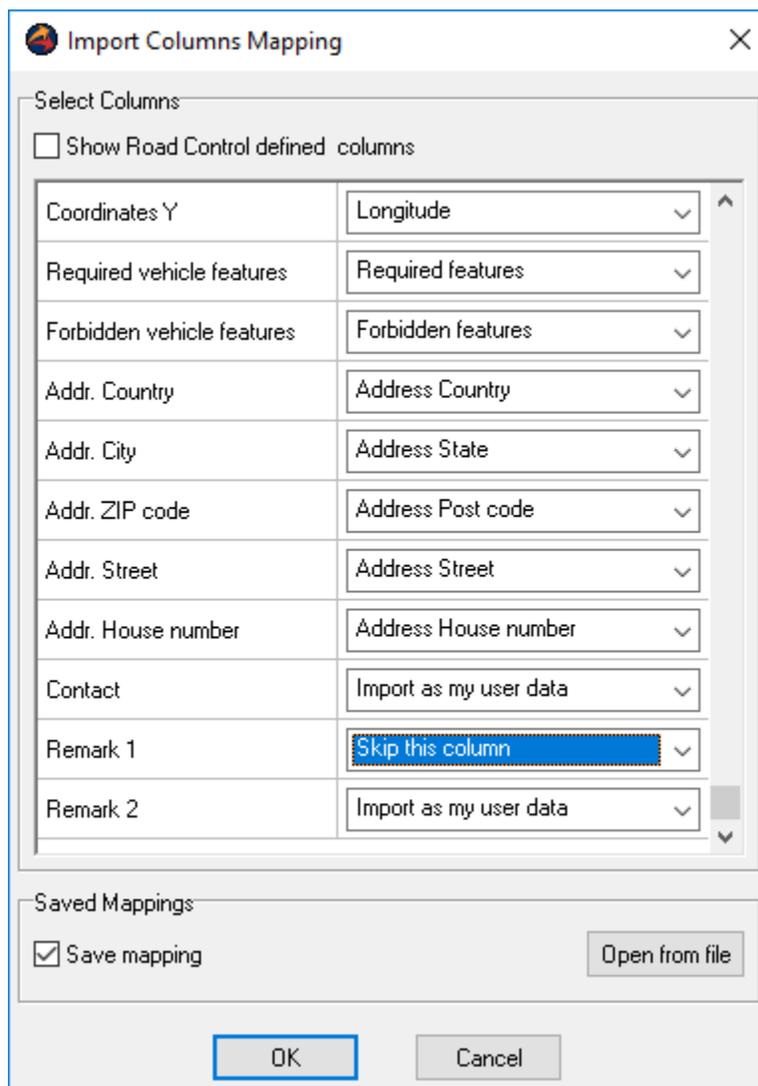
The "Select Columns" section contains a checkbox labeled "Show Road Control defined columns" which is currently unchecked. Below this is a table with two columns: the left column lists source column names, and the right column shows dropdown menus for selecting target column names. The "Coordinates X" dropdown is currently selected and highlighted in blue.

The "Saved Mappings" section contains a checkbox labeled "Save mapping" which is checked. To the right of this checkbox is a button labeled "Open from file".

At the bottom of the dialog are two buttons: "OK" and "Cancel".

Source Column	Target Column
Consignee	Name
Time window from	1st time window start
Time window until	1st time window end
Service time	1st time window service time
2nd Time window from	2nd time window start
2nd Time window until	2nd time window end
2nd Service time	2nd time window service time
Weight	Demand [kg]
Volume	Demand [m3]
Count	Demand [pcs]
Coordinates X	Latitude

Figure 2

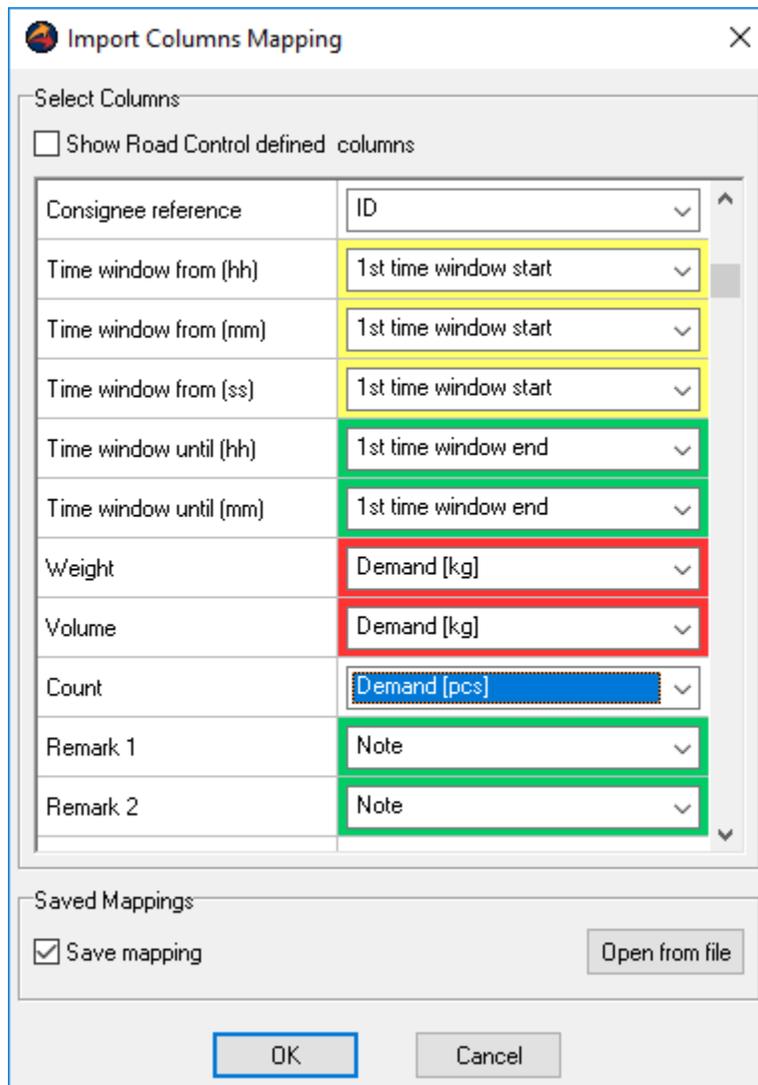


3.1 Map Multiple Columns on One Property

In the Import Columns Mapping dialog, you can assign multiple columns to one property. In this case, Road Control will give you information on how to handle your selection during import. For some properties (such as Note, Required Properties, Forbidden Properties), values in columns are simply assigned as a string to that property. Conversely, properties for which a unique value is required cannot be mapped on multiple columns, and Road Control then loads only the value from the first column in the order.

A specific situation occurs in the case of time data (time window, service time within the time window). Road Control allows you to enter the hh:mm time format into one column. You can also divide the hours and minutes into two columns. Road Control then converts both values into the correct time. In the same way, you can also specify the length of time for which the 'minute' format is supported. Examples of matching multiple columns with the same property are in Figure 3.

Figure 3



Source Column	Target Property
Consignee reference	ID
Time window from (hh)	1st time window start
Time window from (mm)	1st time window start
Time window from (ss)	1st time window start
Time window until (hh)	1st time window end
Time window until (mm)	1st time window end
Weight	Demand [kg]
Volume	Demand [kg]
Count	Demand [pcs]
Remark 1	Note
Remark 2	Note

The pairs you created in the dialog are automatically saved to the same folder and with the same name as the imported file (with the * .rcini extension). The next time you open the import file, the mapping is loaded. However, if you want to use other pairs, you can simply load it from any rcini file using the "Open from File" button.

4. Performing the Import

Once you have prepared your import file, process it by clicking the Road Control menu "Import Schedule...". Select the imported file and click OK. Your places will appear in the Road Control panel.

Hint: Using the import functionality, you can merge places from different source files together. Road Control import appends the newly imported places to those which are already present in the Road Control panel and which have been eventually geocoded in the past.

5. Geocoding of Places

Place coordinates: each place in the Road Control schedule requires coordinates before it can be included in the calculation. If the coordinates are not defined in the import file (columns LATTITUDE, LONGITUDE and PROJECTION) you will need to localize the places in the map using the "Edit Coordinates" functionality. A place can also be localized with the "Search on Map" functionality.

Do you maintain the exact addresses of your customers? Fill in the component address columns in your import file and use the automatic geocoding service. The geocoding is a part of the remote calculation service.

The component address columns needn't be completely filled-in. However, we recommend you to fill-in at least columns CITY, POSTCODE, STREET, HOUSE_NUMBER. These columns ensure the uniqueness of the address. In case you import your places from a file containing the component address columns but not the coordinates of places, launch the schedule calculation by clicking the "Calculate" button. The remote calculation service then tries to geocode places accordingly to their address components. Remark: To launch the calculation successfully, at least one place in the schedule must be defined as depot and at least one vehicle must be present in the schedule. If the geocoding of some places fails, the remote calculation service returns a geocoding error. However, places which were geocoded successfully will be now visible in the map. Check the places which are still missing their coordinates and set them manually. Then launch the calculation again.

Notice: The automatic geocoding is not intended for an extensive geocoding of large customer databases. It is rather an auxiliary tool for the geocoding of no more than 50 addresses of new customers within the daily operations. If you need to geocode large sets of places, we offer a web service Position Services – Search or we can provide a one-time geocoding of your customer database. In such cases please contact us for further information.

6. Sample Import Files

We recommend to use the file format *.csv separated with semi-colon for import files. The import file can be created by your information system or you can create it manually in a text or spreadsheet editor.

6.1 Import File with Addresses

The address of each place is given in the component address columns. Places will be shown in Road Control in the Places panel. However, they need to be geocoded to be visible in the map.

DESCRIPTION;TYPE;ID;COUNTRY;CITY;POSTCODE;STREET;HOUSE_NUMBER

*My Depot;DEPOT;MyID-1;Nederland;Arnhem;6824 MB;Velperweg;153
Customer 1;REQUEST;MyID-2;Nederland;Utrecht;3521 CL;Croeselaan;254*

6.2 Import File with Coordinates

The coordinates are filled-in for each place. Places will be visible in the map and they can be used in a calculation schedule.

*DESCRIPTION;TYPE;ID;LATTITUDE;LONGITUDE;PROJECTION
My Depot;DEPOT;MyID-1;51.993976° N;5.949432° E;WGS-84
Customer 1;REQUEST;MyID-2;52.078744° N;5.114740° E;WGS-84*

6.3 Properties

Other properties can be defined beside the address or coordinates. For example:

- time windows and service time

*TIME1_FROM;TIME1_UNTIL;SERVICETIME1_MINS;TIME2_FROM;TIME2_UNTIL;SERVICETIME2_MINS
07:00;17:00;30;;;
08:00;12:30;15;13:30;16:30;20*

- customer demand or vehicle features

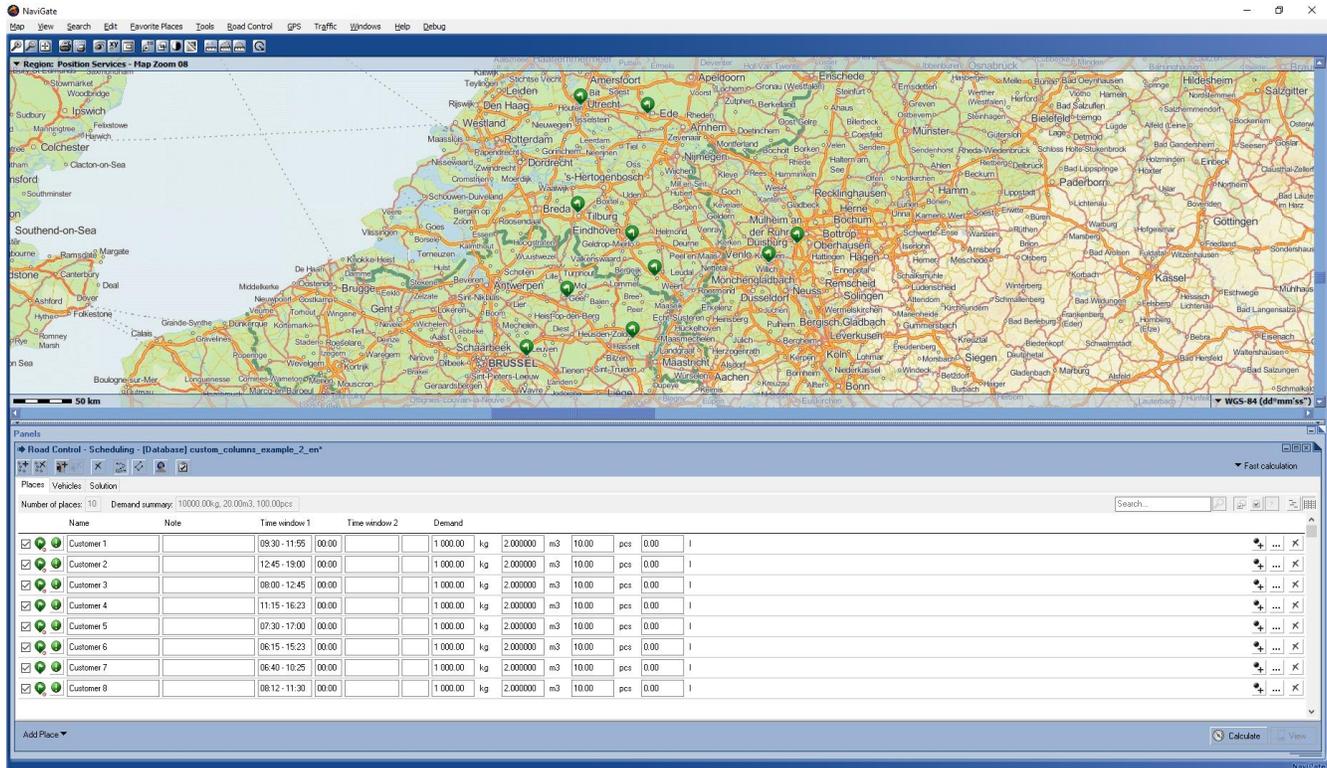
*DEMAND_KG;DEMAND_M3;DEMAND_NUM;DEMAND_L;REQUIRED;FORBIDDEN
1500;2;;;refridgerated;
600;3;;;12 tons|semi-trailer*

Sample import files are accessible through "Import file..." from the Road Control menu.

7. View locations in Road Control

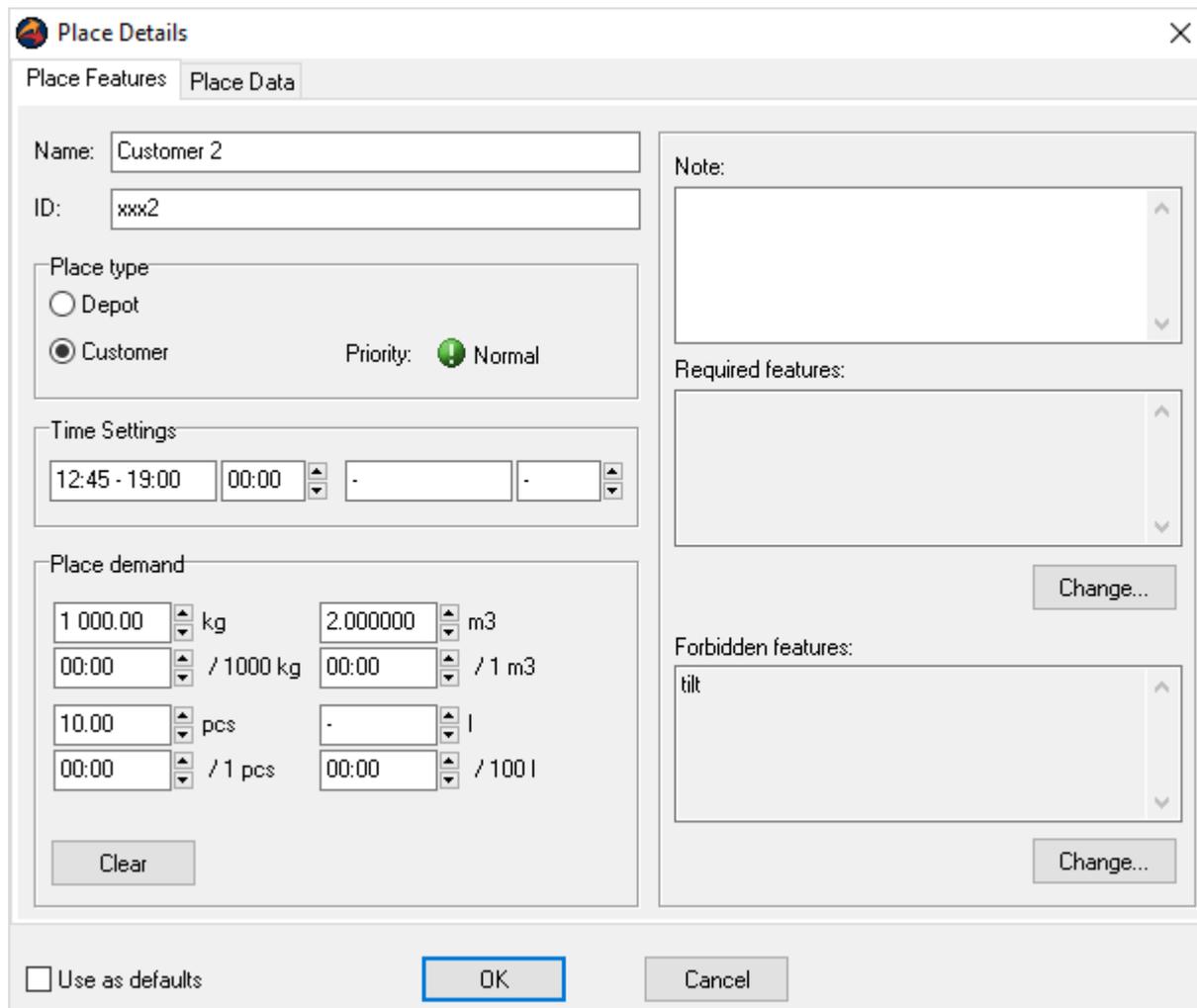
After successful import, the locations will appear on the Places tab of the Road Control panel (Figure 4).

Figure 4



In the Places panel, you can edit some properties, delete places by clicking , change location coordinates by pressing  and clicking on the map. All place properties are accessible via the button . After pressing it, the "Place Details" dialog box will be displayed. On the "Place Features" tab, you can edit all the properties that are defined for a Road Control place (Figure 5).

Figure 5



Place Details

Place Features | **Place Data**

Name:

ID:

Place type

Depot

Customer

Priority:  Normal

Time Settings

Place demand

<input type="text" value="1 000.00"/> kg	<input type="text" value="2.000000"/> m ³
<input type="text" value="00:00"/> / 1000 kg	<input type="text" value="00:00"/> / 1 m ³
<input type="text" value="10.00"/> pcs	<input type="text" value="-"/> l
<input type="text" value="00:00"/> / 1 pcs	<input type="text" value="00:00"/> / 100 l

Note:

Required features:

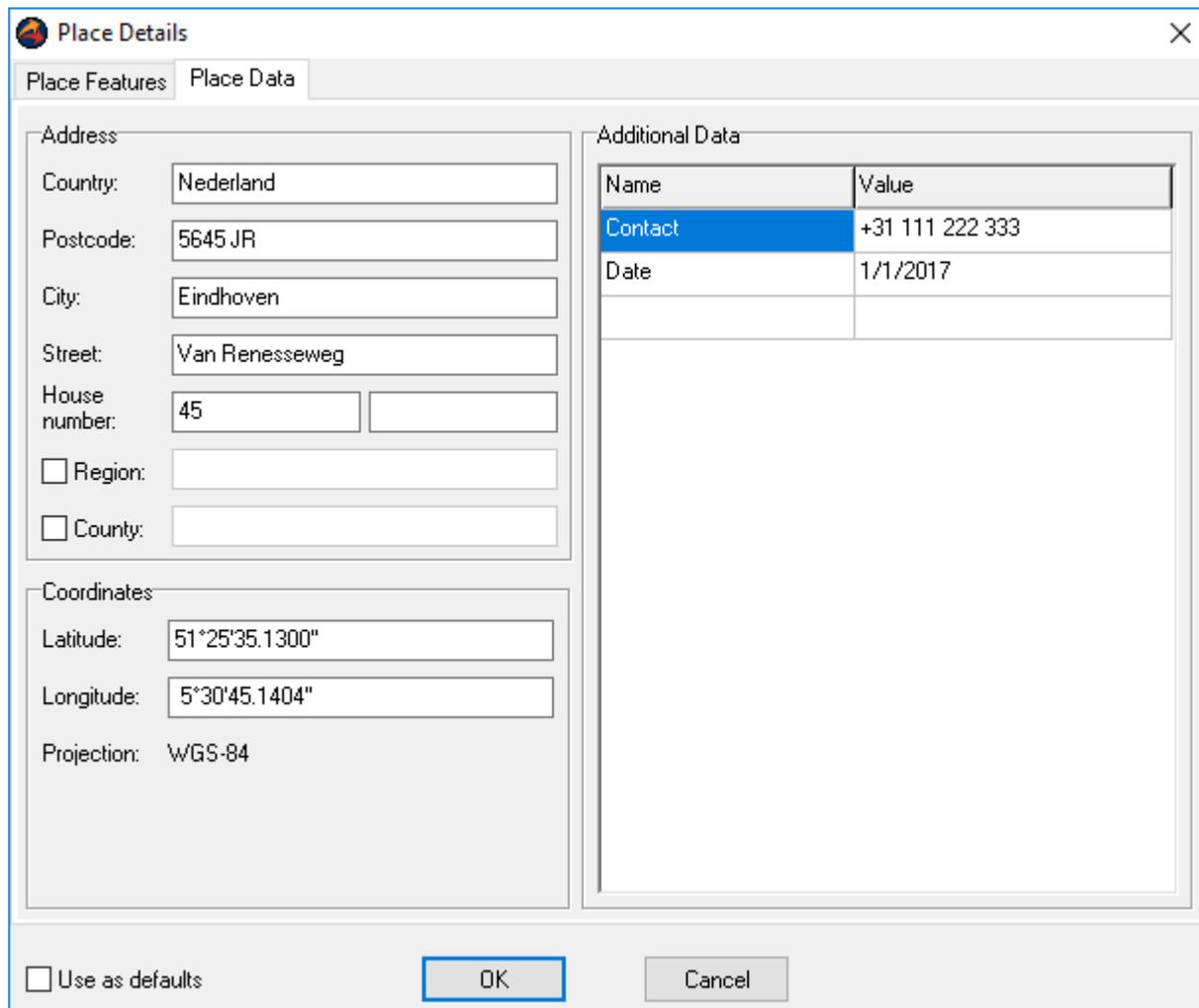
Forbidden features:

tilt

Use as defaults

Other data, including those imported as user data, can be found on the "Place Data" tab (Figure 6). On this tab, you can edit the address, WGS-84 coordinates, and edit user data (the "Additional data" box).

Figure 6



The dialog box is titled "Place Details" and has two tabs: "Place Features" and "Place Data". The "Place Data" tab is active. It is divided into three main sections: Address, Coordinates, and Additional Data.

Address Section:

- Country: Nederland
- Postcode: 5645 JR
- City: Eindhoven
- Street: Van Renesseweg
- House number: 45
- Region:
- County:

Coordinates Section:

- Latitude: 51°25'35.1300"
- Longitude: 5°30'45.1404"
- Projection: WGS-84

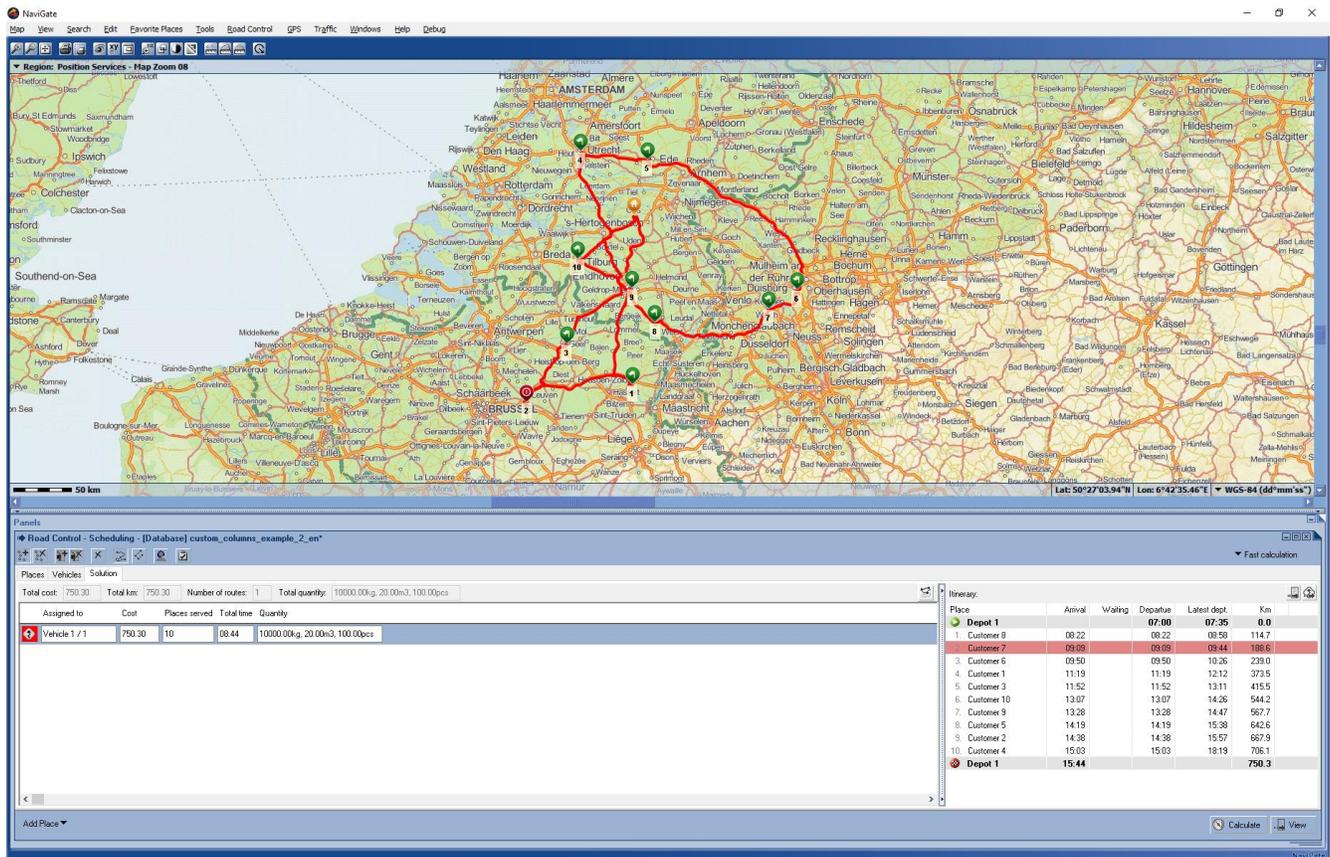
Additional Data Section:

Name	Value
Contact	+31 111 222 333
Date	1/1/2017

At the bottom of the dialog, there is a checkbox for "Use as defaults", and "OK" and "Cancel" buttons.

If you launch a calculation (there is at least one "Depot" in the "Places" tab and at least one vehicle assigned to the appropriate depot on the "Vehicles" tab), Road Control calculates the delivery plan and displays the result in the "Solution" tab (Figure 7).

Figure 7



Press the button **View** at the bottom right to get a clear Road Control Schedule - html report for your solution. You will find all the routes in the Schedule (Figure 8 shows an example of a one-route schedule) for each vehicle. For each point in the route, key values such as arrival and departure times, transit quantities, and the user data that you imported from your import file are shown. For each scheduled place visit, there is also a map view with the immediate vicinity of the visited place.

Figure 8

