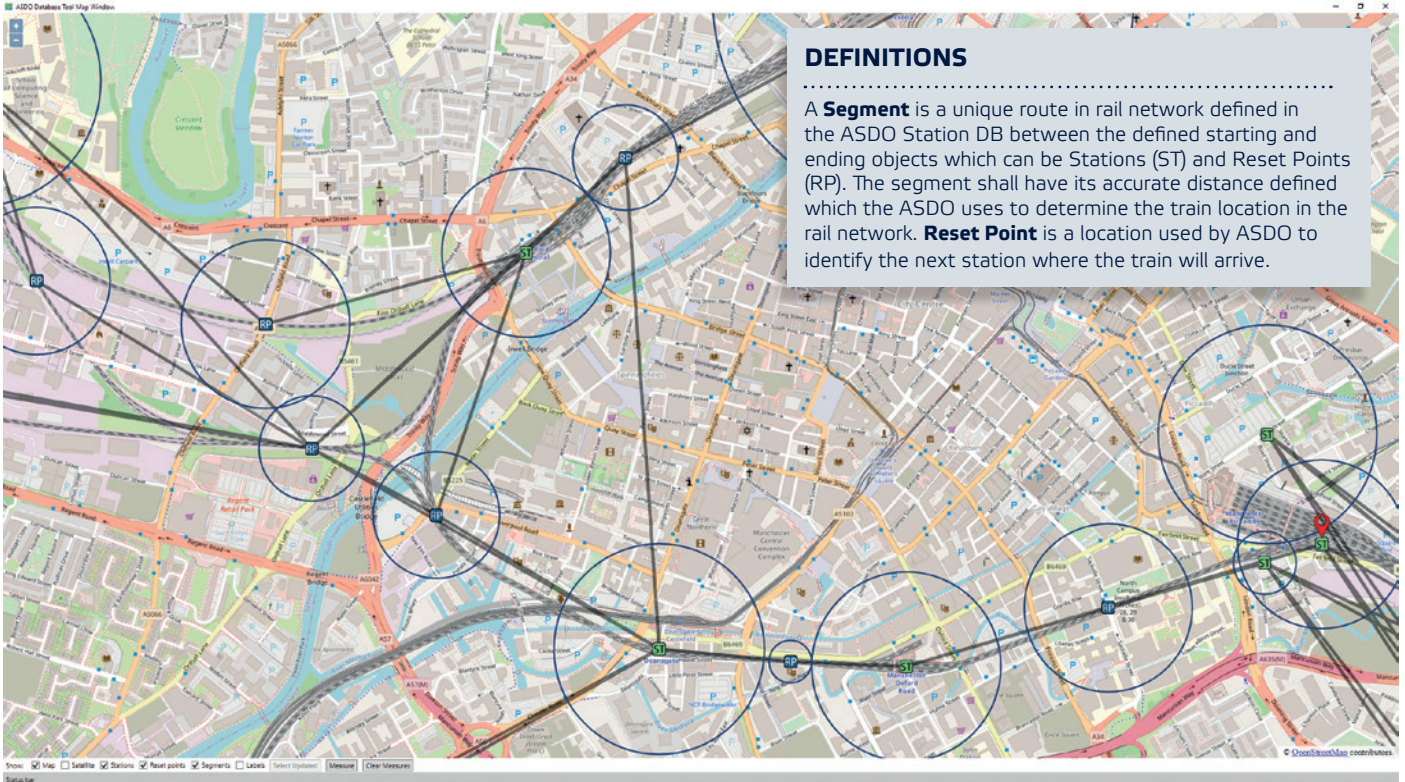


EKE



ASDO VISUALISATION TOOL

Visualisation of the ASDO database content



DEFINITIONS

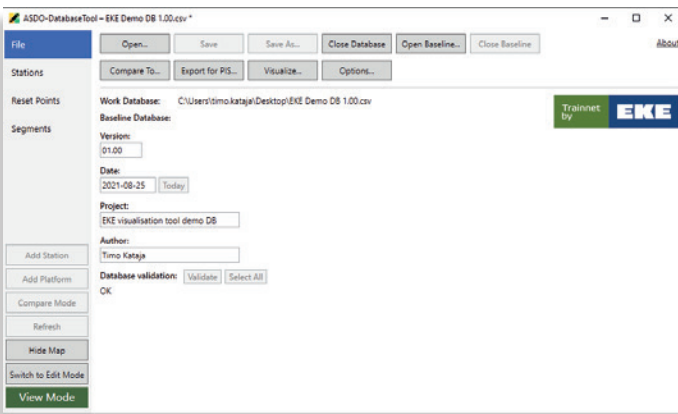
A **Segment** is a unique route in rail network defined in the ASDO Station DB between the defined starting and ending objects which can be Stations (ST) and Reset Points (RP). The segment shall have its accurate distance defined which the ASDO uses to determine the train location in the rail network. **Reset Point** is a location used by ASDO to identify the next station where the train will arrive.

Overview

The ASDO Visualisation Tool is an add-on extension to the ASDO Station DB tool which provides an interactive map window for the user in which objects in the ASDO database, Stations, Reset Points and Segments, are visualised. Additionally, the tool's graphical user interface makes editing of the station database easier for the user. The graphical user interface is using OpenStreetMap Online map.

Note: the verification of the changes made in the ASDO Station DB remains a function of the ASDO Station DB tool (as the change report).

File	ID	Name	TIPLOC	CRS	Latitude	Longitude	Geofence (m)	Show on HMI	Actions
Stations	49	Newton for Hyde (Down)	NWTH	NWN	53.45671202	-2.067513559	450	<input checked="" type="checkbox"/>	Map
Stations	50	Ploverly Field (Down)	FLWVFD	FLF	53.4613592	-2.080068173	375	<input checked="" type="checkbox"/>	Map
Reset Points	51	Guide Bridge (Down)	GIDB	GUI	53.47456788	-2.113241686	200	<input checked="" type="checkbox"/>	Map
Reset Points	52	Fairfield (Down)	FRFD	FRF	53.47137721	-2.144404549	500	<input checked="" type="checkbox"/>	Map
Reset Points	53	Gorton (Down)	GORTON	GTO	53.46893471	-2.167780646	500	<input checked="" type="checkbox"/>	Map
Segments	54	Ashburys (Down)	ASHBRY5	ABY	53.47182858	-2.195469333	250	<input checked="" type="checkbox"/>	Map
Segments	55	Ardrwick (Up)	ARDWICK	ADK	53.471563	-2.213215	90	<input checked="" type="checkbox"/>	Map
Segments	56	Glossop	GLSP	GLO	53.44464996	-1.94949955	500	<input checked="" type="checkbox"/>	Map
Segments	57	Dinting (South)	DINTG	DTG	53.449162	-1.971004	225	<input checked="" type="checkbox"/>	Map
Segments	58	Creve (Up)	CREWE	CRE	53.08860714	-2.433067562	750	<input checked="" type="checkbox"/>	Map
Segments	59	Chelford (Up)	CHELFD	CEL	53.27087721	-2.279816431	1000	<input checked="" type="checkbox"/>	Map
Segments	60	Goostrey (Up)	GOOSTRY	GTR	53.2227614	-2.326150087	1000	<input checked="" type="checkbox"/>	Map
Segments	61	Man Piccadilly 1-12 ASU	MNCRPIC	MAN	53.478739	-2.229331	260	<input checked="" type="checkbox"/>	Map
Segments	63	Man Piccadilly 13/14 (Up)	MNCRPIC	MAN	53.476393	-2.227382	200	<input checked="" type="checkbox"/>	Map
Segments	63	Manchester Airport	MNCRJAP	MIA	53.36523049	-2.271160483	1000	<input checked="" type="checkbox"/>	Map
Platforms: Man Piccadilly 13/14 (Up)									
Compare Mode	ID	Platform Number	Name	Length (m)	Offset	Side Reference	Show on HMI		
Refresh	88	0	13	269	0	<input type="checkbox"/> Left <input checked="" type="checkbox"/> Right	<input checked="" type="checkbox"/>		
Hide Map	89	0	14	269	0	<input checked="" type="checkbox"/> Left <input type="checkbox"/> Right	<input checked="" type="checkbox"/>		
Switch to Edit mode									
View Mode									



Main window

The Main Window contains pages (tabs) to perform everyday tasks, such as database loading and saving, viewing and editing station, platform, reset point, platform and segment data.

Map window

In the Map Window the user can move the map and zoom from close up showing a few square metres to the whole network. Users can filter the objects to be shown, and switch between map view and satellite view.

Stations and Reset Points are shown with their geofences using an ST or RP icon and a circle. Segments are shown as lines between Stations and Reset Points. Labels show Station and Reset Point names and other text labels on the map.



ID	Name	TIPLOC	CRS	Latitude	Longitude	Geofence (m)	Show on HMI	Actions
49	Newton for Hyde (Down)	NWTH	NWN	53.45671202	-2.067513559	450	<input checked="" type="checkbox"/>	Map
50	Flowerly Field (Down)	FLWRVFD	FLF	53.4613592	-2.080068173	375	<input checked="" type="checkbox"/>	Map
51	Guide Bridge (Down)	GUIDB	GUI	53.47456788	-2.113241686	200	<input checked="" type="checkbox"/>	Map
52	Fairfield (Down)	FRFD	FRF	53.47137721	-2.144484549	500	<input checked="" type="checkbox"/>	Map
53	Gorton (Down)	GORTON	GTO	53.46893471	-2.167780646	500	<input checked="" type="checkbox"/>	Map
54	Ashburys (Down)	ASHBRYS	ABY	53.47182658	-2.195469333	250	<input checked="" type="checkbox"/>	Map
55	Ardwick (Up)	ARDWICK	ADK	53.471563	-2.13215	90	<input checked="" type="checkbox"/>	Map
56	Glossop	GLSP	GLO	53.44464996	-1.94949955	500	<input checked="" type="checkbox"/>	Map
57	Dinting (South)	DINTG	DTG	53.449162	-1.971004	225	<input checked="" type="checkbox"/>	Map
58	Crewe (Up)	CREWE	CRE	53.08860714	-2.433067562	750	<input checked="" type="checkbox"/>	Map
59	Chester (Up)	CHELFD	CEL	53.27087721	-2.279816431	1000	<input checked="" type="checkbox"/>	Map
60	Goostrey (Up)	GOOSTRY	GTR	53.2227614	-2.326150087	1000	<input checked="" type="checkbox"/>	Map
61	Man Piccadilly 1-12 ASU	MNCRPIC	MAN	53.478759	-2.229331	260	<input checked="" type="checkbox"/>	Map
62	Man Piccadilly 13/14 (Up)	MNCRPIC	MAN	53.476393	-2.227382	200	<input checked="" type="checkbox"/>	Map
63	Manchester Airport	MNCRAP	MIA	53.36523049	-2.271160483	1000	<input checked="" type="checkbox"/>	Map

ID	Platform Number	Name	Length (m)	Offset	Side Reference	Show on HMI
88	0	13	269	0	<input type="checkbox"/> Left <input checked="" type="checkbox"/> Right	<input checked="" type="checkbox"/>
89	0	14	269	0	<input checked="" type="checkbox"/> Left <input type="checkbox"/> Right	<input checked="" type="checkbox"/>

VIEW Mode

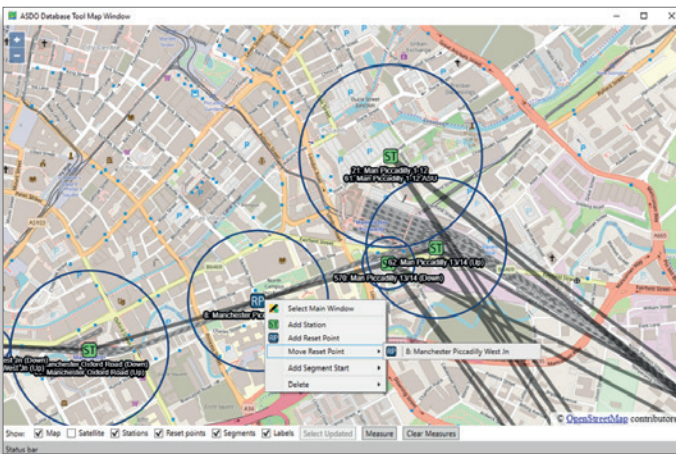
The ASDO Tool has two operating modes to reduce chance of making inadvertent changes to the database. The Main Window contains a mode selector button and mode display to clearly show which mode is in use.

When the ASDO Tool is in VIEW mode, the user cannot save the database (even if it has been modified) or make any changes to the database via the Data Grids or Map Window.

EDIT Mode

When the mode is switched to EDIT mode, changes are allowed. The changes made during EDIT mode are retained while in VIEW mode.

In EDIT mode user may add and modify objects by using the left-hand button of mouse.



ID	Name	TIPLOC	CRS	Latitude	Longitude	Geofence (m)	Show on HMI	Actions
49	Newton for Hyde (Down)	NWTH	NWN	53.45671202	-2.067513559	450	<input checked="" type="checkbox"/>	Map
50	Flowerly Field (Down)	FLWRVFD	FLF	53.4613592	-2.080068173	375	<input checked="" type="checkbox"/>	Map
51	Guide Bridge (Down)	GUIDB	GUI	53.47456788	-2.113241686	200	<input checked="" type="checkbox"/>	Map
52	Fairfield (Down)	FRFD	FRF	53.47137721	-2.144484549	500	<input checked="" type="checkbox"/>	Map
53	Gorton (Down)	GORTON	GTO	53.46893471	-2.167780646	500	<input checked="" type="checkbox"/>	Map
54	Ashburys (Down)	ASHBRYS	ABY	53.47182658	-2.195469333	250	<input checked="" type="checkbox"/>	Map
55	Ardwick (Up)	ARDWICK	ADK	53.471563	-2.13215	90	<input checked="" type="checkbox"/>	Map
56	Glossop	GLSP	GLO	53.44464996	-1.94949955	500	<input checked="" type="checkbox"/>	Map
57	Dinting (South)	DINTG	DTG	53.449162	-1.971004	225	<input checked="" type="checkbox"/>	Map
58	Crewe (Up)	CREWE	CRE	53.08860714	-2.433067562	750	<input checked="" type="checkbox"/>	Map
59	Chester (Up)	CHELFD	CEL	53.27087721	-2.279816431	1000	<input checked="" type="checkbox"/>	Map
60	Goostrey (Up)	GOOSTRY	GTR	53.2227614	-2.326150087	1000	<input checked="" type="checkbox"/>	Map
61	Man Piccadilly 1-12 ASU	MNCRPIC	MAN	53.478759	-2.229331	260	<input checked="" type="checkbox"/>	Map
62	Man Piccadilly 13/14 (Up)	MNCRPIC	MAN	53.476393	-2.227382	200	<input checked="" type="checkbox"/>	Map
63	Manchester Airport	MNCRAP	MIA	53.36523049	-2.271160483	1000	<input checked="" type="checkbox"/>	Map

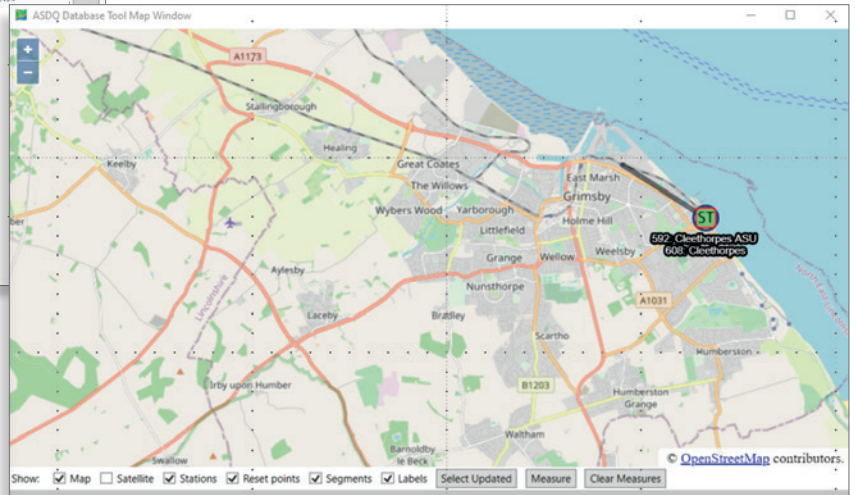
ID	Platform Number	Name	Length (m)	Offset	Side Reference	Show on HMI
88	0	13	269	0	<input type="checkbox"/> Left <input checked="" type="checkbox"/> Right	<input checked="" type="checkbox"/>
89	0	14	269	0	<input checked="" type="checkbox"/> Left <input type="checkbox"/> Right	<input checked="" type="checkbox"/>

Compare mode

Compare mode shows differences between two databases. The database the user is currently working with (previously known as the "current database"), is now called the work database. User may edit the work database by changing to the EDIT mode.

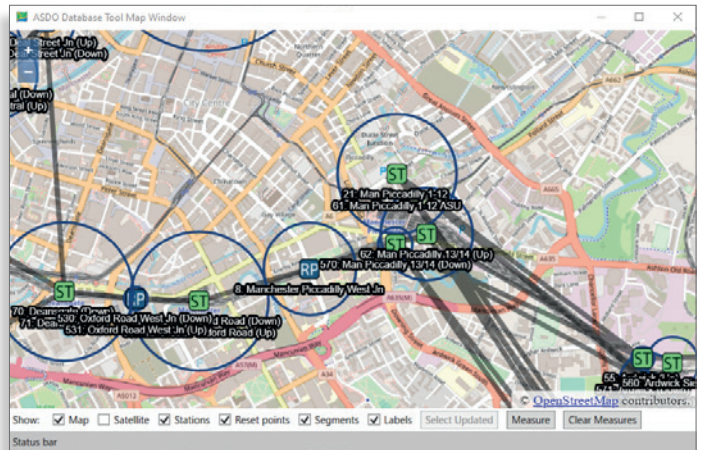
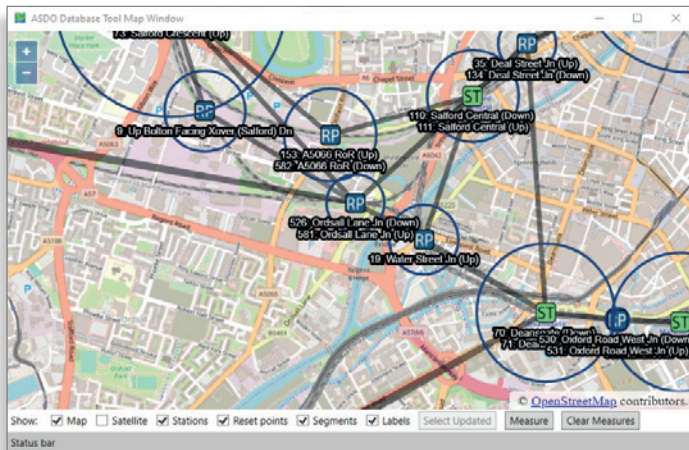
The work database is compared against the baseline database. It is read-only and cannot be changed or saved. **Compare Mode** from the left sidebar. Under; Stations, Reset Points, or Segments the modified data from the work database is visible in the first line. The baseline database values are visible on the second line on the same table row.

ID	Start	End	Invert Side	Default Platform	Track Distance (m)	Actions
992	592 Cleethorpes ASU	593 New Clee (Down)	<input type="checkbox"/>	Single	2494	Map
1053	603 New Clee (Up)	608 Cleethorpes	<input type="checkbox"/>	-unset -	2494	Map
1054	608 Cleethorpes	593 New Clee (Down)	<input type="checkbox"/>	Single	2494	Map



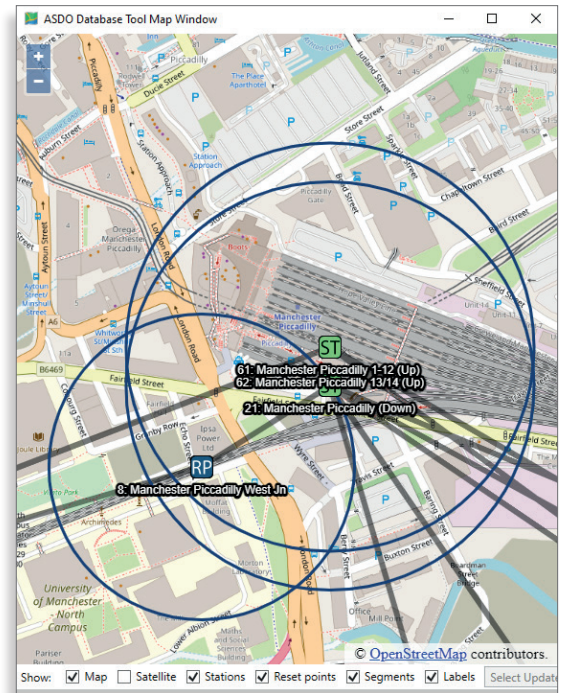
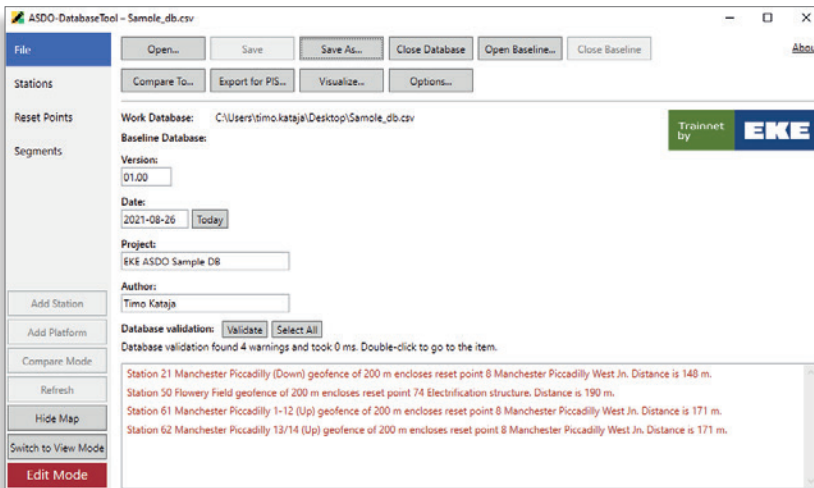
Pan and Zoom on Map

For normal purposes of the ASDQ Tool, it is more likely that users zoom at levels where map symbols – stations and reset points in particular – are visible and separated from each other. The area covered by the selected zoom level depends on the size and resolution of the display and the current size of the Map Window.



Finding Errors

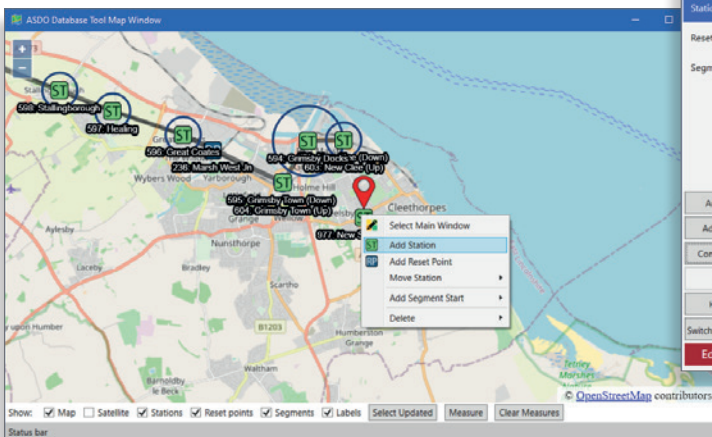
The error messages listed at the bottom in the **File** tab of the main window can be clicked to see the affected Points of Interest on the map. You may also choose to re-run the validation on the database using the **Validate** button or highlight all affected Points of Interest on the map using the **Select All** button.



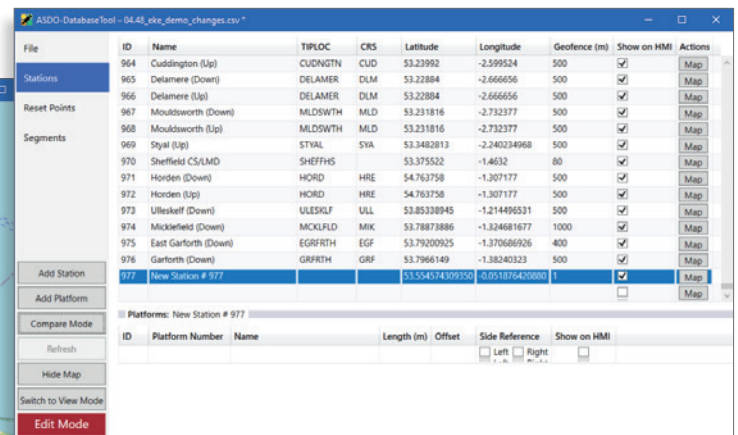
Object addition / removal

A Station or Reset Point can be added/removed in the map view by right-clicking on a location on the map and choosing the appropriate function from the context menu that will appear. A new entry will then be created in the main window with its longitude and latitude data automatically filled in. In the case of removal, a confirmation dialog box will appear.

Note: Other details must be manually added.



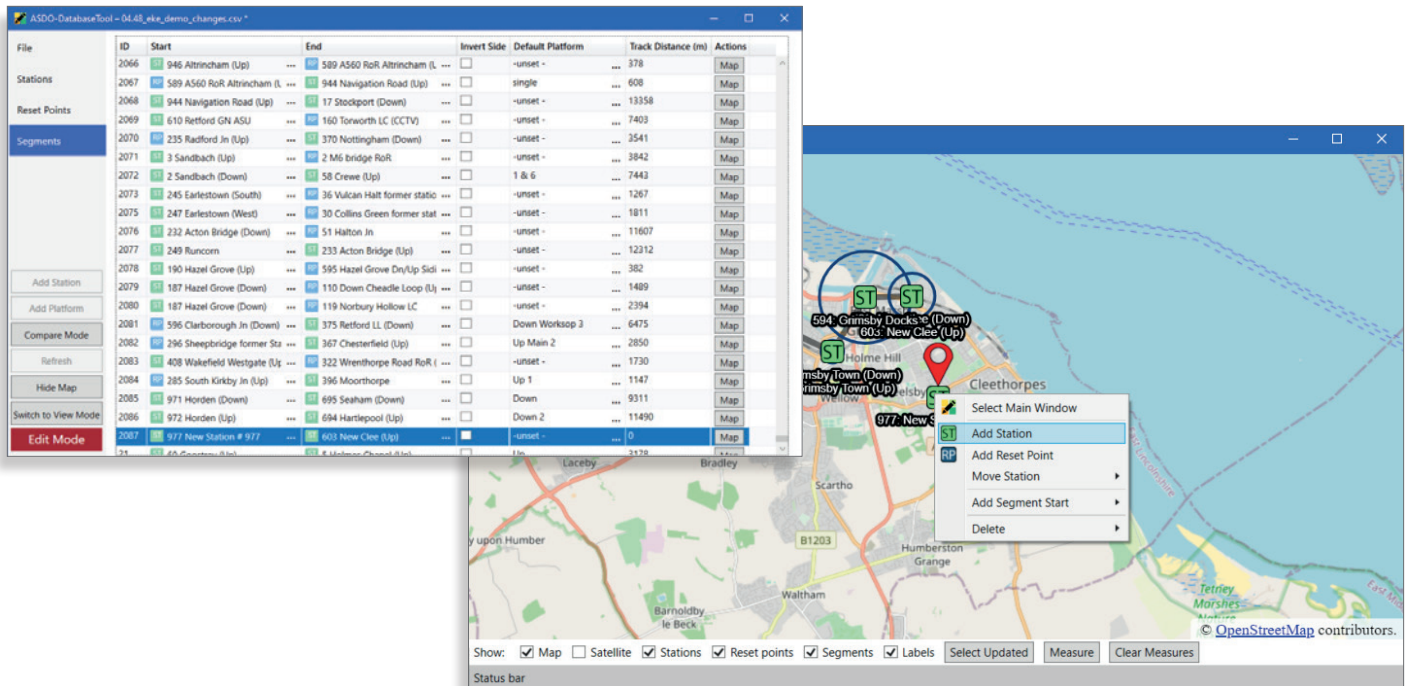
If multiple Station or Reset Point icons are overlapping each other in the map window, by holding down Ctrl on your keyboard and left-clicking on the group of icons a dropdown menu is shown from which you can select a specific Station or Reset Point.



Segment Management

A Segment can be added / removed by right-clicking on a Station or Reset Point and selecting the starting point under **Add Segment Start**. Then by right-clicking on another Station or Reset Point and selecting Add Segment End, a new Segment will be added in the main window with the first station as the starting point and the second station as the ending point.

Note: The track distance must be manually set from the main window. In the case of removal, a confirmation dialog box will appear.



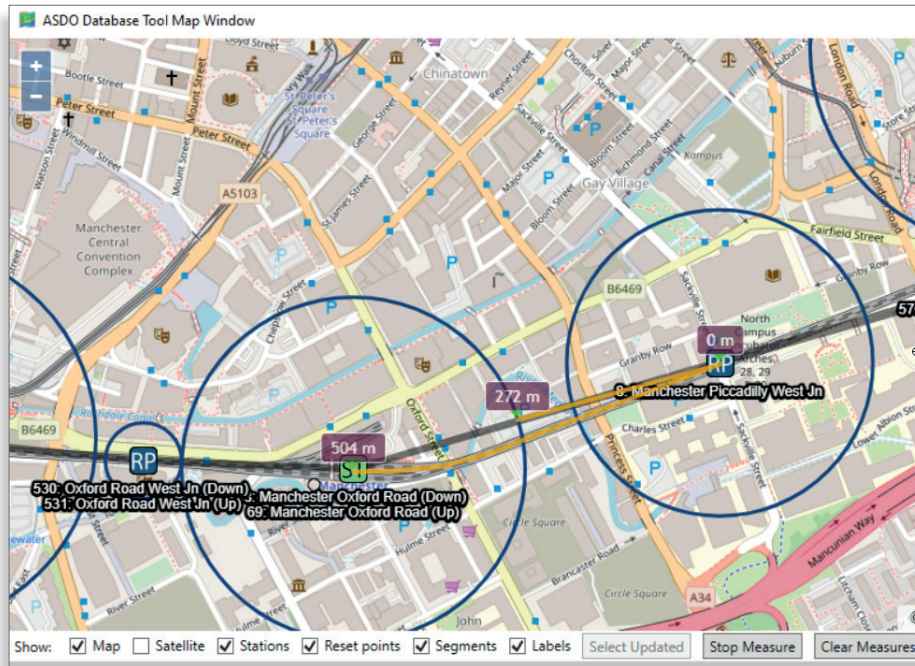
Fine-tuning an object

The location of a Station or Reset Point can be fine-tuned by right-clicking on it on the map window and selecting it from the menu that appears under the **Move Station** or **Reset Point** header in the contextual menu.

Measuring the distance

The user can measure the distances on the map through the Measure button. The Measure function automatically copies the measured distance to the clipboard and the measured value can be pasted where needed.

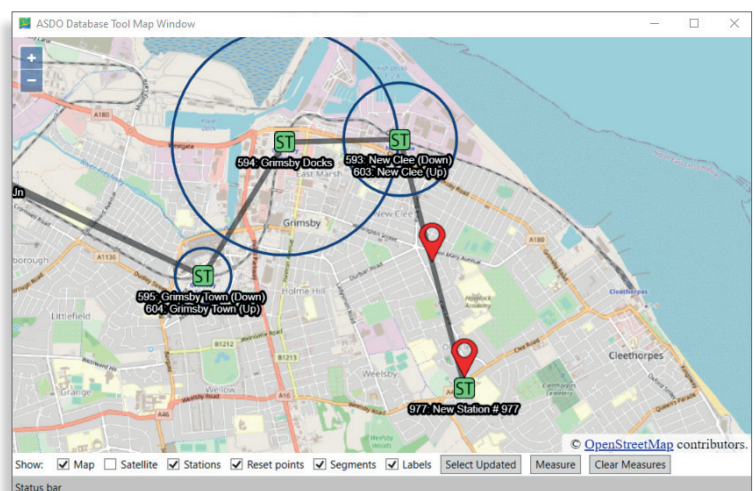
The **Yellow polyline** is shown as the measured distance between the two stations on the map window. This feature allows measuring the distance with 1m accuracy. The map window additionally allows panning and zooming while measuring distance.



Updated objects display

The **Select Updated** button at the bottom of the map window, when selected, shows the recently made changes on the map window.

Note: no other objects are shown in **Select Updates** -mode for clearance.



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