



Aviation - map.aviation.admin.ch

-

**Instructions for using the
Web-GIS Obstacle Map (WeGOM)**

25.11.2015



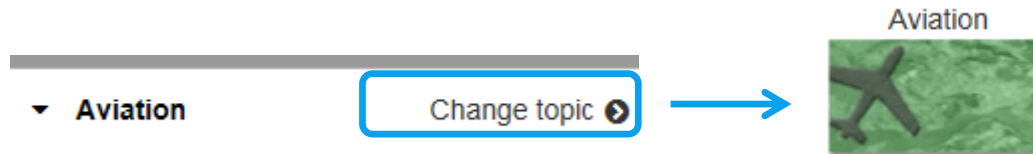
Contents

1. General
2. Obstacle information
3. Obstacle queries
4. Extras



General

- Web-GIS Obstacle Map (*WeGOM*) is a web-based interactive map application for querying and displaying information for air navigation.
- As an official aeronautical publication of Switzerland, WeGOM should be routinely consulted by pilots as part of flight preparation.
- To launch WeGOM, open the topic «Aviation» within the official map viewer facility.





General

WeGOM homepage (topic: «aviation»)

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
In collaboration with the cantons

Search for a place or add a map:
Q e.g. Bundesplatz 1 Bern, 46.7 7.5, Noise map ...

Full screen Report problem Help Mobile version DE FR IT EN RM

- ▶ Share
- ▶ Print
- ▶ Draw & Measure on map
- ▶ Advanced tools
- ▼ **Aviation** Change topic ▶
- ⊖ Aeronautical obstacle publication
- Air navigation obstacles ⓘ
- ⊖ Additional thematic data
- Heliports/mountain landing sites ⓘ
- Points of interest ⓘ
- Protected areas MIL ⓘ
- ▶ Maps displayed

Close menu

Background

© Data: swisstopo, FOCA

Download data Copyright & data protection



General

The *air navigation obstacles* layer

Switzerland
Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
In collaboration with the cantons

Search for a place or add a map:
Q e.g. Bundesplatz 1 Bern, 46.7 7.5, Noise map ...

Full screen Report problem Help Mobile version DE FR IT EN RM

- Share
- Print
- Draw & Measure on map
- Advanced tools

Aviation Change topic

- Aeronautical obstacle publication
 - Air navigation obstacles
- Additional thematic data
 - Heliports/mountain landing sites
 - Points of interest
 - Protected areas MIL
- Maps displayed

Close menu

Important: note the date of the last update (validity)

Last update: 26.11.2015

Background

Download data Copyright & data protection



General

The ***air navigation obstacles*** layer provides current obstacle information for the entire country. The information is updated twice weekly (every Monday and Thursday). It includes structures and facilities (including antennas, buildings, cables, cranes, cable lifts, power lines, wind power plants etc.) that could potentially render the operation of aircraft or air navigation facilities difficult, dangerous or impossible. This includes obstacles with a height of at least 25 metres above terrain outside populated areas or at least 60 m within populated areas.

This layer does not cover obstacles in the vicinity of airports. That information is published in the AIP or VFRM CH of Skyguide.



General

Legend and metadata on air navigation obstacles

The screenshot shows the WeGOM interface. On the left, a sidebar contains a legend with the following items:

- Share
- Print
- Draw & Measure on map
- Advanced tools
- Aviation** (Change topic)
- Aeronautical obstacle publication
 - Air navigation obstacles (with an information icon)
 - Additional thematic data
 - Heliports/mountain landing sites (with an information icon)
 - Points of interest (with an information icon)
 - Protected areas MIL (with an information icon)
- Maps displayed

The main map area shows a topographic map with a red rectangle highlighting a cable crane. An 'Infobox' window is open over the map, displaying the following legend items:

	High-voltage aerial line
	Electric power station with switching station
	Cable crane

Below the legend, the 'Information' section provides the following metadata:

- Basic geodata ID: -
- Valid scale range: Min. 1:25'000 - Max. 1:1'000'000
- Metadata: [Link to geocat.ch](#)
- Detail description: [Link to description](#)
- Order data: [Link for download](#)
- Thematic geoportal: [Link to portal](#)
- WMS service: [Link to WMS](#)
- Data status: 26.11.2015

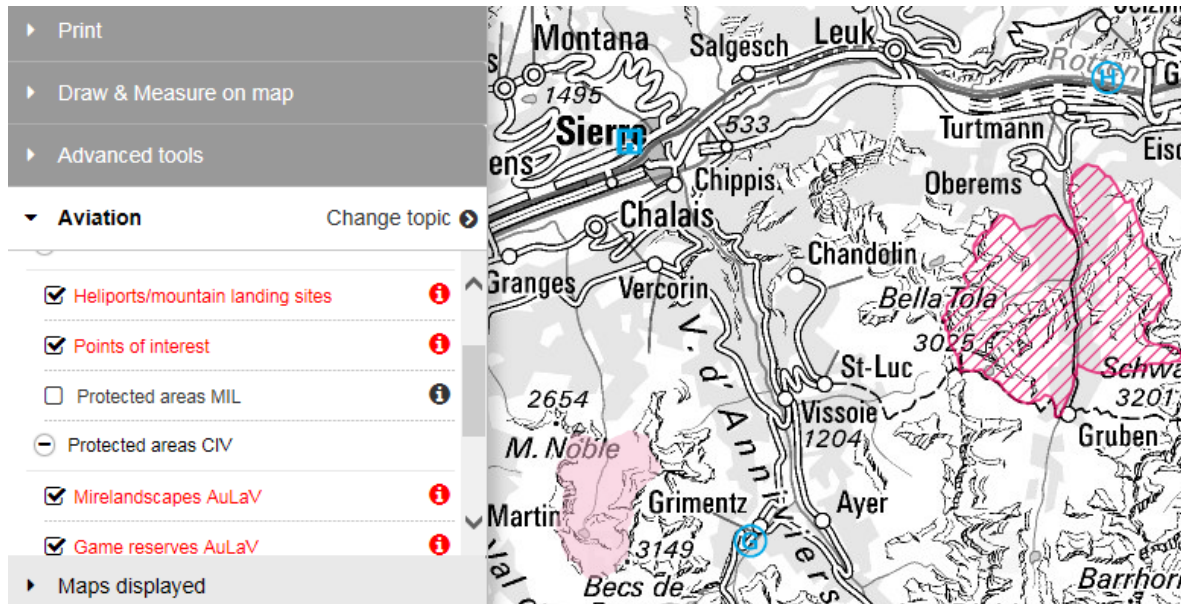


Click on the [Infobox](#) icons for descriptions of the different layers available in WeGOM.



General

Other layers (*aeronautical information*)

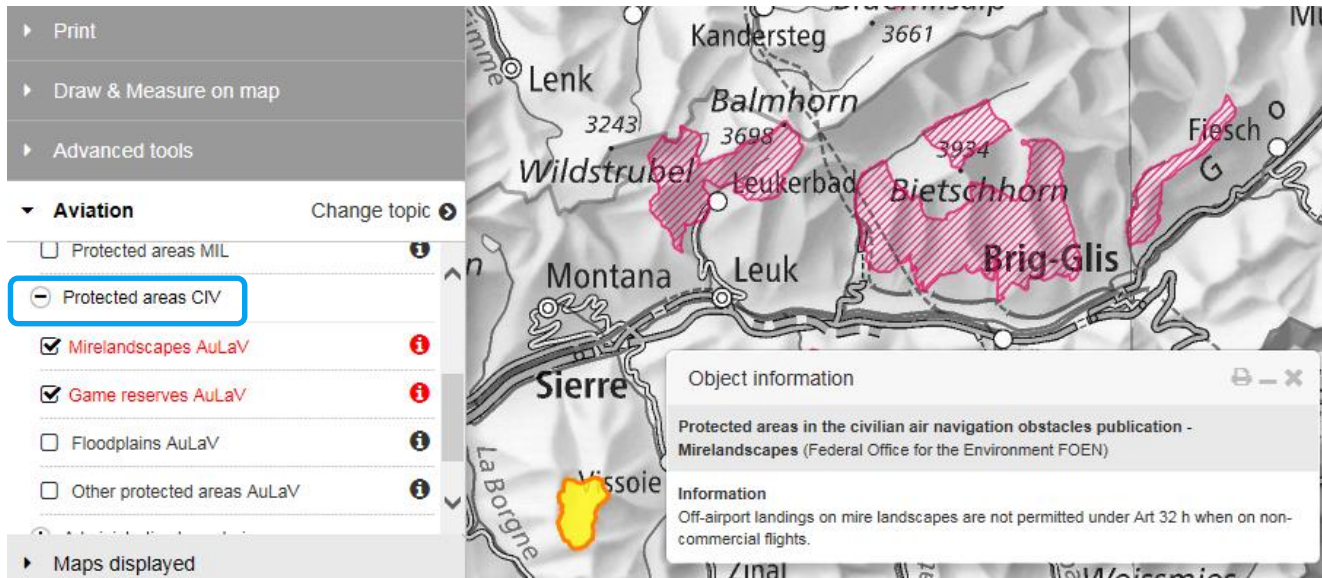


Also under «Aviation» you can find other layers of data, including landing sites, protected areas (Art. 19 of the Swiss Off-Aerodrome Landing Ordinance, *AuLaV*), the ICAO aeronautical chart and glider chart, and the cantonal and municipal boundaries.



General

Protected areas under Art. 19 of the AuLaV



Under the heading «*Protected areas CIV*» you can view the officially published protected areas under the Off-Aerodrome Landing Ordinance, AuLaV, along with information about applicable restrictions.



General

Aeronautical charts (*Aeronautical Chart ICAO and Glider chart*)



In *Aeronautical charts* you can view the ICAO 1:500'000 aeronautical chart for Switzerland and the 1:300'000 glider chart. The charts include airports and airfields, classified air space, restricted and hazardous areas and air navigation obstacles.



General

Downloading aeronautical data:



The file can be downloaded by clicking on the infobox icon for the desired layer and then on «Link for download».

Data formats available:

- Air navigation obstacles → Google Earth (KMZ)
- AuLaV protected areas → ESRI Shape Files (SHP)



Obstacle information

Information under *Air navigation obstacles*

The screenshot shows the WeGOM interface with a map of air navigation obstacles. A blue arrow points to a specific obstacle on the map, with a callout box that says "Click (left mouse button)". The information popup for this obstacle is displayed on the right side of the map.

Object information

Swiss air navigation obstacle data (Federal Office of Civil Aviation (FOCA))

Information	
Registration number	262-BE-20041-LSGK
Map number [NM100]	41
Obstacle type	Antenna
Status	A
Maximum height AGL [m]	36
Maximum top elevation	1032
AMSL [m]	
Total length [m]	0
Start of construction	2003-02-21
Duration of installation	PERM
Marking / navigation lights	Red(RAL3020)/white(RAL9016)/red tapes
	More info

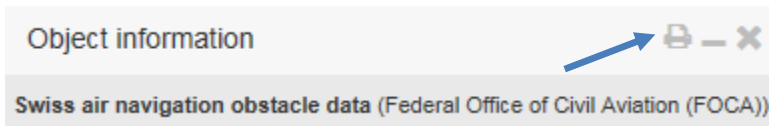
Click on individual obstacles to display their properties.



Obstacle information

When selecting *Air navigation obstacles*:



- If there are several obstacles at the place where you click, all objects will be listed in the information window. The chart shows only active obstacles (A). Inactive (I) or suspended (S) objects may be displayed inadvertently when selecting an object manually.
- The object information window has a print icon in the top right corner, which can be used to print the object information.





Obstacle information


More info

Object information  

Swiss air navigation obstacle data (Federal Office of Civil Aviation (FOCA))

Information

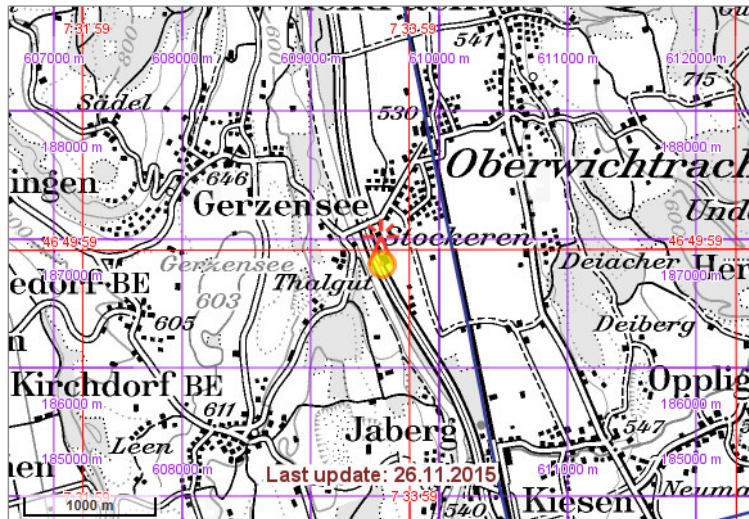
Registration number	243-BE-20055-LSZB
Map number [NM100]	36
Obstacle type	Antenna
Status	A
Maximum height AGL [m]	27
Maximum top elevation AMSL [m]	559
Total length [m]	0
Start of construction	2004-05-01
Duration of installation	PERM
Marking / navigation lights	Lighted

[More info](#) 

Click on «More info» to generate a printable chart with the information for the selected obstacle.

Swiss air navigation obstacle data (Federal Office of Civil Aviation (FOCA))

Registration number: 243-BE-20055-LSZB	Obstacle type: Antenna
Status: A	Start of construction: 1.5.2004 Duration of installation: PERM Removal accomplished: -
Geometry data:	Maximum height AGL [m]: 27 Maximum top elevation AMSL [m]: 559 Total length [m]: 0
Coordinates [CH1903]:	East=609546.0 North=186815.0
Marking / navigation lights:	Lighted
Map number [NM100]: 36	



Last update: 26.11.2015

The aviation obstacle data may include deviations regarding its completeness, up-to-date map maintenance as well as regarding the bearing- and height positions of obstacles.
Date: 26.11.2015

[Copyright & data protection](#) [Print](#)



Obstacle information

Other information available:

Further object information available includes:

- In the case of an object of *inactive status* (I), the date when it was made inactive. This attribute remains empty if the status is active.
- The *Swiss grid coordinates* of the object (coordinate pair in the case of a point, or a rectangle in the case of a line or surface).
- *Chart excerpt* with the obstacle highlighted, overlaid with the WGS84 and CH1903 coordinate grid and the date as of which the data was valid.



Obstacle queries

To submit a query for several air navigation obstacles in WeGOM, you have three possibilities:

- **Select multiple obstacles** by clicking and drawing a rectangle (see [How to select objects](#)).
- **Predefined queries:** There are two predefined queries that will give you all obstacles that have been made active in the previous two weeks, or all those that have been deleted in that time.
- **Custom queries:** You can also create a customized query, for example by specifying date ranges, numerical attributes or domain values (see [How to select objects](#)).



Obstacle queries

Predefined *standard queries* for air navigation obstacles

Advanced search operator

1)

Select filter:

▼ Query conditions

Condition n°1

>=

Condition n°2

ilike

2) Select filter:

▼ Query conditions

Condition n°1

>=

Predefined queries with automatic adjustment of date (to cover the previous 14 days)



Obstacle queries

Custom queries for air navigation obstacles

The screenshot displays the WeGOM interface. On the left, a sidebar menu includes 'Share', 'Print', 'Draw & Measure on map', 'Advanced tools', 'WMS import', 'KML import', 'Compare', 'Object information', 'Aviation', and 'Maps displayed'. The 'Advanced tools' section is highlighted with a blue dashed box, and a blue dashed arrow points from it to the 'Object information' panel on the right. The 'Object information' panel has a title bar with a close button and contains the following elements: 'Filters (BETA)', a 'Select filter:' dropdown menu with 'Custom filter' selected, a 'Query conditions' section with a right-pointing arrow, a text instruction 'To select several objects use CTRL (cmd on Mac) and draw a rectangle on the map.', a 'Search' button, and an 'Objects (0)' status indicator.



Obstacle queries

Here's how to specify the *conditions* for a *simple* customized query and submit the query:

The image shows a two-step process for creating a query. The first step shows a dropdown menu for selecting a layer, with 'Air navigation obstacles' selected. The second step shows the query definition interface with three fields: 'Air navigation obstacles', 'Start of construction', and '2015-11-01'. The operator is set to '>'. A 'Search' button is located below the query definition.

Select your layer («Air navigation obstacles»)

Define your query conditions

- Attribute
- Operator (=, !=, >, <, >=, <=)
- Value

Submit your query



Obstacle queries

Here's how to specify *multiple conditions* in a customized query

Object information

Filters (BETA)

Select filter:

Custom filter

Query conditions

Condition n°1

Air navigation obstacles

Start of construction >

2015-11-01

Use the map's bounding box

Search

Click here to add a new one

Advanced search operator

AND

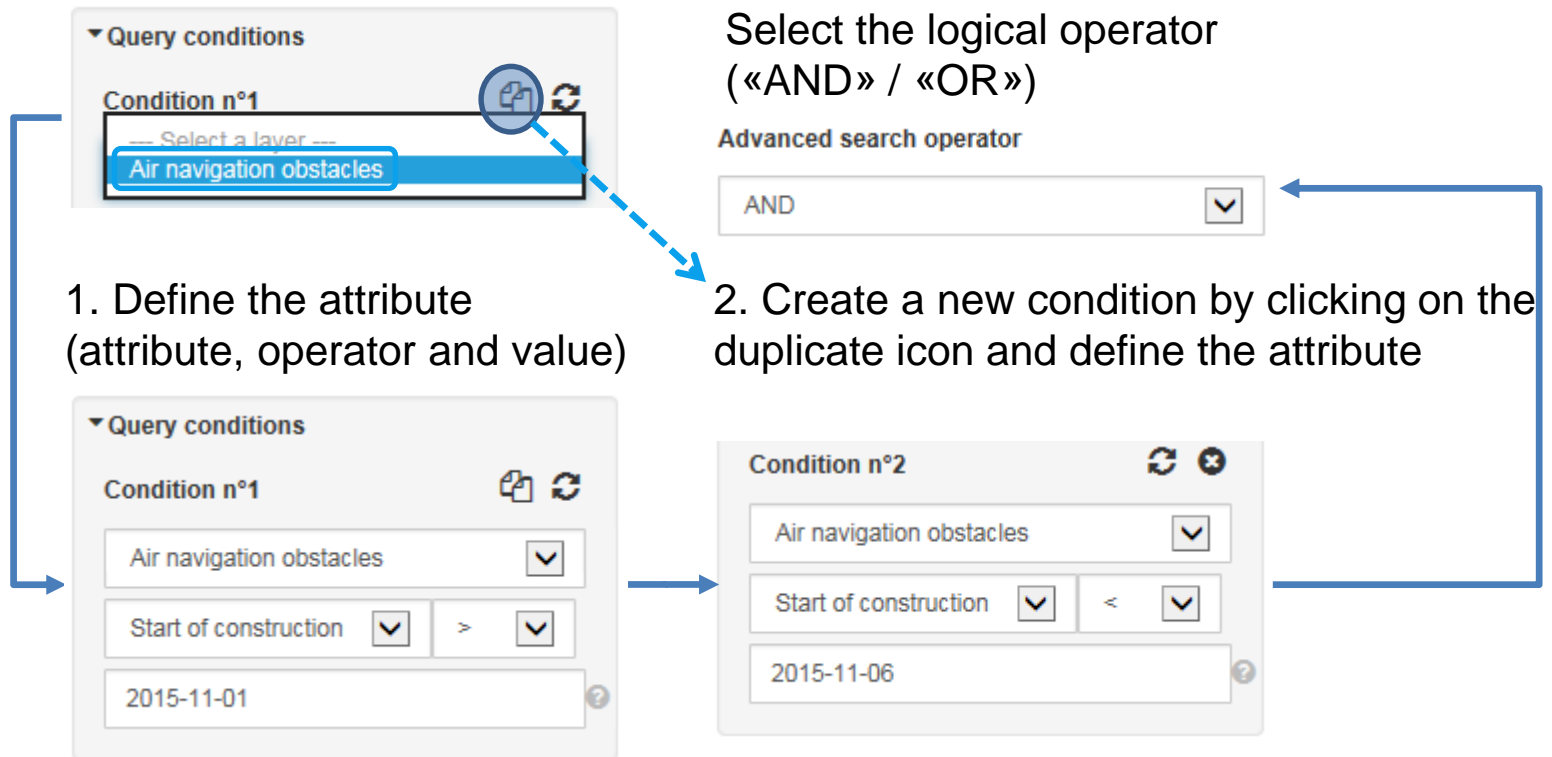
OR

AND → Both conditions have to be true
OR → Just one needs to be true



Obstacle queries

Example of a customized *multiple-condition* query: display all air navigation obstacles that were made active during a particular period of time.

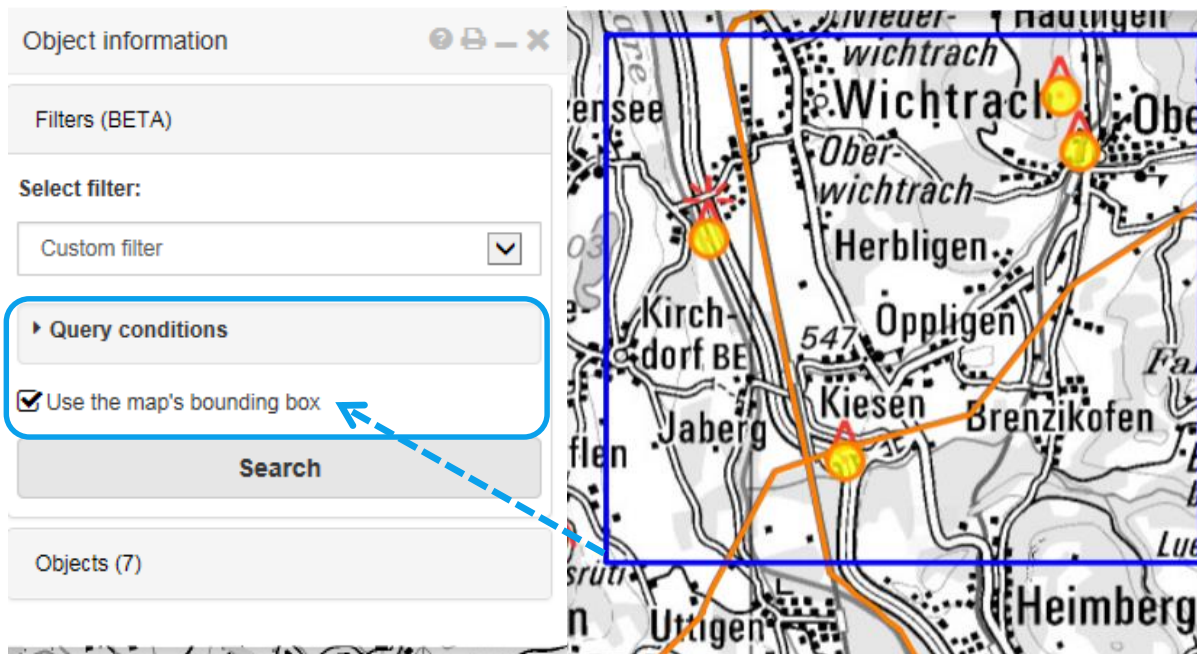




Obstacle queries

Define *the space*:

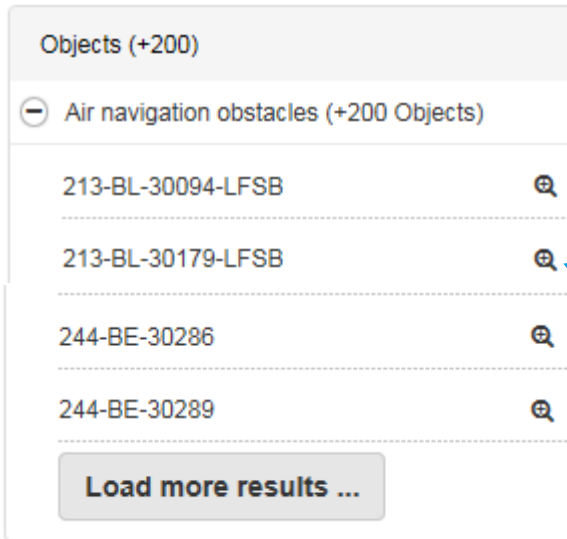
A customized query can be spatially restricted to a predefined rectangle (CTRL + left mouse key).





Obstacle queries

Viewing the results of your query



The initial list of results is limited to 200 objects. If there are more, you will see «+200 objects».

Click on the zoom icon to zoom in on the obstacle on the map.

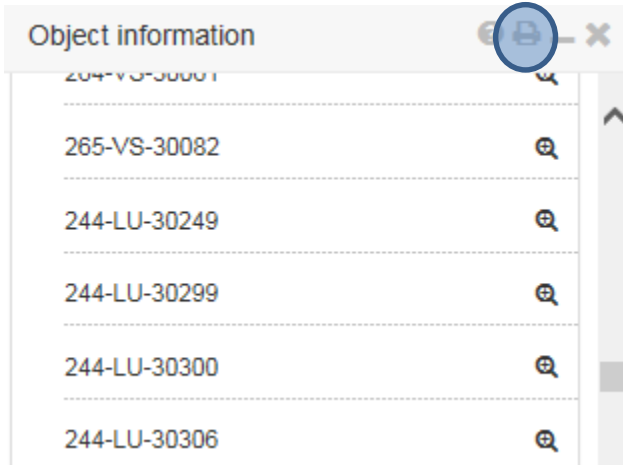
Scroll through the other objects as necessary.

Selected obstacles will be highlighted on the chart viewer (yellow with orange outline). A query of air navigation obstacles will always include not just active but also *inactive* obstacles (highlighted on the map, but without the symbol).



Obstacle queries

Printing the *query results*

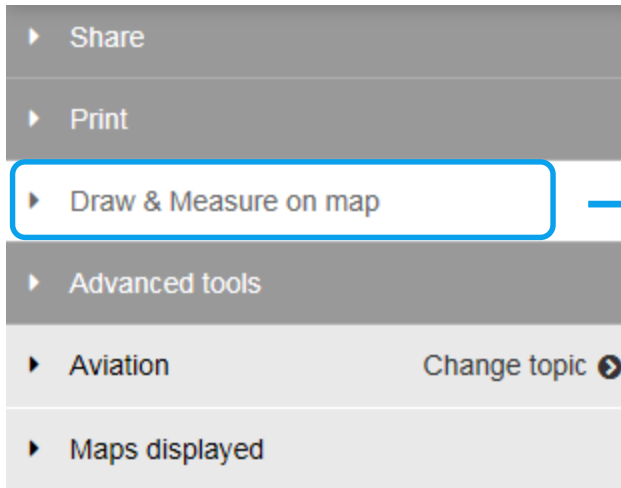


Click on the print icon (top right) of the object information window to generate a report on all obstacles found. Each object will be printed on a separate A4 page with detailed information (as per «More info» on slide 14 above). The report can be used to create a PDF file or printed out directly.



Extras

Create your own drawing



Put drawing objects in the chart.

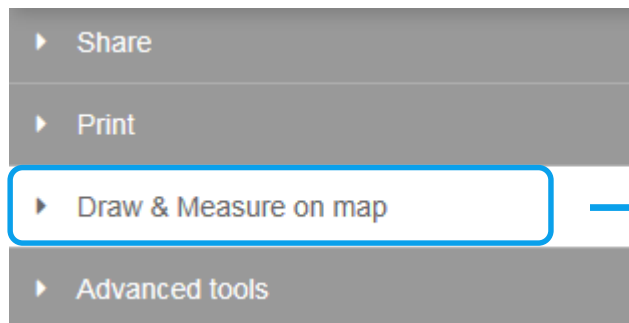
Drawings can be shared with other users by means of a URL, and they can be edited (see «[Share drawing / KML](#)»). Drawings are automatically stored and retained for at least one year.



Extras

Import your own drawings as external files (1/3):

You can keep permanent copies of your drawings and share them with other users, by generating a permalink. This will also save all the important parameters such as the selection of layers, the displayed domain, zoom level and so on.



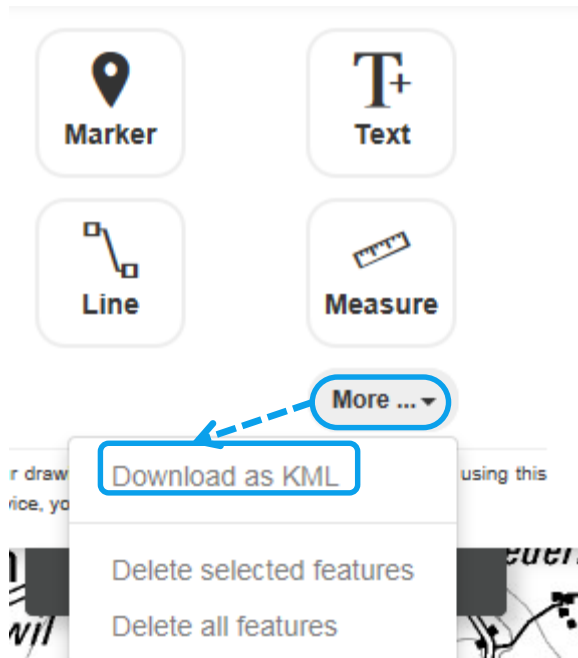
Step 1 and 2: Create your drawing objects in the chart and select the layers, domain and zoom level.



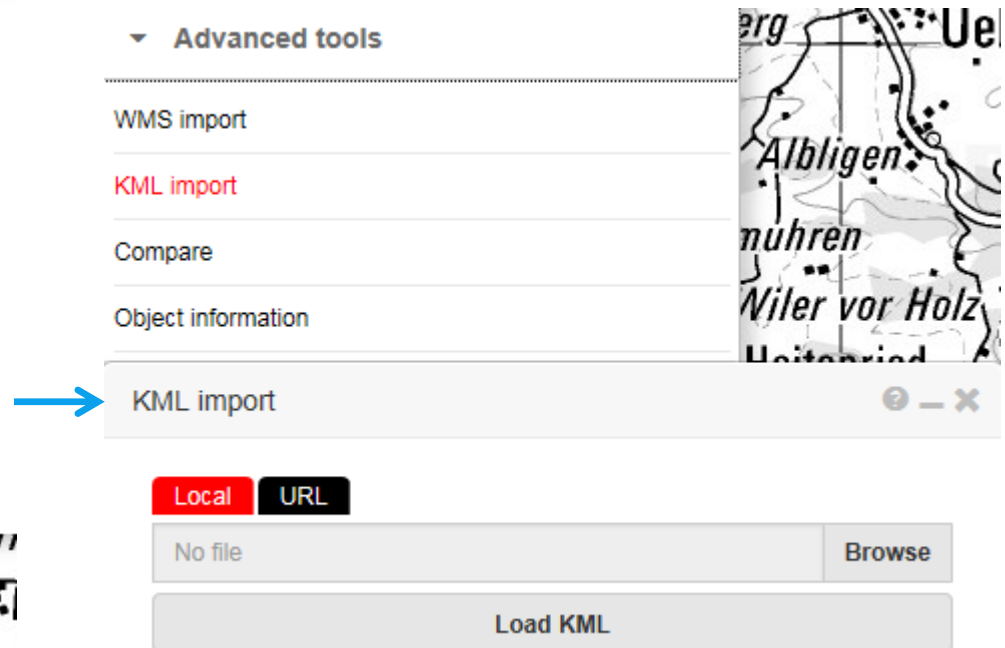
Extras

Import your own drawings (2/3):

Step 3: Save the drawing as a KML file. Rename the file if desired.



Step 4: Use the KML file to import the drawing (either from a local drive or via the URL).

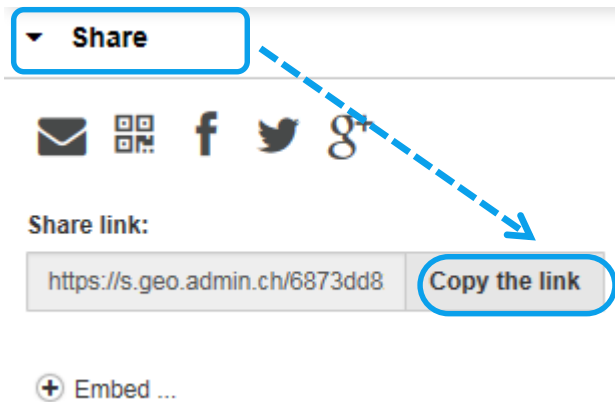




Extras

Import your own drawings (3/3):

Step 5: Select «Share» and click on «Copy the link».



See also «[Use parameters to call up a map](#)».

Step 6: When the link is opened, the external drawing (i.e. the KML file) will be directly imported and displayed on the chart.



Extras

Use the cursor to capture coordinates:

Just right-click any position on the chart.

A screenshot of a 'Position' popup window from a flight simulator or chart application. The window displays the following information:

CH1903 / LV03	592°340.0, 188°810.0
CH1903+ / LV95	2°592'340.00, 1°188'810.00 *
WGS 84 (long/lat)	7.33820, 46.85038
UTM	373'310, 5'189'878 (zone 32T)
MGRS	32TLS 73310 89878
Elevation	603.1 m

[Link with bowl crosshair](#)



The popup window is titled 'Position' and has a close button (X) in the top right corner. The background shows a portion of a flight chart with a 'Milken' logo in the bottom right corner.