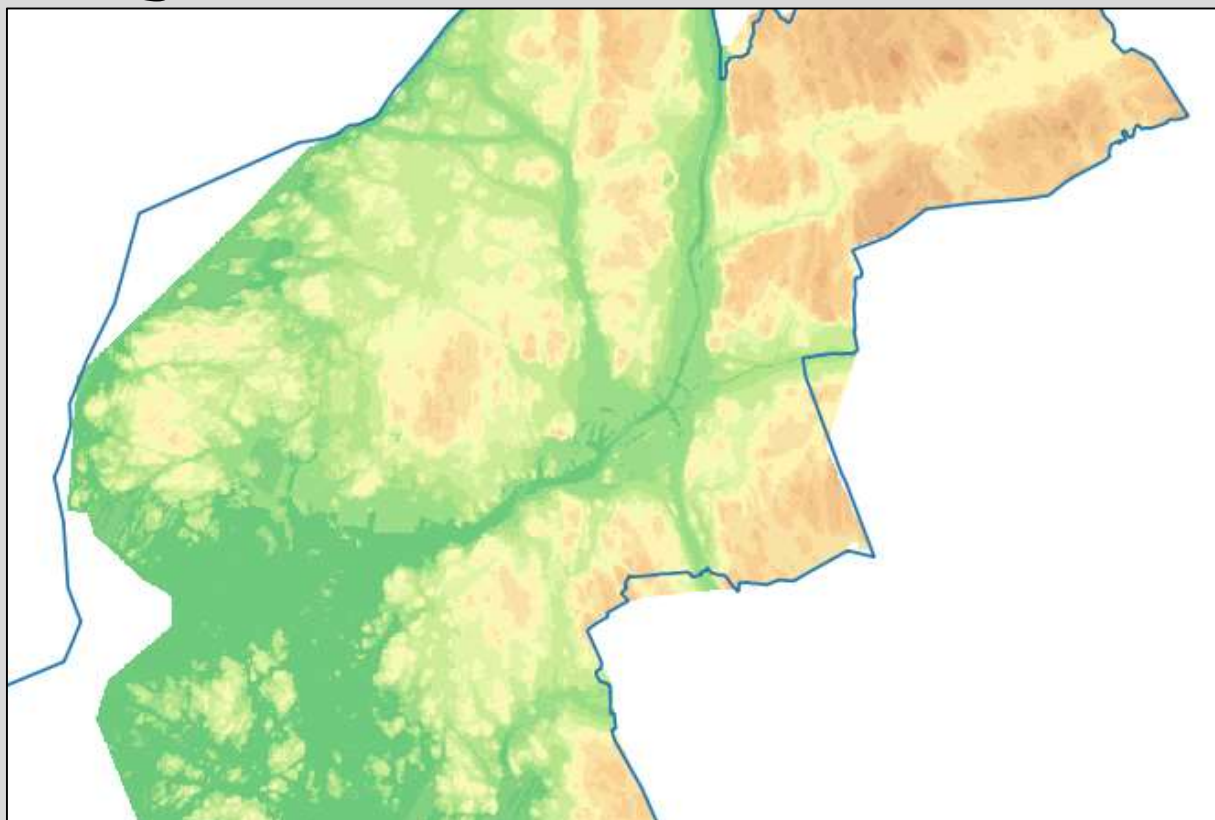


# Höjdmodell 2022



<b>Product:</b>	Höjdmodell 2022 / Elevation model 2022
<b>Date of data capture:</b>	2022
<b>Resolution:</b>	0.5 m/pixel
<b>Geographic coverage:</b>	All of Gothenburg
<b>Image format:</b>	GeoTIFF with LZW compression
<b>Image tiling:</b>	1x1 km
<b>Reference system:</b>	SWEREF 99 12 00 (EPSG: 3007)
<b>Height system:</b>	RH 2000
<b>Data owner:</b>	City of Gothenburg
<b>Licence:</b>	Creative Commons, CC0
<b>Contact:</b>	Göteborgs Stad Stadsbyggnadsförvaltningen Tel: +46 31 – 368 19 60 Email: <a href="mailto:kartor@stadsbyggnad.goteborg.se">kartor@stadsbyggnad.goteborg.se</a>

## Contents

The product is delivered as raster files and metadata compressed to downloadable zip files. Raster files are grouped by 10x10 km squares according to the reference system SWEREF 99 12 00 grid.

In order to describe the dataset, two shapefiles are provided:

- index.shp (index of the dataset's raster files, shape file)
- mask.shp (mask of the dataset's geographic coverage)

## Index of raster files and packages

Green color shows the geographic index of the dataset. Yellow color shows the index of packages for delivery.

641_12	641_13	641_14	641_15	641_16
640_12	640_13	640_14	640_15	640_16
639_12	639_13	639_14	639_15	639_16
638_12	638_13	638_14	638_15	638_16
637_12	637_13	637_14	637_15	637_16

## Download instructions

1. Identify and download desired zip files.
2. Create a destination catalog.
3. Unzip all zip files to the destination catalog.

It is not necessary to download all zip files. However, after download, the raster files need to be found in the corresponding subfolders in order to have proper index file links.

## Raster file properties

Format:	GeoTIFF
Band:	1 (Gray)
Data type:	Float32
Coordinate system:	SWEREF 99 12 00
Resolution:	0.5 m/pixel
Compression:	LZW
Image size:	2000 x 2000 pixels
Image area:	1x1 km
Block:	256 x 256
Nodata Value:	-9999
Alpha band:	No
Georeferencing:	Yes
World file:	TFW
Comments:	Coordinate system and georeferencing are stored in the header of the GeoTIFF file. World files are complementary.

## Data capture parameters

Data capture method	Airborne laser scanning
Data capture dates	9, 15 and 16 May 2022
Altitude	1340 - 1510 m above ground
Point density	10 points per square meter
Strip overlap	30 %
Field of view	40 degrees

## Data quality

### Completeness

When capturing data with airborne laser scanning, factors as vegetation and season, among others, will affect the point density.

In this case data was captured in the spring, before leafing, which meant good conditions for capturing ground points. Some areas will however always be covered by dense vegetation and therefore give a less detailed estimation of the ground surface.

### **Classification**

The elevation model is based on automatically classified ground points coming from an airborne laser scanning. Through interpolation between the ground points a grid has been calculated. This means classification errors in the underlying ground points are present in the grid as well. Places with higher risk of erroneous ground points include e.g. hilly areas or ground connected roofs.

Please note that water areas and interpolated heights “beneath” buildings are included in the elevation model. Because of this, the data sometimes will benefit from being clipped with water or building polygons.

### **Positional accuracy**

The expected positional accuracy inherent with the laser data from which the elevation model is derived is 0.05 m in height and 0.15 m in plane on hard flat surface. When the elevation model is generated through interpolation, a generalization of the data occurs. This also means that the generalization gets bigger as the terrain gets hillier. The positional accuracy in the elevation model is also affected by the classification and the point density, which means, for instance, that dense vegetation will contribute to a heavily generalized ground surface, hence a lower positional accuracy.

## **Change log**

<b>Version</b>	<b>Datum</b>	<b>Description</b>
1.0	2020-06-09	Document created.
1.1	2023-01-18	Updated
1.2	2023-12-12	Updated