

Project GeoICT

2021-2022

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Herhaling QGIS

Project GeolCT

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Zelfstudie

Herhaling QGIS

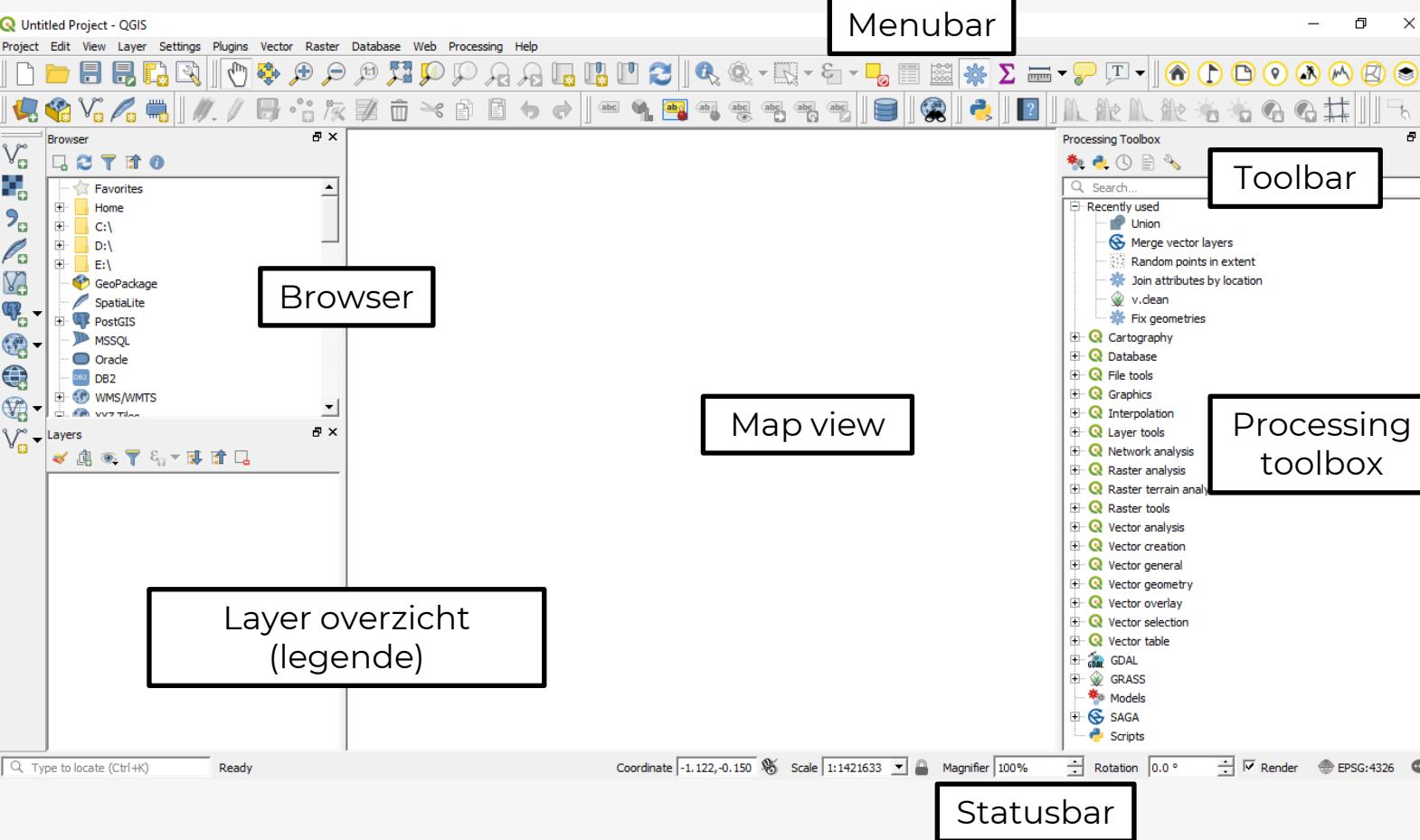
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QGIS: 3.x voor deze opleiding!

- Gratis en open-source GIS platform voor desktop toepassingen
- Basisfunctionaliteit aan te vullen met plugins
- Updates volgen elkaar snel op
- Ondersteunt veel dataformaten



Enkele basisvaardigheden



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Enkele basisvaardigheden

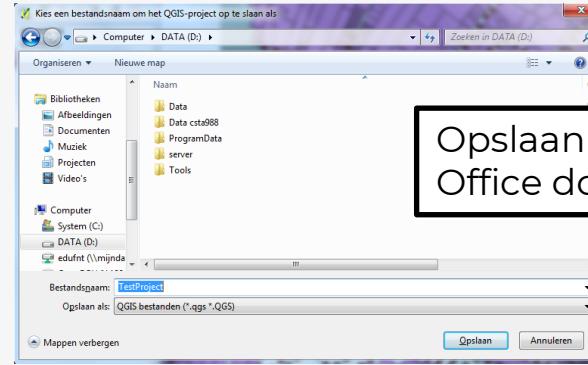


Werken met projecten:

- New
- Open
- Save
- Save as...



Qgs: geen data, maar referenties naar data, CRS, styles, ...



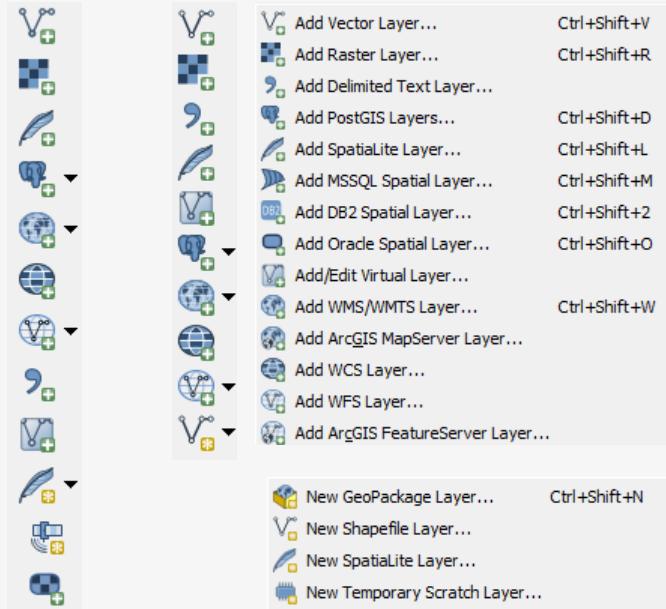
```
74      </filegroup>
75    </legendlayer>
76  </legend>
77  <projectlayers>
78    <maplayer simplifyAlgorithm="0" minimumScale="0" maximumScale="1e+08" simplifyDrawi
79    <id>Adp4301820170116164447237</id>
80    <datasource>D:/Data csta988/Projecten/GeoICT/S1/GRB_Zelzate/Shapefile/Adp43018.shp
81    <keywordList>
82      <value></value>
83    </keywordList>
84    <layername>Adp43018</layername>
85    <srs>
86      <spatialrefsys>
87        <proj4>+proj=lcc +lat_1=51.16666723333333 +lat_2=49.8333339 +lat_0=90 +lon_0=
88        <srid>2640</srid>
89        <srid>31370</srid>
90        <authid>EPSG:31370</authid>
91        <description>Belgische 1972 / Belgian Lambert 72</description>
92        <projectionacronym>lcc</projectionacronym>
93        <ellipsoidacronym>intl</ellipsoidacronym>
94        <geographicflag>false</geographicflag>
95      </spatialrefsys>
96    </srs>
97    <provider encoding="System">ogr</provider>
98    <previewExpression></previewExpression>
99    <vectorjoins/>
100   <layerDependencies/>
```

Enkele basisvaardigheden

Toolbar:
Toevoegen en verwijderen
van panels en toolbars

Panels	Toolbars
Advanced Digitizing Panel	Advanced Digitizing Toolbar
✓ Browser Panel	✓ Attributes Toolbar
Browser (2) Panel	✓ Data Source Manager Toolbar
GPS Information Panel	✓ Database Toolbar
Layer Order Panel	✓ Digitizing Toolbar
Layer Styling Panel	✓ Geopunt toolbar
✓ Layers Panel	✓ Help Toolbar
Log Messages Panel	✓ Label Toolbar
Overview Panel	✓ Manage Layers Toolbar
✓ Processing Toolbox Panel	✓ Map Navigation Toolbar
Results Viewer Panel	✓ OSMDownloader
Spatial Bookmarks Panel	✓ Plugins Toolbar
Statistics Panel	✓ Project Toolbar
Tile Scale Panel	✓ Raster Toolbar
Undo/Redo Panel	Shape Digitizing Toolbar
	Snapping Toolbar
	✓ Vector Toolbar
	✓ Web Toolbar

Enkele basisvaardigheden



2.x

3.x

Data toevoegen:

- Vector data (shp, gml, ...)
- Raster data (tif, grd, ...)
- Text separated file (csv, txt, ...)
- SpatiaLite
- SQL database (postgis, ...)
- WMS(T)
- WCS
- WMS
- Virtual layer
- Oracle Raster
- ...

Nieuwe laag maken:

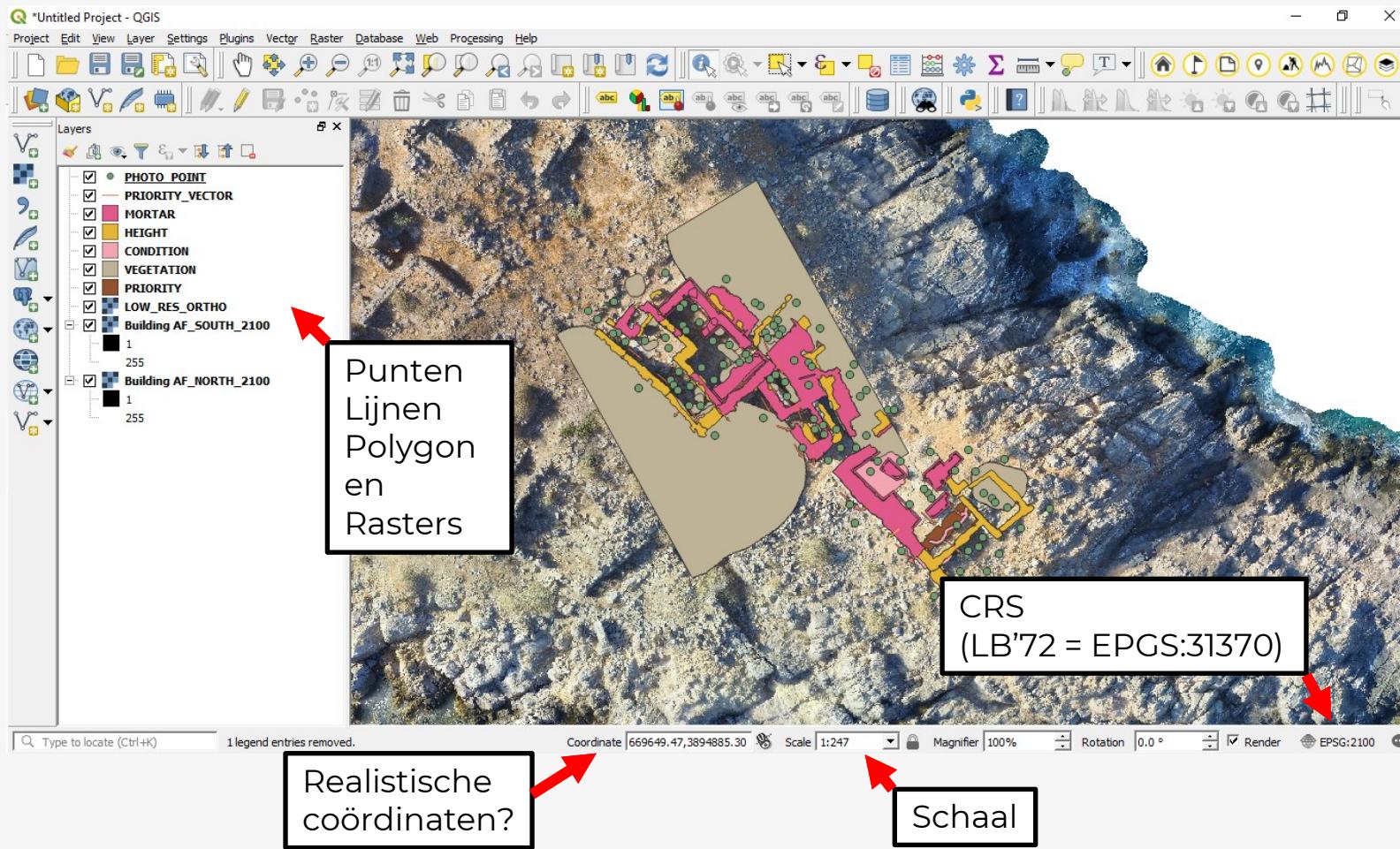
- SpatialLite
- Shapefile
- ...

Demo met enkele datasets

Gelieve de volgende datasets op te zoeken:

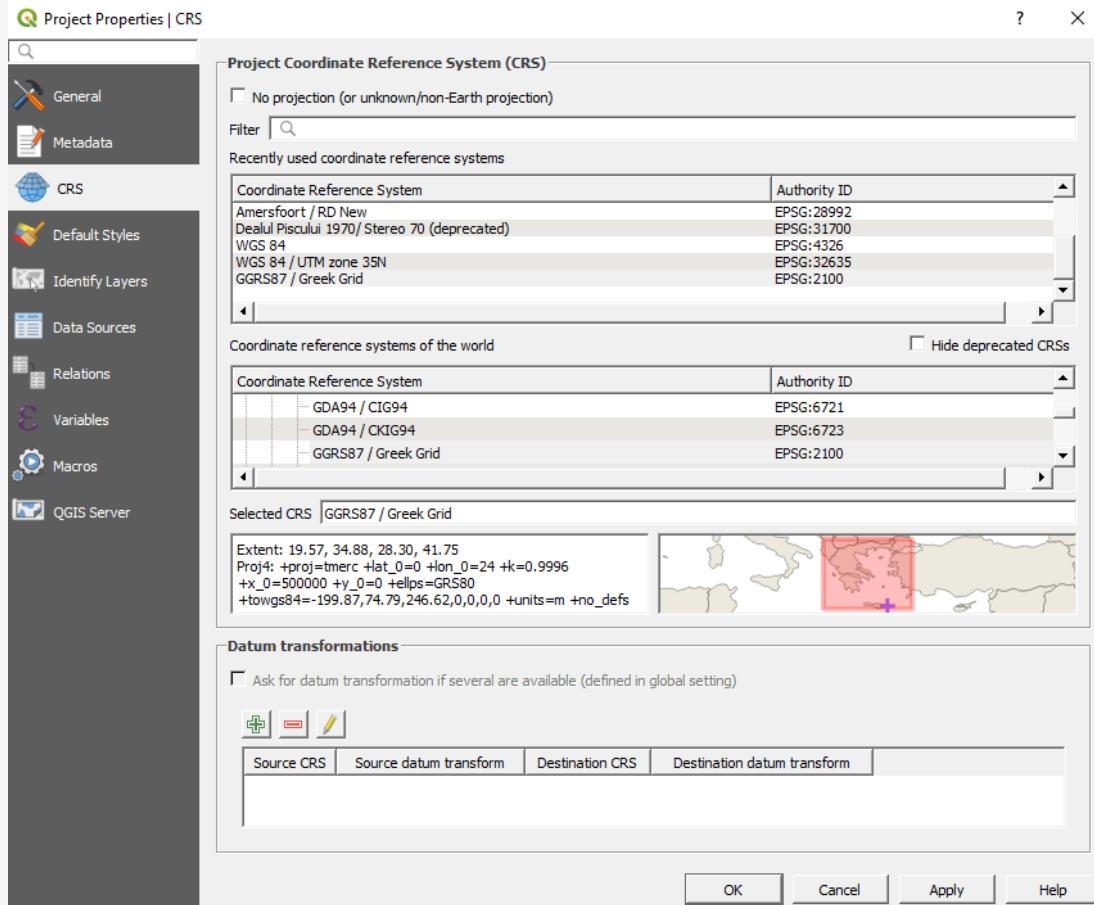
- Shapefile (polygoon): referentiebestand gemeentegrenzen
- WMS: Grootchalig referentiebestand (GRB)
- WFS: Grootchalig referentiebestand (GRB):
 - Administratieve percelen (ADP)
 - Wegverbindingen (WVB)
- WCS: Digitaal hoogtemodel Vlaanderen-II (DHMV-II)
- XYZ-tiles:
 - Google Maps
 - Google Satellite
 - Topografische kaarten NGI

Enkele basisvaardigheden



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Enkele basisvaardigheden



CRS vereist
gemeenschappelijk
CRS aanbevolen
(niet altijd mogelijk)

Enkele basisvaardigheden

Layer Properties - MORTAR | Information

Information from provider

Original Name	MORTAR
Name	MORTAR
Source	D:/Data/Projecten/Pseira/GIS/MORTAR.shp
Storage	ESRI Shapefile
Comment	
Encoding	System
Geometry	Polygon (MultiPolygon)
CRS	EPSG:2100 - GGRS87 / Greek Grid - Projected
Extent	669620.9146418380551040,3894882.5552429347299039 : 669643.1746601966442540,3894900.3103016028180718
Unit	meters
Feature count	75

Identification

Identifier
Parent Identifier
Title
Type
Language
Abstract
Categories
Keywords

Extent

CRS
Spatial Extent
Temporal Extent

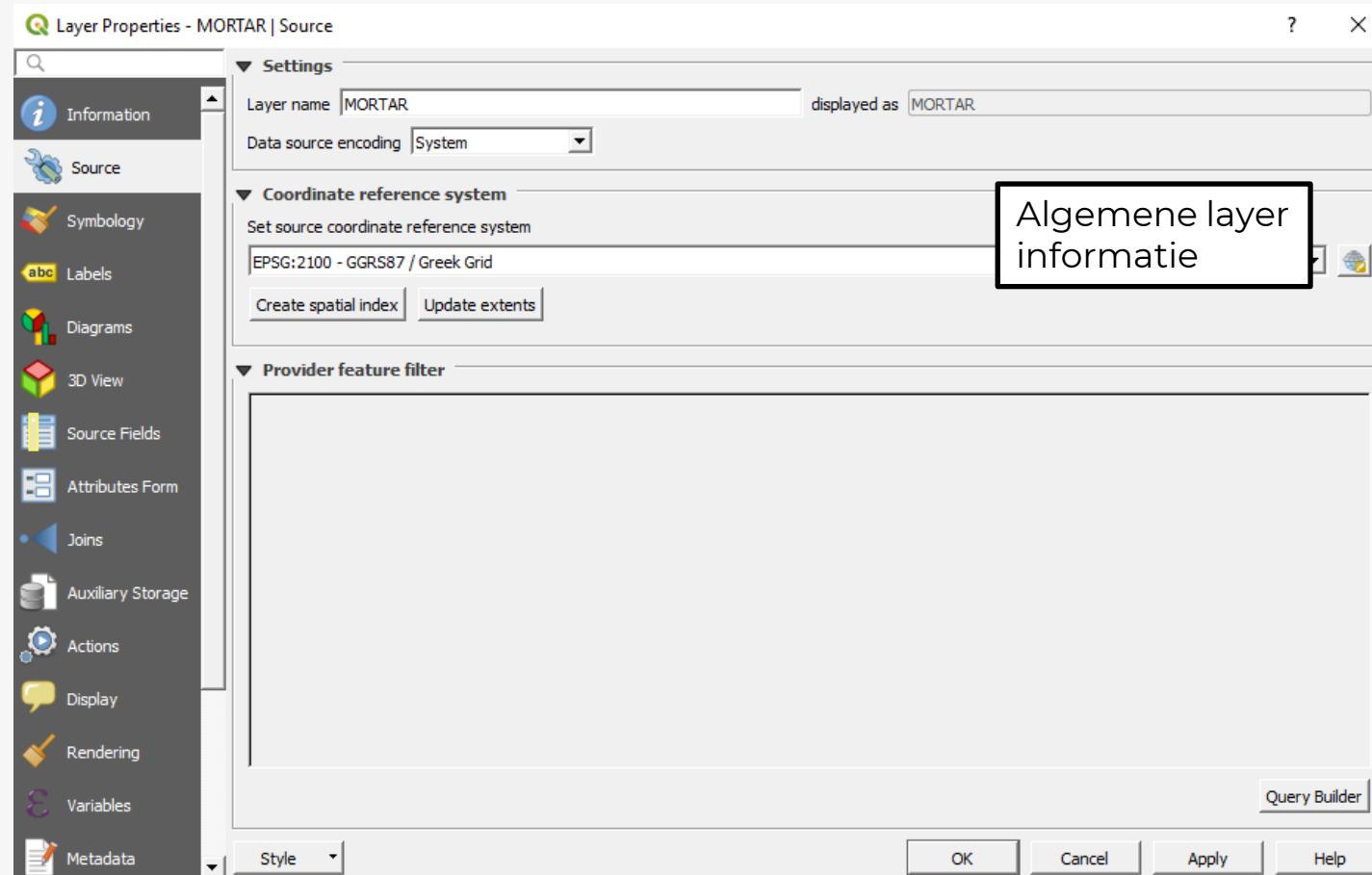
OK Cancel Apply Help

Layer information
(metadata viewer)

The screenshot shows the 'Layer Properties' dialog for a layer named 'MORTAR'. The left sidebar contains various tabs: Information, Source, Symbology, Labels, Diagrams, 3D View, Source Fields, Attributes Form, Joins, Auxiliary Storage, Actions, Display, Rendering, Variables, and Metadata. The 'Information' tab is selected. The main pane displays 'Information from provider' for the 'MORTAR' layer, listing details such as name, source, storage, geometry type (Polygon), CRS (EPSG:2100), extent coordinates, unit (meters), and feature count (75). A callout box highlights the 'Layer information (metadata viewer)' section. Below this are sections for 'Identification' and 'Extent', each with a table of metadata fields. At the bottom are standard dialog buttons: OK, Cancel, Apply, and Help.

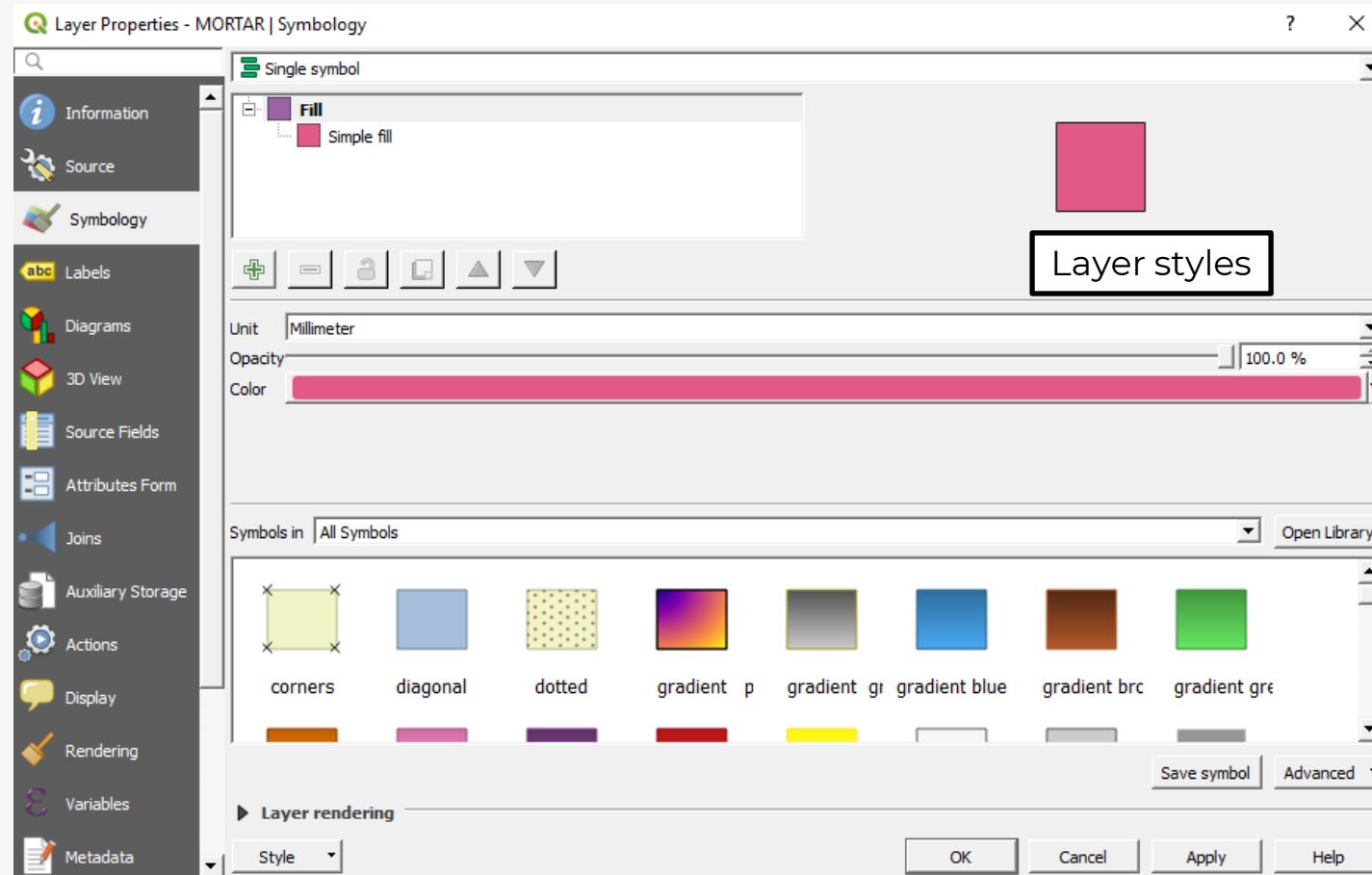
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Enkele basisvaardigheden



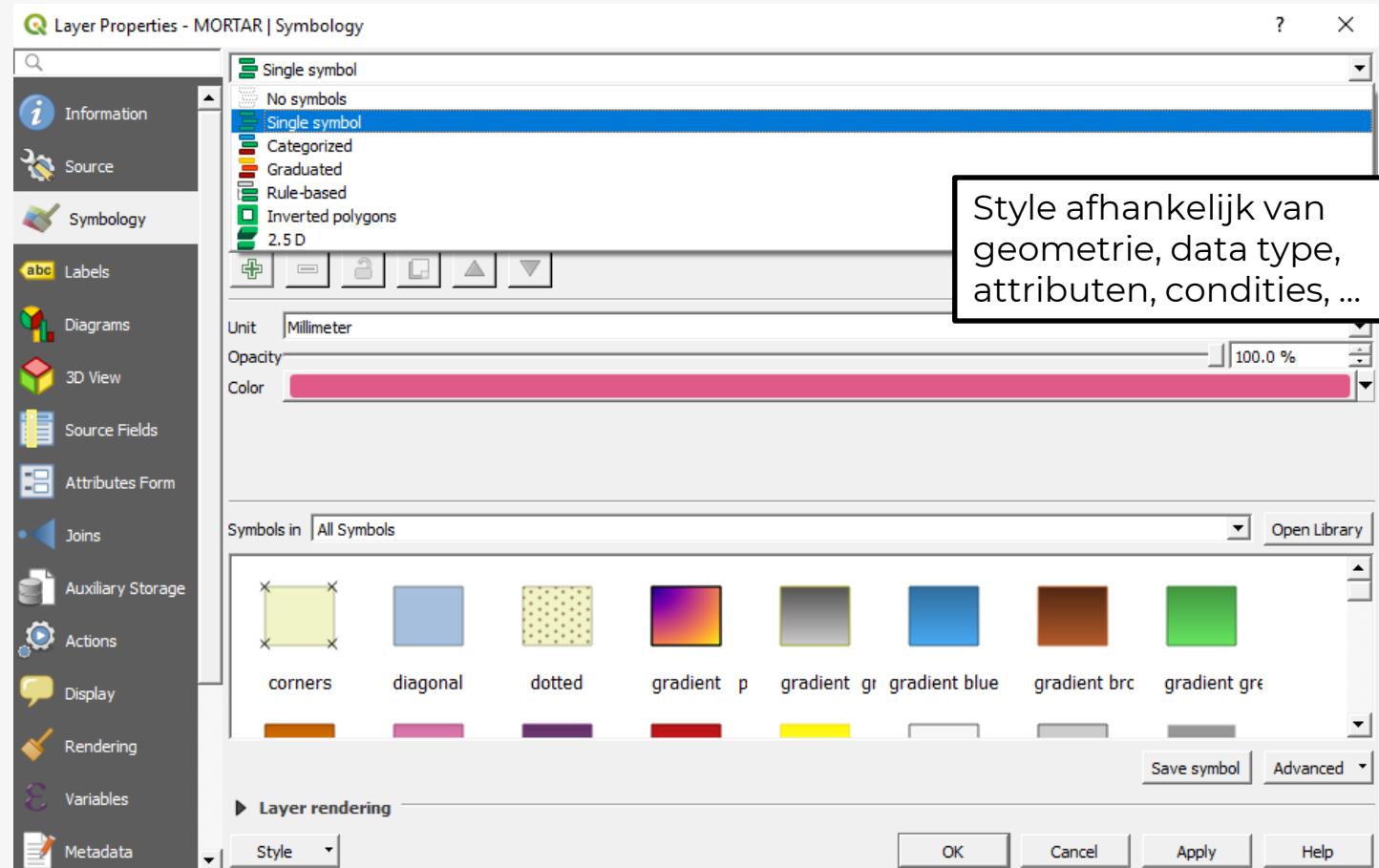
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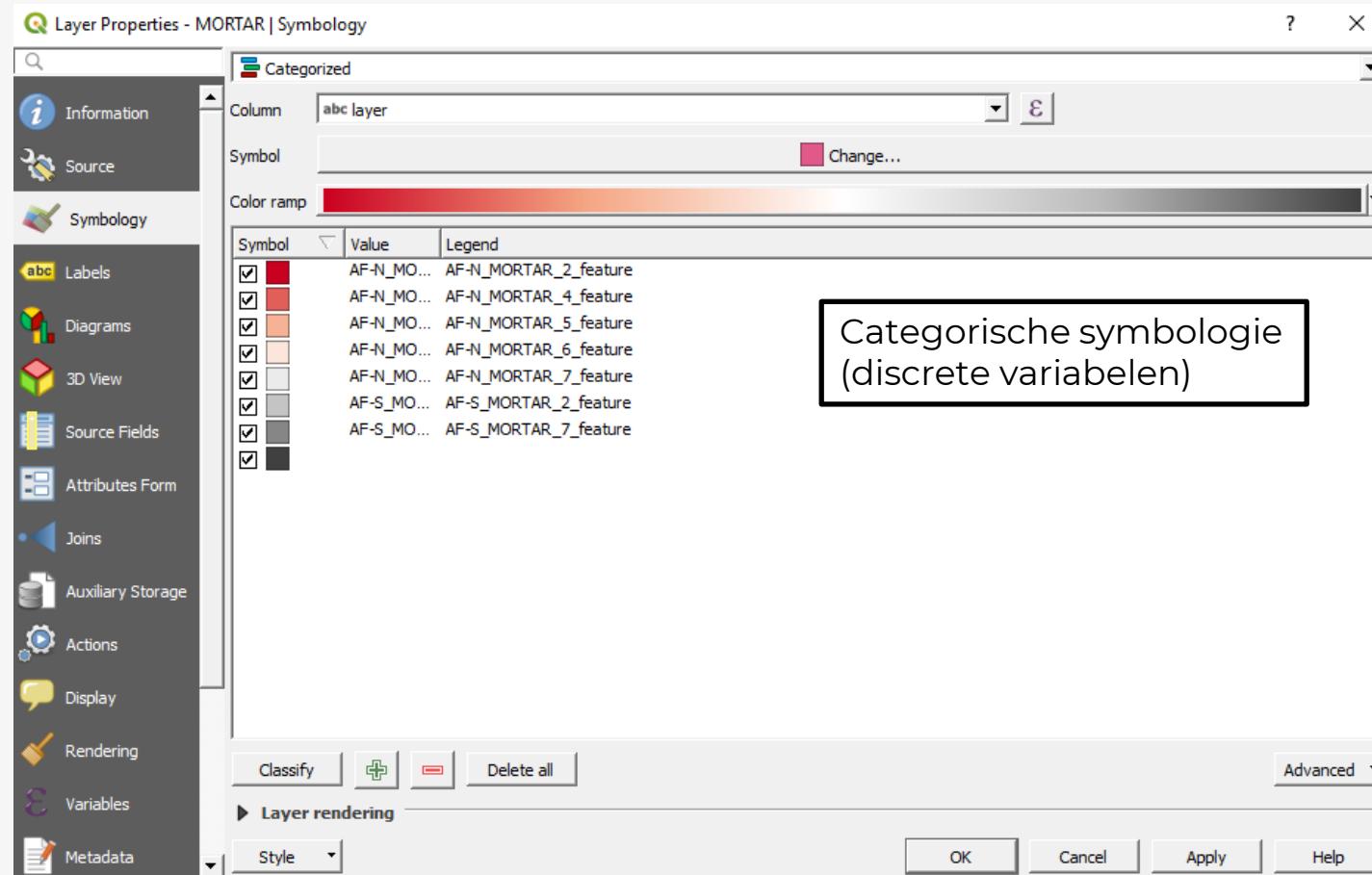


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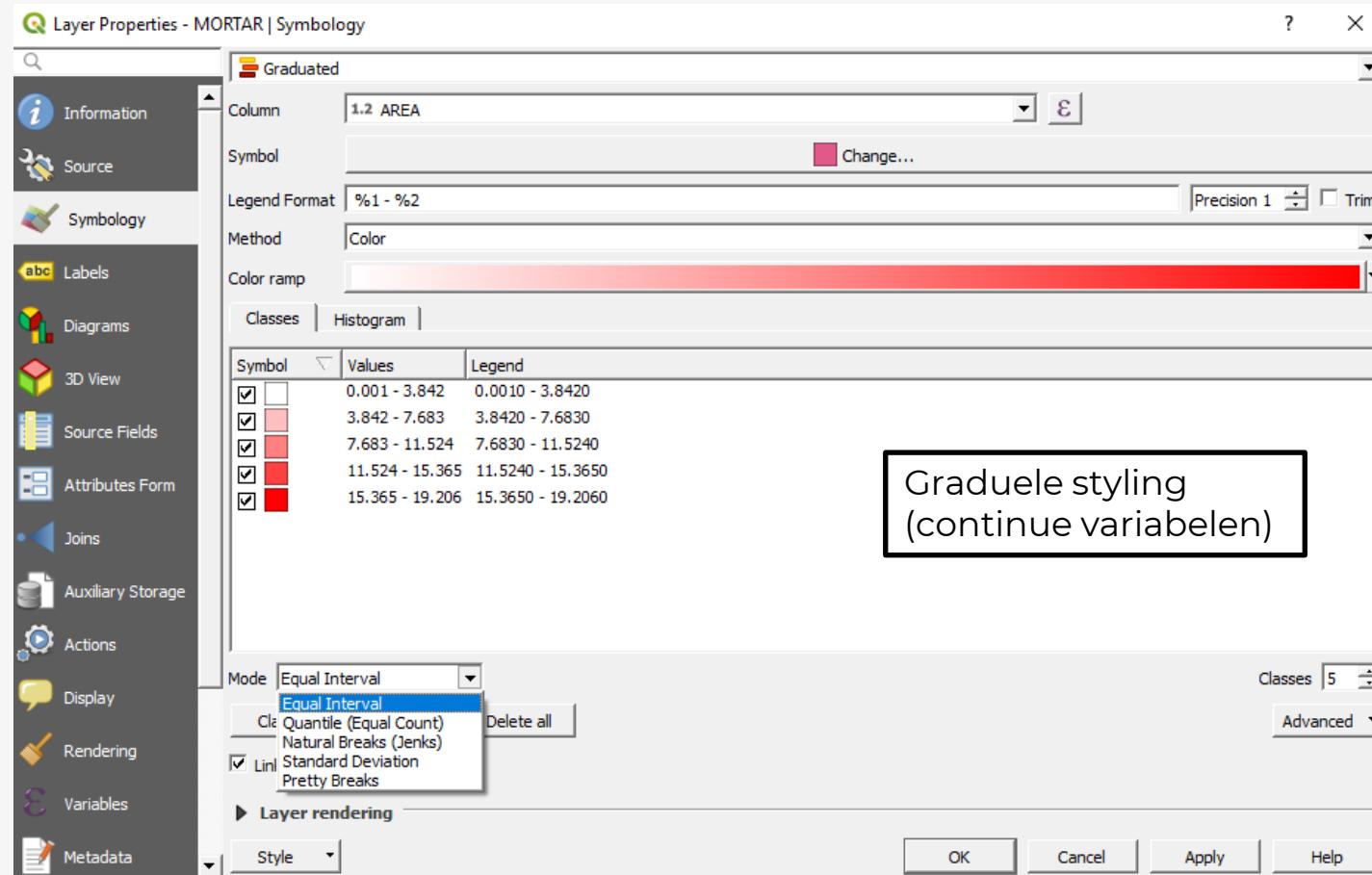
Enkele basisvaardigheden



Enkele basisvaardigheden

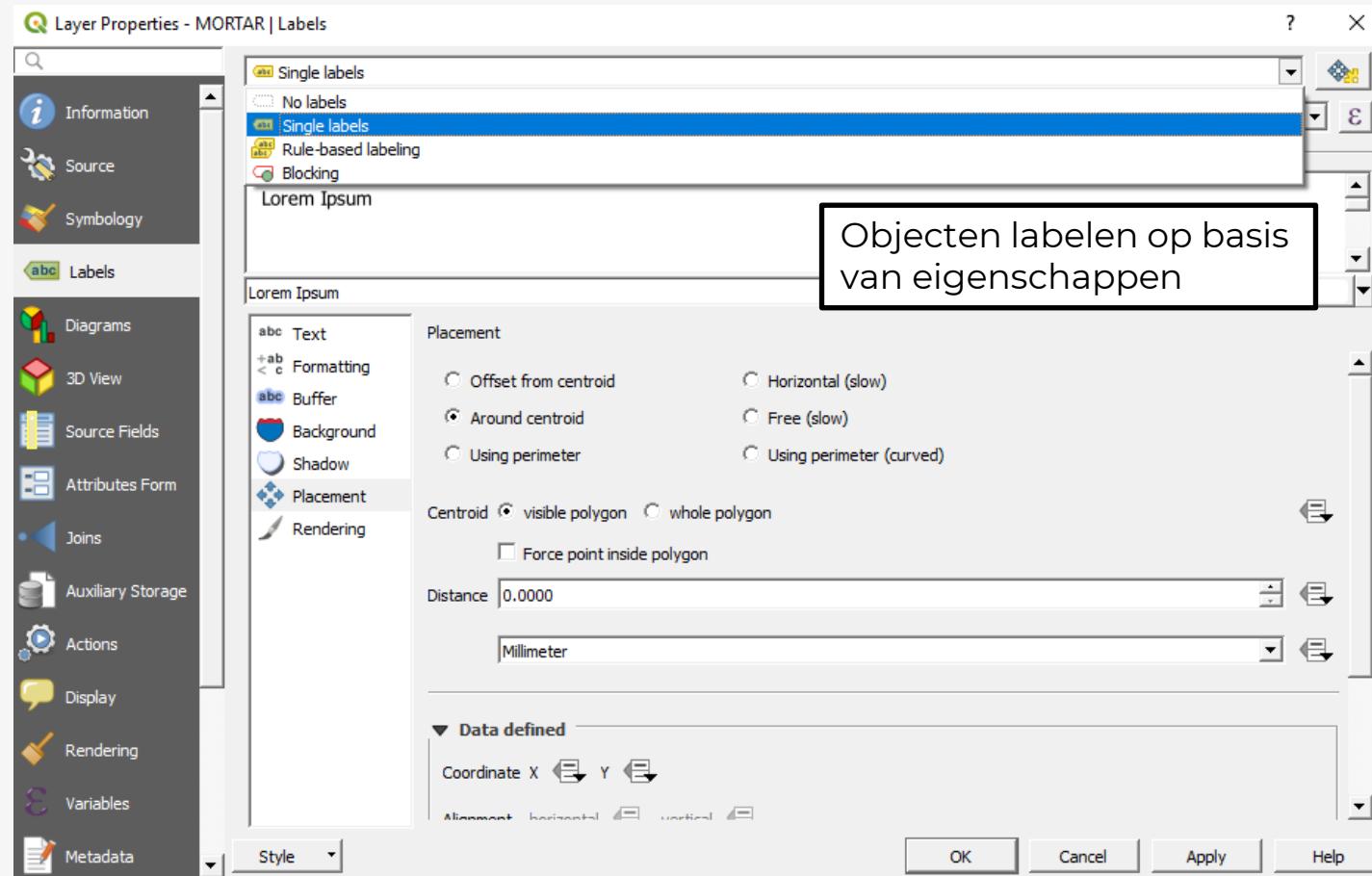


Enkele basisvaardigheden



HOGENT

Enkele basisvaardigheden



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Layer Properties - MORTAR | Source Fields

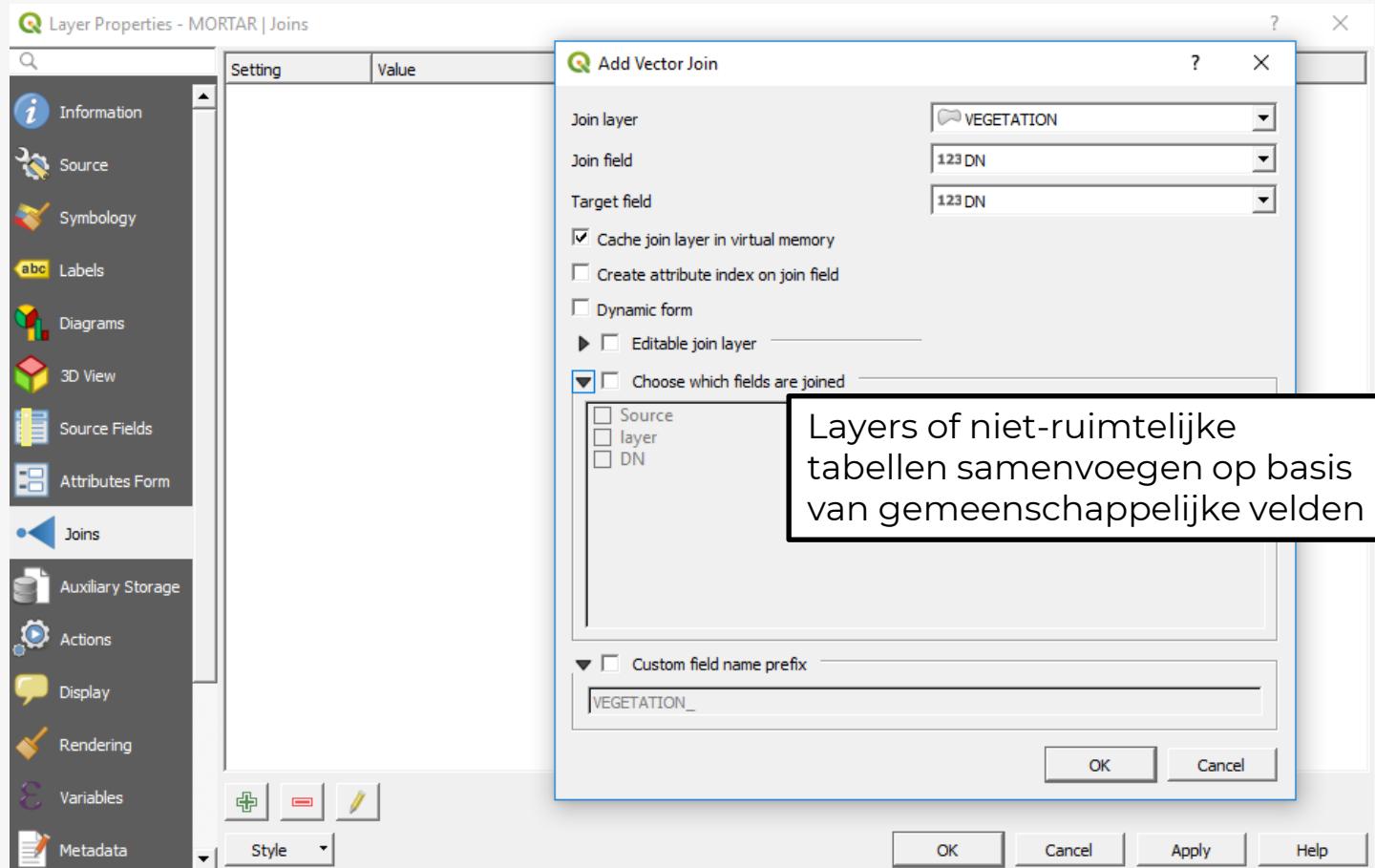
<input type="checkbox"/>	Id	Name	Alias	Type	Type name	Length	Precision	Comment	WMS	WFS					
	abc 0	Source		QString	String	11	0		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	abc 1	layer		QString	String	21	0		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	123 2	DN		qlonglong	Integer64	16	0		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	123 3	MORTAR_ID		int	Integer	3	0		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	12 4	AREA		double	Real	10	3		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					

Style

Velden en data types:

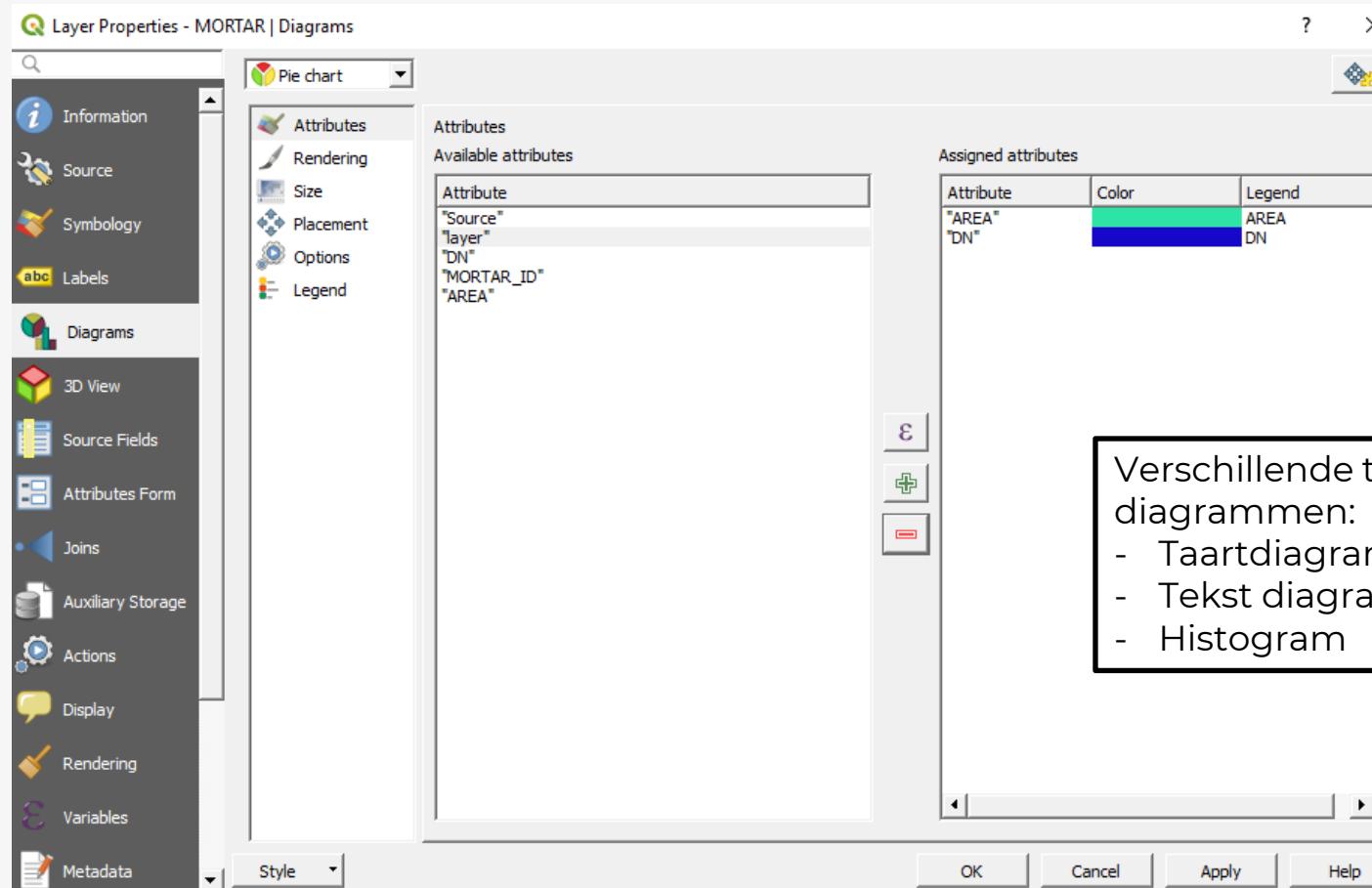
- Inspecteren
- Toevoegen/verwijderen
- Bewerken
- Velden berekenen

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Enkele basisvaardigheden

Layer Properties - MORTAR | Metadata

Identification Categories Keywords Access Extent Contact Links History Validation

This page describes the basic attribution of the dataset. Please use the tooltips for more information.

Parent identifier

Identifier Set from layer

Title

Type

Language

Abstract

Metadata aanmaken
en beheren

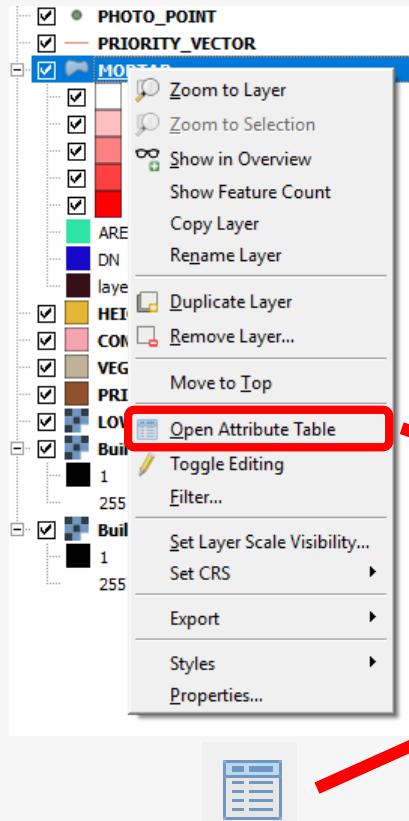
OK Cancel Apply Help

Source Symbology Labels Diagrams 3D View Source Fields Attributes Form Joins Auxiliary Storage Actions Display Rendering Variables Metadata Dependencies

Metadata

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Enkele basisvaardigheden



Objecteigenschappen bekijken:

- Gehele layer → attribute table
- Individuele objecten → Via identifier

The screenshot shows the QGIS interface with the attribute table for the 'MORTAR' layer open. The table has columns: Source, layer, DN, MORTAR_ID, and AREA. The data shows 12 features, each with a unique MORTAR_ID and varying AREA values. To the right, the 'Identify Results' dialog is open, showing a tree view of the selected feature's properties: MORTAR_ID (2), layer (AF-N_MORTAR_2_feature), DN (1), MORTAR_ID (2), and AREA (19.206). A large red arrow points from the 'Open Attribute Table' option in the context menu to the attribute table window.

Source	layer	DN	MORTAR_ID	AREA
1	AF-N	AF-N_MORTAR_...	1	2
2	AF-N	AF-N_MORTAR_...	1	6
3	AF-N	AF-N_MORTAR_...	1	6
4	AF-N	AF-N_MORTAR_...	1	6
5	AF-N	AF-N_MORTAR_...	1	4
6	AF-N	AF-N_MORTAR_...	1	6
7	AF-S	AF-S_MORTAR_...	1	2
8	AF-S	AF-S_MORTAR_...	1	7
9	AF-N	AF-N_MORTAR_...	1	7
10	AF-N	AF-N_MORTAR_...	1	6
11	AF-N	AF-N_MORTAR_...	1	7
12	AF-N	AF-N_MORTAR_...	1	2

Voor vandaag...

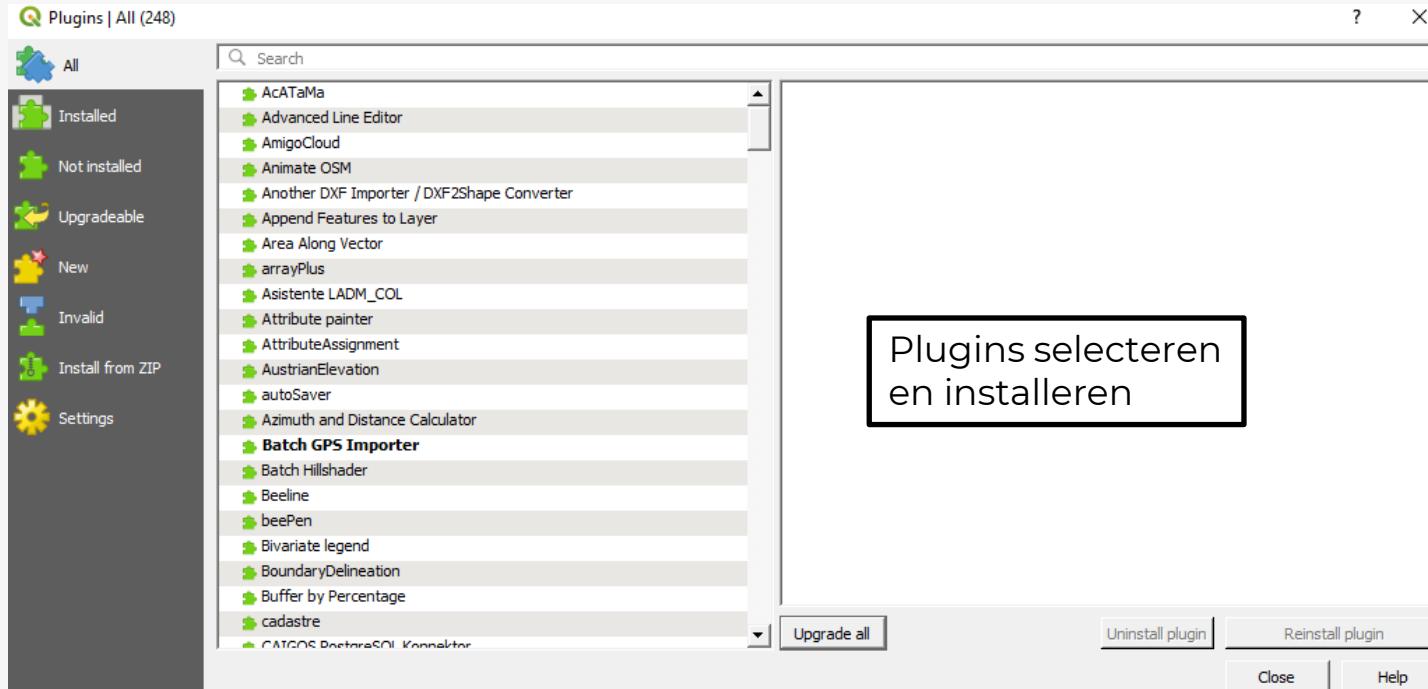


Data selecteren

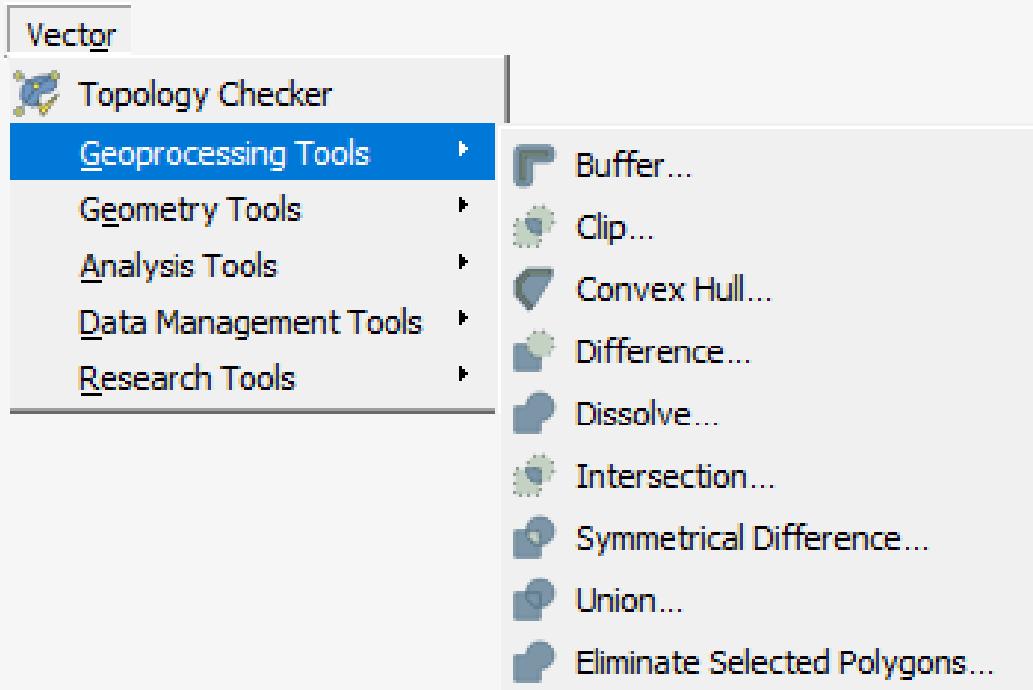


Velden berekenen

Voor vandaag...

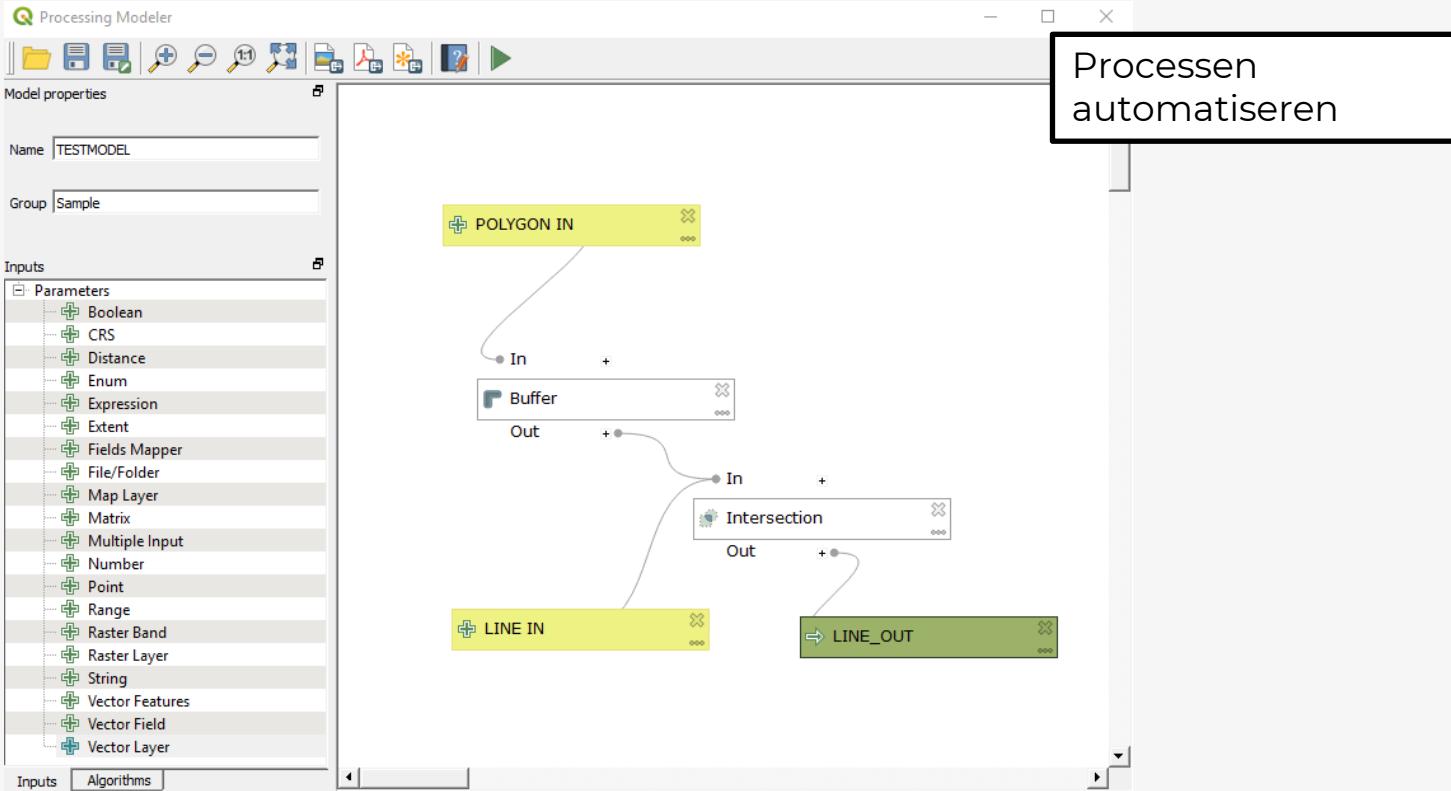


Voor later nog...



Data
analyseren

Andere mogelijkheden...



Andere mogelijkheden...

The screenshot shows the QGIS Python Console interface. On the left, there is a 'Python Console' window with some introductory text:

```
1 Python Console
2 Use iface to access QGIS API interface or T
  ype help(iface) for more info
3
```

On the right, there is a script editor window titled 'convert.py' containing the following Python code:

```
1 import processing
2 import glob, os
3
4 - def convertPlan(thisPath, thisName):
5     print('Starting: ' + thisName)
6
7     plan = QgsRasterLayer(thisPath + thisName + '.tif', thisName)
8     if not plan.isValid():
9         print("Plan failed to load!")
10    else:
11        # POLYGONIZE ...
12        param_polygone=(INPUT': plan, 'BAND': 1, 'FIELD': "DN", 'EIGHT
13        processing.run('gdal:polygonize',param_polygone)
14        print('\t' + thisName + ' polygonized')
15
16
17
18
19
20
```

A callout box highlights the text 'ProcesSEN automatiseren met PyQGIS'.

```
>>>
```

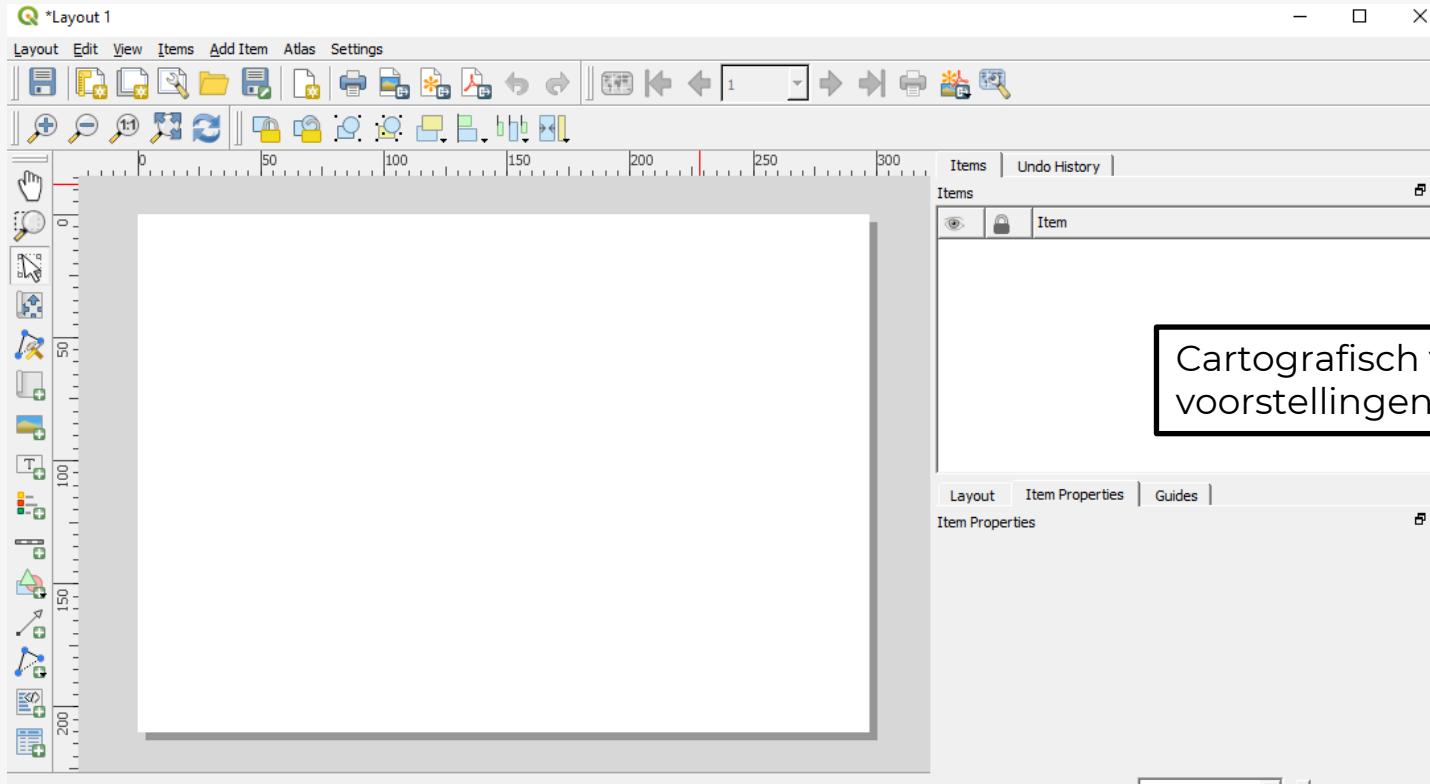
Andere mogelijkheden...

The screenshot shows the DB Manager application interface. On the left is a tree view of database providers, including GeoPackage, Oracle Spatial, PostGIS, and various spatial extensions like geotict, tiger, and topology. The 'weg_segm' table is selected under the PostGIS provider's 'public' schema. The main window displays 'General info' and 'PostGIS' details for the 'weg_segm' table. It shows the table has a relation type of 'Table', is owned by 'postgres', has 76271 pages, and approximately 1013030 rows. The 'geom' column is defined as a LINESTRINGM geometry with a dimension of 3. A warning message indicates no spatial index is defined, with a link to 'create it'. Below this is a 'Fields' section with a table showing the schema for the 'weg_segm' table.

#	Name	Type	Length	Null	Default
1	id	int4	4	N	nextval('weg_segm_id_seq'::regclass)
2	geom	geometry (LineStringM, 31370)		Y	
3	ws_oidn	int8	8	Y	
4	ws_uidn	varchar (18)		Y	
5	ws_gidn	varchar (18)		Y	
6	b_wk_oidn	int8	8	Y	

Database
management

Andere mogelijkheden...



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Enkele basisvaardigheden

QGIS Tutorials

<http://www.qgistutorials.com/nl/>



Einde

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