

The Digital City: Interpolation Map

Manual: Weixuan Li, 2017

As you have already seen from the past two weeks, the Excel spreadsheet contains 1562 kohier information will serve as your main source understanding your own block. In this assignment, you need to link the 1562 kohier record with the cadastral map and create an interpolation map based on the 1562 housing value. You will need the following information from the 1562 kohier table:

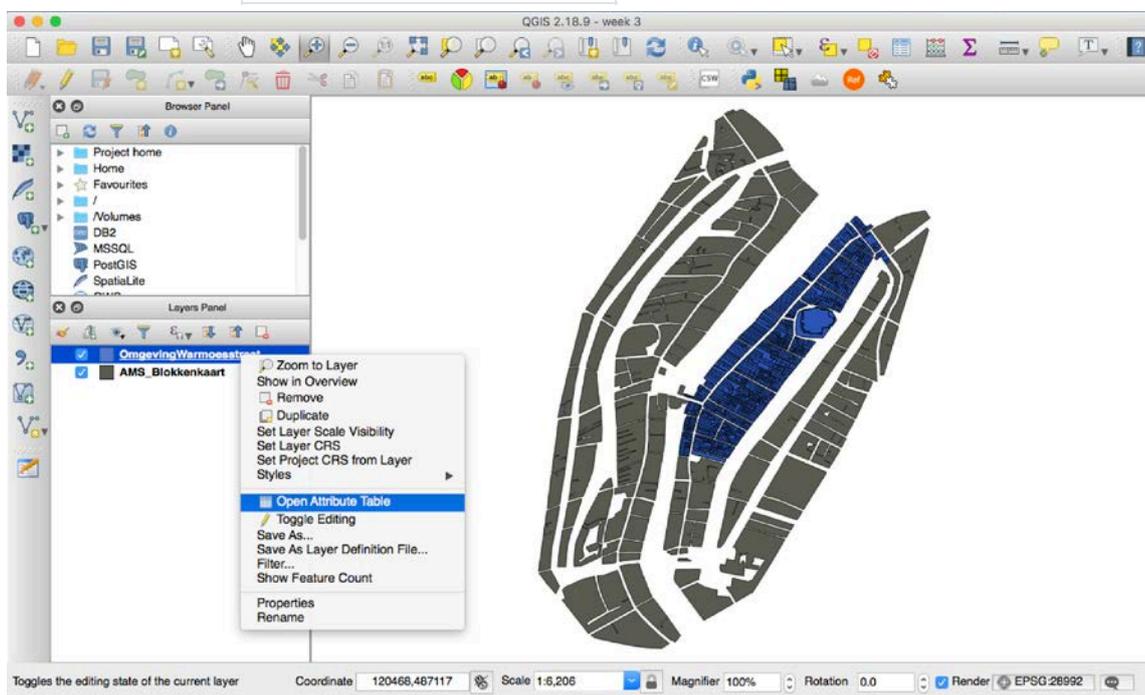
I	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
ID	Fol.	Persoonsnaam	Beroep	M/V bewoner	Straat	KadSectie/Nr.	Bouwblok	Aanduiding/ huisnaam	Opmerkingen	M/V eigenaar	Huurwaarde					
1222	6016 333	Gerijt van Valckenburch		m	Warmoesstraat	G376/375	2-4			m	120					
1223	6017 333	Florijs van Roedenburch		m	Warmoesstraat	G374	6			m	200					
1224	6018 333	Govert Jansz		m	Warmoesstraat	G373/372	8			m	150					
1225	6019 333	Duijff Adriaen Ockerst		v	Warmoesstraat	G371/370	10		[teepziederij]	v	170					
1226	6020 333	Mathijs Mathijst		m	Warmoesstraat	G369/368	12			m	150					
1227	6021 333	Adriaen Paeuw		m	Warmoesstraat	G367	14			m	200					
1228	6022 333	Cornelis Louffsz		m	Warmoesstraat	G366	16			h. van Griet Barten	v	300				
1229	6023 333v	Harman Int boot		m	Warmoesstraat	G364	16a			m	140					
1230	6024 333v	Hans Wilkes		m	Warmoesstraat	G363	18			h. van Gerijt Stuver	m	210				
1231	6025 333v	Gerijt Jansz in Parijs		m	Warmoesstraat	G362	20		In Parijs	h. van Jacob Henricz	m	162				

- ID An unique number that indicates the number of the record in the entire document
- Bouwblok Building block, we can add this, based on the block map
- Beroep Profession
- Straat Street name
- Opmerkingen h. van means: tenant, house is owned by XX
- Huurwaarde Rent value of the house (per year)

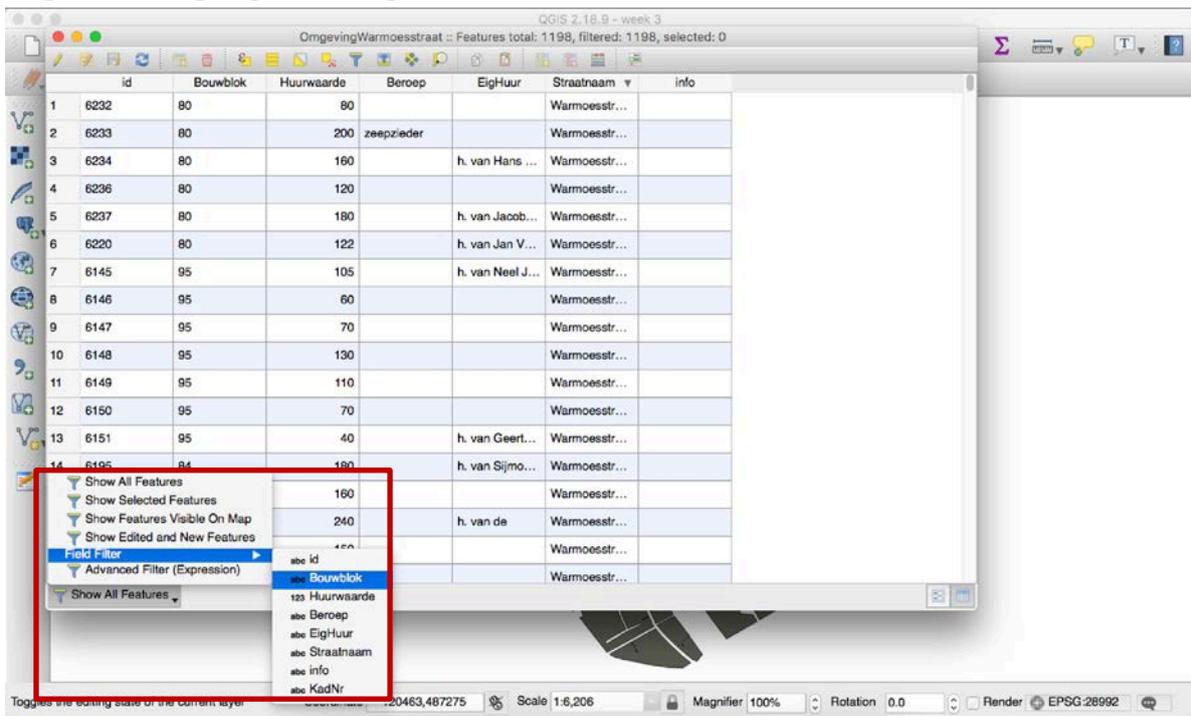
Once you have linked the two sources, the following manual will show you how to create an interpolation map in QGIS.

Task 1: Find your own block on the map

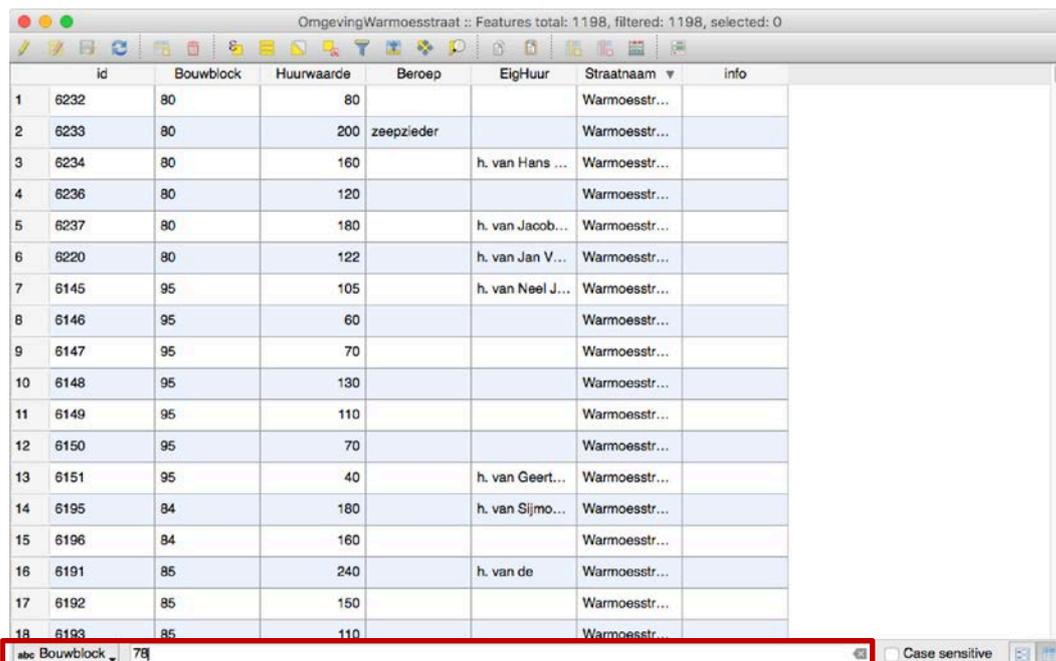
- Create a blank project and set the coordinate system to **Amersfoort RD/new; EPSG:28992** (as you did in the previous weeks)
- Load `AMS_Blokkenkaart.shp` and `OmgevingWarmoesstraat.shp`
- Right click `OmgevingWarmoesstraat.shp` → **[Open Attribute Table]**



- To select the parcels that belongs to your block: in the lower left corner, click **[Show All Features]** → **[Field Filter]** → **[Bouwblok]**



- In the bottom line of the attribute table window, fill in the block number of your choice (in the following steps, I will use Blok78 as an example) and hit **[Enter]**, the parcels belong to your block will be filtered.



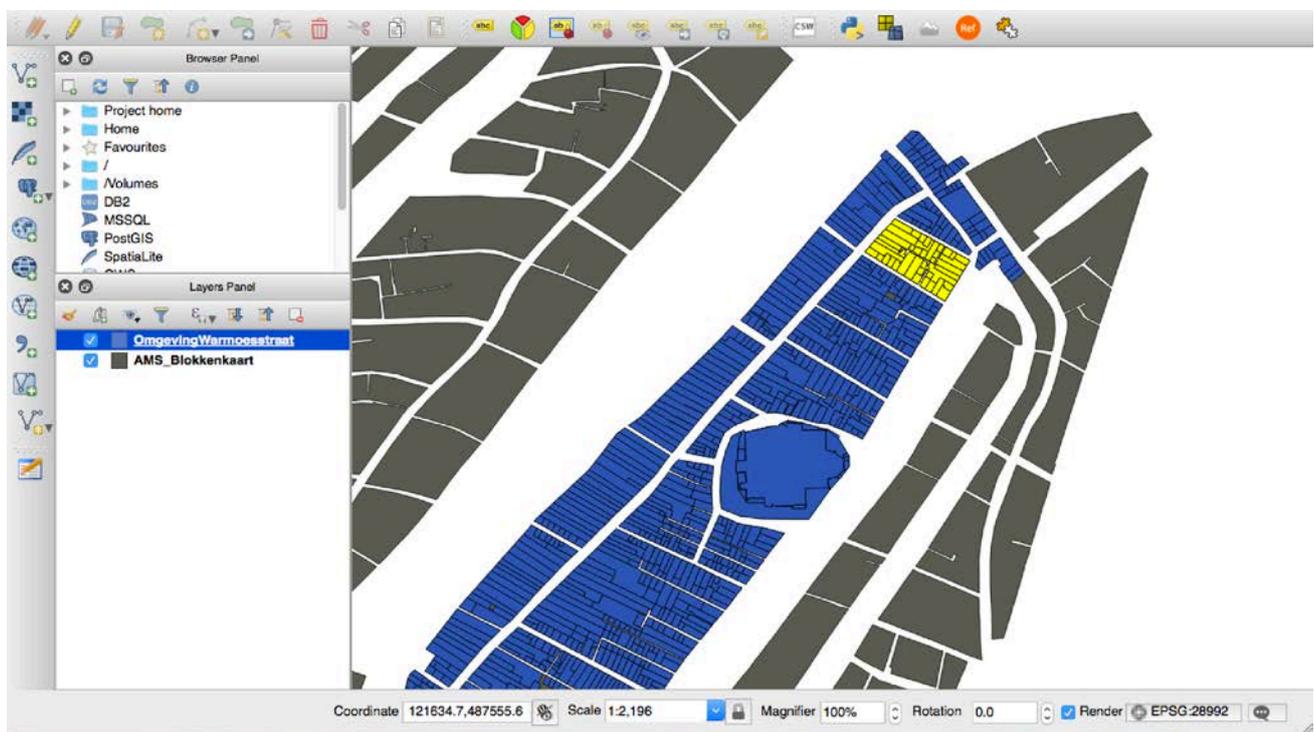
- To select the filtered parcels belonging to your block, click on the upper left corner of the table to select all filtered records – all selected records will be highlighted in blue:

OmgevingWarmoesstraat :: Features total: 1198, filtered: 42, selected: 42

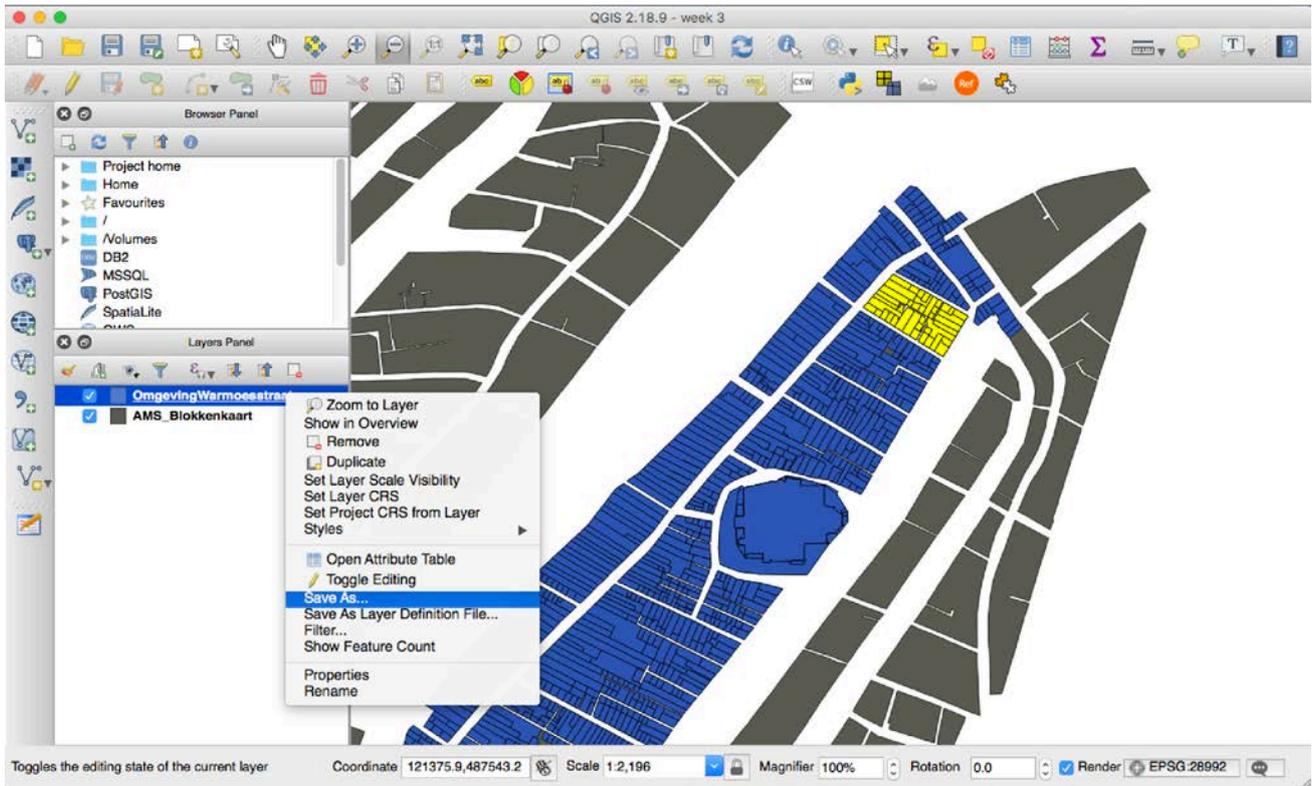
	id	Bouwblok	Huurwaarde	Beroep	EigHuur	Straatnaam	info
11		78					
12		78					
13		78					
14		78					
15		78					
16		78					
17		78					
18		78					
19		78					
20		78					
21		78					
22		78					
23		78					
24		78					

abc Bouwblok 78 Case sensitive

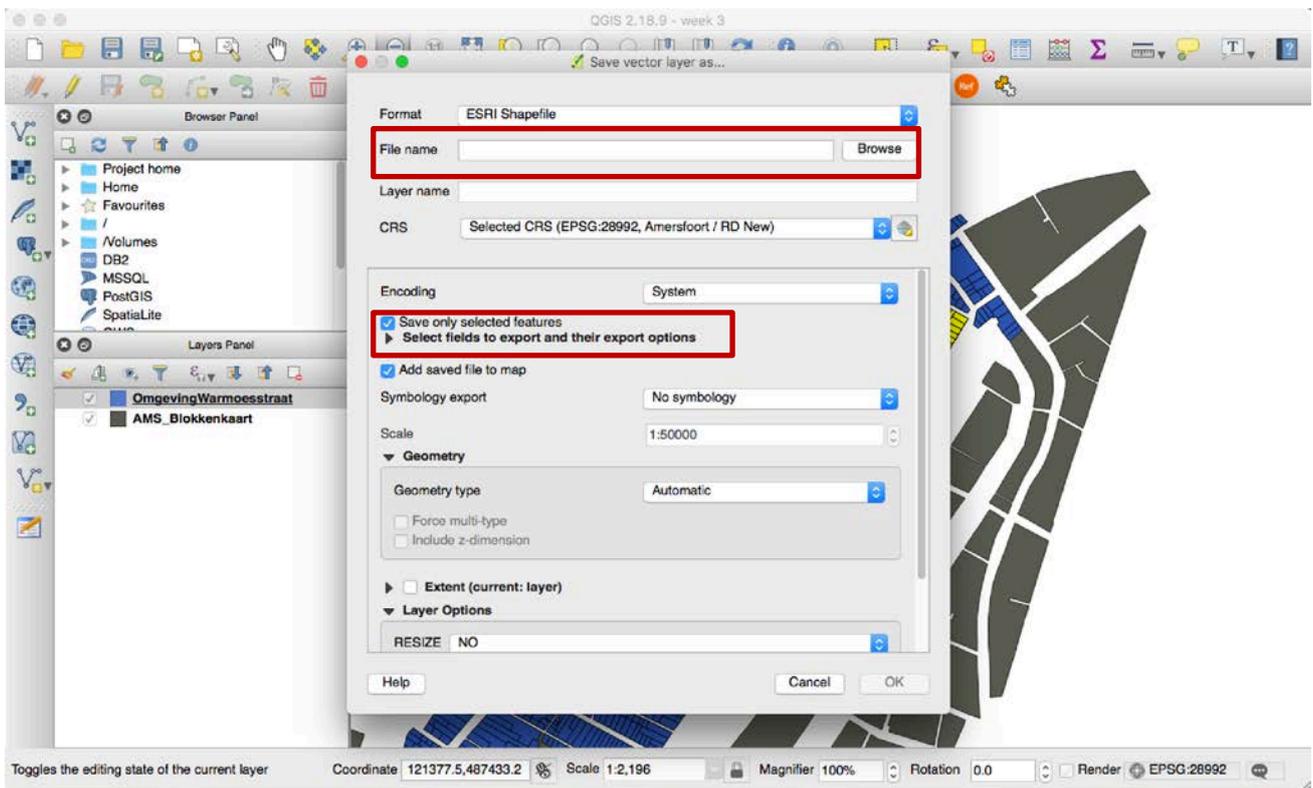
- Going back to the map window, your selected parcels will be highlighted in yellow:



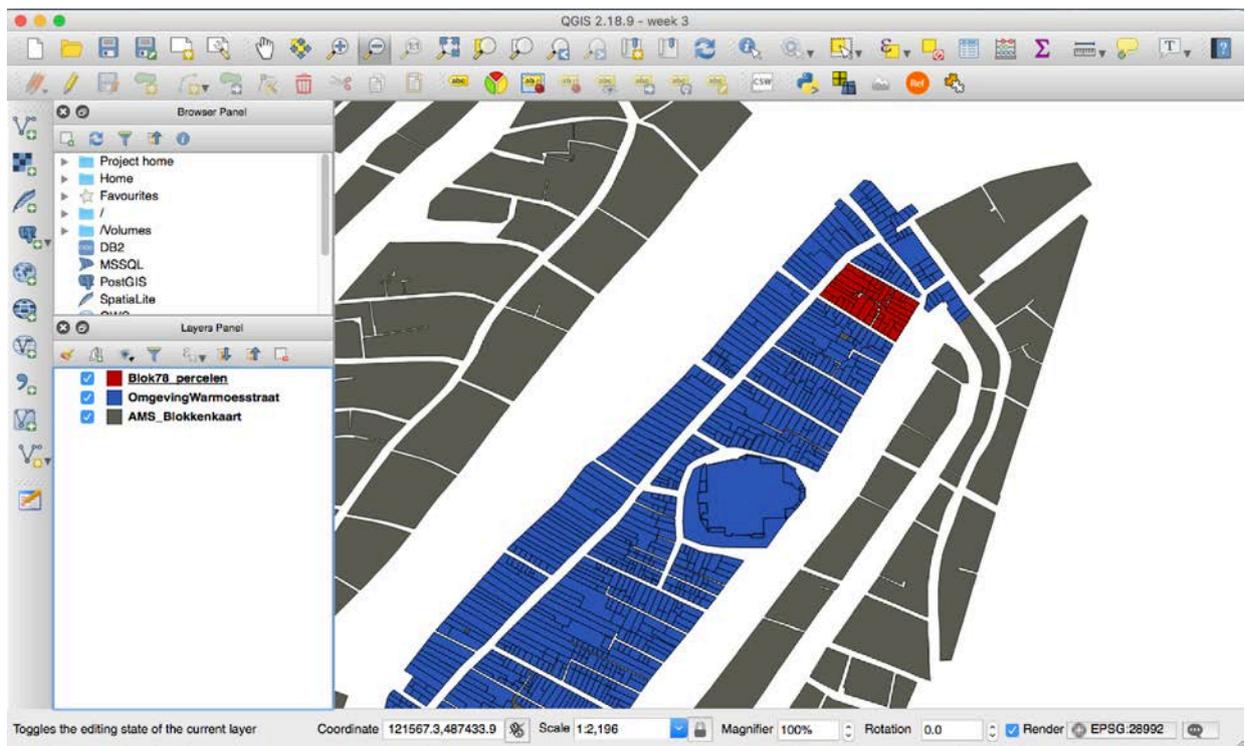
- Then you may export the selected parcels as a new layer: in the [**Layers Panel**], right click *OmgevingWarmoesstraat* layer, and select [**Save As**].



- In the pop-up window, in the [File Name] menu, click [Browse] and save this new layer, in this case, I name this layer [Blok78].
- In the [Encoding] menu, check the [Save only selected features] option to export only parcels within your block. Then click [OK].



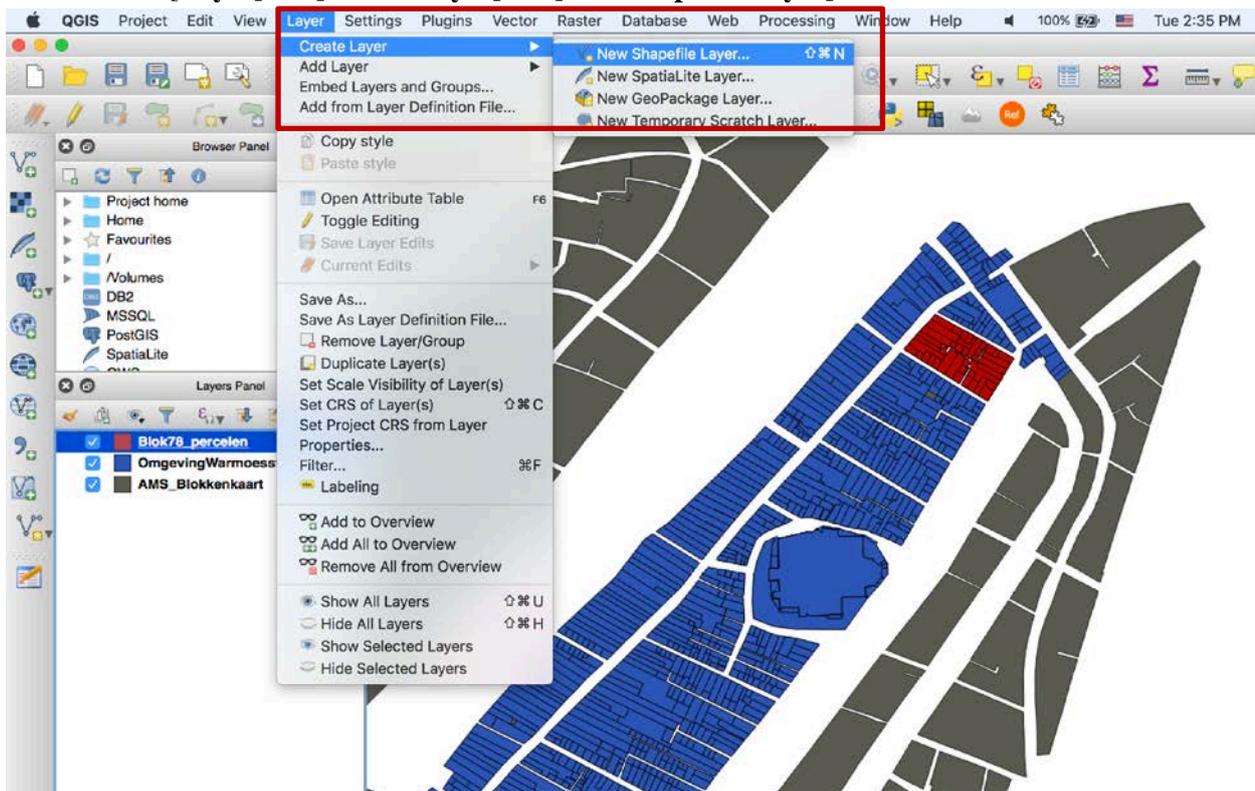
- Your new layer will be added to the [Layers Panel]



In the next assignments, you will create a point layer for every parcel in your block.

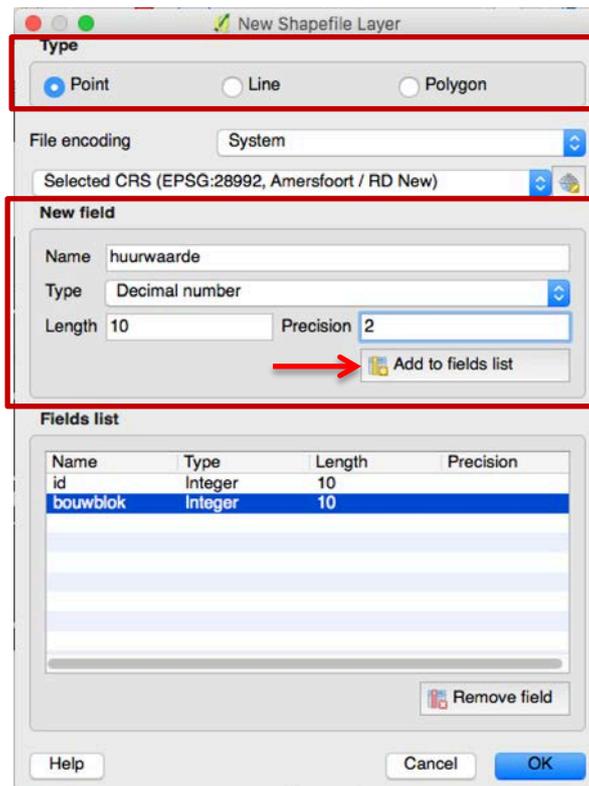
Task 2: Create a point layer

- Go to **[Layer] → [Create Layer] → [New Shapefile Layer]**



- In the pop-up window, in **[Type]** menu, select **[Point]** and in the **[New field]** menu, add new fields. To add a new field, you need to specify **[Name]** of the field, **[Type]** of the data (from the dropdown

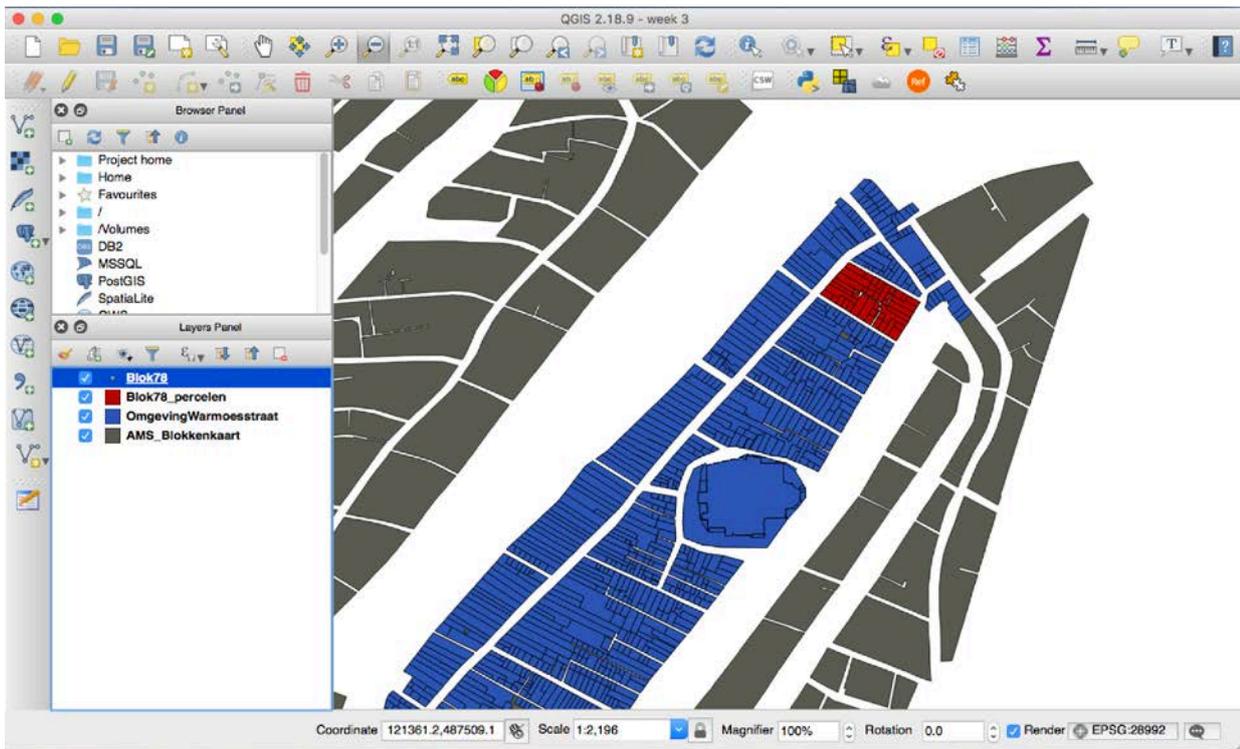
menu), [**Length**] of the data and [**Precision**] if it needs decimals. When finish one specification, click [**Add to field list**] (the example below shows a specification of *huurwaarde* field while the *bouwblok* field is already added:



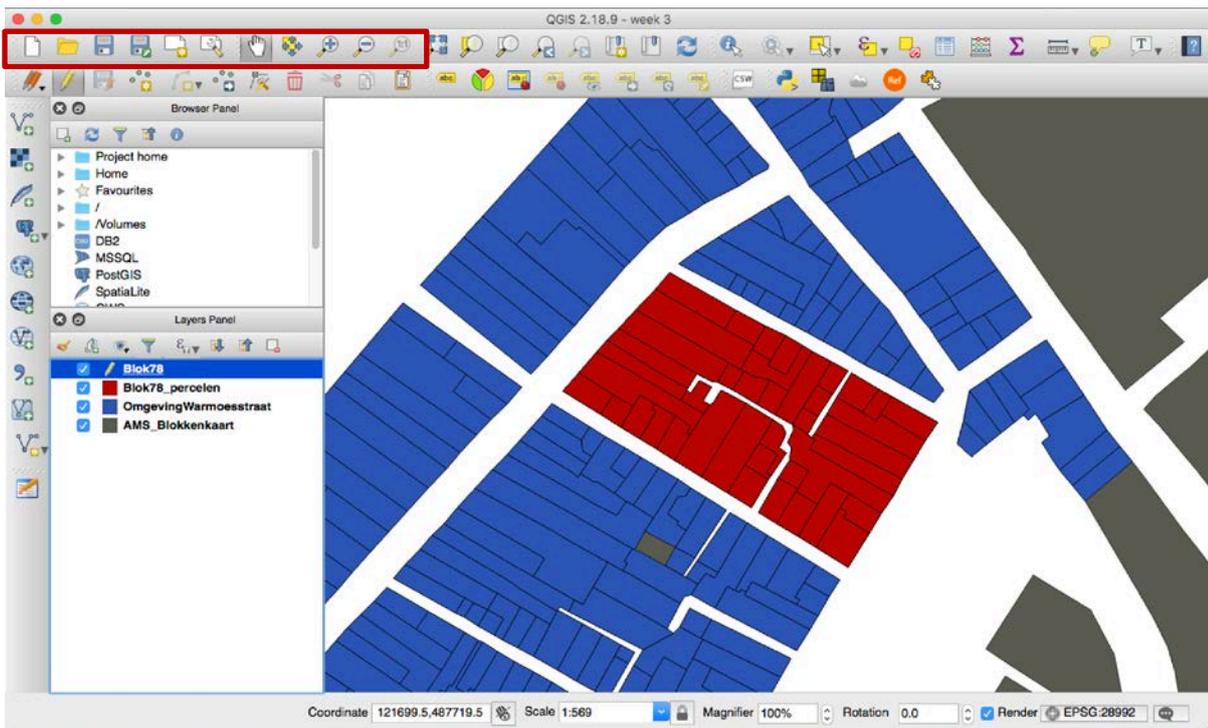
- Add all fields according to the table below. When you finish, click [**OK**] and save this layer with your file name and location of your choice. In this case, I name it [**Blok78**]

Column name	Description	Type	Length
id	id number in the Excel table	Whole number	10
bouwblok	Your block number	Whole number	10
huurwaarde	House value in the 1562 kohier	Decimal number	10, precision 2
beroep	Only in some cases available in the 1562 kohier	Text data	35
eig#huur	Ownership in the 1562 kohier	Text data	10
straatnaam	Street name in 1562 kohier	Text data	25
info	Blank, any notes you want to add	Text data	35

Now a new point layer is added to your map:



- Zoom in to your block and select the newly created point layer (i.e., *Blok 78*) from **[Layers Panel]**
 - Right click *Blok 78* and select **[Toggle Editing]** or click on the *Toggle Editing* button: ; then the icon of your layer will turn to a pencil when you are in this Toggle Editing mode
- (If you can't find this button, check that the *Digitizing Toolbar* is enabled. There should be a check mark next to the **[View] – [Toolbars] – [Digitizing Toolbar]** menu entry.)

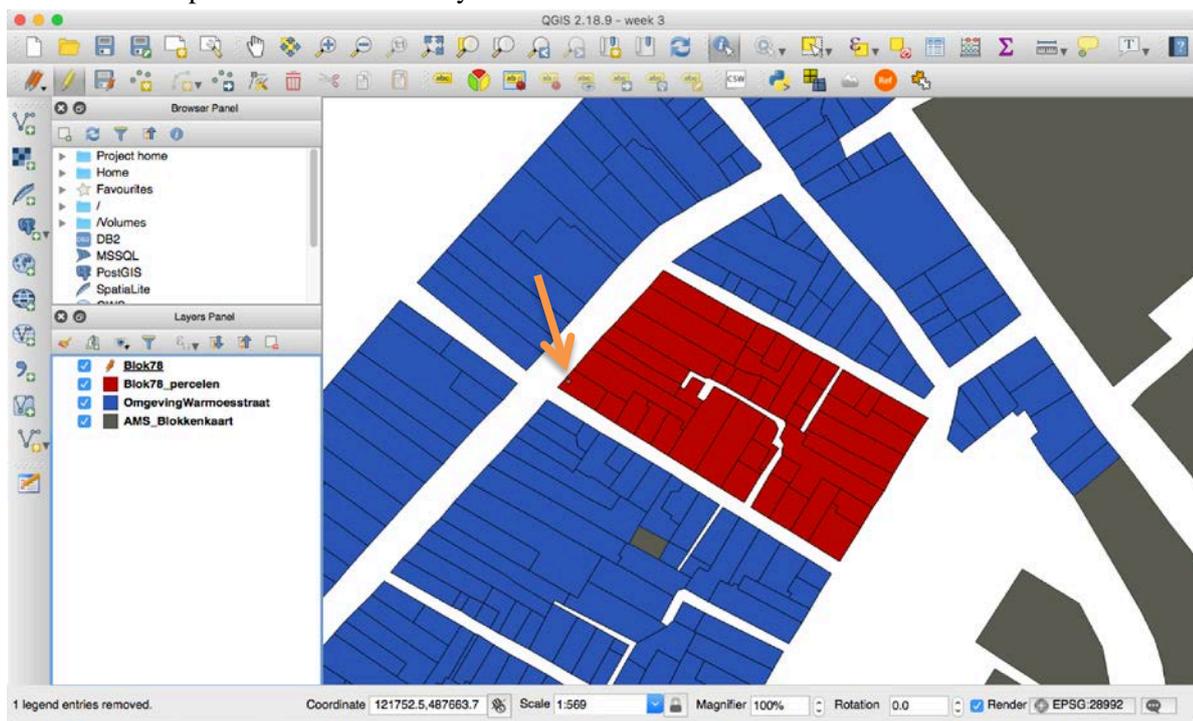


- Click **[Add feature]** button  from *Digitizing Toolbar* and then in the map window, click on a parcel in your block

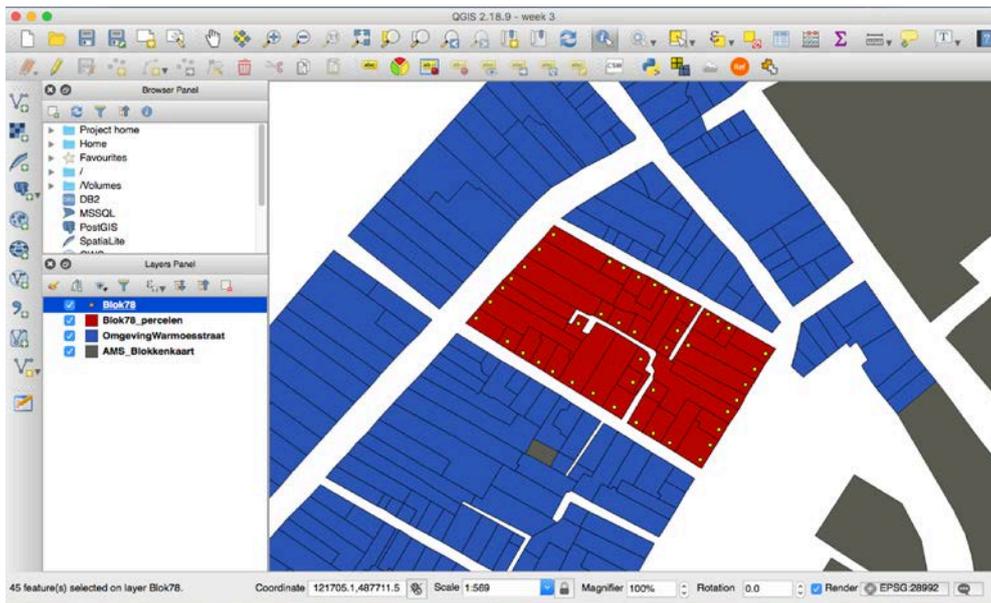
- In the pop-up window, fill in manually the information regarding that parcel, based on your investigation in the Excel database. When you finish, click **[OK]**

id	6249
bouwblok	78
huurwaarde	230
beroep	NULL
eig#huur	NULL
straatnaam	NULL
info	NULL

A data point is added to the layer:



- Repeat this process for all the parcels in your block, when you finish, save your project.

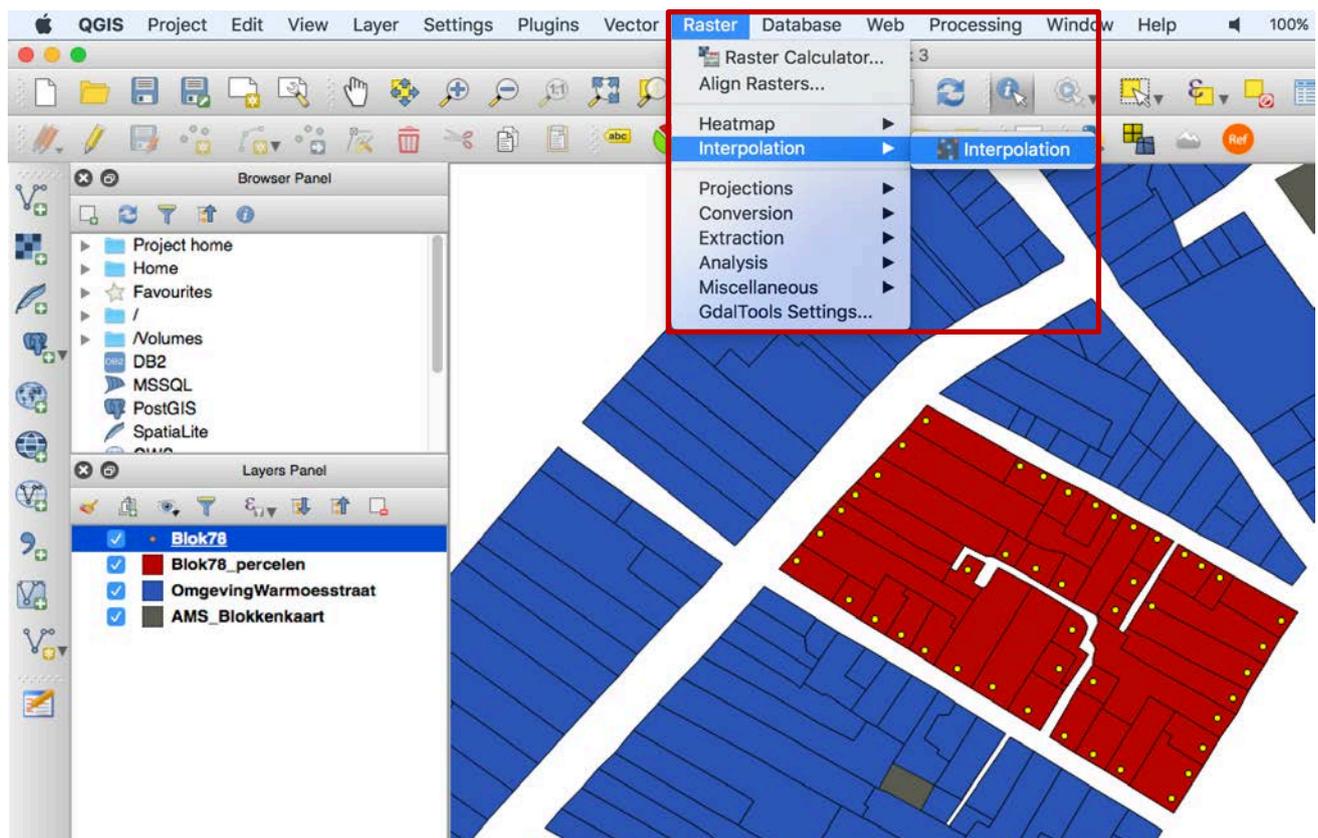


Task 3: Make an interpolation map using the point layer

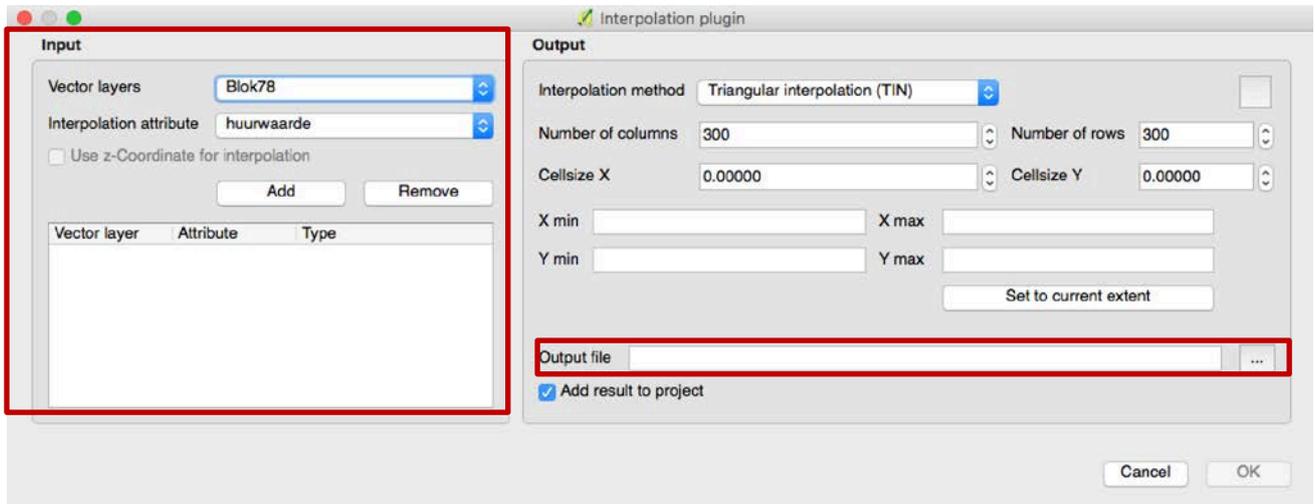
Why do we need an interpolation map? As you may have already encountered, in many cases, historical records are often incomplete or having problem connecting to other sources. Interpolation is an estimation of a value within two known values in a sequence of values and an interpolation map use existing values to project the unknown parts, which may help us understand the historical record and to use them appropriately.

With the point layer you have created in Task 2, here's how to create an interpolation map of your own:

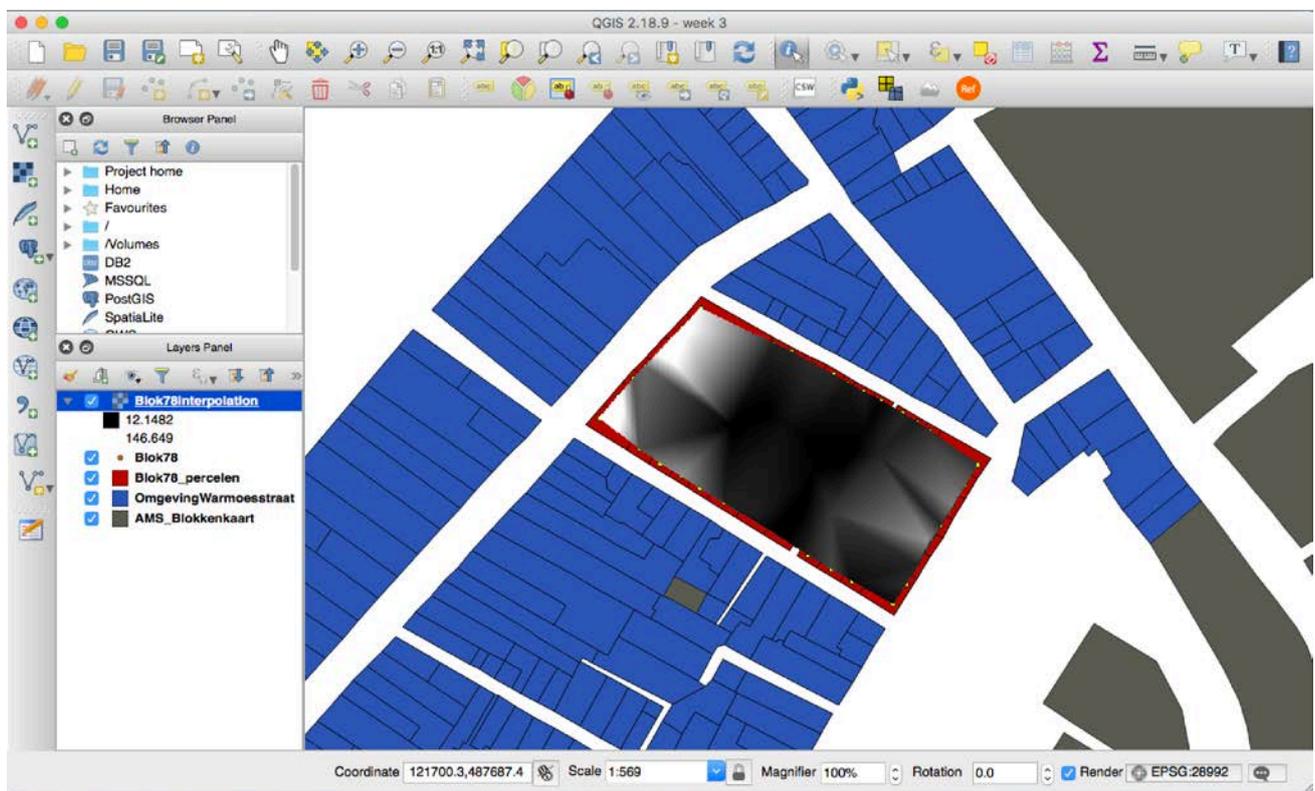
- Go to **[Raster] – [Interpolation] – [Interpolation]**



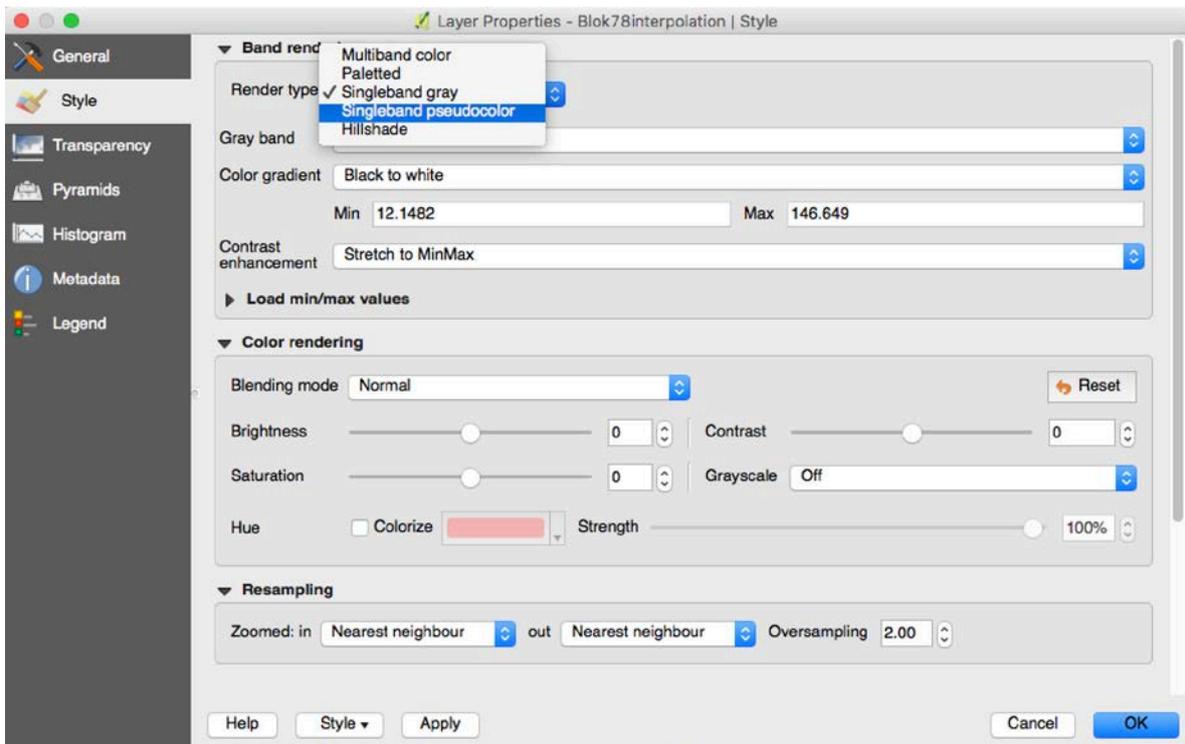
- In the pop-up window:
 - In the **[Input]** menu, select your point layer in **[Vector layers]**, and use *huurwaarde* as **[Interpolation attribute]**, then click **[Add]**
 - In the **[Output]** menu, you just need to specify the output name (in this case *Blok78interpolation*) and location



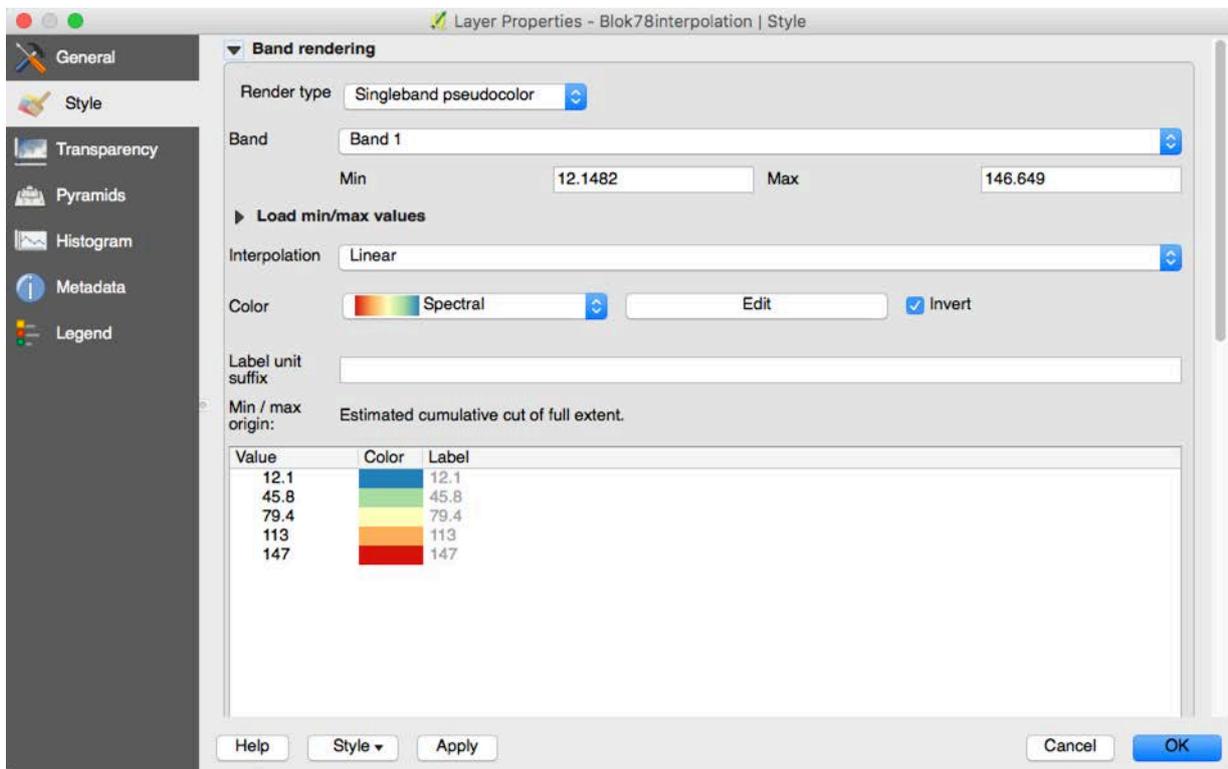
- When you finish, click **[OK]** and you will see a layer look like this:



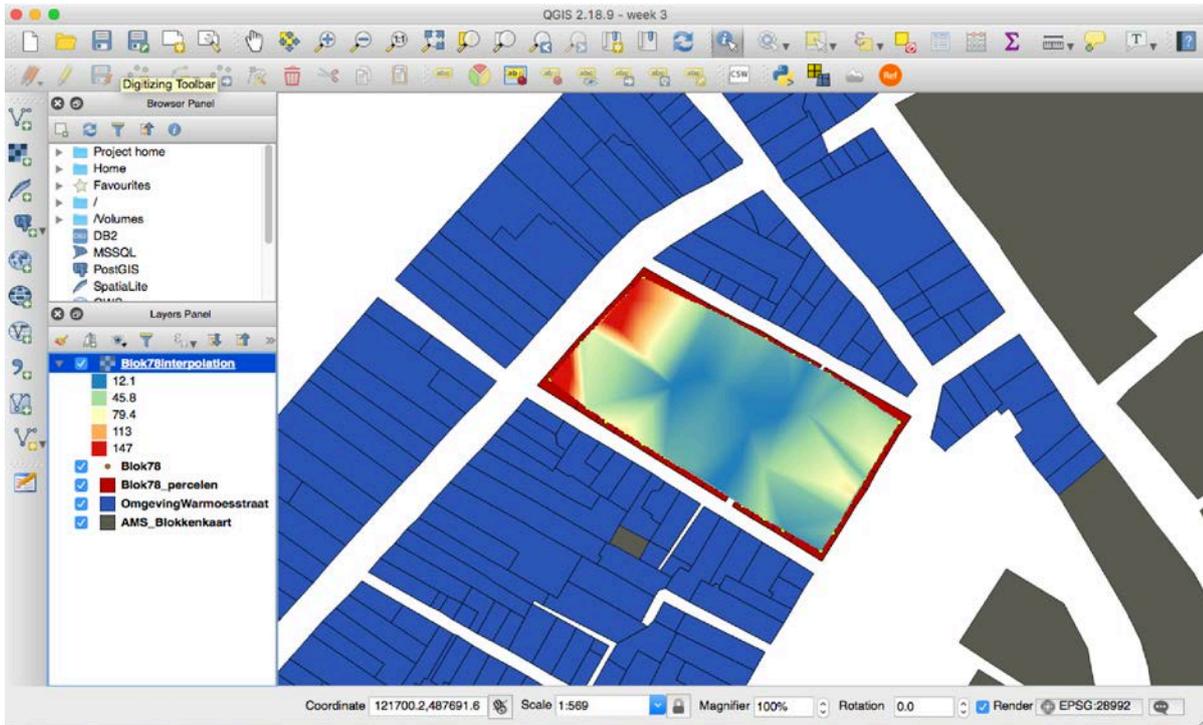
- In order to change the style of this interpolation layer, go to **[Layer Panel]** and double click on the layer's name
- In the pop-up **[Layer Properties]** window, click **[Style]** from the left list
- On the **[Style]** page, go to **[Render type]** and choose the **[Singleband pseudocolor]** option from the dropdown menu



- In the [Color] menu, select [Spectral] and check the [Invert] box – click [OK] when you finish



Your interpolation map will look like this:



[Questions] What can you learn from this interpolation map? Will it help you to reconsider your original assignment of the kohier record and the cadastral parcels? If so, what change you would like to make and why?