



Name: Hidayat Ullah Shah

ID: 7743

Section: (C)

Subject: GIS Mini Report

Submitted to: Engr. Hamza Mustafa

Assignment / Final Paper

Dated: 7 July 2020

**IQRA NATIONAL UNIVERSITY**

**PESHAWAR**

# Summary

This report include how I picked out data of my village and then how I geo-referenced it with respect to Global Co-ordinate system. For this purpose, I have used “Google Earth” and “QGIS Software”. In this project, I have shown different types of buildings and land classification according to its use.

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## Introduction:

KARAK is the district of Khyber Pakhtunkhwa which is 123 km from Peshawar on the main Indus Highway between Peshawar and Karachi. KARAK is established as a separate district July 1, 1982.

The district of KARAK is administratively sub-divided into three Tehsils.

- (1) Banda Daud Shah.
- (2) Karak.
- (3) Takht-e-Nasrati.

There are total 21 Union Councils in district Karak.

The most important thing, the co-ordinate of my Area is *33,7,12N, 71,5,41E*.

## Nature of the Work:

First, I opened the Google Earth Software and gave “Dabb Sangini” in search menu. It gave me out the satellite imagery of my Area of 2/2/2016, as it’s not so late because it is an urban area and does not suffer changes during this period.

## Searching on the Google Earth:

First, I searched the area and find out co-ordinates od some distinct points and then list them up like:

Locality	x-axes	y-axes
School corner	71.226719	33.134431
House corner	71.227167	33.133931
House corner	71.225723	33.134510
House corner	71.227838	33.134374
House corner	71.226913	33.133360

## Taking the picture:

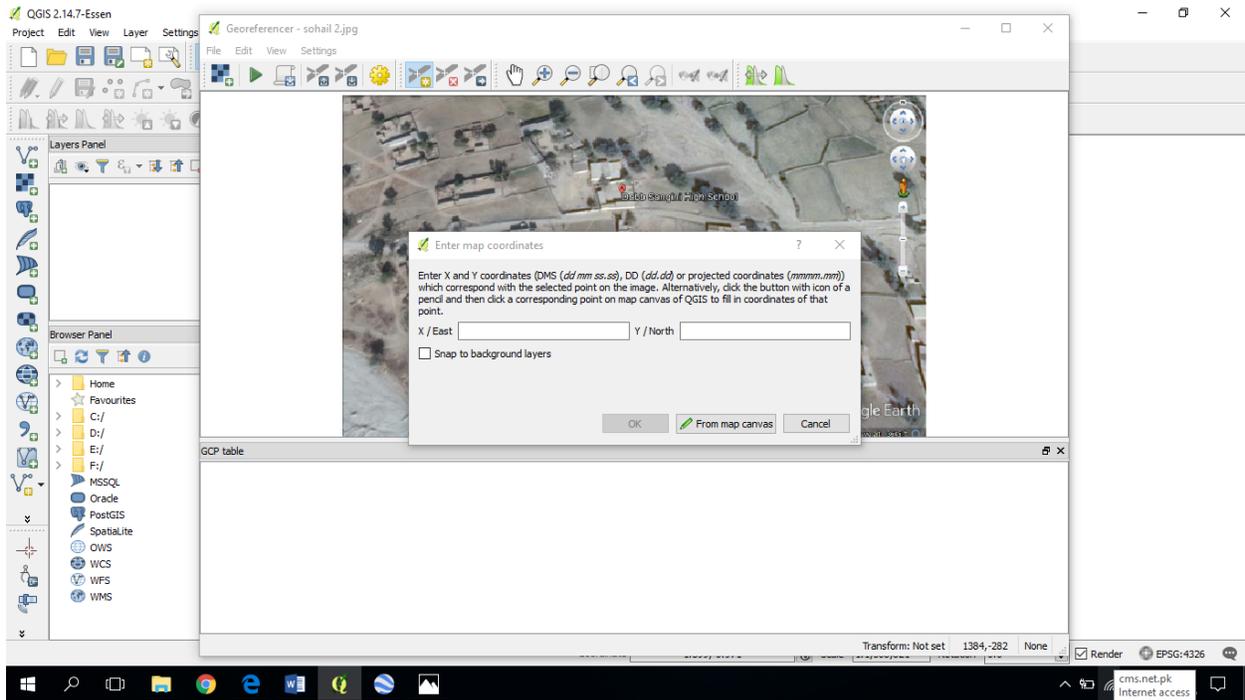
Then I go to the file menu and pick out the snap of area like:



### QGIS software:

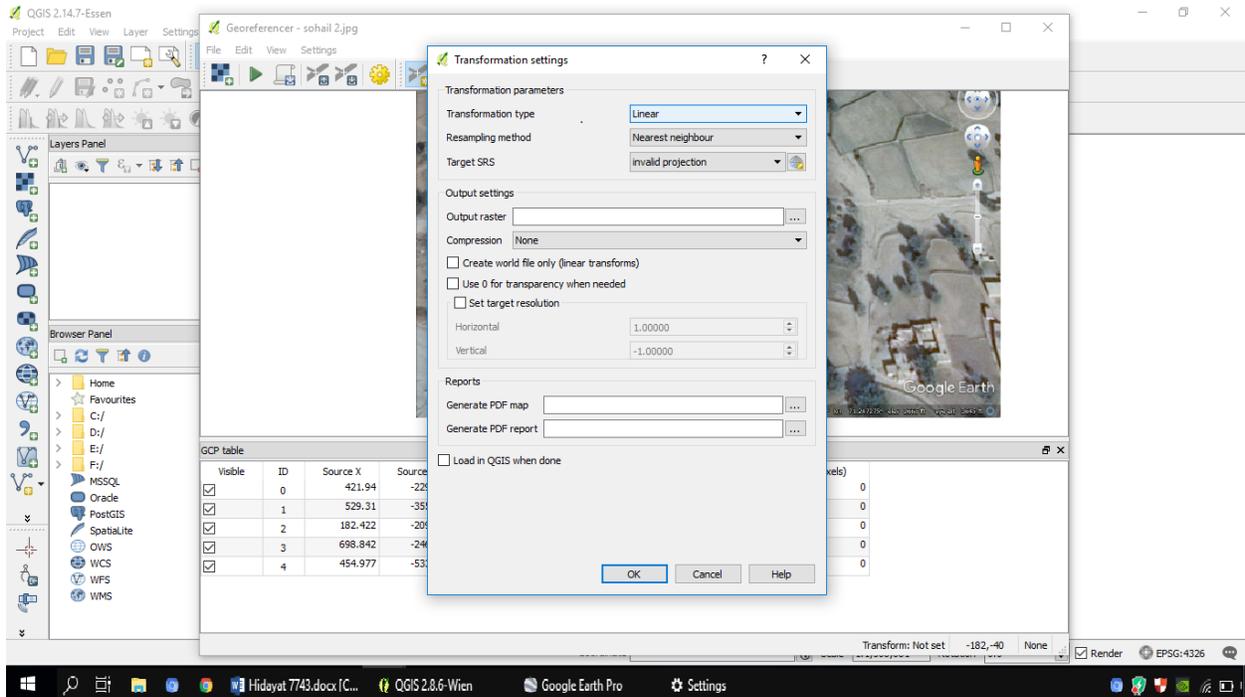
Then I moved to QGIS software and I started to Geo-referenced it. For this first I open the software and check that whether the “geo-referencing” plugin is installed or not. It

was installed by default in my software. I open the georeferencer and added up my data into it and start giving the co-ordinate like:



## Start Geo-Referencing:

After giving the points to the specified locality I started the geo-referencing the raster data from the start button. After pressing that button, it asked about the transformation type which I set up as “Linear:” like:



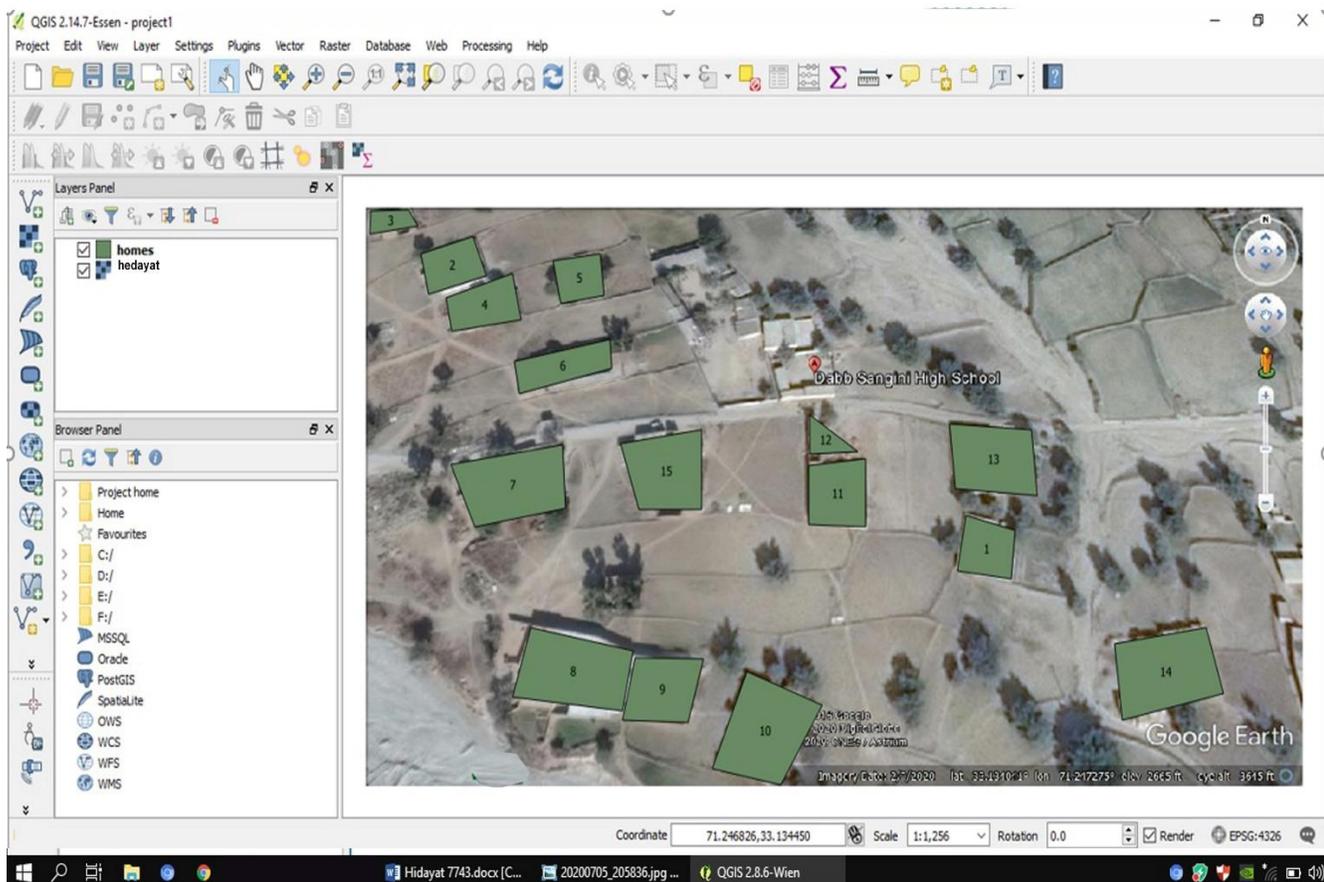
## Working in the main Software:

### Creating shape file:

#### (a) For Homes:

After starting the main software, I created the shape file for the polygon and named it as “Homes”. After that I start making the polygons over the houses and I started from my own house as mentioned in the below diagram. In the same way, I draw many polygons for different houses in my village and then I open the “attribute table” and include the features as:

- (1) The owner’s names.
- (2) Number of the residents.



### (b) For open lands:

Secondly I made another shape file using the same method as for the home shape file. In this shape file I made polygons over the open lands. And then again in the attribute table I included the features like:

- (1) Grassy land.
- (2) Fertility.
- (3) Lawn etc.

### (c) For the Masjid:

Then I made another shape file named as “Masjid”. In this layer, I made polygon over the one Masjid in our area and then show it in attribute table.

- (1) Name of the Masjid.
- (2) Number of Worshippers.

### (d) For point Features:

While adding this layer, I choose point option in the table shown while creating layer. In this layer, I added the features like:

- (1) Tower.
- (2) Trees.

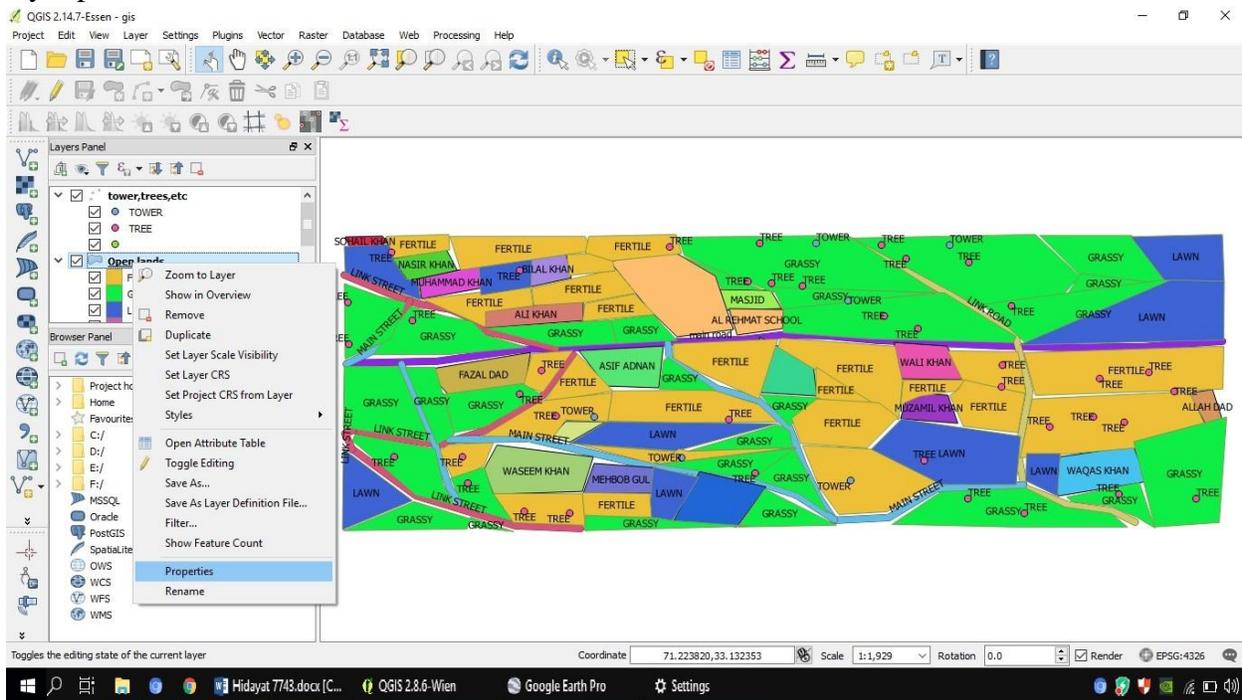
### (e) For Roads and streets:

In this layer, I created file as line instead of the point. After that I showed roads and streets in this layer. Later, I categories this layer on the following basis:

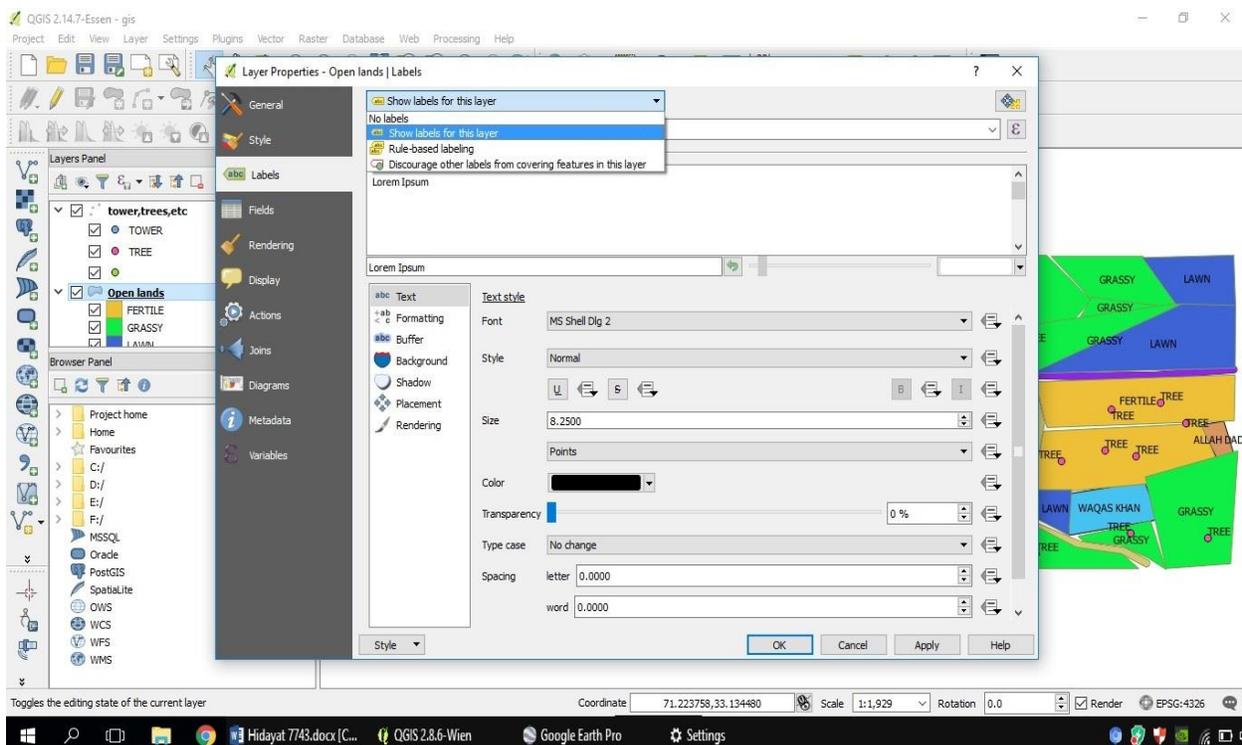
- (1) Main Road.
- (2) Link Road.
- (3) Main Street.
- (4) Link Street.

## Labeling and Style:

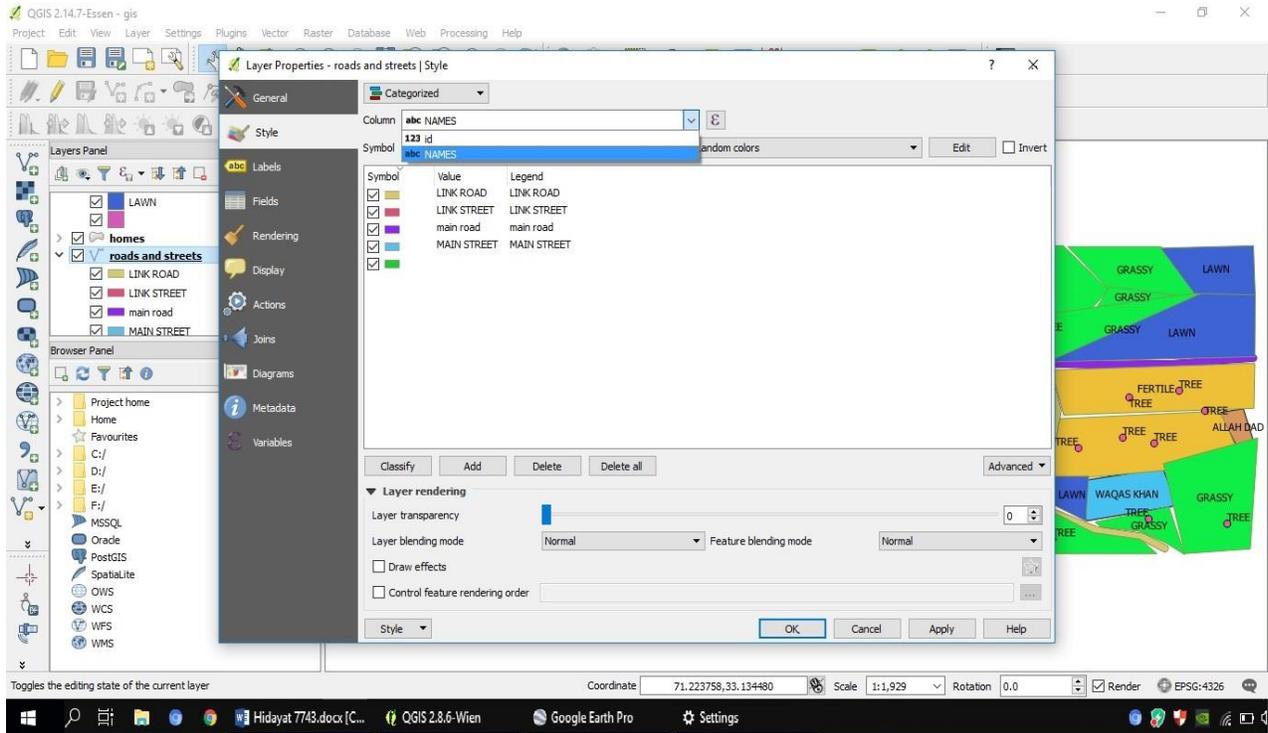
For labeling and style I open “properties” by right clicking on the layer in layer panel. Like:



After that it open the window of labeling and style, in that I labeled it first as:

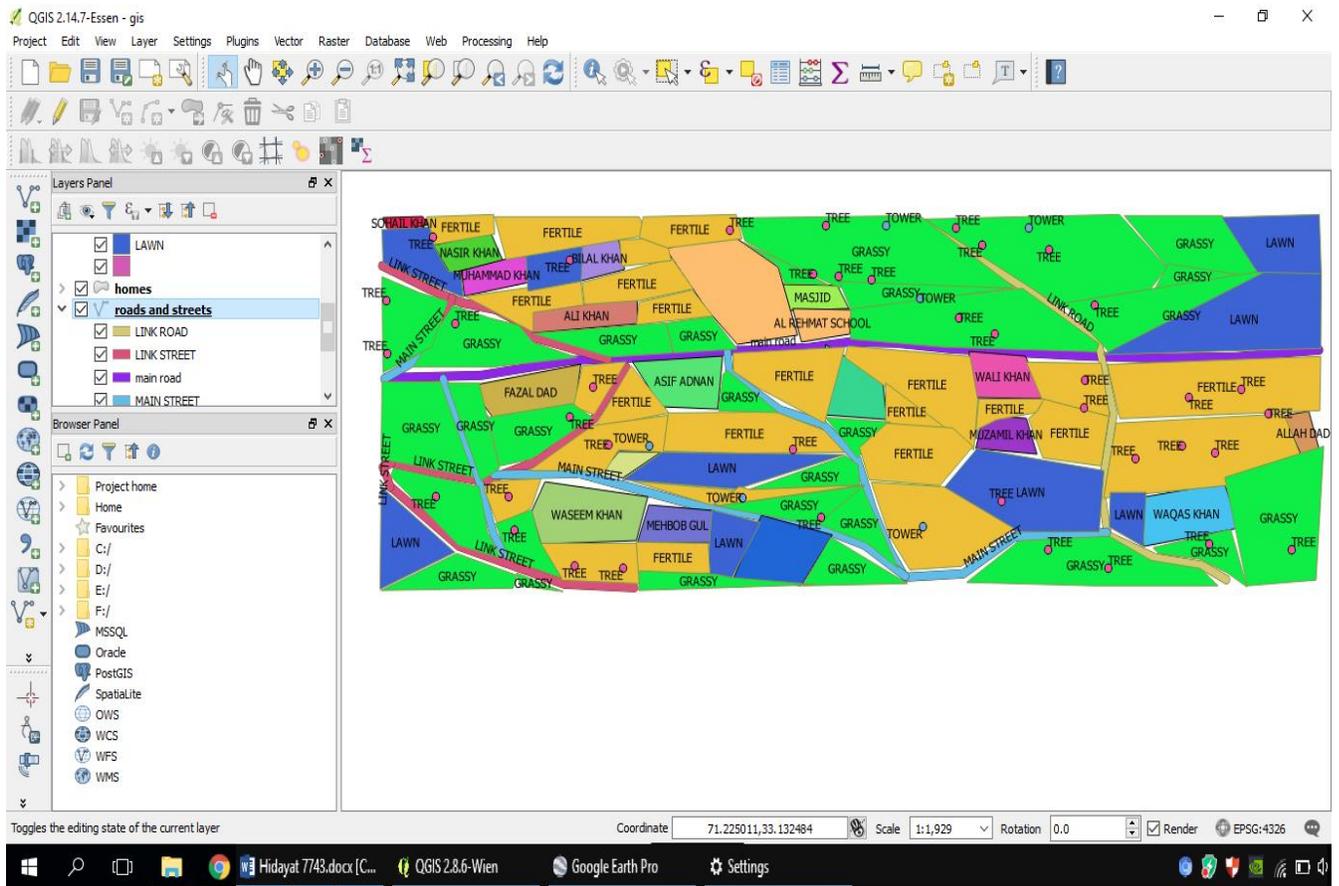


This is done with the labeling and then I style menu I categories the layer according to road type:



## Final Result:

Final output of my whole process is below:



Now you can see the co-ordinates are same as Google Earth is showing.

That mean my project is complete.



The End