

Overview

Google Maps has long been a part of the in-crowd when it comes to online maps. The 2013 release of Google Maps Engine Lite, however, introduced new functionality to the popular interface for casual mappers. This tutorial is a modified version of the Google Maps Engine Lite, as it has been phased out by My Maps, which was first introduced in 2007. Chances are you've used Google Maps to search for a hotel or restaurant, and when you click on one of the placemark results, a callout pops up containing information about that business, including address, contact info, website, pictures, and sometimes even video. The same functionality that businesses and enterprises have been using for years—the ability to create content that gets them found—is now available to everyone through My Maps. This shows users how to get started with My Maps by creating a simple map using the most common functions of the application.

Setting Up

Although My Maps is free, it does require the use of a Google account to access the application. Go to <https://www.google.com/mymaps> and click on **Create a new map**, which will prompt you to sign in if you aren't already. Use your Gmail, Google+, or other related account to sign in.

If you don't have a Google account, you'll need to create one.

To create a Google account, go to the [Create your Google Account](#) page and enter your personal information. Note that you can choose to use a current (non-Google) email for your username rather than creating a new Gmail address.

For this tutorial, we are going to create a map showing the location of the Waterloo Golf Academy. We will also import a table containing the xy-coordinates of the greens for each of the 9 holes that make up the course. Because this is an overview of the functionality, we will cover the basic methods of map and layer creation. These functions will act as a foundation for creating your own maps in My Maps.

Getting Started

To begin, take a look at the content box in the upper-left corner of the map. This is where the majority of map editing takes place. Here you can give the map a title, open new or existing maps, add layers to your current map, edit layers in your current map, import tables containing location information, and change the base map from the classic Google Map (default base map) to others such as satellite imagery, terrain, and more.

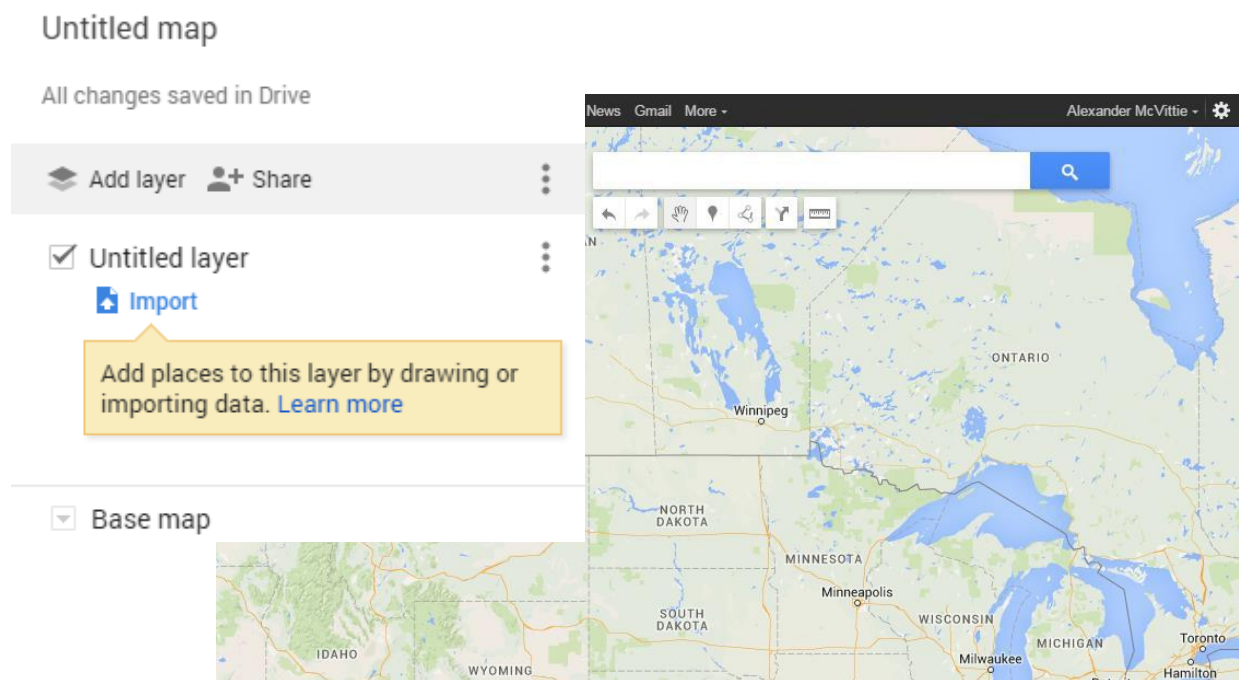


Figure 1 - Default My Maps View

We'll start by adding a place using the Search box at the top of the map. Type **waterloo golf academy** in the box and choose the suggested result located on Wilmot Line in Waterloo, Ontario. This will add a temporary placemark to the map. At this point, let's give the map a title

and description. Click on the words **Untitled map** found on top-left corner and type **Waterloo Golf Academy**. For the description, type “A 9-hole, par 31 course in Waterloo, Ontario.”

Adding Features

Under the search box are several tools, including (from left to right) **Undo, Redo, Select items (Pan), Add marker, Draw a line, Add directions, Measure Distances**. We are going to use the **Draw a line** tool (Figure 2), which also creates polygons when you connect the last point to the first point. Before you begin drawing, try zooming to an extent that shows the entire area you will be drawing. Once you begin to draw your line or polygon, you can pan the map view only by using **arrow keys on the keyboard**.

Referring to the satellite imagery, our goal is to create our own polygon over the golf course. Click the dropdown arrow on the Base map layer and choose Satellite (Figure 2). Click anywhere along the approximated boundary, then continue adding points (vertexes) around the perimeter until you come to the first one. Hover your cursor over it and click to finish the drawing. Name the layer **Course Boundary** and click Save. In the content box, move your cursor over the layer name to reveal the **paint bucket** icon and click on it. This reveals the appearance options for the layer, including the color palette, transparency slider, and border-width slider. Change the color to your choice of green and adjust the transparency and border width to your liking.

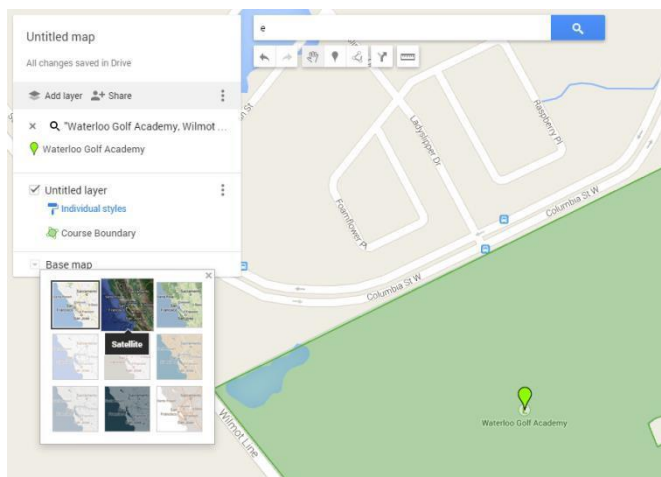


Figure 2 - Adding Course Boundary Polygon

Since the location of the placemark does not cover any of the golf holes, we will have to add in a new data which displays all of the holes within the Waterloo Golf Academy. The first thing we want to do is to create a new layer to store the placemark in. To do this, click the “Add Layer” text underneath the description of your map. You can set this as the active layer by clicking on the layer name. To add the placemark into this new layer, simply drag the Waterloo Golf Academy marker from the content box and drop it onto the new layer.

Now let's make some changes to the layers in the map. For the layer containing the polygon, change the name to **Features** by clicking the three vertical dots and selecting the option "Rename this layer". In a similar manner, change the name of layer containing placemark into **Golf Course**.

The idea behind layer naming is to generalize what is contained in that layer so that you can add other items to the layer that fit within the general category; here, for example, we're naming the polygon layer Features so that we can add other shapes like the outline of the clubhouse. The Golf Course layer can similarly have other courses added to it later, which are then part of a logical grouping within the layer.

At this stage, your map should look similar to the one below.

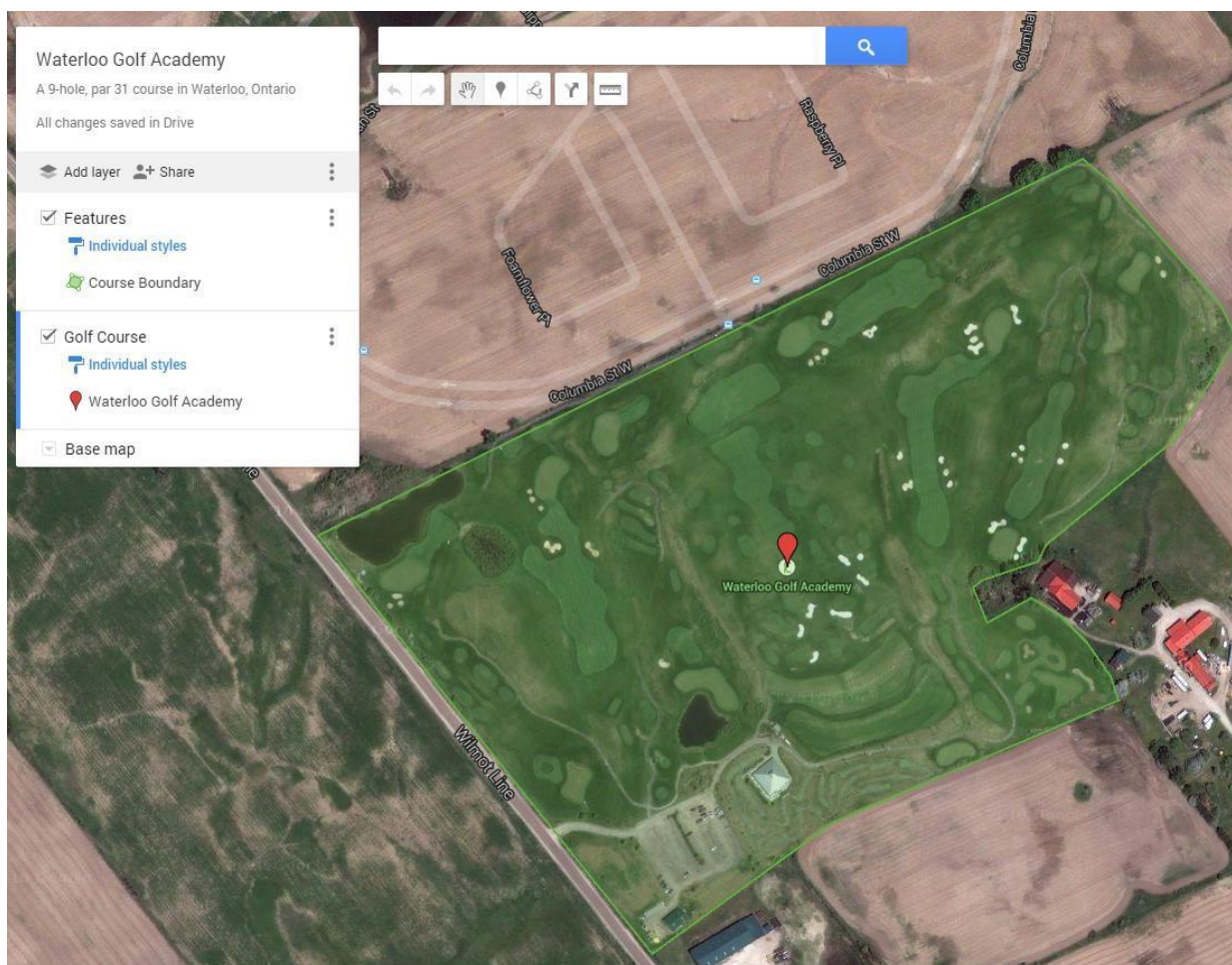


Figure 3 - Waterloo Golf Course Polygon Overlay on Satellite Base Map

We are now going to add some tabular data to the map to plot the locations of the golf holes. Again add a new layer and name it **Holes**. This time, click on "import", and you will see a pop-up screen which gives an option to select a file directly from your computer or from **Google Drive** (Figure 4).

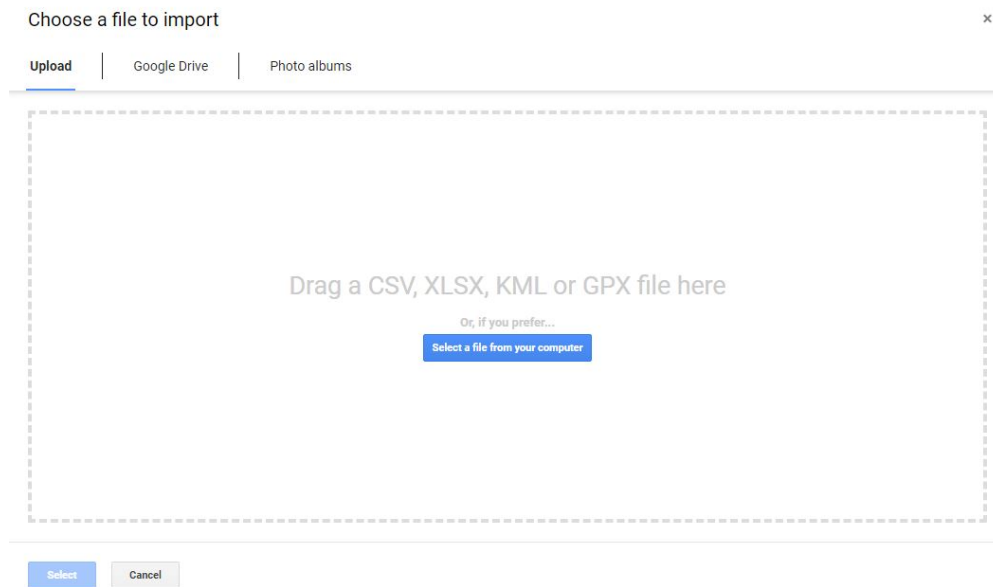
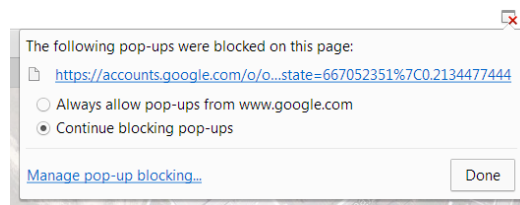


Figure 4 - Choose File to Import Window

Hole No.	Latitude	Longitude
1	43°26'57.51"N	80°35'3.09"W
2	43°26'52.05"N	80°35'2.88"W
3	43°26'58.84"N	80°34'58.35"W
4	43°26'57.16"N	80°35'10.11"W
5	43°26'54.82"N	80°35'16.63"W
6	43°26'51.22"N	80°35'23.60"W
7	43°26'46.08"N	80°35'17.65"W
8	43°26'53.71"N	80°35'18.61"W
9	43°26'48.64"N	80°35'12.94"W

The spreadsheet containing the following data can be found within the tutorial package.



*Note: Depending on your browser, you may need to **enable popups** in order to add the spreadsheet to the map.*

A popup appears on the screen showing the columns identified in your spreadsheet. By default, Latitude and Longitude should be selected to match those import options. Click Continue and choose Hole No. as your column for your marker titles. Now click Finish.

The locations are imported as markers on the map. Since the markers are all of same color, we can't easily differentiate the course location from the holes, so let's change the color of the **Waterloo Golf Academy** marker by clicking on the paint bucket next to the marker name.

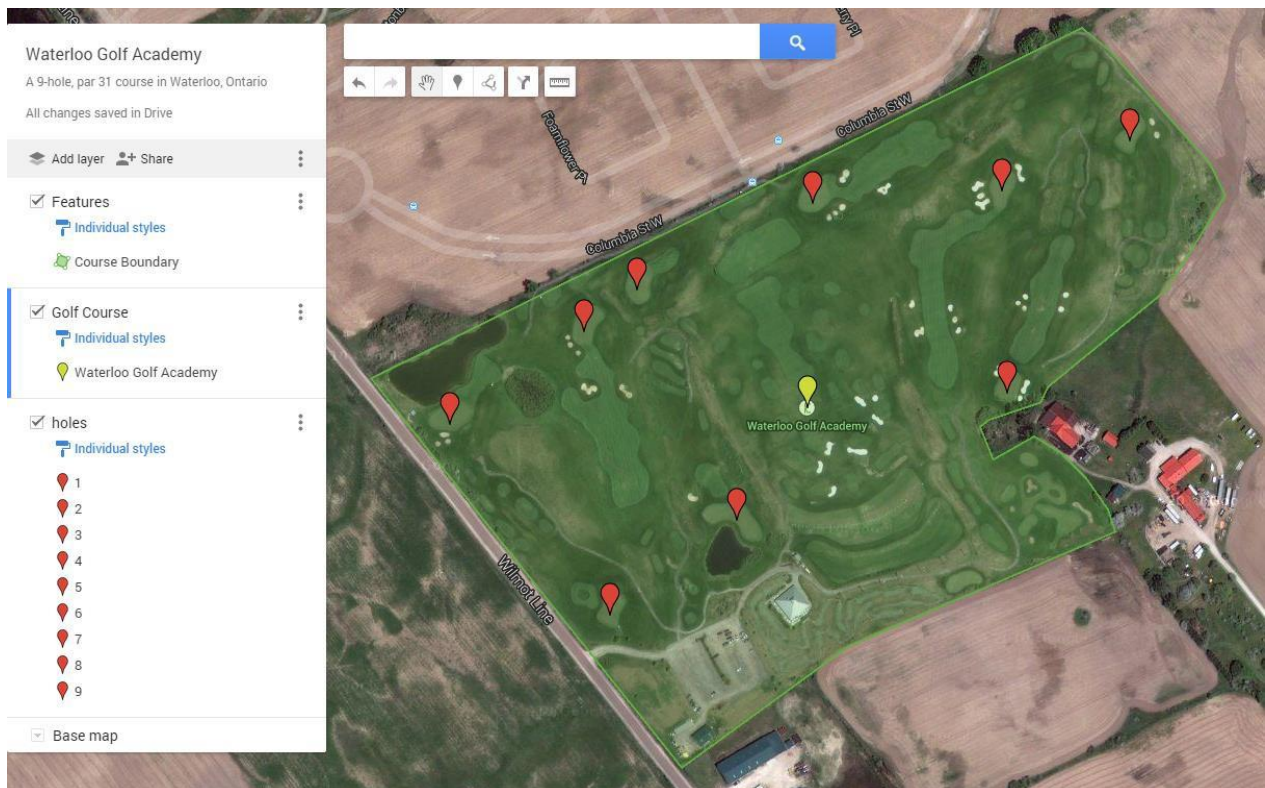


Figure 5 - Holes Imported from CSV Spreadsheet

Now, to make the fairways clearer, we will add some lines to the **Features** layer. Making sure it is the active layer (blue bar on the left edge), click on the **Draw a line** tool and add lines as you see in the image below and name them **Fairway** followed by the corresponding hole.

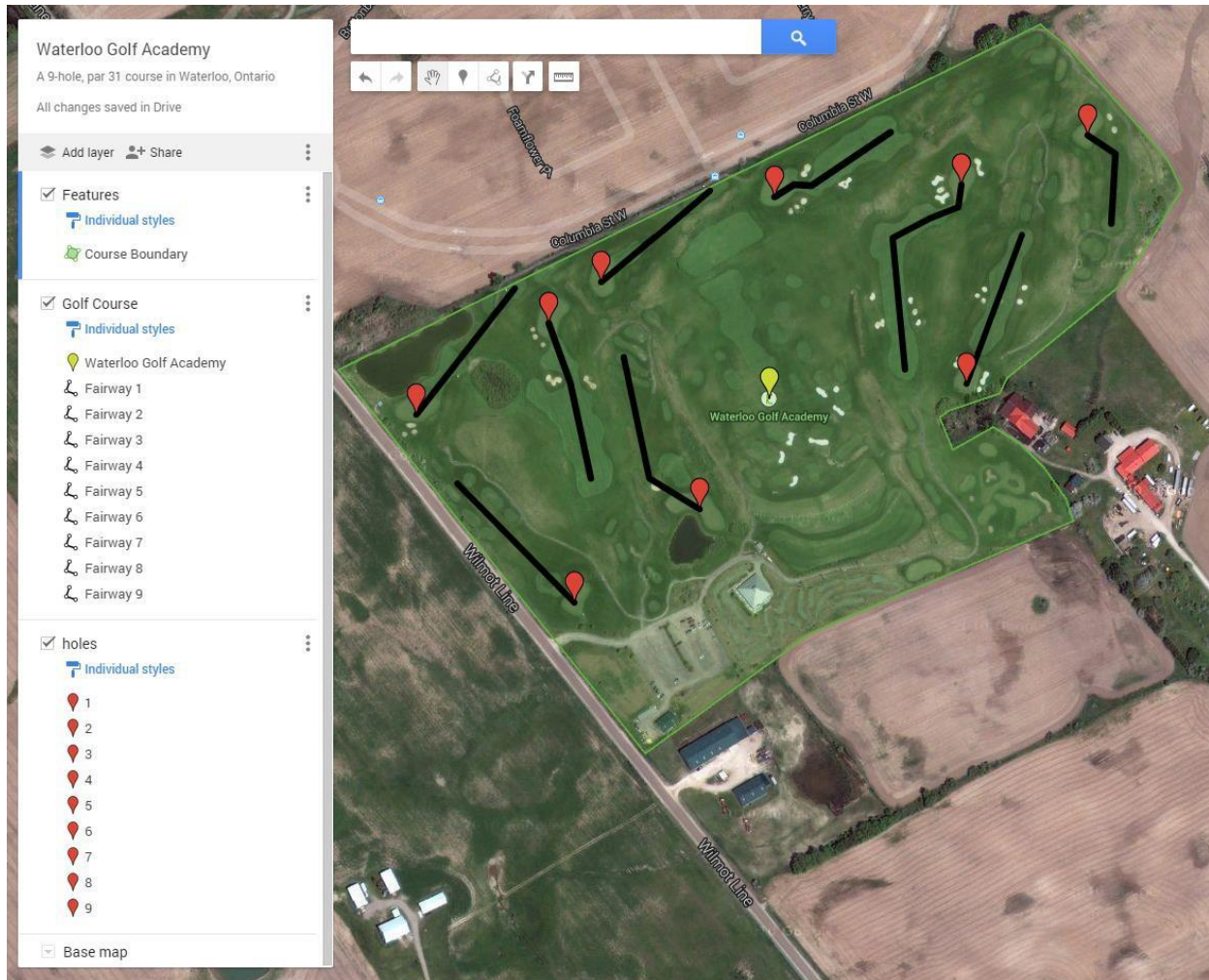


Figure 6 - Fairway Line Features Addition

Wrapping Up

You may have noticed as you worked through this exercise that My Maps saves your map automatically as you go. Therefore, there's no need to save changes as you finish up the map. You can, however, continue to add features (perhaps a polygon of the clubhouse or parking lot; or some different colored lines showing the cart paths; or markers showing the tees and their corresponding colors for men's, ladies, etc.). There are lots of options and things you can do with your map. You can even add directions if you're sharing it with a friend who has never been there before. When your map is ready, click the Share option that is next to the Add Layer feature.

In the **Sharing settings** popup, there are several options available for sharing, each with different levels of privacy control. If you have set up sharing with specific people using the **Invite people** box, you can copy the **Link to share**, which contains a URL that makes the map accessible to collaborators (i.e. those people you have invited to view or edit your map).

Another option is to **Share link via** email or social media, which includes Google+, Facebook, and Twitter. If you want the map to be visible to anyone, you can change the **Who has access** settings to **Public on the web**. Additionally, in the tab next to the Invite People bar, you can change the level of interaction other people can have with your maps, such as **can edit or can view**. You can also prevent editors from changing access and adding new people by selecting that option under **Owner settings**.

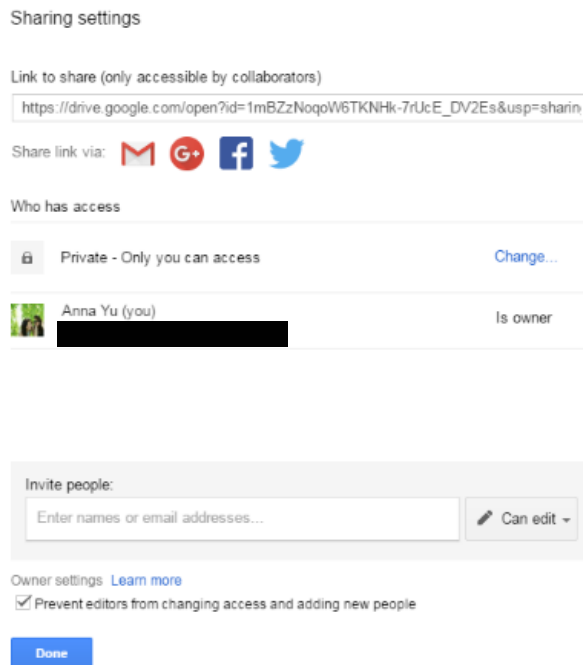


Figure 7 - Sharing Settings Pop-up

If you wish to only share a map with people once your product is done, you can also choose to export the map as KML or print the map. These options are available on the three vertical dot menu access beside the Share text.

The key to this application is using it as much as possible. The more you use it, the easier and more intuitive it all becomes. Happy mapping!

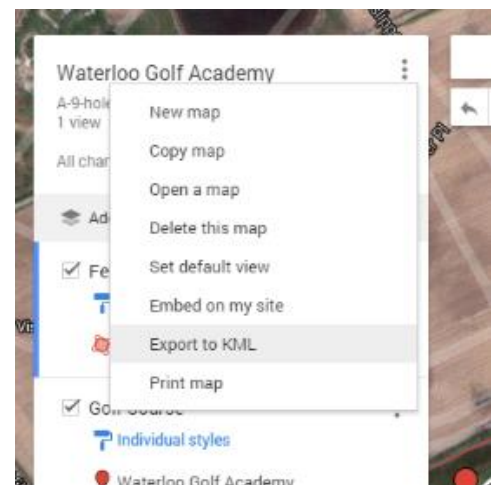


Figure 8 - Export to KML