

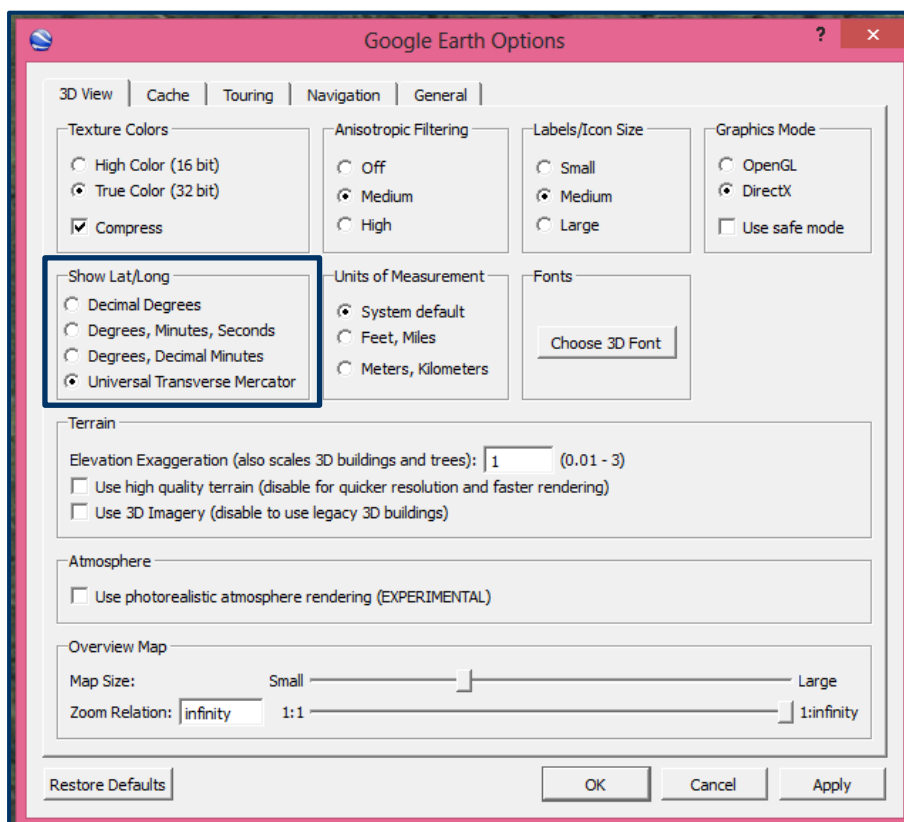
Create Satellite Image, Draw Maps

1. The goal

Using Google Earth, we want to create and import a background file into our Adviser program. From there, we will be creating paddock boundaries. The accuracy of these images and the correct alignment of polygons and background imagery depend on user precision matching Reference Points between Google Earth and Adviser, and correct co-ordinate transference. Let's get going!

2. Getting Google Earth Ready

To ensure that Google Earth behaves as we require during our Mapping, we need to ensure that the settings are correct. Open the program and ensure that the program is ready by completing steps below:



1. Left click on Tools from top toolbar
2. Left click on Options
3. Change "Show Lat/Long" in 3D View tab to Universal Transverse Mercator (shown above)
4. Click OK
5. Left click on View from top toolbar
6. Ensure that Tour Guide is not ticked, Left Click to untick if required

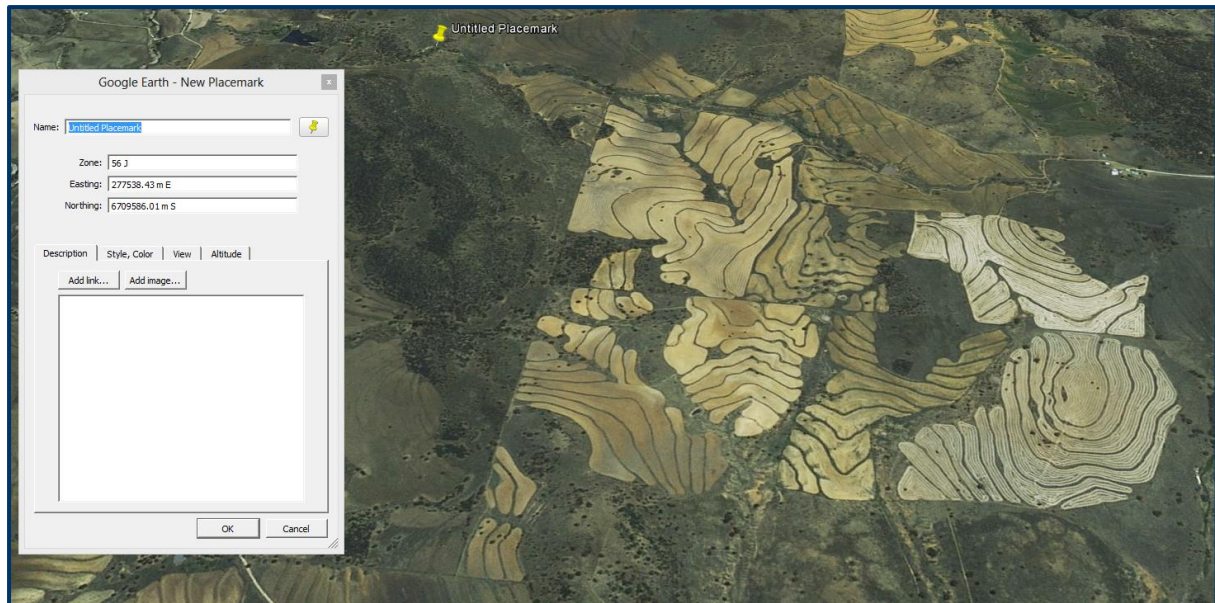
3. Find your Farm

Google Earth is all fired up and ready to go! First, we need to find the area that you want to map. Use the search function of Google Earth, or keep zooming until you find your location.

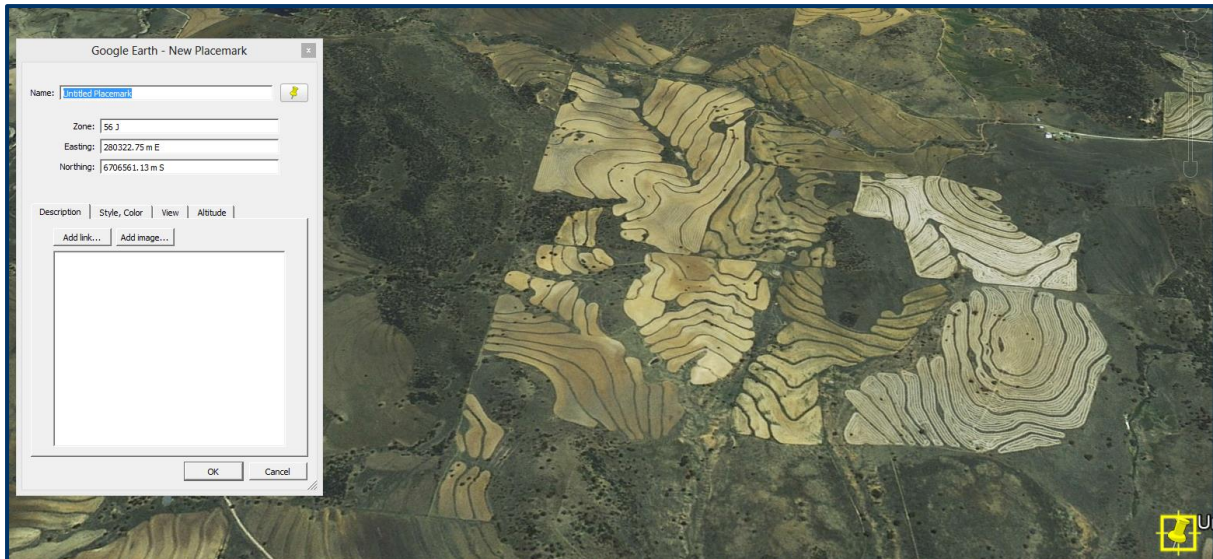
1. Zoom in as much as possible so whole farm is on screen

4. Establish co-ordinates from Google Earth

These will be used to geo-reference your map within the Adviser program.



1. Right click under Places on left
2. Left click Add
3. Left click Placemark
4. Move Placemark to a clear point on or near top left corner of your farm- Reference Point 1
 - a. Make this a place that you can find on the map again, for example, a distinctive tree or shed. The object here is to get two reference points as far from each other as possible, both horizontally and vertically
 - b. Zoom in as much as possible for accuracy
5. Record Easting and Northing (will be shown as Southing in Google Earth) points, with the title Reference Point 1 including all decimal points
 - a. For example: Reference Point 1: Easting= 262884.36, Northing = 6694673.35
 - b. Zoom in as much as possible for accuracy
6. Record Zone information



7. Move Placemark to a clear point on or near the bottom right corner of your farm, Reference Point 2. This should be as far away from Ref Point 1 as possible, vertically and horizontally
8. Record Easting and Northing points, with the title Reference Point 2 including all decimal points
 - a. For example: Reference Point 2: Easting = 263919.33, Northing = 6693606.15
9. Record Zone information if different from initial
10. Click Cancel on Placemark

We are now ready to save this background image. Snipping Tool can be used for this, or the image can be saved through Google Earth.

5. Output image from Google Earth

Image can be saved in a multitude of different ways. A couple of these are listed below for your convenience.

5.1 Use Snipping Tool to save image

“Snipping Tool” is a program that will be found on most computers, and allows the user to take a cropped picture of their screen to save.

1. Open “Snipping Tool”
 - a. Click Start Menu
 - b. Type in “Snipping”
 - c. Double click on program to open
2. Click “New” in Snipping Tool
3. Ensuring that entire farm and Reference Points are contained, draw rectangle around required area
4. When Snip opens, check that area is complete
5. Click File
6. Click Save As

7. Ensure file type JPEG or BMP
8. Choose location for “Background image”
 - a. Suggested: Documents\Back Paddock Company\Adviser\Maps
9. Type in appropriate name for image
 - a. For example, Background Farm1
10. Click Save

5.2 Save through Google Earth

This image can be saved through your Google Earth program by following the steps below:



1. Left click on File
2. Left click on Save
3. Left click on Save Image
4. Choose location for “Background image”
 - a. Suggested: Documents\Back Paddock Company\Adviser\Maps
5. Type in appropriate name for image
 - a. For example, Background Farm1
6. Click Save

6. Import and Geo-reference background image

We’re ready to bring this into our Adviser program now.

6.1 First checks, does it look right?

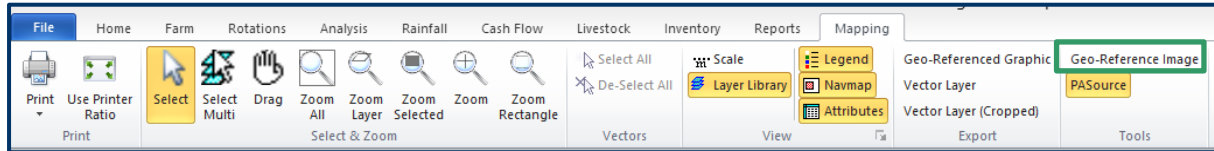
Firstly, we’ll just have a quick look at the image to make sure it looks alright, by following these steps below:

1. Open Adviser software
2. Open required Client File
3. Click on Mapping tab
4. Click on “Open Map Layer from External File” 
5. Navigate to Google Earth image
6. Click Open
 - a. Ensure all looks correct, and image is as zoomed in as possible while still containing all required paddocks and reference points
7. Click Close All Layers to remove map image from screen 
8. Click Yes

6.2 Geo-reference image

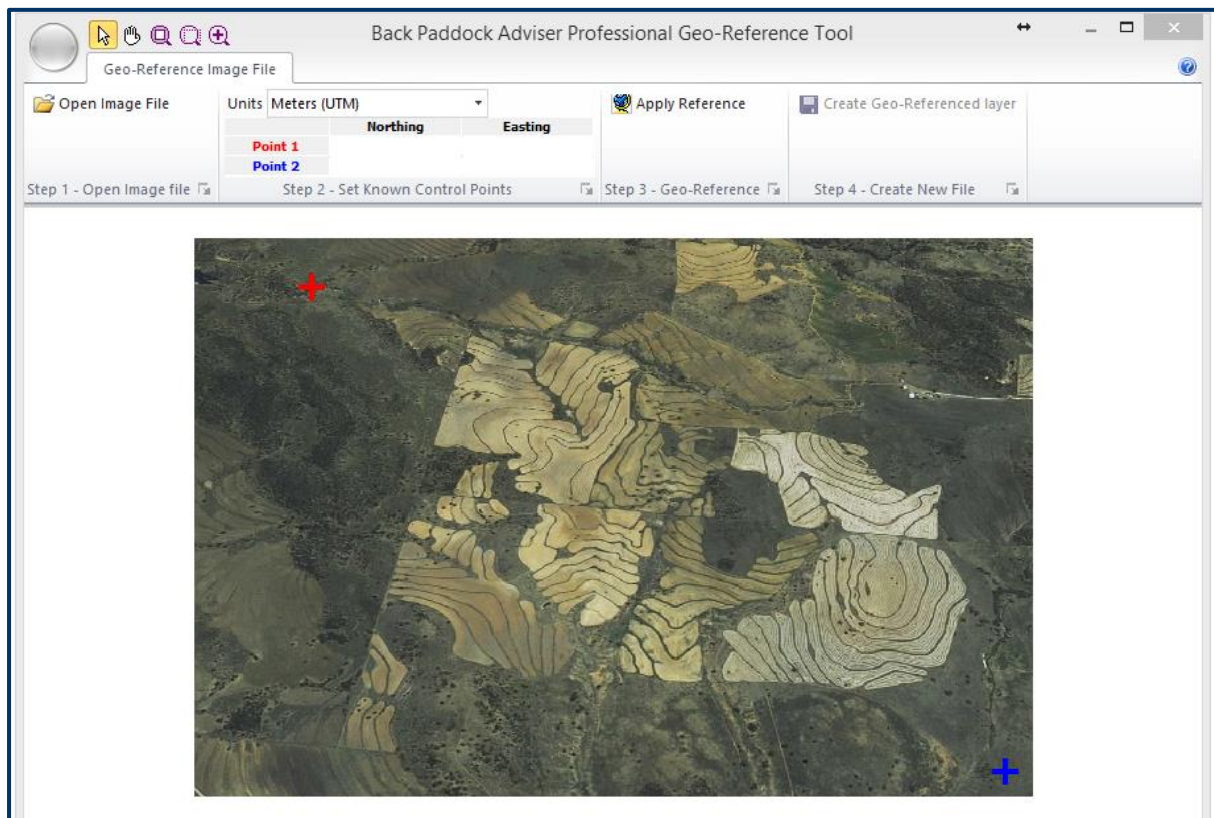
We now need to geo-reference this background image. In very simple terms, we want to make this image “spatially aware” and tell the program where in the world our farm is!

Open it up



1. Click on “Geo-Reference” above Tools in ribbon toolbar
2. Click Open Image File
3. Navigate to Google Earth image (Documents\Back Paddock Company\Adviser\Maps)
4. Left click on image to highlight
5. Click Open
6. Ensure that Units are set to Meters (UTM)

Input reference points



You will see a blue cross and a red cross on your screen. The Red Cross represents Reference Point 1 from Google Earth, while the Blue Cross represents Reference Point 2.

1. Left click on the Red Cross and drag to Reference Point A on your image
 - Hint: Zoom in on your image by clicking on the Magnifying Glass with a Plus sign in it, then clicking above your reference point, dragging your mouse down the screen*
 - a. Click below the point and drag your mouse up to zoom back out
 - b. Click on Select pointer to move Red Cross

2. Enter Reference Point 1 co-ordinates into Northing and Easting points for Point 1 in the ribbon toolbar
3. Enter Reference Point 2 co-ordinates into the Northing and Easting points for Point 2 in the ribbon toolbar
4. Click Apply Reference

You will see now when you move your mouse around the screen; the E and N values will adjust accordingly.

Create layer and save

1. Click Create Geo-Reference layer
2. Rename file to include "Geo" for Geo-referenced
 - a. For example, name your file "BackgroundFarm1_Geo"
3. Save as type JPG
4. Click Save

Your image file is now Geo-referenced, meaning that it can be spatially placed in your Mapping canvas according to its' co-ordinates.




5. Close out of the Open Image page.

Please note: other files may be created as part of the geo-referencing process (for example .tab .jgw .prj files) please do not delete these, they are required.

7. Set as Background Image for Client File

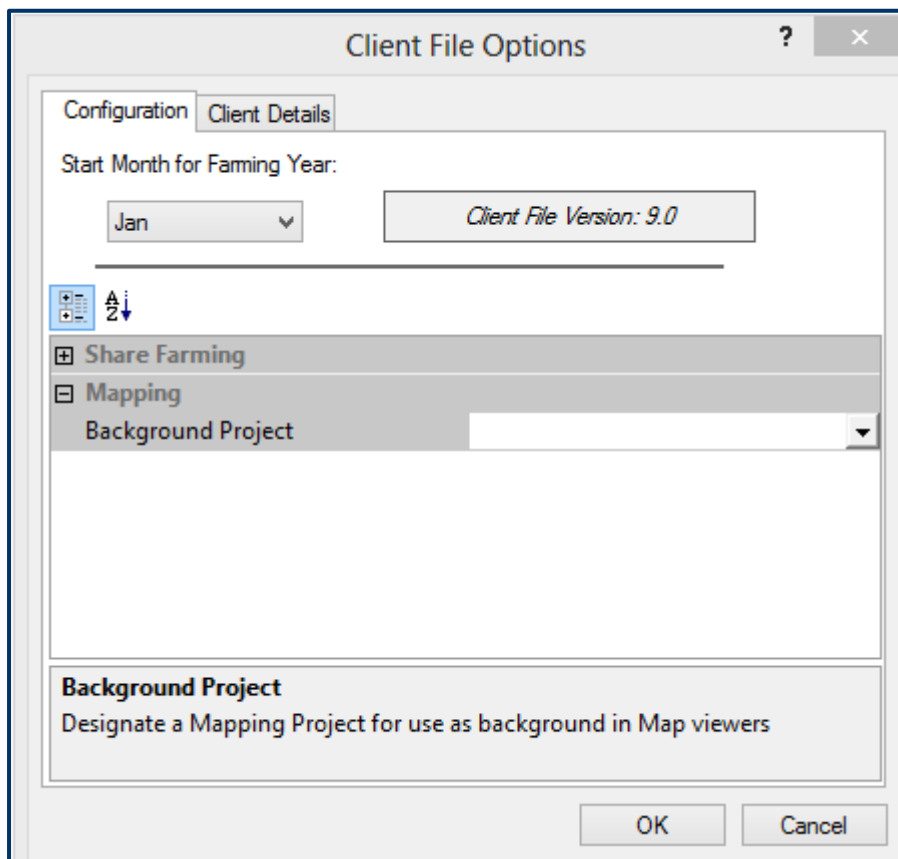
We are now going to re-import the new Geo-referenced file and assign it as the background image for your Client File.

7.1 Import geo-referenced image

1. Click on Open Map Layer from External File 
2. Navigate to your geo-referenced image, click to Open
3. Under the Layer Library, click on Mapping Projects down the bottom 
4. Click on Create New Map Project 
5. Enter name for your new background project
 - a. For example: "Farm1_Background"
6. Click OK

We are now going to make this your Default background image for this Client File.

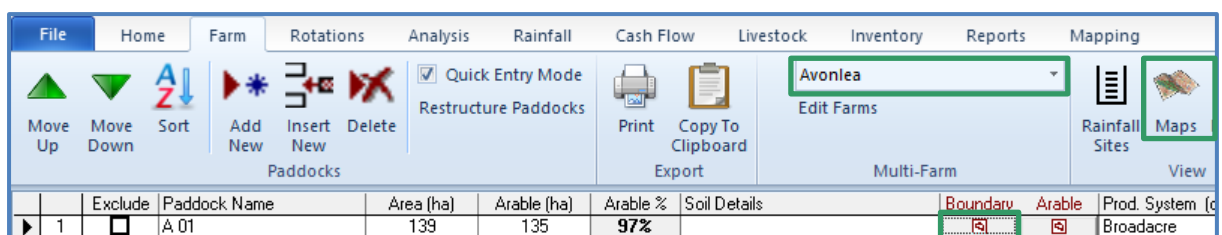
7.2 Set as Background Image



1. Click on File in your Adviser program
2. Click on Info
3. Click Client Options
4. Click in white bar next to Background Project
5. Click on drop down arrow, find newly created Background image
6. Click once to select
7. Click OK

8. Paddock Boundaries

We are now going to create paddock boundaries and assign these to the Paddock Names within your Adviser program. It is also possible to create new Paddocks this way, rather than typing names into the Farm section.



1. Click on Farm tab
2. Select required Farm in drop down box (if multiple farms exist)
3. Click on Maps
4. Click on box under the word Boundary for first paddock
5. Click “Background Project” to bring up newly created image
6. Click Edit tab
7. Maximise image for ease of use
8. Locate boundaries for your first paddock

8.1 Terminology buster

These settings can help make your boundary mapping much more user-friendly!





Snapping: Allows boundary fences to automatically be shared when creating adjacent paddocks



Snap nodes: Allows nodes or corners to be shared

Node numbers: Allows visual representation of ‘node’ order

Auto Area: Allows program to calculate paddock area based on your image – accuracy depends on your accuracy with image and dropping paddock nodes. Click on or off as required. Ensure two decimal points are being used to increase accuracy by selecting 0.00 in the drop down box below. If this is selected, it will override the area data already existing in your client file

8.2 Create Paddock Polygon

1. Zoom in as much as possible for accuracy by selecting one of the two Zoom options from the top ribbon ( or  - personal preference)
2. Click on “Select Mode”  from top toolbar when ready to draw boundaries
3. Click on Create New Polygon above the Edit section of the ribbon toolbar 
4. Click on each corner or node of your paddock, in a clockwise or counter-clockwise direction

A polygon will be created. Press Edit  or Delete  if not correct, or continue if satisfactory. Please note: to make small changes to a polygon it is often much easier if “Snapping” and “Snap Nodes” are turned off.

5. Click on Select Tool to confirm polygon

8.3 Assign Paddock Names to Polygons

1. Click on Select tool 
2. Click on new polygon shape until highlighted

3. Click in Paddock Name bar
 - a. To Add New Paddock:
 - i. Type in required name
 - ii. Click outside of box
 - iii. Click Yes to add to Paddock Master
 - b. To nominate boundary to existing paddock:
 - i. Click on drop down menu next to Paddocks
 - ii. Double click on correct paddock name

If this has been labelled correctly, you will now see a boundary and a Paddock Name in the centre of your new paddock. Continue to Create New Polygons for your remaining paddocks.

Note: If paddocks are adjacent and share boundary fencing, this is a good time to turn "Snap Nodes" and "Snapping" on by ticking in their box.

Tip: If creating a very complex polygon it may end up crossing over itself. If this occurs Clear the created polygon and try creating the shape in the opposite direction.


4. Press Save
5. Click on the round circle and Exit to close

Your paddocks have now been successfully imported, and your Paddock Boundaries created. To view these or print image, follow instructions below:

9. View and Customise

Now that your boundaries have been created successfully, they can be viewed within the program or even printed.


9.1 View boundaries

1. Click on Mapping Tab
2. Click on Show Boundaries 
3. Click on drop down arrow beside this, Show Paddock Names

You should now be able to see your background image, with a Paddock Boundary layer. To adjust the appearance of this including fonts, follow instructions below.

9.2 Customise your Map Layer

The default map settings are nice, but we like to give you a few more options at Back Paddock. Follow instructions below to make your boundaries look the way you want:

1. Click on “Set Layer formatting and properties” 
2. Click on required tabs to make adjustments
 - a. **Layer:** change Name or Legend Name
 - b. **Polygon:** makes changes to the Paddock Area itself
 - c. **Labels:** makes changes to the Paddock Names including Fonts
 - d. **Charts / Rendering / Legend:** change specific settings for manipulating layers, for example a yield layer.

You're all done! All going well you have a good satellite image for your background project. Please feel free to contact us if you require assistance with this process. Our online training sessions can be particularly useful for this.

For more mapping information, please feel free to continue to our website, where specific help sheets can be found on numerous aspects of the program

<http://www.backpaddock.com.au/help-desk/>

Good luck, and have fun!

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