Oz-iTRAIN

Cadsoft Australia and New Zealand

With appreciation to Robert Harbottle for supplying this paper to assist you with the rendering in Envisioneer.

Envisioneer Render Settings

To begin the render process you must select the option "3D Render RealView" from your menu (You must be in a 3D Camera view mode for this option to be activated). The first dialogue box you see is that below.

IMAGE:

Size:

For the initial phase select the default 800x600 or smaller to start. Once you have all your composition and settings correct adjust the size to suite your required pixel sized image. Do all your tests with the smallest practical image size. That is, changing the image size to what you actually require is the very last step before starting the final render.

A good tip is too take your finished pixel size and calculate a size that is proportionally correct, but is still no greater than 800 x 600. This means the render will show if you need to recompose or add to your image before you get too involved in all the other settings. When you change to your required final size the overall composition will not need to be changed.
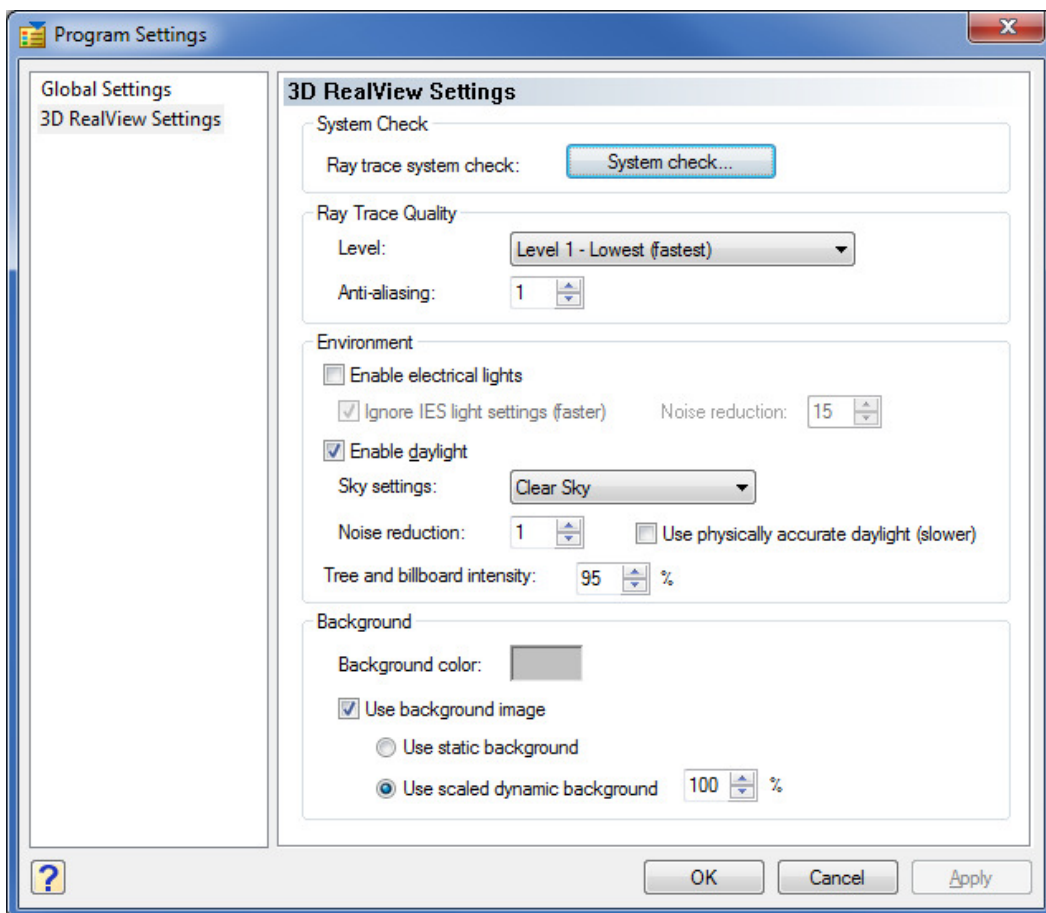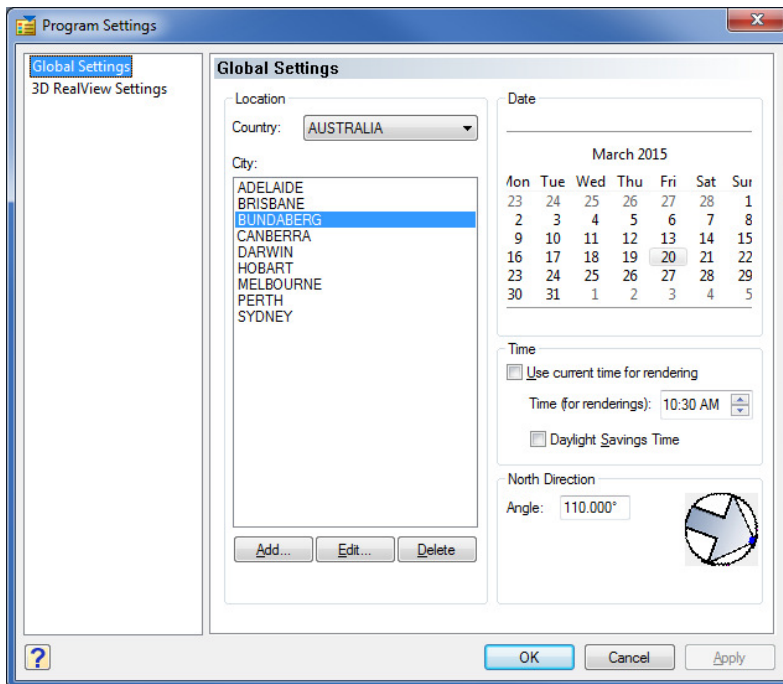
Example of Size adjustments:
Finished size 1920W x 1000H. For a proportional smaller render multiply both the height and width by 40% to give you a test render size of 768w x 400h.
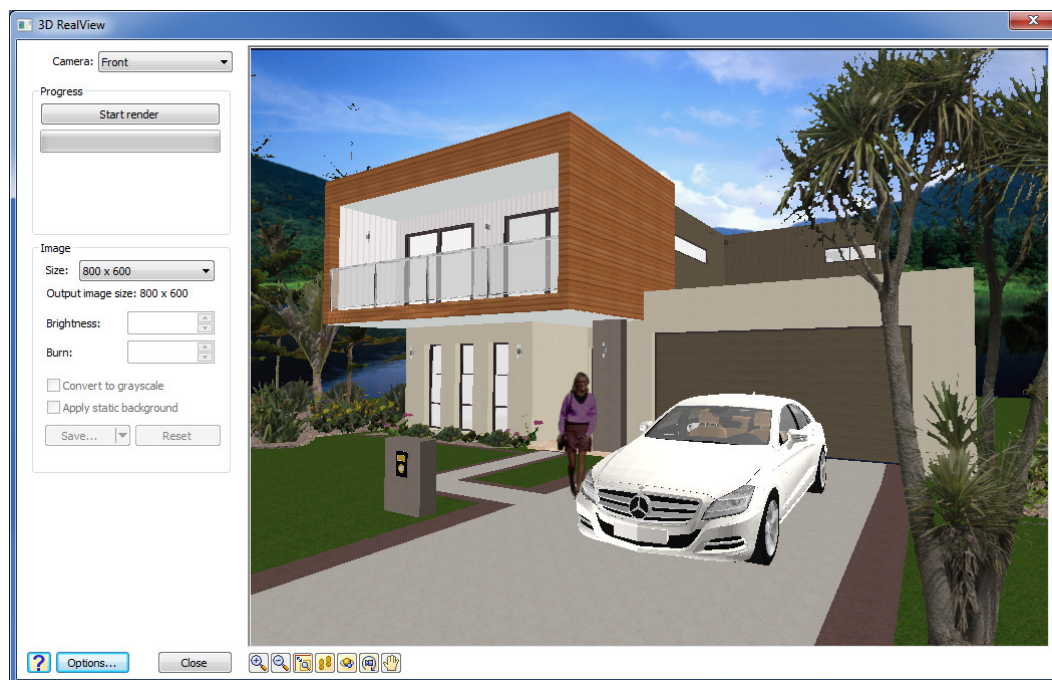
Options:

Click the "options" button and select either the **Global Settings** or **3D RealView** Settings.

RAY TRACE QUALITY:

Levels:

I leave this at Level 1 for test renders so that I can get an idea of what the final render will look like. The thing to remember here is the image that is created at level 1 will not be the best quality and may be pixilated. I will talk about adjusting this later on.

If I am happy with the test render I will then increase the render quality level. This will create a better render but will take longer to complete.

Anti-aliasing:

Again for test renders you can leave this at the lower levels to help increase render times but when you are creating your final image you will want to increase this to level 5 to help smooth out any lines or edges in your render.

ENVIRONMENT

In the **Environment** section there are a couple of different settings that we will look at.

Enable Electrical Lights:

This is as simple as turning your lights on and off with a switch. If you are rendering an interior scene during the day and you want to see how the daylight will affect the scene then you will turn this option off.

Note: You may need to check the "properties" for these elements and the "light" tab to ensure you have sufficient lighting in the element. Most of the standard Catalogue Lights are ok, but if you import a more appropriate light from Sketch-up this are will need some attention.

Ignore IES light settings:

If this option is unchecked it will take into consideration the IES files that are attached to your lights. Once this is turned off it will use the default spot, point or directional light. You can also control the amount of Noise these lights will create. The lower the number the faster it will render but there will be more noise or pixilation in your render.

Enable Daylight:

This option should be displayed for both Exterior and Interior renders, however you can turn it off when rendering an interior scene if you do not or will not see any light on the interior side. You can also turn this off if you are rendering an exterior night scene.

Sky Settings:

There are different options here that will affect the light from the environment. Having a Clear Sky setting will allow the Sun Light to completely cast light over the scene. Having a Partially Cloudy Sky setting will filter the sun out a small amount. Having an Overcast Sky will filter the sun out a larger amount.

Noise Reduction:

The noise reduction will again help in removing the pixilation of the scene when rendered but will affect the rendering time. This should be adjusted the most for final rendered images.

Use Physically Accurate Daylight:

Enabling this option will help in creating a more realistic render as it helps with creating shadows and light in a scene. Turning this option on should be done for final renders as it will increase the rendering time but it will yield a better overall image.

Note: The Global Setting are the underlining settings for this option. If you have your compass set to Zero the shadows cast may not be accurate to the actual orientation of the structure. Other considerations are a) the sun movements from Summer to Winter months (approx. 20 degrees) b) the way the shadows fall from am to pm and c) You may chose to adjust the sun position simply to give you the best light & shadow fall onto your structure.
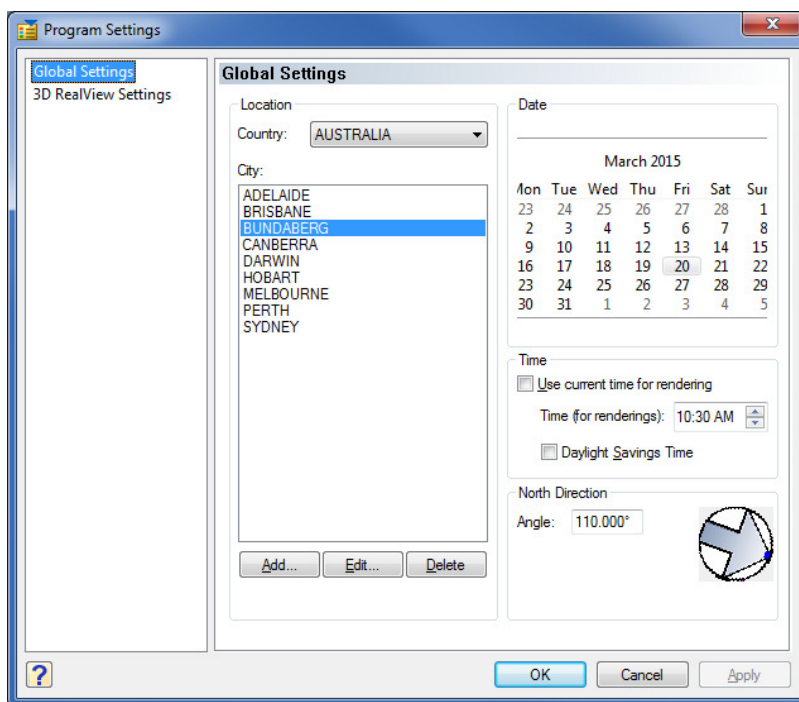
Tree and Billboard Intensity:

This option is used to help increase or reduce the brightness of the trees or billboards.

BACKGROUND

In the **Background** section there are a couple of different sections that we will look at.

Background Color:

This is the color of the background when rendered if you choose not to use the background image. The selected color is also applied to any scene as a way of controlling the overall tone of the scene.

Use Background Image:

When this option is selected you can select either the Use Static Background option or the Use Scaled Dynamic Background.

When an image is used for the Static background it maintains a constant background brightness rather than allowing the brightness to adjust along with the rest of the scene (If you have photographed a background or chosen a particular scene this may be the better setting. The dynamic setting may darken the background and give the render a dirty look). This means that whatever the picture looks like, that is what you are going to see. The light from the scene will not affect the background image.

When an image is used for the Scaled Dynamic background, enabling this option allows the brightness of the background to adjust according to the lighting in the scene. This means that the image itself will be affected by the light from the scene. If you select the "Scaled dynamic background" option you can then adjust the % Scale (Lower number is darker and you can adjust past 100%). This is the degree to which the background

brightness is allowed to adjust when the 'Use scaled dynamic background' option is selected. The higher the value, the more intense the brightness may be.

Texture Intensity:

Under the Materials Properties in the Rendering Effects you will see a Texture Intensity option. If you are rendering a scene and a certain material is too dark or too light or is being washed out by the light in the scene you may need to adjust this option for all the objects using that material. A good example of this would be counter tops or floors. If you render a scene and the counter top or floor is lighter or is changing color then you will want to reduce the Texture intensity down.
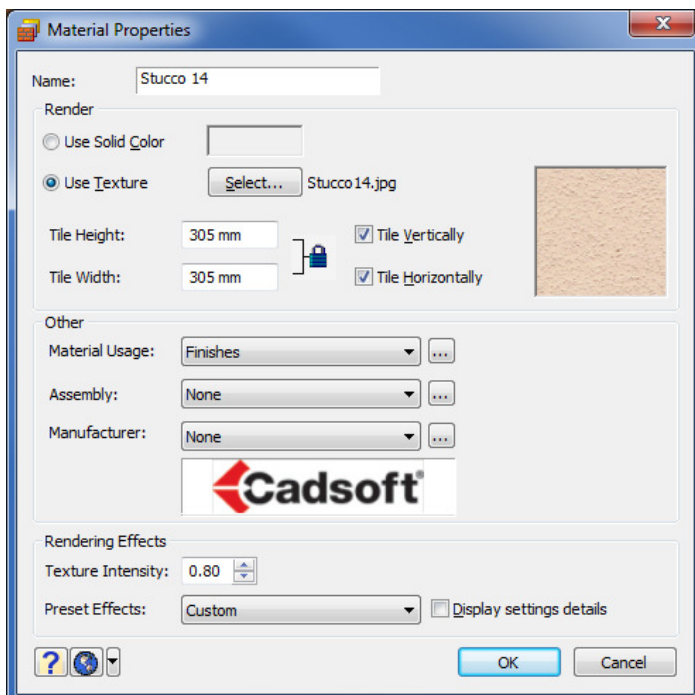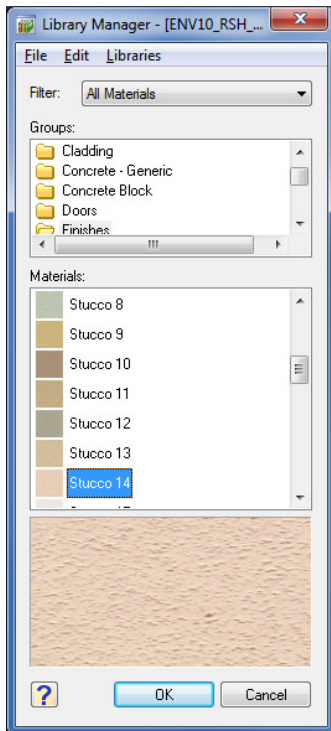
**PROGRAM SETTINGS TO CONSIDER**

Background:

There is both a Day and Night setting. To start it is advisable to select the Day backgrounds and those image plenty of "blue sky and some cloud definition" to start.
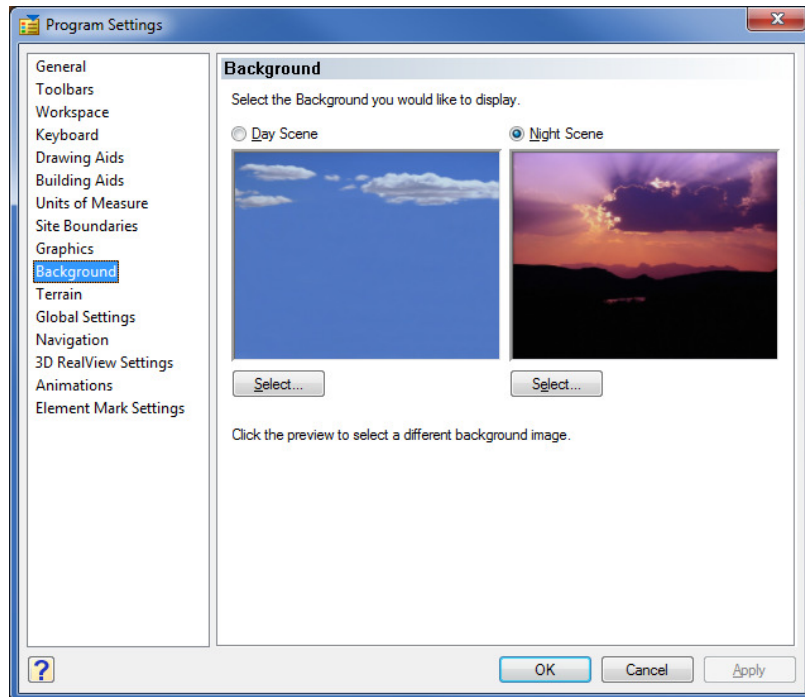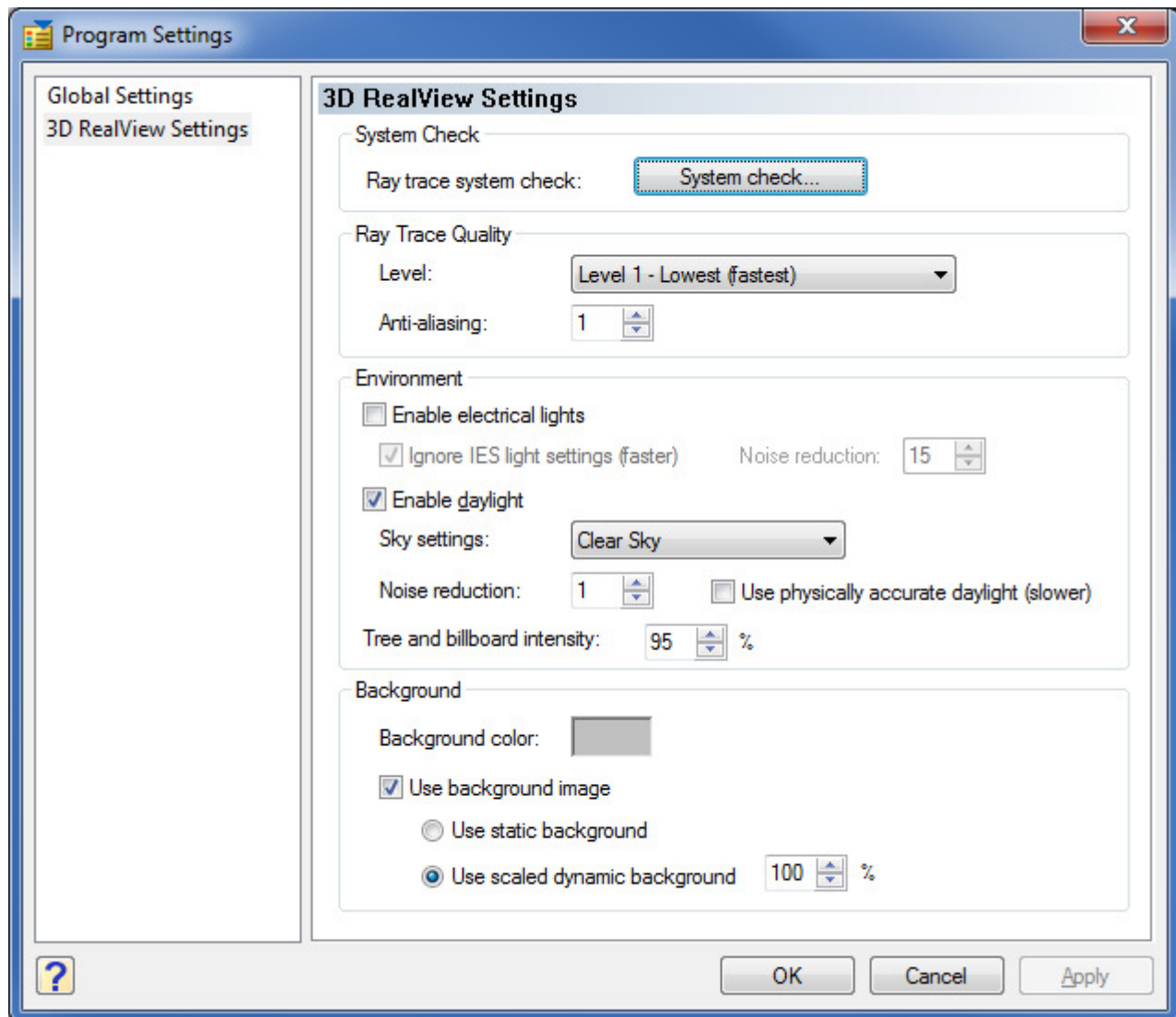

Terrain:

The terrain size, material and base level all impact the render.
- A) The terrain size needs to be sufficiently wide and deep enough to cover the width and depth of the render.
- B) The "Base Level" by default is zero and for a render should be adjusted to approximately 160.
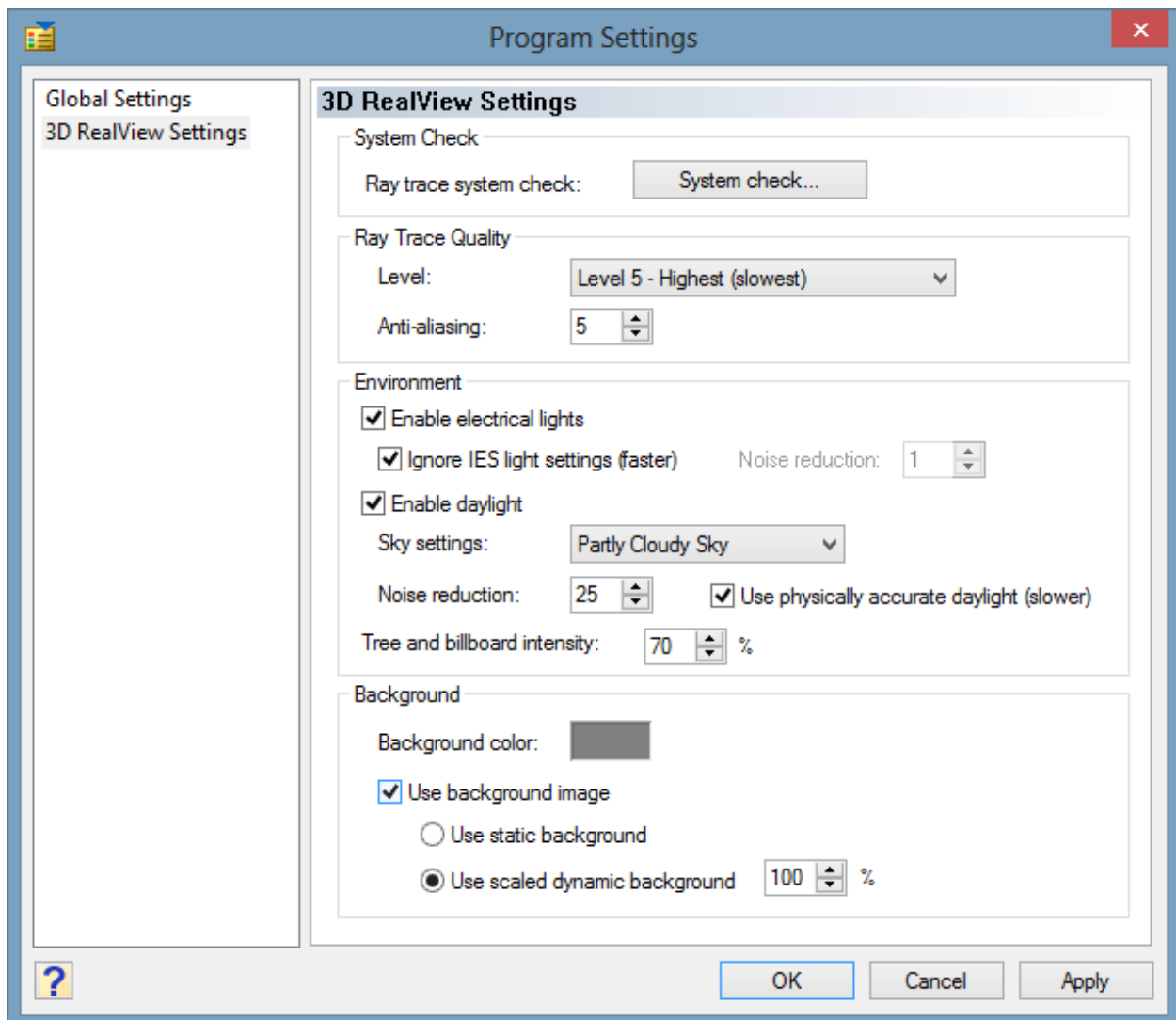- C) The material type generally grass should be selected
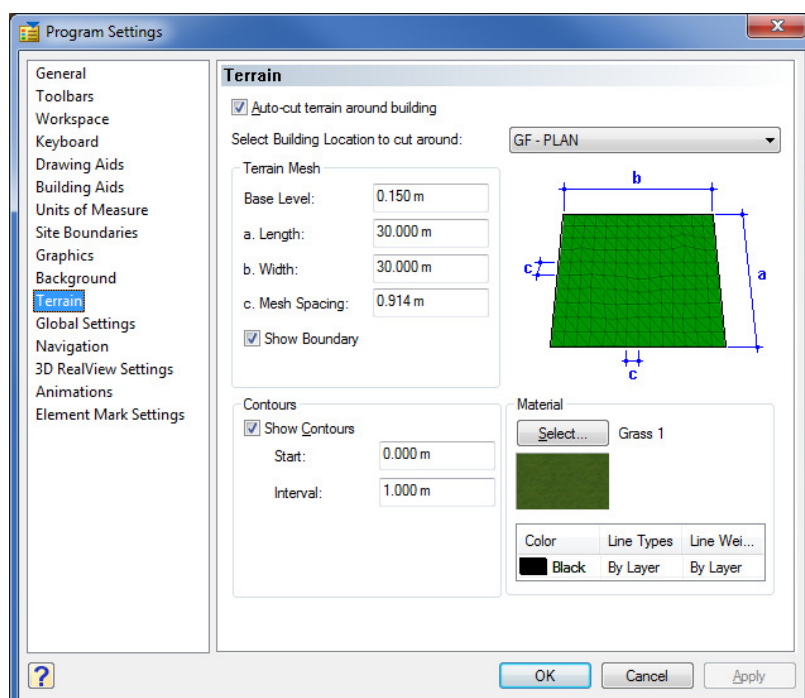
Sample Rendering Settings

Test Render:

Final Render Settings:

Notes:

- I set the Noise reduction to 25 to start and if it the rendered image still appears to be pixilated or grainy then you will need to adjust this further.

- Using the settings I have for the Final Render could take more than an hour to complete depending on the scene you are rendering. Once you have committed to rendering your final image do it over night.

- These are just suggestions and they may need to be adjusted depending on the scene you are rendering.