

ADDING REALISTIC FILM GRAIN

Introduction

There is nothing quite like a dramatic, gritty, black and white landscape image to evoke an emotional response. Unfortunately when shooting digitally and converting to black & white, the impact from the film grain is missing. Some might argue that digital noise is the equivalent but it isn't. Film grain has a beauty and emotion all of its own and can be difficult to recreate digitally.

The benefit of this approach is that it is non destructive based on using Layers and can therefore be fine tuned.

Before You Start

Before trying to simulate film grain in a digital image take a few moments to consider the following:

- It's black & white film that has an appealing grain structure (rather than colour) so for the most realistic results you need to be working in Black and White
- Film grain is not the same as digital noise. Film grain is the actual structure of the film whilst digital noise is interference in the camera sensor. Digital noise is not appealing
- Film grain has an irregular pattern and in larger prints has a slightly soft appearance
- Film grain does not appear even over the entire image. Clouds for example typically display a lot of grain in the shadows but much less in bright areas

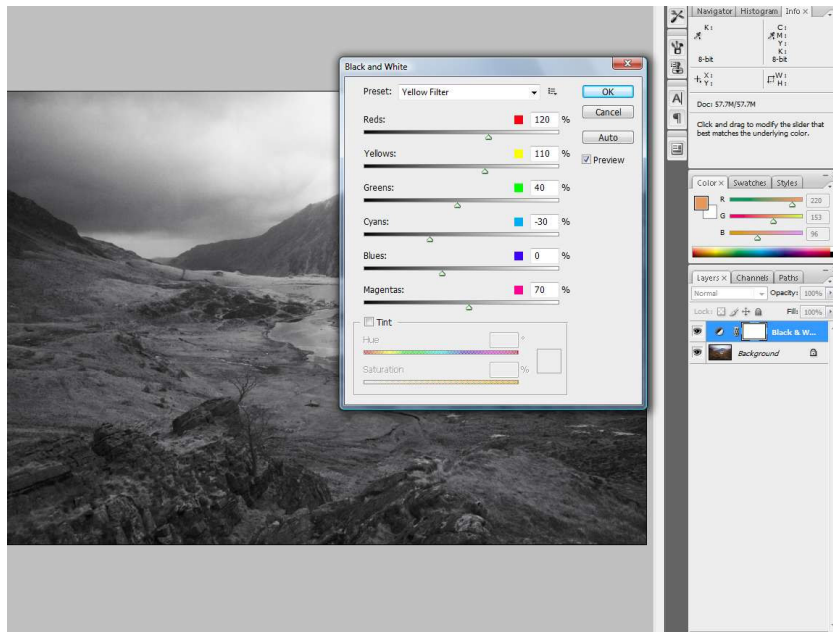
The starting image was shot in North Wales during a very cold, wet and dull weekend and is perfect for a black and white conversion with film grain added.

How to

Before starting open your selected image and display the Layers Window if it is not already visible. This will make the steps much easier to follow.

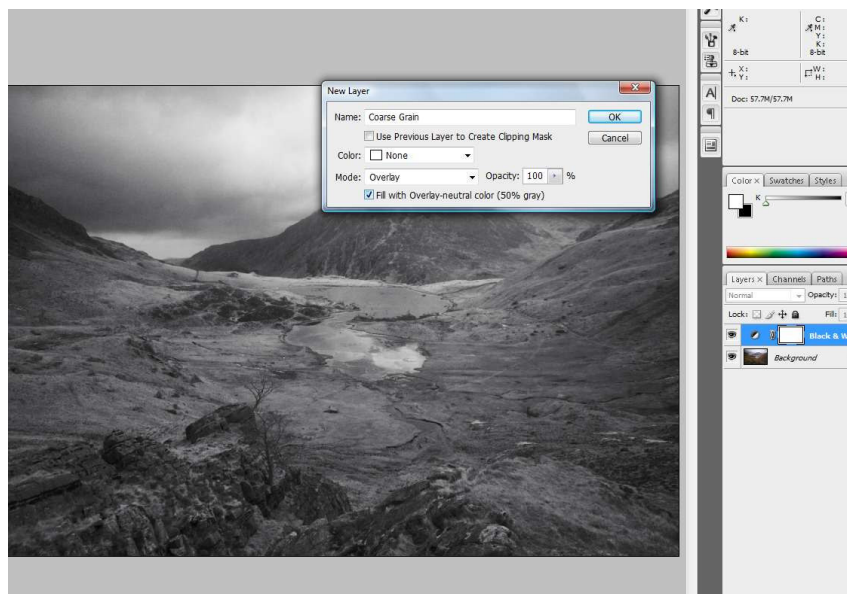
Step 1 - Convert the image to black and white

This is an optional step but as mentioned above I feel the grain effect is best in Black & White. For my conversion I have applied a new "Black & White" conversion layer using "Layer | New adjustment layer | Black & White..." from the menu. This was a new feature introduced in Photoshop CS3 so you might need to use a different conversion method.



Step 2 – Creating a Coarse Grain layer

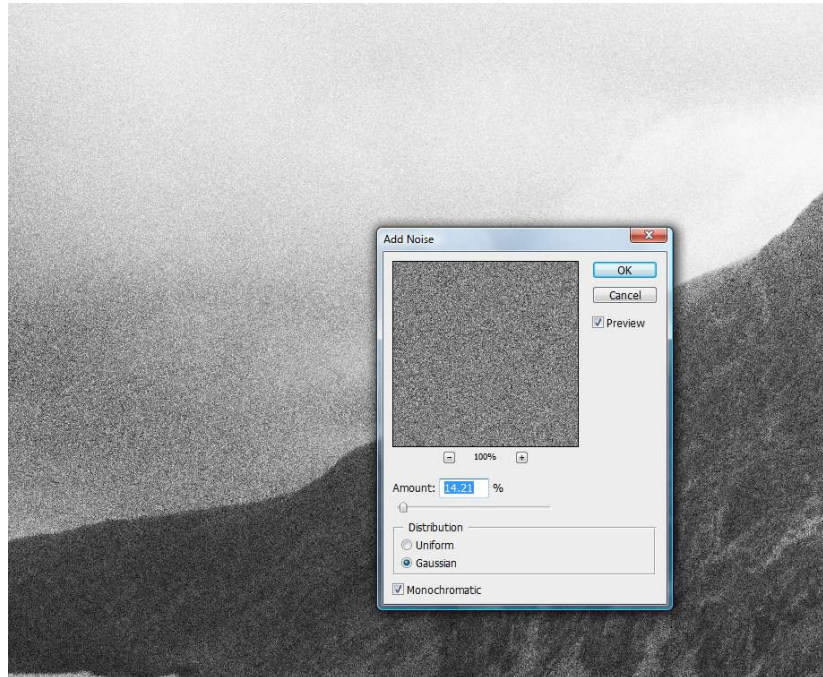
Add a new layer using “Layer | New | Layer...” from the menu. When the “New layer” dialog is displayed change the layer name to “Coarse Grain”. Also in this dialog set the Mode to “Overlay” and check the “Fill with Overlay Neutral Color (50% Gray)” option. Click OK and the new layer is added. If you have the Layers window open you should be able to see the new layer at the top of the layer stack.



Step 3 – Adding the simulated grain

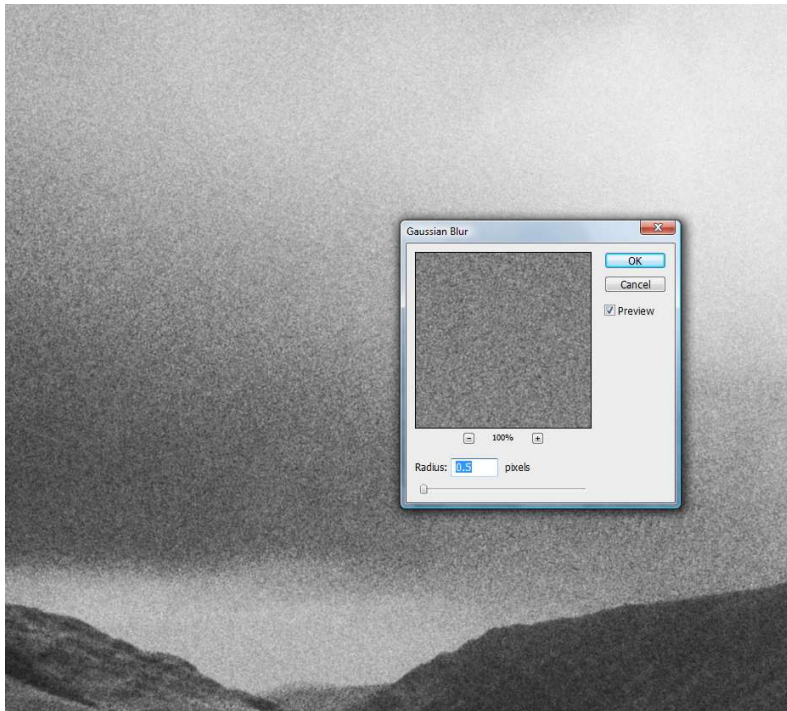
Zoom in the view to 100% so that you can better judge the effect of the grain. It's often helpful to zoom in on an area of sky as the grain effect is easier to judge. Select the “Coarse Grain” layer by clicking on it in the Layers Window and then select “Filter | Noise | Add noise...” in the menu. When the “Add noise” dialog is displayed

ensure the “Distribution” option is set to “Gaussian” as this is a much more realistic grain pattern. Also ensure the “Monochrome” option is checked. Use the slider to set a level of noise to represent coarse film grain. The setting will depend on your particular image but somewhere between 15-20 is often a good starting point. You should also notice that the grain is much more pronounced in the darker areas of the image. This is because the “Blending Mode” of the layer was set to “Overlay” in the previous step.



Step 4 – Softening the grain effect using Gaussian Blur

Whilst you have added a nice coarse grain pattern it is probably a little harsh, unlike true film grain and so requires a softening. We do this by adding a small amount of Gaussian blur to the layer. Select the “Coarse Grain” layer if it is not already selected and click “Filter | Blur | Gaussian blur...” from the menu. When the Gaussian blur dialog is displayed set the blur radius so that it softens but doesn’t remove the grain effect. How much you need to apply will depend on the amount of noise you added but somewhere between 0.3 and 0.7 is often a good amount for coarse grain. Again its best to do this with the image zoomed in to 100%, viewing an area containing both shadows and highlights.



Step 5 – Adding fine grain on top of Course Grain

Strictly speaking this is not necessary but I like to do it as I find it disrupts any perceivable patten in the Coarse Grain layer. As in step 2 above select “Layer | New | Layer” from the menu and call this layer “Fine Grain”. Set the Mode to Overlay and check the “Fill with Overlay Neutral color (50% gray)”. Add some Gaussian Monochrome noise to the layer but this time set the amount to a lower level to simulate finer grain; probably somewhere between 5% and 10%. Having done that, soften the noise as before by adding a little Gaussian Blur to the layer.

Step 6 – Fine tune the adjustment of the noise

Using the layers Opacity and Blending Mode you can fine tune the effect of the two noise layers. If the layers window is not already visible open it using “Windows | Layers” from the menu or press F7 on your keyboard. Select one of your two noise layers by clicking on it. Notice the Opacity is set to 100% which is the default. You can now use the Opacity slider in the window to adjust how strong the grain effect is. It’s often a good idea to turn off the noise layer you are not adjusting by clicking on the eyeball icon to the left of the layer in the Layers window. Having adjusted the two layers independently check the effect with them both visible at the same time. You might still need to make some further adjustments.

Additional information

Another option to experiment with is the Blending Mode which can be found in a drop down in the Layers window. You should find this is set to “Overlay” which was set at the time the layers were created. Other options to try include “Soft Light” which is a little softer than “Overlay”. Hard Light which emphasises grain in the lighter grain, as does “Linear Light”, whilst “Vivid Light” emphasises dark grain.

I hope you enjoy experimenting.