# Sharpening with the High Pass Filter

By Gilly Walker

Like a lot of people, I'd always used the Unsharp Mask feature to sharpen my photos, but no matter how many times I read up on what each slider did and what effect it had, I never really felt I understood it properly. Pretty much all photos benefit from sharpening, so I sharpened everything but always felt that my results were very hit and miss.

And then somewhere along the line I learned to use the High Pass filter to sharpen; I tried it and it was so easy and the results I got were so much better that I've stuck with it ever since. One of the big benefits of High Pass sharpening is that, unlike using the Unsharp Mask, it doesn't emphasise digital noise as it only works on the edges of things. It's got other advantages too, and I'll tell you about those later.

I'm going to show you how it's done in Elements 6, which is what I happen to have, but it will work much the same in any version of Photoshop or Elements—I've also assumed some basic knowledge of Photoshop. This is the original photo that I'm going to work with:


1. First of all, open your picture file and then duplicate the layer. You can do this by clicking the New Layer icon at the top of the Layers palette, or right-clicking on the layer itself and selecting New Layer.

2. Making sure you're still working on the duplicate layer, click on Filters, Other, and High Pass.
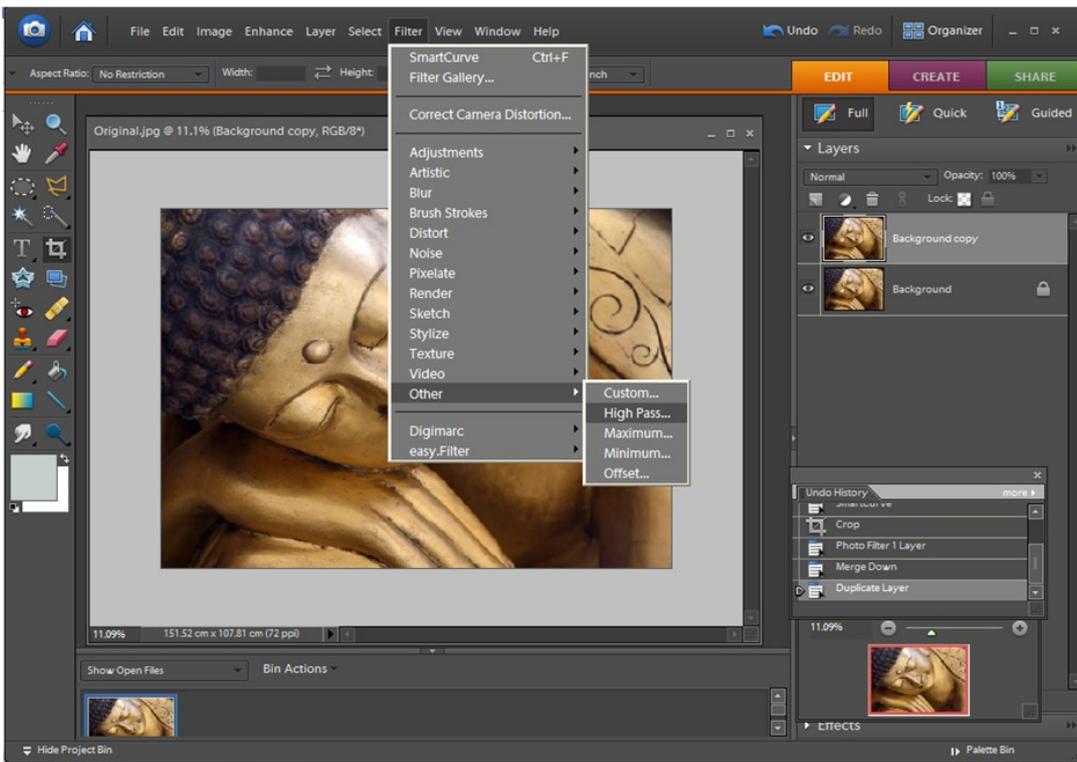
3. Now you'll see a dialogue box open up, with a preview of your photo inside it. It will look all grey with just the edges showing. If you move the slider, you'll see the edge effect increase or decrease. In the picture below, you'll see that it's set to 9.1 pixels, but this is a bit high and I've only set it there so that it's easier to see the effect when you're looking at it here. For web use or low resolution photos you may only need a setting of 1-2 pixels; for print and higher resolution images you might need as much as 10 or more pixels. Experiment until you get the effect you want and remember, less is more.
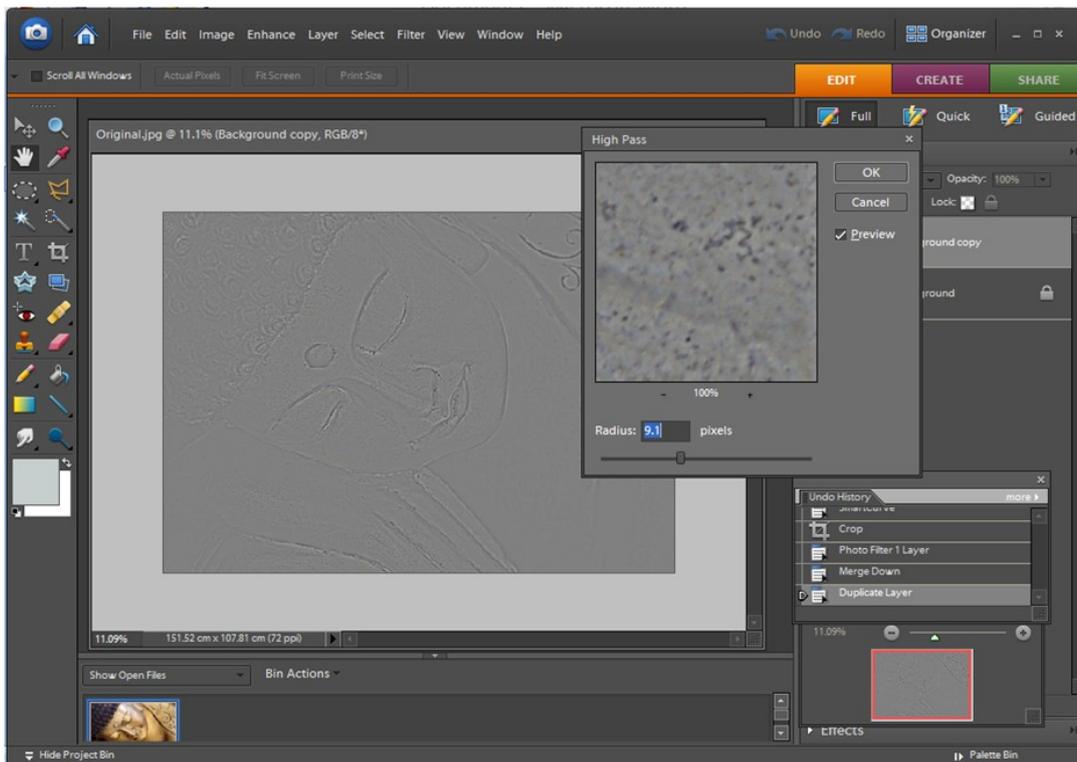
4. Click OK. Your photo will now look horrible, but don't worry because that will change in a moment. We're going to choose a blending mode from the layers palette and there are three choices: Soft Light, which gives the most subtle effect, Hard Light, which gives the most dramatic effect, and Overlay, which is in-between these two. In the image below, I've chosen Soft Light.
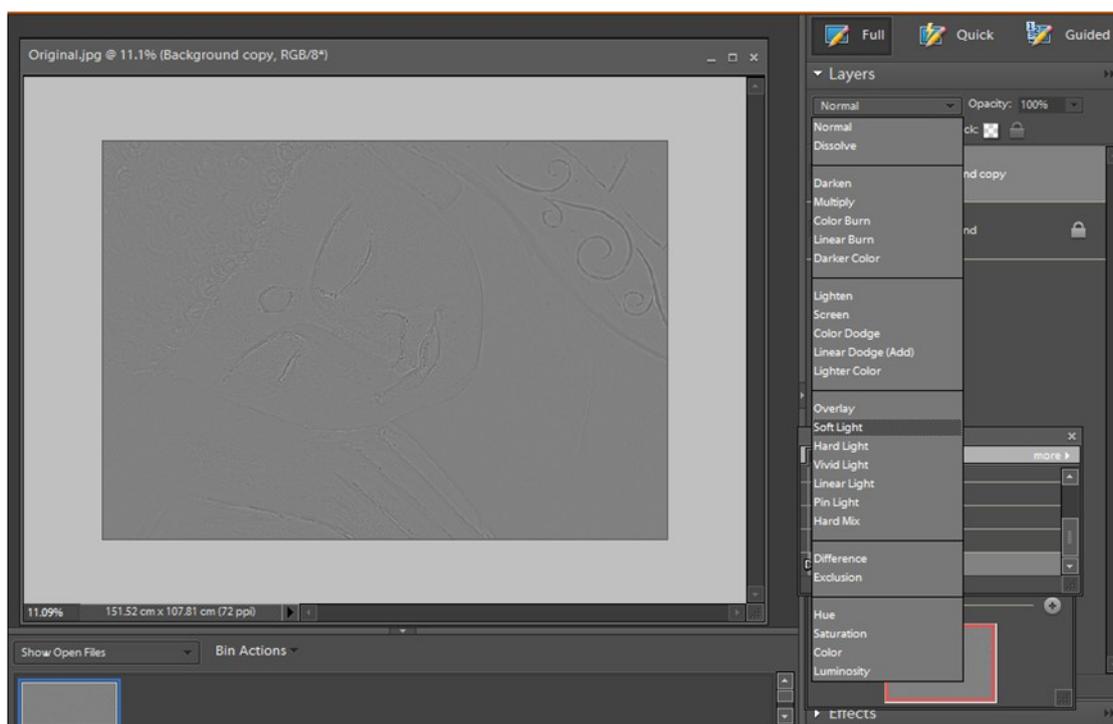
And that's it! It can be difficult to see the effect in the full-size image so I've taken a detail of the original and compared it with the sharpened versions. The first is a comparison of the unsharpened image with the sharpened image using Hard Light blending mode. You can see there's quite a difference. I used a sharpening amount of 6 pixels, which is a little too much on this picture — because it's a face, I'd have preferred a slightly softer effect here. However, this amount might have worked well on a different kind of image—for example, one where you really want to bring out the texture or the detail.

In the image below, I've place the three sharpened versions side by side: Soft Light first, then Overlay, then Hard Light. The differences aren't quite as obvious here, but you should be able to see some.

There are lots of advantages to using this method, apart from the fact that it's so easy.

- I already mentioned that it doesn't sharpen noisy areas and this is because it only applies the sharpening to the edges.

- Another advantage is that, by clicking on the eye icon at the side of the High Pass layer, you can switch the effect on and off to easily see how well it's working.

- You can use the opacity slider at the top of the Layers Pallette which will increase the transparency of the layer and lessen the effect, and you can also use the eraser tool (or a Layer Mask if you have it) to remove areas of sharpening in places where you don't want them. This is particularly useful if you've used selective depth of field or a lens like a Lensbaby that is supposed to be mostly blurred – you can sharpen the bit that matters and leave the rest beautifully blurred. And because the sharpening is on a separate layer, it's easy to delete it and start again if you've got it wrong.

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