

HDR Handout- Enniscorthy Camera Club



High dynamic range imaging (HDRI or HDR) is a set of methods used in imaging and photography, to allow a greater dynamic range between the lightest and darkest areas of an image than current standard digital imaging methods or photographic methods. HDR images can represent more accurately the range of intensity levels found in real scenes, from direct sunlight to faint starlight, and is often captured by way of a plurality of differently exposed pictures of the same subject matter.—(wikipedia)

In simpler terms, HDR is a range of methods to provide higher dynamic range from the imaging process. Non-HDR cameras take pictures at one exposure level with a limited contrast range. This results in the loss of detail in bright or dark areas of a picture, depending on whether the camera had a low or high exposure setting. HDR compensates for this loss of detail by taking multiple pictures at different exposure levels and intelligently stitching them together to produce a picture that is representative in both dark and bright areas.

There are two ways of doing HDR.

One is the correct way which involves combining a series of photographs taken at different exposure levels into one final image.

The second is the way I use and you make three different images at three different exposures from the one RAW image file.

The reason why I do my pictures the second way is because if anything moves between the pictures doing it the first way the whole sequence of photos is ruined & you won't be able to make a decent HDR picture.

Why RAW.

I would recommend that anyone taking pictures should use RAW. Reason being that a RAW file contains far more information than a JPEG. If you (or your camera) gets a wrong exposure you can often find enough information is contained in the RAW file to save the day and give you a decent JPEG. It can often give a decent JPEG if you get your exposure wrong by a couple of stops either way ! Also you can use the RAW files for HDR, Black & White etc.

What do you need ?

1. To make an HDR image you need a RAW picture file.
2. You need a program (like Photoshop, Photoshop Elements or any other program (like Canon Photo RAW) that allows you to adjust the exposure of the RAW file to create a series of three JPEG's that will be later combined into a HDR image. *(you may have got software with your camera that will allow you to do this !!!)*
3. Photomatix V4 (download as a trial from www.hdrsoft.com.)

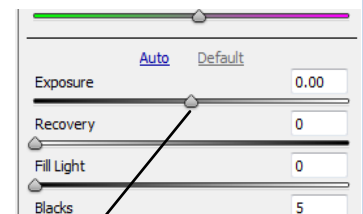
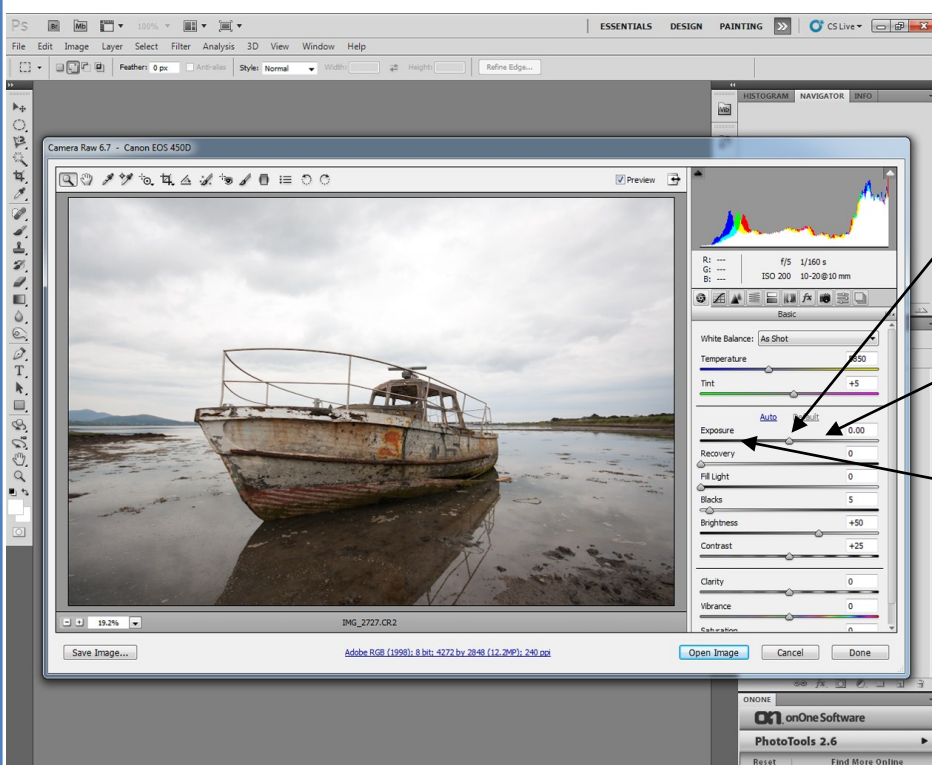
Why Photomatix ?

There are many ways and programs that you can use to create HDR images. Photomatix is one of the best & always rates at the top in the Photo Magazines.

Step 1

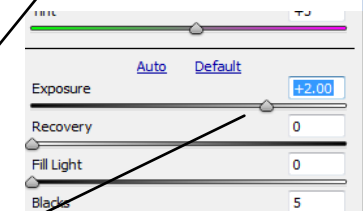
Open your RAW file in your RAW picture program (I am using Photoshop for this example and the image opens in Photoshop's Camera RAW program. You will have to do this Three times as described below.....

1. First time the picture loads just click 'OPEN' and bring straight into Photoshop & then click 'FILE' - 'SAVE AS' and save as 'Image a' but make sure that it is being saved as a JPEG.
2. Second time the picture loads adjust the exposure slider to '+2' this creates an under-exposed JPEG with greater shadow detail click 'OPEN' and bring into Photoshop & then click 'FILE' - 'SAVE AS' and save as 'Image b' but again make sure that it is being saved as a JPEG.
3. Third & last time the picture loads adjust the exposure slider to '-2' this creates an over-exposed JPEG with greater detail in the highlights click 'OPEN' and bring into Photoshop & then click 'FILE' - 'SAVE AS' and save as 'Image c' but again make sure that it is being saved as a JPEG.



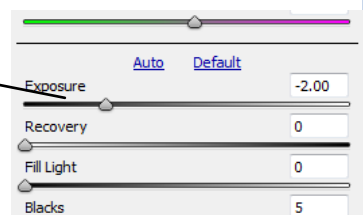
Step 1—Exposure '0'

Save As 'image a'



Step 2—Exposure '+2'

Save As 'image b'



Step 3—exposure '-2'

Save As 'image c'

Now you should have three images as below:-



'image a' at normal (0) exposure

This image gives the mid tone detail



'Image b' at (+2) underexposed

This one gives detail in the shadows

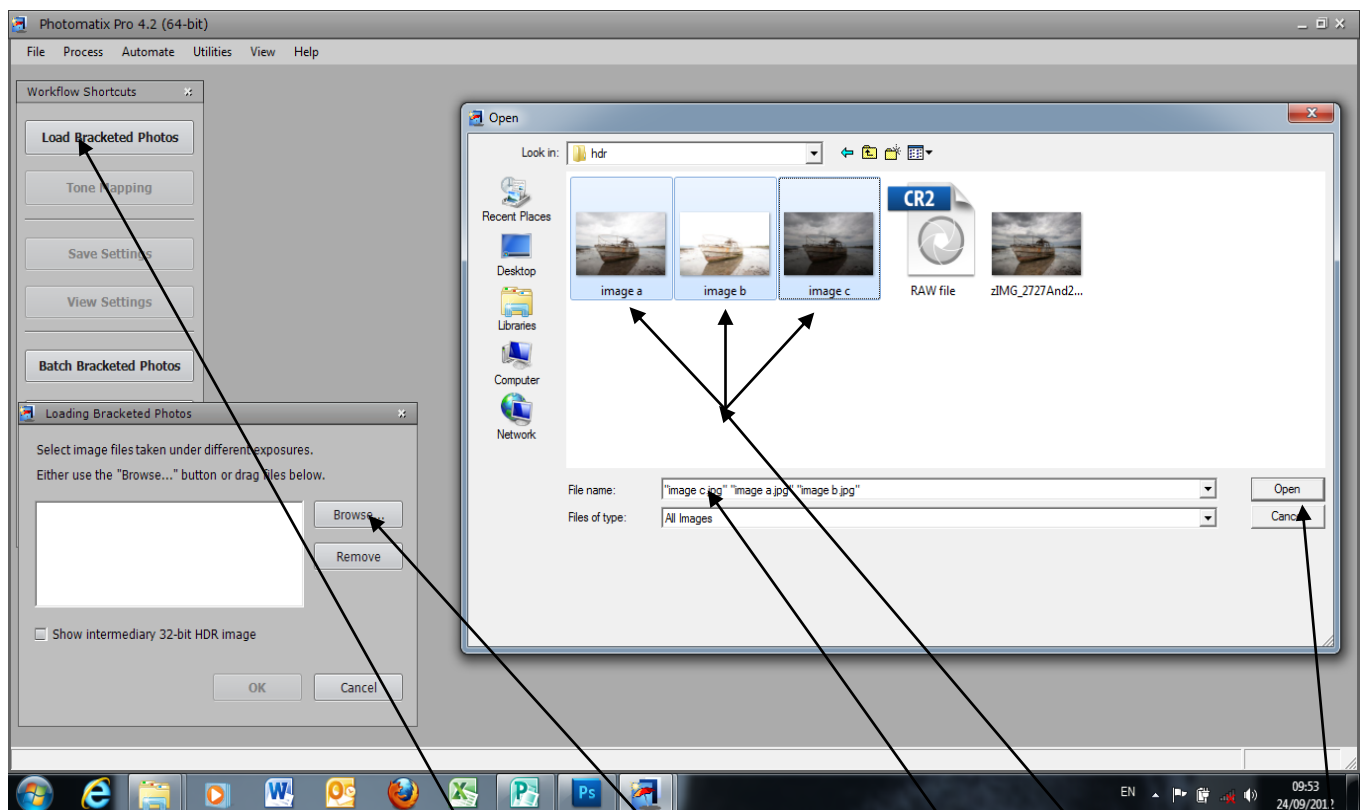


'image c' at (-2) overexposed

This one brings up the detail in the Highlights—(gives the skies texture)

Photomatix

Now we are going to load the three images into **photomatix**



1. When **Photomatix** opens click on 'Load Bracketed Photos'
2. The 'Loading Bracketed Photo's' Dialog box will open click on 'Browse'
3. The 'Open' Dialog box will now open—you will have to navigate to the folder where the three photo's are stored.

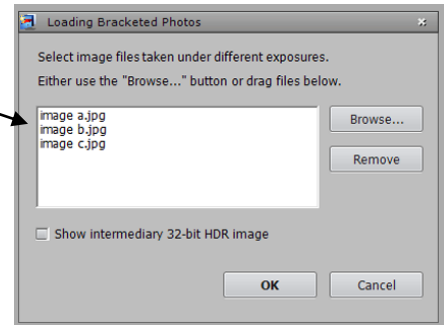
Holding down the 'CTRL' key (usually the bottom left hand key on your keyboard) click on the three images that you want to load so that the names show in the 'file name' box (as shown above).

—If you select the wrong picture you can de-select it by clicking on it again while still holding the 'CTRL' key

4. Lastly click 'Open' to load the pictures into **photomatix**

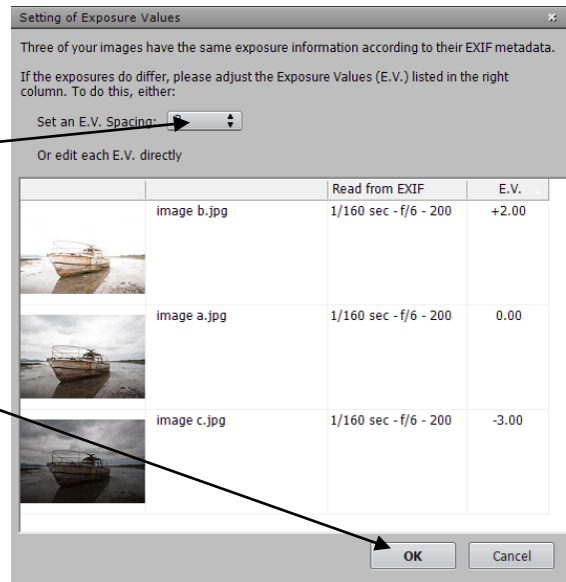
You should now have the three filenames as shown

Click 'OK'



You now have the 'Setting of Exposure Values' box.

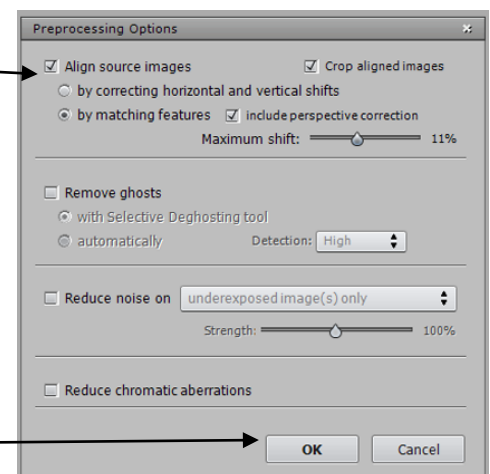
You set the E.V. spacing to 2 stops using this button



Next select 'OK' to bring the pictures into **Photomatix**

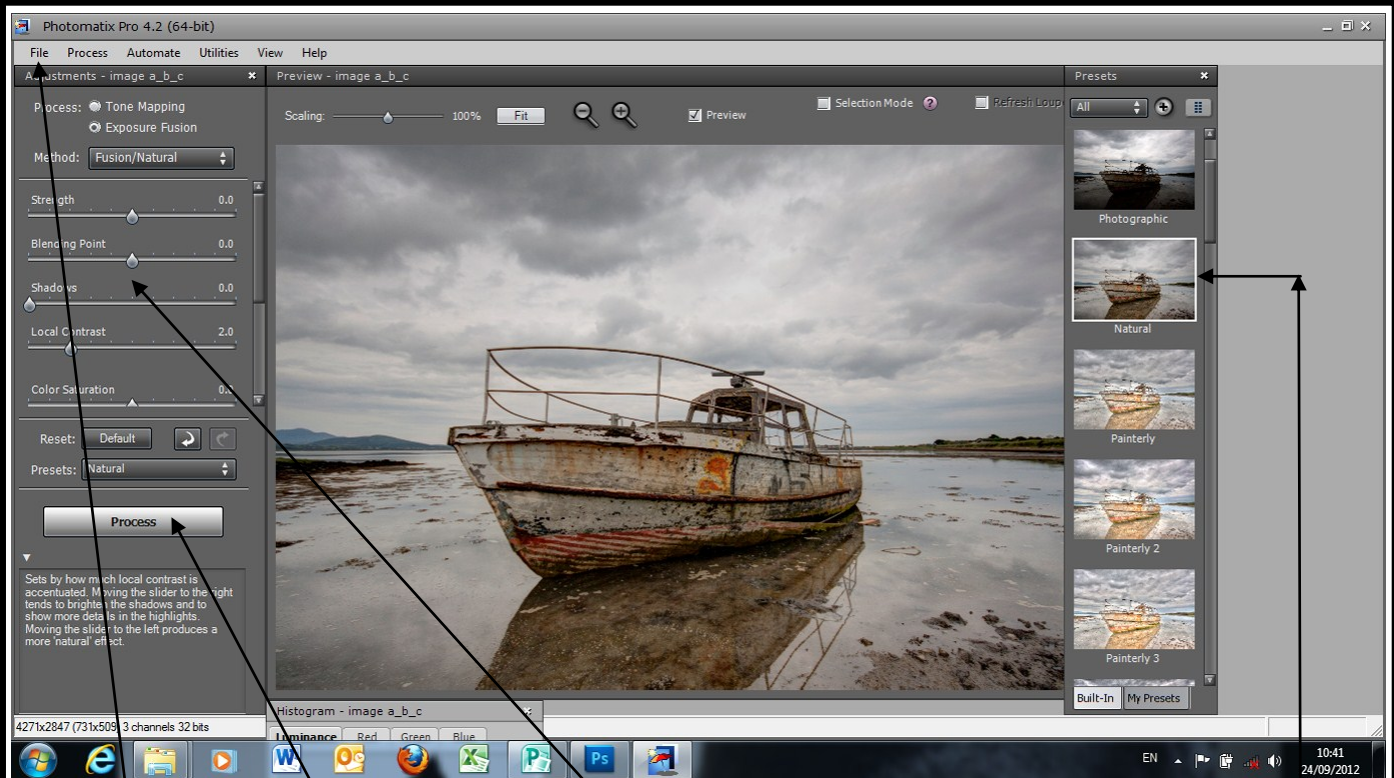
(note the if you are using a sequence of images instead of one RAW file you should make sure that the 'align source images' box should be ticked.

As we are working from the one RAW file the images will already be aligned and whether it is ticked or not does not really matter)



On the next box click 'OK' as well

Your images will now load into Photomatix

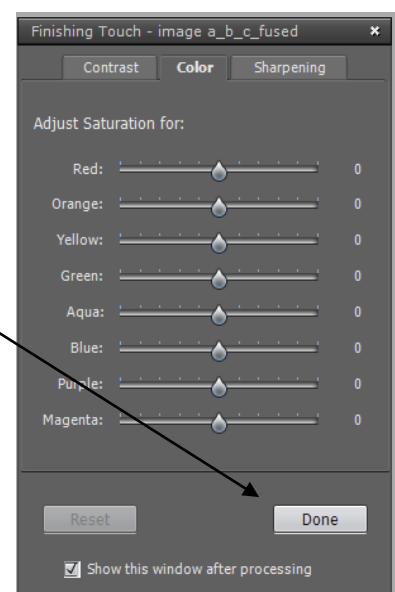


When your picture loads into **Photomatix** the quickest way to get a HDR look that you like is to use the pre-sets on the right hand side. You can quickly get the look that you like. There are also some very nice Black & White pre-sets to try !!!!

When you are close to the HDR look that you want you can fine tune it by using the sliders on the left hand side.

When you are finished you click the 'Process' button on the left hand side. **Photomatix** will now generate a new HDR image from your three JPEG's that you made from the RAW file.

You now get a 'Finishing Touch' Dialog box with three tabs for Contrast-Colour- & Sharpening. You can fine tune these and then click 'Done' when you are finished.



Now simply click on 'File' and 'Save As' you can give your new HDR image a new name if you desire & click save.

If you want you can now load this image back into your picture editor program (photoshop etc.) & work on it further.

(If people feel the need I can run through an example picture in the club some evening).