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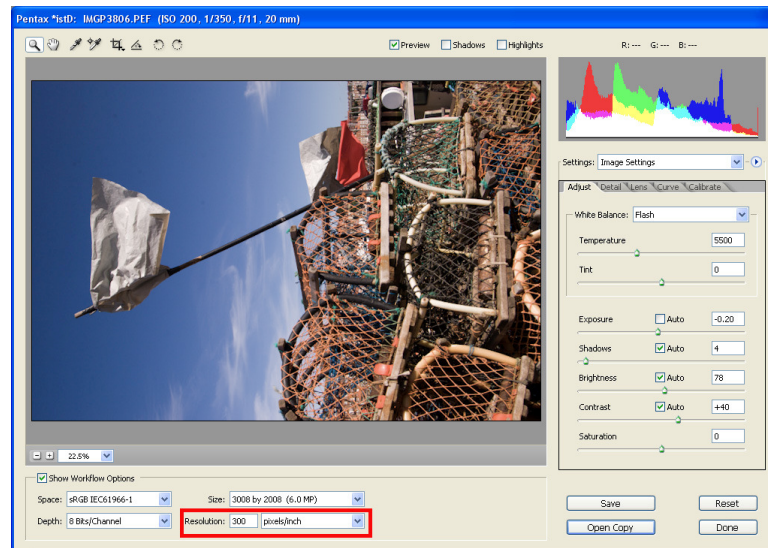
Bibliography:

The brilliant series – Adobe Photoshop CS2 – Andy Anderson & Steve Johnson
Adobe Photoshop CS2 User Guide – Adobe
Adobe Photoshop CS5 for Photographers-Martin Evening
Digital Photo Magazine

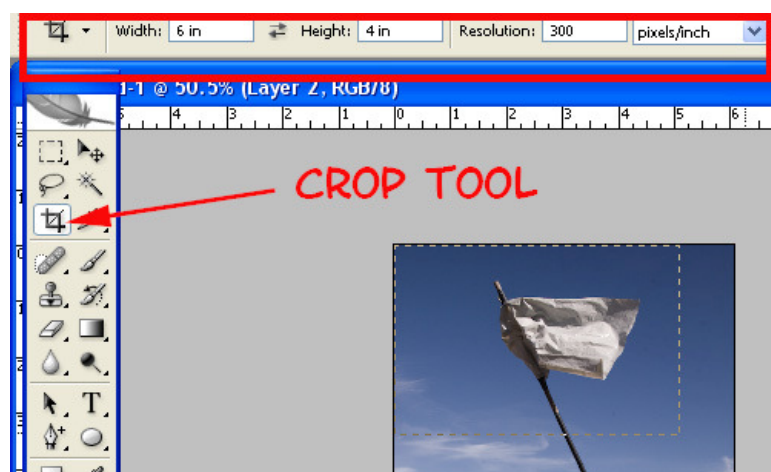
Sizing an image:

When a file is imported from a camera, it comes in to the editing application at a Screen Resolution of 72 ppi, and has to be resized to 300 ppi to achieve an image of photographic quality. This produces a limit on image size unless the image is re-sampled and pixels interpolated to produce the new image size. If imported via a raw file conversion it can be imported directly at 300 dpi with a size of approximately 10" x 8" for a 5.1 megapixel image.

Raw File Conversion:-



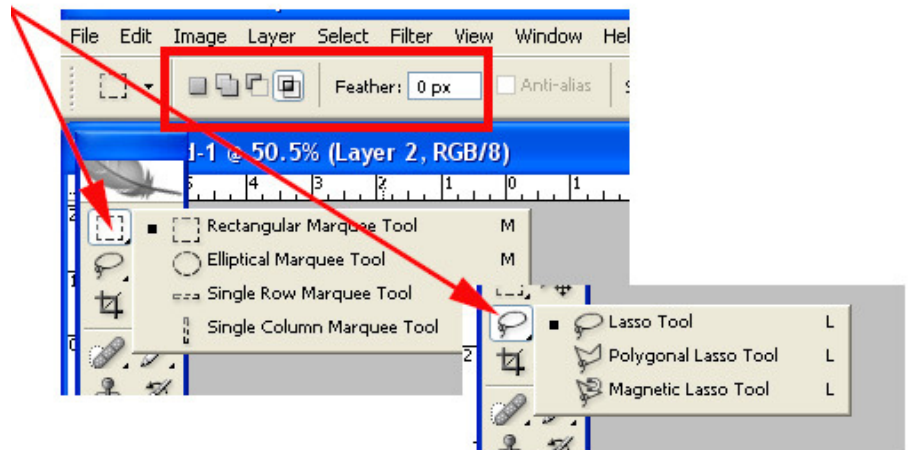
An important point to watch when using the image size command is to decide whether to resample or not to achieve the correct dimensional size. *When using the crop tool it automatically re-samples the image based on the selected settings in the toolbar.*



It is always better to sample the size down (reduce) rather than up (enlarge). This means for optimum print quality a different file is needed for each print size required from the same original.

Selection Tools:

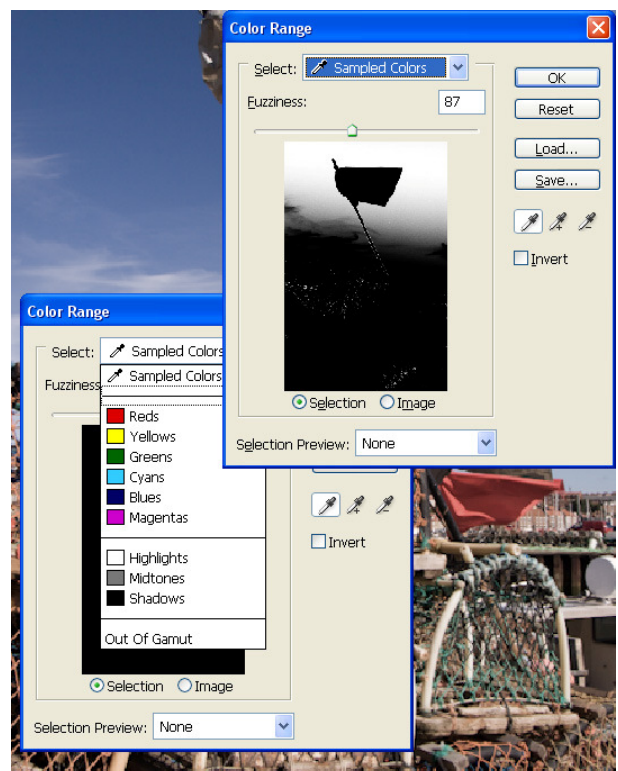
SOME OF THE SELECTION TOOLS



Accurate selection of parts of an image is very important in digital manipulation. To achieve this, predefined selection tools can be selected by hitting M on the keyboard and selecting the required shape. To achieve a circle or a square hold the Ctrl key as you drag the shape. If you select L a range of tools become available to select more complex shapes. The buttons highlighted in the diagram indicate a further option by selecting a button a new selection can be made, a current selection can be added to, or deleted from, or the intersection of two areas can be selected.

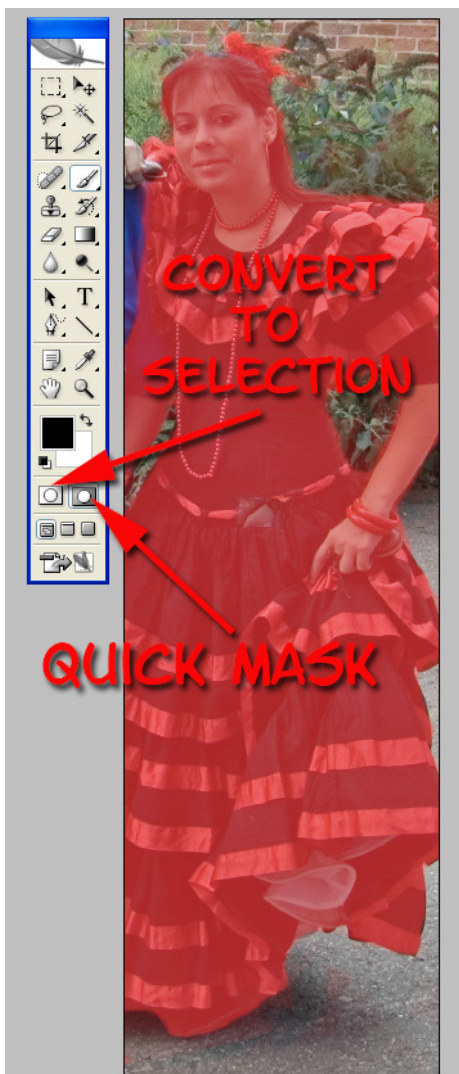
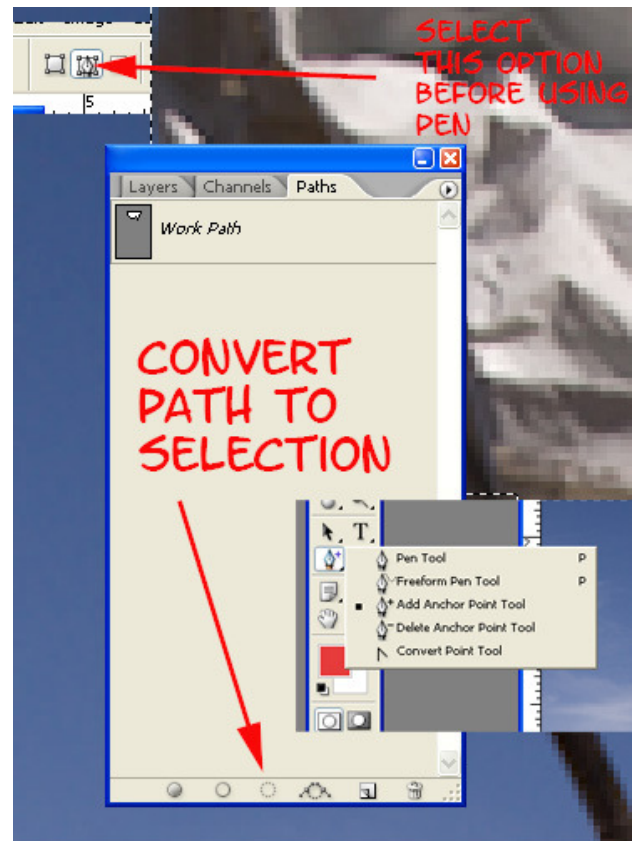
A further method of selection is to use the Colour Range option. The colour range option can be found in the Select menu.

An eye dropper tool can be used to select a specific colour and the amount of variation from the tone of the colour can be selected by altering the Fuzziness parameter. For specific selections presets of primary and secondary colours are listed or Highlights, Midtones or shadows can be selected.



For more precise work, use the pen tool to create and edit a path. The path can then be converted into a selection.

When a selection has been made, or sometimes when using certain selection tools, feathering can be applied. Feathering improves the blending options and removes the scissor cut out effect after making a selection. The amount can vary from a few pixels to over a 100 or more depending on the size of image and softness of blend required. It is your decision depending on the style required.



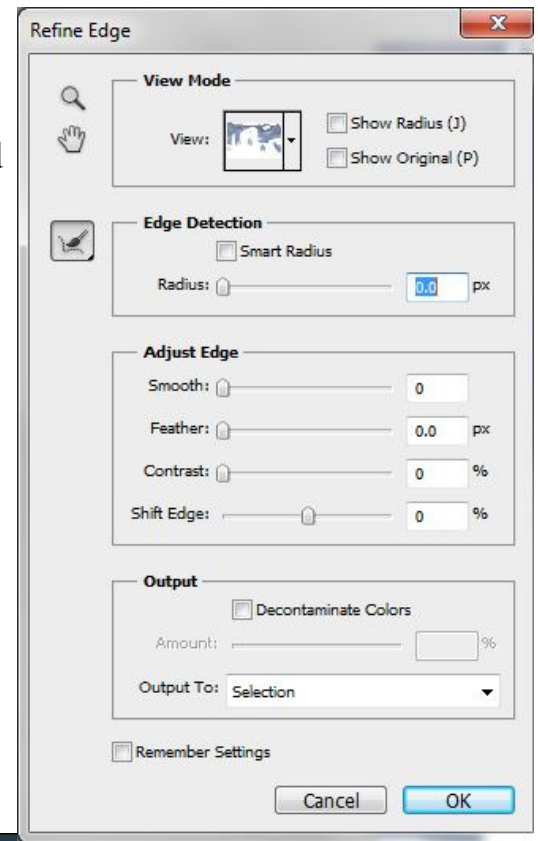
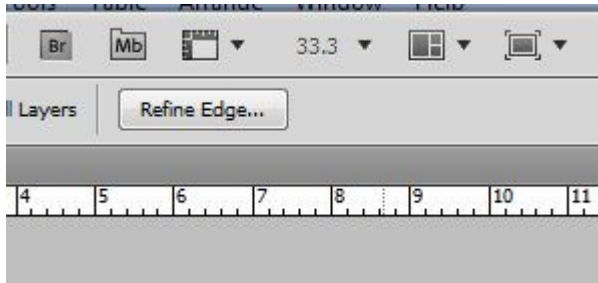
Quick Mask:

There is an option to switch on Quick Mask which covers the protected area in a Ruby Mask. *This originates from the pigment used when photographic negatives / positives were hand retouched.* Paintbrush/Pencil and various tools, such as gradient, can be used before adjusting the image using the mask selection. This allows a quick visual check of the mask as it is created.

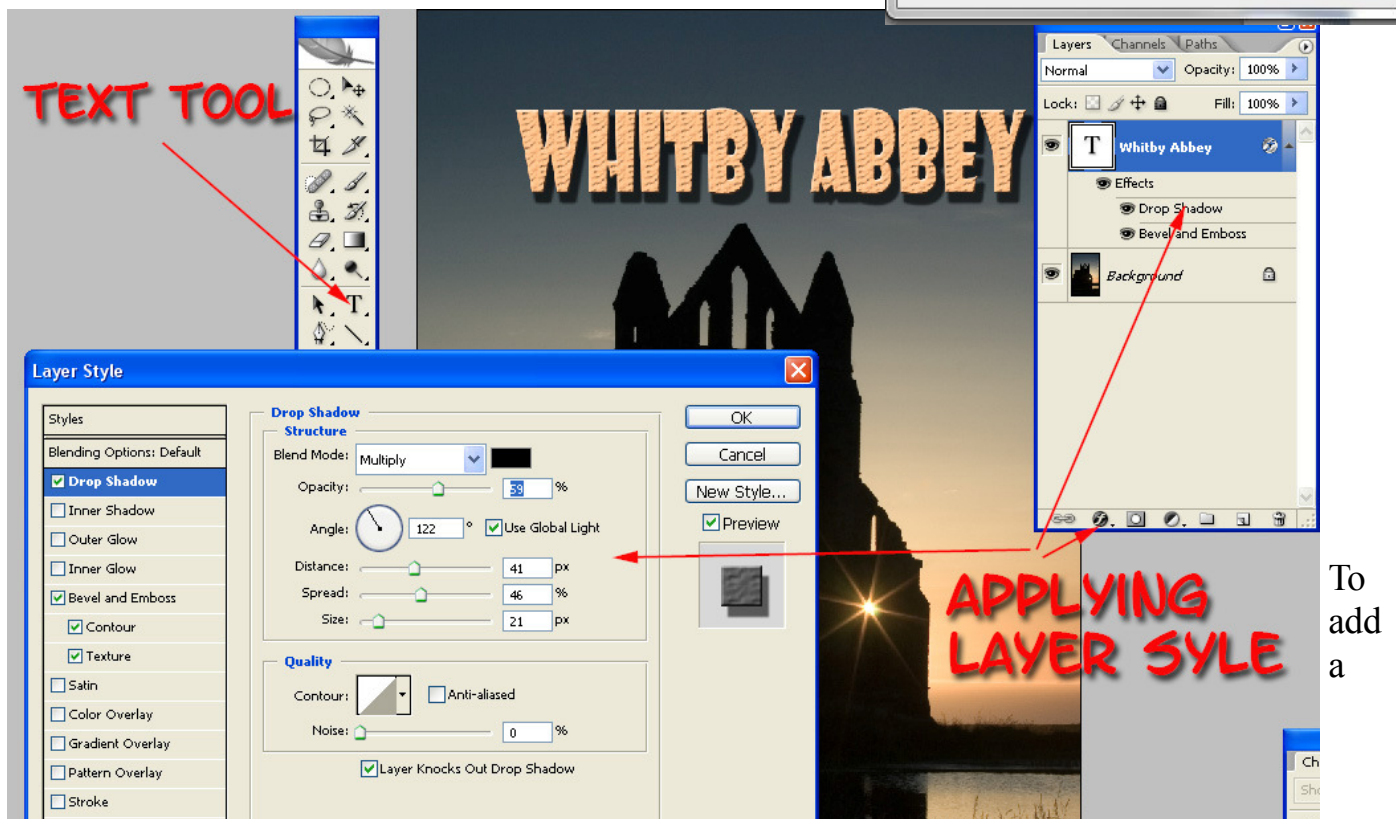
Careful Selection is essential when manipulating photographs, care at this stage will achieve a more realistic looking photograph when combining various elements together.

Extract Tool:

Photoshop allows the extraction of objects onto part of the image to a separate layer. This has now been replaced in later versions by selection and the use of refine edge. The selection is then 'extracted' to another layer.



Adding a Layer Style:



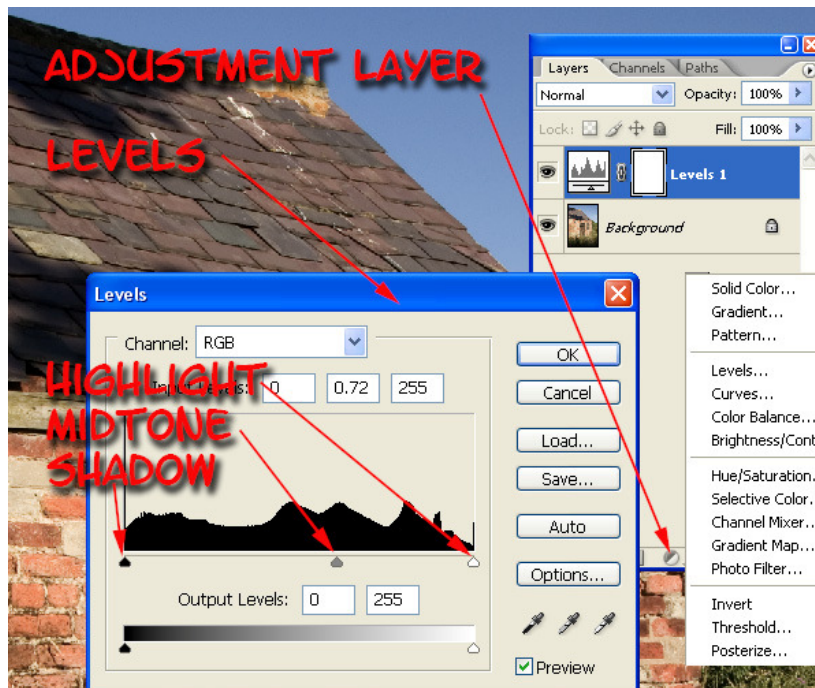
layer style to a text layer (or any picture layer) select the layer, click the layer style button



at the base of the Layer palette. Select Drop Shadow, and adjust the Distance, Spread and Size to suit your requirements. Opacity can be adjusted, I prefer about 50%, note the blend mode is defaulted to multiply. To add Bevel and Emboss, Colour and Texture to the text click the appropriate boxes and select Textures and Contours to suit your artwork. This gives a limitless choice of text styles to suit your projects.

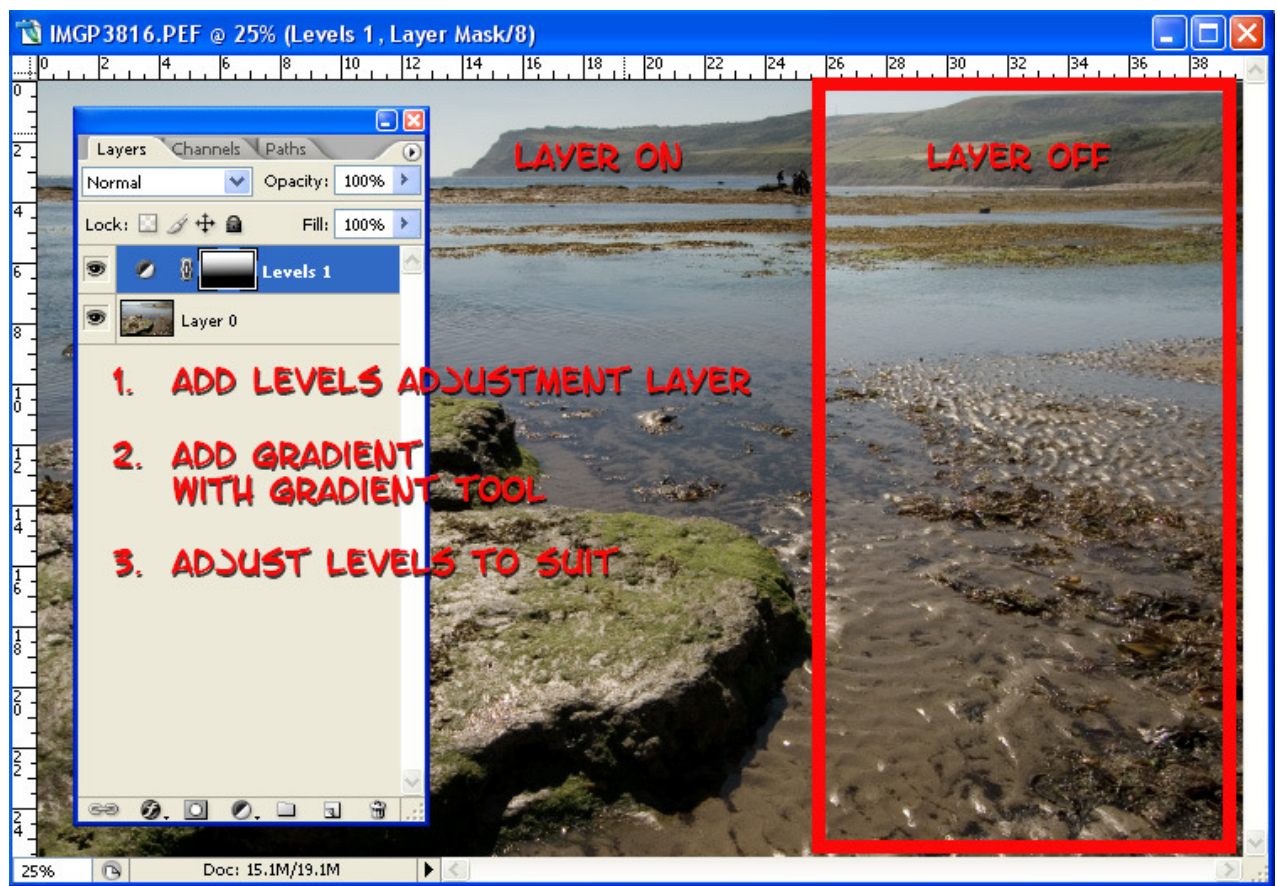
To copy the same style to another layer select the style you have created using Ctrl + Left Mouse Button and drag to a new Layer (Photoshop 7) or use Ctrl + Alt + Left Mouse Button in CS2 or later versions of Photoshop. This simple technique saves having to memorise settings and gives the composite picture a more uniform look.

Adjustment Layers:




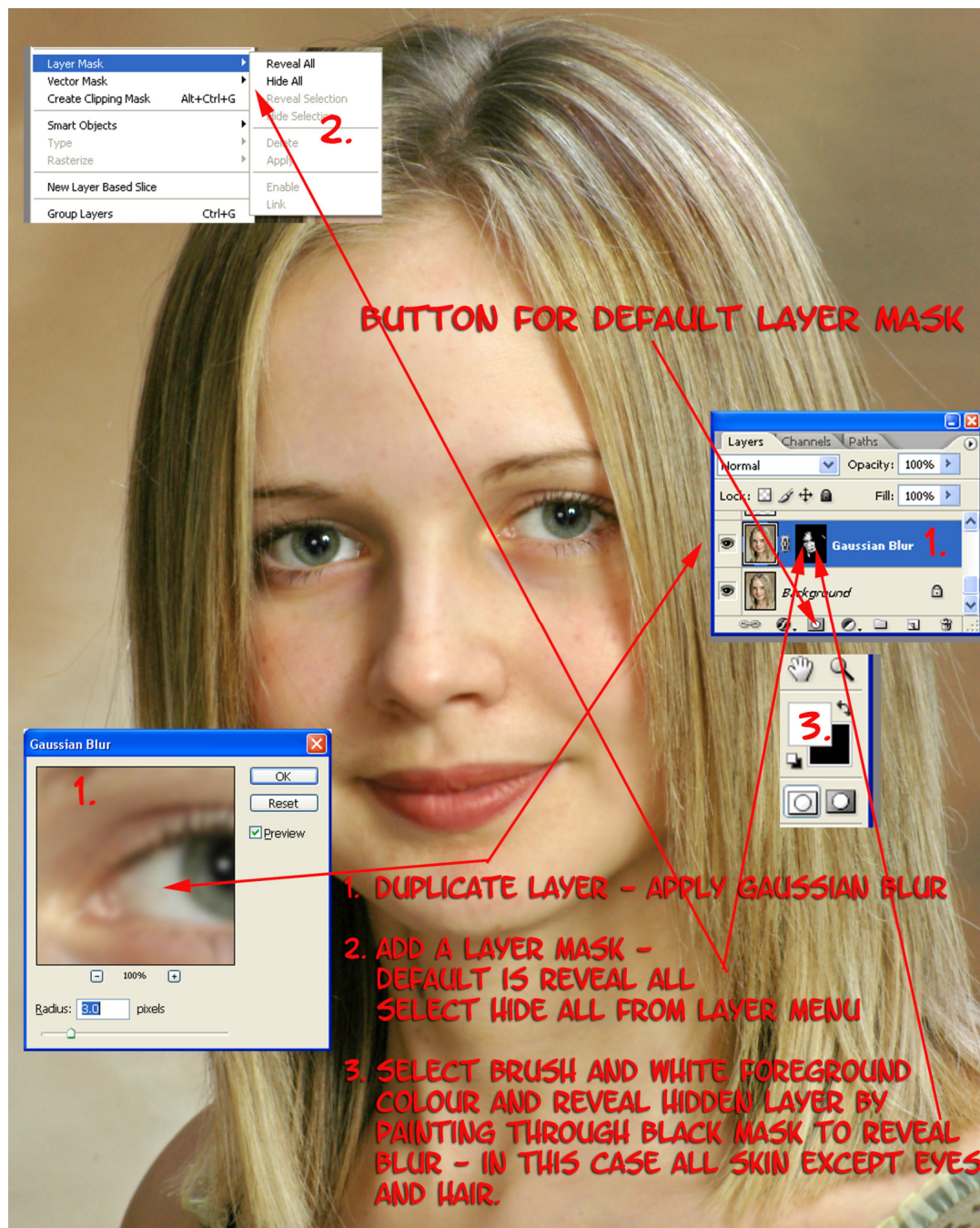
An adjustment layer affects all layers beneath it, unless linked specifically to the layer beneath it. It is a non destructive layer so the original pixels are not affected, and it takes up less space than duplicating a layer. The picture above shows the range of options available and the specific example shows the addition of a levels adjustment layer to control exposure. It can be altered at any time to get a perfect match of exposure.

Adding a gradient mask to the adjustment layer produces a more controlled effect.



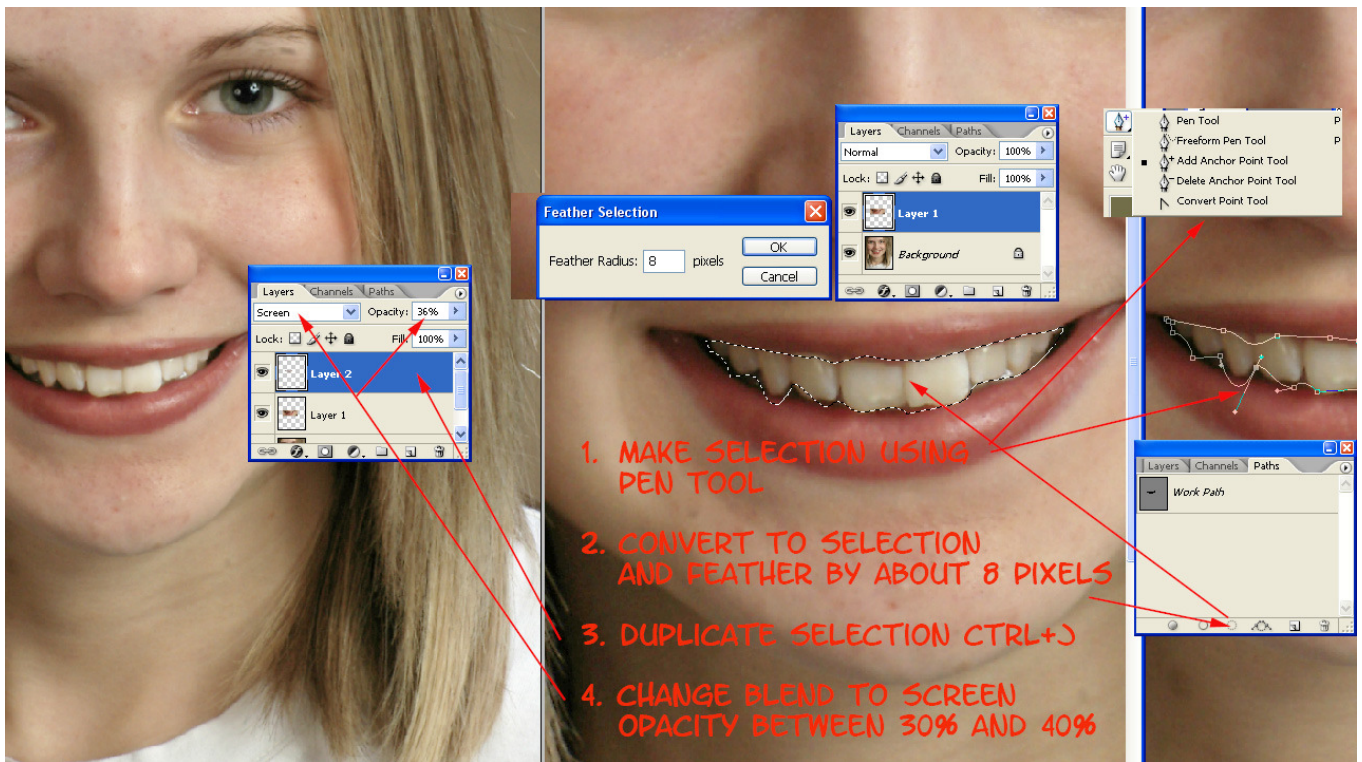
Application of a Layer Mask: A layer mask can be applied by clicking on button at the base

of the layer palette  – this applies a default reveal all option which can be painted through by using a black brush. In this example for softening skin tone a hide all layer mask has been chosen.



Changing Layer Blending Modes

The example illustrated over the page shows the pen tool being used to make an accurate selection of the teeth area, applying feathering, and after copying the selection changing the blend mode to 'screen' and reducing the opacity until the correct balance is achieved.

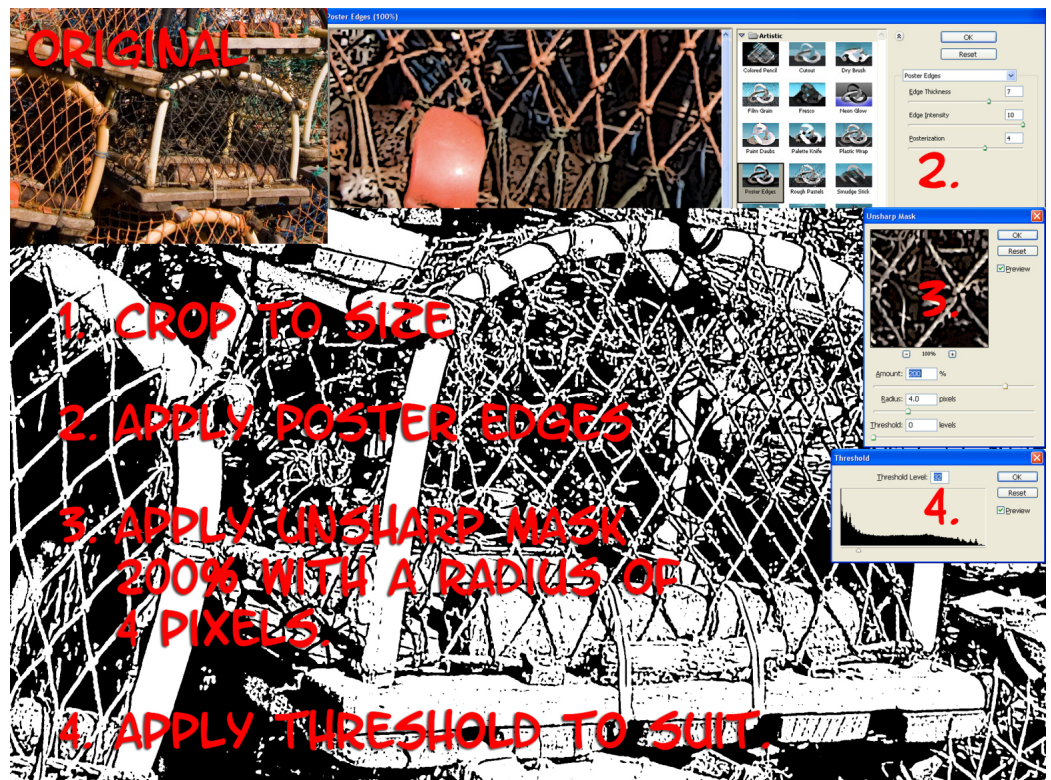


Pen Tool for Selection, Blending Mode - Screen could be used for whitening of teeth.

Creating a Line Drawing -
experimenting with Poster Edge, Unsharp Mask and Threshold, to produce a line drawing.

The Line Process:-

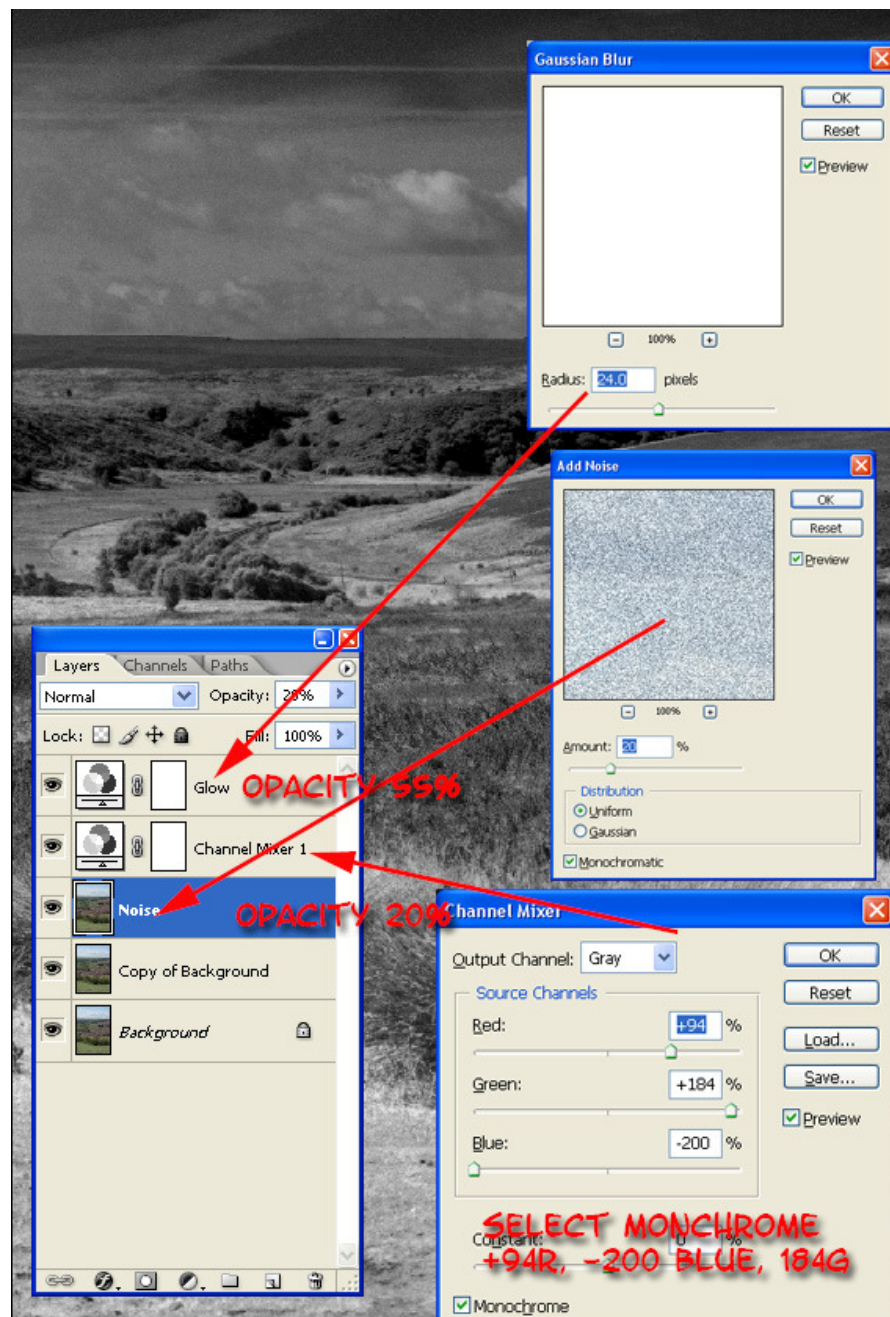
1. Crop to size
2. Apply poster edges
3. Apply unsharp mask – 200% with a radius of 4 pixels
4. Apply Threshold to a level to suit your design.



Creating a simulated Infra Red from a colour original: -

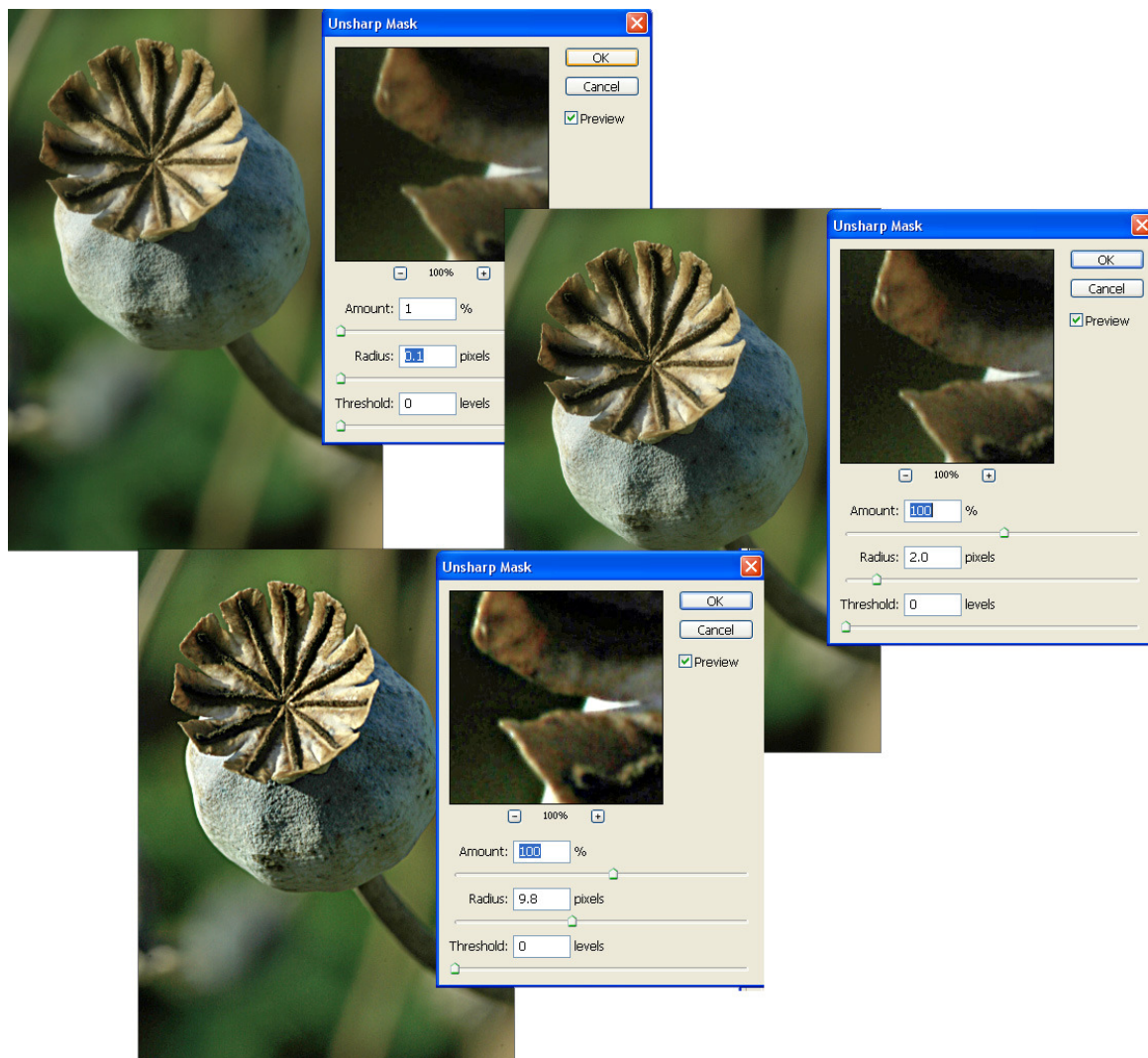
Using an adjustment Layer containing the channel mixer a simulated Infra Red picture can be obtained from a colour original.

1. Create a new layer Ctrl + J
2. Create an Adjustment Layer – Channel Mixer set to Monochrome +94R, -200 Blue and +184G
3. Duplicate Adjustment Layer, Rename Glow, and apply 24 pixels of Gaussian Blur adjust opacity of layer to about 55%
4. Duplicate Background and apply noise , monochromatic, 20% and set the layer opacity to approximately 20%. Move this layer to just under the channel mixer adjustment layer.



Sharpening Techniques: *(generally done last of all in the editing process)*

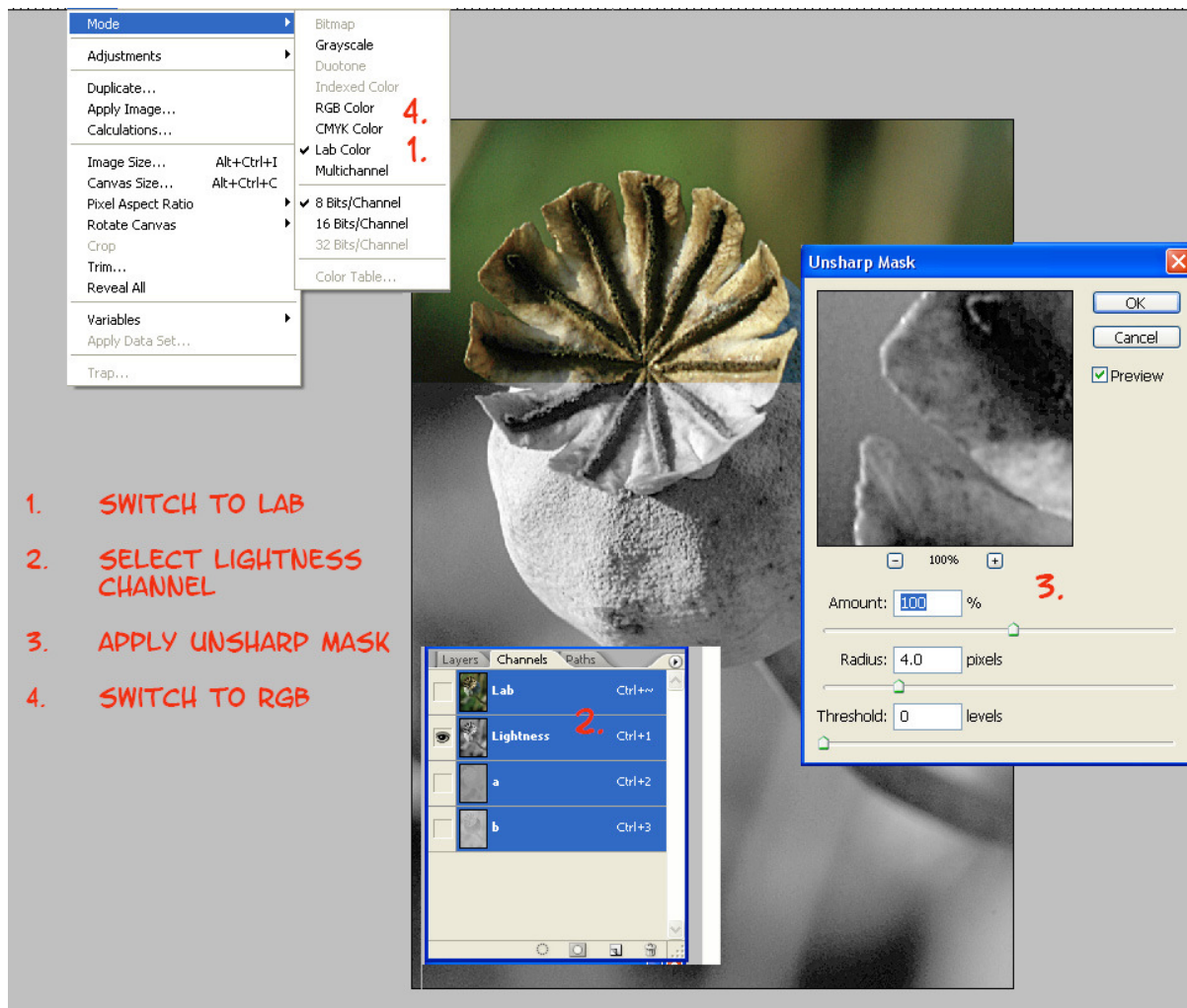
Unsharp Mask:



The most common method used for sharpening is the unsharp mask filter, which allows a large range of sharpening to be applied. Remember no sharpening is applied when importing from Raw Files but may already have been applied when using .jpeg files saved in the camera. Normally a radius of between .6 and 2 pixels is required with an amount of between 20 – 100%, an increase in threshold tends to undo all the effect you are attempting to achieve!!! But is used if a halo begins to appear around elements of your picture a level of 1 or 2 is usually sufficient - it is important not to over-sharpen the image unless you are attempting to achieve a specific effect, and sharpening is usually the last thing you do in the creative process. The above pictures attempt to illustrate some of the control achievable.

This technique often increases colour artefacts and is a destructive technique if applied to the original image i.e. always apply to a duplicate layer of the image.

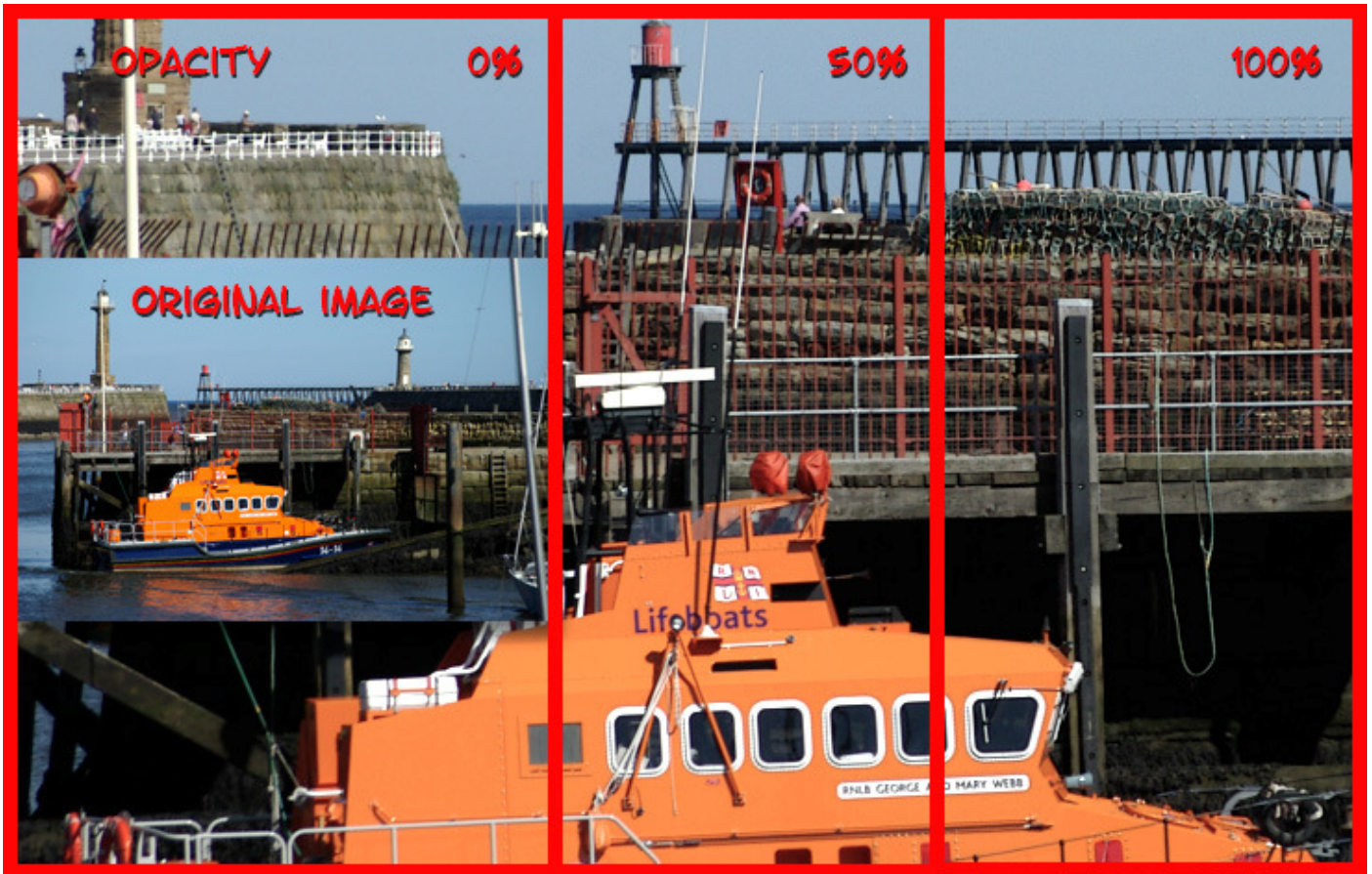
Use of LAB sharpening technique allows you to sharpen the lightness channel of your image without affecting the colour information. The result is a sharper image with less colour interference or fringing.



Creating an Editable Sharpening Layer

1. Open File and size image
2. Create a duplicate of the layer – Ctrl+J
3. Desaturate the layer
4. Create a copy of the desaturated layer and select it
5. Invert this layer and change blending mode to Colour Dodge
6. Select Gaussian Blur and apply a few radius pixels to soften layer
7. Click OK
8. deselect background Layer and then Merge down all layers except for the original Background
Rename the flattened Layer – Unsharp mask
9. Change Blending Mode of the Unsharp Mask Layer to Multiply.
Reselect Background Layer
10. To control degree of sharpness vary the opacity of the Unsharp mask layer.

Illustration of the result of creating an editable sharpening layer:-

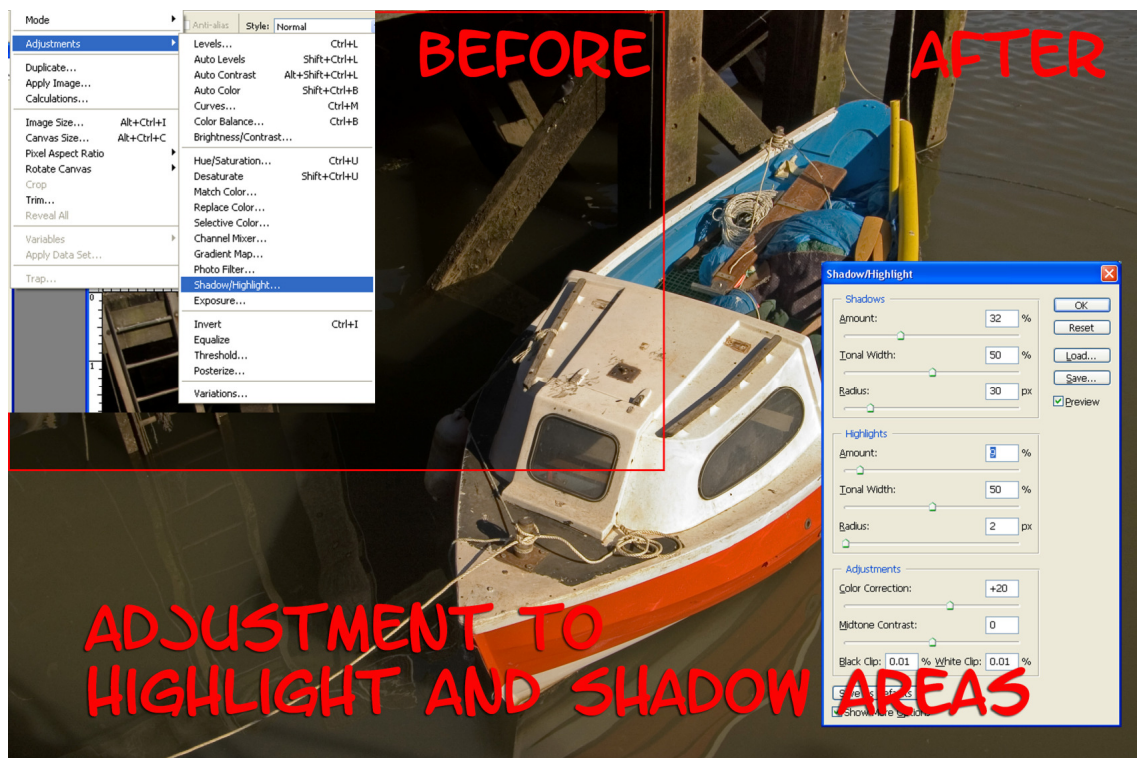


All the preceding techniques can be carried out in Photoshop, and in most versions of elements. The later full versions of Photoshop have all the tools integrated within the one package; the tools included in Elements vary from version to version.

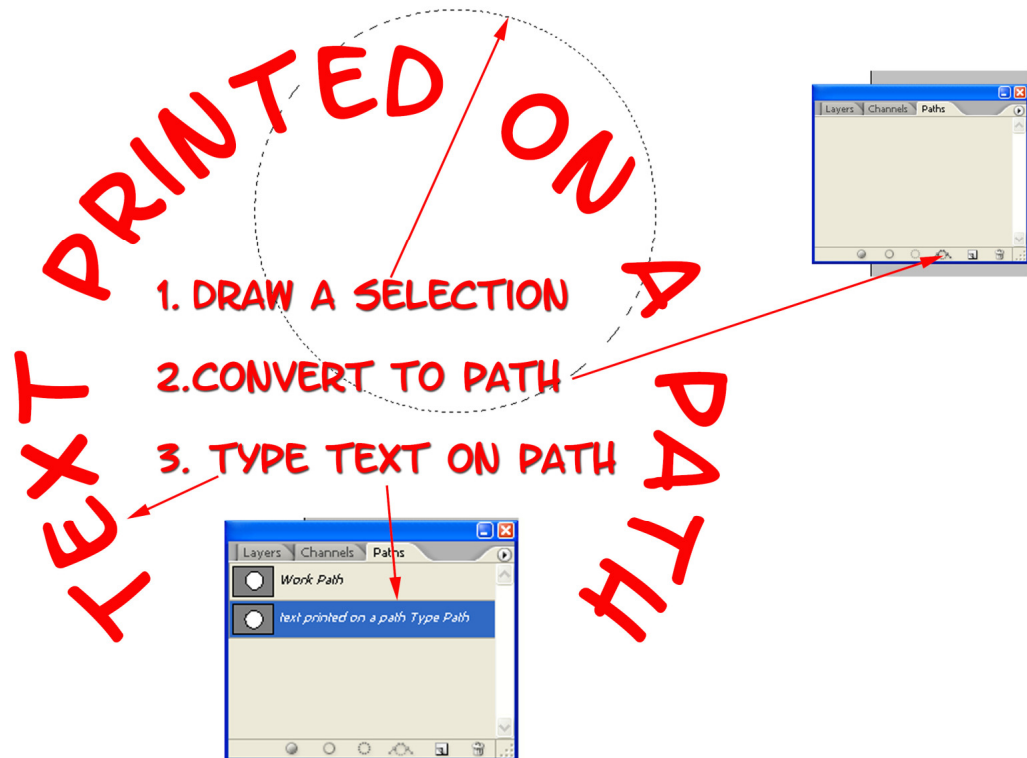
There are several ways of achieving similar results in digital packages, use the ones that suit your way of working. If you are going to do a lot of editing, use a graphics tablet for greater control; backup your work on to external drives; do not overwrite Raw files, after editing is complete, so you can always go back to the original.

CS and later Photoshop versions of elements:

Shadow Highlight Adjustment: a powerful tonal adjustment tool – the following is an exaggerated example. Apply lightly – similar effect to pre-fogging in conventional darkroom technique.

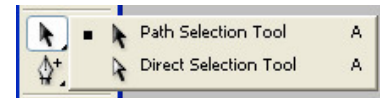


Attaching Text to Path:



Or draw a path using the Pen or shape tools. Select the text tool and type in the text. Alignment can be achieved by rotating

Ctrl+T or dragging with the path selection tool.



This enables a more precise/creative method of placing text.

Or on a curve

inside

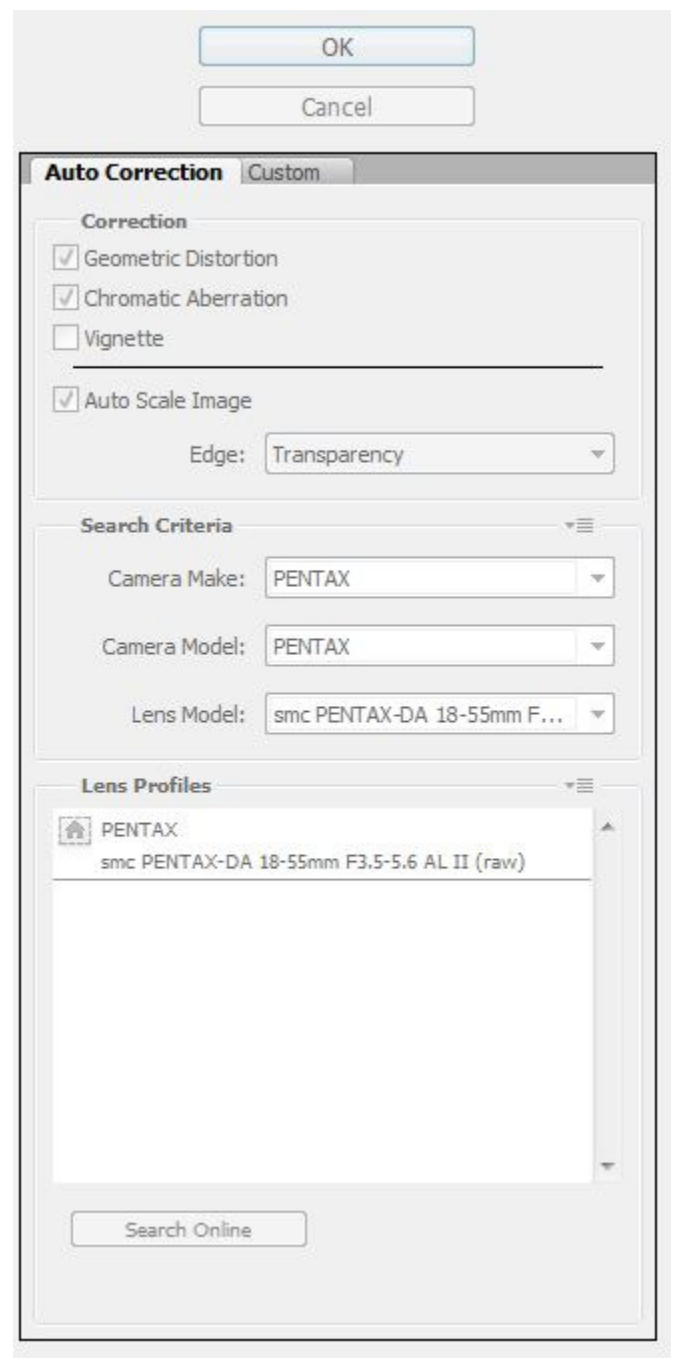
TEXT ON A CURVE

TEXT ATTACHED TO A PATH

Optical Lens Correction:

Defects such as Barrel or Pincushion distortion, chromatic aberration or vignetting, can be corrected/ modified by selecting Lens Correction in the Filter Menu.

This can also be done in the Raw File Converter see notes on page 17-21.



Suggested workflow for RAW Files

- Set the White point
- Apply a camera profile calibration adjustment
- Compensate for missing highlights using Recovery
- Compensate for hidden shadow detail using Fill Light
- Make basic brightness and contrast adjustments
- Boost the mid tone contrast (Clarity)
- Fine tune the Tone Curve Contrast
- Fine tune the Colour saturation / Vibrance
- Compensate for Chromatic Aberration and Vignetting
- Retouch spots using the Clone or Heal brush
- Make localized adjustments (Brush / Graduated filter)
- Full Capture sharpening and Noise reduction
- Apply a crop and or rotation
- Open image in Photoshop for further editing

Camera Raw Tools:-

Magnifier

Move (Press Space Bar)

White Balance Tool

Colour Sampler Tool

Targeted Adjustment Tool

Crop Tool (Sub menu)

Straighten Menu

Spot Removal

Red Eye Removal

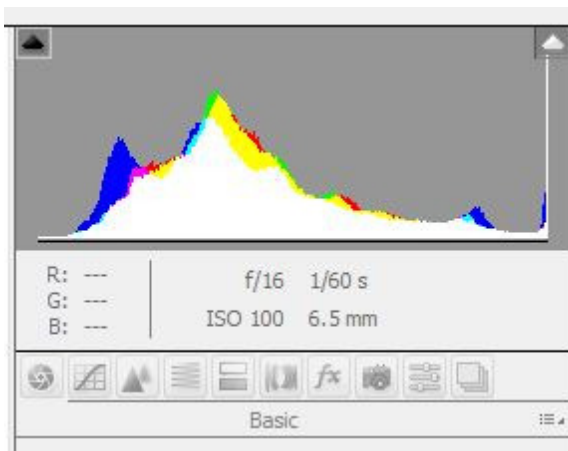
Adjustment Brush

Graduated Filter

Camera Raw Preferences

Rotate Image 90° Counter Clockwise

Rotate Image 90° Clockwise



Switch on
Shadow Clipping (U)
Highlight Clipping (O)

TONE CURVE PANEL

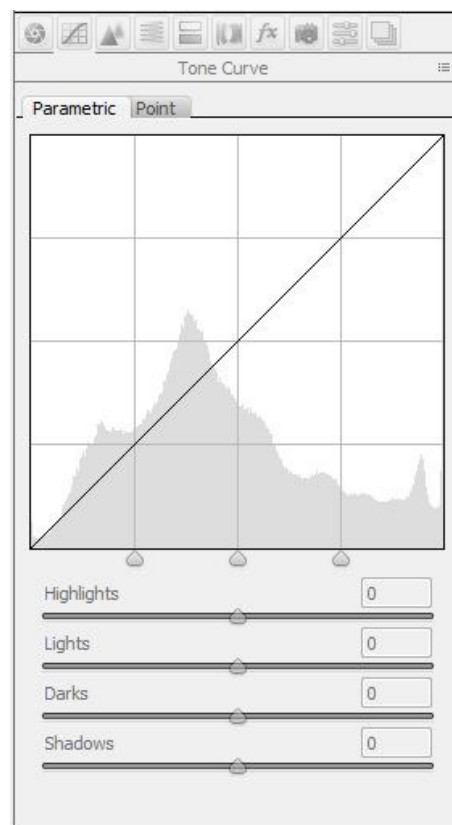
Fine tuning of contrast

Parametric Option – skies

Point Setting

Tonal Range Split Points

Hold Ctrl to select points in point view...



White Balance RAW AWB or preset Adjust from list or slide or use White Balance Tool on a light gray area.

Tone Adjustment Controls
Auto/ Default

Exposure
Recovery (about a stop)

Soften Midtones (Fill Light)

(to clip position)
Shadow clipping helps remove shadow noise

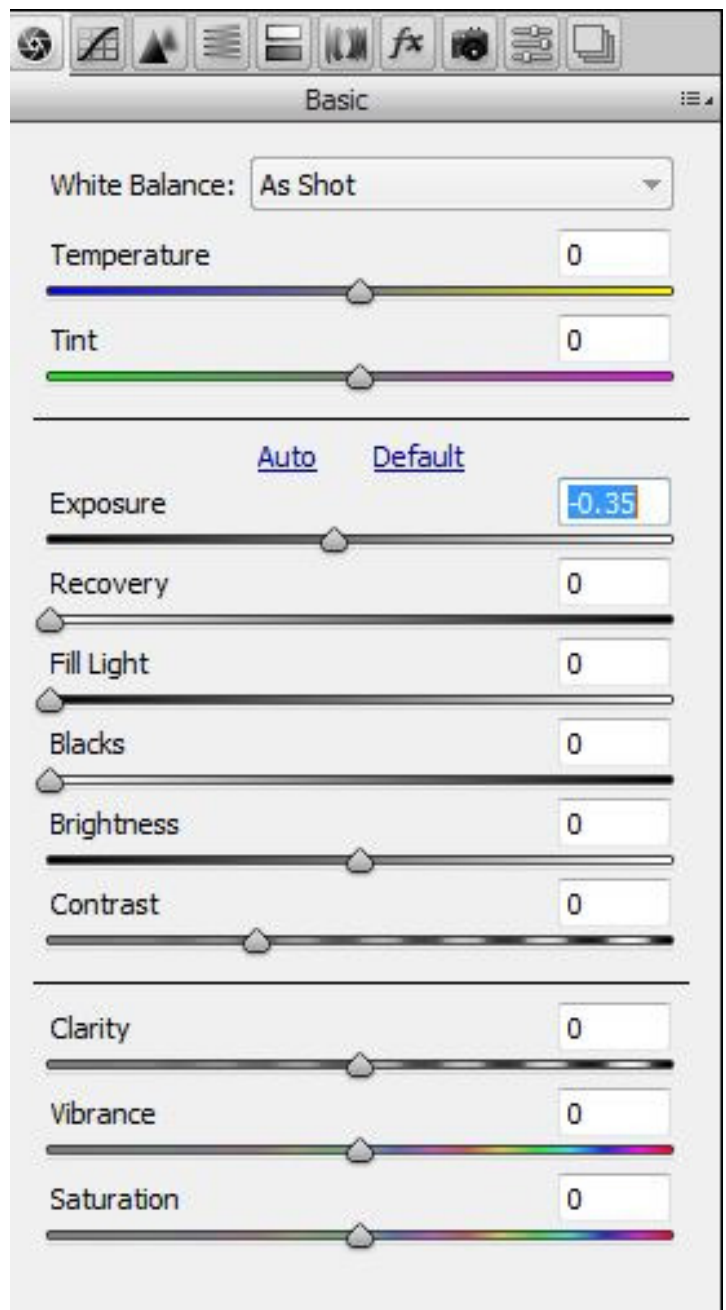
Brightness (as compared to exposure) - used for fine tuning – gamma control – Darken (compresses shadows) Lighten (compresses highlights)
Contrast applies an S shape curve

PRESENCE CONTROLS

Clarity – adds mid tone contrast (applies an unsharp mask)
+positive
-tive – kind of soft focus used in portraiture

Vibrance
Saturation

Hold Alt as you move sliders to show threshold preview

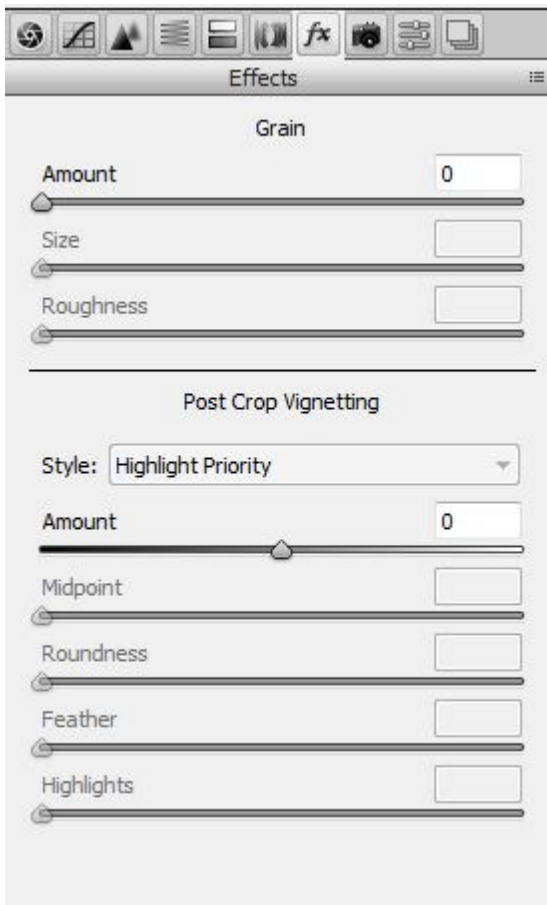
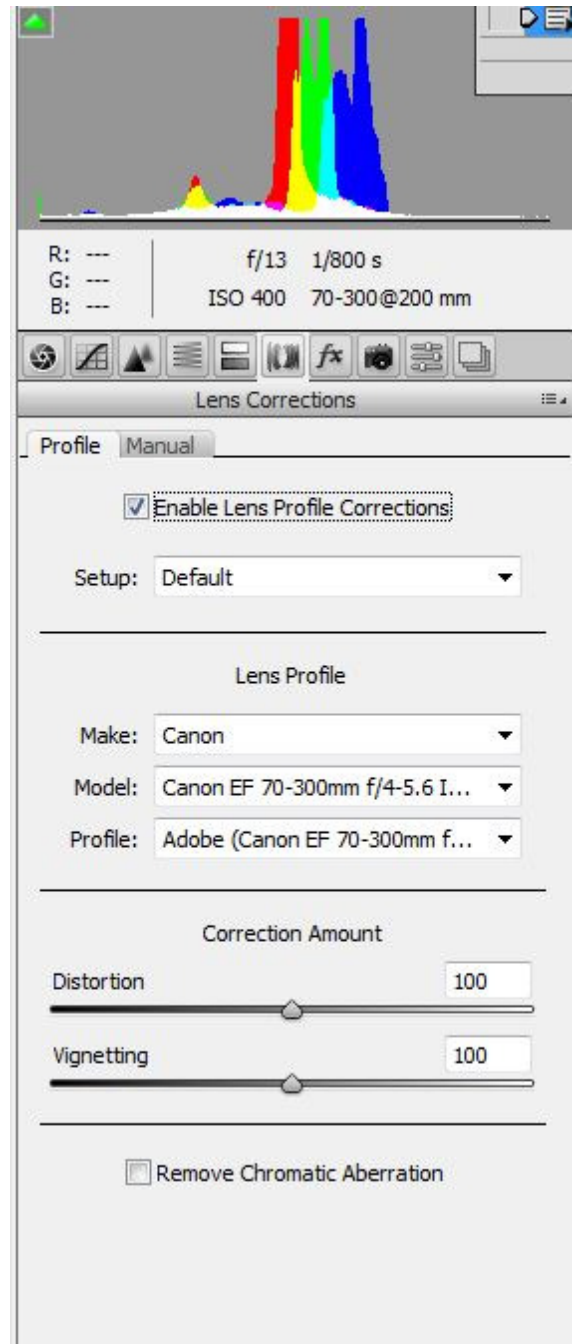


ORDER

Exposure
Recovery
Black Slider
Fill Light
Fine Tune
Brightness
Contrast

LENS CORRECTION PANEL

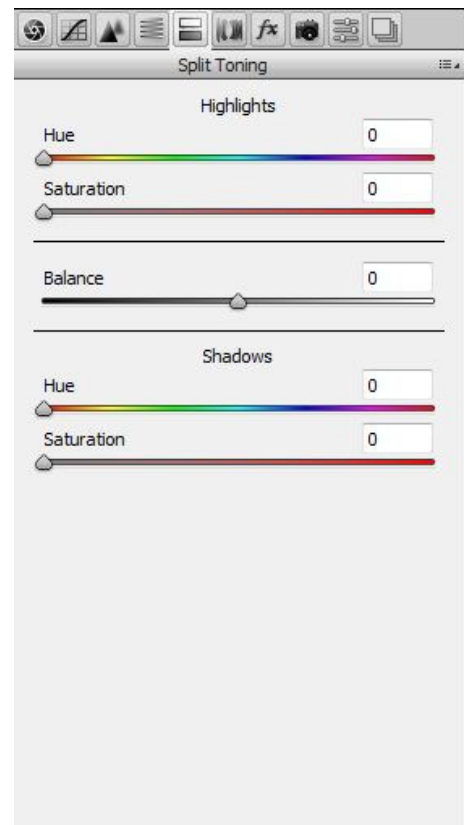
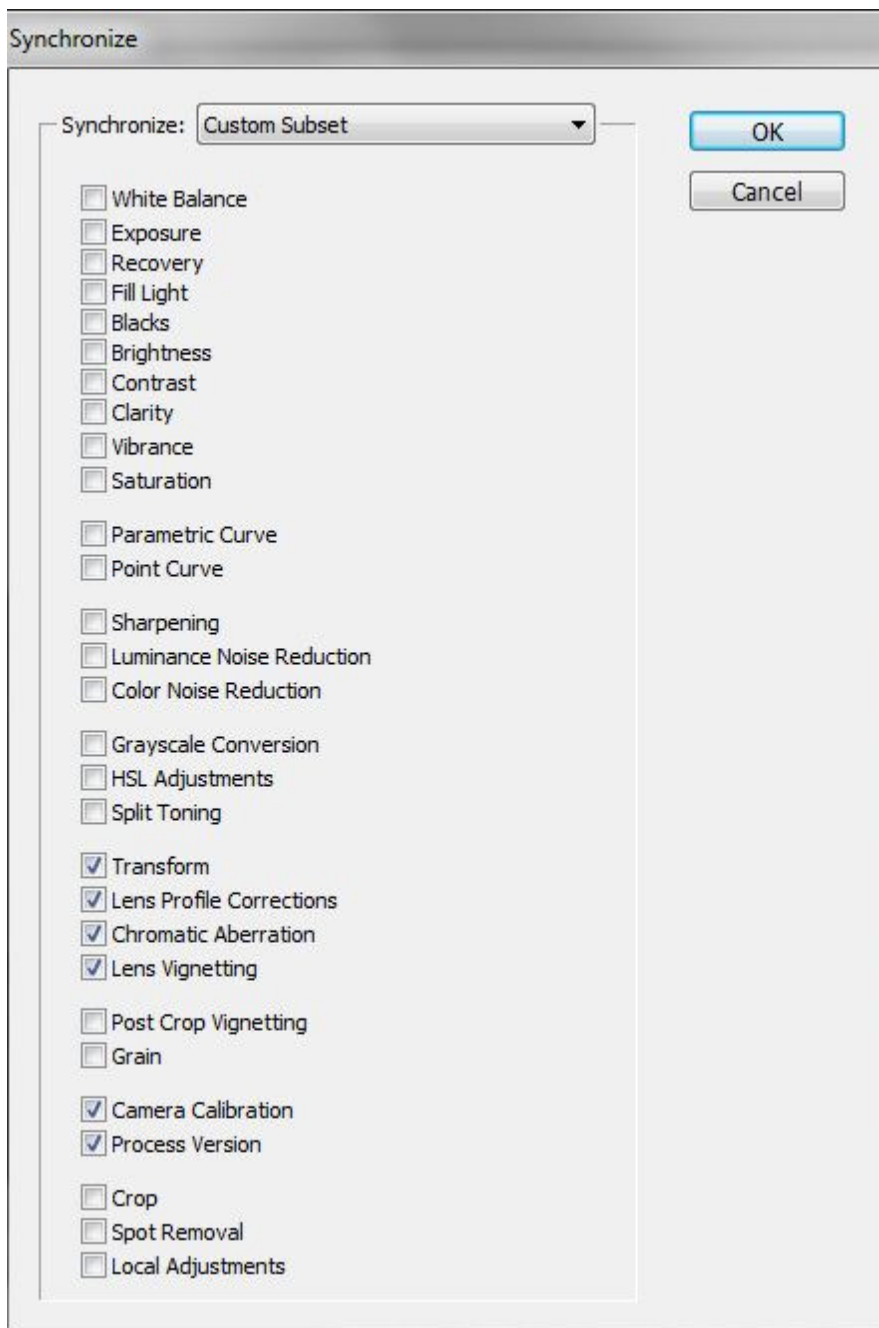
Used for correction of:-
Lens aberrations.
Chromatic aberration
Lens Vignetting
Lens Distortions



Fx—Effects

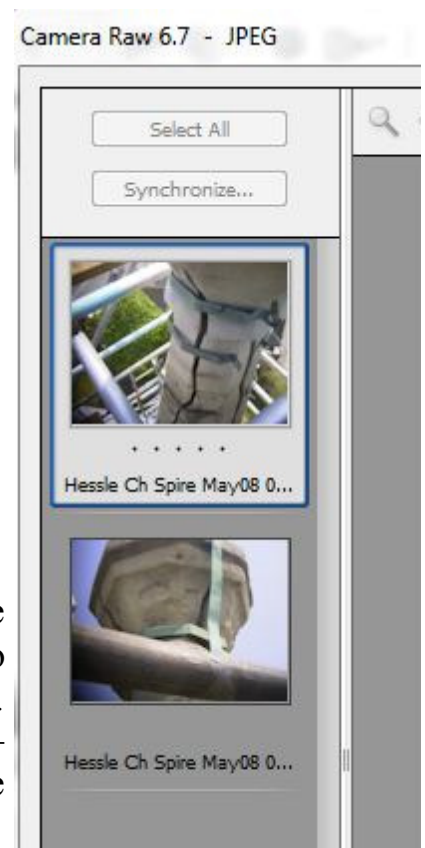
Used for:-
- Post Crop Vignetting Control
- simulating grain

Better methods of achieving an artistic result USING LAYERS and BLENDING MODES AND CURVES.



Select options you wish to synchronise.
(Caution if you select more than one image any adjustment will affect all)

e.g a portrait session.



I hope these notes will introduce you to some of the techniques within Photoshop and will inspire you to experiment and explore the other 80% of the package. Remember you cannot make a silk purse out of a sow's ear – always have in mind what you are going to do with a picture from the moment you press the shutter.