

How do I control what is sharp in my image?

Chiltern U3A Digital Imaging Group

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Get it right in the camera
or
Fix it later in Photoshop

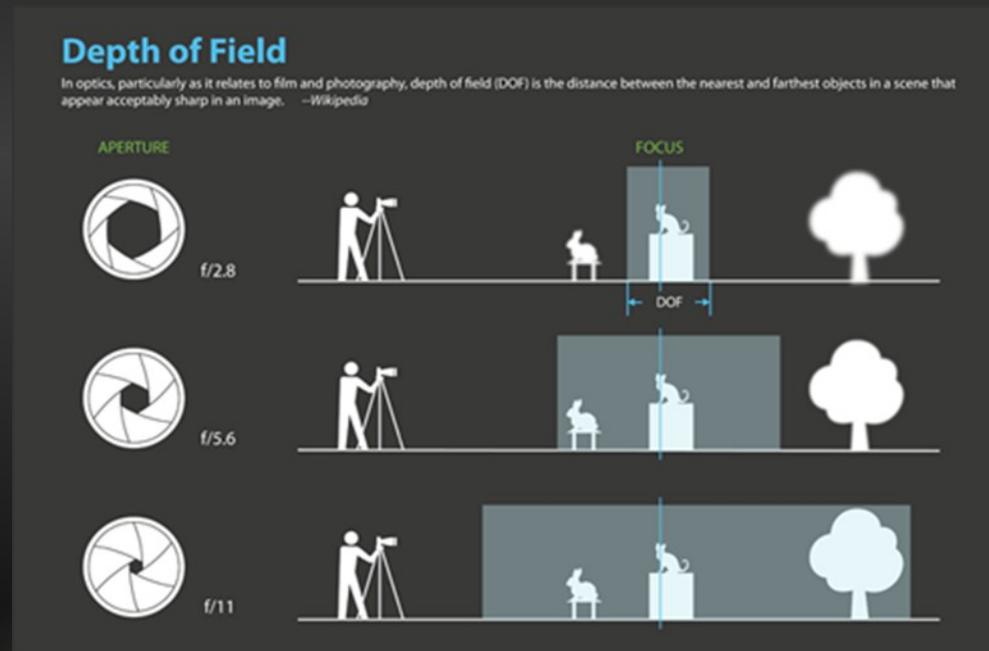


Get it right in the camera

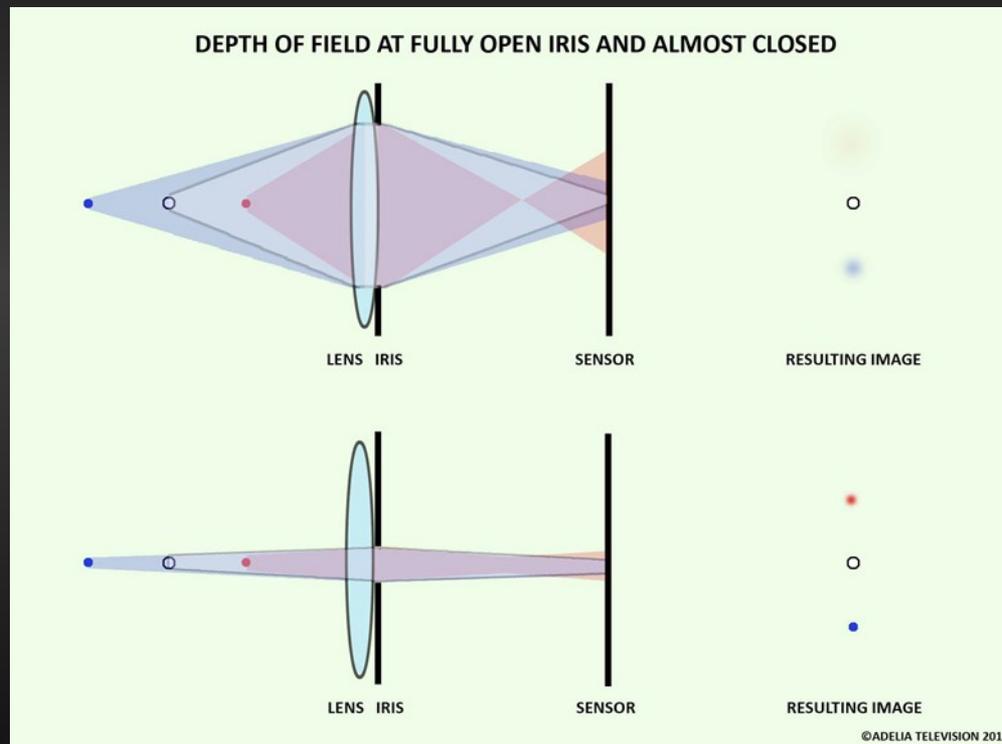
- By far the easiest and most effective way
- Avoid camera shake
 - Use a tripod
 - Use a fast shutter speed
 - Keep the lens clean
 - Control depth of field with aperture settings

Control depth of field

- Use a small aperture to get a large depth of field (everything in focus from near to far)
- Use a large aperture to get a short depth of field (main subject in focus and everything in front or behind is blurred)



The physics:



Control:

- Set the camera dial to Av (aperture priority)
- Rotate dial to set f-number
- Small numbers (e.g. f 4.0) = large aperture
- Large numbers (e.g. f 16) = small aperture



Portrait Examples:

f 4.0



f 8



f 16



Landscape Examples:

At f 4.0, focused at various points



Landscape Examples:

At f 8.0, focused at various points



Landscape Examples:

At f 22, focused at various points



Complications:

Different cameras – the larger the camera the smaller the depth of field at any given f-number

DSLR @ f 4.0



Compact @ f 4.5



Phone @ f 2.6



Complications:

Focal length – the longer the focal length (longer zoom) the smaller the depth of field.

Best result may be obtained by standing further away and zooming in

24mm @f 8

105mm @ f 8



Too complicated?

Try the scene settings on your camera



Landscape

Portrait



Too complicated?

Try the scene settings on your camera



Landscape



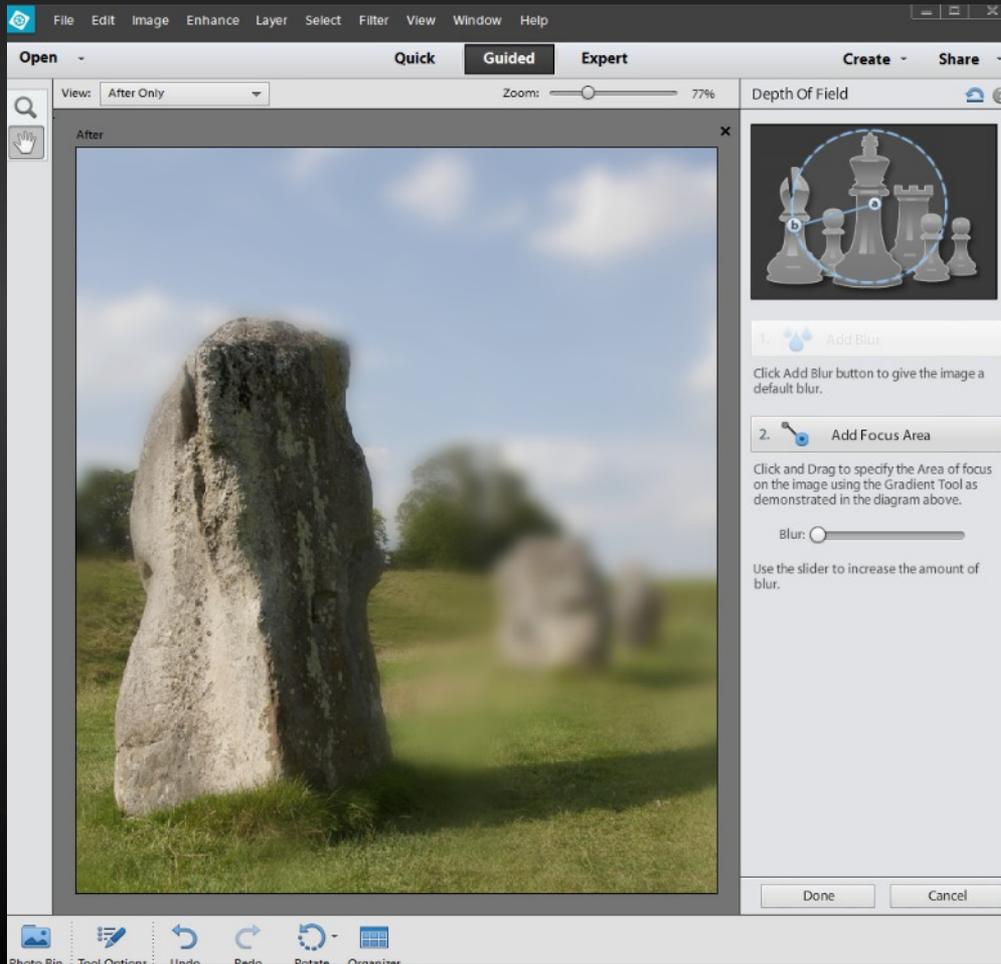
Portrait



FIX IT IN PHOTOSHOP ELEMENTS

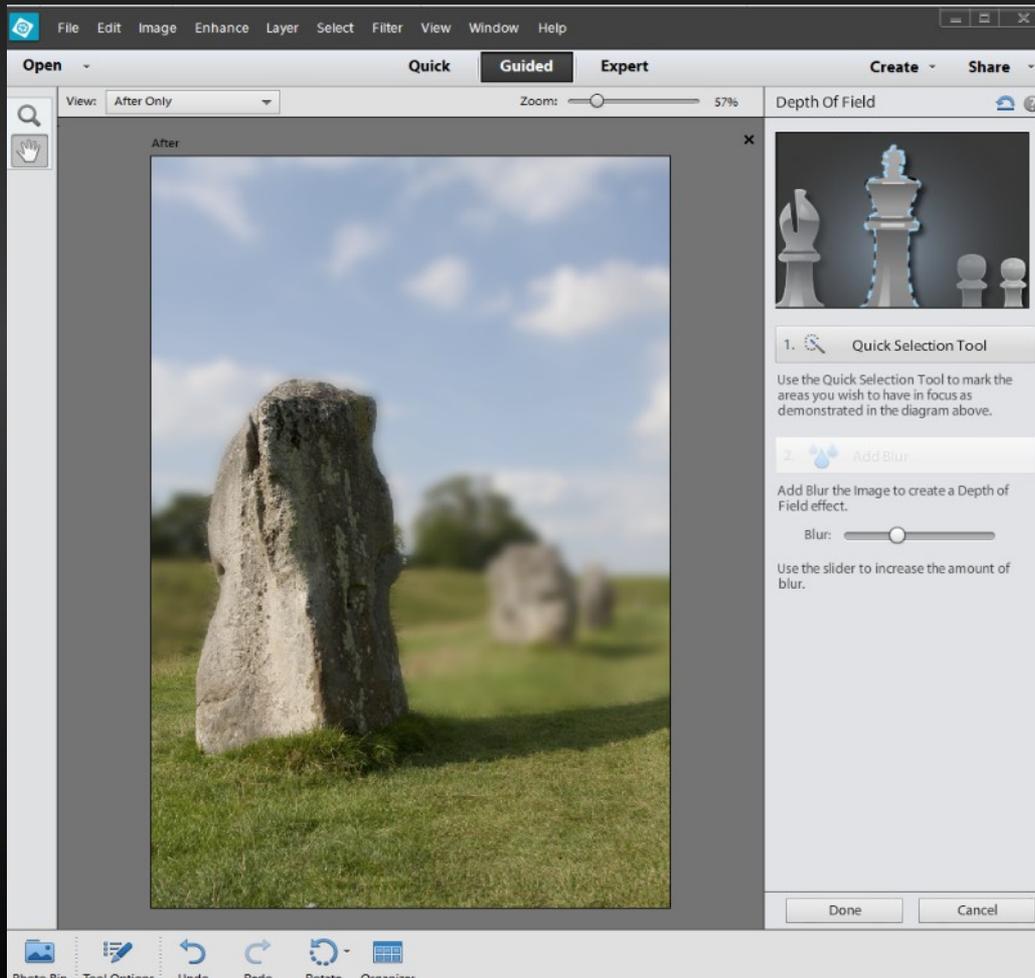
Use 'Guided Depth of Field – simple method'

- Click 'Add blur' button and adjust amount of blur
- Click 'Add focus' button, then drag out circular areas to fill the 'in-focus' part
- Results are awful.



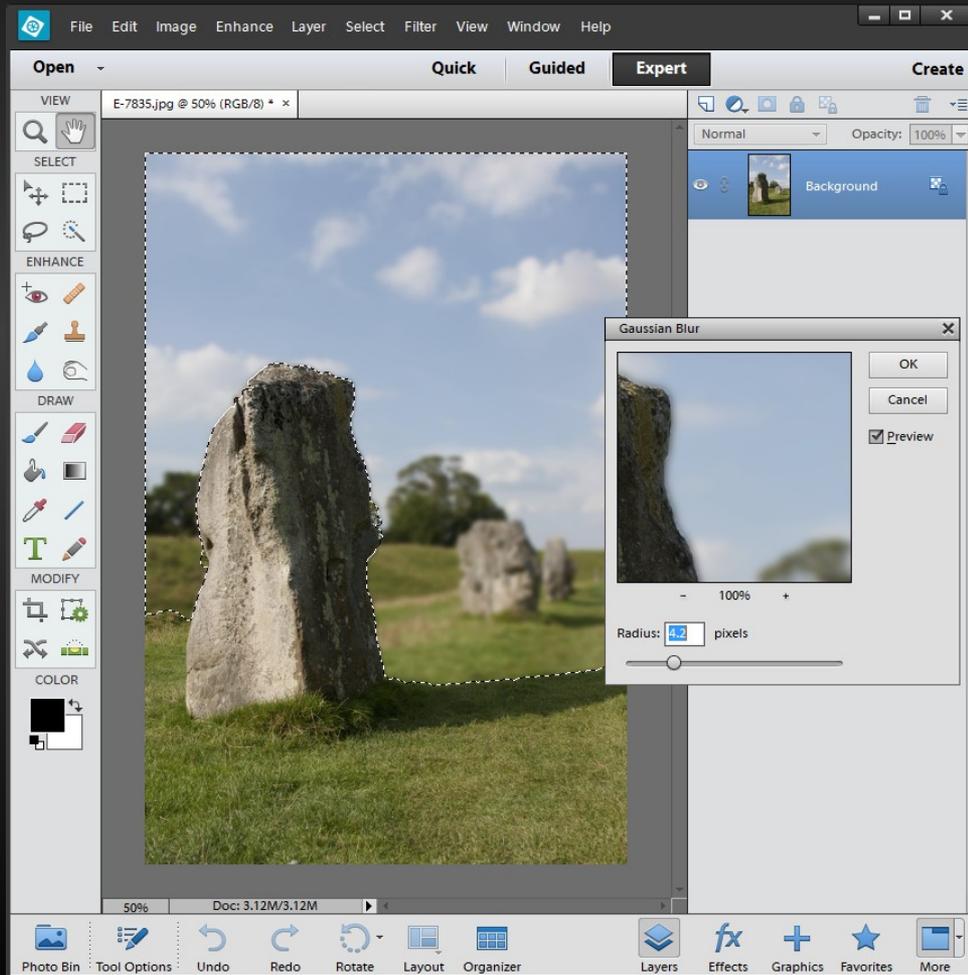
Use 'Guided Depth of Field – custom method'

- Click 'Quick Selection' button and drag cursor over the in-focus area
- Click 'Add blur' button and adjust the amount of blur
- Results are poor – halos, no feathering.



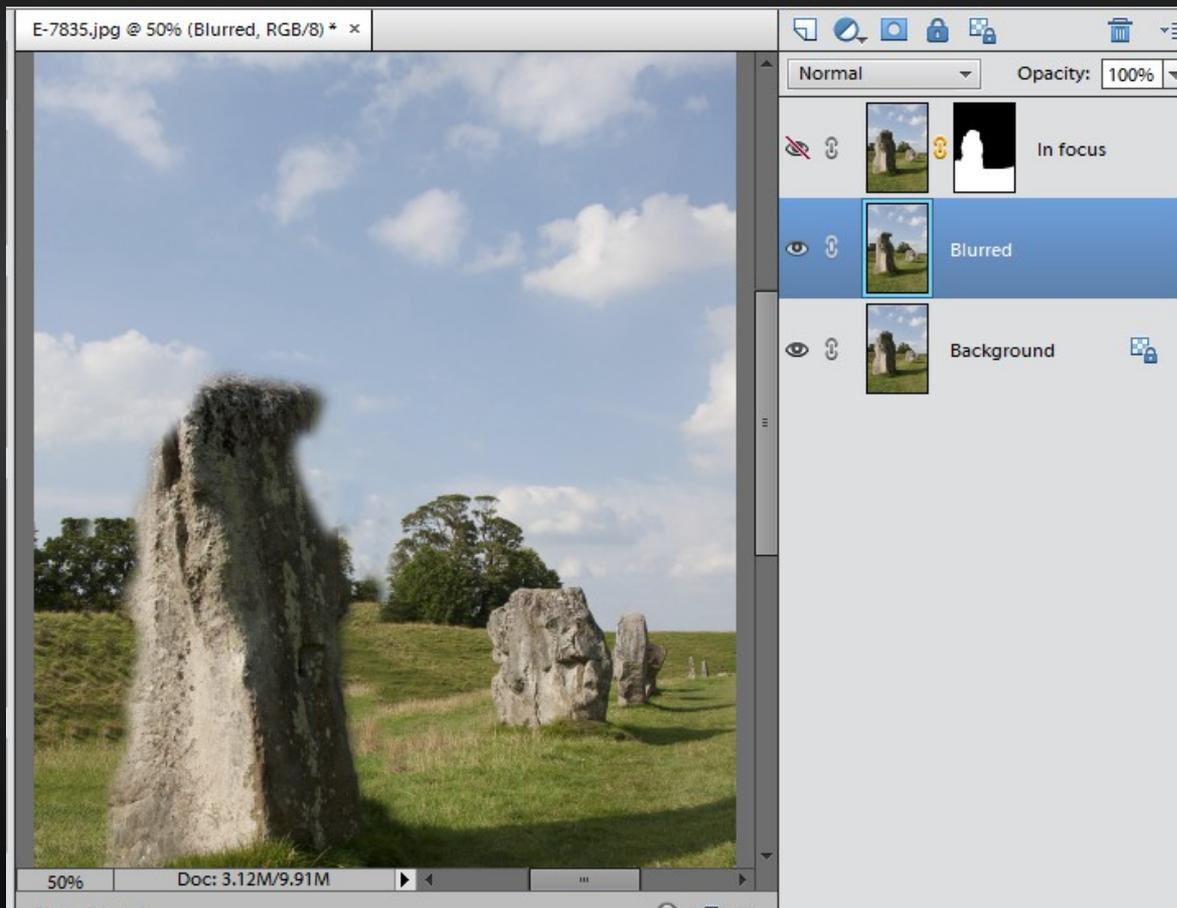
Use Expert mode with Gaussian Blur filter'

- Select the area you want out of focus
- Select Filter>Blur>Gaussian blur and use slider to adjust amount of blur
- Still get halos but can feather selection.



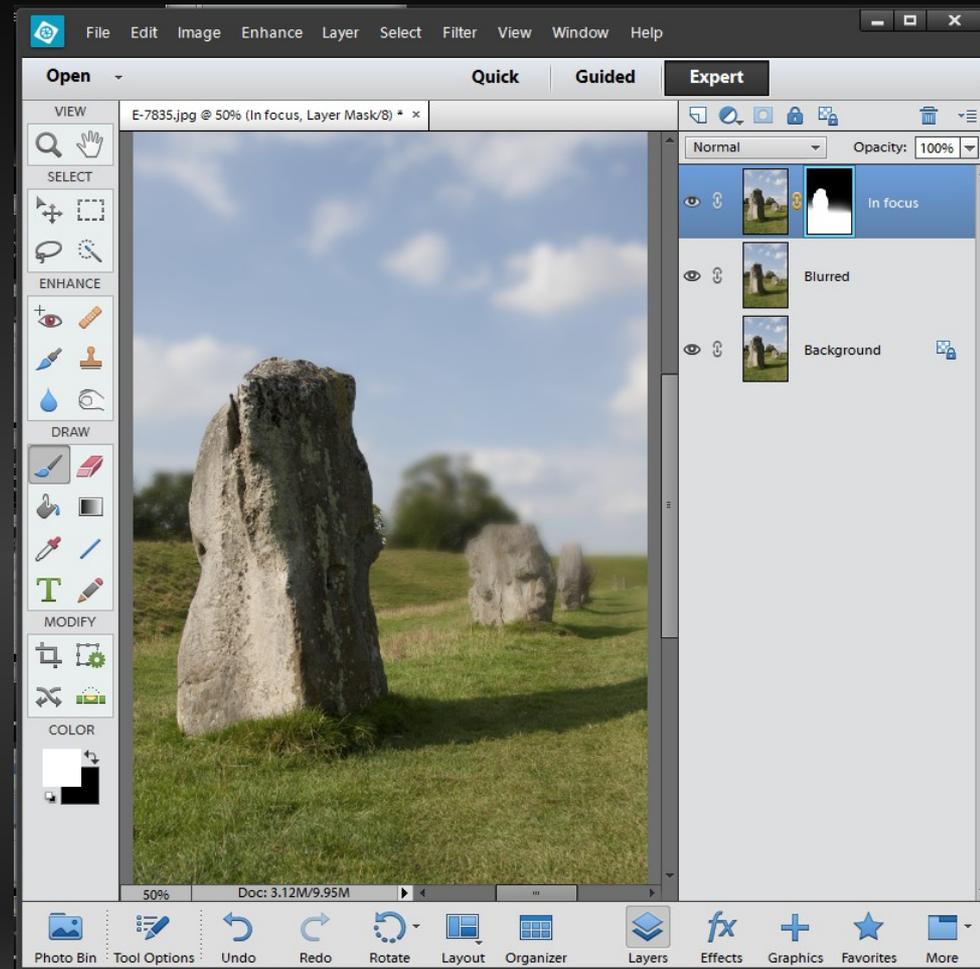
Use Expert mode with Gaussian Blur filter and layers

- Copy the background layer twice. The top layer will be in focus, the lower one blurred.
- Use the clone tool to clone the background into the edges of the in focus part of the image.



Use Expert mode with Gaussian Blur filter and layers (cont.)

- Select the area you want in focus, feathering the selection where necessary
- Use the selection to create a layer mask on the top layer
- Use Gaussian Blur to blur the lower layer.
- Halos are eliminated
- Some differential blurring possible by feathering the selection



Use Expert mode with Lens Blur filter

- Duplicate the background layer and create a layer mask
- Using gradient tool fill the layer mask with black for the area nearest the camera, mid-grey for the in-focus point and white for the far distance
- Using selection tools fill the in-focus subject with mid-grey
- Select the lens blur filter
- Set the focal distance to 128 (mid-grey)
- Good differential focus and no halos

