

Printing

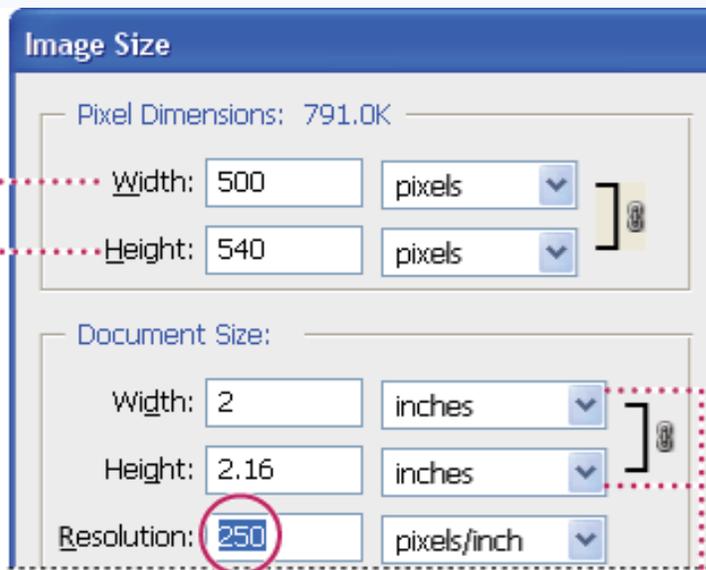
Resolution

- Usually expressed as:
 - Pixels per inch for monitors (72-90 ppi most monitors)
 - Dots per inch for printers (Minimum 220 dpi for quality print)
- Quality can only be as good as the format used to shoot

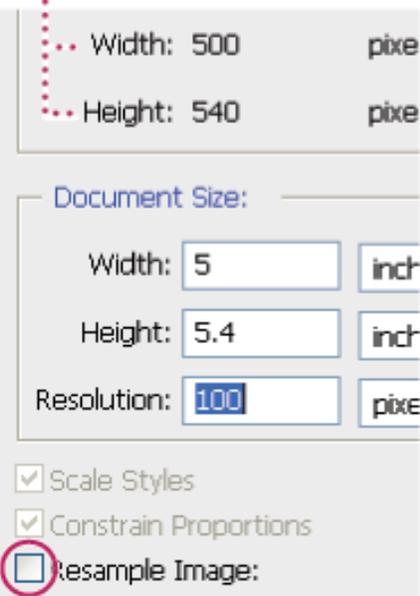
Common Formats

- RAW. Makers own digital negative format. (Opens in Adobe Camera Raw)
- DNG. Adobe negative format. (Can Convert JPG to this)
- TIFF. Tagged Image File. Saves and retains all data. (Large file size -60mb)
- JPG. Worldwide format, (Lossy Format, small files, reasonable quality, loses data when saved)
- PSD. Photoshop Digital. (PS converts files to this for working)

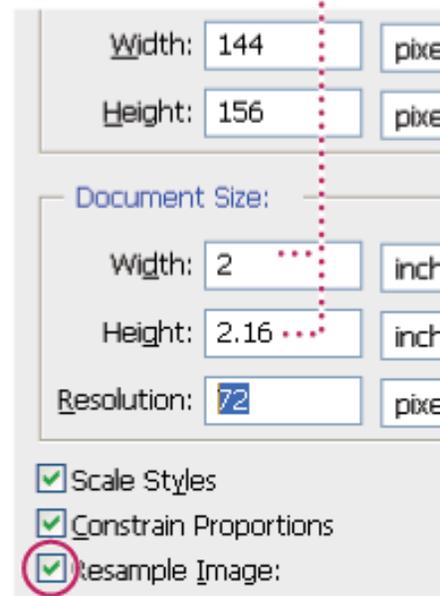
- GIF, PNG. Internet file/picture formats. (Low quality, only cope with 256 colours)



A



B



C

Interpolation

- Photoshop resamples images using an *interpolation method* to assign color values to any new pixels based on the color values of existing pixels. You can choose which method to use in the Image Size dialog box.
- Nearest Neighbor
 - A fast but less precise method that replicates the pixels in an image. This method is for use with illustrations containing edges that are not anti-aliased, to preserve hard edges and produce a smaller file. However, this method can produce jagged effects, which become apparent when you distort or scale an image or perform multiple manipulations on a selection.
- Bilinear
 - A method that adds pixels by averaging the color values of surrounding pixels. It produces medium-quality results.
- Bicubic
 - A slower but more precise method based on an examination of the values of surrounding pixels. Using more complex calculations, Bicubic produces smoother tonal gradations than Nearest Neighbor or Bilinear.
- Bicubic Smoother
 - A good method for enlarging images based on Bicubic interpolation but designed to produce smoother results.
- Bicubic Sharper
 - A good method for reducing the size of an image based on Bicubic interpolation with enhanced sharpening. This method maintains the detail in a resampled image. If Bicubic Sharper oversharpens some areas of an image, try using Bicubic.
- Note:
 - You can specify a default interpolation method to use whenever Photoshop resamples image data. Choose Edit > Preferences > General (Windows) or Photoshop > Preferences > General (Mac OS), and then choose a method from the Image Interpolation Methods menu.

Change pixel dimensions of an image

- Choose Image > Image Size
- To maintain the current ratio of pixel width to pixel height, select Constrain Proportions. This option automatically updates the width as you change the height, and vice versa
- Under Pixel Dimensions, enter values for Width and Height. To enter values as percentages of the current dimensions, choose Percent as the unit of measurement. The new file size for the image appears at the top of the Image Size dialog box, with the old file size in parentheses.
- Make sure that Resample Image is selected, and choose an interpolation method
- If your image has layers with styles applied to them, select Scale Styles to scale the effects in the resized image. This option is available only if you selected Constrain Proportions
- When you finish setting options, click OK.
- Note:
- For best results when you produce a smaller image, downsample and apply the Unsharp Mask filter. To produce a larger image, rescan the image at a higher resolution.

Change the print dimensions and resolution

- Choose Image > Image Size
- Change the print dimensions, image resolution, or both:
- To change only the print dimensions or only the resolution and adjust the total number of pixels in the image proportionately, select Resample Image and then choose an interpolation method.
- To change the print dimensions and resolution without changing the total number of pixels in the image, deselect Resample Image.
- To maintain the current ratio of image width to image height, select Constrain Proportions. This option automatically changes the width as you change the height, and vice versa
- Under Document Size, enter new values for the height and width. If desired, choose a new unit of measurement. Note that for Width, the Columns option uses the width and gutter sizes specified in the Units & Rulers preferences
- For Resolution, enter a new value. If desired, choose a new unit of measurement.
- Note:
- To restore the initial values displayed in the Image Size dialog box, hold down Alt (Windows) or Option (Mac OS), and click Reset.

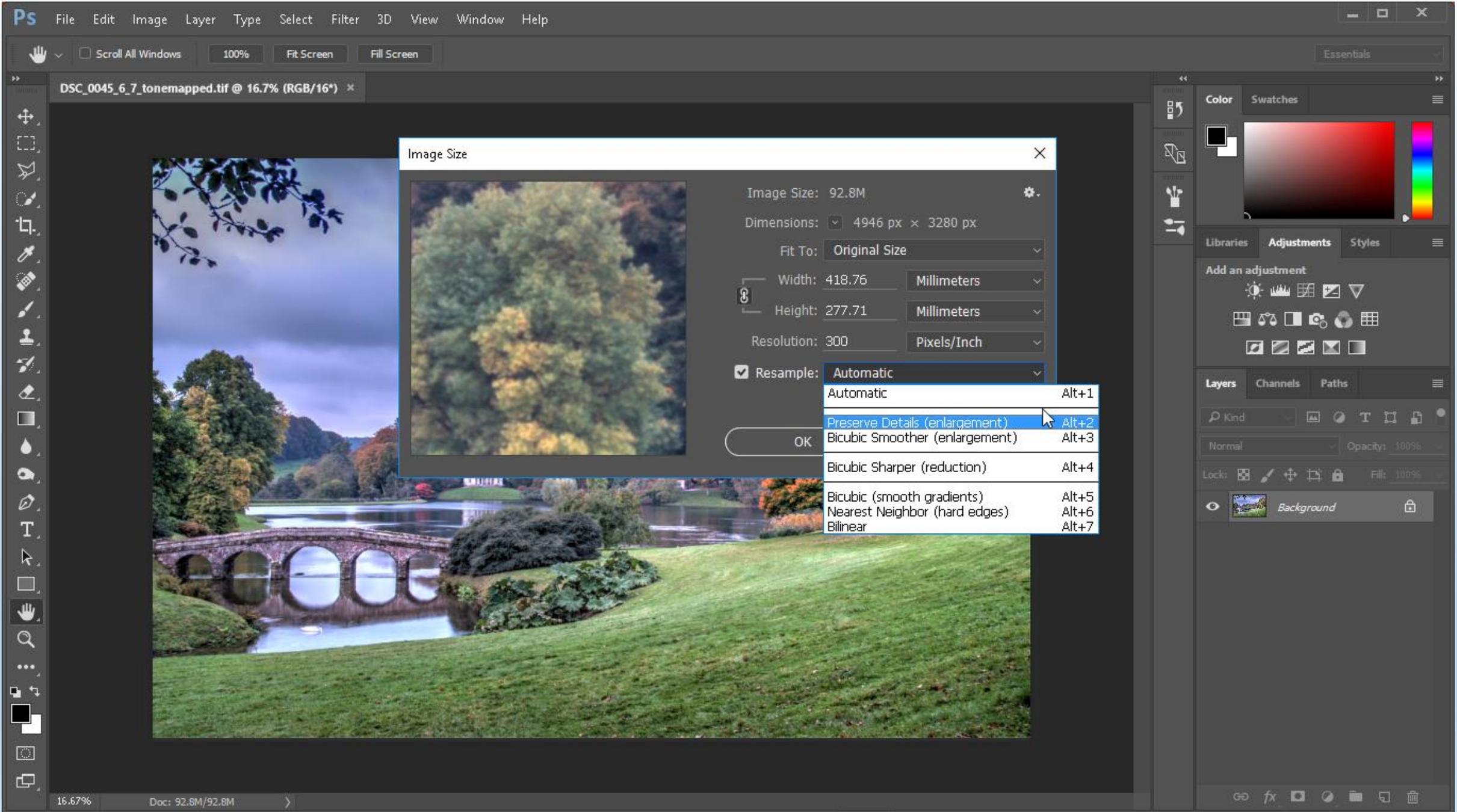


Image Size



Image Size: 92.8M
Dimensions: 4946 px x 3280 px
Fit To: Original Size
Width: 418.76 Millimeters
Height: 277.71 Millimeters
Resolution: 300 Pixels/Inch

- Resample: Automatic
- Automatic Alt+1
- Preserve Details (enlargement) Alt+2
- Bicubic Smoother (enlargement) Alt+3
- Bicubic Sharper (reduction) Alt+4
- Bicubic (smooth gradients) Alt+5
- Nearest Neighbor (hard edges) Alt+6
- Bilinear Alt+7

OK

Printer supplied software

- Most manufacturers supply software with printers to overcome the need to make the adjustments in an editor
 - Good to understand what is going on though
 - And why something did not turn out as expected.
- The absolute key is a well balanced good quality file to print from
 - Printer paper is good but it can't always handle extremes.
- Always use good quality ink and paper. (Cheap is a false economy)

Epson EasyPhoto

File Properties View Tools Help

Printer Settings



Help

Printer

XP-332 335 Series(Network)

Paper Source

Rear Paper Feed

Borderless

Paper Size

A4 210 x 297 mm

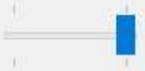
Paper Type

Epson Premium Glossy

Print Mode

High

Borderless

Min  Max

Caution

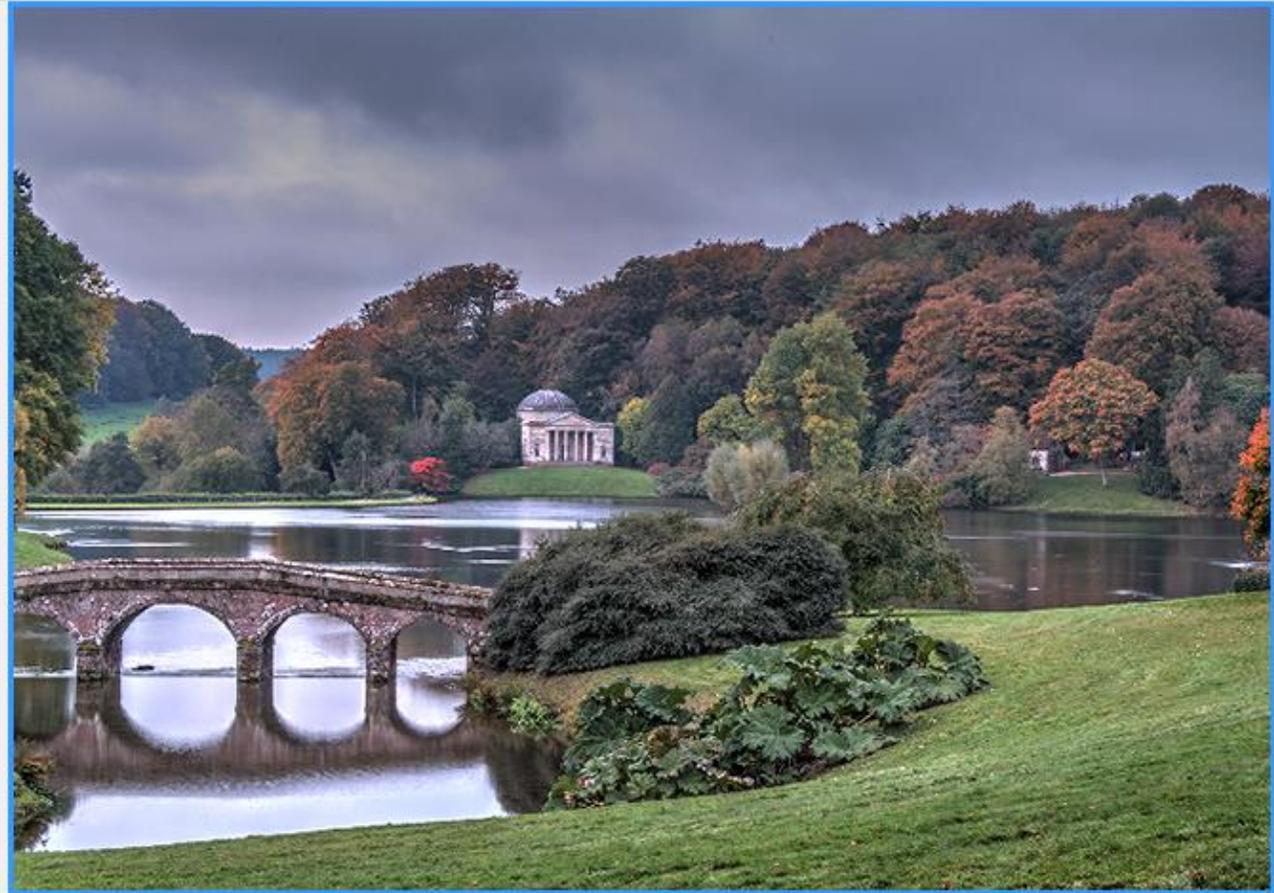
Print quality in the top and bottom areas may decline or the area may be smeared depending on the media. For details about this setting, see online help or your manual.

OK

Cancel

Fit to Window

 Positioning



Page
1/1



1 page

Positioning

Magnification

100 %

Trim

Fit

Move Photo



Rotate



Rotate all Photos

Undo (Selected Photo)

Undo (All Photos)

Close



Page
1/1



1



page

Make image correction settings that take effect during printing.
To print the comments, select a layout with one or more frames for comments.



Fit to Window Help

Auto Correct

- PhotoEnhance
- PRINT Image Matching
- None

Scene Correction Standard ▾

Scene Correction Level

- [Slider] +

Monochrome

Vivid & Clear

Brightness

- [Slider] +

Digital Camera Correction

- Standard
- Smooth Skin

Fix Red-Eye (Auto)

Apply to All Photos

Fix Red-Eye (Manual)

Undo Clear

Comments:

Apply to All Photos

File: DSC_0027_8_9_tonemapped.tif
Location: C:\Users\peter\Pictures\2016Stourhead\RAW\photomatix done

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Portrait Enhance Close

Monitor Matching

- Printers and Monitors use RGB (Red, Green, Blue) build the picture
- Proportions can vary
- This known as the colour space value
- De Facto standard for popular equipment is AdobeRGB89
- Most mass market appliances map to this standard
- That means we don't need to do anything usually.
- Compare a print to your screen, note any slight difference and bear in mind when you print.
- If you use a high quality print house they may give you a colour space value to work to.

Summary

- Resolution is key
- Work in an appropriate format for what you want to achieve
- JPG is fine for small prints and screen based viewing
- Save in TIFF for large prints and to rework
- Take care when changing picture size and or resolution
- Use the right interpolation
- Printer manufacturers software simplifies printing
- Manufactures colour space settings are usually OK