

A basic raw workflow

How to take a raw file (or jpeg) through Adobe Camera Raw into Adobe Photoshop.

Of course, there are many different ways to use post production software. It is likely you will develop your own preferences but for several reasons we recommend becoming familiar with the principles of the professional workflow described here.

The steps we demonstrate are translatable to Adobe Lightroom and Capture One.

ORGANISATION

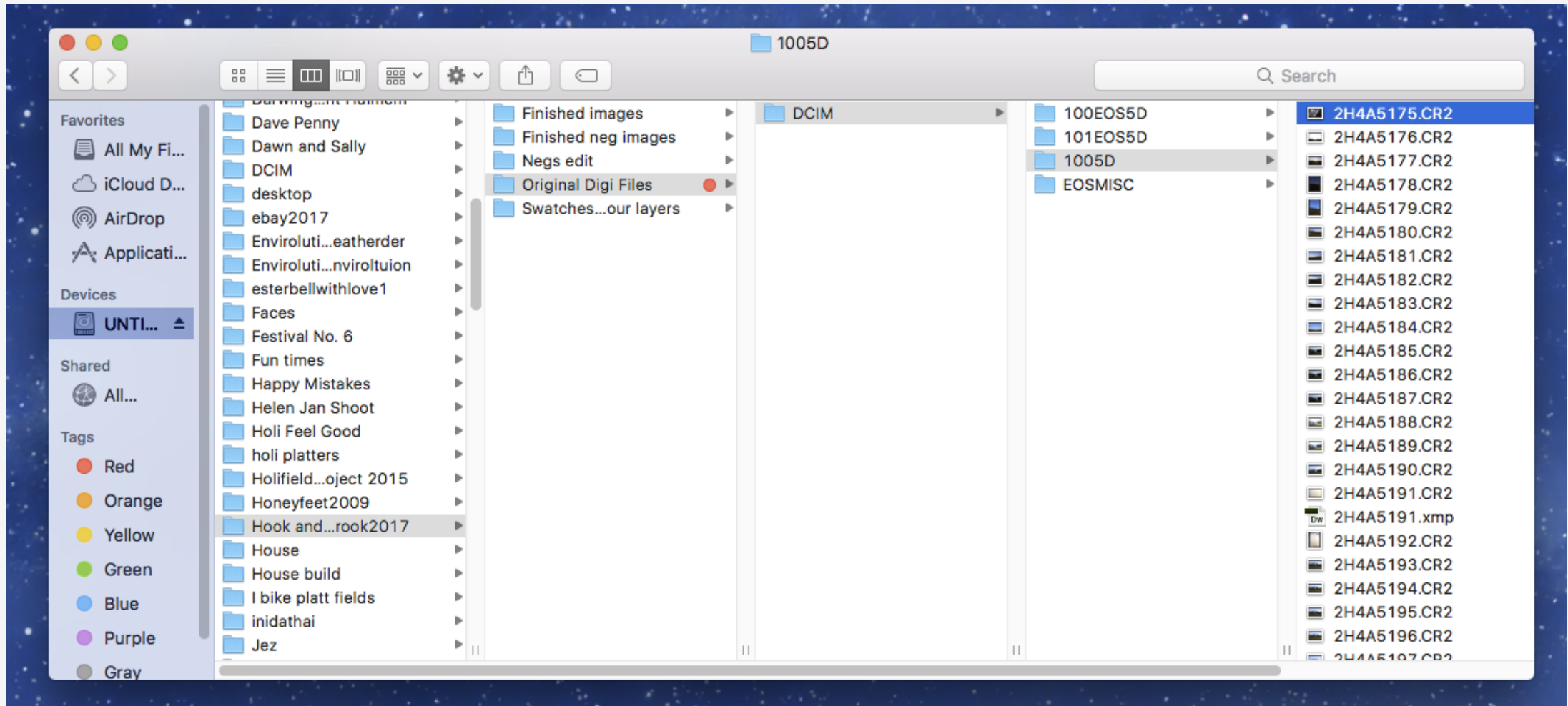
When shooting digitally, and scanning negatives, it's easy to accumulate thousands of images. Be organised from the beginning. You won't regret it!

Adobe Bridge is perfect for the job.

Other software you can use is the Library module in Adobe Lightroom, or Capture One.
(With these two you will need to organise your files to be linked with the software)

Whichever software you use it helps to name your image folder in a way that is clear within your personal system of organisation.

Organizing your files.



Adobe Bridge CC

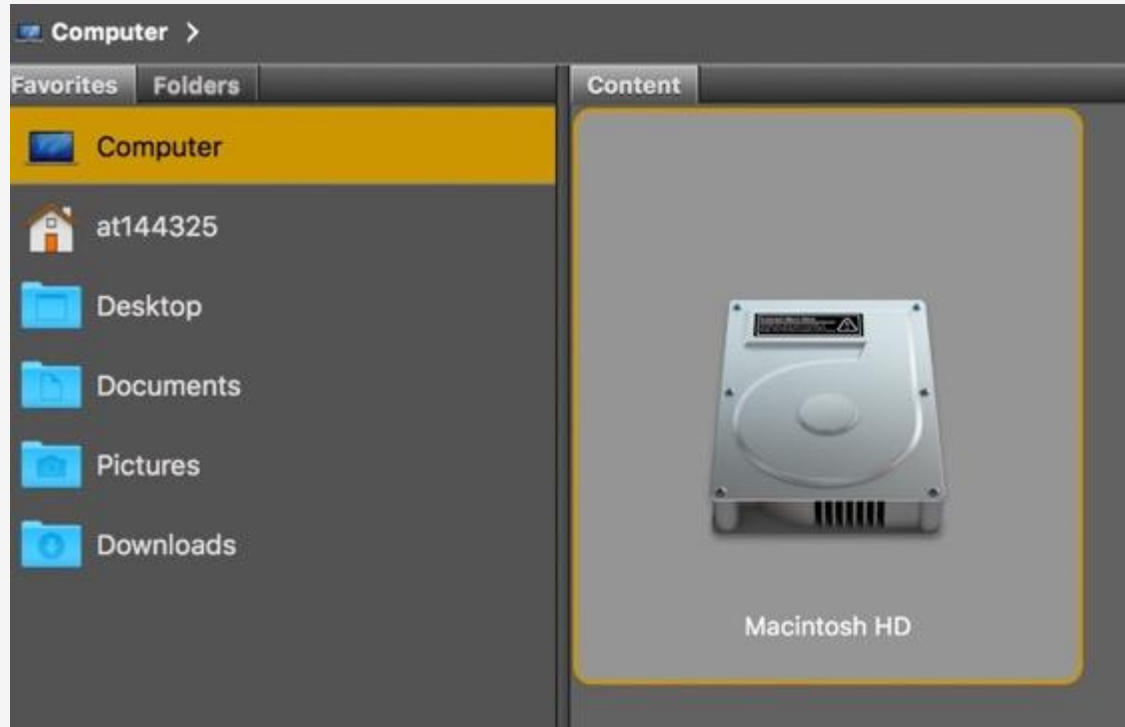
Adobe Bridge is file organisation software.

Effectively it forms a bridge between your thousands of files and the raw software
Adobe Camera Raw.

Open Adobe Bridge

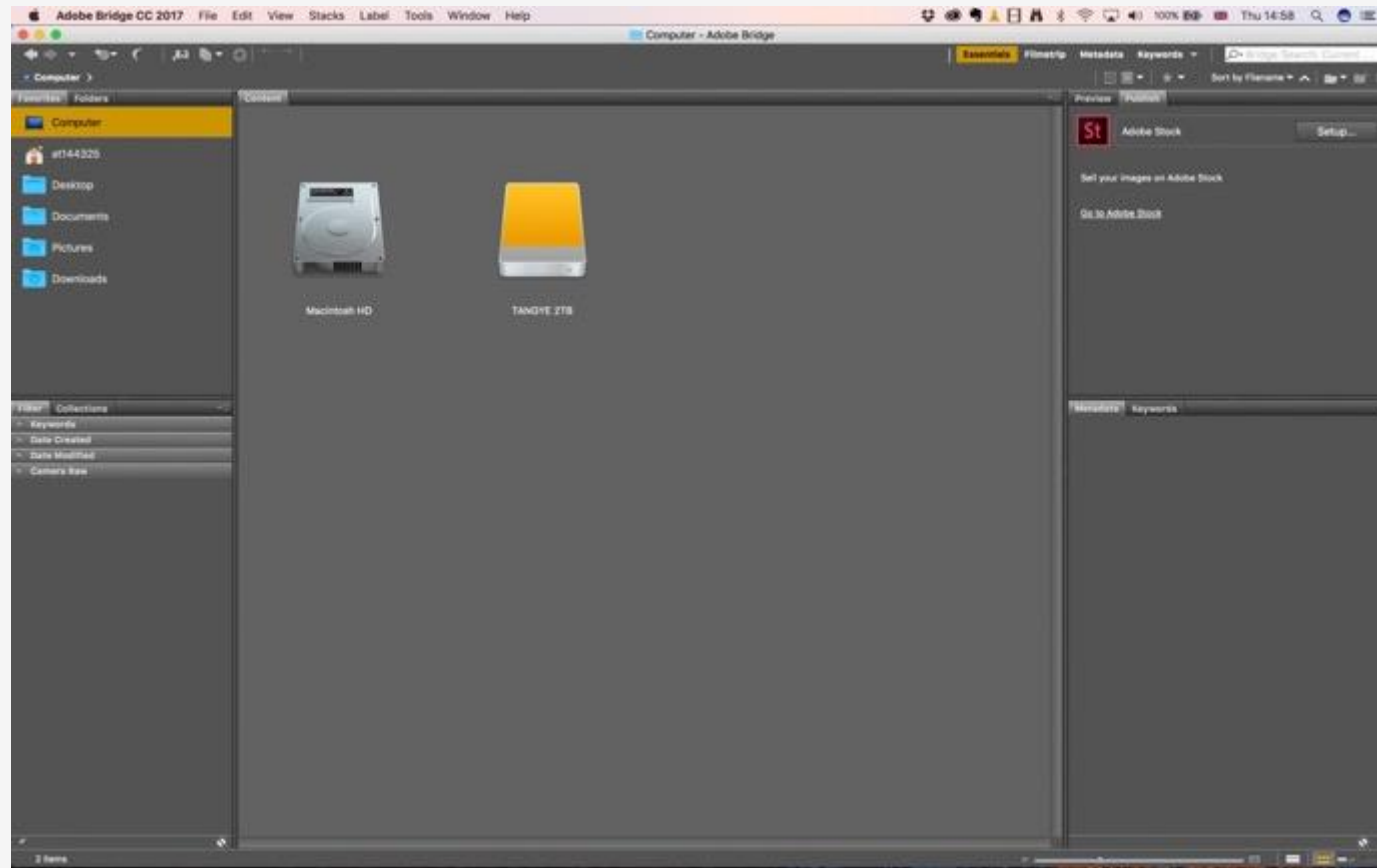


In Adobe Bridge, locate the left hand panel then search for your image files.

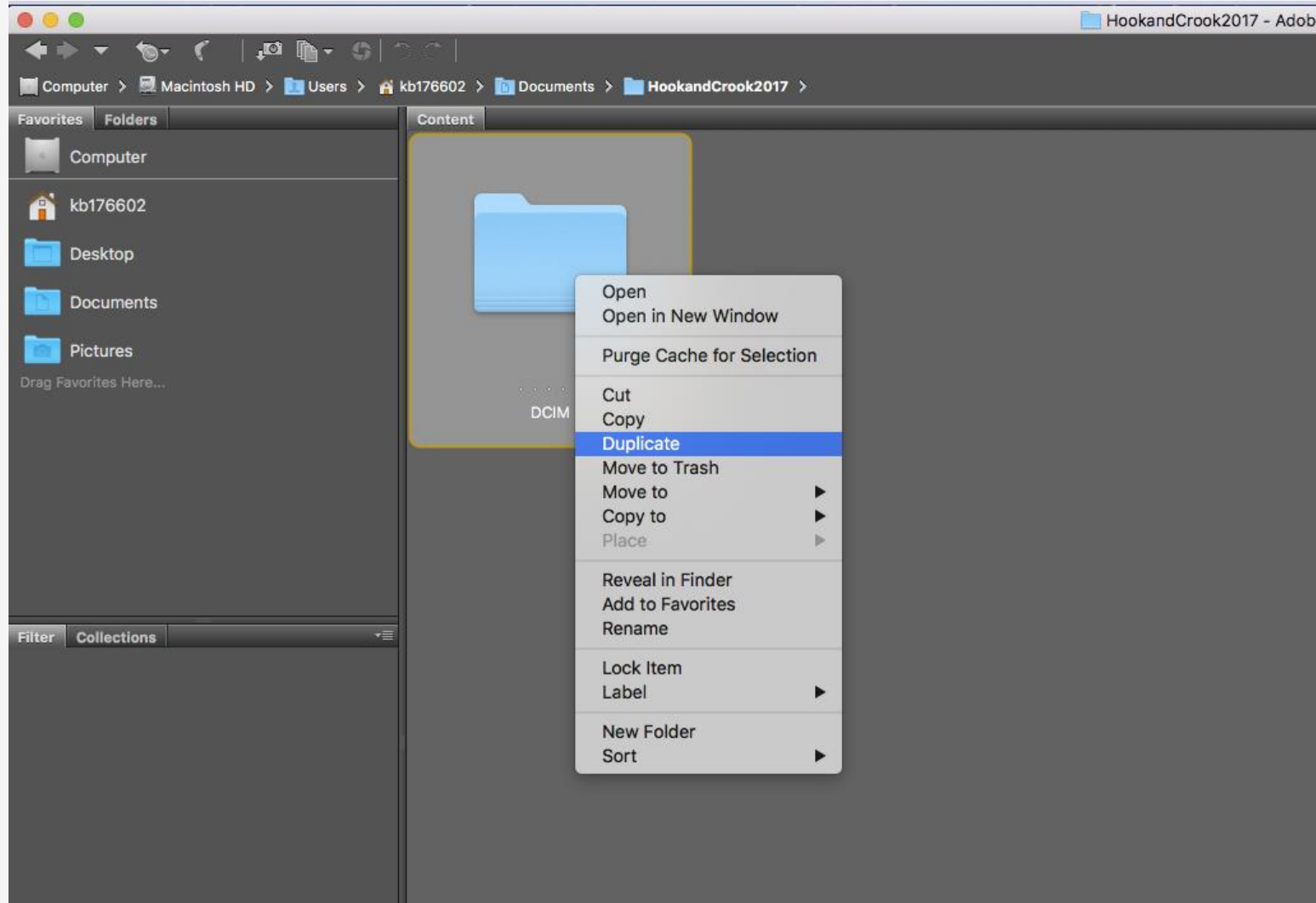


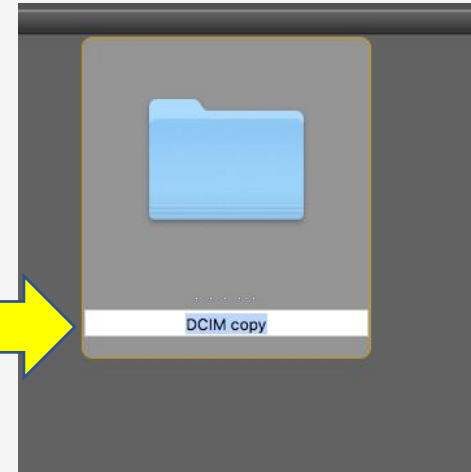
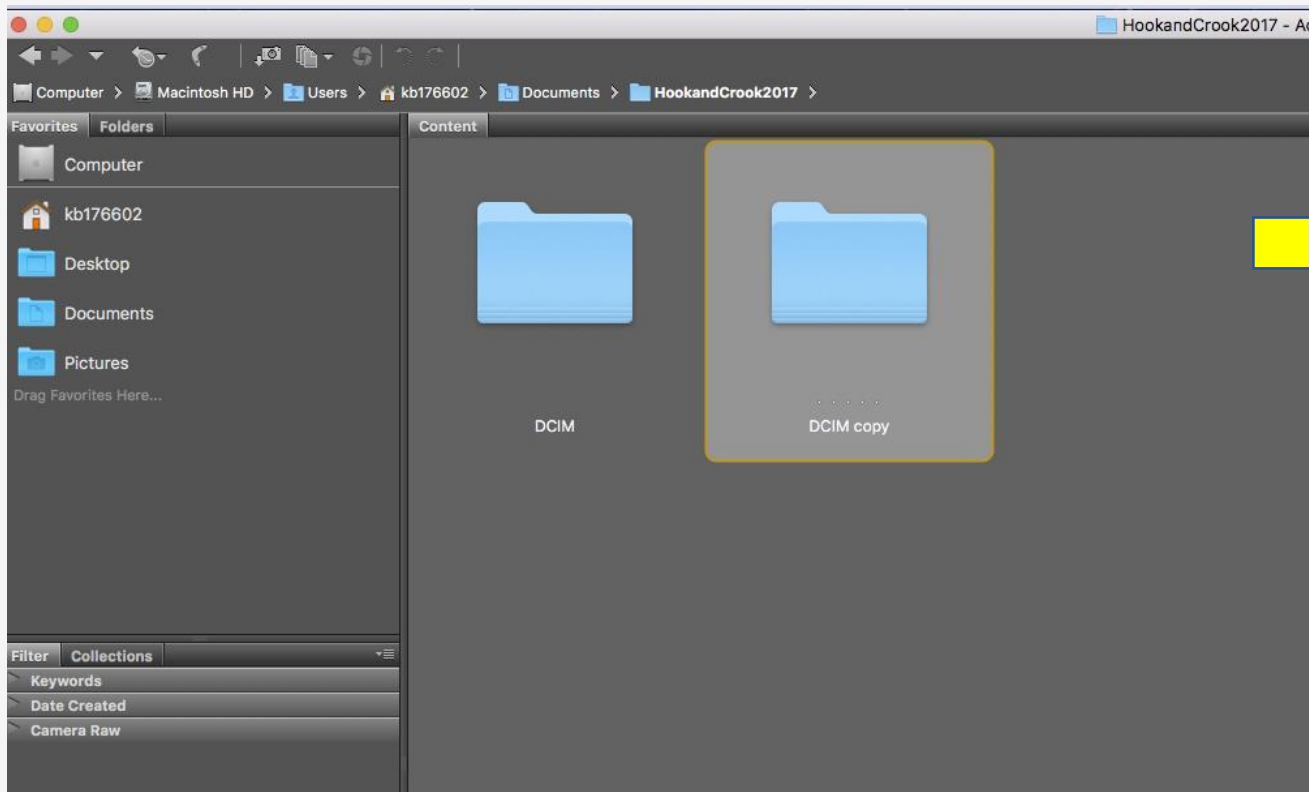
Navigate to your hard drive or memory stick to select images.
As previously described it is recommended that you have copied them to a Desktop folder to work from, but you can do this here in Bridge if you haven't yet done so.

Double click to open a folder. **Right click** to reveal further options such as 'Copy to'.



Select your image folder



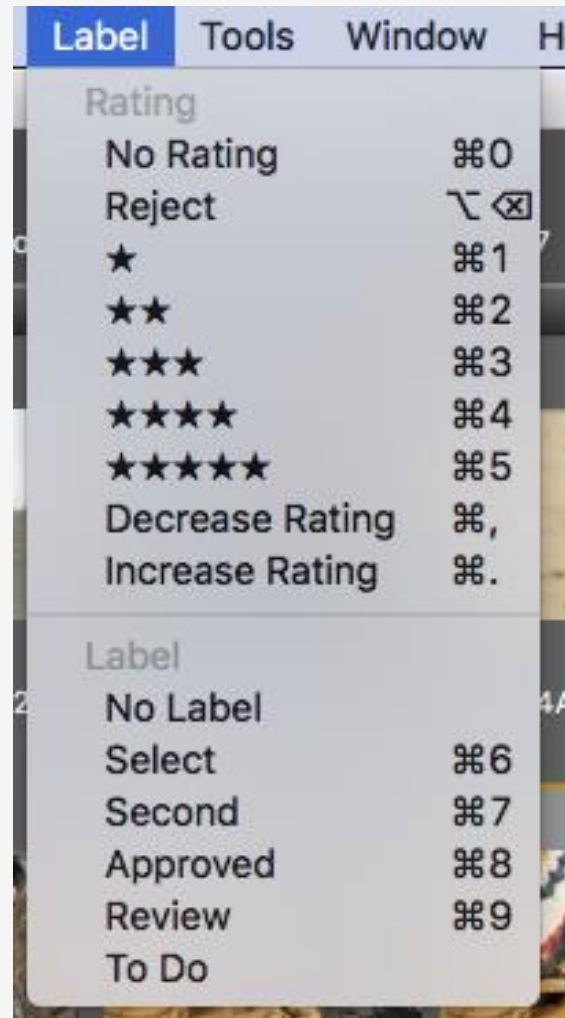


Duplications means that you will always have a set of RAW files that have had no adjustments that you can revert back to. It is always to back up these files on another hard-drive and computer incase of corruption.

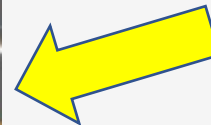
In terms of adjustments to the image, raw software always allows you to return to the original, as you are only ever working on a 'virtual' copy, so instead you could always copy it afterwards, then revert to the original to compare.

Finding a way to work in Bridge that suits you

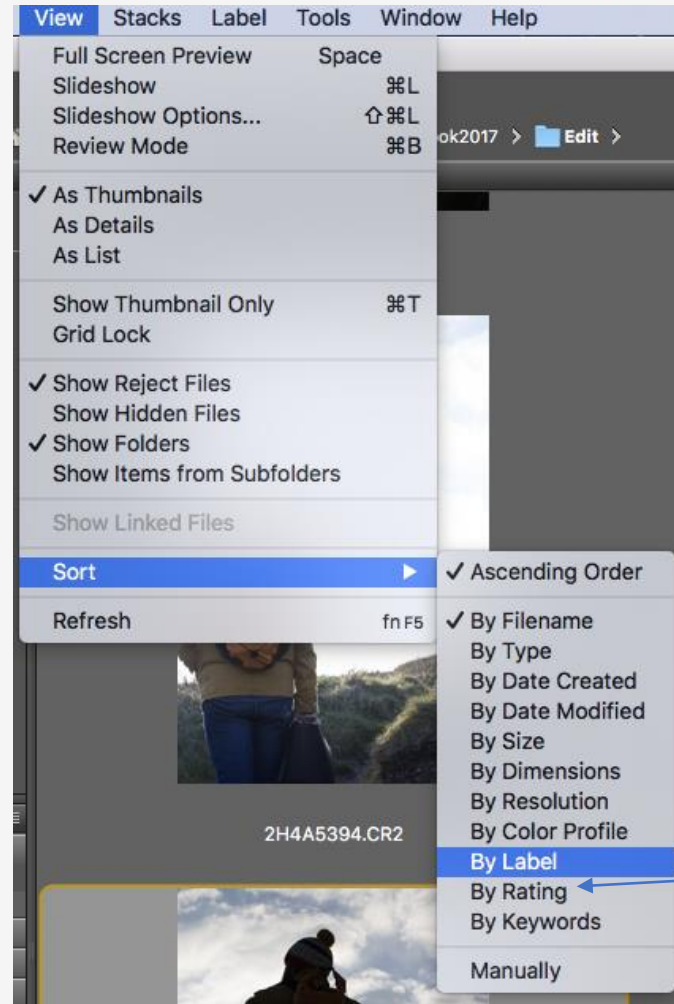
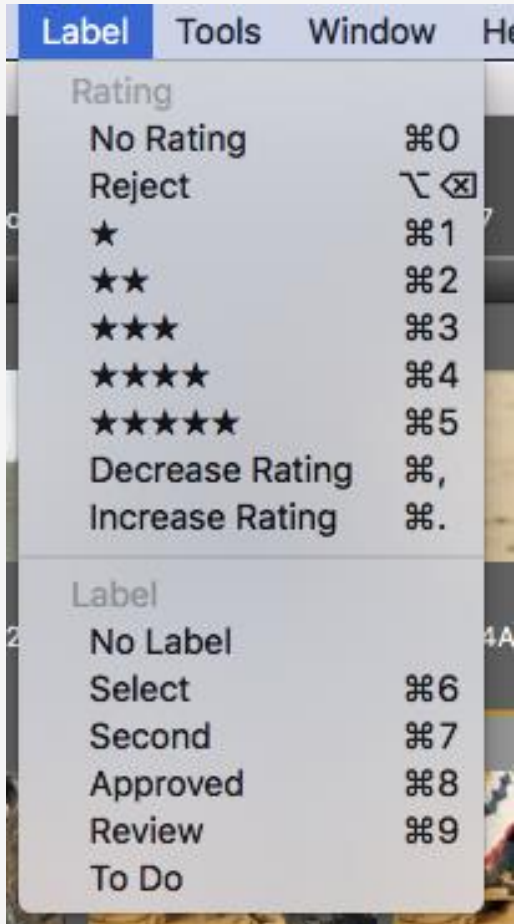
Ratings – Simply going through your images and rating them to your preference is a good starting point for editing.



Label – Labelling is another option for a good workflow and is a more professional and coherent way to work with clients.



By simply clicking on the image and using the short cuts, shown here on the right, you can quickly start to divide out the images you want to work with.



Once you have done this you can select View -> Sort-> And either choose label or rating depending on which method you use.

Right click on your chosen image and choose
Open in Camera Raw

If it is a raw file you can just double click on it to open it.

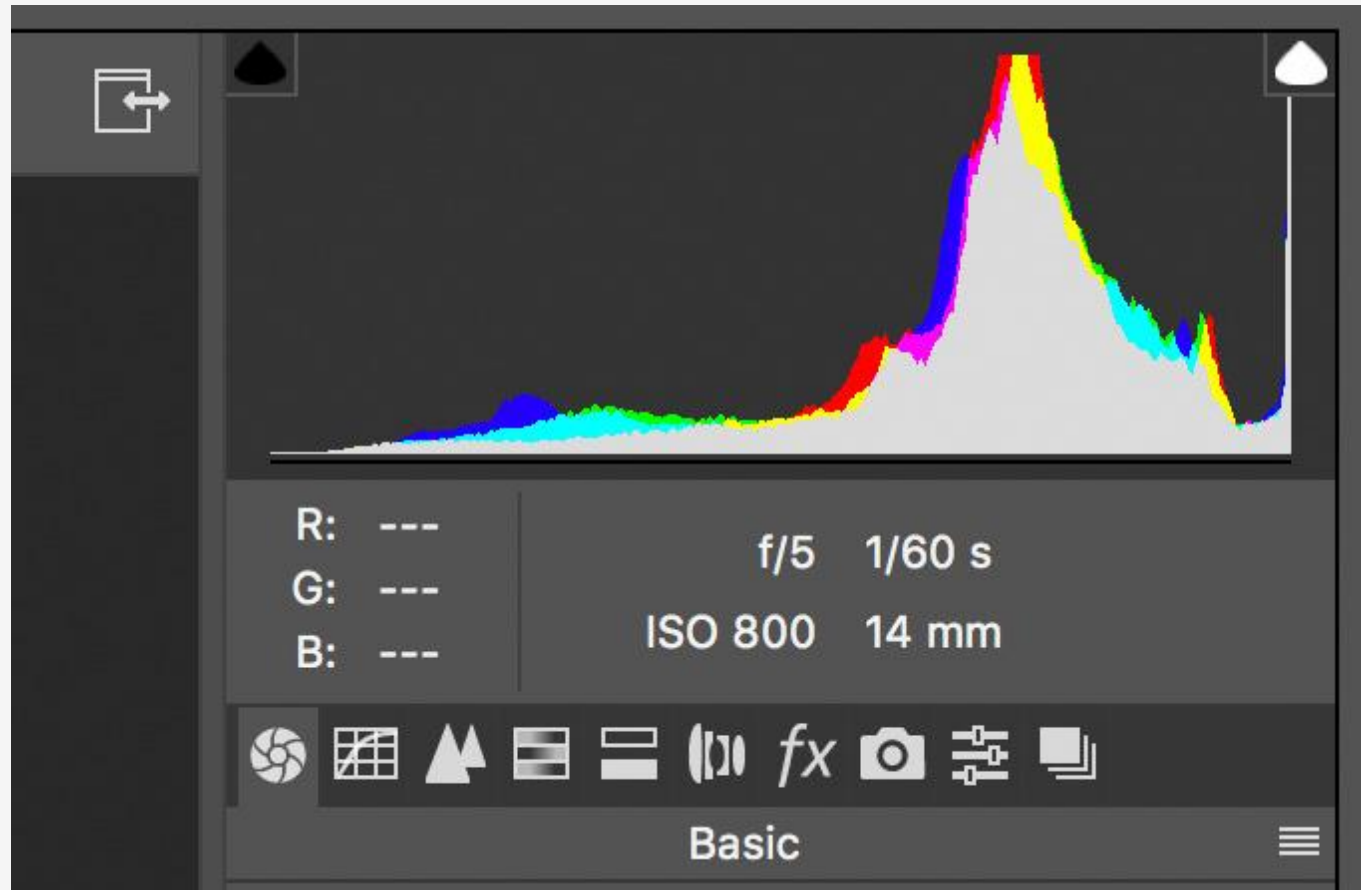


This is the Adobe Camera Raw software.

Although designed to process raw files, it can do the same for jpegs and more. Quality is far superior with a good raw file, as there is more data contained within the image.

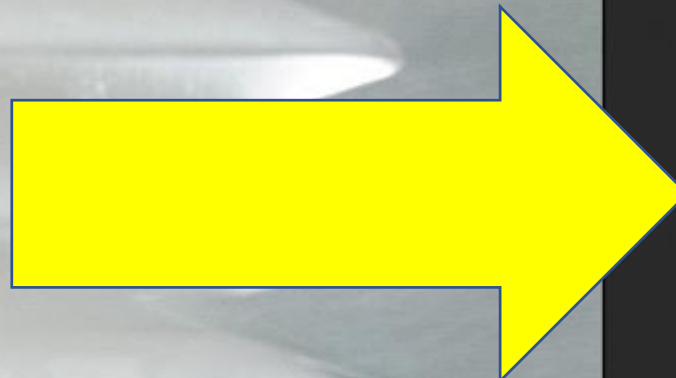


This is a histogram.
It provides information that can help enormously during post production.
More about this in a later session.



Basic global adjustments panel.

A well shot image should be well exposed and correct in terms of white balance, however when adjustments are needed, perhaps for changes in mood or because of the limitations of a DSLR camera, subtle changes can be made here. The software works non-destructively, so the image file quality is preserved.

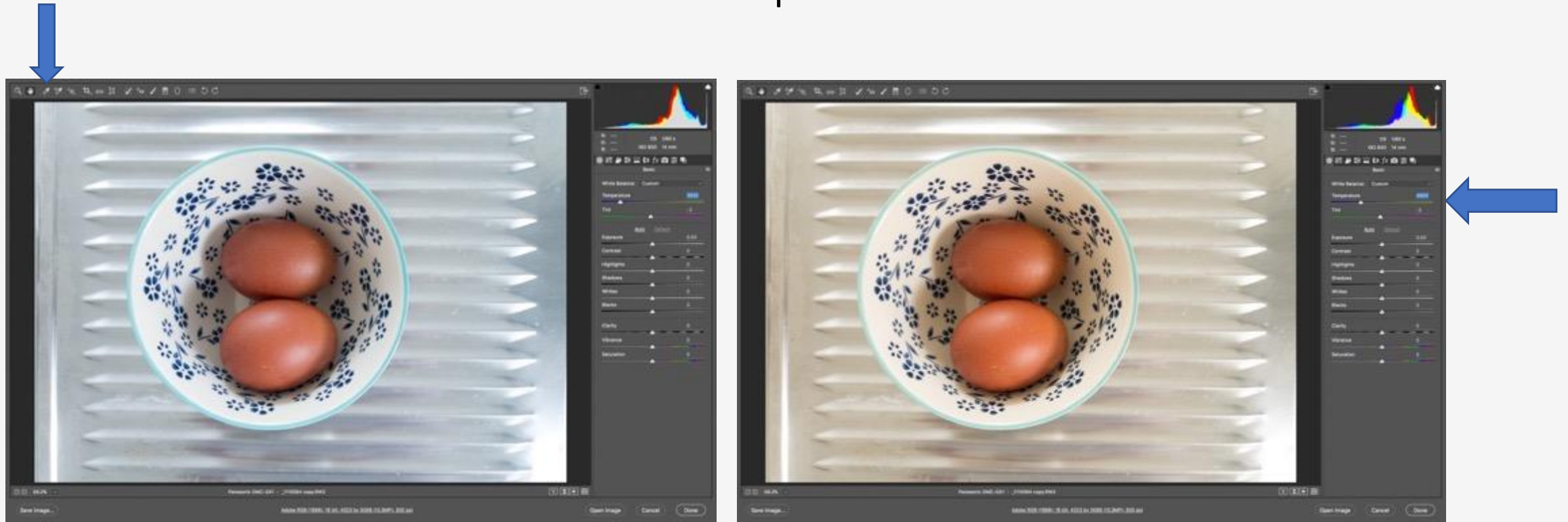


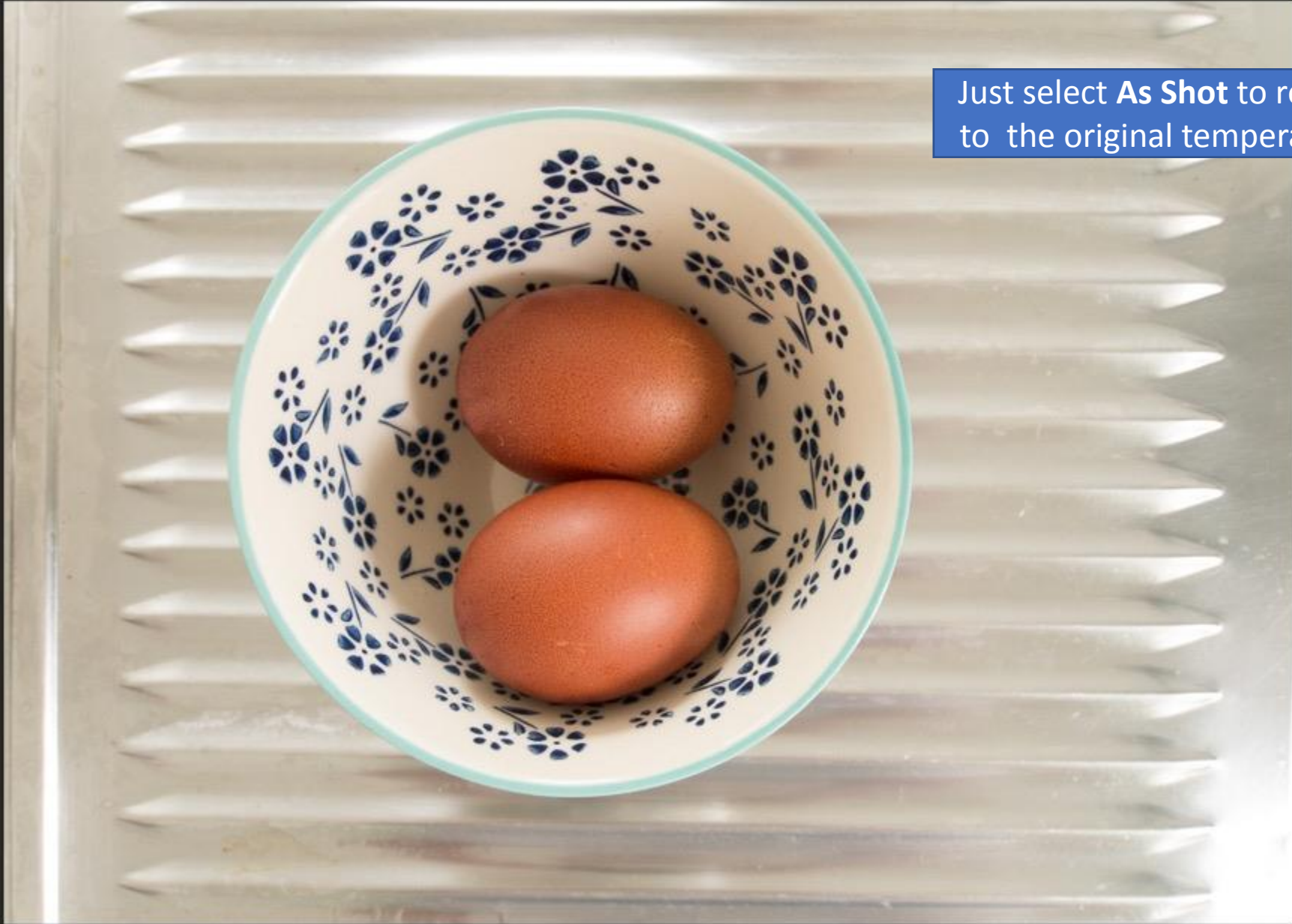
The screenshot shows a software interface with a histogram at the top right and a 'Basic' adjustments panel below it. The histogram displays a color spectrum with a prominent peak in the yellow and white areas. The 'Basic' panel includes the following settings:

Setting	Value
White Balance	As Shot
Temperature	4200
Tint	-3
Exposure	0.00
Contrast	0
Highlights	0
Shadows	0
Whites	0
Blacks	0

Technical data shown in the interface includes: R: ---, G: ---, B: ---; f/5, 1/60 s; ISO 800, 14 mm. The 'Basic' panel also features 'Auto' and 'Default' options for several sliders.

The white balance tool (the eyedropper icon top left) and the temperature slider, can be used to correct or alter colour temperature.





Just select **As Shot** to return to the original temperature

- As Shot
- Auto
- Daylight
- Cloudy
- Shade
- Tungsten
- Fluorescent
- Flash
- Custom

White Balance

Temperature 4900

Tint -3

Auto Default

Exposure 0.00

Contrast 0

Highlights 0

Shadows 0

Whites 0

Blacks 0

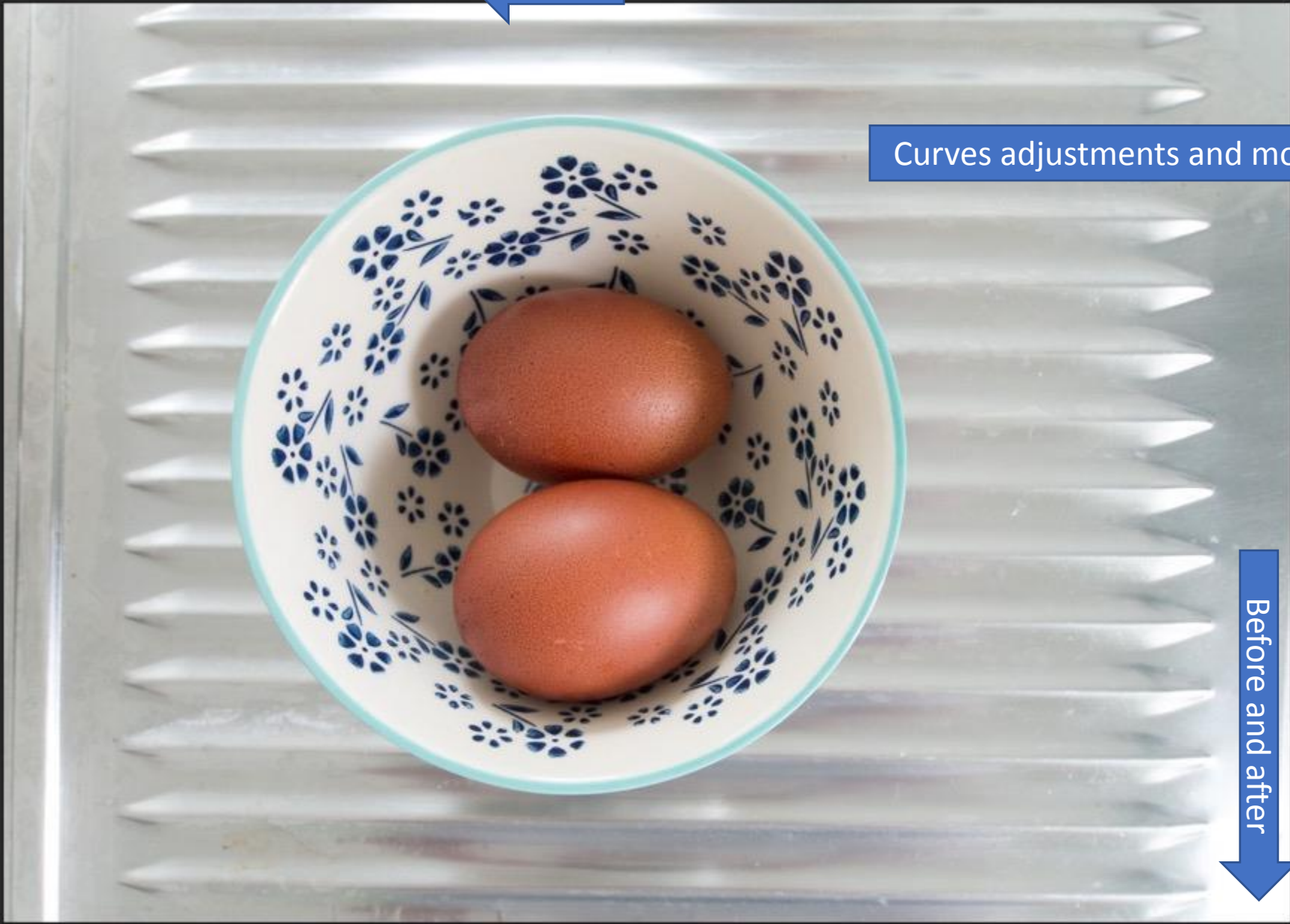
Clarity 0

Vibrance 0

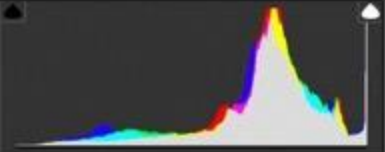
Saturation 0



Tools



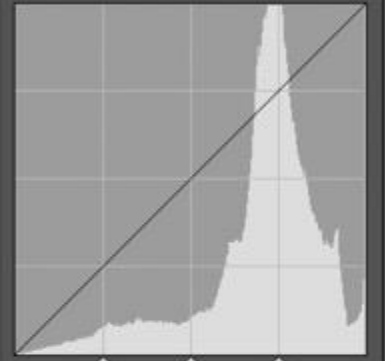
Curves adjustments and more



R: --- 1/5 1/60 s
G: --- ISO 800 14 mm
B: ---

Tone Curve

Parametric Point



Highlights 0
Lights 0
Darks 0
Shadows 0

Before and after

57.7%

Panasonic DMC-GX1 - _1110094 copy.RW2



Save Image...

File info

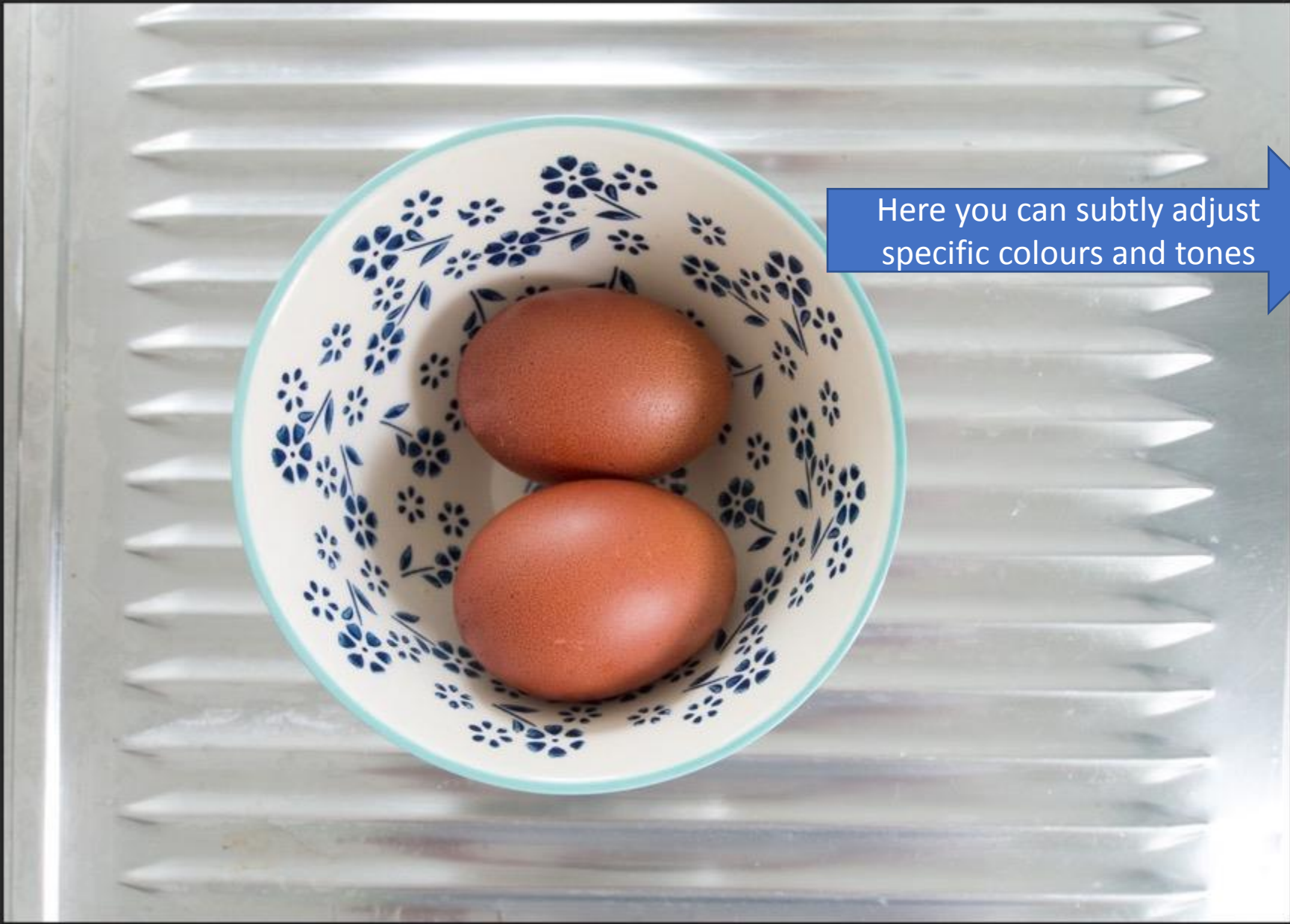
Adobe RGB (1998); 16 bit; 4368 by 3120

To open image into Photoshop

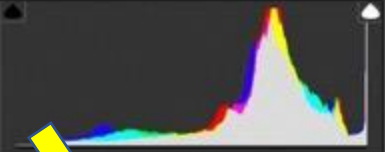
Open Image

Cancel

Done



Here you can subtly adjust specific colours and tones



R: 1/5 1/60 s
G: ISO 800 14 mm
B:

HSL / Grayscale

Convert to Grayscale

Hue Saturation Luminance

Default

- Reds 0
- Oranges 0
- Yellows 0
- Greens 0
- Aquas 0
- Blues 0
- Purples 0
- Magentas 0

57.7%

Panasonic DMC-GX1 - _1110094 copy.RW2



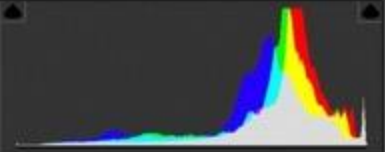
Save Image...

Adobe RGB (1998); 16 bit; 4368 by 3119 (13.6MP); 300 ppi

Open Image

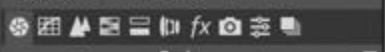
Cancel

Done



R: 226
G: 145
B: 106

f/5 1/60 s
ISO 800 14 mm



Basic

White Balance: Custom

Temperature 4650

Tint -3

	Auto	Default
Exposure		0.00
Contrast		-1
Highlights		-6
Shadows		-1
Whites		-4
Blacks		0
Clarity		0
Vibrance		+5
Saturation		0



To open the image into Photoshop, select Open Image.
Alternatively save it straight out using Save image.

58.6%

Panasonic DMC-GX1 - _1110094 copy.RW2



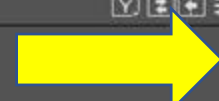
Save Image...

Adobe RGB (1998); 16 bit; 4295 by 3068 (13.2MP); 300 ppi

Open Image

Cancel

Done



Alternatively to work on several files at the same time, click and drag the cursor across the images.

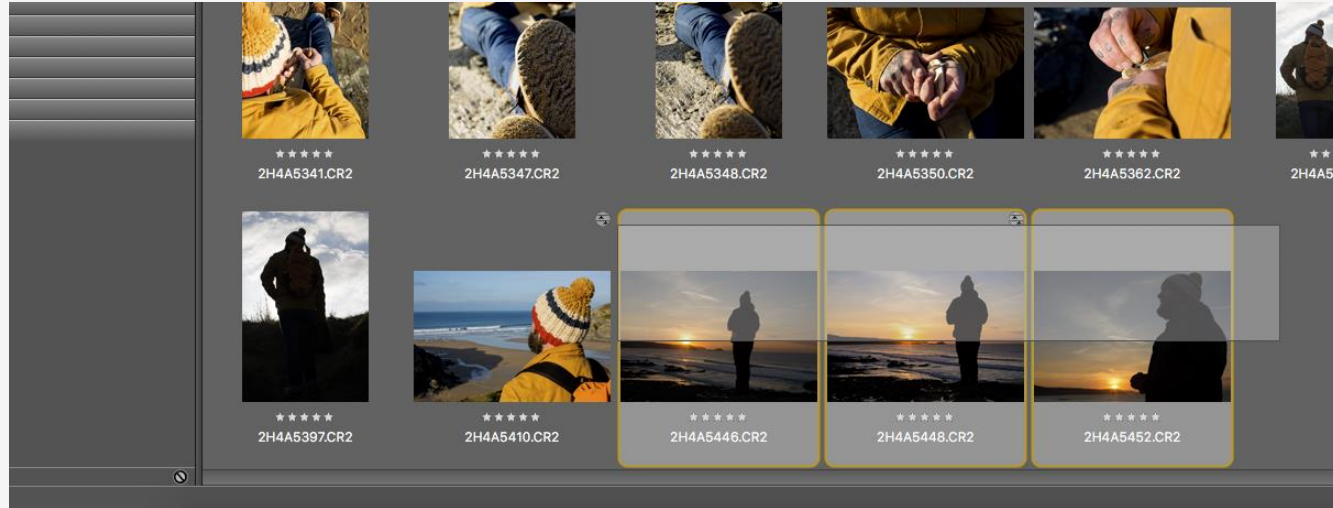
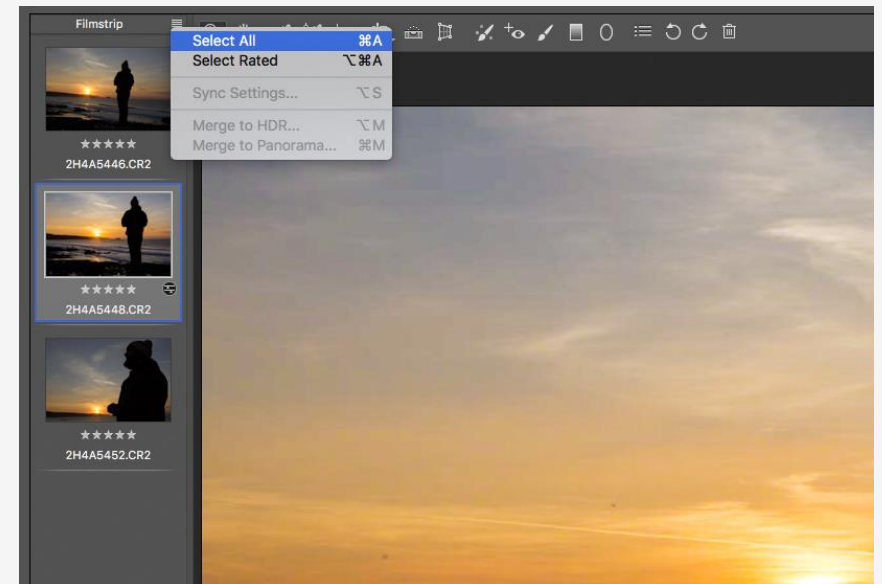


Image Camera Raw click to the right of the Filmstrip or using the 'Select All' shortcut select all images. Any adjustments you now make will happen across all images selected.

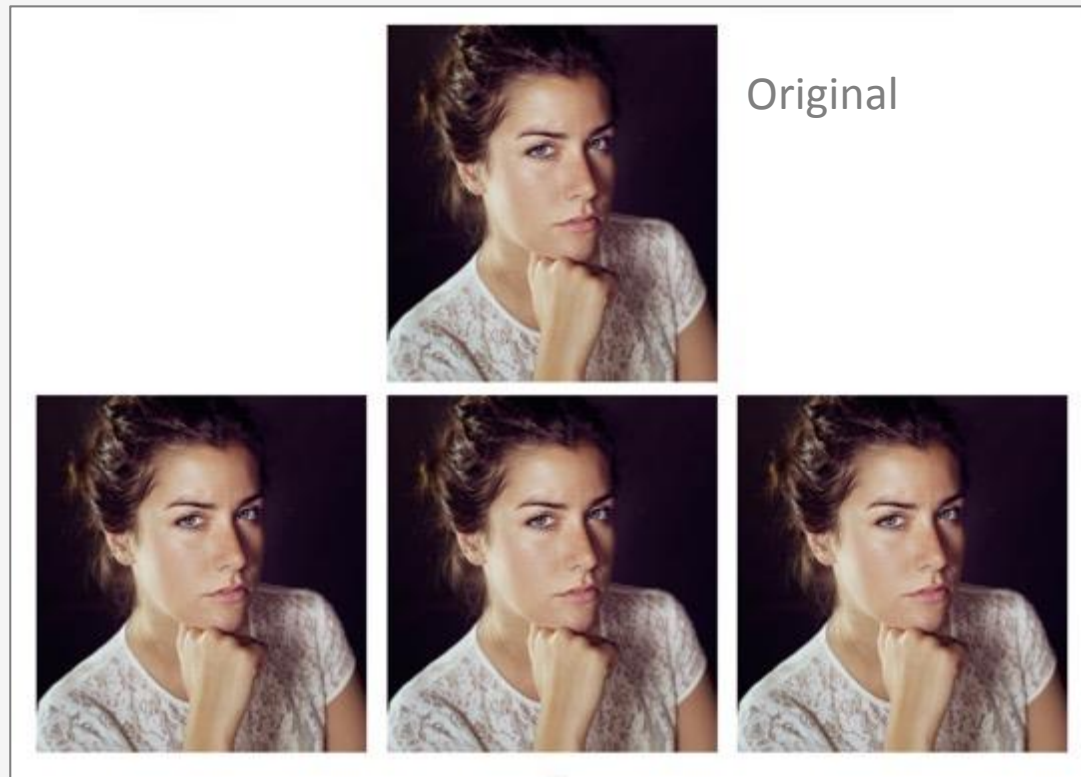


COLOUR MANAGEMENT

All the digital skills in the world will be pointless without good colour management.
Let's take a quick look at how to ensure colour accuracy when processing images.

Why colour manage?

Colour managed



online

printed

archived

No colour management

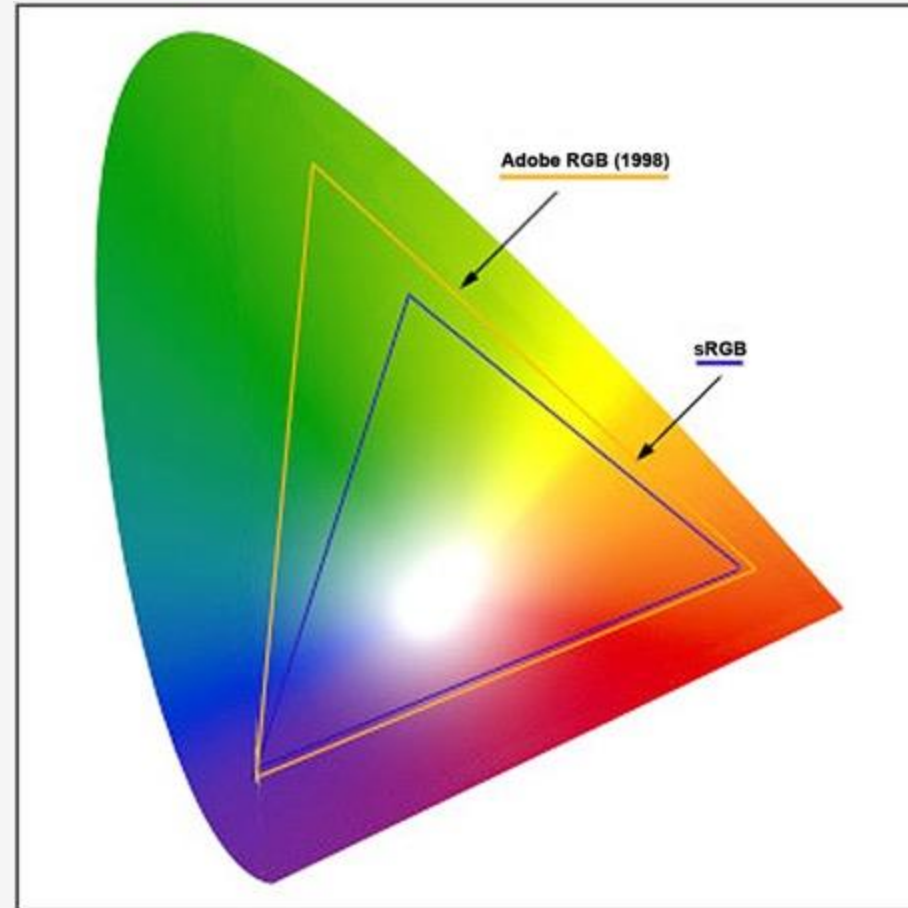


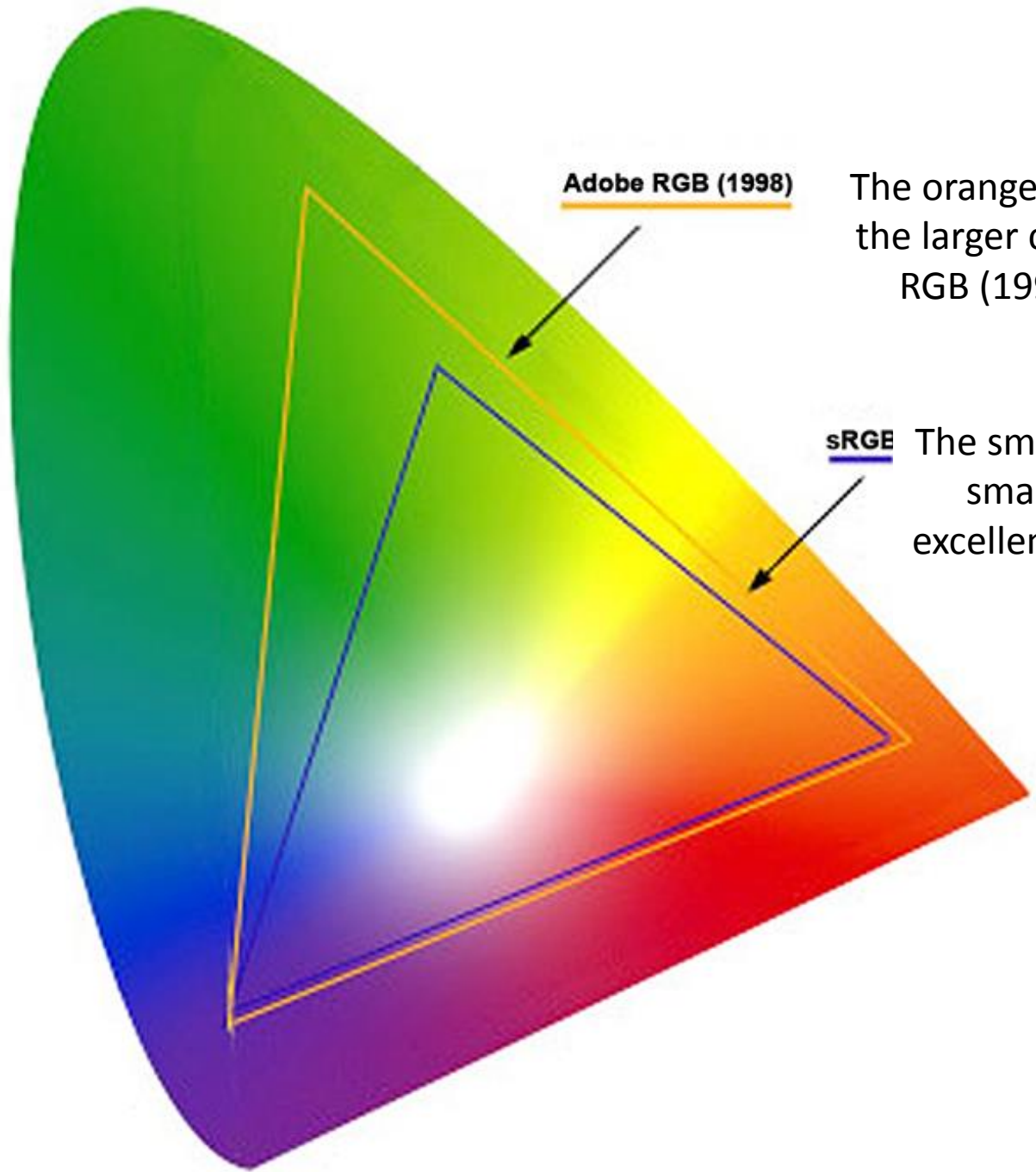
online

printed

archived

Understand Colour Space





Adobe RGB (1998)

The orange triangle represents the larger colour space Adobe RGB (1998), excellent for printing.

sRGB

The small triangle represents the smaller colour space sRGB, excellent for the web, looks great on monitors.

The largest area represents the huge range of tones our eyes can see

16-bit and 8-bit explained

Notice the lines that fall across the blue sky in this image like a rainbow.

This is known as **banding**.

The image was processed as an 8-bit image.

There is nothing wrong with processing an image as an 8-bit file, but a 16-bit file is more robust when it comes to the editing process, and therefore gives you more flexibility.

Why?

In simple terms, 16-bit contains more information, more data.

Quite a lot more!

8-bit contains potentially 16.8 million colours. That's a lot right? But 16-bit contains **trillions**.

16-bit files are enormous so you will need to reduce the file size to print or send to web!

It makes sense to work with 16-bit, then export as an 8-bit image.

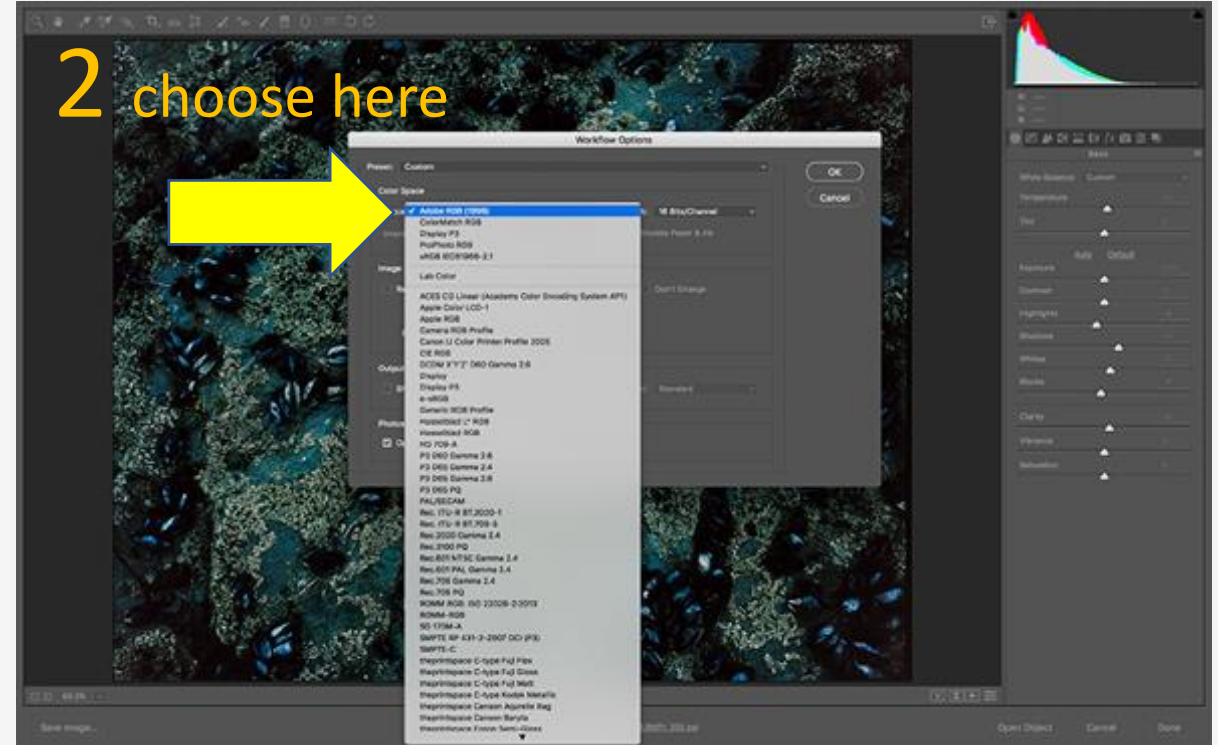
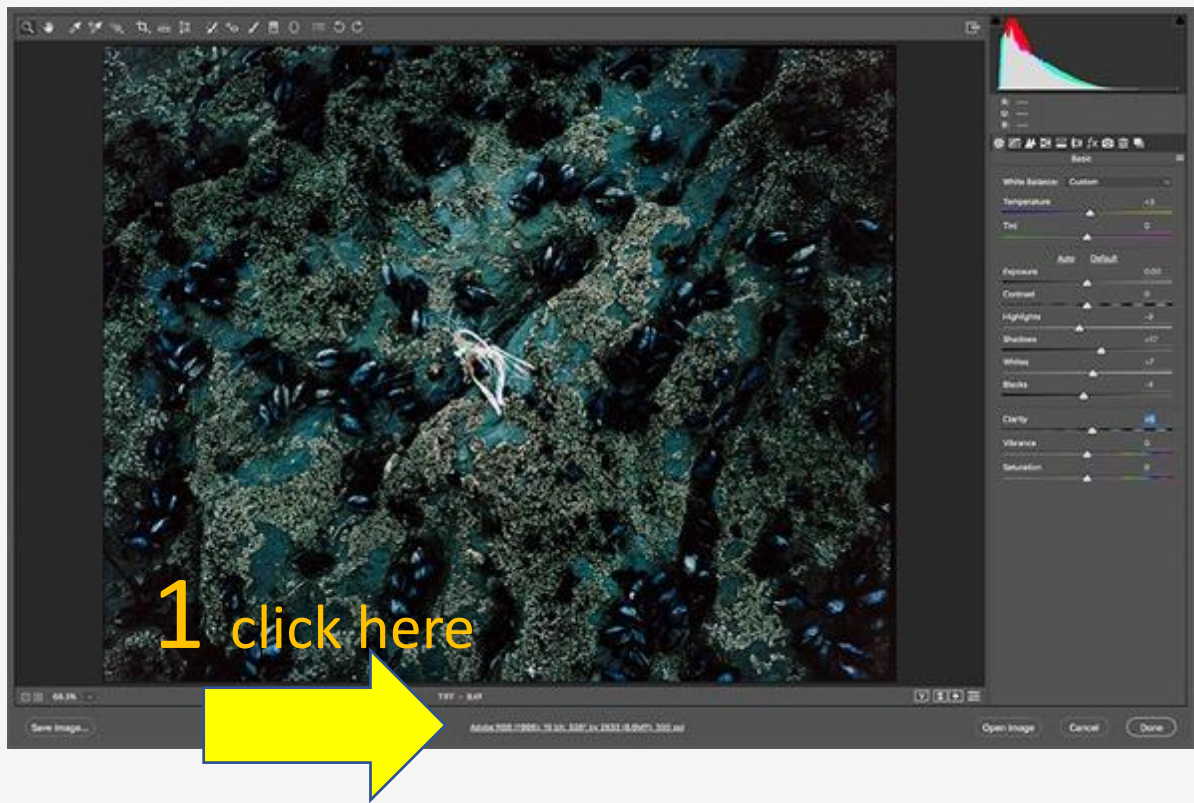
How?

You can see if an image is 16-bit in its metadata in your software, and also in its title in Photoshop.

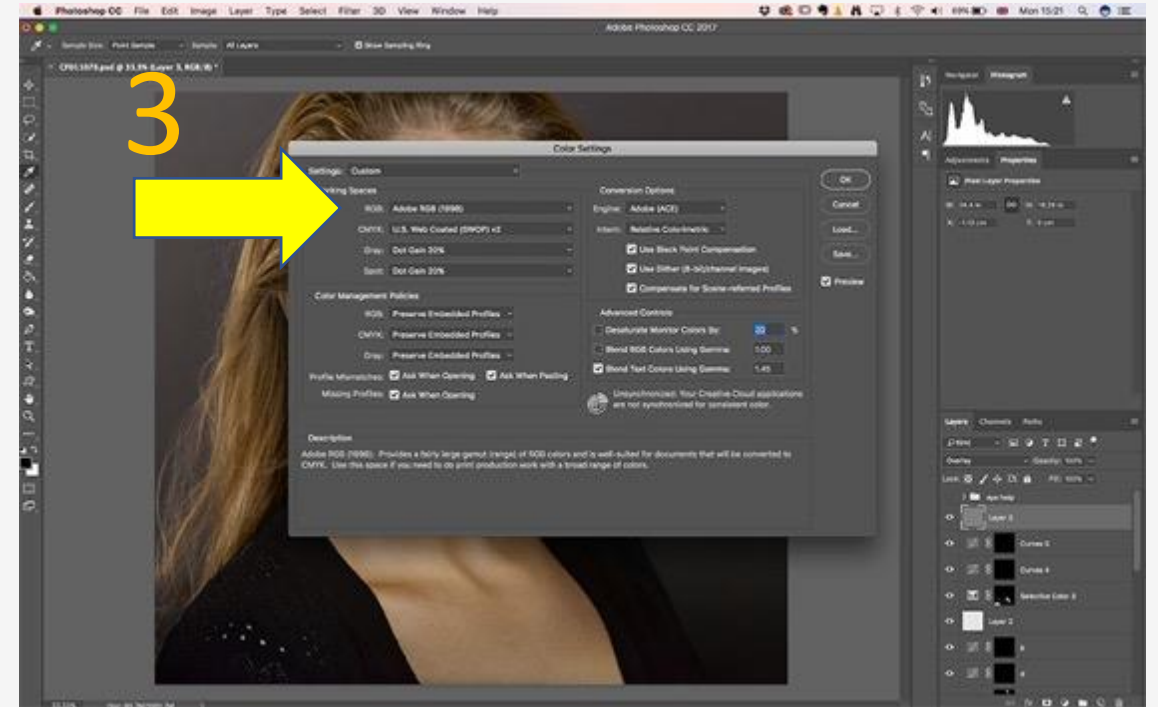
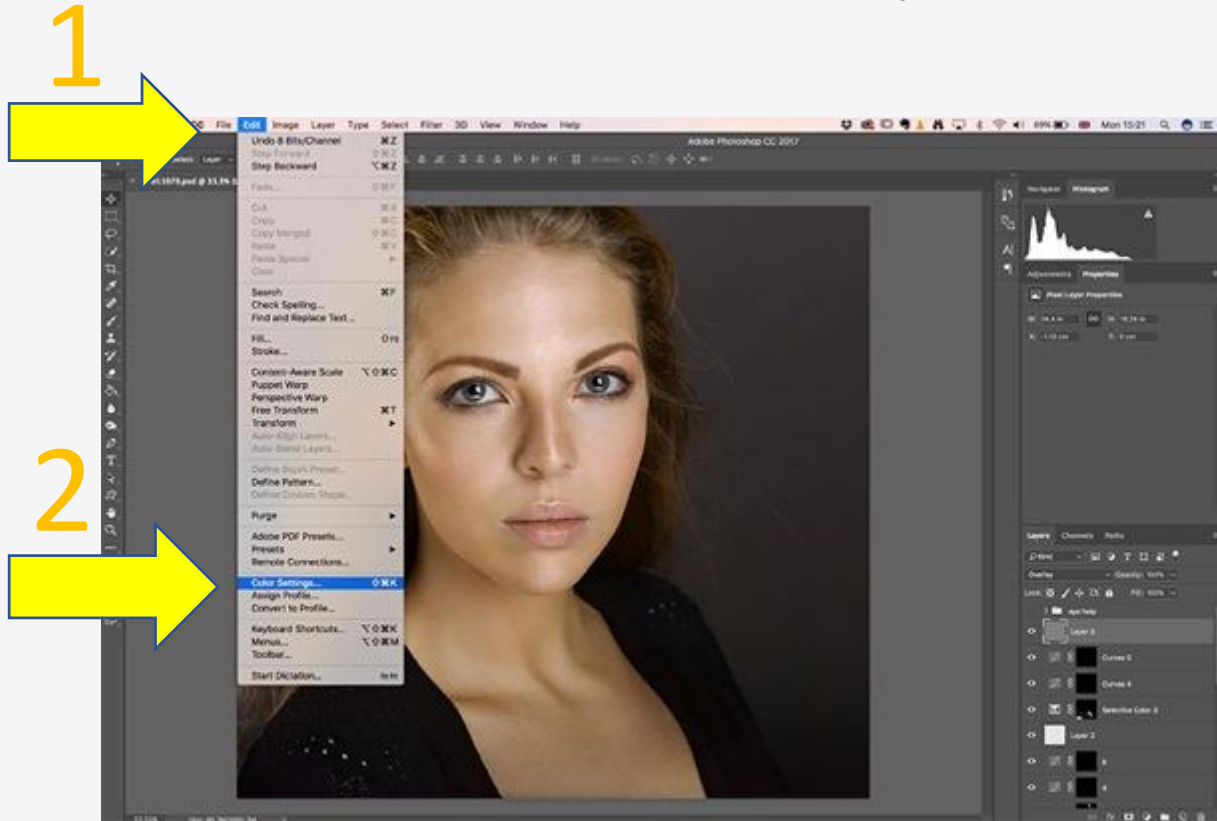
To export as 8-bit in Photoshop, go to Image, then Mode, then 8-bit.

In other software such as Camera Raw or Lightroom, set 8-bit in your export criteria.

If you regularly print, it is recommended that you set your workspace to
to
Adobe RGB (1998)



In Photoshop you can change your workspace to Adobe RGB (1998) by choosing edit/colour settings.



When sending to the web, the optimum colour profile is sRGB

It is a smaller colour space but images look their best on a monitor as sRGB images.

A good rule is to work in a large colour space, with the maximum amount of tones and least amount of artifacts (remember what we learned about banding), then check what your destination requires when you export.

RESOLUTION



Understanding resolution will help you preserve quality in your images

A digital image is made up of
pixels....

...and **resolution** relates to how many pixels there actually are.

Look at these two images.



They both look the same right?

Hmm, let's zoom in



This image has 300 pixels across each inch



This image has 72 pixels across inch



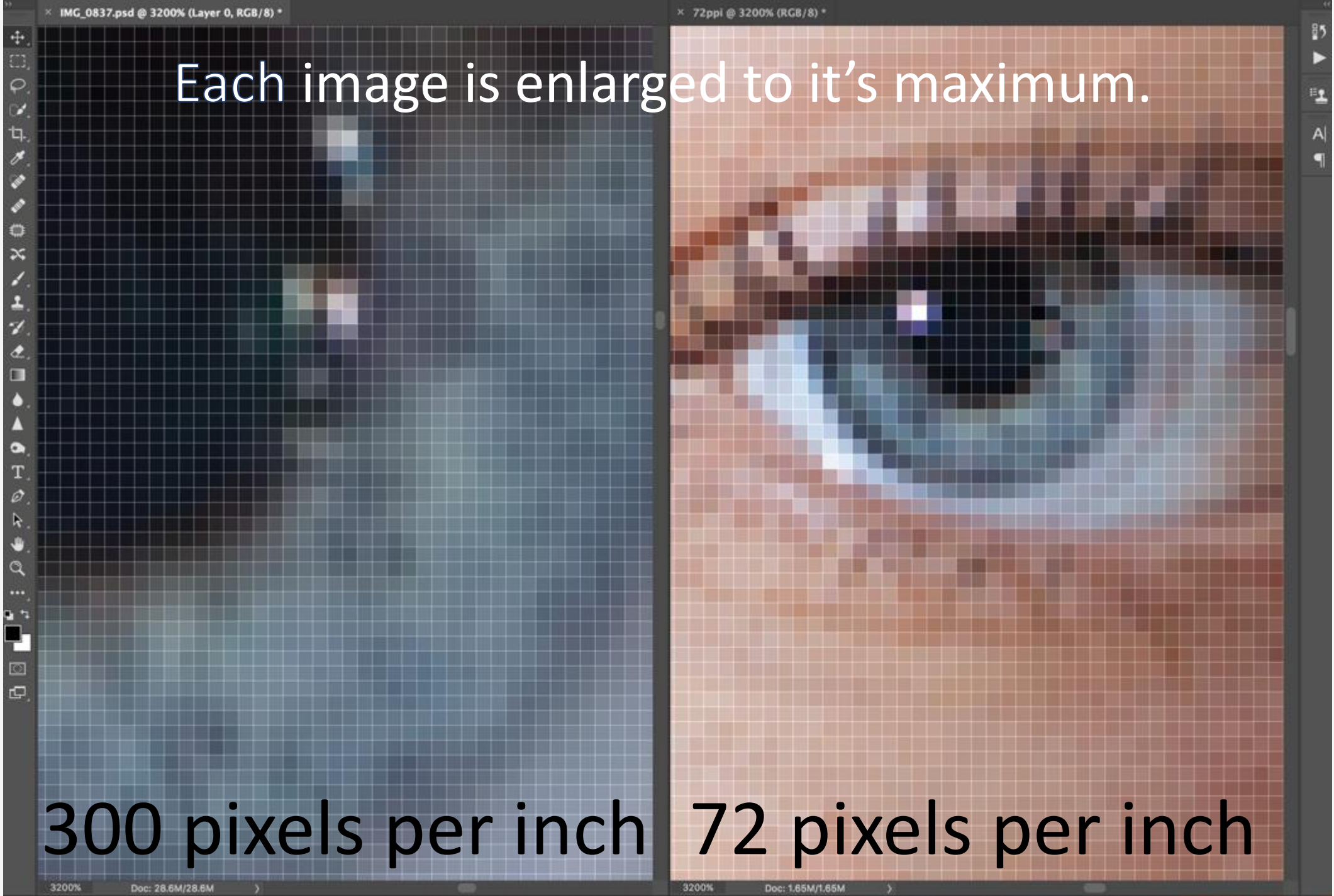
When we zoom in even further

the difference in quality is clear...

Each image is enlarged to it's maximum.

300 pixels per inch

72 pixels per inch



As you can see from the comparison, for good quality images it's important that we shoot at best quality and preserve that quality during editing

Work non-destructively

This means that less damage occurs during processing, and also on export we have maximum choice of destination and size.

The most common good quality resolution is

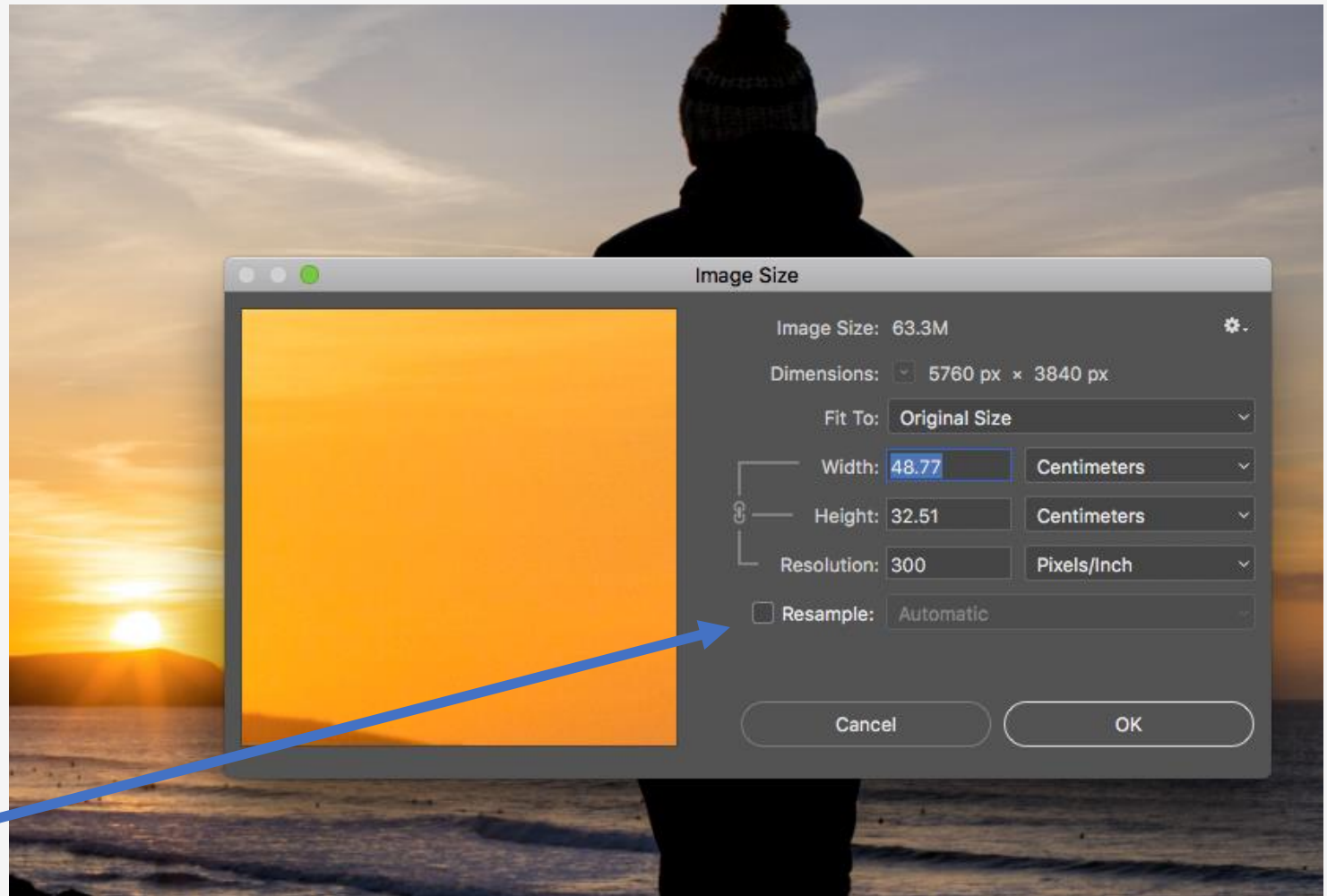
300ppi

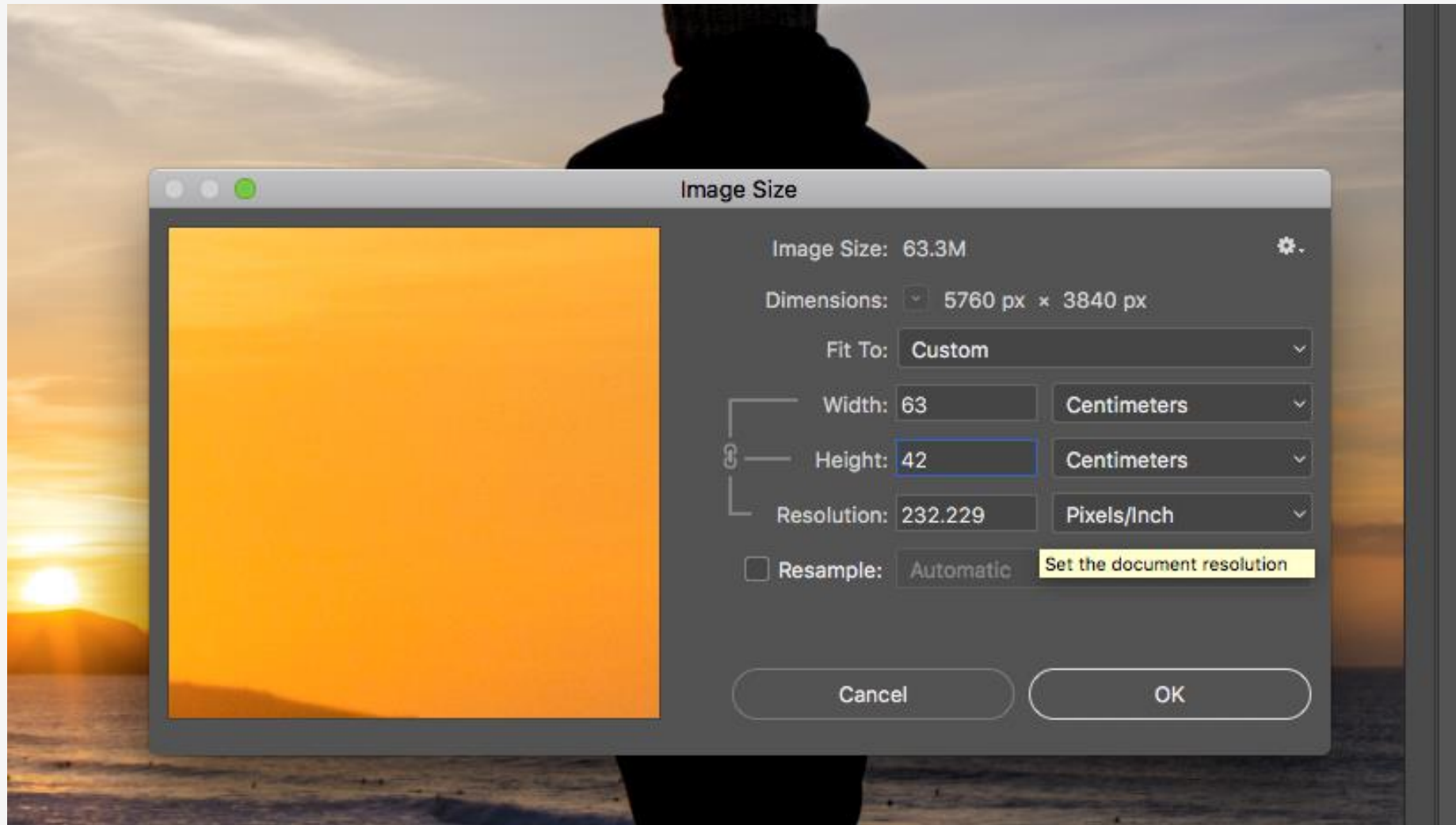
(pixels per inch)

In print this becomes 300dpi

(dots per inch)

Image -> Image Size
Untick Image Resample.
This will mean width, height and
resolution will all work with
each other.





This is less important if the image is being re-sized smaller, but when making an image larger it is better to work with the resolution you have than ask the computer to 'make pixels up for you'

Workflow in Photoshop

Its important to have a workflow that works for you.

Even in the great photographers of the analogue era had a little help, either from learning to print well themselves or by working with master printers.



Adjustment Layers and Layers

Working with adjustment layers and layers means that making adjustments later on becomes very simple. The downside to this is storing large files

You may have a preferred method already.

Today we are going to look at :-

Levels

Curves

Brightness/Contrast

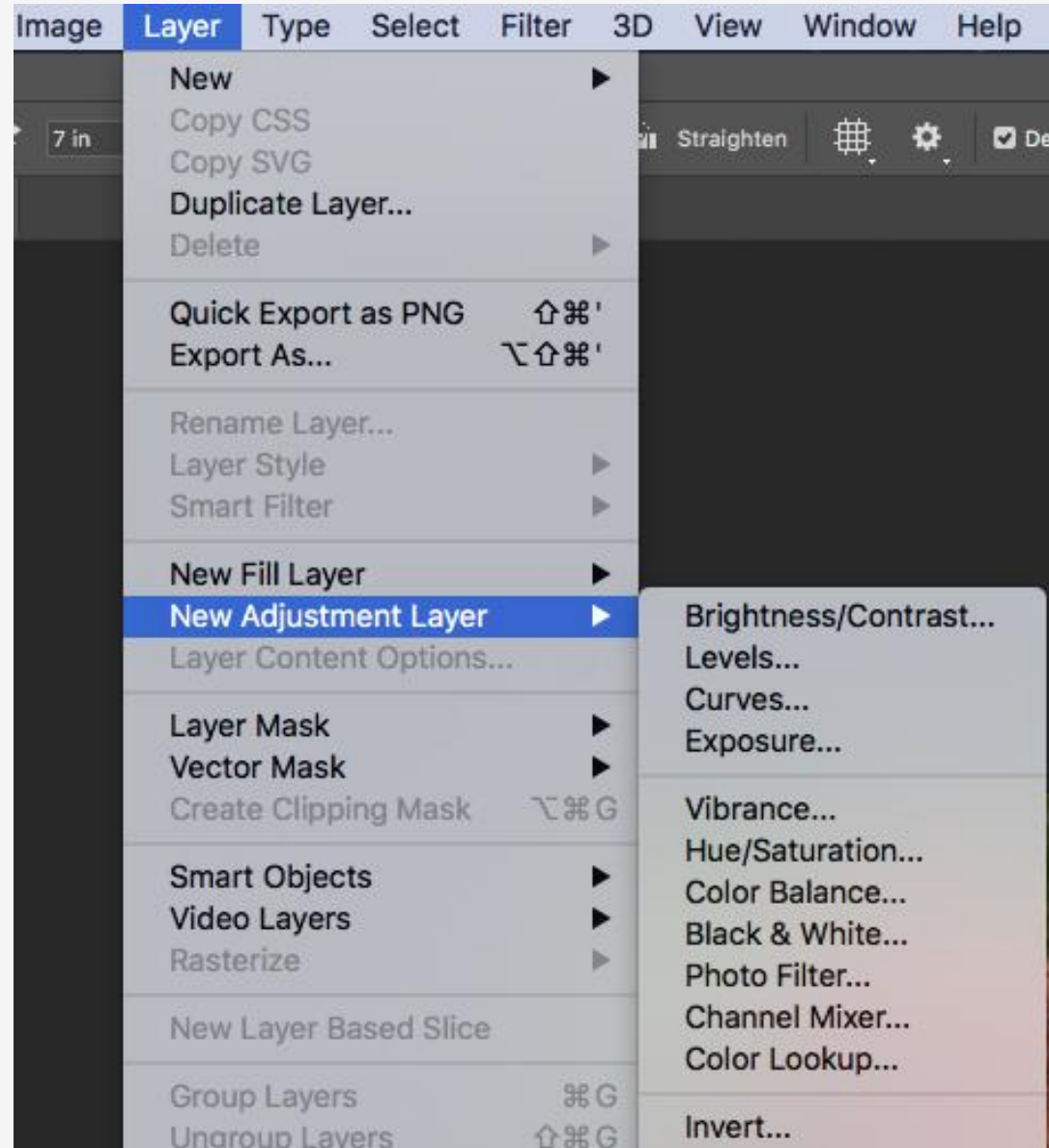
Colour Balance

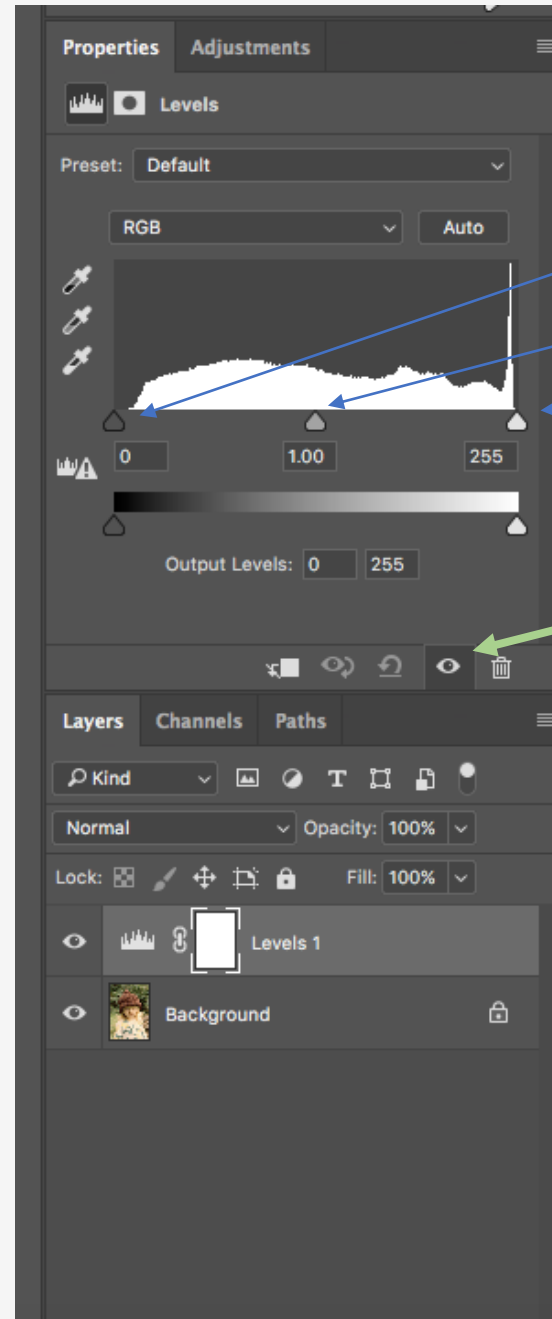
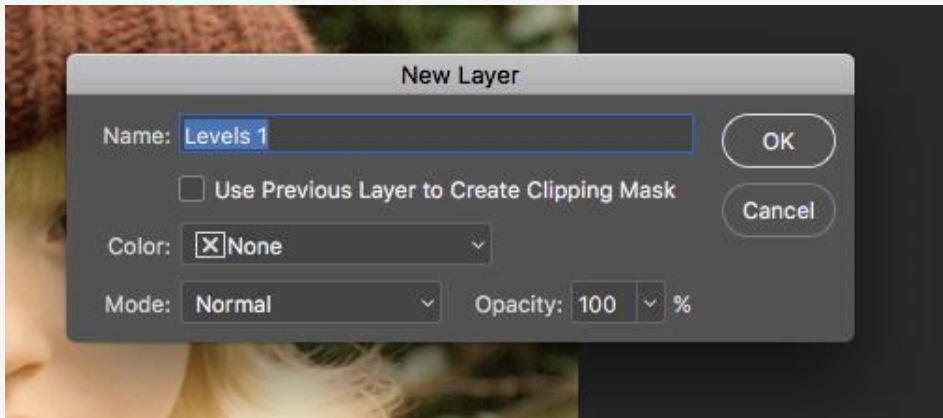
Hue/Saturation

And the Dodge, Burn and Clone Stamp Tools

Levels

Layer -> New Adjustment Layer -> Levels



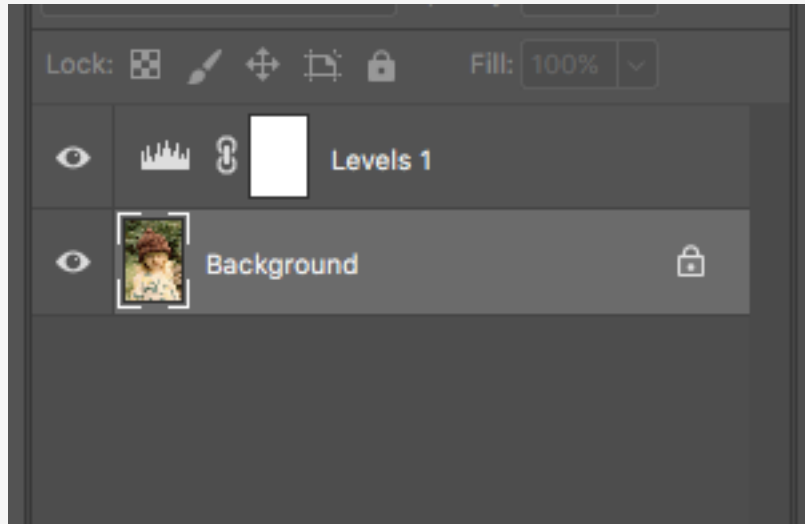


Shadows

Midtones

Highlights

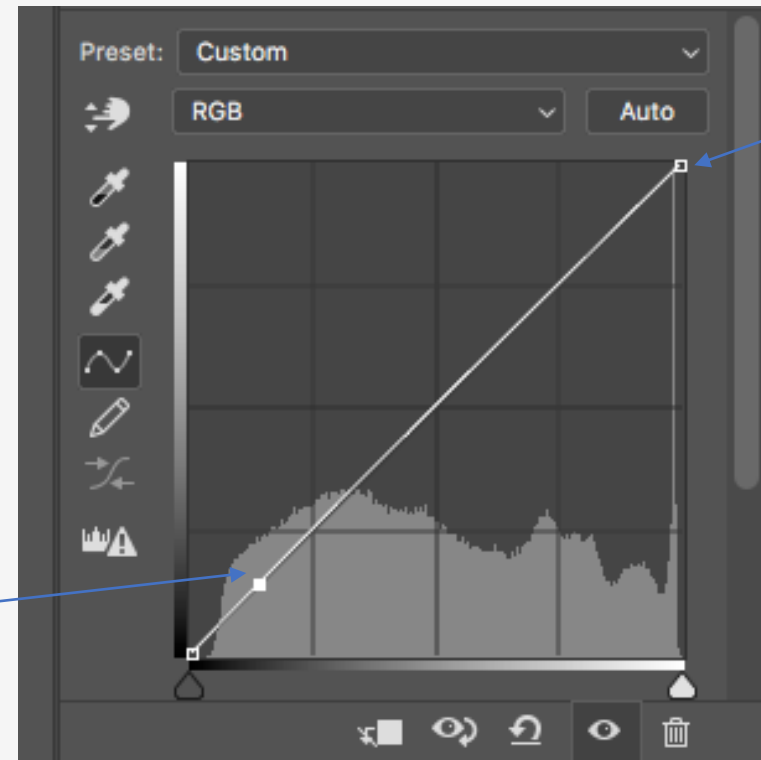
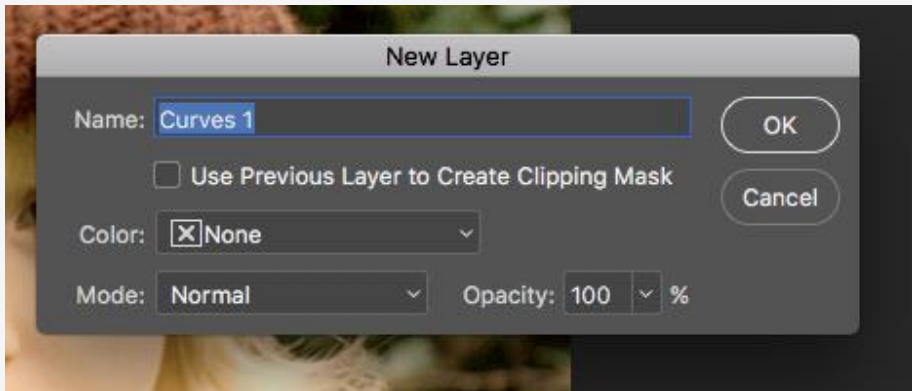
Preview tool



Before working on the next Adjustment Layer click back onto your Background Layer.

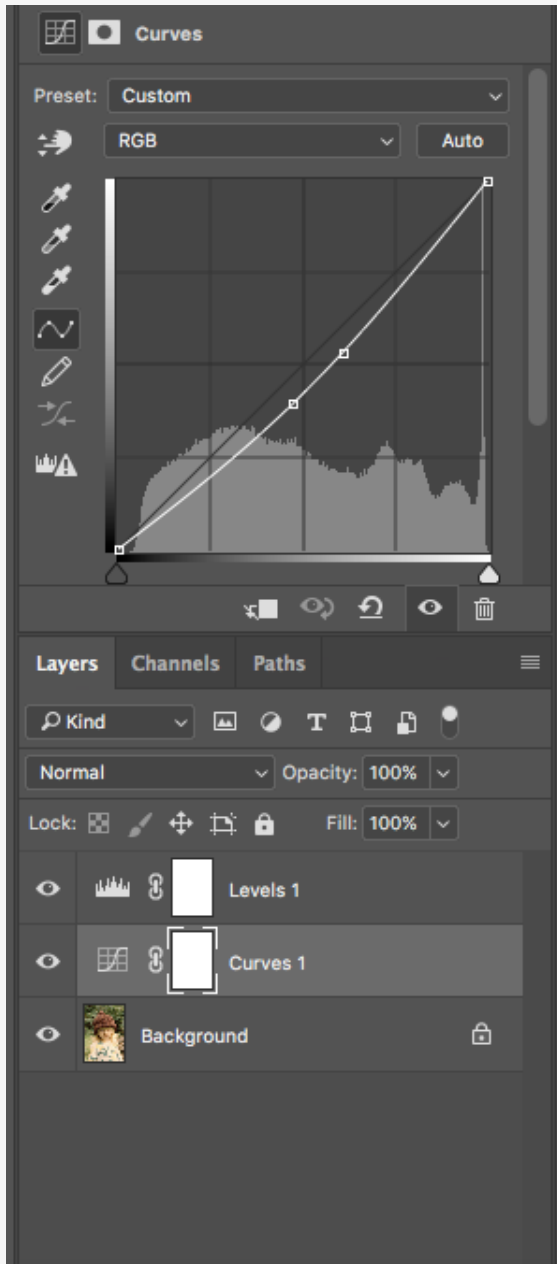
Curves

Layer -> New Adjustment Layer -> Curves



Lightest part of the image

Darkest part of the image



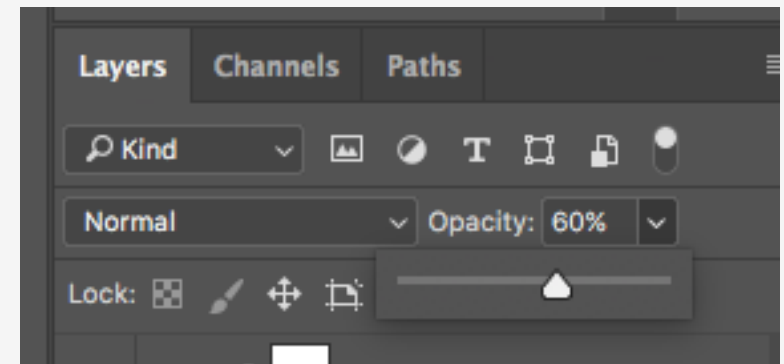
Original



With Curve

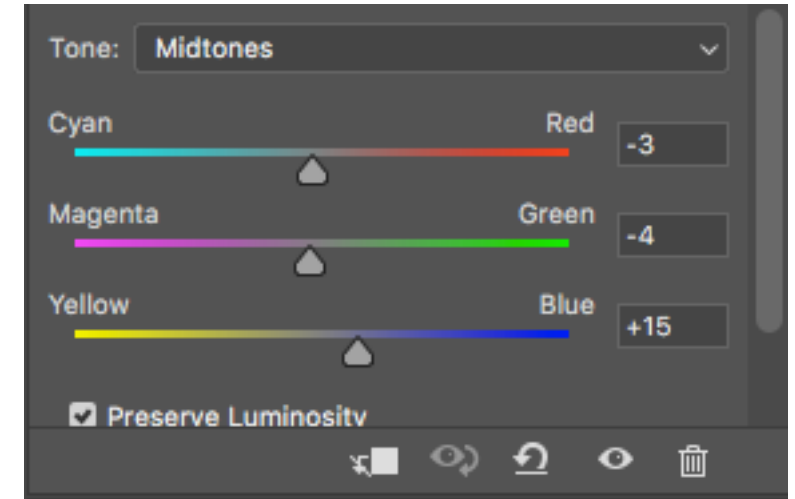


60% layer Opacity





Work in midtones as a starting point



Colour Balance

Layer-> New Adjustment Layer -> Colour Balance

Hue/Saturation

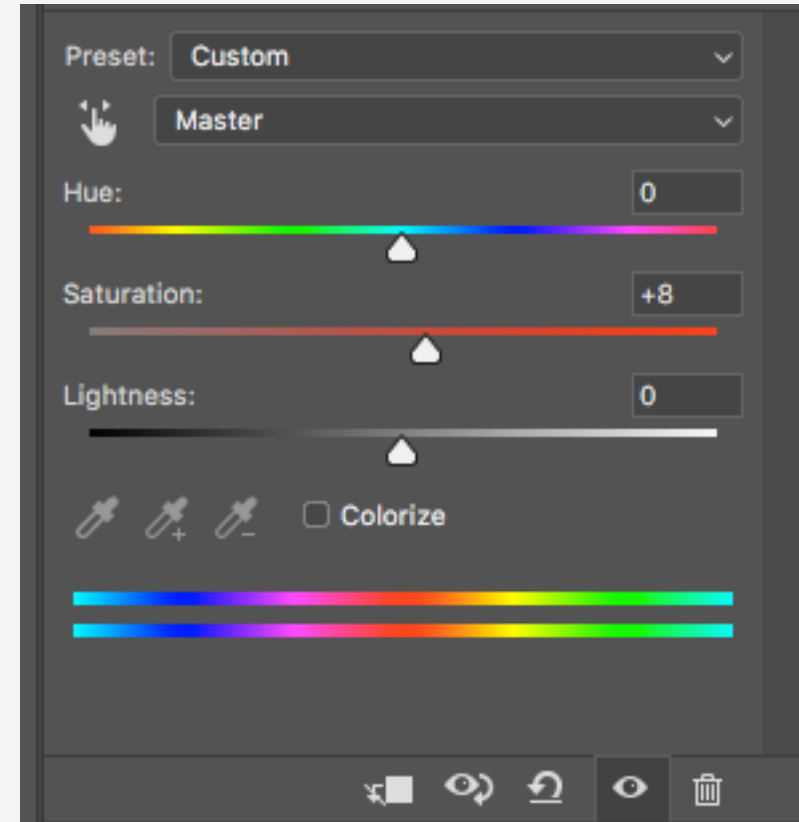
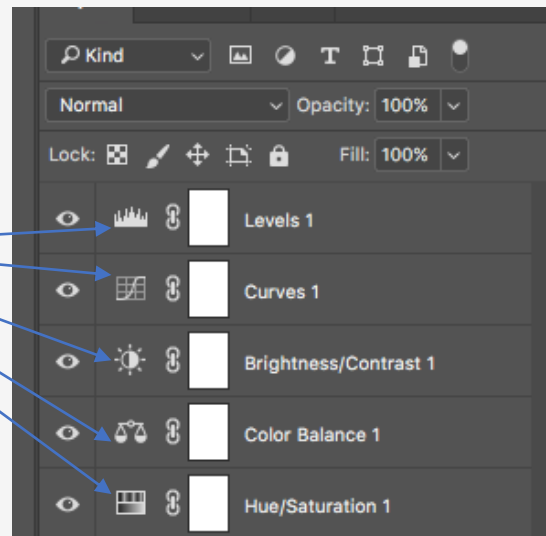
Layer -> New Layer Adjustment Saturation

Try not to use Hue or Lightness (there are better tools to use for these that give you more control).

Fine Tune Your Adjustments

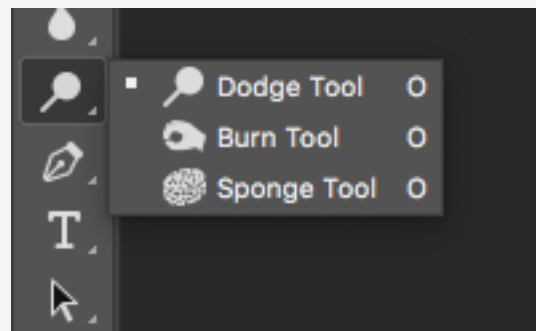
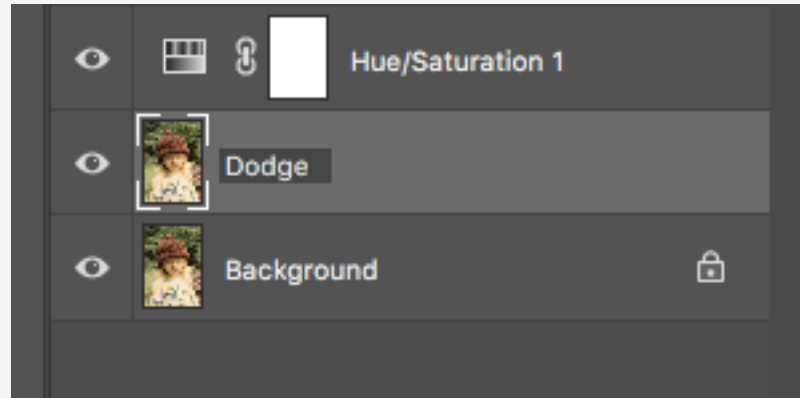
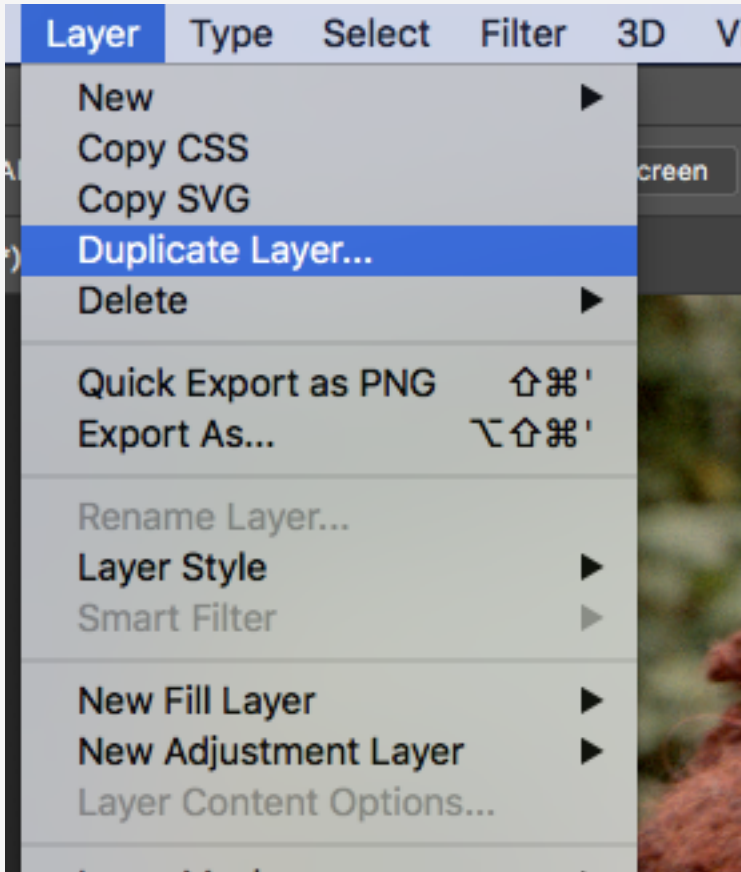
Each of the adjustment layers could be affected by another Layer. If you need to make an adjustment double-click on the icon in Layers to fine tune your adjustment.

Adjustment Icons



Tool Layers

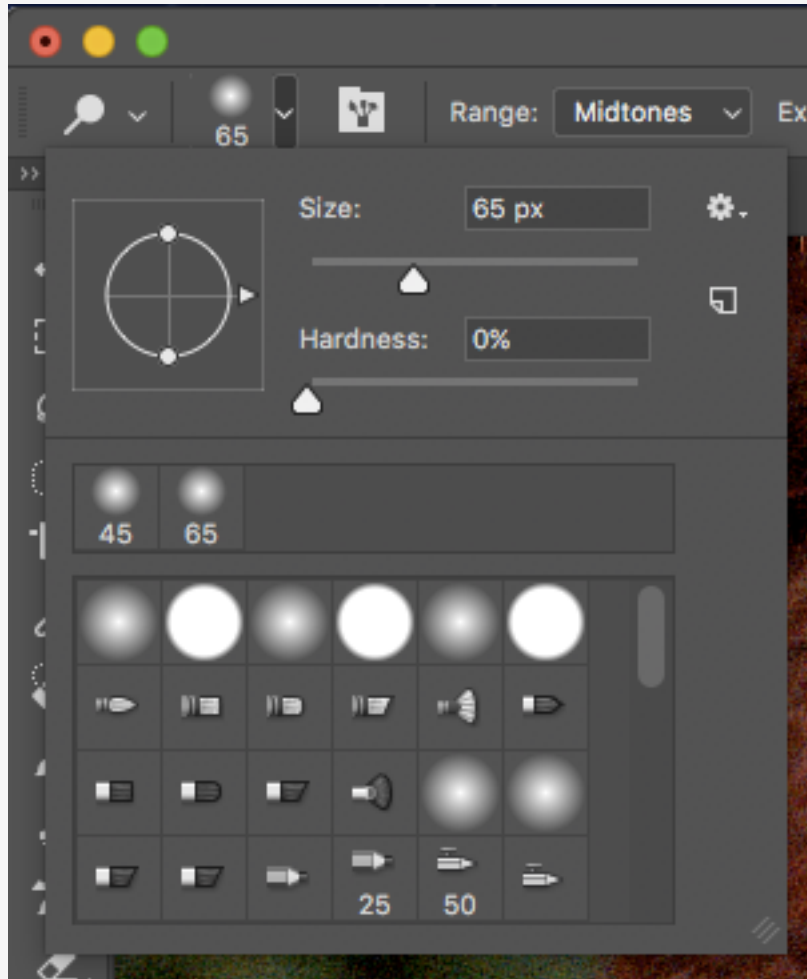
Click back again on your background layer, then select Layer-> Duplicate Layer -> (Name the Layer Dodge) Click OK -> Select the Dodge Tool



Making the most out of your tools

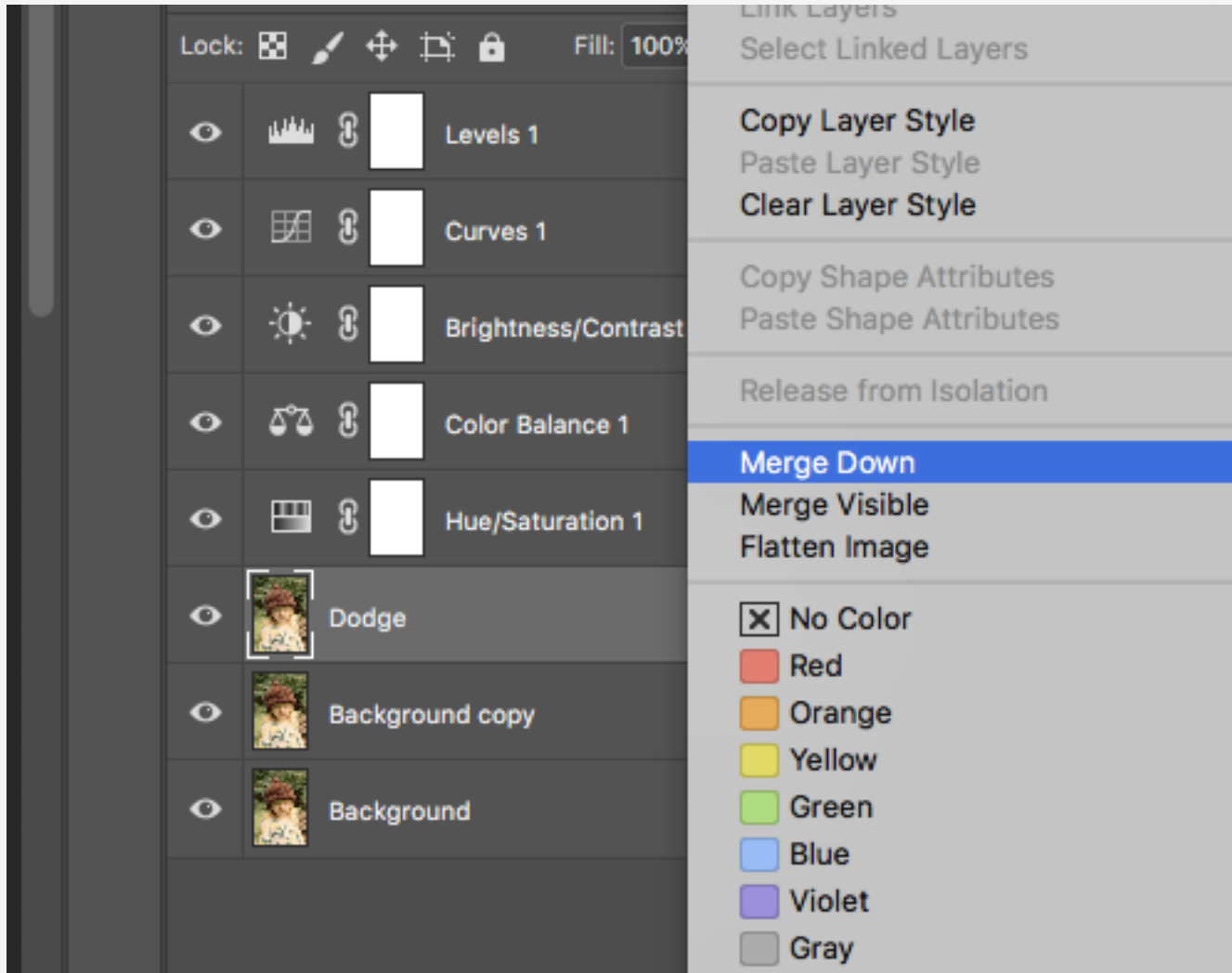
Select the right brush and size for the job. Think of dodge and burn like using a crayon.

With Dodge and Burn always work below 15% exposure. You want to not be able to immediately see the changes you are making, but instead build up the changes slowly.

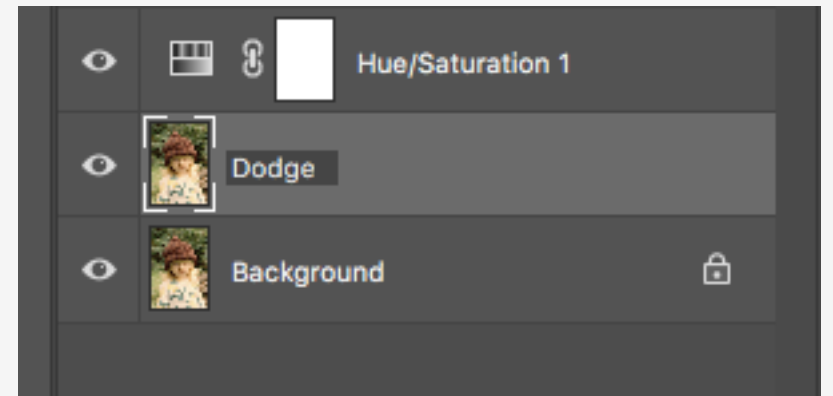


Over-doing it!!

If you over do it you can use the Opacity Tool in Layers to reduce the effect. The only problem with this is that then any duplicate layer you build up on this will also be a lesser percentage. To combat this select the background Layer then go Layer-> Duplicate Layer-> Select the Dodge Layer -> Right-click on the Layer -> Select Merge Down. Your Opacity will now be 100% without affecting the changes you have made.



Don't forget to rename your layer Dodge instead of Background Copy.



Burn Tool

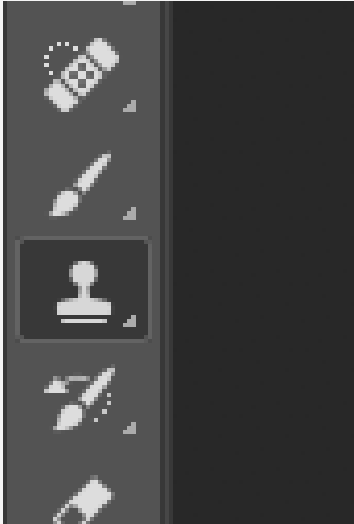
Follow the same steps as Dodge but this time choosing areas you wish to lighten. Experimenting with Shadows, Midtones and Highlights will help you understand how the tool works.



Clone Stamp Tool

This tool can take a while to get used to. But is far superior than using other tools, such as Spot Healing, where the computer controls where it takes information from.

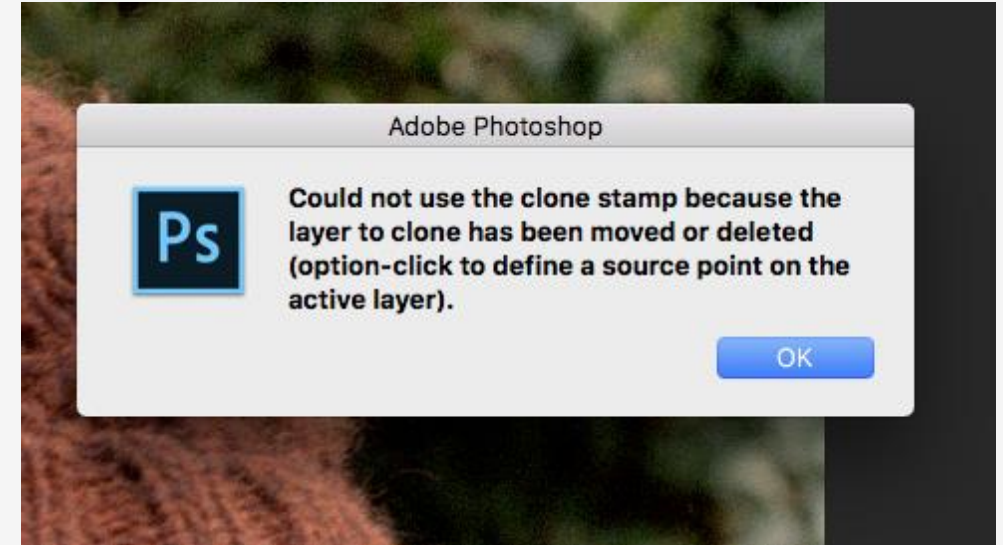
Again follow Layer -> Duplicate Layer (from the Background Layer) -> Change the name to Clone Stamp -> Click OK



Select the Clone Stamp Tool.

If you click on the image it will come up with the error message on the right.

It is telling us that we need to select Alt key (next to the space bar) to choose a source. Once you have selected this button a target button for you to select the area you wish to take the information from. This isn't a one click job, but instead something you must be continuously selecting.





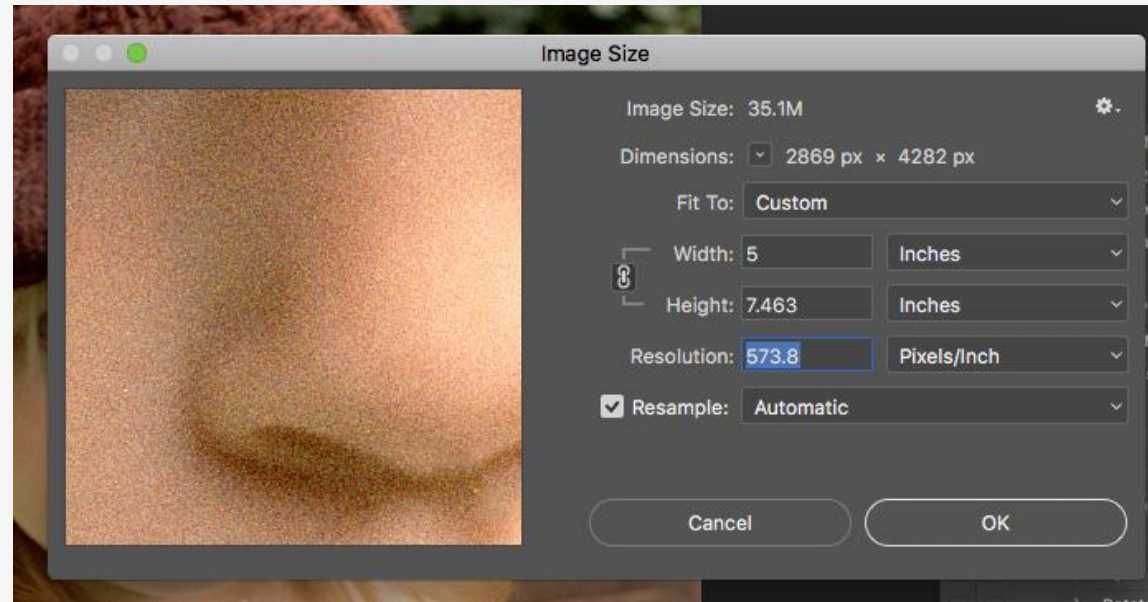
Save the Image as TIFF (or PSD) and Jpeg.

Jpeg is not a stable image to work from. Everytime you edit a jpeg image there is a loss in quality, but they are useful to have for posting work online, or for sending proofs.

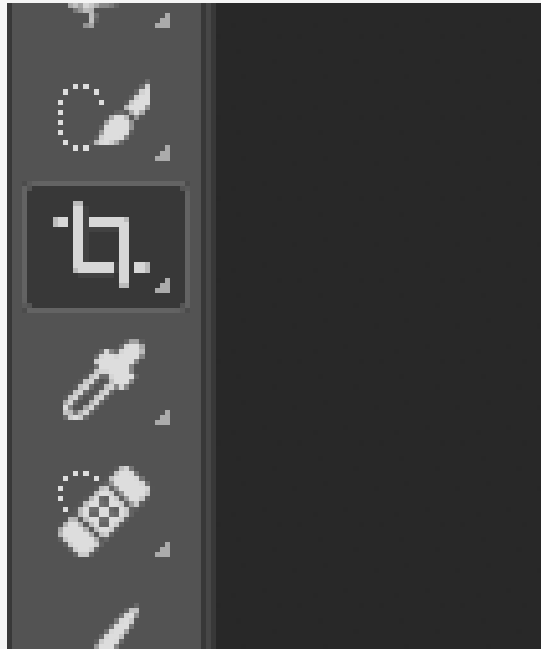
Resizing and Image for Print

Image -> Image Size

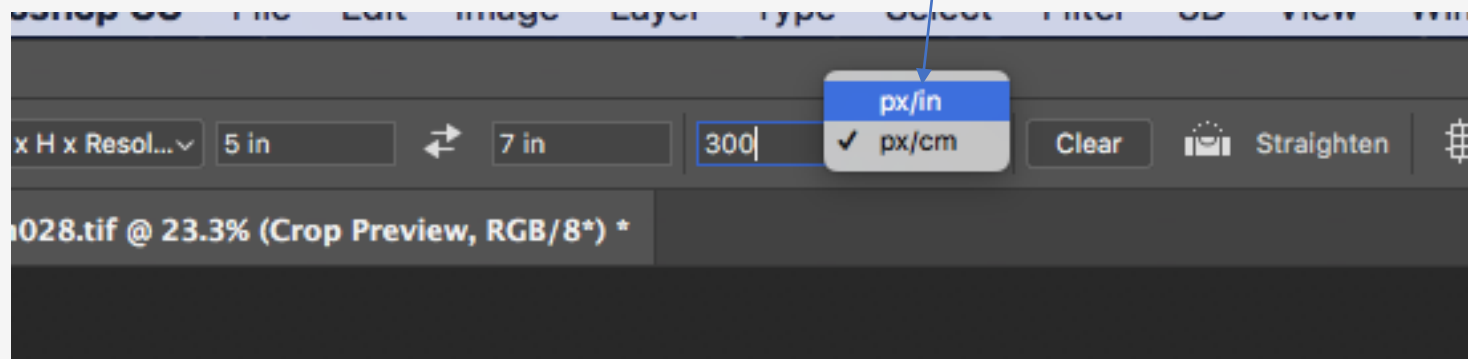
Resizing the image to a 5x7 print my dpi has changed to 573. By clicking the resample button I can move the print down to 300 dpi.



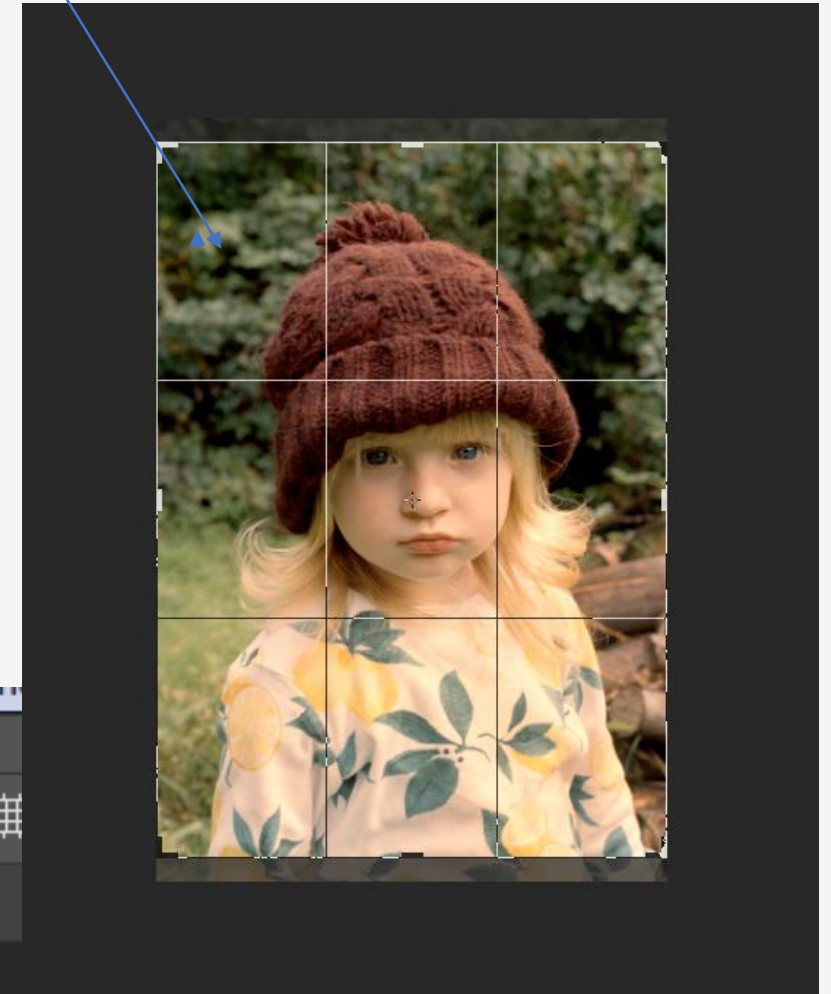
The Crop Tool



Select Px/in



When you have chosen the crop double click anywhere on the image.



The PhotoLab

How to order a print.

IMPORTANT

Print checklist.

- Flatten the layers
- 300 ppi (not 300 pixels per cm!)
- Size print to your required dimensions before uploading to the PhotoLab
- Adobe 1998 or sRGB
- Tiff or jpeg (don't erase the file extension if you rename your file)

www.photolab.falmouth.ac.uk

The screenshot shows a web browser window with the URL www.photolab.falmouth.ac.uk. The page features a dark header with the 'The Photolab' logo on the left and the 'FALMOUTH UNIVERSITY' logo on the right. Below the header, there is a navigation menu with links for 'Home', 'Price List', 'About Us', and 'Contact Us'. The main content area is divided into two columns. The left column has a 'Welcome to the Photolab' section with a paragraph of text. The right column has a 'Sign In' section with a form for 'Username or email' and 'Password', a 'Sign In' button, and links for 'Forgot password?' and 'I am a new user...'. A large blue arrow points from the text 'Sign in with your student username and password' to the sign-in form. The bottom of the page contains contact information, a Facebook link, and a copyright notice.

The Photolab

FALMOUTH UNIVERSITY

Home Price List About Us Contact Us

Welcome to the Photolab

Welcome to the PhotoLab at Falmouth University. We are a professional photo finishing facility that has been serving both demanding students and local professionals for the past seven years. We are now opening our facilities up to the wider public with a particular emphasis on professional photographers, alumni and keen amateurs. We of course welcome casual users too.

Sign In

If you are a current **student** or **staff member**, you can sign in without needing to register - just use normal campus username and password.

Username or email
AT144325

Password

Sign In

[Forgot password?](#)
(External users only - Staff/students use [My Account](#) or Contact the IT service desk to reset your password)

I am a new user...

Sign up

Email: thephotolab@falmouth.ac.uk Phone: (+44) 01326 250218 [Find us on Facebook](#)
Address: The Photolab, Falmouth University, Penryn Campus, Penryn, Cornwall, United Kingdom, TR10 5FE
Copyright © 2013 Falmouth University. All rights reserved. WA.

[Data Protection & Freedom of Information](#) [Terms of Use](#) [Cookie Policy](#)

Sign in with your student username and password

Select New Order



The screenshot shows the 'The Photolab' web application interface. At the top, there is a black navigation bar with the logo 'The Photolab' and several menu items: Administrator, Users, Orders, Batch Manager, History, Activity Log, and Pricing. Below the navigation bar, the main content area is titled 'Your Orders'. Underneath, there is a section for 'Outstanding Orders' which contains a green button labeled 'New Order'. A large yellow arrow points to this button. Below the button, the text reads 'You have no outstanding orders.' At the bottom of the page, there is contact information including an email address, a phone number, a Facebook link, and a physical address. There is also a copyright notice and links to 'Data Protection & Freedom of Information', 'Terms of Use', and 'Cookie Policy'.

The Photolab

Administrator Users Orders Batch Manager History Activity Log Pricing

Your Orders

Outstanding Orders

[New Order](#)

You have no outstanding orders.

Email: thephotolab@falmouth.ac.uk Phone: (+44) 01326 259218 [Find us on Facebook](#)
Address: The Photolab, Falmouth University, Penryn Campus, Penryn, Cornwall, United Kingdom, TR10 9FE
Copyright © 2013 Falmouth University. All rights reserved. W4.

[Data Protection & Freedom of Information](#) [Terms of Use](#) [Cookie Policy](#)

Select Choose files

Locate the 6x4 inch print on your computer (It must be sized ready)

New Order

Upload your photographs and create your new order by following the steps below.

Our system currently supports images with the following extensions: JPG, JPEG, TIF, TIFF

1. Upload your file(s)

Choose Files no files selected



Upload

2. Select the desired file(s)



Photo Printing	Inkjet/Giclee Printing
3. Choose the paper type	3. Choose the paper type
Lustre	Standard Matt
4. Choose the print size	4. Choose the poster size

Upload

New Order

Upload your photographs and create your new order by following the steps below.

Our system currently supports images with the following extensions: JPG, JPEG, TIF, TIFF

1. Upload your file(s)

Choose Files



2. Select the desired file(s)

Photo Printing	Inkjet/Giclee Printing
3. Choose the paper type	3. Choose the paper type

Click on the uploaded file name/s to highlight them for printing choices

New Order

Upload your photographs and create your new order by following the steps below.

Our system currently supports images with the following extensions: JPG, JPEG, TIF, TIFF

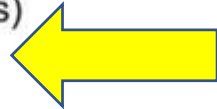
1. Upload your file(s)

Choose Files no files selected




Upload

2. Select the desired file(s)

6x4_1110094 copy.tif



Make your choices. Add to order.

Photo Printing
3. Choose the paper type
Lustre 
4. Choose the print size
6x4 
5. Select the quantity
1 
<input type="button" value="Add to Order"/>

Check, then proceed to Checkout

The Photolab FALMOUTH UNIVERSITY

Administrator Users Orders Batch Manager History Activity Log Pricing Discounts | User Account Orders History Price List Guidance About Us Contact Us Sign Out

New Order

Upload your photographs and create your new order by following the steps below:

Our system currently supports images with the following extensions: JPG, JPEG, TIF, TIFF

1. Upload your file(s)
Choose Files no files selected
Upload

2. Select the desired file(s)
6x4_1110094 copy.tif

#	Photograph	Paper	Size	Quantity	Qty * Unit Price	Actions
1	6x4_1110094 copy.tif	Lustre	6x4	1	£0.12	Remove

Remove All Proceed to Checkout

Photo Printing	Inkjet/Giclee Printing
3. Choose the paper type Lustre	3. Choose the paper type Standard Matt
4. Choose the print size 6x4	4. Choose the poster size A3
5. Select the quantity 1	5. Select the quantity 1
Add to Order	Add to Order

This side for
C-Type
prints, size
6x4 up to
12x18in

This side for
archival inkjet
printing, A3 to
BO size

Your Orders

Checkout

Choose a service:

FREE 24 Hour Service

Enter Discount Code Here:

Apply

Order Summary

Photographs	Order Items Total	Service
1 (1 items)	£0.12	£0.00

I confirm that I own copyright on all images submitted and that I agree to p

Back

Place Your Order »

Remember to click Done



The Photolab


[Administrator](#) [Users](#) [Orders](#) [Batch Manager](#) [History](#) [Activity Log](#) [Pricing](#) [Discounts](#) | [User](#)

Your Orders

Confirmation

Thank you for your order. It has now been added to our system and marked for printing.

[Done](#)

Email: thephotolab@falmouth.ac.uk Phone: (+44) 01326 259218  Find us on Facebook
Address: The Photolab, Falmouth University, Penryn Campus, Penryn, Cornwall, United Kingdom, TR10 9FE
Copyright © 2013 Falmouth University. All rights reserved. W4.

[Data Protection & Freedom of Information](#) [Terms of Use](#) [Cookie Policy](#)

That's it!

It may seem like a lot of steps but in reality it should take no longer than a few minutes to send a print.

The best way to become familiar with the whole process is to practise!