



Installation Requirements

Photoshop and Lightroom will work on just about any computer running Windows 10 or later or Mac running macOS Catalina (version 10.15) or later providing you have at least 4Gb RAM. The more RAM and faster the processor the better, while it will run with 4Gb RAM some features will really struggle with less than 8Gb, 16Gb would be preferred. Also don't underestimate the storage required for your images. I'd recommend you allow at least 4Tb of disk space for your images, and of course, don't forget you'll need at least the same again for backup. Your options for storage include internal drives, external drives and of course cloud based storage. Choose which, or which combination suits you.

Getting the Software

The most effective way to get Adobe Lightroom and Photoshop is through the Adobe Photographer's Subscription plan which you can sign up for at <https://www.adobe.com/uk/creativecloud/photography.html> you get a free trial period, but for most users, its only for 7 days which is a bit mean. Longer trials are available for corporates and for educational users. If you install a trial version and then purchase a subscription to the full product, then all of your settings etc will be carried over.

I would advise getting the 20Gb Photography Plan which gives you Photoshop and Lightroom with just 20Gb of on-line storage for around £10 a month. There is a Photography Plan which gives you the same features, but with 1Tb of on-line storage for £20 a month, but I feel that's not cost effective (you can also buy more on-line storage at a cost).

Note there are two versions of Lightroom included in all packages. Lightroom Classic, which is a fully featured version of Lightroom geared to keeping your images locally on your own drives, and Lightroom CC, which has slightly fewer features and is geared towards keeping your images in the Adobe Cloud. If you use Lightroom CC than you will need to make sure you purchase enough on-line storage.

Organising your images

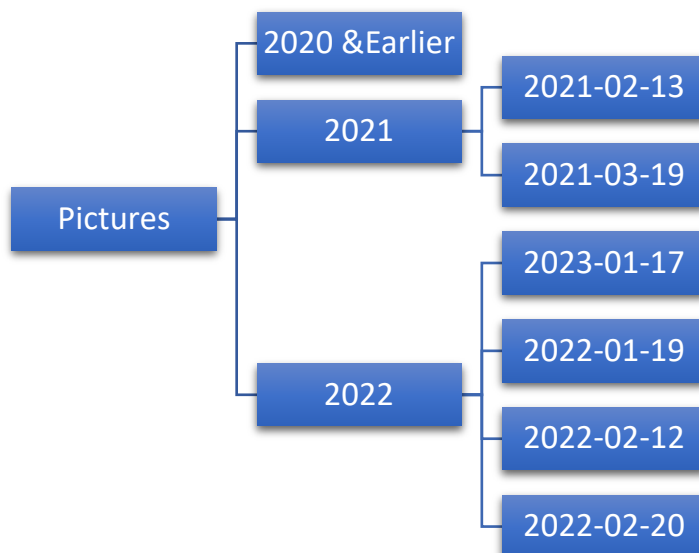
Its worth thinking about how to organise your images. By default your images will normally just all be dumped in the 'Pictures folder'. Its worth considering on which drive you're going to put your images and how you will physically organise them. There is no right or wrong way to organise, them but some logical system that allows you of find your images and organise backup now and in the future is highly recommended. It does not have to be complex but it does need to make sense.

The way I do it is like this.

I have a top-level folder called Pictures

Under that I have a sub folder for each year

And within the year folders I create a new dated folder each time I add images from my camera, so it looks a bit like this.



The dates on the folders are not necessarily the dates the images were taken, rather they are the dates the images were uploaded to the computer. I may take images over several days and then upload them in bulk to one folder (the actual date the image was taken is of course in the Metadata)

If you use the international date format YYYY-MM-DD, then it ensures that the folders are always displayed in date order.

Organising images like this makes some routine housekeeping jobs such as backup and maybe moving images from selected years to other external drives etc much simpler. It also avoids potential issues with images with the same filename being added to the same folder.

Note that I make no attempt to organise by subject matter or location etc. Images containing specific subjects or from particular places can be located by keywords – more on that later.

If you haven't already organised your images something like this, then do so from now on, you can go back into your old images as and when you have the time and inclination and organise them if you wish.

Installing Lightroom and Photoshop

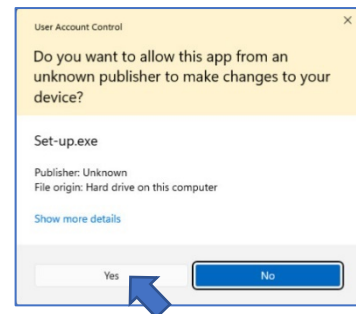
When you sign up to the Adobe Subscription you will get access to the Creative Cloud installer which will install and maintain the Programs on your Computer. You can also download the individual installer programs for Lightroom and Photoshop. Trial versions are available in stand alone versions. If you install a trial version and then purchase a subscription to the full product, then all of your settings etc will be carried over.

It does not matter whether you install Lightroom or Photoshop first. I'll start with Photoshop

Installing Photoshop

If you're not using the Creative Cloud Installer, then download the Photoshop installer and run it.

If you're asked if you want to allow the programme to make changes to your computer then click YES.



Select the default options for language (English) and Location (Default Location)

Installation will then continue with. Photoshop will be installed in the C:\Windows\ProgramFiles\Adobe\Adobe Photoshop 2022 folder (or the corresponding folder on a Mac).

Installation typically takes around 5mins but the exact time taken will depend on your computer.

Once Installation has completed then you can close the installer program.

You might want to add Photoshop to the Start Menu and/or the Taskbar for ease of use.



Photoshop Settings

Once photoshop is installed then you may want to change some of the default settings. Mostly the settings are OK as they are but you may benefit from a couple of changes.

Open Photoshop, you will be greeted by the 'Welcome or Home Screen' and one of the first things you will probably want to do is get rid of it.

Click EDIT -> PREFERENCES -> GENERAL and untick

Auto show the Home Screen

On the TOOLS section you might also want to untick

Show Rich Tooltips

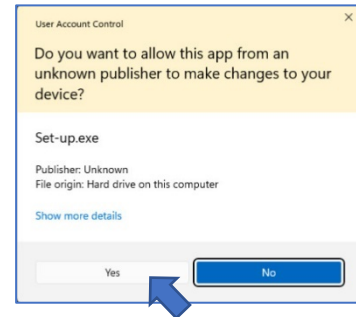
All the other stuff you can leave, for now.

Installing Lightroom

Installing lightroom follows much the same process as for Photoshop, but there are a few more 'after install settings' that you might want to change

If you're not using the Creative Cloud Installer, then download the Lightroom installer and run it.

If you're asked if you want to allow the programme to make changes to your computer then click YES.



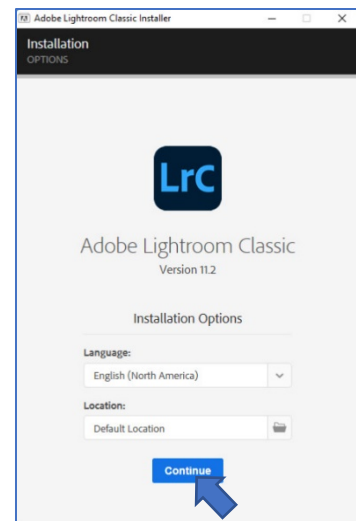
Select the default options for language (English) and Location (Default Location)

Installation will then continue with. Photoshop will be installed in the C:\Windows\ProgramFiles\Adobe\Adobe Photoshop 2022 folder (or the corresponding folder on a Mac).

Installation typically takes around 8mins but the exact time taken will depend on your computer.

Once Installation has completed then you can close the installer program.

You might want to add Lightroom to the Start Menu and/or the Taskbar for ease of use.



When you open Lightroom for the first time it will be 'Empty' and it will not have a Catalogue.

Older versions of Lightroom used to display a message telling you there is no Catalogue and would ask you to create one and you could specify where it was created. It seems Adobe has now decided to simplify this and when you run Lightroom for the first time a new catalogue is automatically created in the default Pictures folder in sub-folder called Lightroom.

So what's this Catalogue Thingy?

The lightroom catalogue is a database. It contains an index to all your images and stores details about where the images are on your machine and other details including a thumbnail preview. It records all changes you make to an image. Because it's used very heavily by Lightroom its normally best put on your fastest drive – preferably an internal SSD, even if the images themselves are on external Hard Disks or Network Drives. The Catalogue can get quite big but not excessively so 30-50Gb. By default, it will create backups of itself under its own parent folder – not ideal. We'll look at this later.

Lightroom Settings

There are one or two settings that you might want to adjust in the Lightroom Settings. Select EDIT -> PREFERENCES.

I have my General Preferences set as shown as I don't want lightroom to bug me every time I insert a memory card or USB drive in my PC.

On the external Editing Tab I have set the following options.

I prefer to have Photoshop write PSD files by default as it's the native Photoshop format. TIFF is the default and has the advantage of being supported by many third-party applications.

I have the sRGB colour space set as it's the standard for all on-line image processing, most home, and the majority of commercial printing.

16bit colour depth provides better colour blending and grading but is not supported by some processes and plug-ins.

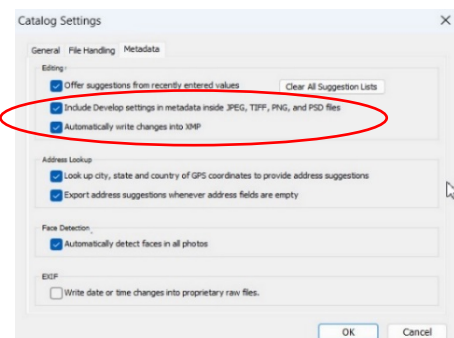
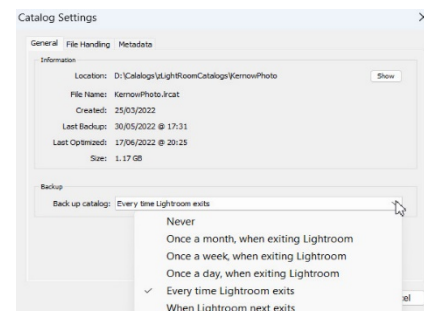
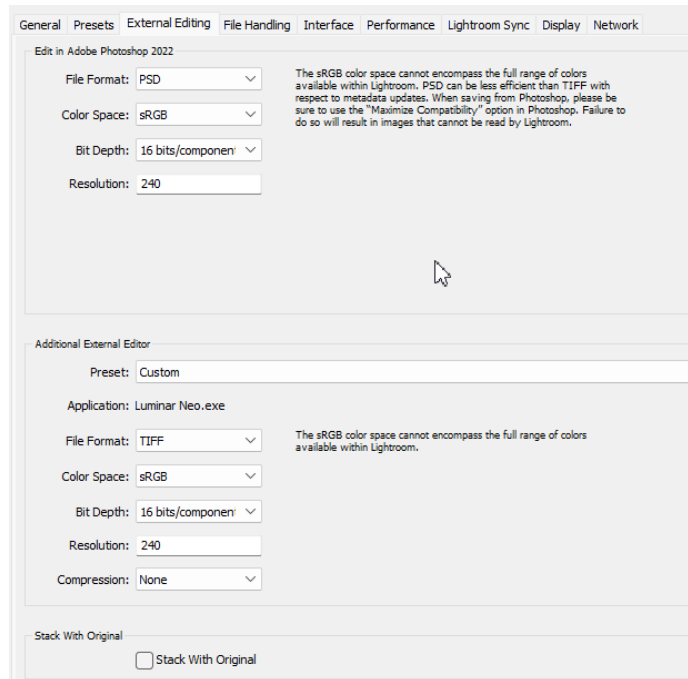
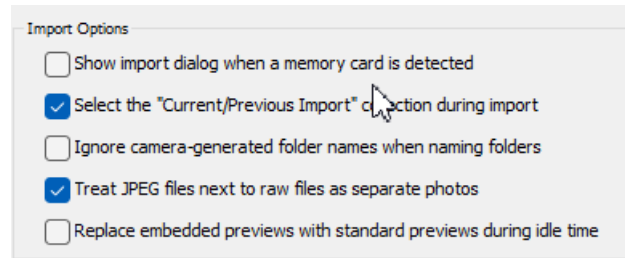
I tend to avoid stacking in all cases, as I'm easily confused by it!

Catalogue Settings

There are also some important settings under EDIT -> CATALOG SETTINGS.

The GENERAL tab shows where your catalogue is located and you can change the backup frequency here. By default the catalogue is backed up to a ZIP file in a sub-folder under the active catalogue, but you can modify the location when prompted to back-up.

The Metadata options are quite important. Lightroom will record any changes you make to the catalogue. If you want changes available outside of Lightroom, then you need to make sure the information is written to the files themselves, or in the case of RAW files to the XMP sidecar file, so I always have these selected.



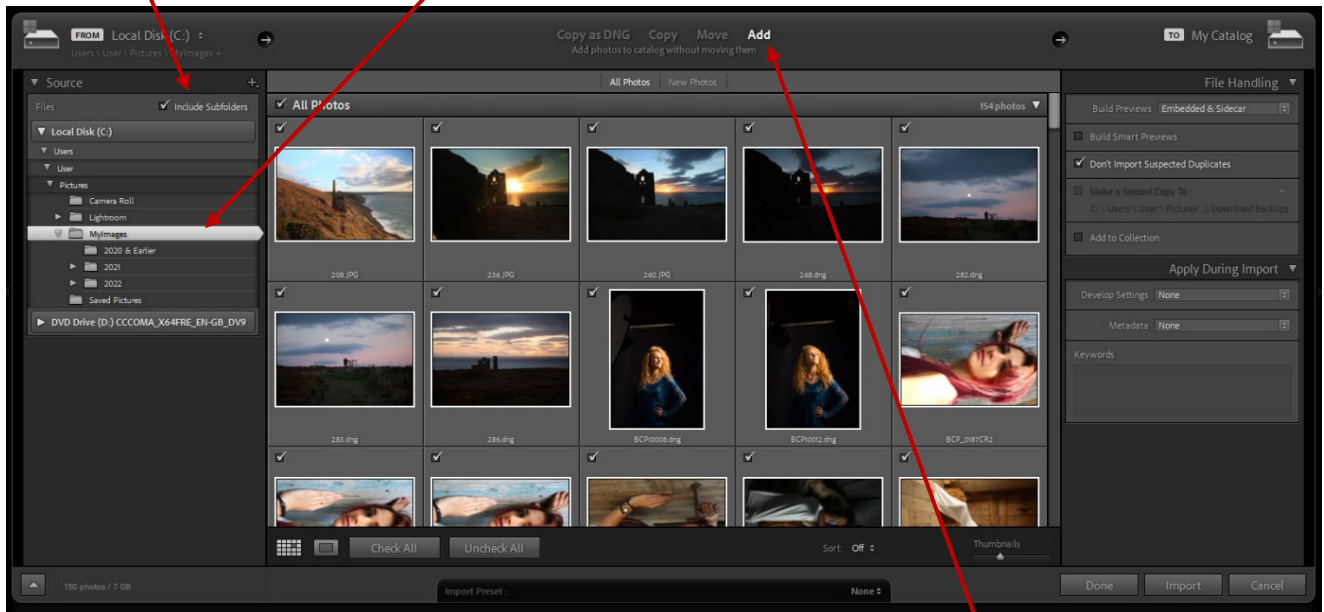
Importing Existing Images, Configuring Lightroom and Photoshop Basics

Adding existing images into Lightroom

When you install lightroom it will create an empty catalogue. If you have existing images these can be added to the lightroom catalogue. The images can be on your internal drive, external drive or network drive. All we need to do is to tell Lightroom where they are.

My existing images are located in Pictures\MyImages and various sub-folders under that.

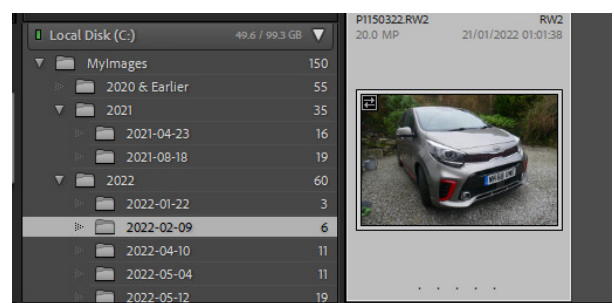
So I'll select IMPORT and find the MyImages folder in the panel on the right and make sure that Include Sub-Folders is selected



I want to leave the original images where they are, so I need to make sure ADD is selected and then click IMPORT

Adding images in this way for the first time may take a while if you have a lot of images to import.

Your original images are not altered or moved during the ADD process. All that is happening is that your images are being indexed, previews built, and details added to the catalogue. The panel on the left will show the folders in the library. By selecting the folder, you can see the previews of all the images in that folder.



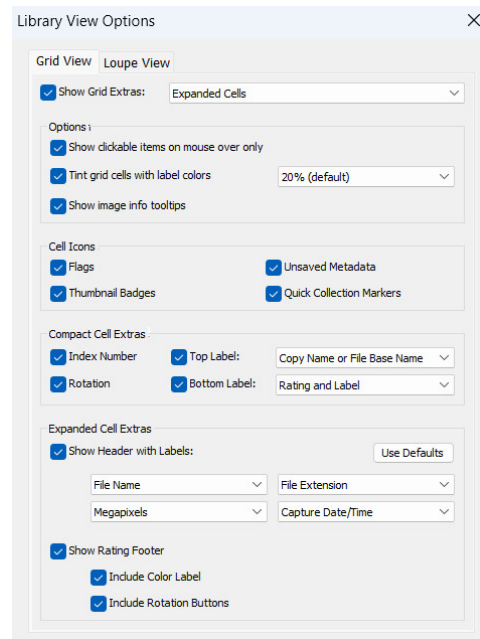
View Options

If in the library view you right click on the grid you can scroll down to View Options and change the information displayed on the previews.

What you decide to have shown is your own personal preference, but I have mine set like this.

Essentially, I have Expanded Cells enabled and all the options ticked.

At the top of each preview, I'm showing the filename and extension, image size and capture time.



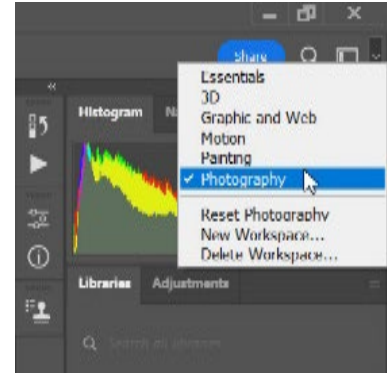
Opening an Image in Photoshop

You can select an image (or multiple images), in Lightroom and edit it in Photoshop. Select the image(s), right click and select 'Edit in Photoshop'

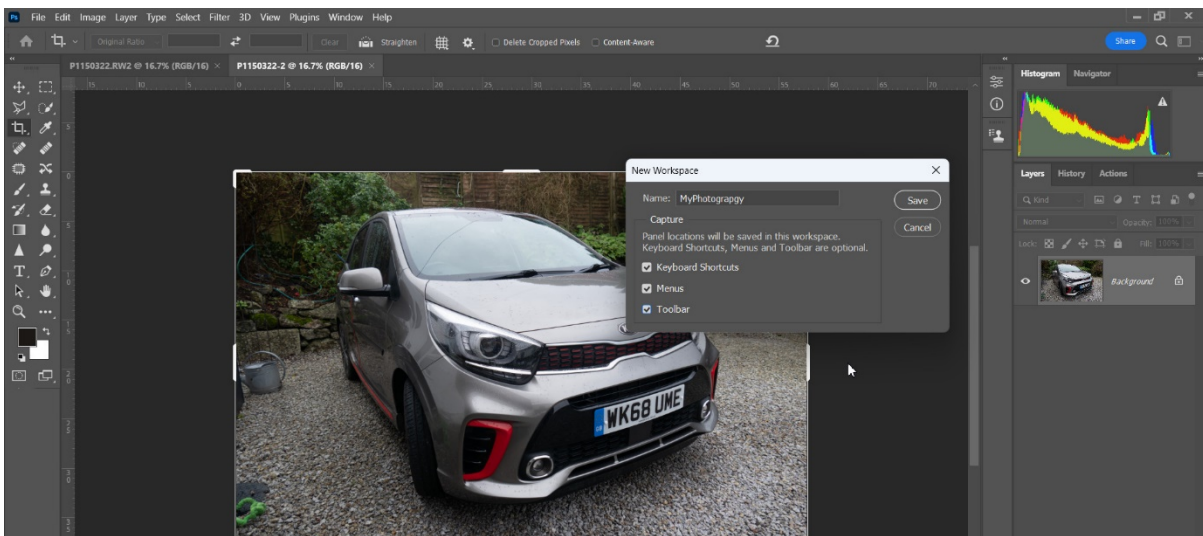
Photoshop Workspaces

By default when you open Photoshop for the first time it uses a general workspace. Since We're dealing with Photography we could switch to the more appropriate 'Photography Workspace'

While this workspace is better for our needs its not perfect, but we can use it as the basis for our own workspace, make changes to it by selecting which panels and windows to have and then save this as a new workspace.



Photoshop allows you to create and save your own custom workspaces. This is the one I tend to use. I don't use Libraries much, so I get rid of that, add the history and actions panel and save that as 'MyPhotography'

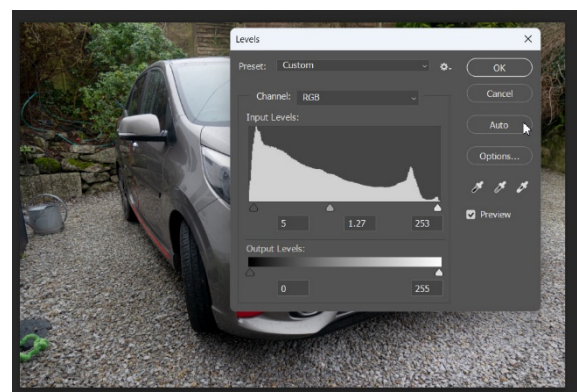


Editing and Saving

Once you've got the image(s) into Photoshop you can obviously use all the Photoshop editing tools. I'm not going to go into all of those now, but I'll make a small edit and save the changes.

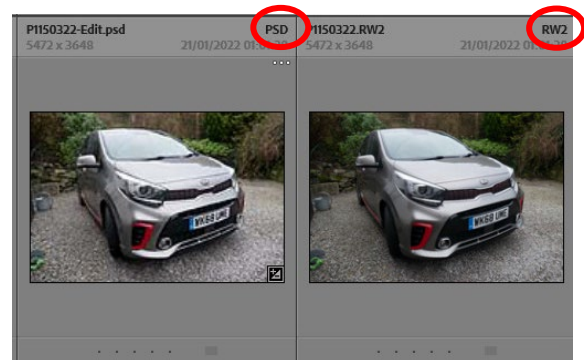
For the sake of changing something, I'll just select IMAGE -> ADJUSTMENTS -> LEVELS and select the AUTO option.

I'll then save and close the image

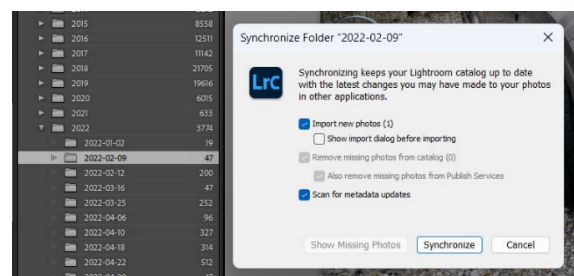


If we now look at lightroom we can see that there are now two versions of this image, the original RAW file, and along side it the edited version saved as a PSD file.

So long as you edit images from lightroom like this, then lightroom will keep track of your images and automatically add changes to the catalogue.



If you edit files outside of lightroom then lightroom will not know of the changes. You can use the SYNCHRONIZE FOLDER option to re-scan the folder and add any new images and updates.

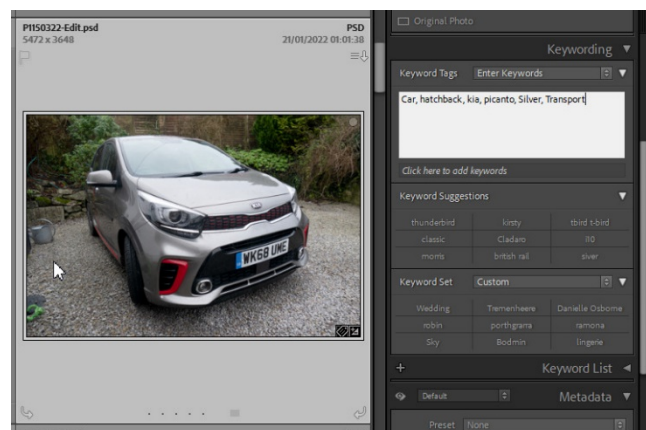


Importing and Categorizing images

Once you start building up a library of images it can be tricky remembering what images you have, or knowing where they are.

Lightroom helps with this in a number of ways but the most basic and most powerful is by allowing you to assign and search images based on keywords.

For existing images you can select them, or select multiple images and simply enter the keywords in the Keywords box on the right.

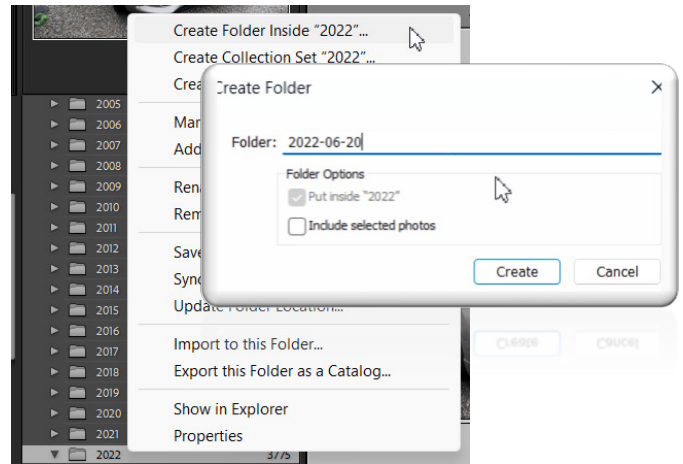


Note that if multiple images are selected and some keywords are followed by a star it means that that particular keyword is assigned to some, but not all of the selected images. If you remove the star it will assign that keyword to all the selected images.

Importing new images from your camera

Getting the images from the camera to your computer involves at least two processes. Copying the actual images to your computer's disk and adding the images to the Lightroom catalogue.

Before you attempt to import new images you need somewhere for them to go on your drive so I'd create a sub-folder under the current year in your folder tree. You can do this either from the operating system or from within Lightroom.eg:



Use the international date format as suggested to make sure folders are always listed in order.

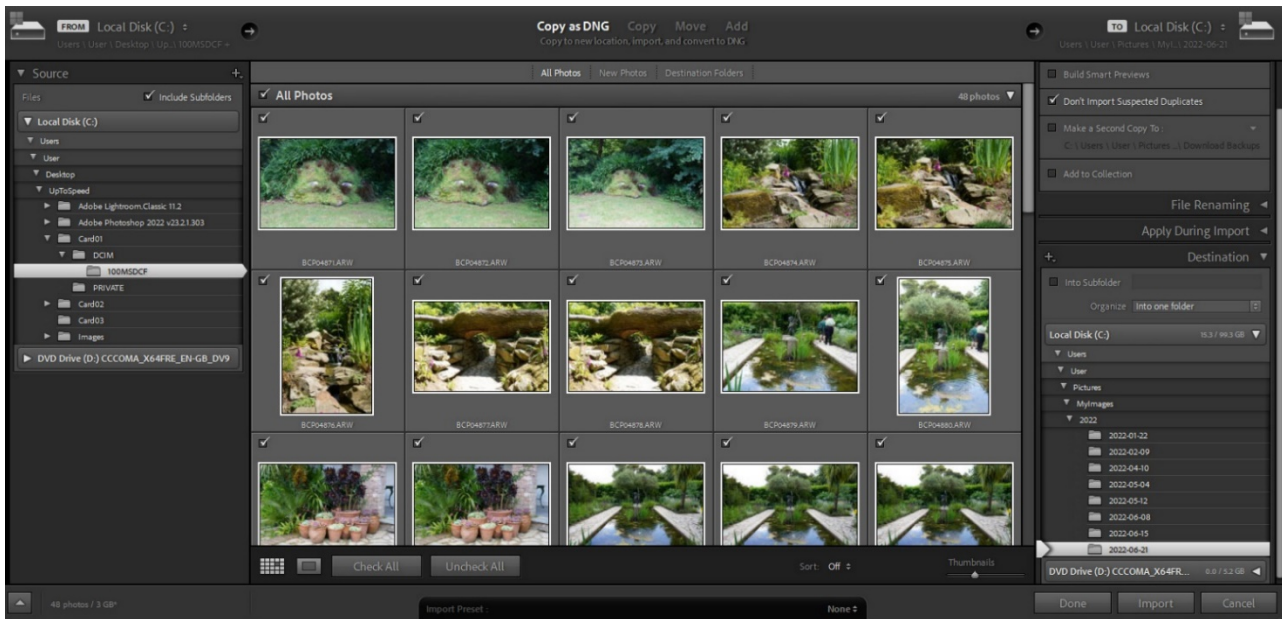
Once the folder is created you can copy the actual images. To do this you'll need to either connect your camera to your computer or take the memory card from your camera and insert it into your computer.

If the import dialog does not automatically appear you can select IMPORT from the bottom left in the library module.

When you import from a camera or memory card you are actually doing two things.

1. You are copying the actual images from the memory card to a folder on your computer
2. You are updating the Lightroom catalogue with details and previews of the new images

When you start the import, you will see a screen like this



On the left is the SOURCE, the place where the original images are, normally your memory card or camera.

On the right is where Lightroom will copy the actual images to, normally a folder of a drive on your computer. Its good practice to create a new folder for each import as mentioned earlier to assist with organisation and prevent duplicate file name issues. You can create a new folder by right clicking on the parent folder and choosing 'Create New Folder'.

Its important to make sure that the ORGANISE option is set to into one folder, it can get messy if any other option is selected.

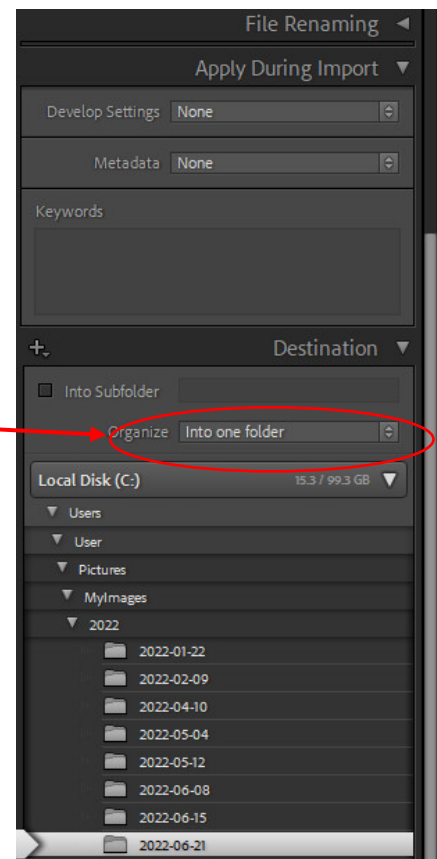
Note that there is also a 'Apply During Import' section. Amongst other things you can specify here any keywords that you want to apply to all images in this import.

At the top centre of the screen are four main options for importing.

ADD, leaves the original files where they are and simply adds their details to the lightroom catalogue. This is most useful when you first start with lightroom to add existing images from your drives to the catalogue.

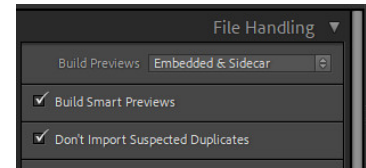
MOVE, moves the images from the source folder to the destination folder and adds them to the library. The original files are deleted after being copied to the new location.

COPY, copies the images from the source location to the new location and adds the details to the lightroom catalogue. The original files are left.

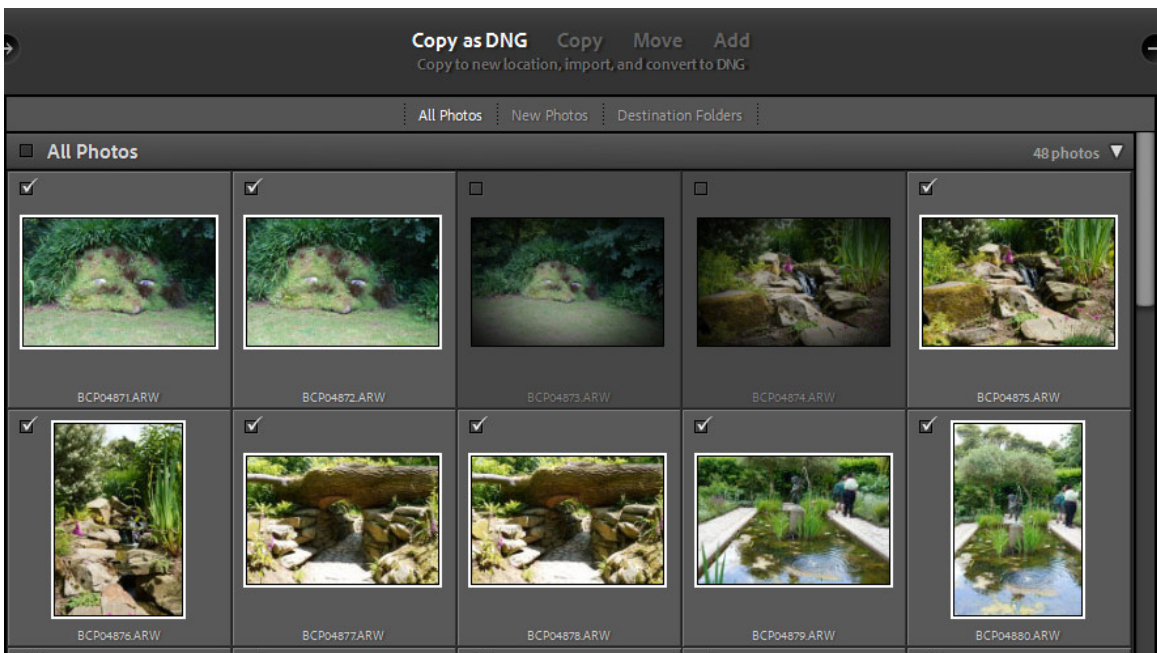


COPY as DNG. Works like copy, but RAW files are converted to the Adobe DNG format, this can be useful as DNG files have universal support and are often smaller than the RAW files as they use lossless compression to store the data.

The main window under in the centre of the screen shows previews of the images that will be imported. By default lightroom will not import images again which it thinks its already imported and some of the cells may be unticked/greyed out. You can override this in the panel on the right of the screen.

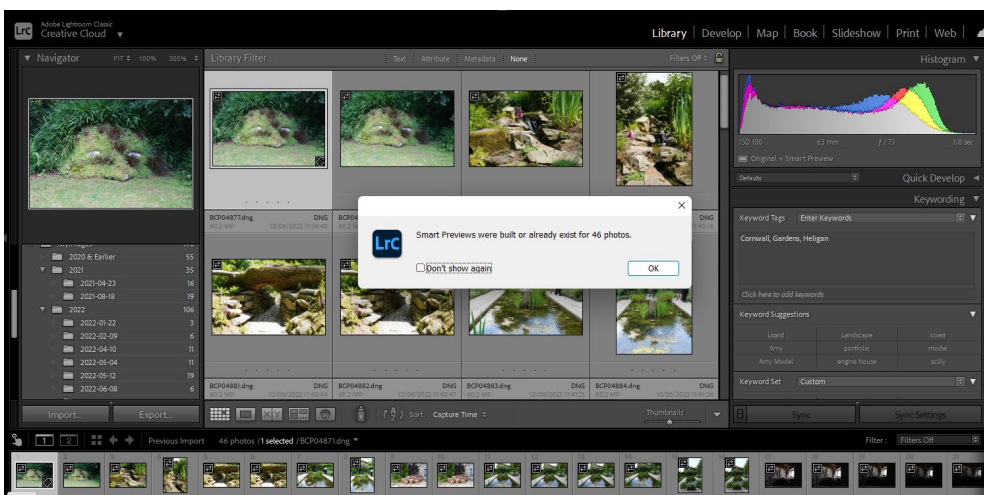


If there are some images that you want to discard at this stage, you can untick them in the preview and they will not be processed.



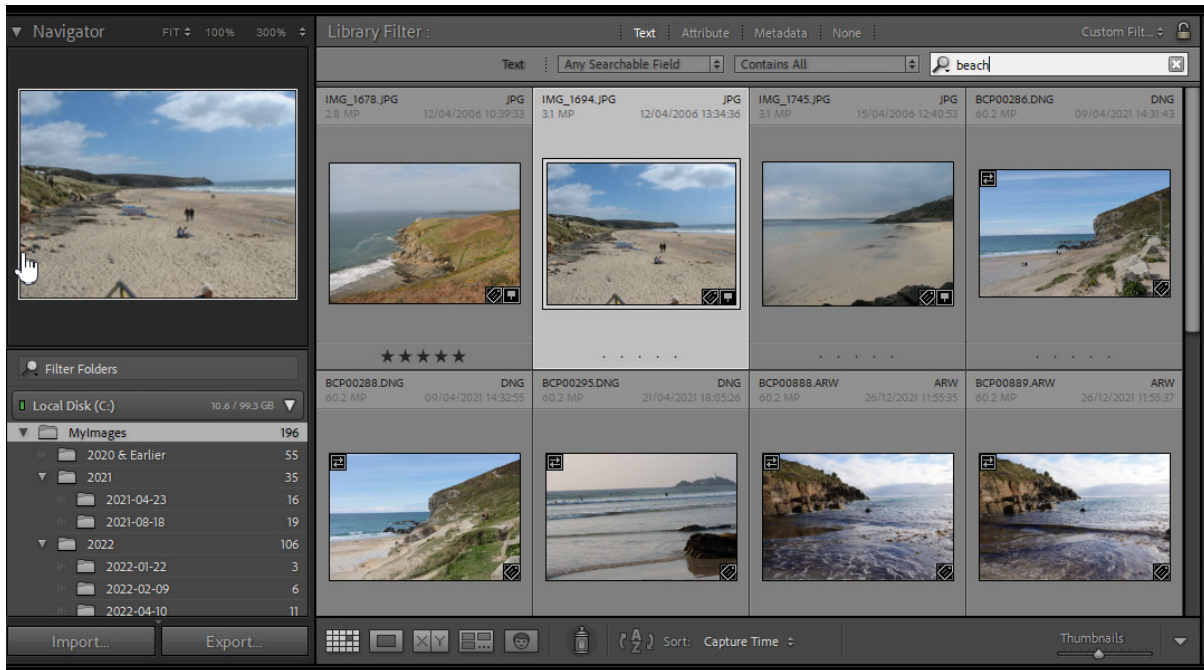
You can use this to discard test shots and other obviously flawed images that need to be culled. In many cases though you'll want to import most of the images and then cull any unwanted ones once in lightroom.

Once you're happy with the options you can click IMPORT to process the images. It can take a while to copy, convert and catalogue large numbers of images.



Finding Images

I'm not going to go into all the options regarding categorising images here, there are many powerful tools that you can use, but I will mention the essential use of Keywords and Attributes. You can search the entire catalogue, or a specific folder and its sub-folders based on keyword. Select the folder on the left, then click TEXT on the toolbar at the top and type the keyword you want to search for (if you can't see the toolbar press the '\` key).



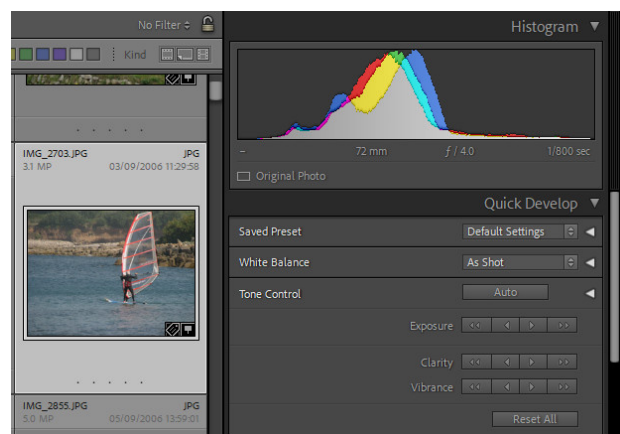
You can also tag images with colour tags and rate images using the 'star' system and search on that basis or any combination of keywords, attributes and metadata, but I'm not going into all that detail here – experiment.

Editing Images

Now we come to the fun bit, editing your images. You can do quite a bit of editing in Lightroom of you want.

Its good for making some basic changes to images such as adjusting the exposure. There are some very basic tools on the Quick Develop Panel.

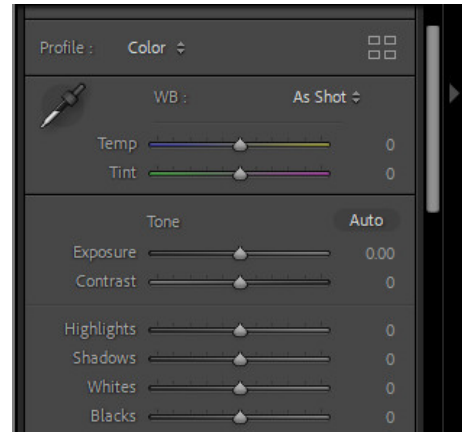
Just select the image (or multiple images), that you want to adjust, and then use the panel to make some basic corrections.



If you want to do something a little more advanced then you can open the DEVELOP module which gives a lot more tools, options and adjustments that you can employ.

As lightroom as evolved then the develop module has become more sophisticated to the extent that it can now do just about anything than can be done in Adobe Camera Raw.

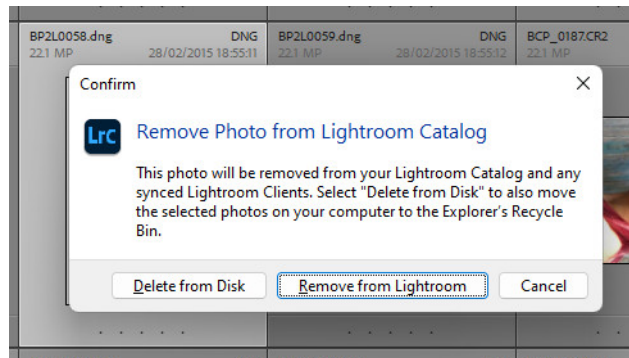
However, Lightroom does not have the more advanced editing options that can be found in Photoshop.



Culling Images

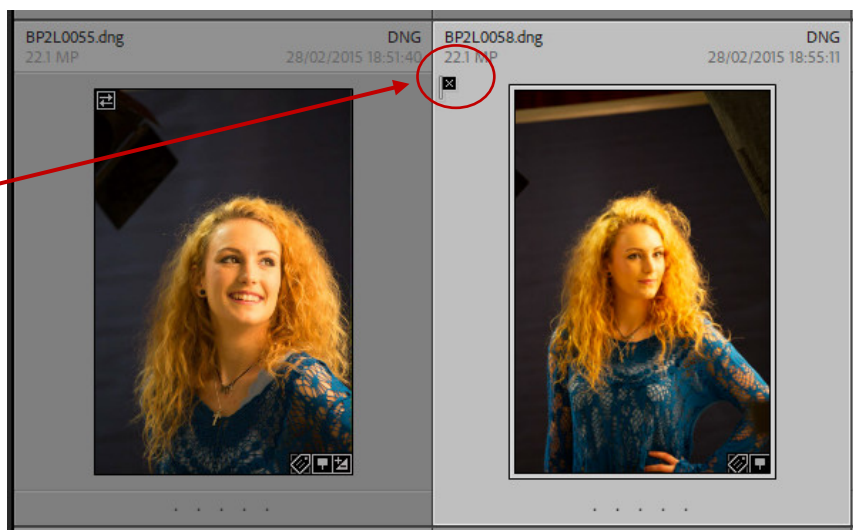
You are going to find that there are images, that despite your best efforts are simply not worth keeping and need to be got rid of.

You can delete individual images by selecting them and pressing the DELETE key. Lightroom will ask you if you want to delete the image from lightroom (in which case it will be removed from the catalogue, but the original image will remain on the disk), or if you want to delete the image from Disk – in which case both the catalogue details and the original file will be deleted.



Many people prefer to use a slightly different method. You can mark an image for deletion by selecting the image and pressing 'x' – you'll see a little deletion flag on the image preview.

You can mark multiple images in this way, and if you change your mind about an image, you can click the delete flag to remove it.



Once you are done you can press [CTRL][BACKSPACE] to delete all the flagged images.

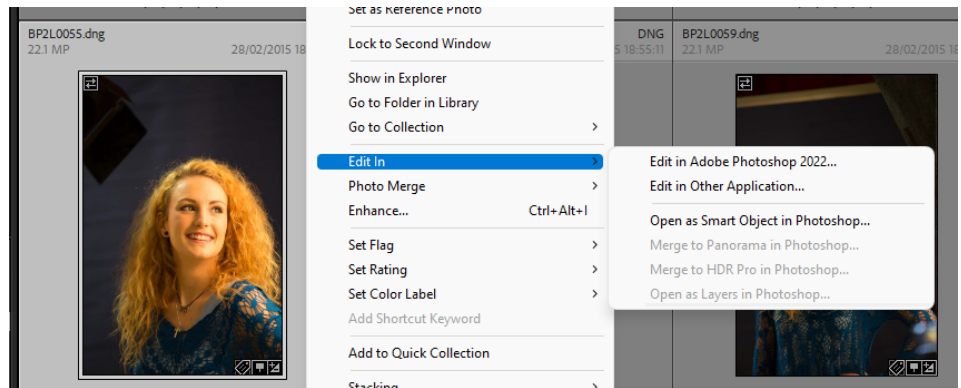
Basic Edits in Photoshop

Opening an image from Lightroom

If you want Lightroom to keep track of your changes in Photoshop, then Lightroom needs to know what you are doing. To make sure this is the case, its best practice to open images in Photoshop from Lightroom, rather than opening them directly in Photoshop.

To do this you can select your image (or multiple images) in Lightroom, and right click and select EDIT IN -> ADOBE PHOTOSHOP

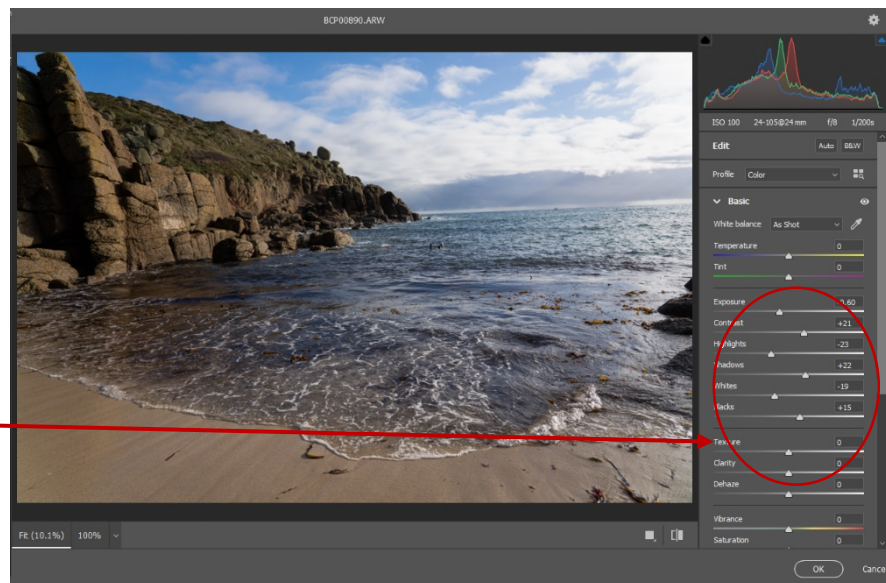
This will open photoshop (if its not already open), and then load the images from lightroom into it for editing.



Basic Exposure

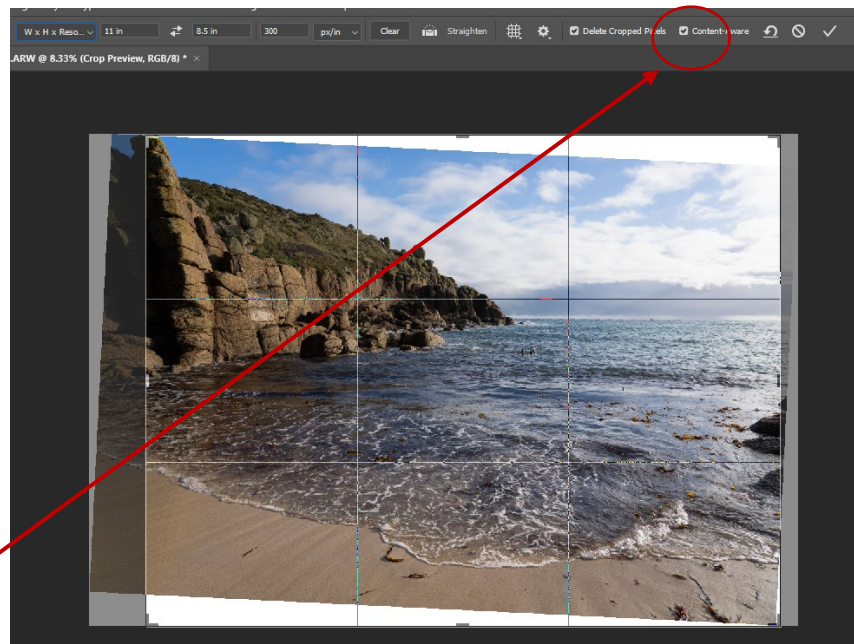
You can modify the basic exposure in Lightroom or In Photoshop. To do it in photoshop then as with most things there are several ways of doing it.

My preference is to use the FILTER->CAMERA RAW filter and then modify the exposure on the BASICS tab.



Crop and Straighten

You can crop for composition reasons or to crop to a particular size for printing or publication purposes. Several crop sizes are pre-defined. You might want to make your own for example, A4 – for A4 Printing. 8.5in x 11in for magazine publication, 4:5 ratio for Instagram and 820x360px for Facebook headers. You can also use the crop tool to straighten the horizon.



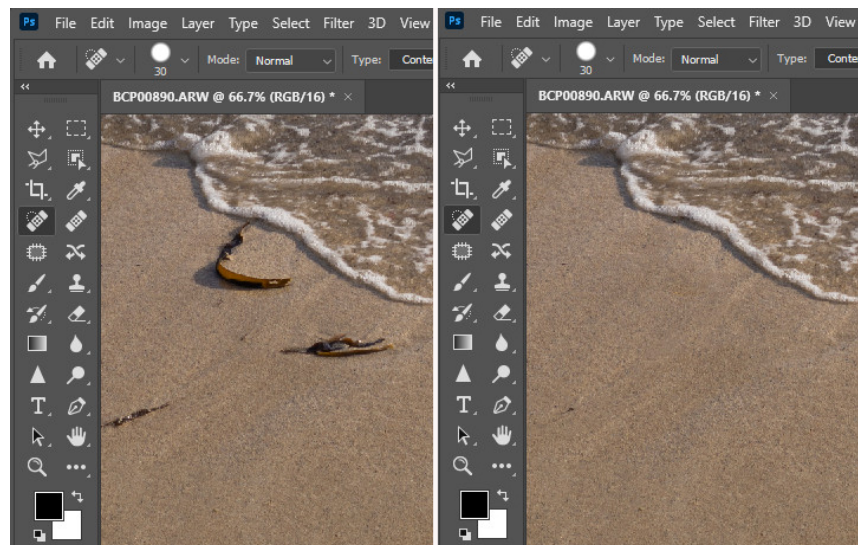
Content aware fill can be selected to fill any out to bounds areas.

Spot Healing Brush

The spot healing brush can be used to remove small artifacts, litter, wires and such like.

Draw over the offending items with the spot healing brush and it will paint over the area by sampling from the adjacent areas. It works best on smaller artifacts.

Sometimes you may need to brush over an area several times to get an acceptable result



Healing Brush

This works like the Spot Healing brush with one important difference, you can press the ALT key and it will allow you to select the area that is copied from, so it offers you a greater degree of control.

Clone Tool

The clone tool is similar to the Healing Brush but offers many more options. Its more suited to larger areas than the Healing Brush or Spot Healing Brush.

Brush Controls and Shortcuts

There are some common shortcuts that can be used with most brushes.

[and] can use used to change the size of the brush

SHIFT [and SHIFT] can be used to make the brush harder/softer

ALT – can be used to set the source for the brush

Making Selections

There are a variety of Selection tools which allow you to isolate part of an image so you can work on that area without affecting the rest of it. When a selection is active most adjustment, filters, brushes etc only work within the selection itself.

Most selection tools are found in the tools panel in three main sections. Use select the Rectangular Marquee tool. Drag a rectangular selection onto the image. The area inside the animated border represents your selection.

To select more, click the Add to selection icon in the options bar or press Shift and drag. To select less, click the Subtract from selection icon in the options bar or press Alt (Windows) or Option (macOS) and drag.

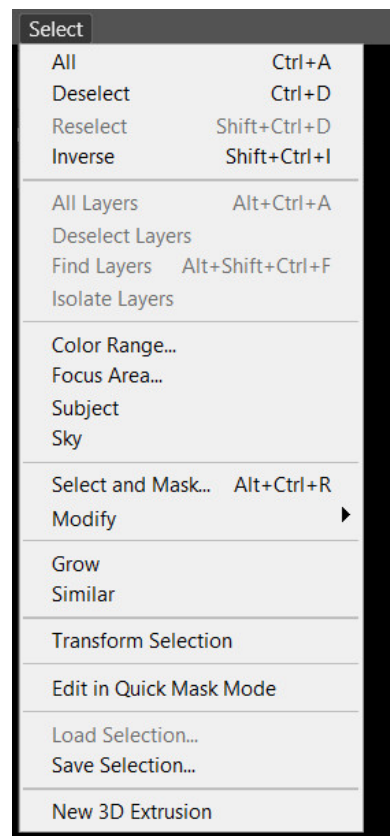
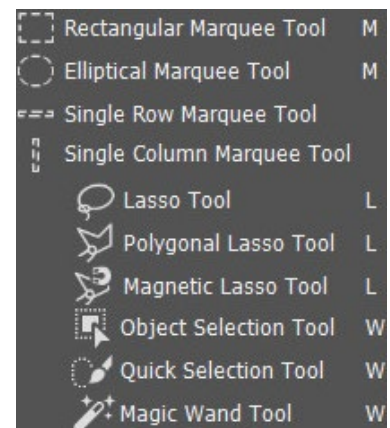
Select a layer you want to adjust. Then try applying some adjustments (Image > Adjustments). With a selection active, adjustments affect only the selected area of that layer. The same is true if you were to apply a filter, paint, fill, copy, or make other edits.

When you're done, you can deselect by choosing Select > Deselect or pressing Control+D

There are many other useful options under the SELECT menu shown opposite

More info and videos at

<https://helpx.adobe.com/uk/photoshop/how-to/selection-tools-basics.html>

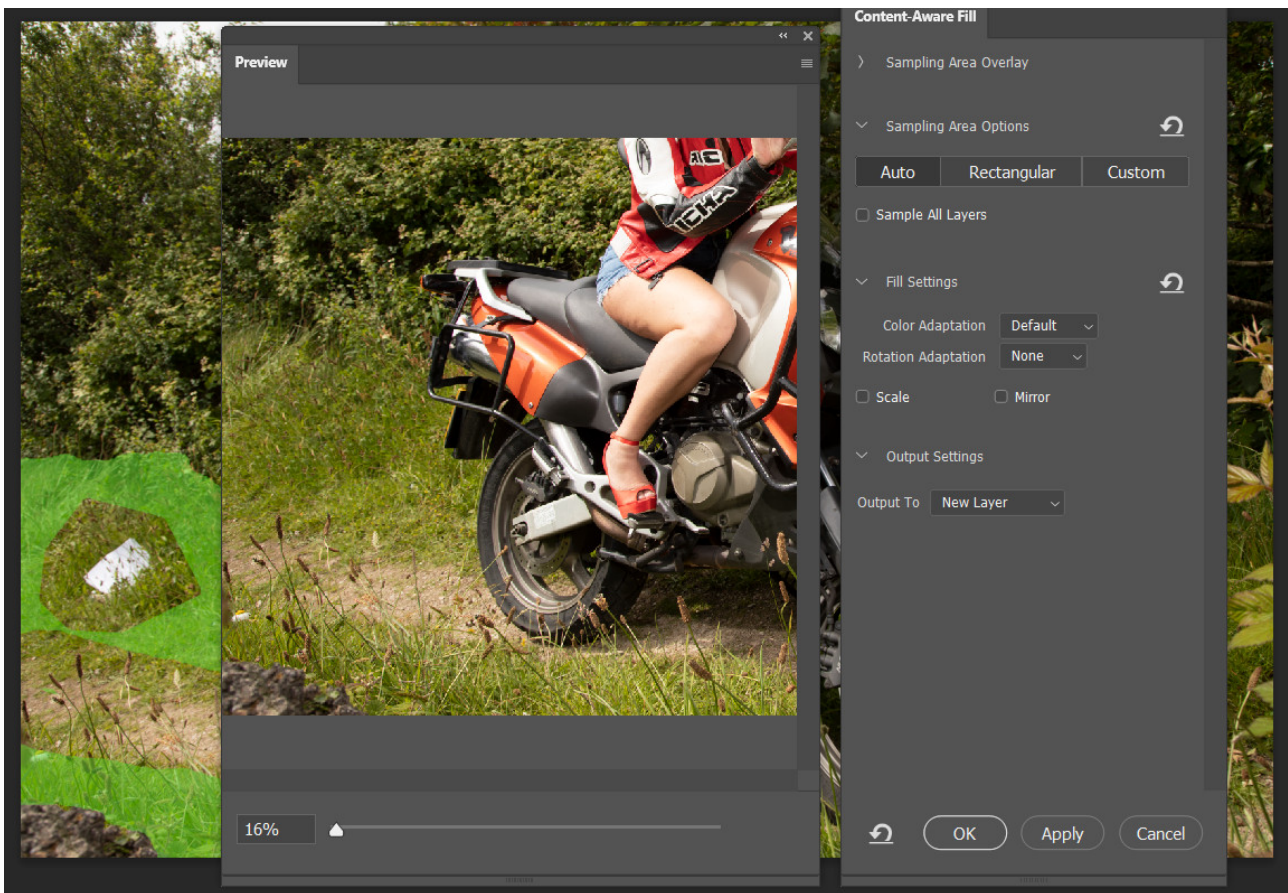


Content Aware Fill

Content aware fill can be used to 'fill' blank areas and to remove distractions and blemishes. It works on some items better than others. It works by sampling the surrounding areas and matching/extending areas. It can sometimes cause repeating elements and distortions, but you can always use the healing brushes/clone tool to tidy up.

The simplest way to use 'Content Aware Fill' is to select the area and select Edit-> Fill and select the content w aware option.

If you want more control you can use Edit->Content aware fill, which not only gives you a preview of the result but also allows you to specify the areas that will be used to fill the selected area.

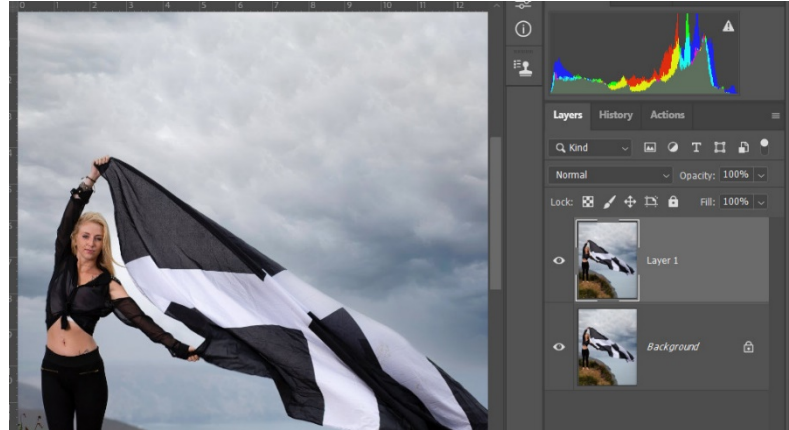


Using Layers

Layers are a fundamental feature of Photoshop. They allow you to stack modifications and adjustments over each other and in a way that can easily be undone. If you want to save images with the layers preserved, then you must save the images as either PSD or TIFF files.

In their simplest form layers are just like opaque sheets of paper stacked one above the other, You can copy stuff from one layer onto another but you can only see the layer that's on top.

Creating a new layer like this is useful, if you want to keep the original version, and make changes to a copy. If you mess it up or change your mind you can then simply return to the previous layer.



To copy an entire layer to a new layer, select the layer and press CTRL-J

The EYE symbol can be used to hide and view layers

Layers can get clever when you start to experiment with some of the options such as:

Opacity – the degree of transparency of the layer, that can be used to let the image from layers below to show through to some extent.

Masks – which is a bit like cutting holes in the layer to let parts of the image below show through

Blend modes – which changes the way layers interact with each other.

When I edit nothing is happening.

The common causes are:

You have a selection active somewhere – [CTRL][D] to deselect

The wrong layer is active – select the correct layer

The active layer is locked – unlock it

The tool opacity/flow is at 0% - increase it

Brush size is very small – make it bigger

My brush looks odd and won't resize – [CAPS LOCK] is on.

So what are layers

Think of layers like sheets of paper. A photoshop image can consist of many layers or pieces of paper stacked one above the other.

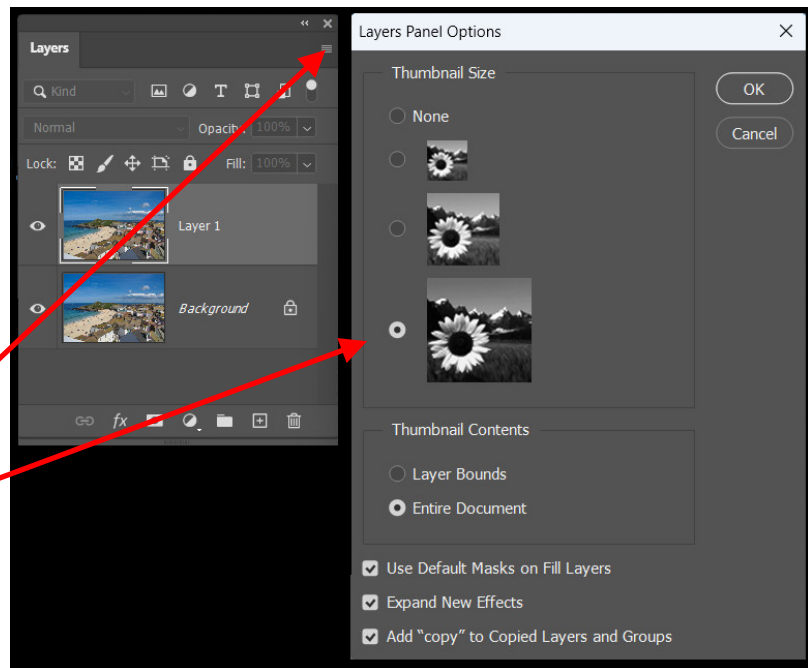


In reality, things are a bit more complicated than that. If each layer were like a piece of paper, then you'd only be able to see the one on the top.

Maybe a better analogy would be to think of each layer as a transparent piece of plastic which lets you see through it, or see through parts of it, to the layers underneath. That doesn't quite hold up in some cases either though as we'll see.

The layers Panel

The layers panel shows the layers and allows you to manage them. One thing you'll probably want to do if you use layers a lot – and most people will – is to make the layer thumbnails a bit bigger so you can see them more easily.



On the layers panel, select the options box (horizontal lines top right), scroll down to Panel options and choose the large thumbnail.

Not strictly necessary but it does make life a little easier.

If you open a previously unedited file then it will contain only one layer which photoshop will label as 'Background' by default the Background layer is locked, notice the padlock, meaning that you are limited what can be done with it. You can click on the padlock to unlock it, or some processes such as cropping will automatically unlock it.

Some processes, such as adding text, will automatically create a new layer, or you can manually create a new layer. Its good practice to leave the background layer as it is (then you can always go back to it, and make a copy of it to work on.

Note that not all filetypes support layers. If you want layers to be saved you must save the image as a PSD, PSB or TIFF file. If you save as a JPG then the JPG file will be a flat file with a single later.

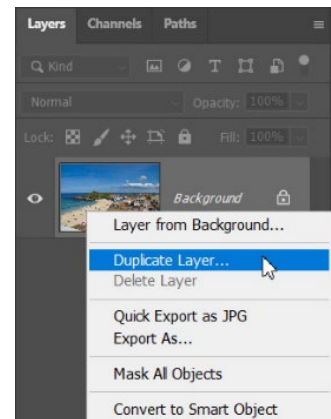
To create a copy of a layer

To copy a later you can right click on the layer and select DUPLICATE LAYER

When you duplicate the layer by default photoshop will name it 'Background Copy'. You can change the name by entering an alternative name in the dialog box, or you can double click on the name in the layers panel and change it directly.

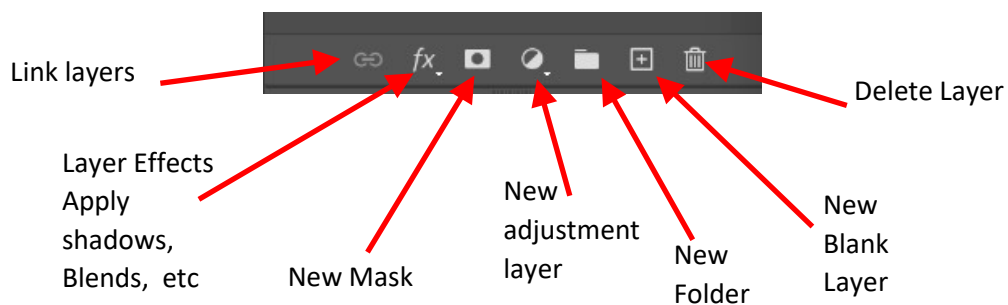
Notice that the new layer does not have the padlock on it, it is not locked.

You can also use the shortcut [CTRL][J] to create a new layer (note that [CTRL][J] copies the current selection to a new layer, so you must make sure that either ALL the image is selected, or NONE of the image is selected if you want to duplicate the whole layer.

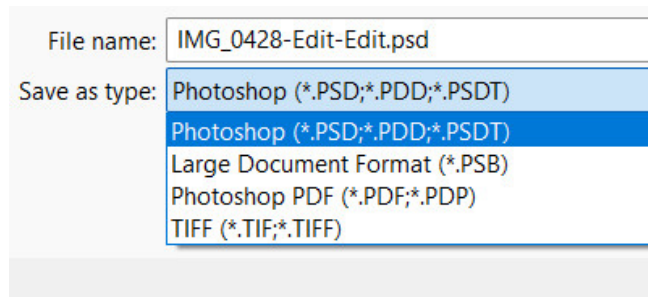


Layer Options

The icons at the bottom of the layer panel mainly controls new layers, we'll look at all of these in detail later, but the functions are



If you have an image that contains layers Photoshop will do its best to ensure you save it in Photoshop format PSD, PSB or TIFF format so the layers will be preserved. You can always use Save Copy as to create another file type if you need to – or do as I do and just Export from lightroom if you need to do that.



Example using layers to combine images

Lets start with the image fairygrotto.psd and load that into photoshop. That's going to be our background

We'll also open fairyqueen.psd, that's going to be our subject.

We need to extract the girl from the Fairyqueen.psd image so use Select Subject and then refine the selection if needs be.

With the girl selected press [CTRL][J] to copy her to a new layer.

With the new layer active use [CTRL][A] to select the layer, then [CTRL][C] to copy it.

On the fairygrotto.psd image use [CTRL][V] to paste the girl as a new layer

Use the move tool to place the new layer so it hides the little girl as much as possible

Use Edit->Transform to resize the new layer as needed. Hold [SHIFT] to maintain the proportions

If any part of the small girl remains visible, make sure the layer that she's on is selected and use Content Aware Fill and/or clone tools to remove them.

While the girl is now in place her tones do not match the background so to make that more realistic, make sure the layer with the girl is active, then select Filter->Neural Filters and enable the Harmonization option.

Select the background layer and use the sliders to match the tones/

To make it more realistic you can add a shadow, you can do this with a black brush OR

Select the layer with the girl and duplicate it. Rename the bottom copy Shadow.

With the shadow later selected, select Filter->Camera Raw and slide the Exposure and Blacks sliders all the way to the left to make it black and apply the changes.

Use Edit Transform and Edit->Transform Distort to place, shape and rotate the shadow. You may want to fill in/add areas with a black brush.

Use the Filter-> Blur ->Gasian Blur filter to soften the shadow

Reduce the Opacity of the shadow layer to make the shadow more realistic



Smart Objects

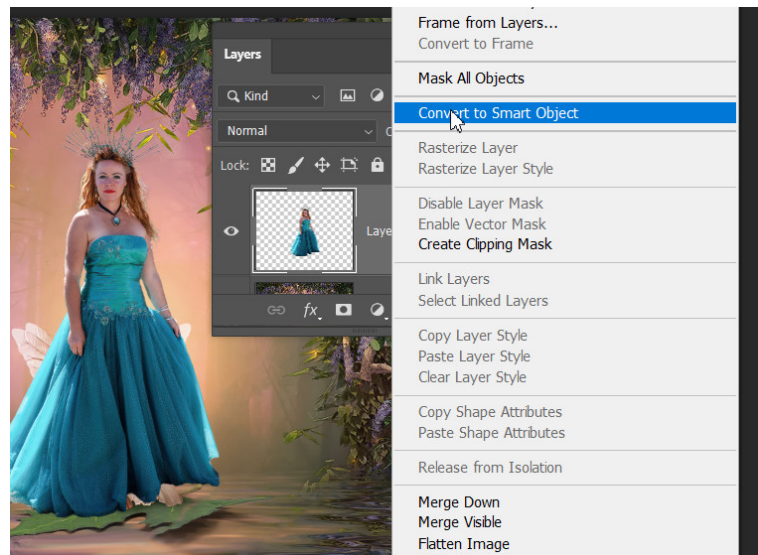
A smart object is a layer with special properties. They can be useful, but they can also make your files very large so only use them where you need to. One example may be when compositing and resizing images. In the previous example the image of the girl in the blue dress was placed on the background and resized. Since it wasn't a big change and since we never intended to go back and resize it again it didn't matter. However sometimes resizing an image like this can lead to issues if you want to go back to it having changes your mind. Let's demonstrate.

If I take the image of the girl in the blue dress, paste it onto the background, then decide to make it much smaller, all works well.

If however I then decide I want it much bigger, when I select it again and use the transform tool to make it bigger again, some of the original detail has been lost

By making the new layer s smart object before I transform the girl, I can resize and retain the quality.

Smart objects also have a number of other benefits but that's beyond the scope of this topic



Adjustment Layers

An Adjustment layer is different to a normal layer as it contains no pixels. Instead, it contains some settings or adjustments which, because they are on a layer are non-destructive. If you change your mind, you can go back into the layer and tweak the adjustments.

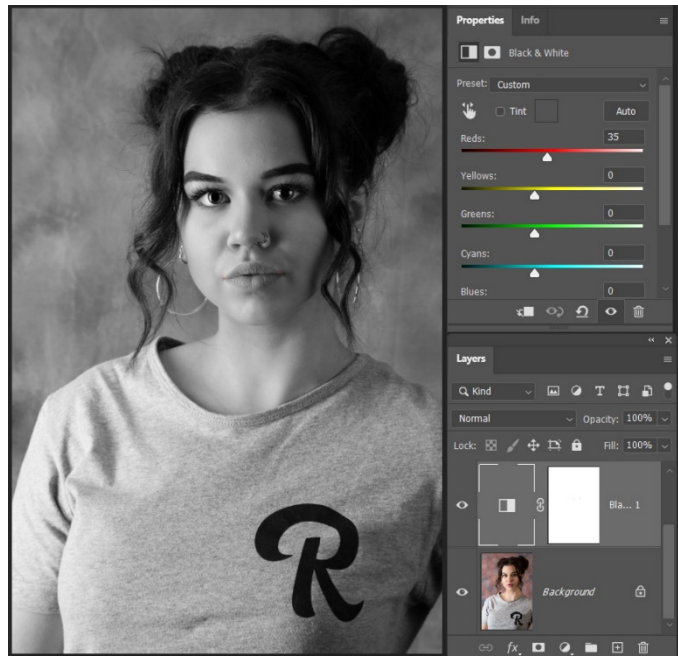
For example, to make an Image B&W load the original image into photoshop

Click on the Icon on the layer palette to create a new Adjustment layer and Select Black and White.

There are some presets you can use to refine your image or to use as a starting point.

You can also manually modify the sliders to control how each colour is rendered in B&W

If you later change your mind and want to re-tweak the sliders, then you can do so easily. That's something you can't do if you convert an image using the Images -> adjustment option.



Masking

Normally when one layer is above another, you can only see through to the layers underneath if there are any transparent areas. Masking is a very powerful tool it allows you to select which parts of a layer will be allowed to be seen through the layers above even if the upper layer is not transparent.

Look at the above example again, when I added the adjustment layer to convert the image to B&W photoshop automatically added a mask next to the adjustment. By default, the mask is all white, meaning that the adjustment applies to the whole image.

I can let coloured areas show through from the layer below by painting on the mask with a black brush.

First it's important to select the mask by clicking on the mask thumbnail in the layers panel. If you don't do this then you'll end up painting on the actual image – not good. If the mask is selected it will have a white rectangle around it.

Then choose the brush tool. You'll need a BLACK brush. The Foreground/Background colour indicator should look like this. If it's not showing Black and White press [D] to select the default colours. If the black and white squares are the other way around press [X] to swap them.

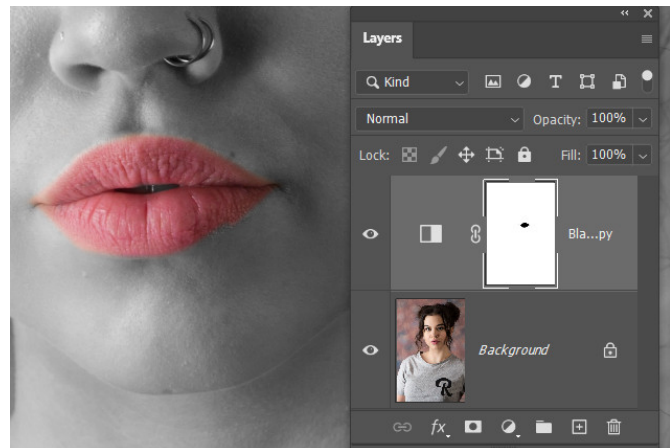


Make sure the MASK not the image is selected, and then paint over the lips with the black brush you might want to zoom in so you can see what you're doing press [+] to zoom in as many times as you like – you can always use [-] to zoom out again if you go too far.

You can control the size of the brush with the [[] and []] keys, and the hardness of the brush with the [{] and [}] keys.

As you paint on the mask with the black brush, the red lips from the layer below will be allowed to show through.

If you should paint in the wrong place with the black brush, no need to worry. Just flip to a white brush {X} and paint over, then [X] again to swap back and carry on.

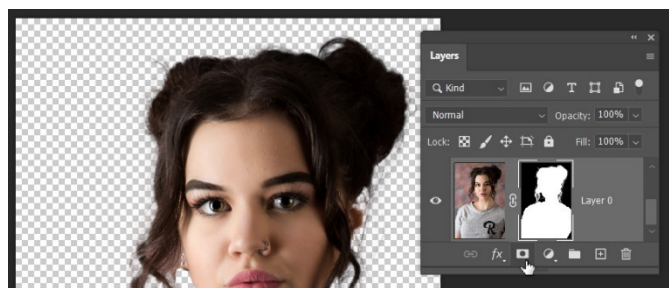


Notice that the black area also appears on the mask thumbnail.

You can of course repeat the process for any other areas that you want to appear in colour. Press [CTRL][0] to zoom right back out when you're done. BTW if you double click on the mask itself, then it will open the mask in the select and mask window which can sometimes be useful.

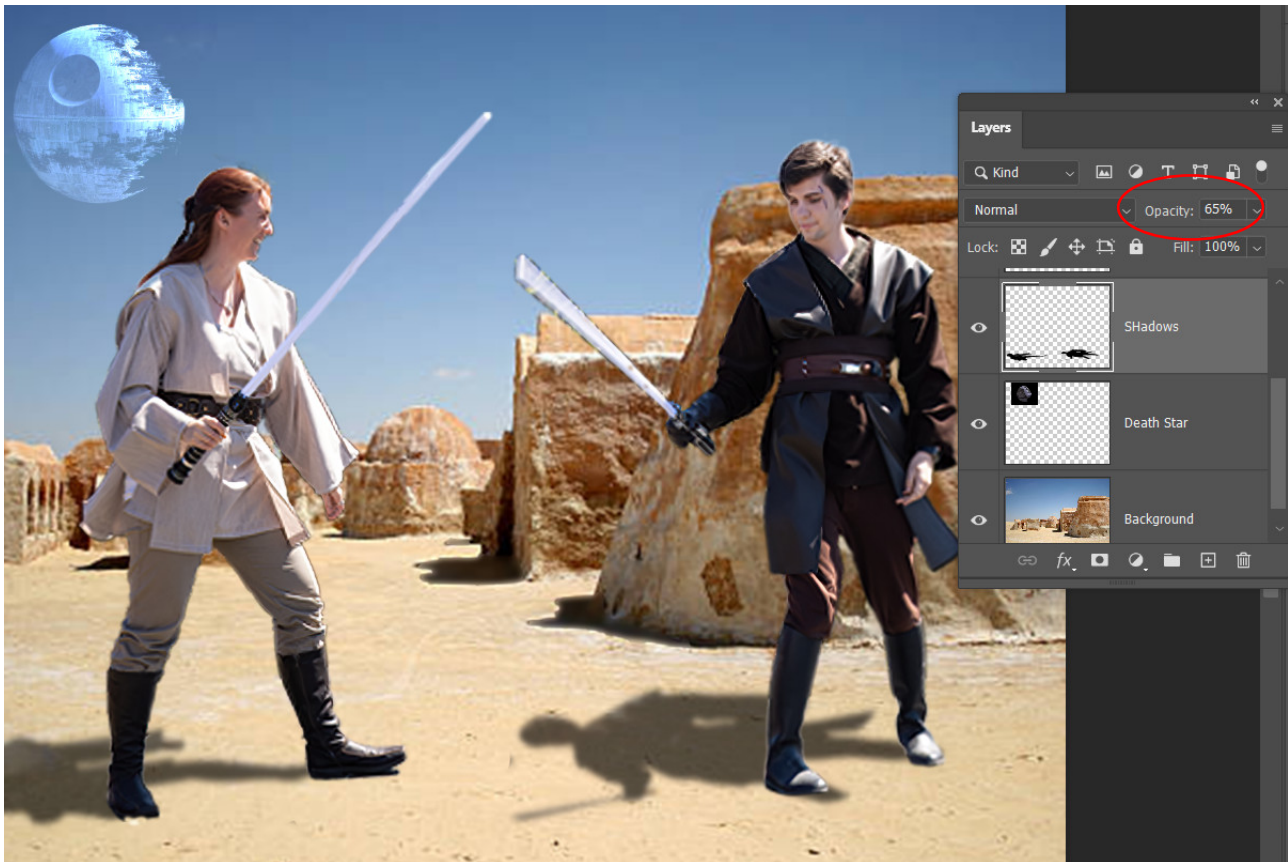
Creating a mask from a selection

You can easily create a mask from a selection. All you need to do is make your selection and then click on the Create mask icon.



Opacity and Blending

Normally a layer under another layer is not visible as the top layer covers it. As we have seen, you can reveal selected parts of the layer underneath by using a mask. However, you can also change how transparent a layer is by reducing its opacity. A layer that has an opacity of 100% is totally opaque. One with an opacity of 0% is totally transparent.



By changing the transparency, you can subtly change how the layers interact with each other as we saw a little while back when adding a shadow.

Blending

The blending mode changes the way that pixels on one layer interact with pixels on the layer(s) below. The default blend mode is 'Normal'. Ignoring opacity, pixels on the top layer simply block the pixels underneath.

Blending modes fall into the following categories

Normal – No intrinsic pixel-based effect – only opacity affects transparency

Darkening - White pixels will become transparent, and anything darker than white will have a darkening effect on the pixels below.

Lightening - Black pixels will become transparent, and anything brighter than black will have a brightening effect on the pixels below

Contrast - Photoshop checks to see if the colours are darker than 50% grey or lighter than 50% grey. When the colour is darker than 50% grey, Photoshop applies a Darkening Blending Mode. When they are brighter than 50% grey, Photoshop applies a Brightening Blending Mode.

Difference - The Difference Blending Modes uses the difference of the base and blend pixels as the resulting blend. White inverts the colours of the base layer. It is the same result as inverting the colours of the base layer. Black Produces no change, while dark greys apply a slight darkening effect.

Component - The Component Blending Modes use combinations of the primary colour components (hue, saturation, and brightness) to create the blend. The Blend Modes in the component group are unavailable in the Grayscale Mode.

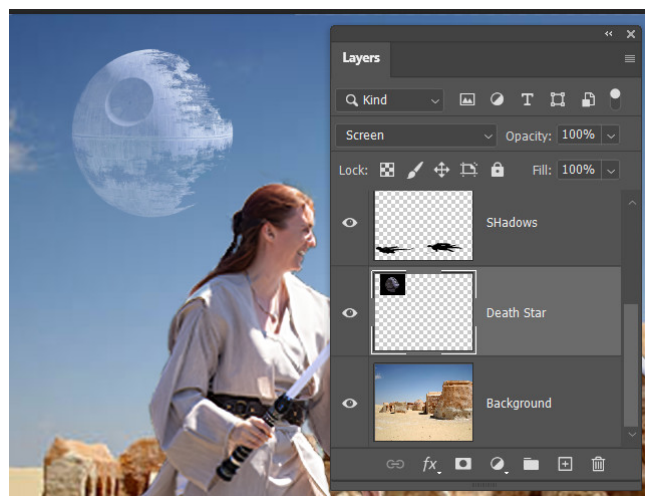
Commonly Used Blending Modes

All workflows in Photoshop are different. But you will probably use these blending modes more often than any others. They can help you create almost any effect you want in Photoshop.


- **Multiply**
- **Screen**
- **Overlay**
- **Soft Light**
- **Colour**
- **Luminosity**

If you look at this photo, you'll see that the 'Death Star' is originally a light subject on a dark background.

By changing the blend mode to 'screen' (one of the lightening group), the pixels lighter than the background are visible but the dark, black background does not show.



Here's another example. I'll load the image of Stacey. Let's add some colour to the lips.

I'll start by duplicating background layer (for safety), and then create a new empty later above it with the key. 

The new empty layer is totally transparent with nothing on it, so I can still see the image of Stacey below it.

Next I'm going to select the brush tool. I want a nice red colour so I'll click on the foreground colour chip and then choose a nice bright red from the colour picker.

I'll make sure that the new empty layer is selected, then zoom in to the lips, zoom to maybe 100% or even a bit more, then carefully paint over the lips with the red brush – note that you're actually painting on the new empty layer.

You can make the brush bigger or smaller with the square bracket keys [and]. You want quite a soft edge to the brush, you can control the brush hardness with { and } (that's SHIFT and the square brackets).

Carefully follow the outline of the lips. At this point the result isn't convincing but that's to be expected.

To make the effect more realistic, select the blend mode drop down and see which blend mode gives the best effect (Multiply or Soft Light is normally best).

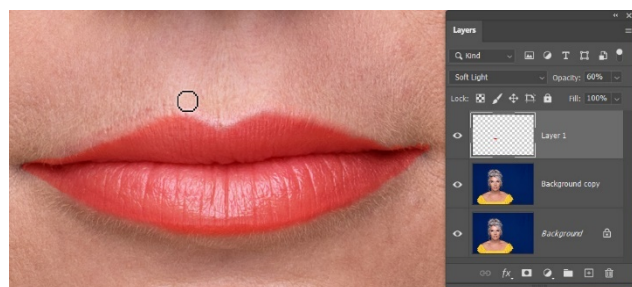
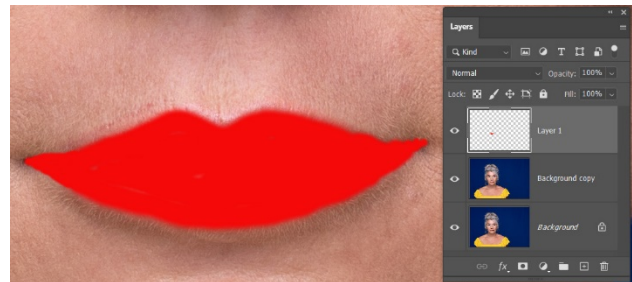
If the effect is a bit much, then reduce the layer opacity to make it more subtle.

You can of course add additional layers to add other effects, for example to make the eyes blue, or to add eyeshadow and blusher etc.

To tidy things up a bit you can put all the 'Make-Up' Layers in a folder to keep them together. This is not strictly necessary, but it does look tidier, and it allows you to apply effects to all the layers in the folder at once if you want.

The easiest way to put the layers into a folder is to select all the layers then press [CTRL][G] (Group).

You can then rename the folder



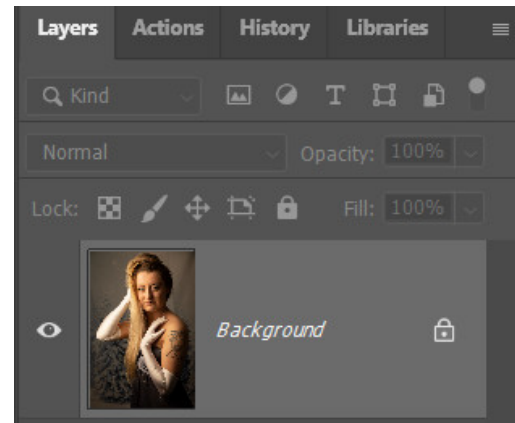
Clipping masks

Clipping masks in Photoshop are a powerful way to control the visibility of a layer. In that sense, clipping masks are like layer masks. But while the result may look the same, clipping masks and layer masks are very different. A layer mask uses black and white to show and hide different parts of the layer. But a clipping mask uses the content and transparency of one layer to control the visibility of another.

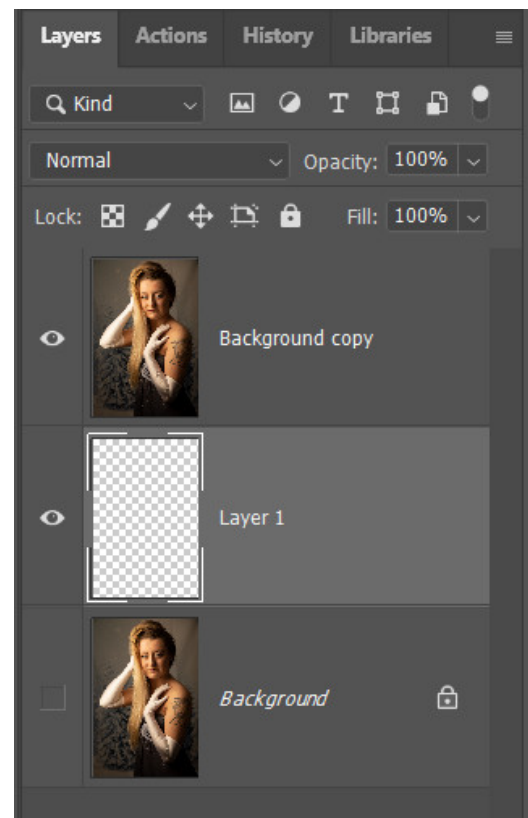
To create a clipping mask, we need two layers. The layer on the bottom controls the visibility of the layer above it. In other words, the bottom layer is the mask, and the layer above it is the layer that's clipped to the mask.

Where the bottom layer contains actual content (pixels, shapes, or type), the content on the layer above it is visible. But if any part of the layer on the bottom is transparent, then that same area on the layer above it will be hidden. That may sound more confusing than how a layer mask works, but clipping masks are just as easy to use just remember Clipping masks use the content and transparency of the layer below to control the visibility of the layer above. Content in this context can be anything, images, vectors, or text.

Let's load an example image



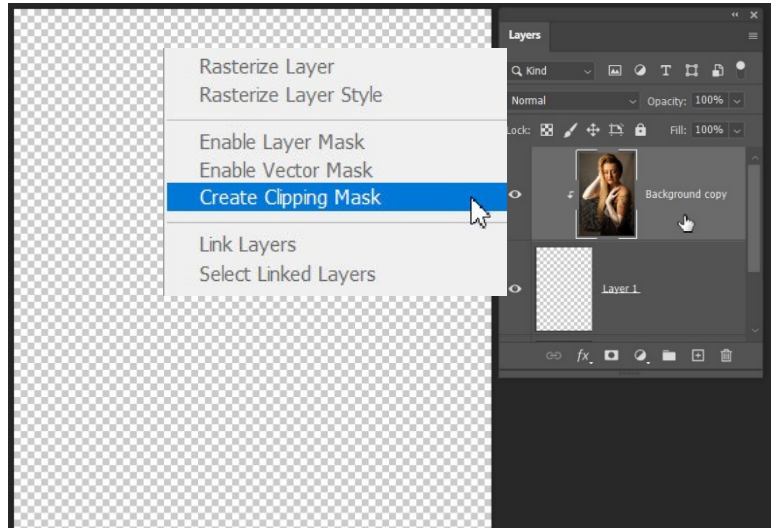
I'll duplicate the layer, and then create a new empty layer below the new layer and hide the original.



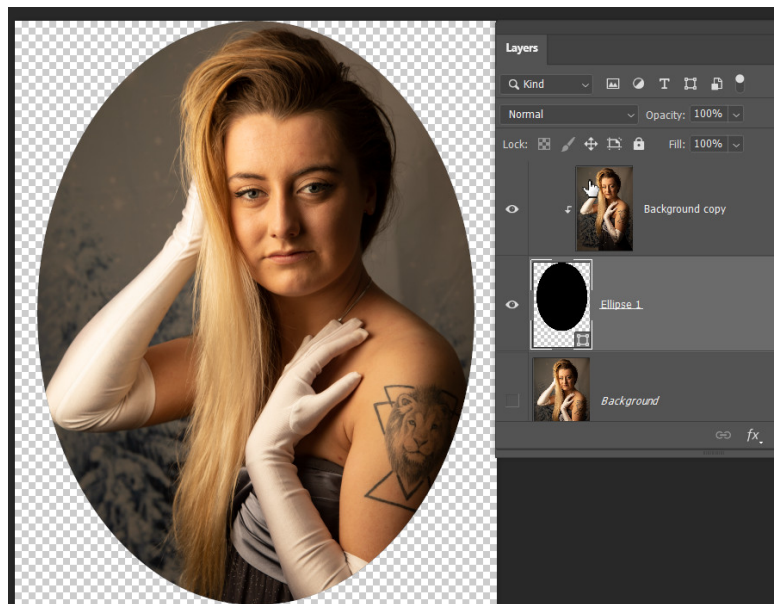
If I now right click on the image, I can clip it to the layer below.

But as you see as the layer below is completely transparent and contains no content whatsoever, all this has achieved is to effectively hide the image layer completely.

To let some of the image be visible, I'll need to add some content onto the transparent layer.



To do this I'll simply add an ellipse onto the transparent layer.



Add pattern to clothing

Select the clothing eg dress or T-shirt

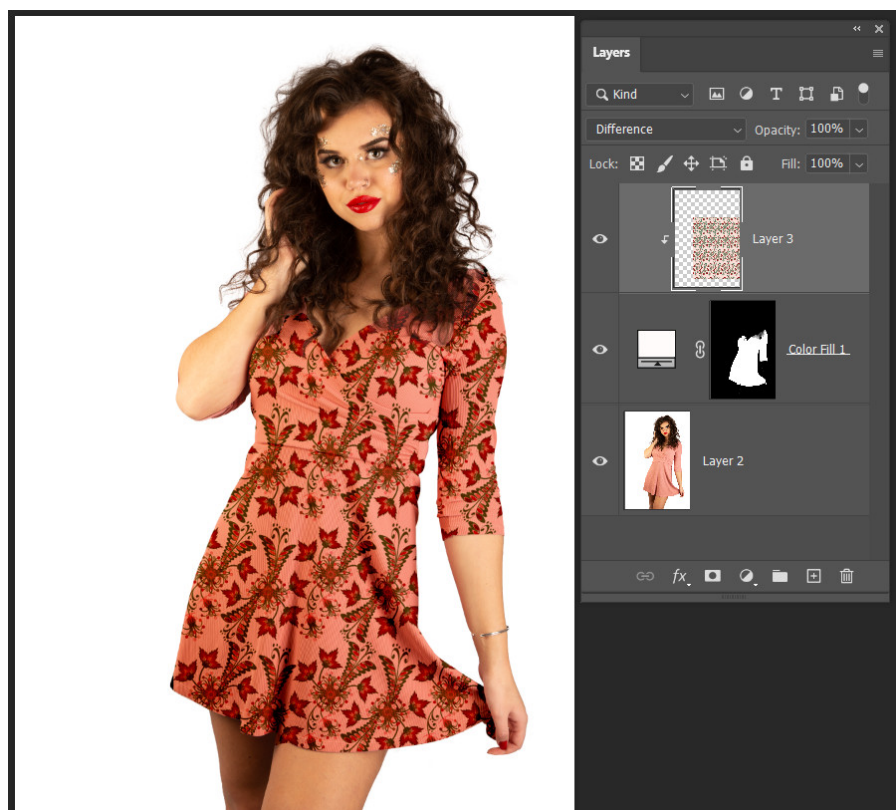
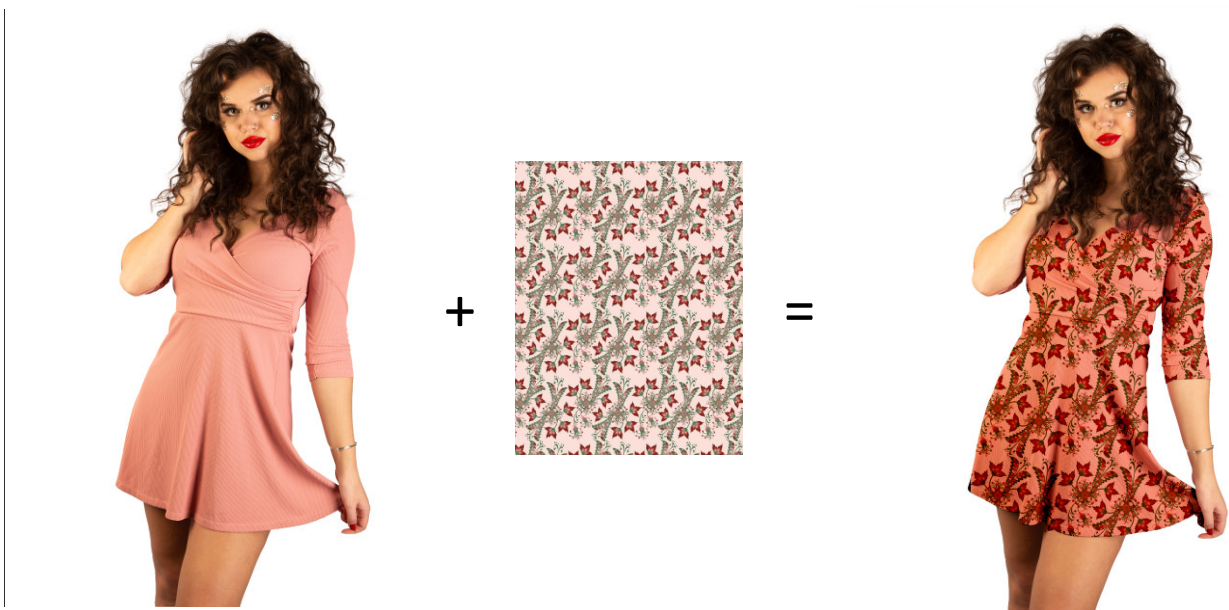
New adjustment Layer – Solid Colour -> White

Change Blend mode to subtract or difference – see which works (you can adjust it later)

Place pattern as new layer and position and resize it as required

Right click on pattern layer and select Create Clipping Mask which will confine it to the selection

Adjust the blend mode of the adjustment layer to get the desired effect



Using the Liquify Filter

The liquify filter can be used to great effect on portraits – use it sparingly

When you select Filter->Liquify the filter will attempt to automatically detect faces.


There are in-built options for modifying the Eyes, Nose, Mouth and general face shape.

The forward Warp tool can be used to reshape by pushing pixels around

The bloat tool can be used to enhance some elements and make them larger



Using Type (Text)

The Type tool as Adobe like to call it, is used for adding text. The most commonly used tool is the  horizontal Type Tool. Which can be used to add text across the image.

Note that when you add type to an image in this way, Photoshop will automatically create a new layer for each new type element.

With the type tool selected, you can either click to place the I-Beam cursor where you want to start typing, or you can drag out a rectangle to constrain the text.

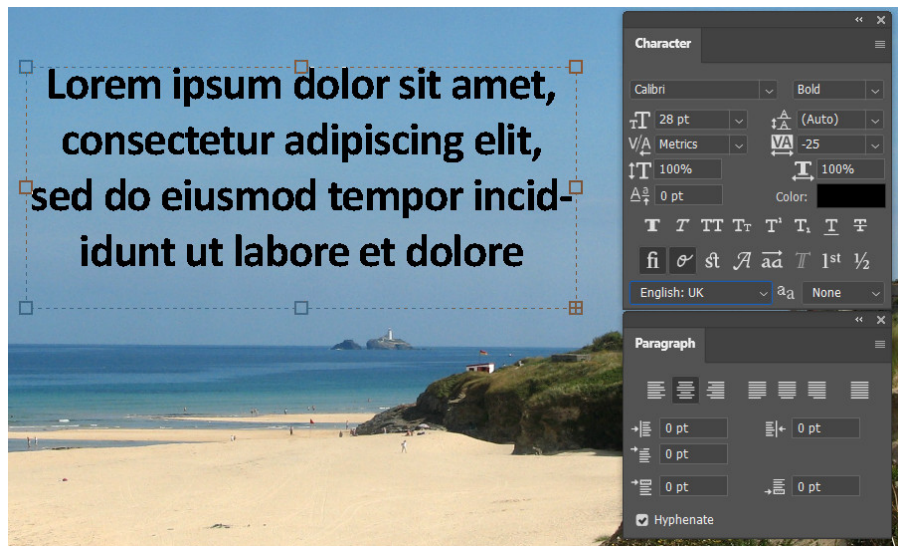
Photoshop may place some Lorem Ipsum text as a guide when you place the type tool, this will automatically be removed as you start typing.

You can of course use the type toolbar to change the font, font style, font size, colour and layout etc. Note that while the font size drop down box shows common sized up to 72pt, you can type in any number you want from 1 to 255, so if you want a 41pt or a 151pt font you can have it.

The actual font size needed will of course depend on your requirements and the size/resolution of the image.

If you want more options for the type, then you can open the Character and Paragraph windows that present you with more options than you can shake a stick at.

I won't go into them all here, but they include things like Kerning and line spacing and loads of other options typographers will appreciate.

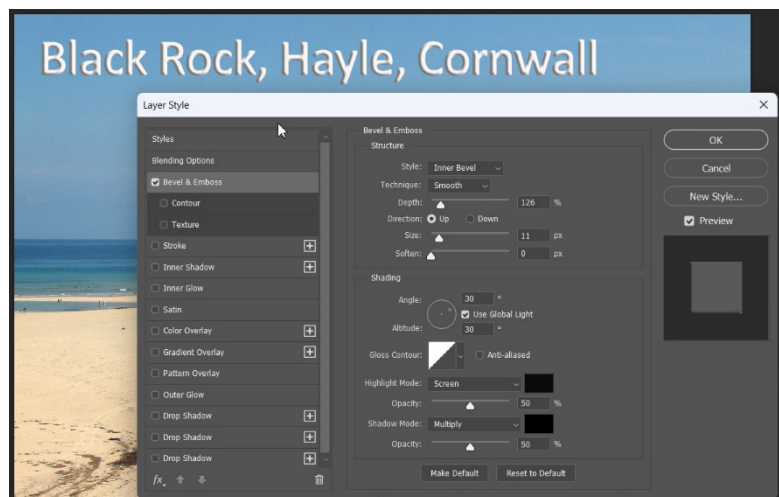


Text layers, like any other layers can be moved around using the move tool (or by holding the spacebar). Text can be edited any time by clicking into it.

Layer Fx

Having got some text on an image, it's an ideal opportunity to look at layer effects. While Layer Fx can be used on any layer, they are easily demonstrated with text.

You can add multiple effects, or even multiple copies of the same effect with the same or different parameters. I won't go into them all – experiment.

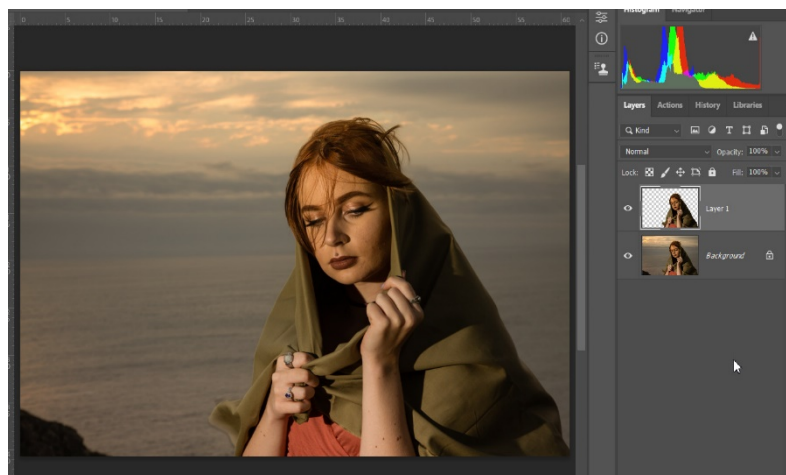


Putting text behind a subject

Open the image

Use Select Subject, or the Object selection tool to select the girl

CTRL-J will create a new layer containing the subject



Type the text on a new layer and resize and colour it as required

Move the text layer between the subject layer and background layer.



Picture in Text

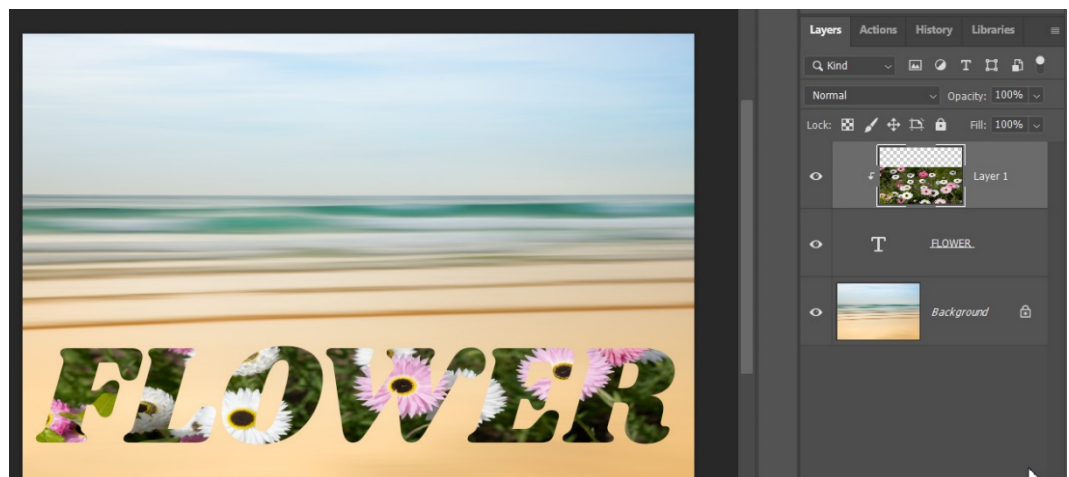
Open your background image. A plain image, gradient or solid colour is going to work best

Type your text on a new layer, select your font and size as appropriate. Make the text BLACK.



Open the picture you want to appear in the text and paste it as a new layer above your text.

Right click on the new layer and create a clipping mask.

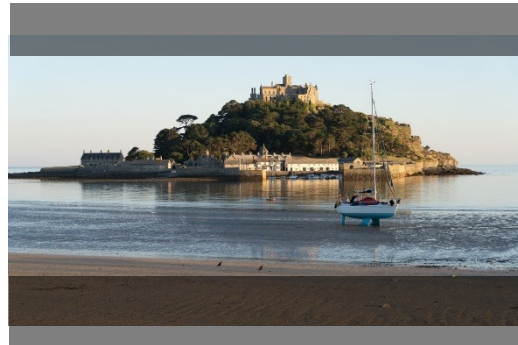


Creating a Panorama

There is no formal definition of what is a 'Panorama' but it seems to be generally accepted its an image that is at least twice as wide as it is high (2:1). Personally, I prefer to think of it as 3:1 as its closer to the field of view of the human eye.

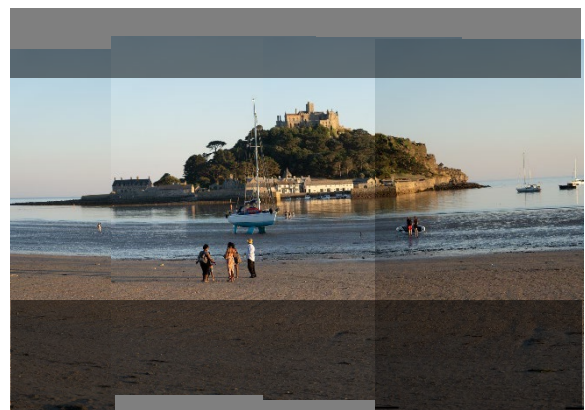
You might think that the most effective way to create a panorama is to take a single wide shot, then crop the top and bottom leaving the strip down the centre. This will work.

Assuming you start with a 30mp image, if you crop 1/3 off the top and 1/3 of the bottom to form the panorama then the resulting cropped image will be 10mp. You've lost 2/3 of the image.



The preferred way to shoot the image is to shoot it in portrait orientation with several overlapping shots. To make sure you can line up the images an overlap of somewhere between 1/4 and 1/3 of the frame is recommended. As you shoot each image note a prominent feature on the right of the current image and make sure the same feature is included on the left in the next image. Below is an example with 4 such overlapping images. 4 is about the minimum you need for a panorama up 5-10 images is not uncommon.

Assuming each shot is 30Mb, you have 120Mb of data. Allowing for a 1/4 overlap, your down to 90Mb of usable image, then of course you still need to crop from top and bottom – so the final image will be around 30Mb in this case. Three times the resolution that we had by cropping a single image – and of course the more images you take, the greater the final resolution.



While in theory doing it like this provides a much higher resolution image, the problem is of course that you have multiple images that you have to line up and merge together. Because the shots were handheld there could also be slight changes in angle, and there may be exposure differences between the images. This complicates the process.

If only there was a way to do it automatically! - Photoshop to the rescue.

Using Photoshop to create a Panorama

First of course you must take your images as described on the previous page. Between 4 and 10 images normally works well with about 1/4 to 1/3 overlap on each image.

The next stage is to load all the images into Photoshop. Each Photo will appear on a separate tab. The images don't need to be in any special order, providing there is enough overlap Photoshop will be able to determine the correct order.

To process the Panorama Select File-> Automate -> Photomerge and [Add Open Files]

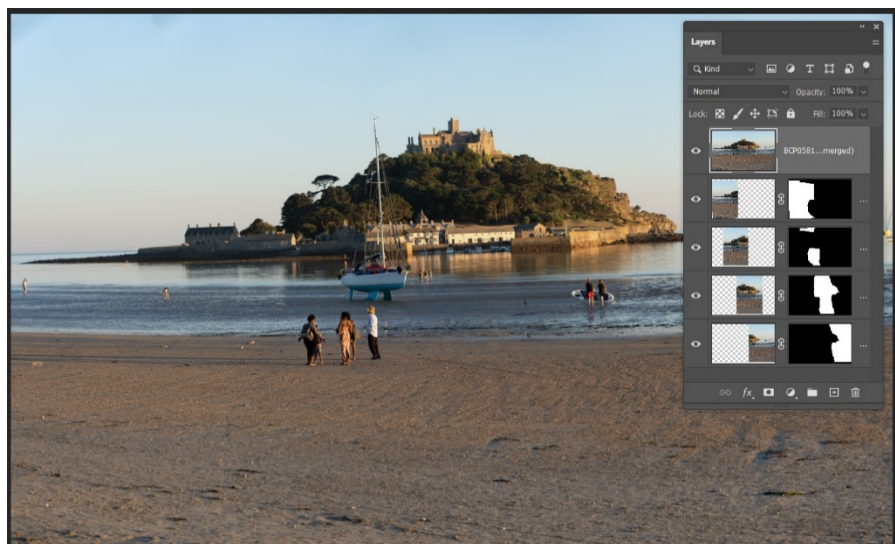
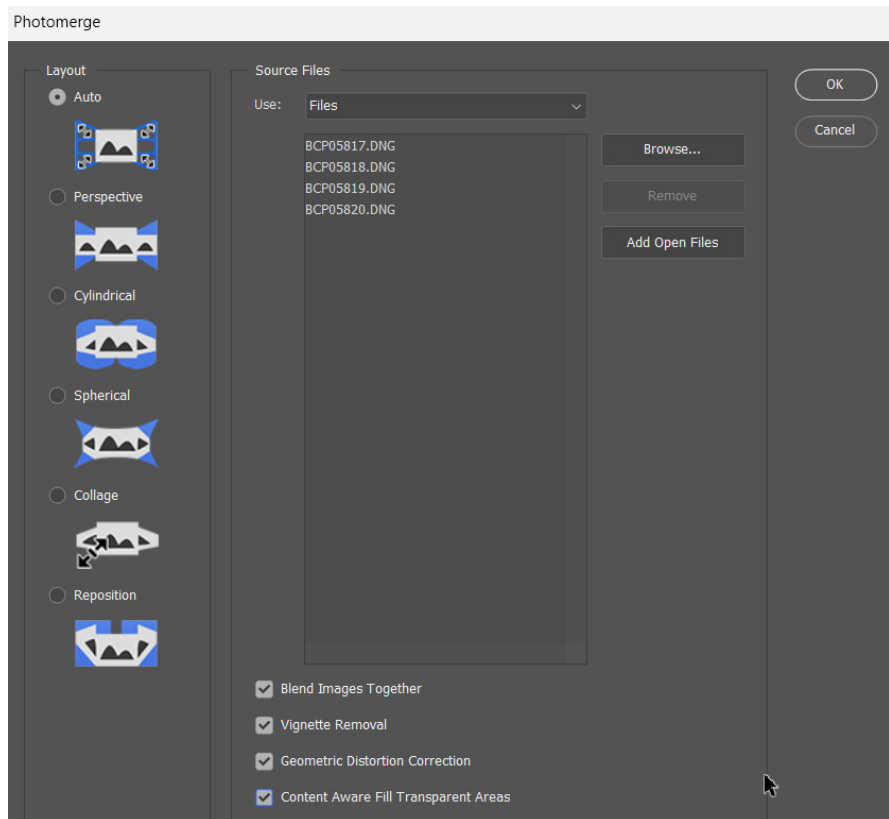
The Auto Layout generally works quite well.

You will want to blend the layers, the other tick boxes depend on your preferences, but I normally select them all.

Once you're done you can press OK and Photoshop will do its stuff.

Depending on how many images you have and how big they are it may take a little while to process the images.

Photoshop will create a new file with each of the selected images as a layer. It will then attempt to align the images and apply masks to build a new image. It will also deal with exposure variations and changes in angle etc.



Note that you can do much the same thing directly in Lightroom. Select your images in Lightroom, then right click and choose Photomerge->Panorama. Slightly less options and control than in Photoshop, but it works well in most situations.

Some Odds and Sods

Red Eye Removal

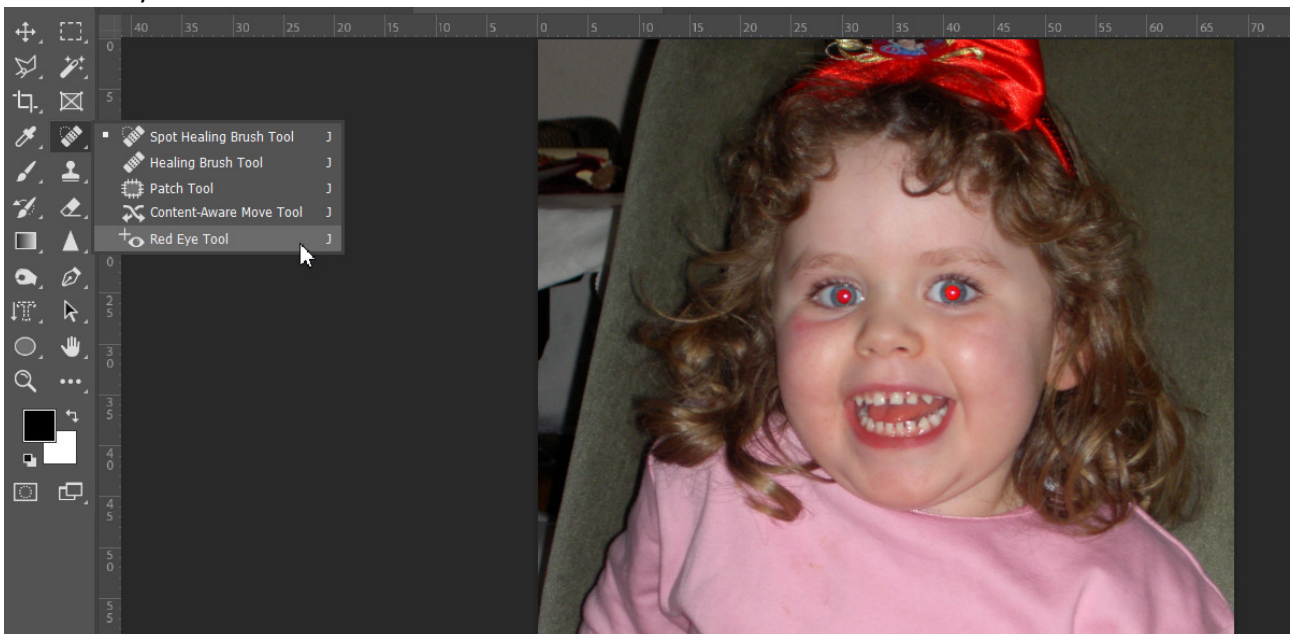
Red Eye results from light, normally from a flash, lighting up the back of the subject's retina which is rich in blood vessels. The result is red demon-like eyes.

It occurs most commonly when the flash is positioned very close to the lens, such as a camera's internal flash or hot-shoe mounted flash. One way to eliminate it is not to get it in the first place, maybe move the flash off camera, or if that's not possible bounce or defuse the flash.



Sometime though its not possible to prevent red-eye and in those cases, Photoshop has a tool specifically designed to fix the problem.

The red eye tool is located under the healing brushes, right click on the healing brush to expand the choices and then select the red eye tool, then roughly draw a rectangle over one eye, then repeat the process for the other eye.



Transform

The transform tool can be used to resize, rotate, flip and reshape layers. Note you cannot Transform the background layer by default as it is locked.



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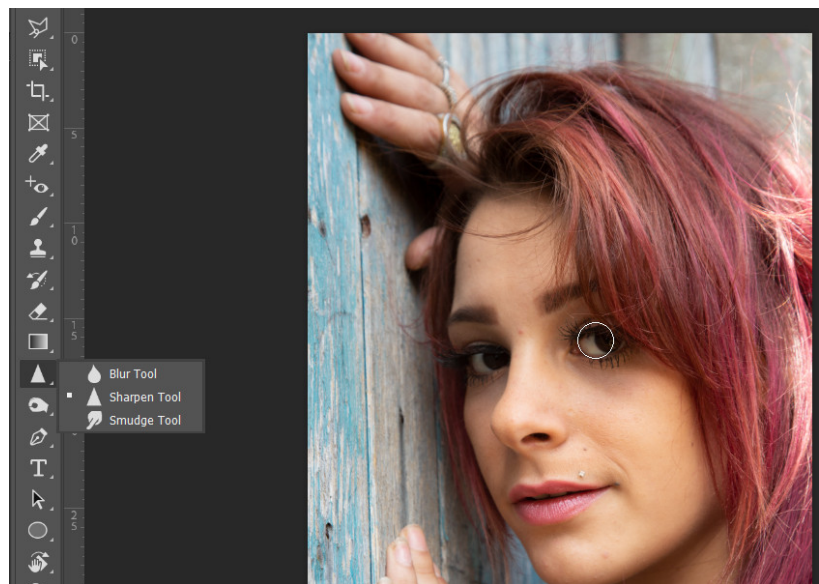


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Sharpen and Blur

These two tools essentially do ‘as it says on the tin’ The sharpen tool can be very useful in applying additional sharpness to specific areas in portraits such as the eyes, lips and hair.



Replace Sky

Automatically selects the sky and allows it to be replaced. Various options are available to make the replacement look realistic



Actions

Actions are ways of scripting repetitive tasks so you can redo something tedious quickly and without effort.

To create an action you need to be able to see the Actions window. If its not visible use Window->Actions to display it.

Lets create a simple action to select background and make it Black and White while leaving the subject in colour.

On the Actions Panel, select [+] to make a new action.

Give the action a name and optionally assign it a function key combination and identifying colour

Press [RECORD] and the recording circle will then show in red to indicate your action is now being recorded.

You now need to carry out the process manually so.

Go to the layers panel, right click on the background layer and select DUPLICATE LAYER

Select-> Subject (don't worry if the selection is not too accurate for now)

Select->Inverse (to select the background)

Click the New Adjustment layer icon [o] and select Black and White

Go back to the actions panel and click the square STOP RECORDING icon

The action has now been recorded and can be run again on any image by opening the image and pressing the assigned function key combination (if you set one), or by selecting the action in the actions panel and double clicking or by pressing the Play icon. >

We've kept this simple for this demo, so the selection may not be accurate - you can always paint in black on the adjustment mask if areas that should be in colour have been missed – and/or paint on the mask in white to make areas B&W.

