

Photoshop Essentials

by *Andy Astbury*

Modern day digital workflow is awash with choices for the digital photographer – a RAW workflow especially, has a large range of RAW file handlers like Lightroom and Bibble standalone software packages to choose from. However, for the most part, whichever RAW handler you choose to use, you will, eventually, end up transferring the image file to one version of Photoshop or another.

When I talk to photographers and see their work I often find that they don't promote or publish their images on the multitude of internet forums, or set up a personal web page for one overriding reason – they don't understand how to process their images and prepare them for display on the web.

And so, for this first issue of the magazine I'm not going to get too heavy and technical – I'm going to show you how to do a quick, simple and effective representation of a full resolution camera image suitable for display on the internet.

We'll be using a TIFF file in this instance which will have been generated in Lightroom originally, but could equally have come straight from the camera if that's how you shoot. If you shoot JPEG then the same steps will apply but you'll have a slightly narrower level of adjustments available to you; but the same basic workflow steps will apply.

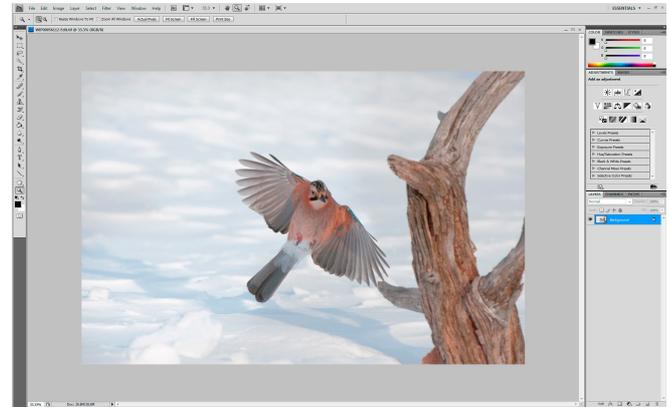
But before we look at the process workflow I just want to take a moment to look at Photoshop setup on a typical Windows PC, and the basic Photoshop workspace.

I use what's called a "double desktop" setup with two monitors, this allows me to have all my tools and panels to hand and an uncluttered view of my image, but for the sake of clarity here all the screenshots you see will be taken from a single monitor workspace.

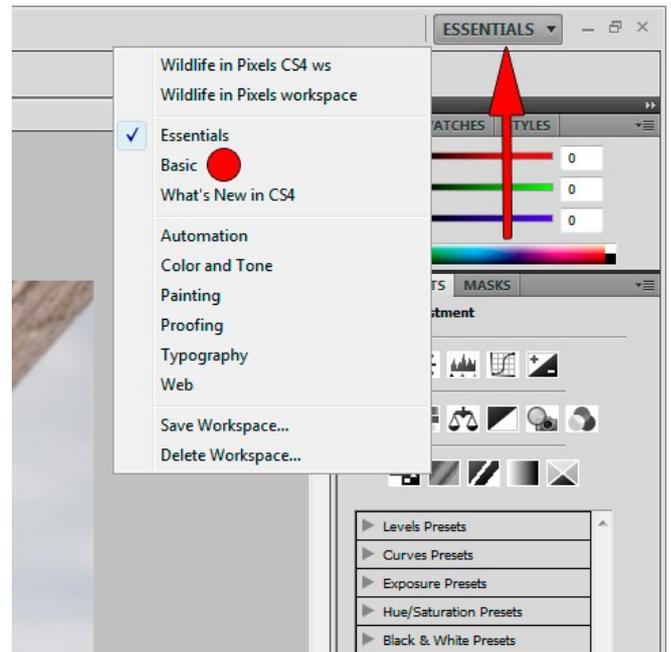
So let's go ahead and open up Photoshop – in this case Photoshop CS4 (*fig.1*) – and look at some of the essential "twiddly bits".

Firstly, when you open up Photoshop the first thing I'd suggest you do if working on a single monitor is to go to the WORKSPACE tab and select BASIC from the drop-down menu, this will allow you to maximise your available image workspace, and you'll also be able to customise the palettes that you have open (*fig.2*). I'd do this because Photoshop ships with the ESSENTIALS workspace as default

and there are tools and utilities viewable that you don't need at this point.



(*fig.1*)

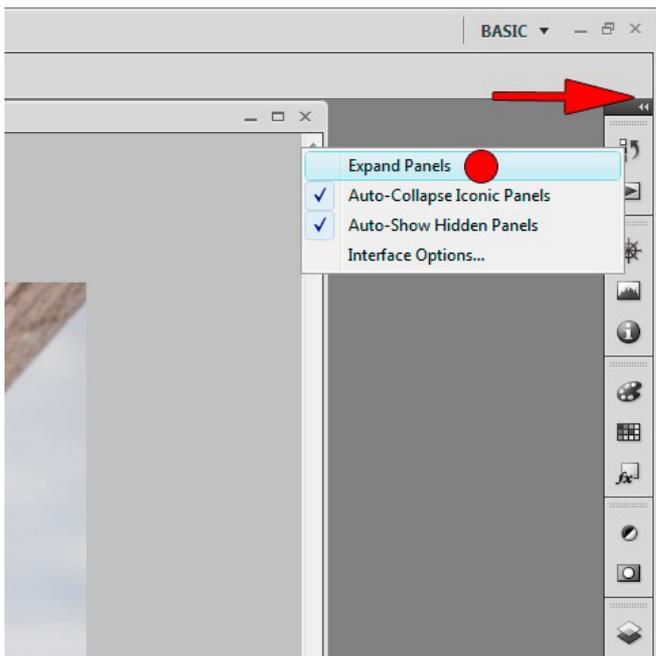


(*fig.2*)

Now all our panels have minimised to the right edge of the Photoshop workspace. Now single left click with your mouse on the double left arrows indicated in *fig.3* to expand the collapsed/minimised panels, or, as I've done in the illustration, single right click and choose Expand Panels from the drop-down menu. Sometimes it does you good to see the pull-downs as it gives you a view of the many and varied options available.

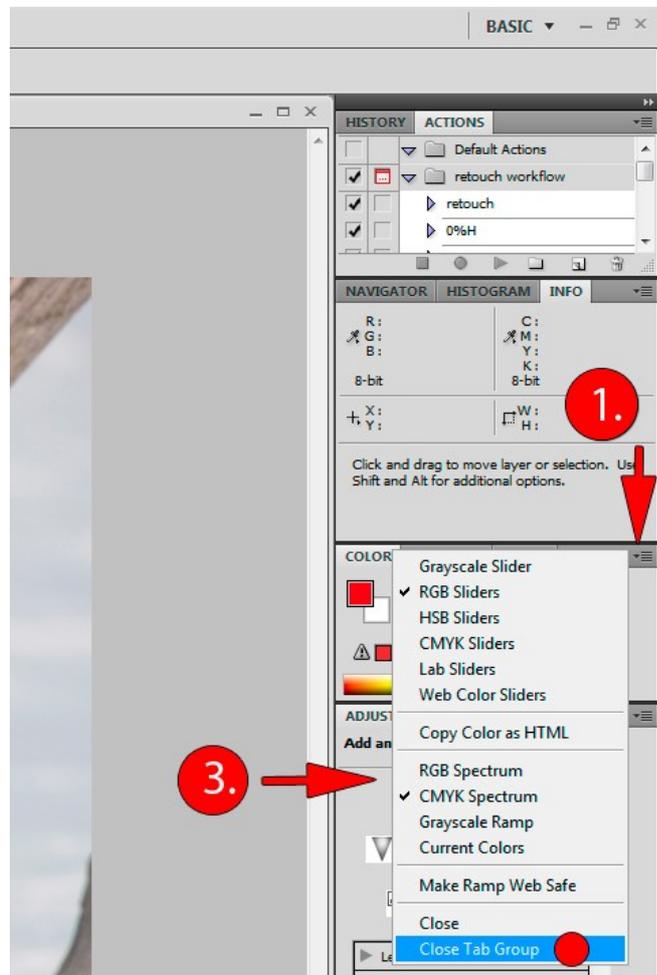
In the next screen capture (*fig 4.*) you can see that we now have the main default panels open in our new BASIC workspace. In the default ESSENTIALS workspace we had some of the most non-essential things I can think off to

a photographer – Colour Swatches and Styles are two that spring to mind. However, we still need to tidy up our panels, as there are still some unnecessary ones open.



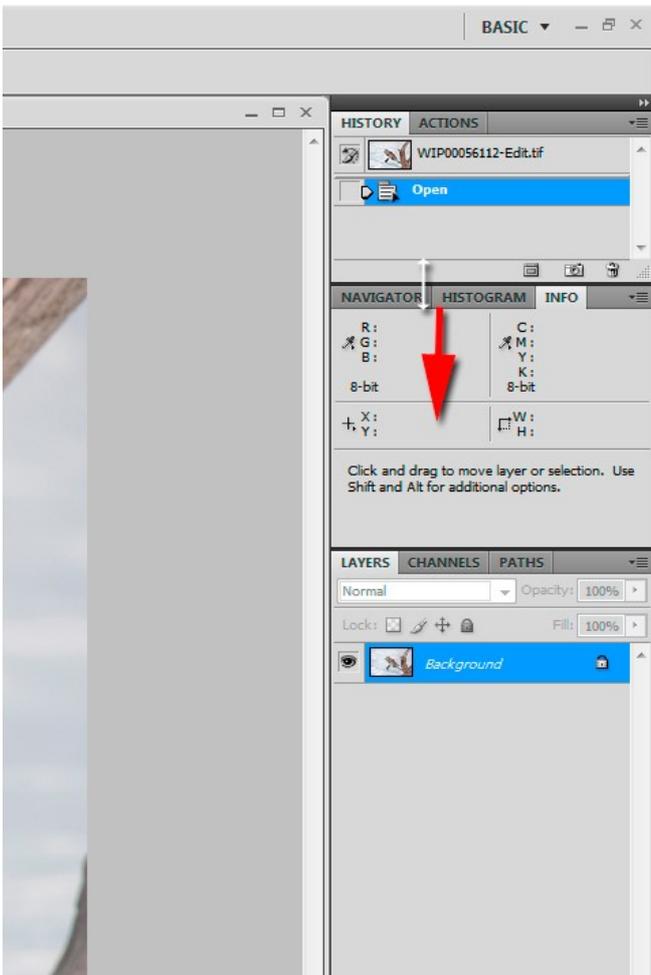
(fig.3)

Colour, Swatches and Styles aren't needed for our purposes, and neither are Adjustments and Masks, so left click the Panel Options icon (1) and select Close Tab Group from the drop-down menu.



(fig.4)

Similarly, do the same for the Adjustments and Masks panel (3) group; then you'll be left with something that looks like this (fig 5).



(fig.5)

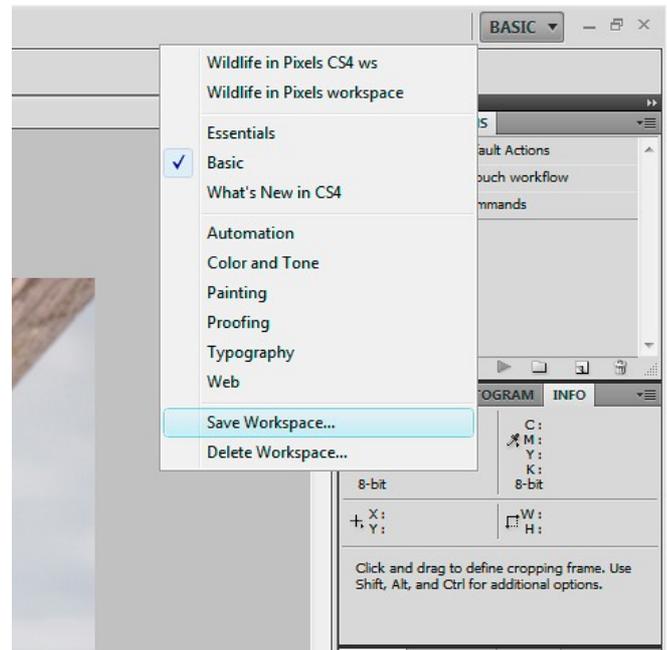
So now we have the most useful panel set open and at our disposal; the History panel, the Info panel and the layers panel – more on this in a moment.

But we need to extend the history panel a bit so place the mouse over the gap between the History and Info panels, it turns into a two-headed arrow. Click and drag the panel edge down to give you some room in the History panel, this will save you scrolling through the history steps.

Now that we've created this simple but effective workspace we need to save it, so if we move back up to the Workspace drop-down menu we find we can invoke a save workspace dialogue box, see fig. 6 below.

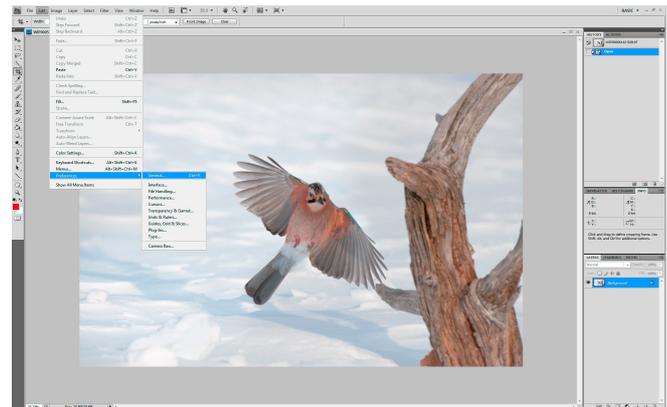
Give your new workspace a name, click Save, and then every time you launch Photoshop the programme will open up with your new workspace already for you to go to work making great images look even better.

There's just one more thing we need to take a quick look at before we start processing, and that is the Photoshop Preferences which are to be found under the Edit menu.



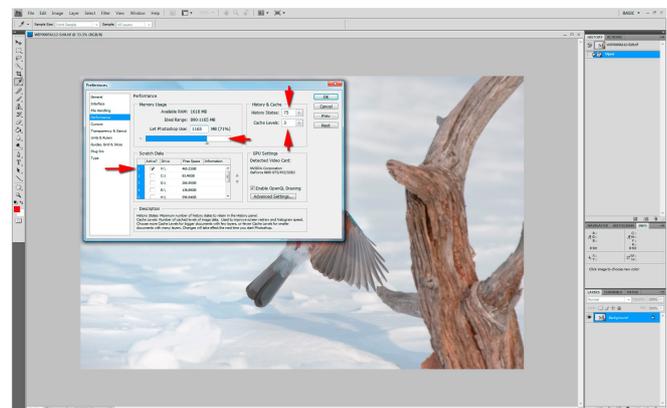
(fig.6)

So go Edit>Preferences>Performance (see fig.7), or alternatively hit control + K (Ctrl+K) or command + K (Cmd+K) on a Mac and then click Performance from the side menu.



(fig.7)

Below is the Performance dialogue box (fig.8)



(fig.8)

My Windows machine has 4Gb of RAM and a 32 bit installation of Vista Business, and a 32 bit installation of CS4 can only read 1.6Gb of available RAM – there’s a lot of inefficiency there, but it’s fast enough for most of my purposes.

Just ensure that you are using the maximum indicated amount of RAM (here it’s 1165Mb), though I must admit that I actually run mine at 80% without any problems except on multiple layers from Nikon D3X images which I sometimes use for landscapes – then things can get a bit slow.

Next, set your history states to a value of between 50 and 75 – don’t set it any higher than this as that can consume too much memory.

Cache Levels – Photoshop renders your image in tiles – big multi-layered images have very large tiles when they are fully rendered. These fully rendered tiles are held in the Cache, and when the Cache gets low then Photoshop needs more time to re-draw them. But equally, if you allocate too many Cache levels then Photoshop runs out of memory and can’t re-draw them anyway – so keep your Cache Levels set to 3 as a good average value.

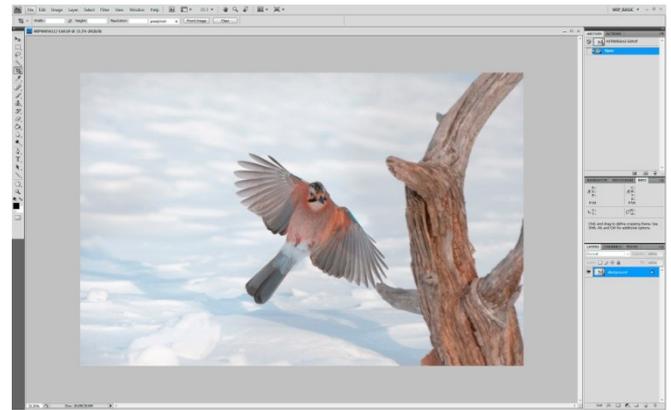
Lastly, Scratch Discs – well, CS4 will automatically choose your system disc (drive C:) which is a very bad thing indeed. Whatever version of Photoshop you are running you seriously need to look at your Scratch disc settings. On older versions you had the option of selecting no scratch discs, but on CS4 you have to have one. You need a fairly modest, blank HDD installing either inside your machine on an IDE, SATA or eSATA connection, or a fast external drive. This drive must be for the sole purpose of being a Scratch disc and must have nothing stored on it – it also needs defragmenting regularly.

A Scratch disc is basically Photoshop’s “scratch pad” which it uses as and when the necessity arises, namely when it really needs access to more RAM for temporary storage of clipboard data during copy and paste operations etc. and the flow of information to and from a scratch disc is very dynamic which basically, isn’t good for the hard drive – so leave it set to its C: default at your peril...!!

And I said I wasn’t going to get all Hot ‘n Heavy.

Well you’ll be glad to know that it’s all over now and we can get down to the matter at hand, and start making that excellent image you shot the other day into a masterpiece ready for the web.

So now we have our full resolution 300 dpi TIFF file open in Photoshop ready to start work.



(fig.9)

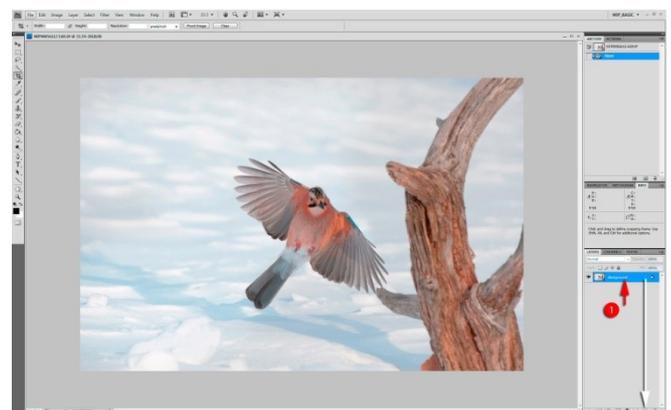
This Jay in flight is a shot, from a recent trip to Norway, is one I quite like and it’s well exposed. However, the Jay is in the shadow of the stump it’s about to land on. I am fortunate in the fact that the snow on the ground is throwing a lot of reflected light back on the underside of the Jay, but still it looks a little dull and lacking in contrast.

The rest of the image looks fine with no blocked shadows or blown highlights, so if I want to make adjustments to the Jay I don’t want these to affect the rest of the image.

The easy way around this problem is to use one of Photoshop’s most powerful features – the LAYERS panel.

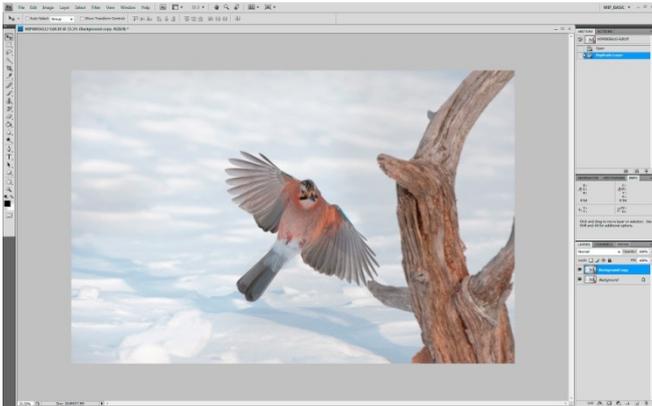
What we are going to is to have TWO COPIES of the image stacked like playing cards, and make adjustments to the underlying layer that will affect THE WHOLE image. We will then revert to the upper image layer and, using a soft eraser, we’ll ‘rub away’ the weak areas of that layer to reveal the parts of the adjusted layer below that we want. That way we’ll end up with a single image that contains adjustments made to the Jay, but everything else stays the same.

SIMPLE...! Here’s how to do it...



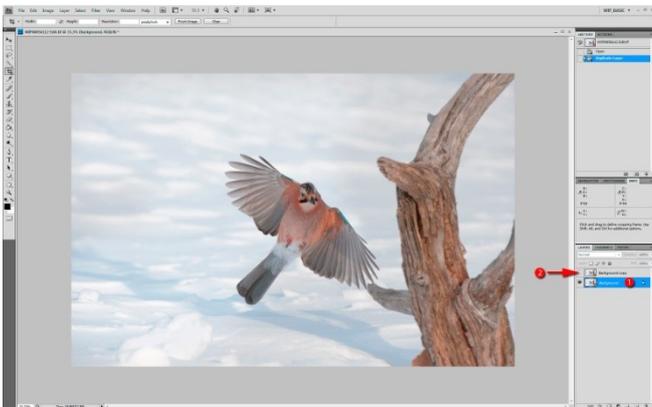
(fig.10)

If we look at our Layers panel we can see our image is already in a layer called "Background". Click and drag Background to the little icon indicated in fig.10 – when the icon changes colour release the mouse, and hey-presto, we now have TWO layers – see fig.11.



(fig.11)

What you need to understand is that the image you can see on your screen WAS 'Background' but is now 'Background Copy'. 'Background' hasn't disappeared; it's just stacked behind 'Background Copy' so you can't see it. But 'Background' is going to be our adjustment layer so we need to make it visible by de-activating 'Background Copy'.



(fig.12)

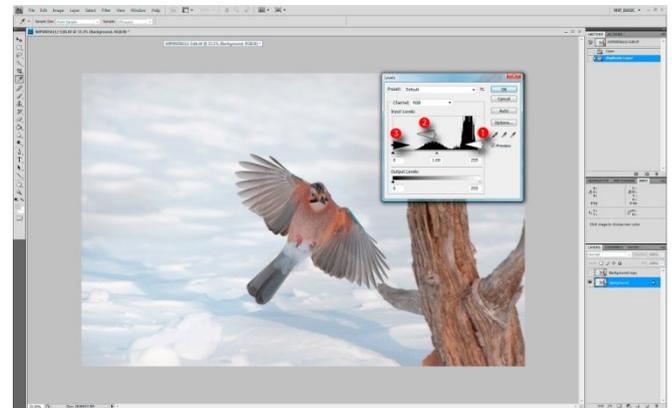
If we look at fig.12 we can see how to prepare for the adjustments we are going to make.

Firstly we need to make 'Background' our ACTIVE layer (1) by clicking it once with the mouse – the colour changes to blue to confirm that it's the current active layer and anything we do to the image will occur in that layer only.

Secondly we need to make the layer visible, this we do by clicking the eyeball (2) for the Background Copy layer OFF – until we do this all we can see on the screen is Background Copy, even though it's not the current ACTIVE layer.

The preceding two steps are crucial, so take your time and get the principle of layers and layer visibility established in your mind.

Now comes the fun bit; go Image>Adjustment>Levels and the Levels Adjustment dialogue box will open.



(fig.13)

We have three sliders along a horizontal scale and a Histogram.

The black coloured slider represents our potential black point, the grey coloured middle one our midtones and the white slider on the right is our white point. In an ideal image the histogram would extend all the way to the ends of the scale, but here it doesn't. The white point is slightly short, meaning we have no true white in the image and the black point is a long way from the dark end of the histogram, which similarly means we have nothing approaching a black in the image.

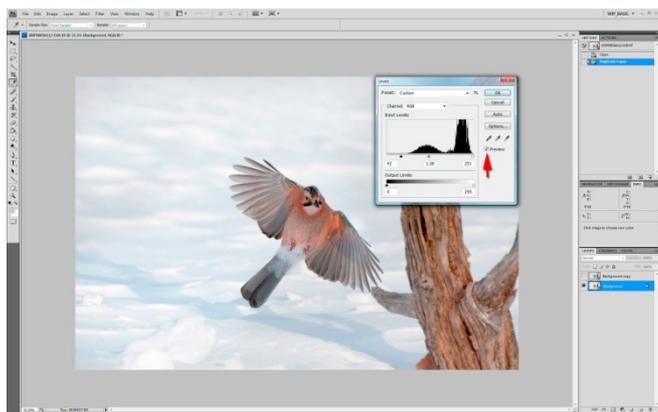
This is a text-book low contrast histogram and it gives us plenty of room for quick and simple adjustment to make the image have a bit more 'punch'.

But the idea behind what we are doing is to only add punch to the Jay – and this will be emphasised by making no such adjustments to the rest of the image – hence we do this in layers.

If we move any of the sliders to the left we make things lighter, and to the right, darker. So if we move the white point slightly left we will get a jump in contrast. We will get an equal jump in contrast if we move the black point slider to the right, and then the overall contrast increase can be smoothed a little by moving the mid slider to the left a little (fig.14).

In fig.14 you can see we've done exactly that; dropping the white point from 255 to 251, the mid from 1.00 to 1.38 and lifting the black point from 0 to 42.

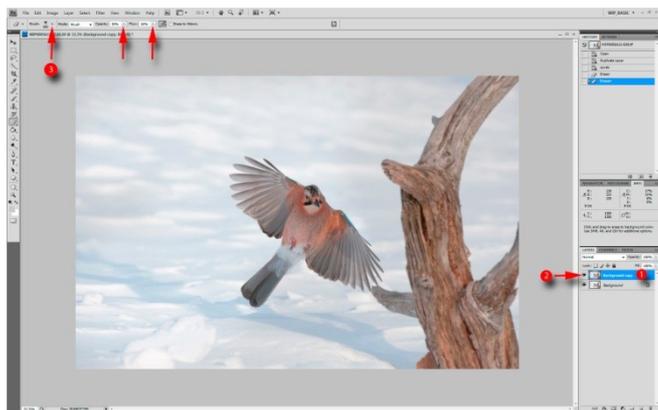
To see your changes you can simply click the PREVIEW checkbox and repeatedly un-tick and re-tick it.



(fig.14)

Make sure you leave it ticked before moving to the next step though...

Now we can begin to do 'the big reveal' and make the Jay stand out more in the image.



(fig.15)

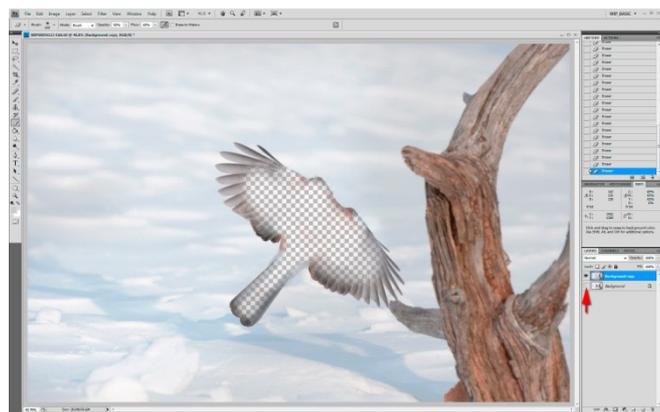
The first thing we need to do is make our UNALTERED image in 'Background Copy' visible again and make that layer the ACTIVE or working layer (fig.15) by clicking in the layer (1) and clicking the eyeball to make it visible again (2).

As you can see on the left tool bar we have our eraser tool already selected. Click the BRUSH dialogue box on (3) and ensure the HARDESSS slider is set to ZERO and size is around 150 pixels. Then drop the Opacity to 50% and the Flow to around 60%, and we are ready to begin erasing the Jay in our upper, visible image layer to reveal the more 'punchy' one below.

Using a soft brush gives a highly feathered effect to the brush strokes and with the settings for Opacity and Flow it will take two or three passes to reveal the full effect.

Interestingly, if you look at fig.16, un-ticking the eyeball on the Background layer and making it invisible will

show you exactly what you have done to the upper 'Background Copy' layer.



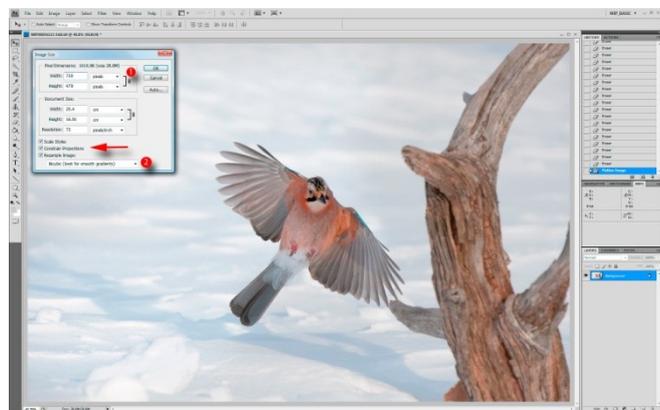
(fig.16)

What a mess...Quick, turn it back on..!!

As you can see though, our Jay is looking a bit brighter for his experience.

Now flatten the image and save it to your archive TIFF directory, because now we are ready to prepare the image as a jpeg to go on the web.

Go Image>Image Size and the Image Size dialogue box will appear (fig.17).



(fig.17)

Web browser resolution is a standard 72dpi, and on most web pages an image of between 600 and 800 pixels on the longest side is as big as you need to go; any bigger and there's a likely chance that the image won't be fully viewable on an average viewers monitor without scrolling – something governed by monitor screen size and screen resolution.

As a hangover from the good old days when everything that was worth anything was done as a ten inch print I do all my web jpegs at 720 pixels on the longest side.

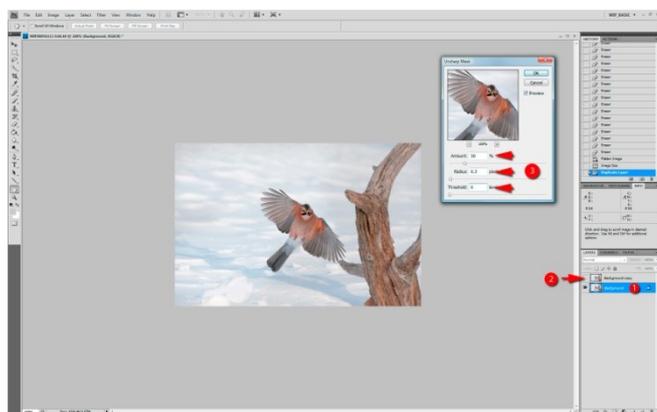
Entering that value (1) for the longest side (in this case width) you'll notice that the height drops automatically

to keep the same aspect ratio; that's because the Constrain Proportions check box is ticked. Also ensure that the other two check boxes are ticked, though the Scale Styles option doesn't actually apply in this instance. The Resample Image options menu (2) works best for me set to Bicubic (best for smooth gradients).

Click OK..

Now that we have our image sized for web display we need to sharpen it, and to do this I always use a 'selective sharpening' process that in it's setup mirrors exactly what we have just done in layers. The only difference is the adjustment to the underlying layer – instead of adjusting the levels we are now going to add multiple passes of a gentle Unsharp mask, and then use our reveal technique to add sharpness to the subject and nowhere else in the image.

In other words we are only going to sharpen what is actually in focus and sharp in the original image.



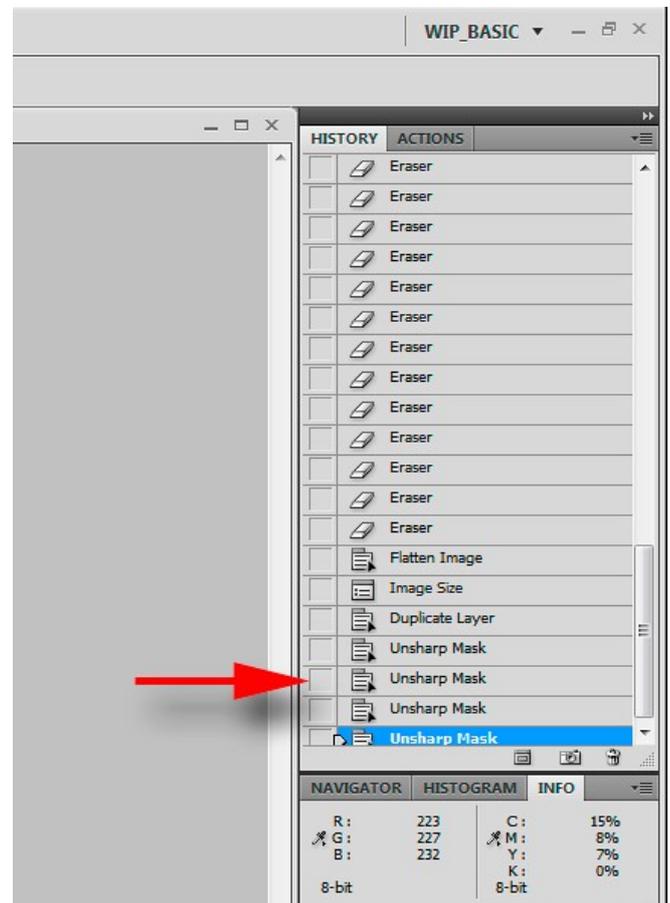
(fig.18)

In the next image (fig.18) we can see that we have again made a duplicate layer, made it invisible and made the underlying layer the active or working one.

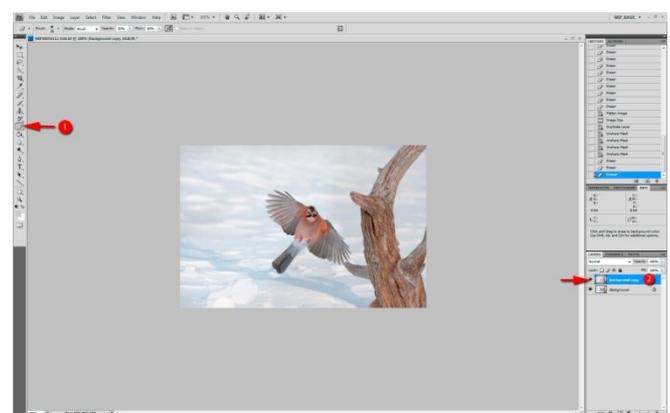
Our next move is to go Filter>Unsharp Mask in order to call up the USM dialogue box. Enter (3) the following values Amount 30, Radius 0.3, Threshold 0, and click OK.

Now we can add another pass of USM by using the keyboard shortcut Ctrl+F (which is the shortcut for apply previous filter).

On this particular image I've applied four passes in total, as can be seen from the screenshot of the history panel (fig.19).



(fig.19)



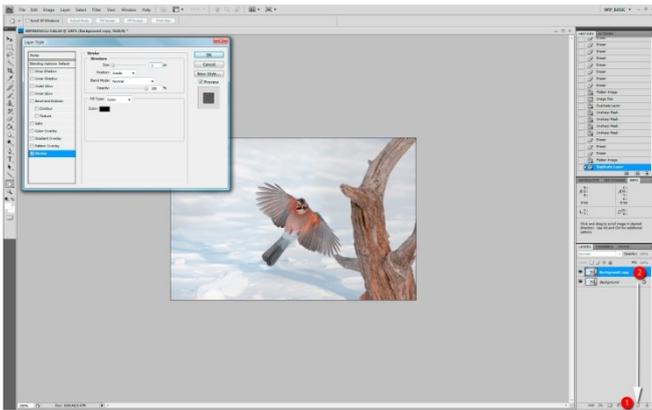
(fig.20)

Now we are ready for the reveal (fig.20) and it is exactly the same procedure as before, select the eraser tool; click the upper layer to activate it and the corresponding eyeball to make it visible. Now that our sharp image appears soft again we can erase the soft Jay to reveal the sharpened Jay below.

Once the sharpness of the subject is revealed it is simply a case of flattening the image by going Layer>Flatten Image and that's it, we're finished basically.

But I always like to add a finishing Keyline around the image, and the easiest way to do that is USING LAYERS again!

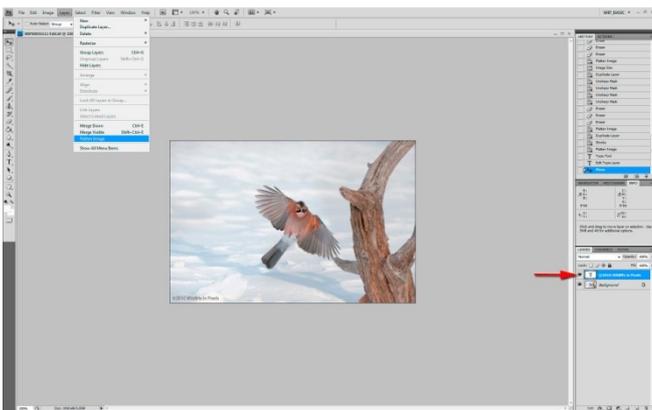
Quickly drag the image layer to the make new layer icon at the bottom of the layers panel (see fig.21)



(fig.21)

RIGHT CLICK the new layer and select Blending Options to call the Layer Style dialogue box. Click STROKE to invoke the Stroke options. Enter 1px in the size box and INSIDE from the position menu (this is crucial otherwise the stroke won't show on the image border). Click OK.

The only thing left to do is to add a visible copyright mark to the image, which is quite simple (fig.22).



(fig.22)

Select the text tool and click inside the image – don't look now but another layer has just opened up in the layers panel!

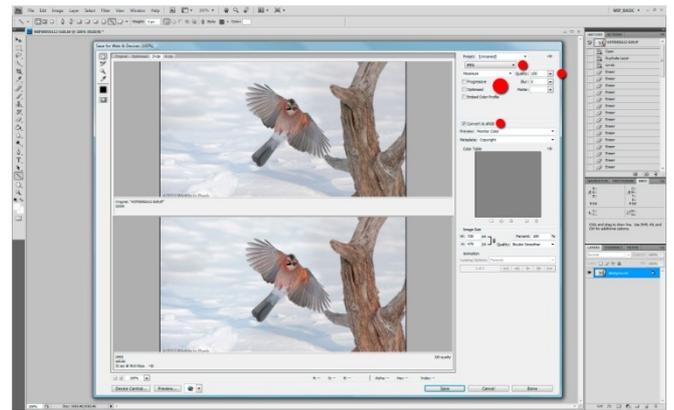
To invoke the copyright symbol © on a PC the shortcut is:

ALT (hold) + 0169

Add to this the year and your name and you are finished – just remember to flatten the image by going Layer>Flatten Image.

The only thing left to do is to Save the image as a JPEG suitable for web display in the sRGB colour gamut, and the easiest way to do this is to use the Save for Web & Devices option under the File menu, or Alt+Shift+Ctrl+S from the PC keyboard.

Saving you image this way automatically converts your image to the sRGB colour gamut which is correct for the web, as most browser support for the larger AdobeRGB1998 colour gamut is limited or non-existent.



(fig.23)

There is very little to say here except to ensure that the correct options are set.

When invoked for the first time the options usually default to GIFF – a fact that gives away Photoshop's original heritage as a tool of that weird person the Graphic designer.

If that's what happens change the file format to JPEG, compression quality set to Maximum, Quality level 100 (if you are posting the image to a forum and they have a maximum file size limit then you might have to adjust the Quality slider down a little. You can see the current file size displayed in the lower left corner of the bottom image in this 2-up view.

The three check boxes on the left need un-ticking, progressive jpegs are awful things that slowly reveal themselves like something from a bad '80s porn movie. You've already optimised your image so you don't need Photoshop doing it again and you don't need to embed the colour profile. Ensure that the Convert to sRGB checkbox is ticked and click save.

Now go and upload your masterpiece on to a nature photography forum – but not this Jay image!

I hope you've found this article of use as it has covered two of the most common questions I'm asked as a photography and workflow tutor.

Best Regards and picture making...

Andy Astbury, Wildlife in Pixels.

<http://www.wildlifeinpixels.com>

andy@wildlifeinpixels.com