

Editing & File Size

In this lesson I'll show you how the way you edit an image has a dramatic influence on how big your files end up. Hard drives used to be cheap, but with AI using up so much of the world's memory and storage, prices have gone up, so it's worth knowing how much space your edits take. I edited the same casual iPhone shot of my wife Karen several ways and compared the file sizes, from a 1.62 GB layered TIFF down to 1.2 MB of Lightroom Classic edits.

Key Concepts

1. **The Edit** (00:59)
2. **Retouching with the Remove Tool** (03:19)
3. **How Big the Layered File Gets** (05:18)
4. **Delete Hidden Layers** (06:06)
5. **Merge Retouching Layers** (07:15)
6. **Flatten and Convert to 8 Bit** (08:54)
7. **Save as JPEG** (10:00)
8. **The Same Edit in Lightroom Classic** (11:01)
9. **Measuring Lightroom Edits** (12:39)
10. **Work in a Raw Processor First** (14:44)

The Edit (00:59)

This is a raw (DNG) file captured on my iPhone. I straightened and cropped it, smoothed out the dress so it drapes more nicely, made the top third of the background less saturated, and made the door a little greener so your eye is drawn to the area around Karen, not just to her.

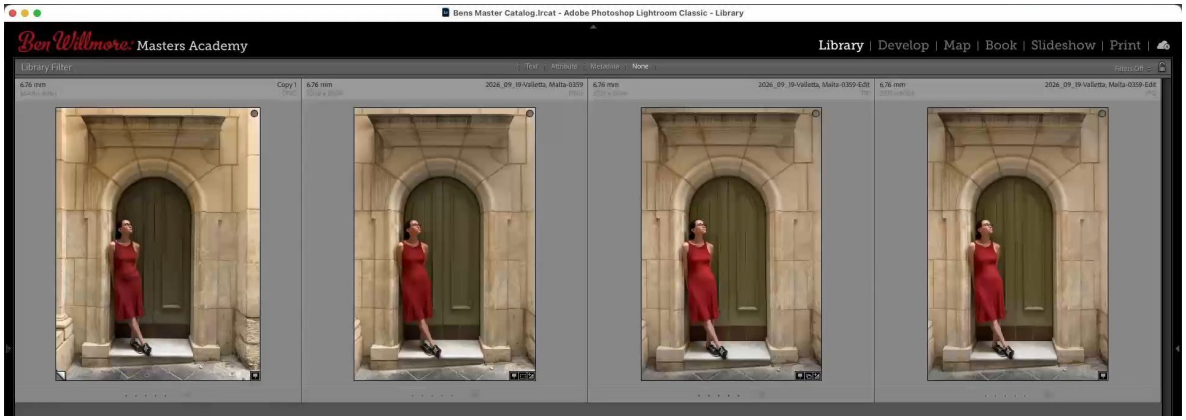


Original DNG



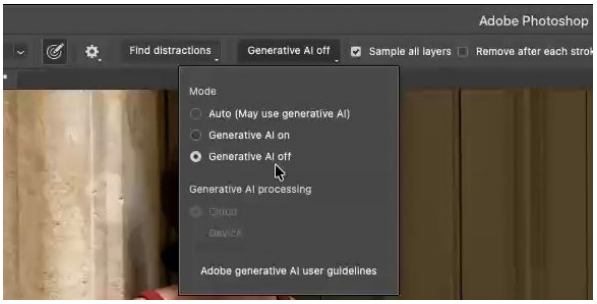
Edited version

At first I thought I'd need frequency separation, a Photoshop technique that separates the texture of a surface from its overall color and shading (we have multiple lessons on it). So my instinct was to open the image in Photoshop. In the end I didn't need it, and along the way I saved the image several different ways so I could compare the file sizes.



Retouching with the Remove Tool (03:19)

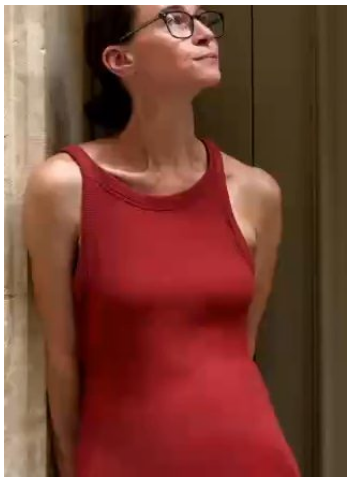
I found I could do the retouching with the **Remove** tool instead of frequency separation.



1. **Turn Off Generative AI:** In the options bar at the top of the screen you can choose whether the Remove tool uses generative AI. My internet on a cruise ship is limited and slow, so I turned it off. The tool then works only on my computer and is much faster. I did most of the dress that way.
2. **Turn It On When Needed:** A bit of Karen's gray sports bra showed near her shoulder, and I knew the non-generative version wouldn't handle it well, so I turned generative AI back on for that part.



Before (sports bra showing)



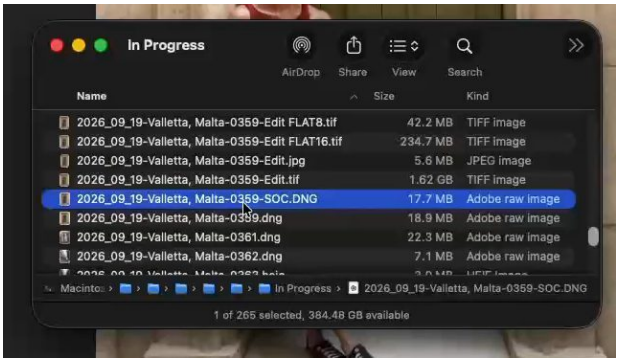
After generative Remove

Then I added a Hue/Saturation adjustment layer to make the top third of the background less saturated, plus adjustments to make the door greener and more even in color.

How Big the Layered File Gets (05:18)

When I saved this image as a TIFF, I left in the frequency separation layers I'd ended up hiding, because I'm so used to keeping layers in case I need them later.

The DNG file marked SOC (straight out of camera) is how big the file was when I transferred it from my phone: **17.7 MB**. The layered TIFF is **1.62 GB**, which is absolutely ridiculous considering we started with 17 megabytes.

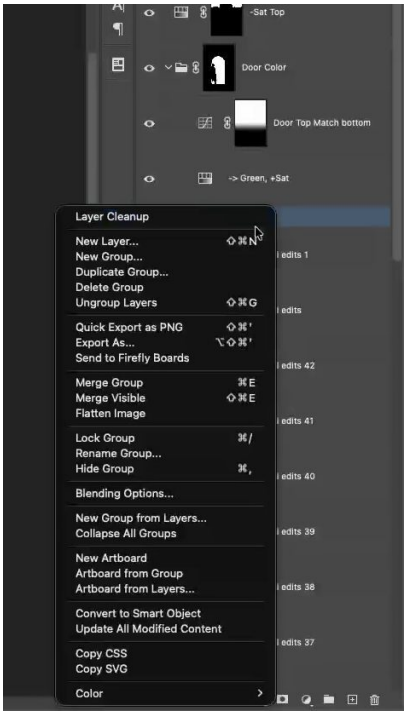


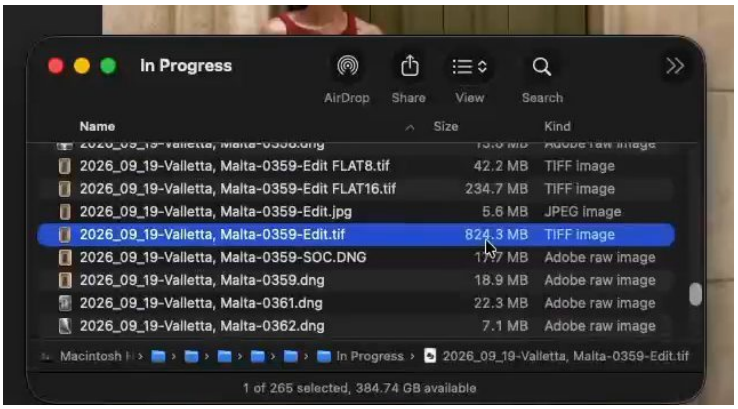
Delete Hidden Layers (06:06)

The first cleanup step is to get rid of any layers that don't contribute to the end result.

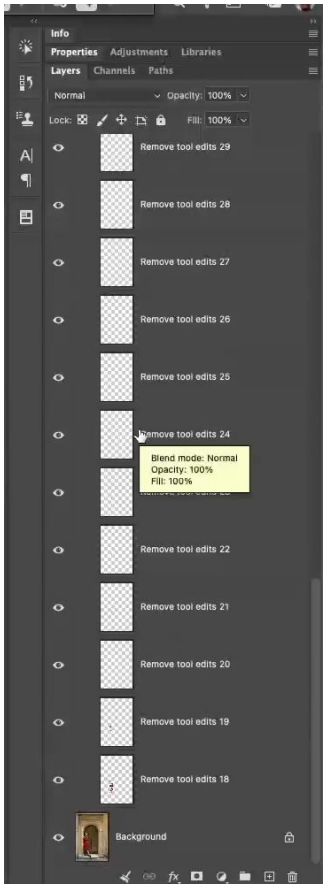
1. **Delete Hidden Layers:** Open the Layers panel side menu and choose **Delete Hidden Layers**. It finds every layer with its eyeball turned off and deletes it. My hidden frequency separation group is gone.
2. **Save Again:** Choose `File > Save` to replace the file.

The file went from 1.62 GB to **824 MB**. That's still massive.





Merge Retouching Layers (07:15)

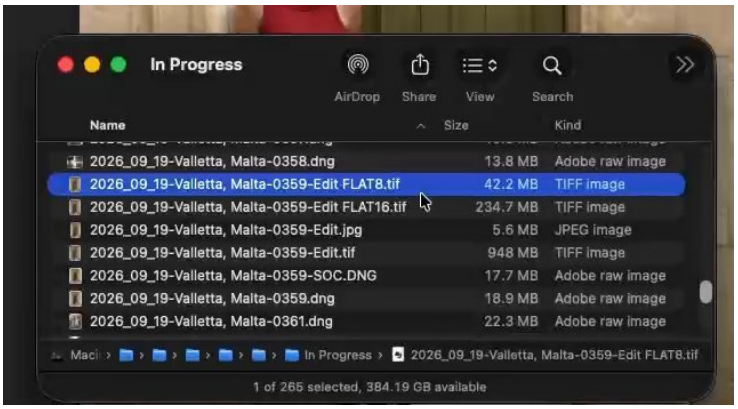


One reason the file is so big is that the Remove tool had **Create New Layer** turned on in the options bar, so every single stroke went onto its own layer. I used it about 40 times. Separate layers are handy while you're retouching, because you can throw away one that went wrong. When you're done, though, there's little reason to keep them apart.

1. **Merge the Group:** Right-click the group that holds all the retouching layers and choose **Merge Group**. You get the same result on a single layer.
2. **Save Again:** Oddly, the file went *up* to **948 MB** after I saved it. Still a very large file.
3. **Merge Further if You Can:** If you'd never undo the retouching without starting over from the original, merge it down too. The same goes for adjustment layers you don't expect to tweak again.

Flatten and Convert to 8 Bit (08:54)

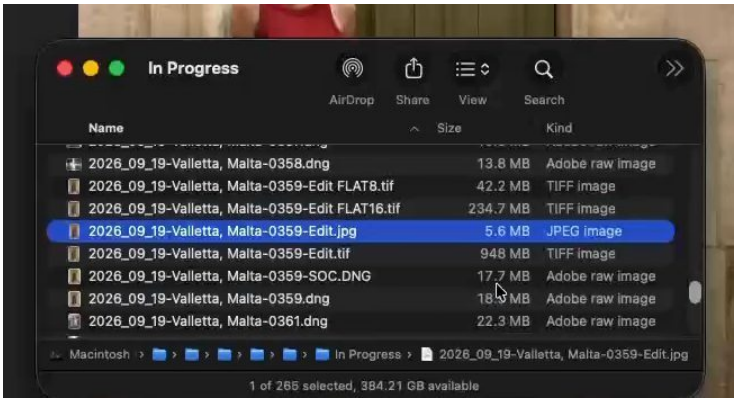
I also saved flattened versions of the image in 16 bit and 8 bit. The flattened 16-bit file is **234.7 MB**, a big savings over eight or nine hundred megabytes. But 16 bits is mainly useful while you're applying adjustment layers. Once the image is flattened, 8 bits is enough to print it and have it look good, so I converted it to 8 bit with `Image > Mode > 8 Bits/Channel`. The flattened 8-bit file is only **42.2 MB**.



A flattened 8-bit TIFF is what I'd use if I plan to open the image again and make further changes, because TIFF is a lossless file format: it doesn't degrade the quality of the image.

Save as JPEG (10:00)

I went further and saved the image as a JPEG. JPEG files are always 8 bit and use compression that makes the image much smaller. It's only **5.6 MB**, even smaller than the 17.7 MB that came from the camera. That's because the raw file holds more than 8 bits of information (usually 10 bits or more), which takes up more space and gives slightly better quality.

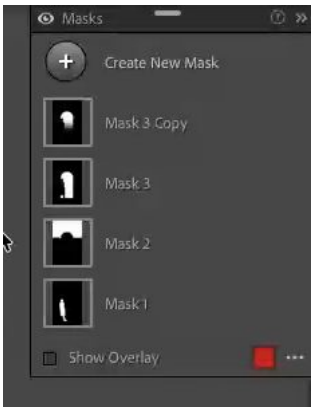


The Same Edit in Lightroom Classic (11:01)

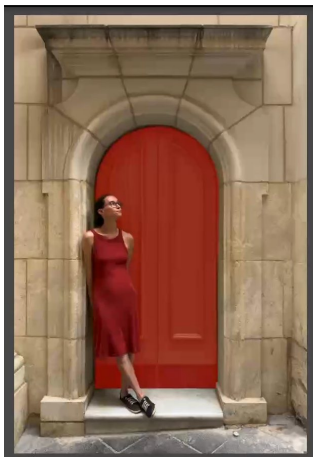
Photoshop is where you make absolutely massive files, so I tried a different approach: I did the same edit to the original DNG in Lightroom Classic's Develop module.

1. **Retouch with the Remove Tool:** Lightroom Classic's Remove tool has its own **Use Generative AI** checkbox. I left it off for most of the dress and turned it on for the sports bra straps.
2. **Add Masked Adjustments:** I used masking to isolate the upper third of the background and lower its saturation, made the door greener and more saturated, evened out the color between the top and bottom of the door, and adjusted Karen herself. That's four masked adjustments doing the same jobs as the adjustment layers in Photoshop.

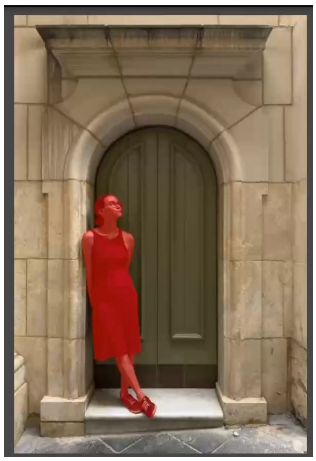




The Masks panel



Door mask

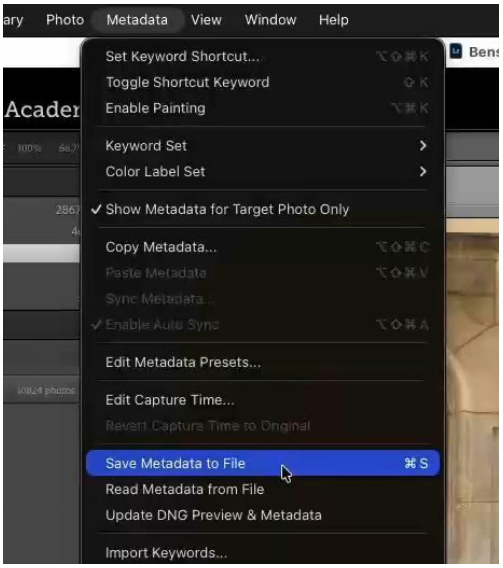


Karen mask

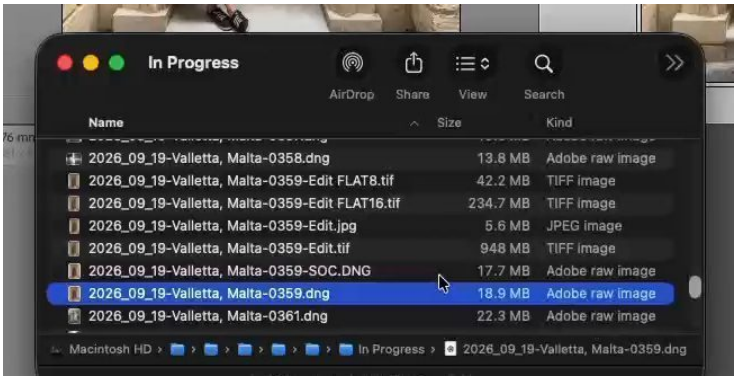
Measuring Lightroom Edits (12:39)

When you edit in Lightroom Classic, everything you do is stored only in your catalog file, so you can't see how much space it takes. To find out, I saved it into the file itself.

1. **Go to the Library Module:** Select the image.
2. **Save Metadata to File:** Choose `Metadata > Save Metadata to File`. This writes the information that's usually only in your Lightroom catalog into the file.
3. **Compare the Sizes:** In your operating system, compare the straight-out-of-camera version with the edited one.



The edited DNG is **18.9 MB** compared with 17.7 MB for the untouched original. All my retouching and masked adjustments took about **1.2 MB**, compared with as much as 1.62 GB when I was inefficient in Photoshop. Even the JPEG has to be added to the size of the raw file I'd keep anyway.



Lightroom and Adobe Camera Raw have the same general adjustments as Lightroom Classic, so you can use either of them instead if you don't use Classic.

Work in a Raw Processor First (14:44)

I do as much work as possible in Lightroom Classic (or Adobe Camera Raw if you don't use Lightroom). The savings in file size is one reason. The other is that everything stays non-destructive: you can go back and change anything as often as you like, with no merging to save space, because you keep all the pieces you used to build the image.

I'm keeping the full layered version of this file only because I may use it as a demo in the future. Unless you teach Photoshop and Lightroom, there's no reason for that. Make as many adjustments as you can in a raw processor, and only head to Photoshop when something would be inefficient or impossible to do there, because only then is it worth having your file size balloon.