

Slide 1

Creating a Timelapse Sequence

(Lightroom/Photoshop Users)

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Applicable for users of Lightroom and Photoshop.

Note: When reading this document, please **expand the view to fill the whole width of your screen**. You will then be able to see the screen captures from Lightroom and Photoshop clearly.

Timelapse - Basics

- Captures movement
 - subject (also camera)
- Suitable for various genres of photography
 - natural world to urban
 - wide angle to macro
- Aurora borealis:
 - Low light: exposures of a few seconds with a short gap between
 - Example: four second exposure with a one second gap (5 second cycle)
 - Video frame rate: 25 frames per second
 - For a 10 second video, require 250 frames (shoot duration: 20 minutes and 50 seconds)

Introduction

A timelapse sequence is a way of capturing movement and speeding up that movement. A classic example would be a timelapse video of a seed germinating and growing.

Usually, the camera is on a tripod and remains stationary. However, some practitioners place the camera on a dolly and this allows the camera position to be slowly altered while photographing the moving subject.

Timelapse sequences have been used in various photographic genres. The worked example presented here is of the Aurora Borealis. Timelapse is used to try to capture the so-called 'dancing' of the northern lights. Because of the low light conditions, exposures of a few seconds are usually required. To capture enough images to create a video (even for a relatively short duration video), you can expect to be out for some time. Make sure you have a fully charged battery, enough space in your memory card and wear warm clothing.

Timelapse – Camera Settings

- Interval Timer setting (on Canon cameras)
 - Interval between individual exposures
 - Total number of exposures



Camera Set-up

This image shows a Canon camera but other manufacturers will have similar functionality (although different naming) on their own cameras.

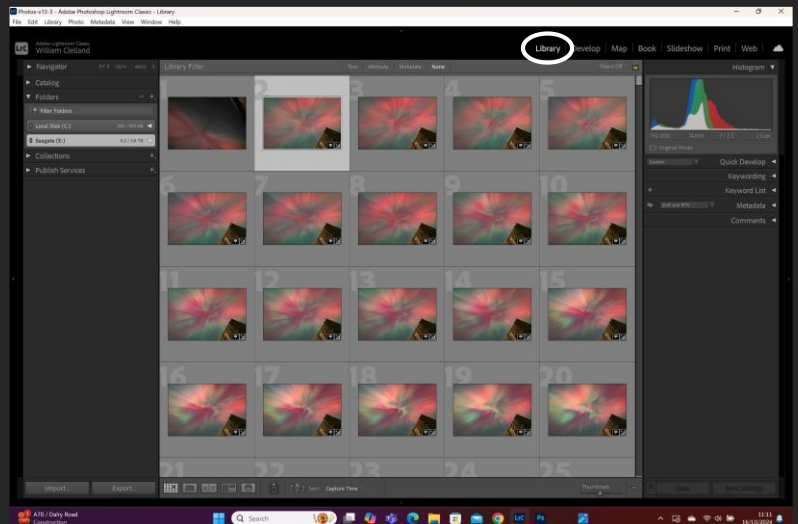
On Canon, you will need to navigate to the '**Interval Timer**' setting on the camera. Here there are two functions that can be set:

'**Interval**' is the duration between exposures. It can be set from 1 second to 100 hours. For timelapse sequences of the aurora borealis, I normally set it to 1 second.

'**No. of shots**' is the number of exposures you want to take. If it is set to '00' then an 'unlimited' number of exposures can be taken (at least until your battery drains, your card is full or you stop the sequence).

Timelapse – Lightroom Workflow

- Transfer images from memory card to Lightroom
- Perform basic editing on one image
- Synchronise edits to all images in sequence
- Export sequence to folder



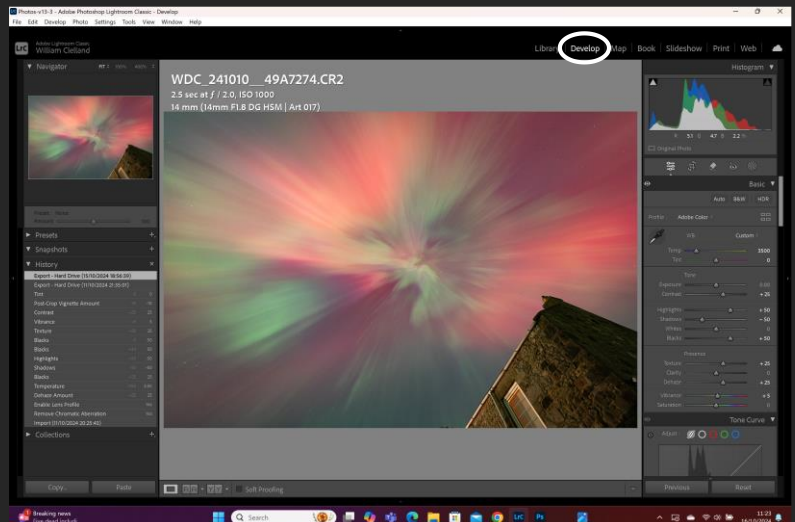
Lightroom Workflow

Import the images from your memory card into Lightroom (under the **Library** module).

Note: You will likely have other images that were not captured with the aim of creating a timelapse sequence or that were taken before finalising the composition or camera settings. It is OK to import these images at the same time and to the same folder.

Timelapse – Lightroom Workflow

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Lightroom Workflow

Select one image, move to the **Develop** module and perform any editing you feel is required.

FYI

The settings I used for the timelapse sequence were:

Exposure time: 2.5 seconds

Aperture: 2.0

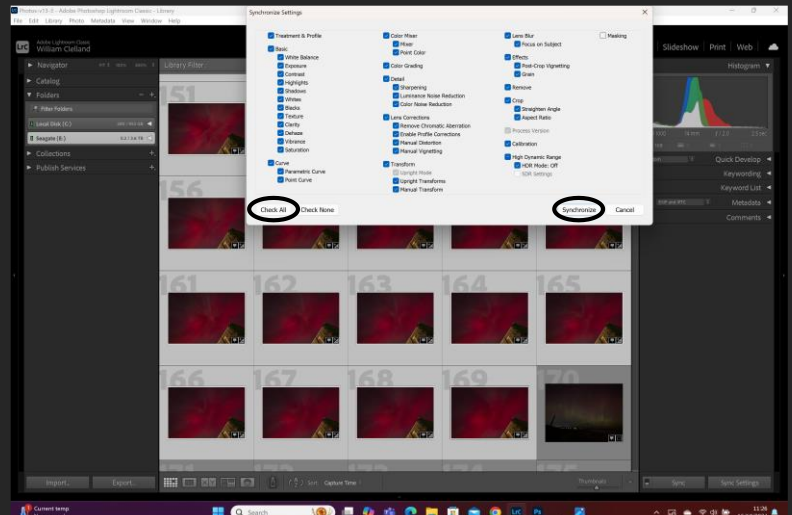
ISO: 1000

Focal length: 14 mm

I used an interval of 1 second between exposures (and so the cycle time was 3.5 seconds per exposure)

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Lightroom Workflow

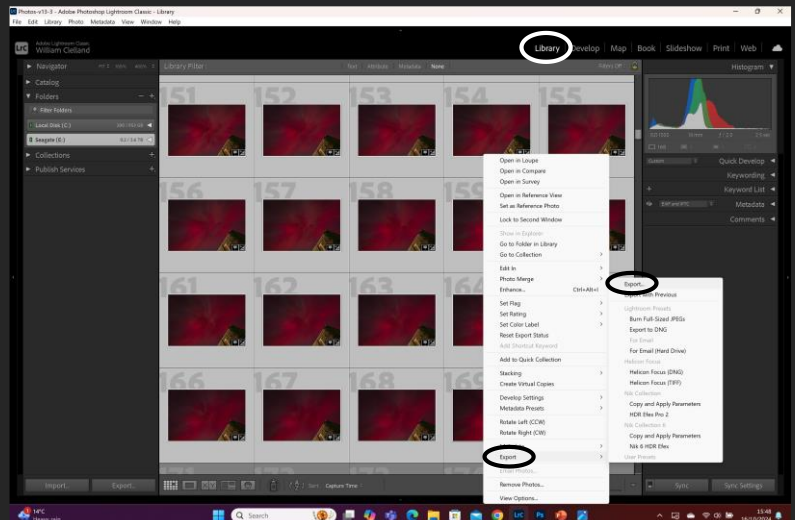
This will open the dialogue box shown.

Click 'Check All' and then click 'Synchronize'.

Lightroom will now copy your edits to the rest of the images in the timelapse sequence. Note, there will be a large number of images and this will take a considerable time.

Timelapse – Lightroom Workflow

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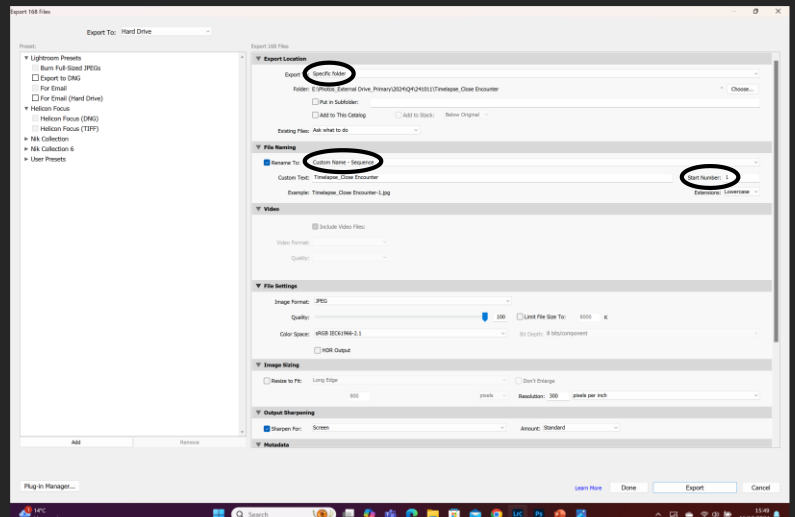
Lightroom Workflow

Once the synchronisation is complete, you need to export your image sequence to a folder (previously created by yourself).

From the **Library** module, the full sequence of images should still be selected. Right click on any one of them. From the dropdown menu select '**Export**' and from the sub-menu '**Export...**' again.

Timelapse – Lightroom Workflow

- Transfer images from memory card to Lightroom
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Lightroom Workflow

A dialogue box will appear.

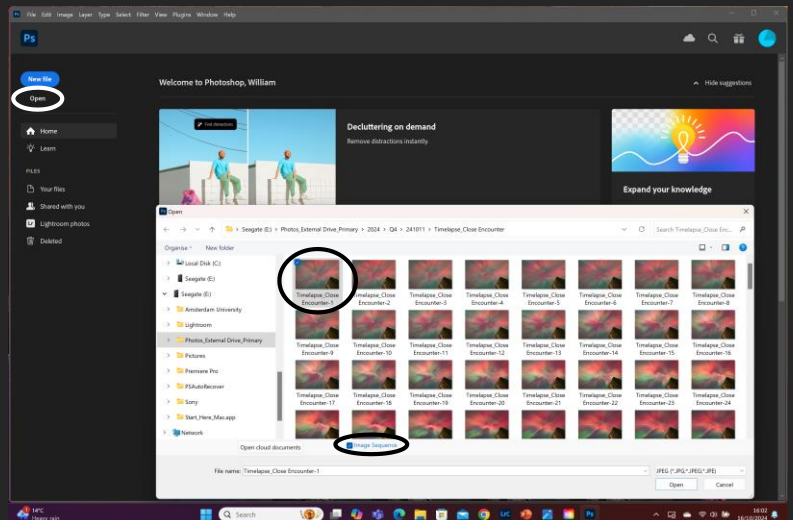
In the top section (**Export Location**), navigate to the folder where you wish to export your timelapse sequence.

In the second section (**File Naming**), choose '**Custom Name – Sequence**' from the dropdown menu. Choose a '**Start Number**' of 1. Give your sequence a name.

Note: Once again this will take a while. When complete, you can close Lightroom.

Timelapse – Photoshop Workflow

- Open file as a sequence of images (set frame rate)
- Select: Window/Workspace/Motion
- Select: Image/Canvas Size
 - Full HD: 1920 x 1080 pixels
 - 4K: 3840 x 2160 pixels
- Convert to Smart Object
- Fit to canvas size
- Render video



Photoshop Workflow

Click on the **'Open'** button (top left corner) and navigate to the folder with the timelapse sequence.

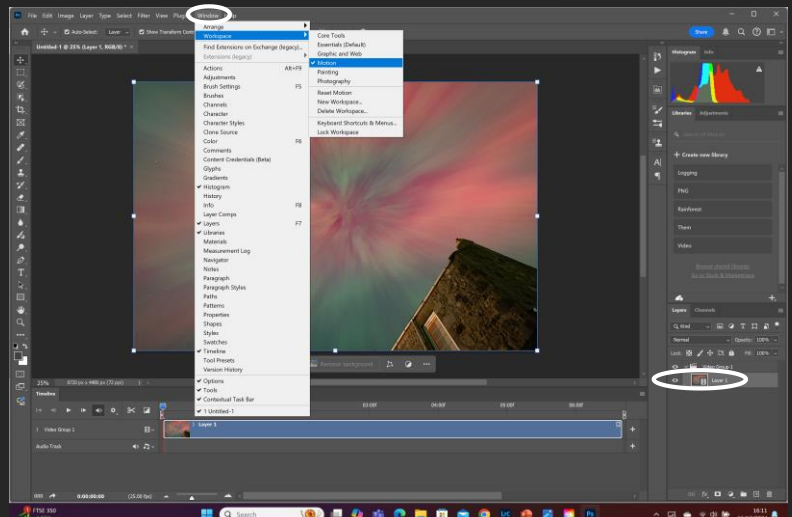
You will see a sequence of images 'name-1', 'name-2' etc.

Click on the first image (name-1). Tick the check box **'Image Sequence'** and click **'Open'**.

Note: It will ask you to select a frame rate. I usually choose 25 fps.

Timelapse – Photoshop Workflow

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Photoshop Workflow

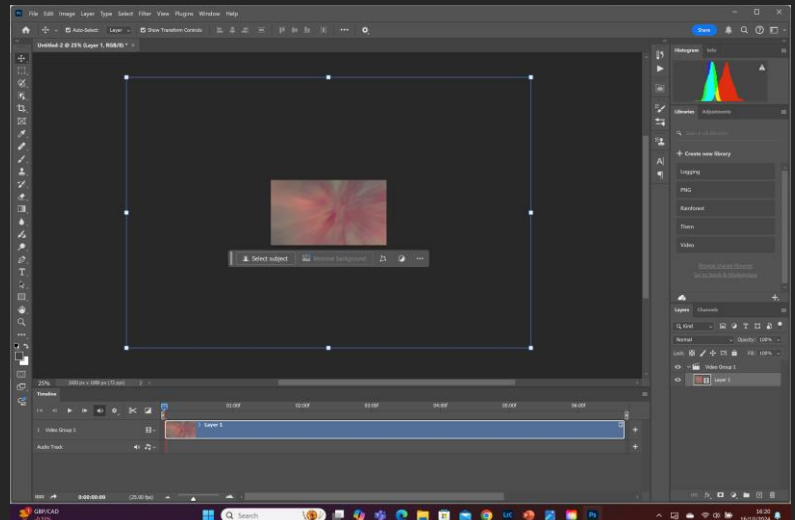
Note: The sequence is imported to Photoshop as a single layer.

From the menu bar at the top of the screen, click on '**Window**'. From the dropdown menu select '**Workspace**' and from the sub-menu select '**Motion**'.

This opens a timeline at the bottom of the window and allows you to scroll through the sequence manually. It also allows you to set keyframes to enable more advanced timelapse sequences to be created.

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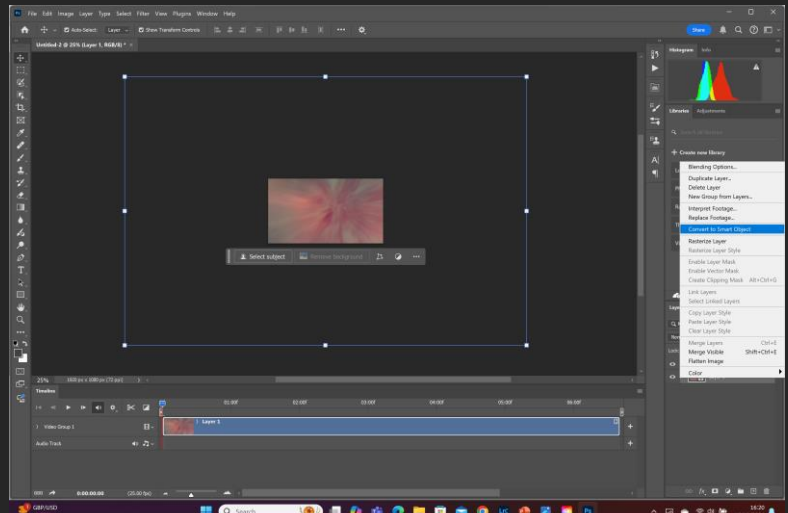


Photoshop Workflow

You will now only see the central part of the image . In the case shown, the central 1920 x 1080 pixels.

Timelapse – Photoshop Workflow

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Photoshop Workflow

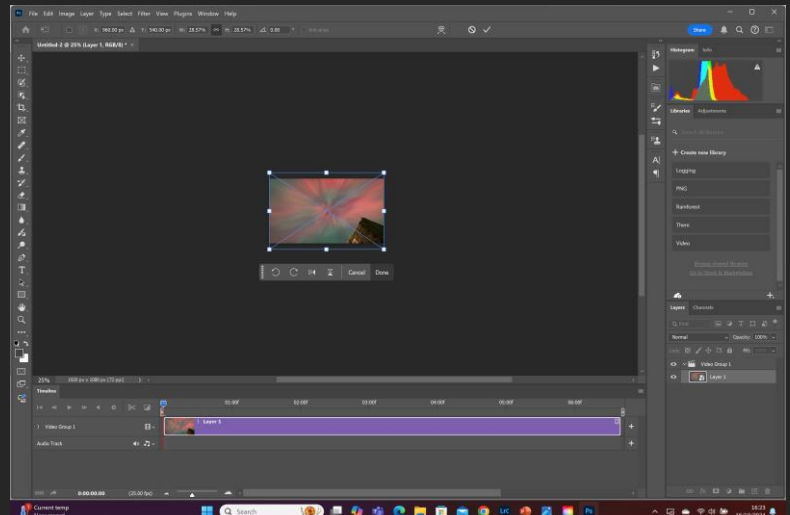
From the '**Layers**' panel (lower right), right click on '**Layer 1**' (or whatever you may have renamed it to). There should only be one layer.

From the dropdown menu, select 'Convert to Smart Object'.

This allows you to more easily go back and change settings.

Timelapse – Photoshop Workflow

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Photoshop Workflow

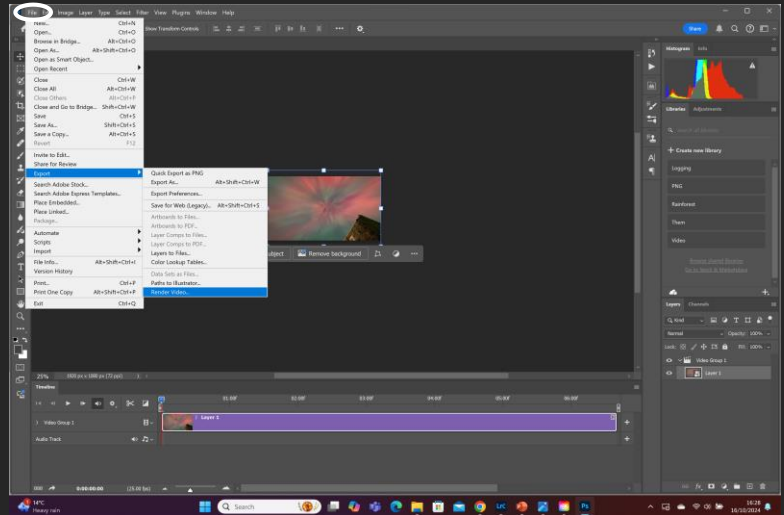
You now want to fit the image to the new canvas size. In the case shown: 1920 x 1080 pixels.

You do this by dragging the blue box towards the centre.

Note. As the aspect ratio of my camera sensor is different to the Full HD aspect ratio, there are parts of the image at the top and/or bottom that will not be displayed.

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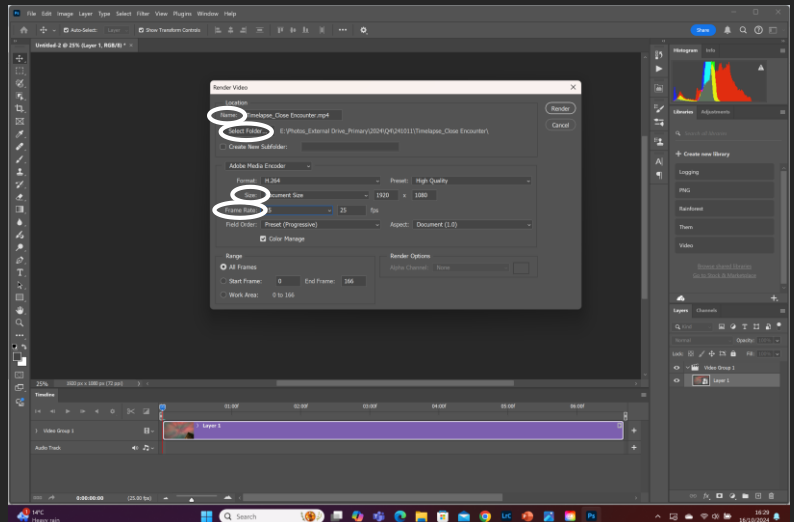
Photoshop Workflow

You now want to create (i.e. render) the video.

From the top menu bar, click on 'File'. From the dropdown menu, select 'Export' and from the sub-menu select 'Render Video...'

Timelapse – Photoshop Workflow

- Open file as a sequence of images (set frame rate)
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Photoshop Workflow

On the dialogue box, choose a **'Name:'** for your video (this should be a **'mp4'** file).

'Select Folder...' to specify the location to save your video.

Check that the **'Size:'** and **'Frame Rate:'** are correct.

All other default settings should be correct.

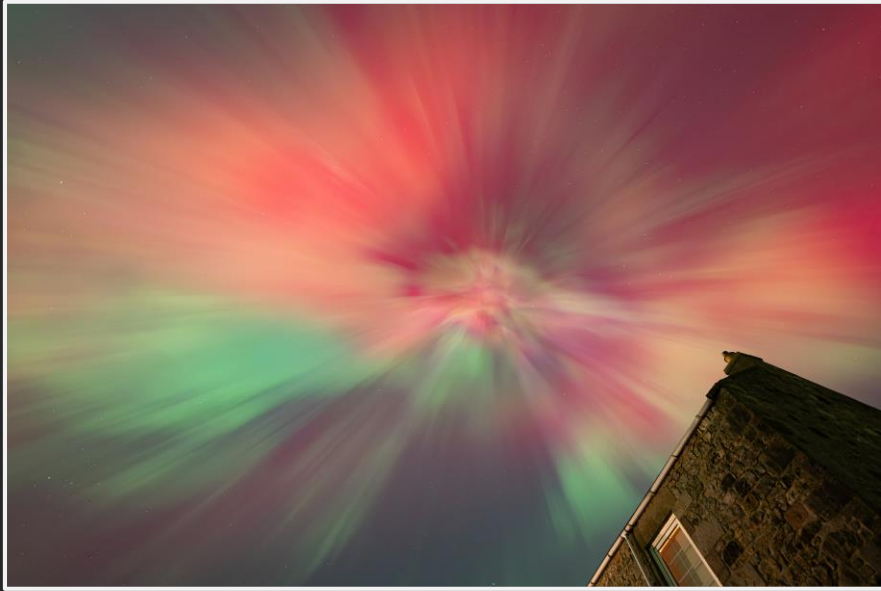
Click the **'Render'** button (top right). When complete (after a few minutes), your video (.mp4 file) should be in the folder you specified.

Timelapse – Key Link

- How to Easily Create a Timelapse in Lightroom and Photoshop (David Johnston)
 - https://www.youtube.com/watch?v=laJEKsE_0Vg

Link to YouTube video which describes the steps in more detail.

Timelapse – Close Encounter



The timelapse was captured just after midnight on the night of 10th/11th October 2024.

Earlier in the evening, when the magnetic field strength was around 800 nanotesla (nT), the solar storm could be considered to be very strong. However, just after midnight, the strength increased further to 1500 nT and the aurora was very bright overhead – only a few stars could be seen.



Because of the strength of the solar storm, the movement of the aurora was rapid. Therefore, at its peak, the timelapse sequence (with a 3.5 second cycle) was not short enough to truly capture the changes.

As time progressed, the movement slowed, the aurora dimmed overhead and the stars reappeared.