

How to Take Better Photographs !

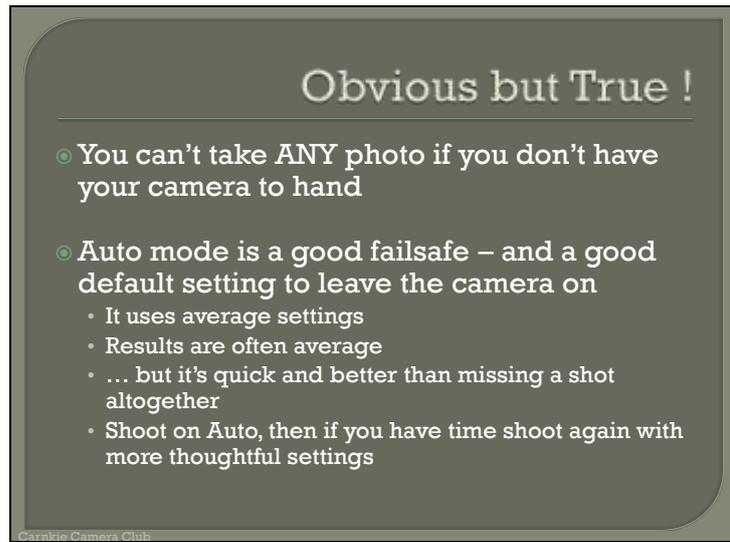


This presentation is designed to be a guide for taking better photographs – for turning snaps into photographs if you will.

As with many things, its best to get it right at the time, that means getting it right “in-camera”, but if you don’t or can’t manage that, then Photoshop offers the chance to salvage something.

In the next few slides I hope to show you how to make your photographs better by understanding some simple guidelines (if only to break them), and some of the common faults and how to avoid them.

In the presentation I have used Photoshop Elements v 7 to show how you can manipulate images.

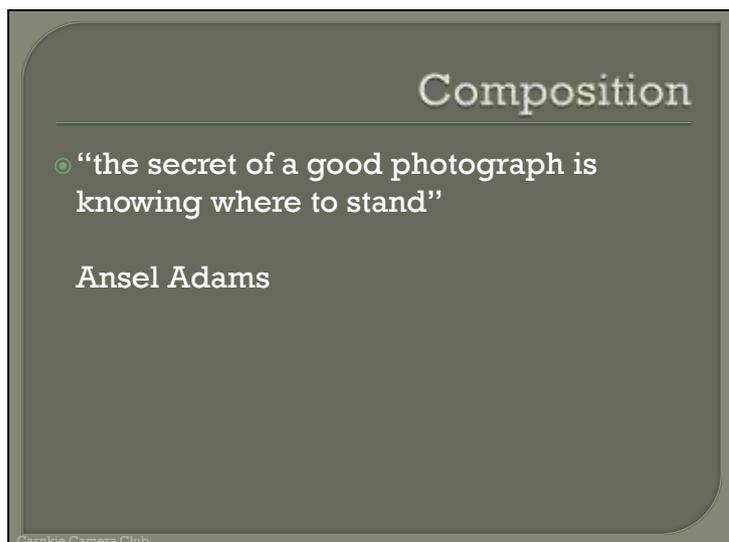


If you are going to take great photographs, the first thing you must do is to carry a camera, any camera.

Learn how your camera works, learn what all the different settings do can how to use them.

The AUTO setting is a good failsafe – but its a compromise. It averages everything based on rules an engineer in the factory thought would produce acceptable photos for a wide range of subjects and settings – but the result is the photos end up being “average” too.

You don't need an expensive camera to take great photographs, know what your camera is capable of and exploit its good features.



Composition is all about capturing the scene that you want to see. While its important to get the technical stuff such as exposure and focus right, its composition that makes or breaks any photograph.



To improve your composition you must not only learn to look at the scene through the viewfinder, or on the LCD screen, but you must also SEE what you are looking at.

Look at the photo, a promising scene but the composition could be a lot better.

The dark circle is caused by using the wrong, or an incorrectly fitting lens hood on a wide angle lens

The horizon is not straight

And the focus and exposure are also a bit off



If you have a zoom lens you can adjust the zoom to exclude things around the edge of the subject that might detract from the photograph, you can also use your feet to move closer or change the shooting angle to achieve a better composition.

You can adjust composition by:

Physically move objects relative to each other. Only really works with still life photography!

Tell people to move relative to each other or other objects. Only works with people who are co-operative and can hear you.

Zoom. If your camera has a zoom lens you can exclude elements from the periphery of your image

Move. Usually the most effective way to control your composition is to alter your viewpoint.

Sometimes all it takes is a slight change of viewpoint to completely transform the composition. Walking a few metres in any direction could give you a far clearer view, get rid of unwanted distractions or provide important foreground interest.

Using your feet is a vitally important part of composing a picture, so never be afraid to wear out a little shoe leather



If you can't use the zoom or change your viewpoint, then all is not lost. Its quite easy to use the CROP tool in Photoshop to exclude distracting objects from around the edge of the picture.



While wide shots can be effective, you can often add impact by getting in close.

Take care though, getting close the subject can sometimes isolate them and you lose the context of the scene.

Sometimes your mind tends to exaggerate what you see through the viewfinder of your camera. You often perceive things a bit bigger than they actually are and you also tend not to notice 'slight' distractions.

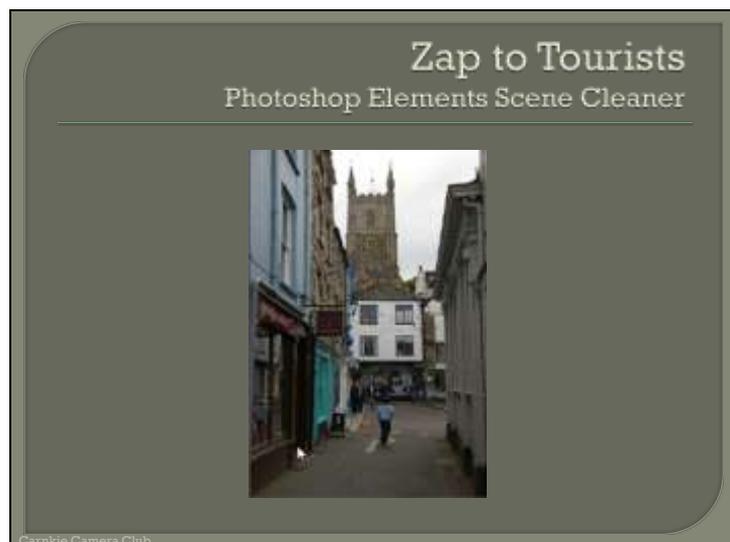
What you end up with is photographs with huge areas of wasted space around the edge and people with things growing out of their heads. Make sure your subject fills the frame. The best way to do this is to move a bit closer.

Before you press that shutter release have a quick look round the edge of the frame and behind your subject. Make sure that you don't have acres of space full of nothing interesting and check for 'stuff' intruding into your masterpiece.

In our wonderful 3D world that tree is far away in the background, but in a flat 2D photograph the tree may appear to be growing out of someone's head



Again you can use the crop tool to get in close to your subject after the event.



If you want to take a picture of something and can't get a decent picture of it because of all the people milling around, then Photoshop Elements can help, you can get rid of tourists faster than a wet bank-holiday weekend.

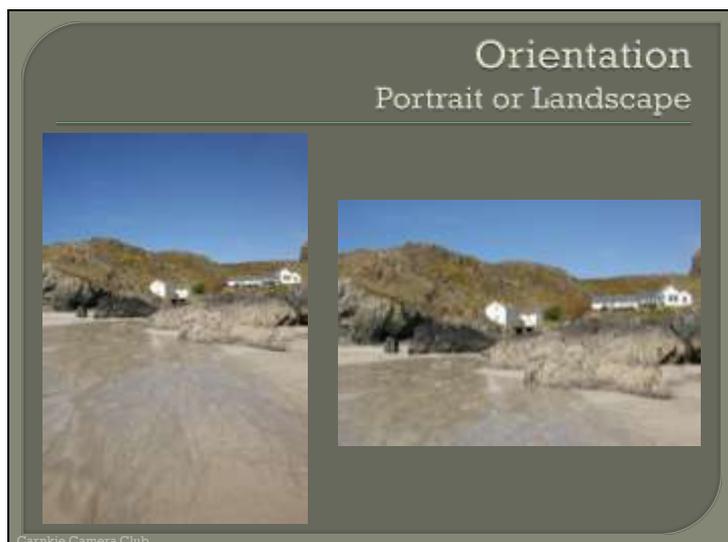
All you need to do is to take a few (the more the better), shots of the subjects, just ignore the people.

As the people move around and you take your photos, then hopefully, while you may not have any photographs that are "people free", different parts of the subject will be obscured and revealed in the multiple photos.

With Photoshop Elements, then you can pick the photo that looks most like you want the final scene to look, and then add and blank out parts of the scene from other images – the Scene Cleaner takes a lot of the hard work out of this.

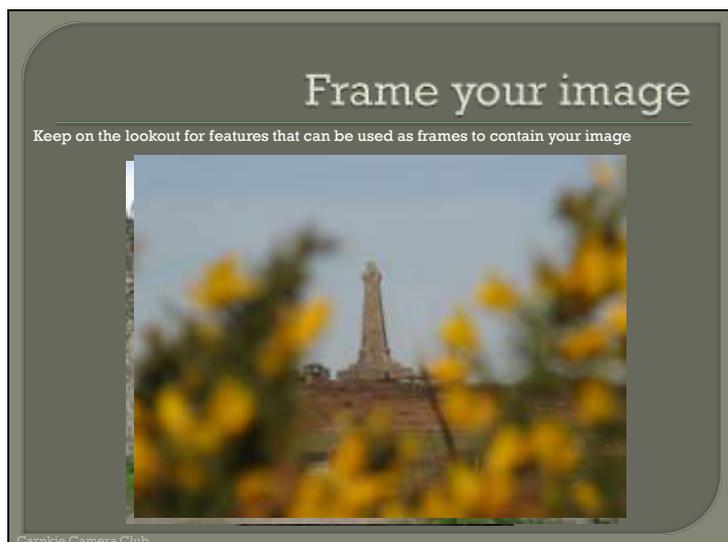


Despite your best efforts to get it right “in-camera”, some photographs may contain elements that you don’t want. Its pretty difficult for example to avoid getting that NO ENTRY sign in this picture – but you can use the CLONE tool to remove it.



Although it's natural to shoot landscapes with the camera held horizontally in the 'landscape' format, turning the camera on its side can totally transform the composition.

Upright pictures are far more energetic because the eye has further to travel from bottom to top. You can also emphasise vertical lines and height to add tension and excitement, or capture rivers and roads snaking away into the distance. The horizontal format is much more restful to look at because it suggests repose, and echoes the horizon itself - that's why it tends to be preferred by landscape photographers.



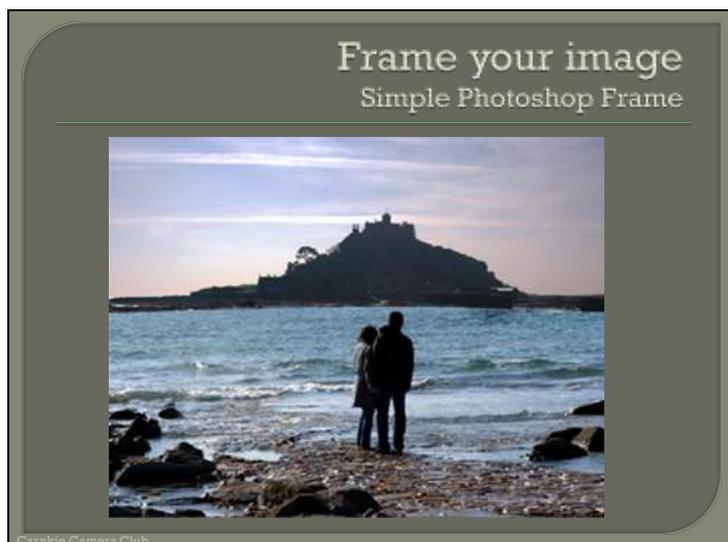
One of the things that you can do to improve your image is to frame the subject. When the subject is framed by other elements in the picture the eye is drawn towards it. The subject is placed within a context and its clear what the main focus of the photograph is.

Using manmade or natural features to frame your pictures is a great way to tighten up the overall composition, get rid of annoying details and direct attention towards your main subject.

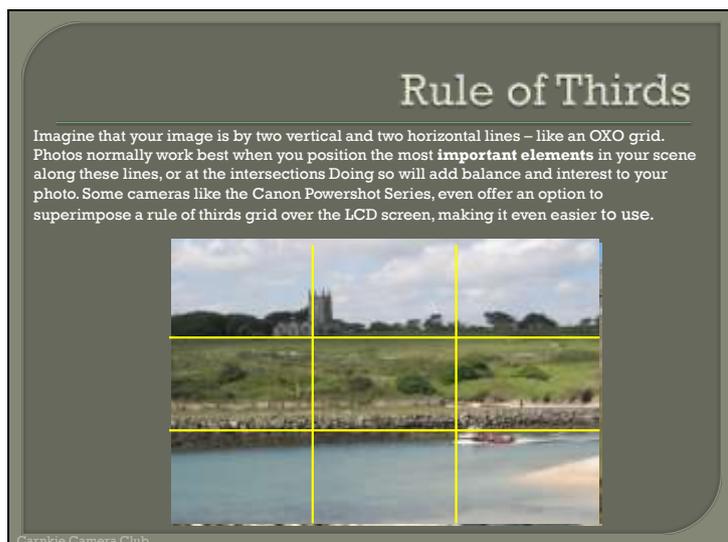
All sorts of things can be used as frames: archways, door and window openings, a hole in a wall, a gap in dense foliage or between trees, the overhanging branches of a tree, bridges, even the play of shadow on a scene.

To make best use of frames you will usually find that a wide-angle lens works best, allowing you to include the frame without obscuring the scene beyond. Set your lens to a small aperture such as $f/11$ or $f/16$ if you want the frame to come out sharp. Alternatively, blur it by setting a wide aperture and focusing carefully on your main subject.

If the frame casts a shadow over you, step beyond it to take a meter reading, otherwise the main scene will be overexposed. In bright conditions the frame itself will record as a silhouette, which can look stunning.



You can add frames, masks and borders using Photoshop Elements



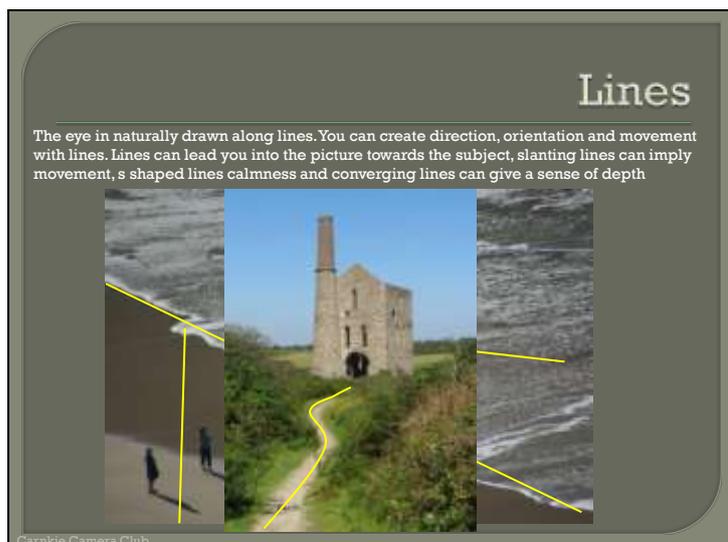
One of the most popular 'rules' in photography is the Rule Of Thirds. It is also popular amongst artists. It works like this:

Imaginary lines are drawn dividing the image into thirds both horizontally and vertically. You place important elements of your composition on the lines, or where these lines intersect.

Using the Rule of Thirds helps produce nicely balanced easy on the eye pictures. Also, as you have to position things relative to the edges of the frame it helps get rid of 'tiny subject surrounded by vast empty space' syndrome.

Once you have got the hang of the Rule of Thirds you will very quickly want to break it ! This is fine.

As I said earlier these 'rules' are best used as guidelines and if you can create a better image by bending or ignoring rules then fire away.



You can use diagonals as leading lines to provide a way into the picture. It's a simple and easy path for the eye to follow to the main subject.

Converging lines created by roads, crop rows, avenues of trees and railway lines are ideal for adding a strong sense of depth, scale and perspective due to the way they rush away to the horizon and seem to move closer together with distance. To make the most of this effect, look straight down the lines and use a wide-angle lens to exaggerate perspective. Include the point where the lines meet - the 'vanishing point' - is also a good idea as it brings the composition to a satisfying conclusion.

Diagonal lines can also add dynamism, suggesting movement and livening up an image. Diagonal lines are more energetic because they contrast strongly with horizontal and vertical elements and carry your eye through the whole scene. By suggesting perspective they also add depth. Lines moving from bottom left to top right work the best because that's natural way for the eye to travel.

One of the most common and graceful lines used in composition is called the S curve. Here's another S curve that forms a diagonal leading line. This picture is also improved with a well-placed centre of interest, and the result is a photograph that's easy to look at.



The height from which you shoot should also be considered. Most photographers take every picture with the camera at eye level, but by kneeling down or standing on a wall you'll get a totally different view of the same scene.



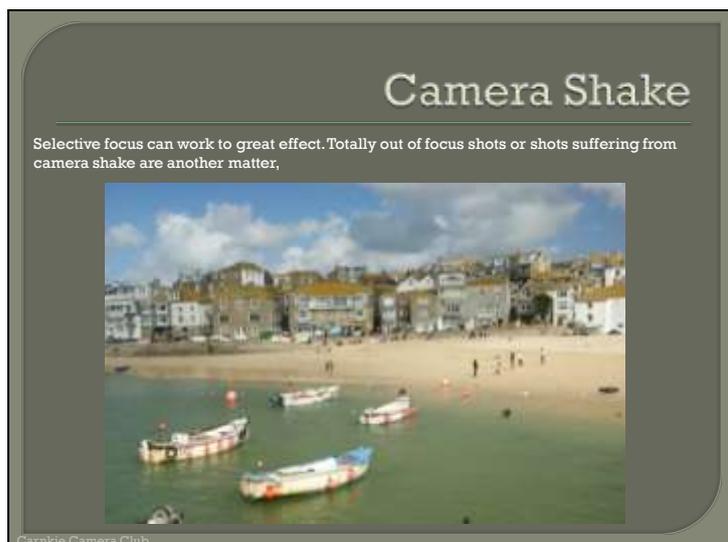
If you take photographs of buildings, looking up then the walls seem to converge as they get higher. Photoshop's transform tool can correct this.



Sloping horizon are best avoided in Landscapes, but can sometimes be effective in giving the impression of movement.



Photoshop's straighten tool, can easily straighten the horizon



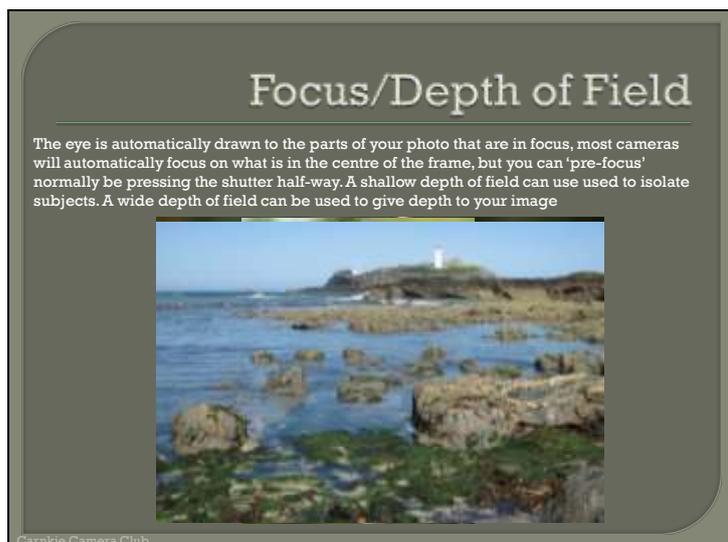
Camera shake is a common problem in photography when telephoto lenses or long shutter speeds (or both) are used.

The resulting images will appear generally blurry (contrast this with motion blur where the subject will appear smeared due to motion)

To avoid images suffering from camera shake when hand holding a camera you can use the following rule of thumb: shutter time must be shorter than 1/focal length

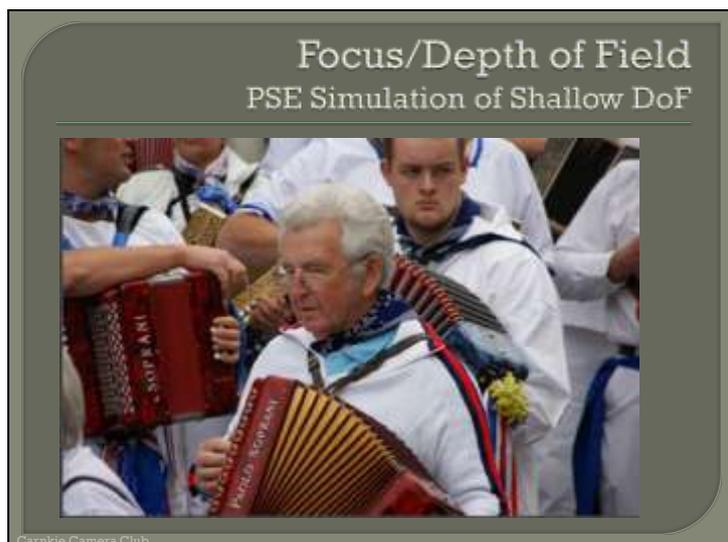
For example, a lens with a focal length of 200 mm can be hand held at shutter times shorter than 1/200 sec. Digital SLRs generally have smaller sensors than 35 mm film, thus before using the 1/focal length rule, the equivalent 35 mm film focal length has to be determined: in the above example, shooting with a digital SLR, shutter time should be shorter than $1/(200 \times 1,6) = 1/320$ sec. Increasing the ISO value will allow one to increase shutter exposure.

All dSLR manufacturers offer camera bodies and/or lenses equipped with some kind of image stabilization to reduce camera shake and similar features can be found in many compact digital cameras. While this can increase the useful (ie. steady) exposure time a by several exposure stops, anti-shake features do not counter motion blur arising from moving subject

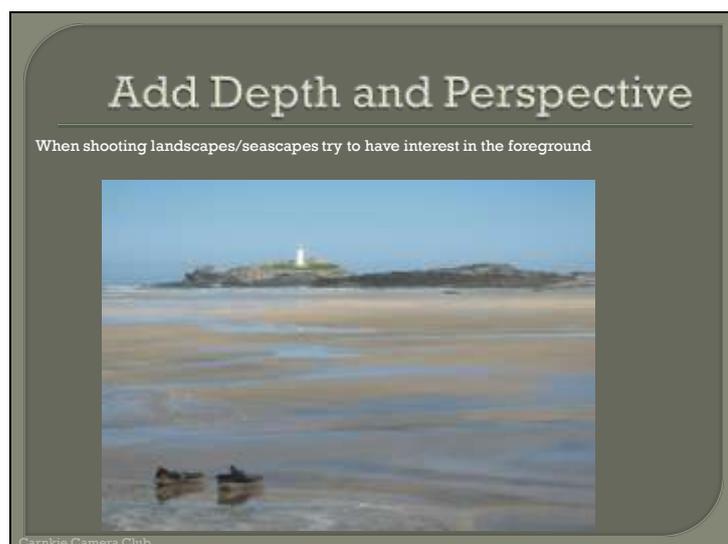


For landscapes you normally want a wide depth of field, that is to say, that you want everything from a few metres away to infinity to be in sharp focus. This can be done by using a narrow aperture f16 or f22, wide-angle lenses also offer the added benefit of extensive depth-of-field.

With some subjects such as portraits a shallow depth of field can be used to isolate the main subject from its surroundings. A longer focal length and wider aperture, say f2.8 or f3.5 can help to achieve this.



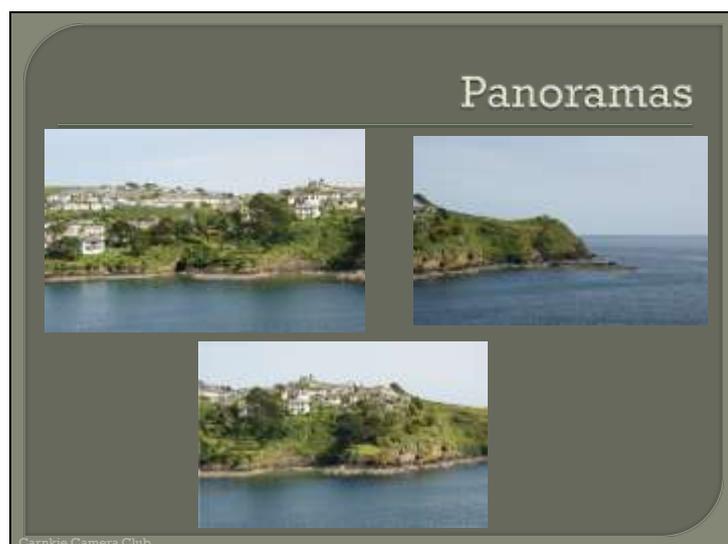
You can make the subject stand out by blurring the background in Photoshop



Scenic pictures can often be improved dramatically simply by including something in the immediate foreground.

Not only does foreground interest help to create a strong feeling of depth and scale, which is vitally important, but it also tightens-up the whole composition by pulling together the different elements in the scene, and provides an obvious entry point into the shot - the bottom is a natural place for the eye to start with conventional picture formats.

All kinds of things can be used as foreground interest - walls, rivers, rocks, hedges and trees, fences, roads, paths, flower beds and so on.



Panoramic shots can be very pleasing. To shoot a panorama you need to shoot several overlapping photos that you can later stitch together.

To do this “properly” the camera should be mounted on a tripod and in portrait orientation to avoid large areas of sky and such. That though introduces another problem. When held vertically the tripod bush on cameras is not at the centre of the axis of rotation and that can cause issues – so the professionals use something called a panoramic head to achieve this.

That said you can still do a pretty good job without any fancy equipment.

For best results the advice is to set both focus and exposure to MANUAL, that way the camera will not shift exposure values and focus between shots and it will make it easier to stitch the individual shots together.

If you can, use a tripod, if not then stand in ONE place and swivel your body between shots and try to keep the camera at the same height and keep the horizon level. What you are trying to do is to emulate the tripod - keep the camera steady and level, and rotate it around a single point.

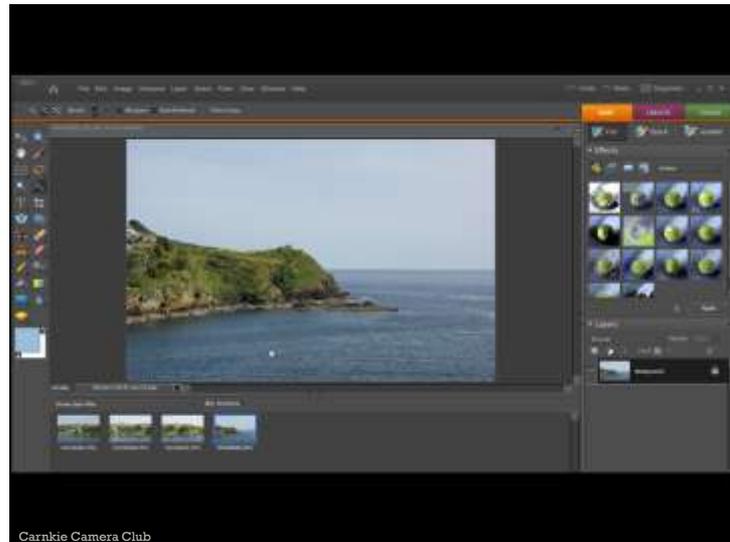
Overlap the frames by a significant amount, this will make matching them up and stitching them together easier, an overlap of 25-50% is ideal.

Once you have the shots then you need to stitch them together on your computer.

Photoshop elements offers something called “Photomerge Panorama” which does all of the hard work for you.

I took these images at Fowey, breaking all the rules in the process. The shots were handheld and the camera was set to auto-focus and aperture priority exposure. As a consequence they images are all slightly tilted in relation to each other and the exposure is a bit variable.

All you have to do is to select the images and then get Photoshop to stitch them together – the rest is automatic – and it makes a decent job.





Determining the "correct" exposure for an image can be a challenging task. We could choose to simply let our camera decide for us, and use the fully automatic settings that are quite sophisticated and often do a reasonably good job. However, this also means to give away part of the creative process to your camera. That said I hardly ever use “manual” mode, Instead, I then to use the “semi-automatic” Program, Aperture and Shutter Priority Modes and the occasional “scene” mode.

Aperture settings determine the Depth of Field (how much of your scene is in focus). Landscape photographers often strive for a very large Depth of Field while Portraits often require a shallow Depth of Field. Being in control of the aperture, the photographer can direct attention and guide the viewer through the image.

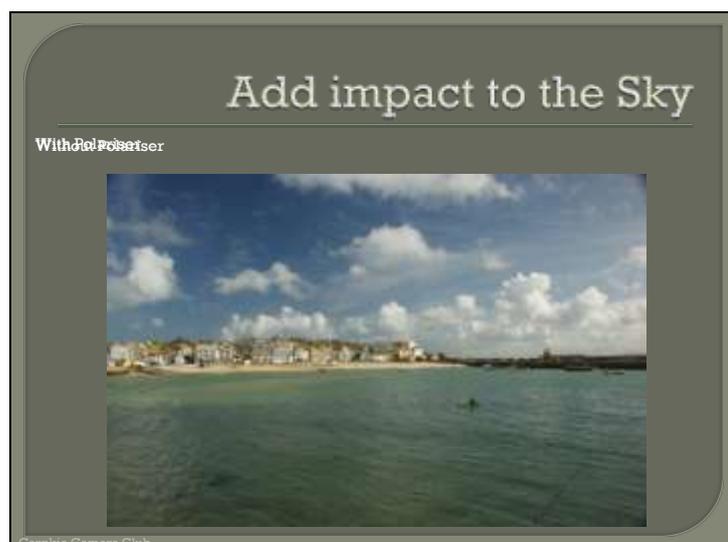
Shutter speed controls how motion of the subject or your camera will look like in your pictures. A slow shutter will blur fast moving subjects and a fast shutter will freeze them.

Certain types of scene can “fool” your camera’s sensor into under exposing or overexposing the scene – watch for this and compensate if needs be – generally speaking its far better to slightly under-expose than over-expose as you can correct this to a degree on the computer.



It's especially tricky to get good exposure across your image when some parts of it are much brighter or darker than others. Even with Film cameras it can be tricky at times and digital cameras are not capable to recording such a wide range of bright and dark as was film (something called the Dynamic Range), but they are improving.

One option you have, if the problem is caused by something like a bright sky and a darker foreground is to use a graduated neutral density (ND), filter. This can be used to darken the sky and prevent it "burning out".



Another way of enhancing the sky is to use a polarising filter. Polarising filters work by suppressing surface reflections from non-metallic objects, by blocking the rays of light from certain directions. The amount of suppression depends on the angle of the reflected light, the rotation of the filter and the amount of polarisation. You also see an increase in colour saturation as the glare caused by the surface reflections often lightens the subject.

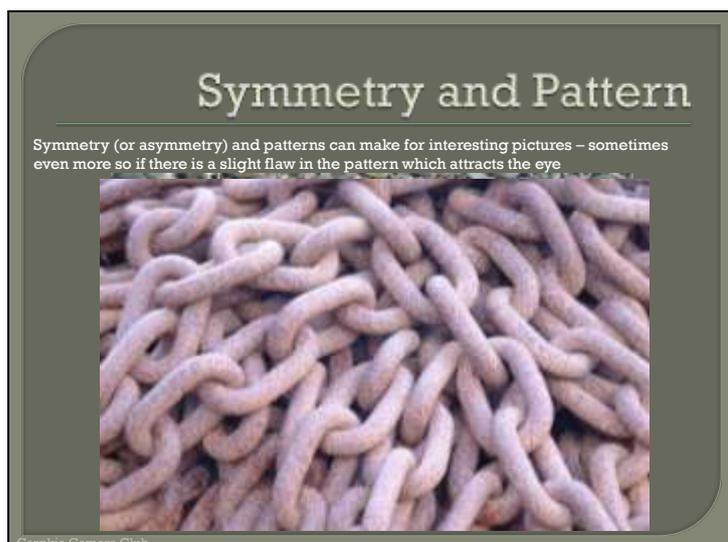
What this means in practice is that you can increase the contrast in skies and cut down reflections from non-metallic objects by placing a polarising filter over the lens and rotating it by varying amounts.

This effect is impossible to achieve with any computer processing afterwards.

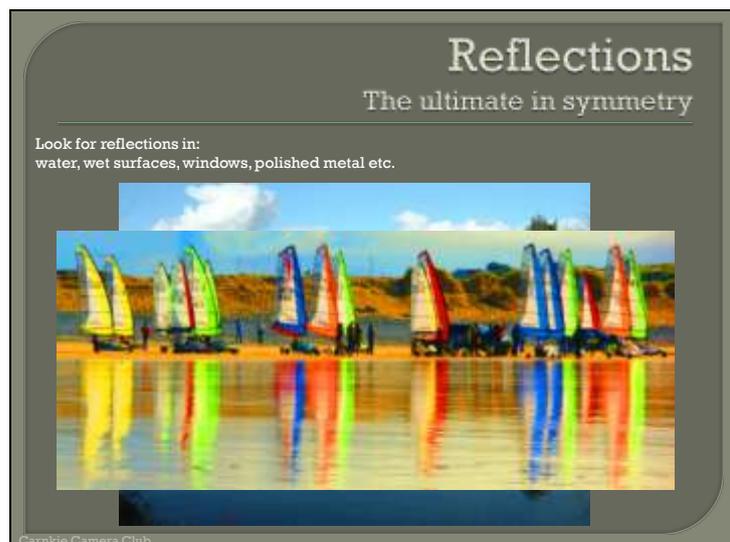


Certain effects – some more subtle than others, can be achieved on your computer afterwards – how convincing these processes are depends to a degree on the original image, your skills and how much time you are prepared to spend “playing” with the image.

Much better to get it right in-camera if you can

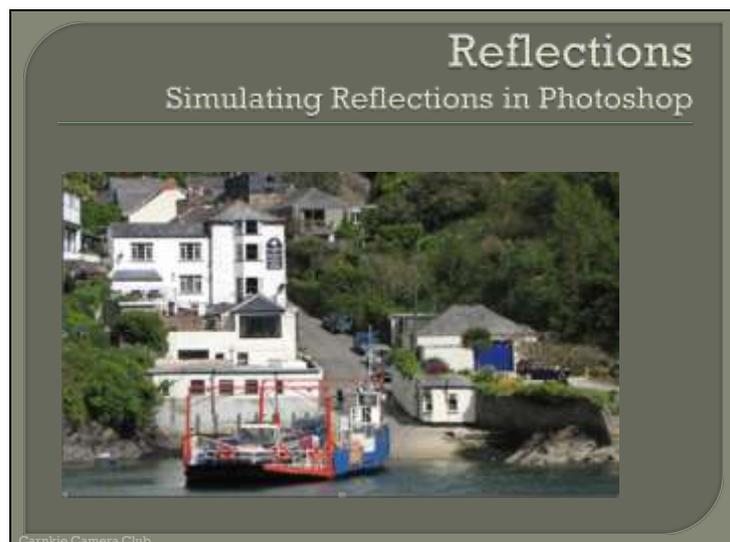


The eye tends to like patterns and symmetry – or asymmetry, slight flaws in the layout can help to make the pattern more interesting .



Reflections are the ultimate in symmetry an pattern and can make an otherwise snap into an interesting photograph.

Reflections are all around, you just have to look for them.



You can add “artificial reflections” using Photoshop, how convincing these is depends on your skills and how much time you are prepared to spend “playing” with the image.

Much better to get it right in-camera if you can



Colour can add to a photo, or even be the subject to the photo itself. With colour, you can create an image that contains visual interest aside from the representational elements of the subject matter.

One method is to look for complementary colours. Simply put, complementary colours are those colours opposite one another on a colour wheel. When positioned in a photograph next to each other, each colour makes the other appear brighter. Look for shots where red and green, yellow and purple, or blue and orange are found together.

The Color Wheel



Photographs containing this type of visual contrast are not only more interesting, they can also highlight a particular subject.

For example, if your subject is a person wearing a red shirt, position them in front of a green tree. Even at a distance, the shirt will nearly jump out of the photograph. It's this colour contrast that catches your eye.

Similar to the use of complementary colours, is the use of analogous colours. This means that the colours are near each other on the colour wheel. When presented near to each other in a photograph, they work together in a harmonious sort of way. Look for things containing red, orange, and yellow; green, blue, and purple; or yellow, yellow-green, and green when you wish to include a soothing effect in your photograph.

A final method of using colour is the idea that colours can be associated with warmth and coolness and that they can convey a mood. The warm colours are yellow, red, and orange. Not only do they convey a feeling of warmth, they can also project emotional warmth and excitement.

The cool colours include blue, green, and violet, which we associate with ice and snow. These colours tend to project peace and calm, as well as a feeling of coolness. Turn to the warm colours in sunsets and campfires, and the cool colours for shaded waterfalls when you want to capture emotions.



Using Photoshop you can manipulate colours. One of the simplest things to do is to change the saturation and/or hue of colours – don't overdo it though.



You can also select areas of colour to manipulate

Black and White

Black and White can also be very effective and relies more on form, shape and texture



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Black and White photos can be very effective and atmospheric. To convert a colour photo to black and white is quite simple, there is a tool in Photoshop elements to do this for you.

After converting the image to Black and white you may want to experiment with the brightness/contrast and perhaps other features such as sepia tint.

Texture

Studies of form, shape and texture can produce some nice shots in themselves



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Light

Morning and Evening

Bright sunlight saturates colour and creates harsh shadows. Overcast and diffused light enhances textures flattering skin tones. The light is "warmer" in the morning and evening and shadows more extreme.





You might have noticed when examining shots after taking them that at times images can come out with an orange, blue, green or yellow etc look to them - despite the fact that to the naked eye the scene looked quite normal. The reason for this is that images from different sources of light have a different 'colour' (or temperature) to them. Fluorescent lighting adds a bluish/green cast to photos whereas tungsten (incandescent/bulbs) lights add an orange tint to photos.

The range in different temperatures ranges from the very cool light of blue sky through to the very warm light of a candle.

We don't generally notice this difference in temperature because our eyes adjust automatically for it. So unless the temperature of the light is very extreme a white sheet of paper will generally look white to us. Digital cameras will normally attempt to make these adjustments automatically (AWB) but sometimes you may need to give it a hand.

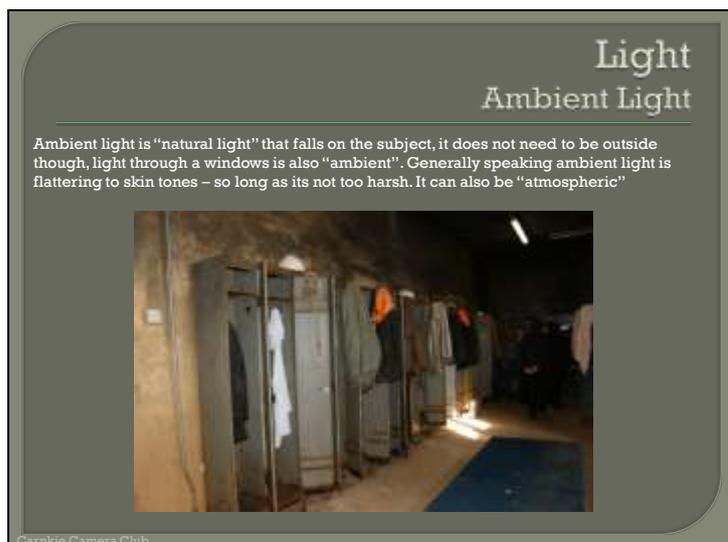
Read more: "Introduction to White Balance" - <http://digital-photography-school.com/introduction-to-white-balance#ixzz0FNfaaBUP&A>

Light Colour Casts

A colour cast is the predominance of a colour, this can be caused by incorrect white balance. Sometimes it can result from bouncing a flash off a coloured wall. Sometimes it can be effective, if its subtle, in sunsets for example.



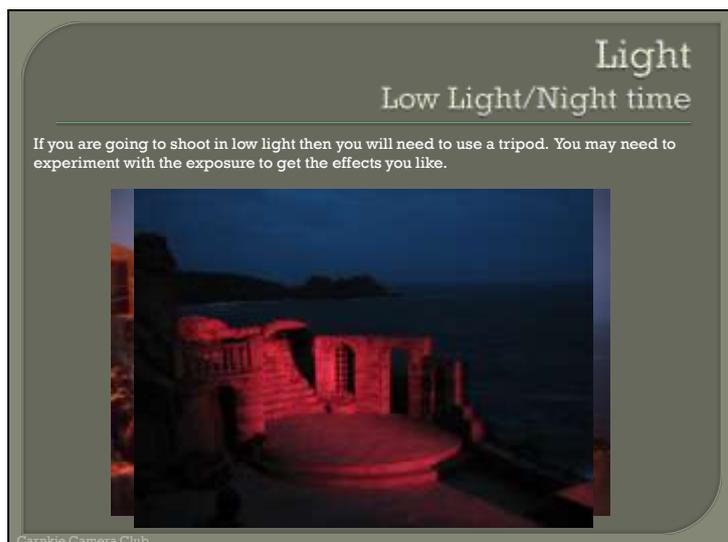
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Ambient light (also called available light or existing light) is a term used by photographers to refer to the natural illumination surrounding a subject or scene.

The use of ambient light, especially directed ambient light, through windows for example, can be very atmospheric.

The actual light levels can be low – which leads into the next topic:-



When shooting in low light there are a number of issues. For a start it's likely that shutter speeds are going to be low, so a tripod is essential.

You are also likely to be using wide apertures with a small depth of field, so focussing is going to be important – but most autofocus systems will struggle in low light and it can be difficult to focus manually as there is not enough light.

Metering is also going to be an issue, it's very difficult to determine correct exposure so you will have to experiment.

At least with digital cameras you can experiment easily and see the results.



Shooting into the light – contra-jour, or backlighting

The two most challenging aspects of photographing backlit subjects are to adequately eliminate flare and ensure correct exposure. These concerns can be allayed with a little practice, good technique and an understanding of the exposure process.

Extreme flare gives rise to a loss of definition and is probably the most significant area requiring attention. It is produced when intense rays of light hit the front element of the lens causing excessive lens refraction, this leads to specula highlights, image softening and loss of definition. Clearly this is to be avoided when photographing backlit subjects, a good lens hood, or even shielding the lens with your hand can work wonders.

Overexposure is a common problem as the brightly-lit background will overly influence the camera's meter; this will turn the subject very dark, indeed almost silhouette like.

Exposure compensation is the answer and it is best to give between one and two stops extra exposure from the "normal" exposure suggested by the camera. Alternatively, take a spot meter reading from the shadow area and expose at the camera's reading this should require no compensation. As exposure for backlit subjects is tricky it is best to practice various exposure metering patterns and overrides until you are comfortable in approaching various back lighting opportunities as they present themselves.

You can also use flash, to light the subject and soften harsh shadows, which leads nicely into...

Flash Fill-in

Fill-in flash can be used in daylight to help balance the light from other light sources and perhaps to reduce harsh shadows (you can also use a reflector in the same way)

With Fill-in Flash



These are the only photos that are not my own !

Flash Stopping Action

Flash can be used to freeze motion, the fastest shutter speed on a camera is normally about $1/2000^{\text{th}}$ of a second – fast – but the duration of the flash is more like $1/10000^{\text{th}}$ of a second – or even faster

Normally the shutter opens, the flash fires, then the shutter closes, since the shutter is open for much longer than the flash duration, if there is enough ambient light you may get a partial exposure of the background.

Rear Curtain Flash Sync takes advantage of the difference in duration of the shutter and flash to freeze motion while giving the impression of movement. With rear curtain Sync the shutter opens and the exposure begins, capturing a normally underexposed blur of motion, then just before the shutter closes, the flash fires, giving the main clear and frozen image

Flash Red Eye

Red-eye is caused by light from the flash bouncing off the retina at the back of the eye. It can be reduced by :-

1. Using an off camera flash
2. Bouncing the flash
3. Using built in red-eye reduction
4. Repairing with software afterwards



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With Photoshop Elements its easy to remove red-eye



Excessively fast shutter speeds can cause a moving subject to appear unnaturally frozen. For instance, a running person may be caught with both feet in the air with all indication of movement lost in the frozen moment.



When a slower shutter speed is selected, a longer time passes from the moment the shutter opens till the moment it closes. More time is available for movement in the subject to be recorded by the camera.

A slightly slower shutter speed will allow the photographer to introduce an element of blur, either in the subject, where, in this example, the feet, which are the fastest moving element in the frame, might be blurred while the rest of the runner remains sharp. The camera has also been “panned” to follow the moving runner so the background is blurred.



Some cameras offer the ability to fire the flash at just before the *second* curtain *closes*. This is called *rear* (or *second*) *curtain sync*, and it is used to freeze motion at the end of the exposure. When making longer exposures while firing a flash, rear curtain sync creates the effect of motion blur trailing the main subject



With Photoshop elements its possible to add motion blur to an image to give the impression of speed, so lets get this traction engine looking like its moving...



My thoughts:

Orchid in focus

Shallow DoF blurs background – good, but its clear enough to be able to see that its by the coast

Main subject on one of the “third” lines

Diagonal line of beach leads to the main subject



Nice tones throughout the image, detail in both sky, foreground and foreground.
Perhaps slightly under-exposed
Tree at intersection of "thirds"
Path forms nice lead-in S curve



First thing to strike you is that the main part of the image is very overexposed
Wall is off focus – may have got way with it if the main image had been stronger



Direct flash has been used – note the obvious and harsh shadow
Shallow DoF – not sure if it may be too shallow.



A contra-jour shot, some flaring, does that add or detract ?

Contrast is low – could have been boosted a bit

Would a ND filter/Polariser have helped increase contrast and avoided so much burn-out?

Some nice converging lead in lines

Horizon not quite level

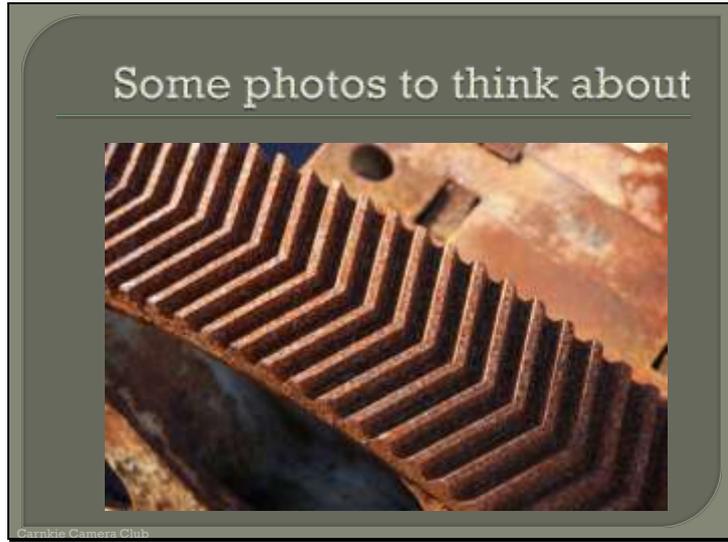


Nicely exposed

Main subject too near centre of frame ? – seems to work well though

Gate adds foreground interest – not sure about the wire right-front.

Good DoF



Nice study
Strong lines
DoF isolates the subject matter



The framing could be a lot better, the corner shop should either have been included or completely excluded.

Image is not vertical, it slopes to the right.

The house (main subject) is not very strong.

Blurred spots (raindrops on lens?)

Plastic bag around camera has encroached into the image, top right



Quite a nice study, well exposed and lends itself well to a B&W image
Good DoF and interest in foreground, midground and distance
Approximates to "thirds"



Unusual view well exposed and lots of interest, but...

Horizon is not level

Nasty wall or something bottom left



Nice subject but colours could be stronger ?

Are the steps and post behind the woman are distracting?

Subject nicely positioned in the frame



Quite a nice landscape with good DoF and foreground interest

Horizon too central to the frame ?

That lamp-post – ugh – a better angle may have been able to exclude the post



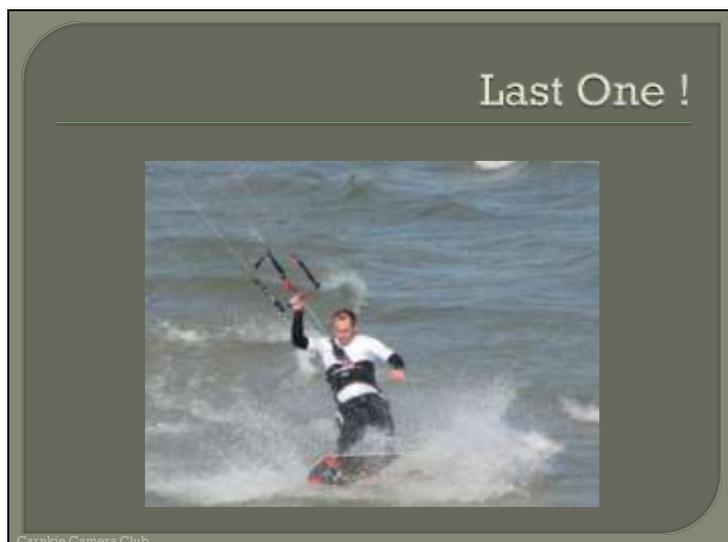
I like this one

The low angle is unusual and the arrangement of the boats provides both lead in lines and asymmetry

The contrasting blue and orange add to the interest.

Good DOF throughout.

The large orange float attracts the eye, which is then led through the rope to the boat and to the lighthouse beyond.



Not so sure about this.

Fast shutter speed has frozen the action but there is not much sense of scale or movement

Is the cropping too tight – what are the lines leading to, top left ?

Could do better !