

DIGIT

THE MAGAZINE OF THE ROYAL PHOTOGRAPHIC SOCIETY DIGITAL IMAGING GROUP
Number 78 2021: Issue 1

Upcoming DIG events

Details of all DIG events are available on the Group's website at
tinyurl.com/sxzl487



Digital Imaging: South East
Saturday 27 March 2021
Online



Hans Strand
Forces that Create &
Mould the Land

www.rps.org/events/regions/south-east/2021/march/hans-strand/

Digital Imaging: Online
Saturday 3 April 2021
Online



Colin Harrison
Creative Flower
Photography Masterclass

www.rps.org/DIGONLINE17

Digital Imaging: North West
Sunday 11 April 2021
Online



Professor Terry Hewitt
Lightroom Classic/CC Exposed
An Introduction to Adobe Lightroom

www.rps.org/dignw-apr2021

Digital Imaging: South East
Saturday 24 April 2021
Online



Valda Bailey

'Photographing Beyond the Imagination'

Valda Bailey in Conversation with Janet Haines

www.rps.org/digse-valda

Digital Imaging: Yorks & NE
Saturday 24 Apr 2021
Online



Tony North
The Art of Macro

[rps.org/groups/digital-imaging/
dig-yorkshire-and-north-east/events/](http://rps.org/groups/digital-imaging/dig-yorkshire-and-north-east/events/)

Digital Imaging: Online
Saturday 24 April 2021
Online



John Paul Caponigro
The Wonderful Things Printing
Can Do For You and Your Images

www.rps.org/DIGONLINE18

Digital Imaging: Online
Saturday 26 June 2021
Online



Guy Tal

Creativity & Expression
in Photography

www.rps.org/DIGONLINE21

Digital Imaging: Yorks & NE
Saturday 2 October 2021
York YO23 1BW



Brian McCarthy FRPS
Images from a Small Shed

[www.rps.org/events/groups/
digital-imaging/2021/
october/talk-by-brian-mccarthy/](http://www.rps.org/events/groups/digital-imaging/2021/october/talk-by-brian-mccarthy/)

**Event programmes
continue to be
disrupted as a result of
the COVID pandemic,
please check on the
RPS website or with
the Centre Organiser
for the latest status of
any event.**

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From the chair

Ian Race



The Digital Imaging Group was originally set up to assist members with the adoption of digital cameras. From time to time I get asked hasn't the group served its purpose and isn't it time to

disband DIG.

I have, however, spent all my working life introducing and putting into production new technologies. And with digital technologies especially, they are continuously being improved or new ones being invented or crafted.

This applies to the technologies employed in image creation today. In all areas they are continually changing. And the joy of this is that firstly we never stop learning and secondly there is always something new to try and to experiment with.

The change to digital imaging technologies is not complete but it is a journey and progression. Of discoveries, of refinement, of success and nearly successful and of enabling our visions to become real.

Editorial

Gary Beaton



As I write this (in the UK) there are glimpses of a light at the end of the tunnel. Spring is around the corner, the days are getting longer, plants are sprouting....and there is talk of lockdown restrictions being

relaxed! Naturally, this brings thoughts of things to do and places to go when it's possible again and, of course, some of the photographic projects that have been on the back-burner over recent months.

But if you seek additional inspiration, I am sure that our contributors to this issue will be a superb source of ideas. Adam Mullender shows us how capable current drones are at capturing the unique view that is available at height, and describes the permissions needed to operate a drone commercially. Remaining with the aeronautical theme, Carolyn Russo, a photographer and museum specialist at the Smithsonian's National Air and Space Museum in Washington, D.C., spotted the art and beauty of airport towers and tells of her travels to visit and photograph some of these fascinating buildings. Paul Bather, rather like Carolyn, sees beauty and patterns in buildings, and shares with us some that he has captured during walks around London.

Whilst many of use commercial products to process our images, Paul Herbert has been happily using open-source alternatives which offer many of the same functions, and he tells us of his experiences. Finally, Tim Pile shares with us his passion for photographing the nude in the landscape and his images made of (and with) model Lulu, and of their quest for photographic distinctions.

Our DIGIT Challenge in this issue is from Zoe Harbord, and shows how she made good use of what was around her during lockdown.

I hope, like me, you will find inspiration in these pages and I wish you happy reading.



Beach

Man has the dream of flight ...but so has the photographer



ADAM MULLENDER discovered the new viewpoint offered by a drone on the slopes when on holiday. Back home, he took his passion for aerial photography to new heights.

I'm sure you will agree with me that life in the world we live in is not the same as it used to be. That being said, it still keeps its wonder and beauty if we choose to look at it. This is why I believe that all it takes it a different perspective.

My name is Adam Mullender, I'm 36 from Blackpool situated in Lancashire, North West of England. From a young age I have always been a

creative person, but working in the construction industry I had never been able to express this side of me until I found my love for photography, especially with aerial photography.

As a keen snowboarder, from early 2017, I started trying to capture my trips on film. Using traditional methods of helmet cameras, selfie sticks and mobile phones, the footage always seemed

MAN HAS THE DREAM OF FLIGHT



Lancaster



Pool

to be poor and disappointing. Snowboarding requires 100% of your attention and I found it too difficult to capture our moments while also enjoying the sport. I decided to look for a better solution. After a few hours of research, I came across an article regarding drones. It was perfect, a camera that could fly itself and be programmed to do pretty much everything I was asking for. Using a drone on the slopes for a few days I realised the potential it had. I was impressed with the camera quality and images that could be produced, sometimes straight off the camera but more often after editing.

After getting back from the first trip with this amazing piece of kit I decided to get straight out there and take some images. The shots I was taking looked a decent quality but average in colour tones and slightly flat at first, but after hours of editing the images came to life. The drone was able to give a new perspective of the area, something I had not seen before. There's a huge difference in the angle of view when shooting from the ground compared to shooting hundreds of feet up in the air. The same scenery seems to gain another dimension! The more time I spent up in the sky, the more love I gained for this new-found hobby. I decided to take this new love of aerial photography more seriously and decided to launch 'Adam Mullender Photography' on Facebook and was surprised by how well it

took off (not just the drone but the new business) and I've never looked back. I now send my work around the world to customers who like to have these unique images in their home or workplace.

Aerial photography

Over the months after my first flight, I became passionate about aerial photography. I was out flying on a regular basis and became familiar with certain editing suites. The more flights I flew, the more unique views I would see. I wanted everyone to enjoy these stunning views that not many had seen before, but it wasn't as straightforward as I had first hoped. I soon realised drones are classed as aircraft, just like the planes and helicopters that we see flying around the airspace every day, and I had to obey certain and very strict laws. I realised that particular images that I wanted to shoot would require permission from the Civil Aviation Authority (CAA) due to the location being in restricted air space or no-fly zones. The only way the CAA would grant permission to fly in these areas is to hold a PFCO (Permission for Commercial Operations), this will also allow you to use a drone for commercial purposes. In 2018, after months of studying and hours of flights, I took a lengthy and challenging course which focused on subjects such as aviation laws, weather, public safety, geography and finished off with a practical

MAN HAS THE DREAM OF FLIGHT



Coniston

and written test. I also had to write a complicated and in-depth Operations Manual before I could apply to the CAA to be granted my PfCO. After 3 weeks of submitting all my paperwork I was finally granted my PfCO from the CAA, this was a huge milestone in my newly found passion for aerial photography.

Piloting a small aircraft at high altitude can bring its own challenges let alone trying to use a digital camera at the same time. Planning is essential before every shoot. The main things I've got to keep a close eye on are the weather, aviation laws of the area and other airspace users especially military and emergency service aircraft, as these



Blackpool sunset

tend to fly in the same airspace as myself. Public safety is paramount and to ensure this there are strict rules regarding take off, landing and flying over people. I'm often time limited as to when I can shoot due to the weather, especially the rain and high winds, therefore aerial photography requires timely planning with great consideration given to flight times, this means before every flight I need to be clear about the shot I want to achieve.

Technique

The most important thing to remember here is that you're shooting from a moving aircraft instead of from stable ground. This simply means most of the time (unless you're blessed with perfect flying conditions) you need use a fast shutter speed to achieve sharp, crisp images. However, using these fast shutter speeds still doesn't guarantee a good image. While flying the aircraft and with limited flight times I find it's difficult to check the image before you're back on the ground and you've transferred the shots to a computer, so I try to get as many images as I can with each flight. Over the years I've discarded thousands of unusable images, but I suppose this is the beauty with digital photography. I normally

tend to shoot with an exposure time of 1/250 second or less. Long exposure shots are possible in certain conditions if you get lucky, but I find it much easier to warp and blur clouds if I want to have a long exposure effect in my final image. I don't shy away from using a higher ISO setting, frequently I find myself raising the ISO levels to 400 or 600. Obviously shooting at night these levels are even higher and sometimes as high as a 1000 ISO, although I'd consider this high for a drone, as most use fairly small sensors, which are not as good as the ones found in traditional DSLR cameras. Having a sharp image, even if it has more noise and less dynamic range is more important to me than a having a blurred image. With advanced programs for post-capture editing it's easy to add as much colour back into images as I need for my style of work. I often find myself using the Auto Exposure Bracketing (AEB) setting, this allows me to take multiple shots of the same subject but with different exposures. Shooting in this setting gives me more options in later editing. It allows me to take the best exposed parts of a set of images and then blend them together in Photoshop, to give me a more satisfying final image.

Unlike traditional DSLR cameras one of the

MAN HAS THE DREAM OF FLIGHT



Tower sunrise

downsides to using drones for photography is that most have a fixed lens. I personally use the MP2 aircraft with a fixed lens equivalent to a 24mm. If I want to shoot wider angle scenes my preferred option is to shoot multiple shots of the same image but at varying angles by tilting the gimbal which I will later stitch together using Photoshop. Some drones do have a built-in panoramic option but I find that using these built-in settings tends to warp the image in an unusual way. If you're going to shoot such wide-angle aerial shots you'll need to be aware of your white balance settings, never shoot with the white balance on automatic, you don't want the white balance of each piece of the final image you stitch together to be different because it will be difficult and sometimes even impossible to stitch into a single image. I'm sure most of you are aware but shooting in RAW is a must as it allows much more control over the image in later post-processing. I have spent untold hours crafting my digital skills and know-how, to extract every last detail in an image to bring it to life and find beauty in something that has almost become lost or forgotten. In order to achieve this, I have taught myself to use multiple programs such as Lightroom and Photoshop to extract the shadows and properly expose the highlights. The programmes allow me to draw more colour out of photographs which is vital in my style of photography. A lot of the time I like to saturate

colours to make my images pop and give more of a kick to my work, but I do also like a more natural looking image. I feel the more time I put into editing, the more I create my own style. I think creating your own style is important to any photographer as I see photography as an art form rather than a science. It makes our work individual and unique, something I believe we shouldn't try to replicate. Individuality is key in photography if you ask me.

When climbing to new heights, everything below can take a different shape, by using a drone I have the ability to play up those shapes and objects I see, and use those geomatics to inspire my composition. I pre-plan my composition by using Google Maps. It helps me compose my images before I even take to the sky, saving me valuable flight time. With most drones, flight times are generally short, usually between 20-30mins, so anything I can do before the flight is a bonus. With a main subject already in mind, I can look at the area on Google Maps searching for leading lines, other subjects I may want in the shoot, and generally plan my overall composition without leaving my home.

Drones have also opened up the option of easily accessible 'top-down shots' (straight down) without expensive rigs. I love these shots; it gives a great new perspective of images that were very rarely previously shot, for obvious reasons.



As drones with great cameras become more and more accessible to the general public, photographers everywhere are taking advantage of the unique viewpoint that can be offered. Thanks to these compact flying machines, there is a whole subset of photography that lets photographers take to the sky and capture

Preston temple
dramatic vertical perspectives and stunning far-off landscapes, that no one has ever seen before! This latest form of photography has certainly got me hooked and I can't wait to see what other pilots will capture with them.

See more of Adam's work at [facebook.com/AdamMullenderPhotography](https://www.facebook.com/AdamMullenderPhotography).



Ronald Reagan Washington National Airport, Virginia, United States, DCA/KDCA (Carolyn Russo/Smithsonian)

Art of the Airport Tower



CAROLYN J. RUSSO spotted an unlikely source of beauty, that might pass many of us by, while she sat on an aircraft at an airport. From that moment in 2006 she developed a passion for airport towers which has culminated in a exhibit which is now travelling the world.

A reoccurring theme in my work is the transformation of the ordinary - whether photographing a mound of dirt, a cloud in the sky, or aviation artefacts. The first time I noticed this with air traffic control towers was in 2006,

when the now defunct LaGuardia, New York, tower came into full view outside my aircraft seat window. The creamy concrete texture and circular windows of the tower became Swiss cheese.

ART OF THE AIRPORT TOWER

The journey of this work began with the research and selection of towers, which was both addictive and time-consuming. Choices were based on visual aesthetics, historical background, height, popularity and location. Initially, my focus was towers within the United States, and I worked closely with the Federal Aviation Administration for access. But I soon found the scope was too limited, so I cast my net across the globe. Did this project include all the significant towers in the world? Regrettably, it does not, due to time and budget constraints.

Non-travellers have access to the landside of an airport, which is the side of an airport where the ticket counters, curbside drop-off areas and parking lots are located. The airside of the airport is the most secure section, with departure gates, aircraft runways, and taxiways. Obtaining access to these restricted areas began with requests to airport authorities, air traffic control agencies, and civil aviation authorities. Sometimes permission came within a few days, sometimes months later; in certain cases, permission came only with the inclusion of an insurance certificate of upwards of \$20 million – a reminder of the potential risks near runways.

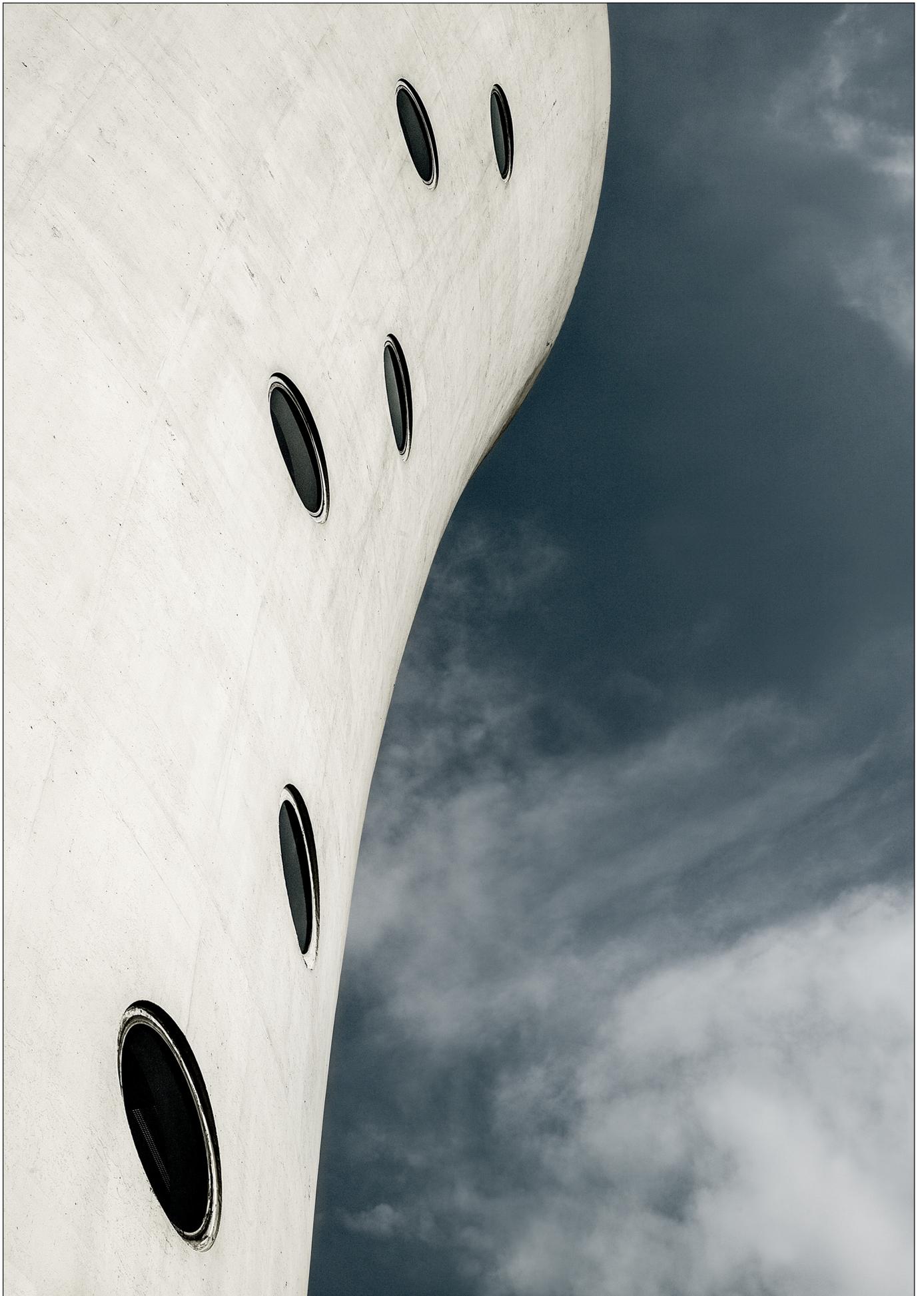
As I photographed each tower, I sought out the attributes that defined it, just as I do when making a portrait. The sun acted as a studio light and revealed different forms or features as the quality of light changed throughout the session. This required foresight and planning as I had to be there during the right time of day. My challenges ranged from finding a viewpoint, whether on the tarmac or from the top of a nearby airport parking lot, to completing my work in the time allotted for the photo session. On one trip far from home, the airport authorities initially requested to see every frame in my digital camera before leaving the site - suspicious of my interest in their airport tower. But after spending time together over coffee and a few cigarettes (I don't smoke now) and common conversation about airplanes and family life, I gained their trust and they no longer asked to inspect my images. And of course, weather was a challenge, and I often prayed to the weather Gods. Cloudy days were always a gift because of the shifting light and beautiful backdrops.

In some instances, I tried to humanize the towers, focusing on their anthropomorphic



East Fortune Field, Scotland, United Kingdom (Carolyn Russo/Smithsonian)

ART OF THE AIRPORT TOWER



LaGuardia Airport, New York, United States (Carolyn Russo/Smithsonian)



Oslo Airport, Oslo, Norway, OSL/ENGM (Carolyn Russo/Smithsonian)

ART OF THE AIRPORT TOWER



Fort Worth Alliance Airport, Texas, United States, AFW/KAFW (Carolyn Russo/Smithsonian)

properties. Others became abstractions. The Paris-Orly tower reminded me of a 'birdie' from a badminton game; the John F. Kennedy-New York tower a swan; the back of the Oslo-Gardermoen tower resembled a human spine. Drawing from my kids' enthusiasm for computer games at that time, the Geneva tower reminded me of a figure from 'Mind Blocks.' Sometimes I associated a tower with its culture. The top of the Paris-Charles de Gaulle tower, for example, made me think of an artist's beret; the London Heathrow tower an English gentlemen's black top hat; the Abu Dhabi tower a flowing robe rising up from the desert.

The inactive towers, which are now landmarks, I photographed in a documentary style. As relics of the past, I tried to capture them in their natural state rather than as architectural abstractions. To me, these towers exude a profound knowledge of a bygone era and are eyewitnesses to aviation history. Older towers such as the those at East Fortune Field in Scotland, Barcelona El-Prat Airport and Abu Dhabi International Airport were found by chance. At one airport, I was asked not to photograph their older tower, as they wanted to showcase the newer structure. I went ahead and photographed the older tower anyway to share my vision and the tower's value.

Even though some towers are on historic records, they still require the maintenance and funds to preserve them. Others that are not on a 'save' list risk demolition. Witnessing the demolition of the Wittman tower in Oshkosh, Wisconsin, was a bittersweet moment with the local townspeople present to say goodbye. A newer tower was built with the height and new technology to accommodate the changing airport environment and the thousands of visitors at the Experimental Aircraft Association's annual EAA AirVenture Oshkosh. During one week each August, the Oshkosh airport is the busiest airport in the world. But the older tower was a significant fixture, part of the airport history to pilots and visitors alike, and in the hearts of those living in the surrounding community. The older tower was a central meeting point, and it served as a backdrop in photo albums that marked airport memories. For one married couple, the old Wittman tower was the location of their first date. Could the tower have been

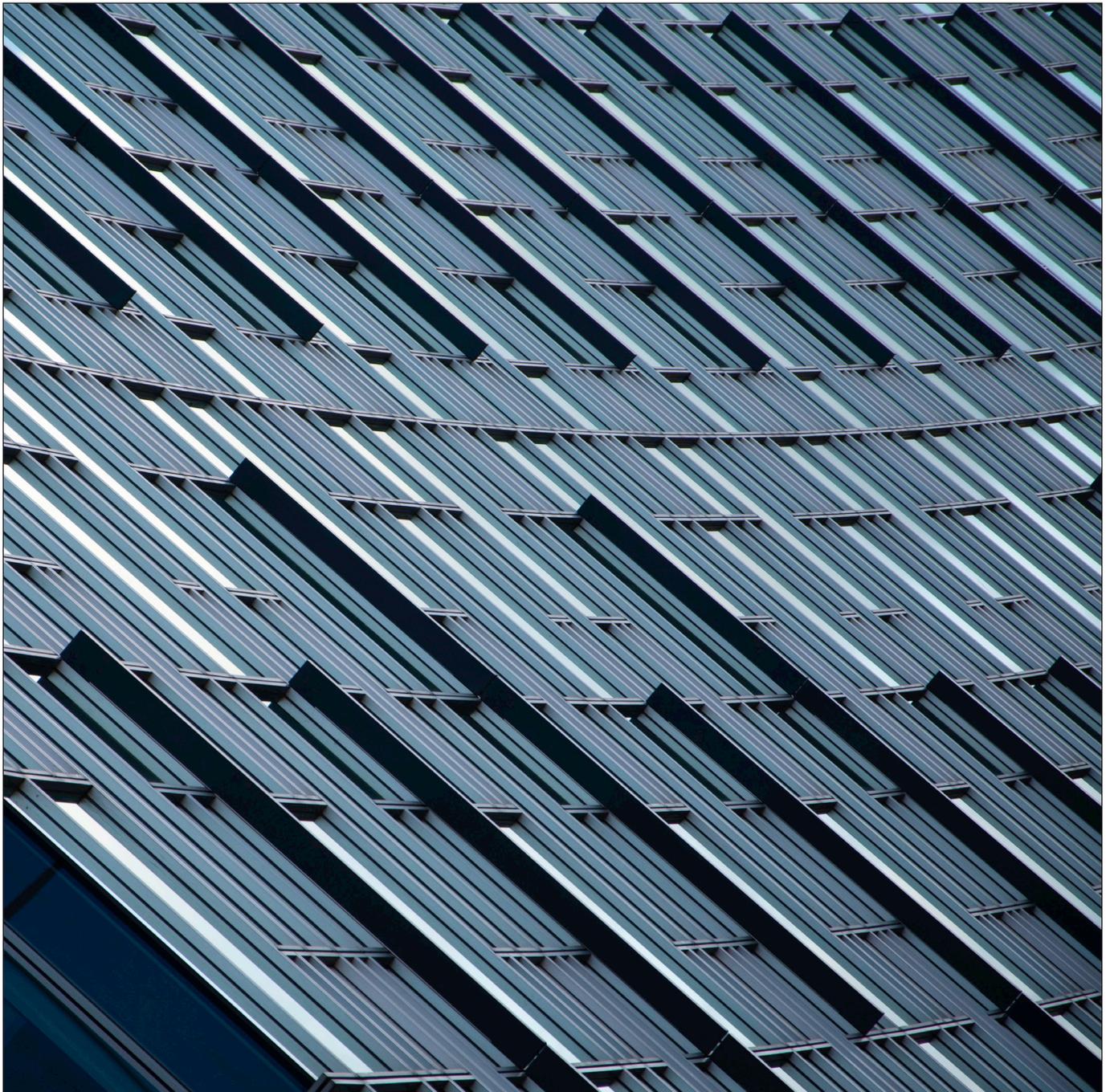
preserved? Perhaps.

With this project, the airport tower became symbolic to me. I viewed each tower as both an essential aviation artefact and a vessel with a powerful presence - watching over the vastness of the airport and sky; a non-judgmental cultural greeter; a choreographer or conductor; a mother bird caring for her flock; an omniscient, intelligent structure keeping humans safe. In the presence of the tower, I sensed the complex orchestration of humans. Through my dealings with the air traffic control community, I felt the inter-connectedness of this highly specialized job: air traffic controllers share common ground regardless of culture. And I felt in some small way that my project brought the controllers a little bit closer regardless of their location on the planet. Through these images, I hoped to bring a heightened awareness to the simple beauty of these structures and a call for the preservation of historic towers, knowing that one day they may vanish from the airport landscape.

With the recent COVID-19 travel restrictions in place, I have thought a lot about these airport towers and my ongoing desire to humanize them. Do the towers notice a reduction in aircraft and visitors? Is there now a sense of loneliness in their presence? Surely, the towers also look forward to the once normal and more vibrant activity of airports again. It's comforting to know - they stand by ready to serve us.

Art of the Airport Tower features photographs of 85 airport towers and is a book (Smithsonian Press) and exhibit. The photographs premiered at the Smithsonian's National Air and Space Museum in Washington, D.C. and journeyed across the United States as a travelling exhibit. Currently, Art of the Airport Tower is with the Australian-based travelling exhibition company for an international tour.

Carolyn Russo has worked at the Smithsonian's National Air and Space Museum in Washington, D.C. since 1988 as a photographer and museum specialist. She is the author of four photography books and is currently the curator of the museum's art collection. Russo holds degrees in Photography with a BFA and MA in Art History with a focus on American Art.



City Lines

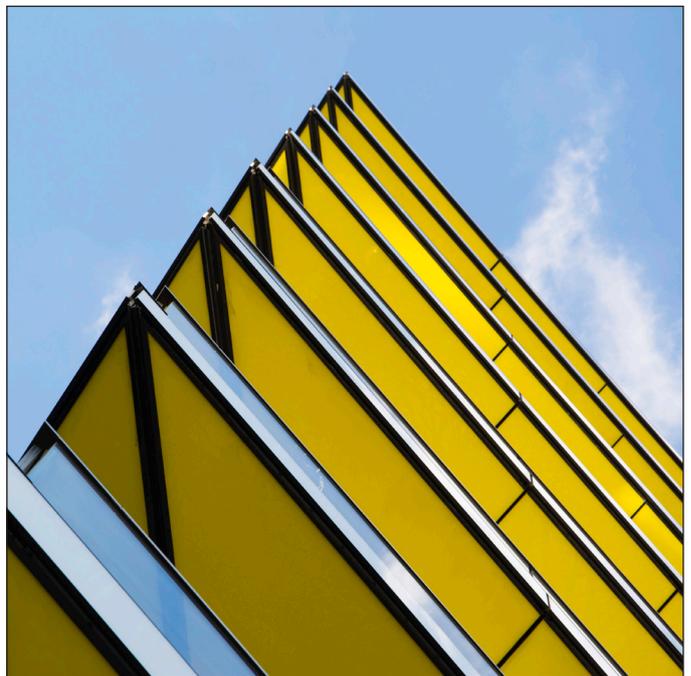
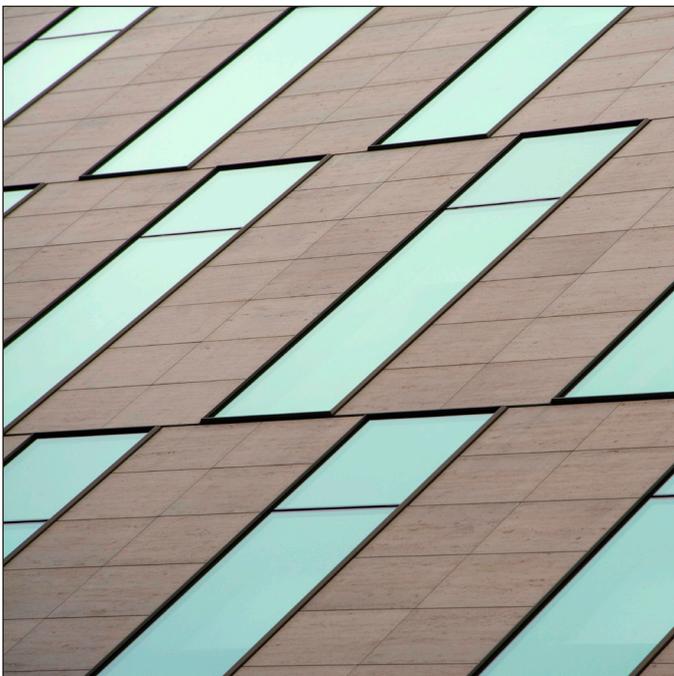
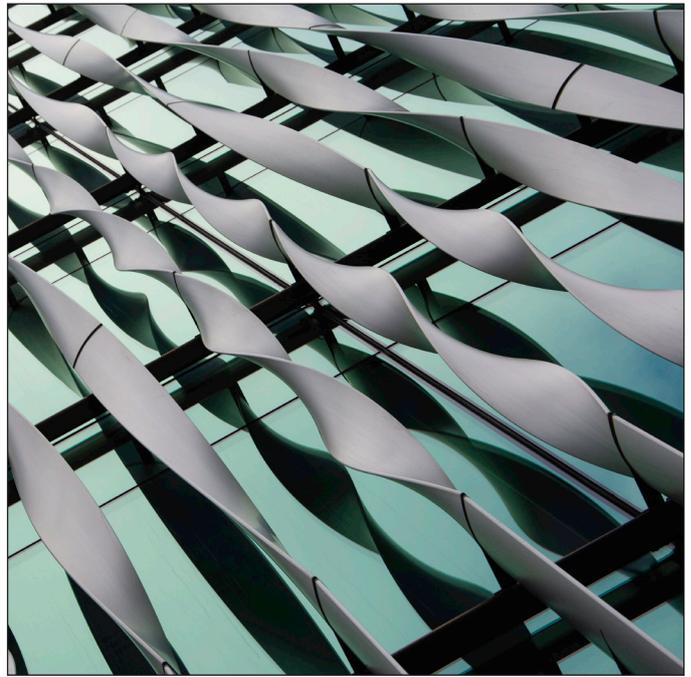
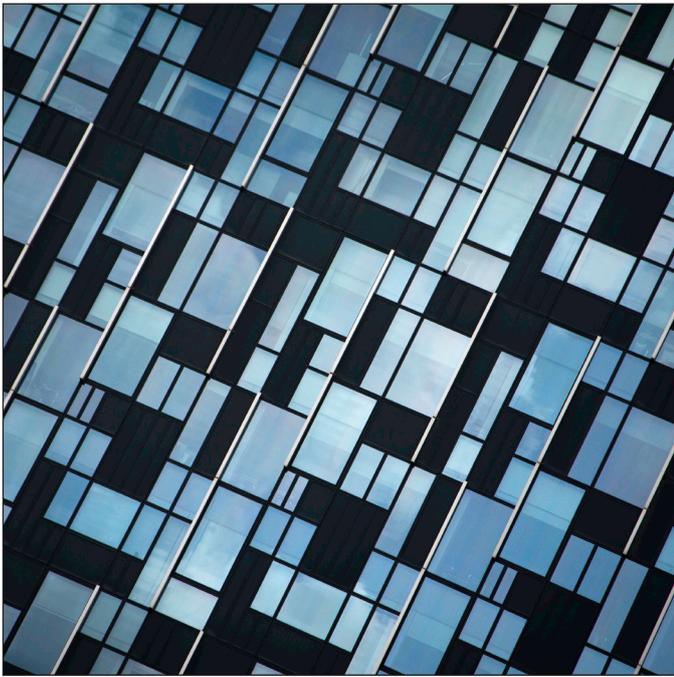
City blocks



For most of us, the most hazardous aspect of a wander around town is probably the traffic on the roads. For PAUL BATHER ARPS, it brings a risk of neck injury because he is always looking skywards and spotting the patterns in the buildings around him.

There is no other way to put it, I love taking pictures of buildings, or rather parts of them. The different materials, textures and finishes can all

look fantastic under an array of different natural conditions at different times, day or night, rain or shine.



Clockwise from top left, Window Boxes, Twisted, London Bridge Angles, City Window Reflections

I like the appeal of a building be it the shape size or different materials used. Some of my pictures focus on the use of mirrors and windows within the building, whereas for others I'll use my lens to examine brickwork and interesting - and intricate - structures.

My photos are all about manipulating and showing buildings or part of buildings in a different way trying to showcase whenever possible shadows, movement of light, tone and textures, bringing a different dimension to the normal image of an office block or building development.

I am lucky to live on the south eastern outskirts

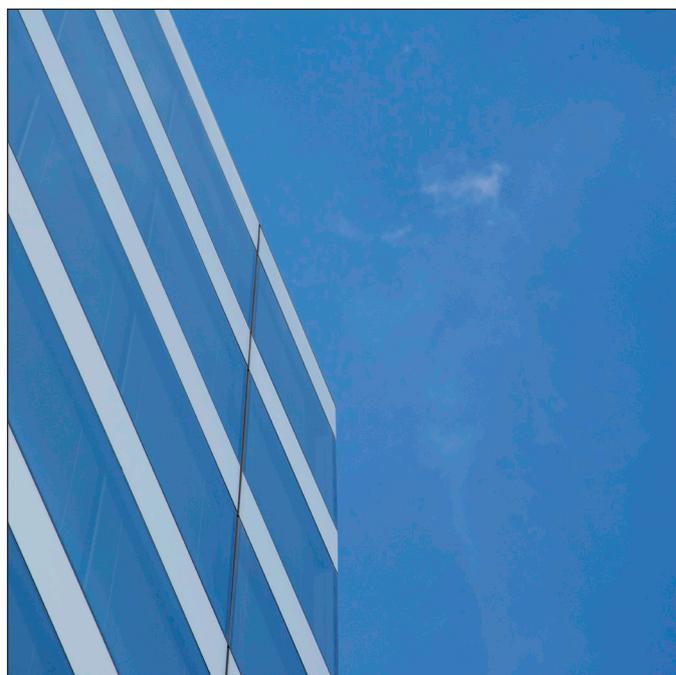
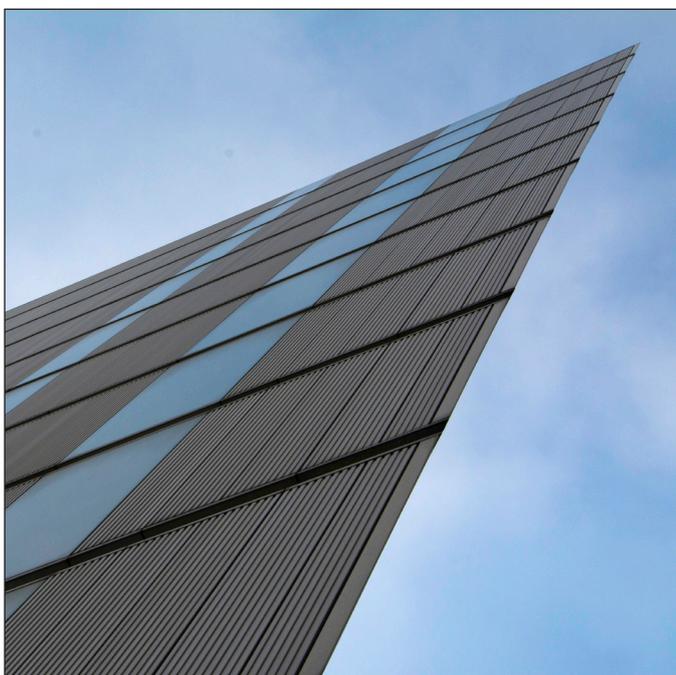
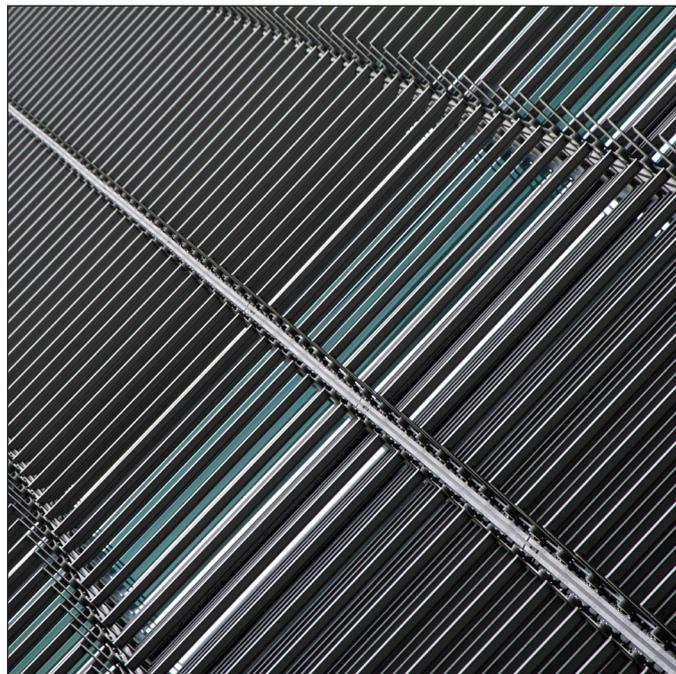
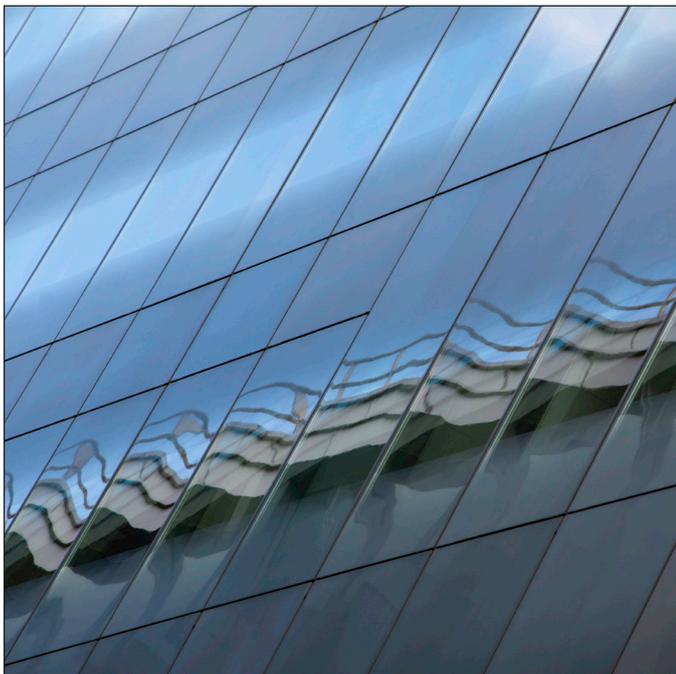
of London with good transport links into the centre of the capital where a large number of recent building developments have taken place including Bishopsgate, Greenwich peninsula and Stratford Olympic park. I love spending a few hours wandering around the city and finding new developments in order to capture different images.

The range of images that you can take of buildings are endless and can introduce an exciting range of abstract imagery to your photographic arsenal.

Achieving the look

To achieve the look I am after, I currently use a

CITY BLOCKS



Clockwise from top left, City Reflections, Window Bars, City Sky Light, What's the Point

Nikon 18-140mm zoom lens on my crop sensor Nikon D7500 or D7100. When I have found my building 'subject', I like to focus on a particular detail of a building such as a group of windows, and explore it using the lens to emphasize and highlight certain aspects.

I try to look around the whole external of the building and specifically look for horizontal or diagonal lines to draw attention to the subject. These different or unusual shapes can also add interest to the buildings. Once I have spotted an unusual or striking shape in a structure, I will use different angles and arrangements to draw attention to it looking whenever possible to highlight any specific details.

I shoot handheld as I find a tripod or even a monopod can attract unwanted attention. My posture and stance can attract some funny looks - but these unusual angles that I use to take my photos can really help to bring out certain light tones and building aspects.

I will try a variety different angles by leaning back and looking straight up or by adjusting the angle of the camera. I have not taken to lying on the floor yet, but that may come soon. I am always looking for ways to showcase different and unusual elements of the structure.

I often use the Photographers Ephemeris app on my phone to assist with the direction of light

on a particular time and day and to indicate the path of the sun, although shooting in a city location with buildings often in shadow this is not essential. For me, I like to work more instinctively looking for how the light reacts and draws attention to areas of a building.

Light, as always, plays an essential role. A front-lit building can look flat, which is something I try to avoid, and I try to shoot with side light whenever possible. Using side lighting can add drama, and assist in revealing the surface texture and details of a building,

Time of day can also make a big difference in how the building is lit. By shooting early or late in the day you may be able to avoid direct overhead light, which can form hard shadows and high contrast, unless it is the effect you are looking for.

A polarising filter can also assist to give you the look that you are after. It can help darken the sky and can often eliminate reflections you decide that you do not want to have in your image. It will also help deepen the colours in your photos - emphasising textures and tone. I also find a lens hood is a useful accessory as not only will it help to reduce unnecessary glare it can also assist in protecting the lens from bashing against walls.

I shoot in RAW, and then using Lightroom I will add contrast, vibrancy and boost saturation if necessary. I will also convert to a square crop as I find this helps me in my final composition, although this is personal choice.

Shooting in RAW helps me to capture the full range of tones from highlight to shadow, I will occasionally underexpose in order to keep the detail in areas, especially with highly reflective buildings. For some of my images, I will add a slight vignette to further draw attention to aspects.

Screenshot 1 shows my usual settings including using an ISO of 400, an aperture of $f/8$ if possible, to ensure sufficient detail and speed of 1/640 second, or sufficiently high to exclude the possibility of camera shake as I am not using a tripod or monopod.

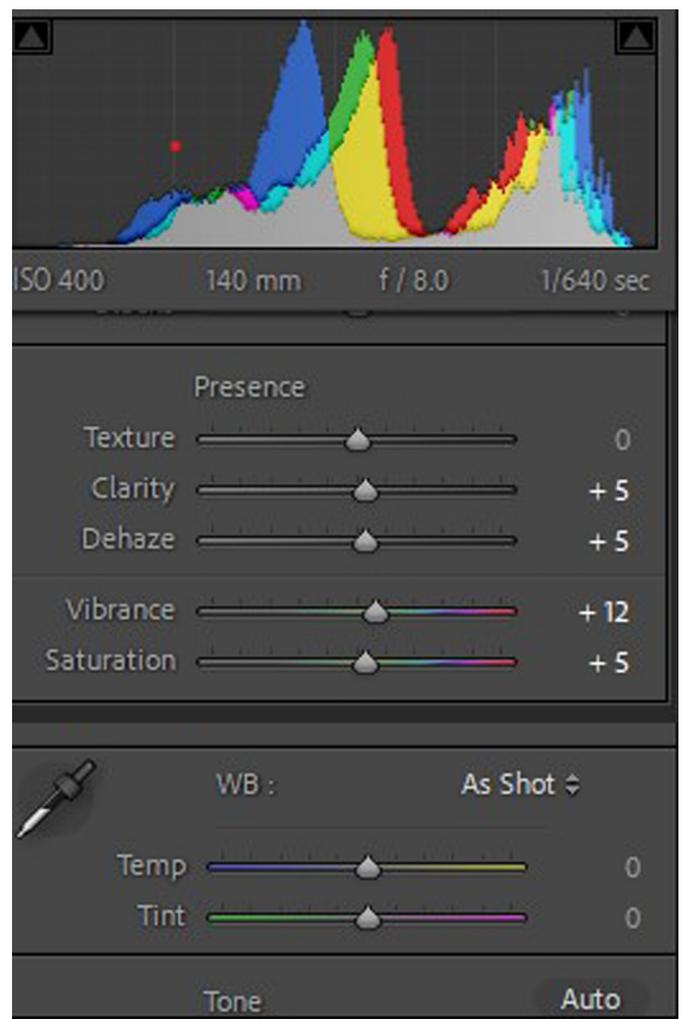
Screenshot 2 shows the addition of clarity +5, dehaze +5, vibrancy +12 and saturation +5. I will then add a dark vignette edge usually -7 before moving onto Photoshop.

These are the settings that I use, however,

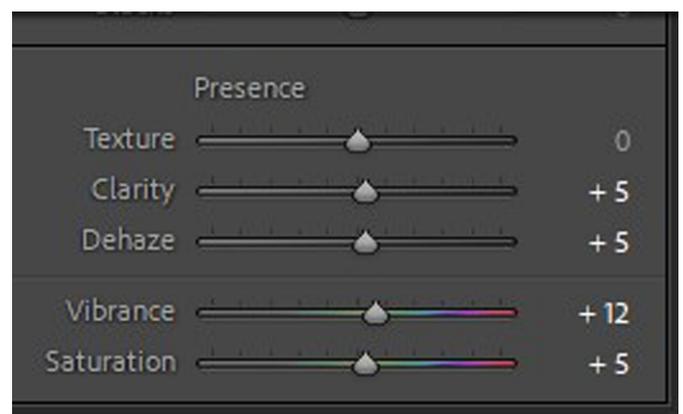
experimentation to find your own preferred finishing effect is highly recommended. I have spent many hours playing around with the settings to get the look I am after.

Once I am happy with the image, I will then transfer the image to Photoshop for cloning out unwanted details or dust specks and resizing the image for final printing if required.

While I am lucky to live so close to the capital, wherever you live I am sure that there will be buildings to explore - old and new.



Screenshot 1



Screenshot 2



Open-source post-processing



So many of us are used to using commercial software for processing our images, it's easy to overlook the alternatives. PAUL HERBERT ARPS discovered some open-source products which offer familiar post-processing functionality.

Why on earth would anyone decide not to use software from the market leader (Adobe) for their image post-processing?

It's a good question. In my case, eleven years ago I bought a 'proper' digital SLR camera and restarted photography as a hobby. For several years my images were mostly holiday snaps and editing was limited to cropping and basic adjustments of JPG files using Google Picasa. The camera saved images in both RAW and JPG format, but I had no idea what the RAW files were for. Only when I joined the Jersey Photographic Club (JPC) seven years ago and started entering club competitions did I realise that I needed to find out more about 'post-processing'.

Most JPC members used Adobe Lightroom and Photoshop, but because I wasn't sure how much post-processing I would actually do, I didn't want to buy anything without knowing more. I decided to look at open-source alternatives. This approach meant I could try different packages for as long as I wanted for free, until I knew that post-processing was going to be part of my photography.

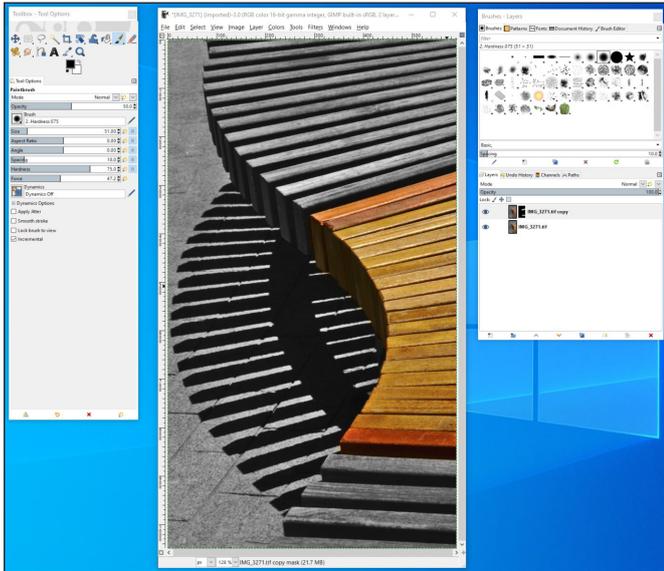
I found two open source applications that seemed to have features similar to Adobe Photoshop and Lightroom. These were the GIMP (GNU Image

Manipulation Program, from www.gimp.org), and darktable (from www.darktable.org), both licensed under the GNU General Public License for free use.

GIMP was first publicly released (for Linux operating system) in February 1996 as an open-source alternative to Photoshop - it is now available for use on Linux, Apple Mac, and Windows operating systems. It was easy to install on my Windows laptop and there was documentation to help with editing images. I had already downloaded Google's Nik Collection software (when it was freely available) and discovered I could use GIMP as an interface for the individual programs (Colour Efex 4, Silver Efex Pro 2, Sharpener Pro 3).

I use GIMP with the working image in a central window and two floating windows displaying the tools I use most (screenshot 1). If I need to work on fine details I expand the image to fill my main screen and move the tool windows to a second screen. I use GIMP for detailed cloning, editing that involves multiple layers, final adjustments to contrast, conversion to black and white, and final sharpening before printing using Nik Collection programs, and resizing images. I also use the G'Mic-Qt plugin for GIMP to do black and white

OPEN-SOURCE POST-PROCESSING



Screenshot 1

conversions.

However, darktable is the application I use for RAW file post-processing. To quote from its website, 'darktable is an open source photography workflow application and raw developer. A virtual lighttable and darkroom for photographers. It manages your digital negatives in a database, lets you view them through a zoomable lighttable and enables you to develop raw images and enhance them'. Darktable is fully colour managed and

includes built-in ICC profile support for sRGB, Adobe RGB, XYZ and linear RGB colour spaces and offers similar functions to those available in Lightroom.

Darktable was first released in 2009. When I started using darktable in late 2013 it wasn't available as a 'native' Windows version. I needed to use my IT knowledge to install it on a Linux 'virtual machine' on my Windows laptop and create file shares which allowed the program to read RAW files from, and write back processed images to, the laptop's file system. I enjoyed this challenge, but a native Windows version of darktable is now available making things much easier. I processed my first competition entries for the JPC in February 2014: within a few months I had achieved several commended / highly commended awards in JPC Projected Digital Image competitions. I felt that I was on the right track and decided to continue with my open-source trial.

Like any new software program there was a learning curve. I found navigating the layout of the main views straightforward. I used the darktable manual for the basics, supplemented by Youtube videos for detail about the 'how to'. I



Patched up



Waiting for the tide

started with those by Robert Hutton but I now use Bruce Williams' comprehensive library of videos. I find it relatively easy to transfer principles from Photoshop / Lightroom tutorials to the GIMP / darktable environment.

There is an 'unofficial' darktable Facebook group for discussions about techniques and overcoming specific issues, and a dedicated section on *pixls.us* where developers share ideas. For example, darktable developer Aurélien Pierre described in some detail his rationale for darktable using a 'scene-referred' workflow, which does as much processing as possible using linear RGB operations before compression. It's the place to discover the mathematical concepts behind the 'pixelpipe'!

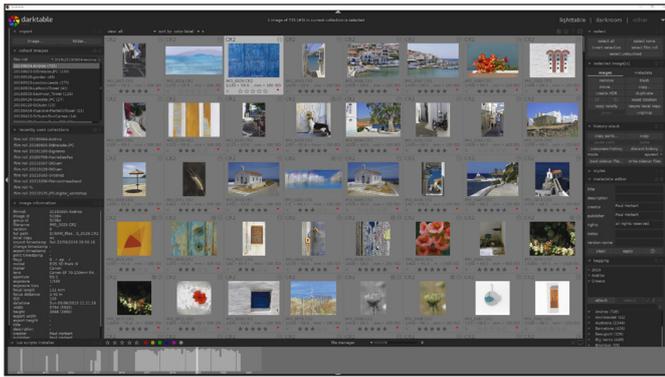
As a novice post-processor, darktable's non-destructive editing feature appealed to me as the RAW file remains untouched. A record of all edits is recorded in a combination of a 'sidecar' file (.xmp) and the darktable database, so different edits on virtual copies of the RAW file have minimal storage overhead, with no risk of messing up the original!

Darktable has two main 'views' which mimic analogue photography; the 'lighttable' view for

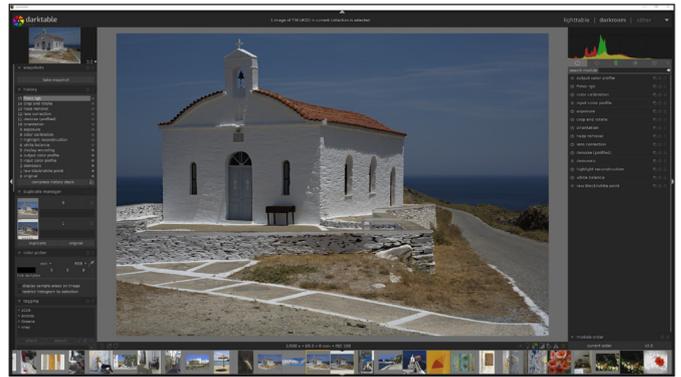
viewing, managing, and cataloguing images; the 'darkroom' view where the processing is done. These views - which look similar to those in Adobe Lightroom - can be configured by the user in terms of the appearance (themes), width of the side panels, and keyboard shortcuts. The panels can be hidden to just display the visible image(s).

The lighttable (see screenshot 2) is used to import / export images, manage image collections using star / colour ratings, manage image metadata and tags, view detailed image information, manage styles, and also to copy an image's 'processing history' to one or more others. A chart at the bottom of the view allows further refinement of displayed images by date. From the lighttable you can select an image to process in the 'darkroom'. There are also options to view images in map view, as a slideshow, and also to use a tethered camera (although this has limited camera support and is not available on Windows).

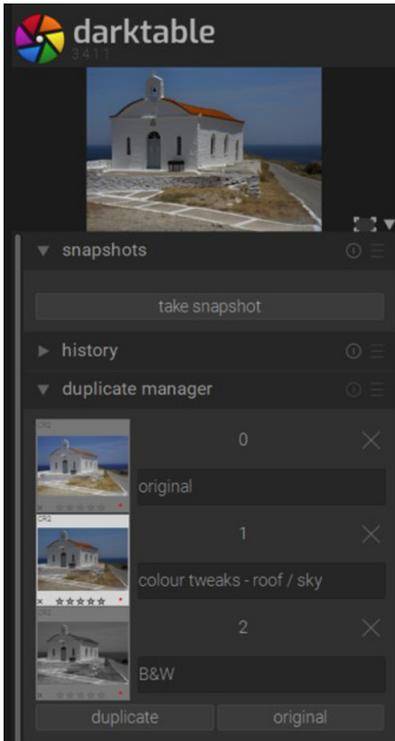
The darkroom (see screenshot 3) is used to process a single image. As well as showing the editing 'modules' it is used to display and manage: the edit history stack, history 'snapshots', image duplicates / virtual copies (see screenshot 4), EXIF information, the colour picker, tags, and



Screenshot 2



Screenshot 3



Screenshot 4 process.

masks used by the processing modules. It includes options to toggle focus peaking mode, ISO 12646 colour assessment conditions (a white border around the image), RAW overexposed indicator, clipping indicator, and soft proofing. A row of images at the bottom of the view allows single-click selection of a different image to

The basic element of image processing in darktable is the processing 'module'. If you use Adobe Photoshop, the idea of a processing module in darktable is like an adjustment layer in Photoshop - both make an incremental adjustment to the image, building on top of the previous adjustments. The modules act on the input RAW image in a default sequence (the 'pixelpipe') to process it, each performing a different operation on the image data: changing the sequence in which the modules are applied affects the final output.

From the outset I was impressed by the comprehensive masking and blend mode capability available in most of darkroom modules. There is a choice of drawn masks such as 'brush', 'circle', 'path', 'gradient' etc.; parametric masks which allow a mask to be constructed using various data channels such as Lab, RGB, hue, saturation etc.; and blend modes such as 'normal',

'multiply', 'overlay', 'screen' and so on, which affect the mix between a module's input values and its output. These blend modes can be applied either to an entire image or selectively in combination with drawn and/or parametric masks. These features offer a powerful way to make adjustments to specific parts of an image.

In 2014 darktable had support for my camera's White Balance presets and Noise profile, but no lens correction profile for its lens. I addressed this by taking images at different apertures / focal lengths and getting them added to the open-source Lensfun database used by darktable for lens distortion data. Later I bought another camera and got its White Balance presets included in darktable by providing RAW files to the developers. As well as fixing my problems, this also benefits other darktable users with the same kit.

There are some things that darktable doesn't offer. While it does have a print option, this isn't available in Windows: instead I use Canon Digital Photo Professional 4 software to print. I did try using GIMP to print but the Canon software has more options. Some proprietary RAW file formats are not yet supported directly.

Having invested time in learning how to use this open source software I have no regrets about trying it out, and I will continue to use darktable - alongside GIMP - to process my images. I'm happy to be doing something a bit different, ploughing my own furrow as it were: in fact, darktable's processing options might allow me to produce images with that unknown 'edge' - who knows?

I am very pleased with the results that I get from the combination of darktable and GIMP and have had several relatively successful images, including 'Patched up' (see page 23) and 'Symmetric shadows' (see next page). I'm particularly proud of my Fine Art print panel which was recommended

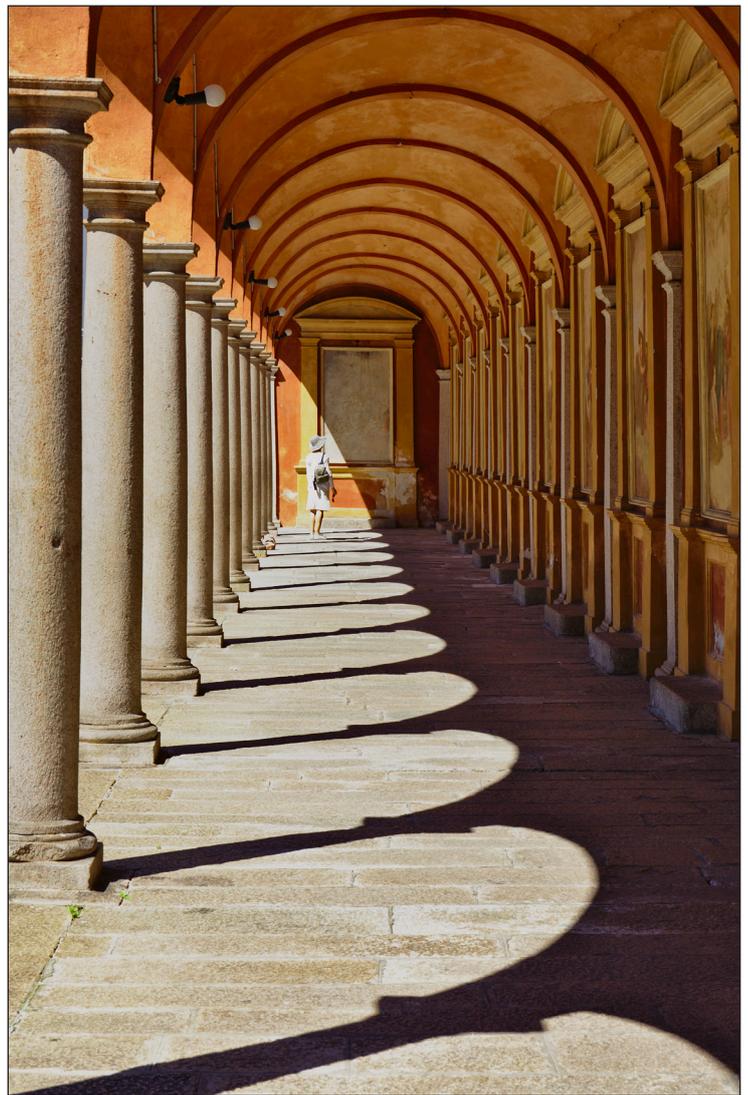
OPEN-SOURCE POST-PROCESSING

for an ARPS Distinction in March 2020 and being awarded a Selector's Ribbon by Martin Addison FRPS in the DIG 2021 Print Exhibition.

In the future I want to learn more about the many processing options in darktable and in particular to develop my approach for making monochrome images.

Although darktable is free to use under a GNU licence, I now make a small voluntary donation to support the ongoing development of the software. I always look forward to the major releases of darktable which are traditionally scheduled for Christmas Day (a nice present), there are also perhaps one or two smaller / maintenance releases during the year.

Seven years after first installing darktable, I am still the only member of the JPC to use it for post-processing (some people have expressed mild interest). This may be partly because darktable isn't a mainstream product and there are fewer people around to provide specific advice on its use. But for any photographer dipping their toe into the post-processing world, especially those on a budget or wanting to be different - darktable / GIMP open-source software offers some great opportunities.



Symmetric shadows



Paul's successful ARPS panel



Lulu - a modern muse



Over the last seven years, TIM PILE has developed a close working relationship with model Lulu. Their collaborative working methods deliver a unique style and helped Tim to achieve a number of photographic distinctions. He is currently working towards an FRPS submission with images they have produced.

As somebody with a degree in mathematics and a long career in information technology, who only had a passing interest in art, nobody is more surprised than me of my artistic journey. My proudest achievement was being invited to become a member of the London Salon of Photography, whose history dates back to 1892, their motto says that they seek 'distinct evidence of artistic feeling and execution' in imagery.

I began digital photography in 2008, and joined Smethwick Photography Society with the intention of improving my photography. I met and worked quite a lot with Dinah Jayes ARPS, a friendship and working relationship that continues to the present day, and was introduced into the world of model photography. I soon realised that I didn't have the patience or



skill to learn studio lighting, plus in a studio you are usually starting with a blank canvas so have to bring new ideas and props along every time, to put together to create images. Conversely, if you photograph on location, the world is your oyster in terms of where to shoot, and instead of posing against a plain white background a model can integrate or juxtapose herself with various elements in the environment, making for much more interesting images.

A chance encounter

I enjoy sharing my images with others, and regularly give talks to camera clubs and to RPS special interest groups. Camera club talks are held in the evenings, so after giving a talk I would sometimes have a long journey home, and would often take the opportunity to instead stay locally overnight, which would then give me the opportunity to photograph in a new area, and also seek out new models in that area.

In April 2014 I gave a talk to Bognor Regis Camera Club, and the day after I had booked a model who I knew of, but had not worked with before; her name was Lulu Lockhart. We got on very well together, and it soon became obvious that we shared the same creative goals in terms of the types of images we wanted to produce. So began a long and creatively productive working relationship, and a majority of my

photography nowadays is with Lulu.

Working collaboratively

There is a viewpoint, which I do not subscribe to, that a model is there to be photographed, and that their role is to pose in the manner prescribed by the photographer. The view is that this is how models posed for artists in the past, so that's how it should be done now. History does not support this view. Elizabeth Siddal, the muse of Dante Gabriel Rossetti, is a classic example of this. She was, like many muses, also a talented artist, but not fully acknowledged during her lifetime.

The other extreme is where a photographer hires a professional model, who goes through a series of well rehearsed poses. This is a good option for beginner photographers, who have enough to think about with their camera settings, lighting and composition, but can obviously lead to different photographers having very similar images if they work with the same model.

Our working method is a different approach. Lulu, like many of the models I have worked with, is an extremely creative young woman, and so it makes sense to pool our skills and create the best images we can between us. Sometimes the pose or composition will be her idea, and sometimes mine.



Working on location

First I have to find suitable locations. As many of our images are thought of as 'nudes in the landscape' I will get some location ideas from landscape photographers, as well as using search engines, websites and the many photographers'

guide books that are available.

Once we arrive at a location we look at where the public could appear from. We don't wish to offend anybody or have onlookers. The public are not expecting to come across us, but we are constantly looking out for and listening for them,



which reduces the chance of being surprised by a member of the public.

It is not an offence to be naked in public in England and Wales, where it does become an offence if it can be proved that there is an intention to upset or shock. Given that we would immediately cover up if we became aware of a member of the public, then there is obviously no intent.

We only work in western European countries, as they are more likely to have a similar attitude to nudity as the UK. Places we have worked together include all the UK countries, Ireland, Iceland, France, Corsica, Canary Islands, Sicily, Tuscany and Cyprus.

We will look for potential image compositions, bearing in mind that some of these may only work if the sun is out or behind clouds, so if the light is variable we know which area to work in with different lighting conditions.

Once I've taken test shots of various compositions we will discuss which ones work best, vertical or horizontal, wide or a closer shot, and also where Lulu will be placed in the image and the type of poses that will work best.

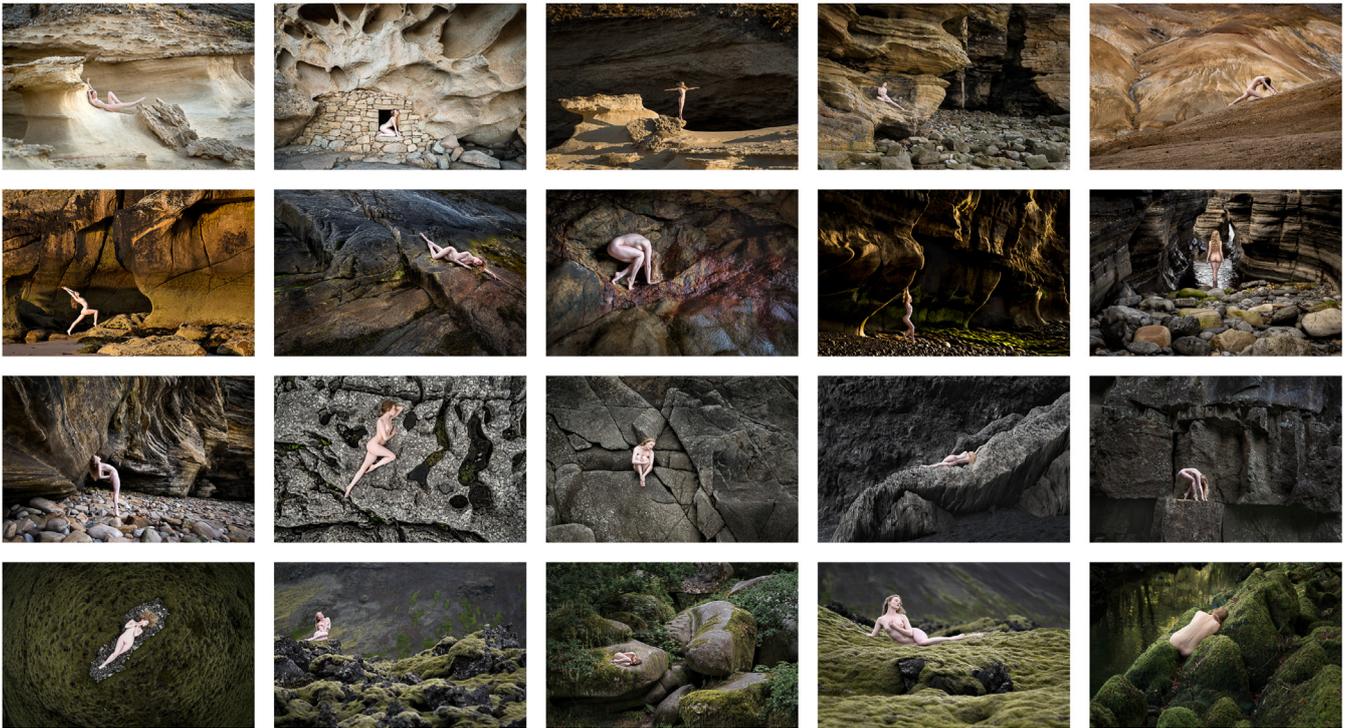
The first thing we consider with a pose is safety. Were she to lose her balance or slip we want to make sure she wouldn't be injured. We also decide whether a natural or more abstract shape pose works best, if we can't decide at the time then Lulu will do a mixture of poses. Generally we are looking for Lulu to integrate into the environment, although sometimes we are looking for the reverse with a juxtaposition. Integration can be achieved by fitting into some natural frame, mimicking a shape in the environment, or with her limbs touching various elements within the scene.

If I feel that a pose needs to be slightly different with a limb moved I will obviously tell her, but as you can see from some of our images we are sometimes quite a distance away from each other. In the past we have used walkie-talkies to communicate, but as I keep forgetting to bring them we usually rely on a series of hand signals that we have developed.

Once Lulu is nude we work very quickly through our pre-planned images. This is for various reasons, some of the places Lulu poses on are not very comfortable, it's often not very warm, and we want to minimise the chances of being seen.



LULU - A MODERN MUSE



Tim's successful Master of the Fédération Internationale de l'Art Photographique panel

Variety is the spice of life

Photography is often difficult as you need good subject matter, and also to be able to lead the viewers eye through the image. This is the reason why many landscape photographers photograph the iconic locations. I am fortunate in that I know what the main subject of the image will be, as the brain will always lead the eye to a nude human form in an image, so I can take scenes that could otherwise be overlooked as lacking a focal point and create a picture.

I generally just shoot model photography, and I've been photographing Lulu for seven years now, in a wide variety of interesting locations, she is as much a friend now as a model. Our collaborative approach means we're unlikely to run out of ideas anytime soon, and as well as finding new locations we are trying different techniques, such as using a drone to get a different viewpoint. We've also started running a series of location workshops, as we are known as a successful team and photographers wish to produce images like ours.

While our work is varied, I've been told many times that people can instantly recognise one of our images, before even seeing it up close. We produce images for ourselves because we enjoy producing them, but it's always nice when others

appreciate them as well.

Distinction success

I was once given some advice that I should not have more than three or four images of the same model in a distinction panel, as otherwise it could be classed as repetition. Photographers often have a fine balancing act trying to get cohesion in a panel, without it becoming repetitive.

I choose not to work with a great number of models so I turned that warning of repetition into a challenge, and decided to do a distinction panel with 20 images of the same model, Lulu. Then instead of the use of the same model being repetition she instead became a cohesive element of the panel. I did have to ensure that all of the poses were different, but given that we adapt the poses to the environment that wasn't a problem.

I was very pleased to gain a Fellowship of the Irish Photographic Federation (FIPF) in November 2016 with a panel of prints of Lulu, and the masters distinction MFIAP from FIAP in May 2019 with a different panel of prints of Lulu.

You can see more images from Tim and Lulu at www.timpile.co.uk.



WHO IS THE FAIREST OF THEM ALL?

Zoe Harbord

Other than the ubiquitous snap shots of the growing family, my only relationship with photography was briefly at college, where I learnt to use an old film camera and to process the results in a darkroom. More years than I care to remember passed and I eventually took up the camera again and joined the Beacon Camera Club in Malvern as a 'remote' member. I was, and still am, mostly interested in creative images that tell a story. The club has a monthly themed creative competition, in which has been great fun to take part and has helped enormously in my photographic journey.

I live in an old cottage on the edge of an ancient woodland, both of which can provide the perfect backdrop for some of my pictures. I've always loved fairy stories and often my images end up being influenced by them.

This particular image was started during the first COVID lockdown in 2020, when the whole family (both daughters, son in law and grandson) all came to live with us until lockdown restrictions eased. The picture is a take on Snow White's wicked stepmother looking into her magic mirror, having asked 'Who is the fairest of them all?', and not being pleased at the answer. The 'Wicked Stepmother' is my daughter, who took no persuasion to dress and pose as the Queen.

There were three images used in the composition.

DIGIT CHALLENGE

The Queen My daughter needed to be suitably attired and regally made up. She's good at this and so needed no help. Just after the picture was taken though, the 'lockdown' of the time ended and my family returned to their homes. I didn't have a suitable mirror for her to hold at the time, so after buying one, I had to do step two and become 'The Queen' myself.

The Queen Holding Her Mirror I had to set the camera to timer mode and take pictures of myself, wearing the same jacket and holding the mirror. I didn't have any suitable 'wicked stepmother' rings, but found an old spider brooch, which I clipped to my wedding ring instead. I felt this added a bit of extra character! I also noticed that I should have painted my fingernails before the shoot, so instead of reshooting, I painted them in on in Photoshop.

The Forest This was needed for the backdrop and taken in the aforementioned ancient woodland.

The next step was to cut out both images of 'The Queen'. This is the first one with my hands holding the mirror. I then dropped this onto the background, on which I had already put a gaussian blur. Once I was happy with this, I duplicated the image and placed it into the reflective part of the mirror.

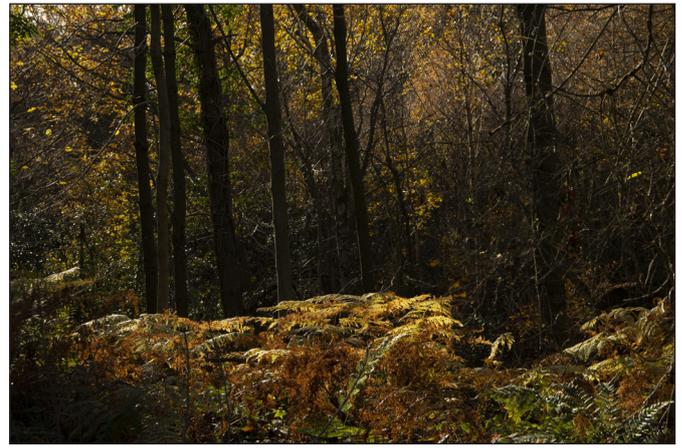
The second cut out was 'The Queen', which was also placed onto a smaller version of the woodland background and then into the inner mirror with each background slightly more blurred than the one before.

Then the final touches: a vignette; a slight gaussian blur to 'The Queen' in the inner image and darkening a bit here and there before adding a black and white filter, to get the final image.

This was a fun picture to put together, if a little challenging due to the personal movement restrictions that presented themselves during the year.

If I was to make this image again, I would take The Queen and the Magic Mirror into the woods and shoot her holding the mirror. One less cut out to do!

Telling stories is part of our nature and I love to do this through photography. We all need a little escapism now and then, more than ever in the COVID climate and I took great enjoyment in creating this version of 'Who is The Fairest of Them All?'.
The Queen



The woodland backdrop



The queen holding the mirror



The queen holding the mirror with woodland background and the duplicate mirror

All previous issues are available from the Digital Imaging Group magazine page of the Group's website at rps.org/digitarchive



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