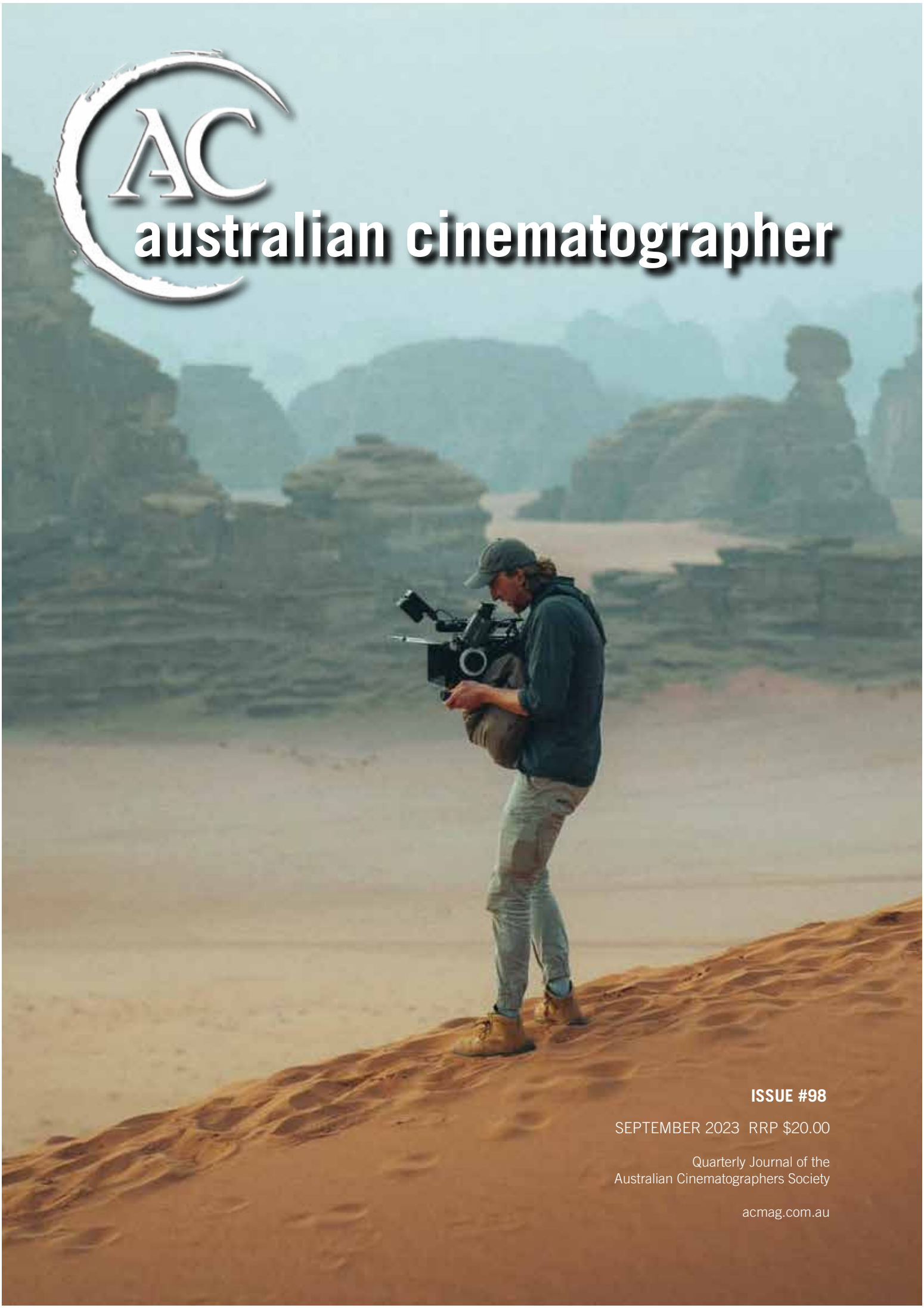

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COVER PHOTO: Photographer Joshua Earl, Louis C. Brandt in *Neom*.

BY DEFINITION of the Australian Cinematographers Society, "A cinematographer is the author of the moving images, using technical and artistic expertise to create moving that tell the story through light, shadow and composition."

FEATURES...

DEPARTMENTS...

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FROM THE EDITOR

Welcome to Issue 98 of the Australian Cinematographer,

The captivating world of cinema takes audiences on unforgettable visual journeys. At the heart of these magical experiences are the cinematographers whose interplay of light, composition and motion create masterpieces. It has been an honour stepping into the role of Guest Editor of the AC Magazine for this issue and perhaps a couple more.

I've enjoyed working with our terrific contributors and wish to thank outgoing AC Magazine Editor, Sarah Fraser for laying the foundations for many of the articles you'll get to read in this issue.

The opportunity to sit down and interview a few cinematographers myself, who were working across the country as well as across the industry proved irresistible - though you'll have to wait a little longer for some of those articles as this issue was bursting at the seams.

If you would like to get involved as a writer, a guest editor or just have a project your longing to share, please reach out to me on lizz@cinematographer.net.au or the wider editorial team on editor.acmag@cinematographer.net.au we'd love to hear from you.

For now, I hope you enjoy the rich tapestry of articles in store for you, from CEOs to Cine's, Inventors to Colourists. Kathryn Milliss ACS interviews Bus Stop Films CEO, Tracey Corbin-Matchett OAM. Award winning Cinematographer, Scientist and Engineer, Pawel Achtel ACS, talks tech about his latest invention the ACHTEL 9x7 camera system. Colourists Kali Bateman CSI interviews Jason Hargreaves ACS and Angela Cerasi discusses the Art of Colour Grading. Other articles by cinematographers Simon Morris, Jane Castle ACS, Dan Freene ACS, Adam Reibel on his father Rob Reibel, Mikey Hamer, Carl Alison, Michael Steel and Louis C Brandt, will take us on a tour around Australia and across the globe, through the outback and to as many cities as they can cram into an AC Mag issue. And Alice Stephens and Dan Maxwell ACS talk about the Credit Maker scheme.

All the best and happy reading,

Lizz Vernon
Guest Editor
Australian Cinematographer Magazine

FROM THE PRESIDENT

Warm greetings to all members, sponsors, and friends,

The 53RD ACS National Awards held in Sydney at Luna Park was a very special night where history was made. Mandy Walker AM ACS ASC was the first woman to win both the Gold Tripod for Features over $2m for *Elvis*, and the Milli for ACS Cinematographer of the Year.

It was an emotional moment for Mandy when one of her mentors, Russell Boyd AO ACS ASC, presented Mandy with the Milli. The culmination of an enormous year of nominations and wins and to be recognised by a jury of her Australian peers was a sweet moment. As Mandy said, *"These doors that are opening cannot be closed behind us".*

Judging commences soon for the ACS Branch Awards, and I hope many of you entered plenty of work. You have to be in it to win it. Those who win a Gold at their Branch Awards, will automatically be entered into the 2024 National Awards in Brisbane. Please hold the date now for your Branch Awards, this year they will be held in Adelaide, Sydney, Melbourne and Brisbane.

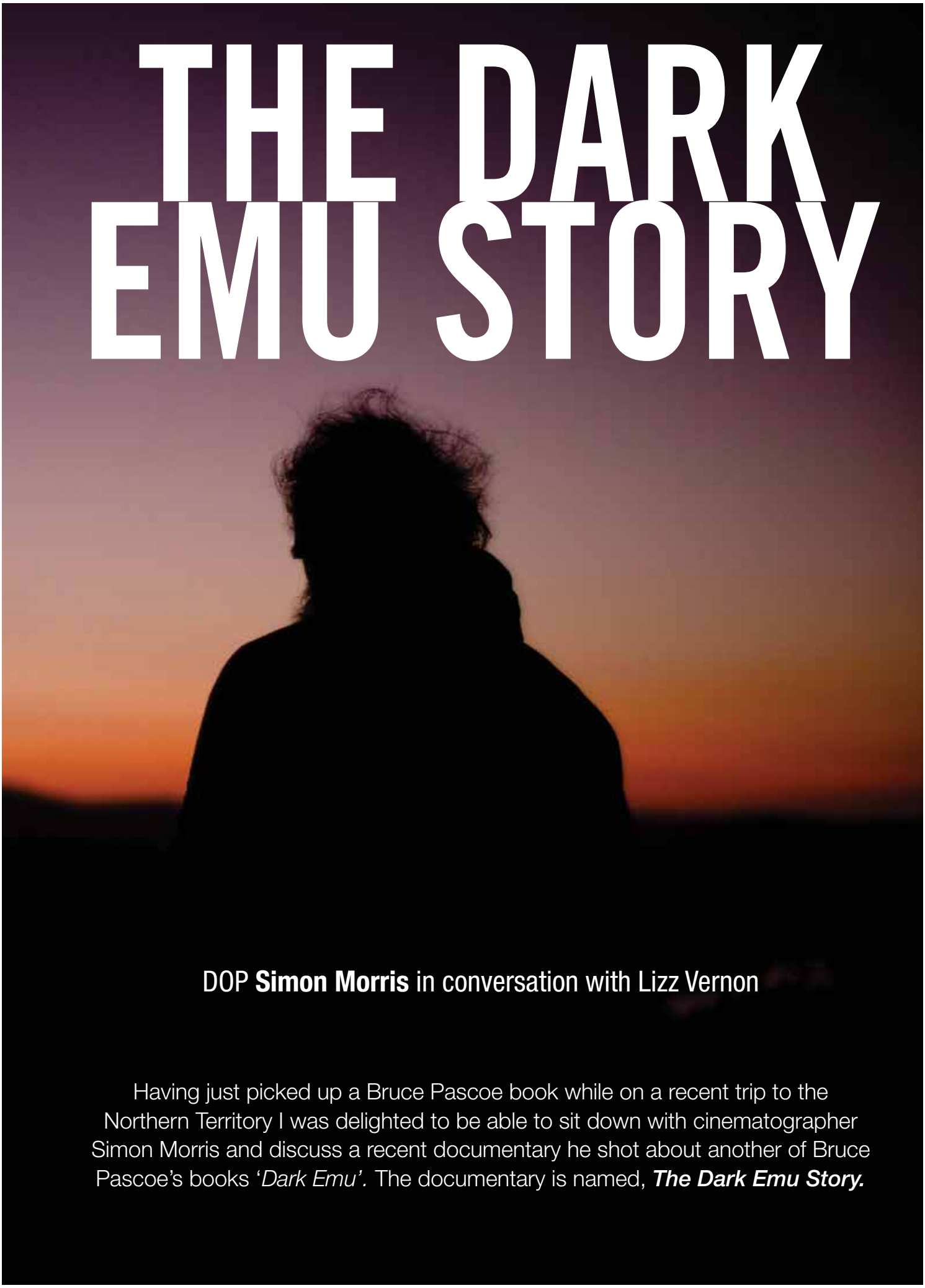
And, if you are applying for Accreditation, make sure to speak to your Branch President, seek feedback and prepare your application carefully. The judging panel closely scrutinise all the material submitted to ensure only work of the highest standard is recognised.

My best wishes to you all,

Erika Addis
National President, Australian Cinematographers Society

PHOTO by Michael Fairbairn - *L-R Simon Morris, Bruce Pascoe*

THE DARK EMU STORY



DOP **Simon Morris** in conversation with Lizz Vernon

Having just picked up a Bruce Pascoe book while on a recent trip to the Northern Territory I was delighted to be able to sit down with cinematographer Simon Morris and discuss a recent documentary he shot about another of Bruce Pascoe's books '*Dark Emu'.* The documentary is named, ***The Dark Emu Story.***

A scene from 'Dark Emu' - DOP Simon Morris

Morris has been involved with Blackfella Films before, and got a call from their producer Belinda Mravicic halfway through last year, ***'I'm producing a feature doc about the book Dark Emu, would you like to meet up with Allan, the director?'***

Allan Clarke lives in France, so his and Morris's initial meeting was online. ***'We had a zoom chat and hit it off, we had similar sensibilities in terms of our approach to shooting documentaries and were in total agreeance that this project had to be something really special visually given the important subject matter. We only had that one zoom chat then he [Allan Clarke] came out to Australia to start pre-production. One thing Blackfella Films did which is very rare in documentary world is provided two weeks of full-time pre-production for the DP.'***

'That two weeks is the reason Dark Emu is what it is. The 'pre-production' time on documentaries is often ad hoc phone or zoom meetings, perhaps a few emails back and forth and you're off into the shoot. But to have the opportunity to sit down with the director face to face, recce locations and collaboratively design the look of a production is obviously invaluable as a cinematographer and often overlooked.'

'One element Allan and I discussed often was how to design a look for the 'chorus of experts' interviews which would be dispersed throughout the film. They needed to communicate the information and opinions, but stand alone, in comparison to the more emotional and character lead location interviews of Bruce & Peter. I pitched the idea of going black & white against a white void and Allan loved the idea.'

'The black and white felt like a nod to the pages of a book. It put these interviews in a non-descript space and kept them stylistically separate from the rest of the landscape..'

I was curious about the choice to film all the interviews in Black and White, and the bold breaking of the fourth wall, it's a powerful choice. ***'The expert/commentator interviews would be the backbone of the discussion around the book.'*** Morris went into his conceptual way to look at that discussion. ***'The black and white felt like a nod to the pages of a book. It put these interviews in a non-descript space and kept them stylistically separate from the rest of the landscape/ character driven narrative and seemed really appropriate.'*** Morris adds, ***'And doing the eye direct style as well was***


A scene from 'Dark Emu' - DOP Simon Morris

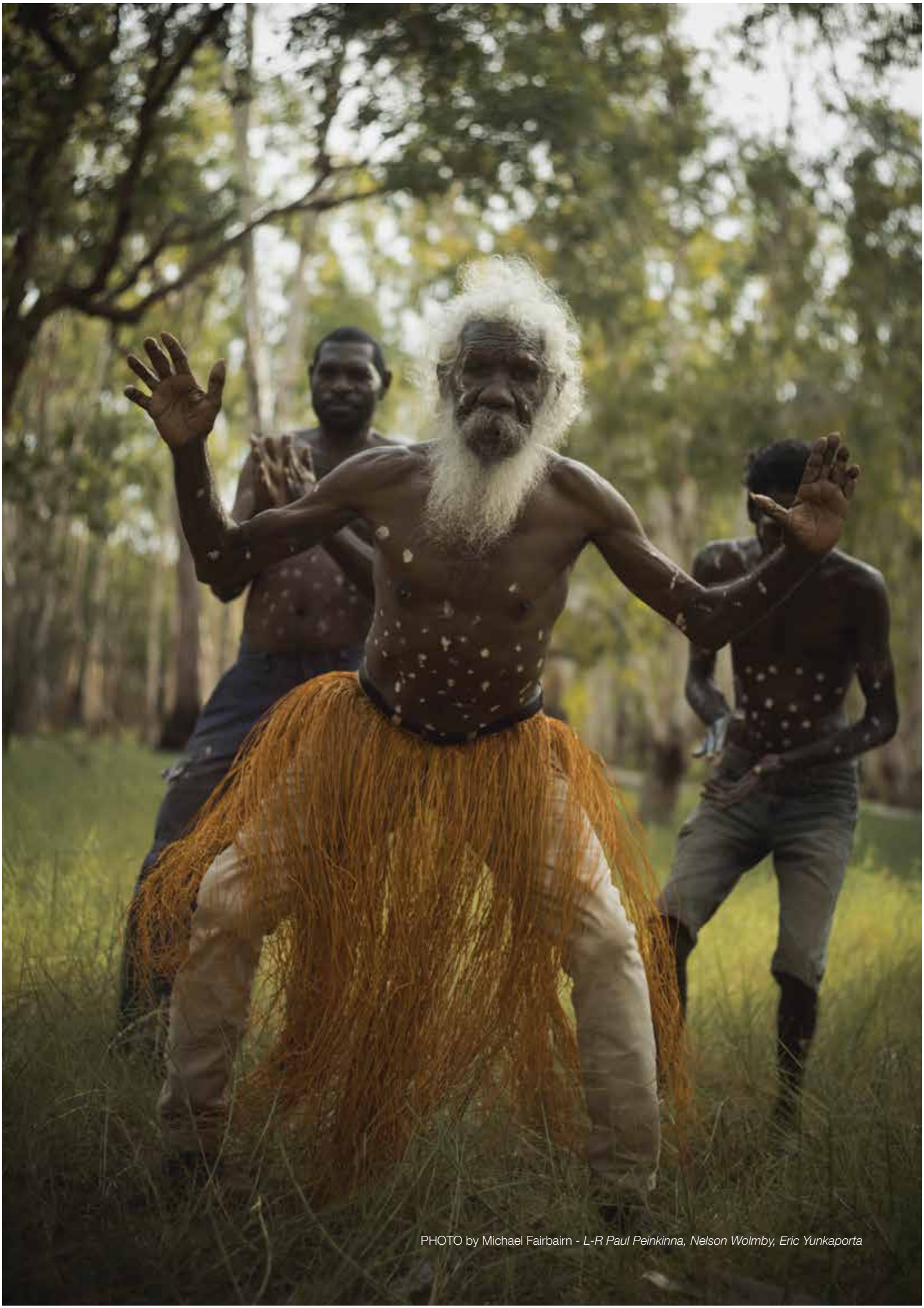


PHOTO by Michael Fairbairn - *L-R Paul Peinkinna, Nelson Wolmby, Eric Yunkaporta*

The grindstones of Mithaka - DOP Simon Morris

something I was really passionate about. I wanted these interviews to feel like a book was talking back at you. I knew there would be some internal moments of reflection from Bruce, and he needed to have his story told directly to the Australian people. So, Allan agreed eye direct felt like the natural way to go'.

During our conversation in a crowded café, we chatted about the original book the documentary is addressing, how it challenged the colonial viewpoint we'd been raised on, the controversy around the author and what his thoughts were on becoming involved in the project, it's recent release on ABC so poignant given the conversations taking place throughout Australia.

Dark Emu's author, Bruce Pascoe sort of peels back the inherent view that was planted in the collective of the Australian education system. Morris who has worked on several projects with indigenous stories, found the content of the book eye opening. ***'It was fascinating, stories of indigenous culture I'd never heard before, but it also just made sense to me. But I was surprised how often throughout the production I was struck by the impact the book had had on so many people. Most people I spoke to said the book had a significant impact on their life or of someone close to them.'***

I admit to being fascinated at the pushback, and focus on Bruce, Morris agreed, ***'the initial response from the more colonial mindset is unfortunately usually to discredit those who stick their head up and speak out.'***

Moving the conversation to The Vote, dealing with controversy, not wanting to muddy waters, and researching all about the backlash – I wondered how Morris felt as a cinematographer, taking up this story. ***'It was an honour to be asked to be involved in a project which could directly have an impact in the national conversation about our identity as a country, especially given the upcoming referendum, interestingly, that's somewhat the story of the documentary production itself.'***

Belinda and the team at Blackfella Films planned to produce the project years earlier, in 2019 announcing a presenter led documentary on the book, literally, Bruce Pascoe on camera talking through the content of the book himself. ***'The ABC was hit with a huge amount of backlash from the more right-wing media, even just announcing it.'*** the ABC decided to pause their plans and reassessed their approach. The time and iteration of the project allowed the team to embrace the conversation and give it a hearing. ***'I think those are the best documentaries though, when both sides of an argument are presented, or a situation shown to the audience to challenge their views and stimulate a conversation.'***

A scene from 'Dark Emu' - DOP Simon Morris

A scene from 'Dark Emu' - DOP Simon Morris

There was so much backlash regarding the author's right to speak on behalf of first nations peoples, and his claims of being of indigenous decent challenged, though I wonder what difference that makes to presenting facts gathered from explorer journals. ***'I love the quote from Stan Grant, "It's like pulling the wings off a butterfly—Why do we do it?"'***

Discussing the Brewarrina Fish Traps Morris lights up. ***'Scenes like that were a really, really important part of why Allan, the director, got involved in the project. He was passionate about making sure we heard from indigenous people themselves.'*** One criticism of *Dark Emu* was that it was only the explorer journals and Pasco discussing these issues relating to indigenous history, ***'When we're talking about indigenous history, its important the people that should be at the forefront of those conversations are the communities themselves.'***

The documentary is ultimately about opening conversations.

The Journals reviewed are descriptive, *"there were ricks of hay that stretched out for miles, resembling that of an English field of harvest,"* with the colonial overtone that appear seemingly dismissive of the discovery as if fortuitous. Hearing those excerpts divulge the colonial mindset and so much more.

Morris says from day one he knew aerials would be a big part of the project, though he's wary of their overuse, ***'We're talking about a big country with a big story. And we needed to show the diversity of the landscapes. So, we had to get in the air. I don't think we could have shot those fish traps any other way. And same with Mithaka. The scale of that country that we were in, one of the big parts of the story is just how different the regions are within this country and diverse the cultures are of the people who lived in them. And it was important to show that visually.'***

The Documentary gives voice to those saying, *"They were only hunters and gatherers,"* while also showing the vast variety of lands within Australia, including as mentioned above: Brewarrina where we see the fish traps. The vast Mithaka Country, an area the size of Belgium, where grindstones, trading routes and quarries can be seen, allowing deeper understanding of a variety of cultural practices and resourcefulness of first nations peoples. Some land area calling for hunting and gathering, and other mass production of products like grindstones. ***'When you start to really think about this continent as vast network of separate countries that have different climates and cultures. We really wanted to make sure we show that we have rainforest country, desert country, coastlines, snowy mountains etc., so of***

A scene from 'Dark Emu' - DOP Simon Morris

Photograph taken by Dark Emu Producer Belinda Miravicic

course, you can't just blanket them all as hunter gathers, or all as agriculturalists. It was a whole connected system. The trade between all those countries is something that I found fascinating.'

There is an aerial shot of an ancient quarry that is amazing. ***'I really wanted to show the vastness of that site amongst the desert country.'*** Some areas Morris relied on tapping into the aerials, concerned with how he was going to show the scale of country, even with the wide camera on the drone he wasn't sure it was going to cut it. ***'Especially that quarry in Mithika, there's no way to show that expanse without being in the sky. Of course, what you actually saw on the doco was a tiny, tiny part, we really needed satellite images… it just goes on and on, for over nine kilometers.'***

Expanding Morris goes on to say, ***'It is amazing when you're standing in those pits you see all the shapes of the worksites, there's a rock in the center, and someone would have stood at that rock and worked carving out grindstones and created those large pits over thousands of years. It's an incredible site. We we're the first professional crew to ever shoot there which was such a privilege. But its also ridiculously difficult to get to. It took us a full 18hr day of flights and a convoy of 4WDs, then we had to camp in swags on location throughout the week of shooting.'***

I asked about logistics and what's involved with a location like Mithika. Morris tried to marry visual style with logistics, faced with how to physically get crew, and resources in and quality visuals out. ***'Over the whole production we shot across two separate blocks, divided to avoid the peak summer heat. In terms of crew, we had myself, Dan Proud on drone cinematography and B cam operating (additional work by Dale Cochrane). 1st ACs Michael Fairbairn (Block 1), Danielle Payne (Block 2) (additional days by Molly Sutherland and Eamon Dimmitt). 2nd AC Nikita Rose Calyun. Sound Recordist Eren 'Pinky' Sener (additional days by Richard Teague). Which is fairly substantial for a documentary. When on the road we had a convoy about five 4WD's and 32 pieces of gear. I tried to make sure the gear was as streamlined as it could possibly be while still having the resources to achieve the cinematic style in remote locations and minimal crew away from any support. Finding that line can be difficult as you don't want to get bogged down with gear and miss opportunities when you're trying to shoot'.***

Morris knew without question that he would shoot with a pair of ALEXA Mini's. ***'I knew we'd be pushing the dynamic range of the camera system given the hard and extreme environments we would be in. While still needing to be manageable for a small travel crew with multiple regional***

A scene from 'Dark Emu' - DOP Simon Morris

A scene from 'Dark Emu' - DOP Simon Morris

'This was a big story, with wide expansive landscapes and I wanted to be able to explore creative compositions to show the country in the cinematic scale that it deserves. When discussing this in pre-production, Allan and I basically both said 'anamorphic' at the same time...

flights etc. So, the Alexa Mini was the obvious choice from the beginning.' When it came to lenses there was a similar thought process, ***'This was a big story, with wide expansive landscapes and I wanted to be able to explore creative compositions to show the country in the cinematic scale that it deserves. When discussing this in pre-production, Allan and I basically both said 'anamorphic' at the same time... so we were heading down that path from the get-go. I'd done a previous feature doc on anamorphic with Blackfella Films, so they were totally on board, and thankfully the ABC agreed and also signed-off.'*** Morris went through Panavision to source the gear. ***'I ended up using the Kowa Evolution 2x anamorphics, which are really small Japanese vintage lenses.'*** He was set, with lenses the size of his fist, which for documentary was essential given anything big is not economical. ***'Those lenses have a great look. Lots of flare, lots of character and interesting, while also really small and lightweight... We also had a Panavision ATZ 70-200 for moments when we'd need the length and flexibility of a zoom, a 35mm E-series and a 180mm for the eye direct.'***

Morris had some concerns matching the Inspire drone to the ALEXA, ***'Obviously the vintage anamorphics have such a strong look.'*** He would have loved to have had an ARRI Mini on a heavy lift drone but given the logistics that was out of the question. ***'The Inspire held up well and colourist Dwaine Hyde (Cutting Edge) did some work to bring the drone footage into as similar look as possible to the Kowa's.'***

'In post colourist Dwaine, and I did a bit of work to give the drone footage a bit of edge softness to bring it into a similar aesthetic as the anamorphics. Obviously missing those wild flares but can't' win 'em all.' I suggested a spot of Vaseline on the lens, and Morris adds, ***'Yeah, that's essentially what we did. Dan Proud is an absolutely fantastic drone cinematographer. He's an incredible pilot, his piloting with the Inspire seems totally effortless, and he has a brilliant eye for compositions which I find is a rare combination.'***

A scene from 'Dark Emu' - DOP Simon Morris

The Brewarrina Fish Traps - DOP Simon Morris

After watching some of the rushes back Bruce Pascoe turned to Morris:

"Good images can tell a story, but beautiful cinematography can make the audience feel" – Bruce Pascoe

When asked about a favorite shot, Morris responds, ***'The first time I watched it, I was impressed with the rainforest scene near Cairns.'*** He explains the comparison of the lived experience of the day on set verses seeing the final footage on screen. ***'That was one of those days at the end of a long block of shooting on the road, we had logistics issues, it was 98% humidity and 36 degrees, I've never sweat that much in my entire life and the team worked so unbelievably hard, completely drenched…'*** Exhausting, hectic are some of the other words he used to describe the day. ***'And when I saw it cut together, I thought, wow you never would have known. I was really happy with it.'***

Filming took place in two main filming blocks with shoot days being split with an early start and a decent break in the middle of the day and working again towards dusk. It is too hot in the middle of the day with the harsh, unforgiving Australian sun—at least, that's what they tried to limit the days to. However,

'Even in such extreme conditions none of the gear ever missed a beat, which I think is obviously a testament to ARRI and the amazing camera team.

Morris found out first-hand the difference in being able to tolerate heat vs being able to work and exert yourself in it, falling ill from heat exhaustion or dehydration while working in extreme heat with a gimbal.

'Even in such extreme conditions none of the gear ever missed a beat, which I think is obviously a testament to ARRI and the amazing camera team. Camera assisting on documentaries is hard and unforgiving work. I was so lucky on this project to have such a dedicated and passionate crew who were really behind the story and what we were trying to achieve visually.'

Morris used Rec 709 knowing they'd be faced with a variety of scenarios. ***'I didn't want to start getting into LUTs given the unpredictable nature of documentary. The ARRI 709 base is such a good starting point which I know so well from using it over the years.'***

A scene from 'Dark Emu' - DOP Simon Morris

A scene from 'Dark Emu' - DOP Simon Morris

With over thirty interviews filmed, Blackfella Films settled on Lumen Arty Film Studios in Botany. Morris mentions gaffer and owner of the studio, Steve Scofield. ***'[Steve] has a studio which has a substantial in-house lighting kit and large white cyc which worked perfectly for us given we had to replicate the same setup multiple times across the shoot. Sometimes, in one day, off on location, then back a few days later. Steve and Alan Fraser were a great help at keeping the look consistent.'***

Interviews in documentaries often inform the footage a cinematographer needs to capture, though Morris explains things were a little different with *The Dark Emu Story.* ***'As always in documentary you need to be open to pivoting and letting the narrative guide itself as you're at the mercy of the outside world… the narrative did shift and change a fair bit as we were shooting. Sometimes there would be big story elements that the team had spent years trying to line up with the local communities which all fell apart at the last minute, so you have to adapt and find solutions. So, it was more that some of the content we were shooting was shifting and changing, and so the interviews had to reflect the new subject matter.'***

The documentary is terrific and I'm sure we will hear from Simon Morris about other projects in the future. I invite you to check out *The Dark Emu Story,* now streaming on ABC iView.

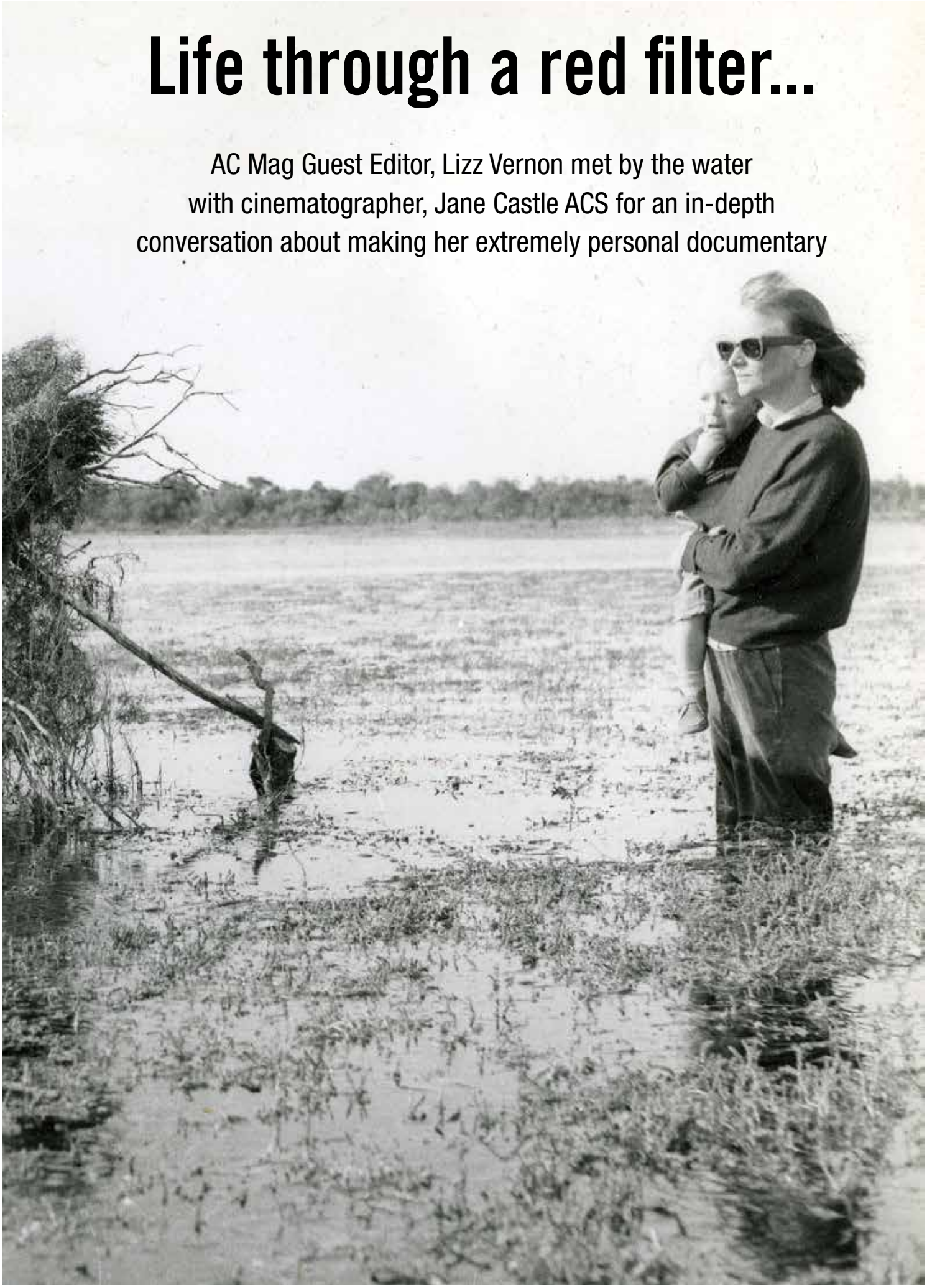
"…Go and stand out in our country as I love to do, at dusk or at dawn and hear the water in the creek and the rivers and hear the animals and look at the trees and look at that beautiful golden light and then close your eyes and say, what's changed? We're here, we still hear those noises we're still here, that's the important thing. I think what Bruce did is, he spoke into that void he closed his eyes stood in the silence in the land and said, 'close your eyes and imagine this country again. And then open them. Magic.' " - **Stan Grant**

PHOTO by Michael Fairbairn - *L-R Nelson Wolmby, Paul Peinkinna, Eric Yunkaporta*

Filming waterbirds - Norm and Lilias - PHOTO supplied by Jane Castle ACS

Life through a red filter...

AC Mag Guest Editor, Lizz Vernon met by the water with cinematographer, Jane Castle ACS for an in-depth conversation about making her extremely personal documentary



Jane Castle ACS is no stranger to the camera, best known for her talents as a music video cinematographer, shooting for artists; Prince, U2, INXS, Midnight Oil, Usher, Divinyls, Paul Kelly, Ian Moss, Hunters & Collectors, The Triffids and Arrested Development. Castle discusses her latest project, an amazing, very personal documentary about her mother Lilias Fraser titled, ***When the Camera Stopped Rolling.***

Neither mother nor daughter are strangers to breaking barriers. Fraser directed over forty documentaries including *Sugar from Queensland, Women of the Iron Frontier* and *This is Their Land.* Castle takes the opportunity to shine a timely light on her pioneering mother's contributions to the film industry.

Castle's career as a cinematographer began with a 'mountain won't come to Mohammed' mentality, as it gave her the much-desired access to her mother. Castle smashed barriers her mother couldn't, becoming a sought-after cinematographer and the second women ever to put ACS after her name, after trailblazer Jan Kenny ACS. When Fraser and Castle inevitably worked together, they clashed on ideas for coverage and, as director, Fraser got her way, ***'She'd had to overcome plenty of grumpy cinematographers in her day and would win them over, mostly - she was a gorgeous redhead, and she was paying them!'***

Castle's exploration of family and the film industry reveal two opposing forces intertwined and constantly in flux. *When the Camera Stopped Rolling* is a bold, unapologetic film that encourages the audience to draw their own conclusions. Castle doesn't shy away from tough subjects either, rather she lays her past to bare. Viewers are taken on a fractured journey of discovery in this very personal documentary. Castle was not only the Director of Photography, but also wrote, directed, and narrated it herself. She paired up with the highly respected Producer Pat Fiske OAM when she began the project almost a decade earlier and was thrilled to have Ray Thomas ASE as editor. I had to ask, given the vulnerability shown, what she was she thinking?

Before answering, there's an audible exhale from Castle, ***'I wasn't! Firstly, I didn't want to make a personal film. I wanted to make an intellectual with interviews, very heady. But it just wasn't a very strong idea.'***

The nature of documentaries is to take a twist, even when the subject matter is lived experience, and *When the Camera Stopped Rolling* is no exception. ***'I had in mind an esoteric, spiritual, philosophical film about death. But then the story of my mum's actual death fell onto the page, and it was a no brainer - The film had to go in another direction. I've seen so many films fail because the director gets too tightly wedded to their original idea, so I was determined to keep listening to the film, to really let it offer itself up.'***

We chatted about the mother/daughter training ground. Had it helped her to 'listen' to the film? Ultimately Castle disagrees. ***'No. Mum made very didactic films. In fact, on the film that I shot for her,*** **Women of the Iron Frontier,** ***that was our big source of conflict. She wanted to make a didactic film and I wanted to do cinéma verité, which was actually unrealistic. I was very arrogant, just out of film school, wanting to spend months just following people around with the camera.'***

'With my film, I think there was some unconscious need to tell my story as part of my healing.' Castle touches on trauma, and there's so much of it in the film, though it is presented without bitterness, which is an incredible feat. I was curious about whether it was a conscious choice to leave the viewer to piece together what was being left unsaid? ***'Yeah, that was my approach. In an almost naive narrator's voice, I just tell the story of what happened. "This happened, then this happened, and this happened".*** Castle was very clear that she didn't want to make a 'victim' film, but has been surprised by people saying, ***"It's like a love poem to your mum, to your parents."*** Personally, I found it impossible not to agree.

'Somehow, Ray understood the film more than me at times. He was mum's cheerleader...'

Castle's ability to hold on an image where the subjects are breaking the fourth wall as she narrates a revelation to the audience — holding the image a little longer, daring the viewer to engage and inviting them to read between the lines, is extremely powerful. Castle states, ***'That's thanks to Ray Thomas. We worked so closely with all those timings, and it was Ray who nailed it. We worked so closely on every aspect of the film. He'd even send me off to get images and I'd come back, and he'd say "No, it's not quite right," and send me off again.'*** She expands, ***'Somehow, Ray understood the film more than me at times. He was mum's cheerleader. He'd often say, "Oh, no, I think you need to say something more about Lilias there."'***

Castle is clear that she is telling her own story, while also revealing to the audience a little of her extended family, her parents', and grandparents' experiences. ***'Giving that context helps you understand where everyone was – everyone was just doing their best.'*** Castle's choice to include these details allows both context and a stark comparison to a generation past.

Making the film wasn't exactly cathartic, and it wasn't easy either. Since its release there has been some sort of relief at having been able to articulate the unutterable, some sense of closure. ***'It was painful to tell this story; but it would've been more painful not to.'***

Castle uses her grandfather's footage and, as a cinematographer, ponders what has been left outside the frame. How curated were those home movies? ***'It's the first filter.'*** I asked if there was anything she wished she could have put in that she didn't? ***'Actually, yes. There's a photo I found later, of my mum and dad together - there are hardly any photos of them together – which says a lot about their***

Lilias and Norm Castle - PHOTO supplied by Jane Castle ACS

'It was painful to tell this story; but it would've been more painful not to.'

relationship - so I would have loved to have put that in.'

Castle is both brave and respectful. It would be so easy, tempting even, to spin her story to evoke sympathy, yet she's resisted that. ***'I don't know how that happened. It wasn't intentional. Perhaps it's because I really relied on feedback, made sure I was really receptive to what people had to say, because otherwise I had no perspective. It's one of the problems of making a personal film. Dealing with so much material was difficult. I had to somehow make it fit the narrative form.'*** Castle had to work out what to lose and what to magnify to create character arcs. ***'I learnt about structure and story along the way with a lot of help from script editors, friends, colleagues.'***

After Castle's parent's split, Fraser and her two daughters became a 'girl gang'. ***'It was like this big, heavy weight had been lifted off us. We suddenly had so much freedom.'*** But Fraser had never stopped moving and Castle now wonders about ADHD. ***'There was this disconnect, something about her being not quite there. I felt her need of me, her love for me, but I don't think she could ever slow down enough to really make contact.'***

Castle goes on to explain, ***'She [Fraser] wrote a fiction feature film script. It was something that kept coming in and out of our film. At one point, I wanted to make a hybrid fiction/documentary film and had the main character from her script tell the story. But it was way too complicated!*** The unmade feature, *"A Summer's Dream,"* was about surfing, ahead of its time with themes of rebellion. Fraser's father put her on her first wave at the age of three, introduced her to a man's freedom at a very young age. ***'Her dad was a trailblazer himself. They were very close; she adored him. I think mum got that pioneering spirit from him.'*** Not surprising that Castle would grow up to break barriers. ***'That was my role model, for better or for worse - with chaos comes a kind of freedom, "You can do anything you want," So there was this kind of bravado and grandiosity, in our family.'***

Castle ponders for a moment, ***'It gave me permission to think big "Yeah, I can be a cinematographer" then, "I can work in Hollywood," and then, "I can write and direct a feature length film."'''***

Castle touches on dementia in the documentary. ***'It's a hard thing to be around. She was so hyperactive, she never stopped bouncing around. And at the same time, I had this deep love and appreciation for her. She was gorgeous. It was probably the first time I could love her freely, because she was like a child, and she was adorable.'***

Within the documentary there is synchronicity from beginning

On location - PHOTO supplied by Jane Castle ACS

to end, especially with the mention of railroad tracks. Castle first noticed the awfulness of an incident she read in the newspaper and was moved to create art about it, attempting to make sense of the senseless. Then almost the same thing happened to her mother - art mirroring life mirroring art.

Castle and Thomas use multi-layered lights as a transition in juxtaposition to the horror, ***'Yes, the horror but also the wonder, a hint of something just beyond the material. It's one of my favourite scenes in the film - the reframing of the horror so that the same event becomes an almost spiritual experience.'***

Castle's late aunt, a modern-day mystic, once revealed to Castle that a violent death can be euphoric, that in the moment of death the person fuses into this huge, ecstatic ball of light. This idea inspired Castle as a way to deal with her mother's death in the final scene of the film, though she's quick to give credit to editor Ray Thomas, ***'He just kind of went off and did it — he had about seventeen layers in the timeline. It was kind of insane. Luckily, we had Roen Davis, the colourist and online editor, to carefully choreograph each layer to help create a mesmerizing tapestry of light.'***

What surprised Castle the most is how many people resonate with specific moments in the film. ***'It is a multi-layered film, but when the audience connects with it, even more layers are created. One audience member told me that a particular image of a school gate triggered a crucial realisation about her mother's abandonment of her and her family when she was 7. It's been such a lovely surprise. You never know who's going to get touched by what. People have also made connections that I haven't even known were there, like when I say, "I got up in the dark with my camera to capture the dawn." I didn't even realise the connection; mum had done the exact same thing when she filmed* nests in the Bush.'**

Shot almost entirely with a Canon 5D MkII was almost an act of defiance according to Castle, *'I can do it with this camera'.* Castle is no stranger to ARRI's, Panavision or other cameras. ***'It just takes more time and care to get the right shots.' Without 4K she couldn't really reframe. 'You've got to get the composition right. I liked the discipline of that. I had to be very intentional about every shot. I had to just be somewhere and feel something. It was great to have my own kit and just go out anytime.'***

The final product was almost ten-years in the making. Castle talks about how the film began with a feeling which led to, among other things, obsessively filming the tawdry beauty of the Easter Show. She created mountains of footage without a clear reason at the time, only to find later where it all fitted... ***'It's these images that add to the film's tone.'***

As Castle mentioned, she was keen to make a different film, and began with a series of interviews. ***'I interviewed nuns and monks and people who had died and come back, people who were dying, and put together this whole trailer about death, interspersed with that kind of mood imagery. But we found that people didn't want to watch an intellectual film about death.'***

Once she realised that her mother's trailblazing career and her tragic, uncanny death were much more compelling, Castle embraced a new approach to telling a story about life, death and all the relationships in between. ***'People are interested in people. We're all in these tricky, complicated relationships with our parents, siblings, kids, partners, and it can make life a total nightmare to navigate. I would have loved to have just made an art film — look at these beautiful shots – but that's not what people are interested in. So, I ended up telling a compelling story, and that meant that the cinematography had to come second.'***

There's a truth to Castle's work. Even when introducing scanned old footage, she gives a gentle nod to viewers' memories of curved edge photographs, a frame created by Roen Davis for the archival material. ***'It looks more like a film gate. Ray Argall AM ACS did the film scanning and did a beautiful job. I scanned all the stills at home. It was a big job, going through all that material, but so rich. I just love that the textured beauty of grainy 16 mm, that decades ago we were all trying to sharpen up. Now we can have our images as sharp as we want, but something's gone out of it.'***

When Castle shot her first rolls of black and white Super8 film at the age of 17, Fraser, who had learnt how handle black and white at the renowned Guildford School of Art, handed her young daughter a piece of red cellphone, and told her to look at the world through it. ***'She taught me to see in black***

and white, but I was determined to do this film in colour, to progress from where I was when I was at seventeen!'

Castle admits to a love/hate relationship with the camera. Initially drawn to it in the hope of forging a relationship with her mother, it turned out to be something Castle excelled at, ***'I was so ambitious back then. I submitted the first feature I shot,*** **Dead to the World,** ***to the ACS and felt really proud to get my letters - but I think my parents were even more proud.'.***

'What was really important was that I was getting to tell my story. Before it was like filmmaking took my parents away. But now I could talk about it, and it's been a way of bringing them back home.'

At times Castle has put the camera down to pursue other things. In her thirties she sought art to try and make sense of the world. She then spent ten years as an environmental campaigner to try to fix it. Lured back to the camera by *When the Camera Stopped Rolling.* I asked if it had always been this love/hate thing? ***'Yes. Because it was filmmaking that took my mother away. So, in one sense, I hate it. It's a pendulum swing for me. I am either completely obsessed or running a mile.'*** We discussed how it felt coming back to the camera to do this film when there was that trauma bond. ***'What was really important was that I was getting to tell my story. Before it was like filmmaking took my parents away. But now I could talk about it, and it's been a way of bringing them back home.'***

Our discussion turns to the possibility of putting the camera down now once and for all. ***'I've told the story. It's not perfect, but it has helped me to make meaning out of something that I couldn't comprehend. It brought order to chaos.'*** Does she miss it? ***'No. Not at all. But all that footage I shot that we never used, it's kind of calling me. I've been thinking about just sitting quietly and putting something together. Playing with the images, maybe thinking up a story. Just a little personal project.'***

The film has helped quiet Castle's head. ***'It's just what happened – there's an order now to what before felt like a big mess. Now I can move on. If there's one thing people can do in their lives, it's to break the cycle of intergenerational trauma; and the film has helped me to do that.'***

Castle is a great writer; she masters an economy of words, ***'I wrote that film for about seven years and I got really good at writing in the process. As I wrote it and rewrote it and rewrote it and rewrote it, I realised I was doing something that I didn't intend to do. I was writing the narrative, but I was also writing poetry at the same time. The need for an economy of words forced me to fuse storytelling and metaphor. A classic example is when I say, "I learned how to put a frame around the chaos." That line is doing many things on many levels, metaphorically, literally and it's also pushing the story along.'***

There are many references to framing — framing in, framing out. Yet Castle chooses not to 'frame' her parents. ***'I just kind of said what happened and, like my images of my dad in the nursing home, it's just what happened - I needed to make sense of my father's predicament so I picked up my camera. I think that's one reason the film is so inviting to audiences; it doesn't tell them what to think. Instead, it invites them in, and they resonate with whatever is meaningful for them.'***

Viewers often bring their own energy and experience to a film. ***'It was such a shock when I realised, after one of the earliest screenings. "Oh my God, this isn't even my film." It's not about me, in the end. The audience members were having their own, unique experiences with the film that were completely personal and have nothing to do with me.'***

The inevitable, *"What's next?"* question arose in good time and Castle revealed she has retrained as a psychotherapist. ***'It's the most creative thing I've ever done - co-creating with another living, breathing, thinking, feeling human being in real time. You never know what's going to happen next, and you have all these choices to make in every moment, working with someone's internal evolution. People come to therapy because they want to change and evolve and I'm helping them to do that – it's so rewarding.'*** In the US Film Industry, many film productions now require a qualified psychotherapist to be on set, not just for challenging scenes, but for the well-being of the cast and crew, a practice Castle sees as a positive change. Tackling high levels of stress and mental illness in a timely manner is so important, Castle believes, and having qualified practitioners on set would be beneficial for the Australian Film Industry and the people in it.

And finally, I ask Castle if there's any question she's never been asked, but she'd like to answer. ***'Yes! What's the connection between cinematography and psychotherapy, they seem so different?***

And Castle's answer, ***'Well in the beginning, coming from a family where there was a lot of dysfunction and aggression, I was pretty freaked out by people – every single person was potentially threatening. So, at first, hiding behind a camera and looking at the world through a lens seemed like a safe choice. But it was pretty lonely! So, my healing process has been about coming out from behind the camera and into authentic relationship with people. Sitting face-to-face in a room with another human being, being their therapist, challenges me to be more authentic, more deeply present, and more deeply connected than I have ever been before. I'm being called to move from disconnection to connection. It's been a long journey, but it's also been incredibly enriching – and I wouldn't have it any other way.'***

You can watch *When the Camera Stopped Rolling* on Stan, DocPlay and Vimeo streaming services.

On set, 'In Our Blood' - DOP Jason Hargreaves ACS

IN OUR BLOOD

Cinematographer **Jason Hargreaves ACS**

By Kali Bateman CSI

In Our Blood is a four-part limited series, inspired by true events, that explores Australia's response to the AIDS epidemic in the 1980s. Set in Sydney's Darlinghurst and Parliament House in Canberra, the show delves into the gay community's personal stories, as well as the government's response to the virus. Produced by Nathan Mayfield for Hoodlum, the show has recently been released on ABC, with international distribution by Fremantle. It was shot by Jason Hargreaves ACS, who was interviewed by me, Kali Bateman CSI, and this show's colourist, for this article.

On set, 'In Our Blood' - DOP Jason Hargreaves ACS

The show is set in two worlds: the vivid gay clubs and locations around Darlinghurst; and the muted, less saturated world of Parliament House. In the Darlinghurst locations, multicoloured lighting and lens flares scattered literal rainbows across the frame, bringing to screen the queer rainbow motif in a visceral way. By contrast, the lighting and palette of the scenes set in Parliament House are soft, muted, and subdued.

"We wanted it to be two separate components, Darlinghurst was to be filled with colour and life and energy—and then there was Parliament House, which was a place of corridors and where decisions can get made, but also are often stifled, and there's lots of roadblocks and bureaucracy."

I asked Jason Hargreaves this though process behind the looks.

"We wanted it to be two separate components, Darlinghurst was to be filled with colour and life and energy—and then there was Parliament House, which was a place of corridors and where decisions can get made, but also are often stifled, and there's lots of roadblocks and bureaucracy. We wanted to contrast those two worlds by creating this sense of the clubs being colourful and rich and full of life and movement and energy, and just dripping in colour, to represent the diverse characters that are living in that world. And then there's the world our main character faces each day at work, which is this sort of monotone, walled environment where decisions have trouble getting made sometimes."

Hargreaves went further to discusses the influences he drew on to create these two looks.

"Euphoria was a big influence, the saturated colour and how they got away with so many scenes using light sources that weren't necessarily motivated by any anything particular."

For example, Hargreaves describes a scene in Euphoria where a character rides a bike in a night exterior with streetlights shining between the houses, with an overly bright, saturated orange light that hits the lens.

"It was a visually beautiful, tasty little morsel, that is justified by the streetlamp, but at the same time, it was probably far too bright to be the streetlamp. But it's beautiful, so it doesn't really matter. I drew from that, that you don't necessarily question that sort of thing. I gave myself that permission along with the production designer and directors, to be able to use a lot of saturated lighting in and around Darlinghurst. You can justify it because the streetlights and neons helped place their homes close to Oxford Street."

Practical light sources or lighting justified by the diegesis, but heightened to emphasise colour and sparkle, were the approach in the Darlinghurst locations. By contrast,

"The Parliament House location was more about supplementing what was already there, and keeping it fairly neutral, and not flat, but a little bit softer in contrast, to help reinforce the neutral feeling of that place."

Hargreaves' in camera work with colour and light allowed for a unified look in the grade that had two strikingly different moods, and yet felt like parts of the same world. The coolness and carefully shaped available light in the Parliament House scenes, contrasted against the warmer, vivid lighting in the















Scenes from 'In Our Blood' - DOP Jason Hargreaves ACS, Colourist Kali Bateman CSI

On set, 'In Our Blood' - DOP Jason Hargreaves ACS

Darlinghurst scenes, without needing a separate saturation treatment to differentiate them.

Along with the fictional references, Hargreaves also consulted factual references from the period.

"Luckily, because we were shooting this for the ABC, we were given access to their archive library online, which has all been digitised. I had a good look at footage from the 80s from King's Cross and Oxford Street and various parts of Sydney.'

Hargraves went back and referred the footage every now and again to see how the images being captured at that time looked, without any lighting, in real situations.

"There were largely newsreels, still shot on 16mm film. I particularly looked at the way that the film stocks handled mixed lighting and how they shot night footage on tungsten film, so warm light was represented as white. I liked the way that that tungsten stock rendered fluorescent lights in and around Oxford Street, so I looked at how night exterior footage was shot. The car headlights were a bit warmer than white, fluorescents had this blue-green colour to them, and then the neons were vibrant. That mixed lighting looked just beautiful, and I wanted to integrate the philosophy behind how the newsreels were shot into what we did."

In grading the mixed lighting, Jason directed me not to overly correct the colour temperature, especially in the fluorescents. We didn't need to correct the RGB to create colour separation or depth in the image, that was already present in the lighting. Cool colours receded and warm colours came forward in the image, and the blocking moved characters through this light in interesting ways.

Hargreave's choice of a Sony camera system was a departure from his usual kit. He explains.

"I wanted the freedom to be able to shoot at a very high ISO without concerns about noise. The new sensor on the Sony Venice 2 had a dual base ISO of 800 and 3200."

"Normally I've largely chosen the Alexa Mini LF. It's a familiar tool, you know exactly what you're getting, and don't get bogged down in questions of whether the highlights are being captured or if the colour is there. But for this show in particular, Sony had released the Venice 2 just a few months before we went into production, and I'd seen some tests and knew that we had a lot of night exterior work. I wanted the freedom to be able to shoot at a very high ISO without concerns about noise. The new sensor on the Sony Venice 2 had a dual base ISO of 800 and 3200. I needed to be able to use as much available light in the background exterior scenes, so we could light the scene with minimal lighting. The Sony allowed us to do that, and it was a hugely freeing experience for all of us. It meant that we could shoot incredibly fast. I also really loved how the Sony recorded colour, which was incredibly accurate and close to what it felt like to my eye. Saturated reds and blues were represented very faithfully. Although I love the ARRI, I really enjoyed using the Sony Venice 2 for this show."

From a colour grading perspective, the reds from the Sony Venice in this show didn't require any secondary correction.

The sensitivity of the camera and the ISO was a particular asset to Hargreaves while shooting, as he explains,

"I knew with the Venice that I could stretch sunset or morning out for a lot longer than you normally would with

On set, 'In Our Blood' - DOP Jason Hargreaves ACS

my usual kit. To be able to give the actors and the director that extra time during those critical, light dependent moments, was amazing."

Hargreaves explains that in one scene in particular,

"We shot late afternoon, to match for early morning just because of the schedule. We had a lot to do that day, multiple location moves, and knew it would be tight, but we ended up shooting the last shot just after sunset."

Hargreaves had warned the directors,

"We were potentially in trouble at that point. I said, 'look, there's potential that this shot may not be usable. So, what I'm going to do is just wind the ISO up and see what we get'."

In the grade we lifted into the shadows to reveal more detail, and that potentially unusable shot performed well. Our look included grain emulation, so we toggled that off to assess whether there was a lot of noise being introduced as the shadows were lifted and did some noise reduction which in other contexts might have looked a bit plasticky, but looked very believable once it was dithered by the print grain emulation. Amazingly, we were able to get a great match for early morning from a shot that was taken after sunset.

I asked Hargreaves what his process was for lighting the night exteriors. He explains,

"I would work with our gaffer, Glenn Jones, who I just adore, and I've worked with for years and years. He would put some basic units in the space so that we had a base to start with, and then we'd do the block through. My philosophy generally is to let the actors and the director do what they want to do in the space. Then step in, you know, if I see that an actor can be in a better position - I'll throw that in as a suggestion if I think it's a bit more powerful visually. After we'd lit the actors, then I would take care of the background. Glenn and I would discuss whether we get particular streetlamps turned off, or which ones we wanted on. I'd always try and turn the ones off that were facing the actors, if possible, and most of the time we could, or we'd put a blackout in to kill that light. There were so many instances where I'd have Glenn on the radio and I'd say, 'Glenn, what percentage is that lamp at the moment?' And I'd ask, 'can we take it take it down a little bit, it's just a little bit bright, take a few notches off it'. And he'd go, 'Jase, it's currently at 2%, if I take it down anymore, it's gonna be off'. And I'd think, 'Okay, well, I guess we won't be going down'. So that was a regular occurrence in my experience on this show. Then straight afterwards, I did a commercial and we're back on back on my old favourite camera, the ARRI, and we're shooting a night exterior. And I said to Glenn, 'I just need a little bit more out of that. I'm guessing they're at like 50% or 40%'. He said, 'No, we're at 100%!' My brain had just been tuned into working at that low light level."

In Our Blood uses a moving camera, and scenes are often comprised of one take shots that move through the action in a lively way. Hargreaves explains,

"The philosophy was to keep the camera moving through the entire process to maintain momentum and energy, to give the audience the feeling that time is running out, danger is looming, and they have to act fast."

I asked Hargreaves how he kept up the pace in highly choreographed scenes while travelling, when the actors have complicated blocking and need to hit so many different marks. According to Hargreaves,

"That is usually done with the first AD and the Steadicam operator. And then I'll interject when I can see something that can happen faster or be condensed. We do a basic run

through with an iPhone and then the Steadicam operator will go through and do it with the director. I make some notes if we need someone crossing through to visually take us into this part, or we need some extra action or camera movement. That's kind of how it mechanically develops. And of course, after the first take if you find there's a dead spot. or a flat spot, this means some more action is needed, or maybe the cast can stop there and do some dialogue and then we can keep moving. But it's usually a feel thing to create these one-shot scenes, and it usually takes four or five takes to develop."

These choreographed one-shot scenes would usually begin in one location and end in another, and the characters would move through several different lighting scenarios, dipping in and out of shadow, but mostly delivering important dialogue in well-lit moments. From a grade perspective, these one-take scenes were quite straightforward and required very few dynamic keyframes and windows. I would match up the beginning of a shot to the master shot of the scene that it came from, and the end of the shot to the scene that it moves to. Then I'd review the shot to make sure that key dialogue and story points were visible. Occasionally a face would be pulled out, or a practical light source would be pushed back, but on the whole, the dynamics of the lighting was embraced by the producers and network. We felt we were able to deliver a look that was moodier than is often the case for Australian television.

The reason we were able to deliver this look was due to the integration of each department and the cross pollination that occurred to produce a look that felt correct for the period. Hargreaves spent a tremendous amount of time with the shows' production designer to put the colours that he wanted to see on screen. He also collaborated closely with me during preproduction. Over a series of sessions during camera testing, we produced a look felt right both technically and aesthetically, that was able to work both in HDR and SDR, characterised by bold colours, but quite low contrast, especially in the highlights.

I wanted it to look like the program was from the 1980s period in which it was set. I developed an idea that it may be a program that wasn't stored properly and doesn't have the most perfect black point, and maybe it hadn't been transferred correctly between formats, so you don't have the deep blacks you can get with digital colour grading. Running with this philosophy, in the DI we also lifted the blacks of any program black and graphics to match our creative black point. It wasn't lifted by much, but enough so that in HDR where we have extended dynamic range in the shadows, it felt quite unique. The curve we created was quite filmic, although with an exaggerated flattened shoulder. Part of the reason for the extremely gentle roll off in the highlights was to accommodate the intense blue and red lights in club scenes and practical neons in night exteriors that Hargreaves intended to shoot. If we'd had strong luminous highlights we would have had to sacrifice on saturation, as the colours would have clipped and become blocky, or been pushed out of gamut. It was a HDR first, Dolby Vision grade, so we had more colour volume to play with initially, but we had to make smart choices as we'd need to trim down to SDR.

"The philosophy was to keep the camera moving through the entire process to maintain momentum and energy, to give the audience the feeling that time is running out, danger is looming, and they have to act fast."

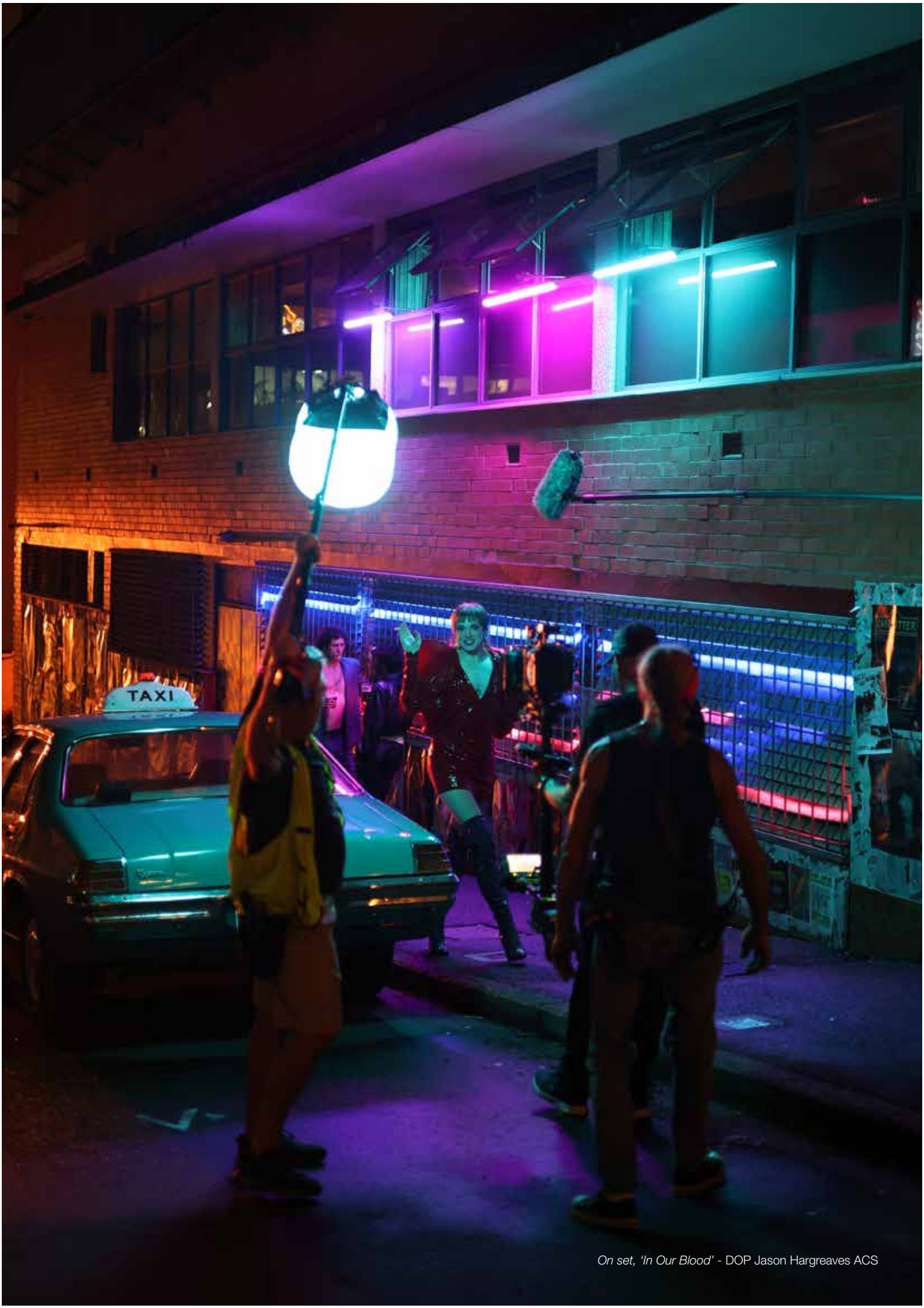
Even with all the practical light sources, it wasn't a particularly bright grade. The images had a lot of colour and meat on their bones, and we found ourselves pulling back the HDR highlights so that they weren't really reaching even 300 nits very often, let alone 1000. Textural elements were also a very important part of the look. Hargreaves tested using Glimmerglass filtration but found that using halation in the grade was giving him the effect he wanted, spreading, and softening the sharp edges you often get in high contrast areas. We produced show LUTs for HDR and SDR, and the SDR LUT was taken on set for monitoring, and burnt into the dailies and offline rushes. ABC were also sent tests early in the process to make sure they were on board with the level of grain and halation emulation we were adding into the look. It is likely that this workflow allowed us to deliver a much bolder grade than we otherwise would have gotten away with. Because all departments and stake holders were shown this look from the very beginning rather than a standard rec709 transform.

Hargreaves explains,

"We wanted to holistically approach the whole show with boldness in every decision possible, because really, this was trying to reflect the bold decisions that everyone was making at the time. Our main character, David, was making incredibly bold decisions in Parliament, potentially career destroying decisions. And in the community as well, at the time, not just in the colours of the art and fashion of the time, but in the bold steps that community was taking to combat AIDS. So, it was excellent to pursue that bold look, early in the process, and try and understand what the implications were for the colours that we were going to be using, and the tone that we're going for, and how that would all look on screen. There was a continuity, I suppose, all the way through from that early stage. Our colour tests were shown to the production designer, the costume designer, and everyone that wanted to see them, so that we could all be very clear about the direction that we're all going in."

In Our Blood is a beautifully crafted series that captures the mood and complexity of the period. The success of the look was due to Hargreaves' thoughtful and collaborative approach, and the key creatives' commitment to boldness in every aspect of the production. It was an incredibly enjoyable show to colour, from the initial camera tests through to completion, and I thank everyone involved for having me on this special project.

The show is now streaming on ABC Iview.



On set, 'In Our Blood' - DOP Jason Hargreaves ACS

Tracey Corbin-Matchett OAM on a Bus Stop Films set - PHOTO SUPPLIED

TRACEY CORBIN-MATCHETT OAM

By Kathryn Milliss ACS

CEO of Bus Stop Films.

Tracey was awarded the Medal of the Order of Australia in the Kings Birthday honours in June this year, appropriately it was for services to people with disabilities and the arts – more so, she was secretly nominated by a student from her organisation.

Tracey and Kathryn Milliss ACS arranged to meet for a chat, here's how their get together played out.

Tracey is passionate about Bus Stop Films…

We're a not-for-profit social enterprise and we use filmmaking and the film industry to raise the profile of people with disability and other marginalised groups. We do that in four ways, education, filmmaking, advocacy, and employment. I think film is a brilliant medium for social change. Film is so portable, it can travel around the world, and everyone has a camera in their pocket, so in order to get powerful messages out, it's impactful.

I was working at Screen NSW in stakeholder engagement and industry development and we were doing a project rolling out the first iteration of ScreenAbility and … working on how we could do more things around inclusion and it was one of the team from Arts NSW who said oh you should talk to Genevieve Clay-Smith, she has this great organisation called Bus Stop Films and they're working with people with disability and I was like oh that's amazing.

So, I reached out to Genevieve and was just blown away by how much she'd achieved with Bus Stop, running the organisation voluntarily, while building her own company and career. She's just an amazing human and I was really inspired by how she was able to bring together social justice and creativity. My career has taken me from social housing to women's legal services and now Film and TV. I have always worked in things that were about making the world a fairer place. As government organisations do, Screen NSW restructured, and I was made redundant, so I started doing things that I loved, back in the industry, working on events and marketing and policy. I picked up Bus Stop as a client. I got to love them, and they loved me, and so I came on as CEO in 2019. It is my perfect melting pot of social justice and creativity.

Our Accessible Film Studies Program is now delivered almost across the whole of Australia, Northern Territory is the final stop, in partnership with film school organisations such as

Stairs - DOP Lizz Vernon, PHOTO by Sarah Jane Johnson.

Griffith Film School, RMIT and AFTRS, Australia's leading film school. It offers a film school experience to people with mild intellectual disability or autism. It's a 40-week rolling program, and some of our participants have been with us the whole 14 years we've been in operation. It's about community, capacity building, independence, socialisation, friendships, and literacy through the lens of filmmaking. The participants do learn about filmmaking and make amazing films but the reason they come back year in year out is to have that sense of community.

We also make amazing films as the ACS will attest. Visual storytelling and quality are really important to us. We have great support from Panavision to supply the cameras for all our films and we work with a host of amazing crews that bring them to life. The films are entered into festivals around the world, and they get picked up for broadcast on TV. We know when people see our films they connect disability with us, so if it's not really good they go, ***"Well what do you expect. People with disability made that"***, but when they see ours, they go ***"OMG that's so great."*** The beautiful film, *Stairs,* shot by NSW ACS Member Lizz Vernon, which was filmed in Mongolia, was one of our most successful films and was able to be entered into the Oscars.

The next part is about the facilitation of employment, so working with the industry to build confidence that they understand what disability is and how it works and the construct of disability around barriers to employment. We build confidence in production companies; small businesses right up to Disney and Marvel, supporting employment on productions including *Shang-Chi and the Legend of the Ten Rings* and *Thor: Love and Thunder* and working with Fremantle to prepare the team ahead of *Heartbreak High Series 1* and on their feature documentary *It's Going to Be Big,* so that they'll feel confident to employ, work alongside and creatively collaborate with people with disability. Similarly, we work with people with disability to identify what they would like to do in the industry, connect them into jobs, get them jobready, figuring out any skills they need to gain and then

We've had great success Just this year, we're up to about 85 employment opportunities that we've supported in the screen industry. Camera is pretty popular. People want to get amongst it and get behind the camera to see how the magic happens.

really work in a bespoke way with the production companies to identify suitable roles.

Kathryn has also worked with the people with disability and is similarly passionate.

In the nineties I shot an SBS series called House Gang about a group house of young people with disabilities. Two actors lived with Downs Syndrome, and one had Cerebral Palsy and a mild Intellectual disability. All three of them blossomed under the high expectations that were placed on them in acting; to learn lines, hit marks, perform character, perform comedy. They absolutely rose to the challenge.

Tracey picks up the discussion again.

I think it's really great for our cohort to have the accommodations they need on set to allow it to be accessible for them, but also that they're challenged to set up and contribute in a professional way, so when we're placing our participants, we have an expectation that they'll act in a professional way and do the job their tasked to do, and we often say to the production company, ***"It's ok to ask them to do the job they've been asked to do"***. You make considerations for their access needs and their disability, but you do want them to challenge the low expectations people have on those who live with disability and support them to be their best self and do their job in a professional way. We want

to set them up for success.

We've had great success Just this year, we're up to about 85 employment opportunities that we've supported in the screen industry. Camera is pretty popular. People want to get amongst it and get behind the camera to see how the magic happens.

At the moment we're supporting a new, Deaf cinematographer, Jack Small. He's a surfer and had a change of career from being a horticulturalist, to studying filmmaking at TAFE and is really keen on camera department, and Bus Stop Employment has been able to connect him in to work in a bigger camera team.

We worked with him on a project we did recently about set signs; a series of Auslan signs for the screen industry. I borrowed the idea from Deaf Sports Australia, where we have a series of signs for different sports that are really aimed at hearing communities. if you're coaching soccer and you suddenly have a deaf person in your team, how do you better communicate? This doesn't replace an Auslan interpreter, or a deaf consultant, it just gives you some skills to go to their side of the fence; some basic Auslan signs for the hearing cast and crew so they can better communicate with Deaf cast and crew they may be working with, even if it's just for letting the crew know when it's coffee time. It does benefit everyone. If we can communicate on a set without using our voices, then it would be better for everyone.

It's where access and inclusion help everyone. A lot of the work we're doing is bringing people with disability into the fold, into crew roles so that crew can get familiar with them. Like with Jack Small on the Set Signs project. He worked with the production company, Ten Alphas, Set Signs was directed and shot by NSW ACS member Jess Milne and now they want to work with him again. So, we're seeing Jack in operation and we're more confident to put him forward in roles on other projects we're working on.

Mikey Hamer, who is a cinematographer and WA ACS Member, is an ants in your pants energized guy and lives with ADHD. He's always thinking, I've got this great idea, and if we just shot it like that…. I think that's why the films we've made with him are so amazing. We made *Groundhog Night* for ScreenAbility with Emily Dash, who wrote it together with Genevieve Clay-Smith who also directed it and they both starred in it. I just remember Mikey coming on board and being so committed, he stayed overnight in the house we were filming in. It had vines growing through it and was scheduled to be knocked down. It was just putrid. It was January in the 'Shire', the walls were carpeted, it was stinking hot, a gaffer fainted with heatstroke, but Mikey stayed in this house to get the vibe and get amongst it, and then the way he set up the shots… There was this beautiful scene, with Robyn Nevin, John Batchelor, Chris Haywood, and Genevieve; this family scene at night, and it was so hot, but it was beautiful the way Mikey set it up. I think his brain is wired in a different way, and it's so creative and so frenetic, and he's always coming up with new ideas and ways to make it work and brings a new perspective to filmmaking. And then he passes that energy on to the participants who he mentors when he's on our projects, really sharing. We got him to come in and do camera classes with our students and share his knowledge and those workshops have been amazing.

MIKEY HAMER

Mikey…. Working with Bus Stop Films is without a doubt the most rewarding job that I ever [get to] do. I do lots of commercials. It sits completely outside my experience of standard work as you are also a mentor and a tutor. It's great to collaborate with neuro diverse people and see their perspective on the world.

All students at Bus Stop are treated with respect. One young guy Bevan, a great student who has Down Syndrome has operated for me frequently. I've occasionally had to pull him up on something like not buttoning on. Honestly, who hasn't done that in their career. He's learned the lesson and not done it again. Afterwards his parents came and thanked me for holding him to a standard and treating him like an adult capable of learning and not like a child.

I was diagnosed with ADHD as a teenager. I was prescribed dexamphetamine. My Dad came home and said ***"Get him off that stuff. Just give him something to do that he's interested in. If you give him a camera and a bottle of tomato sauce, tomorrow he'll give you a horror film".***

ADHD is my superpower for cinematography. It gives me the laser focus about my passions. Sit me at a desk doing admin and I can't focus but get me out and moving and I'm driven. I also work as a director. I'll be asked to write a treatment and come back with it the next morning.

In 2021 I acquired a brain injury, was placed in a coma and needing to re learn how to walk and talk. Bus Stop were amazing at keeping in touch with me and keeping me positive. Without Bus Stop I wouldn't have had the same belief in the possibility of working in the film industry again.

I'm shooting a feature now and that experience changed the way I deal with people, how I communicate. I always check in with my camera crew now, like ***"Yesterday was stressful. How did you cope?"*** It's been a change for the better.

Just a couple of weeks ago, I went to the Down Syndrome NSW, Health and Ageing conference, and a key takeaway was that the life expectancy for people living with Down syndrome is really connected to their social connections, and how important that is for their health and well-being, and I'm so pleased that Bus Stop is a part of that. I came away from it going that's why we need to continue to do Bus Stop, because people have found their tribe. They love film and filmmaking, the cinephiles love the connection they have and it's through the process of the creativity, the learning, the practical and the editing, and the walking the red carpet and being part of it, that they grow and develop, and that gives them that positivity, that's so important to their health and well-being. Not all our participants will end up working in film or TV, but they'll take those skills into other parts of their life, even if it's getting the confidence to strike up a conversation, and maintain a friendship, it's wrapping all that up and teaching it through filmmaking.

PHOTO by Sarah Jane Johnson - *On the set of Stairs. L-R Director Zoljargal Purevdash, DOP Lizz Vernon.*

Government disability employment schemes are very non-existent when it comes to the screen industry unfortunately. There is a lot of support from the government for disability employment in a lot of sectors. I spoke about this in the Disability Royal Commission, because there is a lot of great support through the Job Access scheme, it's a great program. Where there is a disconnect and where they don't include the screen industry is that the scheme is tied to a notion of a job being a regular thing that you turn up to every week, ongoing, ad infinitum. We know that the screen industry and commercial production industries are about work that is more about a constant pipeline not continuous days. It's crewing up for a project and crewing down and having multiple employers across a year.

So, the way that the Job Access works in terms of how it supports companies who want to hire people with disability, is that it's tied to this 13-week benchmark. The job has to go for at least 15 hours a week for 13 weeks in order to unlock a wage subsidy. It also unlocks other things that a company can get that might help it make its workplace more accessible; modifications to the workplace or Auslan interpreters, whatever is required to make that workplace more accessible to a person with a disability as an incentive for a company to hire a person with a disability. When the screen industry can't access the scheme, it makes it harder to hire people with disability. It also makes it easier for a production company to say, ***"well we can't hire a person with a disability because we can't afford it."***

I have met with Minister Burke, who's fortunately both Employment and Arts Minister and his team and he recognises that there is a disconnect. It will take some time because it will require a change of legislation and of policy, but it's great that it's on the agenda.

Bus Stop Films has been operating in that space (employment) for a long time. We didn't have funding. We just did it out of the goodness of our heart and recognising the importance of being employed. We worked with production companies and worked with people with disabilities to match them. Last year we launched Bus Stop Employment, and we need to make it sustainable as a business model in the absence of any government funding.

We provide consultancy to the production company, to work out; what does the job look like, find candidates, on board them, support them and contract to the production for consultancy. That's how I have slowly been able to build that up and to make that sustainable. We got a small grant from the Westpac Inclusive Employment program and The Snow Foundation, but we don't get any government funding for that work. The 85 people that we've placed this year. We've done out of that model. Many of the people who we place do engage with other disability employment service providers, but none of those providers have those networks of contacts and expertise that we have in the industry and they're not going to touch the jobs, the two-day Continental Cup a Soup ad because under the current policies it doesn't give them any financial payment, whereas we can work as consultants to the production companies. And every job is critical, even a 2-day TVC shoot, as it's a building block to get the next job.

There is a review of the Disability Employment Service coming up. I'm hoping that Job Access and Department of Social Services will look at new employment models for industries working in the gig economy. We are not the only one; performing arts industries, music, songwriting: are all gig based. But as Tony MP (Burke) says *"a job in the Arts, is a job".*

Part of our work is advocacy and I will continue to write letters to politicians, send them emails and chip away and get meetings with them and just say hey, you need to change this, we need to have a conversation, because I

L-R Davaasuren Bayarmuynkh, Genevieve Clay-Smith, 'Stairs'. PHOTO by Sarah Jane Johnson, DOP Lizz Vernon.

think until the screen industry can get the same supports that retail, hospitality, manufacturing can get around disability employment, that the screen industry won't move the needle. It's not just the big employers like Disney Marvel, it's also freelancers, sole traders, small to medium businesses who need that support.

The government is making inroads now. We received funding for our feature film "Baby Cat" through a Building Employer Confidence grant through the Dept of Human Services. All the disability employment on that production is already funded and that will happen next year. Wrapped around a feature film we will also use the production to develop resources for industry that are micro resources. How you support someone with a disability in make-up is different to how you support them in camera. So, we'll be using that as a case study to really develop some resources that department specific to build that confidence, to employ people with disability.

Kathryn has a pressing question for Tracey about the wider industry and their concerns.

What would you say to the budget starved producer who says they can't afford the mentoring, handovers, and workplace adjustments to employ inclusively?

Tracey…

Inclusion is a value add for a start. Well, I think then it comes back to broadcasters and the commissioners. Screen Australia is a government agency. It's a Public Service. It's bound by the Public Service Disability Employment Strategy which includes the procurement of services from companies required to hire people with disability, so whether that procurement is the cleaning of the office or the catering for a big event or of filmmaking productions funded through Screen Australia, then those same policies should apply. I can sense they are heading this way, which is great, The Job Access

The genie's out of the bottle on inclusion. When the Oscars come in March next year, that will be the first time that to be eligible for Best Picture you have to meet the Academy's diversity and inclusion standards...

policy certainly needs to change. And I am working on that!!

In NSW If you receive production finance over $500K you have to hire a person from a marginalised group, which is a great start. Also changes to the Production Location Offset from July 1st mean that international productions coming to Australia, receiving that offset, it is proposed that companies will have to invest in legacy training that leaves something to the industry when they have wrapped, and part of that is also providing recognised training for underrepresented groups. So, we are here and ready. We have 180 young adults with disability with us, many of them are job ready.

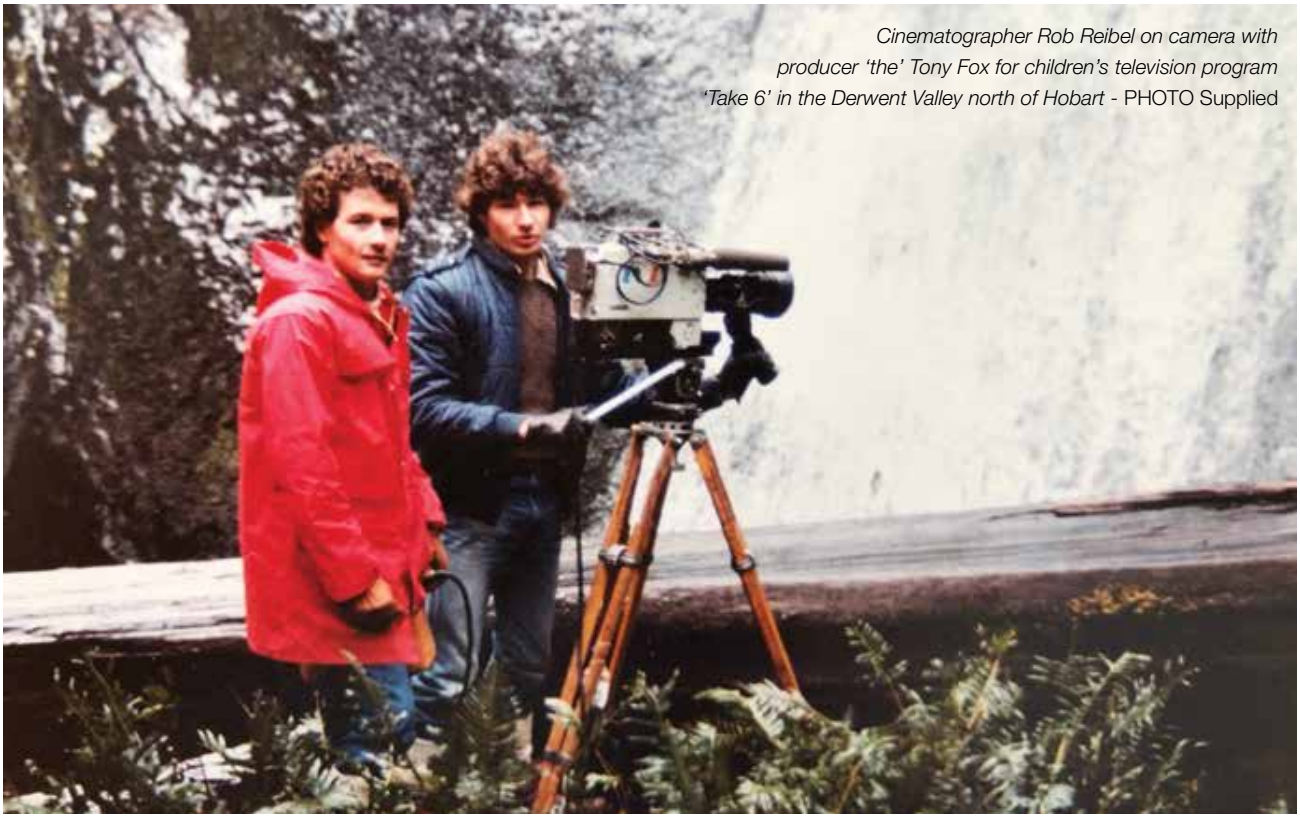
The genie's out of the bottle on inclusion. When the Oscars come in March next year, that will be the first time that to be eligible for Best Picture you have to meet the Academy's diversity and inclusion standards, and that's whether you make your film in LA, Berlin, or Sydney.

It's moved the needle. I want to see it that you can't get funding or finance for your production unless you're committed to hiring an intersectionality diverse cast and crew, so you are just going to have to find time and budget to make it happen.

And that is going to make your film Oscar ready. We are so Oscar ready!

HOW HOBART COMMERCIAL NEWS CINEMATOGRAPHERS LED THE WORLD

By Adam Reibel



Cinematographer Rob Reibel on camera with producer 'the' Tony Fox for children's television program 'Take 6' in the Derwent Valley north of Hobart - PHOTO Supplied

Today, many cinematographers working in the news environment and requiring a near-immediate turnaround would never consider using film to bring us the news.

With the advent of cellular backpacks, satellites, microwave links and newsroom edit servers, edited news packages can be delivered almost immediately to air after it was filmed. Anyone in the newsroom can view the footage as soon as the footage is back at the studios.

Still, there was a time when 16-millimetre film was used, and an immediate turnaround was a future dream.

You would probably not guess that the first television station in Australia and one of the first in the world to make this transition to electronic was TVT-6 in Hobart, which happened pretty much overnight.

My father, Rob Reibel, was one of the cinematographers who began his career processing film in an era when getting it to air was a lengthy task.

"There were six-hundred feet of leader that pulls the 16mm film through the film processor, and it took forty-five minutes for the first frame to come out developed as it also dried the film on the way through," Rob said, "one-hundred feet is equal to three minutes [of vision]."

"Ektachrome was the standard news gathering film used for fast turnaround, and we relied on the cinematographers to get the exposure correct like today."

"Ektachrome is pretty much slide film."

Taslabs, started by Atlabs in Sydney, was based at the former ABC studios in the Hobart CBD near St David's Park.

"I'd wait for four or five rolls of film to come in and staple them together and hope they wouldn't break as there would be thirty-seconds to prevent damage from over-developing the film and get the processor working again."

Rob then got his start at TVT-6 as a trainee cinematographer and film processor, one of the most profitable television stations in the country, when the management decided to process the film in-house at the New Town studios.

"It was more convenient to have the processing machine at the station, and it was a cost-saving exercise, too, I should imagine."

Newsgathering cinematography was very demanding. They were using ARRI ST, ARRI BLs, and Frezzolini's. The ABC used CP-16s.

"You couldn't afford a mistake, and the more you shot, the better you became. The light meter was your main tool as you were constantly measuring light. We used a tungsten film, and we had to put an 85B [tungsten] filter on the end of the lens to shoot in daylight… if we shot in

Camera lineup, Sony BVP-300 News Camera, Frezzolini and an ARRI BL - PHOTO Rob Reibel

daylight, we would have to put a blue gel on the lights to change them to daylight. Everything had to be lit with three tungsten redheads without scrim because the film cameras needed more light. There was no monitor to check… it was all experience and knowledge."

Trainees and junior cinematographers were given short ends, and the experienced cinematographers were given new 400ft loads.

"It was very expensive. It all had to be used. The shooting ratio was almost 100%. We became very skilled with not doing multiple takes. Every shot was a shot we would expect we would use."

In the 1980's the station decided to change over from film and chose Sony Electronic News Gathering equipment (ENG) which used SONY BVU Hi-band U-matic tapes.

"Film cameras were turned off one day, and the technicians had edit suites ready to go the next day. A tape would last twenty-minutes, and the shoulder tape recorder was connected to a cable. The first models would have a heavy battery belt that would power the camera and last just twenty minutes, not to mention the wooden tripods. We would constantly find ways to improve the cameras."

The tape-based equipment differed from today's XDCAM discs or P2 card electronic news-gathering equipment. Rob remembers the change of equipment well.

"We had been practising for a few weeks. It was certainly a lot easier, but the earlier cameras didn't give you the colour temperature, and it was a black-and-white viewfinder."

"You couldn't tell if you had the correct image. You had to do a white balance and a black balance every time."

" We would come back with funny images, blue pictures, and green pictures until we got the hang of white balances. We would deliberately do blue balances to put a lot of warmth into the picture."

For those modern cinematographers trying to replicate the film image today, back in the 1980s with the first ENG tape cameras introduced, Rob remembers trying to replicate that film look.

"We would stretch a black pantyhose stocking before the lens on the camera body to degrade the image because the tape was so crisp compared to film, and we wanted that file took."

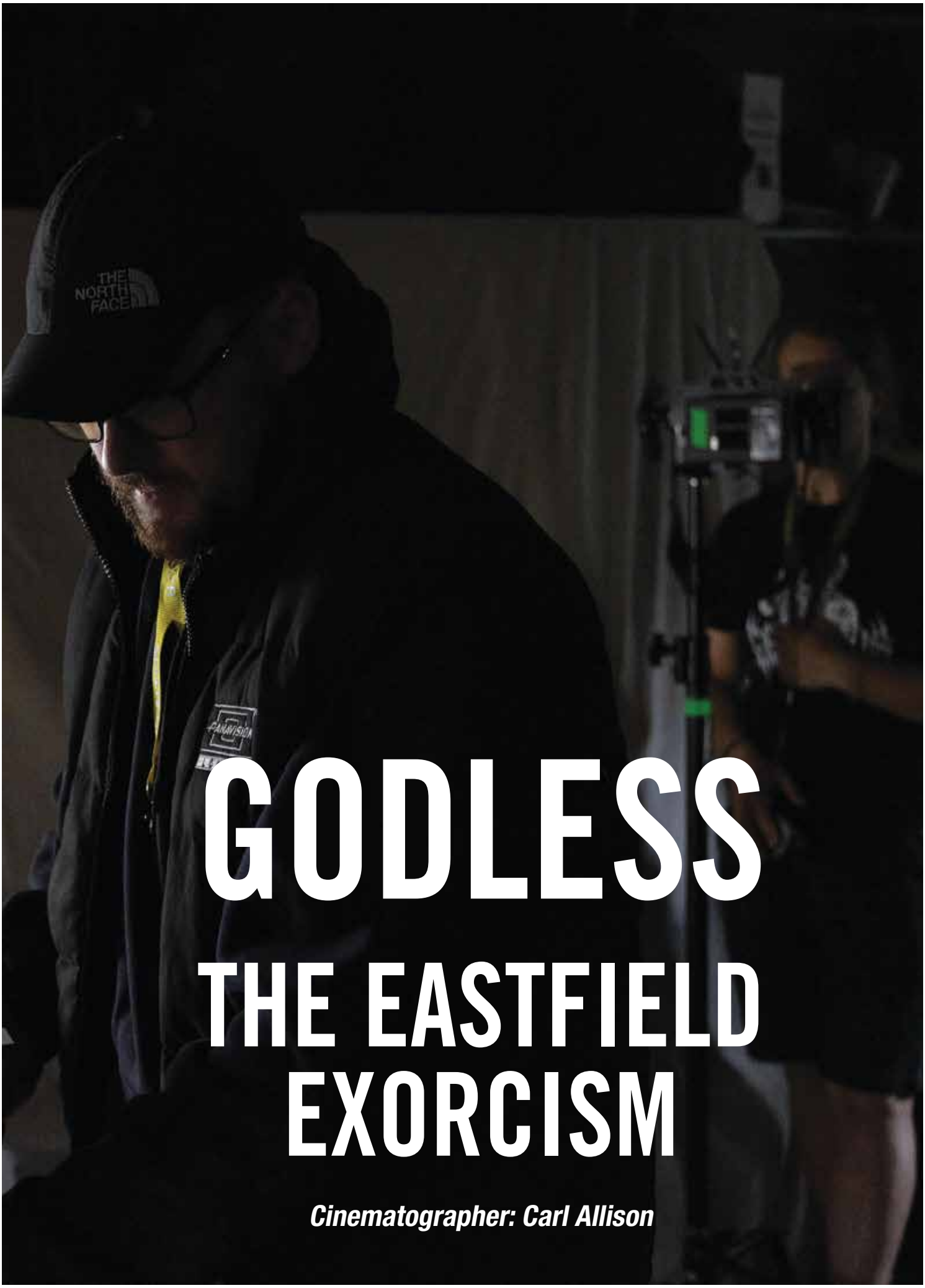
Today, Rob is a freelancer in Hobart and regularly works for ABC, interstate newsrooms, and current affairs programs.

"No one questioned a cinematographer then… if a shot couldn't be done, it couldn't be done, but now everyone is a director. We can pretty much use the cameras everywhere now."

"We've gone from taking outside broadcasts truck and processing film to sending live pictures back using TVU or Live_U because editors can immediately edit the pictures back at the station while you are driving home."

"The picture quality is just so good these days too. Pretty much what your eye sees."

BTS: @p1xels PHOTO Tom Franks.



GODLESS

THE EASTFIELD EXORCISM

Cinematographer: Carl Allison

Faith and sanity are put to the test when a devout Christian begins to suspect his mentally ill wife is demonically possessed. Inspired by true events.

Godless: The Eastfield Exorcism mixes elements of true crime and supernatural horror, as lead character, Lara, is tortured by those around her, descending further into demonic hallucinations. *Godless - The Eastfield Exorcism*, has been picked up for distribution by XYZ films for North America.

Carl Allison had been working with Director Nick Kozakis since meeting at film school in 2009. Kozakis has a great visual sense and intuition for performance. Cutting their teeth on music videos, they've developed an effortless shorthand that borders on sign language, much to the amusement of some crew. Carl knew the minute Kozakis had a feature he was excited about, so would he.

Godless: The Eastfield Exorcism principal photography was shot over twenty-one days: on location and with a low budget.

We chose Daylesford and its surrounding areas, as the film is set in the early 90's and the area provided not only stunning landscapes but a plethora of well maintained, era appropriate locations.

Scouting was extensive for the Indie Production. We wanted to represent a greener, wetter Australia and due to our tight schedule, we needed to be considerate of travel times. Having huge shot list days, with multiple setups was not uncommon.

Melbourne's extensive lockdowns allowed for a lot of pre-production, countless nights on zoom discussing every detail with each department. Carl created a visual bible for the film which mainly consisted of photography examples, in particular the work of Bill Henson. ***'I find this to be the most efficient way to get everyone talking the same language.'*** The final look is moody naturalism, but also incorporating moments with stylistic touches to highlight the characters fragile headspace.

Production designer Bianca Milani brought such a keen and considered eye to the production. Working from the visual bible she did breakdowns of colour palettes for each scene, bringing amazing colours, textures, and patterns to each location. Her team made my job easy as there wasn't a corner, I couldn't shoot in.

Though they pre-visualised every moment, they weren't afraid to stray from the plan. ***'On set if we came to a scene that Nick or I found wasn't working or felt contrived, that idea would be thrown out the window and we'd adapt.'***

The camera package was a RED Monstro with Zeiss CP2's. Carl knew he wanted to shoot large format to make the most of the tight locations that the much of the film takes place in. Carl considers anamorphic and tested Orion Atlas lenses on their proof of concept, but it didn't feel right. ***'I considered utilising a combination of spherical and anamorphic, using the latter for the lead characters hallucinations. We finally opted to just use spherical lenses and to make those transitions more subtle with the use of lighting techniques.'***

Allison included a visual arc when it came to his coverage. ***'In the first act of the film, light and camera movement was kept intentional constricted and considered, but as we built to the climax, we embraced harsher lighting and frenetic camera movement.' He goes on to add, 'The first act is mostly a meeting with a psychiatrist interspaced with flashbacks. It was shot mainly on sticks, favouring the 35mm with subtle push-in's, which then built to more frenetic camera work on the 50mm and 85mm towards the final act.'***

'Except for five glorious days, the film was shot single cam. As B Cam operator, Oliver McGeary, experience in documentary shooting, brought a great sense of intuition to his camera movement.' The team tapped into the naturalistic approach to ground their more intense and dialogue heavy scenes. ***'The rest of our camera team was made up of focus puller Miki Simankevicius, MJ James our 2nd AC and Oliver Whelehan, who were both on work experience from SAE. They were exceptional.'***

The gaffer Sean McGlynn kept the package relatively small. The general approach was 2 x Apurture 600D's bounced off an ultra or unbleached muslin through windows and then controlling the shaft or adding texture with sheers for our key. We then had another lantern wrapped in un-bleached muslin floating around for some fill and a catchlight to read the actors eyes. Though at times the eye-light was removed for certain characters and moments to make characters feel more sinister or mysterious.

Kozakis and Allison like to work fast and efficient. McGlynn had all lights running through an iPad app so at any point during the day when the light changed or we had cloud cover, he could compensate it effortlessly by bringing the ambience up mid-take, that way we wouldn't interrupt performance. The scenes were also covered more loosely and by lighting the room broadly, allowing more freedom for the actors.

Some of the greatest moments can't be storyboarded. ***'There was a day where we had to wait for the right light at dusk for a sequence where the group is praying outside. Just as we were setting up a swarm of what looked to be locusts, in reality… termites, flew over the actors. We shot until we ran out of light and as soon as I buttoned off, they were gone. It had this eerie biblical feel and suited the tone perfectly.'***

Much of the film takes place in three locations, and Allison wanted to find a way to make them visually dynamic as the film progressed. ***'In reading source material about exorcisms, it mentioned how cults would wrap the house in glad-wrap to keep the evil spirits from escaping, - what clever ducks! We changed this to orange tarps so we could have a colour shift. This gave us a hot, saturated, claustrophobic, uncomfortable feeling which added to the scene as we reach the climax.'***














All scenes from 'Godless: The Eastfield Exorcism' - DOP Carl Alison

BTS: @p1xels PHOTO Tom Franks.

With two-night scenes the team utilised a 9K through a Rosco Hanover Frost on a cherry picker for ambient moonlight. This gave them a more textured light and softer fall off to mimic dappled moonlight. There was also an M18 bounced off an 8x ultra-bounce that floated around for the key.

'One of the night scenes is a chase sequence through a forest while a thunderstorm approaches. The main actor begins to have a panic attack which leads into a hallucination/possession. We achieved this by rigging over thirty Astera Tubes in tree lines, along with a further ten Par Cans on the other side of the ridge. No fancy rigging here, we just tacked nails into the trees and hung them on the side opposite to camera. They were triggered in unison to replicate lighting but as the panic attack worsens, we started firing them individually at high frequencies to make the experience more disorienting. The mob following her was lit by torchlights, which we gelled amber to give a period appropriate look.'

Allison doesn't really play around with LUTS on set, instead, for the night scenes he dropped the ISO to 500 and exposed for that, allowing the extra wriggle room in post due to a cleaner sensor image.

This was Allison's first feature, so he didn't have anything of this scale to compare to but knew your backs always against it on indies; whether it's schedule, budget or what have you. ***'We pulled in every favour under the sun, and this support allowed to create a movie that has quality way beyond our budget. We had car stunts, prosthetic SFX, pyrotechnics along with a talented and experienced cast.***

It would have been a completely different experience without the willingness and professionalism of the ensemble. Watching Georgia Eyers snap in and out of her performance during the exorcism scenes was nothing short of impressive. While Tim Pocock and Dan Ewing brought something equally intense and unique to each take.

Both myself and focus puller Miki Simankevicius really had to be on our A game. For some scenes we ran long handheld twenty-minute takes that allowed the actors to explore and experiment. Camera and lighting teams worked hard to allow the director and actors the freedom in these pivotal scenes, without compromising on the visuals.'

Carl Allison doesn't look back with a woulda-coulda attitude. ***'I feel that if I shot the same scene on another day, it would always yield to different results as you're always reacting to whatever challenges arise on that particular day.'***

Our producers Lauren Simpson, Tony Coombs and Tim Whiting really stopped at nothing to get us the resources we need. The generosity of so many talented creatives made this film a reality, and the communities in Daylesford, Hepburn springs, Dean and Yandoit were equally as helpful - jumping in as extras, providing period correct vehicles, and even offering the odd toilet - it was amazing to see.

BTS: @p1xels PHOTO Tom Franks.

LET'S GET TECHNICAL

with Pawel Achtel ACS

The Achtel 9 x 7 Digital Cinema Camera - PHOTO Supplied by Pawel Achtel ACS

Pawel Achtel ACS has over thirty-five years of experience as a film maker and DOP. He specialises in natural history content creation, mainly underwater. Pawel also designs and builds cinematography equipment such as underwater housings and more recently, digital cinema cameras where image quality is paramount. As a scientist and qualified engineer, he merges visual story telling with science-based approach to technical innovations. His inventions were used in many high-end productions and features, such as *Avatar: The Way of Water.* Pawel is also an active member of Innovations Committee and member of board of directors at Giant Screen Association, Full Member of IMAGO Technical Committee and accredited ACS member.

It has been over three years since I announced availability of 9x7 digital cinema camera – a camera that was never going to replace your ARRI, Sony or RED, but an array of six to twelve of them. It is a camera that was specifically designed for shooting VFX plates, Giant Screen, IMAX, and other forms of immersive cinema requiring unprecedented levels of sharpness and image quality.

Resolution versus Sharpness

Resolution is measured in pixels and tells us nothing about image sharpness. Sharpness is measured with MTF (Modulation Transfer Function) showing contrast (from zero to 100%) versus spatial frequency. For example, an 8K camera may or may not be able to discern 8K lines/picture width (or 4K line pairs per picture width) with contrast that we could perceive (say, greater than 20%). If contrast is zero at 8K (or 4K lp/pw), we can say that, whilst the camera has 8K photo-sites and 8K pixels in resulting images, it cannot actually resolve 8K because contrast at such spatial frequency is zero.

Whilst the 9x7 camera's sensor has almost twice the number of photo-sites as other 8K digital cinema cameras, it is not what makes it the sharpest cinema camera currently available. It is also not the fact that the camera is capable of recording up to 11GB/s of uncompressed, linear RAW. What makes it special is the design of the photo-sites that, despite being only about 3µm in size, their MTF is as good or better as some of the best photo-sites in the industry that are 10 times larger. It is this incredible amount of contrast that allows reproduction of details up to and beyond spatial sampling resolution (Nyquist limit) and deliver up to 18.6K (9400 line pairs per picture width) with measurable contrast. The measured sharpness exceeds that of 15-perf 70mm IMAX film by factor of two (four times as much detail) and depth of field can be even shallower than that of IMAX film. It also would take no less than six RED Raptor cameras stitched seamlessly to achieve equivalent sharpness (MTF) as single 9x7 camera can achieve.

The measured sharpness exceeds that of 15-perf 70mm IMAX

The maximum (actually resolved up to Nyquist limit) resolution is 18.7K x 14K (260 Megapixels) achieved through custom demosaicing and image creation process.

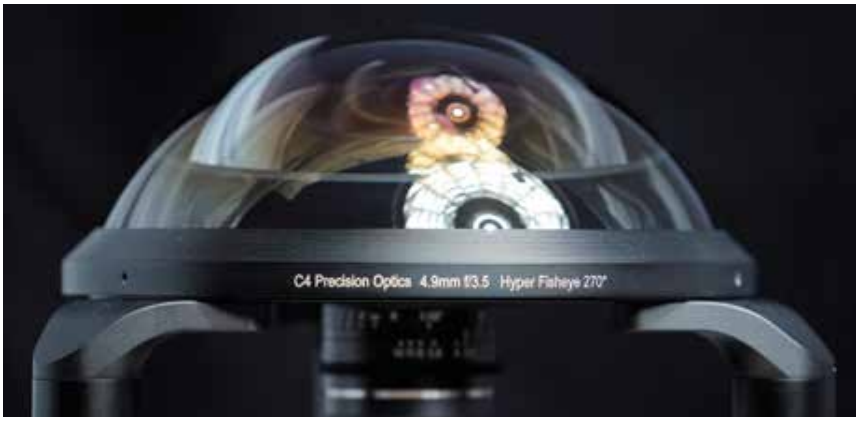
It is this almost limitless sharpness combined with more "squarish", 4:3 aspect ratio that make it ideal camera for immersive cinema, IMAX and for capturing 180° and even 360° VFX plates. The 9x7 was successfully used in number of feature productions, such as Thirteen Lives (Metro-Goldwyn-Mayer), MEG 2 (Warner Brothers) and

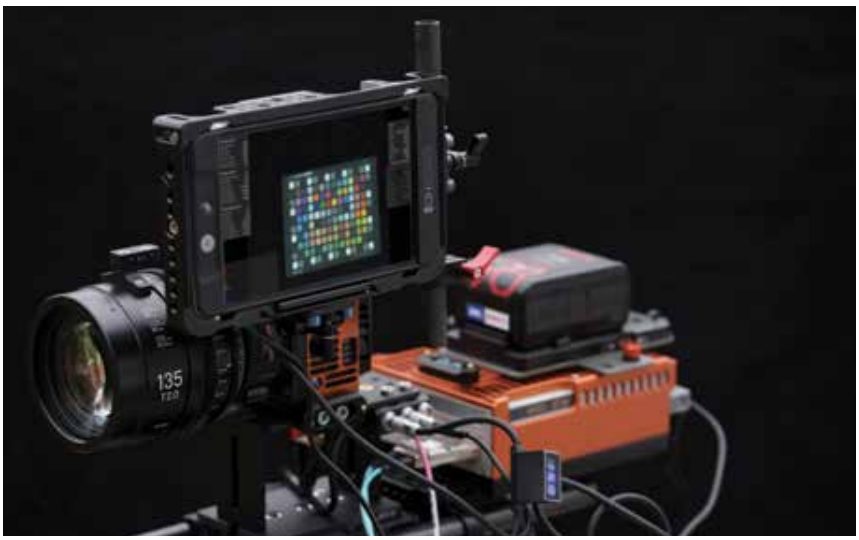
Equalizer 3 (Columbia Pictures). By no means inexpensive (renting at AUD $30K per week), it is many times more cost effective than capturing VFX plates with cumbersome multi-camera arrays and stitching them together afterwards.

The 9x7 camera is also very small and lightweight allowing it to be mounted in stabilised heads, such as Shotover, on drones, underwater housings, and hand-held gimbals – all next to impossible to accomplish with large mulita-camera arrays.

Another important feature that sets the 9x7 apart from other digital cinema cameras is true Global Shutter making it very appealing for capturing fast motion. Global Shutter is incredibly important for VFX work as it allows undistorted mapping of moving objects, but also is important when filming propellers, car wheels, and monitors, TVs as well as flashes, strobes and flickering light sources. Cameras that use rolling shutter can produce significant and undesirable horizontal "striping", distortions, and fragmentation of spinning objects – defects that look unnatural and can be very difficult and costly to fix in post-production.

Another area where the camera found applications is in high-quality 8K content delivery. As most digital cinema cameras suffer from relatively low micro contrast, cinematographers often chose to shoot 8K for 4K delivery to achieve high levels of micro-contrast. But what if your delivery is 8K? Most, if not all, 8K+ digital cinema cameras measure about 0% contrast at 4,000 line pairs per picture width (Nyquist limit of 8K), which means it would be very difficult to discern the smallest detail of such content even if the display is capable of such high resolution. Not so with content acquired with the 9x7. The actually measured contrast at 4000 line pairs per picture width exceeds 50%, meaning: it can be clearly discerned by human vision. It "pops out" off the screen. This is why companies like Samsung chose 9x7 footage in order to evaluate and show the potential of their new 8K Neo QLED 8K TVs – something they weren't able to achieve with using footage filmed with current 8K or 12K digital cinema cameras as, despite having enough pixels, they lacked the actual sharpness and there was little difference when such footage was viewed on 4K or 8K screen.





PHOTOS Supplied by Pawel Achtel ACS

Uncompressed RAW and Afterburner

The 9x7 digital cinema camera records uncompressed linear RAW. The recording module can sustain up to 11 GB/s, which is an order of a magnitude more than any other digital cinema camera.

The camera comes with either 4TB or 8TB built-in specialised high-speed non-volatile memory. At 24 fps it translates to about 27 or 55 minutes of recoding time. When designing the camera back some 4 years ago, the biggest risk to the project was whether we could record this fast reliably. It turns out we "overshot" the requirement and it is actually possible to connect two camera modules to a single recorder (in stereo 3D or multi camera configuration) and still record up to 60 fps each to a single recording module – all synced and genlocked. No extra cabling required.

Working with uncompressed linear RAW footage has many benefits. It's like having "thick negative" – images that stand up to heavy processing often needed in VFX workflows. But there are also drawbacks: disk space and speed. For this reason, we developed

PHOTOS Supplied by Pawel Achtel ACS

Afterburner. Afterburner is an ultra-fast PCIe interface allowing data offloads, transcoding, and backup to enterprise-grade U.2 NVMEs. These are small, portable, rugged, and reliable high-capacity SSD drives that help DIT (digital imaging technician) in providing quick and reliable turnaround for dailies, backup, and delivery to editorial. The Afterburner is capable to offload the data at real-time speeds.

What lenses can I use with the 9x7?

We have option to use either ARRI LF LPL mount or RED DSMC 2 – compatible lens mounts. This allows wide range of lenses to be used with either PL, LPL, PV, Nikon, Canon, Leica M, and other lens mounts.

Of course, not all the lenses are sharp enough to take advantage of the 9x7's capabilities. In fact, only a handful of lenses offer the level of sharpness matching that of the camera. From rectilinear range, we found that ARRI Signature Primes and selected SIGMA ART lenses offer enough sharpness and contrast. When it comes to immersive cinema, IMAX, Giant Screen and VFX plates, the most commonly used lens is the Entaniya HAL 220 LF fisheye offering near perfect f-theta mapping (equidistant projection). Such mapping is considered optimal and non-distorting when capturing extremely wide field of view. The HAL lens is also incredibly sharp showing decent contrast at 200 lp/mm and it is one of the sharpest fisheye lenses ever made.

Speaking of sharp fisheye lenses, I have recently purchased one of the kind Precision Optics C4 – a 270° 4.9mm f/3.5 hyper-fisheye lens from our friends at Lens Rentals in the US. When pointed upwards, this lens will allow me to shoot full 360° VFX plates with incredible amount of sharpness. The lens measures discernible contrast at 250 lp/mm and is one of the sharpest lenses ever made, not just the widest!

Our new firmware, 5.1 already features an overlay for the C4 lens, which has been mapped onto the sensor.

How about colour fidelity?

One of the strongest features of the 9x7 digital cinema camera is in its ability to reproduce colours with unmatched fidelity and colour gamut.

Until now, cameras have been pre-programmed with a default linear colour profiles (IDTs) that determine the accuracy of all colours. They also relied on Colour Temperature as sole means to characterise the whole range of different light spectra and illuminants used to light our images. How inadequate?! How can one single number characterise a tungsten light, a daylight light, as well as fluoro light and all types of LED lights? We have been doing colour science wrong all this time!

Moreover, when we try to apply "correct colour temperature" in a process called chromatic adaptation, we often end up with inaccurate skin tones and other reflective colours. Such approach also significantly limits the accuracy of super-saturated colours, which are often clipped by being mapped outside the spectral locus. The accuracy of those super-saturated colours has been impossible to achieve not just because of limitations of single number chromatic adaptation, but also through means of a linear transforms (IDTs) commonly used in colour processing pipelines. These

L-R: Aaron Closz and Pawel Achtel ACS at Cinegear - PHOTO Supplied by Pawel Achtel ACS

limitations led to workarounds, such as gamut compression, which do not fully solve the problem of super-saturated colour reproduction in digital cameras. The 9×7 provides the option to choose non-linear processing of super-saturated colours, while still retaining the smoothness, accuracy, and tonalities of subtle colours, such as skin tones.

But the feature that I'm most proud of, is what we call DSR – Direct Scene Referred workflow. Whilst the 9x7 still allows the legacy colour temperature and chromatic adaptation, it also offers something that should have been done from day one. Instead of having fixed IDT (Input device Transform) or camera colour profile, provided by camera vendor, we give an opportunity to the DOP or Colourist to create one on set. An IDT that is specific to the lighting conditions for each specific shot, scene, or sequence. Every shot is colorimetric, meaning it doesn't require any colour correction as or chromatic adaptation. The colours are perfect "out of the gate". This custom IDT is created in camera on set and embedded in every frame of every clip as metadata. As the colour is fully managed this colorimetric image is displayed in the camera on set, and preserved in dailies and, raw files are ready to edit and colour grade consistently as there is no need for time-consuming and often destructive colour correction process.

"But the feature that I'm most proud of, is what we call DSR…"

Loosely speaking, the camera stores thousands of numbers in substitution of a single number: the colour temperature. In such workflow colour temperature is completely irrelevant just as it is inadequate to properly characterise the entire light spectrum. The images, whether taken at sunrise, or under overcast, daylight, tungsten or LED illumination will be identical and ready to apply creative colour grade look consistently regardless of what lighting they were shot with.

What about dynamic range?

Film-Like highlight control and extended dynamic range processing allows additional 2 ~ 4 stops of dynamic range as well as soft and smooth handling of overexposed areas, just like film emulsions used to reproduce highlights. There is no "hard clipping", or "ringing" often associated with digital images. The 9×7 Digital Cinema Camera produces natural-looking smooth highlights gradations whilst retaining full detail and chromaticity.

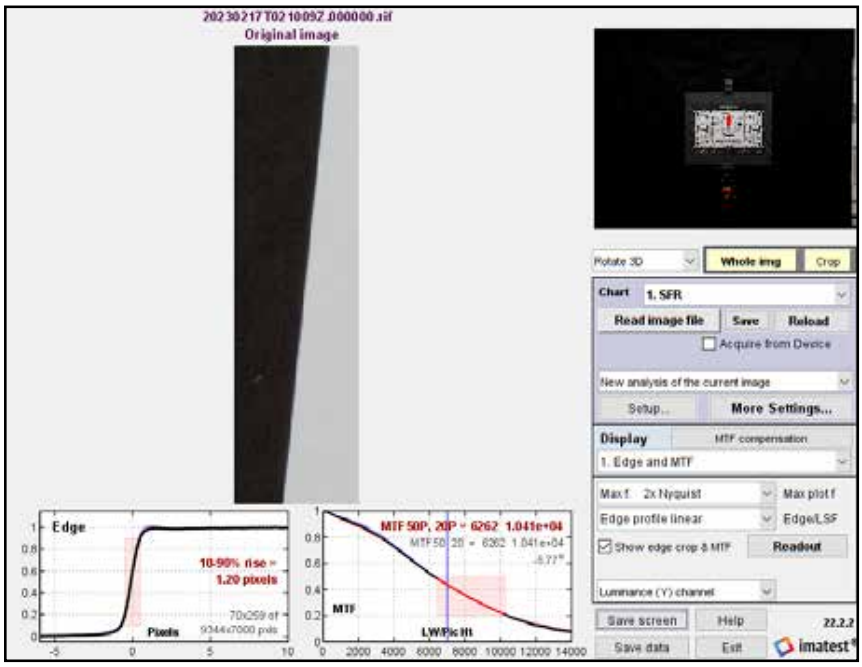
And, because 9×7 camera uses 16-bit linear uncompressed RAW, highlights are much smoother and well beyond what typical log encoding is able to retain. When measured, the 9x7 has as good or better dynamic range than most high-end digital cinema cameras.

What is low light performance?

Most digital cinema cameras are ISO invariant (have single ISO sensitivity) or dual ISO. The 9x7 has eleven (11): eleven native and distinct ISO sensitivity settings ranging from about ISO 500 to a whooping ISO 5100 making it one of the most low-light sensitive cameras available today. Side-by-side comparisons clearly show significantly lower noise than that achieved with any other high-end digital cinema camera. It's very, very clean and some of my favourite shots are night-time city scapes, which the camera can reproduce as bright and vivid scenes.

What makes good VFX and Giant Screen camera?

Of course, image quality is the primary criterion.



One such feature is resistance to flares. Whilst many cinematographers love flares, VFX supervisors and Immersive Cinema directors hate them. A single flare can ruin the shot.

Considering that most of outdoor VFX or Giant Screen shots would have the sun in the view (or a shadow of the cinematographer) it is extremely important that at least the camera should not introduce them. However, one of the most common sources of flares comes from UVIR cover glass and sensor reflections. Every single digital cinema camera has this problem. Well, almost everyone. The 9x7 is different and this extends to an innovative UVIR sensor cover glass design, which I call ClearCast. This super-expensive piece of optics doesn't simply reflect unwanted IR and UV spectra away from the sensor. Instead, it disperses them. No other camera sensor optical stack works this way, and this is where it is pretty much impossible to cause flare when pointing the camera into the sun or other bright light source. One of our customers said that this feature alone was enough to persuade them to purchase the camera as they used to spend a lot of money to remove unwanted flares from the footage. When testing the 9x7, the customer could not cause it to flare, no matter how hard he tried.

Cine Gear Expo, Los Angeles 2023

Cine Gear was our first public showing of the camera in US. Our friends at 8K Association supplied a colour calibrated Samsung 8K TV, which exceeded our expectations. I'm used to working with colour-calibrated grading monitors every day but, I must say, when I played our 8K HDR sample reel containing subtle skin tone gradations of a young girl as well as super-saturated reds and greens of a Macaw parrot, I couldn't help but feel that when all technologies come together, the result can be overwhelming.

We also teamed up with Wavelet Beam GmbH from Germany offering RAW to RAW de-noising solution that is absolute revolution in noise reduction without sacrificing colour or detail in deep shadows. For anyone being obsessed with image quality as much as I am, it is quite a treat.

Another company we partnered with is our own Ignite Digi, well-known for high quality camera accessories and mounting hardware. Using their flagship "keystone" camera cage, we can essentially transform the 9x7 into ARRI-compatible camera leveraging wide range of ARRI accessories. Such configuration makes it easy on set when rigging the camera in professional production environments.

What are we working on?

There is a range of hardware and software improvements that we are currently working on.

One significant hardware upgrade is to incorporate fibre transceivers into the camera head and recorder. This will eliminate very expensive fibre optic cables that incorporate transceivers that we use today. Instead, "off-the-shelf" fibre cables can be used, and camera footprint is going to be much smaller.

But software is where the most activity is. We are now working on our own image creation and workflow software. In addition to uncompressed RAW, we will be also providing high quality EXR export for VFX workflows, which will offer better image quality and superior colour management compared to third party software.

As we always try to under-promise and over-deliver, there are some other innovative features that we are working on, and which will be announced as soon as they are ready.

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WELLMANIA

DOP Dan Freene ACS

Liv played by Celeste Barber gets the party started at a kids birthday, 'Wellness' - DOP Dan Freene ACS.

Dan Freene ACS about to roll on a shot of Liv in a gym, overlooking what will become Central Park New York in winter. PHOTO Martin Farghar

When food writer and human tornado Liv, *Celeste Barber,* has a major health crisis, she's forced to rethink 'live fast die young,' attitude. After she scores a once-in-a lifetime job that will catapult her into the American mainstream, a series of unfortunate events in Australia sees her banned from re-entering the United States unless she fixes her health. Throwing herself body-first into a wellness journey, Liv tries everything from the benign to the bizarre in an attempt to get well quick and reclaim her old life.

Produced by Fremantle Australia, Celeste Barber, and Warren Clarke. The eight-part series is inspired by the book Wellmania: Misadventures in the Search for Wellness by author and journalist Brigid Delaney and co-created with Benjamin Law.

Cinematographer, Dan Freene ACS, was looking for a very rich visual style for the project. ***'The producers wanted to showcase the city of Sydney in its best light, showing off all the iconic buildings, beaches, and features that the city has to offer. The series is set across Sydney and New York. 'Liv, our hero character lives in the elegance and glamour of New York and feels truly at home there. For her, coming back to Australia is essentially just a quick pitstop. To differentiate between the two worlds, 'I wanted Sydney to feel like a Ken Done painting with rich, blues, pastel pinks, poppy reds, bright yellows. Bright open skies, white sandy beaches, emerald, green trees and foliage. Bright warm summer sun by day, and pink, cyan pastels by night in Sydney to set the scene.'***

Freene expands, ***'With New York we wanted to feel its opulence and so lent into rich fabrics, darker tones, gold accents. To contrast the seasons. It's winter in New York, so the fabrics are heavier, and the exterior outdoor ambient light is soft and bluish by day, and warm and lush by night. We further enhanced this in the grade with tobacco shadows and gold highlights. In many ways, the two looks reference a juvenile, fun, exciting city in Sydney and the more mature, serious, grown-up world of New York.'***

With coverage for Wellmania in mind, Freene mentions when he and Erin White started dissecting the scripts for *Wellmania*. ***'It was evident that we were making a comedy in the traditional sense. 'Celeste is a very expressive actor and uses her whole body as a physical extension of her comedic performance, so we knew from the outset we needed to capture all of her. Comedy is told in the mid shot, and where possible we would try and master the scene with a moving camera capturing the bulk of the performance on wider lenses.***

Liv is a human tornado, never still for very long. A coping mechanism she has built up over her lifetime to avoid confronting her past trauma. We wanted our cameras to roll with her energy, and stay with her perpetual motion, during the coverage.

Often scenes would be happening on the go, with many mastered to great effect by our Steadicam operator Julius Koivistoinen. In larger grouped scenes, once our master was in the can, we would lean into cross coverage. I have never been a huge fan of cross coverage, but on comedy it really helps to keep the actor's energy alive and keep their performances balanced when it comes to the edit.'

When asked about inspirations from other shows and how he approaches long form projects, Freene usually has a look through previous films and shows and try to find scenes and images that inspire him, ones that feel like a good fit for the story.

'Erin White, as set up director and I shared many romantic comedy movies, like When Harry Met Sally, Bridesmaids, Meet the Parents, and Flea Bag to name a few. There was one show that I really like the look of. A popular British drama/comedy called, Sex Education. I reached out to Jamie Cairney the DOP early on and found out that he had used a combination of master primes, and the Sony Venice camera.'

2nd block director Helena Brooks & Dan Freene ACS, lining up a top down shot of Liv as she wakes from fainting. 'Wellness' - DOP Dan Freene ACS

Inspired by Cairney's work Freene discussed his own camera and lens choices. ***'Netflix had specified an HDR finish in 4K, for Wellmania which meant I needed to capture a wide dynamic range with excellent colour rendition. I'd been testing the Sony Venice, and absolutely fell in love with the dual ISO sensor, and the 16bit X-OCN raw recording format the Venice uses. Having found when working on TV Work in Australia, post-production has a very strong voice when it comes to data usage, often forcing us cinematographers into a world where we cannot use the amazing digital cinema cameras we have at our disposal to their fullest potential.***

Sony's X-OCN format, has three variable settings of raw recording. During our testing period we settled on their middle compression, X-OCN-ST, finding even in 6K the data rate was smaller than shooting in 444 ProRes.

I had been in touch with VA Digital about supplying cameras for the series, and knew they had a super large collection of ARRI Master Prime lenses just sitting on the shelf. I was keen to film Wellmania in full frame, because I wanted to cover the show with wider lenses, mastering often on a 28mm or 32mm, while having control of the depth of field allowing a nice pictorial separation between the characters and the backgrounds.

We shot the series with an almost constant T-Stop of around

Liv, played by Celeste Barber, is about to have a mental breakdown at her brothers wedding. 'Wellness' - DOP Dan Freene ACS

Liv ponders her catastrophic actions as she catches a cab home through the streets of Sydney. 'Wellness' - DOP Dan Freene ACS

T2.8. In full frame I find this balance works well on lenses from 24mm - 40mm, which is the sweet spot for comedy coverage.

Our final delivery to Netflix was a 2:1 aspect ratio, and to my surprise, when I checked the coverage of the Master Prime lenses on the full frame sensor, nearly all but the very widest lenses covered a 2:1 export when capturing 240:1 in 6K. For those wider lenses we simply made some guides for the camera operators, and for post to push in 5%. The Master Primes have somewhat gone out of favour, so I was able to run a complete package on A cam, from 12-100mm, and have a matching 50mm, 75mm, 100mm for any cross shooting, which is always something I like to have up my sleeve when filming comedy.'

On *Wellmania* Freene adored the Sony Venice system. ***'Apart from having two variable ISO settings, 500 for day and 2500 for low light, little things like variable NDs in one stop increments, the menu available on both sides of the camera. The Sony X - OCN raw format, gave me and grader Adrian Hauser a nice fat negative to push around. Another valuable piece of kit we used is the Sony Rialto, which in essence is actually the sensor of the camera in a very small form factor with an umbilical cord to the recording body. The form factor meant I could squeeze this small form factor camera into tiny tight spaces that the show.***

Wellmania was shot entirely on practical locations in Sydney. We shot in many bathrooms, cars, tight bars, and restaurants, and quite often we were running top-down rigs in these pokey locations. The Rialto small, very light form made these tight locations work for us and allowed us to get the separation from the actors to capture nice shots. Another little trick we used on Wellmania was at the hands of Martin Fargher, Key Grip, who helped design a way to use the Sony Rialto in a handheld configuration. This came to great effect in one particular sequence where we

Camille Lavinge (Miranda Otto) in a private consulting session with Liv as she undergoes hypnotherapy.'Wellness' - DOP Dan Freene ACS

Key Grip Martin Farghar and his team setting up a dolly in Sydney's Luna Park. 'Wellness' - DOP Dan Freene ACS

Celeste Barber having fun with the crew as we move locations.'Wellness' - DOP Dan Freene ACS

were filming inside another super tight location the mirror labyrinth at Luna Park.'

The show is very colourful, Freene elaborates on the approach to the lighting on Wellmania. 'Celeste Barber's character Liv is a very colorful character, and the team from Netflix mentioned to us early on they wanted a rich, vibrant looking series. Nothing too dark or moody, and definitely not desaturated, which suited me to a T, as I really like colorful art, and love to use contemporary LED light fixtures, where I can paint quite vividly and boldly. Ben Dugard my gaffer, and I spent quite a bit of time in prefiguring out various colours we would use across the show in different locations. Modern LEDs, like the Astera Titan and Helios Tubes, ARRI SkyPanels, and the Australian designed Creamsource Vortex lights, were used in pretty much every interior scene as accent or deep background lights, the key light we mostly settled on was a large 8x8 Bi-Color LED light mat, that would run through various layers of diffusion. Everything was patched to an iPad, giving us full control over every lamp, and in some locations, this also extended to the practical lights in the set. On TV Series work, the speed this brings can be the difference of making, or not making the day.

Freene's HMI package included a 400W Joker through to a 9K for day scenes. ***'For night exterior work we usually hung Creamsource Vortex lamps off a 140-foot crane, and again the flexibility of controlling the colours and output from our iPad meant we had full control from the ground. Those Vortex lamps are completely weatherproof and their colour, and output is so impressive. All this combined made out exterior night work both fast and efficient.'***

AC: Discussing collaboration with the production design team, and how Freene integrated their work into the film's visuals.

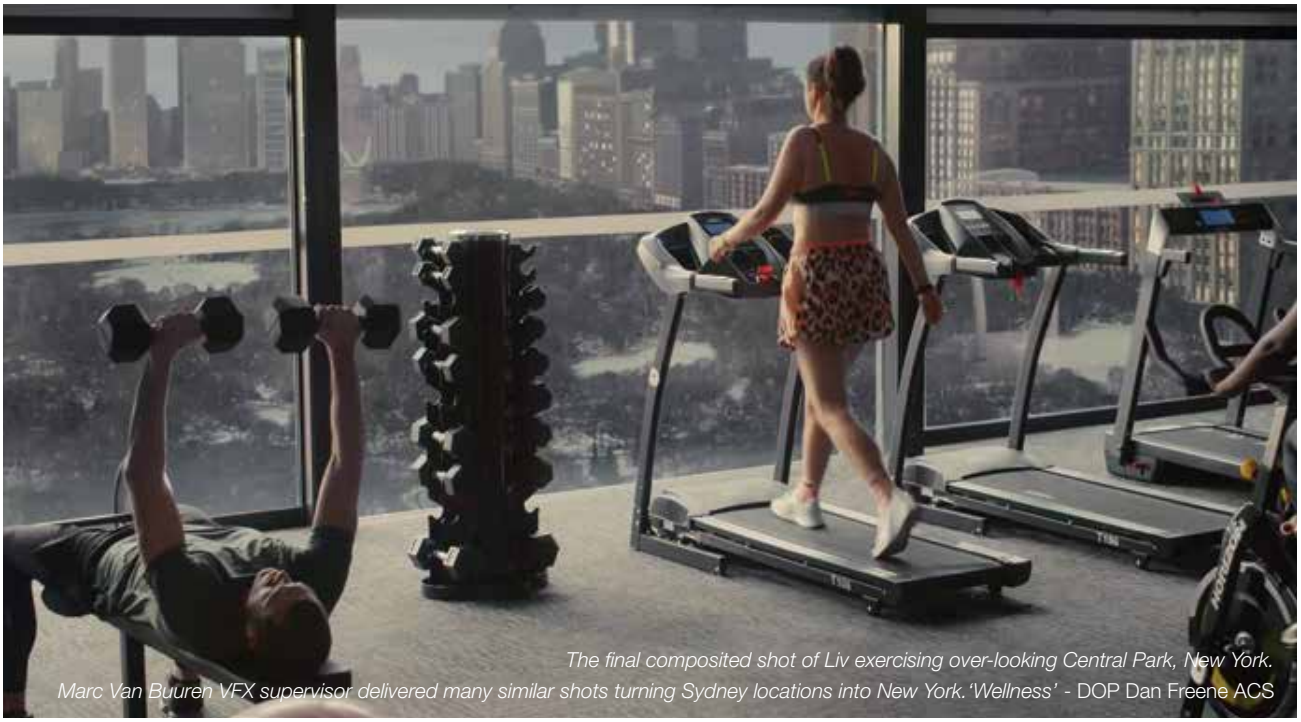
Freene expanded on collaboration on the production, ***'Early in the pre-production process, Roslyn Durnford, and her team, worked tirelessly, bringing many ideas for the various locations we were going to dress. It became a case of taking what we had to work with and dressing the spaces to suit each scene. In most key locations we had the option to paint, and knowing our coverage was mostly going to be handled with wide framing, with several characters, I wanted to have the ability to light the spaces more broadly, to allow the actors to move freely. Ros and I looked at many colours and tones, often choosing ones that sat around a stop darker than middle grey. This really helped us, as we didn't need to be too concerned about cutting light off the walls.***

Ros and I have a similar visual aesthetic. We both love texture and we both absolutely hate empty walls and vacant spaces. Her department worked at a furious pace ensuring we kept this focus during the series.

It was great collaboration. And, in terms of the visual color palette, all departments, camera, production design, and costume design were on the same page with what we were trying to create. A rich, bold, tapestry of colour, and mise-en-scène.'

Freene shares his favourite sequence. ***'Midway through the series Liv goes to Luna Park and gets lost in a mirror maze. The sequence itself is visually striking, and at one particular point she starts to see into her past, watching herself from afar at a beach side location, in extreme weather. With this flashback sequence I got to use Tilt and shift lenses, and shoot off speed at 50 frames, manually racking the focus across both of her eyes. The sequence is edited beautifully, and the drama felt it this moment makes for a big shift in Liv's life moving forward.'***

When asked about unexpected challenges, Freene discusses how he and the team adapted to change. ***'Wellmania was shot between April May and June in 2022, which was some of the wettest months Sydney has ever experienced. In***



The final composited shot of Liv exercising over-looking Central Park, New York. Marc Van Buuren VFX supervisor delivered many similar shots turning Sydney locations into New York.'Wellness' - DOP Dan Freene ACS

fact, we had a whole year's worth of rain in the month of April alone, so it'll be fair to say that we experienced some extreme weather! The crew handled this with complete grace and professionalism, keeping our cameras and operators always dry — which was no mean feat. Given that we were trying to create a postcard version of Sydney with bright blue skies we did have quite a lot of sky replacement that was handled with amazing precision by our VFX team led by Marc Van Buuren our visual effect supervisor.'

Freene is proud of the overall consistency of the show. 'We went in with a particular bold look, and we really didn't alter our approach during the making of the series. *Wellmania* is a classic, "lit" comedy, with a soft visual lighting nuance, combined with bold colours. A lot of this consistency is made up of all the various departments working together towards a common look. All at speed. All in perfect synchronicity.'

He's also quite proud of the New York segments of Wellmania as all these locations were shot in Sydney. ***'These New York scenes were completely designed in pre-production with precision with the fantastic work by Roslyn Durnford and her production design team and complimented by a seamless collaboration with our visual effects department led by Marc Van Buuren and Lauren Claire. The New York scenes required considerable forethought, careful location selection, set extensions, background replacement, and the addition of snow and ice to portray the New York winter.'***

Wellmaina has a striking film grade, applied by Adrian Hauser. ***'When we went into the show, we created several show LUTs. We tested these thoroughly, both interior and exterior, even at some of the hero locations with Celeste wearing her costumes. This show LUT became a trusted ally when it came to doing the final colour timing. I often find when coming back to grade a show that the post-production team and producers have sat looking at whatever LUT was on the camera for many months, and everyone tends to fall in love with that particular look. In this case, the show LUT that we created was very close to the final colour timing, and so we wasted no time with the very many producers and executives that were looking over our shoulder while we completed the final grade of Wellmania.***

Adrian has a very keen eye and is a complete professional when it comes to managing and handling a complex grade. We also finished in 4K HDR, which was a first for me. Thankfully in pre-production we had thoroughly tested the dynamic range of the Sony Venice, allowing me to be able to protect my highlights throughout the duration of the show, something that everyone should think about when finalising an HDR colour grade.'

As for actors, Celeste was what Freene would call a complete and utter legend. ***'Her work rate was phenomenal. She was basically in every single scene in the show which is a lot considering we are making eight episodes all back-to-back, so you can imagine the amount of dialogue an actor has to learn, and then perform at the level required to pull off her comedic performance.***

She was so lovely to all the crew members, and in fact, every Friday she would go around and independently, thank every single person that was working on the show, including all the unit personnel, the runners, everyone. What a privilege it was to work with such a wonderful person, and an absolute treat to watch her work on set. I often find myself on these shows pinching myself every morning, rain, hail, or shine, about what a privilege it is to capture these stories, and work with such committed crews, and such talented actors.'

Wellmania is currently available to stream globally on Netflix.

Dan Freene ACS is known for his films, *Wasted on the Young*, *OtherLife*, and his series work on *Soul Mates*, *Squinters*, and has recently shot the upcoming BBC/ABC Comedy Series, *Queen of Oz*, starring British comedian Catherine Tate.

THE ART OF COLOUR GRADING

By Angela Cerasi of Peachy Keen Colour

Move over Carrie Bradshaw. Angela Cerasi is tapping at the keys composing a sparkly new column - ***The Art of Colour Grading.*** For those who know me from my podcast of the same name, you're in for a treat. You can expect the same honest insights, random analogies and unique female, artsy perspective.

For those who don't know me, I'm a senior colourist and after 15 years of colour grading in Dublin and Sydney, moved to the coast of sunny Brisbane with my Irish husband, three kids and dog. It was here that I founded the remote colour grading company, Peachy Keen Colour. As you will discover, I love the artistry of grading and the creative use of colour in visual storytelling. I've decided to dedicate this first column to the most misunderstood and underused of all the colours, my favourite colour, the vibrant, delightful, and magical magenta.

Poor magenta gets a bad rap - everyone hates unintentional magenta in their image! Especially images with Caucasian skin tones. Often if you need to remove magenta out of this skin, you neutralise it by increasing the amount of green. This is because green sits on the other side of the colour wheel and is magenta's complimentary colour. It is often a fine balance between having these skin tones too pink or tinged with green.

The only thing worse than magenta in the skin is green in the skin! Black skin on the other hand can definitely handle magenta and green. In fact, if lit intentionally with gels of this colour, portraits of people of colour can be extremely dynamic and striking. If magenta had best friends their names would be Red and Blue. Magenta is the pinkish-purpleish-red colour in between these two sensible and reliable primary colours. Analogous colours like magenta, violet and blues are visually pleasant together because they don't fight each other for attention - they are great mates. Magenta and dark blues together can be naughty though, *watch out*, think dramatic, intense, playful, confident with a splash of sexy.

Moving toward the warmer tones of red, another analogous colour to magenta is soft pink hues. Together this colour palette can be romantic, feminine, and youthful. Think perfume commercials with shallow depth of field, soft highlights, and a feminine and airy feel.

So how can you intentionally bring magenta into your colour palette? In pre-production think about costume, clothing, or accessories. With set design, can you paint a wall or add soft furnishings? Regarding lighting, would it work for the story to go bold and use magenta gels? Magenta in your midtones and whites can be a daring but beautiful choice. It can be quite uncommon to see on screen, so personally I find it striking and glorious. If the story warrants it, introducing magenta can be a way to enhance a feeling of youthfulness and fun.

P.S *This column's feature word is* ***LUT****. Rhymes with nut. A reference file used by colourists, cinematographers, and editors to convert images from one colour space to another. Arguably, limiting your use of creative LUTs on set to one or two, e.g., Daytime, and night-time look, can be more effective. This is because there is less chance of error with the incorrect LUT being put on a scene and then causing incorrect lighting choices, and getting to know one or two LUTs really well means you can come to understand how they affect the image captured on the sensor across a variety of scenes, making better choices regarding lighting and exposure.*

PHOTOS Supplied by Angela Cerasi

Is there a colour topic you'd like me to riff about? If so email: angela@peachykeencolour.com.au or DM me at @angela_cerasi

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RED SIGMA

CASIMIR DICKSON ACS

My latest purchase from Georges was the Red Raptor VV, the team sorted me out with everything I needed, from accessories to a set of the Sigma Classics. This was all in preparation for my latest feature film, "Girl in the Shadows".

Using the Red Raptor VV camera with Sigma Cinema Classic lenses on set was a game-changer. The Red Raptor's sensor delivered incredible detail, dynamic range, and low-light performance, elevating every scene. Partnered with the Sigma Classic lenses, we unearthed an image and character on screen that enhanced the visual narrative with accurate colour and a low contrast film-like image that I have only seen on lenses 3-4 times the price. This combination informed our approach, pushing the visual boundaries and optimising the cinematic potential for every shot. Exciting times

NEOM, SAUDI ARABIA

Lousi C. Brandt

DOP Louis C. Brandt, NEOM - PHOTO Jakub Arendarik

Louis C Brandt's work spans multiple aspects of film production, with experience in Commercials, Documentaries, Music Videos and Shorts. His global career has seen him filming in around Australia, and abroad in Saudi Arabia, Japan, Indonesia, America, Europe, Vietnam, New Zealand and a stint living and working in London.

Louis Brandt became involved in the Neom Project through long-time collaborator, best mate & director Simon Morehead, from Crater, a hybrid independent visual agency with offices in the Middle East, Europe, and Australasia. ***'The chance to work in the UAE was always on the cards, so when this project came up, it was an incredible opportunity to get over and work in a completely different environment & culture to experience something we'd each never done before.'***

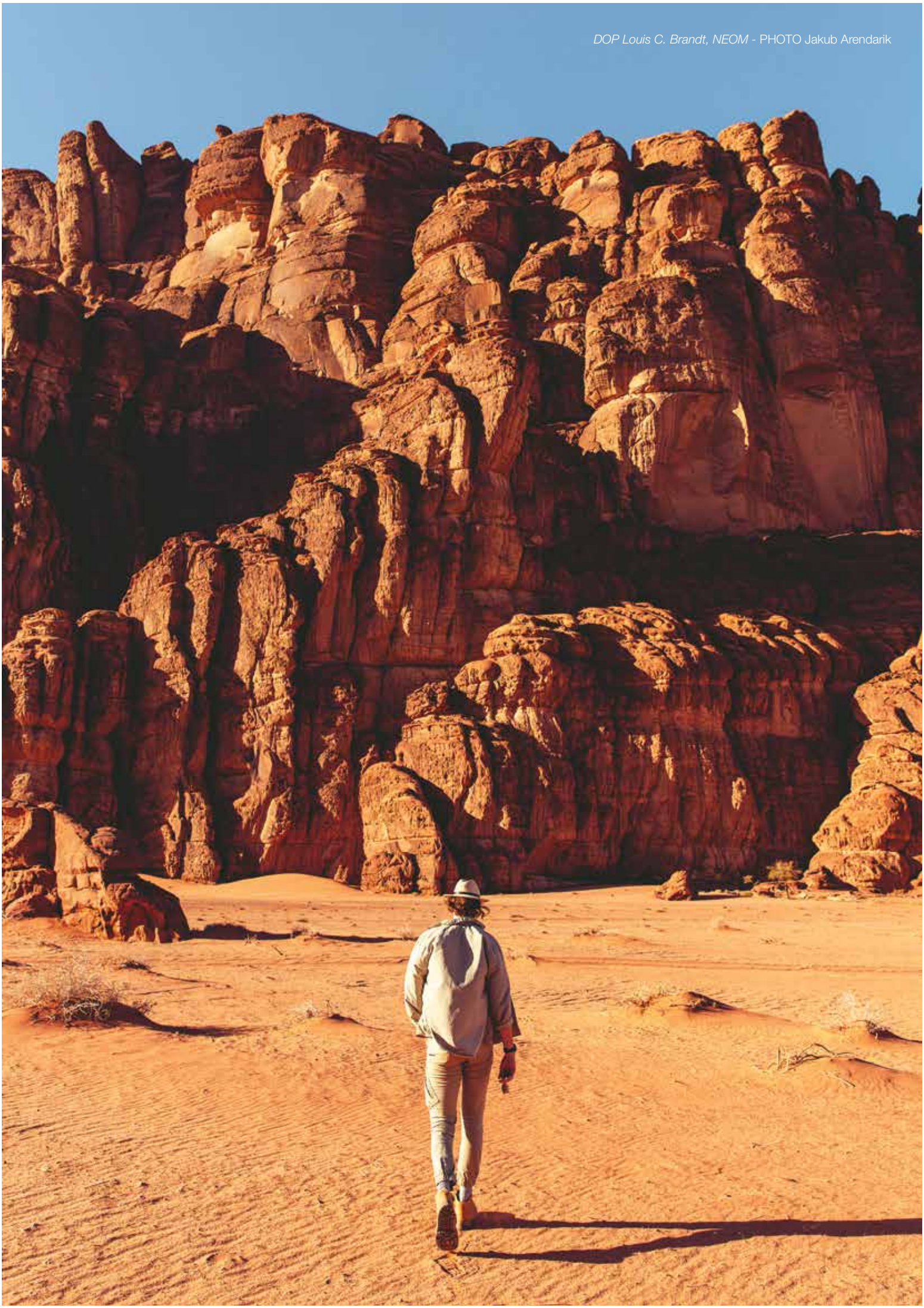
The project was to document, photograph and capturing assets in the undiscovered lands of Neom and Saudi Arabia. ***'One of the best things to be able to do in the project was to be able to work alongside my best friend, collaborator, and mentor, Simon Morehead; we've worked across so many different projects and are so close personally, to be able to experience a project like this with one of your best mates was a major, major highlight.'***

The whole crew vibed off each other becoming super close. Camaraderie and friendships formed were such a highlight that set the tone for the whole trip. ***'The expeditions and the work produced, really came down to who the people were and how we all connected closely and the bonds that were made.'***

Given the open brief, they knew where we were going and had an idea of what the main aim was but ultimately none of them really knew what to expect. Brant considered the harsh landscapes, isolation, and remote desert areas the team would be in for much of the shoot when in the planning process around gear. ***'We had to be very nimble.'*** As for crew, there was Brandt, Director Simon Morehead, the photographers, the client, and local guides. ***'Everyone banded together to pitch in and help the film team and by the end of each expedition, it felt like a well-oiled machine which I was extremely grateful for.'***

Most of the locations had never been captured and each landscape would present as a completely different place depending on the time of the day or night. On top of this, they were covering the photographers. ***'We were shooting close-ups of skins; we were shooting action, pretty much everything you can think of in a remote landscape documentary, cinematic film setting. We knew it was going to pop up at some stage each and every day.'***

Needing to be stripped back, coupled with a desire to retain a cinematic look. Brandt shot the project on his ARRI Alexa Mini, a camera he is super familiar with and known to be durable to the elements. For other gear Brandt sourced a Ronin and Lenses from a local camera house choosing a set of Zeiss CP3 Primes, with a range of focal lengths 18mm, 35mm, and 50mm,



DOP Louis C. Brandt, NEOM - PHOTO Jakub Arendarik

DOP Louis C. Brandt, NEOM - PHOTO Jakub Arendarik

adding a super compact lightweight Tokina 50-135mm zoom lens for textured, abstract layers he'd come across. ***'The accessibility to gear was a lot easier than I thought.'***

The team were up against variable environments throughout the shoot, driving for long stretches, stopping at a moment's notice and in between all of that, switching between handheld and the Ronin. ***'The CP3s made life that much easier because of their identical size and weight. We would be handheld for a lot of the shots, but there would be moments when the Ronin would be ideal because the landscape would influence a more extended, cinematic shot. Ideally, I'd have two camera setups simultaneously, but given the size of our convey, our capacity was already maxed out! Even more, reason why I'm so proud of what we achieved considering our resources.'***

Every single day was a different eye-opening experience, and every day was one that Brandt knew was special. ***'I couldn't have even imagined the landscape of Saudi Arabia. The desert, the colours, the rock formations. It was absolutely mind-blowing. Fortunately, we spent a lot of time in the desert each day exploring different parts, exploring other parts. We would get up for sunrise and be in awe by the colours, blown away by the shapes, blown away by the shadows, hitting the landscape. In the middle of the day when it's super harsh sunlight. And there were still these incredibly unique locations and moments that looked stunning in that light.'***

Certain locations stick in Brandt's memory, *'You traditionally look for those sunrise-sunset spots.'* What was interesting was the team saw the exact location at different times, ***'Each time they appeared completely different.' Such is the beauty of the formations in the 500 million years old Hisma Desert, in Tabuk.'***

Another key highlight for Brandt was experiencing the coastline of Saudi Arabia. ***'Seeing the Red Sea for the first time is a memory I'll truly never forget. Before visiting Neom, I thought it was only desert, dry, and hot, but we were met with a vast and beautiful coastline. Being from Australia, familiar with our beautiful coastlines, how rugged and magical they can look, the majestic waters of Saudi Arabia took me entirely by surprise. We got to go under the surface, only metres from the shore and see all of the marine life and reefs the Red Sea had on offer. I was speechless with the clarity and colours, and the reef's health was a beautiful surprise. To be able to show this assortment of colours throughout gave it an absolute pinnacle point of character within the film. Alicia Franco and the underwater team were incredible.'***

Another great thing about this trip was the opportunity to experience the local culture. ***'The hospitality and the accepting nature of our tour guides and the people on the ground blew me away. They welcomed our group in as if we were one of their own, teaching us their local ways and showing us their local cuisines, traditions, and customs.'***

'One of the photographers, Luke Stackpole, captured an image of me standing on the dune, framing a shot. The composition of the dune and the landscape foreground and background signifying the environment, the vastness and the colours and textures we were working in. Fortunately, we were surrounded by photographers who captured these moments. I feel so fortunate to have been able to keep so many mementos! '

Where will you find Louis in the future – He's on a mission to constantly improve, learn and work with as many talented creatives as possible. He aims to shoot long-form & narrative-based projects where he's most passionate.

DOP Louis C. Brandt, NEOM - PHOTO Jakub Arendarik

'Surviving Summer' Series 2, DOP Dan Maxwell ACS in discussion with Credit Maker Alice Stephens - PHOTO Ben Saunders

A RITE OF PASSAGE

By Alice Stephens and Dan Maxwell ACS

The ACS Wider Lens report analysed film and TV production in Australia between 2011- 2019 and found only 9% of Australian features and series drama was shot by female cinematographers. *Credit Maker* is a new initiative from Screen Australia that supports twelve female practitioners across directing, cinematography and composing to attain a career-defining credit on a scripted production. The ACS is proud to be facilitating the four cinematography placements to bring greater equity to our screen industry.

Experienced female cinematographers who have a suitable background in narrative storytelling, aesthetic and technical demands, and the ability to work in a fast paced on set environment are mentored and supervised by a DP who is shooting a drama series. The Credit Maker DP observes the Supervising DP in action and participates in pre-production, so they are across all aspects of the show. Then working under the guidance of the Supervising DP they shoot an episode of the series and attain their first break-through drama series credit, to elevate and accelerate their career trajectory.

During January this year Alice Stephens (Golden Tripod winner for Music Videos in 2023) joined series cinematographer Dan Maxwell ACS down on the Surf Coast of Victoria for the inaugural ACS Credit Maker placement on *Surviving Summer Series 2,* produced by Joanna Werner for Netflix.

Alice Stephens reflects on her experience….

In the depth of a Toronto winter, where I had recently relocated, I was accepted as the first Credit Maker cinematographer. A whirlwind of travel saw me return to Victoria within a week to shadow Dan Maxwell ACS on the second season of *Surviving Summer.* My journey with Dan began with weeks of shadowing, and operating B camera whenever possible alongside the A cam operators, Max McLachlan and Alec Schultz. Observing their collaboration, they are essentially an extension of the DP, both professionally and emotionally providing support. Trust and a similar sensibility in this relationship are invaluable. I had an incredible role model in Dan, who is very laid back, focused and a deeply kind person. While the pressures of a TV show can be overwhelming, Dan had a knack for staying centred by remembering his purpose.

After film school I shot music videos, documentaries and short films where every cent is crucial, progressing to larger sets and more defined processes. Stepping onto the set of a Netflix TV show was a significant adjustment for me. Despite my experience and ability, imposter syndrome affected my focus, memory, and confidence, resulting in fear and anxiety filtering through the body. The primitive brain regulates emotions, setting off automatically triggered fight, flight, freeze, or fawn responses leaving the limbic system in control. Important aspects of decision making, problem solving and empathising get lost among strong feelings of emotion. To acknowledge this natural yet understandable response to

'Surviving Summer' Series 2 Dream Team Camera Crew PHOTO Ben Saunders

stepping up is vitally important to bring to the forefront. How many cinematographers feel this way in points of their careers and how do they deal with it? Dan believes that pressure never goes away, that it's part of the learning process, and your ability to deal with it changes, but the nerves and fear of not knowing never leaves and is a big part of why he loves the work he does. One of the most important lessons I will walk away with is to be adaptable to change. It all comes down to what is happening in the scene, who's scene it is and what the director wants the audience to feel. If you have a grasp on those three things, you'll be able to adapt your plans to touch on the very elements that matter the most.

I'm grateful for being surrounded by a supportive crew keen to see me thrive. This was a dream camera team! Incredibly professional, kind, calm-yet-assertive, and strong. The wonderful grip team always lingering to take the camera at a moment's notice, and the exceptional lighting team navigating the challenges of the ever-changing Victorian coastline weather. The professionalism of seasoned crews is inspiring, their ability to enjoy the experience while building beautiful relationships between all ages and abilities was magical to witness and be part of. Nothing was ever a problem and they moved quickly and swiftly, always there to support and offer interesting creative ideas. The first time using a crane freaked me out. It's hard not to think that you have to come up with every single visual idea, but your key grip is just as much part of the visual process and is there to offer and support your vision with their specific expertise.

Monitoring lighting ratios and making on-the-fly decisions is where true learning occurs. I learned about adjusting lighting

Monitoring lighting ratios and making on-the-fly decisions is where true learning occurs.

conditions late in the day, managing intensity with wires to balance ambiance loss. Time shifts slowly when observing as a shadow, and quickly when in charge of a team, an invisible currency that can slip away if you don't take responsibility for it. Dan mentioned that he looks over the rushes and checks the time in between takes to analyse what was happening in between takes and setups. There is always something you can be doing to master your craft and, in this instance, it's evaluating time.

Another lesson: getting out of my own way. Making decisions and sticking to them. Realising last-minute changes to decisions can affect the whole flow of a set. A small change can affect the way a day runs. A great AD helps, but owning your choices and being aware of your decisions can make a huge difference. At times I struggled with communicating to my team and would pay for it later down the track when the schedule naturally bottle-necked as a result. Managing expectations and choosing battles is something I will be more aware of now. You can't think as an individual, you must think as part of a collective and a collaborative team, and be considerate and respectful of every single person's job in the machine of TV.

As a female in a predominantly male industry the need to exert extra effort to prove oneself is evident. Finding support and shedding concern for others perceptions comes with enduring

'Surviving Summer' Series 2 Dan Maxwell ACS and Alice Stephens PHOTO Ben Saunders

challenging experiences, building a firm foundation for self-assurance. Recognizing my eye for cinematography has transformed intimidating productions into familiar sets. Though distinct, each set shares a common goal. The vast scale of TV sets can overshadow its collective nature, which hinges on trust, love, active listening, and letting go.

Credit Maker taught me confidence in my ability, knowing I have a power and fire within me. Realising the polite and humble natured Alice can sometimes step back and allow others to speak over her. This experience creates awareness that I need to keep pushing and pursuing the career I love, and how I want to influence and be part of the positive changes within the film industry. The scheme is a rare opportunity to step up safely and learn the skills required to lead a team. Real growth occurs when we are challenged in unprecedented ways or even pushed to our limits, such experiences may unravel us, but are essential for deep learning. Dan Maxwell's words resonate for me as a simple yet profound reminder, *Keep the passion alive, and you will never lose.*

Dan Maxwell ACS experience….

When Dan Maxwell ACS was first approached to be a part of Credit Maker, he felt it was a no brainer. He always tries to support equality and equity on film sets and has seen talented females overlooked for no reason but their gender: ***'I've got a daughter, I want a world where she can turn on the television, see the credits and see there are women, to inspire her to go down whatever path she wants.'*** If there's a way to help, he's going to help.

It was Alice Stephen's background, making stories with a clear voice of her own, and not over polished, that drew Dan's attention from the shortlist of candidates. Her storytelling was in line with what he was doing on the show, keeping it very natural. At its core, it's a story about teenage kids who are just finding their way through their environment. Her experience in documentary was important, given the nature and speed of shooting TV where you are having to find angles and ways of covering a scene on the fly, not all storyboarded and perfect. He followed up by talking to people in Melbourne who had worked with Alice, and heard she was a good communicator and calm, important qualities he was looking for.

To facilitate an understanding of the style and pace, Alice spent time on set observing and operating, allowing for discussions about the process of the blocking, lighting parameters, the fixtures being used and how they were being utilised, ***"it was valuable to spend time with the gaffer and grip, and for Alice to see what gear was available."*** Dan feels you come up through shorts being creative with far less, and you make your lighting work around that. On a larger scale set it's a different beast, ***"to have a whole truck worth of stuff and know what to pull out is a good thing to have time to observe in practice."*** Operating also gave the cast and crew time to bond with Alice with less pressure, and gave her the opportunity to see decision making on the fly, how to keep things moving forward. ***"You're on from the moment breakfast is finished, until the end of the day, firing and firing, and pushing through, which for Alice stepping up and walking into that tempo of a TV drama set was pretty daunting I imagine."***

Dan was delighted with how supportive the production and

crew were of the whole Credit Maker scheme. "***Having a supportive team around Alice, to make her feel protected, not like she was going to get thrown under the bus was very important. It was still a trial by fire, but to Alice's credit she was very honest with her feelings. When she was feeling a bit overwhelmed, I obviously was there for her, but also let her walk the journey herself.***" Dan encouraged Alice to enjoy her collaboration with gaffers and grips, and the camera department, "***being open to people's ideas, and using the experience around you, while keeping true to your creative drive and what you've set out to achieve. We have to appreciate that we're a hub for the people that work around us, and if we're manic and crazy, that vibe is going to flow onto the team and that is how your set becomes, and that affects the space the cast work in. So, if you can remain calm and communicative it's a help for everybody. We're all like ducks. It's mad under the surface. That's half the battle, keeping calm so you can process the information in your own brain and then get it out to everybody else before the sun goes down!***"

One scene where the sun was setting, with all the usual stresses that happens daily on most shows, Dan recalls, "***Alice did get a bit bogged down, sort of stuck in her own mindset and not able to communicate well to the crew. But to her credit, she worked through it, and credit to the crew, they were really caring and helped her to get the information out. And then the ship was righted, and it ended up being a really beautiful scene actually.***"

As someone who hasn't come up through the TV drama ranks sometimes Alice's approach was different, and Dan observed that "***sometimes she'd come in and do something and I'd think: Oh, that's really ingenious. I like that. I'm a big believer that you're always learning forever. And there were certain things I'd see Alice do that I'll keep in mind for next time, because it's a good idea. I think the learning went both ways, and that's the beauty of what we do. From the beginning to the end Credit Maker was successful and I think Alice got a great deal out of it, I know I did. For the female members of our camera department, it meant a lot too. Because suddenly these up-and-coming young women could see a visual path for themselves, which is so important, otherwise it's daunting and overwhelming. The episode Alice shot is beautiful, I hope she's proud of it.***"

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If you have an upcoming production that could be suitable for a placement or for further information please contact Credit Maker ACS Project Manager, Clare Sawyer: clare.sawyer@cinematographer.net.au

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