



Opposite: The tour was co-designed by Bryte Design and Black Skull Creative, and each worked closely with the pop star to complete the final look of the show.

ELLIE GOULDING: DELIRIUM

TPi's Ste Durham witnessed the collaborative four section visual spectacular.

When Ellie Goulding first appeared on the general public's radar in 2009, few would have suspected that she would go on to produce the kind of elaborately scripted stage show that TPi was on hand to witness at Manchester Arena. The production value was certainly upped from previous tours, with a huge video and lighting package, bespoke staging and striking drapes to rival those of mainstream pop's biggest names.

Tour Manager Rebecca Travis first joined the Ellie Goulding camp four years ago, and has overseen performances across the world, in venues of all shapes and sizes. For the artist's first full arena run, the team turned to seasoned Production Manager Bob O'Brien to lend his experience (and unflappable disposition) to the *Delirium* tour cycle.

Having arrived in September 2015, during the album's promo period, O'Brien had plenty of time to settle into the fold and begin coming up with ideas for the tour itself. He said: "It was brilliant as it gave us all a head start. In terms of crew and suppliers, everyone was happy and everything was working well so I saw no reason to change that. We certainly upgraded for this level but did so with the same suppliers, as well as adding them for aspects that Ellie had never needed before, such as All Access Staging & Productions for the tour's staging requirements. This included some custom work, a moving thrust catwalk and a B stage."

Having been prepared for the usual maelstrom that is an arena production on show day, it was quite startling to be greeted by the level of calm felt at Manchester Arena. O'Brien laughed: "It took a while for us all to settle it in after the transition but it really is quite chilled out now. That said, everyone knows what they're doing and the work is getting done in double quick time. Promoters and reps always wonder how it's

so relaxed on site and we take that as a huge compliment!"

According to TM Travis, this philosophy is something that filters down right from the top. She added: "Ellie doesn't want any dramas. She wants everyone to be happy and trusts us enough to leave us to it. I make a point to go and see them every day because we're so self-contained. The people employed to do the day-to-day jobs know what they're doing, which allows us to plan ahead, then get into show mode later on."

As well as instilling an ethos of calm within her crew, Goulding has also (coincidentally or otherwise) assembled a crew reinforced by a number of strong female characters – something that pleases her no end, according to Travis. She said: "Ellie is very into having strong women around her - it just so happens that one of the only female bus drivers in the industry is on this tour as well!"

SHOW DESIGN

Another of the aforementioned female contingent on the Delirium tour is Lighting and Co Show Designer Cate Carter of Bryte Design. In close collaboration with Director of creative production agency Black Skull Creative, Dan Shipton, she helped develop the show from its embryonic beginnings to the full stage production in effect at arenas across the UK.

Carter, who has been with Goulding since the end of 2012, explained: "Basically myself and Dan were introduced to each other and then immediately started work on the show design from the initial concept. This was a combination of the ideas that Ellie had put forward, the ideas behind the new songs and album, and an overview of Ellie's progression as an artist. It's been a really good experience because Black Skull come from a slightly different background than us. They do a lot of TV and theatrical things as well as concert touring, so that definitely lead to



The Delirium tour had a strong look based on geometric shapes, most notably the shards of video screen.

some interesting ideas during the creative process."

The pair started work together in the autumn of 2015 with rehearsals due to begin in January 2016 at Litestructures on Wakefield's Production Park. From the first meeting that they had with Goulding and her management around the artist's kitchen table, Carter and Shipton were certain that they had to bring nothing less than their A game.

Shipton said: "Cate's previous relationship with Ellie has been based on her live shows and I have focussed on her TV performances. We wanted to make sure that the tour felt cohesive with everything that has gone before so there was a creative through line to the whole album campaign, which climaxes in the tour."

Carter added: "We had lots of feedback and revisions from Ellie and her guys during the design process. This meant a relatively tight rehearsal period, but everyone at Production Park is always so accommodating. The fact that we could stay on site during the long hours made a massive difference."

Carter and Shipton were informed from the off that the *Delirium* tour had to a big step up from what had come before. This included a unique design, a discernible narrative thread and special moments within the show to mark these transitions. In short, a show some way from the artist's understated beginnings - more akin to those of contemporaries such as Katy Perry or Lady Gaga whose productions aren't afraid to flirt with the theatrical.

"We started with the concept of *Delirium*, the album title, and a way of using that to show the audience all the different sides of Ellie," explained Carter. "She is a girl who can pick up an acoustic guitar and sing a beautiful, vulnerable love song but also turn on the performance for a big dance hit. With this fragmented sanity idea we can also introduce some of the darker material she has done as well."

Shipton continued: "We started by sectioning the show into chapters that grouped Ellie's music together. This allowed us to give each chapter a visual identity that would transcend the costume, choreography, screen content and magic moments within the show. The chapters begin to explore versions of Ellie that link to the music. We start with Ethereal Ellie who is dressed in white and represents Ellie in her purest form. She invites us into her world that quickly introduces us to Energised Ellie who is more fun and outgoing.

"Then we move to the darker side and discover *Digital Ellie*, who has a sexy, underground club vibe to her. Heart comes next - a chapter that shows the warmth and emotion in Ellie's music. A harder, more *Rock Star Ellie* is seen for the darkness section before she becomes light again. Finally, all of the versions of Ellie intertwine and we see them resolve into the live Ellie who is holding court on stage. It's as though we are saying that you can't have Ellie without all of these facets to make her complete."

Lite Alternative provided the lighting rig for the *Delirium* tour. The moving head fixtures consisted of 62 Ayrton MagicDot-Rs, 16 Philips Vari-Lite VL 3500 Wash FXs, 25 Martin by Harman MAC Viper Profiles, 14 MAC Viper AirFxs, 12 MAC Viper Performances, 44 MAC Aura LED Washes, and 25 Clay Paky Sharpy Spots. These were underpinned by 12 i-Pix BB4's, 22 Martin by Harman 3000 DMX Strobes and three Robert Juliat Lancelot 4k followspots, as well as over 50 4-lite and 2-lite molefays.

Carter commented: "When we designed the show I realised that I wanted to use Ayrton MagicDots because they were small and light but powerful enough to the fill space and frame the mirrored lighting pods. They are versatile as well, working hard during the rave portions of the show and producing beautiful eye candy moments elsewhere."

Another key design choice for Carter was the addition of MAC Viper



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Goulding uses a Sennheiser 9245 microphone with an EM 3731-II receiver; Showtex created stunning soft goods for the show.

AirFXs alongside her "workhorse" fixture, the MAC Viper Profiles. "During the show I have a mixture of jobs and lots of space to fill. I knew that I needed to shutter things off and keep momentum with the high-energy stuff. And, of course, lots of Sharpys!"

A separate rig for the B stage section included eight Philips Vari-Lite VL 3500 Wash FX Luminaires, 20 Clay Paky Sharpy Spots, 12 MAC Viper Performances, and a Robert Juliat Lancelot 4k Follow Spot. To accentuate the fragmented theme, Total Solutions Group manufactured four mirrored, triangular lighting pods that were flown above the video screens. They were made up of a truss along one edge and ladder frames along the others.

The truss had some of the MAC Vipers hung from the underside, while the ladders had some of the Ayrton MagicDot-Rs uniformly spaced along each edge. These were used to reflect the moving lamp beam off the mirrored surfaces, creating some spectacular effects.

Carter opted for an MA Lighting grandMA2 Full Size console for control, with one for backup – her go-to desk for a rig of this size.

She said: "I do use other consoles occasionally but for touring I usually choose the grandMA2. It's really powerful, versatile, and always reliable. My colleague Mike Smith has been integral in the design and programming process as well, and is great at the technical aspects - as is Lighting Tech Glenn Johnson from Lite Alternative. I'm happy to say to them what I want and I know that they'll be able to help me."

While Bryte Design and Lite Alternative were members of the Ellie Goulding 'Class of 2012', the team added a new supplier in All Access to introduce staging elements that were previously absent from Goulding's bag of tricks.

All Access UK Sales and Marketing Manager Matthew Bull explained: "We supplied all of the staging elements on the show, based on our new style of rolling stage with a touring leg system to allow more weight. We have two star lifts that start below the stage and bring Ellie to stage-level, and an

X-lift from the stage-level up into the air that is used during the set."

The company supplied raised tech wings that housed a cosy monitor world at stage left and doubled as a riser for Goulding to use during the show. The package also included all high-shine flooring and a catwalk from the stage that detached to allow Goulding could glide to the B stage.

While the majority of the staging elements were stock, some custom work was involved for a raked stage that housed the band, including a patchwork fascia created by Derby's Drapemakers. Bull continued: "The original fascia was going to be hard but Bob required soft ones that would be easier to transport. I met the Drapemakers guys at a show earlier in the year and they seemed like a great fit."

Head Carpenter Paul Stratford was on site in Manchester to oversee the construction of the stage, along with Carpenter Josh Perree and freelance Carpenter Nidge Dobson. Bull said: "Bob wanted someone from All Access on the crew but they were all busy so we asked Nidge. Although he is technically freelance we've worked with him for a while – he's practically part of the team!"

Another facet of the show design was the selection of visual draping elements supplied by ShowTex. The company provided two golden LurexVoile 100 drapes that were hung in the middle of the stage during the two opening acts, which were then dropped for the arrival of Goulding by a ShowTex Kabuki system.

Later on in the set, during the song *Explosions*, Goulding appeared on stage in a white dress, dragging two giant elastic wings made of PolyStretch P8 CS Matt behind her. These were fully stretched out during the song and later, courtesy of another Kabuki drop system, seemed to vanish into thin air, as seen on the current cover.

Another of ShowTex's creative contributions was a number of bespoke coloured banners made from a mixture of Spinnaker CS and glow in the dark Phosphor Foil strips for the ultimate psychedelic special effect during

GOULDING DELIRIUM WORLD TOUR

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Monitor Engineer Mike Flaherty; Monitor world with Flaherty and Audio Crew Chief Marc Peers; Bryte Design's Cate Carter; Megan Griffiths of Phoenix Bussing, the tour's band bus driver; Systems Tech George Puttock and FOH Engineer Joe Harling.

one of the high-energy sections of the evening.

Fabric Designer Carl Robertshaw was behind the design of the wings, flags, and gold reveal, originally being scouted by Shipton. Carter remembered: "We had ideas for the different elements and Carl helped us to make them into something tangible. He specialises in 3D fabric designs and so was the perfect man for the job."

The visuals were further accentuated by eight CO2 jets and around half a tonne of gold confetti, provided by Pyrojunkies and overseen by Stu Wickens.

VIDEO

Goulding's Video Director Robin Haddow was originally brought into the fold to cover Carter on lighting at a time before video was involved at all. He laughed: "That's usually the way my career goes! I find it quite a natural progression and I think the background gives me a great understanding of the bigger picture. It's the main reason I'm out front with Cate when many video directors would be backstage at the racks. In such a visually rich show it's useful to see what's happening with your own eyes and feed off one another's energy."

PRG XL Video provided the kit for Haddow, as well as three LD techs and an engineer. Video Engineer / Projectionist Ray Gwilliams looked after the cameras filming IMAG content, which were operated by LED Tech Tim Bolland, Truck Driver John Burgess, and Head Rigger Amos Cotter, who operated the camera situated at FOH.

There was seven cameras in total at Manchester Arena: three manned Sony HXC-100 cameras (two in the pit and one at FOH), two Bradley robocams on stage and two GNAT minicams - one on the piano stage right and one on drumkit stage right. Haddow cut between the cameras

manually using a Carbonite Production Switcher. He said: "The camera content is falling into place night after night and the guys know their shots by now. I'm still better busking from FOH as there's always the possibility that Ellie might change where she goes. The band are quite prominent, particularly when she mentions or interacts with them, but she is the main focal point."

The stars of the video design were the triangular 'shards' of FX 11 (11mm) LED screen, which stretched across the back of the stage and was meant to represent the fragmented nature of the show's concept. The shards were flanked by three MC7 (7mm) IMAG screens – one on each side and one flown in the centre. All of the LED surface could be used as one canvas to show content or split to display a combination of content and live camera shots.

Haddow also used an MA Lighting grandMA2 on PC command wing to busk in the camera feeds, which was especially useful between songs when Goulding spoke to the audience.

Due to the condensed pre-production time, content creation for *Delirium* was tackled by a number of different studios, with Bryte Design's Paul 'Pablo' Beckett collating the material from the different studios and producing a number of the pieces himself. All of the transitional films and bespoke footage of Goulding was handled by NorthHouse Films, while London's Atticus Finch created a portion of the animated visuals and Belgium-based studio Fabrique Fantastique produced another batch of song-specific custom content.

Carter explained: "The studios created 100 minutes of quality content between them, allowing Dan and myself to spend time pulling the whole thing together. We worked through set list and script to see who was best suited to deliver each bit of content. We play to their strengths, as well as



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The fabric wings in all their glory, designed by Carl Robertshaw and manufactured by ShowTex.

playing to our own."

Shipton added: "The video content is hugely important part of the design. The screen content also became hugely important in making the transitions between the different sections within the show work. We wanted to take Ellie into the screens and show her morph into the next version of herself. We spent time shooting the various 'Ellies' with NorthHouse Films, who then did a great job of producing the transition VTs. One of my favourite parts of the show is the acoustic version of Devotion where we strip everything back to a single spot on Ellie playing her guitar with a white outline on the screens before she sinks into the stage, the track drops and Digital Ellie appears on the screens."

As the whole show was timecoded, Haddow decided to try switching to d3 Technologies media servers for the tour, saying that he felt it was the perfect fit for the job.

Haddow commented: "I've been involved with d3 Technologies for a while, most recently for Massive Attack where we used it for lighting and video. I've always been quite intrigued but never had the chance to properly use it. This tour was a great opportunity to test it and I've had some time off that allowed me to do some training in Hemel Hempstead, as well as some time at home as well. By the time rehearsals came I knew it quite well and I've had great support from the staff at d3."

He went on to speak highly of the "great quality" of the servers' SDI input cards, which resulted in a much clearer camera picture than he was used to, and the efficient way that he added effects using d3. "I use the onPC command wing to control Notch digital effects in an analogue way," he explained.

"Notch is a plugin for d3 that allows camera feeds to be manipulated and affected in an amazing array of ways, from neon trails to subtle

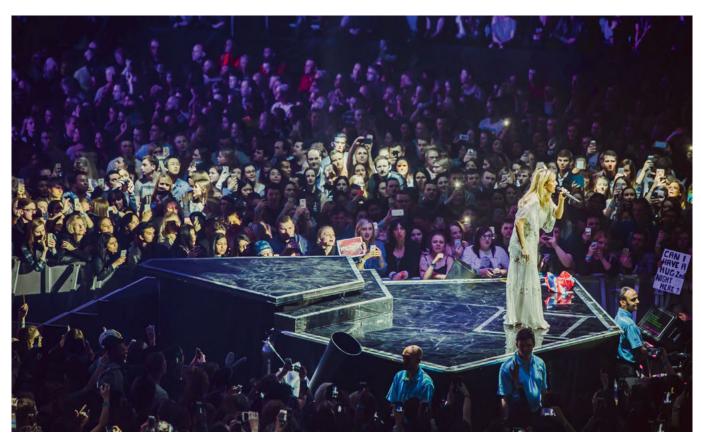
colour shifts. The benefit of this being a plugin within d3 is that it removes the latency you would get if you were routing the cameras through an external effects device. I definitely look forward to using the Notch plugin in future shows as I am only just scratching the surface in what it can do."

AUDIO

While Adlib were contracted to supply audio for the tour, FOH Engineer Joe Harling's preferred system for Goulding, the d&b audiotechnik J-Series, had to be sub-hired from Entec Sound & Light. Systems Tech George Puttock explained: "Audio Tech Lee Fox Furnell is a freelancer that does quite a lot of stuff with Entec so he knows what he's doing! We have 20 J8's per side with eight J-SUBs flown behind and to the side we have a 16-deep hang of 12 J8's and four J12's. On the deck we've got a line of eight J-INFRA subs and eight J-SUBs, all driven from the new d&b D80 amplifiers. Harling has chosen a DiGiCo SD5 to mix the show, running Waves externally on an Apple Mac mini as well as a variety of outboard effects.

"The light weight of the J-Series lends itself to the variety of arenas we are playing. We don't have to carry a big box and a small box because we've got both in one. It also means that we can have the same boxes on main and side hangs, which you can't usually do because of truck space."

As well as the practical bonuses afforded by the J-Series, Harling favours it because of its ability to compensate for quiet vocalists like Goulding. "It just allows me to get a bit more control," he explained. "The challenge is always getting her vocal on top. To then maintain the density behind that in a live environment is quite tricky, especially when she comes out to the B stage in front of the PA."



The B stage supplied by All Access Staging & Productions.

One of the techniques that Harling utilises to overcome this challenge is by keeping the show's overall decibel level a touch lower than your average pop show. He continued: "There is also lot of processing going on with vocals, you have to rely on multi-band compression rather than broadband because, when someone uses their head instead of chest voice, they're not really expressing a lot of air, so odd notes will stand out

"For instance, a note at 2.5kHz is going to have even less pressure than a note at 800kHz so the threshold around there needs to be a bit lower. I also use something called Waves WNS, which is a six-band gate expander. It helps reduce the ambience and feedback when she's at the B stage but not singing. We have to take time to ring out the vocal microphone and perhaps be more aggressive than you'd normally like to be. In the middle section I bring the band down about five dB to compensate."

As Goulding owns a selection of Sennheiser gear, it made up a large chunk of the gear on stage, along with a variety of beyerdynamic and Shure gear for instrument microphones. Her main and spare

microphones were two of the four prototype Sennheiser 9245's in the UK, running into an EM 3731-II receiver, while the backing vocalists used e945 wireless microphones.

Harling continued: "There's a lot of density to the sound and everything changes song-to-song. For example, the bass player will switch between a synth bass that has a different tone for every song to a real bass with loads of effects pedals – we'll maybe have three or four different bass sounds in one song. It's enough just to try and keep on top of that."

Although this presented another set of challenges for the audio crew, at least some of the other instruments were slightly lower maintenance. "The keyboards don't actually output any audio. They basically act as MIDI controllers so the world is their oyster. We spent some time in rehearsals trying to recreate the sounds on the album, but now they're there it's quite simple."

Another thing that Harling and Puttock were particularly proud of was the "vibey as possible" FOH they had created at Manchester Arena, complete with carpet, rope lights and a vinyl player. The same look had









Matthew Bull of All Access Staging & Productions; Video Director Robin Haddow; Goulding in her Ethereal alter ego.

been recreated in monitor world, tucked underneath stage left, where I was greeted by the amiable pairing of Monitor Engineer Mike Flaherty and Audio Crew Chief Marc Peers. With sound check approaching, Flaherty revealed Goulding had only attended two all tour. "She's really easy going and polite. If there's something she needs she'll just ask but she tends to just let us get on with it," he said.

Peers added: "I think it's a measure of confidence in what Mike is doing that she doesn't sound check. If it was a dog's dinner every night she'd be in sound check every day!"

Flaherty was also using DiGiCo, this time an SD7, to stay on top of the 12 channels of Sennheiser 2000 Series IEM, as well as additional output mixes for the dancers. While the majority on stage rely on their Jerry Harvey Audio JH16 in-ear moulds, the keyboard and bass positions have an L-Acoustics SB18 each. The drummer has two bi-amp 15-inch wedges to stay in touch with the bass. All of the on stage subs run using Lab. gruppen PLM 10,000Qs.

An additional function of the desk that helped Flaherty during the B stage sections of the gig was suggested by some of the crew from PRG XL Video. Flaherty explained: "We can't see Ellie from here when she is on the B stage so the video lads have run us a direct feed from the cameras into the back of the board so we can still see how the show is going. It's been really helpful."

Peers said: "Mike knows her better than anyone and can tell just by looking at her if something is wrong. You can't stress how much difference it makes to be able to keep eyes on her during that section, particularly with how complicated that part is from an audio point of view. The video lads really sorted us out with that one."

Again this is representative of the chemistry between departments and suppliers that was evident during almost every conversation I had at Manchester Arena. Peers put it succinctly: "Rebecca and Bob are really decent people to work for. We don't have any shouters on this tour-everyone is good at their jobs and gets on with it. I'd much rather be part of a team like this and to top it off the work's all being done at a good pace."

LOGISTICS

Phoenix Bussing is another of the go-to companies for the Ellie Goulding crew, having provided its services since 2012 when one bus and a trailer would do. For the UK leg of the *Delirium* tour, Phoenix supplied three crew buses and a band bus, with another artist bus being added for the European run. All were 14 metre double deckers and were laid out in the various configurations required for each touring party: 16-berth, 14-berth and an artist suite.

Phoenix Bussing's Andy Gray said: "It was great to be working with Rebecca again on this tour, and to have Bob joining her as we have worked with him previously on other tours. Dealing with both of them is very easy and a real pleasure.

"The tour planning was quite straightforward. There were a few long drives in Europe that required second drivers and stopovers en route but nothing too troubling. Also it was very fortunate that the weather was good for the time of year in Scandinavia and there were no delays on any of the journeys."



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The singer enjoyed a sold out show at Manchester Arena; Rock Star Ellie - one of the four characters in Delerium; The production team led by PM Bob O'Brien (centre).

Taking the wheel as Band Bus Driver was Megan Griffiths, an industry veteran who has spent 16 years at Phoenix - currently standing as the company's only female driver. While Griffiths might seem like an obvious addition to Goulding's team of strong women, her inclusion was a complete coincidence.

"When I started there were very few females in the industry, let alone bus drivers," she said. "I've just seen it as a job and not really thought anything of it. I've certainly never encountered any negativity – perhaps a few surprised looks when the doors open!"

Although Griffiths has driven buses for 24 years, it was her sheer tenacity that landed her in the rock 'n' roll industry. She continued: "I was told that if I wanted to earn a decent living and have more fun than driving grannies to Blackpool then I should try and get into the touring industry. I mithered Phoenix to death until they hired me and I wouldn't change it for the world. This tour in particular has been really great to be a part of."

PM O'Brien echoed Griffiths' sentiments: "I think having women on the road makes everybody tone it down - in a good way. There's a time and a place for laddy behaviour but that certainly gets old as tours draw on! Megan is fantastic and the crew love her. Apparently the band bus has become a lot tidier since she started driving it as the guys made a bit more effort - that has got to be a good thing!"

Trucking for the tour was provided courtesy of Fly By Nite - a company

with which both O'Brien and Travis have established relationships. Fly By Nite's Operations Manager Paul Walker said: "They are both great people and amazing to work with! We provided nine trucks for Ellie's UK tour. As support act John Newman is a regular FBN client so we also provided a 26T truck for his equipment."

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