



gauge

gauge

**IS AN INVESTIGATION BY A GROUP OF ARTISTS AND SCIENTISTS INTO WEATHER, WATER AND SCALE.
BY FOCUSING ON SPECIFIC MANIFESTATIONS AND INSTANCES, GAUGE HOPES TO INVIGORATE OUR
AGE-OLD CURIOSITY FOR THE UNDULATIONS AND PRECIPICES OF THE WATER CYCLE.**

Created and directed by Madeleine Flynn and Tim Humphrey

WITH

Graeme Leak | performer/composer/inventor;

Rosemary Joy | miniature percussion designer;

Cameron Robbins | visual arts and sound;

Johanna Bramli and Ed Chivers | sound/music
composition and performance;

Associate Professor Adrian Pearce | Senior
Lecturer in the Department of Computing
and Information Systems at The University of
Melbourne. Research Theme Leader in the Defence
Science Institute, the Director of Education for the
NICTA Victoria Research Laboratory and Director
of the Intelligent Agent Laboratory

Professor Michael Roderick | Professor, Research
School of Earth Sciences, and Research School
of Biology, ANU; Associate editor of *Water
Resources Research*; Leader of the Roderick Lab
- Ecohydrology & climate at Australian National
University.

OPENING TIMES

2-24 May

Mon & Tue Closed*, Wed & Thu 1pm - 7pm

Friday & Sat 10am - 10pm, Sun 10am - 6pm

*Expect for Bank Holiday, Mon 4 May, 10am - 10pm

Daily live 'weather forecast' performances

VENUE

Circus St Market

Gauge is an evolving project which aims to
collaborate with artists across the seven continents.

*Lighting Design and
Production Management*

Jennifer Hector

Photography

Dean Petersen

Catalogue design

Letterbox

Ali Smith,
AD of Brighton Festival



Imagine the world seen from the eye of a bird. Migrating birds are born naturally equipped with maps that even new-born birds know how to follow. Imagine maps of landscapes with no border, and birds with nothing but the urge to flock together, get there, be here now.

Imagine the borders between the artforms. Imagine them opened, crossed, melted, made invisible, so that poetry meets music meets theatre meets dance meets thought meets sculptural meets rhythm meets fiction meets the natural world.

Ali Smith, Brighton Festival Guest Director 2015
standing outside Brighton Dome. Photo by Vic Frankowski.

Actually there's no need to imagine it – all we have to do is go and see something, hear something, just be present at any art event, because it's what happens in the arts all the time, quite naturally; just as naturally as that bird that catches the eye as it flies over our heads has crossed the wide open sky to get here, and always will at this time of year.

It's tremendously exciting to have been asked to help programme the 2015 Brighton Festival. I'm delighted and honoured – what a gift, to be asked to do this, imagine – the biggest multi-arts spectacular in England. I've always loved Brighton's sense of fun and friendliness, its vibrant open-mindedness, the way it opens to sky, the way the rest of Europe is so close it's almost visible. It's a city that's always known how to live on the edge, a place full of endless energy, argument, possibilities, light. No matter the wildness or mildness of the weather, no matter the zigzag of zeitgeist elsewhere north or south of it, Brighton is always itself, and always uniquely welcoming.

I'm a fan of the crossing places between the artforms, the places where they meet, open to each other and fuse into the wider world, and of the places where our worlds, our words and our imaginations all meet up.

The word festival comes from the place where the word for feast crosses into the word for joyful, happy, honouring, celebratory. Cross all those things with the word Brighton and the month of May, and look what happens. It's that time of year again. I can't wait.

Ali Smith,

Brighton Festival Guest Director 2015

Director's note

As a closed global system, the water cycle invites an investigation into patterns of water distribution. The varying access to water across different world populations is an increasingly important political question. We began to think about a work involving climate in 2010. Certain ideas were already important in our work, for example: making sense of large amounts of data in poetic and material ways, paying attention to sound in public places, the tempo of a long approach, and echoes of a childhood spent on a farm in country Victoria, Australia, where the rain gauge is a highly-significant piece of equipment.

The artists, Madeleine Flynn, Tim Humphrey, Rosemary Joy, Graeme Leak, and Cameron Robbins from Australia; Johanna Bramli and Ed Chivers, from the UK, as well as Alex Stahl and Patti Clemens from San Francisco, have all thought about different aspects of weather and water, and the beauty of the processes involved.

Each artist has been inspired by a different aspect of the weather, water, or the scale on which these two things change. Our discussions with the scientists sparked different creative directions for the artists. Cameron Robbins whose work uses the forces of the natural world; Graeme Leak, who has a lifetime of working with water in percussion/installation; and Rosemary Joy, whose work is concerned with site-sympathetic scale.

Each artist has responded to phenomena that had emerged during discussions with the scientists; and then to one another's work in the space.

These responses emerged as a series of quite discrete works that shared a particular aesthetic history. Within this exhibition space the sounds are orchestrated, using the aesthetic principles of musical organisation, with the source timbres that result from artists' reflections on the world water system, or cycle.

The Scientists who provided a systematic frame, and some amazing insights into the water cycle that have creatively provoked the artists, are the Australian National University's Professor Michael Roderick, and Associate Professor Adrian Pearce, from the University of Melbourne.

We have had many discussions with Adrian about the idea of “infinite process” and how this can be modelled. The modelling of infinite processes is a very current idea useful for our understanding of climate change. Michael Roderick is a world-renowned hydrologist, with a vast understanding of both the minute (how plants work with water) and the massive (mapping the implications on rainfall distribution around the world of climate change models).

Our discussions with Michael covered principles, often forgotten, about the water cycle. Such as the fact that there is a finite amount of water on earth; or if it rains here, it is not raining somewhere else; or that water doesn't stay in the atmosphere for very long – mostly just falls back down into the sea again. Michael is the co-author of the ANU's Global Atlas of the Water Cycle, “which visualises data on the past, present and future patterns of rainfall across the world, beginning 100 years ago, and projecting 100 years into the future.

Seven Continents

Gauge is an evolving project which aims to collaborate with artists across seven continents.

Californian artists Alex Stahl and Pattie Clemens, have created a video work, *Water Project #2262* that will be projected onto the wall during the night-time hours of the installation. This work literally creates watery sculptural forms from sound through the special structure of the speaker.

In Brighton, we are also including work by artists Johanna Bramli and Ed Chivers, who are creating *Erode*. Johanna and Ed are interested in erosion of the coastline by the sea,

creating a piece in which Sussex weather tales and memories are gradually washed out.

Orchestration

The materials, sounds and textures of *Gauge*'s apparatus: clay, water and steel, compressor, and humidifier; bubbling tanks, falling numbers; downpipes and melting ice; live weather data and a “weathered” piano, add up to a specially-orchestrated soundscape of concrete sounds.

Each of the works is a component part of an overall sound, like different instruments in an orchestra. We hear the low, sustain of Graeme's downpipes; the energetic interruptions of Rosemary's water storage/rainfall data performances for percussion; the intermittent texture of the water piano, varied through the real-time data from the weather station on the roof; the regular tempo of a gauge; the ever-moving bass-end of Cameron's bubbles; and including public interventions with mud, cloudscape, and piano. These are heard both locally, close to the works, and through the whole, open listening space of the old Circus Street markets.

Gauge is an ephemeral, hands-on weather museum, where visitors can play with mud, ice, water, fog and rain. In the crumbling, memory-laden surrounds of the venue. *Gauge* is beautifully and deliberately lit for the changing evening light, by Jen Hector to accentuate the extraordinary ambience of the site, which is complete with a large hole in the roof, and amid the detritus of the discarded.

Our hope is that *Gauge* can be a reflection on the beauty and importance of processes related to water; the cyclical and ever-pulsing indicators of the life, and the health, of the planet.

MADELEINE FLYNN & TIM HUMPHREY



Madeleine Flynn and Tim Humphrey work with the human experience of listening, their collaborations intersecting with industry, communities and sites. They are commissioned and presented nationally and internationally, recognised with the National Award for Excellence in Experimental Music in 2012. Recently they created 5 Short Blasts Melbourne, for electric boats and marine radio, winning the 2014 Green Room Award for Hybrid/Alternative work. 5 Short Blasts Prague will be presented in June 2015 at the Prague Quadrennial.

www.madeleineandtim.net

What's yours is mine?

The amount of freshwater in the world remains constant. Uneven distribution and increased demand for freshwater creates scarcity. Our works for Gauge are inspired by the downward fall of water in the cycle from the cloud to the watertable. Complementary with Cam's work, we imagine a closed system where the amount of water in the system is allocated and constant, but dispersed in distribution.

Inspired by the water cycle description from Dr Michael Roderick and ongoing discussions with Dr Adrian Pearce re orchestration in music/sound and process.

1. Waterpiano

MATERIALS: Beale 1942 piano, bitumen paint, on-site 2400 L water tank collecting water from Meat Market roof, pump, hose, drip irrigation system, water container modulated by live weather data from installed on-site weather station via a custom made Pure Data electro-acoustic patch.

2. The Gauge

MATERIALS: Gauge, falling numbers generated live from installed on-site weather station (with Cameron Robbins). We have also worked with the team to create the living, breathing soundworld.



ROSEMARY JOY



Rosemary Joy creates sculptural percussion projects, often site specific and usually for very small audiences. Recent projects include *Fratrem* and the *Beginnings of Sleep* performed by percussionist Vanessa Tomlinson in Brisbane in 2014. Earlier works as part of arts company *Aphids* program include *System Building*, inspired by and performed in *Watertoren West* (Noorderzon Festival, Groningen), *Radialsystem V* (Berlin), *Melbourne Recital Centre*, *Carriage Works* (Sydney) and *Red Gate Gallery* (Beijing); and *Xantolo*, a collaboration with Mexican percussionist Evaristo Aguilar, inspired by the Day of the Dead celebrations in Mexico, performed at the *Melbourne Recital Centre*.

Australia is both the driest permanently inhabited country and the wettest permanently inhabited country in the world. Most Australian cities store enough water for 5 years' supply. London, in contrast, has water storage capacity for only 6 weeks.

The work *Water Storage Capacity* features wooden boxes representing the water storage capacity of London (smaller box) and Melbourne (larger box) at a scale of 1: 5,000,000,000 with a score for two percussionists created using statistics on average rainfall in both cities.

Michael Cathcart's inspiring narrative of Australia's sometimes disastrous efforts to control water is the inspiration for *Silt*. In particular, the work references the water storage tanks built by British convicts on the *Tank Stream*, Sydney's first freshwater supply, not long before it was overcome with pollution.

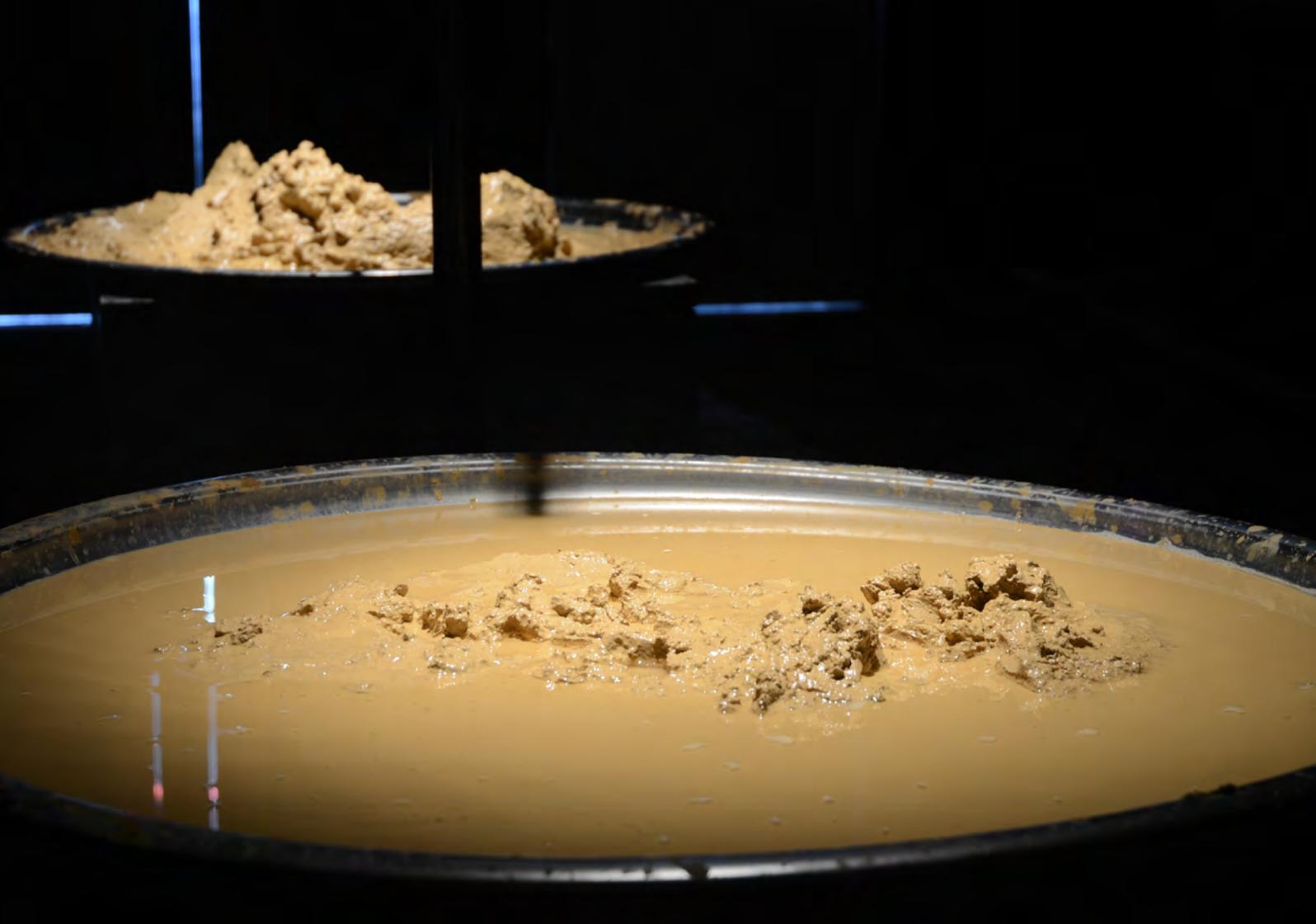
With thanks to Dr Michael Roderick and Michael Cathcart.

1. **Water Storage Capacity**

MATERIALS: African Rosewood, Danish oil, beeswax.
with thanks to Adam Stewart for construction of the boxes.

2. **Silt**

MATERIALS: clay, water, steel







GRAEME LEAK



Graeme is a musician who works across composition, performance, instrument making and installation. He is interested in the beauty of the ordinary, the physicality of sound and connections with the listener. His projects are wide ranging, from a Musical Fence in outback Australia to sonic playgrounds in Arts Centres to large-scale pieces performed by amateurs and professionals side by side. His work is characterised by a playful, direct sense of engagement. He now lives and works in the UK.

www.graemeleak.com

1. Dripolator (2012)

MATERIALS: steel frame, acrylic bowl & tubes, washing-machine tub, melting ice, colander, condenser microphones.
Fabrication and design consultant: Ian Bracegirdle

The sonic beauty of water has been central to my work since 1980s. It is both a source and a conveyor of sound. Dripolator converts everyday noise into music via tube resonance. The microphones in the tubes are listening. Some are focused on the drips falling from melting ice, while others are focused outside (they are located in the rafters, pointing to the sky). Nothing is pre-recorded or processed; it is simply the sound of dripping water and exterior ambience, all heard through tubes. These add atmospheric drones to the environment sounds, much like hearing the sea through a seashell.

2. Say Something (2012)

MATERIALS: vintage reel-to-reel tape recorders, tape loop, microphone.

The machine on the right is recording; the machine on the left is playing back. The analog delay system feeds back on itself, transforming the sound with each pass as it slowly decays and vanishes.



CAMERON ROBBINS



Cameron's work makes tangible the underlying structures and rhythms of natural forces.

He has produced site-specific installations in art galleries, disused buildings and outdoor sites in around Australia, Japan, Germany and Norway. These inquiries employ structural devices such as wind- or ocean-powered mechanical systems. Their aesthetic is the result of both careful engineering and resourcefulness. The outputs of these site-specific installations include wind drawings, ephemeral structures, and sound compositions. These interpretations of the dynamics and scale of the physical world suggest the complexities of the unknown.

www.cameronrobbins.com

How old is a glass of water?

From the astronomers we know that enormous volumes of water reside in different parts of the cosmos and throughout the Milky Way galaxy. Water ice can be found on many of our planets and moons in the solar system, and also in the comets. Water can be created from hydrogen and oxygen in the shockwaves of exploding stars, where many of the heavier elements and minerals are created. From these metamorphosed star ashes, clouds of material eventually condense to form planets such as the Earth. This means that our drinking water is older than 4.5 billion years. When we see water bubbling out of the ground in hot springs and volcanoes, part of it has been percolating from the hot interior since the planet was born.

My works for *Gauge* reflect the upward motion of water from within the earth to the clouds.

1. **Plutonic Waters** (Bubble Chamber)

MATERIALS: 160 litres rainwater, Acrylic, compressor, gauges, timber, lightbox, dimensions approx 180 x 180 x 180cm

2. **Cloudscape**

MATERIALS: 2,700 litres rainwater, vinyl pool, ultrasonic humidifier, fan



JOHANNA BRAMLI & ED CHIVERS



Johanna is a sound artist, performer and composer dealing with sensory perception, spaces and audience interaction. She has won awards for sound design in contemporary dance.

Ed is an international performer and sound designer interested in generative computer composition. He spends his time between remixing, producing and geeking-out with modular synths and Max/MSP.

They are both founding members of the Metahub which explores the use of technology to enhance communication and collaboration. Supported by the Arts Council England and European funding bodies, the Metahub has appeared in events and festivals in cities across the UK and Europe.

They both lecture at Northbrook College, Worthing.

www.johannabramli.com

With special thanks to Northbrook College and dreamthinkspeak for their support.

Erode

Erode is an exploration of erosion of land by sea and also of memory by time. We are interested in the unveiling of the past through erosion and the unpeeling of the layers of memory.

It is a collection of recorded memories, caught in a freeze frame just like the raindrops that the speakers represent.

MATERIALS: 24 hanging speakers dispersed as raindrops, with archival interviews and granular synthesis.

SCIENTISTS

Dr Adrian Pearce



Associate Professor Adrian Pearce is a Senior Lecturer in the Department of Computing and Information Systems at The University of Melbourne. A/Prof Pearce completed a BSc (Hons) at Curtin University of Technology and a PhD at the University of Melbourne in computer science.

His work falls within the field of artificial intelligence and includes reasoning about action and change, based on asynchronous variants of the situation calculus, and epistemic reasoning involving complex epistemic modalities, including common knowledge. He is currently Research Theme Leader in the Defence Science Institute, the Director of Education for the NICTA Victoria Research Laboratory and Director of the Intelligent Agent Laboratory.

Dr Michael Roderick



Professor Michael Roderick graduated with a degree in surveying in 1984 and subsequently worked as a surveyor across northern Australia until 1990. He then completed a PhD in satellite remote sensing and environmental modelling at Curtin University in 1994 and joined the ANU as a Research Fellow in 1996. He holds a joint appointment as a Professor between the Research School of Earth Sciences and the Research School of Biology. He is also an associate editor of Water Resources Research and leader of the Roderick Lab - Ecohydrology & climate at Australian National University. The main focus of his research revolves around water, at scales from cells to the globe.

COLLABORATORS

Lighting design Jenny Hector



Jenny has worked nationally and internationally, with Back To Back Theatre, Paul Kelly and Paul Grabowsky, The Light In Winter Federation Square, The Snuff Puppets, Stephanie Lake and Robin Fox, and Big West Festival.

Most recently Jenny designed for Tim Darbyshire's Stampede the Stampede, which premiered at the Dance Massive Festival, Melbourne, Australia, along with Sandra Parker's creative development Small Details, also in Melbourne.

In 2014 Jenny designed the lights for Yellow Wheel's I Came Here To Dance Once, the Centenary Commemoration of the ANZACS departure at Princes Pier, Port Melbourne, and continued her relationship with Berlin based Rimini Protokol, facilitating the set and lighting design for Darwin Festival's 100 per cent Darwin.

Jenny also developed a residential lighting installation that used light and colour to express the emotions of her collaborating neighbors How Are You?

Jenny is the recipient of two Green Room awards and a current member of the Green Room Dance Panel. The Green Room Awards are Victoria's premier Creative Arts Awards.

gauge futures

THE WATER CYCLE ON A GLOBAL SCALE

As a closed global system, the water cycle invites an investigation into patterns of water distribution. The varying access to water across different world populations is an increasingly important political question. As a reflection on the fact that whatever water falls as rain or snow has only recently been lifted from another part of the earth part of our ongoing vision for *Gauge* is to invite artists from the seven continents to create work.

In addition to our initial Australian artists, we invited San Francisco based artists Alex Stahl and Pattie Clemens to create a new work, *Water #2262*.

Gauge was first presented by ArtsHouse, City of Melbourne, in the historic surrounds of the old Meat Market. We are now beginning a seven continent journey, with a first stop in the decidedly weathered Circus Street Markets, Brighton, UK. We are joined by Johanna Bramli and Ed Chivers, of Brighton, with their work *Erode*, and include again Alex Stahl and Patti Clemens of San Francisco, with *Water Project #2262*.

As part of our engagement with site, and the narratives of use and misuse of the water resource that are part of the history that our work has referenced, we have also been pleased to partner with two local organisations: Brighton and Lewes Downs Biosphere, which is presenting *Water Matters* with us; and Southern Water.

Water Matters

Gauge meets Biosphere
The Brighton & Lewes Downs is now a UNESCO World Biosphere site, which means it is part of a global network of international areas that bring people and nature together to pursue better living for the future. UNESCO World Biosphere Regions are places that champion life, connect and empower people, and model solutions to solve global challenges. Local priorities include promoting environmental awareness and engagement, especially amongst young people and children, and influencing land management so

that the quality of our drinking water from our underground chalk aquifer is improved.

The local Biosphere team have created a virtual world of the local Biosphere Region, using the children's computer game of Minecraft, enabling people to have fun exploring and learning about how the local water cycle really works here, both in schools and at home. Their goal is that local people learn where the water in their taps comes from, by venturing beneath the surface to discover the hidden underground water supply, and find out how they can help look after this precious resource.

Over the course of the weekend, you can take part in various family activities - such as a Minecraft virtual world to uncover precious water resources hidden beneath the ground - and find out why our water really matters. You are also invited to contribute your thoughts and ideas in a daily discussion at 2pm, between *Gauge*

and the Biosphere team exploring the similarities and differences of the environment, nature and water issues in Australia and Brighton.

When

Sat 16 & Sun 17 May, 10am – 6pm
Gauge Meets Biosphere discussion at 2pm each day.

“Water is crucial to life, yet as a scarce resource is often used without thought of where it comes from or the impact it has on the our environment. Southern Water is always looking for unique ways to encourage our customers to think about the amount of water being used in their daily lives. An association with Gauge is a unique way of showing how through smarter living we can reduce the amounts of water used for the benefit of all.

Did you know that a quarter of the water used in your home is hot water and so also adding to your energy bills?

We each on average use 150 litres of water per person, per day. Imagine 150 litre bottles of water piled up high, each day!

Patti Clemens

Patti Clemens is a vocalist, music producer, inventor, designer and maker of musical instruments, and other novel objects that produce sound.

30% of the water we use is flushed straight down the toilet, 13% is to wash our clothes and only 4% is actually drunk

Population growth and climate change have contributed to the South East being classified as water stressed. To help us secure Southern Water has installed nearly 500,000 water meters across Sussex, Kent and Hampshire.

Customers are using, on average, 16.5 per cent less water. This means that in Brighton and Hove, for example, 2.8 million litres of water are being saved

Alex Stahl

Alex Stahl is a designer, builder and operator of musical instruments, sound environments, acoustical architecture and studio tools.

each day. That's more than enough water to fill an Olympic-sized swimming pool.

By detecting leaks alone, the meters we are installing are expected to save the South East 76 million litres of water a day. That's enough water to fill three Olympic sized swimming pools.”

Ben Earl,
Water Efficiency Manager, Southern Water.

Joey Williams

Joey Williams, VideOda, is a videographer, D.P. and post-production editor.

For 25 years he has documented fine arts, performances, and community activism in the realms of peace and social justice.

This project has been assisted by the Australian Government through the Australia Council, its arts funding and advisory body.

Kindly supported by Southern Water.

Thanks to the Brighton Festival team, who have worked very hard to get us here, particularly Sally Cowling and Polly Barker. Thankyou to our hosts here at the Circus St Market and new collaborative partners, Southern Water, Biosphere and artists Johanna Bramli and Ed Chivers. The artistic team would like to thank Dr Adrian Pearce and Dr Michael Roderick whose willingness, curiosity and openness to the creative process has been greatly inspiring. This project has been supported in development by the Inter-Arts Office Australia Council of the Arts and CultureLAB and in presentation by the ArtsHouse, City of Melbourne and Arts Victoria.



