



Katie
Paterson

First

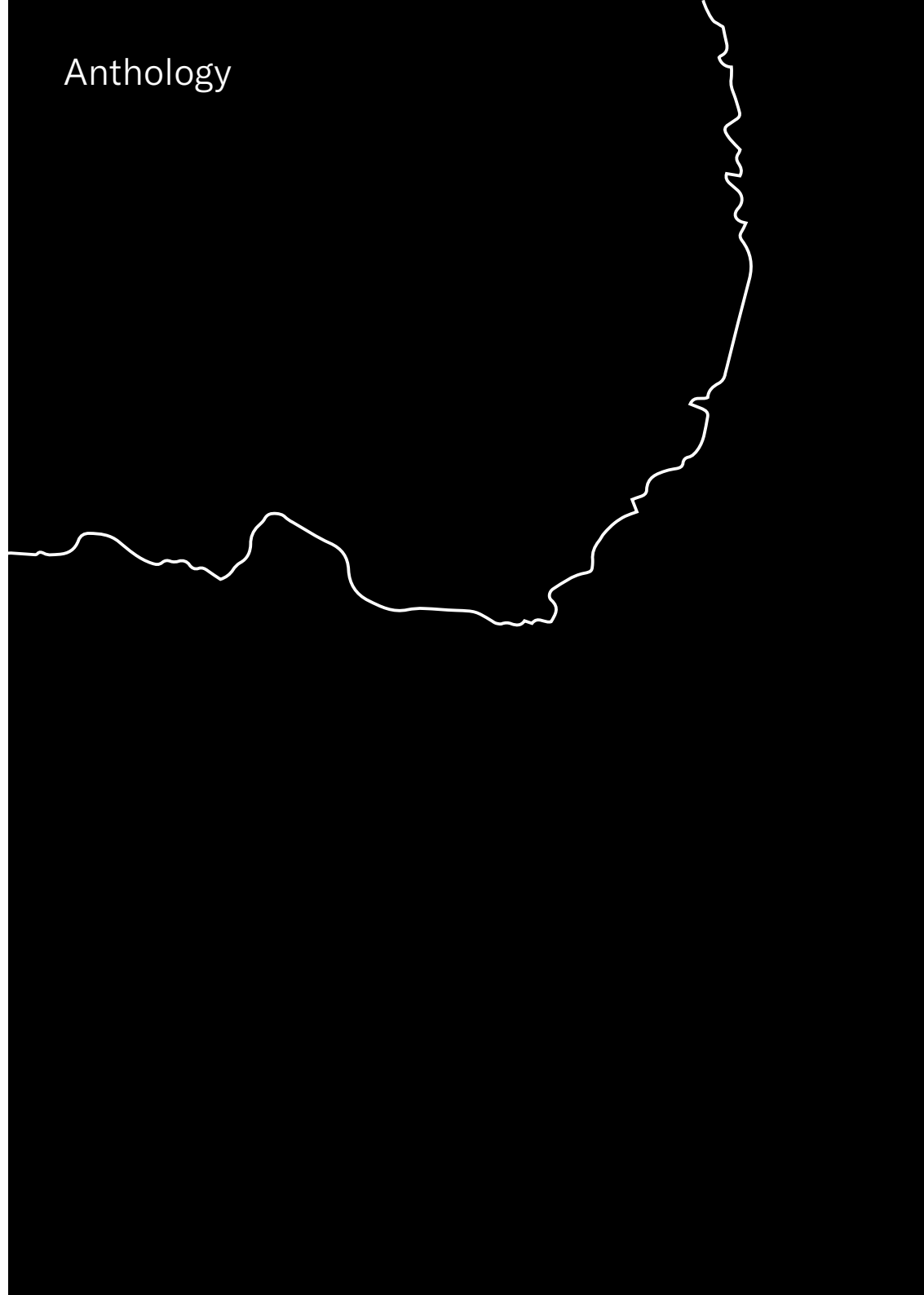
There is a

Mountain

“In every outthrust headland, in every curving beach, in every grain of sand there is the story of the earth”

Rachel Carson

Anthology



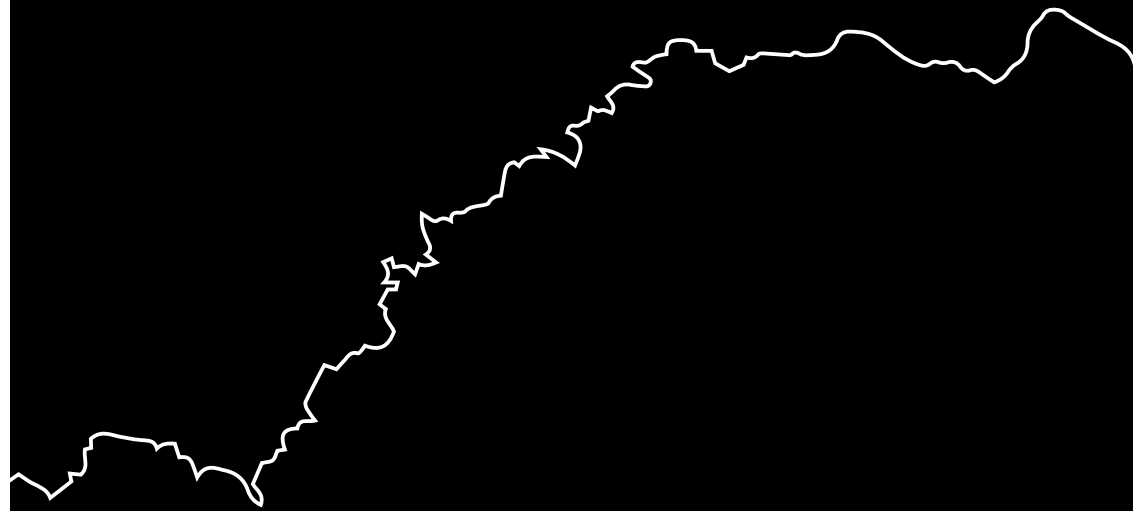
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*They Came from the
Sea – A Litany*
by Jeremy Millar

March 31



Whitstable Biennale, Kent

They came from the sea, or so it seemed.

They came from the sea and were clothed, yes, but
wet through.

They came from the sea and they came from the east,
from where we look to see from where we came.

They came from the sea and were without a thing.

They came from the sea and did not say why they came
or why here.

They came from the sea and were carried on.

They came from the sea and were still.

They came from the sea but too early.

They came from the sea and ate slept drank.

They came from the sea and were barely there.

They came from the sea and were transformed.

They came from the sea and were beautiful.

They came from the sea and were illuminated.

They came from the sea and let go.

They came from the sea and then waited.

They came from the sea and were not known.

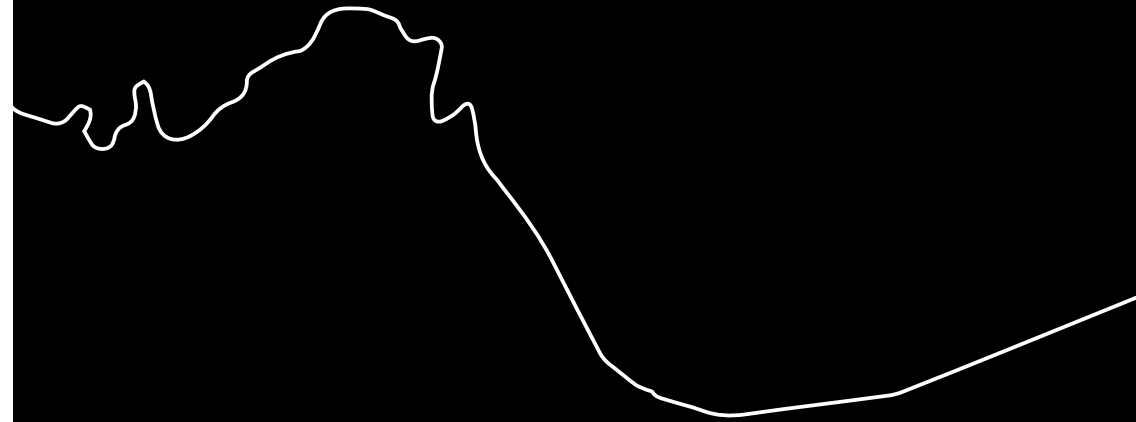
They came from the sea and were in torment.

They came from the sea and made sounds never heard.
They came from the sea, a fortnight dead.
They came from the sea and lived upon shells.
They came from the sea and were consumed.
They came from the sea and then gathered their bones.
They came from the sea, waste and empty.
They came from the sea but did not say what they had seen.
They came from the sea but it was too late.
They came from the sea and were alone.
They came from the sea and were seen by no one and by all.
They came from the sea and it was inside them still,
still moving.
They came from the sea and saw themselves there.
They came from the sea and apprehended all.
They came from the sea and reached out towards us.
They came from the sea and reminded us of what we needed
to remember.
They came from the sea and were changed.
They came from the sea and were possessed.
They came from the sea and no one dared look upon them,
and they did not dare to look.

They came from the sea and there is no end to it,
no end to it.
They came from the sea and had many voices.
They came from the sea and were bound to.
They came from the sea and their bodies were still flooded.
They came from the sea and set themselves down.
They came from the sea and all shall be well.
They came from the sea and resembled no one, not even
themselves.
They came from the sea and were invisible.
They came from the sea and were renewed.
They came from the sea and were tongued with fire.
They came from the sea and were indifferent.
They came from the sea and gathered the darkness
around them.
They came from the sea and left themselves there.
They came from the sea, or so it seemed, but then the sea
came for them, and for us all, and for everything.
The sea came for everything.

Porthmeor Beach
by Richard Hamblyn

April 7



Jeremy is an artist living in London and Ramsgate, and a senior tutor at the Royal College of Art, London. He has exhibited widely nationally and internationally – most recently in Paris and Venice – and has written for numerous publications. His film *XDO XOL*, commissioned for the 2014 Whitstable Biennale, was shot on the Isle of Sheppey, close to where Katie Paterson's work will be presented.

Tate St Ives, Cornwall

Before I begin – before *we* begin – I’m going to dig into the sand with both my hands, and then stand slowly up, with a miniature mountain cupped in front of me. And then I’m going to adjust my palms, ever so slightly, to release a slow, sandy trickle that will hourglass this flow of geophysical reflections, reversing time for a minute or two, or three, or four, as the grains fall like charms onto the beach.

Porthmeor Beach is a magical space, 110,000 square metres of fragmented carbonate material (that’s “sand” to you and me), bracketed like a pair of claws by ancient headlands of dolerite and gabbro: dark, intrusive rocks formed from slowly cooling magma some 300-400 million years ago.

On a map, the eastern headland (“The Island”) is an old man’s head, Smeaton’s Pier his straggly beard, his prominent nose dribbling into St Ives Bay, St Nicholas Chapel whispering in his ear. Much of the shoreline of St Ives Bay – in Cornish: *Cammas an Tewyn*: “the bay of the sand dunes” – is carpeted by the wave-fragmented shell casings of billions of long-dead marine creatures, broken up and driven ashore as particles of sand by the ceaseless Atlantic swells. Pick up a handful of Cornish sand and you commune with the ghosts of ten thousand lives lost at sea. Like the Sybil of Greek mythology, who was granted her terrifying wish of a year of life for every grain of sand she could hold in her hand, we too are gazing upon immortality.

Sand is mesmerising: both ordinary and enchanted, intimate and infinite, a marker of time – the three-minute egg: the five-minute essay – as well as of infinities of scale. The cosmologist Carl Sagan once claimed that there are more

stars in the universe than there are grains of sand on all of Earth’s beaches, a claim that was dismissed at the time as hyperbole, but which now appears, astonishingly, to be true. The thought recalls a childhood memory of writing my name and address on my school-bag: “Feock, Truro, Cornwall, England, Great Britain, Europe, The World, The Solar System, The Universe, The Cosmos”, but not knowing which one was supposed to go last: the universe or the cosmos? Which one was bigger? Which holds more grains of sand?

The question tricks me back into another memory-time, not my own but my mother’s: a vicar’s daughter from Penzance who, as a teenager, discovered that the 1960s had landed over the border in St Ives, hanging out at firelit beach-parties with suntanned art students doing summer work at the Hepworth studio, “chipping for Barbara”, as they called it, learning their trade from the leading light in postwar sculpture.

The thing that is always said about the St Ives artists is that they came here for the light –and as so many of the luminous landscapes on display in Tate St Ives attest, the vaulting skies of Cornwall are among the atmosphere’s greatest gifts. But I’ve long suspected that some of them really came here for the geology: for what lies beneath this ancient and enchanted landscape of stone, sand and sea; the very titles in the gallery that overlooks this beach drawing a poetic map of west Penwith: “St Ives”, “Porthleven”, “Trevalgan”, “Tol-Pedn”, “St Just”, “Mounts Bay”, “Porthmeor” or “Port Meor”, to borrow Alfred Wallis’s preferred construction.

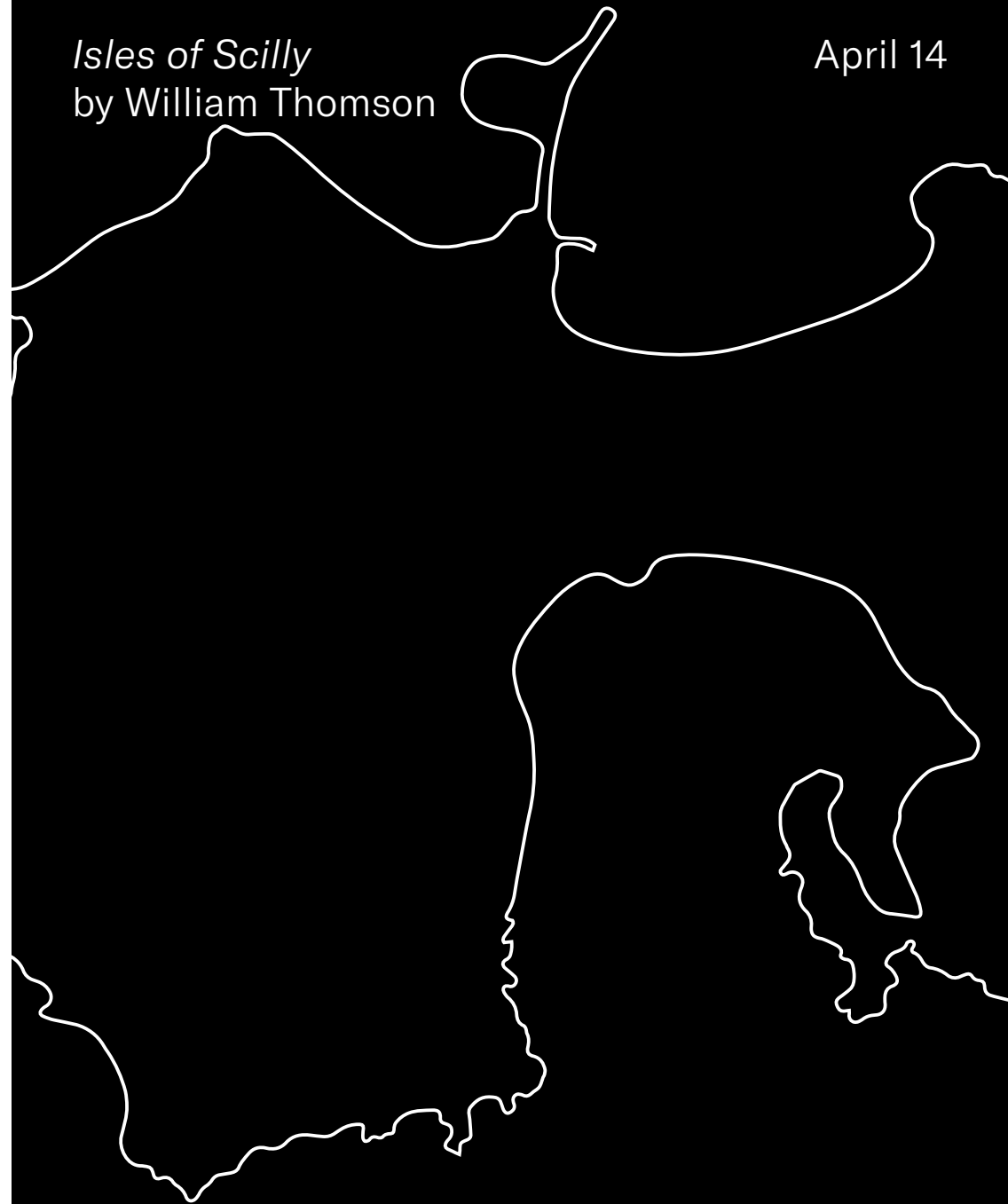
Isles of Scilly
by William Thomson

April 14

And while visitors to Tate St Ives are asked to keep their hands to themselves, down here on “Port Meor” Beach the sand in my hands – in *our* hands – is all about touch, tickling slightly as it trickles away, over seconds, over minutes, over aeons. A billion or so years ago – a blink in the eye of my hand-held sand-timer – the moon was much nearer Earth than it is today, with a stronger gravitational pull raising vast tides in our planet’s young oceans. The energy dissipated by those tides as friction helped slow the earth’s rotation, locking our moon into its present alignment, so it always shows the same face to the earth. In the fullness of time, the earth, too, will become tidally locked, and so will always show the same face to the moon. The tides will cease, bringing to an end the great natural spectacle of an ocean dragged across the beach by the moon’s cosmic leash, with the entire weight and breath and heartbeat of the sea involved in the daily shaping and reshaping of the shoreline – a liminal space that is erased and rewritten twice a day by tidal improvisations: by what oceanographers know as “the Atlantic calcium carbonate budget”, or by what children and castle builders know as “fresh sand”, laid out anew each day.

And it’s waiting for us now, as my sandglass ebbs away to nothing: a miniature cosmos, our new world of sand, waiting to be created and erased again, by a hundred hands, by a single tide.

Richard Hamblyn is an award-winning environmental writer, and a lecturer in the Department of English at Birkbeck, University of London. His books include *The Invention of Clouds*, which won the 2002 *Los Angeles Times* Book Prize; *Terra: Tales of the Earth*, a study of natural disasters, and *The Art of Science*, an anthology of readable science writing from the Babylonians to the Higgs boson. His most recent book, *Clouds: Nature and Culture*, was published last year, and he is currently working on a long-planned book about the sea.



As we stand here in the Isles of Scilly, surrounded by water, the timeless inscription chiselled onto a rock on Holy Island, Northumberland, resonates with this beach: “Out of the sea a heart beats of stone”. Our heart of granite, softened by white sand and brightened with wild flowers, breathes the south-westerly winds. It beats with the tides and the Gulf Stream flows through its veins, part of a great circulatory system of interconnected ocean currents transporting heat and nutrients around the world. It takes one thousand years for a water particle to make a complete journey through this global system and return to where we are now.

While ocean currents transport water, tides transport energy. Right now that energy is flowing around the Atlantic Ocean in the form of a colossal wave with high tide at its peak. After passing the Isles of Scilly the energy that forms high tide travels to Iceland, Greenland, North America, North Africa and Europe. It then returns here twelve hours later and repeats the cycle without missing a beat, connecting us with communities around the Atlantic regardless of culture or climate. From the Inuit of Greenland to the Berbers of the Sahara, we all share the energy of the Atlantic tide wave. And this wave does not work in isolation, it is part of a network of tide waves that join like cogs in a great machine, high tides merging seamlessly throughout the world’s oceans.

Tides, winds and currents are set in motion by the earth orbiting on its axis at an angle of 23.5 degrees. This perpetual spinning creates a climate of constant change; day to night, spring to summer, high to low. But this change is not linear – it is circular. It follows a cycle, a path that

To Us for the Filling by Lizzie Lloyd

May 5

makes a loop and returns to the start, just like the peak of the Atlantic tide wave. Each cycle is unique and the time it takes to make a circuit varies. Tides repeat themselves once a day. Currents transport water around the world once a millenia. And every several thousand years polar ice melts and pours into the ocean, rising sea levels. This is the cycle we are in now.

Three thousand years ago Phoenician traders sailed from the Mediterranean and stood where we are today. But their view would have been very different; instead of looking out over water they were above a valley that rose up to hills that make the islands opposite us. In those days these were not a collection of isles, but a single island whose valleys were flooded by rising sea levels, creating the isles we see today. And now that cycle is repeating, this time accelerated by man-made global warming. The difference now is that by looking back at the cycles of the past we can predict what will happen in the future, and we are better equipped to adapt to this dynamic stage in the cycles of our oceans.

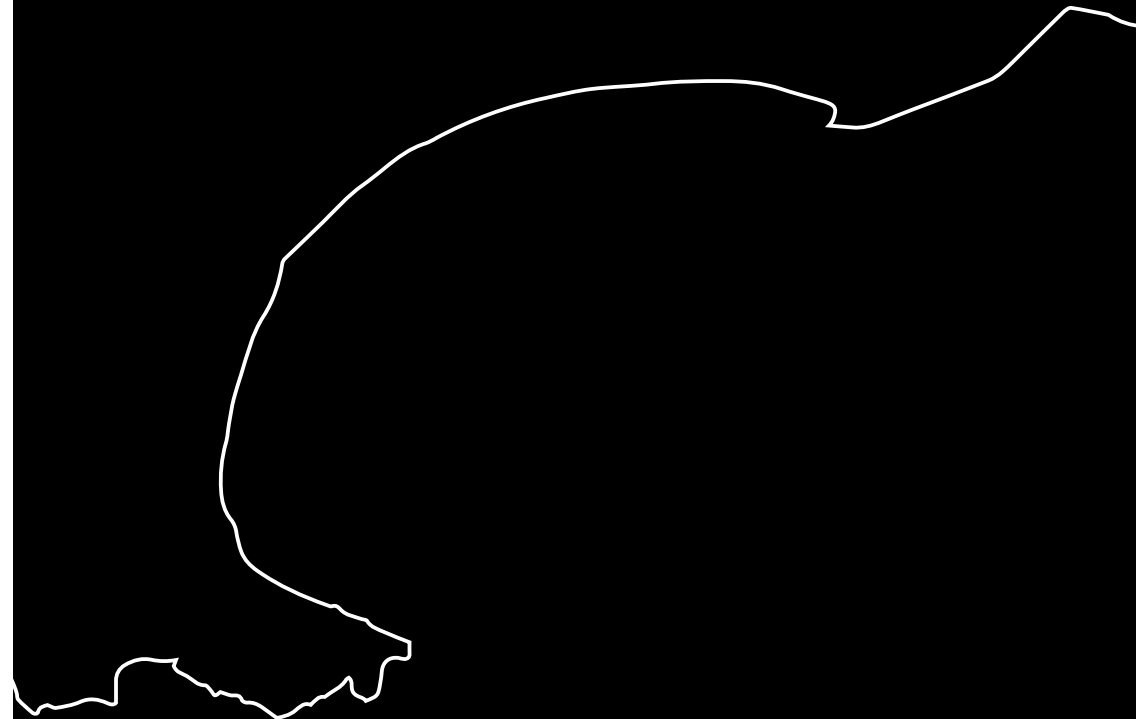
William is an author, artist and adventurer.

In 2014 William founded Tidal Compass and travelled the coast of Britain, making Tide Maps for the coastlines he explored. This adventure inspired his best-selling *Book of Tides* followed by *The World of Tides* and *Tides and the Ocean*.

In 2018 William was made a Fellow of the Royal Geographical Society and established Tide School, taking people on outings along the coast and teaching them about tides so they can have safer and more satisfying adventures.

William is currently planning an expedition to sail the world and explore climate change. His strategy is to sail to the places most at risk and share the stories of 'SUPA' Heroes; people helping develop a sustainable [S] future through better understanding [U] the natural world, preventing [P] damage to the environment and adapting [A] to changes in climate.

You can follow William's adventures through his weekly Friday Forecast at www.tidalcompass.com



Splayed and blanched-white pails are passed from one pair of expectant hands to another. Crisp and shell-like these conic forms are nestled upside down, one within the next. They call to mind overgrown peonies, frilled eruptions opening themselves up to us for the filling.

scutch – scutch – scutch

fud-thwt

flump

I fill and pat and flip and wonder how many millions of castle-shaped buckets have been filled along this bay? How many names temporarily scrawled on its shore? How many stones thrown, spades buried, sticks fetched, shells collected, rearranged, and pocketed? How many bottles washed ashore, nets caught and knotted, balls carried away by winds or tides?

scutch – scutch – scutch

I'd like to fill my buckets with words that I've collected, inspected, and run my finger over; words that belong here. I'd like to fill them with memories of this place so that when I turn out my tamped down, second-hand words, they'll form unsound first-hand mounds. These, I imagine, will amount to a compression of snot-wet-grit-specked upper lips and benumbed bare feet and grizzled skies and overcast waves the colour of week-old bruises. Midnight walks home after closing would be there too, together with (something like) football played at dusk in fits of young and unselfconscious giggles. The bank holiday birthing of my first boy.

fud-thwt

flump

Getting the right consistency is crucial, though: too wet and I risk a sloppy dissolution, too dry and a gusty collapse.

scwtch – scwtch

fud-thwt – fud-thwt

I'd like to shape my mounds with the ups-and-downs of accented words mouthed here, by there, and endowed by vowels that are extended, open-ended and occasionally curtailed. In my teenage years, when it mattered most, I set to adopting this lolloping rhythm. I later lost it somewhere along the way to here. Now I hear it only occasionally. I can replay it in my mind, though – it's still there. But when I set to speaking it aloud it isn't; my mouth is stiff and clumsy, no longer able to form the right shapes to host it.

flump

Hands together; eyes closed: she's got the whole world in her hands. The last time I sang something close to this refrain I was here, in this same sing-songing city, I mean. Sitting, head down, cross-legged on a sticky lino grey-blue floor I would cast sideways glances around the school hall and the teachers that rimmed it both of which seemed comparatively, unimaginably large.

scwtch

fud-thwt

This is her way, I suppose, to play between scales of time and dimension. Switching between the unfathomably vast to the familiarly small – from light years to light bulbs – she stages a world, a universe even, in precarious miniature (or is it a precarious world in miniature?). She hands out pieces of it, proxies for it. These five great world formations don't look like much against the backdrop of the arm-wide expanse of Swansea's bay, not much at all: more molehills than mountains and fit for glee-filled, two-footed stamping.

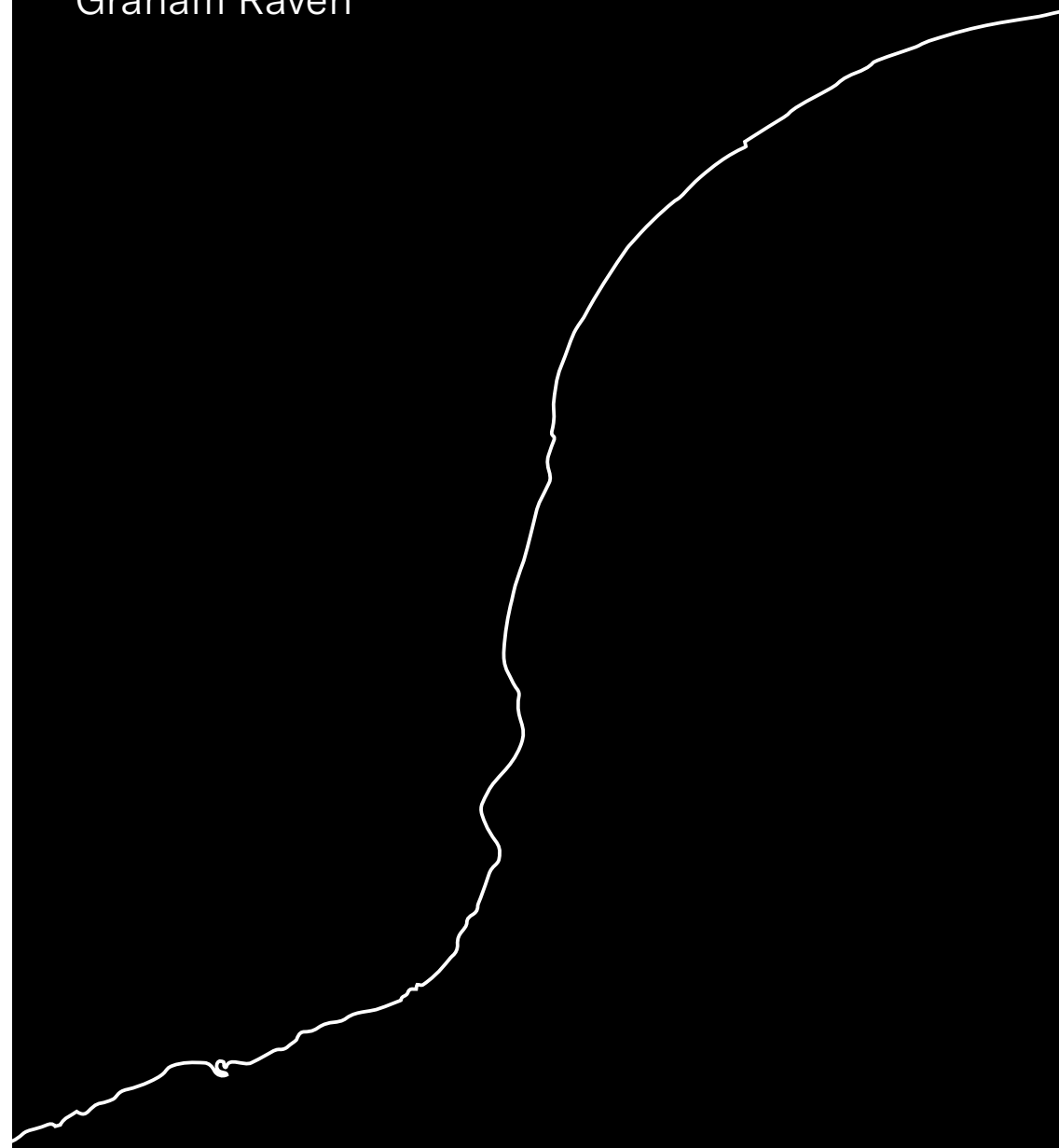
flump

Regardless, we dig on. We rearrange grains of sand into shapes that we know to be short-lived before turning to rearrange the contents of our daily lives into shapes that we know to be short-lived. We dig on. It turns out that even her pails exist in passing, degradable, like these words and the sounds and the mounds they make and the worn down mountains on which they're modelled. Before long, I know, my sand mountains will be toppled from above and sucked from below; they'll collapse in on themselves, out from under themselves, swept clear by the returning tide. Still, heads down; we dig on.

Brought up in Swansea, Lizzie is an art writer. She lectures in Fine Art and Art and Visual Culture at University of the West of England. Her texts have been commissioned by Plymouth College of Art, Phoenix (Exeter), Hestercombe Gallery (Taunton), UH Galleries (Hatfield) and she recently contributed to a Cubitt Education Community Studios project (London). Her writing has appeared in publications including Art Monthly, Journal of Contemporary Painting and artnet. She was writer-in-residence at Arnolfini (2016) and Plymouth (2017). Her doctoral thesis on Art Writing and Subjectivity at University of Bristol will be completed in early 2019.

*The point of the work
is the work by Paul
Graham Raven*

May 12



Artecology & Quay Arts at Hullabaloo,
Isle of Wight

Dear child, let's play a game. Come here, crouch down,

and place your tiny hands upon the ground

to feel the salted sand beneath your skin.

That outer layer of your inner world

is very thin, and will get thinner still

as years pile up on years, but never mind –

you're young, and age is for the aged ones,

and time for you still measures out in joy

and tears and wonder, day on day on day,

and size is relative at best. So much

will come along and go away with time,

your life an hourglass, the top still full

but trickling slowly downward nonetheless;

you're still so small, the world is oh-so-big,

and how I hope to see it all anew

again, as seen and felt afresh by you,

your eyes alight and hungry for it all!

So: look out there, where waves dance up and down,
and tell me what you see. Not much? So true!
But don't just look through distance, look through time
to see the past – not deep as dinosaurs,
but just a handful-hundred years or so.
It's Fifteen Forty-Five, and Henry Eighth
is fearful of the French invading here
(a war, like most such wars, which was at heart
an argument about who got to claim
the work and taxes of the normal folk,
a game of thrones in which we're merely pawns –
and not so much has changed in that respect).
Now, Henry was all get-stuff-done-and-build,
and forts were very much his sort of thing:
protection, yes, but part of playing king
is making statements, setting down your mark.
And so he had his men construct a fort,
a box of stone with walls and ramparts: traps
for men in ships with mayhem on their minds.

But then, before they'd finished, from the swell
of summer's tides at dawn, the French attacked!
They crossed the Channel in two hundred ships,
two thousand men all gunning for the fort,
still incomplete, the builders not yet done.

The French, they didn't win (I'm not sure why,
to tell the honest truth) and went away.

The workmen carried on, the fort was built,
the war was won (or lost – depends which side
you take) and Henry died, as all kings do.

(They're only human beings, after all.)

The years flowed by, the tide licked up and down
the castle's walls, and made them soft and weak,
which isn't very useful in a fort.

Alliances and politics had changed
(and so had war), the French were less a threat
than someone else (I'm not sure who). And so
it was the castle walls were all knocked down,

the stone reused elsewhere, the site left bare,
abandoned – given over to the sea.

My point, dear child, is not to make a mock
of kings, not even Henry Eighth. (I *could*,
and sometimes do.) But look: in Henry's case
you can't accuse the guy of sitting back
and letting life unfold for sake of fear
that what he did might fall a little short.

As mortal as he was – as you and I –
he made his moves, and made them fast and bold.

My dearest child, the point I mean to make
is that you'll try then fail, or try then win –
and even when you win, it mightn't last
beyond the first bright rush of holy joy
completion brings. Temptation sings a tune
(like sirens, if you know your Odyssey)
of torpor, tells you not to even try:
why bother, if the things you make will die,

and so will you? *But that's the wrong way round.*

The tree still falls; the question of the sound
is answered by the other trees, who'll say
“we felt it – that's enough”. The forests know
that life-and-death's the loop that lets them grow,
that kings and heroes cannot do their work
without their soldiers, builders, farmers, clerks.
The large is built up slowly from the small,
and every castle-tree must someday fall.

Now let's get down to earth, let's touch the truth –
no matter if the sand is wet, who cares?
For did you know that once upon a time
this sand was rocks and mountains, far away?
That time and tide wore down those mountaintops
and crushed them into something close to dust?
It's true! The large becomes the small with time,
the small becomes the large... this Earth was made
from distant stars exploding into rust,

and so were you, you too are made of stars,
the salt-red ocean underneath your skin
is full of tiny bits of stars – don't laugh!
I wouldn't lie to you, it's what we are,
all people, good or bad, or strong, or weak,
are stars – and don't forget it, much as life
may tempt you so to do when things go wrong.
'Cause time is ocean's waves, and life's a beach,
and all our castles merely piles of sand –
but don't despair! The power left to each
of us is here, *right here*, within your hand.

So kneel – but not to gods, nor kings, nor men.
To time we bend the knee, and take the gift
of time to make a shape, to make our mark,
not knowing if or how that mark will last.
'Cause nothing lasts forever – sad but true.
The waves of time will crush our rhymes

and castles, yes, they will – but don't despair.

For meaning is a moment we can take
and cling to tightly when the world's awash
with rage and loss, and we feel oh-so-small.
So kneel – and sink those tiny human hands
into the sand, which once was mountains tall,
and make it shape a mountain once again.
Perhaps the sand remembers what it was;
perhaps your hand remembers how it felt
to raise a wall against the sea, against
the French, against the patient tides of time.
For that is all that human hands have done,
and all that they can do: make shapes of sand,
of rock or air, or ink upon a page.
(This is my castle, made of words, for you.)

There will be times you'll face this fact and feel
that nothing's to be done, that all is lost.
But other times – and let this be the first! –

*Life Made the
Mountain, the
Mountain Came Alive*
by Ian Vince

that feeling will be wind to fill your sails:
if nothing lasts, and every fortress fails,
and every mountain crumbles into sand,
then every moment, poem, every shape
we make is glory: dreamings brought to life.

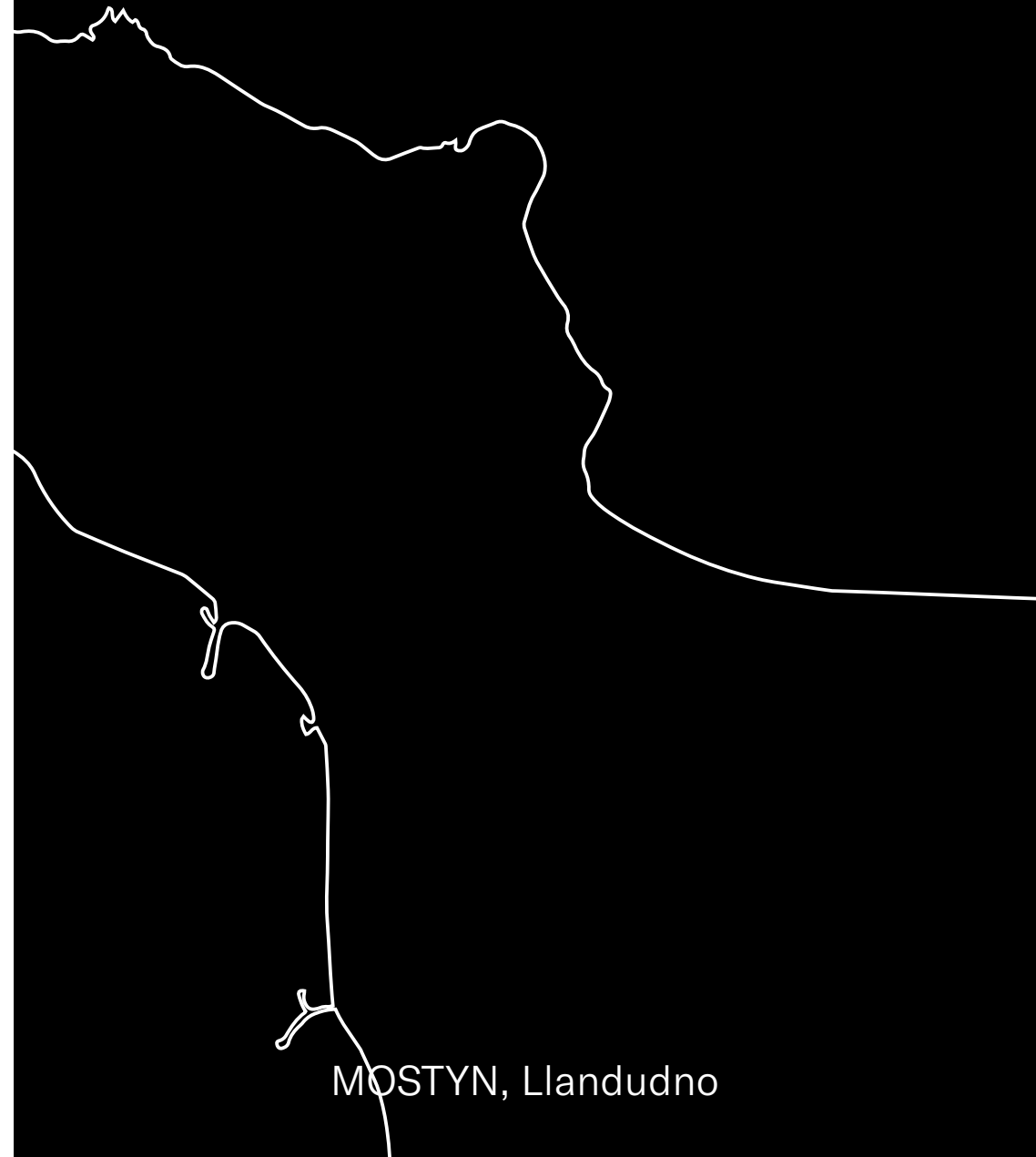
Embrace this momentary act! Admit
the truth of life, which is mortality,
and so defy the tyranny of time.

Now say the magic words: "shall we begin?"

#

(for Jasmine)

Paul is a postdoctoral researcher for Lund University (Sweden), using the tools of science fiction and social theory to explore infrastructural reconfigurations for Anthropocene futures. He's also a writer of poetry and fictions, and a consulting critical futurist, literary critic and occasional journalist, with bylines in such venues as *New Scientist*, *Wired UK*, *ARC Magazine* and *The Guardian*. He lives a short walk from the site of the Battle of Orgreave, in the company of a duplicitous cat, five guitars he can barely play, and sufficient books to constitute an insurance-invalidating fire hazard.



It seems odd to stand on a beach and tilt your head up for a view of the ocean floor, but that remarkable feat can be achieved on West Shore Beach at Llandudno. The cliffs and slopes that terminate each end of Ormes Bay are the petrified remains of a former sea floor – the bottom of a shallow sea, now long gone, that existed over 325 million years ago. This is not unusual; most mountains are made from sediments laid down in the ocean. What is special about limestone uplands like the Great and Little Orme, is that they were originally made a long way offshore. The sediment that created them did not come from the erosion of an earlier landmass; it was left by living organisms.

The uplands around Llandudno were laid down in a shallow tropical sea during the Carboniferous, a period of deep time that teemed with life. The southern shore of this ocean continually moved, with the sea periodically inundating and then receding over dense lowland rainforest where ancient dragonflies reached the size of seagulls and millipedes grew to one and a half metres long. Continual flooding of the forest floor left layers of dead plants collecting and compressing over millions of years to eventually form the coal seams of South Wales. Carboniferous means *coal-bearing*.

Like the coal seams to the south, the Carboniferous limestone around Llandudno is made of life itself. The Orme limestones were formed from the shells and exoskeletons of billions of brachiopods, crinoids and corals. When the limestones were first laid down, Wales was located along the equator and the climate was similar to the modern Bahamas. Britain also lay at the centre of a super-continent of all

the world's land called Pangaea. In Pangaea, a walk from Llandudno to New York would have taken about a month, followed by a wait of around 330 million years.

As the continents crushed into one another for Pangaea's assembly, the Caledonides – a mountain range of Himalayan proportions – formed to the north eventually eroding down to the Scottish Highlands. It was during this period of mountain building that the Orme was uplifted. From the Promenade, you can even see the fold of the rock beds above the Grand Hotel and under the pylons of the cable car.

Mineral-rich water seeped into the fissures created as land was uplifted and rucked like a rug. Dissolved copper crystallised into ore known as malachite and enough of it would be extracted from the Great Orme mine during the Bronze Age to make at least ten million axe heads. The Orme was one of the largest industrial sites of the Bronze Age world.

In other parts of the world, mountains stand aloof. Wood smoke fills the valley floors, agriculture, industry and the material needs of people predominate below, while the mountain is the home of spirit, the mark of permanence, the symbol of calm. On the seaboard of Wales, it was reversed. The mountains were places of industry – of mines and quarries – while, in the valleys that met the shore, buckets and spades beside the seaside had an altogether different purpose to their mountain counterparts.

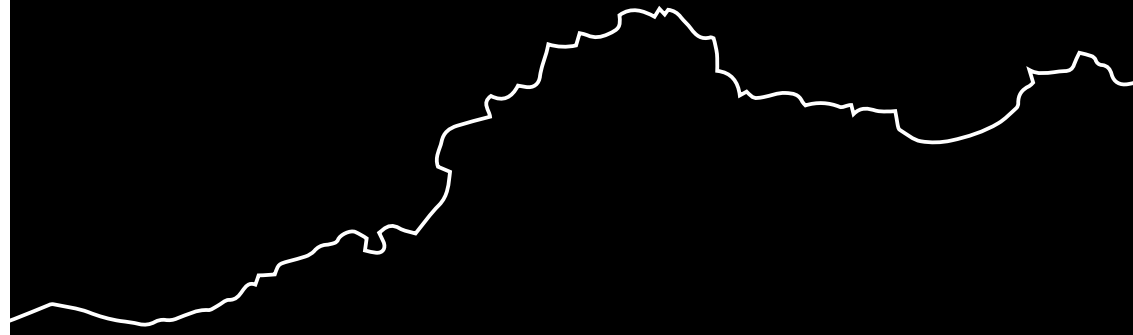
Much of that has been upended and usurped by technology, by modernity, by the blunt forces of economics and politics. The industrial mountain has become silent, even in the

hubbub of its new appeal to tourism, within the projected spectacle of visitor centres and heritage attractions, the mountain is now a place to take a longer view and look at our own lives.

After writing three humour titles in two years, Ian Vince decided to take things at a more sedate pace. With two friends, he marshalled a 1950s electric milk float across England for the 2008 John Murray book, *Three Men in a Float*. The delightfully slow journey woke up Ian to the power of the landscape in all its forms. After another year of travelling up and down Britain and only half-remembering his geology O Level, he started the British Landscape Club and wrote its unofficial manual, *The Lie of the Land – an under-the-field guide to the British landscape*. He lives in Wiltshire with his family.

A Beachfront View
by Stuart Walker

June 2



Grundy Art Gallery, Lancashire

The swell rolls in, rising and breaking and surging into spume that surfs across the sand. Back and forth, back and forth, waxing and waning with the breath of the moon. There is constancy in its changeless routines and changeable moods.

Down at the water's edge soft soughing fills the air, pierced by the quarrelsome cries of gulls. And the brine on the breeze smells of ... *innocence* ... cut-throat pirates, crows' nests, *the wheel's kick and the wind's song*, Billy Bones and Blind Pew.

Looking out from this place landlocked lubbers once dreamed of distant shores ... the Spanish Main, Portuguese Men o' War, Ancient Mariners, the cargoes of Masefield and the Bounties of Bligh.

But the horizon and the romance have become foreshortened because even the seascape is now in harness to our appetites. The wind farms that fence in the skyline try in vain to keep up with our cravings. One day, perhaps, even the wind will be exhausted.

The jarring jingle of the ice-cream van has usurped the sirens' song and a little grey donkey bearing the mark of the cross on her back in memory of Jerusalem now goes by the name of Fifi. She stands on the sand in pink taffeta hat and fake-flower necklace patiently waiting to ply her trade.

But from the kiss-me-quick to the squeeze-me-slow, a shadow hangs over this beachfront view – the plastic buckets and the plastic spades and the plastic pitted sand, and the bottle tops and the beer cans, and all the fun of the fair.

Behind the sands the straddling tower casts a sombre eye over the bustling crowds, the bingo halls and the tramcars, the sticky sweets and the penny arcades. And as the day sinks into the sea there are big lights and big shows and night-time bars with ‘Funny Girls’ and ‘Table Dancing’; and the *Little Black Pug* presents a drag act with the alluring stage name ‘Baga Chipz’.

Many of the streets away from the front have a melancholy air, the guesthouses and trinket shops have seen better days – before their regulars flew south for the season for too many sangrias and too much sun.

But there is also optimism in the air – new buildings, new jobs, a fresh start and new hope. And most of all there are the beaches – the glorious golden beaches – washed and cleaned and always new under a windswept sun – with families and picnics, cricket and castles, and endless days that stretch on and on into childhood.

And time passes. Generations come and generations go. The sun rises and the sun sets, and the mountains come down to the sea.

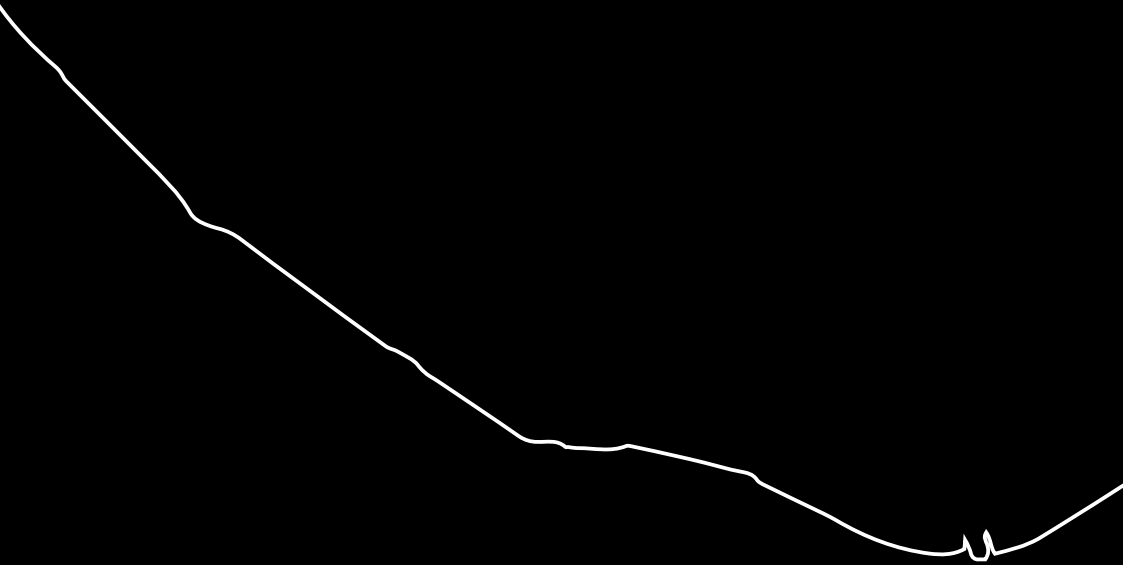
And the swell rolls in, rising and breaking and surging into spume that surfs across the sand. Back and forth, back and forth, waxing and waning with the breath of the moon. And down at the water’s edge soft soughing fills the air, pierced by the quarrelsome cries of gulls.

And the earth remains ... forever.

Stuart is Chair of Design for Sustainability at Lancaster University where he co-founded ImaginationLancaster. He is Visiting Professor of Sustainable Design, Kingston University, London and Emeritus Professor, University of Calgary. His AHRC supported research explores environmental, social and spiritual aspects of sustainability. His designs have been exhibited in Canada, Australia, Italy, the Design Museum, London and Brantwood, John Ruskin’s house in the English Lake District. His books include *The Handbook of Design for Sustainability* (ed. with Jacques Giard), *Designing Sustainability; Design Roots* (ed with Martyn Evans et al), *Design for Life and Design Realities* (Routledge, 2018).

Portstewart Strand
by Patrick Barkham

June 9



The National Trust and CCA Derry~Londonderry,
Northern Ireland

Before there were mountains, and dunes like miniature mountains, and sandcastles that map our mountains, there was a lake of molten basalt. It cooled slowly, giving shape to this line where land meets ocean.

Over millennia, the sea nagged and nibbled at the rocks. This restless sculptor, sand creator, pushed the rock dust away from Portstewart. Over centuries, billions of grains nudged the River Bann along the coast. The Strand had ideas, the Strand had ambition. It spread its wares westwards.

The wind, like an avaricious giant, piled this gold into great mounds. Tenacious marram grasses fought the wind for six thousand years, fixing its sand-hoard into dunes, adorned with pyramidal orchids and wild thyme.

Below them, two miles of tabula rasa, created every day. Washed clean, fussed over and rearranged by the sometimes placid, often furious, always mighty maid that is the North Atlantic.

What a space for the humans who trod here when the dunes were still as small and changeable as a baby. The Neolithic people may have fought or sought food by the sea but they watched the sunset and found solace in the rhythm of the waves too. They would have played here, found community here and told stories here, just as we do.

Portstewart Strand shapes us and our imaginations. My favourite Strand story tells of a husband and wife living happily on the banks of the Bann. One day the wife flies into a rage and flees for the Strand. She finds a surprise washed up on the beach – the decomposing carcass of a whale.

Sinews are stretched taut between its ribs. They sing in the wind. The wife is lulled to sleep. The husband finds her and realises she has been soothed by the whalebone music. The next day he cuts a bough from a tree and adds animal sinews as strings. Whenever his wife becomes distressed, he plays on his harp, and all is well again.

The ocean is a great peacemaker. But the sea is an exhilarator too. It's an audience urging us on. We crowd-surf it, swim it, or hear its roar as we run fast and free. Generations ago, folk thundered their horses on the Strand, racing through the surf. Now we bring our metal machines. Is there an occasional doughnut spun on the sand? An illicit race by moonlight still?

Sixty years ago, many beaches were filled with cars. Now, like smoking in a restaurant, driving on a beach suddenly looks surreal. Society's values are reshaped as swiftly as the sand. Strand-driving feels a bit wrong too: eerily smooth, as if the soft sand may bog us any second (as it occasionally does).

But cars, shiny and packed tight as sardines, are still the picture of Portstewart Strand on a summer's day. Each one is a windbreak, beach hut, cafe and changing room. Regulars paid sixpence in the Sixties to park here, and park here they will.

The Strand is a fun park, pleasure ground and common land; a place of elation, contemplation, emotion, creation.

The departing tide sketches wavy lines on the beach. They wiggle like the rings of a tree stump. Both tell of time's passing.

An expanse of sand is the most eternal of landscapes and the most changeable. As we build our mountains, we remember that our labours are ephemeral, our lives are short and everything must change. We thank the Strand for this sadness and joy, and for the great gift of starting again.

Patrick was born in 1975 in Norfolk and is Natural History Writer for the Guardian. He is the author of four books – *The Butterfly Isles*, *Badgerlands*, *Coastlines* and *Islander*. The latter won the National Geographic Traveller readers' prize in 2018. He lives in Norfolk. His next book, about children and nature, will be published in 2020.

*Mountains in
Portobello*
by Doug Macdougall

June 16



The Fruitmarket Gallery, Edinburgh

Mountains in Portobello: who would have thought
that these small peaks, precise, to scale,
would grace this beach?

This beach once trod by smugglers, Victorian ladies, Walter
Scott.

And George the fourth, in his military finery.

Fuji, Shasta, Uluru. Stromboli.

Kil-i-man-jaro.

What is it about mountains
that so beguiles us?

Cathedrals of rock reaching for the sky,
beckoning us to climb their summits
for the sheer joy of pitting ourselves
against a worthy adversary.
Or maybe just for the view.

Fuji, a postcard perfect cone,
a holy mountain, part of the volcanic ring of fire

that rims the great Pacific where ocean crust
dives deep below the surface, until the planet's inner heat
turns it to magma.

Across the wide Pacific Shasta,
a ring of fire California cousin,
stands proud, and sacred too,
the tribes who lived in her shadow
said she was inhabited by spirits.
John Muir, that son of Dunbar who
began his life not far from here
nearly ended it on her peak, until he found
a hot spring near the summit
to shelter him from a raging blizzard.

Fiery Stromboli, rising from the sea,
her lava fountains guiding wayward sailors
like a lighthouse.
She too was born of plate tectonics,

of Africa sliding under Europe until again internal heat
turned solid stone to liquid lava.

And in Africa famed Kilimanjaro,
a different kind of volcano,
hot plume from deep within the earth
rising up, splitting apart a continent,
pushing the famous peak up to the clouds
her summit dusted with snow.

Finally Uluru, smallest of our five;
looming red above the desert,
this mountain no volcano
just a block of sandstone,
grains of quartz and feldspar, cemented,
tilted up toward the sky.

And here in Portobello our tiny seaside mountains
shaped by human hands, no plate tectonics required,

are also made of sand –
sand from other mountains, distant in time, in space,
mountains forged in fire, raised high,
they had their fleeting moments in the sun
before they too were worn away,
until no trace remained, except this sand.

Quartz, feldspar, mica. Zircon.
Minute grains, winnowed by tropical rivers,
scooped up by roving glaciers,
piled here by North Sea waves.
Piled up again by us.

One man who walked this beach
in centuries past, a man who some say
is the one who found time,
once wrote – thinking of sand and mountains and time –
that there is ‘no vestige of a beginning,
no prospect of an end.’

I think about his insight as we gather here
to watch *our* mountains rise and fall,
leaving nothing behind.
A speeded-up geological cycle
that Mr. Hutton would appreciate.
Time stretched, time shortened.

Four billion years and more
have shaped this earth so far,
more billions still to come.
What will they bring? More mountains to be sure,
more grains of sand cracked from those rocky peaks
and carried to some future sea.

A future sea not one of us will know,
a sea with shorelines, inlets, headlands, cliffs,
and beaches just like this one, but so far away in time
that our imaginations fail.
We cannot even comprehend their presence.

What feet will walk those beaches,
what creatures dig their sand?
What tides will wash them,
what storms will roil their quiet shores?

We cannot know, but here, on this beach,
we need no future-guessing.
We know the rising tide will swirl around
our small, sandy mountains
until they slowly tilt and crumble,
dissolve into the flat, monotonous shore,
gone in a geological instant.

Tomorrow who will know
that these miniature mountains
ever existed here?
Perhaps our memories will recall
how we shaped a Fuji, or a Shasta,

and maybe a grain of quartz or two
will remember vaguely how,
on its four hundred millionth birthday,
it somehow found itself a part of something strange,
and wonderful,
a mountain on a beach.

Doug is a geoscientist, writer, and former professor of earth sciences (now emeritus) at the Scripps Institution of Oceanography in La Jolla, California. Born and raised in Ontario, Canada, he has been based in Edinburgh since 2005. His most recent book, to be published in 2019 by Yale University Press, traces the exploits of scientists on the 1870s Challenger expedition, a voyage that had many Edinburgh connections.

A Vestibular System
by Maria Fusco

June 23

Aberdeen Art Gallery & Museums and Creative
Learning, Aberdeen City Council, Aberdeen

18th to 19th August, 2018

M.V. Hjaltand, NorthLink ferry, from Lerwick to Aberdeen

7.40pm

The tawny horizon pitches, filling the window from 20% to 100%. Matching the giant yawn of the waves, the ferry tips. As my glass of red wine slips off the table, urged by this turbulent sea, I decide not to save it, letting the full glass spill over my denim skirt so that I am forced to walk back to my cabin. I stumble about, dripping, through a force I cannot disagree with. Chucked by the swell into the Game Zone, I deliberately angle my descent, so I slide between two Xbox 360 tower consoles to ease my confused inner ears. A teenage boy is retching theatrically in the corner. I am content. There is nowhere else I can go.

2.40am

I am buckling in the top bunk. Lying on my side. There is no porthole. I have turned on the bedside light. I watch myself in the mirror opposite through the beige safety bars of the bunk. Squinting to witness my ochre face. The bridge of my nose is throbbing. My scalp is shrinking. My ears are fresh. My belly is undulating. My toes are clamping. I keep my lips shut to prevent the possibility of boke. My toes are cold. I think of the pets down on the deck below; small hairy bodies rattling in wire kennels; the water from their bowls splashing, spilling, soaking them. The ferry's lower

machinery wails solid. Metallic yelps and deep sea groans.
Held up by water. Cradled by wind. Compressed by gravity.
I am content. There is nowhere else I can go.

7.40am

I speed off the ferry, running towards the beach. I can barely walk straight, trip over kerbstones, lurch round granite corners, grazing my knuckles. I am laughing. My mustard jumper is on inside out. I haven't brushed my hair. I am here. A lambent tide. Moss green groynes. Vertigo. Longshore drift. A ribbon of cyan sky, just there, between the clouds. The white lighthouse blinks. A giant gust of wind slaps me. I flinch. My tongue is fizzing. Sand crunches between my teeth. I fall to my knees. I am content. There is nowhere else I can go.

Maria Fusco is an interdisciplinary writer and Professor in Art, Design and Social Sciences at Northumbria University. Working across the registers of creative, critical and theoretical writing, her work is translated into ten languages and she is editorial director of cross-genre journal *The Happy Hypocrite* (Book Works). Recent works include *ECZEMA!* (Accidental Records and National Theatre Wales, 2018); *Give Up Art* (New Documents, 2018); *Master Rock* (Artangel/BBC Radio 4, 2015) and *Legend of the Necessary Dreamer* (Vanguard Editions, 2017) which Chris Kraus calls "a new classic of female philosophical fiction."

How to make your own hill by Alec Finlay

June 30

The Pier Arts Centre, Orkney

To make a hill you'll need:
a slope with a steady rise,
shoulders, noses and ridges,
topped off with a summit

don't bother with a cairn
they're considered rather vain

Paths: a minimum of three –
uppy-downy for walkers in a hurry
& some zig-zag trods or traces
shared with sheep and deer

Cover: on the lower hill something basic
blankets of moor-grass for grazing
mixed with flowers and thistles

higher up breacan's traditional:
patches of scree mixed with ling,
bracken and thickets of birch or hawthorn

no reason not to add pines on the skyline,
or, for variation, a stand of larch

A burn: with pools
as much for the sound they make
as their pleasing waterfalls
line it with hazel, alder, etc.

at the foot incorporate a bog
with peat, myrtle, meadowsweet
and bonus tadpoles

A hill seems part of nature
but you can be sure
you weren't the first to walk here

factor in the human:
the dent of an old quarry,
a fank, humps in the grass

marking ruined shielings
& memories of summering,
long-untended lazybeds

A past: be ambitious: dig in something
Neolithic, Norse, or Roman,
align a standing stone,
fit in the cave of an early saint
or add a folly – they go well with waterfalls
and attracts visitors

Now the difficult question of economy:
your hill's pretty, but how do you
plan to make any money?

mobile phone masts are a thing,
whether lattice or fakey-pine,
but do you really want one?
alternatively, pylons and radar masts

show that you're listening

avoid sitka plantations –

mass forestry's no longer the in-thing

best of all, invest in a pair of wee windflowers

– provens or evances – so's

you can feel smug in every wind

Now the part that's most fun: devising a name:

brush up your languages

but don't worry if words and meanings

seep into one another

here's some for starters

Clook, *Claw*

Keelylang Hill, *Long-keel Hill*

Rushabreck, *Horses or Rushes Slope*

Snaba Hill, *Snowball or Sheep-shelter Hill*

Starra Fiold, *Starling or Rushes Hill*

coda: to make your own mountain

A mountain is from some perspectives

no more interesting than a hill:

to make one just take a basic knowe

and inflate it until altitude brings snow

and a line beyond which trees don't grow

draw the contour lines tighter

and prepare for a long winter

on an island a small hill

forms a model pinnacle

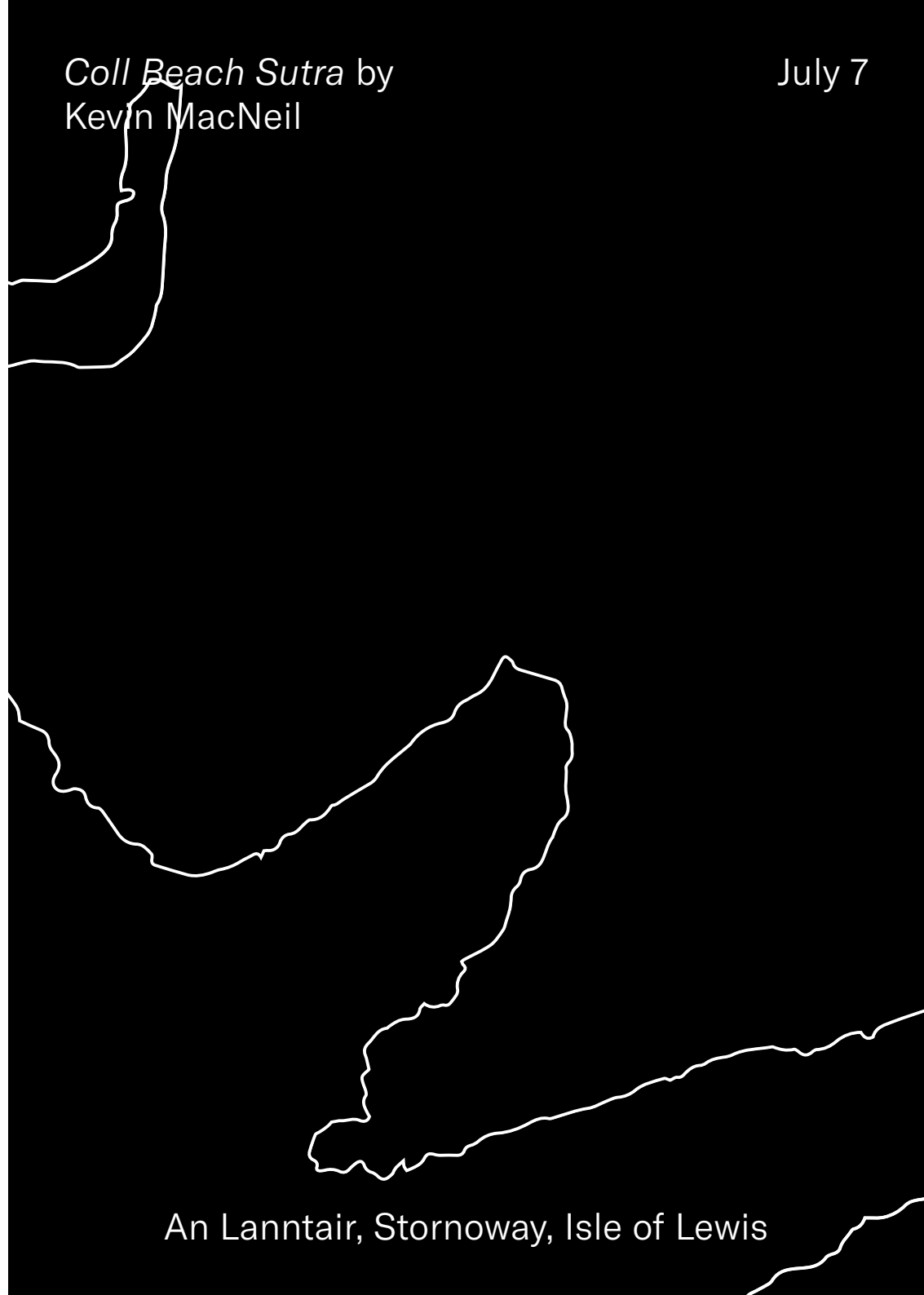
Hill names from Berit Sandnes: *From Starafjall to Starling Hill, an investigation of the formation and development of Old Norse place-names in Orkney.*

Alec (Scotland, 1966-) is an artist & poet whose work crosses over a range of media and forms – poetry, visual poems, poem-objects, sculpture, collage, audio-visual, artist blogs, and new technology. Much of Finlay's work considers how we as a culture, or cultures, relate to landscape and ecology, with a specific interest in place-awareness, hutoopianism, and rewilding. He is also known for his political and social activism. Recent work includes *A Variety of Cultures* permanent artwork installation at Jupiter Artland; and HUTOPIA for the Fondazione Prada exhibition 'Machines á penser' at the Venice Architecture Biennale.

Finlay established morning star publications in 1990. He has published over forty books and won six Scottish Design Awards, including two Grand Prix Awards (2001, 2015). Recent publications include the Scottish Design Award nominated *a far-off land* (2018); *gathering* published by Hauser & Wirth (2018); *th' fleety wud* (2017), *minnmouth* (2017), *A Variety of Cultures* (2016), *ebban an' flowan* (2015), and *Global Oracle* (2014).

Coll Beach Sutra by
Kevin MacNeil

July 7



An Lanntair, Stornoway, Isle of Lewis

“Before I studied Zen, I saw mountains as mountains, and water as water. When I arrived at a more intimate knowledge, I came to the point where I saw that mountains are not mountains, and water is not water. But now that I have got its essence, I am at rest. For it’s just that I see mountains once again as mountains, and water once again as water.” - Qingyuan Weixin

“Great faith, great doubt, great effort.” - Traditionally the three conditions of Zen practice

I

First there is a mountain. Then there is a bay. The mountain is really an island, and has two borders and at least four names. The bay is called Loch a Tuath, “North Loch”, but is known in English as “Broad Bay” and really it is the sea. You harbour a theory that since we emerged from the sea, we think in waves; at any rate, we are surely transient and have no fixed form. On the island, by the bay, is a beach, Coll Beach, also called Tràigh Chuil, and this is what that beach has taught you...

II

One day you bent down and seized a disintegrating fistful of Coll sand. You stood up and unclenched your fingers, observed time flowing swift as gravity. Maybe in the future, you thought, gravity herself will up-end the Earth like a snow-globe – the sands of Coll shall begin to run from the

end called birth to the end of the beach which really has no end. Time, a poet or scientist said, moves at a different pace beside the sea. When you were a child you were already old because of relativity and circumstance and books and because you simply didn't play on the beach often enough.

III

Child old before your time, you lived in books – within other people, other times, other worlds. Words were plentiful as particles of sand. You held a grain of sand to your ear and pretended to hear it whisper, “Listen, at the end of the universe the sands of time, as on Tràigh Chuil, are stretched before you like this, beautiful as freedom.”

IV

You built stories like sandcastles, and believed everything you read. There were no books about you or your kind; you were not quite sure you existed. Sometimes the sand was hot and agonisingly ticklish under your bare feet. Sometimes you popped grotty bubblewrap seaweed with mad pleasure. Sometimes you learned that the same sun that warms the planet can scorch the skin on your back. In certain moments, you can still feel the pain, the peeling. The raw flare of aftermath.

V

It hurt, too, that this water, with which you had such an intense affinity, kept its distance, even when close. The sea's tongue lapped and sizzled, icy and bitter, over your bare feet, and bit at you with the sharp tang of jellyfish. Salt waves slid with an elastic clasp over your thin, brave thighs. This cold sea that gave birth to all of us clutched at your chest like a stopped heart.

VI

You yearned to embrace all horizons at once. Your vision began to fail. Swimming until you can't see land ought to be no more unusual, you believed, than living somewhere without a sea view. You swam through wave after wave like one whose hugs are pushed away. If the Earth is three-quarters sea, you concluded, then she is three-quarters tearful.

VII

Who has been forced to kiss the bitter scruff of seaweed?
Who has endured the violent, brackish bucking? Who has learned to go beyond?

VIII

You pictured the Earth tilting as she orbits the sun. Platonic gravity holds planets and warmth at arm's length. Perhaps this is a universe of hidden love, perhaps delayed love is love for the best. Better than time, better than words, let each grain of sand represent a good deed achieved unseen. Make mountains of them. Do not speak of compassion. There is a word for that. Put compassion, instead, into practice.

IX

Helping others, you encounter unified sentence.

X

You have not embraced all horizons at once; that would be the work of the ego. It is enough to assume the serenity of the bright moon reflected in a wild sea. Let the heart beat steady as a clock during a savage storm, a lighthouse to others.

XI

Below the waves, the ghosts of the drowned. Hungry ghosts. Thirsty ghosts. Do you remember how you once dived too deep here and came face to face with such a ghost? O, Bodhisattva. Such moments are fragile, like a tiny golden seahorse clasping a transparent wisp of seagrass under the

intense pressure of an ocean. Your heart, your mind, your lungs, could have burst. We are all vulnerable. Gravity, time and mountains have us at their mercy. And so, humbled, you forgave the sea her sad bones.

XII

Forgiveness buoys you up. And so, you think, let time's ocean barrel towards our fathomless island like a mountain on wheels – an idea that is, after all, no more absurd than an actual planet tumbling through actual space. Created, we create. May we all find meaning in life, wisdom in art, joy in absurdity. It is said that the man who invented cycling did so because he desired a surreal way of walking. Swimming is a surreal means of embracing nature. And so the beach is also what saves us.

XIII

This huge, ever-expanding universe is a tsunami, exquisite. When the mind breaks, it can break like a clock or break like a wave. To understand the wave, think like a wave. To have presence, learn from the mountain. As a wave can travel from Coll to Colombia, the mind flies from Mùirneag to the Matterhorn, the Cliseam to Kilimanjaro, here to infinity, and back, everywhere, nowhere.

XIV

In a Japan only visited by certain minds, a Gaelic Japan,
there is a woman made of sand. You love that her sand
disobeys time, as if she has learned the secret of the waves
and the moon. Her mind is a full moon of its own. Aspire.

XV

Sands shift, quicken. Choiceless time does its thing. Coll
Beach shrugs off her clothes, switches on the night-light.
The moon ignites a cloud or two. You, who swam through
wave after wave like one whose hugs were pushed away,
keep swimming them.

XVI

First there is a mountain. Then there is no mountain. In
swimming towards it, we swim to each other. Then there is
no sea. Now there is a mountain. Now there is a sea.

XVII

You swim onwards, streaming through the sea like a
good thought come to life. Embracing, you are altogether
embraced.

Born and raised in the Outer Hebrides, Kevin is regarded as one of the most inventive and versatile writers of his generation. A poet, novelist, playwright, screenwriter and editor, he has performed his work and taught creative writing across many countries. His books include novels (such as the Saltire-nominated *The Brilliant & Forever*), poetry (the Premio Tivoli-winning *Love and Zen in the Outer Hebrides*) and unique editions (such as the first ever publication of the Jorge Luis Borges-chosen *Robert Louis Stevenson: An Anthology*, part of the Herald Angel Award winning *Outriders* project). He is a cyclist, a lecturer in creative writing at the University of Stirling, and inventor of Hai-Cookery, the subject of his next book.

*The million and
one mountains*
by Jan Zalasiewicz

July 14

Taigh Chearsabhagh Museum and Arts Centre,
North Uist

The small packet in the post brought me a million presents. Each one was a sand grain from Baile Sear Beach. I did not count them individually, but a quick calculation of grain size, weight and density led to this reasonable if nicely rounded number. They can, of course, tell a million separate stories, which are now interlinked with the stories of Kilimanjaro, Stromboli, Shasta, Fuji and Uluru – which their kin now, very briefly, build on this beach, in the most physical of senses.

These grains are the survivors of their own unimaginably long and dark journey. You can observe them simply by using a small magnifying glass. It's such an easy thing but it reveals so much (you must try it for yourselves). You will see, then, the lovely, wave-shaped grains: mainly clear quartz, looking more glass-like than glass.

These survivors were once part of mountains, though mountains so ancient and so distant that they may as well have been on a different planet. Somewhere maybe near the South Pole, about three billion years ago, mountains rose up – and several tens of kilometres below *them*, deep underground, myriad crystals grew amid something that was not quite rock and not quite magma, something that was *far* too hot to touch and glowing a deep, almost black red (though it is quite impossible to see a glow, of course, that far underground). The grains waited. The giant mountains above slowly changed their form, mutating from one shape to another and slowly becoming smaller, as the wind and the weather ate at them.

The Haunted Sea by Sophia Kingshill

July 21

A billion years ago, our grains had almost reached the surface. But then, other mountains grew above them and were eaten away by the wind and the rain in turn. Our subterranean grains – now just as hot (say) as a good cup of tea, were still far south, but moving north, one centimetre (or so) each year. Over a billion years one can go a long way, at that pace: to where the Hebrides are now, in this case. And one can grow and collapse a thousand – perhaps ten thousand - Etnas, Kilimanjaros, Fujis and Shastas in that time. These are just volcanoes, poor things, which live fast and die young. (Uluru, now, is a gentler and slower mountain, a little like our own in spirit).

And *now*, in this geological instant, that particular Hebridean landscape – a remnant of the mountains that once rose above it – is reached by the wind and rain to tear our mineral grains from the rock, and spread them as sand along Baile Sear Beach. And *now*, a little of this sand can be shaped, just for a day, into Uluru, Shasta, Fuji, Stromboli and Kilimanjaro.

But this is a new *now*, and new mountains are forming. Among the million grains in the packet of sand, I noticed one tiny pink strand – acrylic, from someone's beach towel or bathing suit. It is one tiny part of a new mountain, of the Earth's human-made plastic, that now weighs nearly ten billion tons, and that is growing fast.

This new mountain of plastic is still smaller than Kilimanjaro – but it is already bigger than Uluru, and is much more dangerous. In today's new world, we need to think hard on the new mountains, as well as the ancient ones.

Jan is Professor of Palaeobiology at the University of Leicester, UK. In early career he was a field geologist and palaeontologist at the British Geological Survey, deciphering the strata of eastern England and then the mountains of central Wales. Now, he teaches geology and Earth history and studies fossil ecosystems and environments across over half a billion years of geological time. He has helped develop ideas on the Anthropocene, the concept that humans are making a new kind of geology on Earth. His popular science books include *The Earth After Us*, *The Planet in a Pebble*, *Rocks: A Very Short Introduction*, *Ocean Worlds and Skeletons*.



When we stand on the shore, we are on the edge of a different world: the world of the sea, where mysteries lie concealed. Old stories told of an inconceivably huge beast that swam deep below the surface, a beast called the Kraken. Something like a monstrous octopus or squid, the Kraken was so enormous that when it rose to the surface, it could pull down ships with its tentacles, which reached as high as the tallest mast, and when it dived, it churned the water into whirlpools that could devour and destroy entire fleets of boats.

Only one such vast creature could inhabit the ocean, a lonely giant that was created at the beginning of all things, and would survive until all other things had passed into destruction. Then the Kraken would rise one final time from the depths, and die: and with its death, the world would end.

While it still lived, the Kraken caused the sea to move. This was the legendary explanation of the tides, the regular, unceasing invasion and withdrawal of the waves that pull the sand and pebbles from the shore and carry them back. Suppose that unseen by us, the stupendous Kraken has breathed the water in, leaving a stretch of sand for us to create mountains. Suppose that soon the Kraken will begin to breathe slowly, slowly out, sending the sea back to wash the beach smooth again.

Science proved long ago that what causes the tides is the force of gravity and the pull of the moon, a truth that may seem as extraordinary as any fable. Nonetheless, people believed in the Kraken, and these northern seas, that circle the shores of Scotland and its isles, were thought to be

its home. Off the coast not many miles from here, a ship's captain reported that he and his crew had actually seen the monster: a living, moving shape as big as a floating island, with tentacles that curled on high like an army of fighting soldiers.

Are these tales nothing but fantasy and illusion? You might think so – but it's a fact that huge and extraordinary animals live in the water's hidden deeps: the Giant Squid, and still larger, the Colossal Squid, a dweller in the coldest oceans. Its ten tentacles can measure more than sixty feet in length, and its round eyes are bigger than dinner plates.

No legend, but a real species, the great squids were glimpsed by sailors of the past, who told horror stories of immense creatures lurking in the green shadows below their ships. From the innocent surface of the sea, a thing like a long, blind serpent would rise and attach itself by suckers to the side of the boat, moving on and up, while a second and third tentacle snaked from the water, groping for prey. Men swore that they had seen their companions snatched from the decks by such uncanny means, and the rumours were repeated and feared for centuries.

Whatever truth lies behind old myths, the ocean keeps its secrets well. Today, building sand into mountains, we mirror on a human scale the cosmic forces that go to build real, towering mountains from the material of the earth. Then, as we watch the foam nibble at our sand peaks and level them, in a short hour or two we reflect the immeasurable spans of time that reduce real rocks and cliffs to grains of sand, trickling between our fingers. The tide is our partner

in the artwork. Eternal, unstoppable, it could be the inhale and exhale of a creature bigger and older than any we can imagine. However much we have learned about the planet where we live, the sea is our image of the unknown, and when we stand by the shore, we are on the edge of a different world.

Sophia Kingshill is the author of *Mermaids* (Little Toller, 2015), a cultural history of sirens, selkies and other sea women. She is co-author of *The Fabled Coast* (Random House, 2012) and *The Lore of Scotland* (Random House, 2009), with the late Jennifer Westwood. Her YA fantasy novel *Between the Raven and the Dove* was published by Accent Press in 2017, and she is currently working on the sequel. She lives in London, and is a member of the Folklore Society.

On Calgary Beach
by Michael Pye

July 28



I remember walking here. A cold bright winter's day, close to New Year. It was like walking on light, grains of frost shining between the grains of sand. All those tiny prisms fracturing light into brilliance.

I was walking with someone I love very much, but he's dead now. I have the oddest sense that the beach remembers.

This isn't all fancy. This lovely white sand is shell sand, made when the sea held the right creatures. Those beasts have gone, so the sand can't replenish itself any longer. What is here, stays here.

It shifts of course, each tide wipes out the obvious marks of what happened last. It also persists, just as much as the black basalt dikes you find all round the bay, some in the fields, some in the water, one turned into a pier. Those dikes gave Calgary its name: bay of the wall. They define the place.

But so does the whiteness, the brilliance of the sand. Its transience is an illusion. The solid basalt also comes from a process which is over, volcanoes hurling out lava. Even mountains do dissolve; in 1806 a whole Alp called Rossberg melted down to the ground and caused a tsunami in a Swiss lake. When you're thinking about losing someone, about what's permanent and what is fragile, sands and mountains seem much the same.

You know that and you realise the sands carry much more than your own memories.

Try listening to the bay. Hear the Major ring the bell in the big house at six in the evening. The house empties: maids, guests, family, cooks all down to the sand in a line. They run into the water, warm or cold, to swim.

Hear the puffers, stubby little ships, coming up from the Clyde. They run for the beach and don't stop until the sand stops them. When the tide goes out the horses and carts collect the coal and load the turnips for Glasgow; the water turns and the ship floats away. Girls listen out for the puffers: they bring a different kind of company.

Hear the echoes from the people who left in the nineteenth century: the twenty-seven families from Calgary who went to America and Australia. They were expelled by Big Hugh MacAskill from Skye, who had the estate only because his uncle did not trust his own long-haired natural son. Big Hugh was plain unnatural.

Hear the voices from Inivea, the village you find in ruins on a shelf above the bay. They had begun to move away before the clearances, soldiers coming back from the American wars sold America well, and sometimes they moved only as far as Dervaig over the hill. Still, they lost this place. It had been their everything. Still they lost this place which had been their everything.

I salute the McOlphadricks,

the McLucases,

the Patersons and McDougalls as they came to be known,

and the Gillies, Russells, Campbells and Mcleods,

the Robertsons and the McIlphadsigs.

I salute all our various memories, and our memory of the sand still shining.

Michael has written history (*The Edge of the World*) novels that try to tell the stories history can't (*The Drowning Room*) as well as broadcasting, podcasting, translating an orphan novel and general journalism. He is British living peacefully in Amsterdam after a life which has taken him to Scotland, London, the Caribbean, the Marowijne, New York and Portugal.

Seahouses
by Alastair Bonnett

August 4

The National Trust and Berwick Visual Arts,
Northumberland

Today we bring distant mountains together. Kilimanjaro, Stromboli, Fuji, Shasta and Uluru. We'll watch them jostle, nuzzle and tumble into each other; a happy, footloose swarm that will soon be washed away, like all mountains must be; worn away by the tides and disappearing back into the sea.

The highest peaks rise and fall. Our micro-summits speed up the course of nature and encourage a few improbable geological encounters. It's just play. So let's pretend: let's imagine that these molehills are mighty things; come to this shore as friends. Northumberland's coast needs all of those it can muster. It is threatened by mining, erosion, sea-level rise, creeping suburbanisation, and the plastics that stew in the seas. We like to say it is our favourite place but if anywhere needs help from afar it is here. So we summon Kilimanjaro, Stromboli, Fuji, Shasta and Uluru as old, dimly-recognised colleagues; magicked here to lend us their weight and their wisdom. They are, after all, very special mountains: Uluru, which is also known as Ayer's Rock, is a sacred mountain, which glows red at dawn and dusk. The others are all volcanoes. Kilimanjaro's snow-white cap rises in Tanzania, ever-smoking Stromboli lies off the north coast of Sicily, Mount Fuji's perfect cone frames the southern suburbs of Tokyo, and you can find brooding Mount Shasta in the highlands of California. These are not dead places, mere piles of rock, but churning, living forces; raw and angry, full of both destructive and creative energies.

Can all that power be contained in a bucket of sand? Imagine it. Perhaps so. And can this beach be a place of miracles? I guess we have to keep trying. Faith is unlikely but possible. The Venerable Bede tells us that Saint Cuthbert, who died a

hermit on Inner Farne 1,332 years ago, would return to this coast after spending weeks preaching “far away on steep and rugged mountainsides, which others dreaded to visit”. Bede, a reliable Jarrow man, explains that Cuthbert would “tarry in the mountains” – our border hills - not because they were easy but because they were hard: they were difficult to get to, cut off and dangerous.

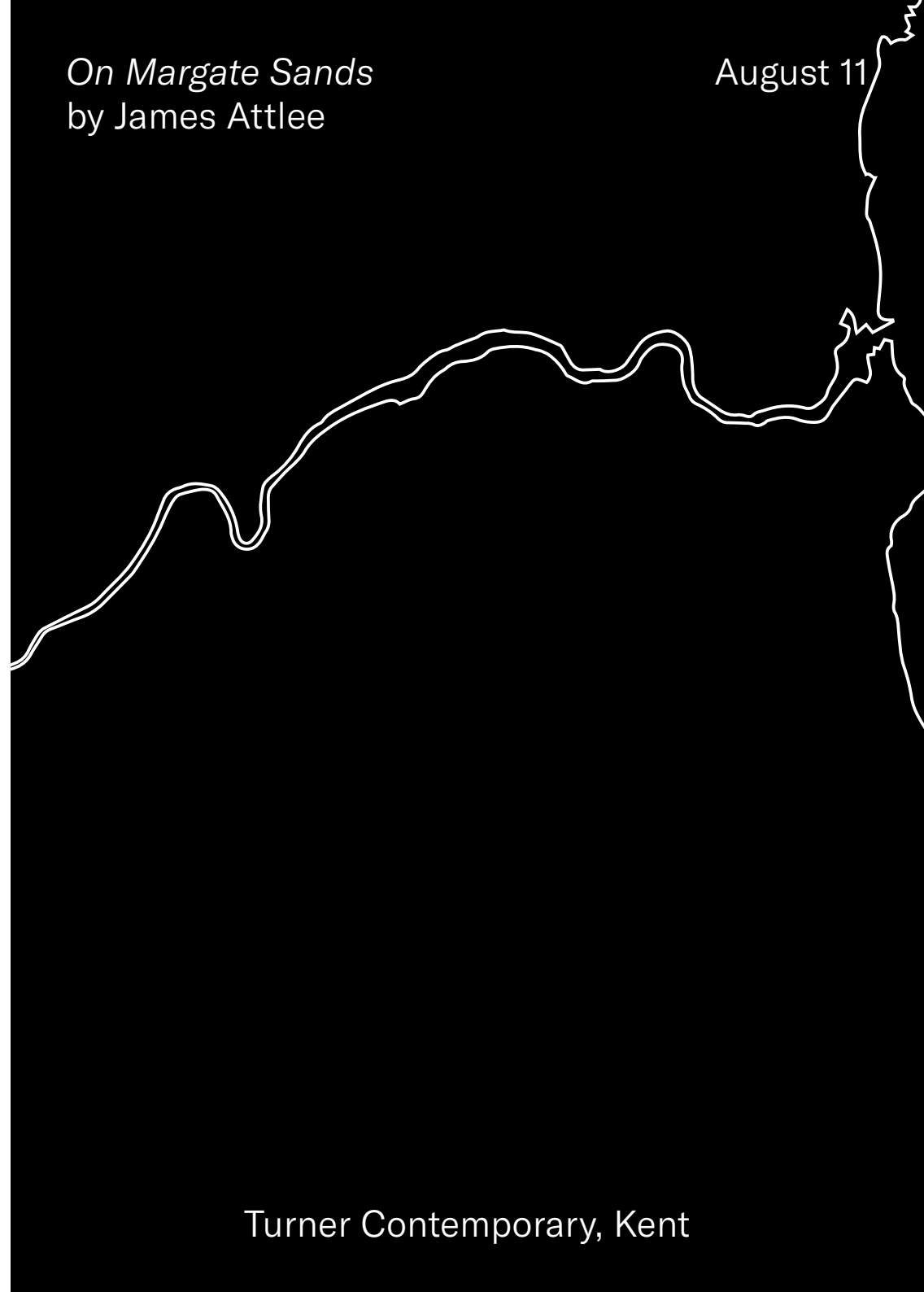
Perhaps our sandcastles – bringing the mountain down to the beach – pay a kind of homage to Cuthbert. He was, after all, a man of many miracles. In monasteries at Coldingham and Lindisfarne, Cuthbert appeared to disappear every night. The other monks couldn’t understand where he went. One night a particularly curious novice crept after him and this, says Bede, is what he saw:

Spying in the dark, this monk watched astonished as Cuthbert walked neck deep into the sea and spent the dark hours of the night “watching and singing praises to the sound of the waves.” When daylight came sea otters came out of the water with him and dried his feet with their fur whilst he blessed them.

Small miracles are the best miracles. One can almost believe in them. Maybe no otters will come and dry our feet but we can bring some of the world’s most distant and beautiful mountains to this beach. Here, briefly, Kilimanjaro, Stromboli, Fuji, Shasta and Uluru can circle round each other, collide and safely explode. Anything can happen; at least anything that is small and made of sand: it’s geography unleashed and, perhaps, it’s also a summoning of friends.

On Margate Sands
by James Attlee

August 11



Every object, if it is art, is charged with the rush of time.

Robert Smithson, 1968[1]

“On Margate Sands”, T.S. Eliot wrote in his poem *The Waste Land*, “I can connect nothing with nothing”. He had come to the town in 1921 to recuperate from what his wife called “rather a serious breakdown” and stayed at the Albermarle Hotel in Cliftonville. He was not the first to arrive here seeking a cure, of course: Margate was early in promoting seawater, applied either internally or externally, as the remedy for a wide variety of ills; when the Royal Sea Bathing Hospital opened in 1796 it was said to be the first centre for orthopaedic treatment in Britain, perhaps the world. “There is no disease without antidote”, wrote John Anderson, an early director of the Hospital. “Sea-bathing comprehends in it the powers and qualities of fluidity, gravity, pressure, attraction, repulsion, stimulation, friction, attrition and velocity”.^[2] And there was nowhere better to practice it than Margate: it was the town’s beach, “a fine, level, sandy shore, defended from the furious blasts of Boreas and the foaming waves of Neptune, by the pier, promontories and rocks” as a writer in 1801 described it.^[3] that attracted visitors, travelling first by stagecoach and then by paddle-steamer from London, in an early manifestation of mass tourism.

Sand, it seems, releases something in human beings. Any five-year-old deposited on a beach and given a bucket and spade becomes an artist. Otherwise respectable citizens have only to remove their shoes and feel it between their

toes before they tear off the rest of their clothes and run screaming into the frigid waves. In this liminal space – revealed and then covered again by the seas that lap at our tidal islands – different rules apply: temporarily released from the task of keeping watch on our screens we are free to appreciate the temperature, texture, odours and wind-speed of the present. But what does sand mean to artist Katie Paterson as a medium? In direct contrast to Eliot’s depiction of the alienation and fragmentation of modernity, her work seeks to connect everything to everything: more specifically, to build a bridge between the brief flicker of a human life and the immeasurably vast and slow chronologies of geology and space. Whether she is planting a forest outside Oslo to provide paper for a library – the contents of which will only be revealed a century from now; giving gallery goers a phone number to ring so they can listen to the sound of a glacier dripping as it retreats in the face of global warming; or broadcasting a minute of ancient darkness that dates from 13 billion years ago on cable TV[4], her raw material is time, and nothing embodies the effects of time like sand.

The earth’s crust is subject to continual erosion by rain, wind, heat, cold, rivers and streams as well as the effect of tectonic processes like earthquakes and volcanoes. Over many thousands of years, mountains and hills are broken into fragments and washed down watercourses to the sea. There, quartz, mica and silica mix with the skeletons of crustaceans, chalk battered from cliffs by the waves, sea shells and other organic sediments which, when bound by the right proportion of seawater, become the perfect building material beneath your feet, while also signifying the disintegration of all things. The artist Robert Smithson

used sand to illustrate what he called the irreversibility of eternity. “Picture in your mind’s eye (a) sandbox divided in half with black sand on one side and white sand on the other” he wrote. “We take a child and have him run hundreds of times clockwise in the box until the sand gets mixed and begins to turn grey – after that we have him run anti-clockwise, but the result will not be the restoration of the original division, but a greater degree of greyness and an increase of entropy”. [5] It should be no surprise that one of Paterson’s so-far unrealised *Ideas* series is for “A beach made with sand from hourglasses”. [6]

“Look on my Works, ye Mighty, and despair”, reads the inscription on the statue of Ozymandias in Shelley’s poem of the same name; but the sculpture itself, the poet tells us, is “half-sunk” in the sand, and of the empire of the King of Kings “nothing beside remains”. On the beach, we are all Ozymandias; life itself is a brief interlude between two tides. Lift a handful of sand, let it slip between your fingers and contemplate the eons that have passed, the civilisations that have risen and crumbled away before time milled it to this fineness. It drifts and obscures, burying crops, grazing land, cities and entire civilisations; yet sometimes it shifts to reveal what has been lost. On Margate beach, at low tide, one evening in late September, I notice a solitary man following the course of a stream of seawater down to the waves, sweeping it with a metal-detector. He has, it turns out, been studying the behaviour of sand at Margate for decades, relying as much on his ability to read its movements as on his electronic device: over the years he has found Georgian silver, numerous rings, Roman coins and a fat gold chain worth hundreds of pounds.

These treasures reveal something of the history and character of the site of their discovery. In neighbouring Walpole Bay, for instance, the gold dropped on the beach is 18 carat; while in Margate itself it is only 9 carat, demonstrating the social stratification among seaside resorts that began centuries before Dreamland opened, or Mods and Rockers jostled on the beach. “Belgrave Square retires to Brighton” a writer in *Punch* explained in 1842, “while the Shambles of Whitechapel seek the shingles of Margate”. By the early 20th century, Eliot merely had to use the phrase “Margate Sands” to evoke a mental image of holidaymaking his readers may have considered a trifle vulgar. Yet the town was not short of aristocratic recommendations: after recovering from an operation at the resort in 1906, the Marquess of Salisbury was moved to give “another testimonial to Doctor Margate. The air of Margate is the finest in England”.

As well as air, the town had sand, and sand, at least in part, is mountains ground in the jaws of time. Katie Paterson asks us to turn back the geological clock and resurrect giants from the end product of their erosion. The summits we fashion will include some of the greatest engines of tectonic change on the planet: the volcanoes Kilimanjaro, Mount Shasta, Mount Fuji and still-active Stromboli, as well as the mysterious inland island of Uluru, in central Australia, formed of the sand run-off from long-vanished escarpments. Venerated as well as feared, worshipped since mankind’s beginnings, these monuments too will be worn down and scattered, dispersed in the desert or on the shore – if, that is, they do not awaken first in large-scale eruptions, shattering themselves in the process.

On Margate Sands, Paterson casts us as magicians, able to set eternity running in reverse: yet even here our efforts are at the mercy of forces larger than ourselves. We know that in a matter of hours our work will vanish – the moon’s gravity will draw in the ocean and our creations will meet the fluidity, gravity, pressure, attraction, repulsion, stimulation, friction, attrition and velocity John Anderson has told us seawater possesses.

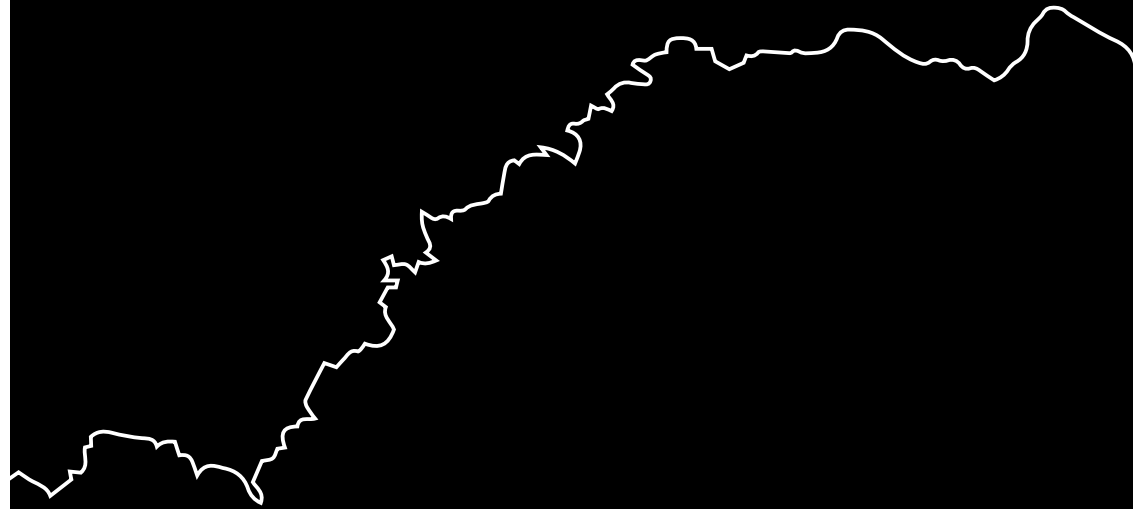
Perhaps connecting to the immutable and vast processes to which we are all subject is a way of reconciling ourselves to them. In the collaborative creative act, as we construct mountain ranges the like of which the world has never seen, for a few moments at least we step outside time.

1. A Sedimentation of the Mind: Earth Projects. In: Jack Flam (ed) *Robert Smithson: The Collected Writings*, (Berkeley: University of California, 1996), p. 142.
2. *A preliminary Introduction to the act of sea-bathing; wherein is shewn its nature, power and importance; with some necessary hints for the attention of visitors, at the watering places, previous to, and during a course of sea bathing*, by John Anderson, M.D., a Physician to and Director of the Royal Sea Bathing Infirmary at Margate, 1795.
3. *The New Margate, Ramsgate & Broadstairs Guide*, 1801.
4. Katie Paterson, *The Future Library*, 2014-2114; *Vatnajökull (the sound of)*, 2007-2008; *Ancient Darkness TV*, 2009.
5. Robert Smithson, *A Tour of the Monuments of Passaic*, New Jersey. In: 1968, Jack Flam (ed) *Robert Smithson: The Collected Writings*, (Berkeley: University of California, 1996), p. 74
6. Katie Paterson, *Ideas*, 2015.

James is a writer based in the UK. His books include *Guernica: Painting the End of the World* (2017), *Station to Station*, (2015) shortlisted for the Stanford Dolman Travel Book of the Year Award, *Nocturne: A Journey in Search of Moonlight* (2011) and *Isolarion: A Different Oxford Journey* (2009). His digital fiction *The Cartographer’s Confession* won the New Media Writing Award 2017. His journalism has appeared in publications including *The Independent*, *Frieze* and *London Review of Books*.

*Reimagining
Roker Beach*
by Robert Duck

August 18



Northern Gallery for Contemporary Arts,
Sunderland

It is a hot and sunny August Sunday; the beach is crowded; there is no “roke” at Roker today. The golden sand is firm, warm and enticing; grains sparkle in the sunlight (all of this might need some imagination). This beach has been a source of fun and entertainment for over a century. People are at their leisure – sitting, walking, and playing, children are digging holes and building sand castles, kites are flying – Roker Beach is buzzing; it is alive with activity and fun. It is a paradise for sand castle builders. Yet how many of the people enjoying the sea air and the noise of the waves breaking have ever asked themselves the simple question – “where does the sand come from”? First, take a close look at the beach, especially close to Roker Pier on its northern side and at the foot of the sea wall where they have been tossed up by waves. It isn’t all made of sand – there are lots of pebbles and cobbles. Many of these coarse fragments are a creamy, buff colour. They have been eroded from the local cliffs which can be seen at, for instance, Roker Ravine. The rocks here are bedded limestones of the Magnesian Limestone. They are of Upper Permian age and are about 240 million years old. The limestones contain not only calcium carbonate but also calcium magnesium carbonate – or dolomite. They were originally formed beneath the waters of the western side of what geologists call the Zechstein Sea (Zechstein is a German term for “tough stone”). Its warm waters, then located close to the equator, teemed with marine life and extended from the east coast of northern England right across northern Europe and into Poland. At the top of the cliffs, above the light-coloured rocks and often obscured by vegetation, is a brown, stony soil called till. This was laid down by ice when this area experienced the freezing conditions of the last Ice Age, around two million years ago.

But today these cliffs and the Lower Promenade from Roker towards Parson’s Rocks and Whitburn are protected by a sturdy sea wall that dates back to Victorian times. This prevents the sea from eroding the local rocks but, in so doing, depletes the natural supply of particles to the beach. Coastal erosion is often given a bad press but, quite simply, if there were no erosion there would be no beach and therefore no pleasure! There are other pebbles too – much darker in colour. These have probably come from far away, some transported by ice but others as ships’ ballast and then dumped. Pieces of brick and masonry are also present; these are the remains of long-gone industries. Together with the exotic ballast fragments they are a reminder of just how important nearby Sunderland once was as a port. Forty years ago you could also have picked up pieces of coal from the beach, when the mining industry was still active; but today these have all been either collected for burning or washed away by coastal currents. Much of the finer sand grains are derived from glacial deposits and have been carried here from far afield when the North Sea was covered by ice.

The magnificent, elegantly curving Roker Pier, with its lighthouse at the end, is an icon. It was badly damaged by the “Beast from the East” in February 2018 but the granite blocks that make up this mighty triumph of engineering have withstood repeated attacks from the sea since it was built between 1885 and 1903. Why are there so many pebbles, cobbles and a build-up of sand against the pier? This is because the dominant direction of transport of sediment in the area is from north to south along the beach face; the so-called longshore drift. Though it was not intended to do

Suspended by Brian Dillon

September 1

so, the pier acts as a barrier to this movement and the sand, pebbles and cobbles build up against it.

North of the pier, at the back of the beach below the sea wall are some low rocky outcrops of limestone. If you look carefully at these you can see shapes like spheres a few centimetres in diameter and cavities from which spheres have been eroded out. This is a rare and unusual rock, world-famous, and, because the spheres – or concretions to give them their proper name – resemble cannon balls, it is known as the Cannonball Limestone. The concretions grew progressively over hundreds of thousands of years around individual nuclei, pebbles or bits of shell, as a result of complex chemical reactions involving salt and other minerals on the floor of the warm, shallow, tropical Zechstein Sea.

First there is a mountain; Or was there?

Robert is Emeritus Professor of Environmental Geoscience at the University of Dundee where he was Dean of the School of the Environment for nine years prior to taking early retirement in 2015. An expert on coasts and estuaries, he has made a career-long commitment to furthering the public understanding of science and climate change. He is the author of *'This Shrinking Land: Climate Change and Britain's Coasts'* (2011) and *'On the Edge: Coastlines of Britain'* (2015).

How small, how fragile can a work of art be before it drifts away on the wind or floats out to sea? And how large, or long-drawn-out, before we are unable to apprehend it all at once? Katie Paterson is an artist who answers these questions in the same breath – she pictures the furthest reaches of the earth, even of the universe, and asks us to imagine the smallest speck, or span, of space and time. Her materials include the light of heavenly bodies, the sounds of creaking glaciers and dying stars, the tiniest grain of sand added to or taken from the vastness of the Sahara. In *First There is a Mountain*, Paterson has made a nested set of sand pails, modelled after five famous mountains: Kilimanjaro, Shasta, Fuji, Stromboli and Uluru. Imagine that these mountains, from far-flung corners of the world, have all appeared together on the beach at Cleethorpes, multiplied along the coast, sprung up all round the edges of the UK. An experiment (or is it a game?) with the earth's scale is under way, but will very soon disappear.

The coast is a place where things come and go – especially a coast like this one, where a third of the estuary is exposed at low tide. One fifth of the land surface of England drains eventually into the Humber, and with all this water comes sand and sediment, detaching itself, as elsewhere in the world, from the highest mountains, but also from slopes, plains and riverbanks. This is just a fraction of what ends up in the estuary; along the Holderness coastline the cliffs erode and are washed down into the Humber. Still more material comes from the North Sea. In fact, around six million tonnes of sediment enters the estuary each year. The tides take most of it away again, but things are not so simple. Above and below the surface, sandbanks swell and shrink; currents

twist and turn; ports and channels silt up and need to be dredged clean; sand is thrust onto the beach, scooped out or blown away, and must be replaced. Everything is on the move; whole mountains have been arriving and departing regularly since the last Ice Age.

Still, Paterson's mountainous archipelago is an apparition of another sort. The seashore is also the scene of historical surprises, magical or monstrous sights. In March 1870 the schooner *Clio*, which had sailed from Lowestoft, was washed ashore without a soul on board. In September 1956 a large round object 80 feet in diameter hovered off the coast from Cleethorpes one afternoon; when RAF planes approached, it was reported, the UFO sped away. Other curious arrivals on the shore: a cargo of French onions, a monstrous squid with a beak like a parrot's, several thousand starfish, a message in a bottle predicting the end of the First World War. Stand on the beach for long enough and the world will wash up, in the shape of a miracle or catastrophe. The beach is made of mountains, the mountains were once the floor of the sea, and the earth, as Katie Paterson reminds us, is still saturated with surprises.

Brian's books include *Essayism* (2017), *The Great Explosion* (2015) and *Objects in This Mirror: Essays* (2014). He is UK editor of *Cabinet*, a quarterly magazine of arts and culture based in New York.

Studland Bay by Tristan Gooley

September 15

The National Trust at Shell Bay, Dorset

The lane that led down to Studland Bay was lined with dogwood red, but the beach had a more austere palette. A pair of black crows pecked at dark seaweed, as white gulls hovered above broken waves.

Stepping over a stream I saw a pattern I recognised in the sand. The rainwater had flowed down from the hills to rejoin the sea, but not before etching rill marks into the beach. There were tendrils, tentacles and upside-down trees carved into the sand.

I pulled my jacket collar higher, against a cold onshore wind that toppled the waves. Each plunging crest nudged the foam higher up the shore. By my feet, the water sank down and then the bubbles appeared. I looked a little higher up the beach and there were the pinholes, tiny dark holes formed when sinking water pushes air back up, creating countless microscopic tunnels in the sand.

In more sheltered spots the cold vanished and I was hugged by a surprise warmth; it was a hat-on, gloves-on, hat-off, gloves-off kind of day. Old patterns were soon joined by familiar sounds and I rejoiced in the happy racket of halyards slapping against dinghy masts. A single stubborn oak joined me in celebrating the fresh air, reaching its arms out to the sea, showing off jewellery of golden lichens. This one determined tree still held its leaves in late November, most the other trees had beaten a retreat.

I walked past memorials to fears of a different retreat. The Dragon's Teeth are solid, pointed stone emplacements designed to stop a German tank assault. I found it hard to imagine that fear of attack now, as the wind tugged at

the National Trust's bright flags and boards with cheery colours proclaimed the virtues of the café's ice cream. But all coastlines are conflict. Where land meets sea there are the battles of perfect surf and violent erosion, sharp air and shelter, tourism and locals, sweet ice-cream and bitter litter, happy wet dogs and glistening turds...

The dog tracks were not all the same. Letting my knees drop into the soft ground, I noticed how some dogs kicked back the sand and others left cleaner, neater prints. And then, with the childlike joy that always accompanies these moments, I appreciated the story within the differences. The dogs that left the tidy prints had run over sand still wet from retreating waves, those that ran over drier sand left the prints with scattered sand. I was looking at a timeline: the tidy dogs were those with early-rising owners, they had come this way a couple of hours earlier, when the tide was higher and the sand wetter.

This new micro-story encouraged me to sharpen my focus. Patterns emerged in seaweed, in waves, in lines of geese that flew fast and low, in the sky. The sun sliced open the clouds and lit patches of grey sea with a turquoise lamp.

Past Old Harry's Rock, the sea boiled, these were the dreaded overfalls: when currents pass over a rough seabed, the water is kicked into angry confusion. I had sailed through these savage waters once, just for the hell of it. And hellish it was. Mugs smashed and this young man reminded himself what danger felt like and inched again through reckless follies towards maturity. That young man became a parent fourteen years ago and has had enough maturity

Great Yarmouth by Jean Sprackland

September 22

already. Now he wants an ice-cream. No, a hot chocolate.
With marshmallows on top.

My eyes returned to the beach and were alive to the glorious detail. Every anomaly tickled and tugged at my curiosity. It was impossible that the small depression could go unnoticed. The last high tide had breached the defences of a child's brief empire. Waves had smashed the battlements and reduced the sand fortress to the meekest undulations. Like an aerial photo of an iron age fort, the ironed bumps were feeble and fabulous at once. I saluted the parent that had their child building sandcastles in November. Look on that love, ye mighty, and despair!

With enough love and enough time on the beach, conflicts earn beauty and maturity need never catch us.

Tristan is an author and natural navigator. Tristan set up his natural navigation school in 2008 and is the author of the award-winning and bestselling books, *The Natural Navigator* (2010), *The Walker's Guide to Outdoor Clues & Signs* (2014), *How to Read Water* (2016) and *Wild Signs and Star Paths* (2018), some of the world's only books covering natural navigation.

Tristan has appeared on TV and radio programmes in the UK and internationally, including The Today Programme, Night Waves, Countryfile, BBC Stargazing Live, Country Tracks, Ramblings, Open Country, Shipwrecks, The One Show and All Roads Lead Home.

1

Past Buddy's Beach Shack and down to the place
where Nelson's jetty used to be –
where the pleasure-boats would dock
and their passengers, queasy and sprayswept,
got their first taste of Yarmouth air.
You can step off the edge of the world here

then find your feet on fine clean sand
licked smooth as ice-cream. Dreamscape of pebbles
where the spun foam snags and clings
shivering in the wind. Snow-fleck and blood-speck.
Combings of bladderwrack, cuttlefish, razorfish,
torn feathers of gull, tern and guillemot.

What can this place know of mountains?
Dead level. Flat out. North Sea a sheet
of hammered tin. And yet
here and there piercing the surface
a grey-green clump of grass, a pioneer,
where the spun sand snags and clings

and grain by grain and gust by hard gust
under the gull-scream and the bone-white sky
the dune begins to rise.

2

Mounted on posts along the front, a row of cameras tilt
and focus, scanning the beach and the sea. Ghosts flicker
over the lens: buss, lugger, ventjager, the trawlermen who

hauled the silver darlings that made this town. Out there, the half-forgotten places: Caister Shoals, Barley Pickle, Cockle Gateway, Yarmouth Roads. On Scroby Sands, the turbines come and go in the mist and murk, like pilings sunk for a series of imaginary bridges: a wild ambition, a race against the clock of rising tides.

3

Stone like an anchor
stone like a kidney
stone like the chipped blue handle of a cup
stone like a pearl
stone like a spyhole
stone like a grin with hardly any teeth
stone like a cottage window
stone like a slice of pie
stone like the forest in a book of fairytales
stone like a zipped purse
stone like a wolf's paw
stone like a full moon behind the clouds
stone like a smashed bulb
stone like a burst star
stone like a ripped page
stone like a ripe pear
stone like a longboat
stone like a bruise
stone like a heart with a hole blown through it

4

Under the pier there's a heap of cinders and fish-heads where someone has kindled a fire and then stamped it out. You'd be out of range of the cameras here, could hole up for weeks if you're careful, in this splinter-zone of struts and pipes, slaughtered parasols, the bones of abandoned deckchairs.

When the end-of-the-pier goes dark, the sea's noise is hushed to a music that reminds you of nights under the low blue roof of childhood. You come and go in the mist and murk of a dream. An incoming wave considers the stone in its hand. A soft clack as it places it like a chess piece.

5

Some seaweed is fishing line.
Some seaweed is old rope.
Some seaweed is toothbrush.

Some stones are bottle tops.
Some stones are ring-pulls.
Some stones are spent fireworks.

Some driftwood is house-brick.
Some driftwood is polystyrene.
Some driftwood is dead porpoise.

What can this place know of mountains?
Dead level. Flat out. It knows estuary, spit, sandbank.
It still remembers the plains and marshes
of Doggerland. But *mountains*?

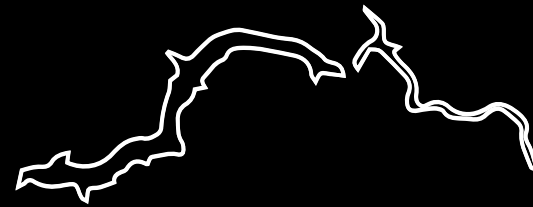
You can step off the edge of the world here,
between the beat and glare of the Pleasure Beach
and the North Sea tide with its guttural
sentences of invasion and retreat. But here

the grey-green pioneers have staked their claim.
Here where the spun sand snagged and clung,
grain by grain and gust by hard gust, they build
their slow green ranges of sedge and marram.

Ragwort seedhead shivering in the wind.
Blue scrap of sheep's-bit scabious.
Track and scrape and scat. Here, under the gull-scream
and the bone-white sky, the dunes are rising.

*To see eternity in a
sandcastle*
by Helen Pheby

September 29



Scarborough Rotunda Museum, Yorkshire

Someone once tried to explain the concept of infinity to me by saying that if an eagle flew past a mountain every million years and touched it lightly with its wingtip, by the time the mountain had crumbled to nothing, that might equate to one second of forever. This still does not grasp the vast reality of eternity, but does help our mortal and time-bound minds to gain some insight into the nature of the universe and our incidental place within it.

The world began on 23 October 4004 BCE, according to the Archbishop of Armagh and Primate of All Ireland, James Ussher in 1650, who worked this out by adding up all the documented ages of key people in the bible.¹ The planet is now believed to be at least 4.6 billion years old, in part due to research undertaken into the cliffs on this beach by John Phillips (1800-1874), the first keeper of the Yorkshire Museum in York. Nicknamed the dinosaur coast, this 40 mile stretch of coastline, from Sandsend in the north to Filey in the South, is embedded with fossils that date back up to 200 million years, from a prehistoric age when Scarborough was a sub-tropical home to the abundance of life at that time.

John Phillips was orphaned at the age of seven and brought up by his uncle, William Smith, who was known as the Father of English Geology and had created the first geological map of Great Britain in 1815. Following in his uncle's footsteps, Phillips also became a highly respected geologist whose significant contributions include *Illustrations of the Geology of Yorkshire*, published in two volumes in 1829 and 1836. Crucially, Phillips built on his uncle's investigations into rock strata and associated fossils to read the different geological eras of the planet.

Phillips was part of an important and ongoing debate between scientists and the church about the age of the earth following the publication of *On the Origin of Species* by Charles Darwin in 1859. Darwin challenged the church's calculation that the earth was 6,000 years old, saying that it was at least 300 million. Phillips used geological evidence to argue against Darwin's "abuse of arithmetic" to claim that the planet was one billion years old.² This was an incredibly radical proposition, but one ahead of its time.

On the beach at Scarborough, with the actual and imaginary weight of history holding up the earth behind it, Katie Paterson invites us to make scale versions of five of the earth's mountains. *First There is a Mountain* takes place around the British coast this summer and beautifully illustrates the artist's rare ability to encourage us to appreciate the profound in the detail – the Sahara desert, for example, now being home to the "tiniest grain of sand", which the artist had chiselled down to 0.00005mm using nanotechnology.

Formed in minutes, present for hours, then returned to the sea by a tide that ebbs and flows without a sense of past or future, the sandcastles that form *First There is a Mountain* represent a microcosm of existence and make us fundamentally more aware of the life cycle of the mountain, of the planet, of ourselves.

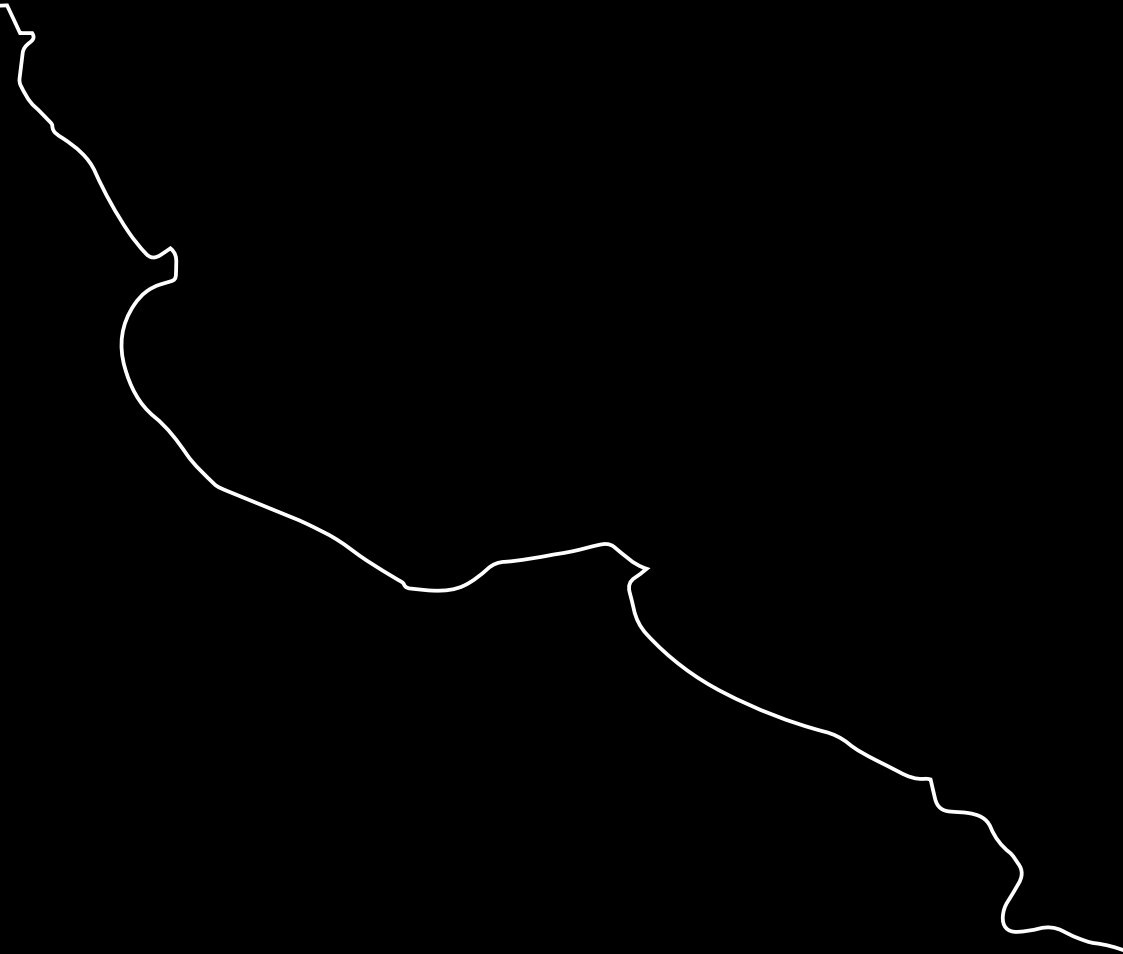
1. James Ussher (1650) *Annals of the Old Testament, deduced from the first origins of the world, the chronicle of Asiatic and Egyptian matters together produced from the beginning of historical time up to the beginnings of Maccabees*.

2. Joe D Burchfield (1974) *Darwin and the Dilemma of Geological Time*. *Isis*, Vol 65, No. 3, The University of Chicago Press on behalf of The History of Science Society, pp. 300-321.

Helen is the Head of Curatorial Programme at Yorkshire Sculpture Park, an international centre for modern and contemporary art set in 500 acres of historic parkland, four galleries, and an 18th-century chapel. Her offsite projects include *A Place in Time* (2016) at NIROX Sculpture Park in the Unesco Cradle of Humankind, South Africa, and the Kyiv Sculpture Project (2012), the first open-air display of contemporary sculpture in Ukraine.

*The meeting place:
Formby Beach*
by Simon Ingram

October 6



The National Trust and The Atkinson,
Merseyside

At a beach, any beach, you meet the ancient earth's past. Here are the watermarks of eons, where past meets present, one place meets another, and as you walk onto the sands, you can meet them all.

And when you go home, you meet your own past. For me, home was not far away from here. As a child I'd hear this place talked about, but, being a child, I never saw that what I was hearing was what made Formby Beach unique. I heard the details, the strangest differences. Here were red squirrels, not grey ones. Pinewoods near the beach. Purity, close at hand to industry. At low tide, a shipwreck. On a clear day, mountaintops seen over sea. But to me, with the small-eyed, simple-questioned geography of a child (how far was it away, how different were the things in it), Formby was an extension of the familiar, not somewhere new.

But as a child all you really wanted was to feel the sand. Make castles from it. See the sea. Feel it. And there's good in that. Good in just taking things as you find them, with the curiosity of instinct. It takes us back to an earlier age, in every sense, our younger selves as people, and as a species. Then you move away, you see other places far from home. My places were mountains – studying, climbing, writing about them. And then as you get older you covet the wonder closer by. You re-find a home amidst as much of it as you can. You might have children of your own, and the cycle starts again.

And then you go home, and you see a place through world-widened eyes, and here again, not far away, was Formby Beach. Beautiful, but more now somehow.

This is a great confluence, a meeting of worlds. Stand here and feel the joining of other places, of people, of elements, and of time. Where wind-bent trees meet dune-grass, dune-grass meets sand. Sand meets sea. Sea links lands over water, over which old lands of different sorts look upon from all sides. Wales, Ireland, Cumberland, the old kingdom of Mann – places whose beaches face the beaches that face them. Were there a mountain here the size of the ones over there in Snowdonia, you would see these places lining the horizon's edge, like faces around a table.

Here meets wood with sand. Land with sea. Sea with other lands. There is metal in the cranes of the docks over there, in the wreck-ribs of the *Ionic Star*, in the sand, giving it that colour. Natural attrition is here, too: wind in the stirring of the sands, in the slow spin of the turbines on the horizon. The offshore banks have names that speak of the climate, which is local and strange: Mad Wharf, Angry Brow, Great Burbo. A clear day and cold weather and you can look upon the snow on the Lakeland mountaintops from the snow on this beach.

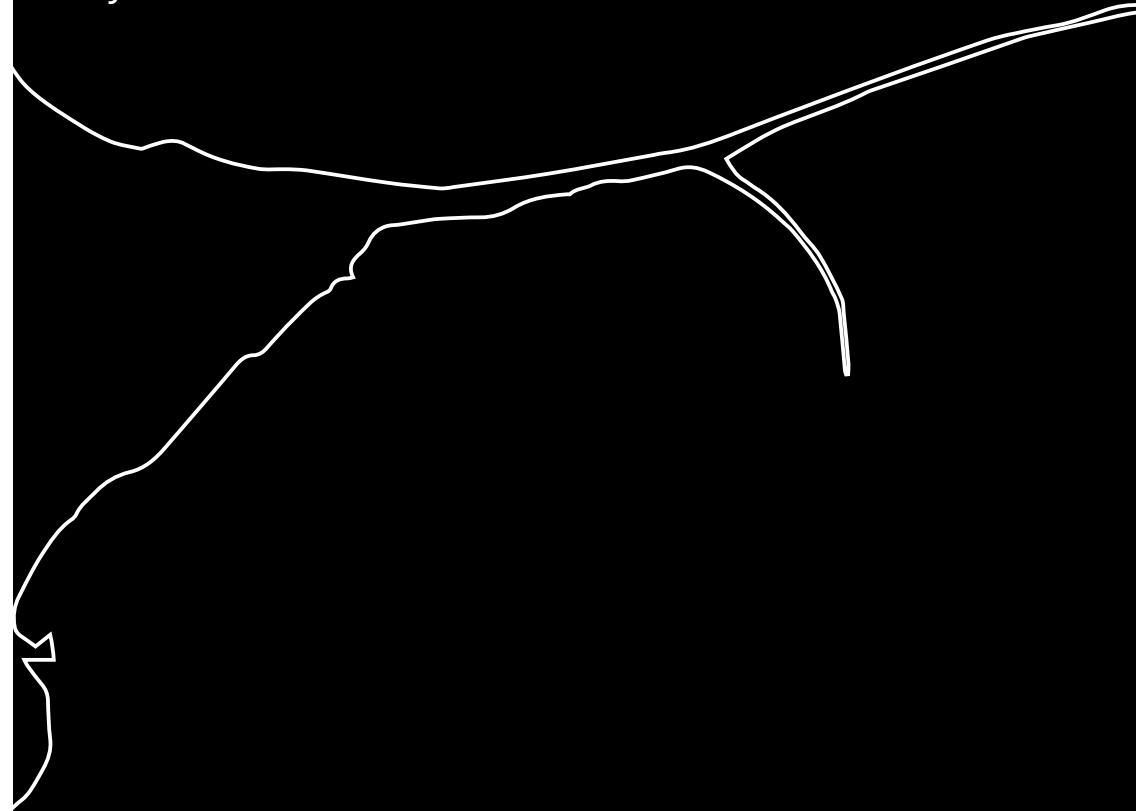
And here on this beach you join humans from another time. The roots of the first lifeboat station, now just foundations in the sand. And the traces of much more ancient feet, belonging to the people who found these sands in a time before Stonehenge. What an extraordinary thing to stand in their own step-prints, along with those of deer, boar and crane. Imagine the scene they saw, thousands of years before the people they would become would imagine them, in this place.

Look at the view from a mountain summit and you feel the same joining of elements around you on the horizon. You see it. But in sand you feel it. Its time is deeper. It joins everything and everyone with its story, with a story too ancient for us to understand. Walk down at low tide and feel the grains, feel them grind between your fingers, feel the way they run when dry, and coalesce when wet. Apt that they talk about the “sands of time”, sand being the most extraordinary joining place of all. First the volcanoes birthed it, built mountains, millions of years ago. Then water, time, wind, motion brought the mountains back to earth. Broke them to sand. Reduced it, moved it, layered it, built it to rock. Into mountains. Built it, broke it to sand again. Joined it with more from elsewhere, an earth-time of mineral, bone, shell. Washed it into the sea. Then up, into mountains again. Down, into water. Into the sea. Down, into the earth. Then into deep time, and then the cycle begins again. Rock. Sand. Rock. Sand. The motion of time on earth, like the tides. Like breathing. In a time when we are gone, it will make mountains again.

Look forward, look back, look around – and think of the tale of time joining you in your hands, when you make your own mountains here on this beach.

*Little Eye for
Brancaster*
by Samantha Walton

October 20



If you look closely at any living thing

you'll see the stamp of every other

the tree-forking of the lungs

the way the hand cups water

like the lake

running into the valley

the flesh that breathes sensing sun & heat

the curves of the muscle creasing

& then the columns of the heart

rising up like mountains

In the faintest streak of life

the little water bear floats free

in the vacuum life tastes sweet

he swims in wastes of space the kind volcanic fold

in heat or cold always the same

cool readiness to be alive the aching for the world

which sees lichen creeping slowly

from the ocean steady lapse

moving in plant-time earth-time
extremophile living in ice on soda lakes with cosmic radiation

When the water breaks the rock it's like
some things were meant to be it's like
the body knew the mind like dancers

Wash your hands in the water clock
& watch millennia drip by
the burn cradled by the rock it cut
the sea that gnawed the beach
pulling the sand far out & flinging it back
turning stone to shingle to
infinite mosaic of crystal
a world made vast under a microscope

Look closer, you'll see

A star a spiral shell
translucent finger of quartz
white disc circled pink
a trefoil snapped from coral reef
ribbed column of bone (from long-forgotten fish?)
oval of black gemstone (a man's thumb-print)
zany purple shard
puckered orange ball & all
the shimmering spheres of silica

Today, your mould carves a mountain
in miniature (at least from where you're sat)
but peer inside, you'll find
the finite dust of life
smoothed & jostled by the sea
but not made uniform
never made into the same
a particle pick & mix

a glittering box of tricks

flakes of feldspar

& mica split &

cut from the

old lost

beloved

islands

Everything that's ever lived

or been carved into form

is somewhere still

ancient shipwreck dug from the black seas

beating wings of dragonflies

cartilage clotted in the ear of a Yukon Horse

coral reefs lost in heat waves bleached

the mountains ground to dusk by glaciers

We can't know what we've found

our hands are always sheathed

in gloves deadening

senseless

plastic

but know that each grain has been touched

& passed through the body of the earth

twice (or more)

ran over by the weight & pull of sea

landed now with you to

cycle onwards

rise & fall

forwards

sink & fly

outwards

without limit

to the ends of the earth

& round again

following its own path

carrying its own message

The handprints we're leaving on the earth
will wash up soon
on other shores in time zones strange
traversing transecting
meeting underground or in the heart of rock
the way the sea's junk yard returns
in a month / in an aeon
the bottle on the shore
the microspherules
nurdling into sand
polystyrene
a siren sung by
zooplankton
eternally
showing up in liver scans
in the blood of whales
in the shimmering skin of
salmon

O! to be a mountain
raised by a child
then washed away
to be so willingly ~~erased~~ (scraped out)
~~eroded~~ (gnawed or ate away)
to make yourself never newly-new again after
a sea-change
makes you strange
on future
unseen
shores

Samantha is a poet, academic and editor based in Bristol. Her first collection, *Self Heal* was published by Boiler House Press in 2018, and 'engages passionately with questions of identity, consumerism, gender, and humanity's relationship to the natural environment.' Samantha co-edits Sad Press, a publisher of experimental poetry pamphlets and translations. She teaches modern literature at Bath Spa University.

Three Shells Beach
by Hugh Aldersey-
Williams

October 27

If you sail due east from here across three and half degrees of longitude – one hundredth of the way round the Earth – you come in a few hours, or days perhaps, to the shore of the Dutch province of Holland.

A long stretch of sandy beach from the Hook of Holland up to the island of Texel and beyond. In between, the seaside town of Scheveningen with its own pier and its own Kursaal.

A mirror world reflected by the North Sea.

‘Holland,’ wrote the English poet and MP Andrew Marvell, ‘scarce deserves the name of land, / As but th’ off-scouring of the British sand.’ And perhaps it does happen from time to time that some of the sand from Southend makes its way with the tide to be deposited on the dunes of the Holland coast, the mountains of the Netherlands.

In that province of Holland, within sight of Scheveningen beach, Marvell’s contemporary, the poet and diplomat Constantijn Huygens, picks up his pen. He looks, and he sees, and he writes: ‘The Lord’s benevolence shines from every dune.’

Sand. Bright refractions from each silica grain beam the light of the Sun into our eyes. And the sand of the Dutch dunes has indeed shown its benevolence. For it was on this not so distant, not dissimilar coast during the course of the seventeenth century that Dutch inventors and Dutch scientists perfected both the telescope and the microscope, using lenses made from glass made from sand. Macrocosm and microcosm were suddenly made visible.

Most sand can be used to make glass. But for glass of optical quality, special sand is needed. The right composition. The right size and shape of the grains to be fused together. Sand and glass.

Constantijn's son, Christiaan, and his brother ground their own glass lenses and used them to build their own telescopes. The invention was warmly welcomed by the maritime Dutch. Telescopes might be used for navigation or in military campaigns.

But the Huygens brothers turned their telescopes to the sky, and began to observe the Solar System. Soon, Christiaan was able to detect for the first time the Ring of Saturn and its moon, Titan.

He observed the poles on Mars and the mountains on the Moon. He began to think about life on other planets...

But Christiaan was a true scientist, not a dreamer. Observing the light refracted by crystals like the sand grains of the Dutch dunes, and inspired perhaps by the restless surface of the North Sea, he proposed a wave theory of light. A wave theory of light more than a century before science was ready to embrace the idea.

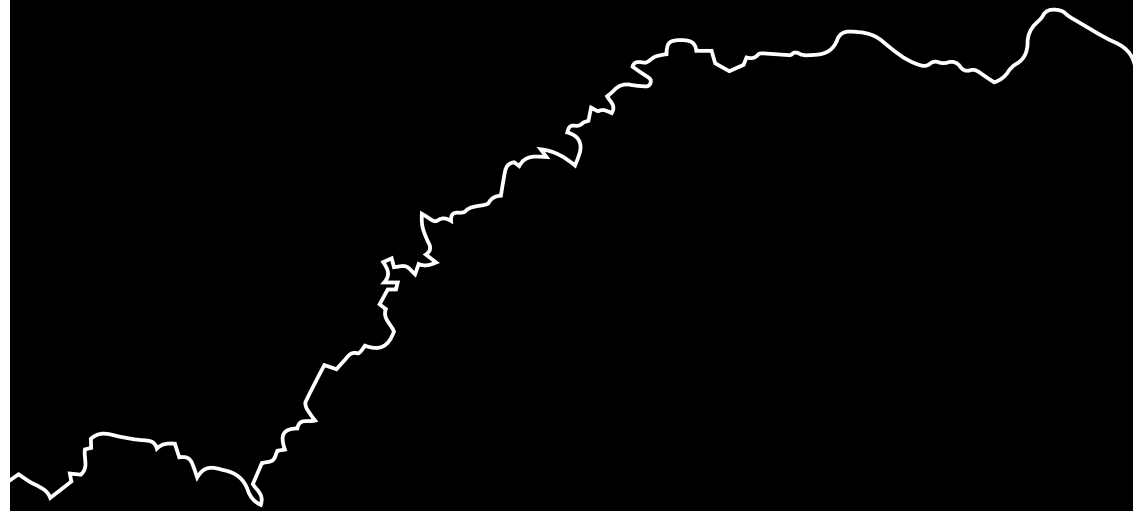
Christiaan Huygens also invented the pendulum clock. One of the first of these he installed in the church tower at Scheveningen. (Before this, time was often kept by measuring the sand running through an hourglass. Sand and glass and time.)

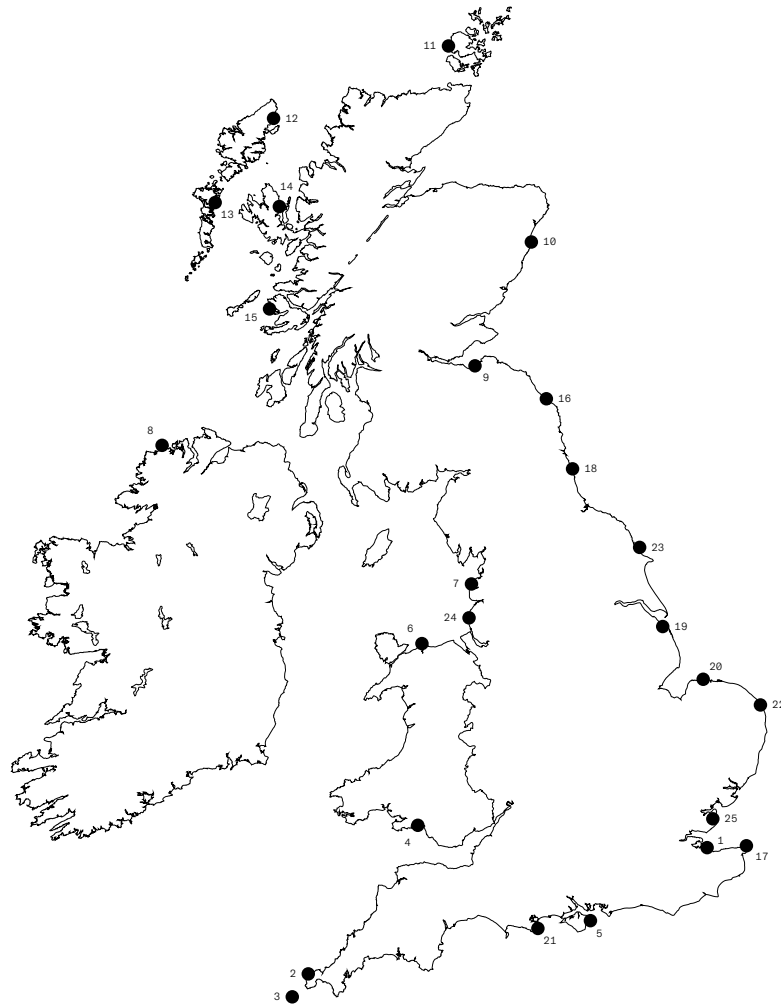
He hoped that sea-going versions of these clocks might be developed in order to solve the age-old problem of mariners' knowing their longitude at sea.

That was many moons ago. More than four thousand moons, in fact. The same moon that raises the tides by the force of gravity, that agitates the sands and shifts them from beach to beach, that grinds the grains for the glass by which we can see the planets. Sand and glass and time and place and the cosmos.

Hugh is a writer and curator. He is the author of the bestselling *Periodic Tales*, a cultural history of the chemical elements, which he later interpreted as an exhibition at Compton Verney. He has also created exhibitions at the Victoria & Albert Museum and the Wellcome Collection. Among his other books are *The Adventures of Sir Thomas Browne in the 21st Century* and *Tide: The Science and Lore of the Greatest Force on Earth*.

Map & Schedule





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|--|--|---|
| 1. Whitstable Biennale, Kent (Leysdown Beach, Isle of Sheppey) | 10. Aberdeen Art Gallery & Museums and Creative Learning - Aberdeen City Council, Aberdeen (Ballroom Beach) | 19. 20-21 Visual Arts Centre, Scunthorpe (Cleethorpes Beach) |
| 2. Tate St Ives, Cornwall (Porthmeor Beach) | 11. The Pier Arts Centre, Orkney (Walkmill Bay) | 20. The National Trust at Shell Bay, Dorset, Studland Bay (Shell Bay) |
| 3. Newlyn Art Gallery & The Exchange, Cornwall (Porthcressa Beach, Isles of Scilly) | 12. An Lanntair, Stornoway, Isle of Lewis (Coll Beach) | 21. Tide and Time Museum, Norwich (Great Yarmouth Bay) |
| 4. Glynn Vivian Art Gallery, Swansea (Swansea Bay) | 13. Taigh Chearsabhair Museum and Arts Centre, North Uist (Baleshare Beach) | 22. Scarborough Rotunda Museum, Yorkshire (Scarborough South Bay) |
| 5. Arteology & Quay Arts at Hullabaloo, Isle of Wight (Sandown Bay) | 14. ATLAS Arts, Isle of Skye (Glen Brittle Beach) | 23. The National Trust and The Atkinson, Yorkshire (Formby Beach) |
| 6. MOSTYN, Llandudno (West Shore Beach) | 15. Comar, Isle of Mull (Calgary Beach) | 24. The National Trust at Brancaster Estate, Norfolk (Brancaster Beach) |
| 7. Grundy Art Gallery, Lancashire (Blackpool Beach) | 16. The National Trust & Berwick Visual Arts, Northumberland, in partnership with the National Trust (Seahouses Beach) | 25. Focal Point Gallery, Essex (Three Shells Beach) |
| 8. The National Trust & CCA Derry-Londonderry, Northern Ireland, in partnership with National Trust (Portstewart Strand) | 17. Turner Contemporary, Kent (Margate Main Sands) | |
| 9. The Fruitmarket Gallery, Edinburgh (Portobello Beach) | 18. Northern Gallery for Contemporary Art, Sunderland (Roker Beach) | |

1	31/03	Whitstable Biennale, Kent	Leysdown Beach, Isle of Sheppey
2	07/04	Tate St Ives, Cornwall	Porthmeor Beach
3	14/04	Newlyn Art Gallery & The Exchange, Cornwall	Porthcressa Beach, Isles of Scilly
4	05/05	Glynn Vivian Art Gallery, Swansea	Swansea Bay
5	12/05	Arteology & Quay Arts at Hullabaloo, Isle of Wight	Sandown Bay
6	19/05	MOSTYN, Llandudno	West Shore Beach
7	02/06	Grundy Art Gallery, Lancashire	Blackpool Beach
8	09/06	The National Trust & CCA Derry-Londonderry, Northern Ireland, in partnership with National Trust	Portstewart Strand
9	16/06	The Fruitmarket Gallery, Edinburgh	Portobello Beach
10	23/06	Aberdeen Art Gallery & Museums and Creative Learning - Aberdeen City Council, Aberdeen	Ballroom Beach
11	30/06	The Pier Arts Centre, Orkney	Walkmill Bay
12	07/07	An Lanntair, Stornoway, Isle of Lewis	Coll Beach
13	14/07	Taigh Chearsabhair Museum and Arts Centre, North Uist	Baleshare Beach
14	21/07	ATLAS Arts, Isle of Skye	Glen Brittle Beach
15	28/07	Comar, Isle of Mull	Calgary Beach
16	04/08	The National Trust & Berwick Visual Arts, Northumberland, in partnership with the National Trust	Seahouses Beach
17	11/08	Turner Contemporary, Kent	Margate Main Sands
18	18/08	Northern Gallery for Contemporary Art, Sunderland	Roker Beach
19	01/09	20-21 Visual Arts Centre, Scunthorpe	Cleethorpes Beach
20	15/09	The National Trust at Shell Bay, Dorset (Studland Bay)	Shell Bay
21	22/09	Tide and Time Museum, Norwich	Great Yarmouth Bay
22	29/09	Scarborough Rotunda Museum, Yorkshire	Scarborough South Bay
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