


**On The Endless Here**

Anna Kirk-Smith  
Mike Horne  
Michael McKimm  
Ian Heppenstall  
Cath Keay  
Rodger Connell  
Jo Ray  
Stuart Jones  
Carlo Verda  
Desmond Brett



**HE** Higher Education  
**UK** Hull College

 eleven

 Hull  
City Council

## On The Endless Here

On the Endless Here is a collaboration between artists and geologists to create new work exploring the geology of Flamborough Head\*, an area of international importance on the East Coast of Yorkshire.

Through field trips, conversations and a lively dialogue between their own practices and the field of geology, a group of artists have begun to investigate the rich geological heritage of the coastline, and the work of the Flamborough Quaternary Research Group.

This exhibition showcases their responses and speculations to date, exposing both differences and shared territories between these disciplines.

This publication will introduce you, by various means, to the people and processes at the heart of the project. The deep curiosity motivating the behaviors and investigations of both Geologists and Artists have provided a fertile ground for this project, which finds each of the participants re-examining their practice and way of seeing the world.

\*With rock sequences dating from the Upper Jurassic to the Cretaceous chalk, and Quaternary deposits crucial to our understanding of glaciation, as well as hosting one of only two mainland gannetries in the UK, the headland has been designated as a Special Area of Conservation and a SSSI.

[www.ontheendlesshere.com](http://www.ontheendlesshere.com)





**Anna Kirk-Smith** is the curator of *On the Endless Here*. She is a fine artist, academic and a graduate of the Royal College of Art, with an active interdisciplinary research record across the arts and sciences. She currently lectures in Fine Art at Hull School of Art & Design, where she is the Curriculum Leader for creative entrepreneurship, and is also a committee member of the Hull Geological Society.



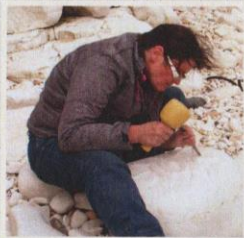
**Michael McKimm** is a poet, writer and performer. A graduate of the Warwick Writing Programme, he has published two collections of poetry including *Fossil Sunshine*, the result of a collaboration with geologists which was funded by Arts Council England. Michael has read from his work nationally and internationally and was an International Writing Fellow at the University of Iowa, funded by the British Council. He lives in London where he works for the Geological Society Library.



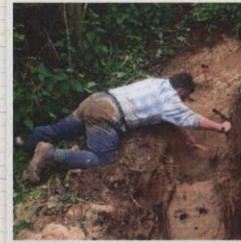
**Mike Horne** has a BSc in Geology, and a PGCE (Higher Ed) from Hull University. He is a Fellow of the Geological Society; honorary life member of the Hull Geological Society; member of the Geologists' Association, Quaternary Research Association, Yorkshire Geological Society and a founder member of East Yorkshire RIGS Group. His published research specialisms include Chalk stratigraphy, biostratigraphy, geochemistry and micropalaeontology, Quaternary of Holderness and the history of the study of geology in East Yorkshire.



**Ian Heppenstall** is a retired Master Mariner and founder of the FQRG. He has studied an eclectic range of HE courses from Archaeology & Landscape, to Regional & Local History and Geology. Ian is a long-standing, valued and active member of the Hull Geological Society. He has collaborated in a range of research projects including those investigating post-glacial lakes at Grassington, Norse and Iron Age settlements, and pre-Ipswichian/post-Devenian cliff lines at Flamborough.



**Cath Keay** is a sculptor and academic with a practice-based PhD in Fine Art from Newcastle University. A multi-award and scholarship winning artist and an experienced BA (Hons) Fine Art tutor, she has undertaken international residencies (Cultura, Japan) and received the Helen Chadwick Fellowship. She recently exhibited at MIMA, in Berlin & Rome.



**Rodger Connell** is a professional geologist with research interests in the understanding of Quaternary climate change. In 2012 he was appointed an Honorary Fellow within the Department of Geography, Environment and Earth Sciences, University of Hull after holding a similar post in the University of Aberdeen. He worked as a Quaternary field mapping geologist with the Geological Survey of Ireland and still undertakes geological and sedimentological consultancy.



**Stuart Jones** is a qualified shipwright and has worked in the regional marine and fishing industry for most of his career. After a lifelong interest in geology, Stuart joined Hull Geological Society 15 years ago. He is the Society Librarian, runs the popular rock and fossil road shows, and plays an active role in a wide range of research projects. He was recognised for his outstanding contributions by being awarded the first Felix Whitham Memorial Medal in 2013.



**Jo Ray** is an artist based in the UK. She studied at the Slade School of Fine Art, and lectures at Hull School of Art and Design. She is about to undertake her doctoral research at Sheffield Hallam University, examining 'The Model as Imaginative Apparatus'. She has contributed to exhibitions, residencies and participatory projects in the UK and internationally.



**Carlo Verda** is a jeweller and silversmith with a BA in Jewellery Design & Manufacture from the Central School of Art & Design (now St Martins). Carlo runs his own gallery and jewellery workshop in Bridlington. He has retailed his work internationally since 1987, was a supplier of John Lewis and Liberty and has attended many tradeshows including Goldsmiths Hall and Formland in Denmark.



**Desmond Brett** is a sculptor and academic with an MFA in Sculpture from the Slade. He is Programme Leader of BA Fine Art at Hull School of Art and Design, has an international exhibition record, and has worked with partners including the Yorkshire Sculpture Park, the Henry Moore Foundation, Kettles Yard and the Cornaro Institute in Cyprus, delivering residencies, popular public educational and practical arts workshops.

# Anna Kirk-Smith

What am I actually looking at? This is my continual question when facing the Flamborough cliffs. I understand it is temporarily captured flux, a moment fixed that may have partially erased historic happenings and yet will change again shortly through weathering or slumping. Consequently I find the figuring out of geological processes here akin to trying to comprehend the plot line of a film through one presented freeze-frame; there are visual clues in front of you, and theoretically through this immediate matter the narrative can be hypothesised, sampled, examined and woven.

Geologists 'see' the cliffs differently to artists; I have been trying to figure out how. I also found out geologists see the cliff differently to the geologist standing next to them. The task becomes more complicated. I am starting to construct that Flamborough plot line through discussions in the field, by trying to work out the relevant scientific testing techniques, by observing the varying approaches of individuals to their tricky, rocky or muddy problem, and by reading papers geologists have written about these cliffs since Victorian times. I have slowly morphed into wearing 'geology goggles', admittedly looked through with a puzzled artistic bent. Metaphorically and literally, I am digging for narrative.

I have concentrated on two introductory themes in this set of initial, exploratory works, firstly the (very) basic understanding of the headland through my introduction to geological terminology:

## "With a Learner's Faith"

This once was how the George Lamplugh described his approach to his studies of the Pleistocene tills and fossils at Bridlington Crag, including Danes Dyke, South Landing and Sewerby, my initial stomping grounds. He began his field observations in 1878, at the tender age of 19 years and was a descriptive genius. I put my "learner's faith" (utterly devoid of genius) in the Hull Geological Society and began the exploratory field trips with the members to the headland (sagely noting the white stone, and overlying brown ooze); listening to their discussions during these initial days they might as well have been talking a foreign language. My early field book notes consist of a list of geological jargon with question marks beside them (for later looking-up), and copied diagrams (thankfully idiot-proof) that Mike Horne drew in the sand with his umbrella to explain the surroundings. Initially it didn't help that this was a questionable landscape - I was trying to comprehend the unknown, the hypothesized, about a terrain that just kept throwing geological curveballs. However once I had settled into the frame of mind that 2+2 might equal 4, 5 or indeed any other random integer potentially proven or disproven by sampling and testing; I became less worried by predetermined fact and more intent upon potential areas of enquiry.

After two years of field visits, gone to me is the 'visually nice' white chalk topped with that ooze of brown mud; and instead has appeared an appreciation of the forensic searching for biostratigraphical fossils, posing reasons for folding and faulting, descriptions of marl content, determining the age and colour of till samples, magnifying grains of sand to distinguish the processes they have undergone, the pondering the far flung origins of glacial erratics and weaving predictions around the size, sorting, orientation, shape and turbation of chalk clasts. Within these lay the foundation for the headland's narrative probability.

"With a learner's faith" sprang from this empathy with Lamplugh's initial search of an unexplored, misunderstood terrain. He possessed far more knowledge than I when he studied the headland, so as a complete initiate, I have in the artwork reverted to a primary Victorian method of learning: the ABC, and added a flavour of my research, queries, field notes and visual perceptions I had to forage for in order to try and understand some of the geological riddles of Flamborough.



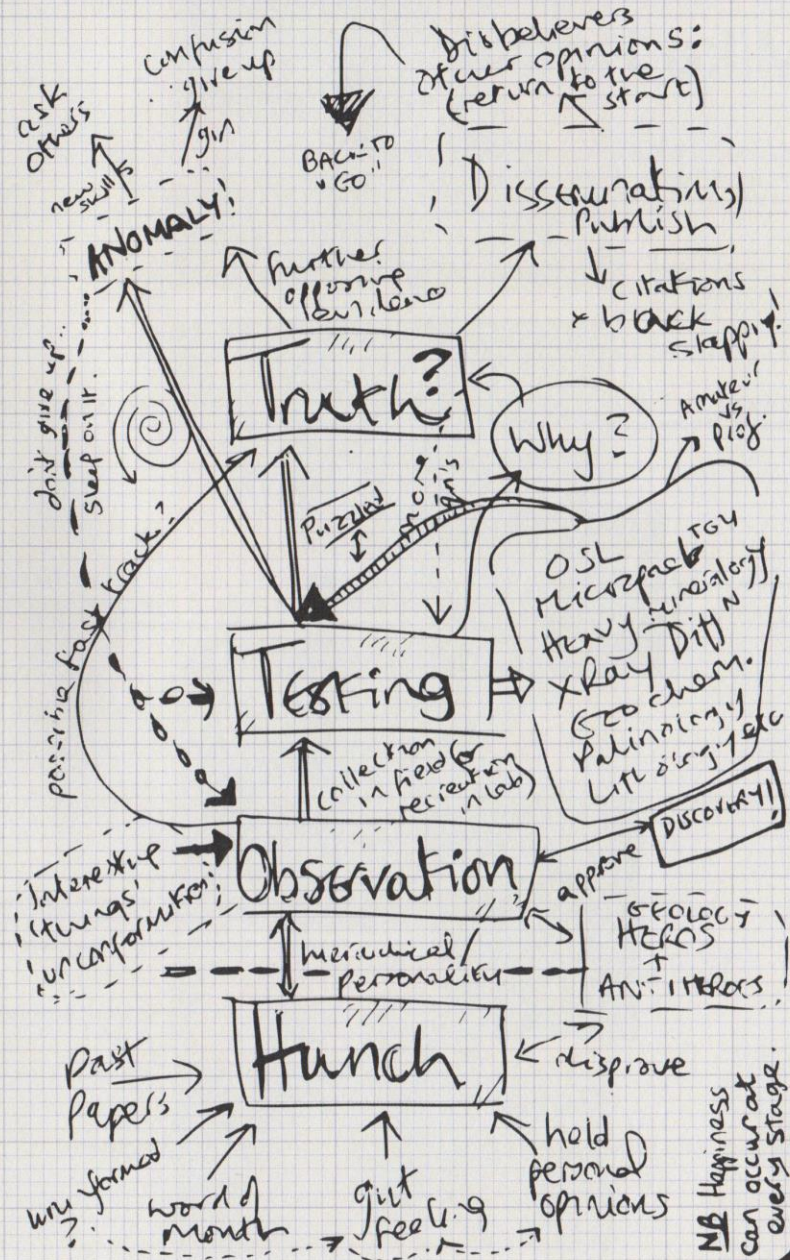
My second set of works is based upon observations of some personalities within the Flamborough Quaternary Research Group (FQRG): their histories, individual quests and unanswered questions that irritate them into field-exploration.

In the FQRG, I have met people whose eyes sparkle with excitement over a new exposure, the social history of a rock or a macroscopic fossil urchin spine. These are animated investigators who care deeply about this headland in their idiosyncratic ways, each possessing their heroes and anti-heroes of descriptive geologists past and present. Their approaches to field geology differ: just as the approaches of these artists to the same headland has showed an intriguing diversity. What FQRG members have in common is that they identify the questions that need to be asked (sometimes over a pint in the Ship Inn), discuss and prove or dismiss previously held posits through observation over time and scientific testing, then determine future investigations required to continue unravelling this enigmatic past. What a team.

During this collaboration, it is not only the rocks (and mud...sorry, 'till') that have beguiled me, but the people behind the fieldwork. I have tried to portray something of these chaps through the transformation of their favoured working tools, by suggesting at their preferred medium or epoch of enquiry, their deliberated comments and their enlightening findings.



Jo Ray



# Mike Horne

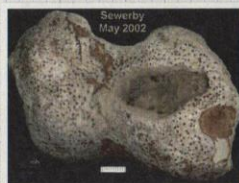
Good science is to have a mind that is open to possibilities.  
There are no "right" answers but there are some which are wrong.  
Once we decide we are "right" we stop searching for answers and become defensive.

I do research because I want to understand things for myself.  
The more research I do the more questions I find.

Nothing can beat the thrill of discovering a rock or fossil that nobody else has seen before.

Working with the artists in this project is an adventure too. I do not know if they can capture the essence of geological fieldwork. The "not knowing".

This chalk fossil



is what remains of an animal that lived and died here, in the sea and by chance get preserved in rock a long time ago when here was somewhere else.

That rock



formed somewhere else when somewhere else was somewhere else and then has been brought here by a glacier. And I found them! What are the chances of that happening?

Trying to understand that; thinking in four dimensions. Every rock and fossil has a story to tell.

"If we knew what it was we were doing, it would not be called research, would it?" Albert Einstein.





# Michael McKimm

In the summer of 2012 I joined a field trip at Barmston beach, on Yorkshire's Holderness coast, which was being led by Mike Horne from Hull Geological Society. I was beginning a year-long project exploring various aspects of geology and climate change, with the intention of writing a new series of poems, and Holderness had been suggested as a place to visit to witness dramatic levels of coastal erosion. On that field trip I met artist Anna Kirk-Smith, curator of *On the Endless Here*, who was engaging with the local geology to inform her art in much the way I was hoping to inform my poetry. Later that week, Mike took Anna and I to see the famous Sewerby Buried Cliff on Flamborough Head. I was delighted, some weeks later, to hear from Anna and to be invited to take part in *On the Endless Here*.

I first caught sight of Flamborough Head from Bridlington, where I was staying for that first field trip, and to where I've subsequently returned a number of times. I'm always surprised at how the headland, seen from the town, can appear differently depending on the light and weather – sometimes so close, at others so far away; a bright white beacon; a dozing reptile lolling to the north of the arcades and amusements. It might be the way the geography of Bridlington town is arranged, but it's often hard to see it, unglimped between the rows of houses, until you reach the beach or harbour wall and then it's suddenly there, a sudden 'oh yeah', and always a contrast with the town and the low beach and the coastline slipping away to the south, flat and quicksilver and disappearing to a blur all the way to Spurn Head.

But that is the headland from a distance. Up close, for me, it's another thing entirely. There are two main ways in which I've experienced Flamborough Head. Up above, on the grass coast paths, it's about birds and walking, trees and village pubs. The gannetry is astounding. The history of the place is fascinating, throwing up constant questions. Down below, on the beaches and chalk platforms, looking up at the chalk cliffs, dusty with lines of fallen boulder clay, it's all about geology – geological field trips were the first and only way I've experienced it.

My writing has been engaged with geology for several years. I work as a Librarian at the Geological Society of London and over the years have picked up some (limited) geological knowledge. I'd written a number of poems based around some of the more interesting or eccentric figures from geological history. But I really wanted to see what it was like out there for the geologist in the field, and Flamborough is where I feel I really experienced that most truly for the first time. I've loved the often simple processing that goes on during field trips.

Just to get down onto a beach and take a look at your surroundings and try and work out what's going on – in many ways that's all there is to it. Geologists have great imagination; they have to. Not just to try and imagine how a place looked millions of years ago but to also have X-Ray vision, to look through a cliff, to imagine what's beneath a surface. In many ways, this is something I try to do in my poetry as well, to tell stories about things in order to understand them better.

One of the things I am particularly interested in is the relationship between geology and climate change. I want to find out what the evidence held in the geological record can teach us about 21st Century global warming. Part of the work of the FQRG, looking at glacial deposits and the glacial valleys on Flamborough, is a study of past climate change, so that has been of interest to me.

I suppose a second preoccupation is the grandness of everything, the mind-widening-ness, the just-when-you've-got-your-bearings-on-something-another-fact-knocks-you-sideways adventure, the imaginative leap.

My main objective on the field trips was to stand back and observe, and that's really where my work for this project has sprung from. The first poems I wrote looked at different points of the headland, and were

written very shortly after being on the field trips, with the research and observations the geologists were reporting fresh in my mind. But while writing those, brought together as the sequence 'Field Notes', it became clear to me that I couldn't leave out the more technical language found in the geologists' academic papers (words like thermoluminescence, brecciated, imbricated), and indeed, in order to try and make an understanding – through poetry – of the science at stake, the use of highly technical language became essential to me. Later, I remembered how I kept hearing the name Lamplugh cropping up – "Lamplugh thought this", "When Lamplugh was on Spitzbergen", "Well, that goes back to Lamplugh".

George Lamplugh is clearly a hero for Flamborough geologists: born in Driffield, he completed the first major work on Speeton Clay and the drifts of east Yorkshire, and despite turning professional and rising to be President of the Geological Society, his many obituarists noted how he remained in spirit an amateur, with the amateur's 'love and keenness for his subject'. So I wanted to write something about him, and read a number of his papers and reports of excursions he led. I happened upon one he led around Flamborough in 1891 and the poem 'Mr Lamplugh Leads an Excursion' came from that. What I realised, however, was how little had changed with geology field trips from Lamplugh's time to today: so the poem is as much about Lamplugh's excursion as it is about the different trips I've been on with this project.



Anna Kirk-Smith

A piece of research I have been undertaking more recently concerns geological mapping. 2015 will mark the 200th anniversary of the first geological map of England and Wales, made by William Smith, who spent the last years of his life in Scarborough. Looking at Smith's map, I imagine there must have been a shock at this new way of seeing Britain; how the colours on a geological map create new boundaries, making territories out of places that you would never normally think shared a connection. It offered a way of zooming-out from Flamborough Head and not thinking about it in isolation but how it is the northern edge of a band of chalk that snakes down England to the south coast, linking up hundreds of town and villages, hills and valleys. I want to continue to explore this concept of how different places are linked, most often unknown to us as we go about our daily lives, by what was laid down beneath the surface millions and millions of years ago.



### Ordinary Meeting

Such work just to begin. Foot work.

Eye work. Such all weather work.

Wet lead running on paper, bare  
legs scratched by marram grasses.

Sketching on sand. Sketching in notebooks.

Sampling fossils, pebbles, blown sand.

A thick rucksack. Eye glass, vials,  
sandwich bags. Trowel. Hammer.

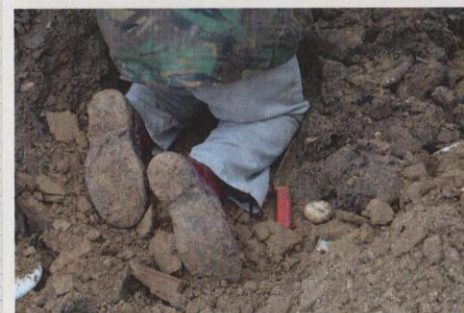
Hammering and hammering. Cliffs. Boulders.

Hammering chisels at the narrowest  
angle – careful  
not to split.

Eye work. Silence. Waves and wind  
and scattering seagulls. But silence,  
thought, calculation, measurement. Work.

Before the 'actual work': the writing up.

Michael McKimm



Jo Ray

# Ian Heppenstall

*How did you become involved in this project?*

In 2002 I attended a University Foundation Award (UFA) Course about the Yorkshire Coast on which we did a field trip which included the South Sea Landing at Flamborough. Seeing the glacial deposits in the valley I thought (incorrectly) that there would be a connection between these and the buried cliff at Sewerby. Returning to South Landing on the next two weeks I wrote a project entitled "The Sewerby Buried Cliff: are there more exposures?". I showed this to Mike Horne and asked if it would be possible to start a research group into these formations and those at Danes Dyke (South) in order to see if there is any relationship with the formation at Sewerby. The Flamborough Quaternary Research Group (FQGR) is the result of this. After a lot of basic research I gave a talk at the joint meeting of Hull Geological Society with the Yorkshire Geological Society in 2009. On the following Sunday a field trip to the formations was held and on this came Professor John Catt; an authority on the Sewerby formations and Rodger Connell; glaciologist and sedimentologist. After Rodger had seen the formations the research efforts redoubled and he has provided a great deal of information particularly concerning dates of deposition.

*What is your relationship with Flamborough Head?*

My relationship with Flamborough Head is as a result of field trips on various courses and more particularly as a result of the FQGR work.

*What is your relationship to the field of Geology?*

I have an O' level in geography and as a mature student I attended thirteen UFA courses in Geology and completed my own project about a post glacial lake near Grassington in Wharfedale, part of which was copied to the Yorkshire Dales National Park's archives. My work is borne out by the work of archaeologists researching into the same lake bed. Since completing the UFA courses I have attained a Certificate (HE) in Regional and Local History and a Diploma (HE) in Archaeology and Landscape and have done work on Norse (Viking) settlement remains in Wharfedale and their relationships with the landscape and with Iron Age settlement in the same area.

*What preoccupies you? Is there a niggling question?*

My particular preoccupation is to find the pre-Basement Till (pre-Ipswichian) cliff line and the outward extension of the Ipswichian Buried Cliff line, also the post-Devensian cliff line of the chalk cliffs between South Landing and the Sewerby Buried Cliff. There is also work to be done on determining the gradient of the stream bed in the Danes Dyke ravine and its relationship to the bed of the ravine at the end of the Devensian Glaciation.

*What research have you been undertaking during the life of this project?*

Much of my work has been in the taking of photographs and making an annual record of changes in the formations over the years from 2002 to 2014. I have also collected old photographs so that we have a record of changes in some parts of the formations over a period of 125 years. Additionally I have taken and tested water samples from a spring situated between Sewerby and Bridlington and there are other springs waiting to be tested.

QUATERNARY		
	HOLOCENE	0.00 to 0.01
P L A T E	DEVENSIAN	0.01 to 0.12
	IPSWICHIAN	0.12 to 0.15
	WOLSTONIAN	0.15 to 0.20
M I D D L E	HOENIAN	0.20 to 0.25
	ANGLIAN	0.25 to 0.30
E A R L Y	CROMERIAN	0.30 to 0.40
	BESTONIAN	0.40 to 0.65
	PASTONIAN	0.60 to 0.80
	PRE-PASTONIAN	0.80 to 1.50
	BRAMEATONIAN	1.30 to 1.55

*Are you able to say something about the processes you are undertaking?*

The water tests are carried out using simple implements such as a wine making hydrometer and sample jar, an aquarium (immersible) thermometer and a gardening Ph meter along with chemical test strips for drinking water purchased over the internet. Finding the former cliff lines is done using the work of John Catt to calculate erosion rates, measurements taken of features at South Landing which are included in the historic record which also give an indication of erosion rates at their positions and observation to check the results of these calculations.

*Are you able to tell us something about the results you are awaiting?*

Finding the formations in the positions suggested by calculation is a matter of patience as the formations may be covered by sand or by the ever present chalk clasts and we have to wait for the sea to clear these away. It could be a very long wait or we could just arrive on the right day.

*What are you certain about?*

I'm certain that the old cliff lines can be found.

*What are you uncertain about?*

Because of the nature of the chalk I'm not certain that they will be where I expect them to be.



Anna Kirk-Smith

# Cath Keay

*How did you become involved in this project?*

I've been working on various projects that are informed by science, its history and the processes used in research. I'd talked to Anna about sculptures I'd made with the help of scientists at the Dove Marine Laboratory in Cullercoats, where I had been getting so-called pest organisms to overwhelm terracotta sculptures. We have both read 'Father and Son' by Edmund Gosse, which discusses how science, art and religion affected his childhood.

*What is your relationship to the field of Geology?*

I'm interested in stone as a sculptor; how it is formed and sourced effects what you can do with it. I've worked with Carrara marble, Welsh slate and Kilkenny limestone before and these are all utterly different and particular to each place. I'm also interested in beaches/ coasts as they constantly change, wiping themselves clean twice a day.

*What is your relationship to the field of Art practice?*

I'm an artist. It's a torrid romance.

*What preoccupies you? Is there a niggling question?*

I would like to get stones to grow. I can't wait that long.

*What research have you been undertaking during the life of this project?*

I have been trying to contemplate the vast time-scales shown in the layers at Flamborough. I've been trying to picture the infinite masses of little animals, and then the occasional rhino. I want to make something that could suggest that to other people on the beach.

*Are you able to say something about the processes you are undertaking?*

I want to carve something very human, very ordinary, but out of its usual context. I've chosen cartoonish writing and the sort of starburst signs you see on bargains in the market- everyday background stuff.

*What are you certain about?*

It's great to work on a project with so many like-minded but completely different folk.

*What are you uncertain about?*

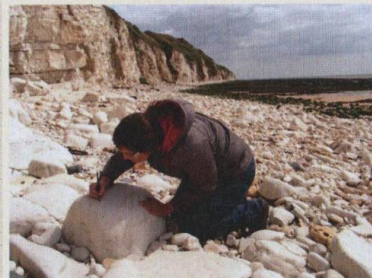
How easy it is to carve hard Flamborough chalk?

*What happens next?*

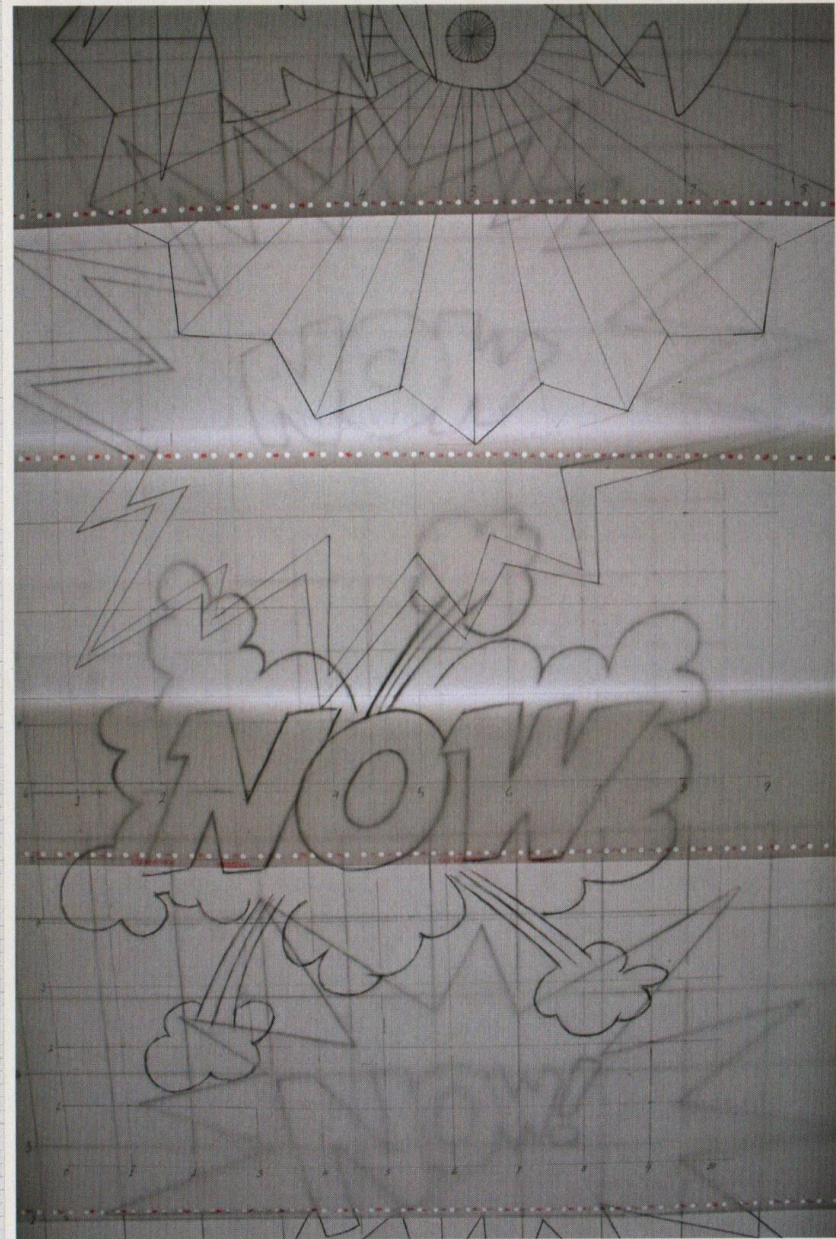
I go to Flamborough next week with my drawings and my chisels and hope for good weather and benign passers-by.

I will carve the word 'now' onto smooth chalk boulders scattered around Flamborough Head. 'Now' is short and immediate; chosen to counter the immense eons over which the cliffs were created 'then'. Each word will be surrounded by a starburst reminiscent of eye-catching adverts or cartoon punches. These carvings will change over time, eroding with the tides until they fade back to smooth unblemished pebbles and the human interaction that each rock recorded will no longer exist.

The carved rocks will be photographed over successive months and years to document this process of regression back to their natural state.



Anna Kirko-Smith



# Rodger Connell

## *How did you become involved in this project?*

I became involved as I'm a member of the Hull Geological Society's Flamborough Quaternary Research Group which I joined back in 2009. I've enjoyed being involved in the project as my own interests are in the chronology of glaciation in areas of the British Isles and the North Sea basin. My own research on the chronology of Pleistocene glaciations stems from the need to better understand how the climate system works – particularly how the ice age climate shifts are related to the interplay of ocean circulation and the ice sheets. Improved chronological control from terrestrial glacial deposits (and those offshore) may allow better correlation to climate events recorded in the deep ocean and ice sheet palaeoclimate records, so allowing better interpretation of climatic drivers and aid future predictions.

## *What is your relationship with Flamborough Head?*

I was born in Bridlington and visited South Landing often as a child as my "Auntie" Rita's parents retired to South Sea Road. I don't remember much about the geology from those years but I do remember Sid's budgies at the back of the house! Being born near the sea, and living in Hornsea and Aberdeen for many years, I've always been drawn back to the sea. Flamborough's position "way out in the sea" has been a constant fascination for me. I even did part of my undergraduate dissertation in Beacon Hill quarry between South Landing and Danes' Dyke!

## *What is your relationship to the field of Geology?*

I guess my interest in (love of?) geology came from my Dad originally. He went to Hull University night classes during the 1960s and he'd take me on field trips where he'd been with the class. Living in Hornsea we'd scour the beaches for interesting erratic rocks washed out of the till cliffs. He was the first to show me a rock from Scandinavia – a subject I've been fascinated with ever since! At college and university I trained in Pleistocene history and glacial sediments – but then became a sedimentologist specialising in deep marine Jurassic reservoirs in the hydrocarbons industry for my sins! It's a pleasure now to return to the study of Pleistocene history again. Geology is very definitely a collaborative science. Rarely can you "solve" a problem alone. Others provide skills you don't have and so it fosters collaboration and fruitful interaction with colleagues. Debate and discussion with others is meat and drink in developing interpretations of the complexities of glacial sedimentation, stratigraphy and chronology.

## *What is your relationship to the field of Art practice?*

I'm sorry to say the limit of my relationship with Art practice is producing section drawings and maps of field sites for ongoing projects and publications.

## *What preoccupies you? Is there a niggling question?*

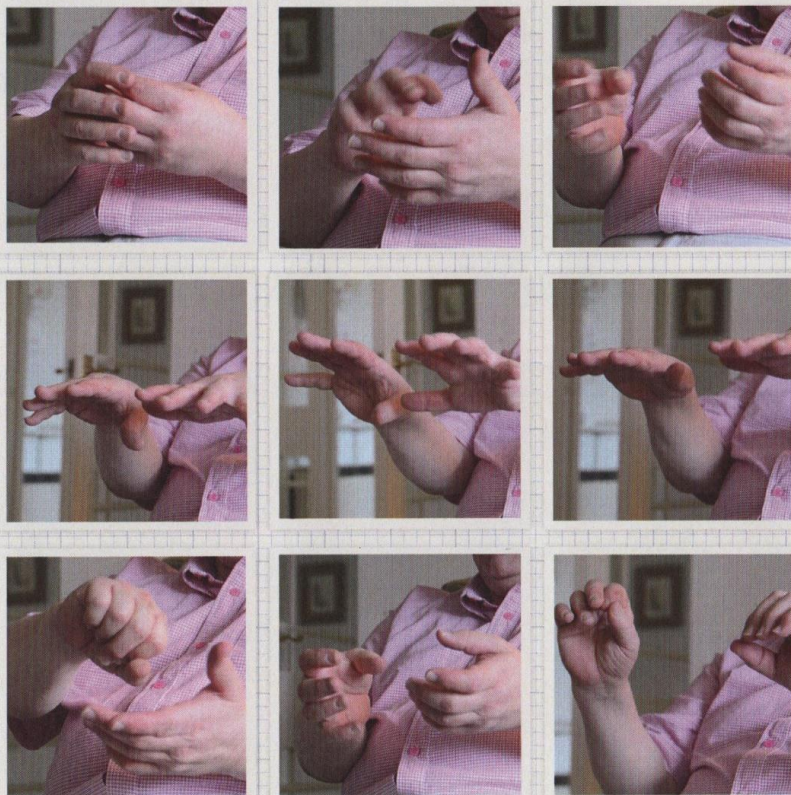
As far as the FQRG goes the "niggling question" is always trying to fill the gaps when sections in the cliffs don't tell the whole story as due to slumping they are not well exposed! At South Landing this is/was particularly so just east of the slip way. Fortunately in December 2013 Mike Horne spotted new exposures after storms which go some way to improve understanding of the relationship of a number of the deposits. He also spotted the fact that the new exposures were underlain by a "new" deposit which has not been recorded previously and which requires further study. These crucial new exposures also allowed further sampling for Optically Stimulated Luminescence (OSL) dating which, hopefully, will clarify the time relationships of some of the deposits at South Landing.

## *What research have you been undertaking during the life of this project?*

As well as recording sections at the sites as they become available I've collected bulk samples of the deposits for the FQRG to characterise the particle size of the various units and look at the type and roundness of pebble-sized clasts. These are standard techniques which aid the interpretation of the provenance (where it came from! Local or a more distant source) and how it was deposited (Palaeoenvironment - maybe the base of an icesheet?, a meltwater stream? or fan?, a periglacial slope deposit?, or a marine beach?).



Anna Kirk-Smith



Jo Ray

This has involved sampling deposits in the area (particularly Sewerby) where deposits of known age and origin occur for comparison. I've also been able to use my contacts to ensure these nationally important sites were brought to the attention of colleagues who undertake OSL dating. Their contribution has been very important in the understanding of the fascinating and important sites on Flamborough Head.

During my time back in Holderness I have also been, along with HGS, university and BGS colleagues, re-investigating some of the "unsolved questions" of the glacial history of Holderness. Particularly the age of the Basement Till (apparently the oldest beneath Holderness) and the age and origins of the "Bridlington Crag" – rafts of shelly marine sediment rafted into the Basement Till.

I have also continued with research into the glacial history of NE Scotland, again with colleagues from Scottish universities and the BGS. This work, on an area where the record stretches back nearly 300,000 years and three glacial cycles, is being drawn together for a conference in Edinburgh in January 2015 and a subsequent paper.

*Are you able to say something about the processes you are undertaking?*

Particle size analysis and clast lithological analysis (counting the lithology of the pebbles in a sample and documenting their roundness) to determine provenance and depositional environment..

*Are you able to tell us something about the results you are awaiting?*

We are awaiting final results of the OSL dating already undertaken. Some "single grain" measurements were being carried out by Professor Mark Bateman at Sheffield University to clarify the dates obtained. Since that first dating campaign new sections at South Landing have allowed a further three samples to be collected. These may be key to understanding the age relationship of sediments from the two sides of the bay.

*What are you certain about?*

I'm certain the FQRG have done a good job in finding, recording and sampling the sediments at the two main sites (South Landing and Danes' Dyke) and also in investigating and monitoring other important sites on the headland.

*What are you uncertain about?*

Until final OSL dates are available from the sites (probably early 2015) it is difficult to be sure how the overall interpretation of the sites will fit with other areas in the glacial chronology of eastern Britain. Preliminary models are there but the final dates will determine if these can be sustained or need to be reconsidered.

*What happens next?*

If the Flamborough dates are confirmed I would speculate that the sites on Flamborough Head will be of key importance in the debate on the overall chronology, configuration, dynamics and controls of the retreat and disintegration of the last British/Irish icesheet.

The main sites on Flamborough Head will need to be monitored to see if anything else is revealed. Other sites have also shown promise in adding detail to the story and will need to be thoroughly investigated in due course. A draft for a small paper in Quaternary Newsletter (Quaternary Research Association) is available and will be completed in the autumn for submission. Hopefully a longer paper will be published with our colleagues from Sheffield University when the OSL dates are finalised.

# Jo Ray

*How did you become involved in this project?*

I find it hard to resist a field trip. I enjoy walking a landscape that is new to me, with people who see it differently...so I joined in by stealth (not that stealthily).

*What is your relationship with Flamborough Head?*

A vicarious one, through my collaborators; but also first hand through said field trips, the first of which was followed by a quite visceral dream about a landscape eroding to reveal white, dead flesh (interchangeable, in some way, with the chalk), and a chance finding of an old Flamborough Head postcard at a car boot sale.

*What is your relationship to the field of Geology?*

I'd like to say 'summer fling' but it's been some months now and there was snow on that first trip. So I will say instead, innocent, becoming amateur later.

*What is your relationship to the field of Art practice?*

I make stuff as a way of thinking with my hands and head at the same time. I feel like the stuff can be cleverer than me, and show me things. When it works.

*What preoccupies you? Is there a niggling question?*

I am fascinated by scale, and in geology I get to ponder this in space and in time. I have become fascinated by watching the swift hand gestures, the intuitive form and movement, used when the Geologists are speaking about processes and events that may have taken unimaginable tracts of time.

I'm not sure there is one question, but it might be 'what's to be done?'

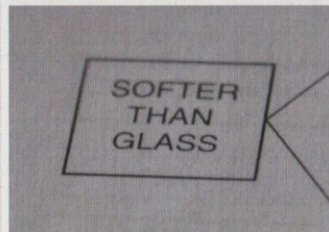
This speaks of immediate things and the short time scale in which we are here, and how we might react to the changes we are witnessing...somehow.

*What research have you been undertaking during the life of this project?*

I've been pondering how we fall back on shared languages. Communication of something from one to the other is flawed and fascinating...at the scale of a conversation between two people but also between our disciplines - which both seem to be concerned with unearthing, exposing, making evident, making sense. So, I've been indulging in the poetry to be found in analogies and 'stand ins'.

The fieldwork that geologists undertake is an intense visual and sensory 'reading' of the landscape using eyes, skin, tongue and intellect.

I feel a kinship with their commitment to investigation and their embrace of 'lostness' but likewise a frustration at glimpsing a knowledge I will never have, as if through obscure glass.



Listening to the language of their discipline, I feel surrounded by phrases and imagery shot through with connections to 'the search'.

Thoughts about the chalk, dust clouds, snow blindness, milky hazes, sea frets, wax, finger nails, frosted glass, things glaucous and obscure have connected in my imagination with the whitening of fossils with ammonium chloride smoke, the 'bleaching' of samples intended for OSL testing. And of course the 'exposure'. I've played fast and loose with associations and double meanings.

*Are you able to say something about the processes you are undertaking?*

Anna and I have been talking a fair bit with the Geologists. Listening. Watching their hands. Noticing turns of phrase. In the studio, I've accumulated a collection of materials and objects which somehow act as 'stand ins'...and which help me think about lostness, struggling to see through; the potential for wonder or disappointment, understanding or obscurity. I have been making still and moving images with these.

*Are you able to tell us something about the results you are awaiting?*

I am shooting some processes that are somewhat difficult to capture in the conditions I want. I am not sure if the imagery will yield the same qualities I see when I am working with the materials.

*What are you certain about?*

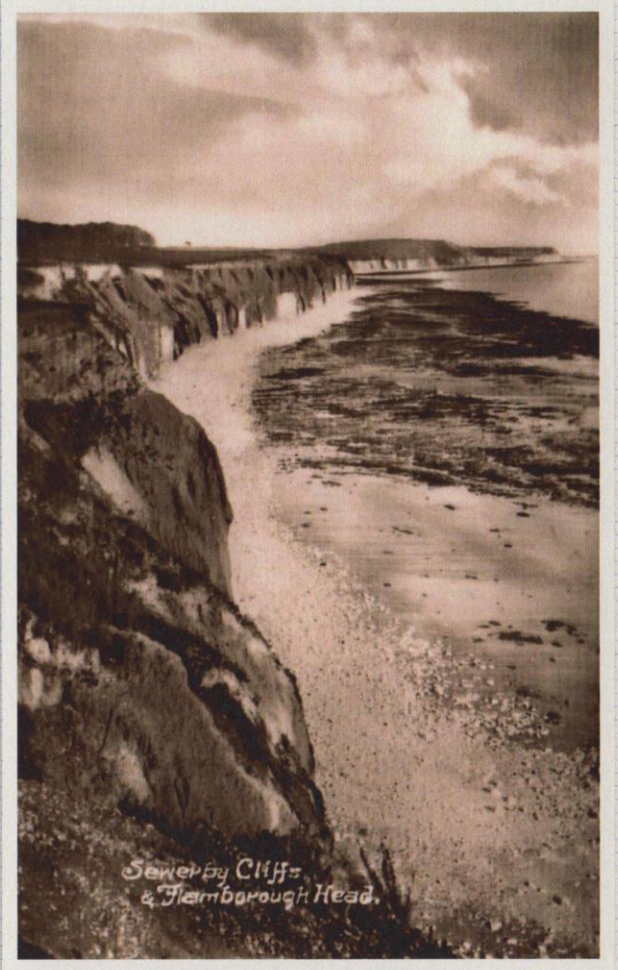
Nothing.

*What are you uncertain about?*

In relation to this project, I suppose there are many questions about what can be offered by different disciplines, for mutual benefit.



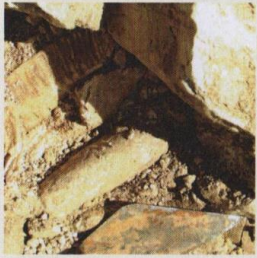
dead flesh dreams  
 mortification  
 calcified remain blindness  
 derriada  
 The whiteness  
 of the chalk  
 grinding  
 pulverisation  
 mist  
 sea bed  
 dust cloud chalk blackboard  
 dust  
 atomising  
 salt  
 inspection  
 interogation  
 fossil photography conventions  
 time/scale.  
 scale



Sewerby Cliffs  
 & Flamborough Head.

# Stuart Jones

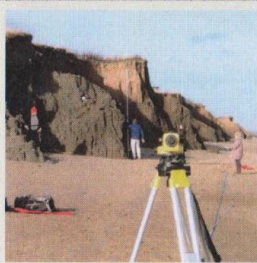
A few years ago a friend phoned Stuart up one evening to let him know about a storm over Bridlington, a big one. In the post-storm calm Stuart drove up from Hull in the hope of finding some decent erosion at Sewerby and what resulted was the most revealing photographic evidence of the Ipswichian buried cliff and raised beach in existence. He was also there at the finding of an *Elephas antiquus* fossil tooth at this iconic quaternary location. Stuart knows this headland well. Bridlington and Flamborough beaches were a playground for Stuart as a child, his early interest in collecting coloured stones was encouraged by his teacher Mr Taylor whilst at Moorfield school, and his geological interests developed further through friendship with John Earnshaw who was 2 years above him at St George's school in Bridlington. By the age of 14 they had mapped the coast from Bridlington to Sewerby Steps and Stuart had amassed a large collection of fossils. Earnshaw later went on to be the first curator at Sewerby Hall Museum.



Stuart's career took a different turn and he qualified as a shipwright, building boats from yachts and trawlers to traditional cobsles. He then worked on the boats potting for crabs, netting and long-lining before 'escaping' to Hull and becoming a shipyard foreman, amongst other jobs, during the busy years of Hull's fishing fleet in the early 70's. He is the only chap I know who has built a concrete boat, righted a failed launch in time for Christmas and can tell a good tale about a granddad's donkey (ask him)! He says "I've done everything on a trawler apart from the cooking."

After the Hull fishing fleet demise in 1976, whilst working as a central heating installer, Stuart discovered, in the rubble of a shop in Beverley, a prospectus for Hull University offering courses in geology. He joined the adult education course run by Mike Horne (who, to quote, "is an excellent teacher, he perseveres"), and he also joined Hull Geological Society (HGS), where he has been a key member for the past 15 years. Stuart runs the HGS Roadshows regionally, "spreading the good word" to those who have not yet caught the geological bug, with one memorable occasion of fossils-by-gas-light in the atmospheric Nellie's tavern in Beverley.

Stuart speaks lovingly of fossils saying: "they won't be found until they're ready to be found" and describes the learned intricacies of extracting them from the local rock. Around the headland the chalk apparently behaves in differing ways – in Sewerby where thinly-layered Flamborough Chalk abounds, it is pitted, powdery, soft and splits after a few chisel blows; heading west to Danes Dyke the chalk hardens, the chisel starts to bounce back and the chalk chimes like a bell; at Selwicks the bluish, springy Burnham and Welton Chalks become seriously smooth and hard (more worthy of a sledgehammer approach apparently)! It takes experience and patience to extract fossils from the differing matrices and Stuart possesses both.



As a member of the Flamborough Quaternary Research Group, Stuart sees himself as a surveyor, a mapper, a facilitator with the experience of knowing intimately the place and locals since childhood.

About each newly extracted fossil or eroded, exposed cliff face he says: "I am the first person on this earth to have seen this; it is the same in fishing; when that trawl net breaks the surface everyone is looking, we see things in front of us that have never been seen before. Through such occurrences, hope springs eternal."

Anna Kirk-Smith

"I am the first person on this earth to have seen this; it is the same in fishing; when that trawl net breaks the surface everyone is looking, we see things in front of us that have never been seen before. Through such occurrences, hope springs eternal."

"they won't be found until they're ready to be found" Stuart Jones





