

Martin Winfield – Art on the Rocks @ Broomhill Gallery, June 2006

Notes on the processes

Each of the exhibits in the Broomhill exhibition is linked to a specific process or processes which I have observed in the landscape along the AOR trail over the past 12 months.

Most of the preliminary work was carried out using the medium of photography, a process which involved gathering images of the locality, together with note-taking. A tiny Minidisk recorder was a constant companion and, though at the outset I had no idea of the course the work would follow, the various media combined constructively as the ideas evolved.

Various notes made during the initial visit last June and during the process of creating the work exhibited are contained in my daybook which is on display elsewhere in the exhibition.

Salt Lines 1-4 (photographic salt prints)

Each image shows the white lines of salt which are formed on coastal rocks in the hours following high tide. As the rocks dry in the sun the salt in the seawater crystallizes out in varying patterns, often emphasizing natural contours or fissures in the rock which would otherwise remain hidden.

As a means of linking the photographic image to the natural process, the exhibited prints have been made by using the salt printing process.

Salt printing is one of the earliest photographic printing techniques and dates from 1833. This is the process by which photography pioneer William Henry Fox Talbot produced the first photographic images on paper. The process involves first soaking a sheet of plain paper in salt water before brush coating it with a silver nitrate sensitizer. When dry, the paper is exposed to intense light through a full size negative and the image slowly begins to form over a period of 10-15 minutes. The print is then made permanent by washing in a conventional photographic fixing solution.

Sea horizon line (photographic inkjet print)

The sea is usually perceived as a dynamic, powerful force, constantly in motion. Whilst this is true on a small scale, it also has a permanence and serenity when viewed over a longer time period. The defining horizon line between sea and sky is often difficult to perceive and I have emphasized it in this image by the use of a long exposure of approximately 1 minute which serves to blur both the waves and cloud motion. The original image was originated on 35mm film.

42 Fragments (cyanotype photogram)

During the initial week spent on the AOR project I collected a small pile of “sea glass” - glass fragments which have been washed up and rounded to a greater or lesser extent by the action of the sea and sand. Over the course of the week I refined my selection, choosing to collect only clear glass, and throwing the unwanted pieces down “for another day”. I had no plans for my collection, but the fact that I could be sure that the sea would gather in, rearrange and deposit these fragments with each subsequent tide, led to the idea behind this exhibit. Some months later when I had washed and sorted the glass fragments, I was left with around 40 pieces. The choice of 42 will be obvious to fans of Douglas Adams.

The photogram demonstrates a short sequence of 5 steps* in a process of random rearrangement. All of the sea glass fragments are present in each column, but their position is otherwise undefined. Each column signifies the effects of a single tide with the glass fragments rearranged randomly.

To produce the photogram I laid the fragments out onto hand coated light-sensitive paper one column at a time. The remainder of the sheet was masked while each column was exposed to intense light for the required exposure. Once exposed, I gathered the fragments together in a container before tipping them as randomly as possible on the next column of 4 squares. My only direct interaction with their position was to ensure that the individual piles of fragments were contained within the marked squares.

(* I have had thoughts about producing a larger version signifying a month's tidal rearrangements between two full moons.)

The light sensitive paper uses the Cyanotype process which is one of the many non-silver based photographic printing techniques developed in the early days of photography. The basic formula was invented by Sir John Herschel in 1842 and quickly found favour with botanical illustrators. Later, this became the "blueprint" process by which engineering drawings were reproduced. These particular prints have been produced by using a variation of the formula developed by Dr Mike Ware in 1994.

Ripple tank (installation)

The original idea for this piece stemmed from my trying to think of a way in which I could visualize sound, and specifically a method by which I could actually present sound as a visual image without using complex equipment. Working in such close proximity to the sea and constantly looking at and hearing waves led me to devise the arrangement exhibited here

Initially, I was intending to use two point-source transducers each radiating audio frequency ripples. Where the ripples overlapped they would cause complex interference patterns which would be magnified and projected onto a screen. However, a few experiments showed that the ripples themselves do not form an image, they simply distort light rays passing through. Though I could project sharp images of objects on the surface of the water, the ripples themselves were poorly defined.

Observing the patterns which are generated when sunlight falls obliquely on the sea suggested that a reflective process might be more effective. Experimentation showed that much greater reflection is achieved by using the underside of the water surface, hence the current arrangement.

In this installation the ripple transducers are made from waterproof loudspeaker drive units with extensions attached to the cones. These serve both to create ripples in the water surface and to radiate audible sound waves into the air. The baffles around the edges of the top plate, which are modelled on the "wave breakers" found on some beaches, serve to disrupt reflections from the edges of the tank. Without these the image would be swamped with reflections from the tank sides. Due to the fact that there is no visual magnification of the image, the higher audible frequencies are not visible as ripples. However, the low frequencies achieve some of the desired effect and the chosen sound sources enable the interaction between sounds to be visible.

The sound source itself is predominantly that of the sea. Ripples are but tiny waves; thus from the sounds of waves we are generating more waves and are led to think about the way in which the sea interacts within itself, and with everything it encounters.

In splitting the recorded sound for the two transducers, my aim is to achieve maximum visual effect. Where sea sounds are used, the sea ripples are always generated from one transducer and the additional sounds from the other. Because the transducers are close together we hear the sounds as emanating from a single source, but see the effect of the sound waves merging by the effect of the ripples in the tank.

Ripple Tank Sound Source

This consists of 5 short sound montages. The idea is to demonstrate the point while incorporating an element of humour in the process. All sounds with one exception were recorded along the official AOR trail between Morte Point & Lee Bay, & I've tried to keep processing to a minimum just to show what strange & interesting sounds are out there.

"Gluggy sea" [6:00] Original sound recorded at Downend (this is just outside the official AOR area, I have to admit!) When the tide reaches a certain point the waves start to enter a tiny cave in the outlying rock which produces these strange sounds. All of the sea sounds were sampled here over a period of about an hour. The voice-over is none other than my esteemed colleague, Brenda Whormsley. I have used a technique known as "sound granulation" to process the voice. This cuts up the original into short samples of different lengths, then re-combines them in random order. The sea is thus grinding down and regurgitating the voice.

"Aeolian Harp" [4:50] Original sound recorded at Rockham bay, Lee Bay and on the cliffs nearby. My Aeolian harp was simply a 25m length of fishing line stretched taut between two rocks. One end was attached to a plastic lid from a peanut butter jar. On this I mounted a simple piezo-electric sensor which served as a contact microphone. At certain moments when the wind is at a particular strength and direction it causes the line to vibrate, producing the strange, eerie sounds which can be heard on this track. There is no post-processing applied to the aeolian harp sounds other than basic filtering to remove some of the gusty wind noise. The voices (which were picked up directly by the contact microphone arrangement) are those of a couple of unsuspecting members of the public who happened to wander by. I passed my headphones to them to listen while I explained what was going on. Unfortunately I missed the bit where one of them said "that sounds like something out of Dr Who"! A fragment of the voice was then looped and overlaid with a phase shifted version to produce the repeating vocal pattern which can be heard in the second part of the track (après Steve Reich).

"Frank & Jack" [6:02] AKA "turkey montage". Brenda & I were walking along the shore near Pensport Rock discussing the fact that I hadn't yet recorded the Lee Bay turkey. We couldn't remember his name, although we were convinced that it was either Frank or Jack. Actually, it's Tom. Sorry Tom. The montage is simply a collection of samples of Tom & his cockerel friend looped and overlaid, plus some nice splashy sea sounds from nearby. Thanks to Penny in whose garden Tom & friend live.

"Duncan" [2:38] Firstly, apologies to fellow artist Duncan Cameron, on whose adventure this is based... Sounds: big, dramatic waves from Rockham as the tide came in on a windy day, plus some "static" from a VLF receiver which I made a while back. These were recorded in May at sea level near Pensport rock (and were surprisingly free from 50Hz hum as anyone who's ever tried to receive VLF signals will realize.) Plus, of course Duncan's phone message to Claire from last June. Duncan was ok in the end, and he's here somewhere to prove it! It just goes to show that even the most experienced seafarer can be surprised by the turn of the tide... The "bleep", incidentally, is part of the phone message & I've looped it to add to the drama - a signal lost at sea.

"How Bizarre" [5:02] Main sound: dripping water from a tiny overflowing rock pool somewhere near Appledore rocks (I can't remember exactly where). I've taken a 9 second sample, looped it & then transposed it down 4 octaves in 1 octave steps. The lowest sounds result from a playback speed of about 6%. The 5 tracks are then introduced one at a time, each entering after a single cycle of the previous one (that's 9, 18, 36 & 72 seconds after each other). Voice-over is courtesy of Brenda & myself. Quite what was bizarre about the view I don't remember, although I do say on an unused bit of the recording, "it's all distorted & compressed." (Which sounds like an audio analogy if ever there was one.) But it might have been the sea air, our frame of mind at the time or, more likely, whatever we had to drink the night before...

Image diffusion (installation)

This installation piece evolved predominantly from the notion of the sea consuming everything in its path, breaking down and re-distributing all that it encounters. I was thinking about devising a simple visual process which would work with a photographic image in a cyclic manner, mimicking the cycles of the tides. My first experiment using my photographic inkjet printer to produce an image on blotting paper proved only how water resistant the image was, with no effect after 90 minutes immersed in water! Having dug out an older machine which uses water-based inks, the results were more as expected.

Although I had initially intended to link the timing of the diffusion cycle with the actual tides, this proved far too complex to implement accurately. In addition, the blotting paper requires only around an hour to draw up water to its highest level. The timing of the cycle in this exhibition is chosen to work most successfully with the blotting paper chosen: 1 hour absorption followed by 2 hours drying. Although this is fixed as part of the mechanism, the visible "tide mark" varies slightly with the quantity of ink in the image and the ambient air temperature & humidity.

The actual diffusion process is effectively an ink chromatogram and, as such, reveals more about the printing process than the image itself. However, it is to be read as a metaphor for the sea's action in grinding down and incorporating everything that it encounters with a seemingly infinite capacity.

Over the course of this exhibition many images will be processed, each causing a small amount of ink to be taken into the water tank. As time passes the water will become visibly discoloured. What was initially perceived as an infinitely repeatable cycle is perhaps not so.

Choice of image is not specific, and it's interesting to see what happens. Here, I have used photographs of rock & sand textures, and human activities in the form of carvings in the walls of a cave. All is consumed by the sea, and so it is with any image subjected to the process. Some photographs show a greater vestigial image when the process is complete and, after the exhibition, it will be interesting to evaluate the processed prints as visual entities once removed from the context of their creation.

Martin Winfield, 20th June 2006

Further info: contact mjw@martinwinfield.co.uk. www.martinwinfield.co.uk