



This article documents a series of material studies of prepared surfaces that use laser cutters as instruments of drawing – and, at times, of weathering. They are part of a study that explores, through texts and images, the role that islands have played as *topoi* of imagination and experimentation. I begin these island stories with the novel *Greenvoe* (1972) by the Orcadian poet George Mackay Brown ...



Fig.1 (Previous) Detail of the *Broch of Ingarth*, from the laser-etched pages of *Greenvoe*, Chapter Two (October 2019). The advance of each laser-line is incremental as it removes part of the material to create a raised mark or a cavity between pages. A series of low-level photographs of the same broch and its mossy stone walls were then raster-engraved on the following pages. Their combined image depth resulted in large paper wells and vaporised areas of text, the vestiges of which were held within the cavities of the preceding leaves.

Fig.2 *A Storm-within-the-Text* (November 2019). The pages of Chapter Four in *Greenvoe* (which signal the beginning of a sea swell), were unfolded and joined together and then laser-etched with a satellite image of Storm Abigail, which struck Orkney in 2015. The machine produces a kind of weather that agitates the pages, tearing and burning them directed by the imagery of clouds.

Fig.3 *Clouds become islands, islands become text...* (November 2019). Detail of laser-etched fragments salvaged from the wreckage of Chapter Four.



Fig.4 *Ariel's survey* – 'a true reportory of the wracke' (August 2021). Another 'storm-within-the-text', this time drawn onto untreated cotton khadi (100 x 115cm, 200 thread count). Its gridded texture was frayed and adhered to a muslin underlay by the machine's unfocussed flame. This burning drawing re-enacts Ariel's spell from the opening scenes of *The Tempest*, when the magical spirit summons a violent storm that shipwrecks travellers on the edge of Prospero's Island and shrouds its location:

Ariel:
To every article.
I boarded the King's Ship: now on the beak,
Now in the waist, the deck, in every cabin
I flamed amazement. Sometime I'd divide
And burn in many places – on the topmast,
The yards and bowsprit would I flame distinctly,
Then meet and join. Jove's lightening, the precursors
O'th' dreadful thunderclaps, more momentary
And sight-outrunning were not; the fire and cracks
Of sulphurous roaring, the most might Neptune
Seem to besiege and make his bold waves tremble,
Yea, his dread trident shake.

William Shakespeare, *The Tempest*, 1.2.195–206.





Fig.5 Kodak-Wilson clouds (November 2021). An 'aerial fragment' of nuclear fog etched onto a folded cotton sheet (200 x 124cm, 217gsm). Its woven substrate was brought to the surface by the laser machine's flame and linear motion as worn paper threads in both the warp and weft. The reference-image used for this drawing was a black and white photographic still taken from a drone flying over Bikini Atoll during the Baker nuclear test on 25 July 1946 - partially obscured by the radiation fallout of 'Fat Man' (also known as 'Mark III'), that was detonated 27 metres underwater.

Fig.6 Waxed Sailcloth, a Thickened Register [front] (October 2021). Para-soy wax was applied to the 'facing surface' of untreated linen canvas (200 x 183cm, 265gsm) to improve the material's structure when laser-etched with the same reference image as *Ariel's Survey*. Areas of incineration were then both marked and preserved by liquid wax, produced by the heat of the machine's optics.



Fig.7 Waxed Sailcloth, a Thickened Register [back] (October 2021). Underside of a waxed linen 'chart' with field samples attached. Where the raster image is darkest, the wax has melted into and through the material, to form a dual relief mapping.



Fig.8 Detail of *A Thickened Register, and Waxy Relics from the Island of Icaria* (November 2021). The underside of *Waxed Sailcloth* was treated with black chalk and magnetic paint (before etching) to re-trace the drawing's 'melt' as scales of shade.



Fig.9 *A Thickened Register* [framed] (November 2021). Utopographic-like fragments of waxed linen, with black chalk and magnetic chalk on the underside.



Fig.10 Double Exposure (November 2021). Underside of wax-coated linen treated with black gesso paint. A hole has been burnt through the material as result of the laser machine's misaligned optics. The material was laser-etched multiple times with varying 'exposure' values. In this instance, different reference-stills of Operation Crossroads (the first nuclear tests ever conducted at Bikini Atoll) were superimposed onto the same surface to create a compound image of the Marshall Islands.



Fig.11 A photomicrograph of displaced slide film and residue (December 2021). Field samples recovered from the wreckage of the laser-drawings were re-examined using a stereomicroscope – from *Ariel's Survey* to *A Thickened Register* to *Double Exposure* to *Kodak-Wilson Clouds*.

Fig.12 A *Thickened Register* viewed through a microscopic lens of x20 magnification (December, 2021). Visible in this field sample are waxed linen fibres and displaced particles of black chalk and magnetic paint.

Figs 13, 14 *Errors of Microscopy, Focus Burns and Scale Transgressions* (December 2021). Two photomicrographs of the same field sample illuminated by an inbuilt Halogen light source and viewed through a microscopic lens of x50 magnification using two focal depths. Beneath the microscope and their light transmitters, the material composition of these samples was visibly altered (and 'burned') by varying the depth of focus – like the fogging of photographic film. While examining this field sample through a lens of x50 magnification, a particle of black chalk and magnetic paint was dislodged from the material's underside and slowly migrated through a channel of wax-coated fibres to a well in the laser-etched surface of *Ariel's Storm*. Because the object of scrutiny falls both within and outside the focus region, there is a sense of moving through the territory-like fragments.

