

Protection



INITIAL INSPIRATIONS

Exploring themes of protection and safety within the context of natural forms.

Looking at cocoons, chrysalis, nests and seed pods as an initial source of visual inspiration and the starting point for further investigation.

Looking at change, protection and metamorphosis within nature as a metaphor for the changes and consequently the protection we put in place within our modern, anxious lives.

As the starting point of this journey I raised butterflies from caterpillars at home, documenting their growth and changes before releasing them into the wild.

My working method is to draw my ideas directly into material tests, I think through my making, I have separated this document into the different materials used, in the order in which I first investigated them.



FLEECE

My initial reactions in material to my research ideas were felt vessels. I had limited experience in wet felting and had not attempted three dimensional forms previously and as such the process was a learning curve for myself.

I produced these pods by wet felting some commercially prepared fleece tops I had around a balloon, covering the balloon and fiber with the foot of a pair of tights and then wetting the fleece adding a little soap and working in circular movements with the palm of my hand.

Once the wool had felted I popped the balloon, removed the tights, rinsed the vessel and fulled the piece by rolling in a sushi mat and rubbing with a spoon, then hanging to dry.





I began to consider the abundance of wool as a raw material within my local area, it is literally scattered over the walkways of the South Downs.

It is a versatile, sustainable and low cost material which is I believe overlooked beyond the realms of becoming wool for knitting with, and even then the processes involved in getting a fleece from field to needle are becoming largely forgotten in the face of the ease of industrial process.



I took a trip to the Seven Sisters Sheep Center a local open sheep farm housing many rare breed sheep. The fact that they had rare breeds enabled me to purchase fleeces directly from the farmer.

The rules for fleece sales in the UK mean that anyone with a flock of over four sheep must sell their wool directly through the British Wool Marketing Board (BWMB), unless they have a rare breed exemption. These rules mean a guaranteed sale of fleeces for the farmers, although at low prices but also makes it difficult for small crafters to obtain raw fleeces as the BWMB auction system is overwhelming to those who only require small quantities or single fleeces.

SHEARING STAND
ring demonstrations with
(weather permitting) at:



SHEEP CENTER

The visit to the sheep center was eye opening for me in terms of the business side of the production and sale of fleeces, something I had probably not given enough thought to previously.

On a whim I purchased five raw fleeces, leaving me with a new problem - I would need to learn what to do with them!



PROCESSING FLEECE - A LEARNING CURVE

In my initial excitement at owning a whole raw fleece I quickly scanned the internet for information and promptly placed the whole fleece into the bath tub to soak - stinking out the bathroom and leaving me with a huge unmanageable mass of soaking wet fleece and some really disgusting water. I needed to rethink.





I researched a little further and learnt to 'skirt' the fleece before washing - removing all the obvious dirt and ephemera and really bad condition wool.

I then tried splitting the fleece into smaller portions in buckets - this was more manageable but still far from easy



By placing the wool into net washing bags it made the handling easier, I could manage each bag separately whilst still washing the whole of a fleece. These net bags were the breakthrough in washing the fleece that I needed and was able to establish a routine that worked for me.

SKIRT FLEECE

SEPARATE INTO BAGS

HOT WASH WITH WASHING UP LIQUID

HOT RINSE

WASH AND RINSE 15 MINUTES EACH

REPEAT WASH AND RINSE TWICE MORE

DRY







WORKING WITH THE WOOL



Once the wool has dried, which is a lengthy process that I feel I could still improve upon, it is ready to be carded - essentially brushing the fibers flat in preparation for spinning or felting.

I have handspun the wool using a drop spindle, and prepared an unspun yarn by carding the wool then creating rolags around a large gauge knitting needle and joining the rolags by needle felting.





COLOURING THE WOOL

Whilst I wanted to keep the palette of the work fairly neutral, I found that it was missing that kick of colour that had been present in my initial tests. To address this I decided to experiment with natural dyeing the wool using onion skins.

I collected the outer skins from about 6 white onions and boiled them in water for half an hour, then removed the skins, added the felt and simmered for a further 20 minutes



WET FELTING

The wet felting process is fairly simple but quite labour intensive.

The process is similar whether you are felting flat or 3d.

Begin by layering the brushed wool in opposite directions, 3 layers will give a thin, fine felt.

Put a little washing up liquid and some hot water onto the wool and cover with a fine mesh material.



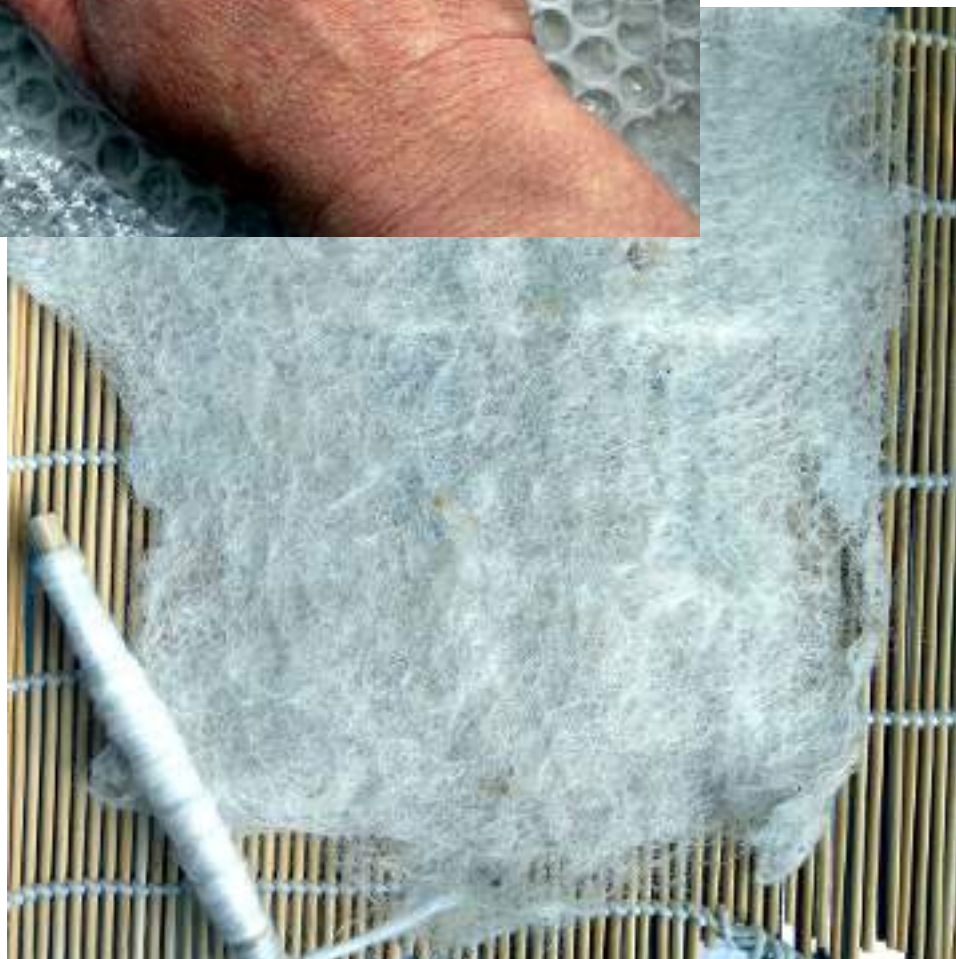
The next stage is to rub the surface in a circular motion to felt the wool, continue this for longer than you think you need, remove the mesh and continue felting with bubble wrap covering the wool.

When the wool is well felted rinse it thoroughly.



The final stage is to 'full' the felt by rolling it in a sushi mat repeatedly.

Then leave the felt to dry.



COMBINING WOOL AND CERAMICS

Adding the felted and spun wool to fired ceramic pieces.

These ceramic forms were not successful so I have used them as test pieces for visualising the addition of wool to my final pieces.

Both the coils and the sheet felt are successful and the addition of the colour from the onion skin dye contrasts well with the smoke fired ceramic.





CLAY

My initial tests in ceramics were based on a combination of the shapes of my cocoon and various nests and seed pods as visual inspiration. this resulted in a shape that I was not entirely happy with and I found that placing the hole to the vessel like a hole to a birds nest made the shape too reminiscent of bird houses commercially available on the gift market, which was not where I was aiming to go.





However my tests with burnishing terra sigillata were successful, as was the smoke firing of these pieces. Therefore I was able to view these initial tests as successes in surface if not in form.



Testing firing knitted Nichrome wire as additions to the clay at green ware. these tests were successful and whilst I did not pursue this process further within this body of work, it is a process I will return to as I am intrigued to see how far one could push the idea.

Nichrome wire is a Nickel Chrome compound and is the same wire used in kiln fixtures.



ADDITIONS IN THE CLAY

In an effort to mimic the materials used in nature for nests, I conducted a series of tests combining straw and clay slip.

These were mixed together and then added to the surface of a leather hard pre-made clay vessel, or used on its own in a plaster mold.

These tests were successful after some practice to get the slip and application right





SMOKE FIRING



I set up a 'kiln' for smoke firing my pieces at home. This consists of a metal dustbin from the DIY store, and a bag of wood shavings from the pet store.

A layer of sawdust is placed on the bottom of the bin and the ceramic pieces are placed on top, packed in with the sawdust and I used straw in some firings also.

A layer of newspaper is used to start the fire and the lid placed on the bin, which will burn for between 24-48 hours













SCALING UP

I began to increase scale, although still unsure on form and still experimenting to find what was working for the project, I felt I needed to increase my scale because I had decided my small scale forms and was struggling to visualise the larger scale pieces.

Whilst neither of these initial forms were completely successful, the string addition with terra sigillata over it worked very well and I continued to incorporate it into other forms



MAKING A CASE MOLD

To make a series of ceramic pieces that were coherent in form, I made a case mold. To begin I made a master in a form that was informed by the cocoon shape I was using and seed pods.

The master was made in reclaimed clay around a core of newspaper, and then a plaster mold was constructed around it. I repeated the process to produce a simple 2 part mold of the cocoon shape also.











Using the two part cocoon mold I produced a series of small cocoons in ceramics. These small cocoons are produced from the same master as the pieces made in polymers and will form part of a single installation hanging piece



BURNISHING

Burnishing in ceramics is a way of preparing the surface of the clay so that it does not need to be glazed. This can be done straight onto the clay surface or onto a terra sigillata slip.

The terra sigillata is prepared using the clay body, soda ash, sodium silicate and water, this mix separates the heavy clay particles leaving a fine burnishable slip.









D100-100
D100-100
D100-100
D100-100
D100-100



To burnish the pieces I re-wet a dry piece, then rub the surface with a spoon until the surface becomes shiny, this step may need repeating a couple of times.

To burnish a terra sig piece a spoon is not necessary and the piece can be burnished by rubbing with a piece of plastic



MAKING AND FIRING A PAPER KILN

I took part in a one day workshop building and firing a paper kiln, this was a very useful and interesting experience.

We began by rolling cones in newspaper and magazine pages for the body of the kiln. These were made by spreading out 5 pages and rolling into a tight tapered cone so that they could fit inside each other. These were then woven into the circular kiln shape.







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The kiln was set alight from the top and burnt down in a slow controlled burn for about 4 hours, then was allowed to cool.

I was surprised by the results from the kiln as i had expected results akin to smoke firing in a bin, however my pieces which had been previously bisque fired remained largely untouched by the firing, however other peoples green ware had fired to bisque in the paper kiln.





POLYMERS

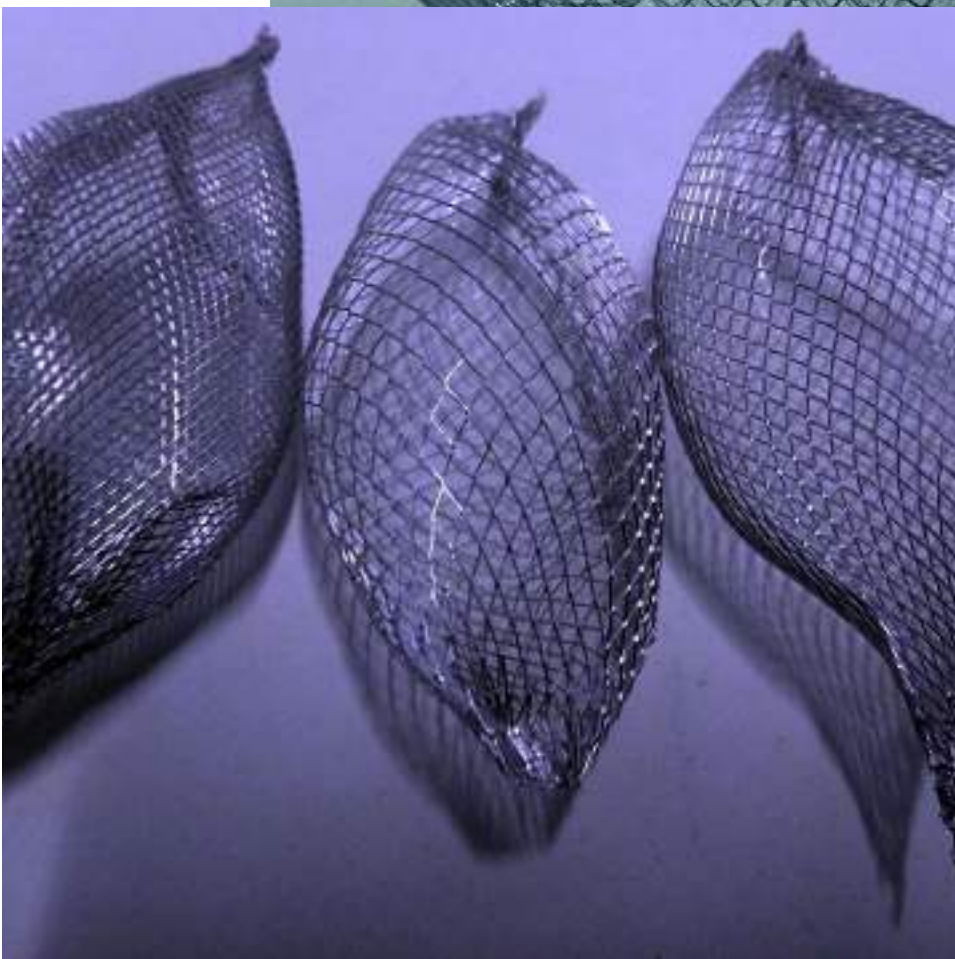
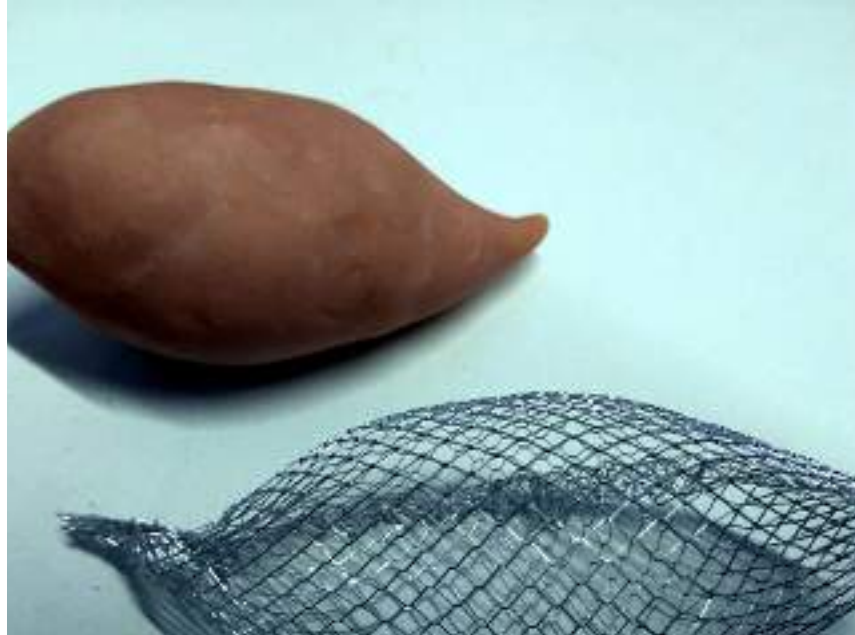
In the polymers workshop I began by creating a simple cocoon master shape in sculpey clay.

Initially I began by molding woven modeling mesh over the master. I then covered the mesh in Jesmonite. These tests worked very well but the process was long and unpredictable so I decided to look for other methods of creating the shape in Jesmonite, and decided on a two part silicone block mold.

Although this mold carried its own set of complications in how to handle the Jesmonite, it would provide me with a means to make numerous copies of the same shape in Jesmonite with different fillers, additions and finishes too the material.

Once the mold was made I needed to experiment with pouring and painting the Jesmonite into the mold, adding different amounts of thixetrope to the mix, and using various strengtheners such as fiberglass, coaxial fabric and human hair.

The most consistent results were achieved by painting on an initial layer, placing a strengthener in and then closing the mold and pouring a final inside coat.









Mixing and testing different additions to Jesmonite

Adding a layer of hair to the inside of the mold painted with a first coat of Jesmonite to strengthen the cocoon.



Documenting
the material
used in test
tiles.



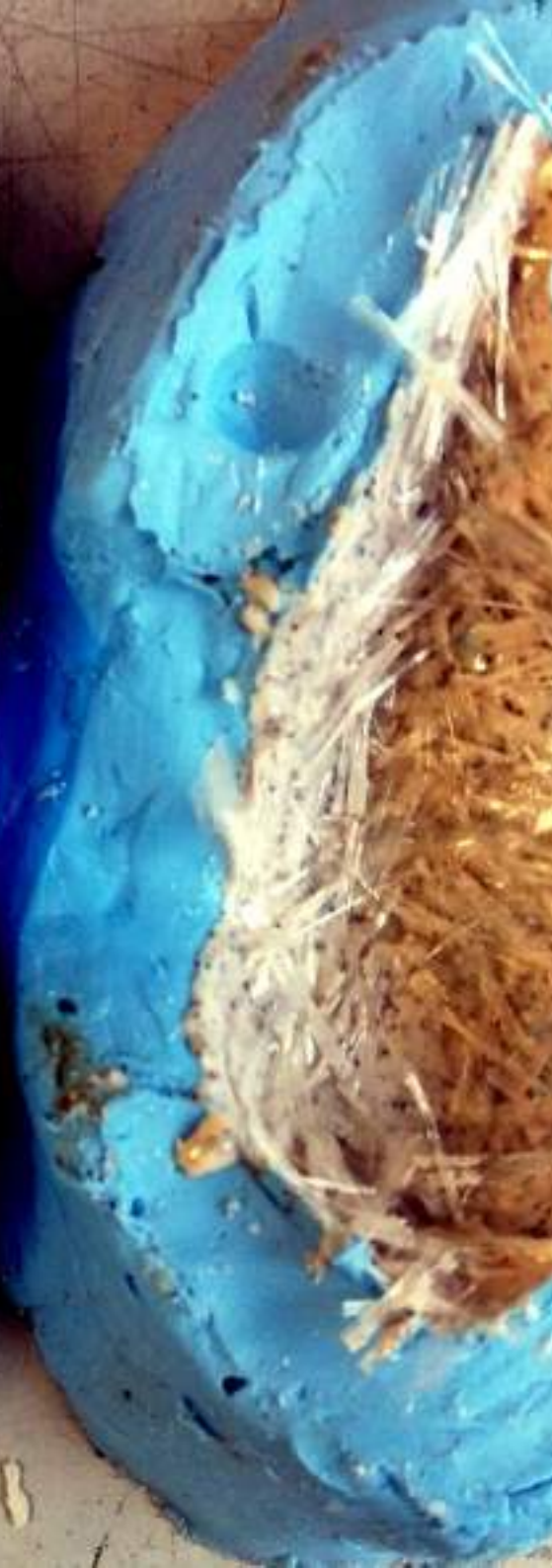
Weighing, measuring and mixing the Jesmonite for the cocoon molds.

My ratio for this was 20g liquid to 50g powder, one drop of thixotrope, plus a spoonful of filler.











Further mold making - I decided to expand a form from my ceramics, the exposed coil 'nest' pot into polymers.

I created a mold and experimented with Jesmonite and resin

Again I made this as a two part block mold from a Sculpey master.

Adding a pour hole at the base of the mold.



I experimented with adding straw, wool and metal filings to the resin.



The batch of Jesmonite I was using seemed to be a more bubbly batch than is usual, this was affecting many people in the workshops, however for my work I am happy with the bubbles in the work as it fits the theme



In metals I undertook the silver project, consisting of a one day experimental workshop introduction to silver, and an extended project working towards a small show held on campus.

The workshop was extremely useful to me in terms of allowing me to experiment freely with a new and typically expensive material, and allowing me to realise that pulling your own wire is not worth the expended effort and therefore in the case of wire it is worth buying, not making.









NESTS AND COCOONS

Furthering my investigations into
on natural forms, whilst exploring
and limitations of working with s

Cat Arnarson





COPPER COCOON

As part of my silver project I began experimenting with mixing metal filings into resin to cast my cocoons, the effect from this was very successful. However I still wanted to make a more solid metal cocoon.

With advice I chose to make this from sheet copper using the hydraulic press, hammering the shape out further into a wooden former, and then soldering the two pieces together.



I have a tendency to underestimate metalwork processes and therefore what I had envisioned as a simple job became one of the most complicated tasks of the project.

The resulting piece though is I feel worthy of the effort involved and I am very pleased with it.

I also produced my cocoons cast in pewter in my silicone mold.

I then flocked the insides of these in a range of colours to fit with my projects palette















CONCLUSION AND FINAL PIECES

This project has been a journey of material discovery for me, at times I have let this be of detriment to the idea behind the work. I do not however feel that this is wholly a negative element, I have been aware for some time that material and process are of utmost importance in my work and this project has allowed me the opportunity to explore many materials and processes at my own pace and on my own initiative.



My pieces do invoke the essence of nature and the protective forms therein.

They allow the viewer to slow down and contemplate the protective presence of the natural world and the forms within and to take a piece of this home with them to meditate on and remember as desired.

