



TALIA LAIKIN

Exploring the practice of meditation
through design and craft

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Meditation was long seen as a new age practice originating in the east and adapted by alternative cultures. However developments in research have resulted in popularised acceptance of meditation as a means of improving mental wellbeing .

Whilst meditation can be practiced anywhere, designed objects and environments can encourage more regular practice and more efficient engagement. This project explores ways in which design and craft practices can be used to achieve a welcoming and intuitive approach to meditation for beginners and those suffering with mental health issues.

My own experiences with mental illness have largely inspired this project. By working on a topic I am truly passionate about, my work aims to connect with people on an emotional level. When tackling a topic such as mental health it is important to create an authentic response and understand real life implications for the audience I'm trying to communicate with.

From a young age I have struggled with an eating disorder, which has led to depression, anxiety and mild addiction in recent years. I have done various therapies, all which only benefited in the short term and have never had a huge impact on my life. I decided to finish my second year of university early in order to try a different approach, starting a three-month programme that uses a holistic approach combining traditional therapies with meditation. I found this approach enormously helpful and noticed a huge change in myself. On leaving treatment and returning to university life I knew I would face challenges. Living in a less nurturing environment and having to switch my focus away from mental wellbeing to completing my degree. I began to consider ways I could utilise my degree to help tackle issues I had predicted and was already beginning to experience. and that others in different situations would also face.

With expectations to be in university, socialise and manage daily tasks it became harder to fit in meditations every morning, like I had been doing for the past three months. I felt demotivated by my environment and had anxiety about missing university. With increased work and pressures I felt old habits and coping mechanism slowly creeping back in. Consequently, even though there was a larger need to continue meditations, they got harder and harder to do.

Equally my new home environment felt like a less supportive and a less nurturing environment. I sensed that even the smallest change in the environment or reminder of a calm welcoming space would help. The difference in the two circumstances were that in treatment there was a set time for meditations and a room that had sofa's, floor space, matts and cushions where we could complete the meditations. This relaxed and encouraging environment is sadly not the reality for many others who are considering this approach. I began researching existing products that might help with this. However from my research I found that most existing products only supported the traditional seated posture. From my experience in therapy, having practiced mediation in a group setting, this was not the way that people suffering with mental illness chose to sit. The postures were largely dependant on their mental state and bodily needs. A women suffering with anorexia, who'd developed osteoporosis needed cushions to support her body and a blanket for warmth. Some lay down; others sat upright, some sat on the floor and others on chairs or sofas. The idea that each person could choose intuitively how to sit helped ease each person into mediation rather than limiting them to one position.

From here I chose to complete my own investigation into ways to tackle these issues through craft. My work aims to encourage and help people feel the benefits of meditation through crafted objects and furniture. I have completed research into posture and breathing and completed an 8-week study on an anonymous woman suffering with an eating disorder, depression, anxiety and addiction to inform my design process. Documentation of her posture and looking for links between mood and posture, and assessing her needs during daily meditations opened various pathways to begin designing and crafting objects. These included reducing physical symptoms of mental illness, looking at channelling breathing patterns and reducing anxiety, introducing elements of nature into the design and material properties, furniture that allows different positions for meditation and textiles that can be used for comfort and provide an easy way to meditate in small spaces.

“Part of the challenge is how do you make meditation, which is an intangible exercise, tangible?”

Rich Pierson, co-founder of Headspace

BENEFITS OF MEDITATION

Meditation can lead to complex benefits in wellbeing, compassion and personal integrity. The primary benefits of meditation are inherent to the nature of the act itself:

The act of attending

The act of abstinence

The act of routine practice

Heightened perceptual receptivity

Pure awareness

Enhanced concentration

"It is fascinating to see the brain's plasticity and that, by practicing meditation, we can play an active role in changing the brain and can increase our well-being and quality of life,"

Britta Holzel

Influences on the body

Reduced blood pressure

Lower heart rate

Deeper calmer breathing

Lower risk of heart attacks

Reduced intensity for chronic pain

Influences on the mind

Left sided frontal brain activity increases - associated with positive mood

Increased grey matter density in the hippocampus regions resulting in increased regulation of emotions, increased self awareness and compassion

Improved memory

Better regulation of emotions in response to negative stimuli and therefore greater emotional resilience

Types of meditation:

Mindfulness meditation

Breathing exercises

Loving Kindness

Visualisation

Guided Imagery

Body scan

Progressive muscle relaxation

Self massage

Affirmations

Mantra

Effortless transcending

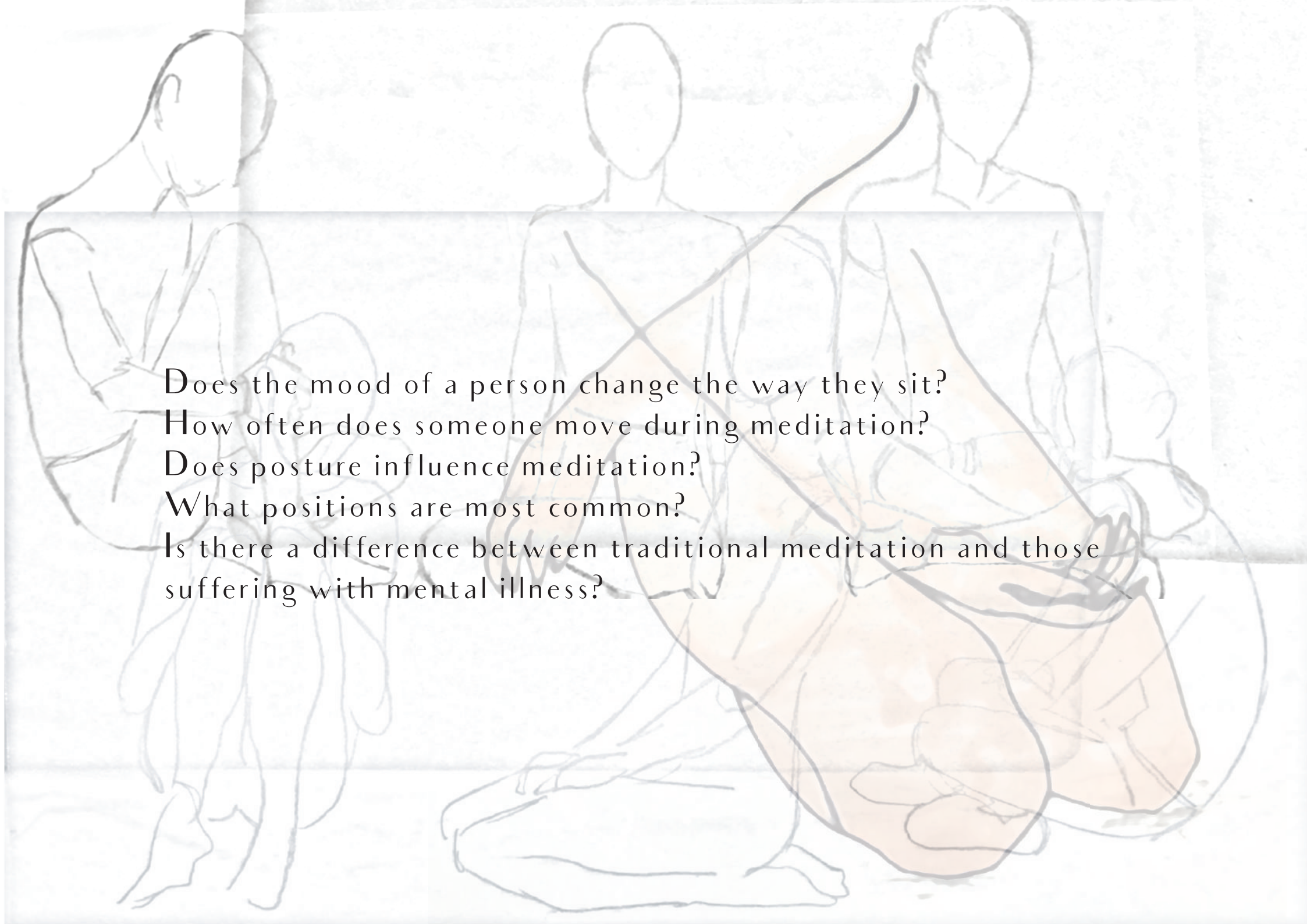
Brainwave meditation

Self massage

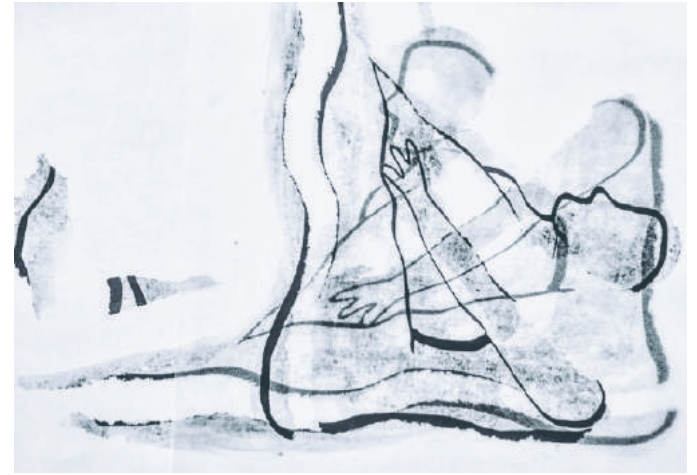
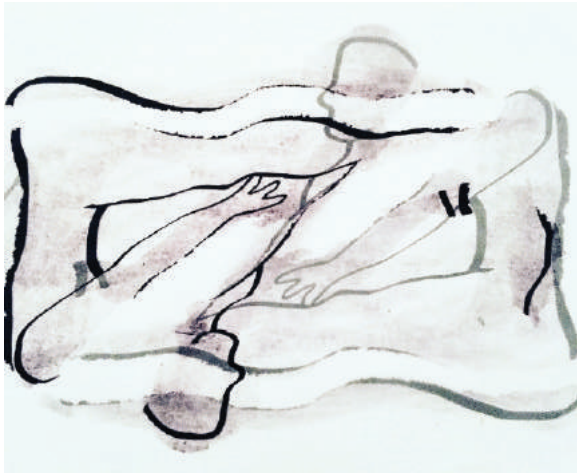
RESEARCHING BODY POSTURE



Life Drawing



Does the mood of a person change the way they sit?
How often does someone move during meditation?
Does posture influence meditation?
What positions are most common?
Is there a difference between traditional meditation and those suffering with mental illness?



Distorted Postures



Henry Moore Inspired Maquettes



Henry Moore Inspired Maquettes

8 WEEK MEDITATION CASE STUDY

8-WEEK MEDITATION CASE STUDY

(16th December 2016 -12th February 2017)

'Participating in an eight week mindfulness meditation program appears to make measurable changes in the brain associated with memory, sense of self, empathy and stress '

Dr Sarah Lazar
MGH Psychiatric Neuroimaging Research Program, Harvard Medical School

Inspired by research carried out by Harvard affiliated researchers, this study looks at the mood and posture of an anonymous woman suffering with an eating disorder, depression and anxiety. Through this study I wish to gain insight into the requirements that a piece of furniture should embody in order to meet the needs of people suffering from mental illness. The study has been taken over an 8-week period, a length that is proven to change the structure of the brain through daily meditations. I hope to see an elevation in mood and will be looking for links between mood and posture and how each posture can be supported in a single piece of furniture. The piece should not dominate the meditation but should act as a tool to be utilised and simplify the meditation for people who may struggle with simple daily tasks. During the study I will be looking for patterns and shapes in the postures that are reoccurring and will be introducing different tools that may aid the meditation. I will analyse how effective these tools are and if they become important to the meditations.

Location of meditations:

Small bedroom (wall space, floor space, bed for backrest, bed available)

larger lounge area (wall space, floors space, chairs available)

Time of meditations

8am meditations during the week

(I expect this to change, depending on mood and extenuating circumstances)

weekend meditations have no set time

(whenever the participant chooses)

No photographs, anonymous participant (age 25, female)

Quick sketches so meditation is not disturbed/delayed

Tools for meditations:

week 1 two cushions provided

week 2- blanket introduced

week 3- introduce prototype/ first model of back rest for 1 day (get feedback)

week 4 painting breath meditation introduced for weekend meditations

week 5- 1 day trial of plywood backrest

week 6

week 7

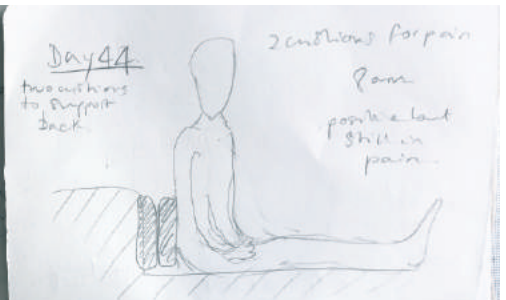
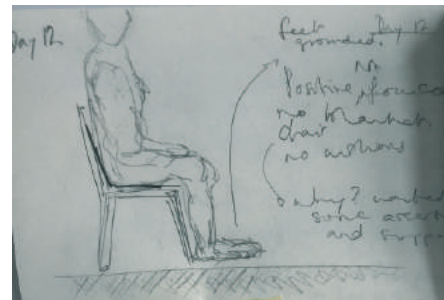
week 8- 2 day trial of plywood back rest

8 week study

Week:
1-4

8 week study

Week:
5-8



WEEK 1	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
TIME OF MEDITATION	8 am	5pm	8am	9 am	NO MEDITATION	NO MEDITATION	8 am
POSTURE	Seated floor position against bed, curved slouched back, legs out straight	Seated upright floor position against bed straight back, legs out straight	Seated floor position, upright against a wall, legs crossed	Seated floor position against bed			Seated upright floor position against bed, legs out straight
TOOLS USED E.g. cushion, blankets, candle	Cushion underneath bottom	Cushion for lower back and underneath bottom	Cushion for lower back				Cushion to support lower back
MOOD, BODY SENSATIONS, COMMENTS ON MEDITATION	Low energy, unhappy, lack of focus	Anxious, unfocused, body aching from binge/purge	Tired, focused on meditation, body feels tight and heavy	Tired, anxious, low mood	Anxious, restless, self destructive	Anxious, lack of focus	Anxious, drained, eating disorder urges high

WEEK 2	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
TIME OF MEDITATION	8 am	8am	8am	5pm	8 am	6pm	8am
POSTURE	Seated upright floor position, against bed, legs out straight	Lay down on the floor	Upright crossed leg seated position	Seated upright floor position, legs slightly bend	Upright seated posture on a chair, feet flat on the ground	Crossed leg seated position on the floor	Upright seated position against the wall, one leg straight out other bend
TOOLS USED E.g. cushion, blankets, candle	Cushion for lower back and underneath bottom	(BLANKET INTRODUCED) Blanket over upper body and cushion underneath the head	Blanket over shoulders, cushion for bottom	Cushion for lower back and underneath bottom	Chair	Blanket over legs and cushion for the floor	Cushion for upper back and on the floor
MOOD AND COMMENTS ON MEDITATION	Optimistic, start of a new week	Positive but extremely fatigued	Positive, engaged, calm	Positive, calm	Positive but unfocused, needed to assert body to focus	Low energy, negative headspace	Focused, enthusiastic

WEEK 3	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
TIME OF MEDITATION	10am	7pm	8am	8 am	8am	8am	8am
POSTURE	Crossed leg seated position on the floor	Seated position against the wall, slouched back	Lay down, in bed	Seated floor position, slouched back	(BACK REST PROTOTYPE) day (trial) upright seated position	Upright seated position against wall, slight movement in legs	Upright seated position against wall
TOOLS USED E.g. cushion, blankets, candle	Blanket wrapped over shoulders and back	Cushion underneath bottom	Pillows to elevate the neck, blanket and duvet	Cushion underneath bottom	Blanket over the shoulders	Cushion for lower back and bottom	Cushion for lower back and bottom
MOOD AND COMMENTS ON MEDITATION	Focused, low mood	Tired, not keen to meditate, eating disorder behaviours previous night	Extremely low mood, post binge/purge and hung-over, short meditation	Positive, encouraged by therapist to meditate	Positive mood, backrest used, feedback was positive in terms of shape but it needs more stability	Positive mood, back pain	Positive mood, anxiety kicked in during meditation, had to stop half way through

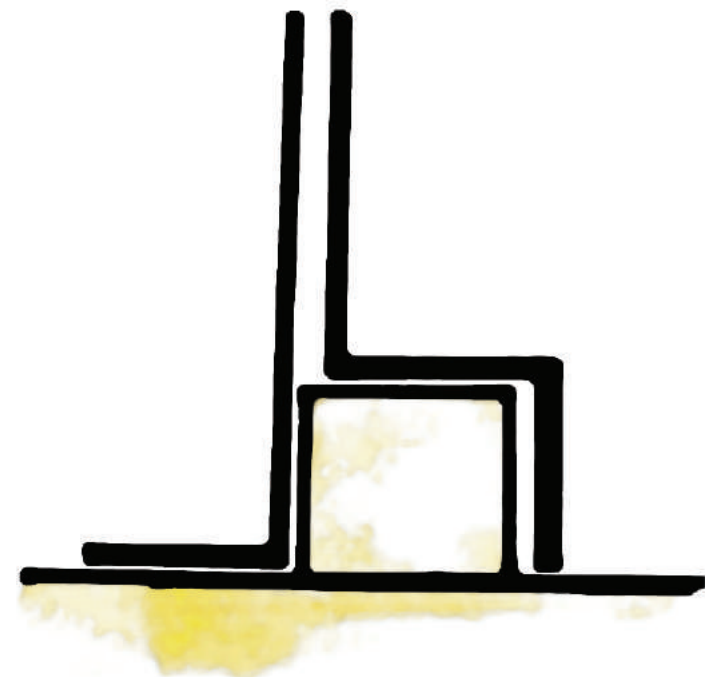
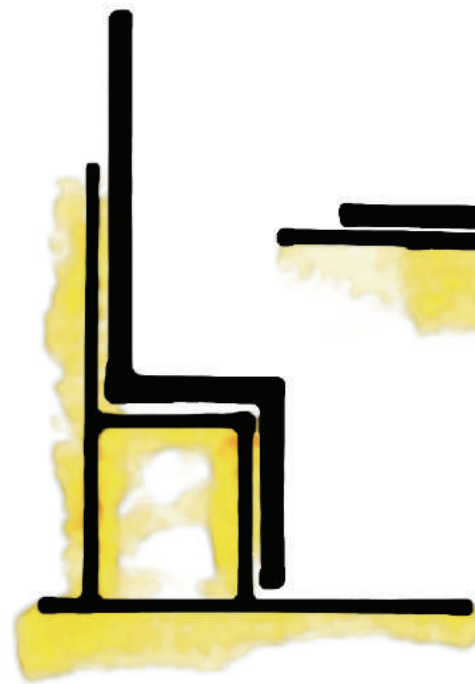
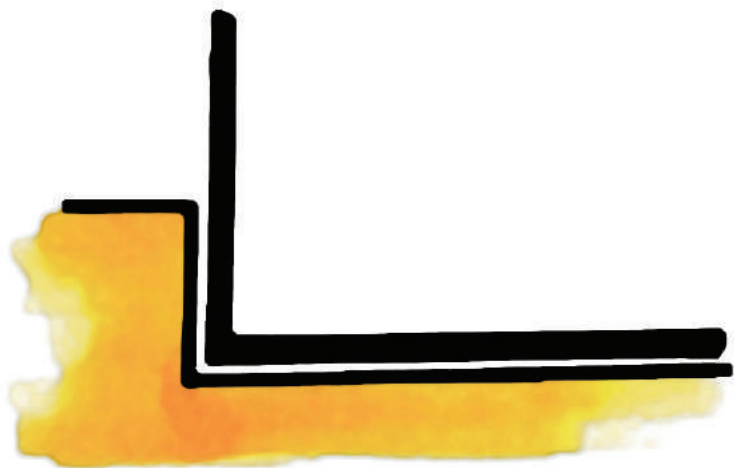
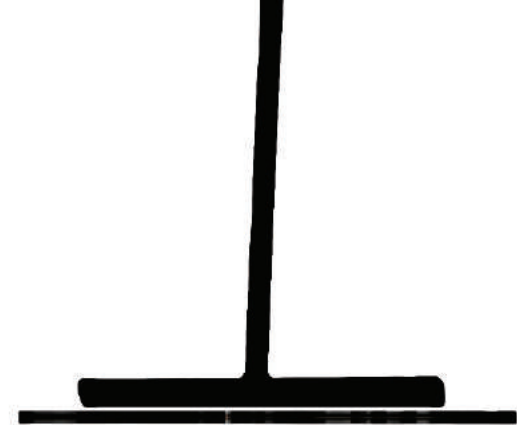
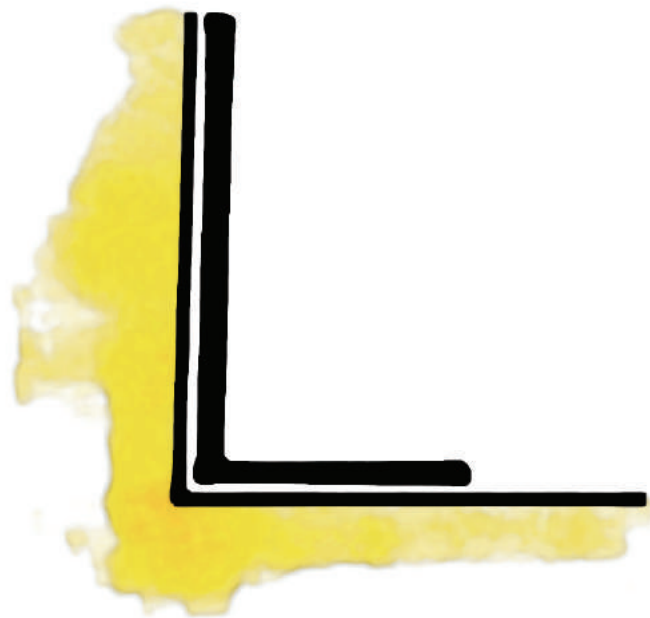
WEEK 4	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
TIME OF MEDITATION	8am	6pm	6pm	NO MEDITATION	NO MEDITATION	1pm PRAINING BREATH MEDITATION	6pm PAINING BREATH MEDITATION
POSTURE	Seated crossed leg position on the floor	Lying down on the floor	Seated upright position against wall			Standing, free movement	Standing, free movement
TOOLS USED e.g. cushion, blankets, candle	Cushion for the bottom	Cushion used to support the head	Cushion used for bottom, blanket around shoulders			Magic cloth, paint brush, water bottle	Magic cloth, paint brush, water bottle
MOOD AND COMMENTSON MEDITATION	Negative mood, spaced out	Tired, anxious, eating disorder is strong	Negative headspace due to strength of eating disorder	NO CONTACT eating disorder strong, depression kicking in	NO CONTACT Eating disorder strong, depression kicking in	Low mood, high anxiety	High anxiety, high energy

WEEK 5	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
TIME OF MEDITATION	8am	8am	8am	8am	8am	1pm	6pm
POSTURE	Seated crossed leg position on the floor	Seated upright position against plywood backrest	Seated upright position against the bed	Laydown on the floor	Laydown on the floor	Seated crossed legs position on the floor against bed	Seated crossed leg position on the floor against bed
TOOLS USED E.g. cushion, blankets, candle	Cushion underneath bottom	PLYWOOD BACKREST INTRODUCED FOR 1 DAY	Cushion for lower back and underneath bottom	Cushion used to support head, blanket over whole body	Cushion used to support head, blanket over whole body	Cushion to support lower back and underneath bottom	
MOOD AND COMMENTS ON MEDITATION	Low mood, tired, keen to meditate	Good mood, calm. Found plywood rest supportive helps keep posture assertive	Feeling productive and positive	Tired, feeling down and scared of eating disorder urges	Tired and anxious	Strong eating disorder urges, trying to focus	Positive focused

WEEK 8	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
TIME OF MEDITATION	8am	6pm	8am	8am	6pm	12 pm	6pm
POSTURE	Seated upright crossed leg position	Seated upright on chair	Seated upright with legs straight out in front	Seated on top of plywood,	Laydown on the floor	Standing	Seated upright position on the floor against a wall
TOOLS USED E.g. cushion, blankets, candle	Cushion underneath bottom	Chair	TRIAL OF 4 LAYER PLYWOOD AS BACKREST	TRIAL OF 4 LAYER PLYWOOD AS SEAT/STOOL Cushion underneath bottom	Cushion to support head and neck, blanket over whole body	Magic cloth, paint brush, water bottle (Testing new water bowl and brush)	Blanket wrapped around whole body, cushion to support lower back and bottom
MOOD AND COMMENTS ON MEDITATION	Good mood, Focused	Lack of focus, needed to feel feet flat on the ground to focus	Good mood, felt the back rest aided good posture and helps to focus during mediation	Felt grounded, focused, good mood	Low mood, tired	Requested to do this meditation, calm/unfocused	Positive, focused

WEEK 7	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
TIME OF MEDITATION	8am	8am	8am	8 am	6 pm	5pm	6 pm
POSTURE	Laydown on the floor	Upright seated position against bed, legs stretched out	Upright seated position against bed, legs stretched out	Seated crossed leg position against bed	Standing	Upright Seated position against wall with legs out straight	Standing
TOOLS USED e.g. cushion, blankets, candle	Cushion under neither upper back and another cushion to support head	2 Cushions to support lower back	Cushion to support lower back and underneath bottom, blanket wrapped around body	Cushion to support lower back and underneath bottom	Magic cloth, paint brush, water bottle		Magic cloth, paint brush, water bottle
MOOD AND COMMENTS ON MEDITATION	Calm mood but in a lot of back and neck pain	Positive but in a lot of pain	Positive, calm, in less bodily pain	Positive, focused, body feeling comfortable	Feeling angry and anxious due to being post binge/purge in the morning	Feeling down but calm	Lack of focus, didn't feel like sitting down to meditate

WEEK 6	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
TIME OF MEDITATION	8am	7pm	8am	8 am	8am	12pm	7pm
POSTURE	Seated upright position with crossed legs	Laydown on the floor	Seated upright position against bed with legs out straight	Upright seated position against bed with legs out straight	Upright seated position against bed with legs out straight	Seated crossed leg position	Upright seated position against bed with legs out straight
TOOLS USED e.g. cushion, blankets, candle	Cushion underneath bottom	Cushion used to support the head, blanket over whole body			Cushion to support low back	Cushion underneath Bottom, blanket wrapped around upper body	Cushion underneath bottom
MOOD AND COMMENTS ON MEDITATION	Positive mood, focused	Low mood, very anxious, eating disorder extremely strong	Post binge/purge, body hurting and feels extremely tired	Low mood, low energy	Low mood, negative headspace, heavy body and tired	Experiencing negative feelings but Focused	Feeling empty and emotionless



Concluded Postures
Line Drawings

ANALYSIS AND CONCLUSION:

Throughout this 8-week meditation study I have found various patterns in the way the participant chose to complete her meditations dependent on mood and factors directly relating to mental illness and eating disorder behaviours. As predicted due to reflections on my own practice completing a traditional seated meditation posture was not always desirable. The participant and myself spoke about how on days that we were feeling extremely low, highly anxious or were experiencing eating disorder behaviours we benefited from a more relaxed posture or needed support in the form of cushions or a blanket. These options helped the participant to choose different positions in various parts of the room that gave her ways to intuitively complete each practice. Throughout the 8 weeks I introduced a prototype backrest of my developing bench to gain feedback on the shape and form. The feedback was largely positive. The first prototype with 3 layers of plywood seemed a little unstable and therefore I added another layer to the second prototype. This was much more conducive to the participants meditation practice.

On various days, when anxiety was high, the participant struggled to complete a seated meditation. To combat this I devised a meditation that uses water to paint onto an absorbent, reusable fabric. The fabric turns black on areas where the water is absorbed. The marks slowly fade after 10 minutes. After testing on both the participant and myself I found the somewhat transient process extremely appealing. This meditation focuses on breath and transferring the movement of each breath to the fabric. This calms the mind and relaxes the body, releasing pent up energy through the action of painting and movement. Using the process of connecting body and mind the participant began to feel more grounded. The participant commented that because the marks on the fabric fade, she was able to feel less judgemental about the way she was painting and reminded her of tools she was learning in therapy at the time of the study.

OUTCOMES:

After reflecting on the results of this study, thinking back to previous experience in group meditations and my own current practice I have been able to consider some areas that can be tackled through crafted objects. There is a clear need for a reduction in physical symptoms of mental illness before beginning a meditation or to help induce a calmer state throughout the day, a need for a seating area to accommodate different positions, comforting blankets and cushions and an area that will provide a non-seated meditation activity.

HELD OBJECTS

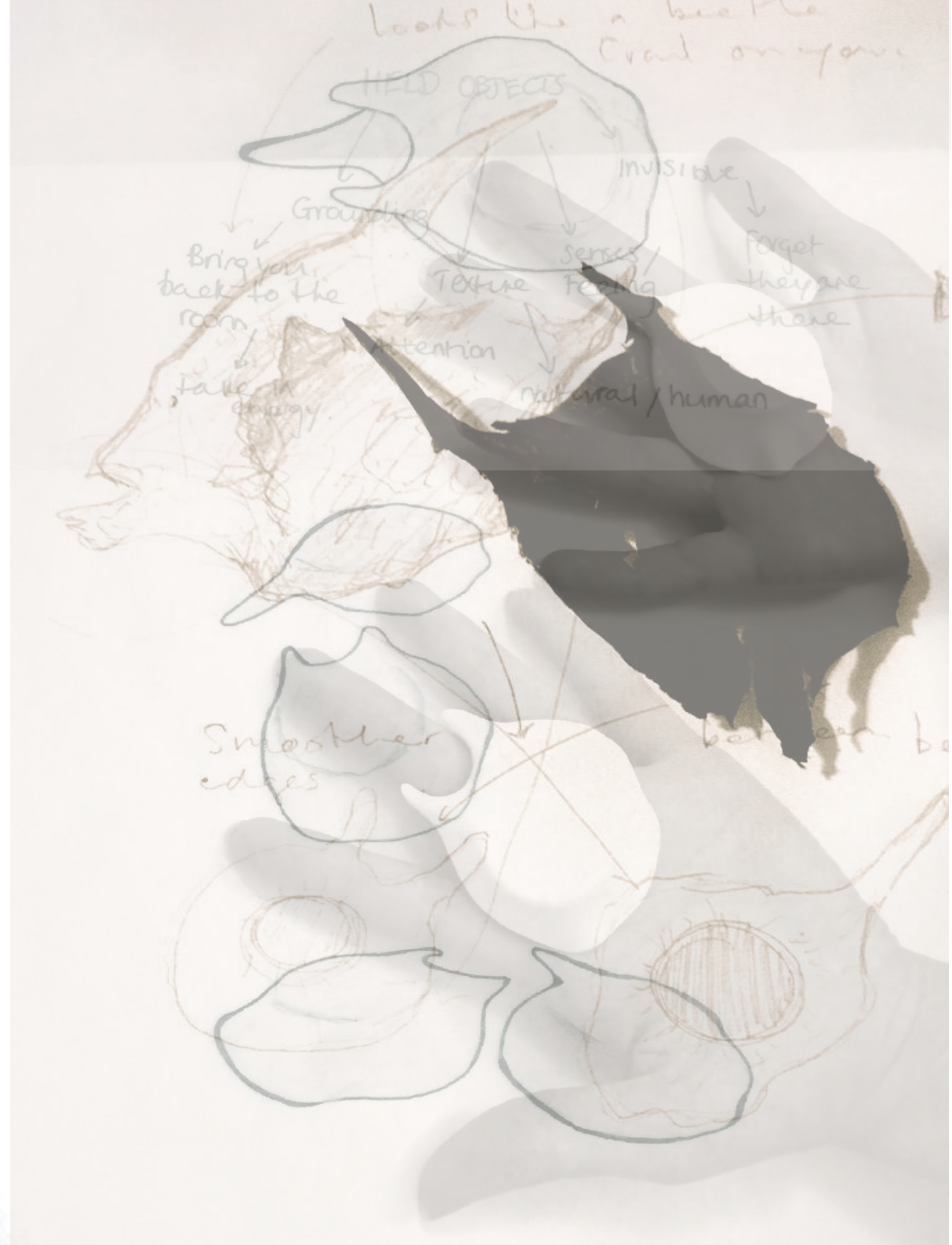
"The effect on sickness of beautiful objects, on variety of objects and especially brilliancy of colours, is hardly to be appreciated. Such cravings are usually called the "fancies" of patients but these "fancies" are the most valuable indication of that which is necessary for their recovery. People say that the effect is only on the mind. It is no such thing. The effect is on the body too. Little as we know about the way in which we are affected by form and colour and light, we do know this: that they have an actual and physical effect. Variety of form and brilliance of colour in the objects presented to patients are an actual means of recovery "

Florence Nightingale





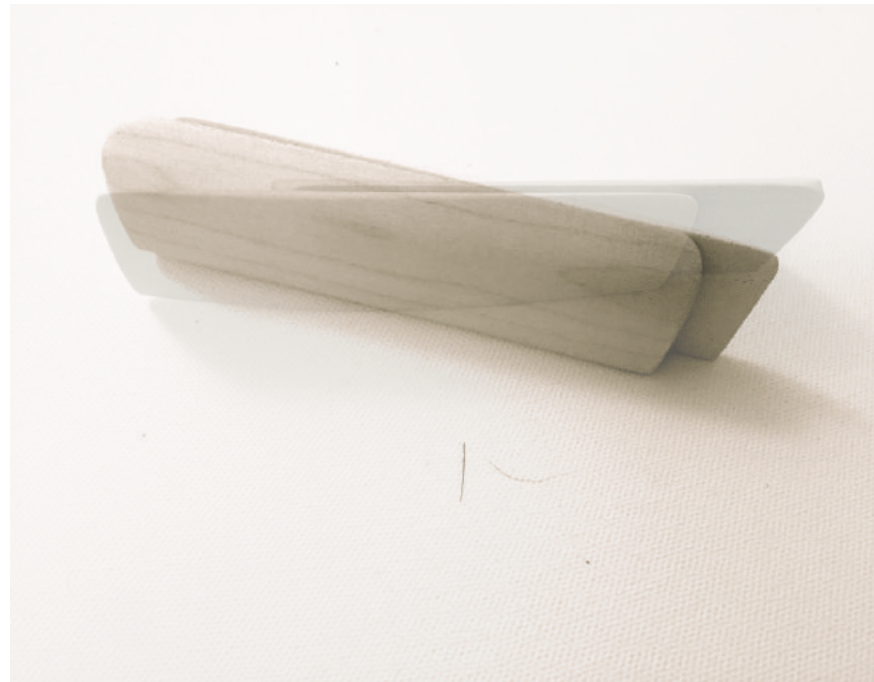
These object inspired by seaweed found on Brighton beach are designed to target the hands and eyes, two highly receptive parts of the body, to promote a more relaxed state throughout the body and mind. They can be used during meditation or simply be held throughout the day in times of stress and anxiety, to help induce a grounded mind-set.





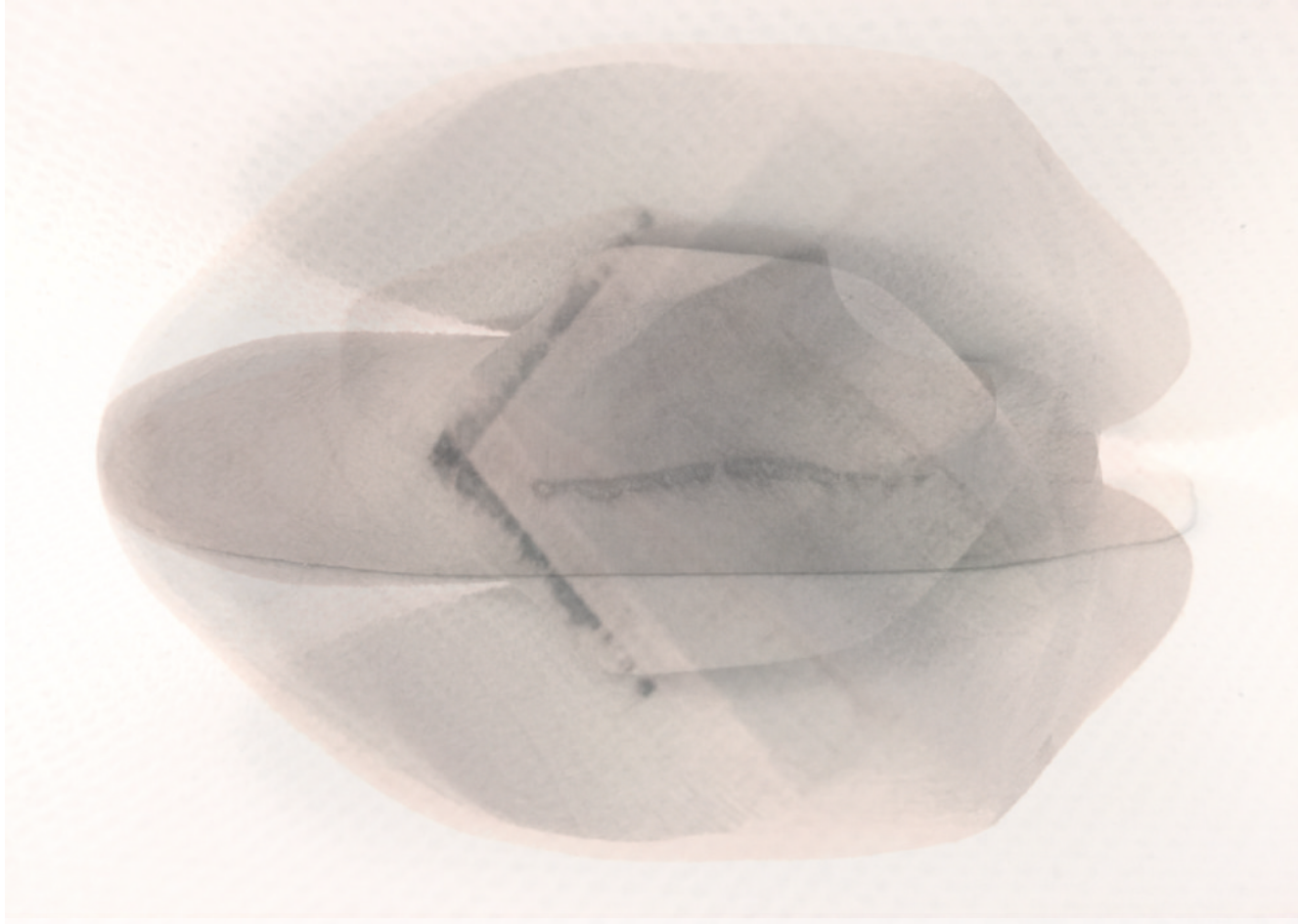


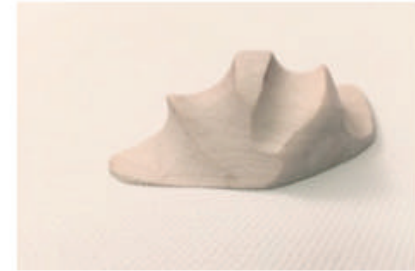
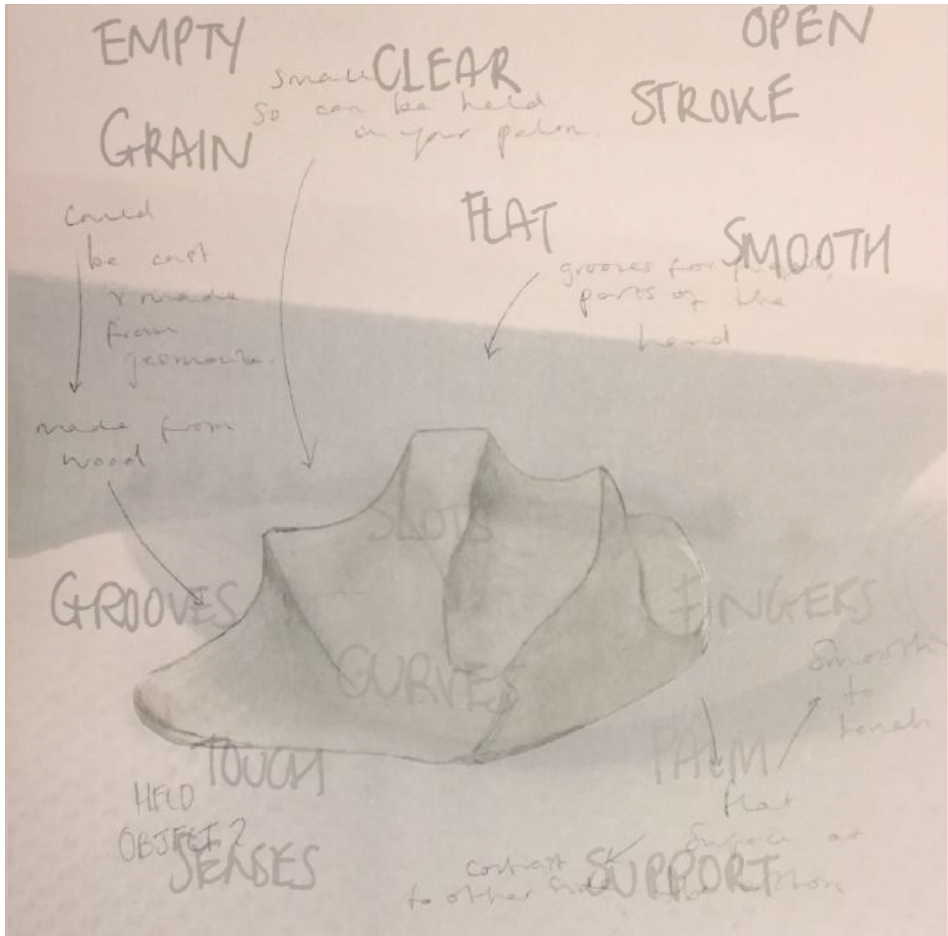
Physical symptoms of many mental illnesses can be significantly disruptive. Hands are affected by anxiety in a variety of ways, and in some cases these issues can be significant enough that they prohibit suffers from completing daily activities, including meditation. These objects aim to stabilise shaking, tremors and fidgeting.









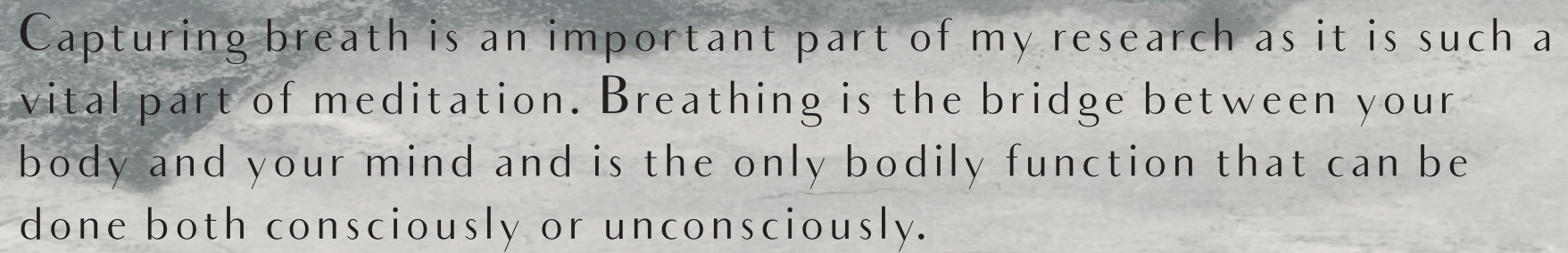




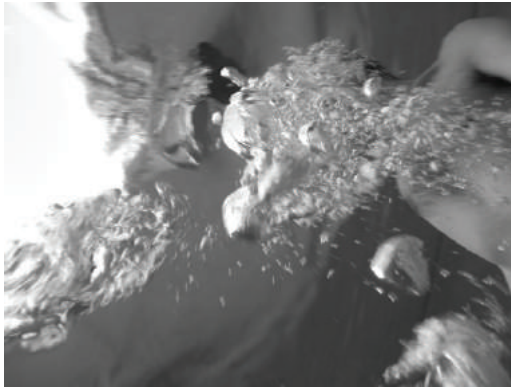
EXPRESSING AND CAPTURING BREATH



Capturing breath is an important part of my research as it is such a vital part of meditation. Breathing is the bridge between your body and your mind and is the only bodily function that can be done both consciously or unconsciously.







I have used underwater imagery to capture the relaxation phase of breathing after an acute episode of anxiety and explore how breathing can be affected whilst suffering with mental illness.

Anxiety causes a variety of breathing patterns from hyperventilation (fast breathing) to an overwhelming feeling of not being able to catch your breath. It can also cause tightness in your chest with a feeling of claustrophobia, light headedness, dizziness as well as tetany. This is an involuntary contraction of muscles due to low levels of carbon dioxide as a result of the hyperventilation.

Being underwater encourages slow regular breathing thereby helping to restore the bodys status quo.







PAINTING BREATH MEDITATION

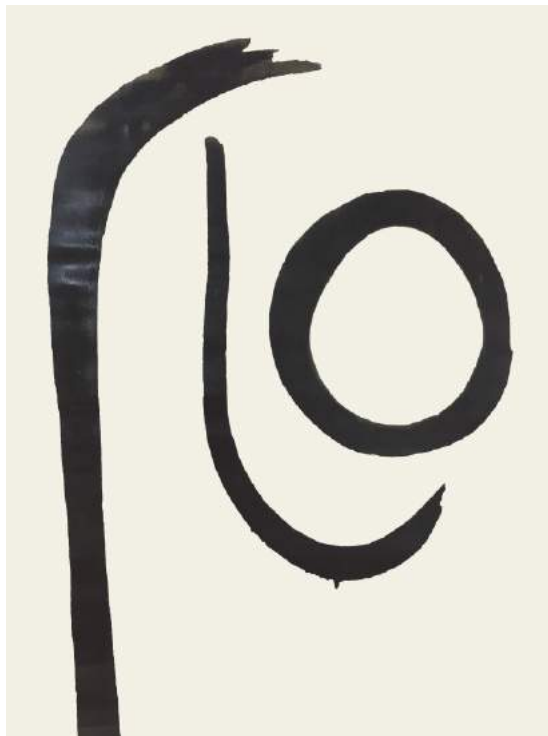
These crafted objects have been grouped together to provide the tools for a process-based creative meditation. The aim is to induce a meditative state and release energy from the body by painting in synchronisation with breath and in turn reduce anxiety.


Handcrafted brushes, made from a variety of naturally dyed woods, and small bowls work as the tools to transfer water onto the fabric. These have been placed on a platform at a low level. The act of bending down, choosing a brush, dipping the brush in water and then painting the breath create a ritualistic experience that can help to refocus the mind.





The fabric used to create the canvas plays an important roll in this meditation. It turns black temporarily when in contact with water and slowly fades within a ten-minute period. The meditation becomes a more transient process, which can help the user be less judgemental of the marks being made.





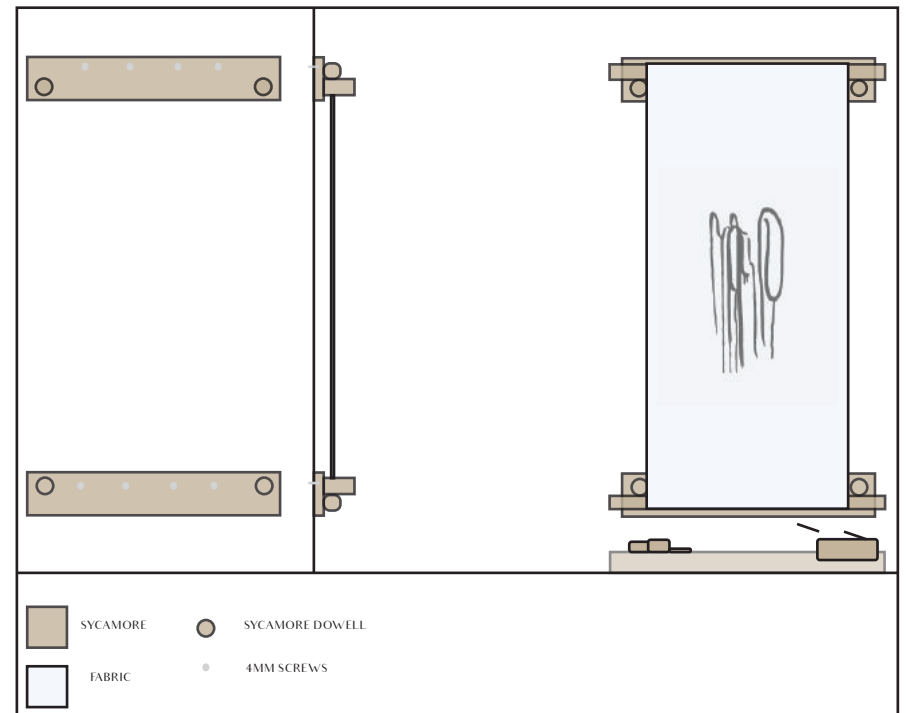
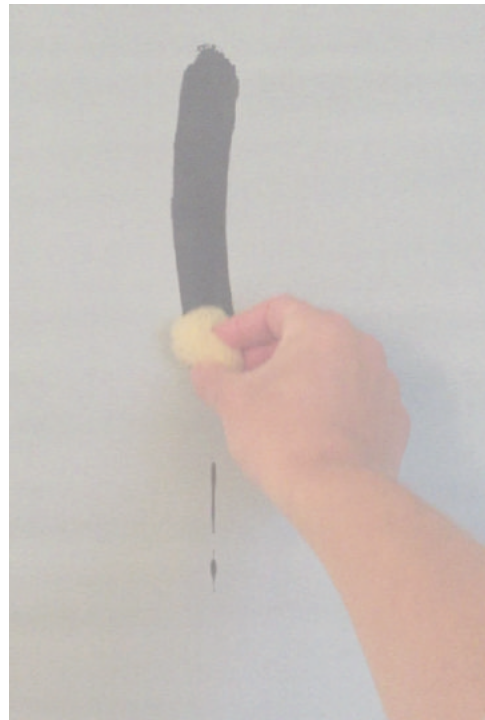
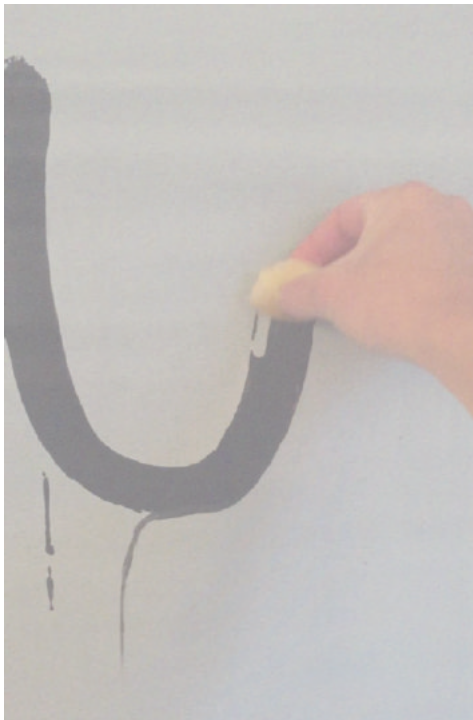
Become aware of the process
Do not worry about end results
Engage with a creative activity
Be free from judgements or self-criticism
Fully immersed in the present moment

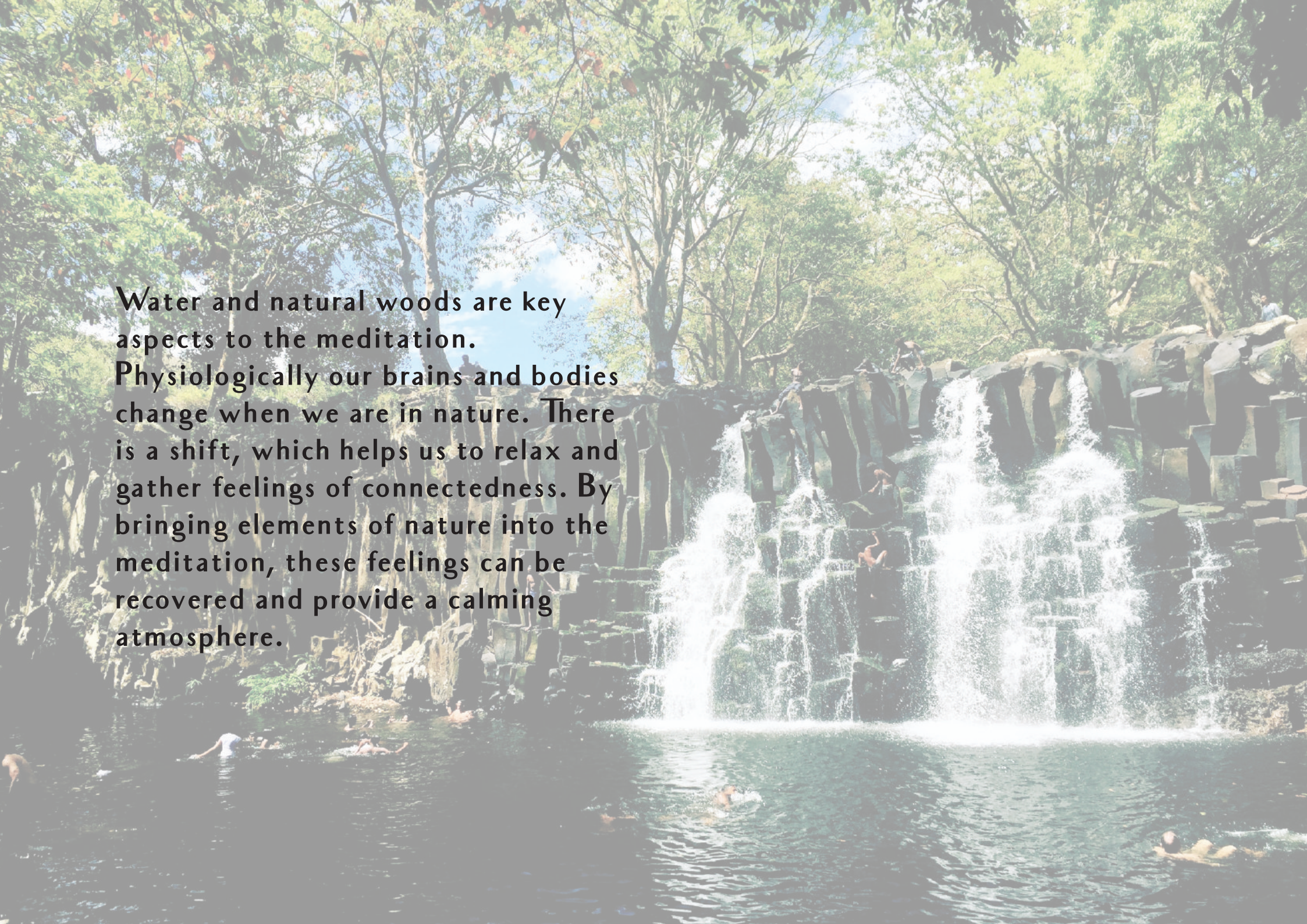




Process and Material Research

Creative expression plays a vital role in healing and coping with mental health. Art can be used to reduce stress levels and deter the mind from usual thoughts along with the production of dopamine, which increases drive, focus and concentration.





Water and natural woods are key aspects to the meditation. Physiologically our brains and bodies change when we are in nature. There is a shift, which helps us to relax and gather feelings of connectedness. By bringing elements of nature into the meditation, these feelings can be recovered and provide a calming atmosphere.



PAINTING BREATH MEDITATION

I'd like you to pause.

Take a deep breath in for 5 seconds. Hold this breath for 3 seconds and release for 5.

You may choose to sit or stand depending on how you feel. Either is ok just really feel your body in contact with the ground underneath you.

Now place your hands on your stomach and take 3 deep breaths, noticing your stomach rising and falling with each in and out breathe.

When you feel comfortable, pick up one of the brushes in front of you. It is important not to judge your choice of brush simply choose whichever feels right for you in this moment.

I'd like you to breathe in for a count of 5, hold for 3 and breathe out slowly.

Let your breath return to its natural rhythm and when you feel ready take the brush and dip it into the water. Begin to paint the blank page with each breath.

Let your brush strokes move naturally in rhythm with your breath.

Continue for a few minutes, your mind may wander. This is ok, simply bring your attention back to the breath and to process of transferring your breath onto the surface in front of you.

When you feel ready, take your last deep breath in and on the outbreath place the brush back down.

You will notice some of your earlier marks starting to fade. You may choose to watch closely, focusing your attention on the fading marks, or if are ready close your practice and take this calm focus on with you into your day.

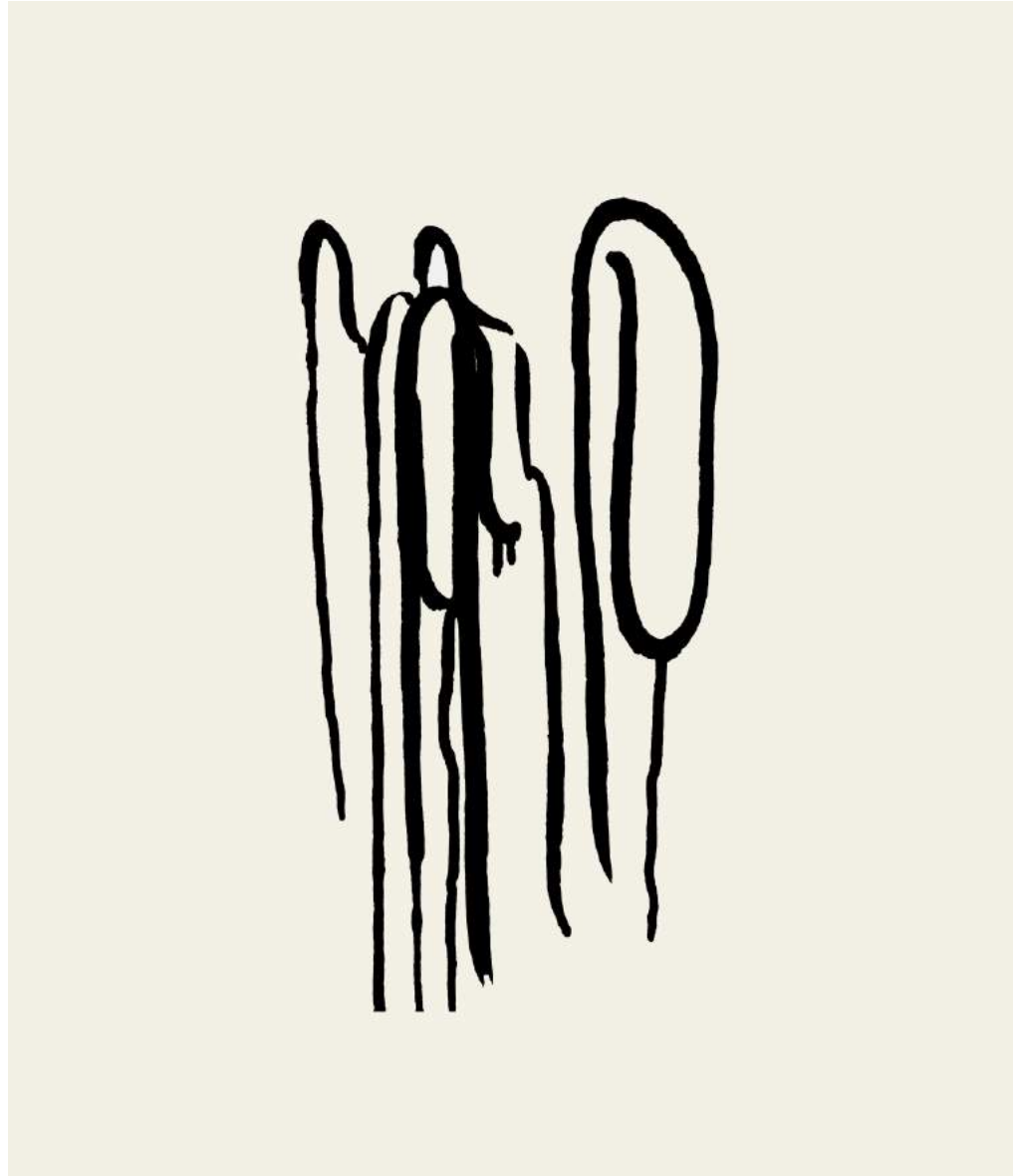


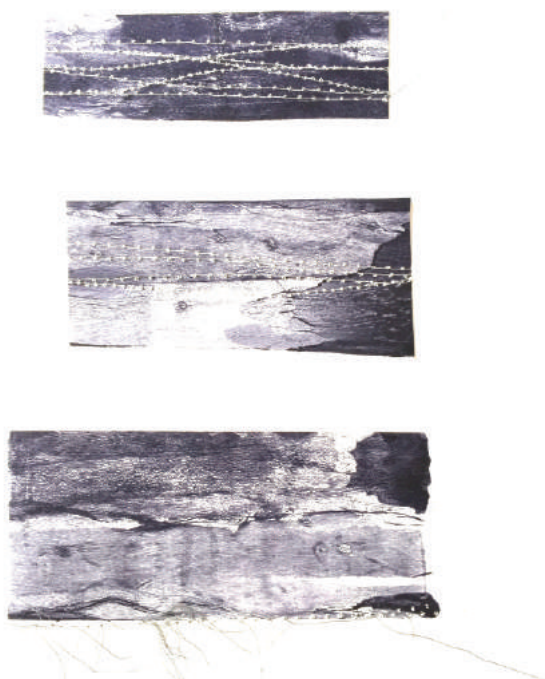
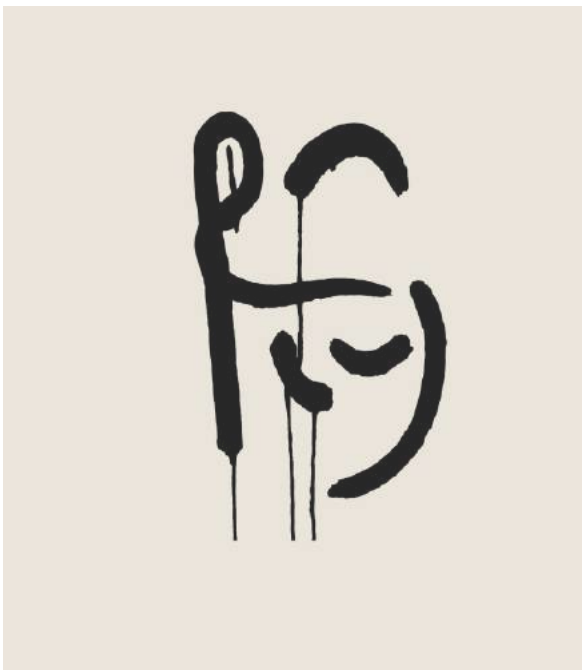
TEXTILES

No matter what posture is chosen during a meditation it is useful to begin by focusing on the body for a short period of time to note areas of the body that may need support or are experiencing discomfort. **B**y listening to your body and adapting the tools used, depending on how your body feels, distraction by physical discomfort will be reduced.

These images are outcomes from my own painting breath meditations. The end results of the meditations were photographed and developed on Photoshop to increase the black colour density to create a bold pattern. They have been digitally printed onto natural fabrics and then made into cushions and blankets, which can be used during meditations. From my own experience in a treatment facility and from the results of my 8-week study I found that cushions and blankets are fundamental to both comfort and a sense of warmth and security when beginning to meditate.









Although perceptions of colours are somewhat subjective the influence of colour to transform a healthcare environment is no longer in dispute but an acknowledged fact. **B**lack is known to induce deep inward focus and discipline. **B**rowns and neutrals are balancing homeostatic colours. They create a sense of safety, as they are associated with the environment and things in their natural state. **W**hite blends all colours, and represents harmony and purity. In excess, however, white can feel somewhat sterile and unapproachable. In conjunction with warm colours the tones of white found in nature are better embodied. These properties have been taken into consideration when developing the cushions and blankets.



"Colour in a healthcare environment should do much more than just make the building look attractive. Well-chosen decor can contribute positively to the creation of an environment in which patients can feel comfortable and at ease."

Dulux

"For example, research into the impact of certain colours has shown that orange stimulates the appetite, while blue can suppress it. This has led to the creation of very specific colour schemes for dining rooms in mental health facilities treating people with anorexia. However, orange also stimulates mental activity, so is often avoided in mental health units treating those with more intense psychological conditions "

Healthcare Design and Management

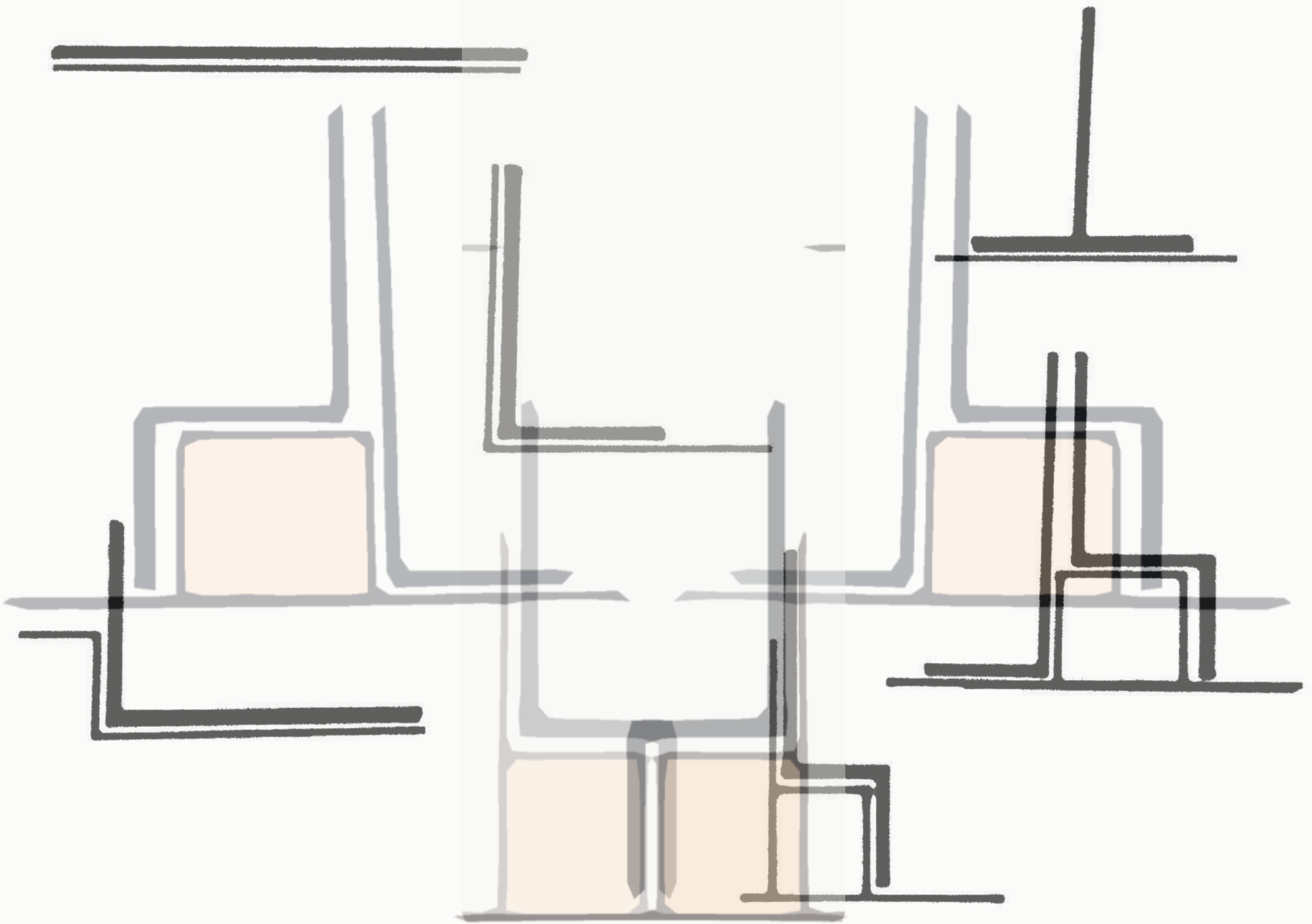






MEDITATION BENCH

Most existing products for meditation are designed to help and enhance the user with the 'correct' posture. I have found that for many, especially those beginning to meditate, this 'correct' posture is not always obtainable or desired. This platform aims to address the gap in the market for ways a beginner meditator or someone using meditation to help with mental illness, can fulfil their practice intuitively and with a more playful approach.





30 Second Sketches

MATERIAL SELECTION AND MENTAL WELLBEING

The health and wellbeing benefits of spending time in nature are well known. This love of time in nature has been called **Biophilia** and explains our innate longing to connect with the natural world.

Looking at ways to incorporate **Biophilic** design has been an important part of my research. Using wood as the core material has positive physiological and psychological benefits that mimic the effects of spending time outside. **Wood** evokes the feelings of natural warmth and comfort and can also improve the air quality of a room by moderating humidity. This is key to a practice where breathing is so important. Research shows that the incorporation of **Biophilic** design can improve a persons emotional state, increase levels of self-expression, reducing blood pressure and stress levels.



Mould making:
 in order to get the shape I
 want for the back rest of
 the bench I need to make
 a former/mould to vacuum
 form plywood around in various
 layers

FIRST ATTEMPT = 3 layers
 of ply, no glue

2nd ATTEMPT = 3 layers + glue
 (cascomore = 40 mins working time)

DRY RUN

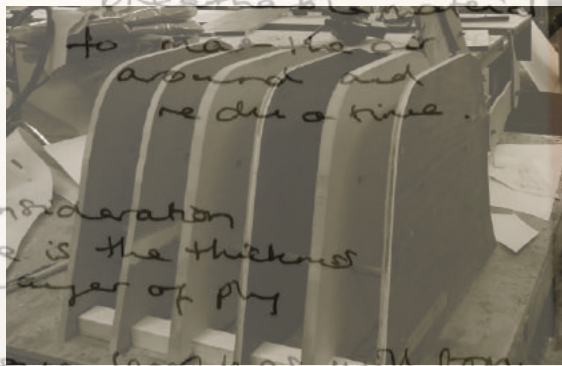
completed
 a dry run
 of 3 layers
 of plywood
 cut to
 size to
 see if they
 would fit
 in and mould to the former.



FLEXIBLE &
 DURABLE

length will
 change slightly
 for each extra
 layer as I need
 to take into consideration
 the fact that this is the thickness
 of the previous layer of ply

use string to measure length as will form
 round the curves.




need extra
 breathable material
 to make the air
 around and
 reduce a time.





Process and Material Research

(H) Testing:



Body Proportions: Things to consider

- leg length of both males & females
- average height of both genders (bench will need to be suited to the larger average)

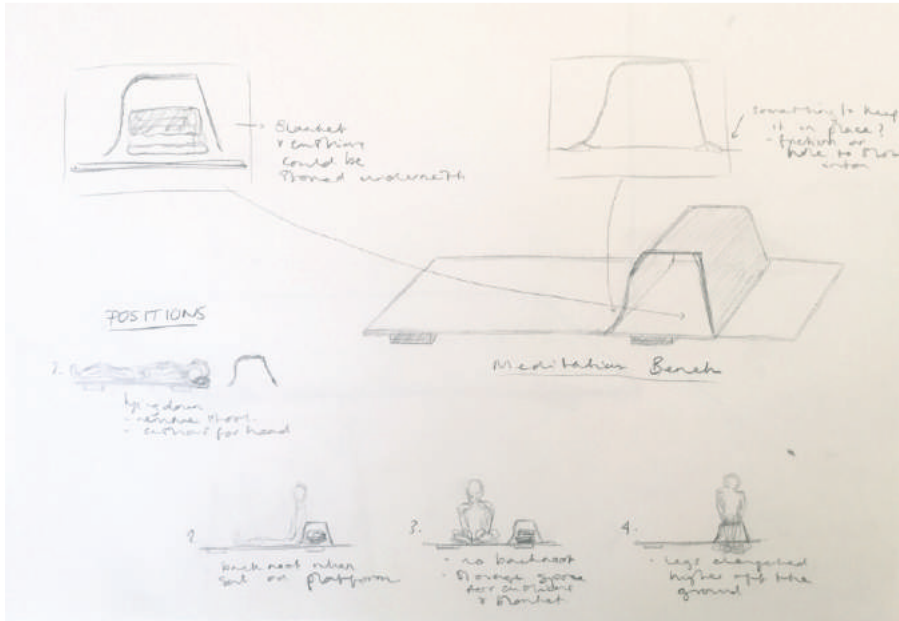
what is average leg length?
(average bench only need to be long enough for legs)
average can be used as a guideline for how long the bench should be.

(based on the UK)
Average height of man: 178cm
woman: 164cm

when thinking about the length of the bench it's important to think not only about UK, but worldwide market.



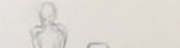

need to look at multi people as I am smaller than average
- eye height (2)
- Jank (2)
- Taller than average (but has shorter legs).

Sketches of people sitting on a bench, labeled 'sitting people' and 'upturned'.



Sketches of a meditation bench with labels: "Slanted & cushion could be placed underneath" and "something to keep it in place? - friction or hole to fit in".

POSITIONS

1. 
Legs down - reduce floor - cushion for head
2. 
Back rest when sit on platform
3. 
no backrest - storage space for cushions & blanket
4. 
legs elevated higher off the ground

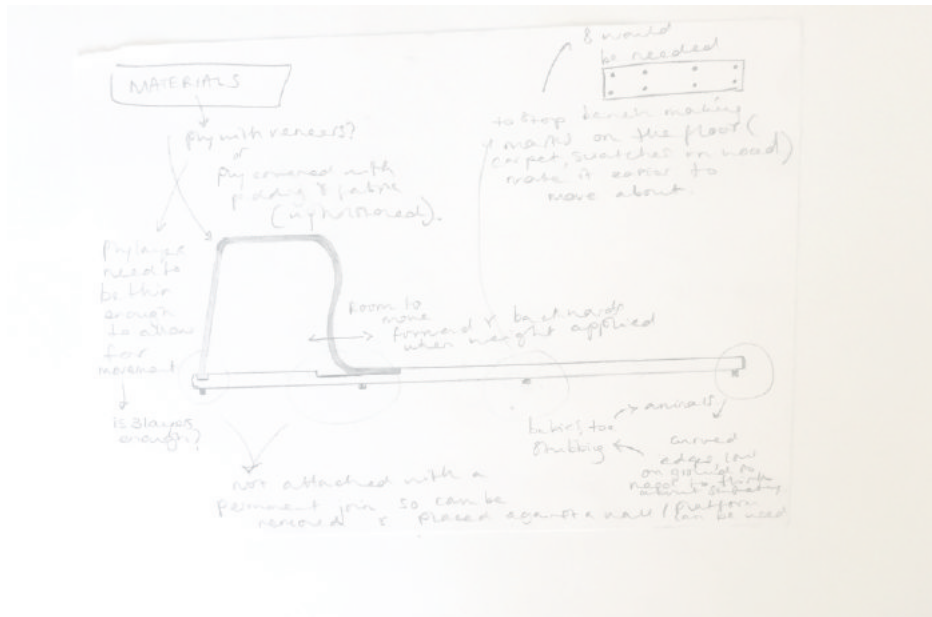
Meditation Bench



padding at backrest to provide P-P
padding at backrest and held together

padding covered to blanket
used using mechanism for comfort/warmth.





TVH because messy and long working time, so can not be so nice

Cascamite: waterproof, 40 mins - 1 hr no working time, 2 part glue (wood & powder)

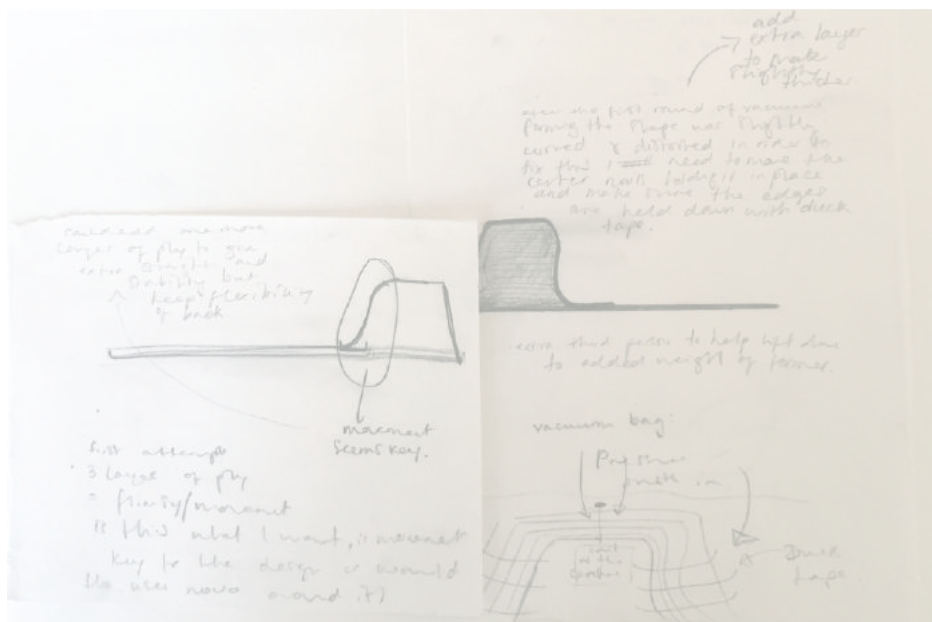
quicker if more people help speed the glue

marking on the inside point seems key

car nail in the layers of plywood and hold in place when going into the vacuum bag

make holes with nail before glue is added to make a point of contact for the nail to fall into and help pry in place

make spreader with teeth to move glue around plywood



Didn't use enough left line and took longer to remove air.

add extra breather material - allow air to flow to all parts of bag by providing slight air space between bag and laminate

BROKEN FORMER!!

duck tape used to cover any holes in former.

vacuum needs to be left on for 8 hrs so Cascamite can set.

edge of former distorted

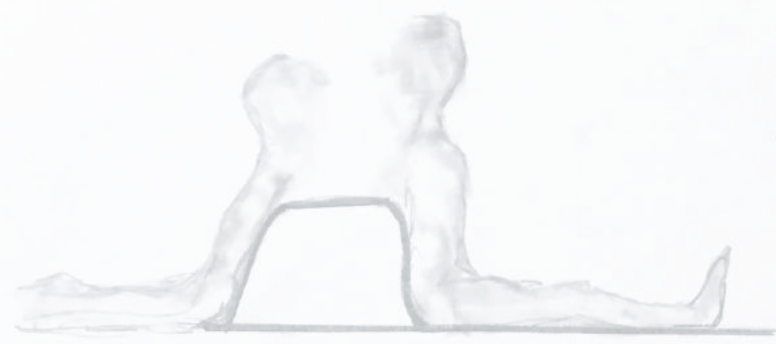
Done! forced out of hole across with duck tape

when the vacuum bag was turned on it started to break the former under the pressure. Needed to turn off so that it didn't collapse any further.

first attempt no tape was used and it moved & twisted

end result was distorted!

keep plywood held down with duck tape to make sure it doesn't move

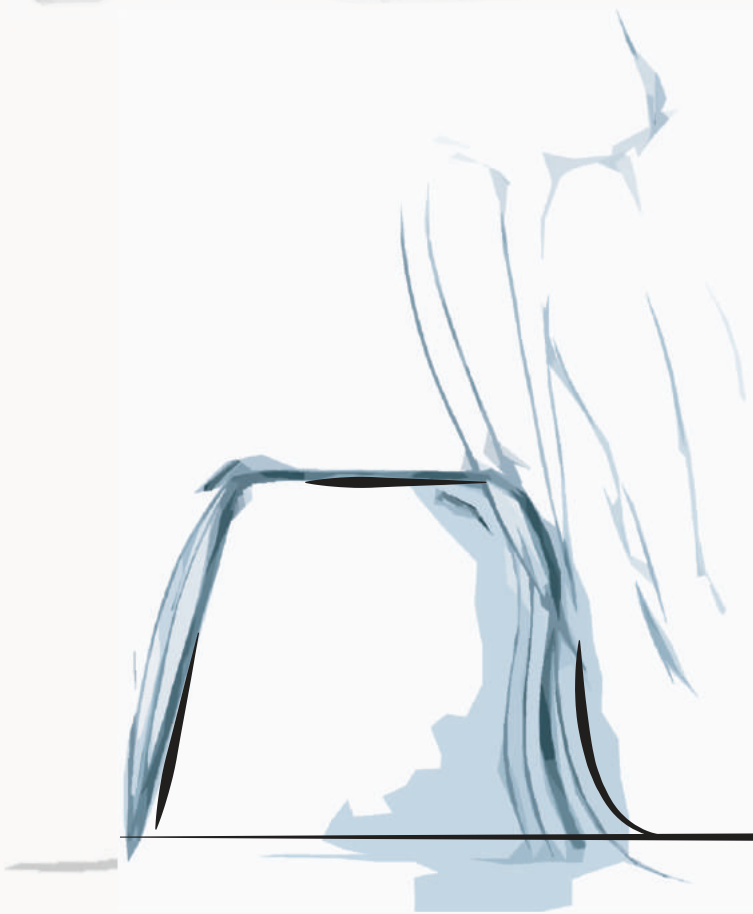


Multiple people could use it at the same time!

↓
meditation
with friend.
↓
extra support.

none
flashed,
relaxed
position.

upright posture,
back alert and
engaged.



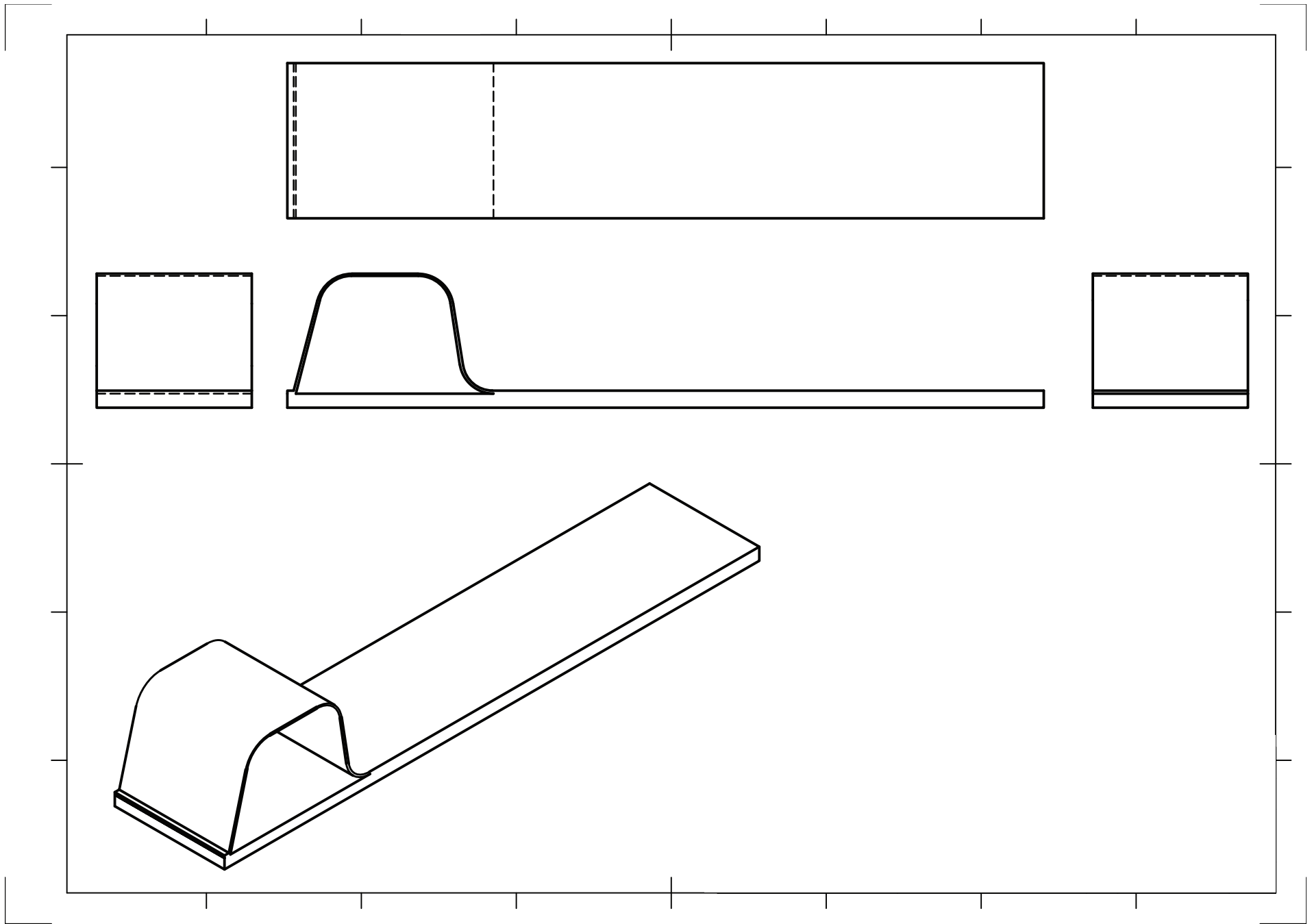
- ① back rest,
- ② back rest.
- ③ head rest,
- body rest when
↓ big down

thinking about
yoga matto,
flexibility,
portability.
variable air flow,
So can create new
option for seated
posture by going down.

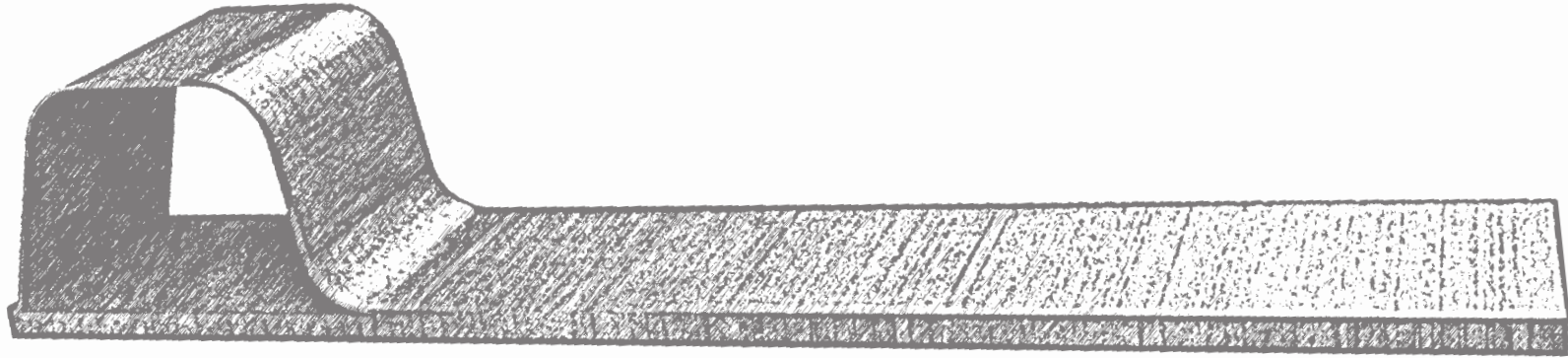


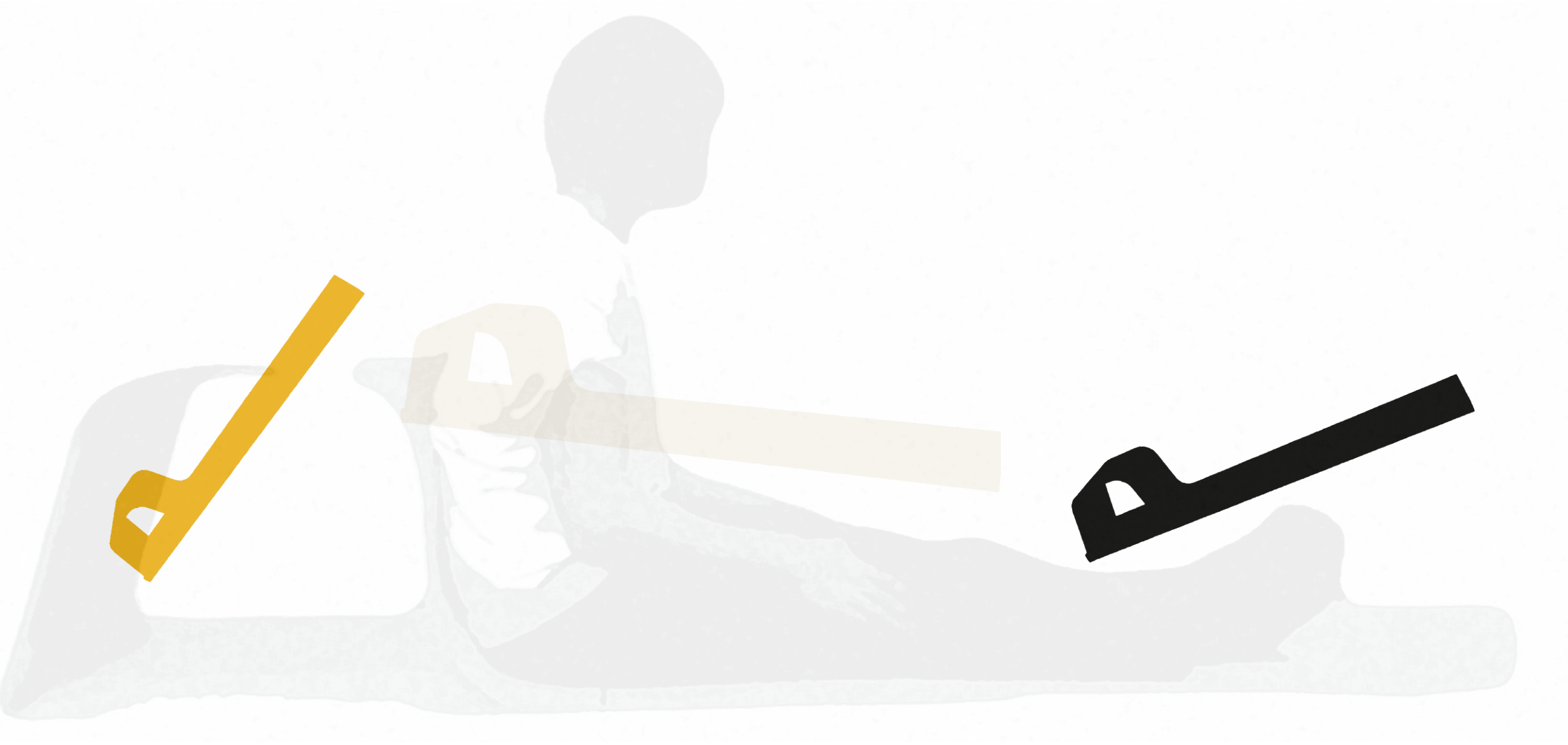
To Do

- plywood backrest & seat
- attach to base
- add legs/prop up to bottom before.
- cushion for over the top.



TECHNICAL DRAWINGS







Process and Material Research



Process and Material Research

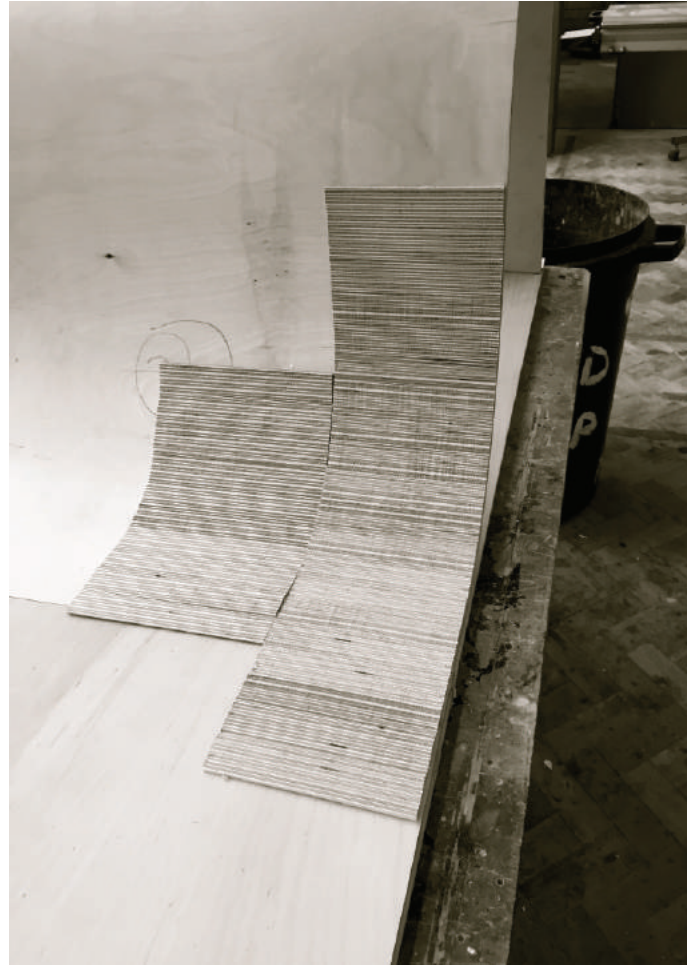
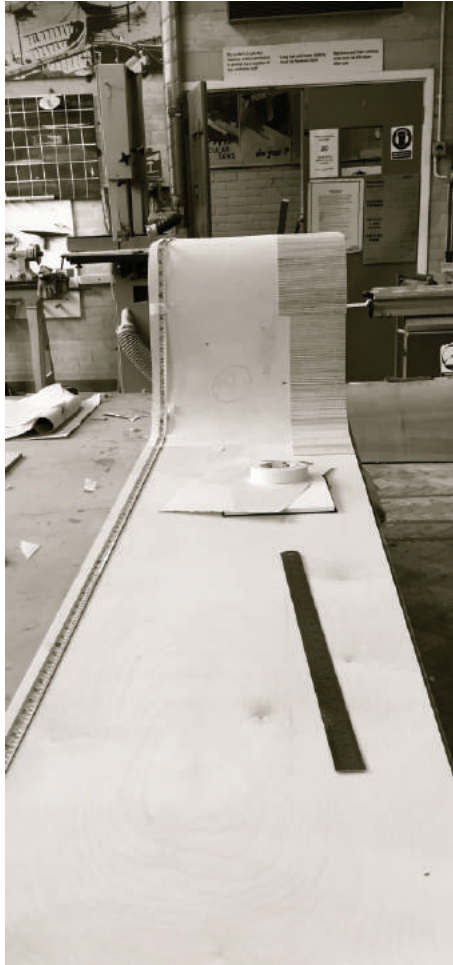




Process and Material Research







Process and Material Research



2 x 12mm Sheets of plywood
(Birch ply) glued together
using PVA, left to dry for
24hrs with clamps
- sliced into 5mm strips



Process and Material Research





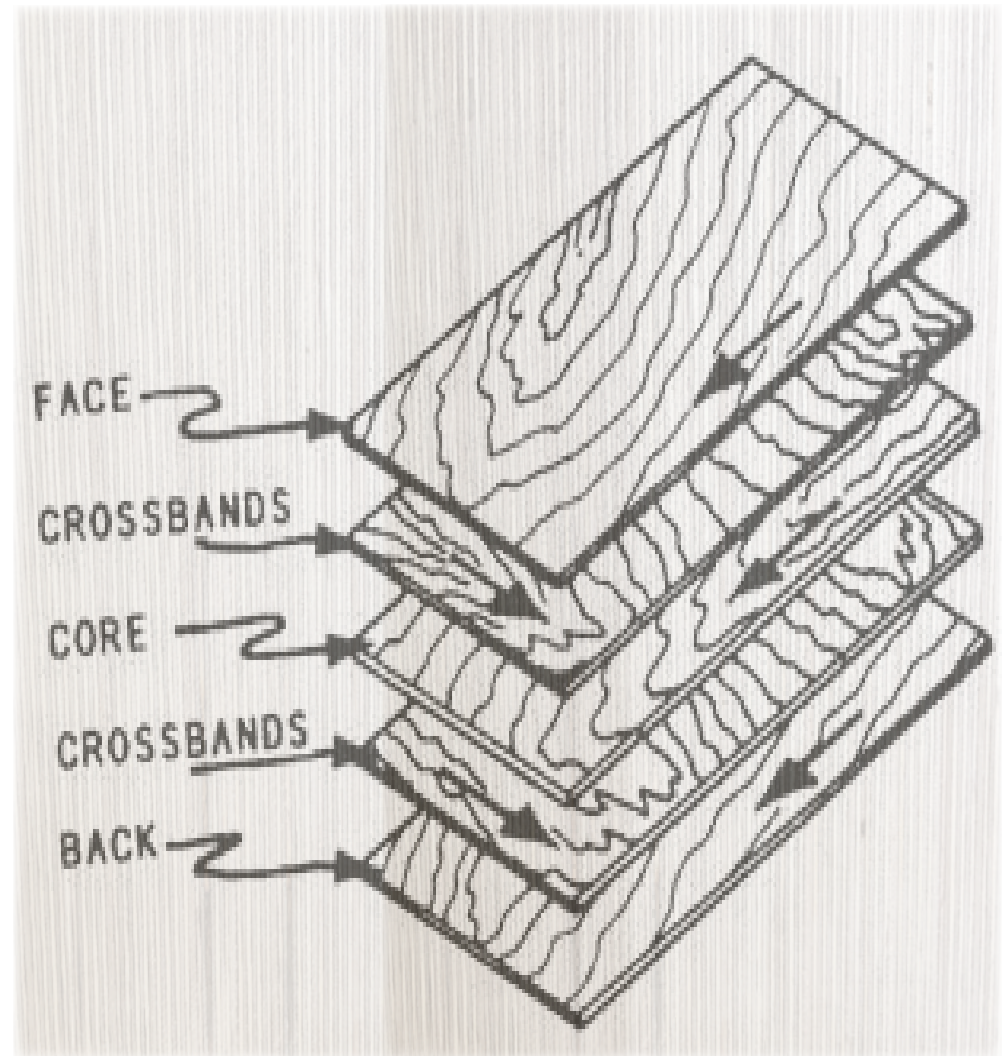
MATERIALS:

PLYWOOD
SURFACE GRAIN
EDGE GRAIN



Process and Material Research

One material
Multiple applications
Utilising all aspects of the material
Simple clean lines
No fixings
Natural finish : Bee's wax





Capturing Light



Capturing Light



Process and Material Research



I have begun to look at ways the inside shape of the curved seat could be utilised in an architectural form for homes, treatment centres, public spaces and installations. The curves work as walls, creating a semi-private concave space. The space does not exclude the external environment making it more approachable and open. In larger spaces the walls could be tall with high ceilings creating a spacious airy atmosphere. Placing these walls in open exterior environments could promote wellbeing and meditation to the public, offering busy working people a meditative space.



Final Design







This Bench is designed to establish a supportive and encouraging environment to help people feel the benefits of meditation. It invites you to sit in different ways and to interact with the bench dependent on what you need. There are options to sit at a low level with or without back support, to remove the backrest to lie down, or use the flat upper level for a seated position. A solid wooden surface keeps the body attentive and creates a warm grounding foundation for meditation.



