

Divergent Design

Design

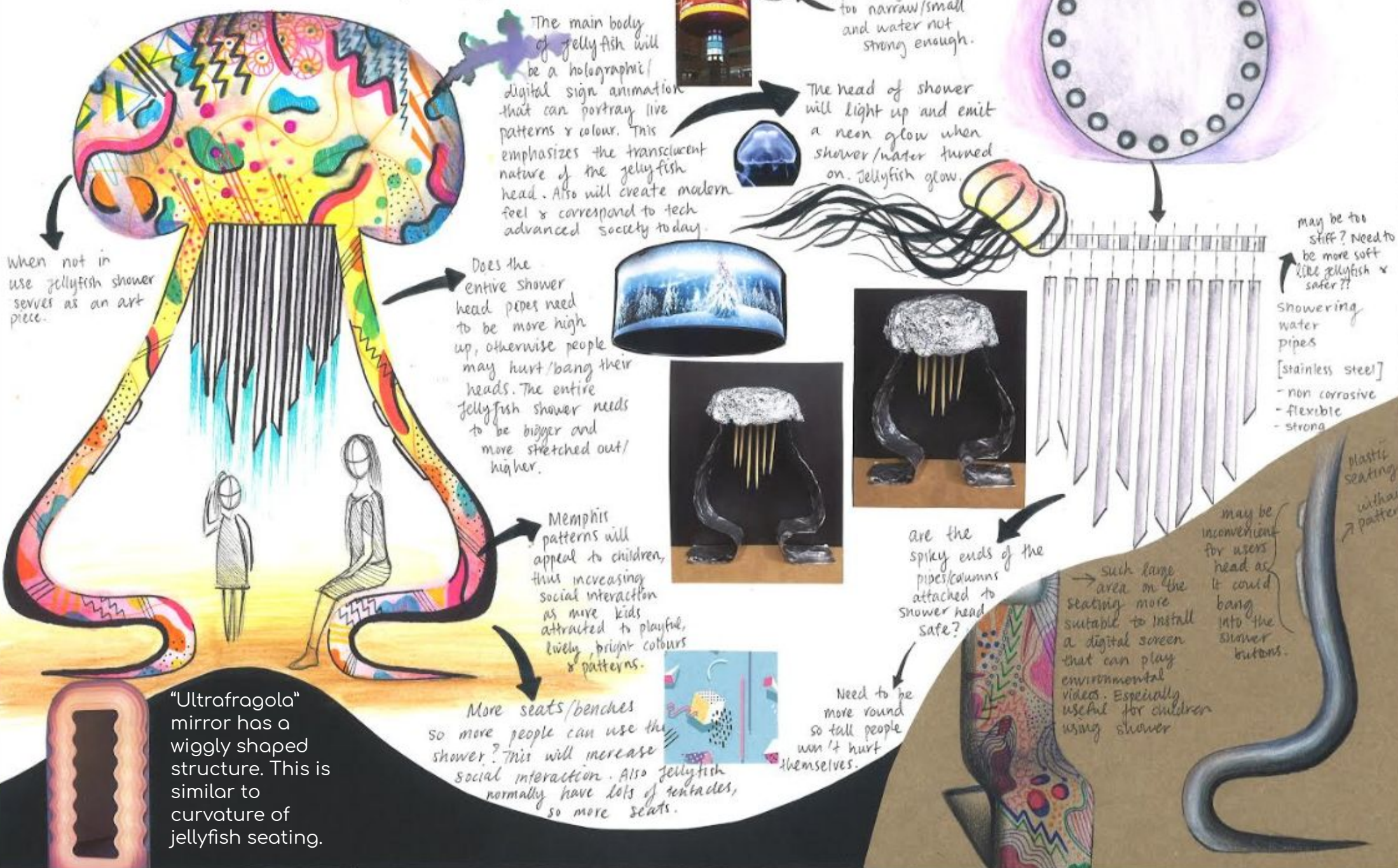


RAPID VIZ

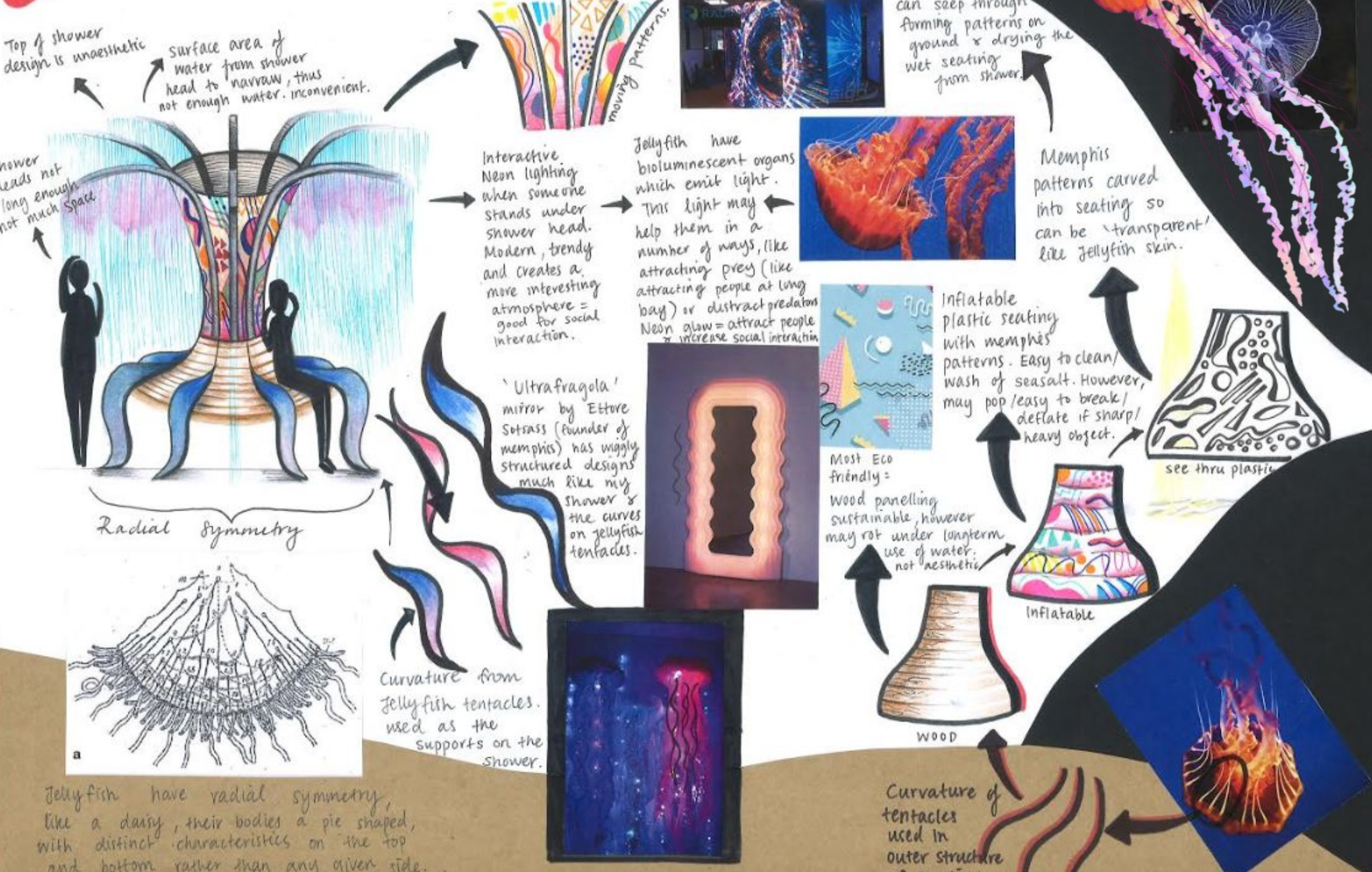


CONCEPT ONE

SHOWER DESIGN



CONCEPT TWO



DEVELOPMENT

Exploring Shape + form

The Memphis bookshelf as seen on the right is one of the most famous designs of the movement. Thus it inspired this zigzag seating for the showers base. As seen on the right pictures, sharp jagged straight lines are common in Memphis designs, thus my seating mimics this structure. However, sharp edges are dangerous for people. Next step is to explore curved designs.



Memphis chair

The strong base of chair is made of plastic and chairs base is strong + durable. However, chair can only be accessed from one side.



popular Memphis patterns include dots, stripes, zigzags, squiggly lines, curvature. These lively playful patterns will appeal to the younger users.

What would shower head look like with no patterns?



BOLD COLOURS



Translucent nature of jellyfish similar to a no-pattern shower head. Less appealing.

Curved digital screen as shower head. Technologically & socially appealing. Also educational as environmental videos can be played on the screen.



TECHNOLOGICAL + educational

Since there is such a large range of patterns that will all look good on the shower head, the shower head will develop into a holographic style, digital screen. This increases possibility and can even be used as advertisement screen or portraying video about environment etc.



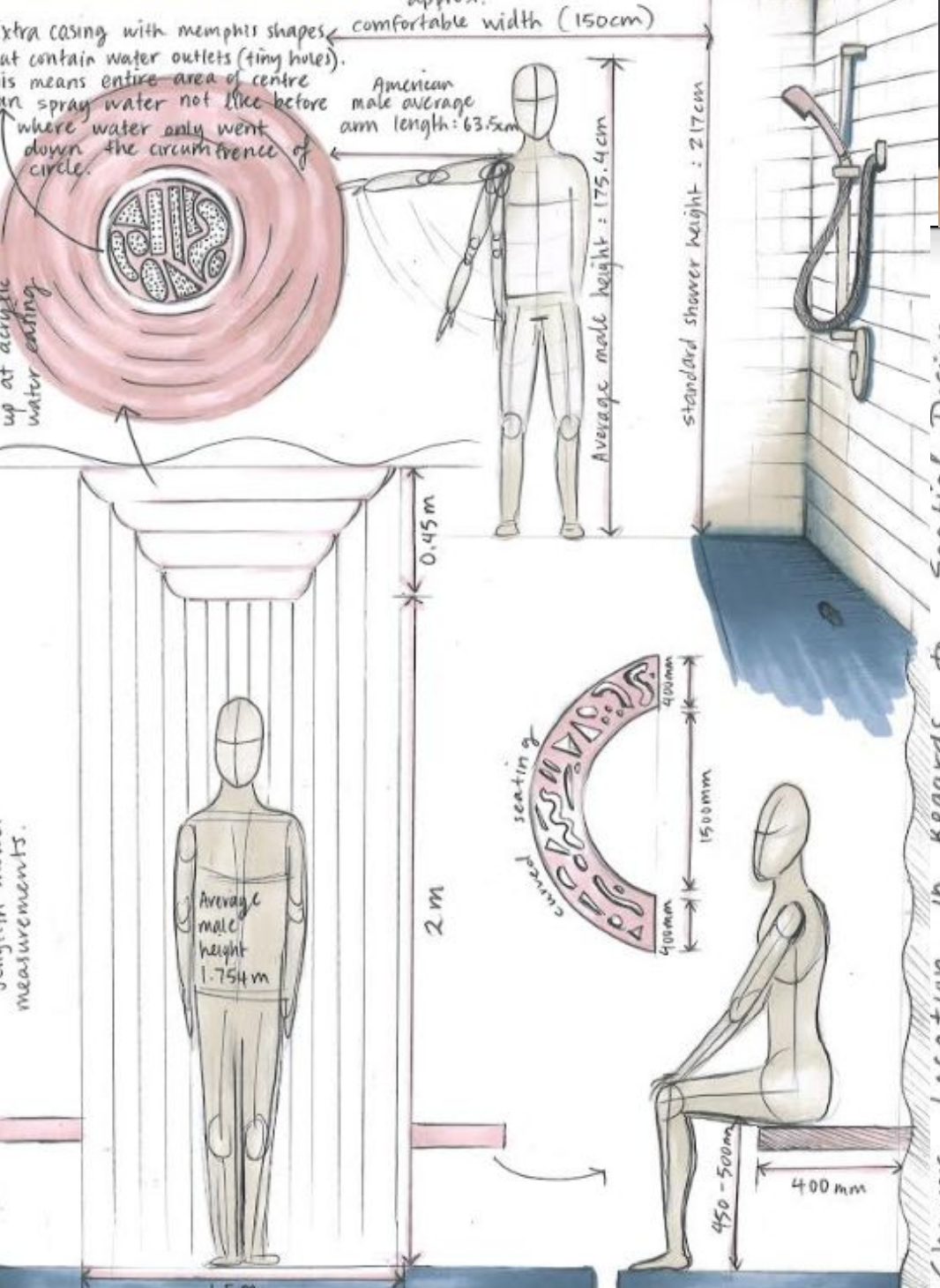
Combination of jellyfish head shapes into the ideal showerhead.

This is an extra circular platform that encircles the shower head. It serves as a shelter with holes so sun can seep through.

Exploring Dimensions

TECHNICAL DEVELOPMENTS

Extra casing with Memphis shapes that contain water outlets (tiny holes). This means entire area of centre can spray water not like before where water only went down the circumference of circle.



Shower Location in Regards to Spatial Design

Positives:

- close to spatial (convenient for kids to quickly wash off salt).
- The close proximity accentuates its connection to spatial.

Negatives:

- Too close to seawater. This means in the long term, the varying water levels may cause foundations to be exposed.
- Defeats purpose to wash off salt water after playing on schedule if shower could have potential to flood.

Positives:

- more hygienic as after stepping of shower, sand won't get onto feet.
- higher elevation
- Easier water pipes for underground plumbing.

Negatives:

- Too far from spatial.
- not unique, most showers are on grass / not on sand.
- Take up space for picnic areas.
- Trees block view of shower.

Positives:

- unique location on sand.
- Extra wooden path means feet won't get sandy after wash.
- Not too far & not too close to water (won't flood).
- Easily visible & two way access.

Negatives:

- May get in the way of walkers (But still plenty of area to walk by)
- water plumbing / route underground may be more complicated.

Location #1



OR

Location #2



OR

Location #3



DEVELOPMENT

starting from the showers base & seating area.

This 'C' shape is a classic shape seen in Memphis designs.

The spraying water effect will increase social interaction, as kids will be attracted to the fun, and playful vibes. This "playful" mood is also seen in many different, quirky memphis designs and patterns.

The curvature seen in many memphis designs as well as solid block colours influenced me to create this 'C' shape chair for seating. However, it is too rigid/hard to sit on, and only access is from one side.

Comfort = 2/10
Appeal = 5/10
Convenience = 3/10

- Exploring Comfort. The memphis seat seems uncomfortable to sit on so cushioning seen in this chair would increase comfort. However, the cushioning may get wet from shower so unhygienic.



comfort = 6/10
appeal = 6/10
convenience = 5/10

This chair can only be accessed from one side, so this seat can be sat on from either side.

comfort = 5/10
appeal = 4/10
convenience = 3/10



maximize storage space



DEVELOPED DESIGN
comfort = 7/10
appeal = 8/10
convenience = 8/10

→ too modern - not playful enough (no patterns, common shape) so not memphis-like.

comfort = 6/10
appeal = 7/10
convenience = 6/10

I like the use of gaps for the shower seating/standing area. Allows sun & natural light. Also two access.

maximize water power



This design to improve the water movement helps direct the water flow into a narrow pathway. This maximizes water power for user than if it were more spread out.

maybe a different shape?
really narrow storage space. inconvenient.

Too many barriers. inconvenient seating.

Drain no need? can dry on sand, water flow off side.



NEXT STEPS:
Explore standing platform for shower, storage space (towels etc.), movement of water.

DEVELOPMENT

AESTHETIC

shelter that creates lively shapes when sun shines through, but instead of walls maybe use 'Memphis' patterns like Δ , \square , \circ , ∇ that way the shadows on the ground will be more playful. old like Memphis from.

Maybe shower should be a rider? Sharp edges & narrow area doesn't feel inviting... Curved edges?

These holes spray water so all areas of body can be washed in fun way!

Too slippery? Needs grip / texture so users won't slip when surface gets wet.

CLASSIC STONE

Patterned stone

The surface will be made of stone. Durable & safe, however, it will be stones in the shapes of Memphis patterns

DESIGNS

I have experimented with common Memphis Shapes such as stripes, curvature, squares, circles, triangles etc. on the structure of the underside of shower head. The uneven distribution of water from shapes echoes a playful, fun & unique style, in which embodies what Memphis is.

SHOWER HEAD WATER

The showers steel water columns look like jail cell bars. The shower should have a playful appealing vibe to portray memphis style (lively, fun) & attract kids so design must change.

Exploring Seating Materials



WOOD
Sustainable, eco-friendly. Durable and strong. But may rot from sea salt and unhygienic if wood gets wet from shower.

Steel material is non corrosive so very durable at marine environments especially grade 316 stainless steel! But may get hot from sun...

STEEL



PLASTIC
Can be coloured & shaped easily. Also cost effective. It's also strong & durable. For eco-friendly use Bio-plastics or recycled plastics!

Creates a 'Translucent' effect like jellyfish body. Stronger than glass and also UV resistant (160°C). Comes in variety of colours. good for Memphis colours.

ACRYLIC

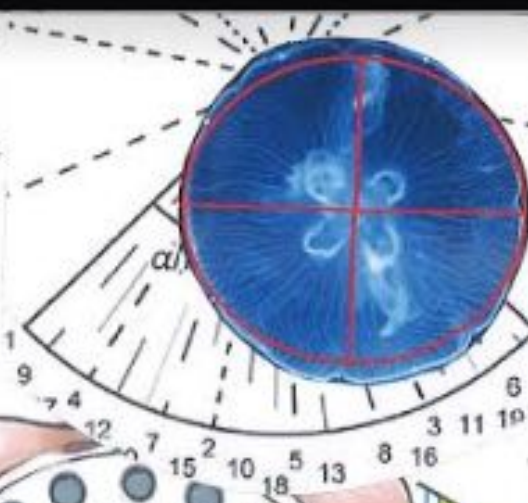


Plastic seat with see through Memphis shapes allow sunlight to seep through and create patterned shadows on foot beneath. "fun & lively" memphis style.

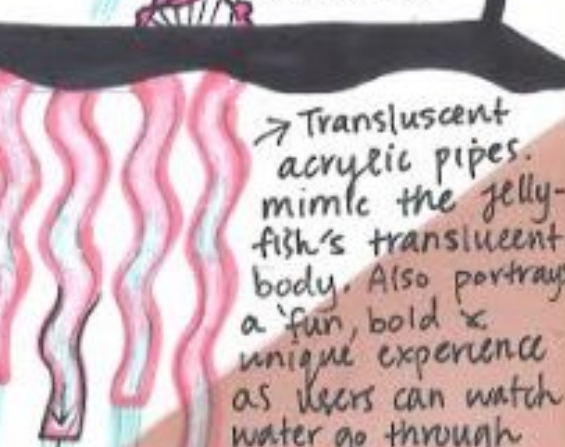
Acrylic seating with colourful gradient allows sunlight if a lighter colour is used, e.g. yellow. Aesthetic & 'Bold' like Memphis design.



Jellyfish have radial symmetry. This is an advantage since the sensory receptors are evenly distributed around the body. Thus the shower head will be radially symmetrical so water can come out evenly & be distributed on user equally.



The curvature on water pipes mimics the curvature seen in 'Ultratragola' mirror designed by Ettore Sottsass, founder of the Memphis design movement.



→ Translucent acrylic pipes. mimic the jellyfish's translucent body. Also portrays a 'fun, bold & unique experience as users can watch water go through the 'tentacles', very memphis like - 'Always bold & different!'

→ User can pull on 'tentacles' like a hose. More convenient for body washing.

DEVELOPMENT

TECHNICAL

DIGITAL SCREEN
OPTIONS

OUTDOOR PROJECTOR

- requires at least 5500 lumens.
- Beach sun too bright against the jellyfish shower head so digital videos/patterns blurry/unclear.
- since shower head is curved will need several projectors.
- no where to place the projector (showers on sand)

VS OUTDOOR LED DISPLAY SCREEN

- saves 60% Energy
- can also serve as an advertising screen e.g. you can play environmental videos. increases possibility of different Memphis patterns.
- Made for the outdoors (seen in cities e.g. New York)
- Quality of images more HD.

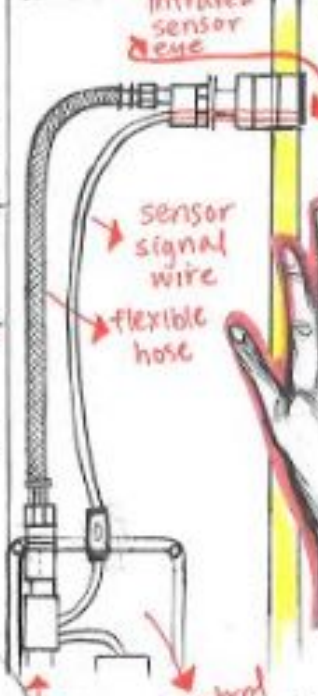
WATER + SENSORS

The shower will have an interactive sensory system where users just stand on the shower platform and the sensors can detect this & initiate water flow. This mechanism mimics my divergent idea - Jellyfish as these creatures survive based on rudimentary sensory nerves at tentacles.

- Benefits include =
- conservation of water
 - Energy saving long term
 - convenient (no need touch)
 - Hygienic

This shower also serves as an 'artistic' piece for the beach, similar to many Memphis design furniture pieces. Embraces idea of art + function.

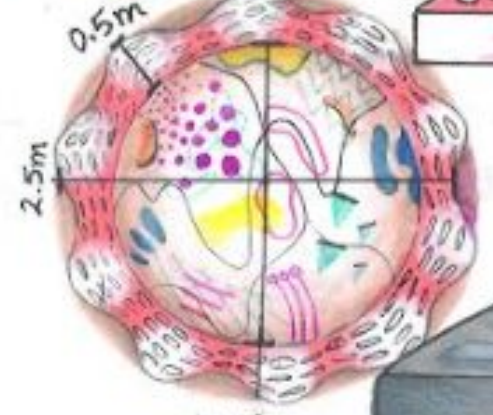
cross section of sensor + water



Infrared sensor eye

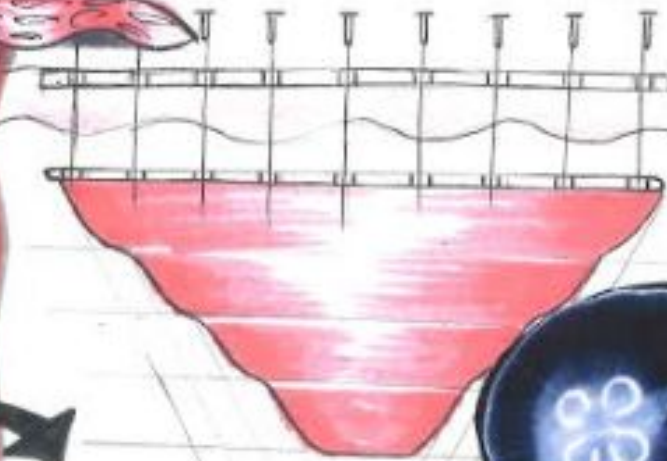
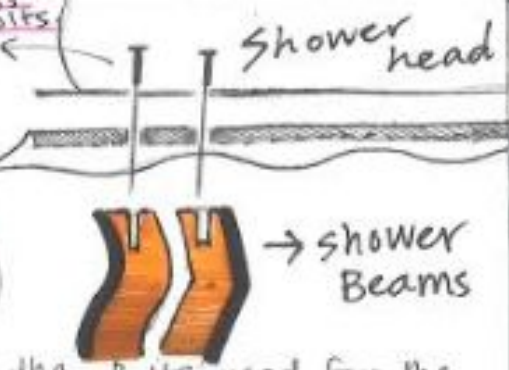
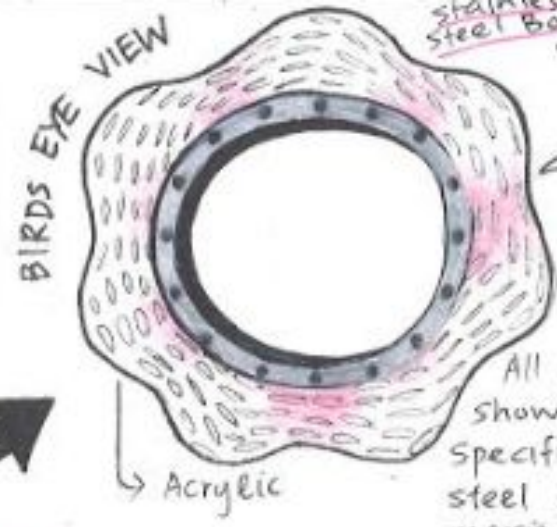


Top View



1.5

water evaporate on sand.



The shower Beams and seating bench will be made of Glass Fibre reinforced polymer (plastic) (GFRP). This type of plastic is most recommended for marine infrastructures. It is light-weight and has excellent corrosion resistance against sea salt at Long Bay. This plastic is durable & sustainable so it is eco-friendly.

Acrylics see thru effect similar to translucent body of jellyfish.

↳ Inspiration! Add NEON LED lighting onto/above acrylic for jellyfish glow effect.



- Stamped Concrete. with 'Memphis' patterns.
- Durable, cost effective
 - Slip-resistant surface
 - won't crack easily
 - easy to clean
 - easy to replace.
 - Strong



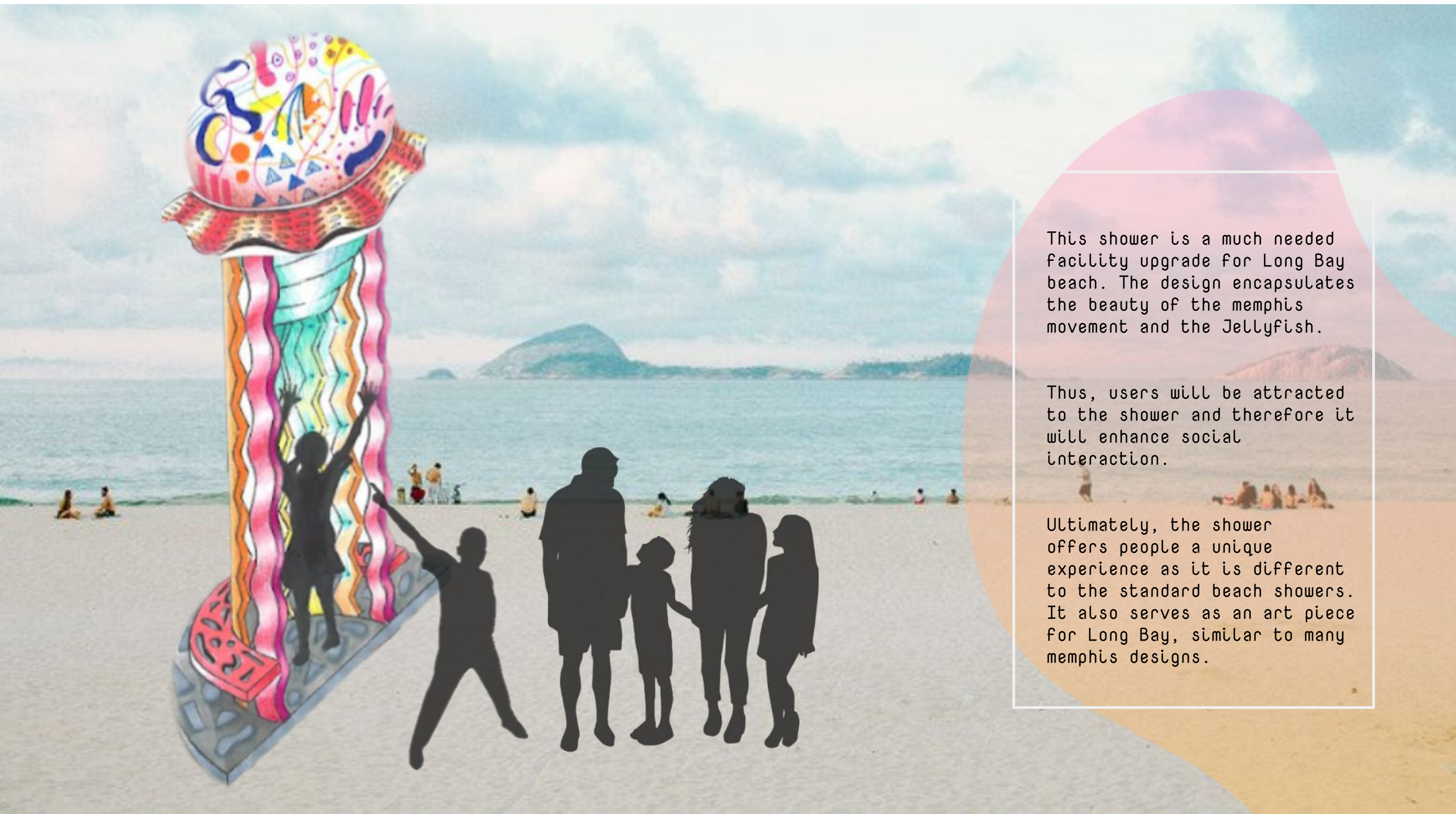
Precast beam of reinforced concrete.

2-3m long, short Bore piles reinforced with steel.



FINAL DESIGN

The Jellyfish Shower.



This shower is a much needed facility upgrade for Long Bay beach. The design encapsulates the beauty of the memphis movement and the Jellyfish.

Thus, users will be attracted to the shower and therefore it will enhance social interaction.

Ultimately, the shower offers people a unique experience as it is different to the standard beach showers. It also serves as an art piece for Long Bay, similar to many memphis designs.

Assessment Schedule – 2019

Design and Visual Communication: Use visual communication techniques to generate design ideas (91337)

Achievement Criteria

| Overall level of attainment for 91627 | Achievement | Achievement with Merit | Achievement with Excellence |
|---------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| E | Use visual communication techniques to generate design ideas. | Use visual communication techniques skilfully to generate design ideas. | Use visual communication techniques effectively to generate design ideas. |

Evidence

| Not Achieved | Achievement | Merit | Excellence |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Visual communication techniques (visual modes and media) are poorly applied or limited in conveying design ideas. Insufficient design ideas shown where aesthetic or functional qualities are not recognisable, not present, or not visually communicated. | Use visual communication techniques to explore functional and aesthetic qualities means examining different design ideas (that could be variations of a single concept or a range of concepts in response to a brief). Explore functional and aesthetic qualities are to be viewed holistically. <ul style="list-style-type: none"> • Functional qualities may include operation, human interface, ergonomics, proxemics, circulation, environmental factors, construction, materials, components, assembly, mechanisms, dimensions, etc. • Aesthetic qualities may include colour, tone, texture, pattern, shape (2D), form (3D), balance, proportion, surface finish, style, etc. Generated design possibilities are different design ideas that are simple alternatives which are predictable, obvious, superficial, or derivations of existing ideas. | Use visual communication techniques to explore in detail the functional and aesthetic qualities of the design. <ul style="list-style-type: none"> • Explore in detail means that design qualities (functional and aesthetic) are clarified through a range (or families) of drawings that show details from different viewpoints. This could include different levels of visual explanation (e.g. overall and closeups, external and internal information, sequence drawings for showing movement, showing design ideas in situ, etc.). Generated divergent design possibilities means design idea variations that are challenging, creative, unexpected, experimental, unusual and / or quirky. | Use visual communication techniques to comprehensively explore the functional and aesthetic qualities of the design. <ul style="list-style-type: none"> • Comprehensively explore means that design qualities (functional and aesthetic) are highly informative and easy to follow. Extended divergent design possibilities show evidence of design thinking that inspires idea regeneration and manipulation (this can be evident in the ideation that leads to the generating of divergent design ideas or the initial development of a chosen divergent design idea). |

Note: **Visual communication techniques** could be digital and / or hand drawn (analogue), e.g. sketching, rendering, illustration, instrumental drawing, model making, mock-ups, 3D constructions, collage, overlays, CAD, animation, photography, etc.

Design ideas: Ideas that have functional and aesthetic qualities as opposed to shapes/forms that are essentially sculptural in nature (as is evident in the initial stages of ideation).

Excellence Exemplar 2019

| Subject | Design and Visual Communication | Standard | 91337 | Overall grade | E |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|---------------|---|
| | Annotation | | | | |
| | Page 1 explores jellyfish through sketching and modelling. | | | | |
| | Page 2 explores the jellyfish form in context, taking the form and turning it into a range of divergent ideas for an outdoor shower. These initial ideas are then explored further in page 3. | | | | |
| | Page 5 extends the design in relation to its functional elements, looking at seating and shelving options, with page 7 looking at the technical details that the candidate has considered need to be in place to make the design work. | | | | |
| | The work begins to extend the design by reintroducing the shapes and forms of the jellyfish. Initial exploration of the idea focusses on the aesthetics of the design in terms of the form and surface patterns, again linking this back to the jellyfish exploration. The functional aspects of the design are explored through the possible locations for the shower structure and the consideration of dimensions and use of the shower. | | | | |
| | This submission is an Excellence. The design had comprehensively explored the design in a way that is easy to follow and understand the candidates process. The design ideas were inspired by the initial exploration and this thematic has been continued throughout the submission allowing the candidate to show the extension of their design thinking. | | | | |