

W a d e .

Women's Autonomy, Direction & Empowerment

WADE combines environmental observation, psychological research and experiential design to create a spatial journey that supports healing, agency and reintegration for women recovering from domestic abuse. Inspired by the river as both a physical and metaphorical framework, the project explores how movement, flow and gradual progression can be translated into interior space. Through iterative sketching, conceptual mapping and light-based experimentation, the design developed a series of carefully sequenced experiences that respond to the non-linear nature of recovery. The resulting methodology demonstrates how natural systems can inform innovative, trauma-informed approaches to spatial design.

The following pages demonstrate the project's innovation process through:

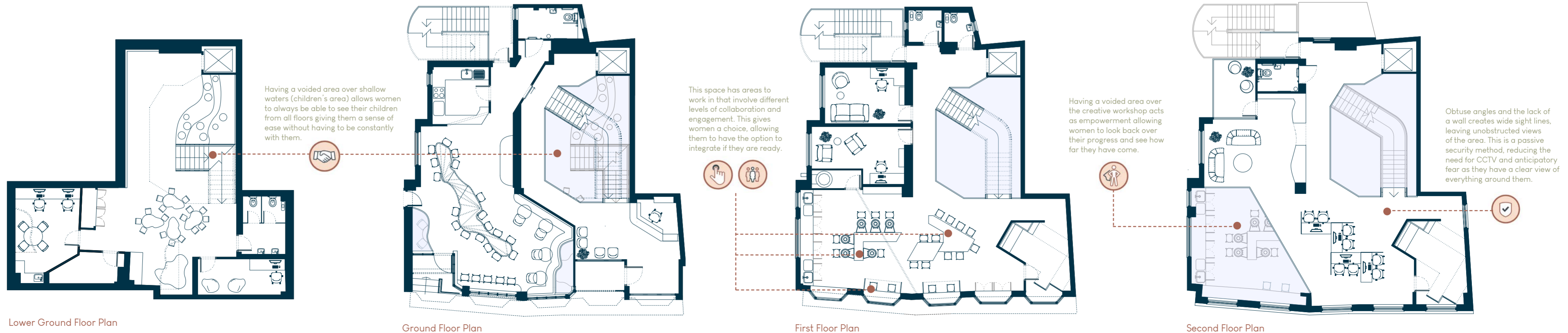
- River systems as a design methodology
- Light as a tool for movement, orientation and engagement
- Atmospheric experimentation through refraction
- Translating healing architecture research into spatial experience



5 Key Trauma-Informed Design Principles



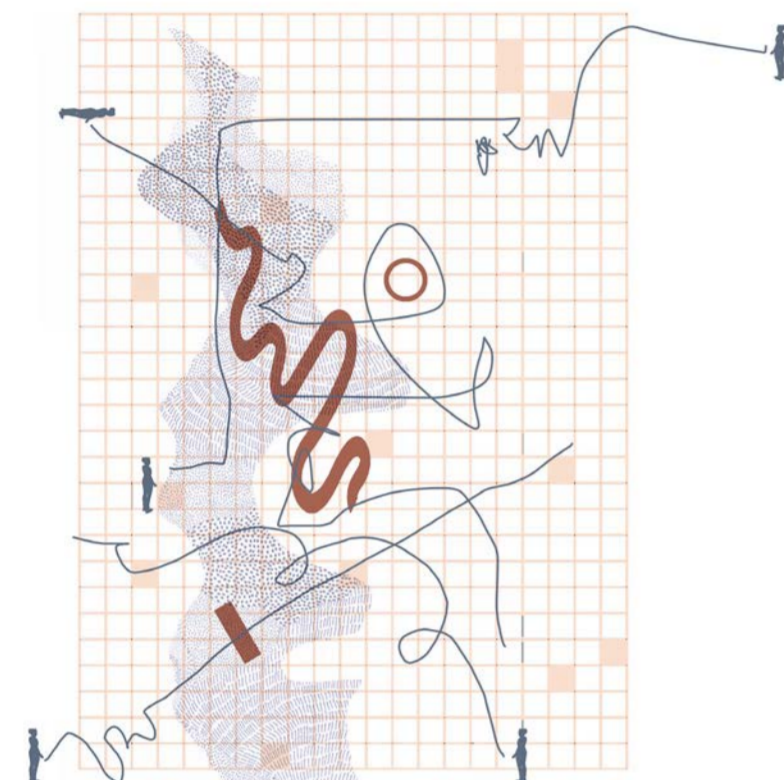
Safety Empowerment Trustworthiness Collaboration Choice



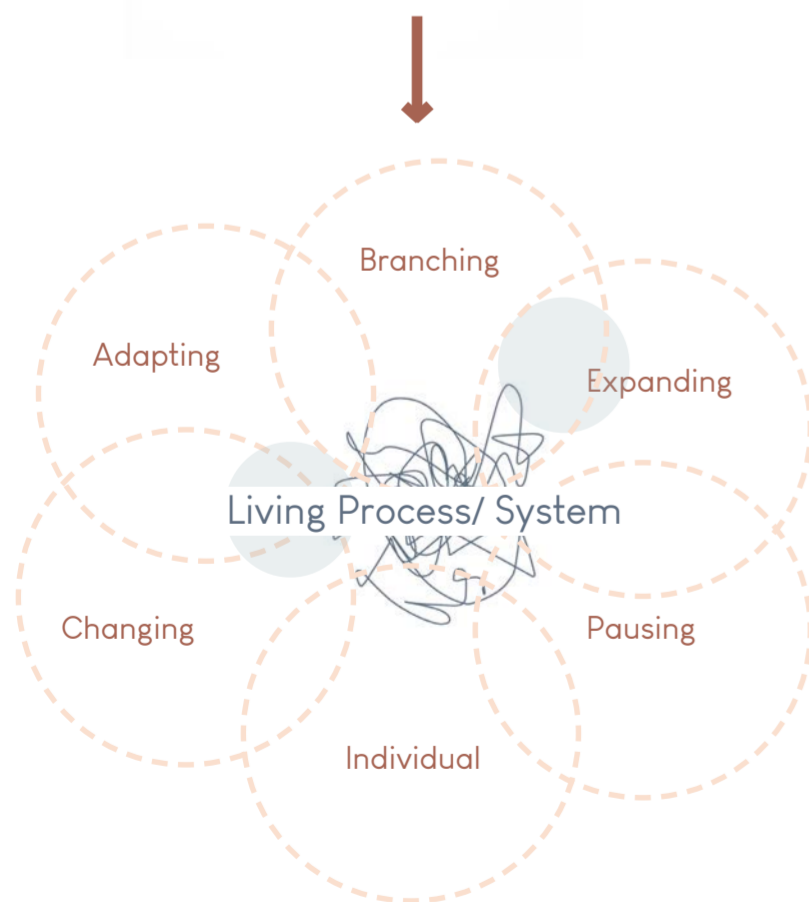
River Systems as a Design Methodology

Trauma affects every individual differently, resulting in unique experiences of recovery and engagement. Initial research framed healing as a living, evolving system rather than a linear process, prompting an exploration of river systems as a design methodology.

Through environmental observation, analytical mapping and iterative sketching within the Lake District, patterns of flow, resistance and progression were abstracted into spatial sequencing and circulation strategies. This experimental process established a trauma-informed framework capable of supporting varying needs, levels of engagement and pathways to recovery.



Recovery is not linear. It is fluid, personal, and constantly shifting shaped by individual experience, emotion, and time. This makes everyone's journeys different.



Therefore the space needs to operate as a rhythmic system designed to support bodily regulation rather than linear recovery.

Lake District- River Observations and Sketches



The coexistence of turbulent and calm waters reflects the realities of trauma recovery. Rather than resisting change, the riverbed supports the water's journey through periods of disruption, gradually guiding it towards calmer states.

Components of the river translated into spatial strategies

1. Arrive

Non-Institutional Reception

Function: Quiet/ Secret Arrival
Why: Reduces Anticipatory Stress

2. Pause

Decompression Zone

Function: Sensory Withdrawal
Why: Regulates the Nervous System

3. Express

Creative Expression Workshop

Function: Pottery/ ceramic studio
Why: Allows expression without verbal disclosure, and gives control back to victims

4. Restore

Therapy Rooms

Function: Different Forms of Physiological and Physical Therapy
Why: Receive formal support from professionals to help reduce the affects of their trauma

5. Branch Off

Resource Library

Function: Help with CV, Finance, Digital Skills
Why: Help regain Independence

6. Connect

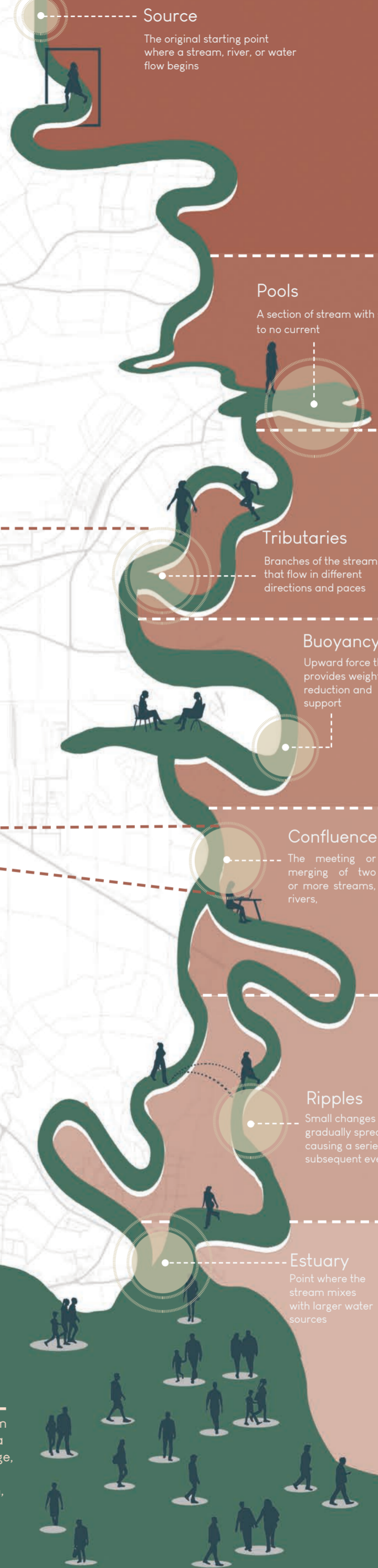
Communal Lounge

Function: Optional Collaboration
Why: Fosters connection without pressure and rebuilds trust through everyday interaction

7. Reintegrate

Estuary Cafe

Function: Supports gradual re-engagement with the public
Why: Helps the victims regain confidence within public settings



Source

The original starting point where a stream, river, or water flow begins

Pools

A section of stream with slow to no current

Tributaries

Branches of the stream that flow in different directions and paces

Buoyancy

Upward force that provides weight reduction and support

Confluence

The meeting or merging of two or more streams, rivers.

Ripples

Small changes that gradually spreads, causing a series of subsequent events

Estuary

Point where the stream mixes with larger water sources

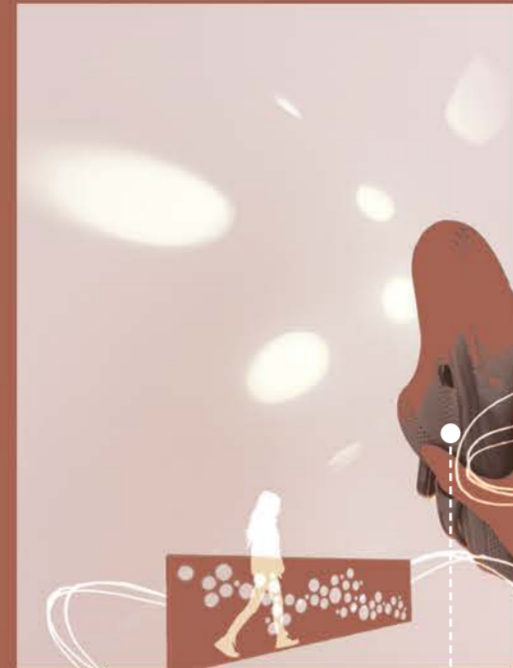
Light as a Tool for Movement, Orientation & Engagement

Through iterative light experiments, perforation sizes were tested to assess their impact on movement, atmosphere and spatial perception. Analysis of river sediment erosion informed the final design, with perforations increasing in scale to mirror the changing sediment profile from source to mouth.

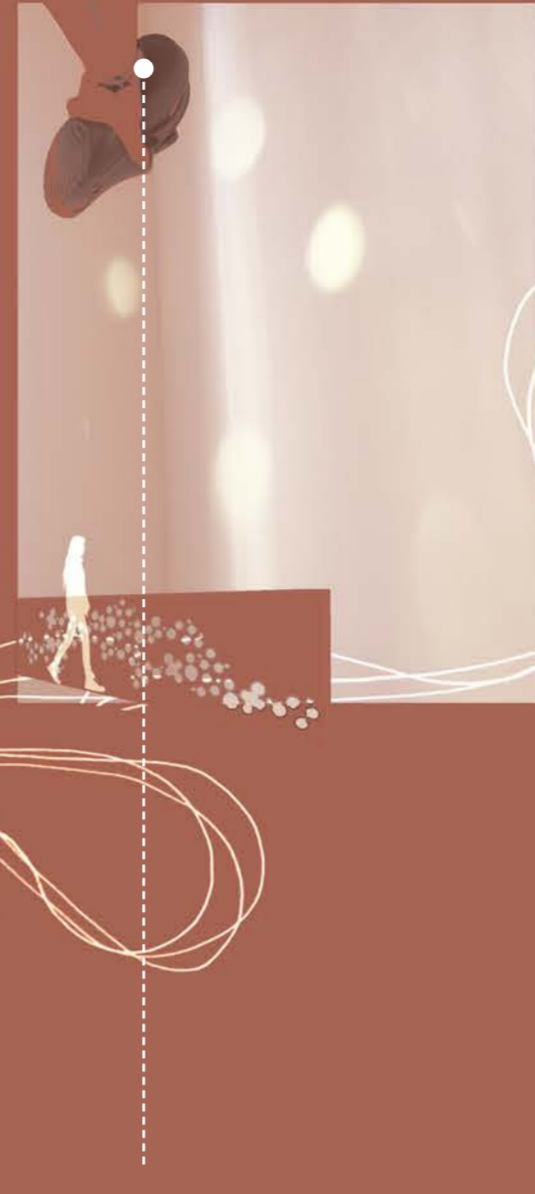
This experimental process transformed a natural phenomenon into an immersive spatial experience, using light as a tool for movement, orientation and emotional engagement, reinforcing a sense of progression throughout the staircase.



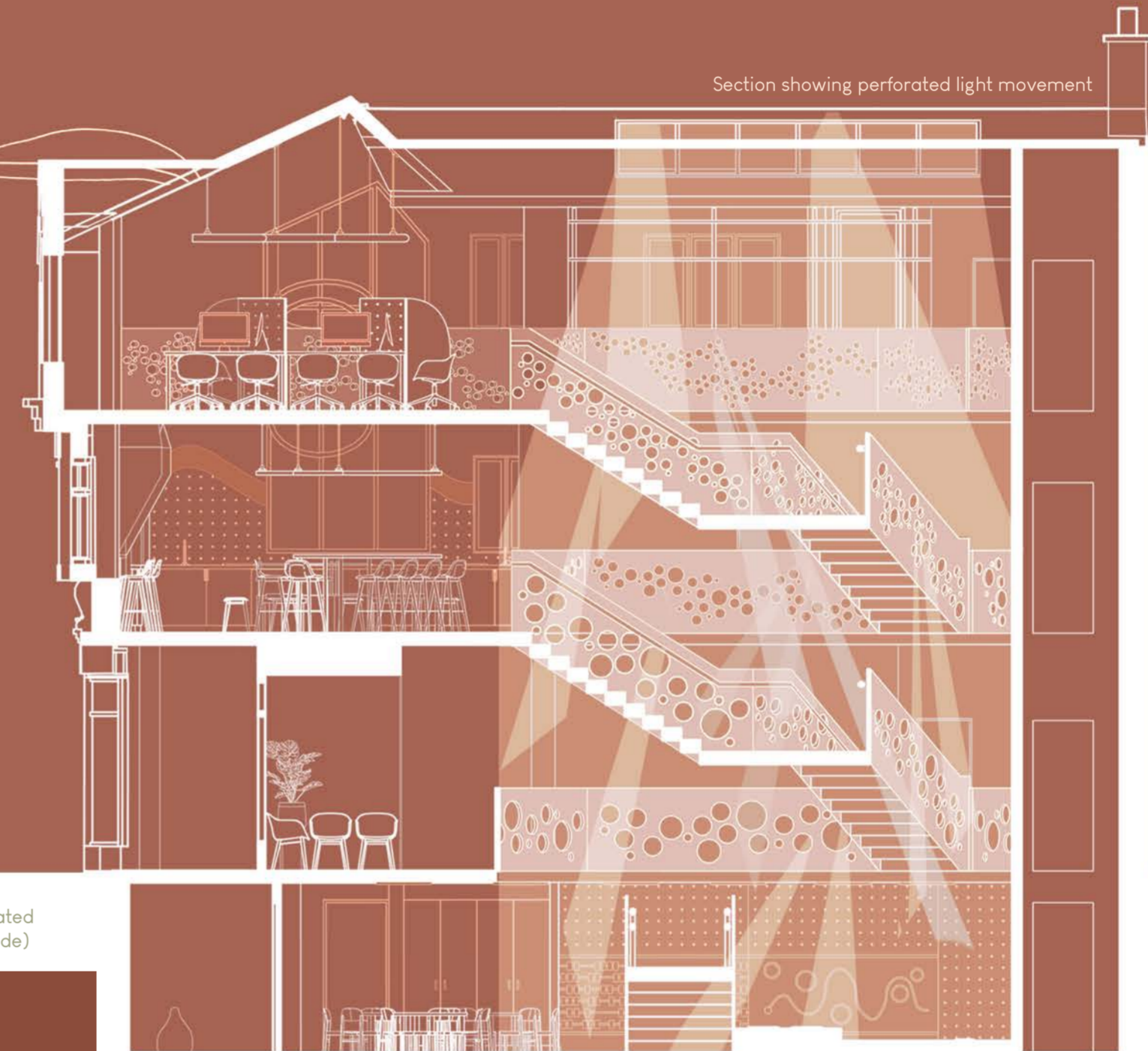
Source proximity and projection precision: When the light source was positioned close to the perforated surface, the projected light patterns became smaller, sharper and more precisely defined, appearing as near perfect circles with minimal diffusion.



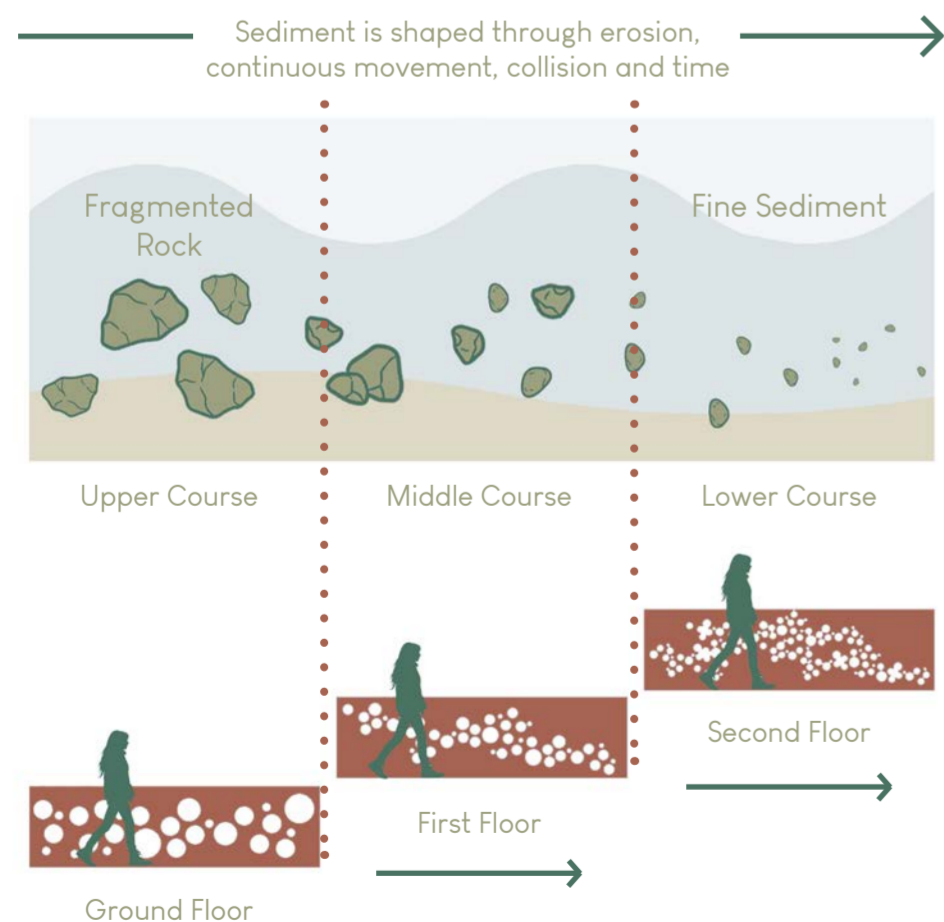
Effect of tilt on geometry and intensity: Tilting the light source altered the geometry of the projections, causing the circular spots to elongate and fan outward. The change in incidence angle also produced variations in brightness and edge definition, creating a more directional and dynamic light field.



Distance and secondary reflections: Increasing the distance between the light source and the perforated surface while maintaining a perpendicular angle generated a regular array of circular projections. Secondary reflections between the perforated openings and surrounding surfaces produced repeated echoes of the same dot, increasing visual density and the perception of movement.



Section showing perforated light movement



Perforation gradient in the balustrade mirrors the gradual transformation of sediment throughout the course of a river.

This presents the staircase as a spatial metaphor for gradual change, demonstrating the effect of sustained movement, support and time, crucial in the journey of recovery from trauma.

Developing Conceptual Visual & Materiality



TERRAIN- Powder Coated Steel Sheets (Balustrade)



Reason- In colour psychology pink represents femininity and healing, highlighting the main function of WADE. The warm earth tones also represent clay which is the end product of eroded sediments

Natural Mountain Larch Boards (Stairs)

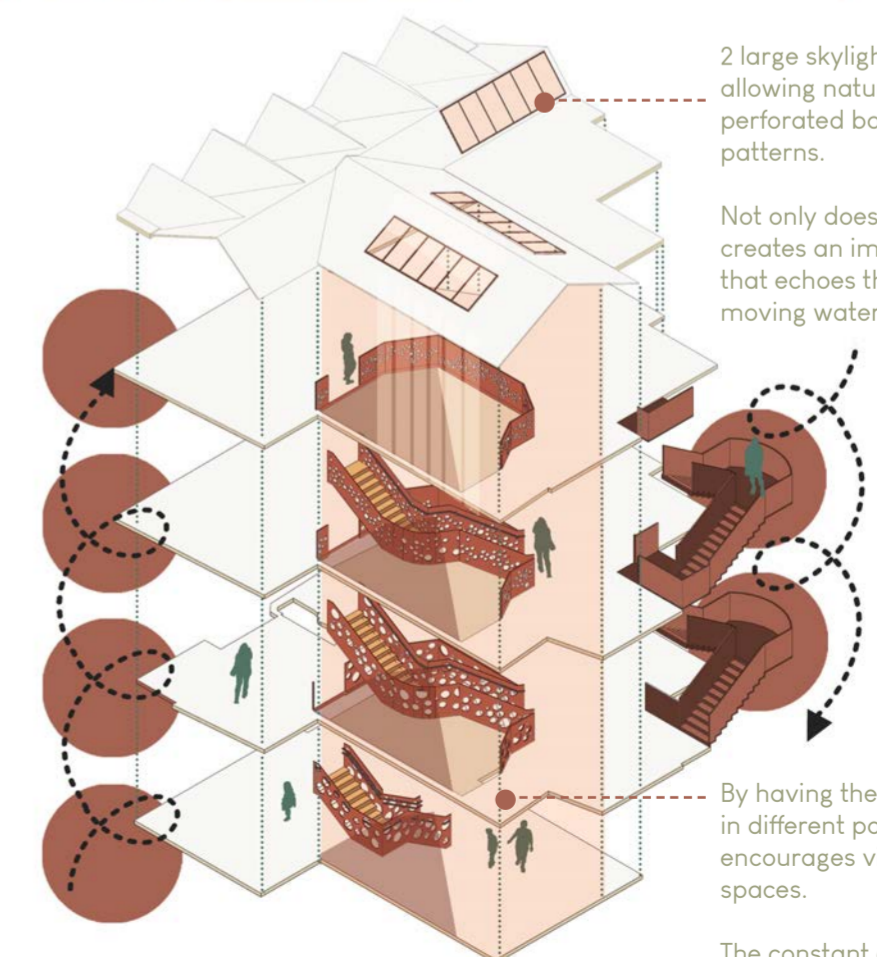


Reason- Light wooden treads soften the physical experience of the space when in contrast to the metal sheets. The open grain of the wood also helps with calmness and recovery within biophilic design.

RAL Grey Blue- Painted Wooden Handrail



Reason- A solid guiding thread within a space with a lot of movement, for reassurance and orientation.



Isometric Circulation

2 large skylights above staircases allowing natural light to be filtered by the perforated balustrades and cast shifting patterns.

Not only does this animate the space, it creates an immersive river environment that echoes the way light refracts through moving water.

By having the stairs start and end in different positions across floors encourages visitors to make use of all spaces.

The constant change in direction also represents the meanders in a river, where it bends to overcome an obstacle.

Refraction Experiment using different sources and boundaries

Projection patterns were directly influenced by the texture and geometry of the boundary material.

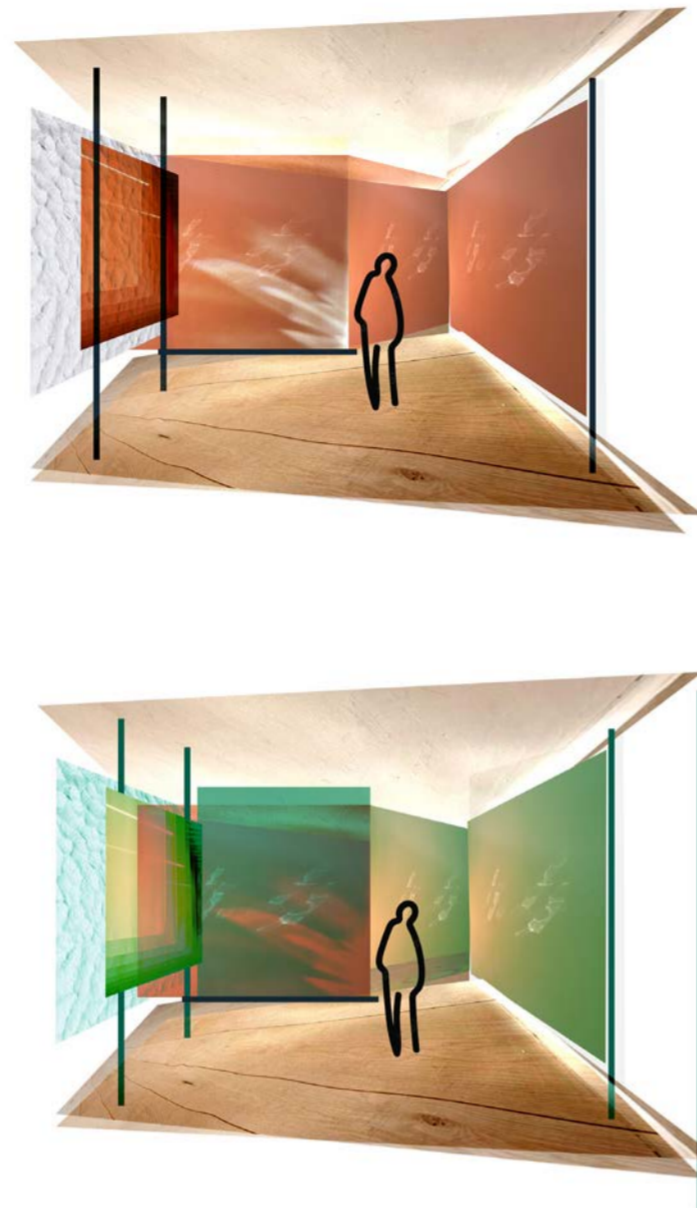
Colour filters modified the perceived atmosphere of the space without significantly changing the projected light formations.

Ribbed textures generated a gradient of light intensity, increasing spatial depth and variation.

Fluid-textured glass created the most effective water-like light projections, enhancing perceptions of calm and immersion.

Artificial light produced static shadow formations, lacking the fluidity and movement achieved with natural light.

Experimental Concept Visuals & Materiality

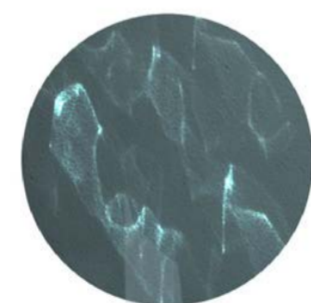


Acoustic Control- Help to reduce auditory overstimulation by cancelling out background noise, decreasing cortisol levels and helping the mind to relax.

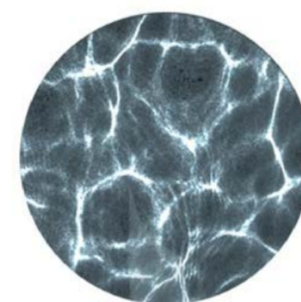
Neutral Tones- Help to reduce emotional noise, steady fluctuating moods, and create a neutral backdrop to decrease overstimulation and therefore relax the mind

3D Model of Decompression Zone

Rounded Edges and Shapes- Create a soft atmosphere, signalling safety and encouraging openness.



Refracted Projection onto wall



Refracted Projection at bottom of water



Glass Plane



Water Surface

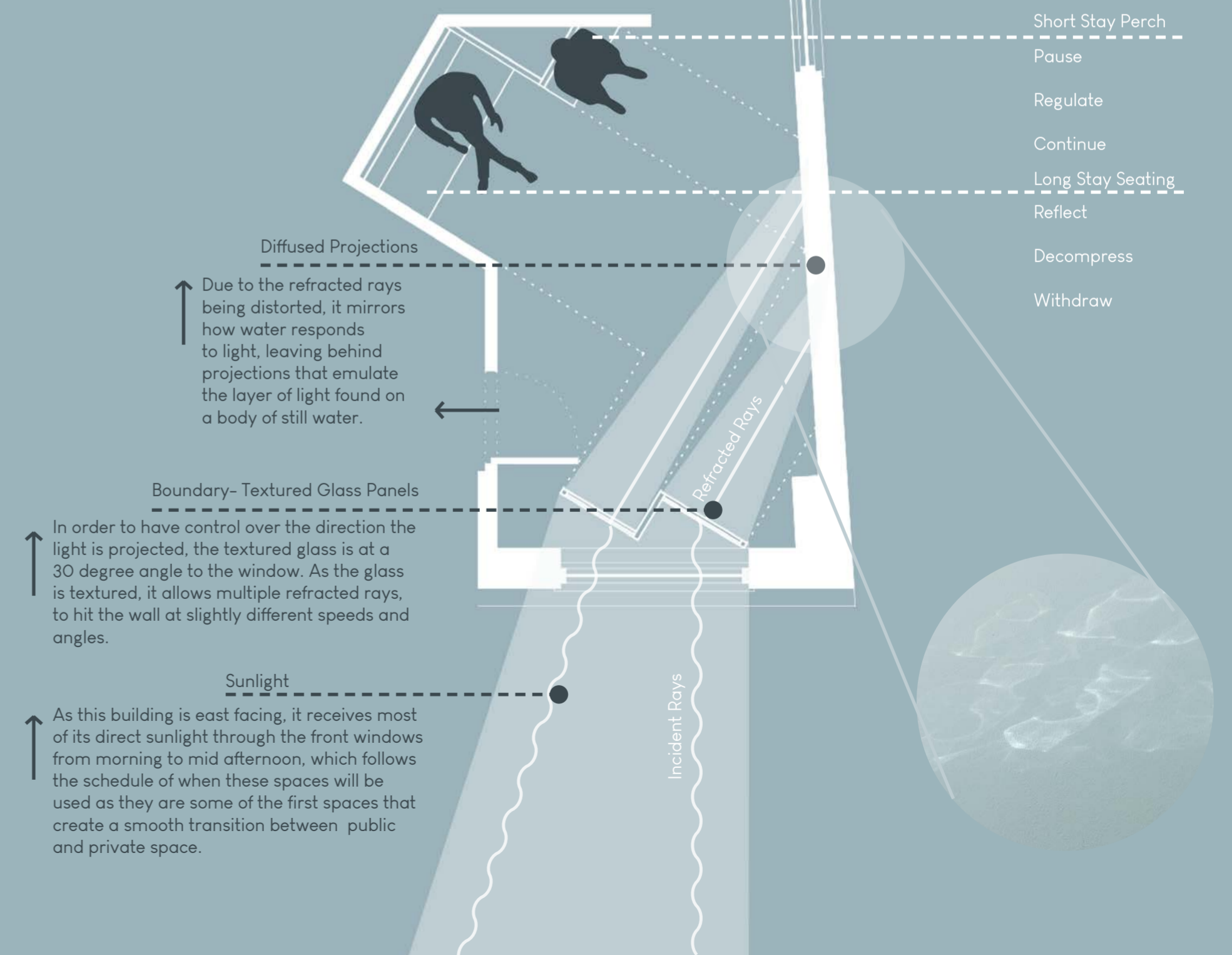
Atmospheric Experimentation Through Refraction

Through iterative experimentation with light, material boundaries and refraction, a series of studies investigated how atmosphere could be shaped through sensory experience. Natural light projected through textured glass and coloured filters produced fluid, evolving patterns that enhanced perceptions of movement and calm.

Comparative testing with artificial light and water generated static shadow formations, revealing the limitations of alternative approaches. These findings informed the development of the decompression space, demonstrating how experimental making and material testing can be used to create new modes of spatial and emotional engagement.

Final Decompression Zone

Having two different options for seating that occupy different lengths of time, encourages agency and choice, as individuals can spend as much time as they need in this area, as everyone's journeys are not the same.



Translating Healing Architecture Research into Spatial Experience

The final design translates research into trauma-informed and healing architecture, into a cohesive spatial experience. Recognising that interior design directly influences neurological pathways associated with stress response, attention and mood stability, five key interior elements were identified as critical to regulating sensory experiences

that support physical and emotional wellbeing. Through the integration of these elements in collaboration with trauma-informed principles, the project demonstrates how evidence-based design can create environments that foster safety, empowerment and long-term recovery.



Natural Light

Directly affects melatonin production, serotonin levels and the circadian rhythm. Exposure helps with mood regulation.

Creative Expression Workshop Visual



Double story window across voided area improving exposure to natural light and helping to regulate the circadian rhythm

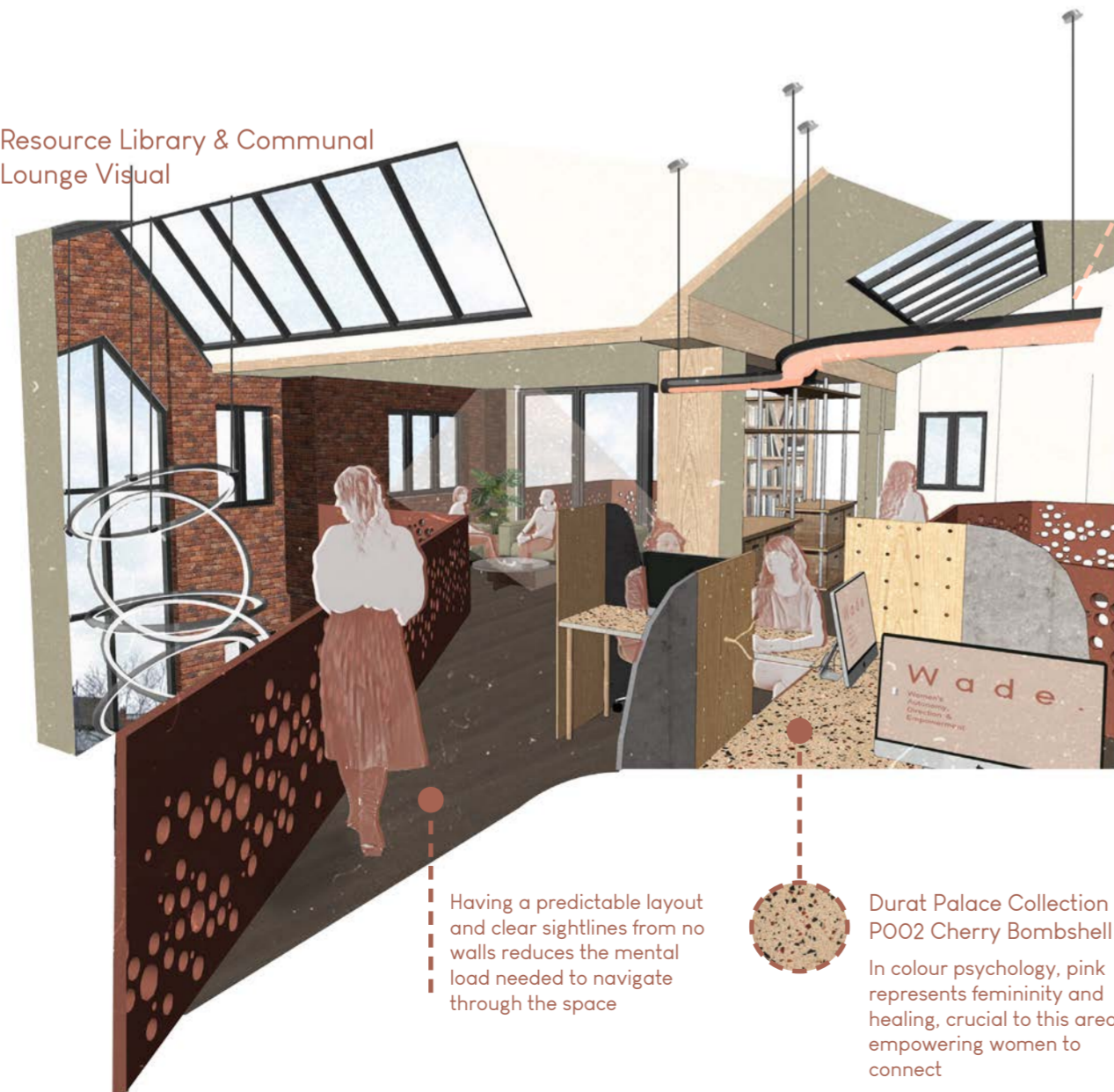
RAL 1018 Zinc Yellow
In colour psychology, yellow is proven to bring joy, uplift moods and increase creativity which is crucial for the workshop.



Colour Psychology

Colour influences emotional processing through associative and physiological responses.

Resource Library & Communal Lounge Visual



Having a predictable layout and clear sightlines from no walls reduces the mental load needed to navigate through the space

Durat Palace Collection PO02 Cherry Bombshell
In colour psychology, pink represents femininity and healing, crucial to this area, empowering women to connect



Visual Organisation/Clarity

Key to decreasing the cognitive load, (mental effort required to process information).



Shallow Waters (Children's Area) Visual

Green supports emotional regulation, learning and development, creating a calming environment that encourages growth, exploration and wellbeing.

Natural Mountain Larch H3409 ST38 Laminate
Biophilic resource, exposure to wood can reduce stress, anxiety and lower blood pressure



Biophilic Design

Supports parasympathetic nervous system activation, reducing stress by promoting calmness and recovery.



Estuary Cafe Visual

Eco Sound Acoustic Slat Wall Panels, Natural Oak
Absorb sound around voided areas, whilst providing biophilic properties

Rammed Earth
Composed of 100% natural earth pigments provide biophilic benefits, and celebrate individuality as every wall is different



Acoustic Design

Acoustic materials absorb excess sound, reducing auditory overstimulation and preventing a rise in cortisol levels.