

# DEEP DIVE

Nominated in the social justice category, this project addresses the sensory challenges many interior environments present to the user. The design strives to create an inclusive neurodiverse oasis in the city, which utilises natural forms and biophilic principles to support individuals with ASD through sensory play, supportive therapies and a sense of shared experience and community.

“Deep Dive” is a pioneering sensory experience centre in the heart of Edinburgh that reimagines the historic Infirmary Street Baths into a vital sanctuary for autistic individuals and their families. Designed to address the often-overlooked sensory and social challenges faced by neurodivergent communities, it creates an inclusive, judgment-free space where individuals can explore, connect, and find relief. Rooted in principles of equity and human dignity.

The project blends innovative wet and dry sensory environments with calming biophilic design, inspired by local nature, to promote emotional well-being. By transforming a former public health facility into a modern centre for community care and inclusion, “Deep Dive” honours the legacy of public service while meeting contemporary social needs.

Its central location and accessibility ensure it remains a trusted, welcoming resource for families navigating the complexities of daily life with autism. The project exemplifies how thoughtful, inclusive design can dismantle barriers, reduce isolation, and promote social justice by affirming the right of every individual to feel safe, supported, and understood.





Project Manifesto:

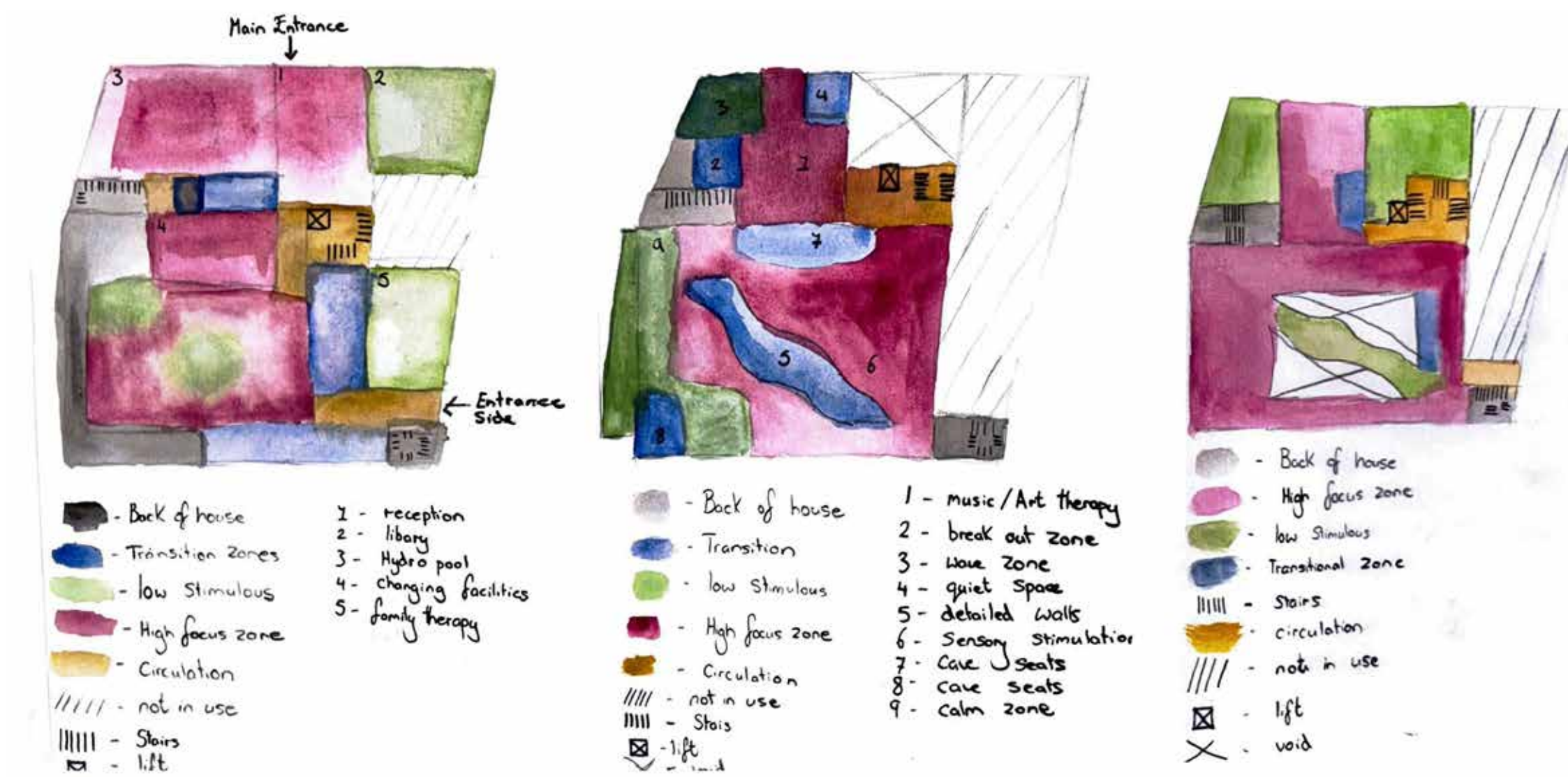
Today the world is connected especially through transport, social media and social groups allowing for people to build connections, make friends and socialise. Unfortunately, this isn't the case for many people with disabilities due to social isolation, judgement, and accessibility. When living with learning disabilities being in an over stimulation environment can not only cause distress but the fear of not being like the public can have an impact on their social interactions.

A survey taken in 2019 by the SCLD found 52% of the individuals said they occasionally sometimes or often feel lonely. This is due to not being able to fully participate in society and not feel welcome. Individuals with disabilities face may physical and emotional barriers. Often families miss out on spending quality time together in public settings due to the general public's ignorance and misunderstanding of a situation.

For my project I am designing an interactive neurodiverse experience that accommodates the needs of families who have children / adults with learning difficulties like autism. The interiors will allow families to relax without any judgment and connect with families alike in their area to build a community that they feel safe, heard, and uplifted. I would like to explore how sensory interiors can allow a calming atmosphere where they can learn, relax, and spend quality time with their family.

The space can also accommodate for building physical, social, motor, and cognitive skills through interactive rooms and build skills they will need when faced with being on their own to allow confidence to be instilled within themselves. Confidence is a powerful tool, and this space can also bring confidence with parents or careers. Having night classes for parents and carers that want to learn more about an individual's disability will allow them to feel educated and have the coping mechanisms they will need in their own environment.

Sensory Zone Thumbnails:



Material Investigation:

Users needs

Individuals who are Hypo sensitive generally respond well to loud environments e.g. Group play activities in an open space.

Hypo-sensitive materials

- Velvet** - Soft, plush texture providing deep tactile comfort, often used in upholstery and cushions.
- Rubber** - Offers a flexible, slightly firm texture that can engage the senses without being overwhelming.
- Leather** - Smooth, cool texture providing a tactile experience, often used for furniture or accessories.
- Wool** - Natural fiber with a soft, warm feel, offering gentle tactile stimulation.
- Textured Wood** - Natural wood surfaces with varied textures offer a grounding and engaging sensory experience.
- Cotton** - Soft, breathable fabric that provides a gentle tactile sensation, ideal for bedding or soft furnishings.



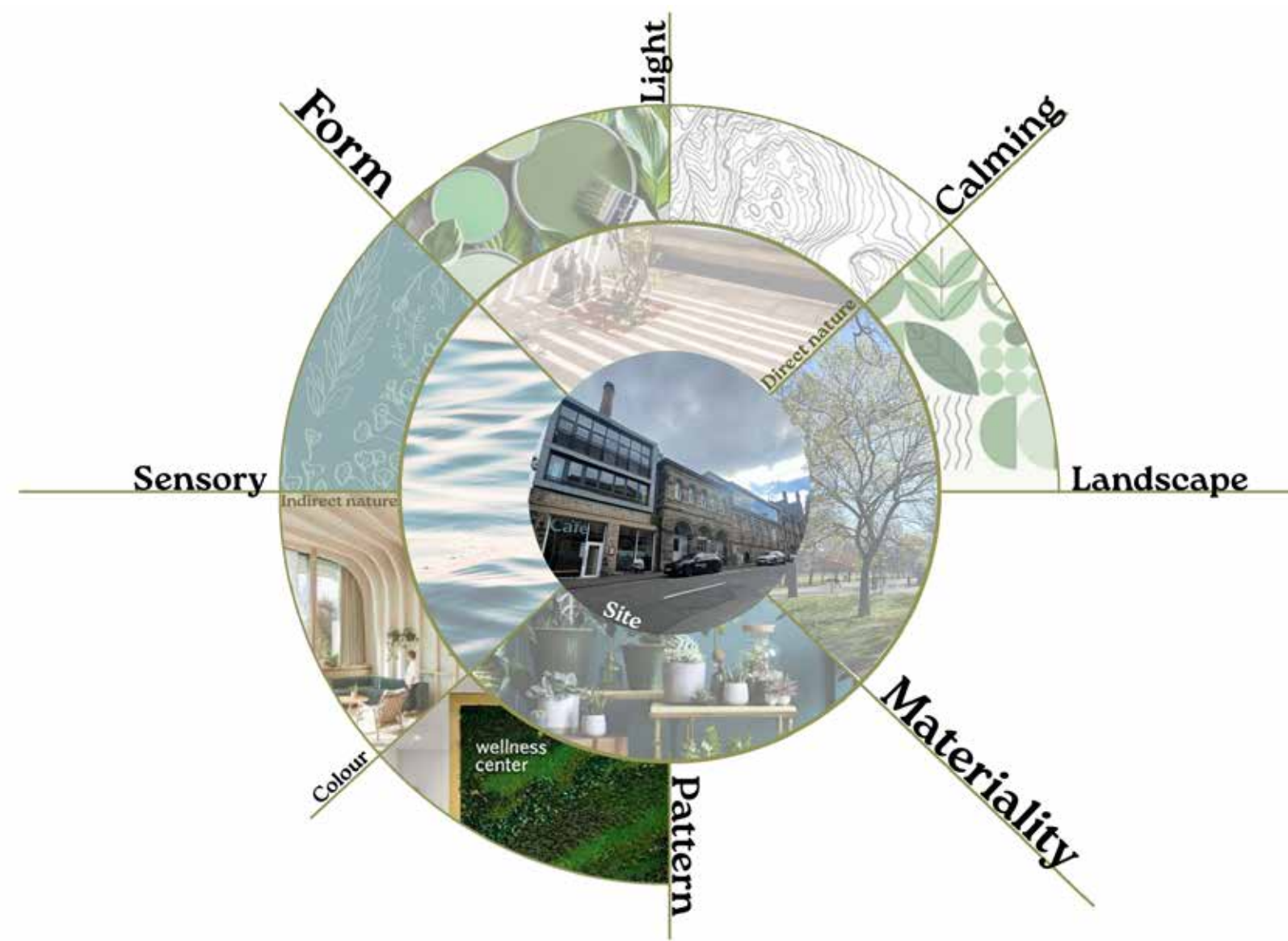
Individuals that are overstimulated are easily distracted by background noise. A quiet 1:1 breakout room with insulated walls with dimmed lights can be helpful.

Hyper-sensitive materials

- Bamboo** - Smooth, non-reflective, and calming material often used for flooring and furniture.
- Cork** - Soft underfoot and sound-absorbing, cork helps create a quiet, soothing environment.
- Cotton** - A soft, natural fabric that is gentle on the skin, ideal for bedding, upholstery, and curtains.
- Microfiber** - Ultra-soft fabric that is gentle on the skin and provides a smooth, non-irritating surface.
- Felt** - Soft and smooth, felt offers a tactile comfort and is sound-absorbing, reducing noise distractions.
- Matte Finishes** - Non-reflective surfaces (in materials like paint, fabrics, or finishes) prevent glare, reducing visual overstimulation.



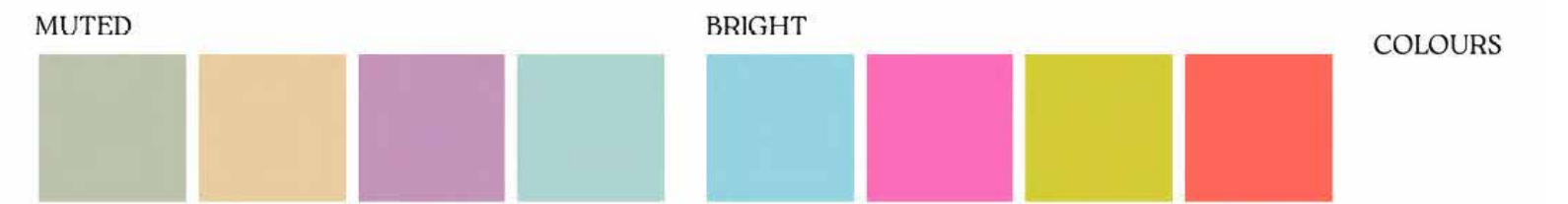
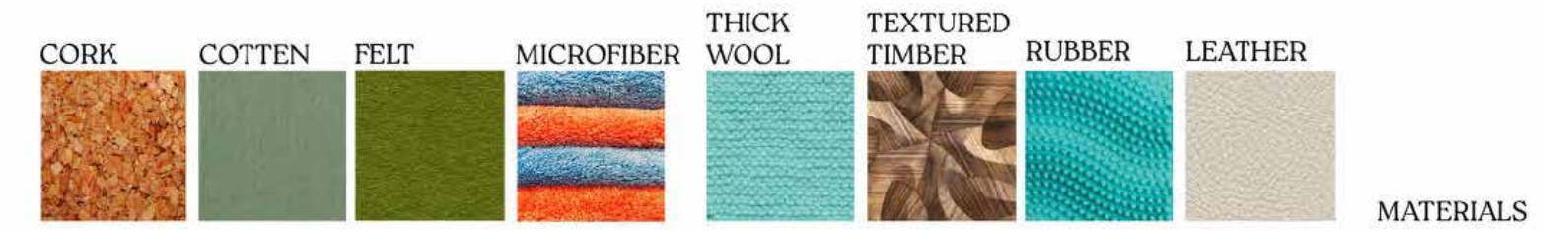




#### A sense of calm:

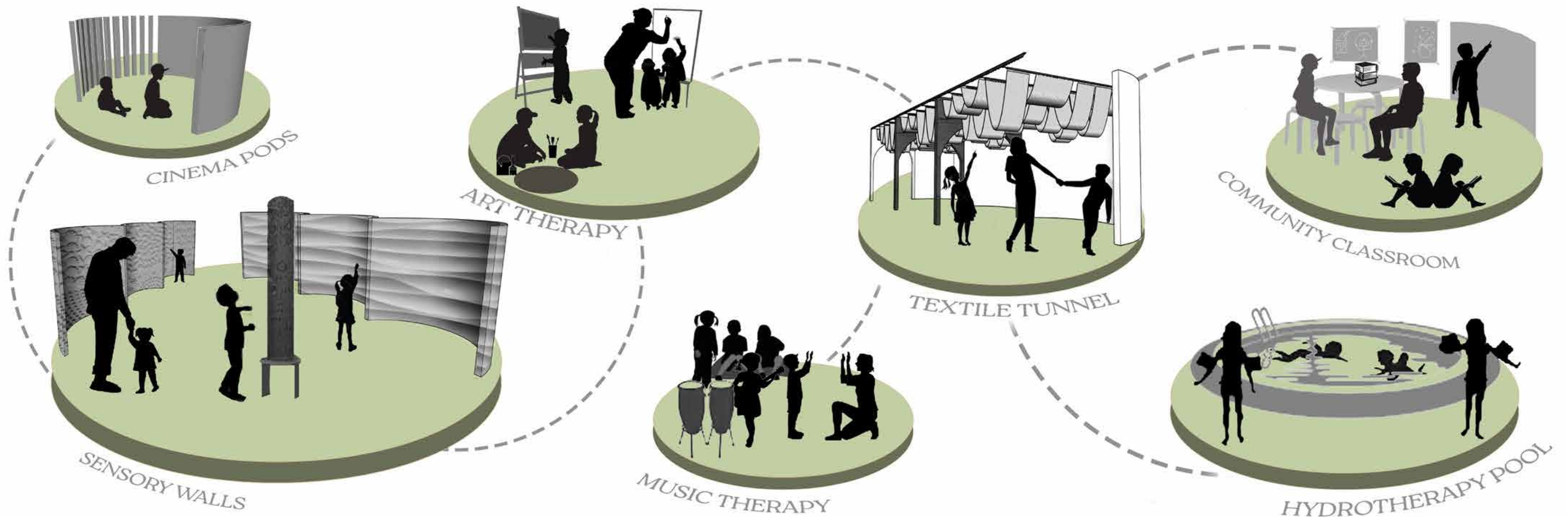
'Autism spectrum disorder (ASD) is a neurological condition that affects social interaction, communication and behaviour. often accompanied by sensory processing challenges'. (Amercian Psychiatric Association, 2013)

Designing with nature at the forefront has a positive impact on individuals with ASD. In this diagram I explore natural elements (forms, colours, and materials) can positively impact sensory perception and contribute to a calming atmsopere. Harnessing the local terroir for inspiration, and bringing that landscape into the urban realm, forms part of the overall design strategy with the users at the heart of the decision making process.

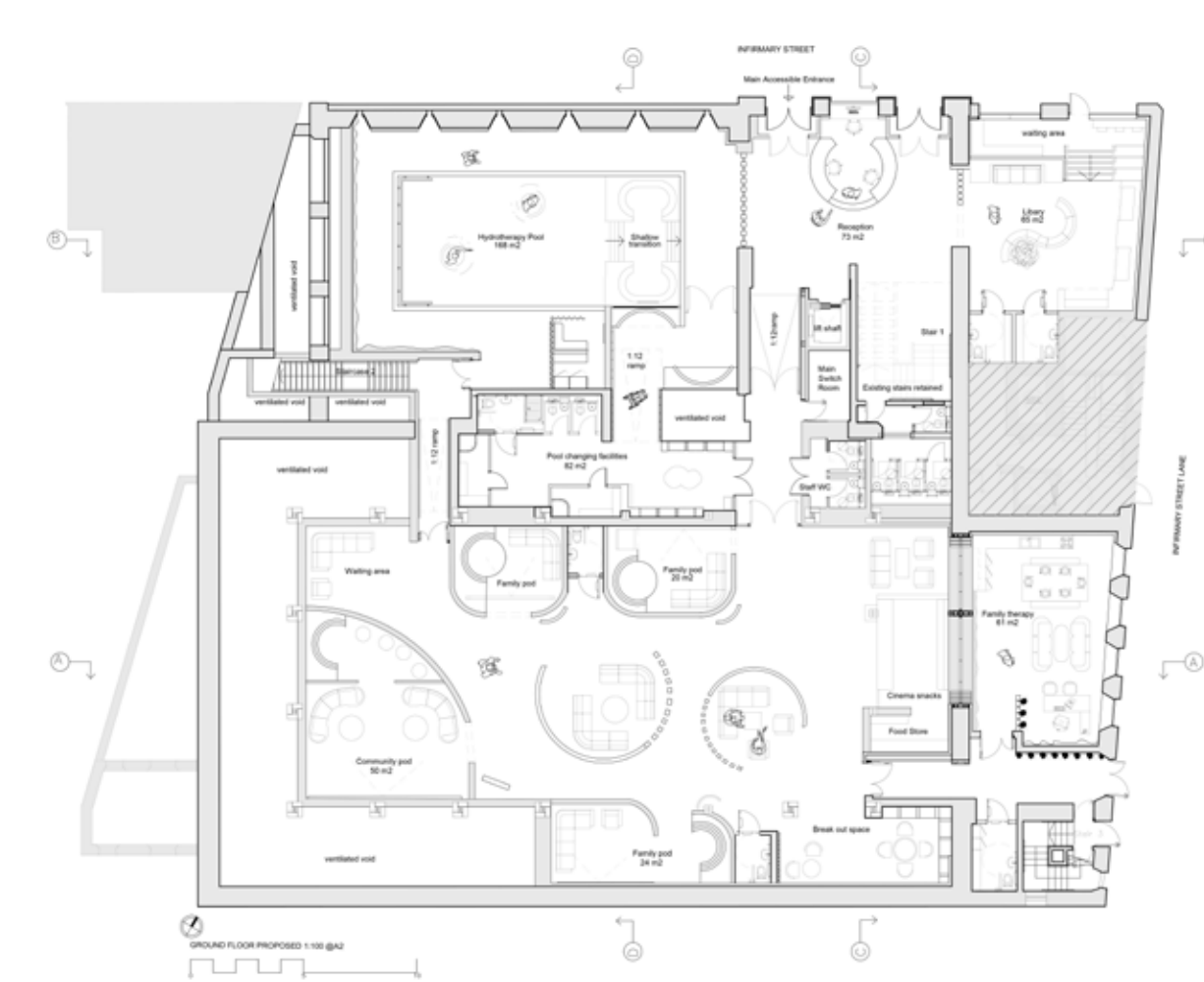


#### Activity Schedule:

All the activities have been tailored towards the needs of users with ASD. Some are more suited towards hyper-sensivity like the cinema pods or art therapy spaces, as calming places which include sensory walls and the hydrotherapy pool. To address feelings of isolation, all of these activities can be done in small groups, as families or with friends, to promotoe connection and social interaction.

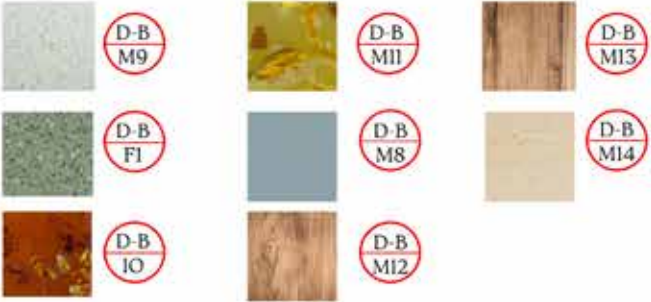
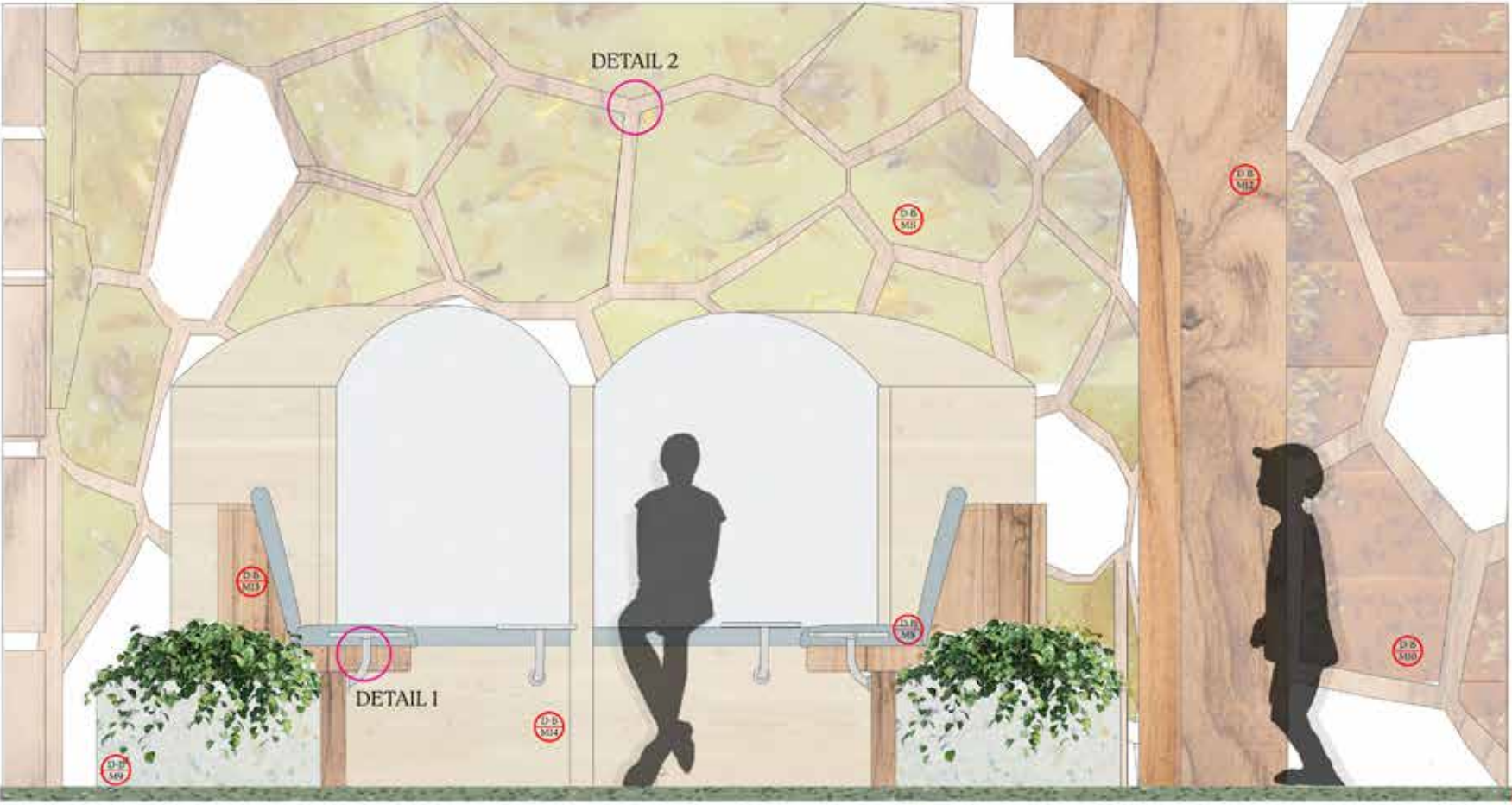




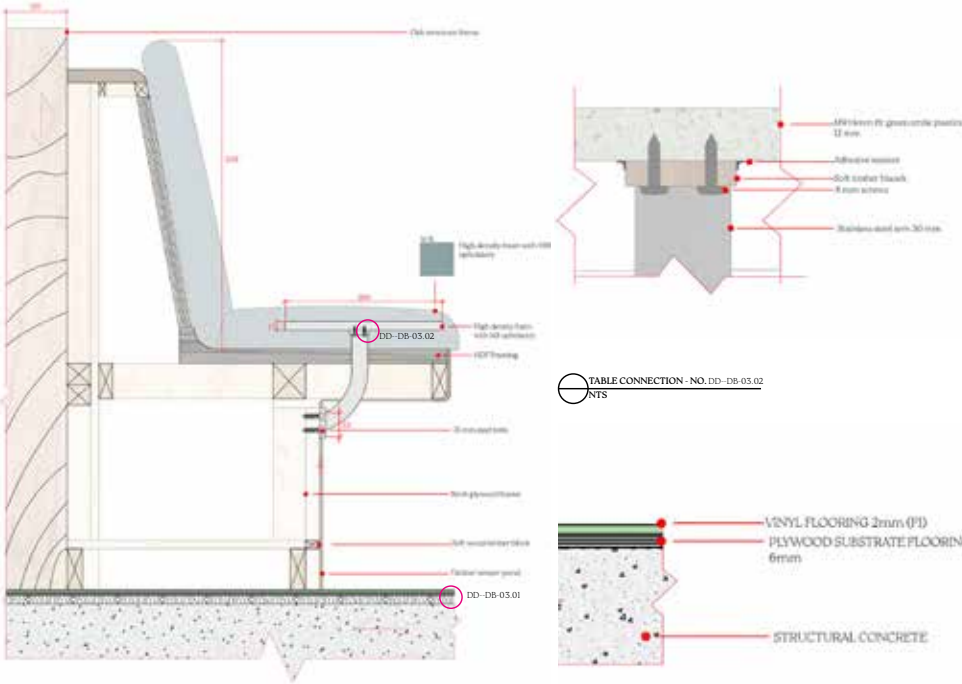




Materials & Details:



DETAIL B ELEVATION - NO. DD-DB-02  
1:10 @A2



DETAIL SECTION - NO. DD-DB-03  
1:20 @A2

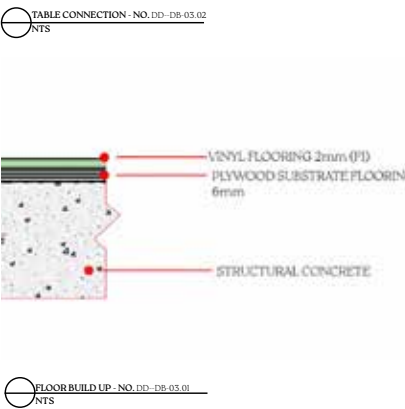
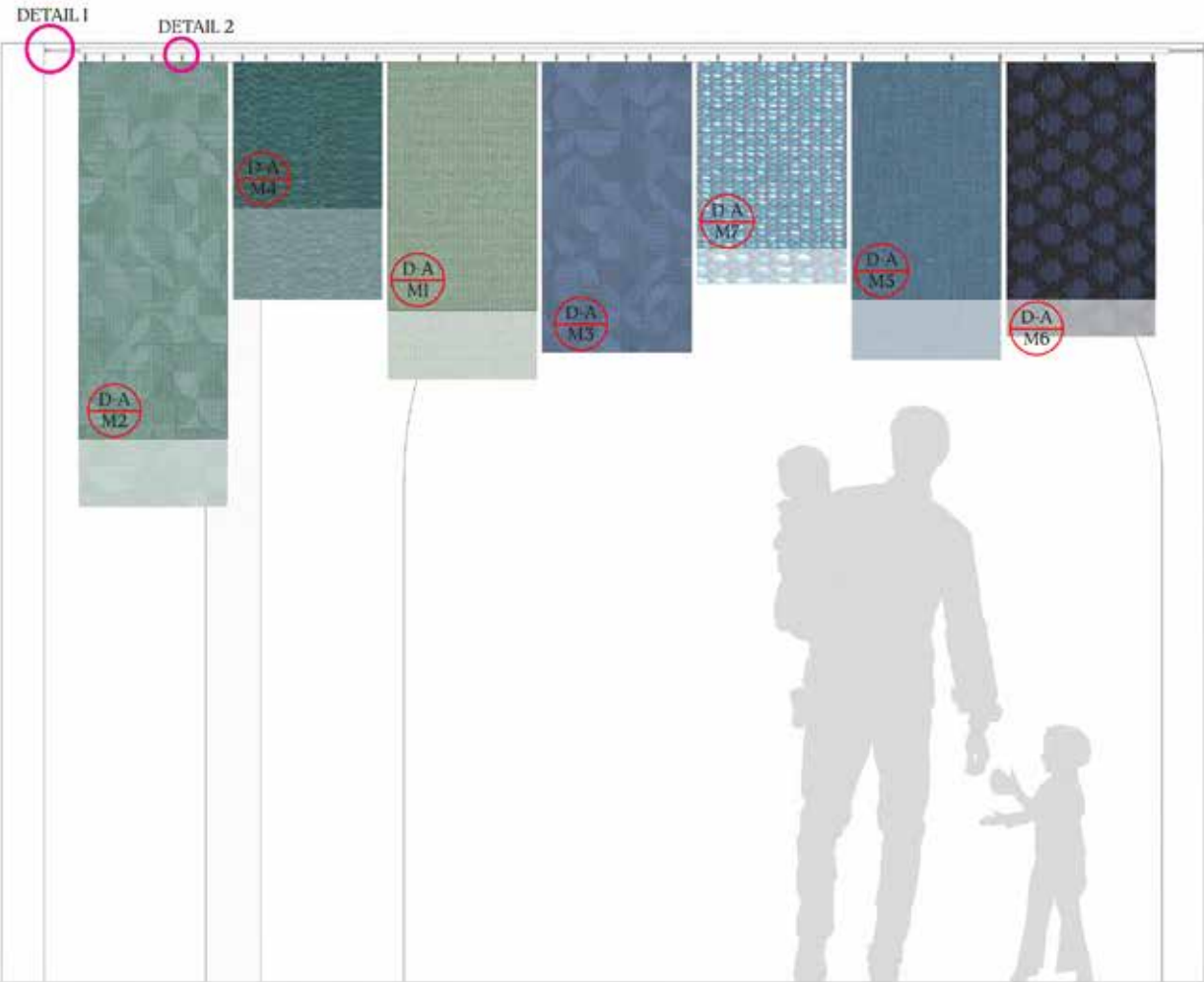


TABLE CONNECTION - NO. DD-DB-04  
1:20 @A2

DETAIL 1 - Wall to running track connection SI, including a zinc galvanizing steel carabiner for support from wall to runner with a welded perforated stainless steel plate. For more details, dimensions and specifications see drawing DD-DA-04 and DD-DA-05

DETAIL 2 - Runner to textile connection. Steel runner with moveable hooks to an adjustable clip for textiles to be easily changed if worn and needing replaced. For more details, dimensions and specifications see drawing DD-DA-06



DETAIL A ELEVATION - NO. DD-DA-03  
1:10 @A2

TEXTILE	SPEC CODE
	D-A M1
	D-A M2
	D-A M3
	D-A M4
	D-A M5
	D-A M6
	D-A M7



DETAIL C ELEVATION - NO. DD-DC-02  
1:10 @A2

For one of my samples I wanted to create my own recycled paper that could be used as a wall paper within my design or incorporated within my design either in the roof or on one of the panels as the paper will be semi transparent and be able to diffused light.

The processes of creating the paper takes a while due to some of the steps taking a few hours to complete. You have to soak the recycled paper for 12ish hours before blending to create the pulp substance. Once the pulp is created and strained you then place this with a container with water and sieve the pulp in a frame to create the sheets of paper. I think for my first try it was successful but next time I will use less blue recycled paper to have less blue species and create thicker paper so its structural more sound.

My next sample was developed in the casting workshop. I wanted to create a texture that could be used as a panel in my detail design or even a wall texture as a feature wall. I collected an old cardboard fruit tray and then filled it with clay to keep its structure when I pour plaster over the mold. I then mixed the plaster over the mould and let it dry and it created my circular texture.

I further developed this by adding felt mosaic pieces to the plaster as I wanted to see how the texture would feel for hyper sensitive kids. This could be created into an acoustic panel by Autex or even a texture for clayworks.

