

Bipolar

What is Bipolar disorder?

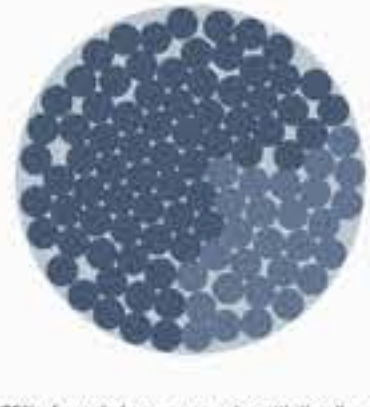
Bipolar disorder is a common disorder affecting mood and behaviour, manifested by repeated episodes of mania/ hypomania and depression. An individual is the most likely to have their first episode occur when a teenager/ young adult. On average it takes 9.5 years to get a correct Bipolar diagnosis.

Sleep response



Those with Bipolar disorder experience sleep fluctuation between having a decreased need for sleep and being tired with no energy. This is due to the irregularity Bipolar disorder causes with the Circadian Rhythm.

Project Justification



67% of people with Bipolar disorder received no self-management advice when diagnosed.

Triggers



Genetics can act as a trigger for Bipolar disorder. The heritability of Bipolar is estimated to be 44% and effect size degree related.



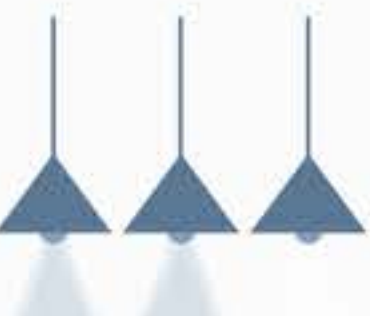
Social Rhythm Disruption was found to affect 25% to 65% of individuals with Bipolar disorder before a manic episode.



Seasonal Affective Disorder occurs in around 25% of people with Bipolar.



Perimenstrual, Postnatal, and menopause periods were shown to increase mood in 77% of women.



Lighting can affect the body's circadian rhythm. This can have extreme effects for someone with Bipolar disorder.



People with Bipolar disorder can develop hyperarousal due to mood instability.

Common treatments



Mood stabilisers can act as a long-term treatment when taken daily.

User



Gender Neutral



Psychological treatment such as talking therapies and group therapy.



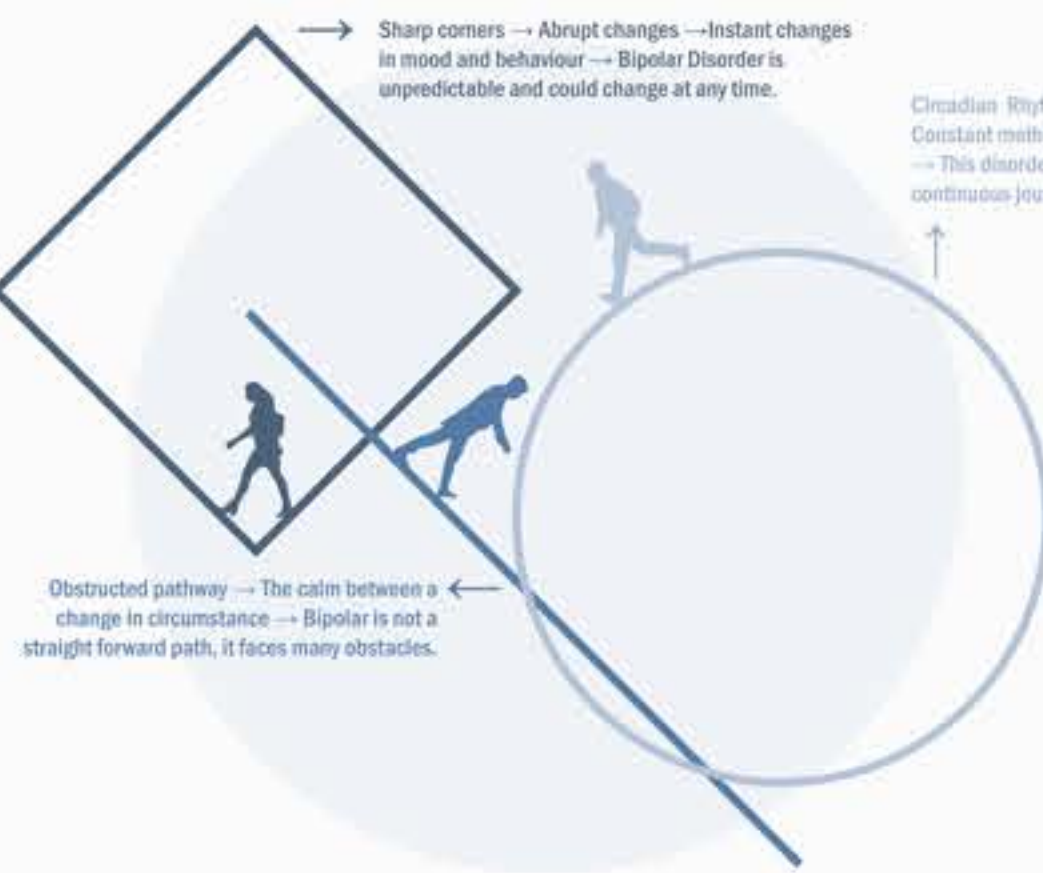
Those affected by Bipolar disorder, Friends and Family



Psychoeducation is used to recognise the signs and symptoms of a manic or depressive episode.

18 years - 40 years

Design focuses



Client



The client 'bipolar UK' is a national charity focused on supporting those with Bipolar disorder and the families affected. bipolar UK was selected as the client for this project due to its national prominence and specialist focus on supporting individuals affected by bipolar disorder. Aligning the design with the charity's mission, enhances its relevance, impact, and potential for real-world application.

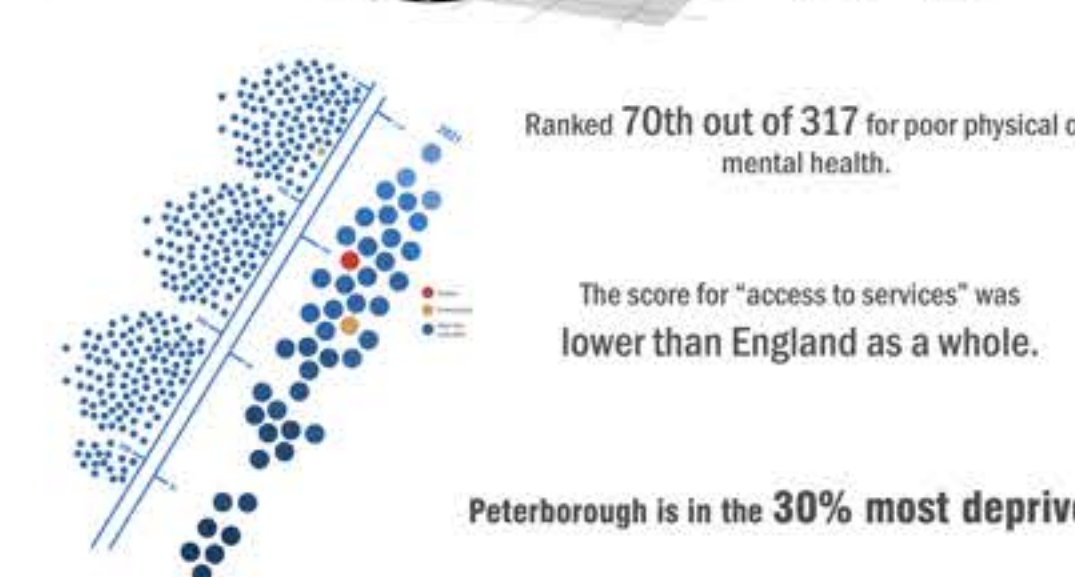
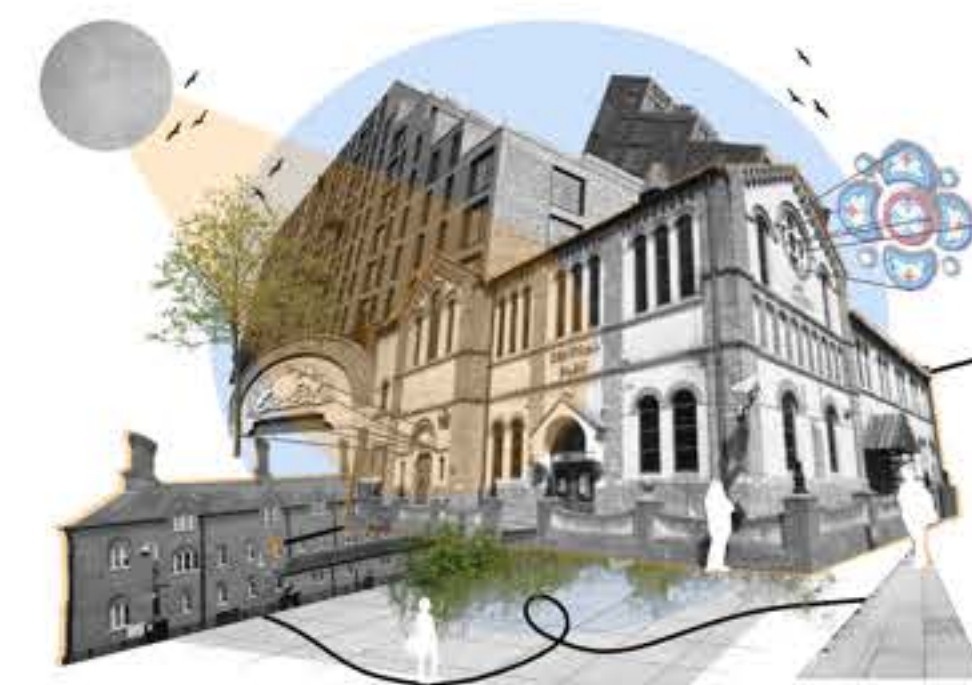
Equinox Community Hub

Design summary

This design rejects the norms of usual medical facilities. It will be a Community Hub for people living with Bipolar disorder (18ys - 40ys) and their immediate support systems. It will contain teaching facilities for families living with someone with Bipolar, therapy spaces, alongside spaces for people to come together to support each other. These areas will be carefully considered using Circadian lighting for the design to assist recovery and aid the therapeutic process. Light can massively impact the sleep patterns and energy levels, especially for those with Bipolar disorder, making light consideration vital.



Within the UK 1:50 people have Bipolar disorder, however, upon diagnosis only 28% of people knew someone else with the disorder. In the UK there is approximately 1 psychiatrist for every 1000 people with this disorder. This project will create an accessible space to receive immediate assistance by medical professionals before hospitalisation is necessary.



Site map (Not to scale)



Location: Laxton Square, Peterborough, Cambridgeshire, PE1 1UQ

The City Centre location offers vast access to public transport. It is in a walking distance from the bus and train station. This is vital in the consideration for those with Bipolar disorder due to the condition limiting those who can drive.

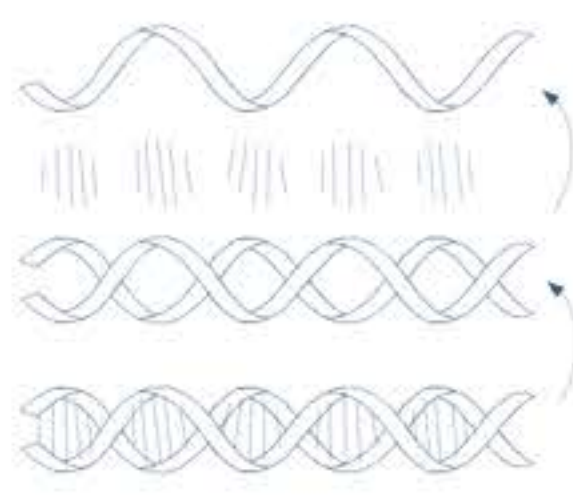


The existing architecture of this building was an industrial site with yellow and red brick. Features: These features include arched windows allowing natural light into the space, additionally, the triangular skylight opens up the building to empty light.



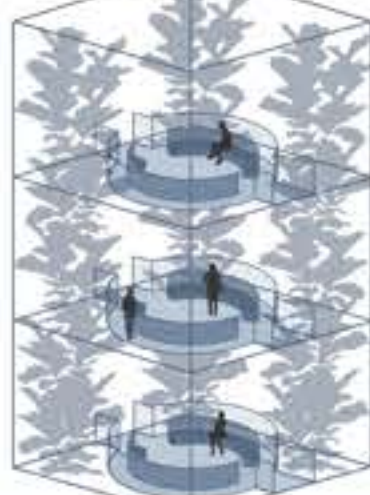
Key design development

Shape experimentation



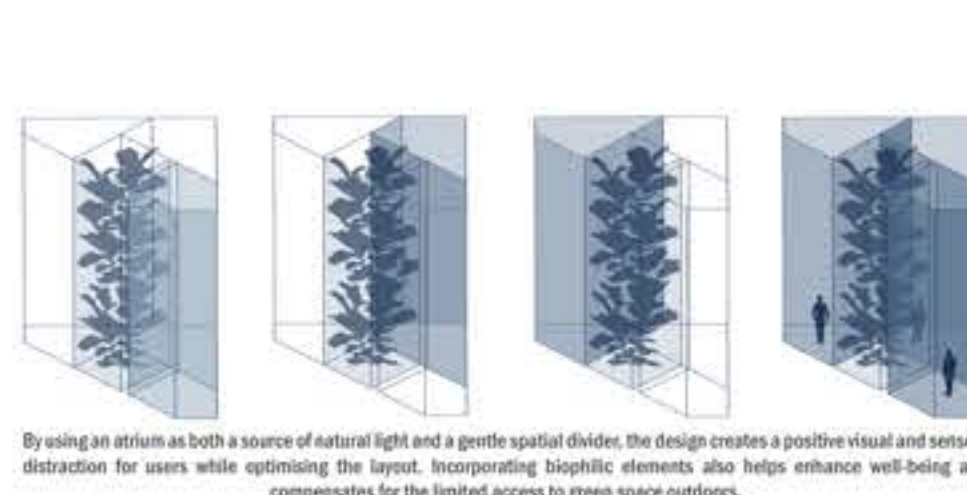
The connection between Bipolar disorder and DNA initiated the inspection of the form within a DNA strand, particularly how those curved forms twist. The curved non-linear shapes produce a balance between openness and enclosure.

Spatial interactions



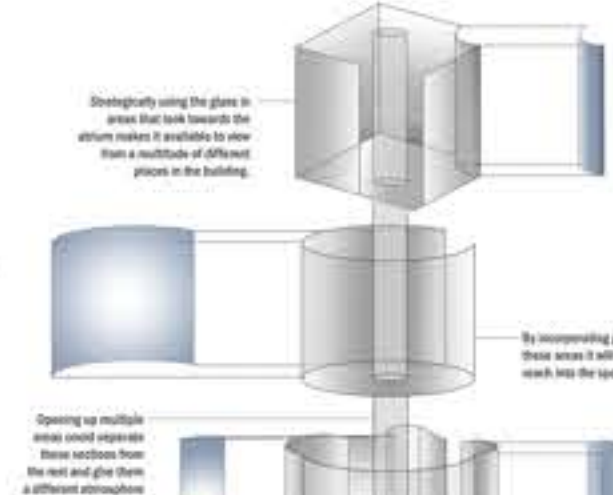
Experimenting with the spatial interaction between floors led to a deeper exploration into the benefits of biophilic architecture for those with Bipolar disorder.

Incorporating Biophilia



By using an atrium as both a source of natural light and a gentle spatial divider, the design creates a positive visual and sensory distraction for users while optimising the layout. Incorporating biophilic elements also helps enhance well-being and compensates for the limited access to green space outdoors.

Material consideration



Biophilic design uses the power of nature to enhance the human experience. This is achieved by incorporating natural elements into the built environment. The use of natural materials, such as wood and stone, can help to create a sense of connection to nature and improve mental health. Additionally, the use of natural light and ventilation can help to create a more comfortable and healthy environment.



Materiality

The use of hard and soft materials is representative of the calming space designed to provide support and harmony in the lives of those with Bipolar disorder. The natural materiality combined with blue hues adds to the calming environment.

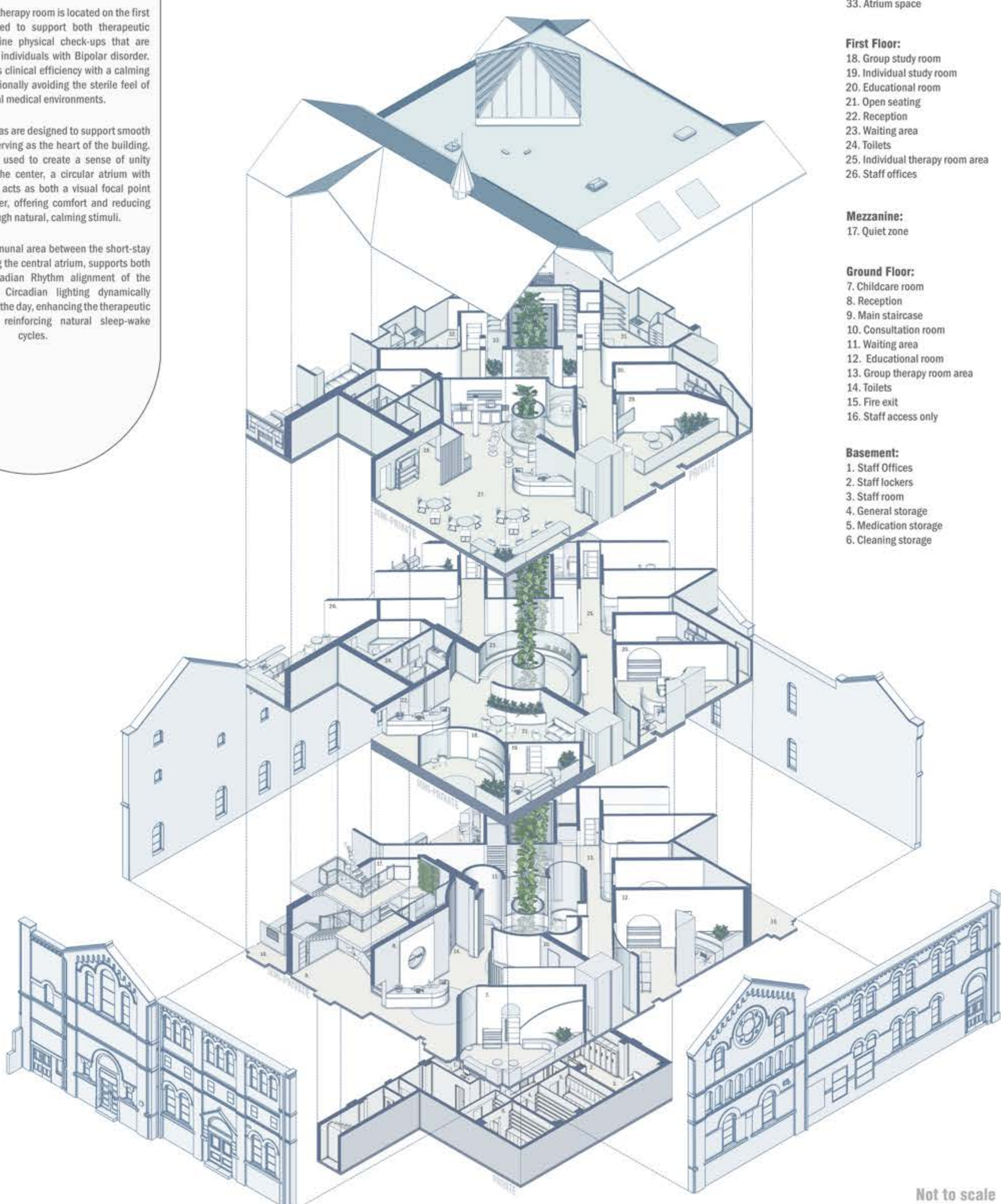
Core spaces

25. This individual therapy room is located on the first floor. It is designed to support both therapeutic sessions and routine physical check-ups that are often essential for individuals with Bipolar disorder. The space balances clinical efficiency with the calming atmosphere, intentionally avoiding the sterile feel of traditional medical environments.

23. The waiting areas are designed to support smooth circulation while serving as the heart of the building. Circular forms are used to create a sense of unity among users. At the center, a circular atrium with biophilic elements acts as both a visual focal point and a gentle divider, offering comfort and reducing anxiety through natural, calming stimuli.

33. A relaxed communal area between the short-stay rooms, surrounding the central atrium, supports both recovery and Circadian Rhythm alignment of the users. Integrated Circadian lighting dynamically adjusts throughout the day, enhancing the therapeutic environment and reinforcing natural sleep-wake cycles.

This axonometric breaks down the design to clearly show the relationship between each floor, demonstrating the use of biophilic design elements like internal plants and organic forms carried throughout the building. Although each level has a distinct function, they're all connected through a shared spatial language, creating harmony and a unified identity across the entire design.



Second Floor:

- 27. Cafe
- 28. Toilets
- 29. Communal living area
- 30. Therapy room
- 31. Short stay room 1
- 32. Short stay room 2
- 33. Atrium space

First Floor:

- 18. Group study room
- 19. Individual study room
- 20. Educational room
- 21. Open seating
- 22. Reception
- 23. Waiting area
- 24. Toilets
- 25. Individual therapy room area
- 26. Staff offices

Mezzanine:

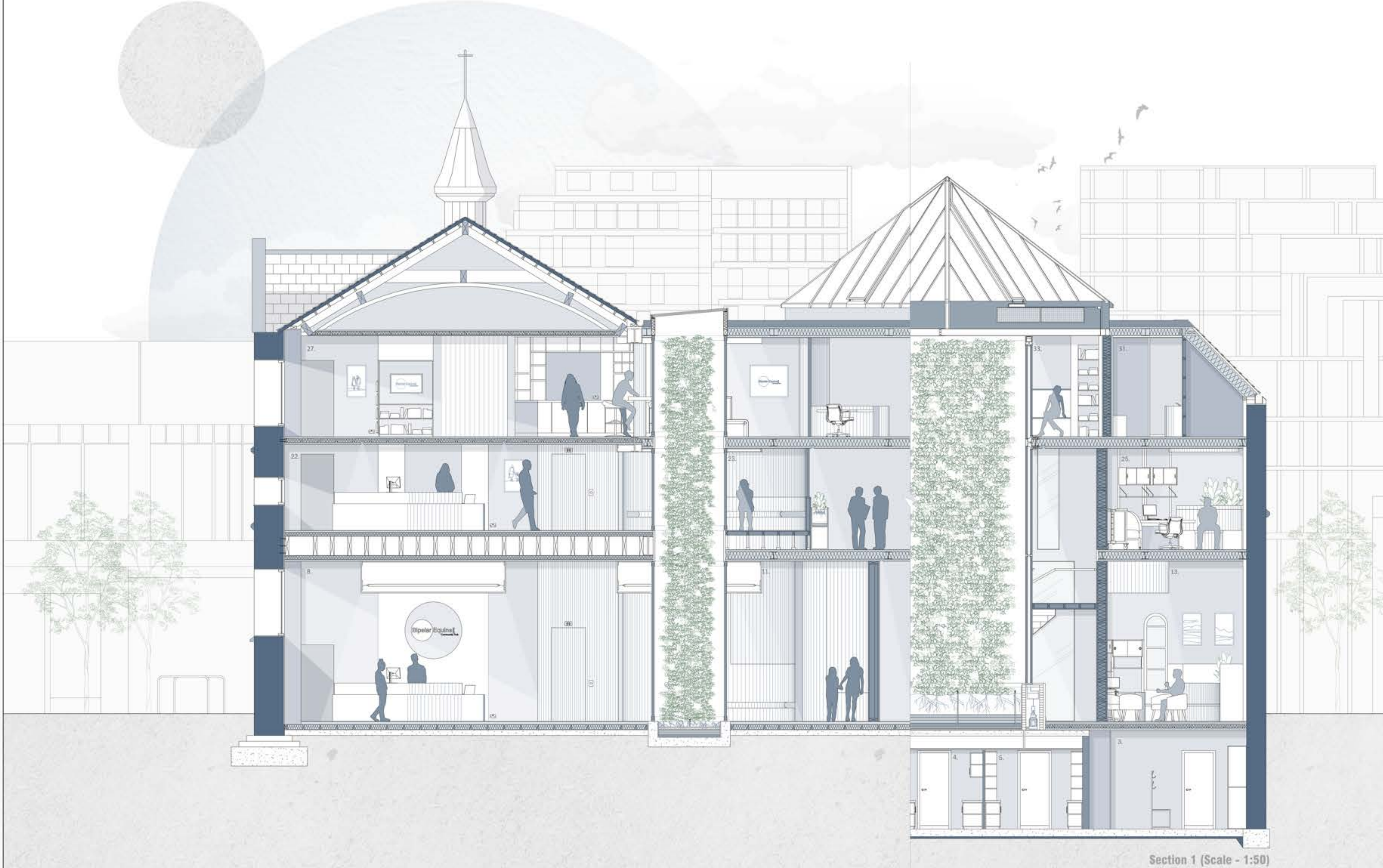
- 17. Quiet zone

Ground Floor:

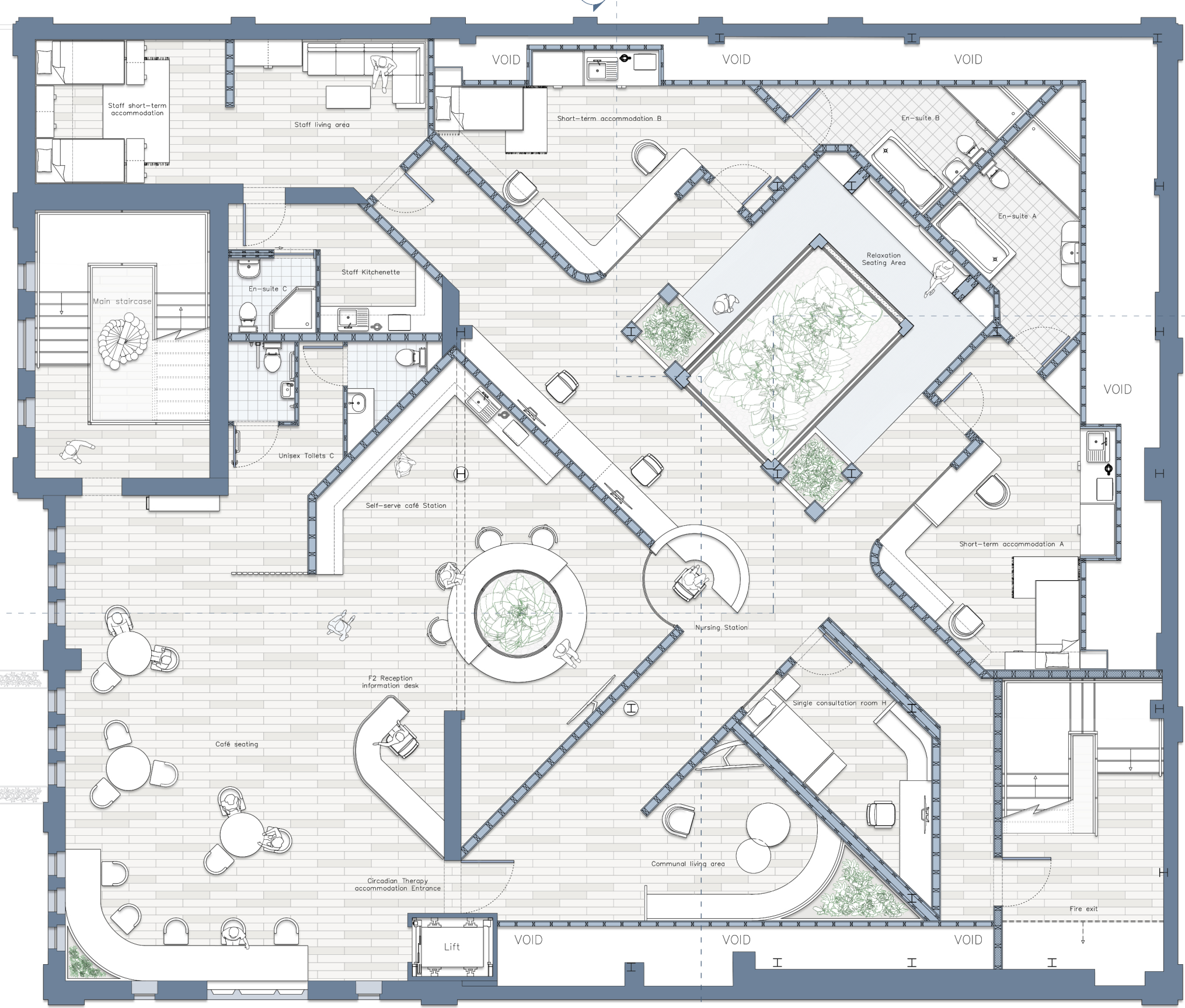
- 7. Childcare room
- 8. Reception
- 9. Main staircase
- 10. Consultation room
- 11. Waiting area
- 12. Educational room
- 13. Group therapy room area
- 14. Toilets
- 15. Fire exit
- 16. Staff access only

Basement:

- 1. Staff Offices
- 2. Staff lockers
- 3. Staff room
- 4. General storage
- 5. Medication storage
- 6. Cleaning storage

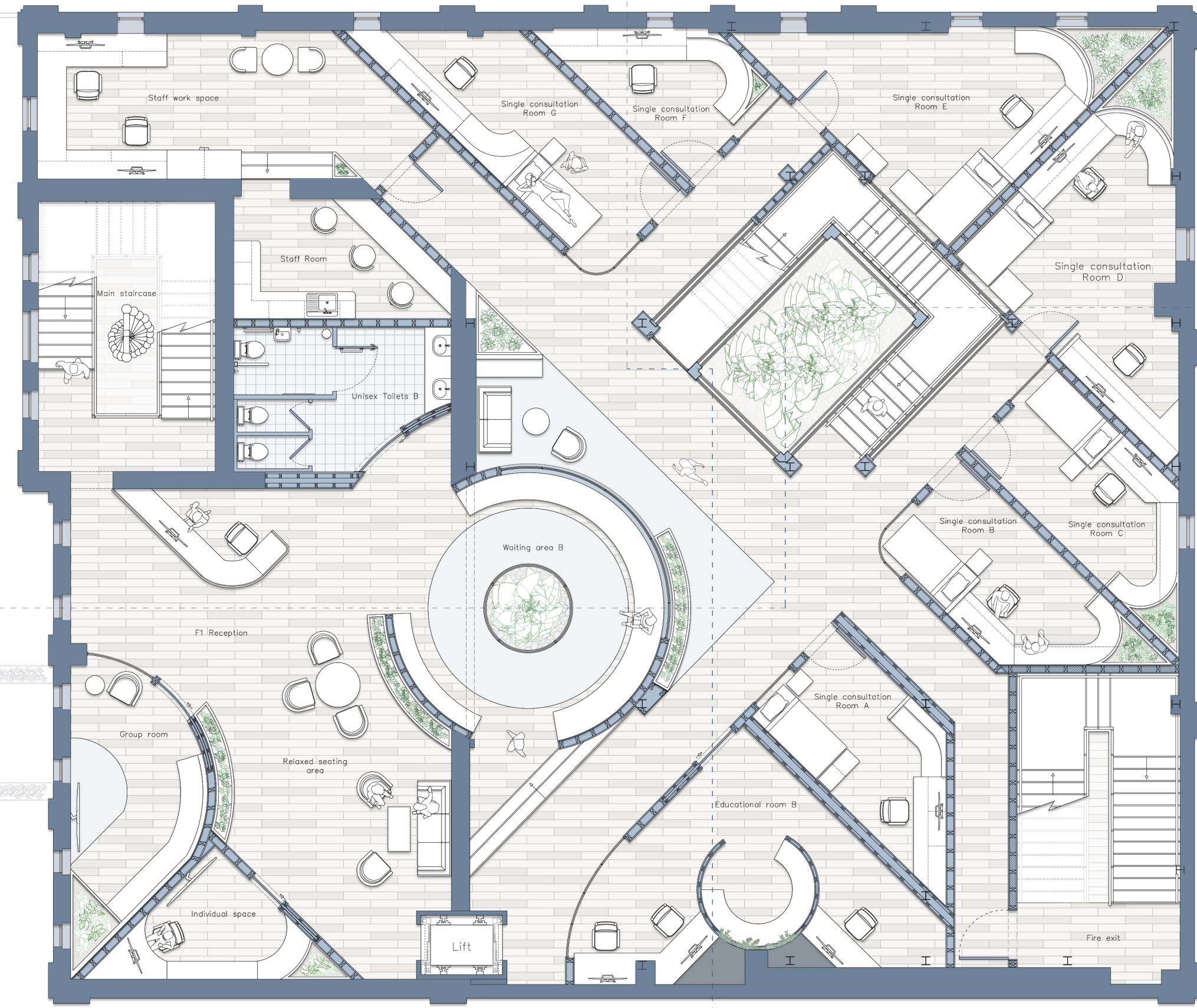


Section 1 (Scale - 1:50)



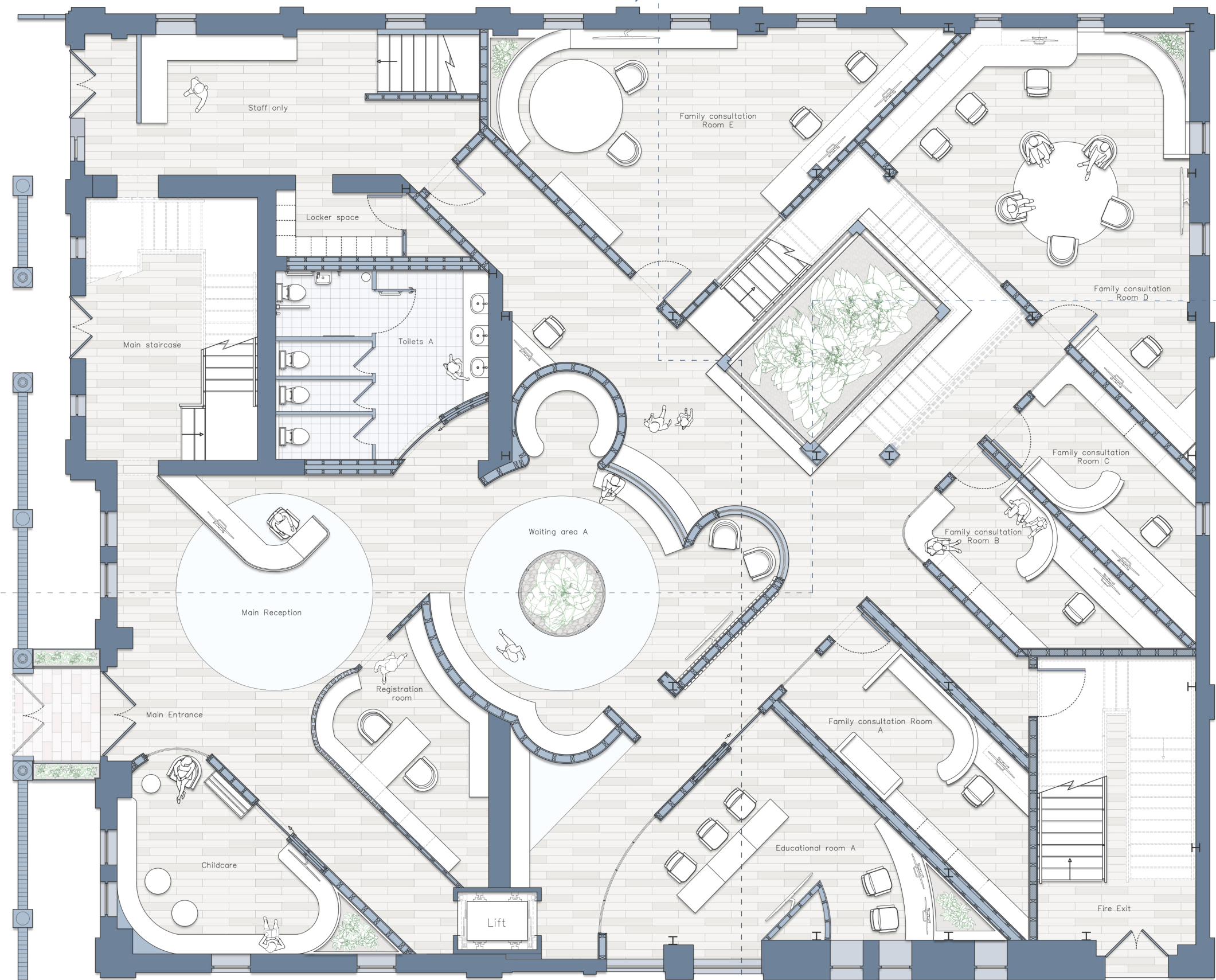
Second Floor (Scale - 1:100)

The second floor houses the main café and dining area which is accessible to all users and intended as a communal social space. This level also includes private short-stay facilities specifically designed to support the treatment of disrupted circadian rhythms.



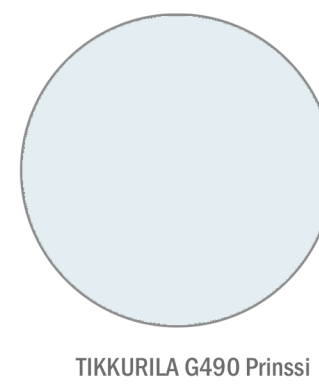
First Floor (Scale - 1:100)

On the first floor, spaces are allocated for learning opportunities, social engagement, and independent study. Individual therapy rooms are equipped for psychotherapy as well as necessary physical examinations depending on the specific patient requirements.



Ground Floor (Scale - 1:100)

The ground floor houses functional areas dedicated to childcare, family therapy sessions, and educational facilities for both direct users and visitors. These spaces are designed to foster a supportive environment where families can engage in therapeutic work together while children are cared for nearby, ensuring accessibility and convenience.



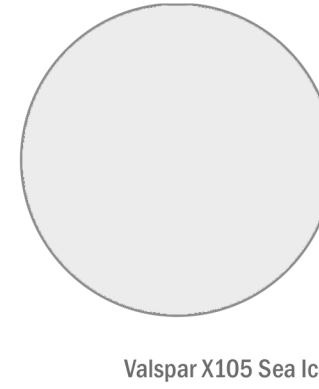
TIKKURILA G490 Pinnisi



Sky LED Panel

Spatial relationships

The spatial connection between floors is enhanced through the interplay of circular forms and angular geometry, creating visual continuity and guiding movement throughout the building. These contrasting geometries promote both cohesion and dynamic spatial experience, reinforcing the overall architectural narrative.



Valspar X105 Sea Ice



Harwoods HW33016 Arteray

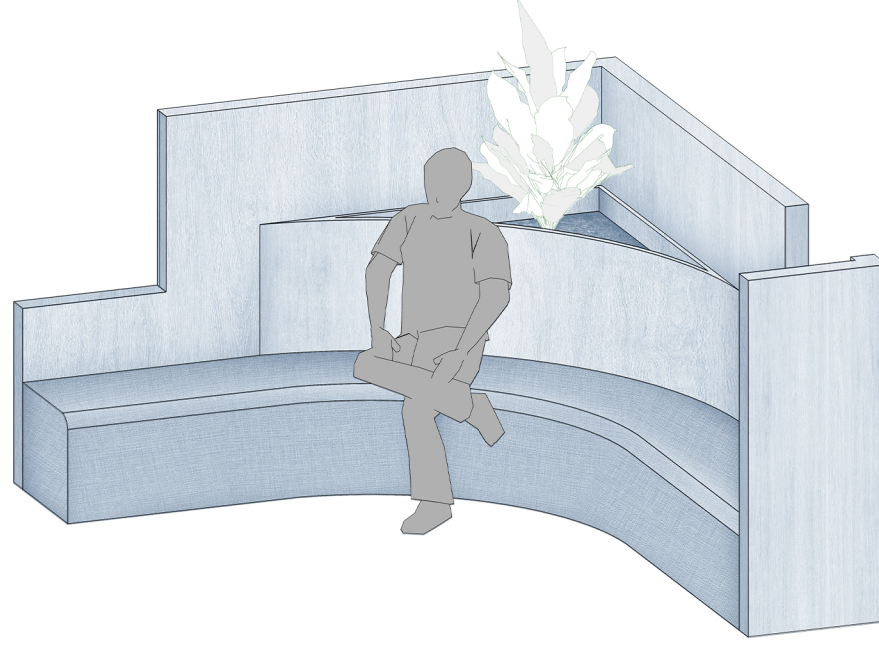
Incorporation of water features

Located within the main atrium, the sound of flowing water introduces a layer of white noise which helps mask disruptive external sounds and promote a sense of calm. This sensory experience supports emotional regulation and contributes to a tranquil atmosphere conducive to healing. In combination with the plants the water feature acts as watering system to the main atrium.



Technical detail A

This detail illustrates a custom-designed curved seating structure integrated with a built-in planter, combining functionality with biophilic design elements.

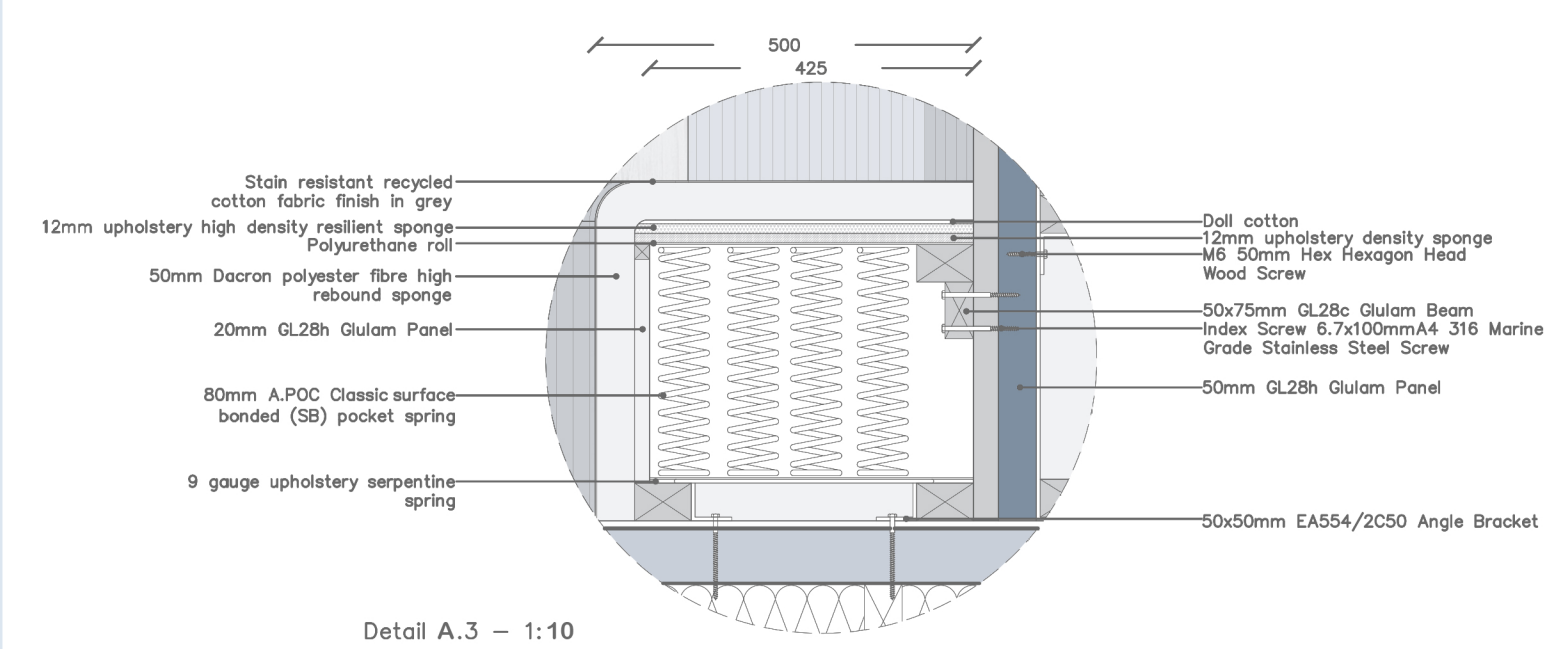


Detail B.2

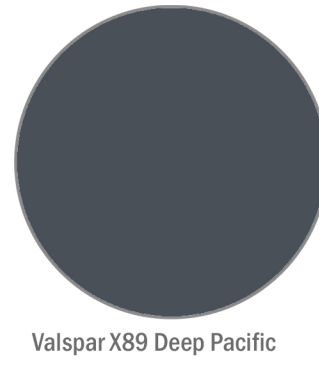
Sectional view showcasing the bench's internal construction, with a focus on the seamless integration of the planter as a biophilic element.

Detail B.3

Close-up detail exploring the tactile and visual layering of the seating, revealing the thoughtful selection of foam densities and box spring integration. Showcasing the prioritised user comfort during a therapy session.



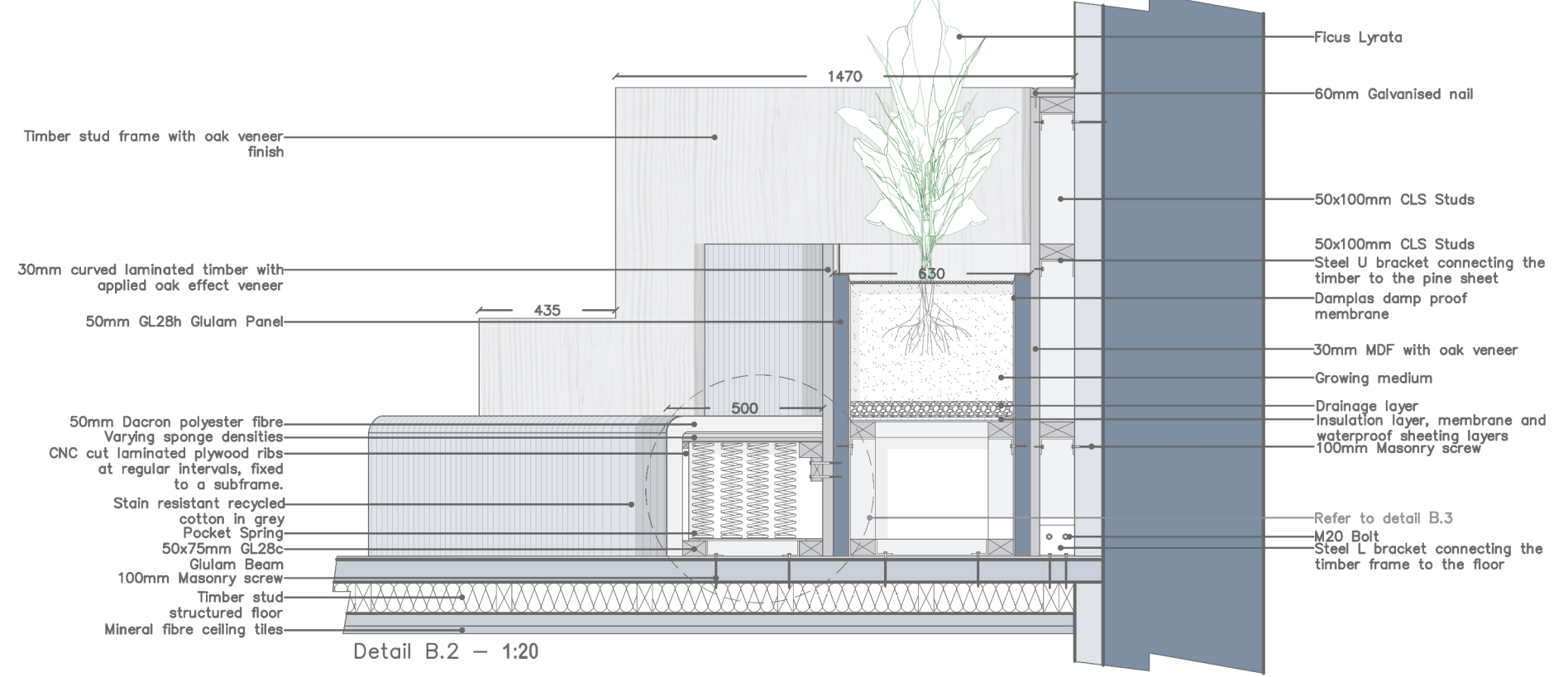
Detail A.3 - 1:10



Valspar X89 Deep Pacific



Autex acoustic paneling



Detail B.2 - 1:20

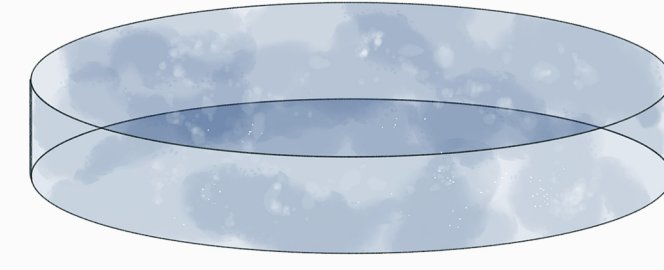
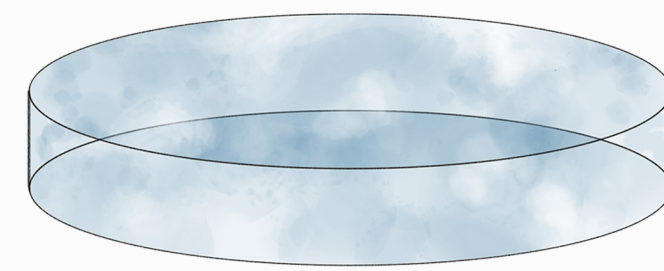
17. The mezzanine is designed as an immersive retreat, offering a quiet zone for individuals experiencing moments of overwhelm. An adjacent observation area provides additional support for users while also facilitating opportunities for research and monitoring. Accessible via the main staircase, the space maintains a balance between privacy and public engagement.

12. The short-stay rooms are created for individuals experiencing challenges with their mental wellbeing. These spaces offer a calm, supportive environment for overnight stays, providing early intervention and monitoring before hospitalization becomes necessary. Integrated circadian lighting supports natural sleep cycles, promoting restfulness and aiding the recovery process through subtle environmental regulation.

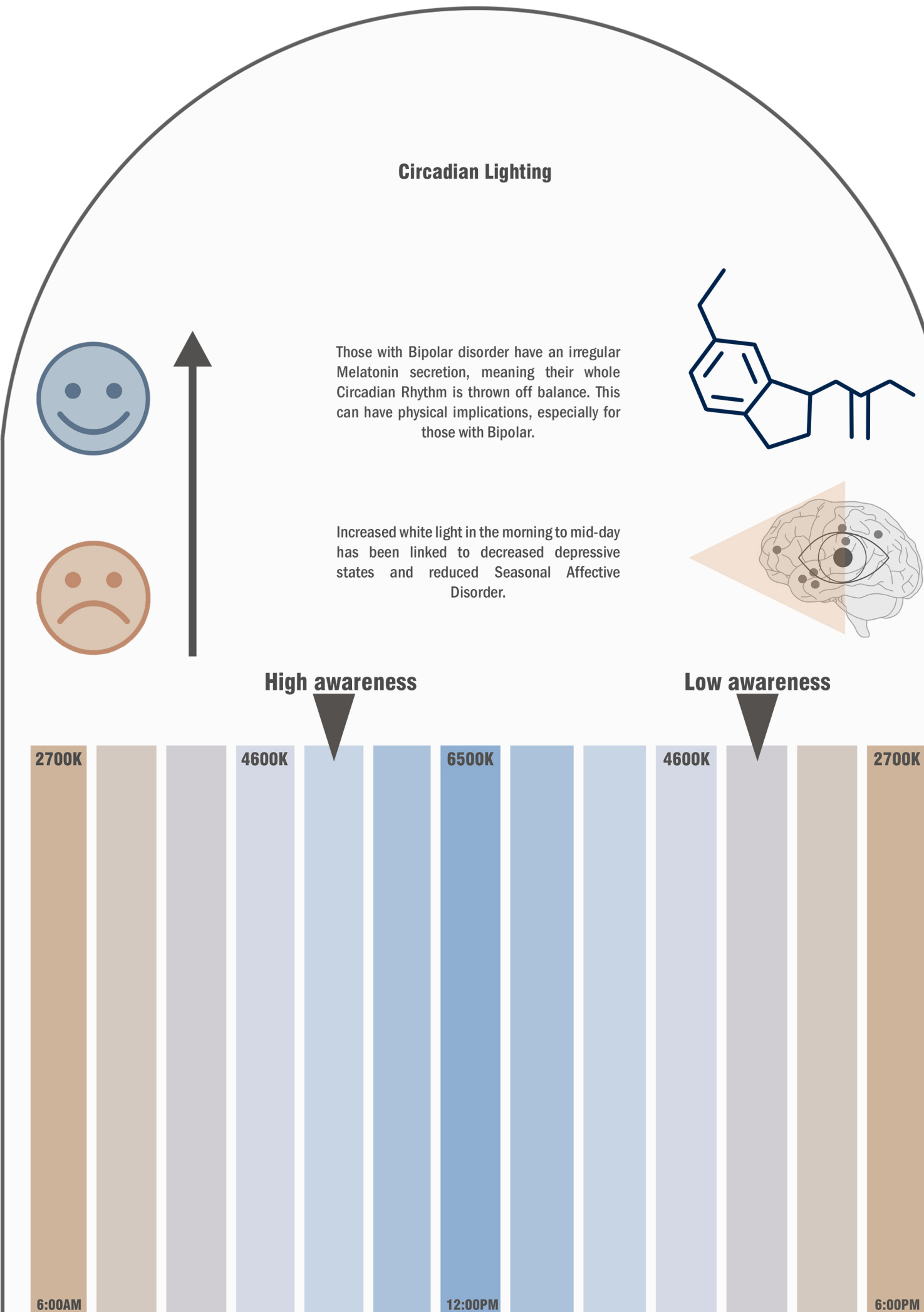
33. The educational rooms are designed to host classes for users seeking a deeper understanding of their condition, as well as training sessions for visiting professionals such as nurses. A relaxed and informal study environment encourages interactive learning, fostering engagement and empowerment among users.

Lighting features

Artificial LED sky panel lighting features are present throughout the space to aid the Circadian cycle and counteract Seasonal affective disorder found in those with Bipolar disorder.

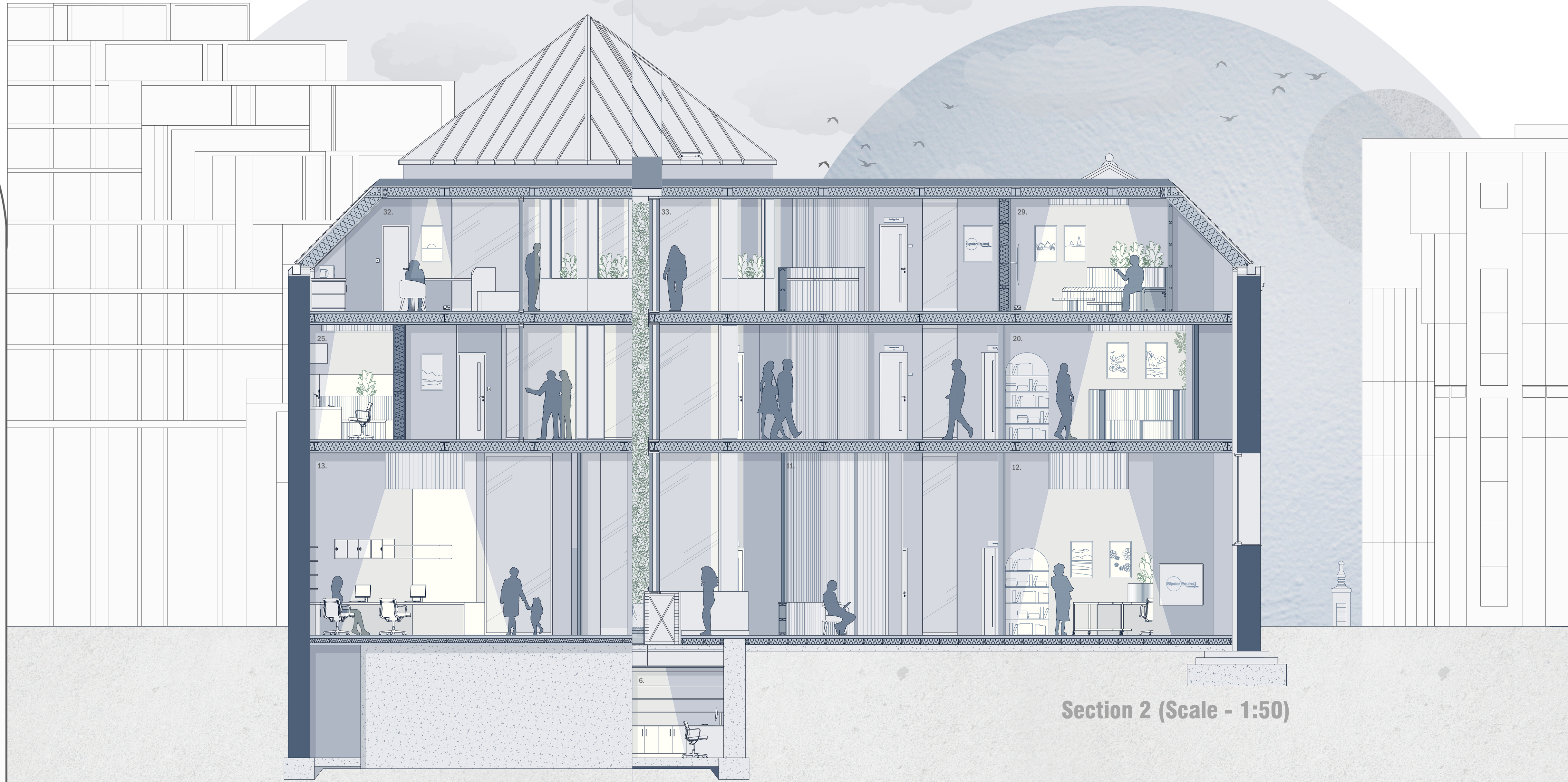


The integration of LED panels simulates the outside sky, visually expanding the space and reducing feelings of confinement, particularly beneficial in therapeutic environments. These concept sketches illustrate how the LED panels work in tandem with Circadian lighting systems to create a dynamic and responsive interior atmosphere that supports mental wellbeing.



Circadian lighting is a dynamic system that adjusts color temperature and light intensity to replicate natural daylight patterns, supporting the body's Circadian Rhythm. By shifting from cool, high-intensity light in the morning to warm, low-intensity light in the evening, it regulates melatonin production and helps maintain healthy sleep-wake cycles.

The integration of Circadian lighting is seamlessly embedded into the design, allowing therapeutic lighting to become an integral part of the spatial experience. This not only reinforces the holistic nature of the environment but also supports emotional regulation, key elements in the management of Bipolar disorder. This works in harmony with the psychotherapeutic care provided throughout the space.



Section 2 (Scale - 1:50)