Can Biophilic design *benefit* those with Neurodivergent disorders?

Monique Morris

Interior Architecture Year 3

2205990

Word Count: 5964

Introduction

In this essay, I will explore the potential advantages of incorporating biophilic design into the lives of those with neurodivergent disorders. As someone with my own neurodivergent diagnosis of ADHD, Autism, and Dyspraxia, I have a personal interest in understanding how these conditions are faced with obstruction from the built environment. While the focus will primarily be on Autism and ADHD, I will also consider other neurodivergent conditions, recognizing that solutions are not one-size-fits-all.

The essay will delve into theories that suggest humans have an inherent connection to nature, with exposure to nature or nature-inspired elements offering both psychological and physiological benefits. To support this exploration, I will review case studies such as Moser Associates' office designs for neurodivergent individuals, the Churchyard neurodivergent school in Swindon, and essays such as ' Exploring the design preferences of neurodivergent populations for quiet spaces. Additionally, I will conduct my own primary research through surveys and questionnaires to gather current insights on how people with neurodivergent conditions behave in work and educational environments.

Overall, this dissertation will explore the context of biophilic design and examine its specific application in environments tailored for neurodivergent individuals. It will be supported by relevant case studies and theoretical frameworks, ultimately concluding with an analysis of the potential effects of biophilic design on neurodivergent individuals.

Section 1: The Context of Biophilic Design

Biophilic design has been around for centuries however wasn't completely defined or recognised till the late 20th century by Stephen Kellert, whom identified the term biophilia as " The innate human affinity for nature". Kellert, a professor at Yale university, has wrote and co-wrote many books including; 'nature by design', "biophilic design: The theory, Science, And practice of bringing buildings to life" and "The biophilia hypothesis"; which all touch upon the physical, emotional and intellectual human expressions to want to associate with nature.

Biophilia or biophilic design when used in architectural sense refers to incorporating 'elements of biophilia' into a built setting. The principles of biophilic design aim to incorporate natural elements into the design process of builds, including natural daylight, greenery, natural raw materials, shapes found in nature and natural soundscapes.

Daylight can be incorporated into architectural design by planning to align the building according the sun's path and maximising the buildings intake of natural light through windows, skylights and openings.

Greenery can be introduced through the use of indoor plants, is not only said to improve the air quality in our homes thus giving physical health benefits, but also psychological as it is said to reduce stress through providing environments with a soothing atmosphere.

Nature inspired materials is considerably a more ethical approach to incorporate natural colours, textures, patterns and shape of animals and plants found in nature. Today people opt for animal print fabric and faux textured textiles, although in the past people would dress their homes with raw hides and furs of animals they would have hunted.

Natural soundscapes, are the sounds we hear outside if we were to mute the modern technologies of today, such as leaves rustling on a windy day, birds calling out to each other in the distance, or water trickling down a river. These soundscapes create a calming auditory and studies such as "effects of nature sounds on the attention and physiological and psychological relaxation' claim nature sounds to have a physiological impact to reduce stress.

Section 2: The Context of Neurodivergent Disorders

Neurodivergent disorders are a branch of multiple conditions, including ASD (autism spectrum disorder), ADHD (attention deficit hyperactivity disorder), dyslexia, dyscalculia, Tourette's syndrome, and SPD (sensory processing disorder). Each of these conditions comes with its own challenges, although many have cross overs including; sensory sensitivities, social and communication challenges and cognitive functioning, learning and behavioural problems.

Individuals with sensory processing disorders can often experience both sensory overload and under responsiveness. Sensory overload can cause the person to have extreme sensitivity to sensory input, i.e., touch, clothing material, or furniture, of which often leads to discomfort

and distress. This can fluctuate and also become an unresponsiveness symptom where there is a lack of sensory stimuli that typically causes reactions doesn't. It can make it extremely difficult when shopping for clothing, as sensitivity may change day to day. Many neurodivergent people experience sensory sensitivities and are often forced to occupy environments which are overstimulating. The level of discomfort will differ between individuals and many have perfected the form of masking to 'fit in' in the neurotypically designed world.

Individuals with ASD often experience misunderstandings in social interactions and sometimes lack appropriate communication skills due to literature thinking. It is possible for someone with ASD to interpret language and social cues literally rather than understanding the implied nuanced meanings; which can lead to difficulty understanding sarcasm, humour, metaphors and figures of speech. In some cases, individuals with ASD also misinterpret social cues such as facial expressions tone of voice or body language which has a result can lead to challenges in navigating complex social situations.

The term "autism" was first used in the early 20th century by Leo Kanner. In 1943, he identified "early infantile autism" in children, categorising it as a distinct condition, and in 1944, Hans Asperger described similar behaviours, which later became known as Asperger's syndrome. While attention-deficit hyperactivity disorder (ADHD) has been recognised since the early 1900s, initially described as "hyperkinetic impulse disorder," the definitions were often vague. It became more formally recognised in the 1980s when it was included in the DSM-III.

The DSM-III, (Diagnostic and Statistical Manual of Mental Disorders), published in 1980, provided specific diagnostic criteria for each disorder, making it easier for clinicians to make consistent diagnoses. Today ADHD is most likely to be diagnosed at an early stage in childhood, whereas, before 1980 ADHD wasn't categorised as a 'real disorder', therefore many adults today, have lived their lives undiagnosed.

ADHD can be characterised by symptoms of hyperactivity in attention and impulsivity often affecting the individuals ability to control impulses, Focus and regulate energy levels. To express how diverse neurodivergent disorders can be, individuals diagnosed with ADHD can also be classified into three sub categories; Predominately inattentive (where ability to maintain focus is the primary symptom), Predominantly hyperactive/impulsive (where impulsivity and hyperactivity are most noticeable)or combined presentation (where both inattention and hyperactivity/impulsivity are present).

Challenges people might face with predominant inattentive type ADHD include difficulty organising tasks, struggle to maintain focus and difficulty in remembering instructions/ detail. This can cause them to seem forgetful or disorganised and require a distraction free areas to focus.

Predominantly hyperactive impulsive activity creates challenges for individuals in their ability to control their impulses may make it difficult for them to stay still or seated for long periods of time. Individuals with this type of ADHD may Benefit from flexible seating / multiple work stations, standing desks, exercise balls or fidget toys to release excess energy.

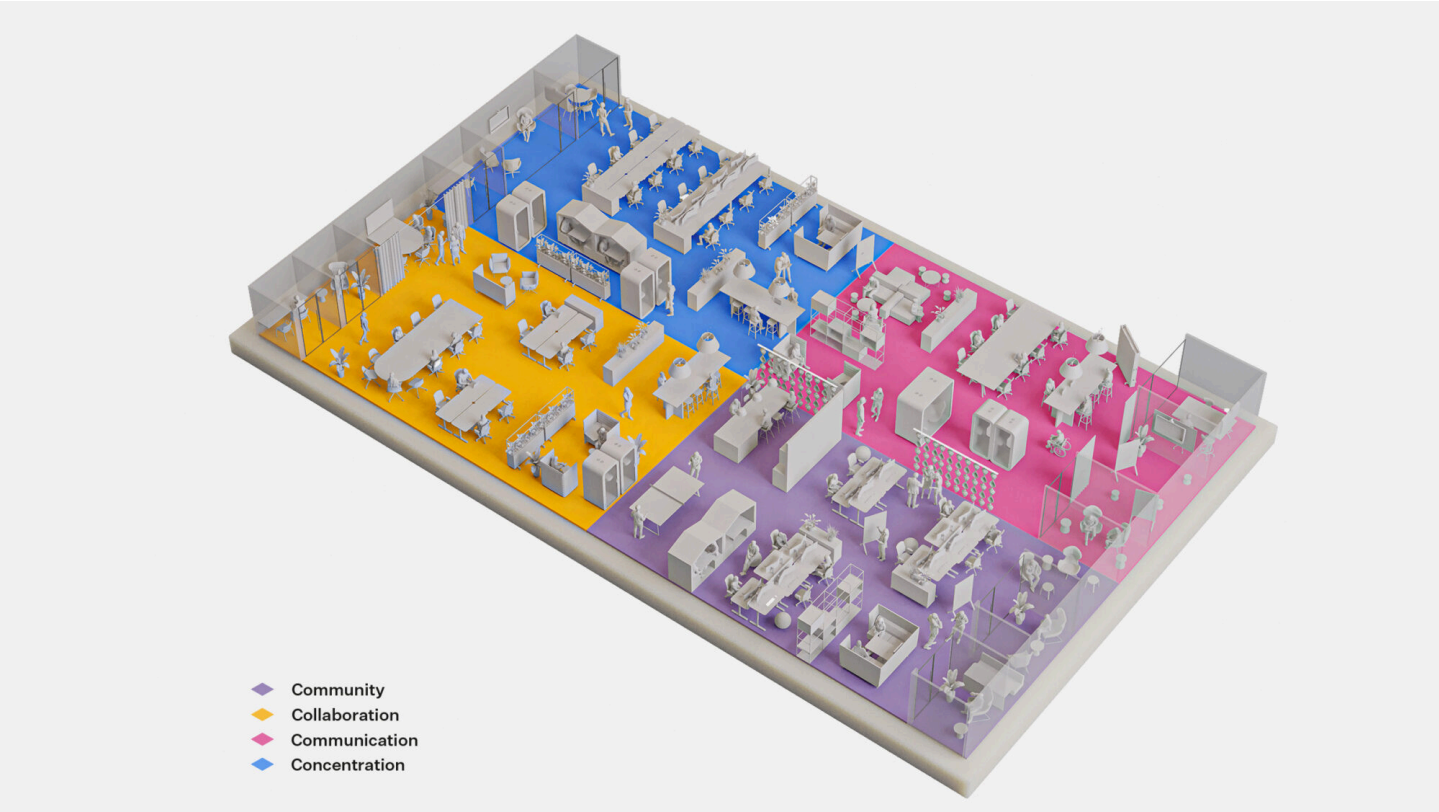
Combined presentation acts as a combination of the two and individual may also require multi-functional areas that offer distinct spaces for focus such as A designated study area to Helping individual stay on track or A quiet room with low stimuli, calming colours to reduce feelings or stress and minimise distractions. As well as optional ways to release energy whilst working.

Additionally, Neurodivergent disorders have been proven to contribute to various mental health issues due to the challenges associated with the conditions. These mental health concerns include anxiety disorders, depression, low self-esteem, episodes of isolation and avoidance behaviours. Anxiety, depression, and low mood disorders have an impact on an individual's ability to concentrate and focus, maintain sustainable energy levels, disorganise, indecisiveness, impaired judgement, communication challenges, neglect of personal hygiene, fluctuating moods, and lack of motivation. According to NHS Dorset "research indicates that neurodivergent people are more likely to experience mental health issues than neurotypical people. For example, up to half of autistic people also experience depression at some point in their lives (National Autistic Society) and up to half of those with ADHD experience one or more anxiety disorders (National Library of Medicine)."

Different cultures interpret neurodivergent traits in various ways, leading to cultural variability in the recognition and diagnosis of conditions like Autism Spectrum Disorder (ASD). In some societies, neurodiversity is well understood, while others may still stigmatize or misunderstand it. For instance, a study titled *Prevalence of Autism Spectrum Disorder in Oman: A Cross-Sectional Study* (published in the *Journal of Autism and Developmental Disorders*) found that only 1 in 1000 people in Oman are diagnosed with ASD. This is much lower than the National Autistic Society's estimate of around 1 in 100 or 1 in 90. The Centres for Disease Control and Prevention (CDC) reports that in the United States, approximately 2 in 100 people are diagnosed with autism. This discrepancy may reflect cultural and systemic factors, such as a country's understanding of autism, availability of healthcare services, and the social stigma surrounding disabilities. In some cultures, lack of awareness may lead to underdiagnosis, while limited access to healthcare or negative stigma may discourage families from seeking diagnosis. Additionally, a lack of research infrastructure and educational support can impact diagnosis, as school reports are often crucial in identifying conditions like ASD.

While biological differences may contribute to varying prevalence rates, much of the variability is likely due to a combination of these cultural and systemic factors. This highlights the importance of designing for neurodivergence, since the individuals who remain undiagnosed could also benefit from the changes, which intern should create a positive and widespread impact.

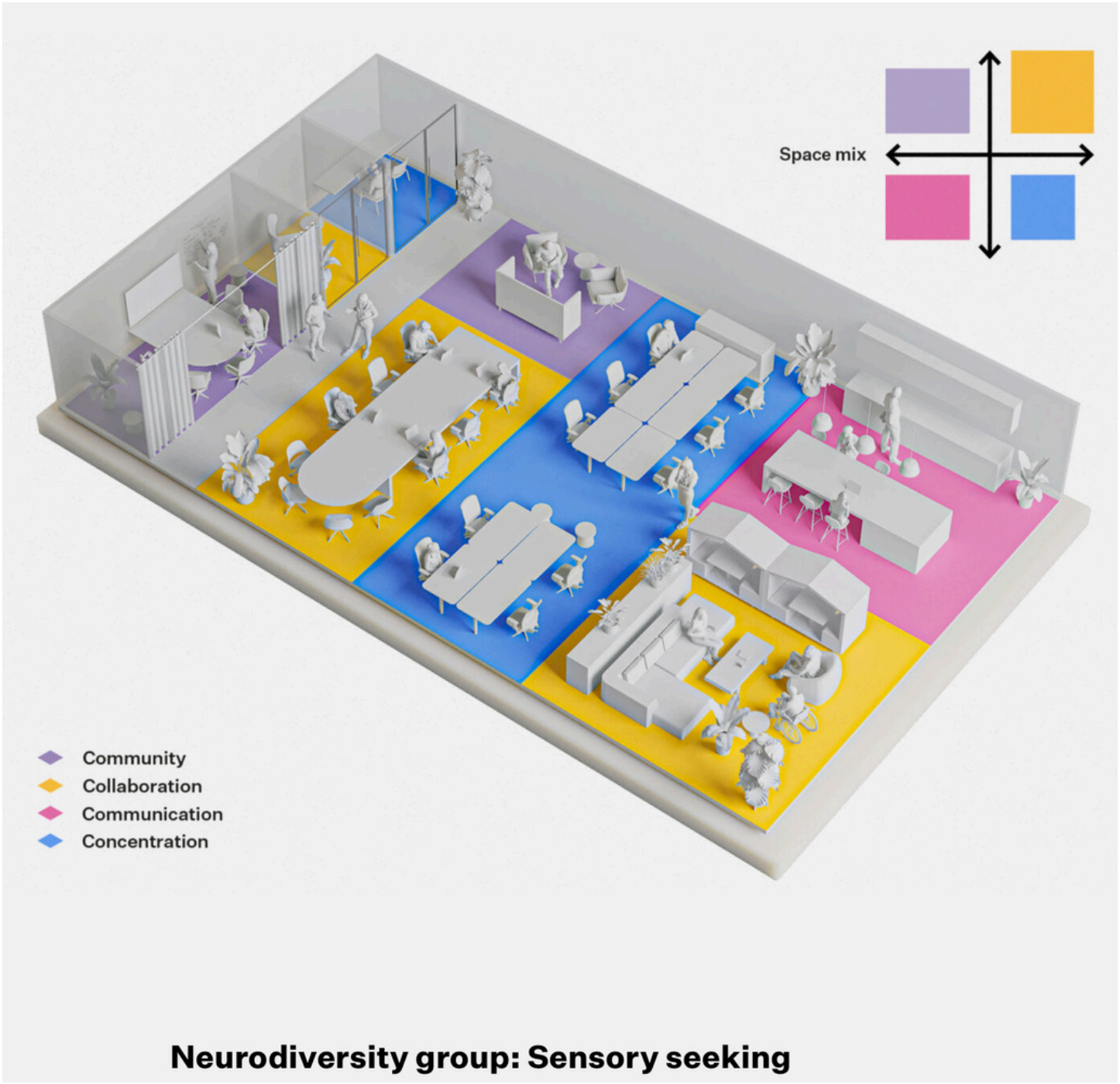
Section 3 : Case Studies on Neurodivergent-Friendly Design



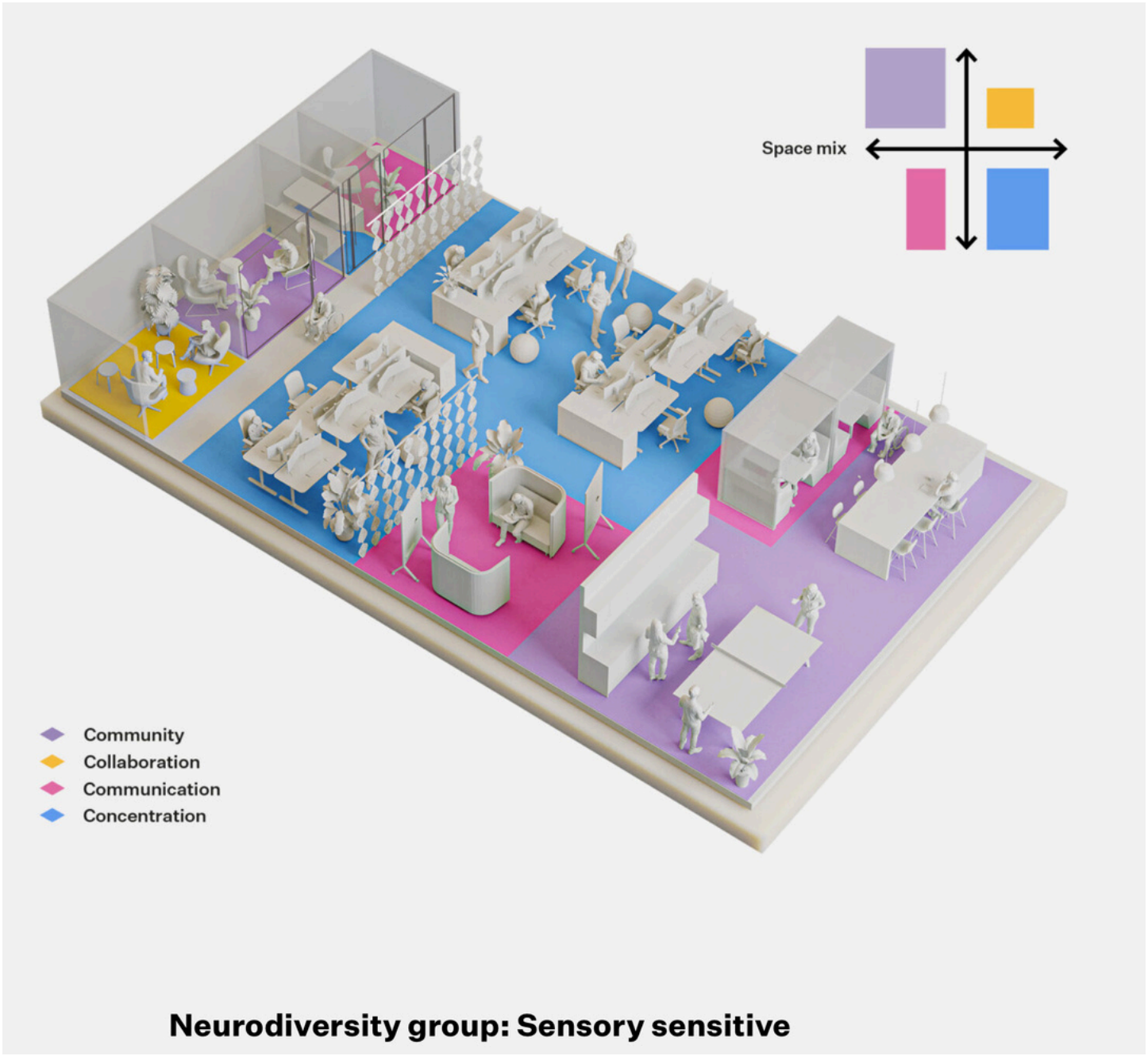
Moser Associates' neurodivergent design approach emphasises the creation of zonal areas tailored to the unique needs of neurodivergent individuals. These zones are categorized into community, collaboration, communication, and concentration areas, each designed to support different aspects of cognitive and sensory needs. The company outlines several essential elements for designing an office that caters to neurodivergent individuals, including:

- Low-stimulation environments to support hyperfocus,
- Social spaces for necessary breaks and stimulation,
- Quiet rooms for deep concentration,
- Low-traffic areas to reduce social anxiety,
- Collaborative hubs to encourage interaction and extraversion,
- Active zones to promote movement,
- Materiality and lighting that guide desired behaviours, and
- Layout and furniture that clearly define the purpose of each area.

This approach is similar to the concept of flexible learning spaces, which allow users to adapt their environment based on their specific needs. For example, instead of sitting at a conventional desk, I might prefer to work cross-legged on a bench, as this setup better suits my comfort and focus. Zoning works in a comparable way, offering varied spaces that align with the user's shifting requirements. Such strategies are particularly beneficial for individuals with predominantly hyperactive-impulsive ADHD, allowing them to engage in different environments depending on whether they need concentration, collaboration, or movement.



Neurodiversity group: Sensory seeking



Another study, *"Exploring the Design Preferences of Neurodivergent Populations for Quiet Spaces"*, highlighted the importance of providing a private retreat space for neurodivergent individuals. These spaces allow users to take a quiet moment to build resilience and process overwhelming emotions. The study found that retreat spaces designed with dimmed lighting and comfortable seating are particularly effective in reducing overstimulation and promoting calmness. The research aimed to explore how different design element, such as; sound, lighting, space layout, colour, furniture, and decoration—interact with the preferences of individuals with neurodivergent conditions, particularly in relation to sensory overload.

Section 4.3.3 of the study revealed the preferred space layout qualities for neurodivergent individuals. The results showed a strong preference for simple (93.8%), private (85.3%), informal (86.9%), and cosy (65.3%) layouts. A positive correlation was found between sensory overload frequency and the preference for private spaces, with 220 participants favouring private spaces over 38 who preferred communal ones. Additionally, 244 participants preferred simple layouts, compared to only 16 who preferred intricate designs. Individuals with Autism Spectrum Disorder (ASD) exhibited a stronger preference for privacy compared to those with Attention Deficit Hyperactivity Disorder (ADHD). These findings highlight the need for quiet spaces within public spaces, educational and work environments as they act as beneficial coping mechanisms for those with neurodivergent disorders and essential for emotional regulation and sensory management.

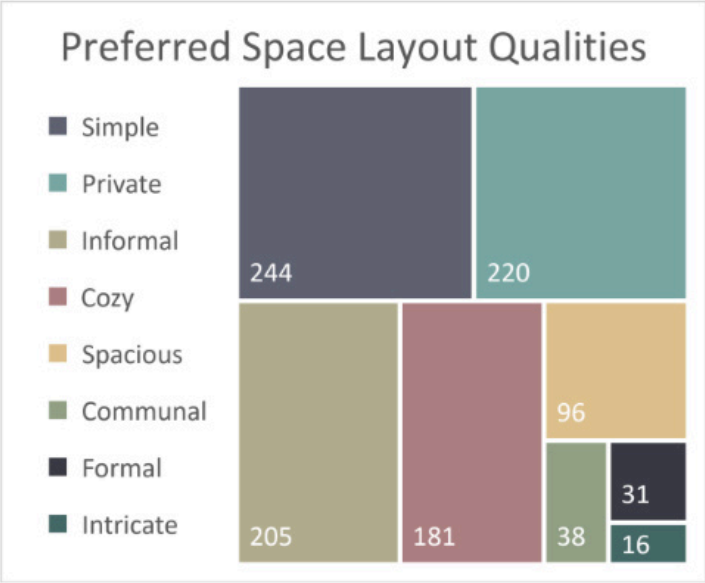


Figure 47: Preferred Space Layout Qualities

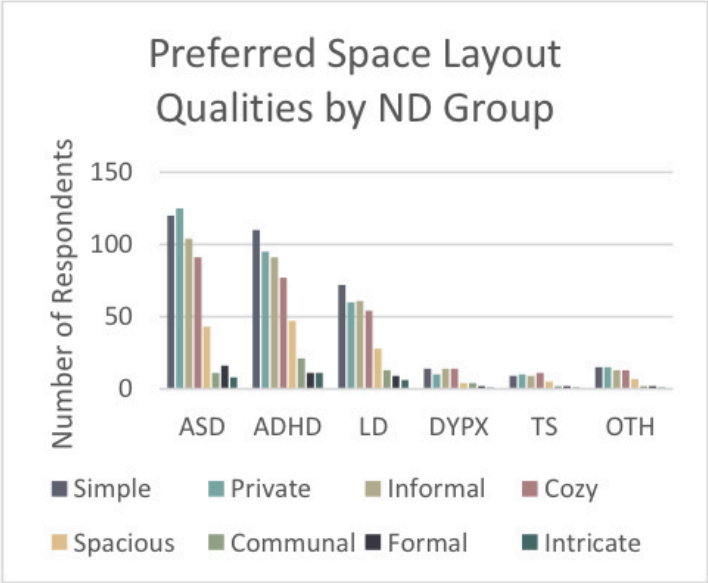


Figure 48: Preferred Space Layout Qualities by ND Group

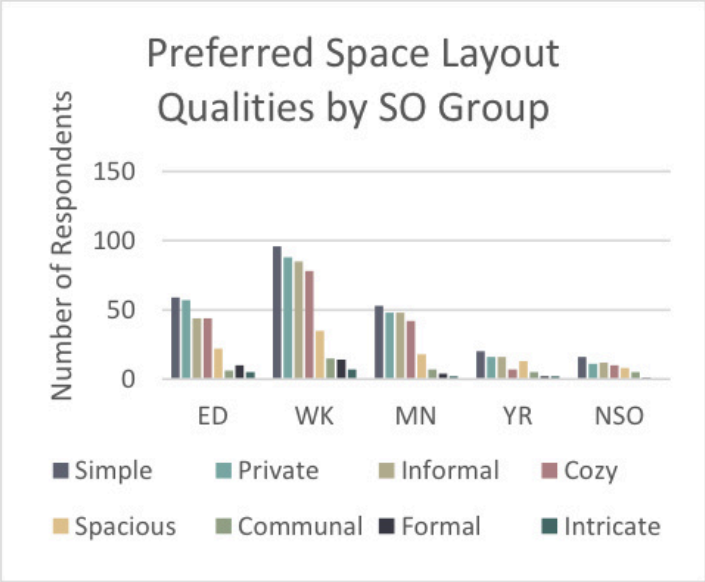


Figure 49: Preferred Space Layout Qualities by SO Group I

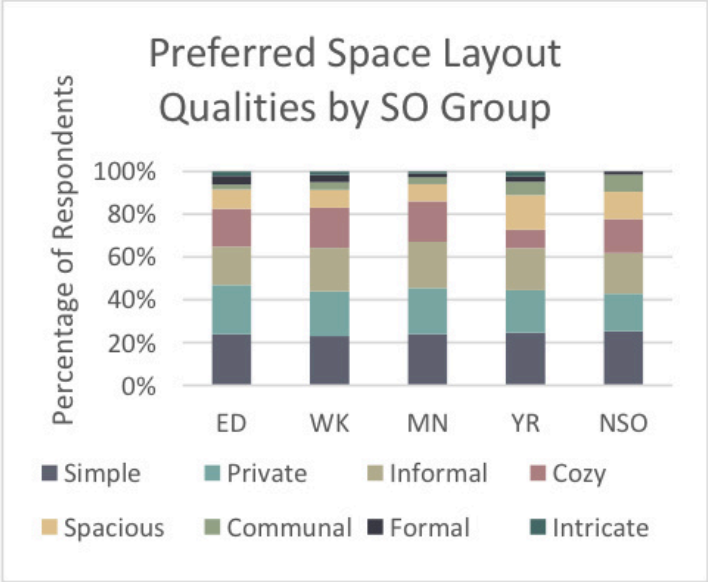
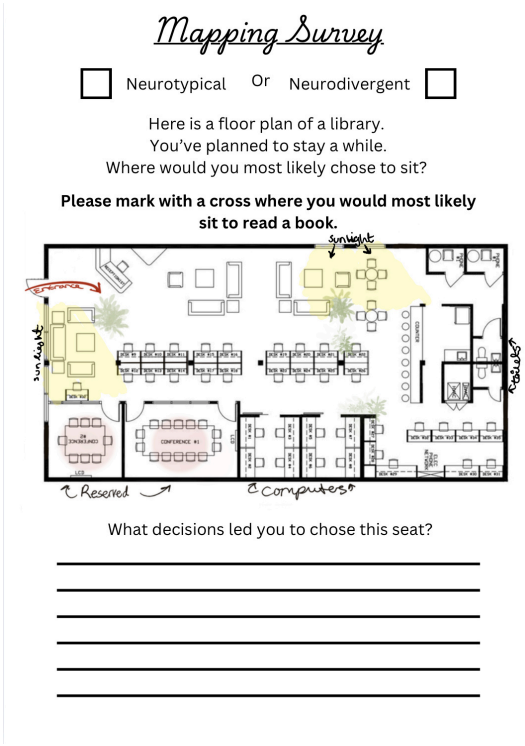


Figure 50: Preferred Space Layout Qualities by SO Group II

The Churchward School in Swindon, designed by Scott Brownrigg, presents a design concept that seems to challenge the previously discussed notion that enclosed spaces are preferable for neurodivergent students. The design of the school emphasizes open-plan learning spaces at its core, with various functional areas such as classrooms, breakout spaces, calm rooms, storage, and staff areas clustered around each Key Stage wing. The intention is to offer a consistent, familiar environment where students can gradually build confidence as they progress through the school, avoiding the need for constant adaptation to new layouts at each Key Stage.

However, the open-plan design, while aiming for consistency and ease of transition, may not align with the needs of neurodivergent students. Neurodivergent learners often thrive in environments with more predictability, less sensory overload, and opportunities for quiet, focused spaces. The open-plan approach could potentially create distractions, noise, and a lack of privacy, which might not be conducive to their learning and well-being.

The contradiction between the school's open-plan design and the notion of creating more enclosed or quiet spaces for neurodivergent students suggests that there is still much to learn about the best ways to create inclusive, supportive environments for all learners. It's possible that the design, while well-meaning, might not fully meet the needs of neurodivergent students as effectively as intended.



I conducted a brief mapping survey, providing a floor plan of a library to 16 interior design students and asking them to indicate where they would most likely choose to sit in order to read a book. The floorplan was divided into seven distinct zones, as shown in Figure 2. Based on my predictions, I anticipated that most students would prefer Zone E, as it offers a defined space with clear boundaries between users. However, of the 16 responses, none of the participants expressed a preference for the central area. This may be attributed to the high volume of foot traffic expected in this space or the inherent openness of the area.

To refine the task description, I used the phrase, "you are planning to stay a while to read a book," to emphasize that participants were selecting a seating option for a long-duration, low-energy activity requiring concentration. Most responses indicated a preference for a quiet environment, away from distractions such as noise and foot traffic.

One particularly interesting response came from a neurodivergent student who indicated they could not read a book in the space at all due to the area being "way too big." This aligns with SadiaT (2020), who suggested that individuals with neurodivergent conditions tend to favor enclosed spaces over open-plan designs.

Another noteworthy response (Figure 3) came from a student who chose not to use any of the provided furniture, instead preferring to sit on the floor in a corner. This observation highlights a limitation of the survey, as the floorplan only included traditional school-style furnishings. It suggests that the space may have benefitted from a more neurodivergent-friendly design, as discussed by Mossier.

I categorized Zones B and D as biophilic due to their exposure to natural light and greenery, while the remaining areas were considered non-biophilic. Interestingly, 68.8% of respondents preferred seating away from the biophilic zones. One participant remarked that "sunlight can be a distraction while trying to read," whereas another argued that "sunlight is important, especially to keep me motivated." This discrepancy may be influenced by the greater number of non-biophilic seating options available, potentially skewing the results.

Anomalous behavior was also observed in Zone F, where a number of participants chose to sit in front of a computer to read. I speculate this preference may stem from the room's smaller size, as some respondents indicated a preference for more compact spaces. Meanwhile, one participant expressed a desire to sit as far away from the computers as possible, stating that "the typing can become easily annoying." This highlights how sound sensitivity can vary widely among individuals, influencing their seating preferences.

Section 4: Effects of biophilia

The concept of biophilia can be linked to regulation of our circadian rhythm, our bodies internal 24 hour clock relying on exposure to natural daylight, which effects the way we regulate various biological processes, such as sleep-wake cycles, hormone release, body temperature, and metabolism. Lunsford- Avery Jr and Kollins s.h. 2018 explains our circadian rhythm is influenced by natural light and is the primary regulator of our internal body clock. Exposure to the light from the rising sun signals our body to wake up approx. 2 hours after sunrise, while the decrease of natural light at sunset probes our bodies to prepare for sleep.

A study conducted by Ikei et al. (2017) examined the biological effects of interacting with nature, specifically focusing on the impact of different natural materials on participants' physiological responses. The findings revealed that contact with wood, particularly white oak,

induced a greater sense of physiological relaxation compared to more processed natural materials such as marble, tile, and stainless steel. This suggests that incorporating raw materials into our environments can promote relaxation. The study hints that the tactile qualities of unprocessed materials, like the texture of wood, may contribute to this effect, and smooth finishes of processed materials may lack the sensory stimulation needed to evoke similar relaxation responses.

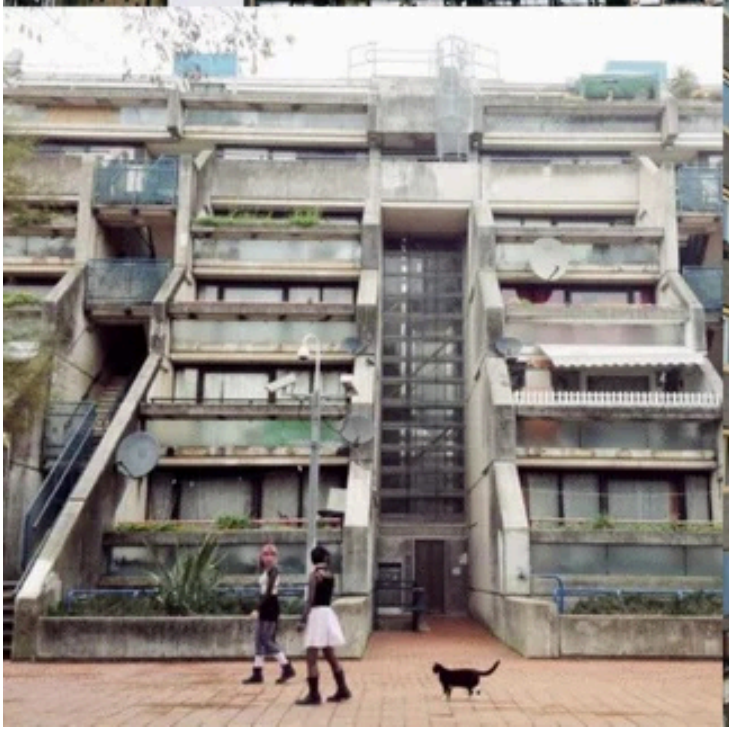
Kellert's utilitarian theory views nature primarily as a practical resource for humans, offering benefits such as medicine, food, and clothing. These aspects of nature are measured by their contributions to human well-being and economic prosperity, suggesting that human health and happiness can be improved through a closer connection with the natural world, highlighting a way in which being in touch with nature could improve human health and happiness. In contrast, Kellert also explores the ecological side of human-nature interaction, emphasizing the interconnections between wildlife and natural habitats. He highlights the importance of maintaining these connections to preserve the balance of the Earth's ecosystem, which has already been disrupted by human activities. This underscores the relevance of biophilia, particularly the need for sustainable design practices in today's world.

While Kellert focuses on the practical and ecological benefits of nature, another influential thinker, biologist and naturalist E.O. Wilson, presents a more ethical view. Wilson's intrinsic values of nature argue that all living things have the right to exist based on their inherent worth, independent of their utility to humans. He stresses the emotional and ethical responsibility to prioritize the health and integrity of ecosystems. Like Kellert, Wilson advocates for biophilic design, suggesting that integrating nature into urban spaces can enhance human well-being by reducing stress, improving mood, and boosting cognitive function. Wilson also believes nature can serve as a model for sustainable design, promoting resilience and problem-solving in built environments.

Van den Berg (2003) discovered that humans respond more favourably to imagery of natural environments compared to built scenery, suggesting that natural scenes are more emotionally evocative and pleasant. This study contributes to the growing body of evidence highlighting the mental well-being benefits of natural environments. It supports the idea that our preference for nature goes beyond aesthetics, reflecting a deeply rooted response to nature's ability to help us cope with the pressures of modern life.

In contrast, an article produced by *WeAreCityLiving*, titled "Why Living in the City Is Much Better Than the Countryside," presents opposing viewpoints about urban versus rural living. The article outlines several reasons why some individuals prefer urban environments, citing factors such as more accessible job opportunities and diverse social interactions. This may suggest that some individuals with divergent disorders could benefit from the stimulating experiences cities offer. On the other hand, the article raises concerns about the need for more natural elements in urban environments, emphasizing the lack of green spaces and graphic design in city planning.

Case studies on biophilia



In the 1980's, infrastructure emerged that is now considered to be ‘biophobic’, often with the purpose of standing out from its surroundings. Structures, such as Sir Denys Lasdun’s design of the National Theatre in London, prioritised abstraction and functionality over the integration of natural elements. The impactful design led to a memorable building initially. However, the exterior features a combination manmade material comprising of exposed concrete and precast concrete panels to create the facades. Their angular forms did not age well, much like many brutalist buildings, they led to environments that felt cold or uninviting.

The barbican flyover tower

An example that broke this barrier, due to humans demand for nature-inspired design is the Barbican Centre, which was completed in 1982 and designed by Chamberlin, Powell, and Bon. The brutalist architecture, modular design, cultural spaces, and terraced levels were implemented to create the vision of creating a cultural hub that would enrich urban life and foster community engagement. The site consists of art galleries, concert halls, restaurants, cafes, cinemas, education centres, and theatres. The design was given a negative response from neighbouring residents as their properties were faced with a 30-meter-tall theatre fly tower. A building constructed to hide the inner workings of theatre production and the forming of pieces of scenery and curtains suspended above the stage. The Barbican claim was, “'In early plans, this conservatory space was envisioned inside a giant glass pyramid on the lake. However, this initial vision was not met, and the design initially consisted of narrow glass planes, industrial steel supports, and flat concrete balconies set on a concrete foundation. Due to the complaints made by Cromwell Tower residents, the barbican conservatory was embellished in 1984. It became the second largest conservatory in London, coming second to the likes of Kew Gardens. The design implemented a diverse collection of tropical plants, various cacti species, ponds, and water features that hide the harsh façade of the theatre’s fly tower. This change shows how powerful the residential impact was on the architecture and discovers the need for further development. The design changes made give a nod to the need for biophilic components within infrastructure and the public's desire for less biophobic creations.

King’s Cross development

A modern example of how biophilic design can have a positive impact is London’s King’s Cross Station development. In 1945, post-World War II, King’s Cross Station was in major decline, with decaying land, derelict buildings, and abandoned warehouses. Development work began in 2008 and promised '50 new commercial buildings, 20 new streets, 10 new major public spaces, and the restoration and refurbishment of 20 historic buildings and structures.' The site opened in 2011.

The public spaces within the development exemplify biophilic design principles and encourage a connection with nature. These spaces include Granary Square and a central gathering point, as well as Regent’s Canal, which consists of a large open space featuring landscaped areas and a water fountain. King’s Cross Central is an area which features play parks, open spaces, greenery, and cycle paths designed to encourage being outdoors. The site also consists of; Lewis Cubitt Park, a tranquil environment made up of green spaces and play parks, offers a place for residents and nearby workers to sit among nature. A waterfront, named Canalside, features local businesses, cafes, and recreational spaces that enhance community interaction and leisure. Lastly, the pavilion, which acts as a flexible outdoor space for hosting events, markets, and cultural activities to engage the community. These public spaces are community-focused and encourage the integration of nature while incorporating biophilic design principles into the King’s Cross development.

From observing public reviews of their engagement with the area, I found that visitors often expressed joy in admiring nature and stepping away from the busyness of London. Others mentioned a feeling of relaxation when exploring Granary Square and the surrounding parks, with one visitor stating, 'Shout out to all those parties who were involved in planning and creating the new Kings Cross and making it a really nice place to visit again.' Other reviews mention the ‘welcoming atmosphere’ of cafes and the ‘friendly staff’ in independent shops, which contribute to the feeling of being part of a community.

Overall, the biophilic design and amenities of King's Cross evoke emotions of joy, tranquillity and engagement in their users, making it a cherished space for both locals and visitors. The area's diversity of spaces, ranging from quiet parks to busy squares, allows individuals to choose locations that suit their sensory needs, whether they seek stimulation or peace.

Section 5: Effects of Biophilic Design on Neurodivergent Individuals

The study by Lunsford Avery et al. (Year) underscores the significance of circadian rhythm delays in adolescents, particularly highlighting the common phenomenon of delayed circadian rhythm phase, which refers to an intrinsic preference for later sleeping and waking times. The study suggests The issue of circadian rhythm misalignment is particularly prevalent in individuals with Attention-Deficit/Hyperactivity Disorder (ADHD), with up to 75% of adults with childhood-onset ADHD exhibiting delayed circadian rhythms. These individuals demonstrate a rise in dim-light melatonin onset (DLMO), alterations in core body temperature, and sleep-related movements that occur approximately 1.5 hours later than in neurotypical adults. The findings suggest that regulating the circadian rhythm could be a beneficial approach to managing ADHD symptoms. Specifically, introducing bright light exposure in the morning may help shift the circadian rhythm earlier, promoting a more consistent sleep schedule and improving energy regulation. By aligning sleep patterns with the natural light cycle, individuals with ADHD may experience enhanced focus and better mood regulation throughout the day, contributing to overall well-being. This highlights the potential of integrating circadian rhythm management into ADHD treatment plans as a complementary strategy to improve sleep quality, focus, and symptom management.

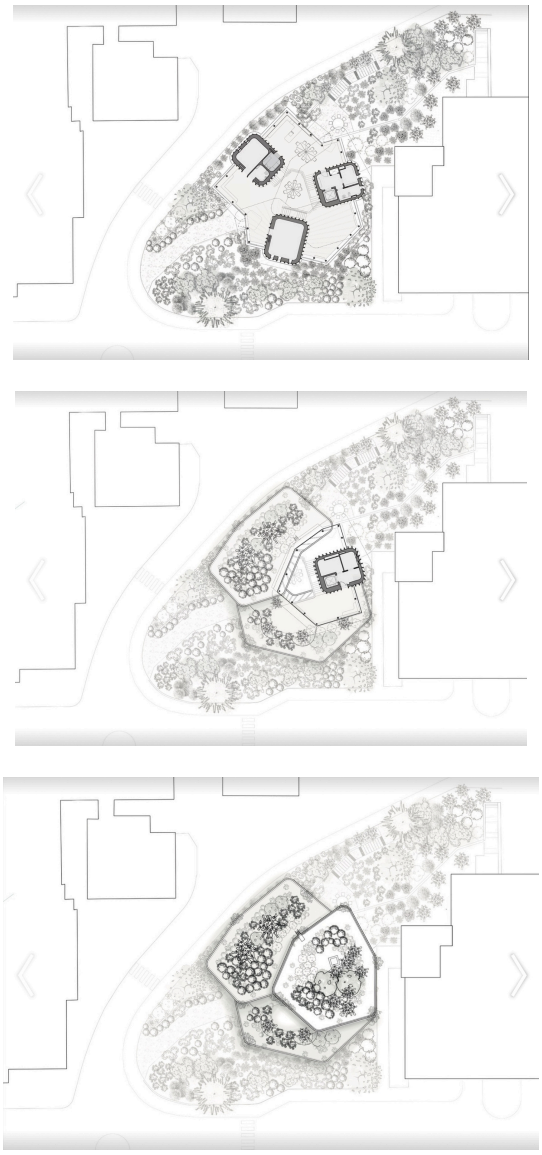
A literature review published by frontiers in psychology titled 'Sound and soundscape in restorative natural environments' shows that listening to nature sounds can positively affect psychological well-being, similar to the benefits of seeing or touching nature. The findings reinforce the idea that auditory soundscapes have a significant impact on psychological well-being and implies specific sounds such as birdsong, wind, and water which are linked with pleasant natural settings can enhance mental restoration. Although the review points out people generally find these sounds calming, we must also consider opinions on different nature sounds can vary depending on individuals reactions to specific stimuli. Additionally, the review highlights a gap in current theories like Attention Restoration Theory (ART) and Stress Recovery Theory (SRT), which predominantly focus on visual stimuli. The study suggests that these theories must evolve to include acoustic factors, such as sound intensity and frequency, to provide a fuller understanding of how nature sounds contribute to psychological restoration. Furthermore, the review mentions research by Haga et al. (2016) and Van Hedger et al. (2019) which points out that the meanings associated to natural sounds, viewing them as inherently positive, may also play a crucial role in their restorative effects.

If we consider the biophilic example of the textile walls in the *Impression Sanjie Liu* pavilion, designed by LLLab, arranged along a path adjacent to the Li River in Yangshuo. As described by Dezeen, the installation consists of 'a series of woven bamboo lanterns that line a path, guiding visitors from the entrance further into the site. The lanterns gradually increase in size until they evolve into pavilions large enough for visitors to step inside.' The description continues, noting that 'in the daytime, the lanterns appear as solid elements with a natural hue that complements their surroundings. At night, they are illuminated from within and seem to glow as light filters through the woven shell.' These structures are intentionally set at a low height in contrast to the towering trees and the dramatic landscape formed by the surrounding mountains of Guilin.

The woven bamboo exudes a natural warmth in both colour and texture, which enhances the structure's inviting aesthetic qualities. Bamboo fibres also have thermal properties, enabling them to retain heat, creating warm environments within the pavilion. In terms of tactile experience, bamboo generally presents a smooth surface, similar to materials like marble or stainless steel. However, the natural grain of the bamboo imparts a slightly textured feel. This could suggest a connection to the study of textures and materials, as bamboo's tactile qualities may also have health-related benefits, promoting comfort and well-being.

There is also a connection between the sense of being at a low elevation and the feeling of positive confinement. This sensation, which arises from small, enclosed spaces, fosters a sense of safety and comfort. A relevant term for this experience is 'nesting,' which refers to the instinctual behaviour of creating a safe, protective space, often seen in animals building nests. This concept resonates with the design of LLLab's pavilion, where the arrangement of the structure evokes a similar sense of refuge and security.

Similar to how The design of the *Impression Sanjie Liu* pavilion's, low and intimate spaces foster a sense of comfort and refuge, the infrastructure, aligns with similar methods from *Exploring the Design Preferences of Neurodivergent Populations for Quiet Spaces. This might indicate that although the pavilion wasn't designed with neurodivergence in mind,* such a design can support neurodivergent populations by offering calm, sensory-controlled settings that promote relaxation and well-being. This could also hint that biophilic design has the potential to benefit all individuals, regardless of neurodivergence, and should be considered for widespread implementation across various environments



The design of Maggie's Centres incorporate numerous attributes of biophilic design, making them not only restorative for cancer patients but also beneficial for individuals with neurodivergent disorders. Developed by renowned architects such as Frank Gehry, Zaha Hadid, and Thomas Heatherwick, these centres emphasize the integration of nature within the architectural framework. The design includes gardens, natural materials, and well-lit, open spaces that contribute to creating calm and restorative environments. As Kellert explains, biophilic design focuses on establishing a connection to nature, and these centres effectively achieve this by integrating plants, natural elements, and providing ample natural light. The interiors use soothing colour schemes, and staff encourage visitors to engage with nature, promoting relaxation and a sense of tranquillity.

Originally designed to create a healing environment for cancer patients, the principles underlying the design of Maggie's Centres are also highly conducive to supporting individuals with neurodivergent disorders. For cancer patients, the design aims to create a peaceful atmosphere that encourages emotional healing by reducing stress and anxiety associated with their diagnosis and treatment. Similarly, individuals with neurodivergent conditions, who may struggle with sensory overload or find it difficult to navigate environments filled with bright artificial lighting, loud noises, or overstimulating colours, can also benefit from these spaces. Maggie’s Centres address these needs by offering well-lit environments filled with natural light, using softer, more neutral colour schemes, and creating spaces that minimise noise, allowing for a more manageable sensory experience.

Natural light plays a pivotal role in these centres, with, floor-to-ceiling, windows that allow natural daylight to penetrate the internal and external spaces, creating a smooth transition between the indoors and the surrounding outdoor environment. Colour choices throughout the centres are often light, soft and earthy, which fosters a welcoming, fresh and calming atmosphere. The inclusion of plants and dedicated spaces for visitors to engage with nature enhances the therapeutic quality of the environment. Interaction with plants can foster a grounding effect and provide relaxation, which according to is particularly beneficial for individuals with neurodivergent conditions, such as autism, ADHD, or anxiety disorders.

The study, titled *"The Multi-Site Trial on the Effects of Therapeutic Gardening on Mental Health and Well-Being"*, investigates the impact of a therapeutic gardening program on individuals experiencing psychological distress during the COVID-19 pandemic. They explored how therapeutic gardening can impact mental health, focusing on areas such as depression, anxiety, daily activities, quality of life, and mindfulness.

In conclusion, the therapeutic gardening program demonstrated significant positive effects on the mental health and well-being of participants, as evidenced by reductions in depression and anxiety, and increases in daily activity, quality of life, and mindfulness. The study highlighted the moderating effects of gender, age, and mental health status, with particularly notable improvements in depression among female participants, older adults, and those without existing mental disorders. These findings suggest that therapeutic gardening can be an effective intervention for improving mental health, particularly in individuals with depression and anxiety, and may offer a valuable complementary treatment for diverse populations.

This solidifies the idea that the Maggie centre's design could benefit those with neurodivergent disorders and highlight the importance to incorporate more biophilic designs within cities. The study suggests Gardening may help neurodivergent individuals improve their ability to focus and regulate impulsivity, which particularly benefits some individuals with ADHD. The study concludes Gardening can serve as a calming activity and has the potential to reduce anxiety and stress levels, but also creates the opportunity to engage in social interaction as group gardening sessions may help develop social skills and improve peer interaction, a communicable skill some individuals with neurodivergent disorders struggle with.

Conclusion

This dissertation highlighted the need for continued awareness of neurodivergent disorders to promote an inclusive future, not just in the UK, but globally. Awareness can be raised through the training and practice of professionals involved in the design process, enabling designers to understand the importance of inclusive design in workplaces and public spaces. To achieve this, professionals must be equipped with the knowledge and skills necessary to create environments that are friendly to neurodivergent individuals.

However, some limitations arose from contradictory studies regarding space layout, suggesting the further need for research into the specific needs of smaller groups within the neurodiverse community. This would help explore the diverse range of disorders and identify their unique design requirements. This would help identify unique design requirements of individuals and allow for a deeper understanding of neurodivergent design. Additional studies would provide architects and designers with the opportunity to incorporate inclusive design principles more effectively.

Biophilic design can be beneficial to individuals with neurodivergent disorders by creating environments that cater to their sensory, emotional, and cognitive needs. We understand neurodivergent individuals often experience heightened sensory sensitivities or difficulties with emotional regulation, making traditional built environments overwhelming. Biophilic design, with its focus on integrating nature into urban spaces, offers a solution to these challenges. By incorporating elements like natural light, plants, water features, and organic materials, my research indicates, biophilic environments can help reduce stress, promote relaxation, and improve focus.

One of the ways biophilic design benefits neurodivergent individuals is by regulating sensory input. Individuals with ADHD or autism can experience sensory overload in environments containing bright artificial lighting and loud noises which can lead to heightened anxiety and make it difficult for to function. In contrast, biophilic environments use natural light, soft textures, and calming sounds which provides a more balanced sensory experience. From the biological study we found, the use of natural materials like bamboo, stone, and wood can help create a calming atmosphere that promotes focus and emotional regulation.

In addition to sensory and emotional regulation, biophilic design can improve cognitive functions, such as focus or attention. Research has shown exposure to natural elements improves memory, attention span, and cognitive performance and exposure to natural lighting, aligns with the body's circadian rhythm, which has been proven to be beneficial in maintaining energy levels and improving sleep patterns. This may benefit some individuals with ADHD who struggle with sleep and focus.

Meanwhile, biophilic design also benefits emotional well-being by creating environments that evoke a sense of tranquillity, safety, and connection with nature. Neurodivergent individuals, especially those who experience emotional dysregulation or social anxiety could benefit from the calming environments created in biophilic design. Beyond sensory and emotional regulation, biophilic design also supports cognitive functions such as attention and memory. Research has demonstrated that exposure to natural elements can improve cognitive performance, memory retention, and attention span, which are critical for neurodivergent individuals, especially those with primarily inattentive or combined ADHD.

While biophilic design is not a cure for neurodivergent disorders, it does offer substantial improvements in the quality of life for those who experience sensory, emotional and cognitive challenges. Biophilic environments provide spaces that are adaptable to individual sensory preferences and needs, offering flexibility and comfort, creating environments that support a wide range of neurodivergent conditions and overall well-being.

Bibliography

- Anon, (n.d.). Big Build – King's Cross Redeveloped | Irish Building Magazine.ie | Ireland's Leading Construction News & Information Portal. [online] Available at: https://irishbuildingmagazine.ie/2019/12/01/big-build-kings-cross-redeveloped/.

- Baldwin, E. (2016). The Architecture of Healing: 12 Maggie's Centres by Gehry, Hadid, Heatherwick and More - Architizer Journal. [online] Journal. Available at: https://architizer.com/blog/inspiration/collections/maggies-centres/.

- Clissold, A. (2024). Neurodiversity and mental health. [online] Neurodiversity. Available at: https://nhsdorset.nhs.uk/neurodiversity/explore/mentalhealth/.

- Cleveland Clinic (2022). Neurodivergent: What It Is, Symptoms & Types. [online] Cleveland Clinic. Available at: https://my.clevelandclinic.org/health/symptoms/23154-neurodivergent.

- Ekblad, L. (2013). Autism, Personality, and Human Diversity. SAGE Open, 3(3), p.215824401349772. doi:https://doi.org/10.1177/2158244013497722.

- Griffiths, A. (2021). Undulating bamboo canopy by LLLab evokes its mountainous surroundings. [online] Dezeen. Available at: https://www.dezeen.com/2021/06/09/bamboo-canopy-lllab-china-architecture-pavilion/.

- ICON Magazine. (2020). Heatherwick Studio's Maggie's Centre champions biophilic design in healing spaces. [online] Available at: https://www.iconeye.com/architecture/heatherwick-studios-maggies-centre-champions-biophilic-design-in-healing-spaces.

- Jabr, F. (1999). John A. Long - Publications List. Publicationslist.org, 14(6).

- Kelley, P., Lockley, S. W., Foster, R. G., & Kelley, J. D. (2015). The impact of circadian rhythm misalignment on academic performance and social behavior in adolescents. Journal of Adolescence, 48, 58-65.

- Kuo, F.E. and Faber Taylor, A. (2004). A Potential Natural Treatment for Attention-Deficit/Hyperactivity Disorder: Evidence From a National Study. American Journal of Public Health, [online] 94(9), pp.1580–1586. doi:https://doi.org/10.2105/ajph.94.9.1580.

- Kuo, Frances E, and Andrea Faber Taylor. "A potential natural treatment for attention-deficit/hyperactivity disorder: evidence from a national study." American journal of public health vol. 94,9 (2004): 1580-6. doi:10.2105/ajph.94.9.1580

- Lunsford Avery, J. R., et al. (Year). Title of the study. Journal Name, volume(issue), pages

- Lunsford-Avery, J.R. and Kollins, S.H. (2018). Editorial Perspective: Delayed circadian rhythm phase: a cause of late-onset attention-deficit/hyperactivity disorder among adolescents? Journal of Child Psychology and Psychiatry, 59(12), pp.1248–1251. doi:https://doi.org/10.1111/jcpp.12956.

- M Moser Associates. (n.d.). Workplace neurodiversity: designing for difference. [online] Available at: https://www.mmoser.com/ideas/workplace-neurodiversity/.

- Mollazadeh, M. and Zhu, Y. (2021). Application of Virtual Environments for Biophilic Design: A Critical Review. Buildings, 11(4), p.148. doi:https://doi.org/10.3390/buildings11040148.

- Proquest.com. (2024). a dimension of biophilia in urban design. [online] Available at: https://www.proquest.com/publiccontent/docview/2554361753?parentSessionId=LM0XSqmTtLY919I%2FO4gFePnTuZZiLP8cT6XYtl8YMo8%3D&pq-origsite=summon&accountid=14178&sourcetype=Scholarly%20Journals [Accessed 4 Dec. 2024].

- RHS (2023). Houseplants: to support human health. [online] www.rhs.org.uk. Available at: https://www.rhs.org.uk/plants/types/houseplants/for-human-health.

- Roenneberg, T., Wirz-Justice, A., & Merrow, M. (2004). Life between clocks: Daily temporal patterns of human chronotypes. Journal of Biological Rhythms, 19(4), 320-329.

- Sadia, T. (2020). Exploring the Design Preferences of Neurodivergent Populations for Quiet Spaces. [online] engrxiv.org. Available at: https://engrxiv.org/preprint/view/1424/2953.

- Sadia, T. (2020). Exploring the Design Preferences of Neurodivergent Populations for Quiet Spaces. doi:https://doi.org/10.31224/osf.io/fkaqj.

- sites.barbican.org.uk. (n.d.). Everything You Wanted to Know About Barbican Architecture. [online] Available at: https://www.barbican.org.uk/s/barbicanfacts/.

- Song, I., Baek, K., Kim, C. and Song, C. (2023). Effects of nature sounds on the attention and physiological and psychological relaxation. Urban Forestry & Urban Greening, 86, pp.127987–127987. doi:https://doi.org/10.1016/j.ufug.2023.127987.

- SONG, H. (2018). THE INFLUENCE OF BIOPHILLIC CLASSROOM DESIGN FEATURES ON SOUTH KOREAN SPECIAL NEEDS STUDENTS' EMOTIONAL BEHAVIOURS. pdf.

- www.maggies.org. (n.d.). Architecture and Design – Manchester | Maggie's. [online] Available at: https://www.maggies.org/about-us/how-maggies-works/our-buildings/manchester/.

- Yang, Y., Ro, E., Lee, T.-J., An, B.-C., Hong, K.-P., Yun, H.-J., Park, E.-Y., Cho, H.-R., Yun, S.-Y., Park, M., Yun, Y.-J., Lee, A.-R., Jeon, J.-I., Jung, S., Ahn, T.-H., Jin, H.-Y., Lee, K.J. and Choi, K.-H. (2022). The Multi-Sites Trial on the Effects of Therapeutic Gardening on Mental Health and Well-Being. International Journal of Environmental Research and Public Health, 19(13), p.8046. doi:https://doi.org/10.3390/ijerph19138046.

- Zauderer, S. (2024). What is it Like to Have Autism? [online] Crossrivertherapy.com. Available at: https://www.crossrivertherapy.com/autism/what-is-it-like-to-have-autism?3868d350_page=2 [Accessed 4 Dec. 2024].

Book references

Gaines, K. *et al*. (2018) *Designing for autism spectrum disorders*. New York, NY: Routledge, Taylor & Francis Group.

Xirou, M. (2024) *Interior designing for the neurodiverse: A transformational guide*. Ontario, Canada: Hasmark Publishing International.

References carried over from Critical anaylisis 02

Block, I. (2019) *Berthold Lubetkin's empty Penguin Pool should be blown 'to smithereens' says daughter*, *Blow Berthold Lubetkin's Penguin Pool 'to smithereens' says daughter*. Available at: https://www.dezeen.com/2019/01/08/penguin-pool-london-zoo-berthold-lubetkin-debate-uk-architecture-news/amp/ (Accessed: 10 May 2024).

Franklin, D. (2024) *How hospital gardens help patients heal*, *Scientific American*. Available at: https://www.scientificamerican.com/article/nature-that-nurtures/ (Accessed: 22 May 2024).

Ikei, H., Song, C. and Miyazaki, Y. (2017) *Physiological effects of touching wood*, *International journal of environmental research and public health*. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5551239/#:~:text=In%20conclusion%2C%20our%20study%20revealed,materials%2C%20thereby%20inducing%20physiological%20relaxation. (Accessed: 09 May 2024).

Lunsford-Avery, J.R. and Kollins, S.H. (2018) *Editorial perspective: Delayed circadian rhythm phase: A cause of late-onset attention-deficit/hyperactivity disorder among adolescents?*, *Journal of child psychology and psychiatry, and allied disciplines*. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6487490/ (Accessed: 22 May 2024).

Mahamane, S. *et al.* (2020) *Natural categorization: Electrophysiological responses to viewing natural versus built environments*, *Frontiers in psychology*. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7298107/ (Accessed: 22 May 2024).

Mead, M.N. (2008) *Benefits of sunlight: A bright spot for human health*, *Environmental health perspectives*. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2290997/#:~:text=The%20melatonin%20precursor%2C%20serotonin%2C%20is,converted%20to%20melatonin%20in%20darkness. (Accessed: 22 May 2024).

Nightingale, F. (1860) *Notes on nursing: What it is, and what it is not.: By Florence Nightingale*. London: Harrison, 59, Pall Mall, Bookseller to the Queen.

Riglin, L. *et al.* (2021) *ADHD and depression: Investigating a causal explanation*, *Psychological medicine*. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8381237/ (Accessed: 22 May 2024).

Van den berg, A.E. (2003) *The natural-built distinction in environmental preference and The Natural-Built Distinction in Environmental Preference and Restoration*. Available at: https://agnesvandenberg.nl/ChapterNebraska.pdf (Accessed: 22 May 2024).

Appendix

10 Jan 2012, 8:07 pm quote

alexi
Deinonychus

Joined: 25 Dec 2010
Age: 43
Gender: Female
Posts: 374
Location: Australia

I think small spaces limit the amount of sensory input that I am exposed to. It's unlikely a little space will be messy or loud or bright. And that is usually what I am looking for, a dark, quiet cave to climb in to "escape".

One of my clearest signs for me to recognize that I am overwhelmed is that I start to try to hide. Even at work and in public.

Profile Report

10 Jan 2012, 8:17 pm quote

Sibyl
Veteran
Veteran

Joined: 10 Jul 2009
Age: 80
Gender: Female
Posts: 597
Location: Kansas

Going back to the womb? But that seems like it'd be for everybody, not just autistic people.

Yes, I too like to get into a small space when I'm shook up. Never need to stay there very long, though.

I _love_ to sleep under a heavy pile of blankets, completely wrapped in some of them, with a 20-lb cat sleeping on my torso, in a cold room. Of course, it's too hot to do that in the summer-- even a sheet is too hot then, but I still want to be wrapped in one. It's just, for me, the epitome of comfort, like I could float away in my cocoon with my cat.

Small Spaces

10 Jan 2012, 7:54 pm quote

sockless74
Emu Egg

Joined: 5 Nov 2011
Gender: Male
Posts: 5

For many years before I discovered that I have AS, I have enjoyed getting inside small spaces. I have a small closet I like to get inside of some times and I have a hard time sleeping without the bedroom door closed and a heavy comforter pulled up to my neck. I've read that many people with autism like to get in small spaces or wear pressure vests. It is quite comforting, but my question is why? What does this do for us that we like and how does it do this? Why is this comforting? Have any medical studies been done to try to figure this out?

Joined: 25 Dec 2010
Age: 43
Gender: Female
Posts: 374
Location: Australia

I think small spaces limit the amount of sensory input that I am exposed to. It's unlikely a little space will be messy or loud or bright. And that is usually what I am looking for, a dark, quiet cave to climb in to "escape".

One of my clearest signs for me to recognize that I am overwhelmed is that I start to try to hide. Even at work and in public.

Profile Report

10 Jan 2012, 8:17 pm quote

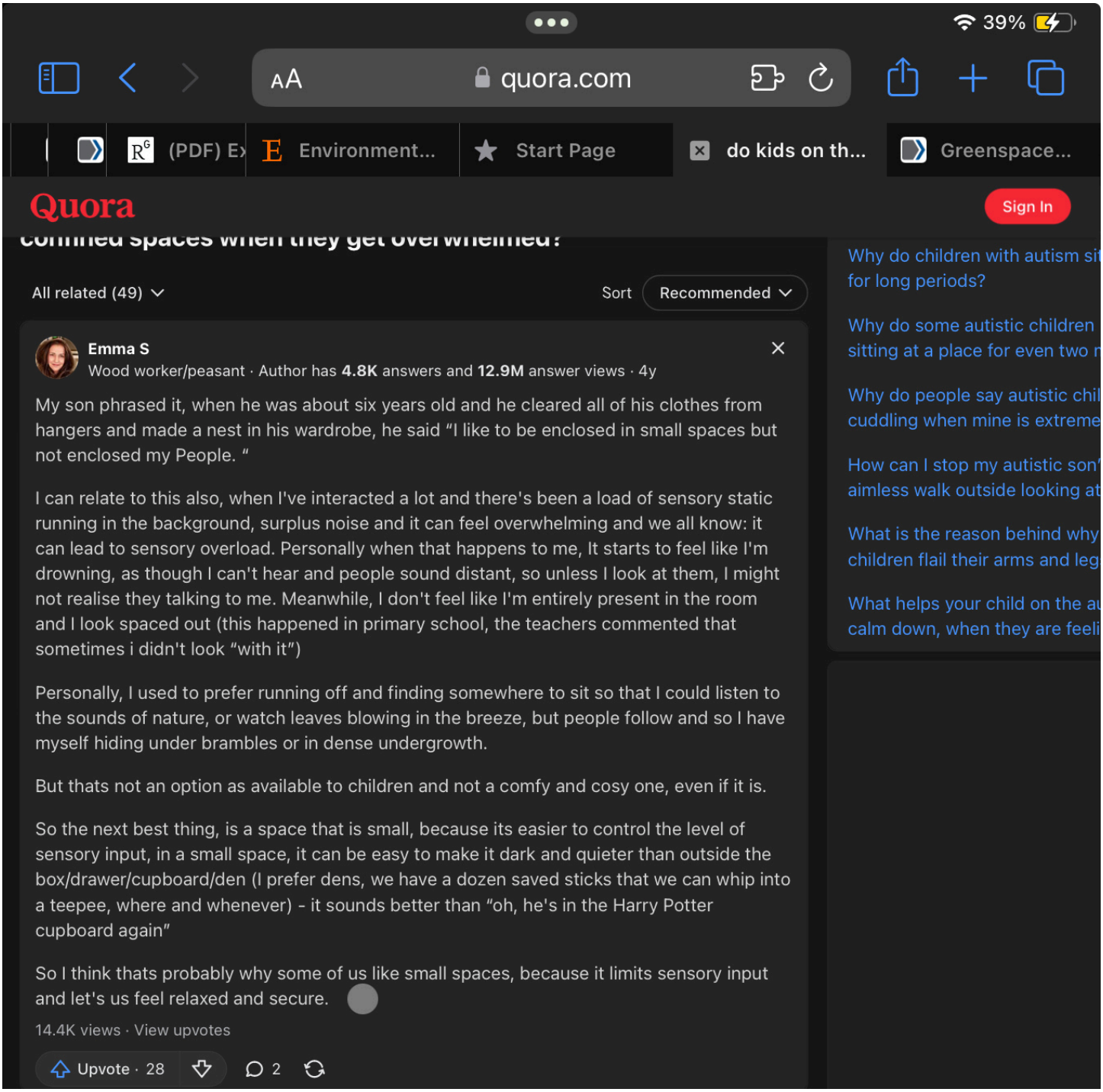
Sibyl
Veteran
Veteran

Joined: 10 Jul 2009
Age: 80
Gender: Female
Posts: 597
Location: Kansas

Going back to the womb? But that seems like it'd be for everybody, not just autistic people.

Yes, I too like to get into a small space when I'm shook up. Never need to stay there very long, though.

I _love_ to sleep under a heavy pile of blankets, completely wrapped in some of them, with a 20-lb cat sleeping on my torso, in a cold room. Of course, it's too hot to do that in the summer-- even a sheet is too hot then, but I still want to be wrapped in one. It's just, for me, the epitome of comfort, like I could float away in my cocoon with my cat.


39%
AA
quora.com
(PDF) E
Environment...
Start Page
do kids on th...
Greenspace...
Quora
Sign In
confined spaces when they get overwhelmed?
All related (49)
Sort
Recommended
Emma S
Wood worker/peasant · Author has 4.8K answers and 12.9M answer views · 4y
My son phrased it, when he was about six years old and he cleared all of his clothes from hangers and made a nest in his wardrobe, he said "I like to be enclosed in small spaces but not enclosed my People. "
I can relate to this also, when I've interacted a lot and there's been a load of sensory static running in the background, surplus noise and it can feel overwhelming and we all know: it can lead to sensory overload. Personally when that happens to me, It starts to feel like I'm drowning, as though I can't hear and people sound distant, so unless I look at them, I might not realise they talking to me. Meanwhile, I don't feel like I'm entirely present in the room and I look spaced out (this happened in primary school, the teachers commented that sometimes i didn't look "with it")
Personally, I used to prefer running off and finding somewhere to sit so that I could listen to the sounds of nature, or watch leaves blowing in the breeze, but people follow and so I have myself hiding under brambles or in dense undergrowth.
But thats not an option as available to children and not a comfy and cosy one, even if it is.
So the next best thing, is a space that is small, because its easier to control the level of sensory input, in a small space, it can be easy to make it dark and quieter than outside the box/drawer/cupboard/den (I prefer dens, we have a dozen saved sticks that we can whip into a teepee, where and whenever) - it sounds better than "oh, he's in the Harry Potter cupboard again"
So I think thats probably why some of us like small spaces, because it limits sensory input and let's us feel relaxed and secure.
14.4K views · View upvotes
Upvote · 28
2
Why do children with autism sit for long periods?
Why do some autistic children sitting at a place for even two
Why do people say autistic chil cuddling when mine is extreme
How can I stop my autistic son' aimless walk outside looking at
What is the reason behind why children flail their arms and leg
What helps your child on the au calm down, when they are feeli

tripadvisor.co.uk

92%

See all things to do

About The area Reviews

Gerard106
Brighton, UK
334 contributions

0

●●●●●

Kings Cross is Grand Again

Jul 2023 • Couples

Bright, welcoming, loads of nice shops, clean well maintained toilets.
Lovely eating places and the water fountain jets our grand daughter loved .Generally well designed as far as we experienced.
To restore the lovely old building as well as building the new
Shout out to all those parties who were involved in planning and creating the new Kings Cross and making it a really nice place to visit again

Written 3 July 2023

This review is the subjective opinion of a Tripadvisor member and not of Tripadvisor LLC. Tripadvisor performs checks on reviews as part of our industry-leading trust & safety standards. Read our transparency report to learn more.

Louise C
3 contributions

0

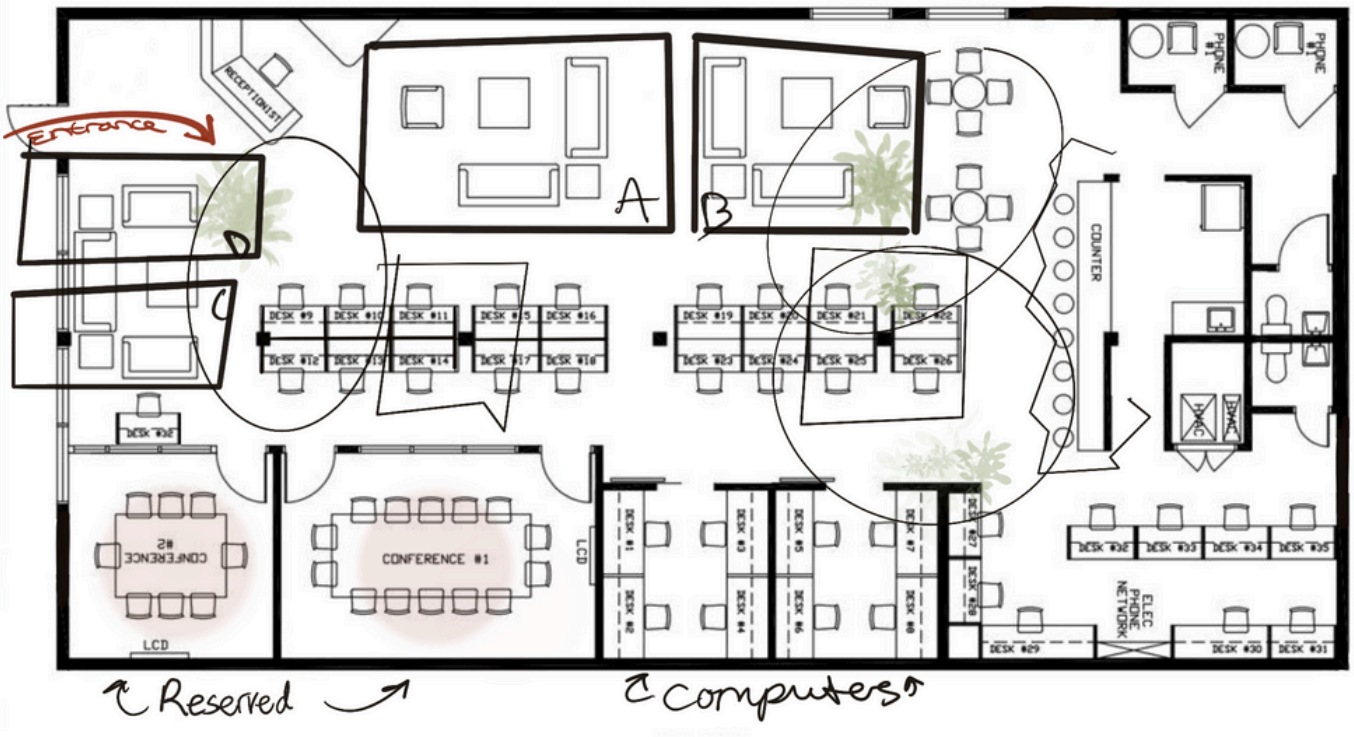
●●●●●

Pizza Party

Sept 2022 • Couples

What an exquisite visit to Pizza Union! Good pizza. No fuss. Great Vibezz. All round good fun!

Best pizza in London.

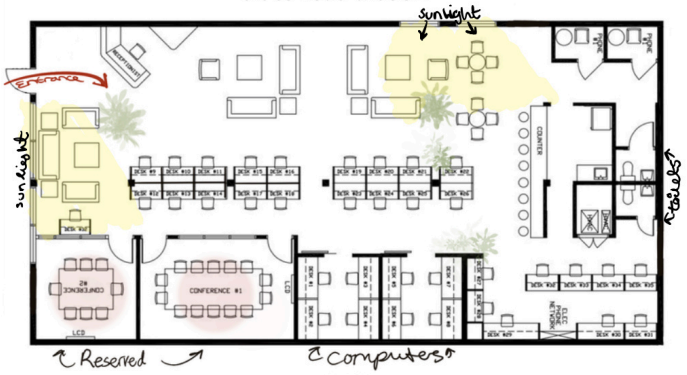


Mapping Survey

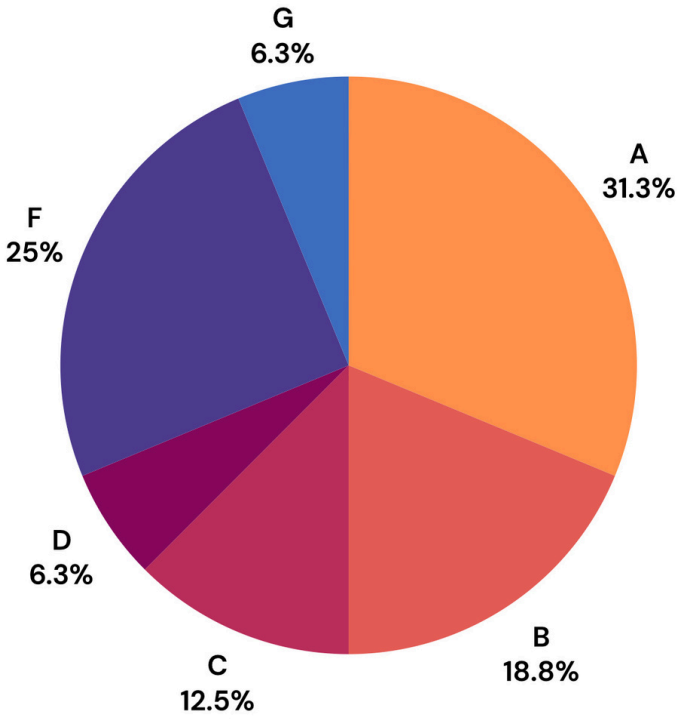
☐ Neurotypical Or Neurodivergent ☐

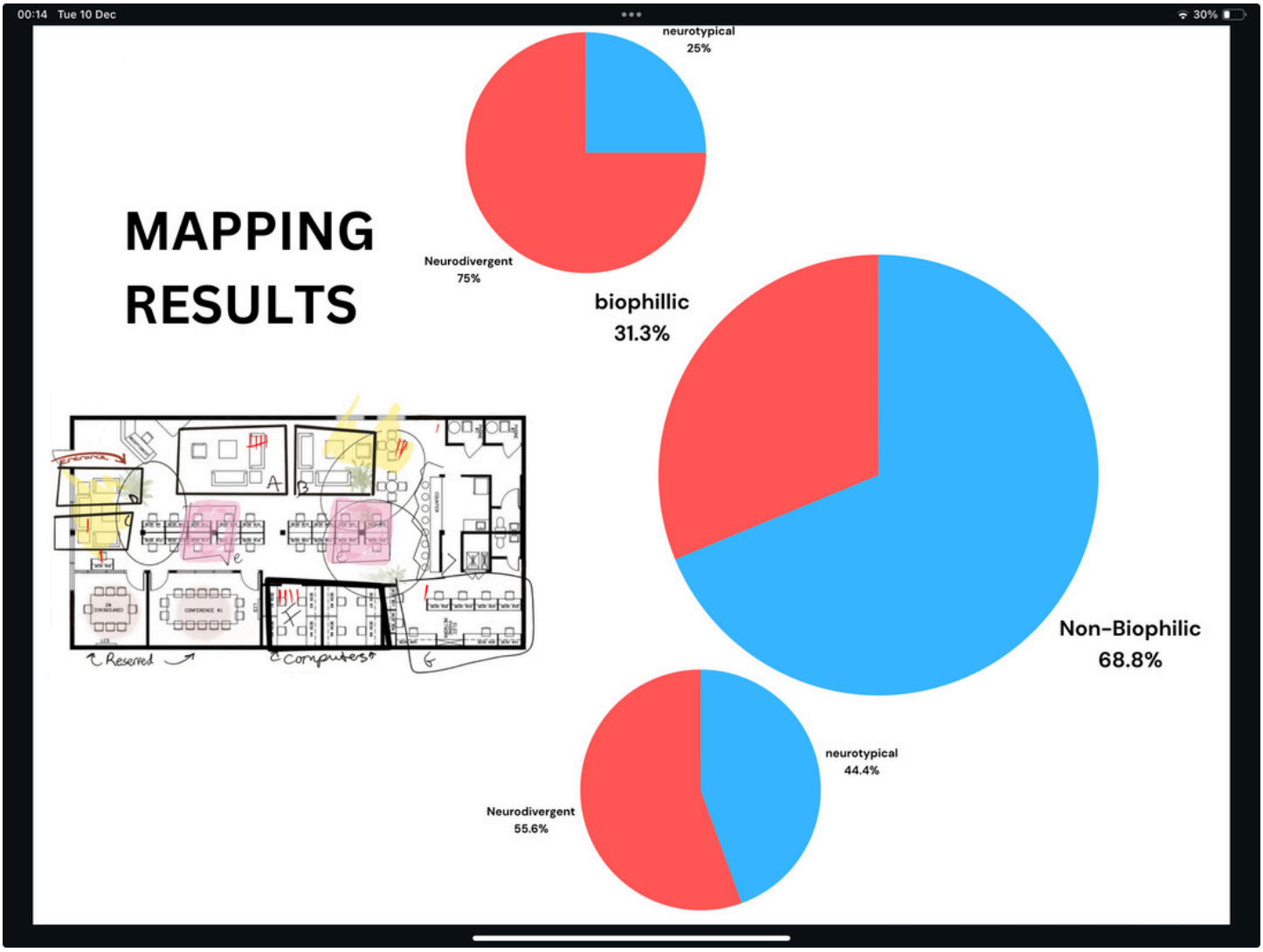
Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?


G
6.3%
A
31.3%
F
25%
D
6.3%
B
18.8%
C
12.5%

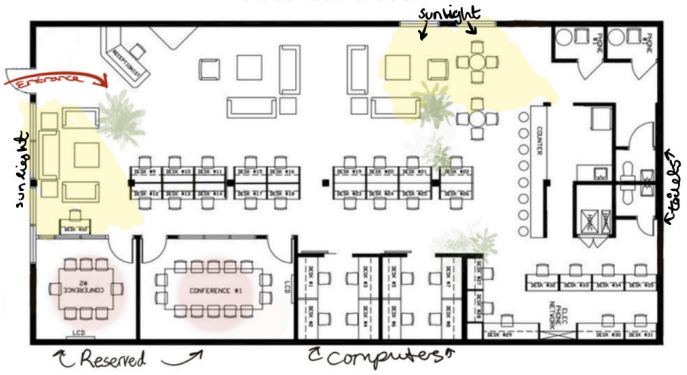

00:14 Tue 10 Dec
30%
MAPPING
RESULTS
neurotypical
25%
Neurodivergent
75%
biophillic
31.3%
Non-Biophilic
68.8%
neurotypical
44.4%
Neurodivergent
55.6%
Reserved
Computers

Mapping Survey

☐ Neurotypical Or Neurodivergent ☐

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



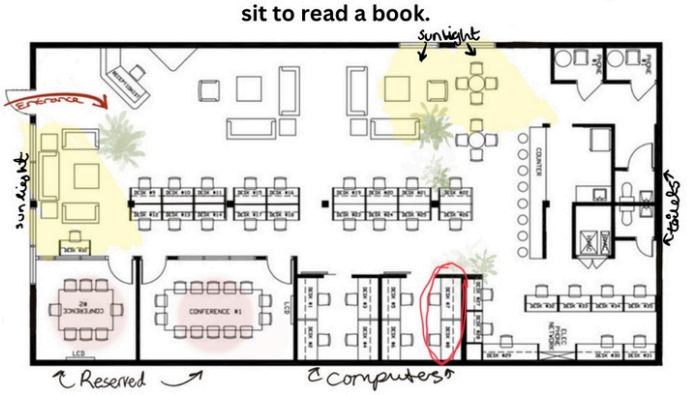
What decisions led you to chose this seat?

Mapping Survey

☑ Neurotypical Or Neurodivergent ☐

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

I like quite and privatey that I can concentrate my work.

Mapping Survey

☐ Neurotypical Or Neurodivergent ☑

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.

What decisions led you to chose this seat?

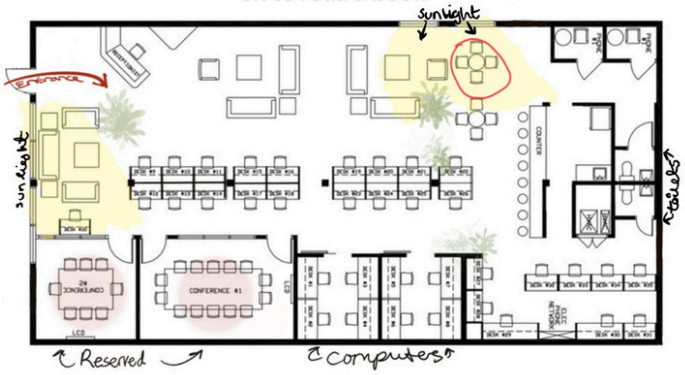
It is tucked away where less people can see you.

Mapping Survey

☐ Neurotypical Or Neurodivergent ☑

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

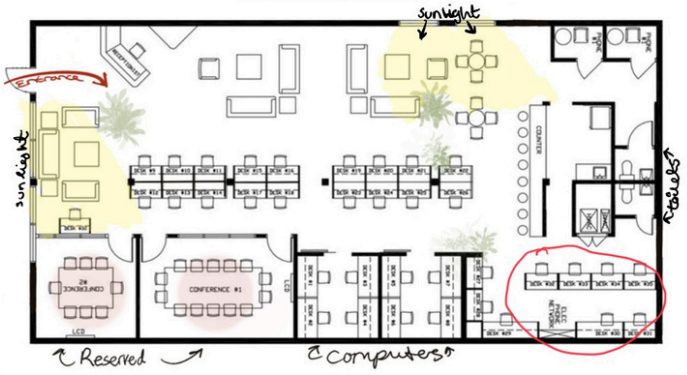
The sun light is important especially to keep me motivated to carry on. Also a little away from the traffic so it's calmer.

Mapping Survey

☑ Neurotypical Or Neurodivergent ☐

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

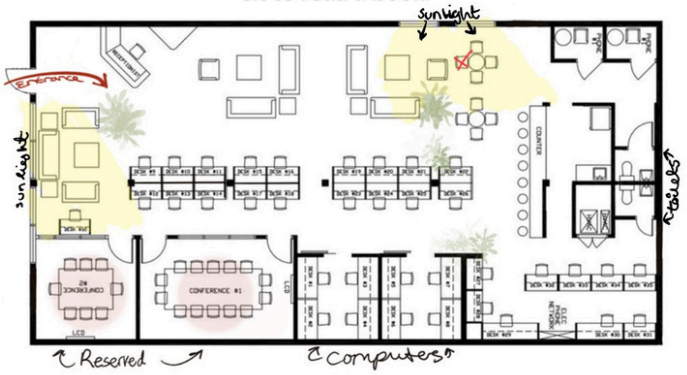
It's a cozy location that doesn't feel closed in.

Mapping Survey

☑ Neurotypical Or Neurodivergent ☐

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

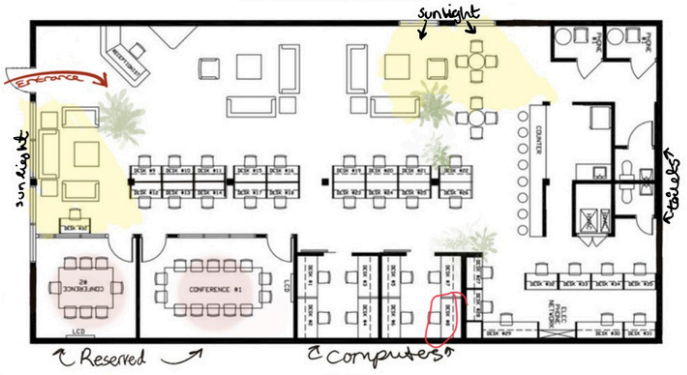
I love and prefer to sit and working in the warm place with natural sunlight♡
but also dont want to facing anyone.

Mapping Survey

☑ Neurotypical Or Neurodivergent ☐

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

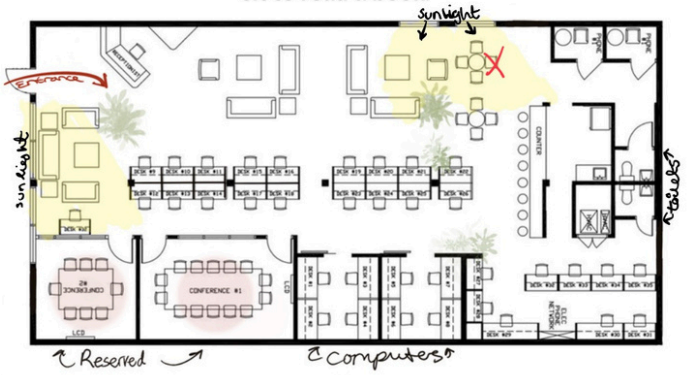
Out of the way and seems to be a quiet spot to be able work and concentrate.

Mapping Survey

☐ Neurotypical Or Neurodivergent ☑

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

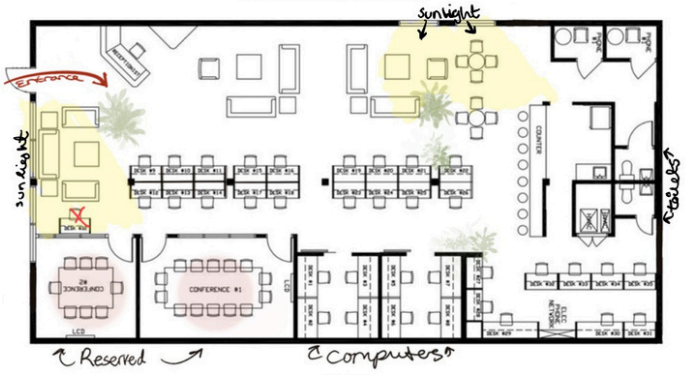
Hopefully this spot will be least busy. I want to be left alone.

Mapping Survey

☐ Neurotypical Or Neurodivergent ☑

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

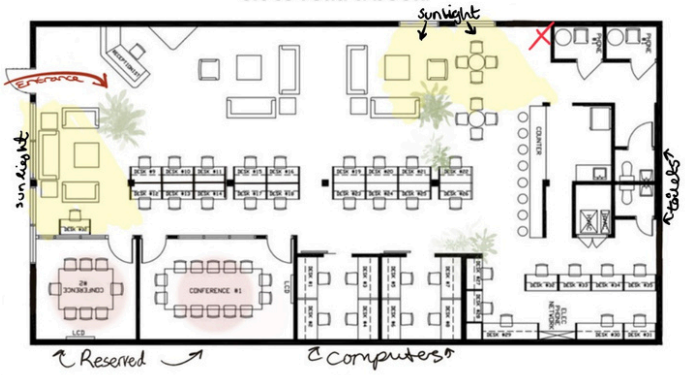
Its the only seat on its own so people won't bother me

Mapping Survey

☐ Neurotypical Or Neurodivergent ☑

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

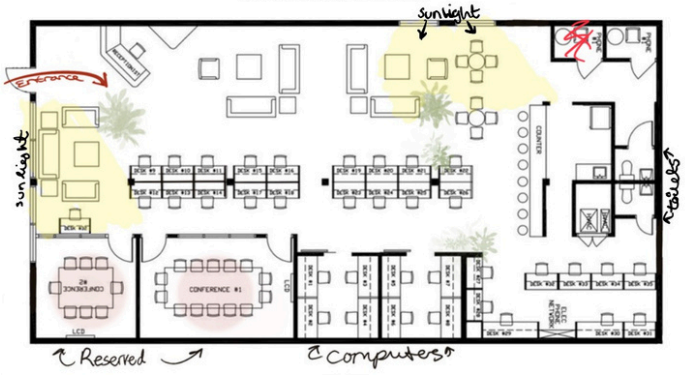
I LIKE TO SIT IN THE CORNER + ON THE FLOOR

Mapping Survey

☐ Neurotypical Or Neurodivergent ☑

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

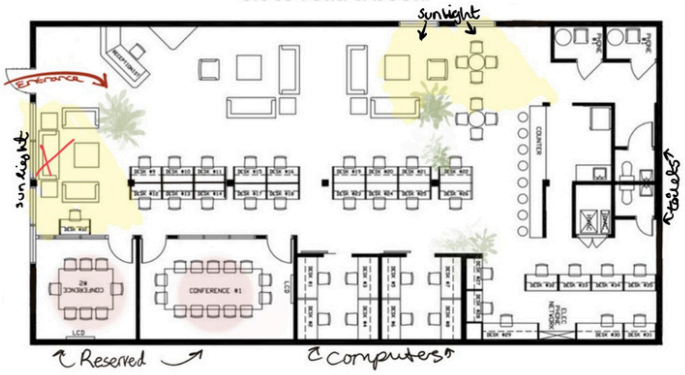
I dont like how big the room is and the small room is too small.

Mapping Survey

☐ Neurotypical Or Neurodivergent ☑

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

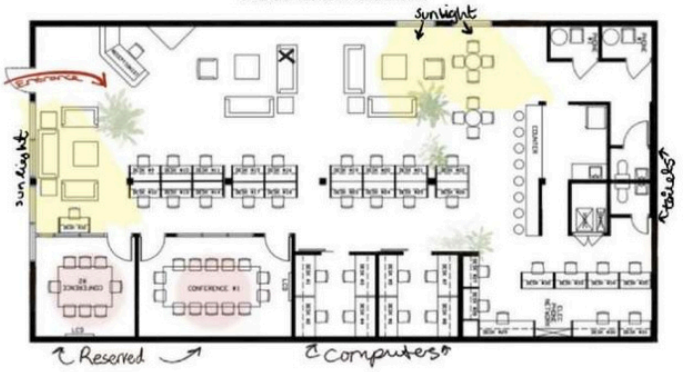
hopefully people will walk straight past and go to the other sunny area.

Mapping Survey

☐ Neurotypical Or Neurodivergent ☒

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

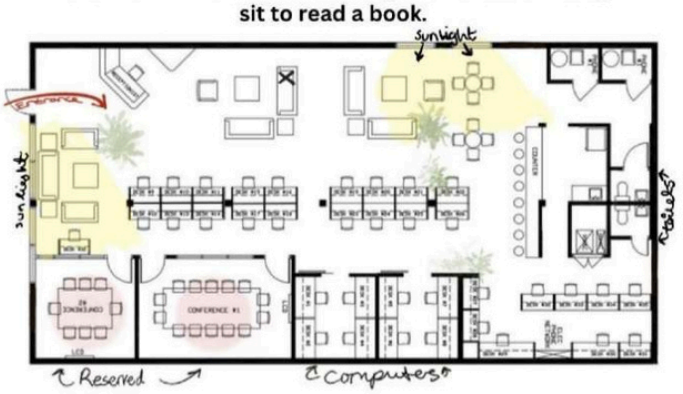
Not too near sunlight as that can be a distraction whilst trying to read as a more darker and cozier setting would be preferable since it allows me to emmerse myself into the book more

Mapping Survey

☐ Neurotypical Or Neurodivergent ☒

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

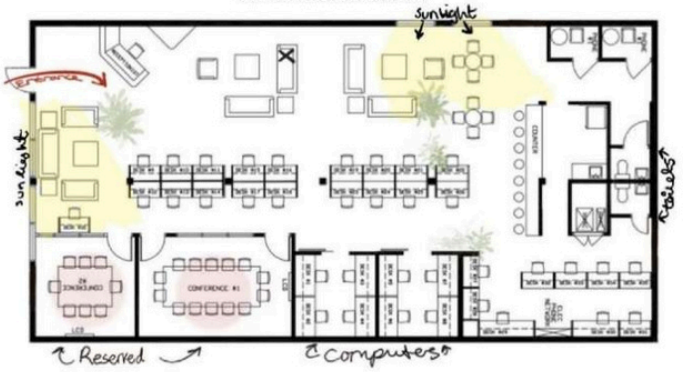
Not near the computers as the typing can become easily annoying and also I like to see what people are writing so I'd lose focus

Mapping Survey

☐ Neurotypical Or Neurodivergent ☒

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

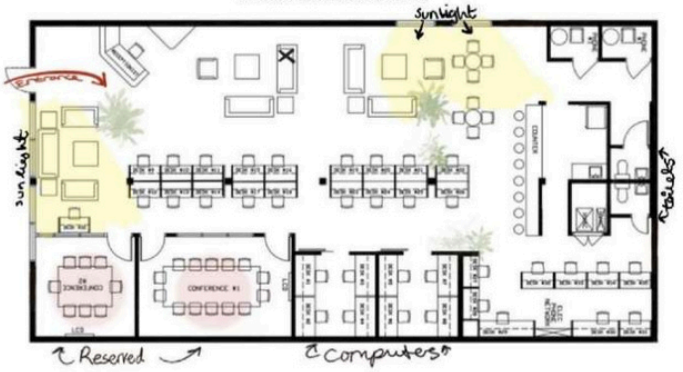
The counter area looks to have not comfy chairs and near the toilets which will smell and are germy and even if there is an air freshener to help, the constant people going to and throw them would be a distraction, plus the toilet flushing would annoy me

Mapping Survey

☐ Neurotypical Or Neurodivergent ☒

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

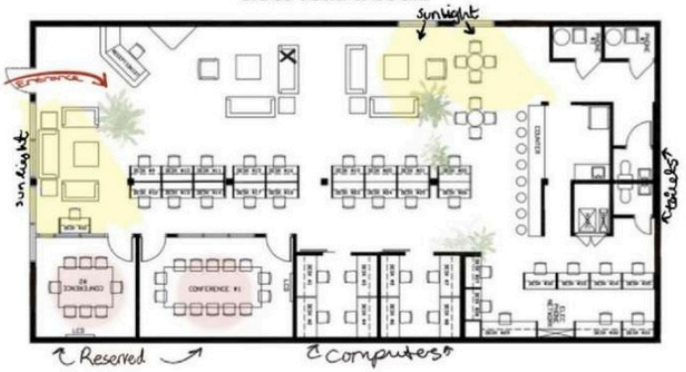
The middle section is just tooo open and I don't like to be too seen

Mapping Survey

☐ Neurotypical Or Neurodivergent ☒

Here is a floor plan of a library.
You've planned to stay a while.
Where would you most likely chose to sit?

Please mark with a cross where you would most likely sit to read a book.



What decisions led you to chose this seat?

I wouldn't sit behind the entrance as not knowing what is behind would scare me and not allow me to fully enjoy my book, therefore I choose the sofa as its a cornered nook, comfy, not too in the light but not too in the dark so I can see my book well, and when people walk in, I am facing towards them so I have some sense of security etc.