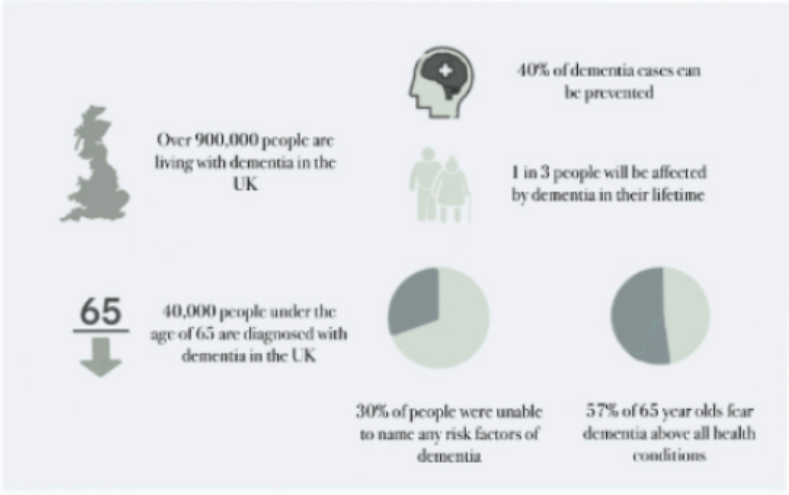


Moments of Clarity

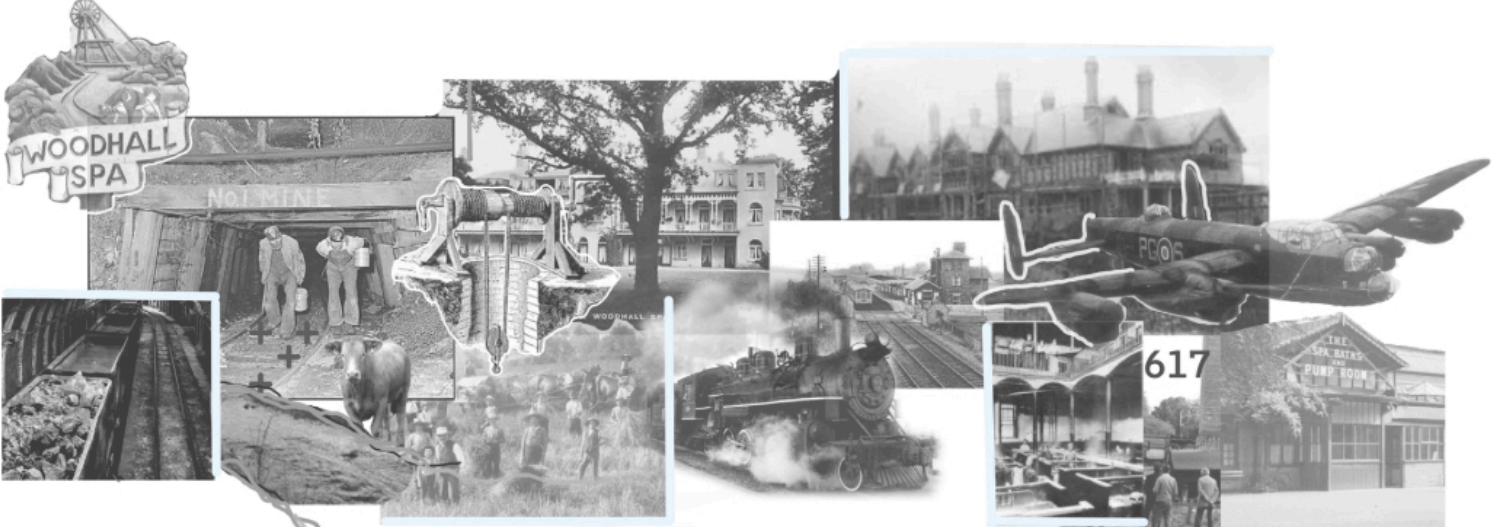
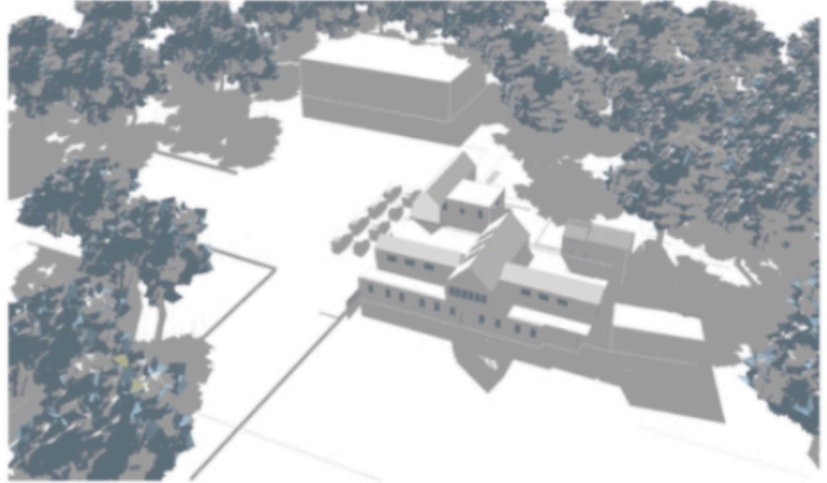


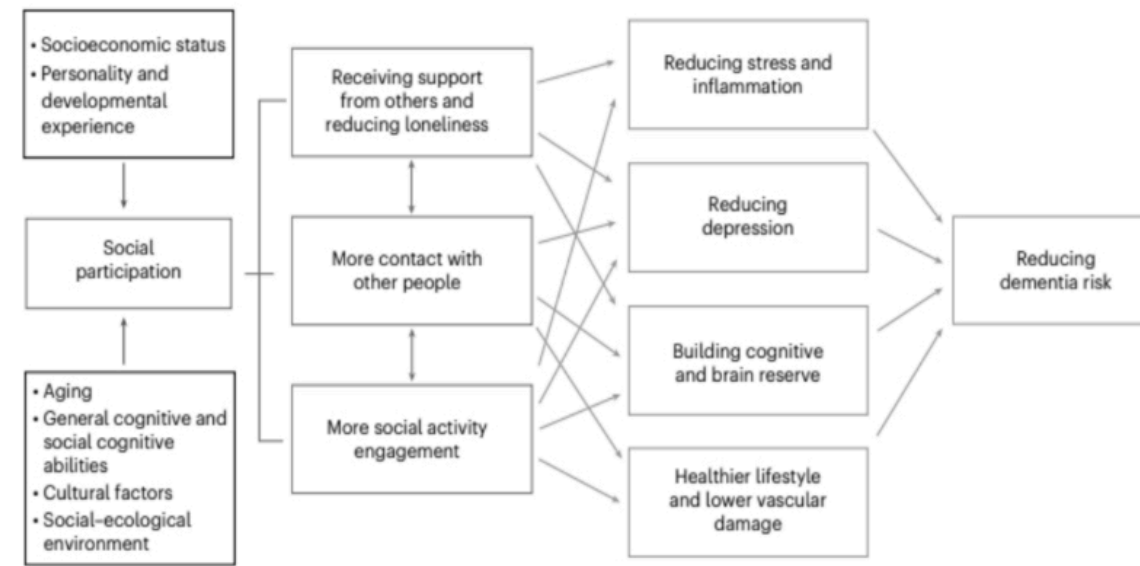
The design proposes to tackle the global health concern of dementia through the use of universal design principles to enhance social and sensory interactions. Over 900,000 people are living with dementia in the UK and 47 million world wide. This is expected to rise to 159 million by 2050. Poor consideration of design environments can contribute to the decline of those with dementia.

The users will be retired individuals focusing on the prevention and education of dementia. Carers, families, and employees will also use the site. Elderly in the area who do not live in care homes will not have access to care interventions that promote social, physical, and mental engagement. My proposal aims to encourage users to become part of these interventions. Mild Cognitive Impairment has a 10-20% chance of deteriorating into dementia, so these people are most suitable and will benefit from the design proposal. Prevention activities consist of three components: physical exercise, intellectual activities, and communication.

When identifying an appropriate location for the memory wellness center, it was useful to consider the demographics, Woodhall Spa being high in retired individuals as well as Lincolnshire. Woodhall Spa has several retirement homes and villages, therefore the proposal targets the quality of life of these people. The Bathhouse is located within the historic core of Woodhall Spa village, located in the East Lindsey District. It is located in The Pinewoods on Coronation Road which also provides access to key surrounding buildings including The Kinema in the Woods and Tea House. The site is a short drive from the center of the village, leading through a historic woodland, creating a retreat atmosphere.

The history of the building is what gave Woodhall Spa its original name. In the 19th century, the search for coal in the area led to a burst spring, forming a water source. This water came popular due to healing gout-related illnesses and arthritis after supposedly healing cattle that drank from the supply. Locals saw this an opportunity and began drinking the water, healing them from disease due to the purity of the water. The owner of the land built a small bathhouse, which attracted more locals and then a hotel (Victoria Hotel) was constructed. By the 1860s, the bath house had developed into a major spa complex, around which the modern village developed. The baths continued to help locals with treatments until during and after the First World War, then the spa went into decline. The Bathhouse collapsed in 1983 has become an abandoned eyesore that sits unused.

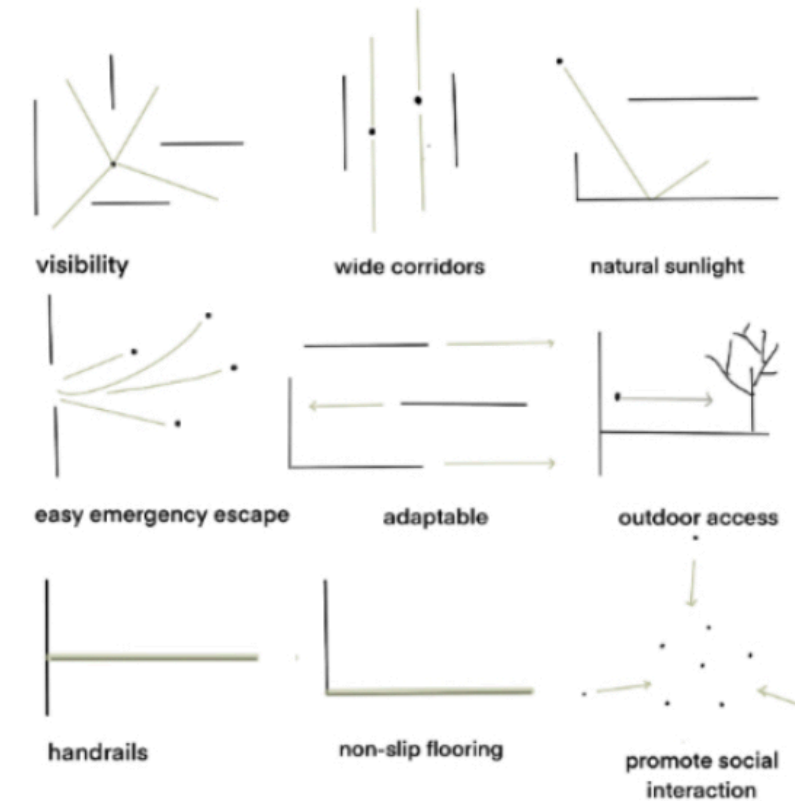




Mental deterioration causes wayfinding to be difficult, weakening the ability to make cognitive maps of an environment. In the past, dementia care was intended to be a standard type of care, reflecting the type used in hospitals. However, architects and designer are beginning to take on a more human-centered approach. Elderly people find conventional environments hard to adapt to, with this becoming harder as brain function deteriorates. A familiar environment allows users to express their identity, through activities, movement, and reminiscing familiar sensations. Universal design principles are accommodated to allow users to have a safe, stress free experience.

Universal Design principles include social interaction, therapeutic settings, calm environments, familiar, safe, and accessible, good visual access, and easy access to outdoor spaces. A study of space with the syntax method shows how the layout of spaces and furniture eases social encounters for people with mild memory loss. These aspects of design also reduce reliance on memory. A feeling of security arises from protective environments where we can move around as we please. It is important for people who are cognitively impaired to not feel constrained to one environment and can safely move through the building independently. Users require intimate environments to remove themselves from an overstimulating environment, as anxiety will occur as well as social environments.

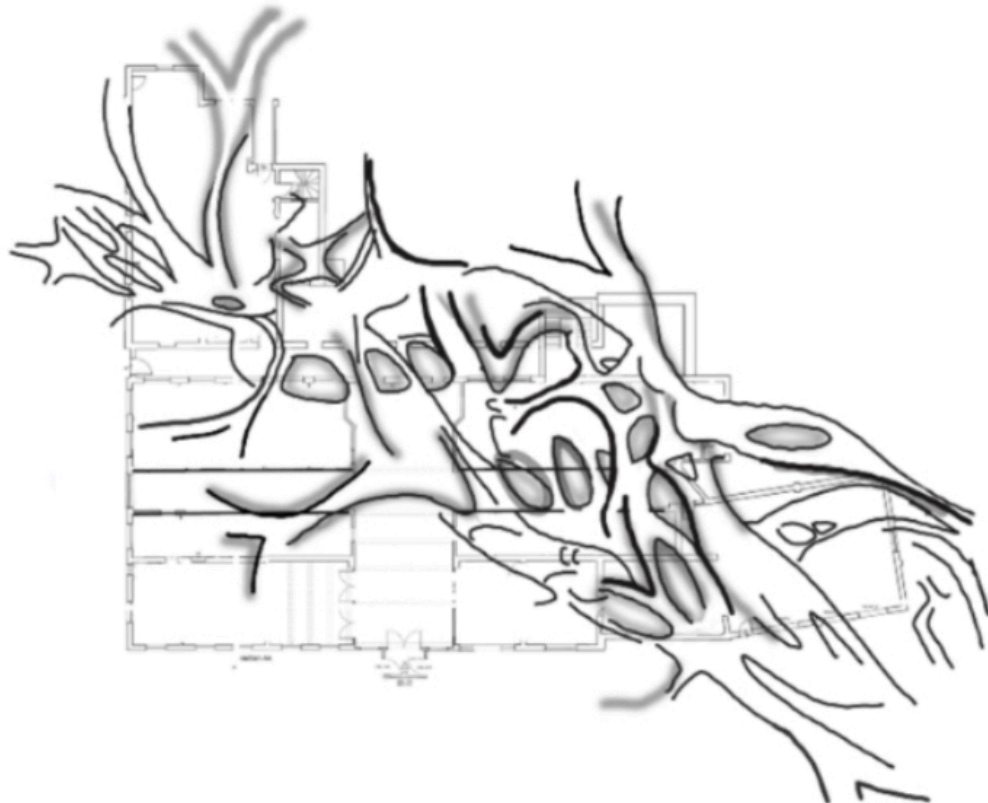
- SOCIAL INTERACTION
- EASY VISUAL ACCESS
- CALM ENVIRONMENT
- FAMILIAR
- OUTDOOR ACCESS
- WAYFINDING



Given we spend 95% of our lives indoors, multi-sensory design is crucial for users to activate parts of the brain that usually lack stimulation. It offers tactile, auditory, and visual engagement that stimulates their minds. Studies have stated that multi-sensory design gives meaningful engagement for dementia sufferers and reduces behavioral symptoms such as stress, agitation, and lack of sleep. This exemplifies the importance of the design to promote sensory experiences, in this case, water, nature and aroma environments, which will help enable the user to remain active, social, and mentally energized



reconnecting with senses



RISK FACTORS

MENTALLY INACTIVE

SEDENTARY LIFESTYLE

ISOLATION

LOW PHYSICAL ACTIVITY

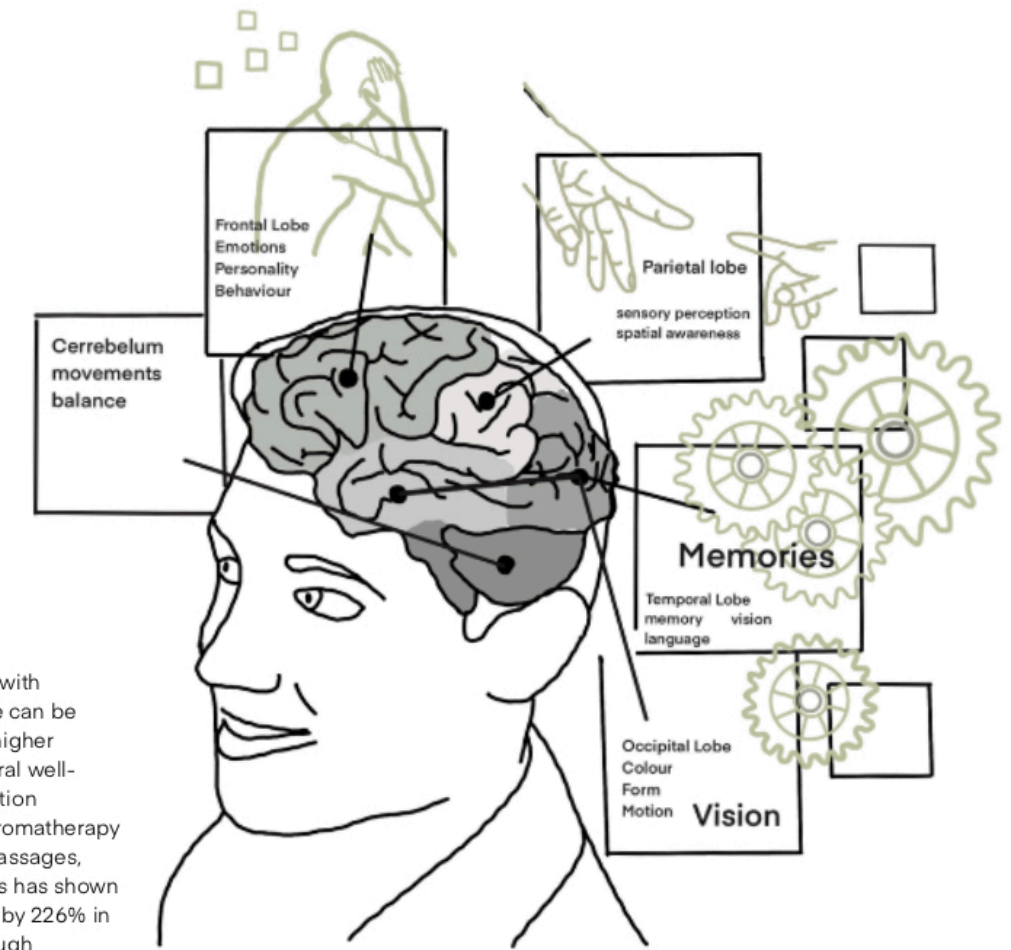
HIGH LEVELS OF STRESS

UNHEALTHY DIET

HYPERTENSION



Defined as the Proust Effect, senses create strong connections with memories. For people living with dementia a feeling of pleasure can be created when connecting to memories with a limited need for higher cognitive function. Aromatherapy is a strategy to promote general well-being, specific to brain functioning. The use of olfactory stimulation improves sleep, reduces stress, anxiety and helps with focus. Aromatherapy has been applied through the water baths, steam rooms and massages, connecting users with senses. Being exposed to multiple scents has shown promise in enhancing cognitive functions, boosting word recall by 226% in older adults. In addition, aromatherapy helps with mobility, through massages and bathing, pain relief and joint problems can be resolved.



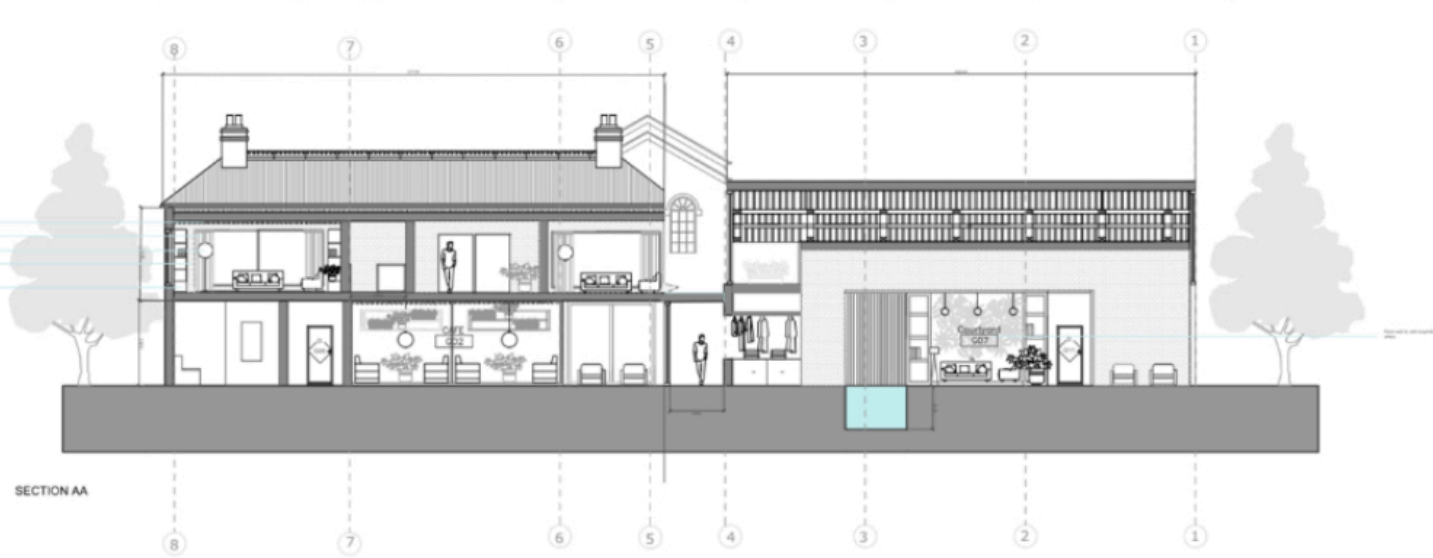
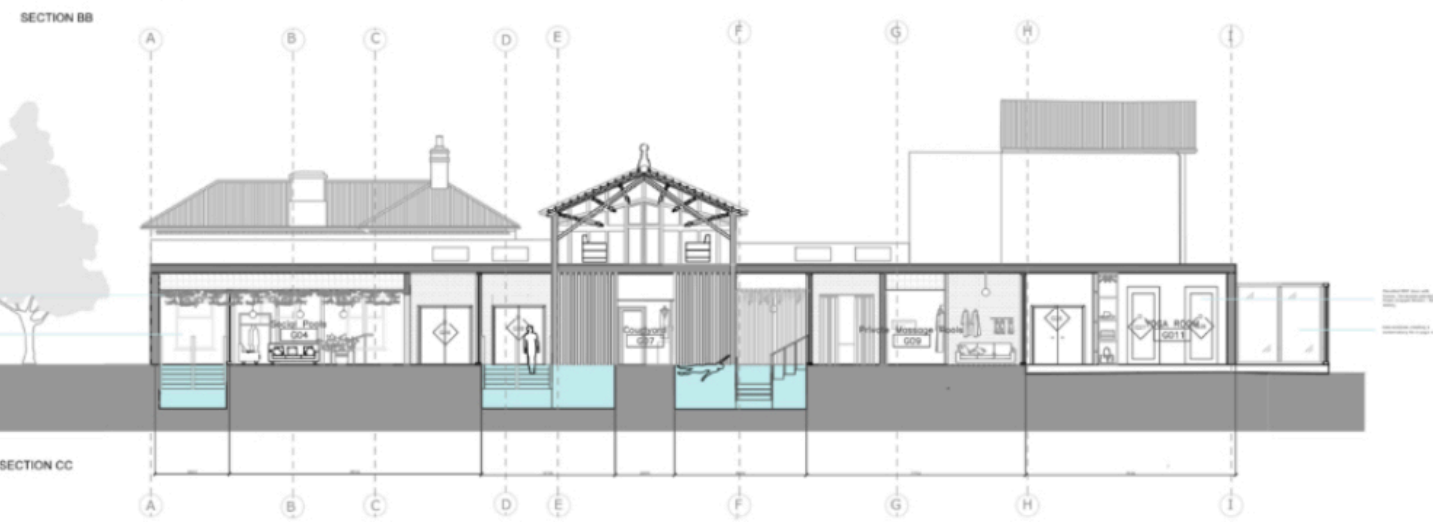
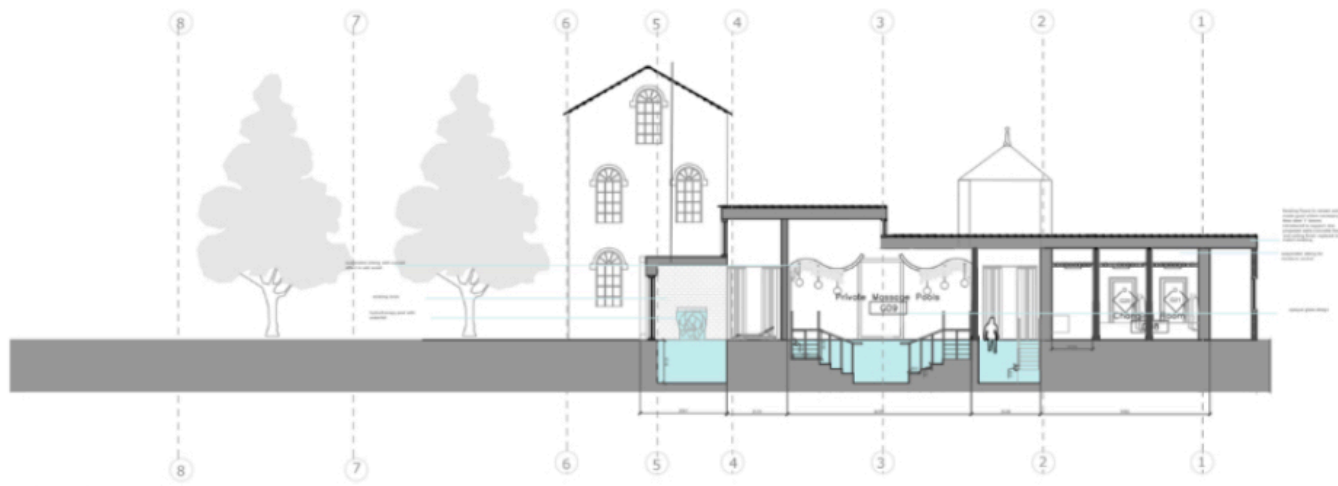


Figure 43- Fragmentation of Neuron

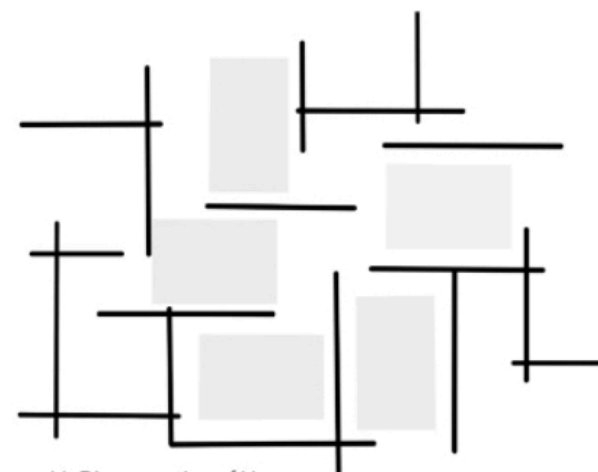
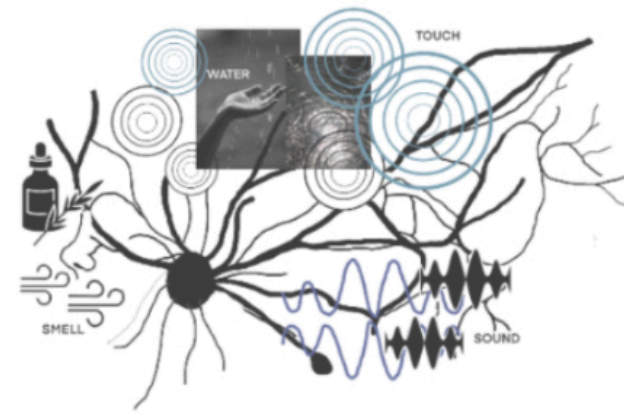


Figure 44- Disconnection of Lines



The concept is based on the connection of neurons in the brain. As dementia develops these neuron connections become weaker due to a build-up of toxic proteins in the brain, blocking information from reaching the synapse. Due to this, the body's response to sensory stimulation becomes slower and memories become lost. My concept uses design principles to 'reconnect the blockages' causing moments of clarity in the brain. The theory of the Proust Effect and Dementia Prevention Strategies supports this concept.

At first, the concept began to develop using fragmentation and disconnection of lines to create voids and spaces. The lines naturally formed gaps that turned into sensory spaces, a reconnection point for users. The idea of the reconnection spaces developed further, and began planning the connection between these points and what was going to be applied within these spaces. As my building's history wanted to be readapted, the concept of the pool was created as sensory points within the gaps, with a variety of activities to reconnect with elderly users' senses. These involved aromatherapy pools, massage pools, lighting pools, and adaptable temperature pools. I developed the layout further and created a disconnection of lines that worked systematically within the existing building. The walls and voids dictate people's movements in and out of the water areas and sensory rooms.

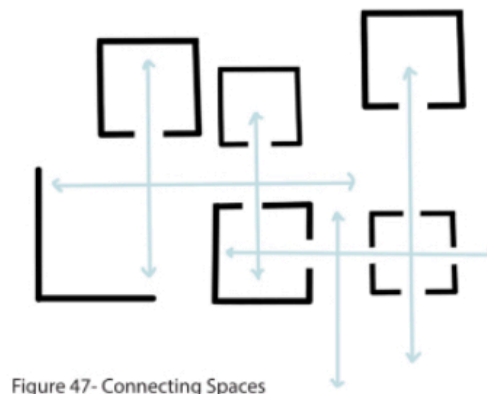


Figure 47- Connecting Spaces

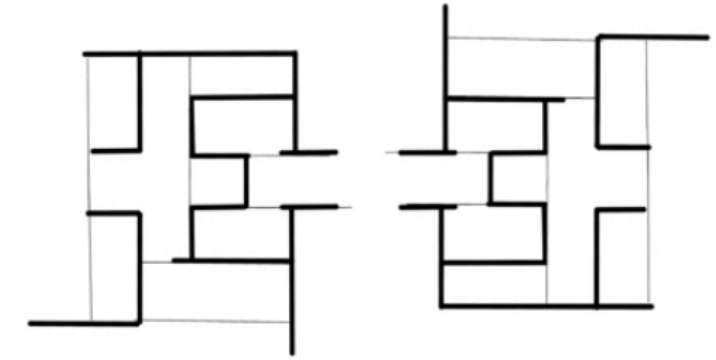


Figure 48- Spatial Arrangement

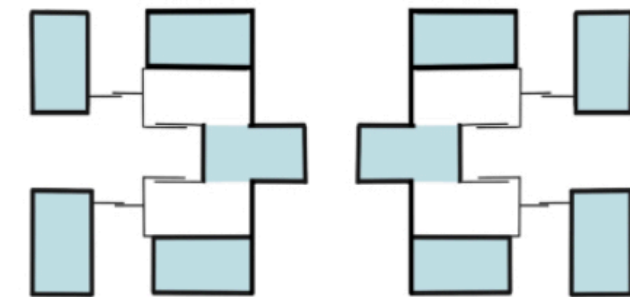
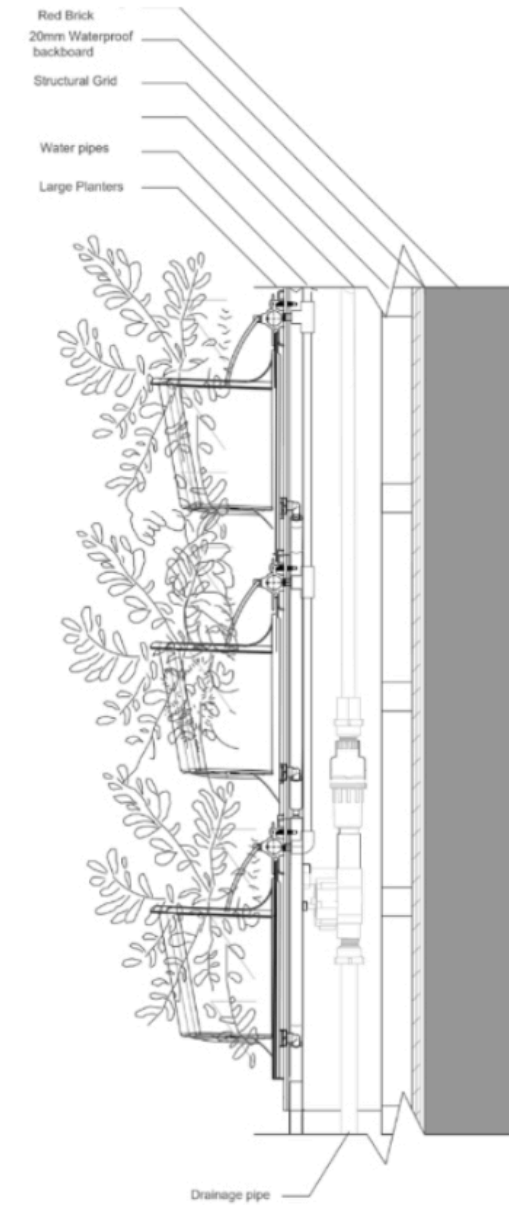


Figure 49- Pool Application





DETAIL- Green Wall System 1:5

Warmer colour tones are important to keep comfort levels high. Colour plays a vital role in creating a secure atmosphere. The design is a harmonious composition with lighting, furniture, textures, and colours all playing a role in creating the right atmosphere for users. The use of local materials creates familiarity, with the use of original brickwork and wood to help link to the original context. The materials are kept natural and light, mixed with warmer tones to reflect the exterior topography.

The recessed lights move from the central atrium into the secondary rooms, offering elderly users a guide to follow that's visibly accessible. When fall risk is combined with naturally declining vision and insufficient interior light levels, buildings can become dangerous for elderly users. Lighting can be a significant factor in creating ambiance, and a person's mood may be influenced by an environment's artificial light. Having access to brightly lit spaces throughout the day can also benefit sleep-wake circadian patterns, nocturnal wandering, and mood disorders such as agitation.

A controlled acoustic environment contributes positively towards reducing stress levels, reducing heart rate, respiration rate, and blood cholesterol. This can contribute to reducing the risk of high blood pressure. Reduced stress levels also contribute to better quality of sleep which can help towards reducing the effects of dementia and lower over-stimulation and anxiousness. Lower sound emissions can also reduce staff stress levels, so performance and maintenance are improved by being able to engage and communicate with users.

Implemented in private spaces are various types of materials to absorb sound, so confusion and anxiousness are minimal when in relaxing more intimate spaces. A problem faced by many people suffering from cognitive dysfunction is over-stimulation.

