

Bachelor of Interior Architecture and Design, with Honours

School of Design and Architecture

***How can phenomenological and biophilic design principles inform empathetic interior architectural strategies for supporting the psychological and physiological wellbeing of women awaiting cancer treatment?***

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Date : 27 / 03 / 2026

Word Count : 6,490

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March 2026

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## **ACKNOWLEDGEMENTS**

Upon fulfilment of my dissertation, I have found myself to be personally challenged however enriched with acknowledging the conceptualisation of where I position myself as a designer. This document would not have been possible without the kindness of the Macmillan staff and Breast Cancer nurses at Diana Princess of Wales Hospital in Grimsby who have shown my family and I the reassurance we needed in a time of uncertainty.

To Tonia Warsap and Marina Hendricks, two successful leading women in the built environment, your expertise and dedication truly composed my final year and fuelled my future career inspirations.

I gratefully acknowledge the continued support and understanding provided from my partner, Daniel Gillott, without you I fear I may have lost my voice in a sea of ambiguity and the unknown.

To my Father, Neal Humberstone, who inspired me to follow my dreams and to always believe in myself. Who introduced me to construction and technical drawings at a young age, I would not be here without your generosity of knowledge.

Finally, and most importantly I give my undevoted appreciation to the woman who I am so proud to call my Mother, Samantha Sessions, you are my leading light, your courage and bravery inspire me more than words can say.

*How can phenomenological and biophilic design principles inform empathetic interior architectural strategies for supporting the psychological and physiological wellbeing of women awaiting cancer treatment?*

## **I . ABSTRACT**

Interior architecture employs the capacity to sculpt environments for user wellbeing and focuses on the subaltern voices of sociocultural communities. This dissertation studies the oncological and epistemological thesis of phenomenological and biophilic design principles. Articulated through sensory experiences of psychological (in-direct) and physiological (direct) effects generating healing agents to exist upon women awaiting breast cancer treatment. Investigating a synthesis of psychoneuroimmunology focused comprehensive literature reviews has formulated a strong case for suggesting the importance to focus on this profound genre of patient centred design. Engaging the design responsibility of framing functional, architectural strategies to result in a control of subsidised empathetic healthcare to influence the mind and body in a positive light, offering support for users during a palpable state of medical vulnerability.

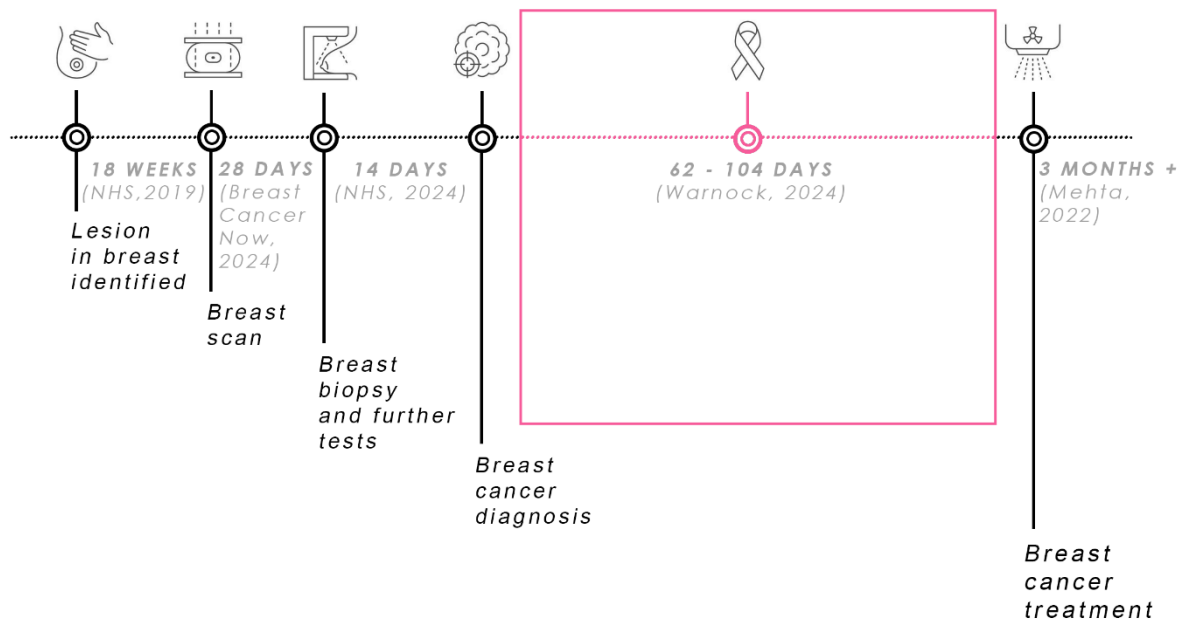
## **II . INTRODUCTION**

The metaphysical theory of engagement within human centred, interior architectural interventions sculpted through suggestive principles of phenomenology and biophilic design differentiate through responses to gender-sensitivity of interfaces.

Grounded in the roots of a contextual and contemporary emergency, I dedicate this piece of architectural literature to highlight the profound gap in knowledge and effort concerning the need of emphasis upon the disparities of health data within the succession of providing health and wellbeing spaces within the built environment. For women, breast cancer is the most common form of cancer with statistics claiming, “one

in seven women will develop breast cancer during their lifetime” (Breast Cancer Now, 2023). Signifying the need for support for women predominantly aged over 50 years, due to the increased risk of a breast cancers occurrence, less likely however still probable for women under 40 years (Cancer Research UK, 2023). Enforcing the need for access to wellbeing guidance specifically between the disruptive NHS cancer pathway to help minimise the psychological (in-direct) and physiological (direct) implications the prevalence of living with a cancer diagnosis would inevitably have on a woman during any stage of life, regardless of the inability to access efficient healthcare due to a contested society and challenged healthcare system.

Narrowing into regional perspectives, the NHS Humber and North Yorkshire subdivisions’ discourse of empirical data, highlights the profound gap concerning the areas increased rate of deprivation and neoliberalism perspectives. Existing empirical research outlining inequalities of identifying cancer patients’ inhabiting within deprived communities were disadvantageous when juxtaposed with the least deprived regions. Warnock (2024) provides prominent data of an increasing 33% most probable to wait over 104 days before starting treatment, post diagnostic assessment, regardless of patient information and social paradigms. The surrounding constituencies within Humber and North Yorkshire have ominously not maintained the NHS 62-day standard waiting period, targeted to treat 85%, realistically achieved only 63% of patients on time during July 2025 (Cancer Research UK, 2025 and Breast Cancer Now, 2024).



**Figure 1.1 :** Breast cancer patient timeline from initial lesion identification to starting medical breast cancer treatment data sourced from (Mehta, et al., 2022 and NHS, 2019 and NHS, 2024) edited by (Humberstone, 2025).

Evidently, the current NHS methodically implements a routine system of undergoing patient care that is paradoxically aligned with their weakness. This view is supported by a 2021 Cancer Patient Survey, Lowes (2022) analyses the impact of patient wellbeing, highlighting a cancer diagnosis once received to be the start of wellbeing turmoil. While some NHS hospitals offer four stages of prehabilitation guidance before starting cancer treatment, this is not yet accessible nationwide therefore, isolating patient wellbeing and pre-emptive effects of the delay in treatment administration (Cancer Research UK, 2024).

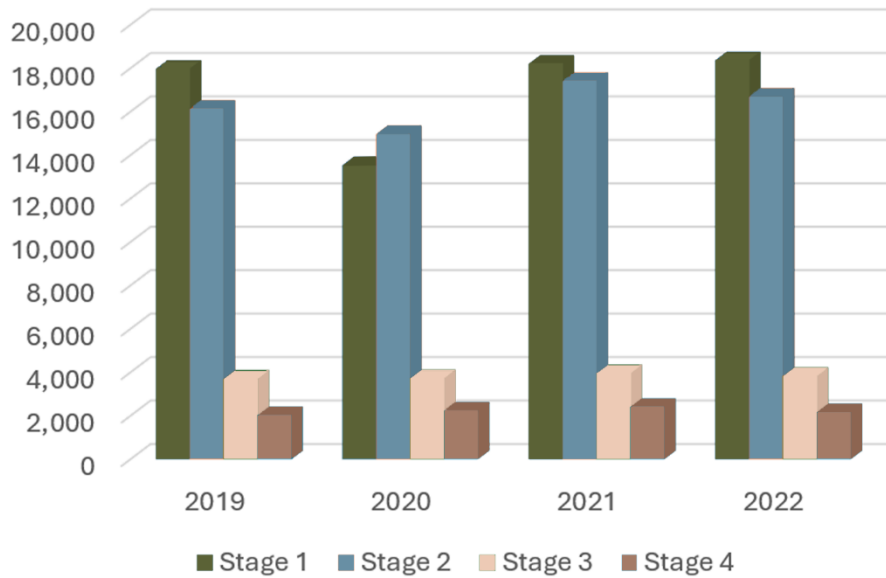
Significantly attributing thus far to the break entrenched in a breast cancer patient's timeline (see **Figure 1.1**), for a cancer diagnosis and treatment to co-exist following a dramatic incline of emotional and physical strain, synergistically produce negative consequences upon the trajectory of a woman's mental health while awaiting the next stage. A systemic analysis of data has proven to have a relationship between

treatment delays and an increased rate in population mortality from as little as four weeks for seven different forms of cancer (Hanna, et al., 2020). With the intention to raise awareness and decrease this void of support by integrating empathetic interior architectural strategies to transform the narrative of cancer patient mortality, improving women's recovery and wellbeing.

In between these two stages a woman unavoidably consumes both psychological and physiological states of transitional change; including and not limited to stress, insomnia, anxiety, weight loss or gain, body pains, changes in mood, possible drug and alcohol addiction (Sayre, 2025), attributing to patient apprehension of these ambiguous health interfaces.

Designing for breast cancer patients' subaltern voices astronomically improve wellbeing pursuing psychotherapeutic models of biophilic and phenomenological understanding. In contrast with existing healthcare frameworks, untouched by empathetic and ergonomic principles, reiterating the design responsibility of effective intervention strategies.

*Female Breast Cancer Incidence by Stage, England (2019 - 2022)*



**Figure 1.2:** Female breast cancer incidence by stage in England, throughout 2019 to 2022. Data Sourced from (Cancer Research UK, 2025) edited by (Humberstone, 2025).

To raise a research limitation, there is a significant lack in evidence and patient explicit data specifically for wellbeing of women who are suffering with a preliminary breast cancer diagnosis and the psychological profiling of accepting treatment complexities. **Figure 1.2** illustrates the trend of an annual increase of breast cancer incidence in women, currently averaging 56,900 new cases each year within the UK; appropriating societal neglect to patient wellbeing due to an unfulfilled healthcare system (Cancer Research UK, 2022). Proposing the need for further awareness to support areas of deprivation, to reduce future breast cancer incidences with interventions of biophilic and phenomenological values that will fundamentally narrow and redefine health disparities.

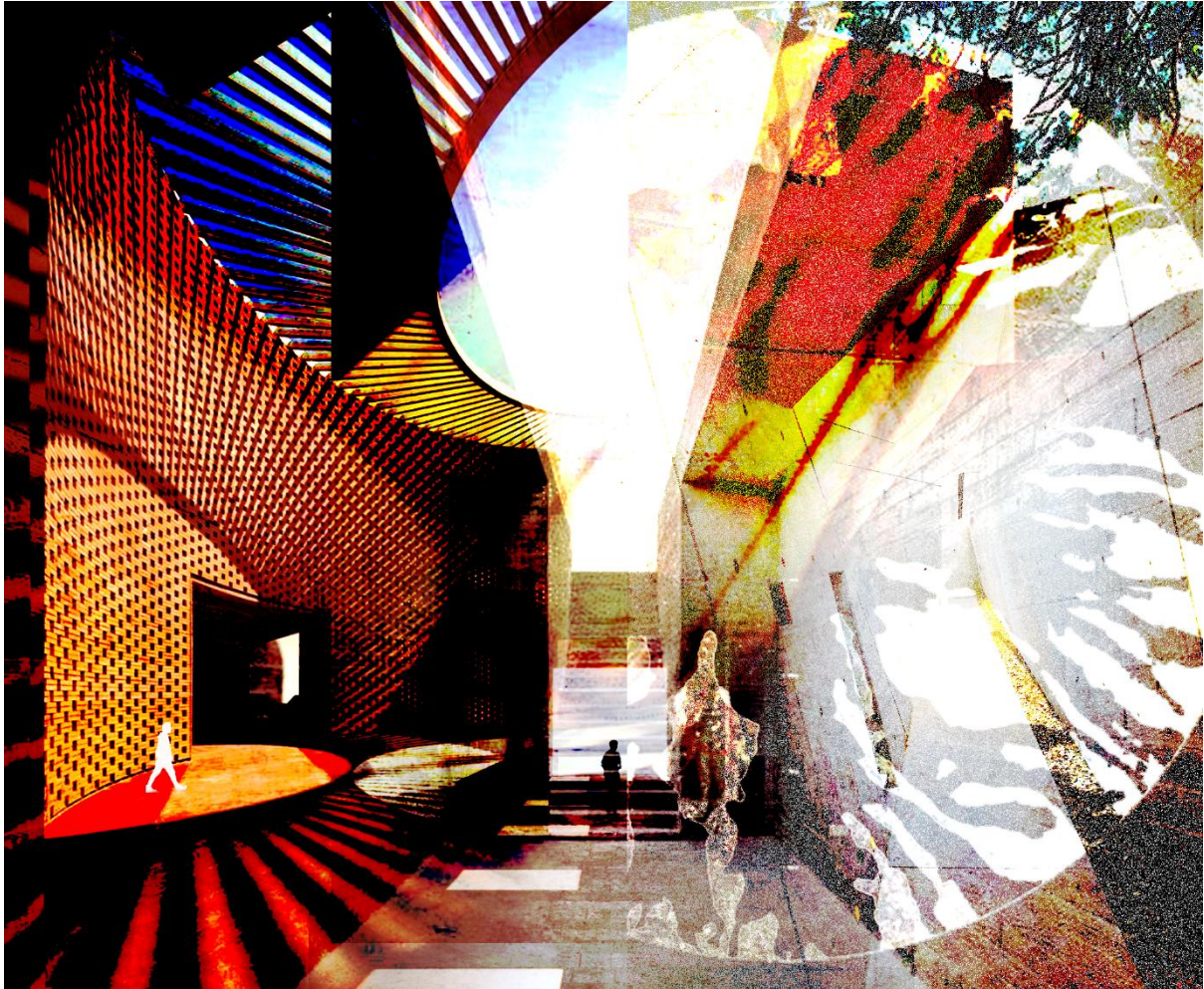
To echo the underlying argument is to question the contemporary design ethos of the NHS and the unresponsive attributes that disconnects patient wellbeing,

engaging an aura of vulnerability. Underpinning the need to question current interior architectural strategies that should be implemented to better a patient's psychological and physiological wellbeing post cancer diagnosis.

This dissertation investigates how biophilic and phenomenological design principles can shape interior architectural strategies that enhance the physiological and psychological health and wellbeing of women awaiting breast cancer treatment.

### III . LITERATURE REVIEW

This comprehensive literature review investigates the ontological and epistemological development of known theory, establishing contextual connections to support the integration of existing fields of knowledge and ideologies within the built environment and consequential factors to women's wellbeing.



**Figure 2.1 :** *Immersive phenomenology photoshop collage* (Humberstone, 2025).

Mediating reactionary and empathetic principles through opportunistic philosophy, fundamentally reflect the significant need for multidisciplinary catalysts that promote therapeutic milieu and mental wellbeing (Connellan, et al., 2013).

Phenomenological practice is the empirical evolution of intangibility, exploring existential engagement of a physical experience (see **Figure 2.1**). Humanistic architecture evolves through sequela psychotherapeutic methodology to enhance the environmental breakdown of user existence within a space to promote healing (Mazuch, et al., 2005). Pallasmaa (2012) supports this integration of a crucial exchange between the designer and user to connect through an ocularcentric paradigm, “I lend my emotions and associations to the space and the space lends me its atmosphere” (Pallasmaa, 2012, 13). Condoning perceptual privilege of a user experience that compositionally consumes the mental capacity of the development of thought. Encompassing responsive and emotional regulation of wellbeing, significantly practiced through an adaptation of sequentially strategic spaces.



**Figure 2.2 :** *Immersive biophilic design photoshop collage* (Humberstone, 2025).

Biophilic design is the semiotic symbolism of integrating human interaction with nature (see **Figure 2.2**), evolving through direct and indirect filtrations of experiential qualities that inevitably heighten the five human senses, touch, sight, sound, smell and taste (Kellert, et al., 2015). Pallasmaa's emphasis on qualitative sensory experience complement Kellert's biophilic theory with an alternative angle. Kellert operates quantifiable research, connecting architectural strategies to join humanity and nature, whereas Pallasmaa contends the essential need for unifying this relationship. Both identifying the fundamental restoration for human and biological affinity as the solution to re-engage sensory understanding with architecture to advance wellbeing. Biophilia is a hyper-reflection of purely natural penetration of idiosyncratic materiality, where contrasting synthetic materials offer prosthetic memory of an inaccuracy of sensual information (Connellan, et al., 2013).

Evans (2003, 541) states that consistency of exposure to natural light illumination improves clinical depression and restores mental wellbeing, reducing cortisol and epinephrine levels (Rainey, 2019, 5). Design responsibilities narrate a metaphysical hierarchy of sensory stimulation through engagement with materiality for the power nature partakes with navigating fields of patient recovery and psychological stress reduction (Ulrich, 1983 and Kaplan., et al., 1989). Incorporating systems of natural light exposure into our environment through emblematic testing claims a biological integration of scientific data to improve circadian rhythm. Where natural light cannot be penetrable, 'daylight spectrum lighting', is evidenced to simulate and attribute the progressive effects to user wellbeing as an example of an indirect natural experience (Gillis, et al., 2015).

Both biophilia and phenomenology are adaptive products when perceived through senses, explore the architectural agency of temporal existences within spaces in the built environment, attaching value to sociocultural identity and functionality (Kellert, et al., 2011, ch. 1). A positive facilitator to differentiate the cerebral communication of developing spaces in the psychological and physiological translations through a philosophical understanding of thresholds in its personified sense. Macaione (2017, 58) reflects thresholds to expand beyond their spatial limitations and provide a physical entity for time to be a space to generate intentional movement and controlled orientation to regulate the emotive and physical wellbeing of a woman. Thresholds in the biophilic rationale incorporate materiality and light whilst in a phenomenological sense can be described as “creating more space for itself” (Macaione, 2017, 58). Adapting concepts of applied memory, expands beyond physical parameters and into the representation of human dimension to enhance psychological comfort and wellbeing beyond their natural limitations.

i) **PSYCHOLOGICAL**

Having founded a rich understanding of phenomenological and biophilic design theory, the following section explores the psychological responses to sensory design specifically within healthcare environments.

The stimulation of multimodal sensory inputs driven from natural sources has a higher response from the prefrontal cortex, managing the brains capacity to experience tranquillity of the mind (Hunter, et al., 2010). Sense sensitivity is an important mechanism that encourages sympathetic design and emotional mapping communicated from a designer for the benefits of a user. Augustin (2009, 5) reflects on the endeavours of appropriating personal place memory with an objectification of

cultural and political agency that influences sensory place design. The human senses can retain a vast amount of information through our dominant senses however, cannot simultaneously read everything in our extended perspectives. Inflicting a natural filtration system of information targeting the senses that are most prominent or unusual to stand out from another (Augustin, 2009, 5).

Continually this hypothesis grows to an adaptive memory of one of a lesser dominant sense, smell. Smell has an understated role in its approach to users coping with space, the limbic system links smell with emotional, memory stimulation by engaging the neurological processors of Olfaction regulation. (Anon., 2017 and Wyatt, 2025). Empirically, humans connect personal, more stressful experiences with a store of emotive, recollective memory; heightened when re-encountering a specific scent. For example, medical scents of dentists and hospitals are proven to increase a network of psychological stress and anxiety (Spence, 2020, 5). Supporting the perpetual echo of intersensory neuroscience, corresponding to the psychological connection between user interfaces and spatial interaction. Lee (2022) reflects on the strengthened user experience with a superior extent and qualitative result than a synergistic combination of “function or form-oriented factors”. The importance of reiterating commonalities learnt through precedential markers, are supported by the psychoneuroimmunology indicators, augmenting physical health by conceptualising the cross-modal involvement of the body and environment. Adult cancer survivor wellbeing inclines post treatment with catalysts effecting psychological distress, anxiety, depression and neurocognitive dysfunction with reports of “multimorbidity clusters up to 84% for long-term breast cancer survivors” (Hernandez-Garcia, et al., 2021).

Obtaining visual reassurance translated through a cognitive understanding of materiality, engages the touch sensual pathway. Proving essential for users who are psychologically troubled; ensuring surfaces for levelled walls and floors appear true to their material origin. A dishonesty of artificially implemented materials generates psychological frustration if one material's appearance is synthetically modified to appear to look like another. Suggesting "woodgrain finishes on metal doors" as they appear warm and comforting to touch, but physically cold and unsympathetic (Mazuch, et al., 2005). Supporting this view of conscious materiality the synesthetic impression, ensued the significance in preservation of smooth, natural textures over synthetic coatings. Empirically proven to result in advanced, positive touch experiences specifically in the user engagement of a lateral relationship touching raw pine and oak finishes (Bhatta, et al., 2017).

Rodemann (1999, s. 4) emphasises the intervention of imposing collective memory with symphonised psychological distribution of pattern, geometry and colour to enhance user wellbeing. Significantly, once exposed to ornamentation for a duration of time, these values play an important role on the qualities of memory and space perception, transporting the mind using recollective stimuli. In a mirrored perspective, geometric sight lines portray significant psychological responses to a stimulus of visual contours and angular arrangements when circulating through spatial boundaries. Empirical data supports the visual perception of straight lines connote psychological distress and agitative states, whereas fluid soft curves imply gentle movement and peace supportive to user wellbeing (Tawil, et al., 2021, 2). Maslikova, et al. (2022) credits this philosophy with the conceptualisations of cosmocentric architecture as a transcendent movement of curved, rhythmic design interventions inspired by the innate relationship between natural form, cosmic harmony and the human body to

improve emotional stability and surface interaction. Conversely, while these experimental studies demonstrate varied positive psychological responses, many are conjectured from observational data opposed to direct, controlled healthcare environments.

## ii) **PHYSIOLOGICAL**

Building upon the establishment of the psychological effects of multi-sensory design, the following section investigates the types of physiological responses that can form within healthcare settings.

Antonovsky (1996) hypothesises a paradigmatic axiom of health to contribute to the biophysical model where salutogenic design guides physical health, rather than avoiding illness. A 'healthy building' composes of four external stressors including air quality, visual, acoustic and thermal comfort: all contributing to physiological health in avoidance of 'sick building syndrome' (Bluyssen, 2010 and ArchDaily, 2018). Environmental health is a contributing factor within interior architecture, the quality and circulation of air significantly impact our respiratory and cognitive health (Public Health England, 2018 and ArchDaily, 2018). Designing for wellbeing begins with incorporating essential hygienic HVAC systems utilising sustainable infrastructure and neutralising carbon levels to reduce long term exposure to pollutants reducing risks of stroke, pulmonary/lung diseases, child neurological development and cancer (Bryden Wood, 2026 and World Health Organization, 2025).

The Renaissance system of the senses refers to the hierarchal, visual relationship to the contextualisation of the Cosmic Body and the human sensory pathways from sight to touch (Pallasmaa, 2012, 18). For physiological effects to occur, a coherence of sensory and non-sensory pathways must be undertaken through a

series of applied interior architectural strategies of a tangible source. Virtual, intangible sources of nature were discovered to have an inefficiency of wellbeing benefits in comparison to a physical presence (Franco, et al., 2017). Sight has been valued as the most noble of senses originating from Greek philosophy (Jonas, 1954, 507). Pallasmaa (2012, 18) maintains the eye as the “centre point of the perceptual world as well as the concept of the self”. It is evidentially factual to suggest that a direct view of nature from a hospital room reduces the length of a hospital stay and induces recovery rates by observing nature to reduce physiological pain (Ulrich, 1984).

The haptics of touch have evolved through the direct proprioception and kinesthesia of user engagement with physical objects (Spence, 2020, 1). Visual comfort is enhanced through the physical engagement with tactile materiality in a philosophical sense “what we touch, touches us” (Fisher, 2004, 20). Material affordances enable SCL/SCR physiological responses to a stimulus of interior architectural strategies. Wood as a construction material reduces tension, blood pressure and fatigue, enhancing neurological performance through observation and connection (Zhou, et al., 2025 and Montjoy, 2023).

Mahmoud (2017, 8) reports that a fluid transition from an interior to accessible outdoor environments in a visual perspective or physical contact, influences a decline in anger, anxiety and inclusively advances health, notably in attention and focus. In a verified hypothesis, physically touching alternate textures of live biophilia, concluded in a research paper, compared the oxy-haemoglobin levels between both sexes discovered, the concentration for women was much lower with smooth plants, indicating heightened relaxation, lower heart rate and blood pressure (Kim, et al., 2025).

The inhalation of sweeter smells is scientifically proven to naturally generate an increased threshold for pain tolerance and informed pain relief, successful through the activation of analgesic mechanisms consequently improving physiological wellbeing (Prescott, et al., 2007). Natural scents associated with aromatherapy including flora such as Lavender demonstrated through a hegemony of strategic interior design implementations, empirically improve human wellbeing by supporting better sleep, decreasing stress and promoting recovery from illness (Spence, 2020, 11).

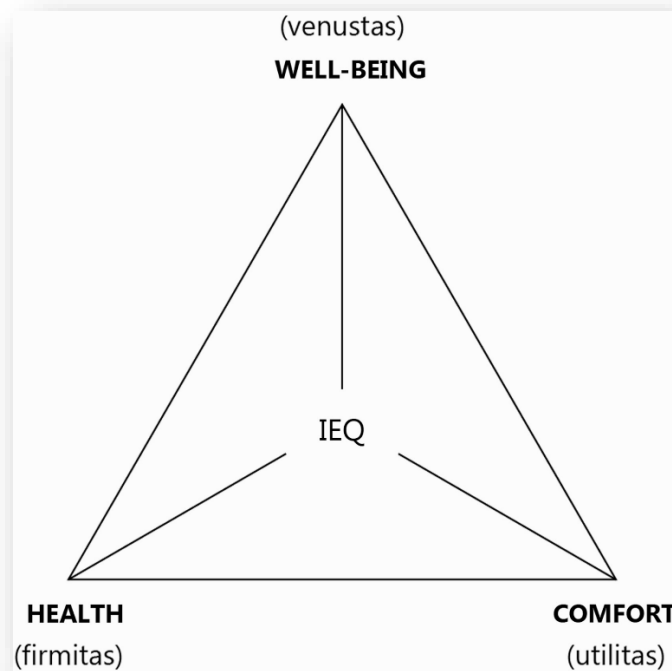
An alternative form of a non-intrusive therapy is the provision of engaging one of the lesser, however highly regarded, senses of sound. Providing sounds of nature including running water, has proven to facilitate recovery, relief and healing after a psychological stressor (Alvarsson, et al., 2010 and Spence, 2020, 7-8).

Torresin, et al. (2020, 7-9) proposes the essential need to for the consideration of foundational properties that consider a spectrum of design approaches simultaneously to balance external unwanted sounds with acoustic centred design to control reverberation for a healthy building's acoustic comfort. Sound application helps mask loud and negative environmental sounds found within places of healthcare stature, ambient applied soundscapes provide a shield of solitude and tranquillity to relax a stressed mind, reduce levels of depression and alter a user's connection and concept with time (Spence, et al., 2020). To mitigate a healthy acoustic environment is to combine soft (e.g. wood, felt, wool) and hard (e.g. glass, concrete, stone) materials to contrast sound absorption and reflection throughout an interior, to diffuse amplified sound to maintain physical comfort, social interactive intelligibility and clarity of communication (DesignDash, 2025 and Souza, 2025).

Traditionally, the exposure to natural light was a subconscious instrument to evolve and underpin circadian rhythms throughout the change of seasons, however artificial light has significantly altered the natural body clock identified as circadian disruption (Landvreugd, et al., 2025, 1-2). The physiological consequences to the indifference of light exposure have been connected to diabetes, insomnia and neurodegenerative diseases (Landvreugd, et al., 2025, 1-2). To emphasise the magnitude of sunlight, alongside water, represents two fundamental resources in the creation of nature, without this; natural environments would not exist. Kellert, et al. (2015, 12) positively facilitates this thesis suggesting, natural light aids subconscious wayfinding as a form of interior architectural orientation, enhancing user physiological comfort and satisfaction. Behavioural response to natural light discovered through a quasi-experiment, unveiled a positive influence incorporating mood and the communication between nursing staff within an active environment (Gillis, et al., 2015).

Natural light penetration into interior spaces employ physiological benefits, adopting traditional heliotherapy techniques, naturally extends itself to symbolise a crucial restorative medium of thermal comfort (Selvaraj, 2011). To maintain a consistent indoor environmental quality is to reasonable temperatures of 20-26 degrees, drastic interplay of light penetration and thermal insulation can result in ill health such as heat stress and thermal shock (Jain, 2024). Outside of the direct physiological support, thermal performance supports user retention as socioeconomic factors, however, can negatively impact sustainability due to non-renewable energy consumption and climate change concerns, emphasising the importance for thermal resilience to support user wellbeing (Jain, 2024).

iii) **PSYCHOLOGICAL AND PHYSIOLOGICAL**



**Figure 2.3 :** Suggestion for a three-branched framework for defining the solution field for good indoor environment quality (Rohde, et al., 2019).

After examining the psychological and physiological effects of sensory architecture, the following research explores the combination of both direct and indirect responses on a user's wellbeing within healthcare environments.

**Figure 2.3** demonstrates a visual connection to the rooted foundation of architecture, the Vitruvian Triad. Proposing an inspired contemporary system that synthesise the interconnectedness of three central principles to encourage great holistic interior environments that support psychological and physiological wellbeing (Rohde, et al., 2019). A truly composed interior is one that symbolises a balance of two juxtaposing values of 'prospect and refuge', Augustin (2009, 11) claims that women prefer to exist within spaces that offer dedicated zones of refuge, areas with lower ceilings and dim lighting connect with our evolutionary past. Appleton (1975) supports

this thesis and argues that this combination of principles initiates psychological and physiological effects, born within architectural environments proposing open views and spaces of enclosure. Highlighting a user's universal sensitive development of feeling pleasure and security.

Evolving through the direct and in-direct phenomenological processes of biophilic design application an engagement of an unanimously governing sense of sight, cultivates cognitive responses to a stimulation of psychological effects through indirect natural contact, "arousing interest, curiosity, imagination, and creativity". On the contrary to this discovery, a deprivation of optical contact with nature; boredom, fatigue, both mental and physical irregularities are induced (Kellert, et al., 2015, 11). Contradicting and outlining the heightened sensitivity of the architectural balance of prospect and refuge hypothesis, if irregular interventions are admitted and negatively impact a user's wellbeing.

Subsequently, a further expansion of direct experiences with biophilia resounds with the establishment of water within the built environment. Contact with water in any form, engaging the five senses, positively inflicts psychological stress relief and satisfaction, while advancing physiological wellbeing through health, healing and performance (Kellert, et al., 2015, 12). Emoto (2005) claims to personify water on an intermediate level as a transcending element that was able to absorb external information, navigating orientational effects on the anthropologically inspired psychological and physiological study. Extending the ethics of biophilia to explore daily, natural light exposure through considerate strategies of large windows, open plan atriums, materials and their reflective qualities contribute to user wellbeing through circadian regulation, reduced anxiety and depression, cognitive function, emotive behaviour and resilience (Negarestan, 2025 and Brown, 2025).

Exposure to visual ornamentation and effective plethoras of pattern design specifically within health care settings, encourage the fusion of psychological and physiological behavioural responses to naturally calm a user, lowering blood pressure and heart rate, reducing eye fatigue and initiates healing (Rodemann, 1999, s. 4). When design extensively responds using trauma-informed and patient centred compositions of the previously stated values, functionally the user and interior become synonymous that directly and indirectly awaken the intangible multisensory agency that subconsciously supports wellbeing.

## IV . DISCUSSION

This discussion synthesises a nexus of case studies when considered compositionally, concentrates existing interior architectural strategies that inspire the sensorial verification of cultivating psychological and physiological wellbeing for women awaiting cancer treatment.

### i) FONDAZIONE QUERINI STAMPALIA, 1961-1963 : CARLO SCARPA



**Figure 3.1 :** *Fondazione Querini Stampalia interior* (De Cal, et al., 2025)

Fondazione Querini Stampalia celebrates the unification of joining traces of the past with contemporary demands. Specifically fostering design strategies of bespoke thresholds and circulation, layering of sensuous material and aquatic sensibility. The site engages the user through considerate wayfinding of sequential openings or reveals, illuminating expressive details of crafted joins and material articulation (McCarter, 2013, 178). The site maintains a respectful language that begins on the journey into the design intervention where moving through the space is one continuous

experience. A newly implemented bridge, transitioning from the exterior directly into site, constructed using Istrian Stone, Teak wood and steel, echoes traditional Venetian bridges, offering a trajectory to a supplementary journey into a building. A dominant aspect of this bridge is the ergonomically considered handrail, an ephemeral experience that guides the user across with a wooden rail, warm and comforting to the touch, juxtaposed with a cool temperament steel structure, offering sensory shifts and perceptions of material sensitivity to the user (Macaione, 2017, 10).

The acqua alta is a circumnavigation tool pulled through the exterior into the interior as a lasting reminder of Venice's governing feature of water. Scarpa welcomes the native prevalence of water and its healing properties, emerging through moat-like canals to support circulation, user navigation and wellbeing. Enhancing the human senses, the sound of water moving beneath the floor, visuals of dancing sunlight reflected on polished surfaces are complementary to the external soundscapes of passing gondolas. Ultimately, grounding the mind and body's sensual experience into the transition from heritage into the entrance vestibule (McCarter, 2013, 167). These sensory attributes of water and light reflections, fundamentally underpin wellbeing positive spaces for user immersive experiences. In a healthcare setting, complementary sensory features could help to reduce fear and anxiety within procedure rooms (e.g. health scans, biopsy's) and waiting environments.

A central suspended passage introduces the core intervention independent to neighbouring spaces, with no physical interference with the original walls or floors (see **Figure 3.1**). Thus responding materially to interior architectural strategies to pre-existing foundations, Scarpa felt not the need to replace, but maintain values of historical identity by layering new material over the old, increasing the tension between old and new intervention (Nickell, 2016, 123-124).

ii) **MAGGIES CENTRE, ST BARTS, 2011-2017 : STEVEN HOLL**



**Figure 3.2 :** *Maggie's Centre St Barts interior visualisation (Steven Holl Architects, undated).*

In respect to the Fondazione Querini Stampalia, the St Barts Maggie's centre composes of a similar ritualistic architectural design, due to the balanced juxtaposition of the existing with the new intervention. Holl strategically habits light as a primary design medium that directly withdraws temporal architectural information into the interior. This can be observed through dynamic, coloured light reflections across the interior interface - fluid to the change of seasons (The Center for Health Design, undated).

Identifiably every Maggie's centre evolves through the circumnavigation system of transcending the exterior with the interior offering consistent views of nature. Expanding upon the design intervention principles to embed wellness orientated design for example, a centralised kitchen table (see **Figure 3.2**) to build strong

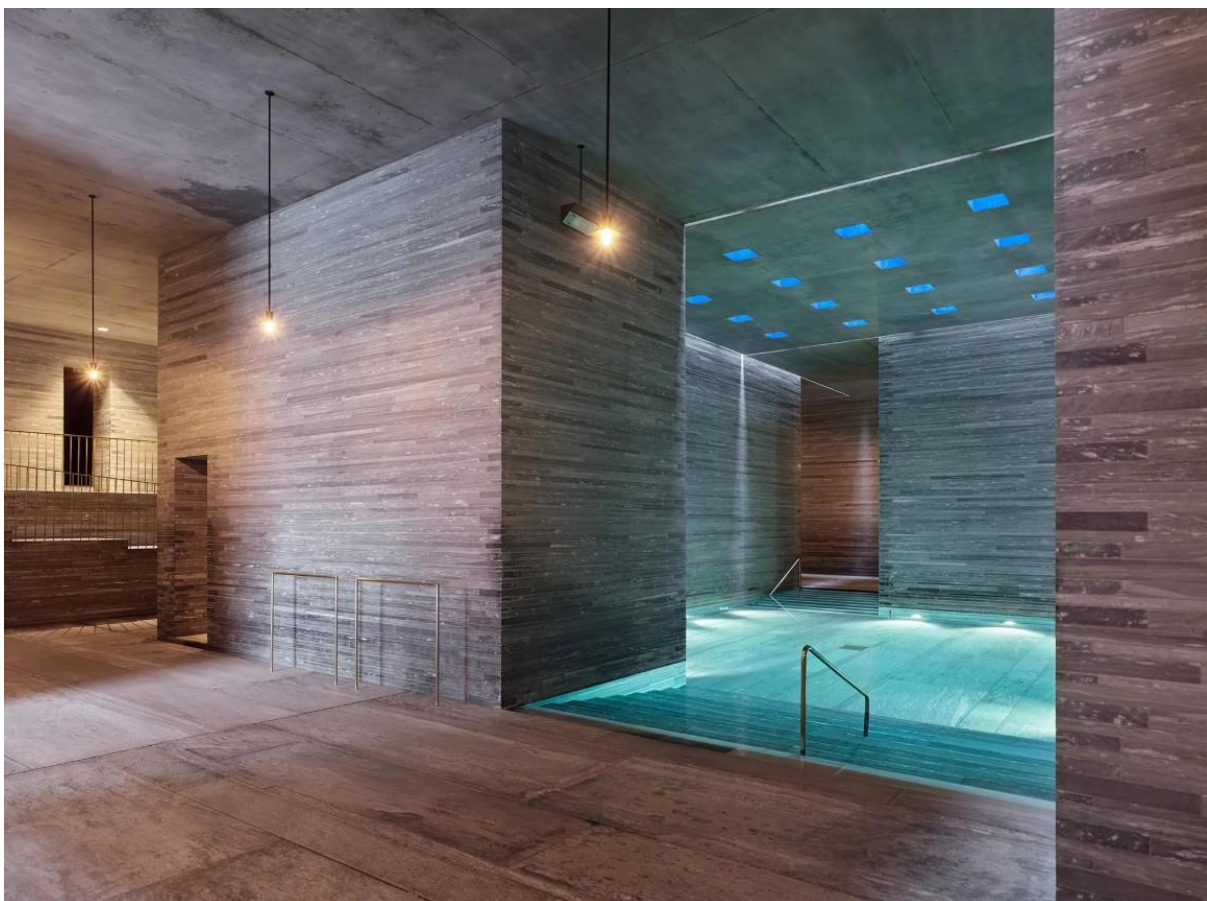
foundations of community and nurture social connections. Generating a healing environment for complete psychological tranquillity and transparency, while discussing sensitive topics amidst a strong architectural blueprint (Maggies, undated and Maggies, 2021).

Steven Holl respectfully implemented topographical influences, formed through the synonymously realised conceptualisation, combining phenomenological understandings of intangible media through music. Expressing this construct as a stimulus that is unavoidable but encouraged to immerse the mind and body simultaneously to support healing through cultural, heritage and environmental influences. Intensifying the human senses by personifying sound as an “extension of space”, complimenting the rhythm of life and engaging the user’s non-visual processor, to identify spatial proportions and alluding to the interiors distinctive function (Steven Holl Architects, undated). The St Barts Centre is defined as a “vessel within a vessel within a vessel”, portraying a structural framework composing of a multi-layered sequence of public and private spaces to enhance the users’ wellbeing. Purposefully evoking psychological and physiological responses such as grounded, safe and disconnected from the outside world within an architecturally profound sensual experience (ArchDaily, 2017). This transition of layering material information could significantly support cancer patients within a healthcare environment, to reduce the trepidation of navigational concerns, enhancing emotions of support and protection while circulating amid health procedures to oncology appointments.

Extending Holl’s phenomenological lens, occupies the incorporation of a natural material palette consisting of, bamboo for it’s tranquil properties, and lighting as a phenomenological agent to mediate the generation between volumes of space and primary experience. Utilising water as a powerful healer, depicting materiality as a

mechanism for comprehending psychological human information such as enhancing emotions and perceptive instincts (Naviri, 2025 and Poon, 2018,1 - 4). Thus providing the architectural anchor between the user, earth and sky, as a reflection of the transitional dialogue between architecture and wellbeing (Steven Holl Architects, undated).

iii) **THERME VALS, 1993-1996 : PETER ZUMTHOR**

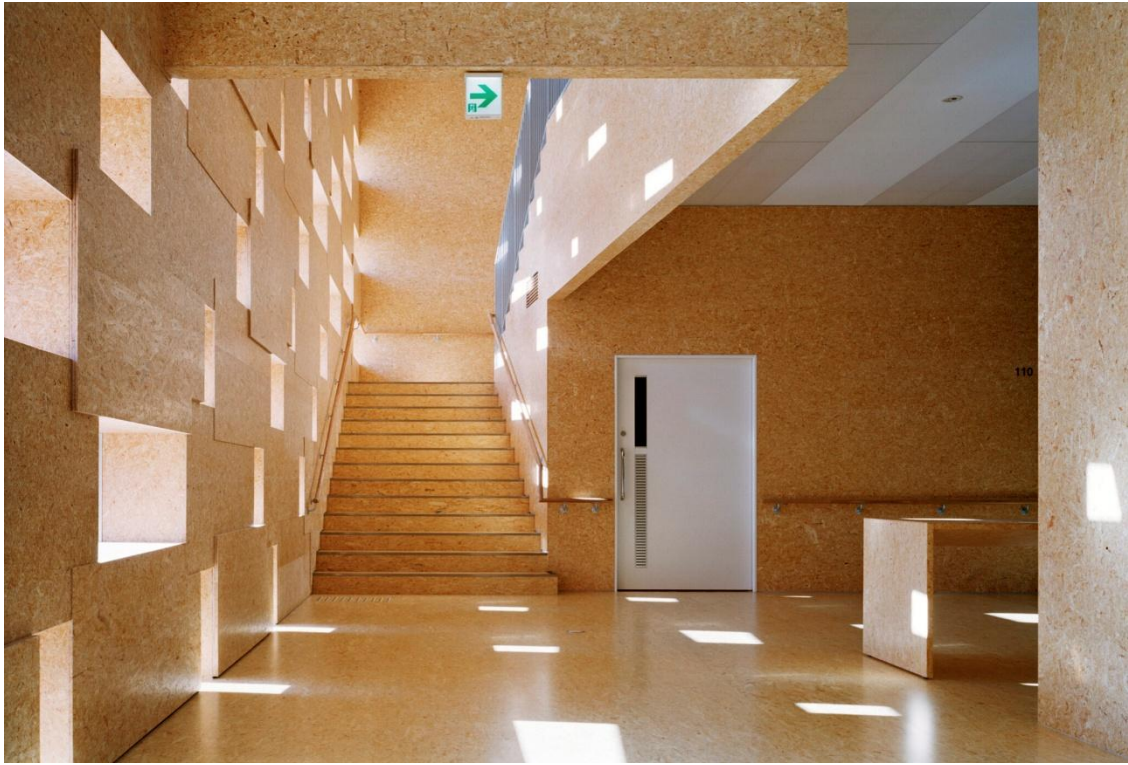


**Figure 3.3:** *Therme Vals interior, Peter Zumthor (ArchEyes, 2024)*

The Therme Vals signifies the true, inherent character of connecting poetic, architectural sensibility as a phenomenological representation to initiate the relationship between the mind and body. Directly conversing with architectural atmosphere, contributing to user wellbeing through ritualistic, functional spaces to

immerse oneself in temperate fluctuations of water pools, atmosphere and connection to the outdoors through a rhythmic sequence of spaces (Fortkamp, 2005, 32-34). Thus activating the user's parasympathetic nervous system, through orchestrated architecture that reduces anxiety and stress, improving pain levels while promoting recovery, sleep and digestion (Health and Prevention, 2025).

Peter Zumthors understanding of materialistic quality, relates to the phenomenological application of using minimal materials as the underlying protagonist of his works. Laying bare four qualitative materials to compose the entirety including water, stone, light and shadow (see **Figure 3.3**). Understanding that each material has a tactile relationship with each other, light as a key role to reflect the rhythm of the water onto the walls to occupy a multisensory experience (VernissageTV, 2016). Every design consideration relates back to the topographical influence and intimately explicates the innate nature of the site's surroundings. Mediating a respectful removal of obstructive intervention and seamlessly attributes his works to be an extension of permanence into the mountainside using native materials, Valser Quartzite (ArchEyes, 2024). Enforcing ethical sustainability and psychologically restoring the users' sense of place within the physical landscape (ArchEyes, 2024). Predominantly, the architectural strategies at Therme Vals utilise gradual sensory progression of material sensitivity, to blur the boundary between the external harmony of a natural landscape into the internal circulation. Suggesting similar transitions within a healthcare environment, could support inner sensory healing by reducing psychological stress for a cancer patient.



**Figure 3.4 :** *Hoshinosato Annex Interior, Kengo Kuma (Ano, 2006)*

Kengo Kuma supports these strategic ideologies through ethical material identification of underlying complimentary systems, to both biophilic and phenomenological principles to advance user wellbeing. Kuma predominantly practises timber as a material palette, to reinstate the user's connection between the ground and sky (see **Figure 3.4**). Believing to reinforce the innate original source of human relation and the psychological benefits to physical touch with timber, to spark collective memory and heritage of belonging (ArchDaily, 2023). Thermory (2026) states the extension of the physiological and psychological effects of observing natural wood within healthcare settings, connected to a reduced length of recovery and more independence from clinical medication.

Kuma speaks of conceptualised 'material transparency', this concept involves the removal of architecture itself, blending structural form into the surrounding environment. Resulting in an equilibrium of interplay concerning the earth and

architecture, to understand architecture as “phenomenon rather than as an object”, formulating a fragmented harmony of architecture, evolved through perceptible chaos of the environmental surroundings (Kuma, 2005). Material transparency within a healthcare setting could suggest positive facilitators to a patient by inducing a comforting atmosphere. Allowing natural light, fresh air and views of biophilic tangibility to pass through permeable materials could suggest a reassurance of human-scaled openness, calming the nervous system during oncology appointments.

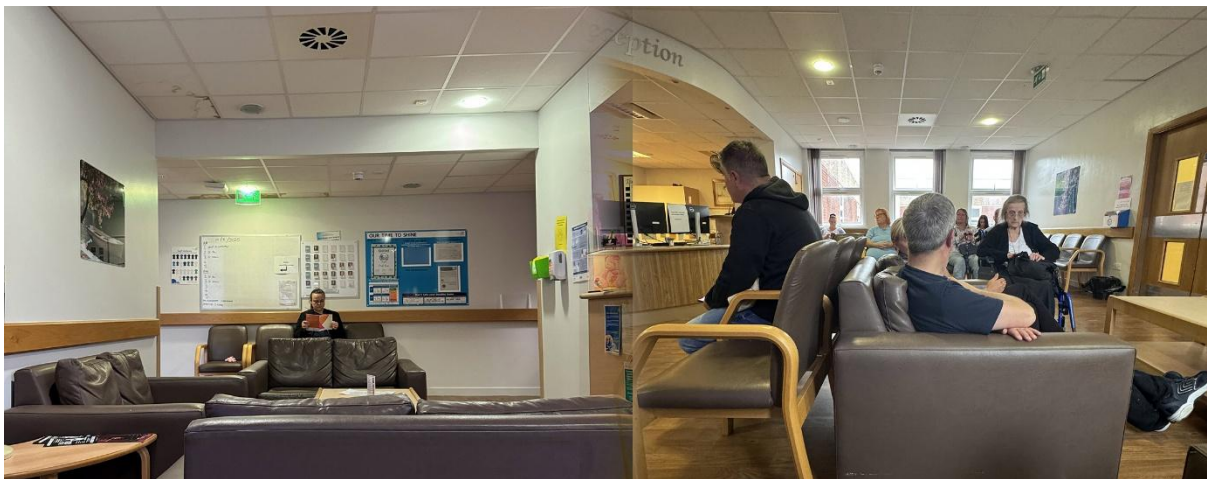
## V . REFLECTIVE PRACTICE

My understanding of design has astronomically transformed from my initial hypothesis, including my perspective to what currently fuels the eclectic discourse to the root of my designs. I addressed my research topic through an inspiration of a personally lived experience. Encountering a current issue within society and applying my general understanding, to provide the passionate mechanism that has encouraged my research journey.

I compassionately believe to translate design effectively, is to communicate how humanity is the beating heart of architectural design. When accomplished successfully, supportive environments to psychological and physiological health can be achieved. Thus inspiring form, circulation, ergonomics, spatial relationships, interactivity of zones and functionality. However, in a modern and contested society, humanity is not always placed at the centre, resulting in disconnection of spaces and misinformed architectural tropes. I consider this gap in knowledge to have formed a strategic decline within direct impacts of social constructs and communities, that become deprived of rich designs. Opposingly feeding into aesthetically poor architectural principles issuing an increase in mental health concerns. The negative impact within this criterion falls among the guidelines of how artificially intelligent, technological advancements have permeated throughout our translation of design from the removal of human input.

Our modern experience within the built environment is passed on through secondary sourced information, that have penetrated the act of what an individual's primary experience should inspire to provoke the human senses. Inevitably losing the tactile materiality and phenomenological intangibility that fundamentally underpins the

reactionary core of a designer's subaltern voice. This systematic hypothesis of ontological research has informed my critical reflection, concerning my adapted opposition to cerebral mundane architecture. Despite their fleeting ephemeral experiences, the repetition of structural forms encompassing urbanisation, reduces individual orientation, establishing an influx of wellbeing and societal restrictions. Ultimately questioning how human wellbeing is compromised in favour of modern design, at the expense of possible ill health.



**Figure 4.1** : *The 'Pink Rose Suite' Interior, Diana Princess of Wales Hospital, Grimsby (Humberstone, 2025).*

To discuss existing representations of healthcare settings within Grimsby's breast care clinic, the 'Pink Rose Suite' (**Figure 4.1**), in which patients endure an unempathetic environment while awaiting scans, test results or a biopsy. As women are often sat isolated, this waiting room demonstrates psychological and physiological stress evolving through a distinct truth of clinical efficiency over the need for trauma-informed design. Currently, the space offers fluorescent lighting, white walls as an emotionally negated colour palette, uninviting seating arrangements that lack emotional privacy, adopting an exposed layout, difficult for patients to navigate their mental wellbeing during a period of uncertainty.

As a designer I take on the responsibility to ensure that my design intervention opposes the internal structure of **Figure 4.1**. Reflecting multi-sensory mediations of nostalgic warmth, contributing to the social sustainability of communities to improve wellbeing, one space at a time. My field of research and theoretical findings have permeated into my conceptual understanding. To embed core knowledge and architectural practice into the foundations of my final year project, supporting women suffering a breast cancer diagnosis, by responding with interior architectural strategies to support their psychological and physiological wellbeing.

Anchora Foundation realises contemporary, patient centred requirements within a paradoxical healthcare system, coherently referencing the contextual and conceptual foundations within an area of socioeconomic deprivation. Drawing inspiration from its topography, on a direct route to the Diana Princess of Wales hospital, Anchora's propositions for a client proposal is to expand on the existing breast cancer support of the local NHS sub-division, Macmillan Cancer Support.

Responding to this contemporary void in women's mental health support, through strategically applied and considered interior architectural principles, I intend to engage my user(s) with the provision of an inclusive and powering space to support, educate and heal through biophilic design and phenomenological principles supporting long term wellbeing. Encouraging the destigmatisation of women's breast health, encouraging education and preventative measures to raise awareness of the importance of early detection, of recognising early symptoms to improve recovery rates and survival outcomes.

Anchora's design intervention uses intangible media, harnessing immersive precedential values, including the vast central void and extensive flooding of the

ground floor. Welcoming water and all its healing properties into site initiated through the inspiration of Carlo Scarpa, supported by the removal of obstructive barriers and material articulation, enables the distinguishable separation of interior interfaces explored through subconscious thresholds. Alternating material identity of oak wood and polished concrete, cross references the function of each space, to support the interpretation of Peter Zumthor's, Therme Valls, where minimal ornamentation achieves significant user circulation as ergonomic wayfinding.

The central void construction has sculpted the abstract arrangement, of floating platforms and slow rise connecting ramps as the core mode for user circulation. Creating inter-connecting zones that embrace an equal divide in areas of group socialisation and private reflection spaces. The configuration of user seating is complimented by the presence of facing the orientation of natural sunlight, stimulating heliotherapeutic benefits for wellbeing. To integrate the importance for a user to engage with biophilic factors, I have ensured access to external platform extrusions to reconnect the user to the sun, sky and river beneath, transitioning the interior into the exterior and inversely.

Compositionally, Anchora reflects a considerate approach to dedicating patient-centred zones of supportive care. Central to the constructive identity of the 'healing courtyard', spanning across the ground and first floor, the first interface to meet with women travelling a similar path, before optional breakout rooms for individual counselling to settle a wandering mind. The second and third floors heighten the dominant senses of sight, sound and touch refined through the concept of the atomic body. Engaging with art, water, aroma therapy and holistic treatments to have a break in their subconscious thoughts. Fuelled by the emphasis for support and research to

be administered for breast cancer patients post diagnosis, highlighting this gap in knowledge of early detection within areas of socioeconomic deprivation.

## VI . CONCLUSION

This dissertation responds to the critical demand for identifying women's health disparities, influenced by subaltern narratives within the built environment. This investigation compassionately establishes the psychological and physiological effects post cancer diagnosis. Thus, to raise awareness of inaccessibility to receive healthcare and education gaps, mediated through a hyper-reflection caused by local deprivation.

Hence, to propose the substantial respect architecture can possess when empathetic healthcare strategies are understood for example, natural light, material tactility, water and acoustic comfort. Instigating this empirical discourse, is not only essential for the affinity of explicit human centred design, however, poses actionable structure for acknowledging designers' responsibilities to execute biophilic and phenomenological principles in practice to support patient wellbeing.

Through the logistical analysis of my literature review, it is evidential to suggest, the most effective strategies to encompass trauma-informed designs should layer tactile and intangible, multisensory information. Research findings indicate that future designers must consider natural light, water, sound and contact with nature through phenomenological and biophilic understandings. Thus, highlighting the necessity for these precedential catalysts for users to achieve therapeutic milieu, for example direct and indirect contact with biophilia positively affect wellbeing by promoting healing and reducing pain.

Building on this hypothesis, evidence directly supports how effective interiors balance both prospect and refuge harmoniously, investigating interior environmental quality (IEQ) as a crucial strategy. Deliberating all elements of air quality, lighting,

acoustic and thermal comfort, contributing to user wellbeing. Acknowledging this research has conceptually informed the proposed intervention of an adaptive re-use project. Implementing human sensory features such as a consistent access to the outdoors and natural light, tangible biophilia and zen gardens, a complete immersion of the ground floor fostering a water tanking system, and sensitive thought for natural material intervention.

The current rates of oncology cases and mental health concerns, supports the argued hypothesis that not all elements of the wellbeing triad are being coherently approached. Funding this void in socioeconomic vulnerability, where access to institutional health support has become a privilege over a basic treatment. This fundamental study is evidenced by the central argument, demonstrated with supporting statistics for patient recovery, evolves more significantly through the physiological attributes to healing - when conscious interior architectural strategies are realised.

To support this recognition, I claim there is an insufficiency in this field of research and knowledge, concerning the neglect to women's wellbeing, awaiting cancer treatment. Considering this area of research and its future longevity, would be to initiate a catalyst for education and awareness of early detection within poignant, deprived areas to re-build community resilience, improve early detection rates and treatment schedules.

In closing, this dissertation argues the critically informed design approaches of biophilic, and phenomenological interior architectural strategies are an essential reflection to improve the psychological and physiological wellbeing of women awaiting cancer treatment. Highlighting the limited amount of findings tangible to me, has

ultimately emphasised a research position of a severely understudied genre. Therefore, warranting further testing theoretically, in practice and evolve valuable capacity to ensure designs are patient centred. Realising the ultimate goal, to effectively nurture women's wellbeing for current and future cases of breast cancer, where uncertainty can finally meet stillness.

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**IX . APPENDIX**

**APPENDIX I : RESEARCH DIARY**

<b>DATE</b>	<b>TASK</b>	<b>TIME SPENT</b>
OCTOBER	Formatting Dissertation document and organising research for feasibility report and	ongoing
25/11/25	Dissertation Research – collating journal articles and books	1 Hour
26/11/25	Began formulating reflective practice (250 words)	2 Hours
27/11/25	Dissertation Drop in (9:40am) Tutorial Formulating structure for Lit. Review Booked Library Writing Support appointment Commenced Literature Review	4.5 Hours
28/11/25	Literature Review development and referencing	3 Hours
1/12/25	Literature Review – natural light research	1.5 Hours
2/12/25	Meeting with Marina for dissertation Expanded on session, planned outline of structure for dissertation and digested the session into tasks/actions Commenced physical changes	2.5 Hours
12/12/25	Created Cancer Patient Timeline Figure 1.1 Introduction development Literature review research and development Referencing	8.5 Hours

15/12/25	Literature Review development	4 Hours
18/12/25	Tutorial with Marina Edits to Breast diagnosis timeline Referencing Reading new article / journal literature	8 Hours
19/12/25	Literature review research and edits	4.5 Hours
20/12/25	Glossary definitions Literature review research and edits	3 Hours
2.2.26	Reflected on Formative Feedback from Tonia and Marina Arranged Dissertation enquiry questions Edits to introduction 'Smell' aspect of literature review	3 & ½ Hours
3.2.26	Reading of Carlo Scarpa (McCarter, R) and Thresholds (Macaione, I) and made notes Began Discussion section (Scarpa) Referencing Phenomenology & Biophilic Design collage Edits to conclusion	7 & ½ Hours
5.2.26	Edits to Literature Review Referencing Research (acoustics, touch, light, sight) Proof reading	8 & ½ Hours
7.2.26	Edits made to 'reflective practice'	2.5 hours

16.2.26	Edits made to 'reflective practice', literature review and readings of academic journals Referencing	5 Hours
27.2.26	Therme Vals readings and edits to 'discussion' section Referencing	3 Hours
4.3.26	Edits to 'discussion' – Kengo Kuma, Steven Holl and Peter Zumthor Grammar check / amendments Readings of journal articles Referencing	5 Hours
5.3.26	Edits to Lit. Review, psychological chapter Referencing Proof reading	2 Hours
6.3.26	Edits made from feedback from Marina	5 Hours
11.03.26	First proof reading of copy (pages 1-10)	45 Minutes
12.03.26	Proof Reading and edits to overly abstract language and grammar including shortening sentences.	2 Hours
13.03.26	Final Edits made from proof reading and annotating latest digital copy.	3 Hours
18.03.26	Strengthening critical analysis and conclusion.	1.5 Hours
20.03.26	Strengthening conclusion and proof reading.	3 Hours

## X . GLOSSARY

### **Biophilia :**

*noun*

“an innate love for the natural world, supposed to be felt universally by humankind” (Collins English Dictionary, 2025).

### **Phenomenology :**

*uncountable noun*

“a branch of philosophy which deals with consciousness, thought, and experience” (Collins English Dictionary, 2025).

### **Milieu Therapy :**

*noun*

“a type of inpatient therapy, used in psychiatric hospitals, involving prescription of particular activities and social interactions according to a patient’s emotional and interpersonal needs” (Collins English Dictionary, 2025).