

A lioness is the central focus of the image, standing in a natural savanna environment. She is positioned in the lower half of the frame, facing left. The background is filled with dense green foliage and dry, golden-brown grass. The lighting is bright, suggesting a sunny day. The overall composition is a full-page spread for a journal cover.

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CHILDHOOD

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Coming up ...

ISSUE 14, March / April 2025 – THIRD AGE

ISSUE 15, May / June 2025 – LIGHT

ISSUE 16, July / August 2025 – SOUND

ISSUE 17, September / October 2025 – ARCHITECTURE

ISSUE 18, November / December 2025 – INTERIOR DESIGN

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WELCOME

Welcome to the thirteenth edition of The Journal of Biophilic Design.

Why dedicate a whole issue to “childhood” when issue 7 of the Journal was focused on Education? There is a great deal of research which clearly states just how important nature connection is for children’s brain development, from boosting cognitive and sensory development, supporting emotional and social growth, improving focus, attention, creativity and imagination as well as promoting physical health and coordination. Plus, it also builds a connection to the environment.

With our planet in a crisis, we need the future generation to fully appreciate just how wonderful and beautiful our living world is. I ask nearly everyone who comes onto our podcast series what inspired them to do the role they do making places better for humans and planet through creating and designing a greater connection to the natural world, and all of them have said that they had exposure to nature at an early age.

We forget just how important those early years are for us. Whether that’s digging a hole in the sand by the beach, or building mud pies, riding our bikes through the park, playing football in a field or just idly wandering with our dog avoiding the washing up.

Some children aren’t lucky enough to have exposure to our beautiful natural world. They might live in a built-up city where there are no green spaces, or they might be restricted on being able to get outside for whatever reason. This is why biophilic design is SO vital, not only in urban design, including pocket parks, green streets, urban farms even, but also bringing nature inside the schools, hospitals, care centres wherever our next generation is.

There are some amazing designs and examples in this issue, of how biophilic design has transformed not only the space but also the lives of the children experiencing it.

I hope you enjoy this issue, and also remember that it’s also ok to release your inner child, go kick those leaves in the park, splash around by the water’s edge, collect leaves and acorns for your desk at home or anything else you used to love to do when you were a kid. Just because you are your age, it doesn’t mean you have to forget what brought you joy back then. Nature is there for everyone, whatever you do, however old you are, wherever you are in the world. Take a moment, as Steve Edge says in his article in this issue, to just stand and stare.

Vanessa Champion PhD, AMRSPH
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HIGHLIGHTS

Each edition of The Journal of Biophilic Design has regular sections. We highlight them here so you can navigate your way around the Journal. If you would like to contribute to a future edition, please do contact our editor we would love to feature your research and case studies.

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Details of our contributors can be found on our website. Each edition of The Journal of Biophilic Design is published every other month. Next issue’s focus is **Third Age**.

Sign up for [our newsletter](#) on [our website](#) to be reminded when the edition is out. Don’t forget you can read this on [your Kindle](#) as well as buy a beautiful full colour printed edition to keep and refer back to, contact us for direct links.

If you would like to sponsor the Journal please contact us. Future editions will focus on Third Age, Light, Sound, Architecture, Interior Design.

CHILDHOOD



REIMAGINING GREAT ORMOND STREET

Scott Carroll, *Landscape Architect and Director at LDA Design*

In its care and treatment of sick children, Great Ormond Street Hospital (GOSH) is pioneering. The first UK bone marrow transplant took place here and it is the UK's largest centre for child heart surgery.

Now the hospital is turning its attention to its environment as it looks to carry on this tradition to create London's – and the UK's – first healthy hospital street, a radical model that could set an international precedent. Biophilic design is the DNA of the project.

GOSH is supporting the pathway to net zero emissions, creating, in collaboration with LDA Design, a healthier, child-friendly public realm around the hospital to become a welcoming and loved place at the heart of the local community. The scheme can deliver significant social, environmental and economic value whilst ensuring hospital logistics are efficiently maintained.

What's the problem?

Like most of our city hospitals, GOSH's

street is heavily trafficked, with nowhere to sit and no reason to linger. The local area scores highly on deprivation criteria. Air quality data exceeds World Health Organisation recommended levels for NO2 and PM2.5, which causes respiratory illness and decreased lung function amongst children.

These are familiar issues, highlighted in The Marmot Review 10 Years On, by the Institute of Health Equity. Improvements to life expectancy have stalled and the health gap has grown between wealthy and deprived areas, and people can expect to spend more of their lives in poor health.

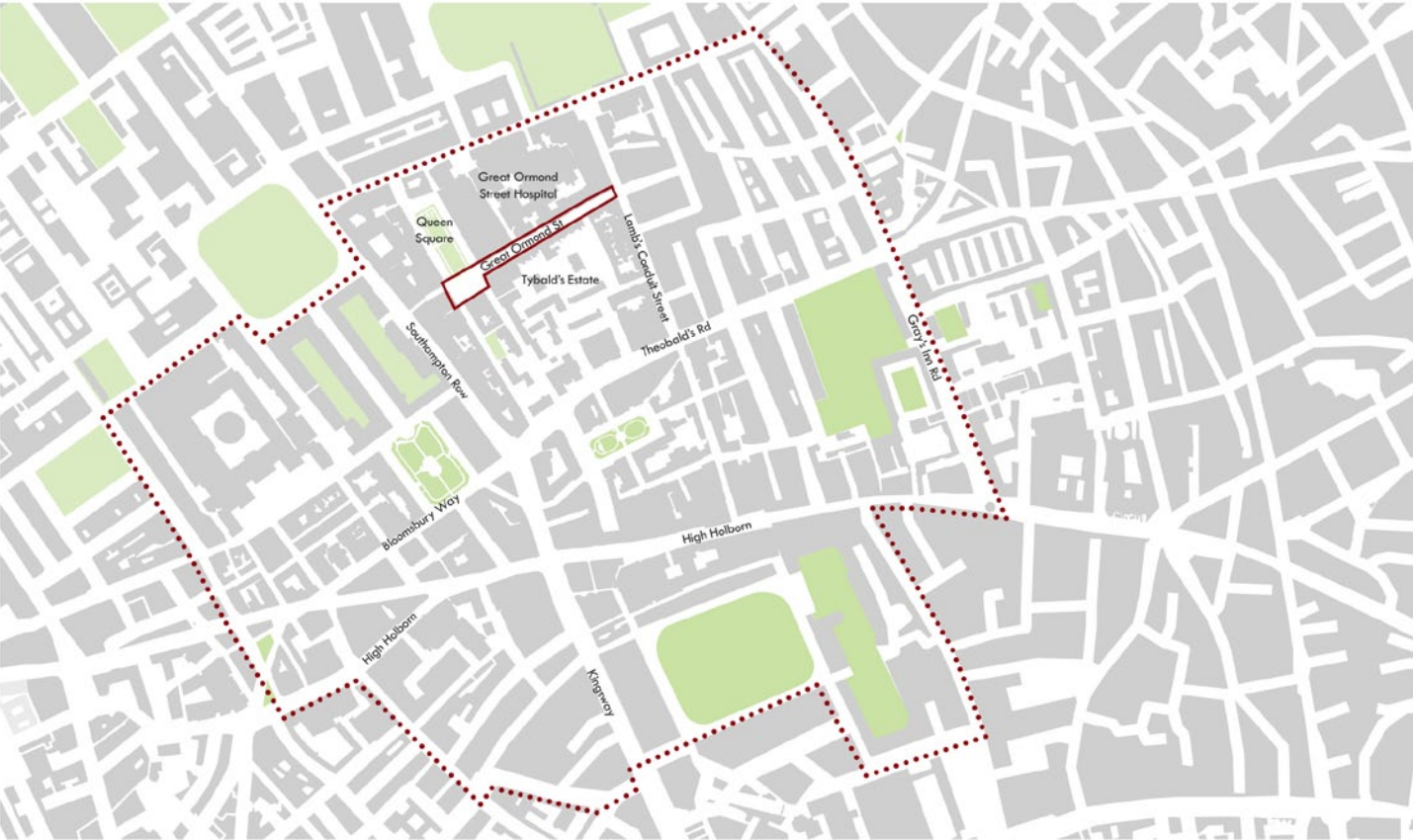
So, what is the design being proposed? It reclaims vehicle space for the hospital and wider community to enjoy, with 'play on the way', rainwater gardens, communal dining, integrated art and seasonal planting with a high ecological value. It aims to create a healing, biophilic environment which also enhances climate resilience. It supports active travel, and space for special events will bring the community together.



A key move involves making Great Ormond Street (GOS) and neighbouring Queen Square a shared resource that is easily accessible by both hospital and community, helping to address health equity issues identified. There is limited green amenity space in the area, and even those spaces that are local to GOSH are often just too far for patients and their parents/carers to be able to comfortably use them.

Through innovative reclaiming of street space, improvements to ambulance access and patient drop off, and changing vehicle access arrangements to both ends of the street, Great Ormond Street itself will work better for people, reducing stress and improving cognitive performance and mood.

Site Context Plan



Healthy City Design Awards 2024
Reimagining Great Ormond Street and Queen Square



Queen Square Illustrative Concept Plan



Healthy City Design Awards 2024
Reimagining Great Ormond Street and Queen Square



Site Connectivity Plan



Healthy City Design Awards 2024
Reimagining Great Ormond Street and Queen Square



Great Ormond Street Illustrative Concept Plan



Healthy City Design Awards 2024
Reimagining Great Ormond Street and Queen Square

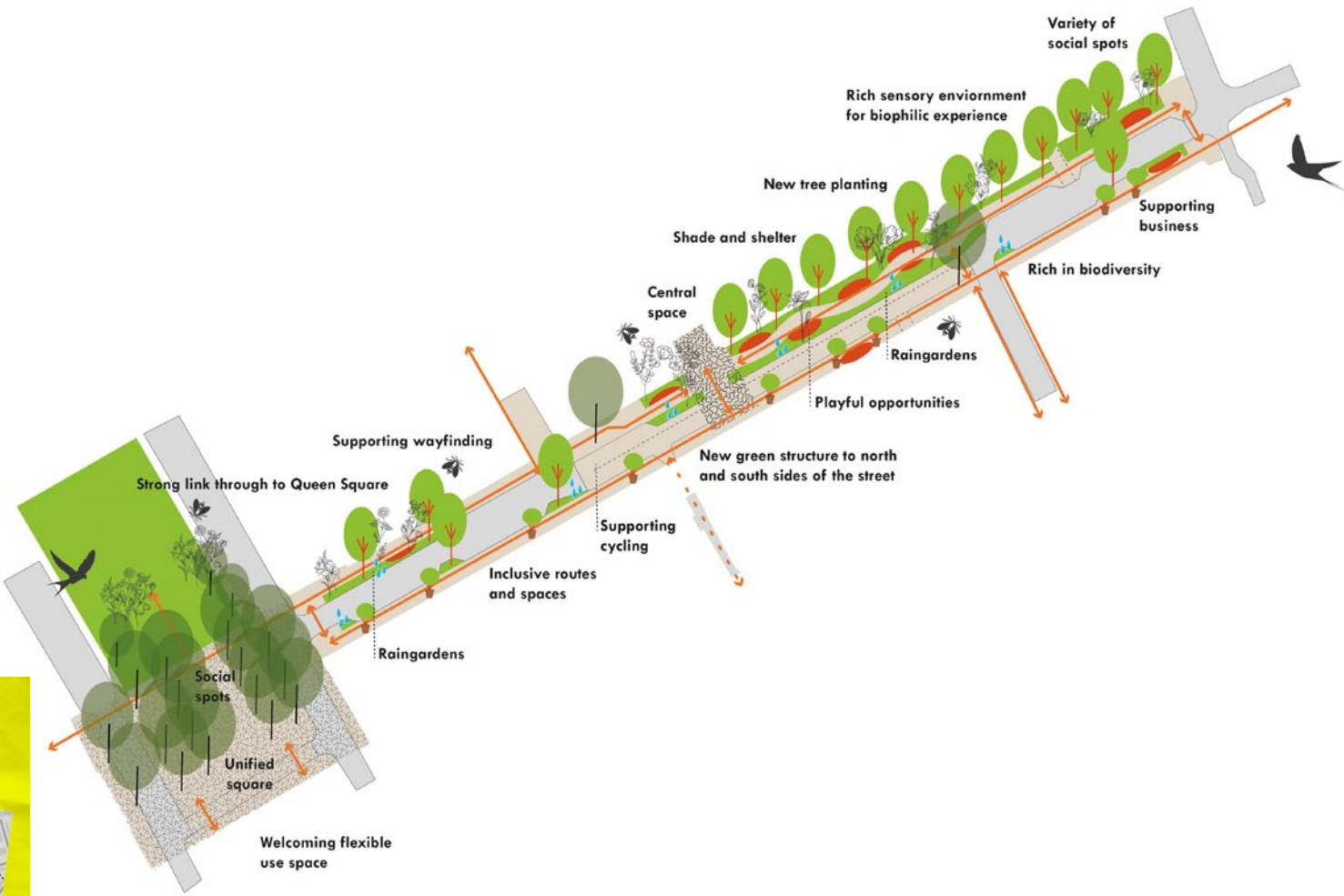


Street as a place of health and healing

The project presents a fantastic opportunity to put biophilic benefits at the heart of people's experience and to optimise the ways in which the local environment can support health, healing and wellbeing.

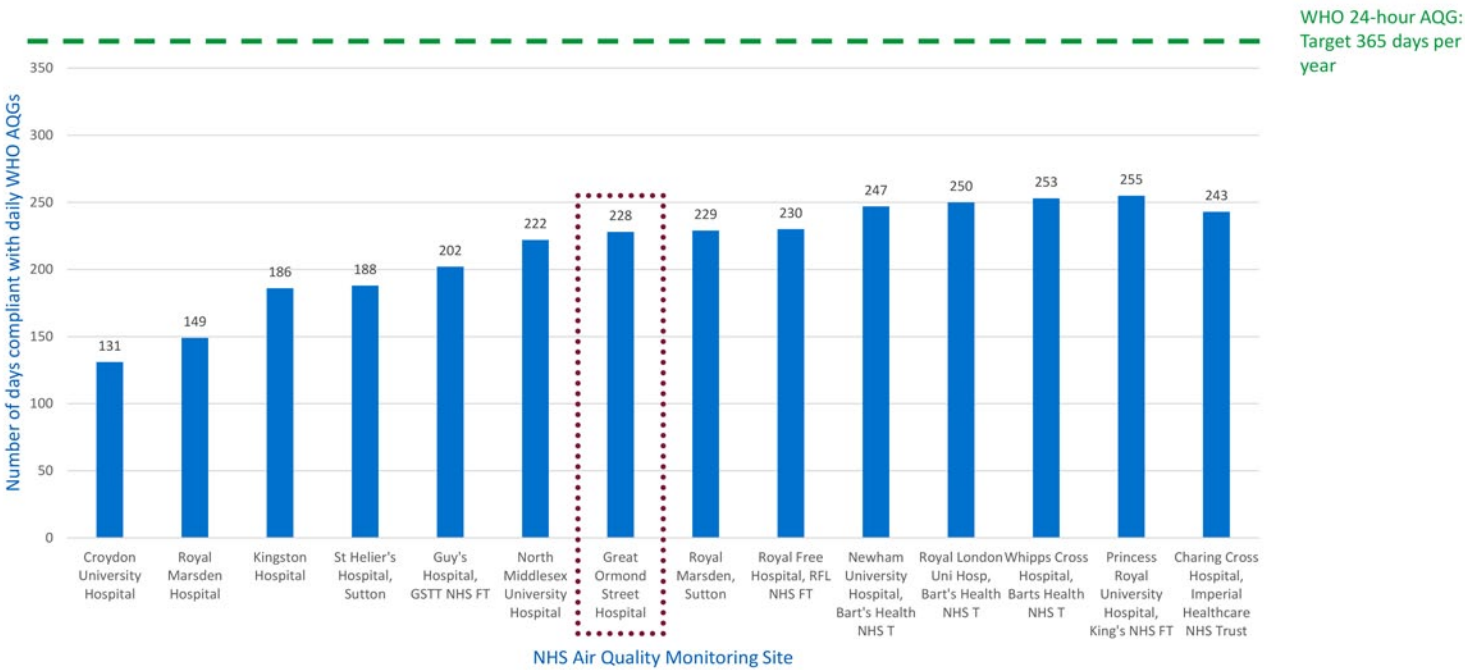
There are three experiential design

layers. The first layer is about shaping the space to include opportunities for exploration, discovery, prospect and refuge. Movement along the street takes the form of gentle curves that provide good sightlines but at the same time reveal the street sequentially. Seating nestled cosily into planting provides a variety of visually rich landscape views.

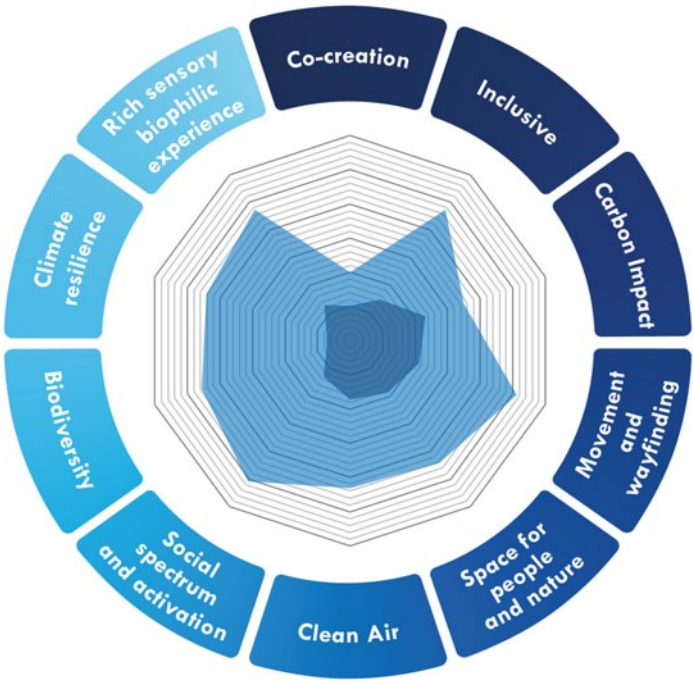




Number of Days London NHS Sites Met WHO 24-hour Air Quality Guidelines (2022)



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	Existing scheme	Proposed scheme
Co-creation	0.50	1.00
Inclusive	0.74	2.37
Carbon Impact	1.15	1.75
Movement and wayfinding	1.06	2.56
Space for people and nature	0.93	2.21
Clean air	0.85	2.15
Social spectrum and activation	0.64	2.54
Biodiversity	0.36	2.29
Climate resilience	0.36	2.21
Rich sensory biophilic experience	0.63	2.37
Healthy Hospital Streets Score	7.21	21.44

Score out of 30

The second layer is about introducing natural content that supports a variety of sensory experience, achieved primarily through the creation of a beautiful and biodiverse planted environment. A curated palette of planting species is critical to making a richly structured space that will provide multi-faceted and focussed delight for all the senses, as well as attracting a wide range of wildlife. This layer helps create a borrowed biophilic landscape that will be experienced as views from windows and balconies of the GOSH Children's Cancer Centre.

The third layer references nature through use of natural materials, including stone and timber, combined with biomorphic form and detailing on surfaces and furniture.

As designers, above all we want the space to be invitational, inclusive and accessible to everyone, and spaces are designed for neurodiversity. A series of beautiful garden rooms

invite exploration, play, relaxation and reflection. Each room has its own offer, to be enjoyed individually or as part of an open-ended choreography of play extending along the street. They provide a spectrum of opportunities for sociability: the importance of connectivity and people-centred (as opposed to vehicle-centred) spaces are fundamental aspects of a neighbourhood that supports a great childhood.

From the outset, LDA Design in partnership with GOSH, realised the value of developing an approach that could be used by other hospitals to help address the same serious issues with their surrounding streets and spaces. This led to the development of the Healthy Hospital Streets (HHS) Wheel, a tool that begins with the widely used Healthy Streets Wheel but provides a more holistic approach. The HHS Wheel can be easily used to assess and score an existing site, developing design proposals and projects once constructed and in use.

Putting the community at the heart of the process

Shaping concept design proposals has involved sensitive engagement to understand the needs of children and young people and in particular their development in urban environments. A rich programme of events has ranged from play streets to talks at bedsides.

As one of the HHS wheel considerations, it was clear that an inclusive co-creation process would be essential to provide a firm foundation for later design stages, subsequent stakeholder involvement, and the project's success. Key stakeholders were identified early on and GOSH Young People's Forum, Bloomsbury 2030 and Urban 95 creative sessions have all contributed ideas.

GOSH play street events brought the hospital and wider community together, providing a glimpse of the powerful impact the project could have. Around 200 children from the locality and the hospital took part. Patients, who in some cases had not left the hospital for months, were able to attend because activity was on the hospital's own doorstep.

Sessions were also organised with local children from St George the Martyr primary school, including a site walk and talk to discuss routes to school, what the children liked about the area and their favourite things to do. Individual children were also consulted at their bedside, about the Healthy Hospital Street vision, their journeys to GOSH, where they live and what they like about the areas around their homes.



The Young People's Forum comprises of current patients and siblings aged 10-21 years old, helping to improve patient experience at GOSH. An early engagement session asked them about the street and the potential to improve it and integrate climate resilience solutions into the vision. The group were well informed and engaged, providing case studies from their local areas.

Bloomsbury 2030 helped to organise an early collaboration between artist Una Knox and pupils attending GOSH's own school and children in the neighbourhood, to imagine transforming the neighbourhood unconstrained by any practical concerns.

The views and insights of children have informed proposals that support play and mobility and allow children to develop some autonomy. The project aims to support a good childhood, which involves having some space and time to find out what it's like to explore and to learn about the new things you can do.

The application of biophilic design principles has been fundamental in creating an environment and open-ended experience that supports childhood development. This new version of Great Ormond Street will feel comfortable and welcoming, invite interaction with nature, and contribute to a safe, playful and experiential movement network.

In the future, healthcare needs to be integrated seamlessly as part of the healthy city.

<https://www.lda-design.co.uk>

Lost Skills

“Biophilic designers have a crucial role to play – we may be the custodians of traditional ways of life, helping children to re-connect with both their environment and their natural abilities.”

Louis Thompson

*“They caught the wild children and put them in zoos,
They made them do sums and wear sensible shoes.
They put them to bed at the wrong time of day,
And made them sit still when they wanted to play.
They scrubbed them with soap and they made them eat peas.
They made them behave and say pardon and please.
They took all their wisdom and wildness away.
That’s why there are none in the forests today.”*

Wild Child written by Jeanne Willis in 2015 is a charming satire mocking traditional education and celebrating the joys of free play in nature. The poem invites us to question the morals and manners of civilized society and its impact on our children.

The poem portrays a different era, a time in which we worried about the constraining limitations imposed by schooling. In 2024, the zoos are the

least of our concerns, data suggests that from 2012 onwards vast swathes of our children stopped building dens in the forest, exploring the countryside on their bikes or playing with friends in the park. Sandcastles weren’t built, swings weren’t swung, stones weren’t skimmed, and conkers weren’t conquered.

The children went indoors, and they went online.



Over the last 50 years the daily screen time of both children and teens has increased exponentially- from 0 hours and 0 minutes daily screen time in the 1930’s to the 9 hours average daily screen time of UK teens today.

We have witnessed an unprecedented change in human behaviour in a remarkably short time frame and the impact on the health of our children is unclear.

The Internet is a global network that has only existed for 30 years. It operates without a central governing body and there is no single law regulating online privacy globally.

Prior to its worldwide release, society was not consulted -there was little public discourse, limited published

research, no votes nor referendums – the internet was used by the US Department of Defence, then it was used by everyone.

Had we been warned of the radical impact the technology would have on our society, would we have been so quick to adopt it with such enthusiasm?

The psychological consequences of the meteoric rise of gaming, social media, and pornography have only recently become the subjects of serious study and investigation – Jonathaon Haidt’s book *The Anxious Generation* in 2024 draws attention to declining mental health of global teens in relation to their spiralling screentime, and Johan Hari’s book *Stolen Focus* in 2022 exposed the insidious effects of the social media business model on our attention and ability to concentrate.





Over the next 5 years Artificial General Intelligence (AGI), will radically change our society once more: it will change the way we work, the way we live, the way we play and the way we think. We are at the threshold of monumental changes to humanity, the decisions about these critical subjects today may echo through the ages.

Historian Yuval Harari, Tesla CEO Elon Musk and Deepmind founder Mustafa Suleyman have all warned that, despite the incredible opportunities, the technology poses significant dangers to Human civilization.

We have a choice – use the technology for wealth, warfare and distraction or we use these new powers to create a resilient, ecological, tolerant society.

The main digital companies that

dominate this nascent sector are the same companies that dominate our digital landscape today. Over the decades as they have grown and morphed they have used their political influence to avoid regulation. This handful of tech giants accept little accountability for what is published on their platforms compared to the legacy media (which must adhere to stringent publishing standards), and take little responsibility for the psychological impacts of their business models. These techno-feudalist oligarchs already wield huge political and economic power.

We will now give these same players unfettered power to manage an AI revolution, that is, by its nature, beyond our control.

We might rewrite that poem today:

*“They caught the wild children and put them on screens,
They let them do dances, tik toks and memes.
They kept them addicted all night and all day,
And made them sit still when they wanted to play.
They showed them celebrities and porn stars and cats
And sold them junk food that was making them fat.
They fed them conspiracies, outrage and lies
To destroy their communities and family ties
They sold all of that data to their marketing teams.
They stole all their innocence and childhood dreams.*





Given the impacts of social media on our children, there are a series of important consequences associated with these technologies should not be overlooked: Many of these applications and algorithms have impacts on our physical skills, mental health and cognitive abilities that are ill understood. Technology is changing our minds, our bodies and our spirits in unprecedented ways.

Take, for example, navigation. Navigation is one of the most fundamental behaviours relevant to human survival. It is the cognitive ability to move from one place to another and involves perceptual, cognitive, and motor processes. It is complicated and it is important – throughout history, humans with a poor sense of direction failed to reproduce (Caveman Bob went to look for mushrooms and never came back).

The Global positioning system is a satellite-based radio navigation system owned by the United States Space Force. It is used by more than 6 billion people worldwide free of charge. The system is used in a dizzying array of applications from transportation, personal fitness and dating apps to banking systems, missile strikes and agricultural planning.

Recent research has revealed the impact of habitual GPS use on the hippocampus which is deeply associated with supporting spatial memory, spatial navigation and mental mapping. It seems that when we are reliant on GPS, we gradually lose our inherent sense of direction. This may be an inconvenience over a lifetime but over several generations we may no longer be able to navigate naturally in the real world.

This same principal could be applied to our attention (rise of ADHD), our artistic ability and our ability to communicate. We may be losing the fruits of our evolutionary biology – the very things that define us as Homo Sapiens.

Biophilic designers may have a crucial role to play in this revolution – we may be the custodians of traditional ways of life, helping children to re-connect with both their environment and their natural abilities.

In an AI future, can we create sacred spaces that celebrate natural wisdom, community and human craft?

<https://nomadicresorts.com>



Nurturing Young Minds with Biophilic Design

“Working all over the world, Bogle Architects embrace the principles of Biophilic Design, creating beautiful and happy places of learning and flourishing for children. Inventing typologies, recycling materials and always, always being mindful of the little young minds who will enjoy these spaces long after the builders have left.”

Ian Bogle

Childhood – I remember mine – well mostly.

Spending most of my time outdoors playing football, blissfully unaware that I was actually surrounded by ‘Biophilia’ through the trees, sky and constant rain, I was also for some reason, always fascinated with my Mum’s ‘top-loader’ washing machine, with the wooden tongs for fishing out the hot clothes, but that’s not the reason I went into architecture.

We had an extension built onto our house (a very 70’s thing) when I was six years old – that’s when I knew what I wanted to do when I ‘grew-up’. The creation of something physical that lasts the test of time seemed unique to me – this was my future.

Fast forward a few years and I’m at the other end of that initial journey. I now design for children having been involved in School design for over 20 years.

Our studio, Bogle Architects, is an international practice based in London and Prague where we have been involved in several projects across the globe. A number of these projects have been in the education sector ranging from Kinder-gardens all the way to institutional research buildings.

When I say the word Kinder-garden that probably resonates with many people about their childhood – I certainly remember mine at the top of the road which, unbelievably now, I used to walk to on my own aged 4 onwards.

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The Early Learning Village (ELV) in Singapore is not the normal early years facility. I remember the phone call from my client asking me to come to Zurich a few days before Christmas because he wanted me to think about something over the festive period. What I didn’t

expect was firstly, nearly not making the plane back to London and missing Christmas with my children but secondly being asked to design a kinder-garden for 2,500 children in one building!

Had this ever been done before?





Working alongside Early Years educationalists the notion of bright primary colours was discouraged for a more neutral colour theme using natural materials like wood for internal finishes. Greenery plays a large part in the building also both internally on living walls but also externally on the facades.

While direct sunlight should try to be avoided the classrooms have windows at varying height so that the young children can look out – I'm told they seem particularly attracted to watching the cars and trains on the infrastructure below.



Never, so we both agreed this was going to need wine.

Three and a half years later this 600,000sqft building (larger than the Gherkin which I worked on in my early career) was open with the initial intake of 500 children. There is no design guide available for a building of this use, at this scale, so we had to go back to first principles and invent a new typology. Our work in residential design was beneficial as the repetitive nature of

apartment design gave us the clue as to how to deal with the scale.

We created what became known as the 'cluster' – a typical 80-100 child nursery – 4 classrooms arranged around a central service point known as the 'peanut'. Then, we playfully placed these clusters on top of each other staggering them so that the floor above shades the floor below from the strong Singapore sunshine. Through a series of physical and 3D computer models we arrived at the final solution.



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Another project where we have used biophilic principles is at the Royal Grammar School Guildford Dubai in the United Arab Emirates which is a K-12 School – early years to sixth form. The briefing sessions with the team of the original, 500 year-old, School in Guildford UK were to try and emulate the original School in the

new contemporary School. This is a challenge we relished.

The clues are there in the existing building where we took the ‘Tudor’ lead windows as a prompt for the rooflights over the internal atrium – supersizing them to a larger scale but with the same overall proportions.



Similarly to Singapore, we designed the building to avoid direct sunlight into the classrooms. The 'staggering' cross section creates a 'V' shape so that the classroom above shades the one below hence avoiding direct sunlight while still maintaining quality daylight – a key biophilic metric. This also lowers the overall energy load on the building therefore allowing the opportunity for carbon neutrality in operation. This is possible by the introduction of photovoltaic cells on the roof and carpark structures which balance the energy loads required.

Biophilia is not just about greenery, it is also about the quality of light and

the building's views both internally and externally. The atrium space in the Dubai School creates another principle from the original School in Guildford who have a system in place where the younger children are mentored by the older children. The stepping atrium allows for this passive 'overlooking' within the building as the older children are on the upper floors and youngest on the ground floor.

One of our earliest projects is the Beijing Green Building Demonstration Park Visitors Centre which is an exhibition building for the promotion of Green Building and Biophilic Design primarily aimed at the education of School children.



This project also is the first building to achieve a BREEAM (Building Research Establishment Environmental Assessment Methodology) 'Outstanding' rating in the People's Republic of China. Walkable Green roofs, passive and active solar measures depending on the time of year and natural ventilation of the spaces all contribute to the accredited certification.

However, my personal favourite, element on this building is the use of recycled plastic water bottles within the facades highlighting that all materials have a re-use in life.

We enjoy designing and creating innovative building around the world and its maybe no coincidence that 'Bogle' is in fact an anagram of 'Globe'.

www.boglearchitects.com



Biophilic Design Meets Family Functionality: A Nature-Inspired Playroom in a Grade II-Listed Home

“Fusing biophilic design with elegance, this playroom creates a serene and functional space for young children by incorporating natural wood, soothing green tones, and organic forms. The central circular alcove, inspired by nature, fosters calm and comfort, while subtle LED lighting enhances the tranquil atmosphere – reflecting the growing importance of biophilic principles in creating spaces that promote well-being.”

Cinzia Moretti – BIID Registered Member

This project was designed for a young family with two small children seeking a refined yet functional playroom within their Grade II-listed property. The brief was to create a space that is elegant, practical, and subtly connected to nature, with a biophilic-inspired design that harmonizes with the adjacent living and dining rooms. To maintain an elegant aesthetic, we incorporated biophilic principles with subtlety – selecting colours, materials, and textures that gently stimulate the mind and evoke a sense of tranquillity.

Located on the ground floor between these formal spaces, the playroom needed to feel cohesive with the

surrounding areas while fostering a distinct, nature-infused atmosphere. To achieve this, we used a harmonious palette of wood and green tones to evoke a sense of serenity and natural warmth.

A central feature of the design is a circular alcove, inspired by organic forms found in nature. This inviting nook includes a soft green cushion set into a wooden wall, reminiscent of lush, calming outdoor hues. The wooden reeded doors add warmth and texture, while the green tones further enhance the connection to nature, creating a cosy spot for children to relax, read, or play.



A delicate LED light follows the upper curve of the alcove, casting a gentle, ambient glow that adds an enchanting touch. This soft illumination mimics natural light, creating a soothing atmosphere that promotes calm and comfort.

Moretti Interior Design Ltd
<https://morettiinteriordesign.com>

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Biophilic Design and Schools

“How Liberty Woodlands School has created a child-centred, nature-inspired learning space for wellbeing and future leaders.”

Leanna Barrett

As both a parent of three children and the Head of Liberty Woodland School, I know how important it is for children to learn in environments that nurture their minds, hearts, and overall well-being. In today's fast-paced world, we need to create spaces where children can feel calm, inspired, focused and supported. That's why, at Liberty Woodland School, we've built our new secondary school campus, Ivy Lodge, with one clear goal in mind: to create a place where nature and child-centred learning come together to help students thrive, both academically and emotionally. As we had such a specific inspiration for the design of the campus, which was to work to not lose the beauty, character and rich history of the 18th century coach house, whilst updating the building design to allow students to continue to feel the sense of calm and focus they feel whilst outdoors, immersed in

nature in our primary school 3 acres of learning spaces, we decided that as Head of School, I would lead the design. Whilst this was time consuming and a new project for me, it felt like a natural process as I had a deeply intentional inspiration behind all design choices.

What Biophilic Design Brings to Learning

I want children to feel connected to the world around them, to experience the peace and creativity that nature can inspire. This is why we embraced biophilic design, working to bring natural elements like greenery, sunlight, natural materials, interesting textures and open spaces into our learning environments. It's about more than aesthetics; it's about creating classrooms that encourage calmness, focus, and a deeper connection to learning.





staircase area with beautiful plants of varying sizes and commissioned Osmose studio to design a bespoke piece of 3m art comprising of grown moulds of mycelium and hemp both native to the UK. From this awe-inspiring entrance, intentional flow was designed through the corridor spaces and into the library, science lab, collaboration room and multipurpose classrooms. Each room was carefully designed to offer the best air quality, acoustics and aesthetic design through the use of natural materials, flora and fauna and carefully chosen suppliers. As an example, paint was chosen from a certified climate positive supplier who provides water-based, low toxin (VOC) paints.

Child-Centred Learning: Tailoring Education to Each Child

At Liberty Woodland School, we believe that child-centred learning is key to helping students reach their full potential. This means placing the child at the heart of the learning experience – tailoring education to their individual needs, strengths, and interests. We ensure learning is meaningful to our students, relevant to their lives and feels purposeful. This approach ensures that each student understands the value of what they are learning, driving a high level of self-motivation, alongside ensuring every student feels seen, heard, and understood, allowing them to engage in their learning in ways that feel natural and meaningful to them.

At Ivy Lodge, every classroom has been thoughtfully designed with natural light, plants, nature-inspired colours, natural materials and flexible spaces to meet the needs of the children in them. I see the impact this has on our students every day. They enter these spaces feeling more relaxed, open to learning, and ready to engage. Our classrooms are not just places for academic instruction; they are environments where children can flourish, feeling inspired by their surroundings and supported by their teachers.

Every room is painted in nature inspired, calming colours, containing a variety of plants that not only bring the natural world inside the classroom and enhance the aesthetics, but also with the right

choice of plants improve the air quality within the classrooms.

We have carefully curated and selected every aspect of our campus, from the wood selected for the boardwalk, to the Corten steel gate entering into a beautiful landscape and lit garden leading you to a natural stone patio surrounded by more planting before you enter the main building. There is a seamless connection between the outdoors and indoors. Our entrance is our first impression of the building, cultivating sophistication and inspiration. We have chosen a deep, rich green for the walls to accompany the original flagstone flooring, enhanced an 18th century bread oven and fire by applying limestone bricks to add texture and interest, filled the room and



Our approach is rooted in neuroscience, which tells us that children learn best when they are emotionally supported, feeling secure, happy and with a strong sense of belonging, also when learning is connected to their natural curiosity and to their lives. By creating environments that foster a sense of safety and engagement, we are helping children grow both academically and emotionally. The biophilic design of our school plays a huge role in this, providing a calm and focused space where children can concentrate and feel at ease to allow them to feel comfortable and confident to challenge themselves in their learning. Nature has a powerful way of reducing stress and promoting mindfulness, which our highly emotionally literate students recognise as helping them feel more grounded, more present and ready to learn.

Wellbeing at the Core of Education

I want my own and indeed all children to feel happy, supported, and valued – not just academically, but in every aspect of their lives. At Liberty Woodland School, well-being is at the very heart of our approach. We know that for students to succeed, they need to feel emotionally safe and supported. That's why we dedicate time every day to focusing on wellbeing, through daily practices such as mindfulness, meditation, morning meetings and taking the time to enjoy activities that help to build resilience and self-awareness.

Our biophilic design complements these practices beautifully. Being surrounded by natural elements – whether through large windows in our secondary campus that bring in views of trees, the use of natural materials, the greenery within



our classrooms or taking our lessons outdoors and enjoying learning in our class dens or directly in the natural world – creates a soothing, nurturing environment. This connection to nature not only enhances well-being but also supports mental clarity and focus. Our children feel more grounded, more connected, and more empowered to take on the challenges of their learning.

The Power of Outdoor Learning and a Four-Day Week

One of the aspects I'm most proud of at Liberty Woodland is our four-day school week and our commitment to outdoor learning. It is so valuable it is for children to have time to rest, explore, and play. Being at school four days a week allows us to extend the length of the school day slightly longer, allowing students to really delve deeply into their learning and not need to have their flow interrupted by an early school finish. It also allows for a greater home life / school balance with three days available each week to pursue personal passions, or simply enjoy time with friends and family.

Outdoor learning allows our students to connect with nature in a way that deepens their understanding of the world. Whether they're conducting science or maths experiments, observing the changing seasons, sitting on our boardwalk under the trees writing stories inspired by nature, or simply playing and exploring the natural environment, they are developing critical thinking and problem-solving skills that extend beyond the classroom. This experiential, immersive approach to learning not only enhances their cognitive development but also builds their confidence and curiosity.



Conclusion: A School Where Every Child Thrives

I am incredibly proud of what we've created at Ivy Lodge. Our child-centred approach, supported by biophilic design and a focus on well-being, has built a school where every child is empowered to grow, learn, and thrive. It's a place where they feel connected to nature, supported in their learning journey, and prepared for the future.

I see it every day in the way our students arrive with smiles, excited to learn and explore. Liberty Woodland is more than just a school – it's a community that values each child, nurturing them not only as learners but as thoughtful, capable individuals who are already making a difference in the world.

**Leanna Barrett, Founder & Headteacher
of Liberty Woodland School**

www.libertywoodlandschool.com

Preparing Students for a Changing World

Both as a parent and Head of School, I think daily about the world our children are growing up in and the skills they will need to thrive in an uncertain future. That's why we've designed our educational model at Liberty Woodland School to inspire and intellectually challenge our primary students with project-based learning, before in secondary school students move on to study the International Baccalaureate (IB). Our goal is to nurture critical thinkers, problem solvers, and compassionate citizens who are prepared for the challenges ahead.

The biophilic design of our school plays a key role in this vision. Learning in nature-rich spaces helps our students develop the focus and clarity needed to tackle complex problems. It also nurtures a sense of responsibility toward the environment, which is essential for the future of our planet. By learning in spaces that reflect a deep connection to nature, alongside enjoying weekly lessons focused on environmentalism our students are also learning to care for and find solutions to save the world they will one day inherit.



A Cozy, Heritage-Inspired Haven:

A Little Boy's Bedroom that Celebrates Zimbabwean Roots

“Designed with practicality and emotional connection in mind, this cozy bedroom incorporates a stunning wallpaper of giraffes and zebras amidst the African savannah, bringing a slice of Zimbabwe to life. Soft, calming colours mixed with playful accents create a peaceful retreat that not only reflects his heritage but also promotes well-being and joy.”

Nicola Holden

For this little boy's bedroom, the brief was to create a cosy, meaningful space that would connect him with his Zimbabwean heritage. The bedroom is quite a small space so will primarily be used for sleeping rather than as a play area. Practicality was also important, with additional storage being a key requirement. The bedroom needed to be fully decorated, and his mother requested an engaging and cohesive scheme that would feel personal to him and reflective of his family's roots.

The starting point was a captivating wallpaper from Charlotte Gaisford, aptly named *African Father*. This choice set the theme and tone for the entire

room, celebrating his heritage with images of giraffes and zebras among the African savannah. The wallpaper's palette combines soft shades of orange, pink, green, and blue, which are known to generally have calming effects in colour psychology. The orange elements, however, bring in a subtle sense of fun and playfulness that balances the room's calming focus. Beyond its aesthetic value, the wallpaper also offers a visual connection to nature, albeit simulated. Research has shown that even indirect representations of nature can help to reduce stress and elevate overall happiness, making this wallpaper an ideal choice for his peaceful retreat.





Positioned at the back of the house, the room has a window that overlooks the garden, offering real views of nature. This natural connection to the outdoors is significant in the field of biophilic design, which emphasises nature's role in enhancing well-being. The views outside give him an ongoing visual link to the greenery and changing seasons, which can naturally instil a sense of calm.

Natural daylight exposure is a key element of biophilic design. Studies have shown that maintaining circadian rhythms through daylight exposure can improve sleep quality, mood, and alertness. For children, this is particularly important, as restful sleep contributes significantly to growth and development. Having an openable window also allows the family to easily adjust airflow and temperature, keeping the room comfortable year-round.

For window treatments, we selected curtains that can be fully drawn back, maximising the positive impact of natural light and outdoor views. The curtain fabric was chosen for its patterns, featuring biomorphic forms like circles, starbursts, and zigzags. These patterns also help to enhance mood. Circles in particular are infinitely symmetrical, creating a very calming and stable shape.

The layering of the different patterns, colours and textures adds complexity and visual engagement to the scheme, making the room feel dynamic without

overwhelming its small size. This balance of complexity and order stimulates a positive psychological response.

In terms of colour, we painted the wardrobe, woodwork, and radiator in a vibrant, grass-green hue. Green, sitting at the centre of the colour spectrum, is known for its restful qualities, symbolising balance and harmony. The yellow undertones in this particular shade of green give it a youthful vibrancy, ensuring the space feels lively. This colour choice subtly injects energy into the room, maintaining a sense of youthfulness while supporting the room's calming theme.

The overall effect for this bedroom is simultaneously joyful and calming, creating a space where this young boy can feel both rooted in his heritage and connected to nature. Each detail, from the wallpaper to the colour choices and window treatments, was selected to serve a dual purpose of beauty and well-being. In an era where thoughtful design can make a profound impact on our living spaces, this bedroom stands as a testament to how design can support emotional and physical wellness. This nurturing environment was crafted to tell a story, serve a purpose, and ultimately become a meaningful retreat.

Nicola Holden, Nicola Holden Designs

www.nicolaholdendesigns.co.uk

Nicola Holden is a BIID
Registered Interior Designer



BIOPHILIC BEDROOM AND BATHROOM DESIGN FOR A YOUNG TENAGE BOY

Abby Laybourne

“In response to the increasing pressures and digital demands faced by young adolescents, one family sought to create a sanctuary that promotes productive study, restful sleep, sensory rejuvenation and overall well-being. The brief to design a calming, nature-inspired bedroom and bathroom for the family’s teenage son.”

The Power of Green

To set the foundation for a nature-inspired atmosphere, green is used as the primary colour throughout the bedroom and bathroom. In the bedroom, a smoky green blue paint (Farrow & Ball) was chosen for its irresistible depth and weathered familiarity, evoking a calm and serene backdrop to the room. This shade was chosen not only for its aesthetic appeal but also for its psychological effects; green is known to reduce stress, encourage calm and create a peaceful environment conducive to sleep and study. With a low-odour, low-VOC paint that scores A+ for indoor air quality, the design incorporates strong physical well-being objectives.

Green and white striped tiles line the shower/bath wall, bringing a fresh, vibrant energy to the space. The varying verdant green tones echo the bedroom’s walls, while the white stripes keep the room feeling light and open. This visually striking pattern also introduces a playful, youthful element to the design.



"The biophilic design approach has transformed my son's space. Not only does it feel calm and inviting, but it's become a place where he actually wants to unwind without constantly being on his devices. The natural light, calming textures, and greenery give him the perfect environment to focus on his studies or just relax. It's given him a retreat from the digital world where he can really recharge."





Embracing Natural Materials

Natural materials play a key role in this bedroom/bathroom design, enhancing the sense of a natural retreat.

The bespoke headboard in dual-purpose recycled corduroy is both sustainable and durable, giving the room depth, comfort and a sense of grounding. A reclaimed wood desk and chair with woven seat, connects the room visually and physically to organic forms, bringing authenticity to the space. Natural cotton bedlinen in earthy green tones complements the green walls and reinforces the theme of organic comfort. The floor is adorned with a jute area rug, adding texture while contributing to the room's overall sustainability.

Natural stone surfaces, including a countertop in polished quartz, provide a durable yet organic finish that connects the bathroom to the outdoors. Timber finishes play a prominent role, with a vanity made from lacquered oak that complements the stone and tile.

Integrating Indoor Plants

Plants bring life to the room, literally and figuratively, by adding greenery and supporting improved air quality. This teenager's bedroom and bathroom feature an assortment of low-maintenance indoor plants, which are easy to care for and thrive in low-light conditions. Placed on shelves and sitting in clusters on the desk and bedside tables, these plants offer visual interest and establish a connection to the outdoors. Not only do the plants enhance

the room's aesthetics, but they also create a nurturing routine, as the teen cares for them regularly, cultivating a sense of responsibility and connection to nature.

Emphasising Views of Nature

Sash windows allow ample natural light to flood the rooms, enhancing the green tones and making the space feel airy and open. The bedroom window frames views of a nearby tree, providing a direct visual connection to nature. A strategically placed reading nook by the window features a comfortable chair with a throw blanket, encouraging moments of rest and contemplation while overlooking the greenery outside. This design choice leverages the restorative effect of nature views, which studies have shown to improve focus and reduce stress.

Tactile Textures for Sensory Engagement

Textures play an essential role in enhancing the biophilic design, bringing warmth and sensory engagement throughout. Soft cotton blinds frame the window, while textured boucle wool pillows invite touch and comfort. The recycled corduroy headboard offers a calming, tactile experience, while the 100% wool carpet and jute rug add grounded, earthy textures to the room. In the bathroom, smooth, hand-finished tiles create a clean, fresh feel. This thoughtful blend of textures creates a rich, multi-sensory environment, amplifying the room's natural, sanctuary-like quality.



Considered Lighting Strategies

Lighting in biophilic design balances light and shadow to create a natural rhythm, enhancing comfort and focus, while mimicking sunlight to foster well-being and a connection to the outdoors. In low-light conditions, warm, indirect lighting recreates a natural ambience. Dimmable lights are ideal, allowing adjustments for activities like studying or relaxing, adapting seamlessly to the natural daylight cycle. Thoughtfully placed pendants, wall lights, and table lamps in both the bedroom and bathroom create an immersive experience, where soft glows and gentle shadows add depth and visual interest. This approach cultivates a calming, adaptable environment, bringing the vitality of nature indoors.

Incorporating biophilic design in a teenage bedroom/bathroom creates a harmonious environment that balances relaxation, study, and personal growth. By combining the colour green, natural materials, indoor plants, views of nature, considered lighting and tactile textures, the space becomes a refuge that nurtures well-being, inspires creativity, and fosters a lifelong connection to the natural world.

Studio 3 Creatives

<https://studio3creatives.com>

Project: St Margarets Lodge

BIID Registered Practice and Registered Interior Designer

Photographer: Chris Snook

<http://www.chrissnookphotography.co.uk>



Transforming Care: A Bespoke Hospice Design Inspired by Young Hearts and Local Art

“When Mood Interiors was approached by Dougie Macmillan Hospice to design a new space for young adults transitioning from the children’s unit, they embraced the challenge with a deeply personal approach. Through collaboration with the young people themselves, the team created a vibrant, empowering space, culminating in a stunning mural by a local artist that captured the essence of Stoke-on-Trent and the spirit of the young residents.”

Preet Anand – BIID Registered Interior Designer

When I was approached by the Dougie Macmillan Hospice, previously the Donna Louise Hospice, there was no hesitation. Mood Interiors was established in 2016, with the aim to improve the environments for young adults and children in the Care sector, and the Hospice’s passion for providing outstanding services to those with life-limiting and complex needs, felt like a perfect partnership.

The aim of the project was to transition teenagers from the children’s unit, into the more “grown up” young adults’ unit, which was a purpose built extension on the same site. The project ran over a couple of years, with the interiors fit out taken place towards the winter of 2018.



CHILDHOOD

The briefing process on this project was slightly more unique to the traditional process, after meetings with stakeholders it felt more and more paramount that the aspirations of the young people was the centre of the brief for design. So, I led a workshop with five, enthusiastic and creative young people, to start mapping out ideas for the space. As well as discussing the activities that would be taking place and the colours that would inspire, we touched upon graffiti art. A local Stoke-on-Trent “Banksy” became a collectively exciting area to explore, and how great it would be if he could draw the famous “ay up duck” artwork on the walls. The young people were so excited by the idea of including all the aspects of Stoke that felt like home, as a mural. Unknown to them, until the day of reveal – Mood managed to track that exact artist down and surprise the client with a bespoke artwork truly personal to their hometown and what they hold most dear. The word “empowerment” was the centre of discussion with the young adults, and thus is the focal point of the communal area.

“THE BUILDING IS WELCOMING AND DESIGNED WITH THE OPINIONS OF OUR YOUNG ADULTS IN MIND WHO TOLD US THEY WANTED SPACE AND INDEPENDENCE”

DOUGIE MAC, YOUNG ADULTS CARE

From the workshop, a “holiday” feel in the space was very much on the

**CHILDHOOD**

agenda for the theme. With a sensitivity to neurodiversity and sensory needs, the pastel colours and more muted tones within the colour scheme shaped the “stoke on holiday” theme. The theme included ice-cream colours, colour blocking, rustic signage and natural elements to feel the outdoors inside. The design included faux foliage within the dining space, and pebble shaped soft seating to give an organic feel, LVT flooring to showcase natural woods in a practical way, integrated fish tanks and cladding of the breakfast bar to resemble a beach bar. All aspects included, brought the outside-in through biophilic elements which are crib 5 fire rated, hygienic and functional for the end user.

Throughout the space, the conscious ability to use rooms for multi-purpose activity was key to the brief, not only so larger wheelchairs can transition with ease, but allowing the spaces to easily convert from play, to mealtimes or even quiet time. Careful consideration of colour in spaces, such as a counselling room with a bright yellow sofa to encourage positivity, a more serene blue in the physiotherapy space, to the nurturing rose pink used in the night-time lounge on the first floor. The colours in the hospice, were chosen to inspire and encourage, uplifting all those who work and stay.





“EVERYONE WHO VISITS THE YOUNG ADULT BUILDING COMMENTS ON THE DESIGN FEATURES; THE MODERN, YOUNG FEEL AND THE BEAUTIFUL FABRICS”

LINDA MCNEE, HEAD OF YOUNG ADULTS

When working in healthcare settings, especially with specific needs and neurodiversity there is always a battle between aesthetics and functionality. Furniture, fabrics, colour and lighting all need to benefit the needs of the user, as well as fitting in with the overall design aspiration. Requirements such as anti-microbial & waterproof upholstery, durable furniture for high energy situations, the end user may experience, and of course fire-retardant accessories. With amazing suppliers who are not only fit-for purpose but also eco-friendly, accessing design led and environmentally conscious products is becoming much easier. Low

VOC paints, upholstery made with less water waste, furniture and flooring that is FSC certified and up cycling where possible are all ways we can make more conscious design choices, which are still suitable for the healthcare sector. Allowing suitable products to meet a well-designed space, not only looks beautiful but can potentially improve the outcomes, independence and comfort for the end user too.

The Hospice project is one very special in my portfolio, not only because of the personalised aspects the young adults were able to input on, but that it also allowed me to gain my BIID Registered Designer accreditation, and continue to champion the need for beautifully, functional and environmentally conscious spaces which are inclusive and promote wellbeing.

<https://www.moodinteriors.co.uk>



THE POWER OF NATURE IN CHILDREN'S BEDROOMS: DESIGNING CALM, TIMELESS SPACES FOR EVERY AGE

“As both a mother and designer, I’ve discovered that infusing children’s rooms with nature-inspired elements – like tranquil colour palettes and forest murals – creates calming, restorative environments that nurture well-being. From toddlers to teens, nature-themed spaces provide a timeless, stress-reducing refuge, offering the same psychological benefits as being surrounded by nature itself.”

Yoko Kloeden

Designing children’s bedrooms is a delightful yet complex challenge. As a mother and designer, I’ve found that the most effective and enduring solutions stem from the restorative power of nature. When I renovated my own home in 2017, I embraced this philosophy wholeheartedly, creating spaces inspired by *shinrin-yoku*, or forest bathing, for my three young children. With tranquil colour palettes and forest murals, I sought to create calming environments that would nurture their sense of well-being.

This approach has proven equally valuable for my clients’ projects.

Themed around nature, these spaces not only feel timeless, but they can work for toddlers and teenagers alike, and also provide the psychological benefits of a connection to the outdoors. Research shows that nature-inspired decor – whether a mural, artwork, or green hues – can replicate the mood-enhancing and stress-reducing effects of a window with a view of nature.

For today’s overstimulated children, bedrooms should be havens of calm – a refuge as much as they are for adults. But achieving this balance involves navigating several key challenges.





Key considerations when designing children's bedrooms

Multi-Functionality

Children's bedrooms must serve dual purposes: daytime play or study zones and nighttime retreats. Unlike adults, whose work and sleep spaces are typically separate, children need environments that can support productivity, playfulness, and rest.

To meet the need for multifunctional spaces, we balance light, playful elements with a soothing foundation. While darker hues often promote adult sleep, children's rooms benefit from light, airy colours to enhance natural light during the day. To ensure quality rest, we always recommend high-quality blackout blinds.

Whimsy can be introduced through playful accessories like patterned cushions or imaginative light fixtures, leaving the overall decor neutral and timeless.

Long-Term Adaptability

Children grow – and their preferences evolve – at a remarkable pace. Designing spaces that adapt to their changing needs while maintaining aesthetic appeal is essential.

Opting for nature-inspired themes, which have universal appeal, helps avoid the trap of age-specific decor. Furniture should also grow with the child. Adjustable shelving systems allow toys

and books to remain accessible to little ones while providing storage for less-used items above. Securing furniture to walls ensures safety as children explore and climb.

Incorporating Personalisation

Children express themselves through their surroundings, whether by displaying artwork, decorating with stickers, or piling their beds high with soft toys. Designing with this in mind can be a fun but unpredictable challenge.

A dedicated gallery wall for displaying artwork or personal treasures can encourage self-expression while maintaining order. For teenagers, providing a blank canvas empowers them to adapt their space to reflect their evolving identity.

Craving Den-Like Spaces

A child's natural instinct to retreat to a cosy, private corner often manifests in how they use their bedroom. Whether it's a reading nook or a fort under the bed, these spaces provide a sense of security and ownership.

Cocooning spaces are especially cherished by children. Mid-sleeper beds with room for a cozy nook underneath or window seats surrounded by cushions can fulfil this desire. When designing study areas, we consider practical arrangements – such as facing desks toward the door to minimise distractions and foster a sense of control over the environment.



Material Safety and Sensory Development

Children's smaller bodies and developing senses make them more vulnerable to the effects of toxic materials. Selecting materials that are safe, natural, and supportive of sensory exploration is a top priority.

Material selection is critical for children's spaces. We prioritise natural, non-toxic materials such as zero-VOC paints and responsibly sourced wood. Proper ventilation is also vital for creating a healthy environment. Beyond safety, these materials enhance sensory engagement, fostering a deeper connection to the natural world.



A Timeless Philosophy

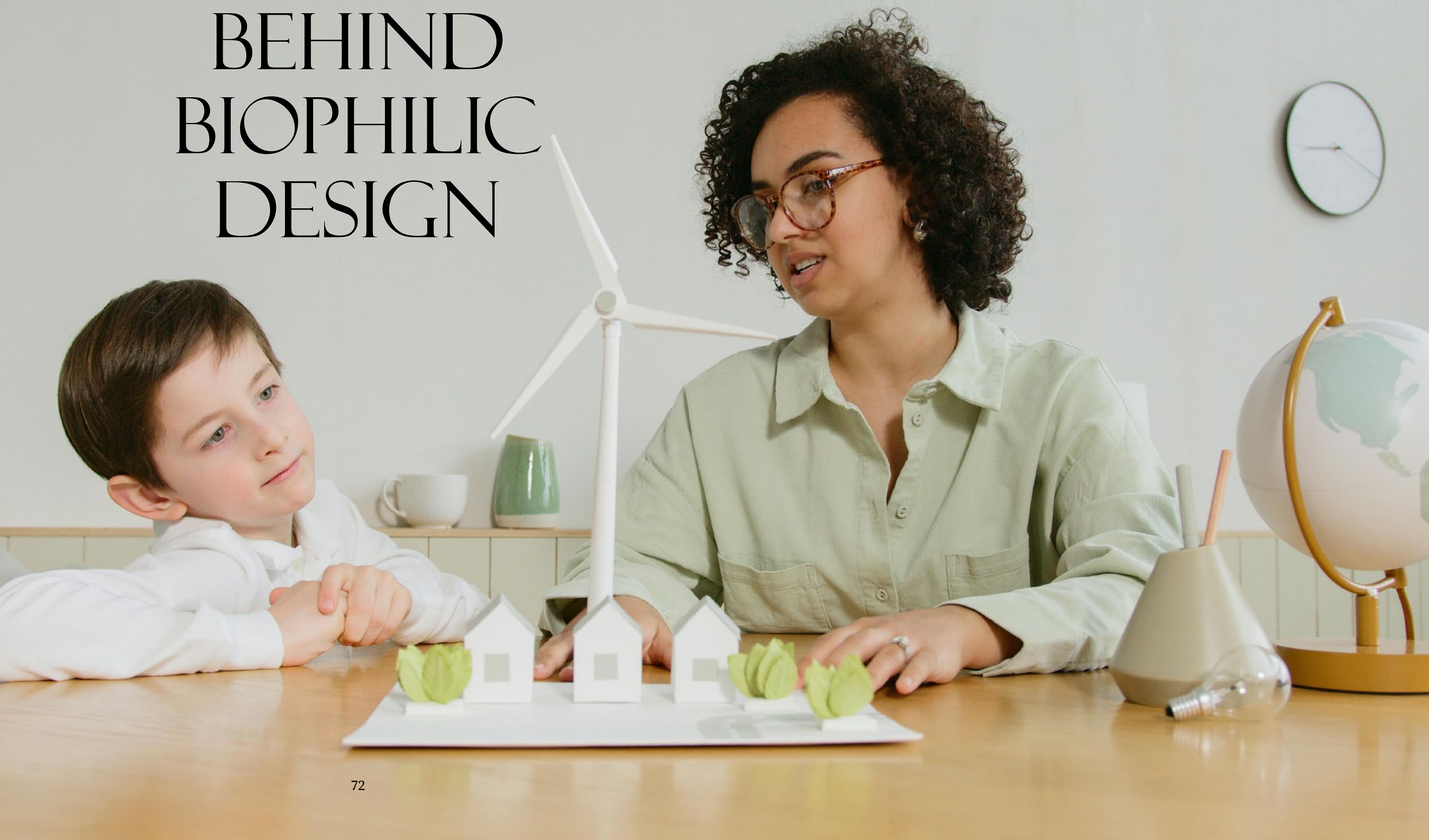
Nature-inspired design provides an enduring and versatile framework for children's bedrooms. Its universal themes grow with the child, and its therapeutic benefits offer a welcome reprieve from the stresses of modern life.

By approaching these spaces thoughtfully, we can create not only beautiful rooms but also environments that nurture a child's development, creativity, and well-being – providing them with their own little sanctuary, as timeless as the natural world itself.

Founder of Yoko Kloeden Design

<https://www.yokokloeden.com>

THE SCIENCE BEHIND BIOPHILIC DESIGN



Did you incorporate nature into your life during the COVID-19 pandemic?

“People who experienced changes in their routine during the pandemic, whether having less or more contact with nature, are now more likely to incorporate biophilic design elements into their environments compared to those whose routines and access to nature remained unchanged.”

Kalterina Shulla and Bernd-Friedrich Voigt

This finding is highlighted in a recent article published in *Discover Sustainability*, co-authored by: **Kalterina Shulla, Bernd-Friedrich Voigt, Salim Lardjane, Kerstin Fischer, Piotr Kędzierski, Giuseppe Scandone and Thomas Süße**, “*People-environment relations following COVID-19 pandemic lifestyle restrictions – a multinational, explorative analysis of intended biophilic design changes*”.

Biophilic design is used to evaluate changes in human-environmental relations during and after the pandemic, as an instrument for understanding how the connection with nature influences behaviour and how individuals respond to natural

environments, seeking out biophilic design elements such as green spaces, sunlight, natural materials, etc. to meet psychological and physiological needs.

The severe restrictions imposed worldwide, especially during the first wave of the pandemic (March–June 2020), limited physical activity, and exposure to blue/green landscapes. In response, biophilic elements such as colour, water, air, sunlight, plants, animals, natural materials, views and vistas, façade greening, geology and landscape, habitats and ecosystems, wide prospect, proximity to natural resorts, etc.) became more noticeable. People increasingly longed to escape their homes when these elements were absent.





Following the pandemic, people were more attentive to incorporating into their daily lives [home growing vegetation, gardens/roofs/vases and in vistas of nature, glass surfaces for more sunlight and illumination](#), etc. When changing home, is favoured proximity to urban gardens/green areas, water bodies (sea, lake, river, etc.), rural areas/suburbs (natural terrain with trees and vegetation), and elevated position (i.e., looking downhill or a viewpoint with a wide prospect). Post-pandemic home adaptations include also biophilic elements from the category of [Nature of the Space](#): Prospect, Refuge, Mystery and Risks.

This study identifies more changes in relocations than indoors adaptations. Nevertheless, the desired changes may contradict with possibilities, thus considering natural elements whenever possible. Despite, the pandemics' far-reaching negative effects, it triggered self-reflection and more actions toward natural surroundings and lifestyle. An individual's response to biophilic design elements is influenced by personal beliefs, past experiences, and socio-cultural factors, without any significant relation to the general restriction during the lockdowns, as analysed in six European countries, Italy, Germany, Poland, Spain, Denmark and Sweden. (*e.g., perceived severity of the restrictions corresponds with the objective severity of restriction in Italy and Spain (strong) and in Germany and Poland (moderate) for Sweden (weak), while in Denmark moderate and strong in contrast with the countries' weak objective status*).

The study reinforces the idea that the COVID-19 pandemic restrictions and lockdowns were accompanied by general

discomfort due to alterations in livelihood, work, and activities in nature and in-person social interaction. Based on these findings, it can be argued that the severity of restrictive measures (strong/moderate/weak) imposed by countries during the global COVID-19 pandemic influenced the likelihood of including biophilic design for changes in people-environment relationships. However, this effect occurs mainly when restrictions are individually perceived or experienced as severe due to personal circumstances. In this regard, individual-level perceived severity of restrictions appears to be a stronger proxy of the intended environmental behaviour change than country-level objective indicators. These findings underline the relevance of the element of individual environment perception within the systemic reasoning of [mindsponge theory](#). In times of perceived crisis of the person-environment relation, the restorative effects of Biophilic Design may serve as an explanation of an individual's intention to change the lifestyle towards more natural surroundings. The mixed method analyses conducted at different sample levels revealed that, despite drastic social distancing measures, the experienced discomfort created by "overcrowding/limited space discomfort" was identified as the most influential variable in relation to the "Time spent outside nature", independent of other variables such as country, gender, and age. Likewise, the comparative data evaluation between Italy, Spain, Germany, Poland, Sweden and Denmark does not reinforce the assumption that people-environment relations differ according to the severity of the measures in a country context but rather according to individual responses to crises.

In this context, individual's perceptions of the severity of restrictions is a stronger proxy of the intended environmental behaviour change than objective country-level indicators of (e.g., lockdown status, state of emergency, ban on outside activities; border and travel/international flights, and events). Perceived "overcrowding" (subjective to individual perceptions unrelated to the official definitions for person/sqm²), is the strongest variable linked with the use of Biophilic design after the restrictions.

There is a post-pandemic tendency toward a greater connection with nature and healthier habits regarding nutrition and living, as emphasized by these findings through individual perception of the living environment within the systemic reasoning, which can be seized by planning and design.

Although, the global pandemic revealed unhealthy aspects of current urbanization and living styles, at the individual level are more aspirations than actual change,

so proper societal structures and long-term design measures are needed to enable larger-scale changes of people-environment relations.

Co-authors: Kalterina Shulla,
Bernd-Friedrich Voigt, Salim Lardjane,
Kerstin Fischer, Piotr Kędzierski,
Giuseppe Scandone and Thomas Süße

Notes

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14 *Patterns of Biophilic Design*, Terrapin Bright Green <https://www.terrapinbrightgreen.com/reports/14-patterns/>



REDISCOVERING WONDER: HOW BIOPHILIC DESIGN SHAPES THE GROWING MIND

Chintamani Bird

“From the memories of childhood adventures in nature to the science behind brain development, this article explores how biophilic design can nurture curiosity, emotional growth, and mental health in children. Imagine a world where the smell of frangipanis, the feel of grass underfoot, and the joy of exploration are integral to daily life – what if we could design environments that unlock these experiences and shape healthier, more connected minds for future generations?”

These are some of my memories of the summer school holidays.

My older sister and brother were bigger than me, and I often felt sad because I had to sit in the middle seat of Mum’s pink Balette. It was hot and sticky, and I never got to sit next to the window. We’d slather baby oil on our skin as we sunbathed under the Australian sun, trying to achieve that golden glow. During the summer, the only things on television were cricket and tennis or other shows that seemed downright boring to a little girl who loved horses, camping and playing. The warm summer nights, with sweltering heatwaves reaching 34 degrees during the day (it was the 1970s, after all), turned our backyard pool into a playground filled with splashing and playful imagination for a little girl seeking cool relief.





Christmas and the traditional pilgrimage to my Auntie's house in Lane Cove would arrive. We enjoyed scorched almonds and the lively chatter that filled the room, reverberating across three generations. I would occasionally go through the backyard fence into the park, where I would feel the harsh spikes of Bindii jabbing into my little feet. I would follow my older cousins down to the water's edge, looking for crabs or climbing the trees in the park.

Dad would pick up my sister, brother, and me to take us to Nan's house in Kingsford, in the Eastern Suburbs of Sydney. We would sit in the formal dining room, surrounded by the Queen Anne furniture, which had a distinctive smell. The imposing dark timber and the sideboard filled with fine China and silverware created a warm atmosphere. The turkey was the centrepiece of the table, and the traditional cracking of the bonbons was the first thing we did. We would put on the paper hats and share the toys and little jokes that were always funny when we were that little.

Afterwards, we played in the backyard, where my Nan's azaleas were a key feature. I remember the prickly buffalo grass under my feet and the intense aroma of her frangipani tree, which made my nose cringe. I enjoyed spending time with my cousins, aunt, and uncle. These memories will stay with me for a lifetime.

Boxing Day would come, and the car would be packed for the long drive to Sussex Inlet on the south coast of New South Wales. Dad had fresh batteries for his cassette player, and this is where my love for John Denver's music began. His songs played on repeat during the trip. And yes, I was

still sitting in that terrible middle seat, squeezed between my sister and brother!

We arrived to the familiar sights and sounds that we experienced almost every Christmas holiday, that we spent with Dad. The community consisted of around ten families, all staying in the same place. We had picked our rooms and unpacked our bags, so now it was time to explore. Meanwhile, the adults were doing what they typically do on holidays: having a yarn, a laugh, and a beer.

I remember walking down a small dirt track leading to a long stretch of parkland alongside the water's edge. There was a jetty where I would sit and watch swarms of tiny fish gather around its pylons. Occasionally, I spotted an eel hiding in the seaweed. Sometimes, I did some fishing while daydreaming and watched the clouds roll by. The sea breeze flowed through my hair, gently brushing my face; it felt so refreshing, feeling the wind blow in and around me. It gave me the sought-after peace I needed and made me feel a little dreamy and inspired. The current was so strong as the tide flowed in and out. I could see the stinging Jelly Blubber drifting in the water and saw its mushroom-shaped top propel it left or right. Opposite the jetty, there was an island, and I often wondered what it would be like to explore it.

I've always had a curious mind, filled with questions and an adventurous spirit that urged me to seek out the wonders of the world. This curiosity filled me with joy and love, inspiring me to pursue more adventures. I found awe in the beauty of the natural world, feeling a mix of amazement and fear, yet always comforted, loved, intrigued, and inspired.

Life has been a labyrinth of experiences. I can still recall the spikey sensation of my Nan's grass on my little feet from almost fifty years ago. I often remember Sussex Inlet with a mix of nostalgia and lighter and darker memories. But nonetheless, these memories are the experiences that have moulded me, and I will carry them with me until that last exhale.

But why? Why do I still remember the feeling of the grass's prickle or the painful spikes of Bindii's on my little feet? Why would a summer breeze that flowed over the waves at the beach send me into a deep sigh of relief, where my shoulders would drop a little bit lower, and my cheeks and jaw would become a little more like jelly than cold butter.

We were bodies that could feel before walking, crawling, or communicating. We could feel pain, anger, nervousness, fear, hunger, cold, hot, and unadulterated joy. Our brains are designed to help us understand the world around us. While our lower brain, often called the reptilian brain, is fully developed at birth, the higher regions that control executive functioning don't fully mature until our mid-to-late twenties.

This is where our journey begins.

From the moment we are born, our brains and bodies are continuously filled with information about our surroundings, interpreted through body sensations and sent back to the brain. We are constantly engaged in a feedback loop, translating, understanding, and learning from our experiences.

I remember the sensation of the grass prickling my feet, the smell of my Nan's frangipani, the sound of John Denver's

songs, the scent of salt in the air, barbequed sausage sandwiches topped with caramelised onions and tomato sauce, and my mum's voice when I needed to hide.

Our brains constantly learn and evolve to help us navigate our environment and survive. This manifests in countless variations of fight, flight, freeze, fawn, or a reassuring sense of safety for each individual.

Brain development is also influenced by a child's experiences, relationships, and care. I have experienced positive moments, like the smell of my Nan's Frangipani's, and I have experienced darkness beyond compare. But I always saw the light when I gazed up into the stars in the night sky. With this, I believed that nature was my comfort, my solace, and my home. No matter where I was, I knew all I had to do was connect to nature because that's when I knew I belonged and that I mattered. Positive experiences in early childhood can help children develop the skills they need for success in school and life. Connecting to nature at a very young age creates a form of stewardship in later life for the environment and connection to other living forms and beings. What an amazing outcome! Consider the possibilities we can achieve if we just went outside and sat underneath a tree or played and connected to the world through the lens of nature.

No matter what age, engaging the mind and understanding the brain are two distinctive elements that are entwined. When considering our children and our own childhood, we see a consistent theme of learning, growth, exploration, and curiosity.





Our minds and brains develop and we become that little girl that pretended that she had three horses prancing in her backyard.

Biophilic design allows and has the potential for the mind and brain to develop and transform a little girl's perception of the world.

Consider this.

What would happen to that little girl who couldn't smell the salt, feel the soft breeze on her skin, or appreciate the warmth of the summer sun and the refreshing coolness of jumping into the water? Would my curious and adventurous spirit have ever emerged? Would my brain have developed an understanding of the variations in the world around me? Would I know the excitement of exploration and the boredom of cricket and tennis? Would I have been able to daydream in the clouds and imagine funny shapes? Would I ever have experienced the lasting memories of frangipanis, azaleas, and warm hugs? Would I be able to believe, imagine, and pretend that I owned three horses, galloping, cantering, and trotting in my own world, enjoying playing alone? What would it be like without trees to climb and cicadas to listen to?

What if I got upset and the adults around me were unable or unwilling to support my emotional needs?

Instead, I may be offered something that provides a quick dopamine fix to quieten me, leading me to dissociate from the beautiful world around me. My brain would check out, numbed by flashing lights, extreme highs and lows, and

various sounds. Dissociation occurs when we become disconnected from ourselves, our emotions, and our surroundings. Dissociation is a complex issue that can have several effects on the brain, including neuroanatomical changes. Dissociative disorders can involve problems with memory, identity, emotion, perception, behaviour, and sense of self.

And I wonder why we are in a mental health epidemic!

While navigating the complexities of our emotions, the upstairs and downstairs parts of the brain function at different stages. The left and right sides of our brain attempt to communicate with caregivers while a little girl tries to understand and learn about the world. We continuously translate our experiences into intrinsic and extrinsic memories. However, we often turn to screens as a way to cope, which is not helpful for brain development.

The brain goes through several stages of development, with the sensorimotor stage occurring up to the age of two. This is a critical period when we learn through our senses. During this time, the brain functions like a sponge, absorbing and learning everything around it through sight, hearing, touching, smelling, tasting Broccoli and Brussels sprouts, balance, and body awareness. Our bodies are made to move, feel and experience the world without being coerced into a seated position. We should not be teaching our brains to numb out and dissociate with television, video games or an iPhone or try to get a dopamine fix when bored or anxious. The developing brain is open to influential experiences across various developmental stages.



So, what happens to that little girl. What happens if I am in a room that lacks colour, a variety of sounds, temperature variations and tactile experiences that would develop my ability to connect with the environment. The opportunity for me is lost. My sense of self would be dulled because I wasn't allowed the opportunity to learn through my senses and experience the world in the present moment. My brain loses the opportunity to embrace its potential because it needs to move to the next stage of development with what it has been given.

Sadly, we are missing out on these valuable opportunities because we are not engaged and have checked out of the present moment of potential wonder.

Welcome to today's world of screens and disconnection.

Engaging the mind and understanding the brain are two distinctive elements that are entwined, regardless of age. When considering our children and our own childhood, there is a consistent theme of learning, growth, exploration, and curiosity.

Our minds and brains develop, and we become that little girl pretending to have three horses prancing in her backyard. Biophilic design allows and has the potential for the mind and brain to develop and transform a little girl's perception of the world.

So, which life would you like for our future generation? One that is connected or disconnected, living in the moment of smells, sights, and sound that evoke wonder and curiosity, or screens and massive mental health outages? How could we design a place that helps us tune in to curiosity and helps us understand and translate the feedback that the body is giving us through body sensations?

Biophilic design can change little people's lives. Just asked that little girl who looked up at the stars and dreamt in the clouds. Make it tactile and colourful and ensure that she is never constantly in a temperature-controlled environment for extended periods. Have temperature variations, which helps the brain understand seasons. Use motives and shadows that can move with the wind, which will help with circadian rhythms. Support curiosity with open and closed spaces and way finding that sparks hide and seek. Ensure they can get their hands dirty and be able to splash in puddles of mud in the rain. Wear woollen jumpers, take them to see the cows get milked, and smell the hay and manure. Take them bushwalking or hiking, listening to the birds chirp and seeing how the world grows and moves. Childhood can be a wonderful time, but it is up to us to provide them the opportunity and allow them to grow and develop to be future stewards of the world and make it a better place.

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Alfresco Breaks Boost Productivity

“Regular alfresco breaks amongst nature for enhanced wellbeing and performance.”

Nigel Oseland PhD CPsychol

At the October 2024 Workplace Trends conference, [Nicola Millard](#) reminded us that the brain can only cope with four hours of intense work each day – see [Pang](#) for more details.

It reminded me of [Tony Schwartz’s Energy Project](#), which proposes we can work intensely for 90-minute periods, so long as we take a proper 20-minute break between them, and three such periods of intense work per day is more than most will achieve. Also, let’s not forget the [Display Screen Equipment Regulations](#) which recommends a 10-minute break every hour or so.

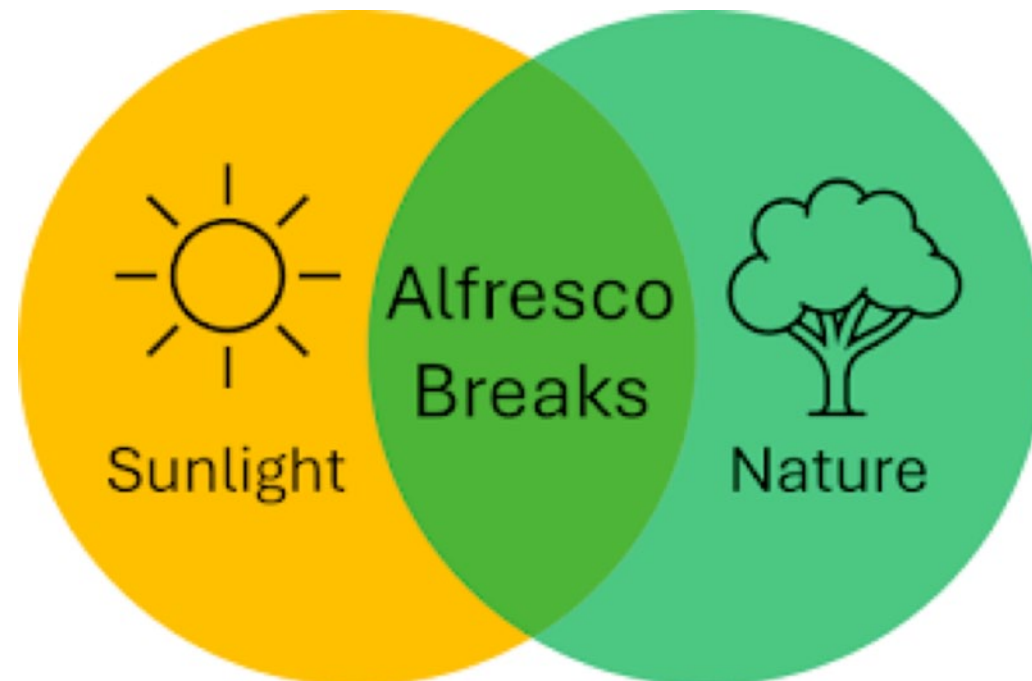
Counterintuitively, it seems the key to productivity is to take regular breaks.

[Ulysse Dormoy, Bob Fosbury and Glen Jeffery](#) explained that our mitochondria, the cell’s batteries, require near-infrared light to energise us, reduce aging and aid recovery from illness. They went on to explain that the current trend for white LED lighting, with no infrared, can lead to red light starvation, mitochondrial dysfunction and poor health. One answer is exposure to infrared light sources such as naked flames, but the simpler answer is spending at least 20-minutes per day outside.



The link between sunlight and Vitamin D production is well documented. As I highlight in my previous book, *Beyond the Workplace Zoo*, Vitamin D is exposed in our skin when exposed to sunlight, it allows the body to absorb calcium which

is essential for strong and healthy bones. Vitamin D deficiency is also associated with muscle weakness, immune system disorders, cognitive impairment, fatigue and depression. Sunlight is therefore essential for long-term productivity.



Natural light also regulates our circadian rhythm and sleep patterns. Sunlight stimulates cortisol and serotonin to be released which increases alertness and readies us for action. In contrast, sunlight suppresses melatonin and as daylight

fades more melatonin is produced inducing relaxation and aiding sleep. Lack of daylight, such as those offices without windows or with deep floor plans, are likely to result in lethargy and loss of productivity.

Based on the above findings on daylight, spending a little work time outdoors each day clearly has long-term health and productivity benefits.

Access to natural light is a core biophilic design principle, even though biophilia is more associated with greenery and landscapes. Again, as I highlighted in *Beyond the Workplace Zoo*, [Park and colleagues](#) found that forest bathing, or Shinrin-Yoku, helped reduce stress, measured through heart rate, blood pressure, cortisol levels and immune function. Furthermore, the Kaplans proposed [Attention Restoration Theory](#) after finding that exposure to nature

can reduce mental fatigue, improve the ability to focus and reenergise those conducting taxing work. A study by the [University of Kansas](#) found that lateral thinking (creativity) improved by 50% after the participants spent time walking in the countryside. [Simone Ritter](#) found that lateral thinking improved by 15% when people were exposed to new experiences, such as an alternative route to work, as it unlocked "functional fixedness".

Based on the above findings, spending a little work time outdoors around nature also has long-term health and productivity (creativity) benefits.



I therefore propose regular alfresco (or more accurately all'aperto or fuori) breaks amongst nature for enhanced wellbeing and performance. Such breaks could be a solitary walk (particularly good for creativity and problem solving), a walk with one or more colleagues, sitting or dining with colleagues (for socialising and connection) or an outdoor meeting, either sitting or walking (great for

one-to-one meetings and brainstorming). The alfresco breaks can take place in nearby parks and gardens or, if available, in the landscaped surroundings or roof terraces of the office.

Don't just sit there, go alfresco!

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PLANTS



The Healing Power of Gardens: Why Children Need Nature to Thrive

“In a world increasingly dominated by screens and indoor living, the simple act of gardening offers children a profound connection to both their environment and their own well-being. From nurturing plants to observing the rhythms of life, gardening not only supports cognitive and emotional growth, but it also strengthens the body’s natural defences, creating a foundation for a healthier, more sustainable future.”

Lara Cowan

I wonder if we asked one million adults across rural areas all over the world about their fondest childhood moments, how many would come back with a memory of being in a garden, outdoors in a field, or in the woods?

Children need gardening for the good of their souls and to give them a feeling of comfort in the world almost as much as they need parental figures and human love. Being in the garden gives you a sense of being at home in the world. And that provides us with a sense of belonging and stability in our

childhood right through to adulthood that we yearn for and need to flourish cognitively and socially.

Gardening, gives children access to people who value nature, people they might not have otherwise spent quality time with indoors. Essentially it gives them time with adults while they are fully focused and present giving children the type of attention needed for spiritual and cognitive growth that so often is lacking day to day adult – child interaction these days as the phone screen dominates.





Sowing seeds, watching roots grow, and seeing Robins dig for worms gives children a visual map displaying the unity of life. It widens horizons on the child's inner landscape ameliorating both their emotional and physical health and mirrors this effect on the outer landscape where relationships with the self and with others are established on holistic terms and hopefully enjoyed throughout their lives.

A very simple equation and critical these days more than ever, is that children need gardening because gardening can give them outdoor exercise and a desire to bring natural foods into their diet. Not only do they need it for exercise and dietary components, but they also need the microbes, phytoncides, and negative ions that interaction with plants and soil gives their bodies. Introducing children to these vital atmospheric gems enlivens health-positive functions in their biological systems, for example by stimulating and regulating dopamine and serotonin productions, regulating blood sugar levels, and a host of biological reactions that rely on contact with the natural world to increase a child's capacity to thrive and grow.

The strengthening of the microbiome in the gut intestine has been proven to be key to our ability to avoid and recover from diseases (a good read here is Super Gut by Dr. William Davies).

Exposure to exercise, diet, and the natural world builds a home

environment that is a strong body and adaptive resilient cognitive processing system – something we all need as a basic starting point if we are to live a fulfilling, long, and happy life.

Helping children to become gardeners, and growers, to learn how to make a hundred plants from one plant through cuttings or seed sowing is a gift that will one day possibly save their life. It is a practice that brings hope, purpose, and real-life nourishment to the soul and to the home.

Developing gardening skills gives children a chance to understand nature, to respect all natural living cells, plants, and insects, and to become people who make sustainable life choices. They will hopefully, by using their inner compass and with knowledge of the ever more treacherous state of nature become climate-conscious, nature advocates and give the natural world another chance to rebalance in favour of the laws of nature, rather than those of the human invention that has so recklessly put us in peril.

International bestseller Richard Louv wrote a wonderful book called Vitamin N and on his website writes a piece under a similar title 'Ten Reasons Why Children and Adults Need Vitamin N' I would recommend readers interested in this topic to have a look into his work.

<https://www.botanicshed.com>



Fun plants for children

“Unlock the secret to nurturing a child’s love for nature with plants that captivate and engage at every age—from easy-care succulents to quirky Venus Flytraps and trailing String of Pearls. Not only does this spark curiosity, but it also fosters responsibility, connection with the environment, and a lasting appreciation for the green world around us.”

Coll Smith

Many children find plants fascinating. Nurturing this interest is not only good for involving kids in the wonderful world of plants but also good for their possible futures for both the kids and the plants.

As soon as they show any interest, encourage this by giving them plants to ‘look after’. Best starters include easy care cacti and succulents such as Bunny Ears cactus (*Opuntia Microdaisy Albata*). Or heart-shaped Hoya or fascinating living stones (*Lithops Pleiopilos nelli*) or *Sempervivum*.

For those a little older or needing more plant stimulation, progress to Spider plants (*Clorophytum comosum*) which ‘sprouts babies at a rate of knots’, prayer

plants (*Maranta leuconeura*) ‘which folds its leaves at night’ and the pretty flowering *Kalanchoe* or two-coloured *Tradescantia*.

Why not follow the advice from ***At Home with Plants***, which suggests letting them ‘plant a container of small spring bulbs – try *Muscari* (grape hyacinth), *Galanthus* (snowdrop) or *Crocus*’ for the youngsters ‘to watch them develop and bloom’.

By the time they are teenagers encourage their interest with plants that do something like the Venus Fly Trap or plants that are fascinating because of how they look or what they resemble. Some favourites in this category include String of Turtles where the leaves trail down long stems and look like turtle shells.



Some other fun trailers which will tempt teenagers include the easy to care for String of Teardrops (*Senecio Herreianus*). These trailing succulent plants just need a little water once they have dried out.

Similarly, String of Pearls (*Senecio Rowleyanus*) produces round shaped leaves that are perfect for hanging baskets or tumbling over a shelf. They also produce white blooms delicately cinnamon scented.

Other plants which are easy to care for that teens may consider are the *Crassula*, the Snake Plant (*Sansevieria Laurentii*), the Chinese Money Plant (*Pilea*), *Tradescantia* – mentioned earlier – or the Peace Lily aka *Spathiphyllum wallisii*.

Information from various sources including ***At Home with Plants*** by Ian Drummond and Kara O'Reilly

www.plantsatwork.org.uk



ENVIRONMENT PEOPLE PLANET

Rooted Biophilic Design

“There’s nothing new about being inspired by nature. In fact the reason why Biophilic Design is so powerful is because it taps into our evolutionary history, which is a very long story of being surrounded by and learning from the more-than-human world. A world in which we all used to live in daily close connection.”

Freyja Sewell

From cave paintings of animals, to bird headed gods in Egypt, to the Art Nouveau movement, humans have always drawn from the natural world, observing it, dissecting it and taking from it.

So what is new about Biophilic Design? Well at its worst, not much! Some “Biophilic” designers are happy to stop at observation and extraction of data and ideas. But those designers are missing the opportunity that this special time in design history offers us.

For the first time not only can we observe the visible, we have

increasing knowledge about what was previously invisible. The marvels of the microscopic, the gigantic potential of genetics and also the place we hold within the larger support systems of spaceship earth. We understand our power, and its limits, more than we used to. We can measure the effect we are having as a species on the climate, the toll we are taking on biodiversity. This new knowledge is what makes Biophilic Design different from past iterations of nature inspired creativity, and to truly reach its full potential this generation of designers will accept and apply this knowledge.





This is why, for example, plastic plants from virgin sources have no place in Good Biophilic Design. How many real plants have been destroyed in the extraction and production of the plastic that is used to create their imitation? Biophilic Design works to increase the connection between humans and nature, so design which broadly destroys nature, and therefore decreases the amount available to humans to interact with, is NOT good Biophilic Design, even if it's coloured green.

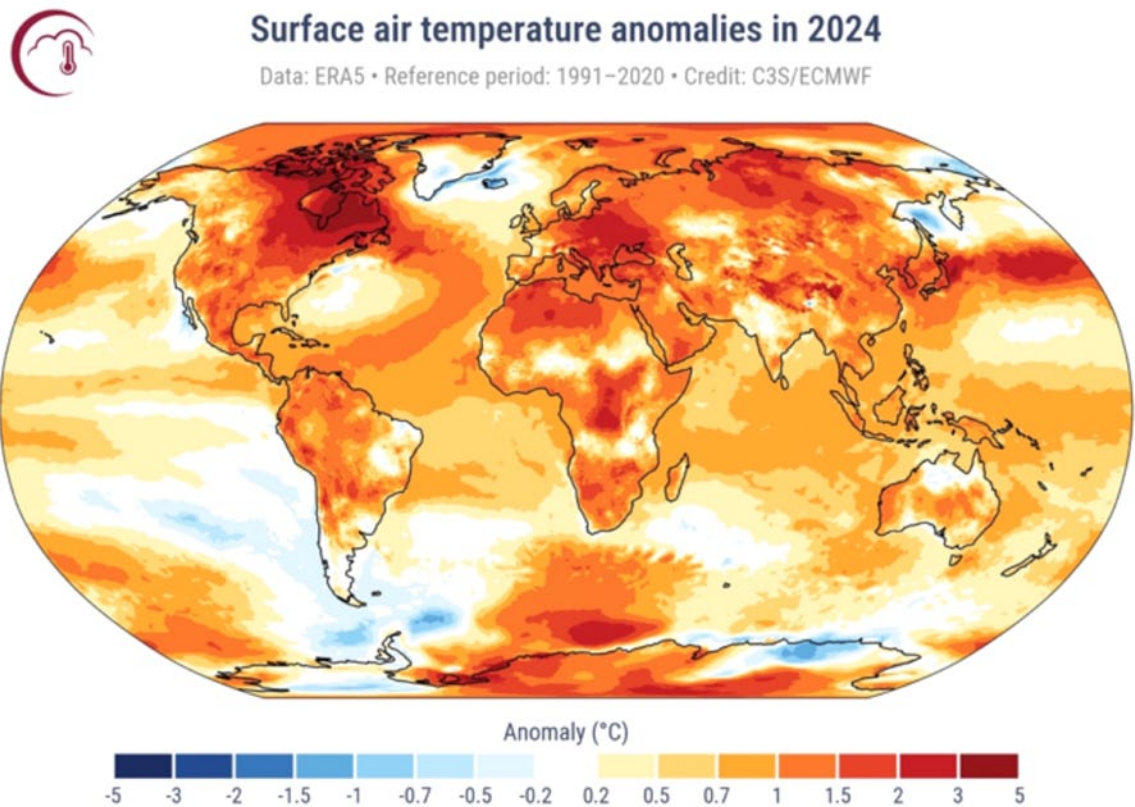
At its best Biophilic Design is a holistic practice combining scientific understanding with a personal and unquantifiable connection to the wilder parts of ourselves and the world. Good Biophilic Design is created with care for the nature that inspires it. I also firmly believe that working in this way is not a constriction, it is a parameter leading us to truly innovative solutions. At its best it is an exciting challenge to rethink the linear extractive consumption model, and seek instead a new world of design that is created in joyful collaboration with the world that supports us. Materials that grow, cities that breathe, spaces that are alive with the systems of life, buzzing with busy interspecies collaborators or ringing with the voices of our non-human relatives.

Biophilic Design is an invitation to create a less lonely world, one where we thrive as one species among many. We can only do our best, we also have to live and work in the current system, for now, but make no mistake, this transformation is already underway, are you a part of it?

While LA Burns, the Planet passed the 1.5°C heating limit for the first time in 2024...

“Last year was the hottest ever recorded – and it’s not just a one-off, it’s part of a dangerous trend that shows no sign of slowing. With global temperatures surpassing the 1.5°C threshold and emissions at an all-time high, we’ve failed to live up to the promises made at the Paris Agreement – and the consequences are already here.”

Alexander Verbeek



Surface air temperatures in 2024 (image: Copernicus; see notes for source)

It’s official: last year was the warmest year ever measured. If this sounds familiar to you, let me assure you that I’m not recycling my old articles; it’s just that 2023 was also the warmest year ever measured. It’s worse: the last ten years have been the warmest ten years on record.

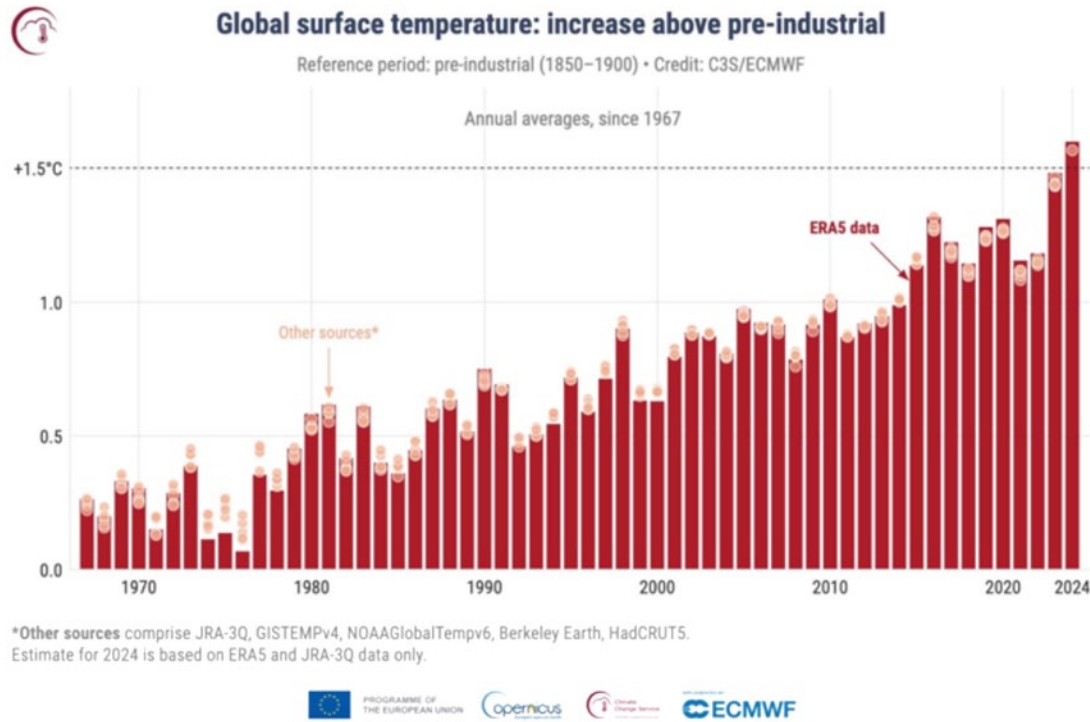
In 2024, the annual temperature was above the 1.5° Celsius warming limit for the first time compared to pre-industrial conditions. You’ll remember that 1.5°C is the internationally agreed-upon level of maximum warming; within a decade of the Paris Agreement, where we framed this ambition, we have collectively burned a hole into that promise.

And to complete our collective failure to save our planet, the incoming president of the most greenhouse-gas-pollutive country in human history has promised to – again – withdraw from this agreement.

Officially, you need data over an extended period as one year’s extremes don’t count as structural climate change. So, although we passed the threshold for a year, you may need to wait just a few years more for an article stating that the world’s governments collectively failed to deliver what they promised to the eight billion of us who have nowhere else to go and are in the hands of our leaders who still haven’t put the global thermostat down.

Worse, greenhouse gas emissions have increased in the past year, setting another record high. That’s the wrong direction on the graph; we can keep warming at 1.5°C if emissions fall by 43 percent in the next six years.

We know how to stop climate change, we have the technology, we can finance it for roughly the percentage of GDP that countries are now willing to use to raise their defence budgets, and we don’t do it.



Global surface temperature: increase above pre-industrial (image: Copernicus)

It's not that nature is not warning us. After decades of subtle signs, our planet decided a few years ago to give us samples all over the world of what a mild level of climate change means. I don't like to use many numbers in one line, but to explain why I use the word mild: we're now at about 1.3°C climate change, which is not even half of the expected climate change at present trajectory in 75 years by now: 2.7°C. Your young children and grandchildren will live in that hell. We're only in the early phase of climate change; it will get worse, far worse, while we know it doesn't have to be that way.

Last year, just before the record-breaking global warming of 2023 was officially confirmed, the world's nations agreed in Dubai to 'transition away' from fossil fuels. Instead, emissions increased by another 0.8 percent.

I recently watched a short BBC video of a woman living in Kodari, a small settlement on the border between Nepal and China. She describes how the land on the steep hillside is sliding down significantly more than before. Like in so many other parts of the world, the area suffers from stronger, more unpredictable rains, causing more floods and landslides for Nepal's mountain-dwelling population. Then she points to a spot deep below, where you can see the ruins of some 30 houses. It's all that is left from another village, another nameless victim of a climate crisis that is still not dealt with as the crisis it is.

I continue my morning scroll on social media; pictures of the devastation in LA and its suburbs pass over my screen. An area twice the size of Manhattan has been burned to the ground, and this real-life apocalypse in Hollywood's world of make-believe is far from over.

According to estimates by AccuWeather, the blazes have caused 135-150 billion dollars in damage; imagine how much energy transition could have been funded with such an amount of money. The victims of climate change are usually in villages like Kodari, which I could only mention in today's newsletter because of an exceptional report published in Western media.

Now that nobody, not even the rich and famous in one of the world's media hubs, can no longer escape climate change, it is a good moment to start meaningful climate action at the appropriate scale and speed that this existential crisis demands.

Former diplomat turned climate storyteller, chasing beauty in wild landscapes, TEDx speaker and Yale World Fellow in love with our planet Alexander Verbeek writes in our Journal regularly. This article was originally published on his brilliant substack:

<https://theplanet.substack.com>

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THE LIFE OF WOOD: A STORY OF CONNECTION AND RENEWAL

“Wood has an uncanny ability to transcend time and purpose. Unlike many materials, its journey doesn’t end when the tree stops growing. It simply shifts form. This mystery of wood’s lifecycle feels deeply relatable – it mirrors the cycles of life itself, where endings often become new beginnings.”

Odile Smith

I’m almost certain that all of us, at least once in our lives, have heard the phrase, “Get out in the fresh air... go for a walk,” or perhaps even said it to someone ourselves.

We all know why it’s good for us. Can you recall those carefree strolls in the park? Whatever the season, there’s always something magical in the air – the whisper of leaves overhead, the earthy scent of soil, and the dappled sunlight filtering through the canopy. But sometimes, the walk takes an unexpected turn, becoming adventurous – or at least curious – when we stumble upon a fallen tree. Its massive trunk, now resting on the forest floor, tells the story of a past life filled with strength and growth. And so our mind wonders off ... who knows what happened here?

Was it a storm?

Was it struck by lightning?

Or did it simply succumb to time, surrendering gracefully to gravity?

A dead tree or one that has fallen feels like a paradox: lifeless, yet somehow alive in its allure. And like a child passing a sweet shop we are drawn to it; we stop to touch the textured bark, marvel at its twisting branches, or examine the moss beginning to claim it.

It’s a reminder that nature doesn’t waste anything. But it also stirs deeper questions: What happens to this wood now? Where does its story go next?

Wondering About Wood’s Journey

Our thoughts might continue to wander: Will this wood decompose right here, enriching the soil for the next generation of plants? Will it be carried away by a stream, traveling to unknown destinations? Or could it be transformed by human hands into something enduring, like a piece of furniture, art, or flooring? Or maybe our imagination can travel further with taken away into far-fetched fantastic stories.

Wood has an uncanny ability to transcend time and purpose. Unlike many materials, its journey doesn’t end when the tree stops growing. It simply shifts form. This mystery of wood’s lifecycle feels deeply relatable – it mirrors the cycles of life itself, where endings often become new beginnings.

Why Are We So Drawn to Wood?

There’s no denying humanity’s deep attraction to wood. It’s not just its warmth or beauty but something more primal and instinctive. According to *The Nature of Wood*, a report by Terrapin Bright Green, our connection to wood is rooted in biophilia – our innate affinity for natural materials and environments.

Key points from the report reveal why wood holds such universal appeal:

Visual Warmth: The grain patterns and natural tones of wood evoke a sense of calm and familiarity, often reminding us of the forests it came from.

Tactile Comfort: Wood feels warm and pleasant to the touch, unlike cold metals or synthetic materials.

Acoustic Benefits: Wood can absorb and diffuse sound, creating environments that feel quieter and more comfortable.

Health Impacts: Being surrounded by wood has been shown to reduce stress, lower blood pressure, and enhance mental well-being.

This connection explains why wood features so prominently in our homes, offices, and public spaces. Whether we’re conscious of it or not, wood grounds us in nature, even when we’re surrounded by modernity.

Although it must be said that in some cases an excessive amount of wood may appear to be overwhelming.

Urban Trees and Fallen Heroes

London, often celebrated for its vibrant urban greenery, is home to approximately 8.4 million trees.

These trees not only beautify the city but also provide essential ecological benefits, from absorbing carbon dioxide to cooling urban spaces and enhancing biodiversity. However, with such an extensive urban forest, tree loss is inevitable. Each year, thousands of trees in London’s parks and streets fall victim to storms, disease, or the natural aging process.

London's Urban Forestry Landscape

London is organised into 32 boroughs, each responsible for managing its urban trees alongside entities like The *Royal Parks*** and private landowners. Collectively, these organizations contribute to maintaining London's greenery. According to data from the *Greater London Authority*, roughly 1,000–2,000 mature

trees are removed annually across the city due to disease or safety concerns. These removals often include iconic species like London planes, oaks, and chestnuts.

While some of this wood ends up as mulch or firewood, a growing movement seeks to repurpose it for higher-value uses. This is where companies like **Fallen and Felled** step in.



Fallen and Felled: Giving Urban Wood New Purpose

Fallen and Felled, a London-based company, specialises in salvaging wood from urban trees. They don't just collect these trees; they mill them and transform them into planks that are made available to carpenters, designers, and artisans. Their process ensures that trees that once lined city streets or shaded parks live on in another form.

By sourcing and processing timber locally, Fallen and Felled minimises the carbon footprint associated with transporting wood and reduces waste that would otherwise end up in landfills. Their approach highlights a growing trend: viewing urban wood not as waste but as a resource.

For example, a majestic oak that once stood in Hampstead Heath might be transformed into a dining table, while a chestnut from Kew Gardens could become a bespoke bookshelf. This careful curation not only preserves the character of the wood but also keeps the story of the tree alive, creating a tangible connection between nature and urban living and the spirit of place lives on.

Ancient Timbers, Timeless Stories

While urban wood tells stories of the recent past, *fossil wood* and *bog wood* take us back thousands – or even millions – of years. These ancient timbers are natural marvels, offering unique aesthetic and structural properties.

Fossil wood is predominantly found in areas with a history of volcanic activity or sedimentary deposits. Notable sources include:

- UNITED STATES: The Petrified Forest National Park in Arizona is a famous site.
- INDONESIA: Known for its colourful petrified wood used in luxury design.
- ARGENTINA: Fossil wood from Patagonia is sought after for its deep, rich hues.

The mining of fossil wood is a delicate process, often involving careful excavation to preserve the stone-like timbers. Once recovered, these pieces are cut and polished, revealing breathtaking patterns formed over eons.



Bog wood, often found in Ireland or Eastern Europe, involves trees that have been submerged in peat bogs, rivers, or wetlands for thousands of years. The anaerobic (oxygen-poor) conditions slow decay, preserving the wood while natural minerals stain it in dark, rich tones ranging from deep brown to almost black, making it highly prized for furniture and art. The recovery and extraction of this kind of wood requires specialized teams c, as their preservation and brittleness require expert handling.

Another intriguing type of ancient wood is **Kauri wood**, which comes from massive trees buried in New Zealand swamps for tens of thousands of years. Like European bog wood, Kauri wood is preserved in waterlogged, anaerobic conditions. However, it differs in scale and appearance. Kauri trees were

among the largest on Earth, and their submerged wood can be uncovered as massive, pristine logs with lighter, golden tones compared to the dark hues of European bog wood.

Kauri wood holds deep significance in Māori culture, connecting to the concept of *wairua* (spirit) and the principle of *kaitiakitanga* (guardianship of the Earth). The Māori view the Kauri tree as a sacred taonga (treasure), embodying the spirit of place and their relationship with the land. Even when buried for millennia, its essence remains part of the Earth's story, symbolizing a deep respect for nature's cycles.

This aligns closely with the biophilic design principle of honoring the spirit of place, which seeks to create harmony between human spaces and the natural world. Repurposing ancient



Kauri wood is more than craftsmanship – it's a way of preserving its spirit, respecting its journey, and embracing our role as caretakers of the Earth, echoing both Māori philosophy and can inspire broader environmental stewardship globally.

Finding, recovering, and crafting these ancient woods into floors or furniture is a meaningful act of giving a second life to these trees, allowing them to continue their journey in a way that honours their history. By repurposing these timbers, we ensure their stories endure while creating sustainable and unique pieces that connect us to the deep past.

Other examples of ancient wood include desert-preserved wood**, often found in arid regions where lack of moisture prevents decay.

While we've explored the beauty of giving fallen trees, no matter the age, a second life, there's another powerful way to extend the journey of wood – by finding new uses to timber that have already served their purpose once (or even more than once). Here are just

a few creative and sustainable ideas I have come across, for transforming wood that might otherwise be destined for the fire or landfill.

Reclaiming Alpine History

A compelling example of wood's second life comes from **De Padova**, part of the **Boffi** brand family. Their “*Madia*” cabinets crafted from reclaimed timber sourced from Alpine shelters known as *Malga's*. These beams and planks , often over a century old, once supported mountain homes and barns.

By repurposing this wood, De Padova honors the rugged weather beaten beauty of its origins. The *Madia* cabinets retain the weathered texture, knots, and imperfections that tell the story of their past lives. This approach highlights the emotional resonance of reclaimed materials, transforming history into a tangible part of modern living spaces. This also elevated this piece of furniture to a signature piece that will for sure be the center of attention and conversation in the space.



Venetian Briccole: A Maritime Legacy

Few examples of reclaimed wood carry as much cultural significance as Venice's iconic *Briccole*. These wooden poles, primarily made from oak or larch, are driven into the Venetian lagoon to guide boats and moor gondolas. Constantly exposed to saltwater, tides, and marine life, briccole need to be replaced approximately every 15–20 years.

From Waterway to Workshop

When retired, *briccole* are repurposed into furniture, flooring, and decorative

pieces. The weathered wood, marked by waterlines and holes from marine organisms, has a distinct aesthetic that speaks of its time in the lagoon.

Designers like **Alcarol** studio have embraced briccole wood for its unique story and character. For example, a *foggy coffee table* or an *anchor stool* from their bricola collection made from reclaimed briccole and downed in resin reveals the wood's aquatic past and truly makes you feel as if you are having a coffee on the famous lagoon. These pieces carry the spirit of Venice into homes worldwide.



Marble ways

In Italian quarries, wooden worktops bear the marks of circular blades cutting stone and marble, embedding the wood with powdered marble carried by cooling water. These grooves create intricate, city-like patterns. Once worn, the planks are discarded as waste. This collection reimagines these history-rich boards, giving them a new purpose.

ENVI collection



The Eternal Life of Wood

From London's urban trees to ancient bog oaks, Venetian briccole, and Kauri, wood proves that its story is far from over. Every time it's transformed – into a piece of furniture, flooring, or art – it's like giving it a fresh start.

But it's more than just creativity; it's about showing respect for the Earth. Like the Māori, who see themselves as guardians of the land, we too play our part when

And the list can go on but I would like to close off with where my imagination sometimes wonders when I see these fallen tree trunks ... and what if, what if they come to life?

Some time ago I was walking through the park and instead of seeing the fallen trees I came across an open air exhibition of by **Umberto Dattola**; my heart skipped as I realised I was not the only person on this earth to let my imagination breath life in wood.

we find ways to reuse and cherish wood.

It's a small, satisfying way of saying, "Hey, nature, we've got your back!" And in doing so, we stay connected to the rhythms of life and the beauty of the natural world. By giving wood a second (or third, or fourth!) life, we're helping its story live on, just like our own connection to the planet.

Odile Smith is our correspondent in Italy

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WELLBEING



Ensuring a Healthy Home Environment for Children to Thrive

“Our homes are where our children take their first steps, speak their first words, and lay the foundations for a lifetime of health and happiness. Ensuring these spaces are safe, supportive, and healthy is essential; not just for their physical growth but for their overall wellbeing.”

Charlie Lemmer

Whether you're designing a nursery for a newborn or improving your home environment for growing children, here are key strategies to help you create a healthier living space.

Creating a Healthy Nursery: Key Tips for Your Baby's Wellbeing – Setting up a nursery isn't just about aesthetics; it's about crafting a haven where your baby can flourish. From the air they breathe to the materials surrounding them, every detail matters.

1. Choose Non-Toxic, Eco-Friendly Materials

Babies are especially vulnerable to

chemicals due to their developing lungs and higher air intake per pound of body weight. Prioritise furniture, paints, and flooring that are free from VOCs, formaldehyde, and flame retardants. Opt for organic, sustainably sourced wood and natural fibres to improve indoor air quality and reduce toxic fumes.

Be sure to listen to [episode 8 of the Healthy Home Show Podcast](#), where I interviewed Becca Willis from Cottonsafe Natural Mattress. She offers incredible insights into how chemical-free materials protect your baby's respiratory health.





2. Improve Air Quality with Plants and Ventilation

Air quality is crucial for children's health. Babies spend most of their early life indoors, making good ventilation and pollutant-free air a priority. Consider using air-purifying, baby-safe plants like spider plants or areca palms. If plants aren't suitable, a HEPA air purifier can help remove allergens, dust, and pollutants.

Check out the [Birdie CO2 Sensor](#) – a cute and functional air quality monitor that's perfect for a nursery. I'm hoping to get them on my podcast soon to delve into how their product works!

3. Reduce Electromagnetic Radiation Exposure

Electromagnetic fields (EMFs) from electronics can pose risks, particularly for developing children. For instance, children's bodies naturally absorb twice the amount of EMF radiation compared to adults, pound per pound. This is due to their thinner skulls and higher water content. Furthermore, devices like smartphones and wireless baby monitors emit microwave radiation, which has been linked to developmental issues and poor neurological formation.

To mitigate these risks, keep your baby's crib away from power outlets, Wi-Fi routers, and electrical appliances. Use low-EMF baby

monitors, such as the SmartNOVA Baby Monitor or NUK BabyPhone (available in Europe). Switch off devices when not in use.

Download my free booklet, [Protect Your Child From Harmful EMFs](#), from my website: it's a short really simple guide for parents!

4. Embrace Biophilic Design for Calm and Comfort

Nature-inspired elements in the nursery can create a soothing environment for your baby. Use natural, muted colours, wooden toys, and woollen blankets. Let in plenty of natural light during the day, which supports your baby's circadian rhythm and overall mood. Biophilic design has been shown to reduce stress and lower cortisol levels in children, helping to calm their nervous systems and foster a sense of security. Studies have also found that incorporating natural elements like greenery and wood can improve cognitive function and creativity in children. For example, exposure to nature has been linked to a 20% increase in attentiveness and a 25% improvement in mood in school-aged children. Bringing elements of nature indoors, such as through textures, patterns, and even sounds that mimic the outdoors, provides a nurturing space that promotes overall wellbeing.

Healthy Home Tips for Growing Children

As children grow, their needs evolve, and so should the spaces they inhabit.

1. Prioritise Indoor Air Quality

Children's respiratory systems are still developing, making them especially susceptible to pollutants. Regularly ventilate rooms, use exhaust fans, and invest in air purifiers with HEPA filters to reduce allergens, mould spores, and dust particles.

2. Avoid Toxic Cleaning Products

Choose non-toxic, fragrance-free cleaning agents to minimise chemical exposure. Natural alternatives like vinegar, baking soda, and essential oils can be just as effective without harmful side effects. Or, if you're not the DIY kind, embrace the future of cleaning products with probiotic cleaners from Clean Living. Delve further into why probiotics are as important for your home's indoor microbiome as your gut microbiome in [this article](#).

3. Reduce EMF Exposure for Older Children

As children begin to use devices like tablets, laptops, and phones, it's crucial to instil good habits. Remember, the closer a wireless device is to a child's body, the greater the risk. Encourage speakerphone use or wired headsets instead of holding phones to their ears. Teach them to use Airplane Mode when carrying devices and never let them sleep with a phone under their pillow!

High-EMF habits, like letting toddlers play with tablets or teens chat on their phones for hours, can disrupt sleep and even contribute to conditions like anxiety or ADHD. Instead, promote low-EMF alternatives like downloading content for offline use and restricting screen time.

4. Soundproof and Declutter

Noise pollution can impact children's sleep and concentration. Soundproofing with rugs, heavy curtains, and acoustic panels creates a quieter home. Decluttering spaces encourages focus and provides more room for imaginative play. We dove into this concept more in my recent interview with [decluttering expert Katie Brumley](#) ... check it out!

A Healthy, Holistic Home

Ensuring a healthy home goes beyond physical safety; it's about creating an environment where children feel connected to nature, protected from harmful elements, and free to explore. From embracing biophilic design to reducing EMFs, each change contributes to a healthier, more nurturing space.

Creating a healthier home is a journey, but every small step brings you closer to a sanctuary where your family can thrive.

If you're planning a home renovation or need expert advice, check out HiiGuru, where you can connect with home design professionals for personalised guidance. Tune into the [Healthy Home Show Podcast](#) for tips and insights.

www.charlielemmer.com

The Power of Nature Play: How the Outdoors Shapes Minds, Spirits, and Morality

“As we navigate the 21st century, the need to reconnect with nature becomes increasingly urgent, especially for children. Nature play not only fuels cognitive, emotional, and mental development, but it also cultivates a sense of wonder and moral insight, reminding us that the natural world is both a playground and a profound teacher.”

Boon Lay

As we progress into the 21st century, we are discovering that much as we need to nurture the environment, we need the environment to nurture us. This reciprocity will unfold further as the century progresses. One area in which this is happening is in Nature Play. Playing in nature is increasingly recognized as vital to our children's development - mentally, emotionally, and cognitively. While the specific advantages of nature play have been extensively documented, there is a deeper intrinsic value within that deserves articulation. This value is manifested through three main concepts: the sense of wonder, learning through play, and affordances.

In a world dominated by technology and science, it is easy to forget that nature is the source of who we are and what we know. Science itself is the study of the laws of nature. Scientists like Carl Sagan found awe in the stars, “By far the best way I know to engage the religious

sensibility, the sense of awe, is to look up on a clear night.” Roger Penrose laments, “No doubt there are some who, when confronted with a line of mathematical symbols, however simply presented, can see only the stern face of a parent or teacher who tried to force into them a non-comprehending parrot-like apparent competence - a duty, and a duty alone - and no hint of the magic or beauty of the subject might be allowed to come through”. The wonders of nature are often obscured by scientific facts and learning by rote. We are so insulated from the natural world that we must make a concerted effort to experience it firsthand. But when we do, its wonders are revealed: a tree can sprout from a seed, birds can flap their wings and fly, and there are whole new worlds beneath the soil and beneath the water surface. Nature dwarfs us and, paradoxically, uplifts us, reminding us that we are both giants and ants. In exploring its vastness, adults are fellow travellers, walking beside us, not confronting us.



Nature overwhelms our senses – the blinding sunlight, scorching heat, drenching rain, howling winds and scary wildlife sounds. While it can be frightening, this unpredictability is part of its allure. In the company of adults, nature transforms into a playground – we don't just swim; we dive and jump. We climb trees, swing from branches, and discover nests. Each encounter is unique, always new and full of surprises. In nature, we don't just play, we discover.

Engaging with nature not only teaches us about the environment but also about fundamental principles of life. Just as we forget that science emerged from nature, we overlook the fact that moral principles often stemmed from observations of the natural world. Ancient philosophers from the Greeks to the Chinese saw morality this way, as natural law. Moral behaviour was never meant to facilitate communal behaviour but to foster personal growth. As children, we learn from the race between the tortoise and the hare, the transformation of the ugly duckling into a swan, and the beast who is really a prince. We believe in magic because nature is magical.

A practical exercise in self-esteem illustrates this: go into a natural setting, perhaps your backyard, and pick up an object, living or inert. Reflect on its importance within the ecosystem

and its significance grows until it seems the most important. In nature, nothing is as it seems; every object assumes multiple roles. The concept of affordance, introduced by J.J. Gibson, illustrates this: a tree is a nesting site, a food source, and shelter all at once. This variability is central to the experience of nature and to our creativity. While science describes the universe in terms of the behaviour of inert objects, our personal experience reveals nature as alive, vibrant and powerful, engaging us in play and adventure. Inherent risks coexist with opportunities for learning and self-development.

Despite its immensity and unpredictability, nature instils in us a sense of peace and calm. It gently warms us with the morning sun, cools us with a breeze, and soothes us with the sounds of rain or birdsong. In its clockless time frame, we discover stillness and quiet. Engaging with external nature connects us with our inner nature, perhaps even our inner spirit. Authors like Richard Louv warns us against Nature Deficit Disorder and E.O. Wilson argues that Biophilia is so important that "our existence depends on this propensity, our spirit is woven from it, hope rises on its currents". Our future depends on us rediscovering and reframing this reciprocity with nature.

www.linkedin.com/in/ongboonlay

Books:

Sagan, C. (2006). The varieties of scientific experience: A personal view of the search for God. Edited by Ann Druyan. Penguin.

Penrose, R. (2004). The road to reality: A complete guide to the laws of the universe. Jonathan Cape.

Gibson, J. J. (2015). The ecological approach to visual perception (Classic edition). Psychology Press.

Louv, R. (2008). Last child in the woods: Saving our children from nature-deficit disorder. Algonquin.

Wilson, E. O. (1984). Biophilia: The human bond with other species. Harvard.



Flower Essences to help children thrive

“One of the best things about flower essences is, because they contain no material matter but work on a vibrational level, they are incredibly safe for all ages. And because children are so much more used, and less resistant, to change they can respond incredibly quickly to the changes that flower essences instigate – sometimes within a matter of minutes (think Rescue Remedy) but nearly always within a week of using them for more chronic issues.”

Saskia Marjoram

I first came across flower essences more than 20 years ago when my own children were having trouble in school and they helped them become more resilient, feel less constrained and more confident in themselves. Because they were so effective for our neuro diverse sons and ourselves as mothers, a friend and I delved deeper and discovered that they are actually quite simple to make so ‘thought we’d give it a go’ – little did we know that journey we were about to embark upon! After 20 years of making and working with them, I’m still constantly amazed by the changes these bottles of plant magic bring – especially when it comes to children.

From releasing birth trauma to being less anxious, from school refusing to not speaking up for themselves, flower essences can help children tackle emotional and behavioural issues

removing old patterns and bring them back to the truest version of themselves. And all they have to do is remember to take them and the plants do the work ... it really is ‘just like magic’.

The difficult bit can be choosing which ones they might need - especially if they are reluctant to tell you what’s really going on or are even unaware of what the real issue is. Flower essence producers must translate plant language into human language and then the human wanting help must translate emotions into words – which is why many flower essence practitioners, including myself, use dowsing as a tool for choosing which essences are needed. However, as a starting point, especially if there is an obvious ‘problem’ like anxiety, sleep issues, procrastination, self-esteem or lots of anger and frustration a ready-made essence blend is a great place to start.





Another issue is that some parents don't like giving their children even a few drops of alcohol which is the usual preservative used to hold the unique energy pattern of the plant in the essence and to stop bacteria building up on the dropper. Because of this, and for others who can't take alcohol, all of our essences are available in a cider vinegar base -although some children don't like the taste of this so maybe check with them first which they would prefer.

So if you have children who are struggling with life, school, relationships and just being themselves in this complex and sometimes overwhelming world of ours, I highly recommend looking into which flower essences might help them. They really are incredible tools to have along for the ride and of

course don't forget that essences can help you too be a better human and/or parent. Many families have our boxed sets of blends so that all family members can take the ones they need on a daily basis and a dropper full of an essence can be added to a child's drinking water bottle to take throughout the day.

Saskia Marjoram has worked with plants her whole life, as a professional gardener, florist and flower essence producer and practitioner. She is secretary for the British Association of Flower Essence Producers and has a shop in East Somerset where you can visit in person or have a flower essence consultation. She also sees people via Zoom and is more than happy to answer email queries. Her website is www.saskiasfloweressences.com



*WHAT is this life if, full of care,
We have no time to stand and stare?
No time to stand beneath the boughs,
And stare as long as sheep and cows:
No time to see, when woods we pass,
Where squirrels hide their nuts in grass:
No time to see, in broad daylight,
Streams full of stars, like skies at night:
No time to turn at Beauty's glance,
And watch her feet, how they can dance:
No time to wait till her mouth can
Enrich that smile her eyes began?
A poor life this if, full of care,
We have no time to stand and stare.*

WH Davies' poem Leisure
<https://englishverse.com/poems/leisure>

TIME TO STARE

*"Biophilic Designer Steve Edge reminds us of the value of taking
the time to just stop ... and stare ... and be ..."*

Steve Edge

For centuries, physicians have extolled the benefits of spending time in the countryside, or taking in the sea air, for improving our health and wellbeing. Japanese doctors prescribe *Shinrin Yoku* (Forest Bathing) to relieve stress and depression; because, trees not only absorb airborne toxins, but also release hormones which stimulate the vagus nerve in our brains, helping calm us

down. However, recent research shows that the current generation of children are spending more time indoors looking at their devices, and less time outside in the natural world, than their parents and grandparents did, which is very worrying. In some cases, this can be even less time than prisoners in our gaols, who exercise for only 1 hour per day!



This is all very strange for someone like me who grew up roaming free in the 1950s, when there was obviously no internet, and no social media, or electronic games or even any daytime tv to keep me occupied. I'm also an only child, so when I wasn't at school, I spent most of my waking days outside with my friends, exploring my surroundings often in the Yorkshire rain, building dens, climbing trees, making mud pies, daydreaming, probably trespassing, or doing nothing sometimes, just ... standing and staring.

I grew up with the outdoor adventures of Enid Blyton's Famous 5, and Just William. My children read Alan Garner's books, which were all set in mysterious landscapes where daily life was mixed with ancient myths. And 'The Lion, the Witch and the Wardrobe' from the Chronicles of Narnia, where the children enter into an imaginary forest, through

the back of a wardrobe. A world where animals and humans live side by side and speak to each other, and the children were in tune with nature, and there's a distinct division between good and evil. Sadly, instead of these biophilic worlds, most kids of my 4-year-old grandsons' age favour cartoons of American superheroes on TV, who grapple with scary monsters, in dystopic cities. And consequently, most have nightmares of being attacked, by monsters!

Other research shows that being outside for 20 minutes a day, in a biophilic environment can help improve children with ADHD. Which is why the Forest Schools philosophy of getting children to engage positively and rewardingly with nature, could help with mainstream education system. Forest school educated children, also learn about the seasons and growing plants and vegetables.

I don't have ADHD when I'm out in the woods, David aged 14
<https://forestschoollassociation.org/what-is-forest-school/>

So, if gardening was on the National Curriculum for schools, as several TV garden pundits suggest, then all schoolkids would soon learn more about where the food on their table comes from. And consequently, we could all begin to raise a healthier society, better connected with the natural world.

If any of this happens, then maybe on our planet of rising temperatures and polluted rivers, we'll all be able to rejoin the biophilic world of the poet, WH Davies:

*What is this life, full of care,
We have no time to stand and stare....*

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Experiences That Open the Door to an Enchanted Earth

*The above is an excerpt from Maureen Calamia's new book, *The Enchanted Earth: Embracing the Power of Nature to Discover the Wild in You* which is now available wherever books are sold online. Some contributors to this book include several contributors to this Journal, including Dr. Sally Augustin, Oliver Heath, Dr. Sumita Singha, Nicole Craanen, and Vanessa Champion. *The Enchanted Earth Podcast with Maureen Calamia* is available on YouTube, Spotify, and Apple Podcast. (Excerpt from Maureen's new book, *The Enchanted Earth: Embracing the Power of Nature to Discover the Wild in You*)*

Maureen Calamia

There are certain moments in our lives that stand out from the rest. A specific sunset among the 25,000 or more we experience in our lives. A look from a doe crossing the road in the moonlight. A gentle breeze that is timed so perfectly to quell our depressive thoughts. The embrace of a tree provides both comfort and guidance.

Nature has a way of elevating the mundane and helping us feel more present.

These experiences are the ones that we not only recall, but treasure, when we are feeling ungrounded, hopeless,

and confused. We remember what we were doing, what we were thinking, and how we responded. We can recall the quality of natural light, the scents, the temperature, perhaps even what we were wearing. Although the moment may have occurred decades ago, they can stay as vivid in our minds as if they happened yesterday.

If each of us wrote our autobiography these experiences would certainly make it to those pages in some form. They are the moments that helped shape our perspective about a relationship or situation, perhaps served as a catalyst to a new calling, or changed their lives in some way.

At least that is what I thought.

Yes, there were some people that, when asked to discuss a profound nature experience, would immediately recount a story (or several) to share that profoundly shifted them in some way, even on a subtle level. Some even say that there are “so many stories, it’s hard to pick one!”

But with some people, I was met with confusion about my request. The response came in the form of another question. “What do you mean by ‘profound?’”

A profound nature experience. What I really meant was an experience that challenged their current philosophical worldview. Life-altering. A time that enabled them to feel, or truly witness, the sacred within nature. And these experiences could have such a subtle shift that no one else would notice.

An experience that opened the door to an enchanted earth.

Since the contributors to this book are a tiny subset of the general population, namely, people that are involved with nature in some way in their careers, I would have thought that they would all have lots to share.

The contributors include park rangers, authors of nature-based books, professors, philosophers, travel journalists and photographers, filmmakers, biophilic architects and consultants, earth-based practitioners, and shamans, among others. And, of course, they also agreed to participate after receiving an email to help them

prepare. So, I was surprised that some of them seemed to struggle for a story.

Because I am eternally curious, I have asked people that I encounter in my everyday life about an experience they could share.

One of the most common stories I heard was an unusual encounter with wildlife that they described to be a message from the spirit of a loved one that died. I heard about butterflies, dragonflies, and cardinals who showed up after a loved one had recently passed or continued to appear at key moments, bringing them a message of peace.

These experiences are helpful and magical, in that they help bring a message of comfort and connection, but are they profound?

Many people seemed to be at a loss; they could not think of anything to share.

My amateur research confirms the importance of this book.

In my first book, *Creating Luminous Spaces*, I told one of my moments in nature, as an adult on a beach in Maui. It subtly shifted my understanding of reality.

But I realised that, before writing about this topic, it was difficult for even me to recount a profound story of my own. I realised that our stories need to be remembered, have life breathed into them. They need to be alive in our hearts, perhaps written down in a journal, and even shared with others. Sure, I’ve had many moments of witnessing beauty and comfort. But were those moments life-altering?

When we don’t allow these experiences to see the light of day, they will be suppressed seeds that will not flower. But I learned that it will not be lost forever. It is still there and can be awakened like the cicada, from its wintertime slumber. It can be awakened with remembrance and contemplation.

Houston, we have a problem.

The quote at the beginning of this chapter, from the 2004 movie “I Heart Huckabees,” shockingly demonstrates the split between dogmatic religion and our experience of nature. How can we not see the divine in all of creation?

With the rise in scientific research, so little is seen as sacred in nature anymore. Everything, or at least most discoveries seem to demonstrate, can be explained by a physical mechanization of the world and universe. What cannot be explained is cast aside as an aberration or mathematical error.

One alarming statistic is that we, basically the American population (and much of the developed world) spent at least 90 percent or more of our time indoors. Most of us are not working outdoors or are exposed to the elements of nature on a regular basis.

In contrast, many experts are starting to understand the issues around humanity’s rapid disconnection from rhythms of the natural world. We are part of nature and have been completely dependent upon nature for our survival for millions of years. But with increased technology, we

have the audacity to act so independently from nature that we now build mega cities in the desert.

Journalist Richard Louv, in his 2005 book, *The Last Child in the Woods*, brought the issues of disconnection among our children. He coined the term nature deficit disorder (NDD) to describe the near separation of today’s youth from the outdoors and laid the facts for a comprehensive conclusion that NDD is highly correlated to the alarming rise of childhood diseases, diabetes and obesity, mental illness, and other societal challenges, such as ADHD (attention deficit hyperactive disorder), and even rates of depression and suicide.

Louv said, in essence, that technology is helpful and desired, but that it needs to be counterbalanced by exposure to, and experience in, nature. The more technology, the more nature needs to be in our lives.

Although he was initially talking about children, Louv’s next book, *The Nature Principle*, shared how this view pertains to all of humanity.

Shortly after reading this book, I attended an educator’s conference to see him speak. So important was this message that I realised it was now part of my mission. But what would I do?

And it didn’t surprise me when some of my interviewees were also inspired by Louv and the fact that his books confirmed their own purpose and mission in their lives.





Reading an interview Louv did, following the book, he told a story about speaking at a conference of builders and contractors, a mostly male audience. Louv shared a story of a place he visited as a child that was no longer there. Other stories from participants were also shared and the tone of the meeting shifted subtly into a more conscious, caring, earth-friendly dialogue.

If sharing these stories around a meeting room had this level of impact, what would happen if I wrote a book filled with experiences from famous people? How many people, who wouldn't ordinarily read a book about nature, would this book reach? Would reading this book open up their perception of nature and spirituality? Would it compel others to reflect on past experiences that they have dismissed, or inspire them to "get out there" and have their own?

I held onto this book idea for ten years....

If you would like to be a guest on her "The Enchanted Earth" podcast (which is available on Spotify, iTunes, etc), you can reach Maureen at maureen@luminous-spaces.com

YouTube – <https://www.youtube.com/@TheEnchantedEarth/>



BIOPHILIC CITIES



Rewilding Childhood: How Biophilic Design Can Transform Our Cities and Save the Planet

“Children in cities are growing up disconnected from nature, but Biophilic Design offers a path to rebuild this vital bond. By weaving natural elements into urban spaces, we can nurture creativity, resilience, and ecological awareness in the next generation – paving the way for a more sustainable future.”

Dr Vanessa Champion

In the towering cityscapes we’ve built to house and power modern life, an unintended consequence has emerged: a growing disconnect between people – especially children – and the natural world. This separation isn’t just a wistful lament for greener pastures; it’s a pressing concern that impacts our mental well-being, creativity, and ability to navigate an increasingly fragile ecological future.

Yet, amid this disconnection lies an opportunity: Biophilic Design, this wonderful concept that seeks to reconnect humans with nature through

intentional and thoughtful integration, holds the potential to transform not just spaces, but societies.

Patrick M. Lydon, the Director of the creative urban ecology studio City as Nature, observes:

“Humans are ecological beings. We are part of nature, yet we tend to build and live in spaces that reinforce a separation between ourselves and the ‘rest’ of nature. As children grow up in these environments, this leads not only to well-studied psychological and physical issues, but also inhibits their ability to solve problems in ecological ways.”



Lydon's insights reveal a profound truth: the spaces we create shape how we see ourselves in relation to the world around us. When we frame ourselves as separate from nature, we lose the ability to work with it – to see it as a partner in solving the ecological challenges that define our time. Yet, as Lydon points out, this disconnection is not permanent. Biophilic Design offers a path back to our ecological roots, sparking creativity and fostering solutions that benefit both humanity and the planet.

An inspiring example comes from Salford, where the living walls of the UK's most sustainable office building, Eden and St Philip's Primary stand as powerful symbols of what's possible when nature is prioritised in urban design. But they're also a call to action. If we want cities to truly nurture the next generation, we must take an holistic approach to integrate nature into every aspect of urban life – from parks and playgrounds to schools and streetscapes.

“As an urban school, green places are particularly special to us,” says Beverley Jackson, headteacher at St Philip's RC Primary School. “The installation of this mini green wall was a most welcome injection of flora and fauna! More than that though, we all hope it will serve as a source of inspiration to the children and to the environmentally conscious builders and architects of the future.”

The mini wall, featuring 300 plants like Euonymus and Hedera, has become a vibrant feature of the school's landscape. More than that, it's a hands-on learning opportunity. During the installation, 30 students participated in activities that explored biodiversity and green construction methods. By interacting directly with the plants and understanding their role in capturing air pollutants, the children gained a deeper appreciation of their environment.



“During installation of the wall, pupils learned about biodiversity and how sustainable construction methods can improve wellbeing,” said Ella Woodward, Development Manager at Nationwide Placemaker Muse who oversaw the development of Eden. “30 schoolchildren participated in three hours of activities focused on the three primary plants used and their environmental benefits. Involving the children helped promote sustainability throughout the school and highlighted green skills in construction.”

“A second objective was to improve the visual appearance of the school and promote mental wellbeing,” Ella continued. “Access to green space is especially important in cities as it fosters a connection with nature

and promotes learning opportunities – installing a green wall creates a positive environmental impact which is built to last. Pupils are now taking care of the wall, providing them with an ongoing project that reinforces the importance of sustainability.”

This initiative highlights a broader truth: children need nature to grow, learn, and flourish. Studies consistently show that exposure to green spaces boosts creativity, enhances learning outcomes, and supports mental wellbeing. Yet in many urban settings, opportunities to interact with nature remain limited. Projects like the mini living wall bridge this gap, creating pockets of green that benefit both the environment and the community.



Dr. Katherine Loflin, a pioneer in place science and place attachment, highlights how cities can nurture this connection to nature by creating spaces that invite exploration, wonder, and belonging.

“In Cary, North Carolina,” Loflin shares, “we’ve integrated nature into both the built environment and community programming. The recently opened \$69 million Downtown Cary Park exemplifies this approach. This world-class park preserved existing champion trees wherever possible while planting over 1,000 native trees and plants.”

The inclusion of Venus flytraps and educational signage in Cary’s park showcases the city’s commitment to engaging children’s natural curiosity. By bringing nature to places where people already gather, Loflin emphasizes, communities can foster “*place attachment*” – a critical factor in children’s emotional and developmental growth.

For children, these experiences go beyond mere play. They become avenues for resilience, creativity, and discovery. According to Loflin, interacting with nature allows children to explore their communities in ways that teach them history, biology, and interconnectedness. From walking trails shaped by Indigenous histories to exploring pre-Civil War orchards, nature serves as a bridge between the past, present, and future.

“Explorations in nature help children develop confidence and resilience while associating those positive feelings with their community,” she explains. “By integrating nature into the places where children live and play, cities create environments where the youngest residents feel rooted, invested, and welcomed.”

These bonds, built in childhood, are foundational for developing ecologically conscious and socially engaged citizens. *“As children learn about local plants, wildlife, and ecosystems, they also start to learn the history of their city, which also helps them to bond them to it,”* adds Loflin.

They remind children – and adults – that they are not separate from the natural world, but an integral part of it. As Lydon notes: *“In our Biophilic workshops -- which have included thousands of participants of every age from children to the elderly -- we have found that nearly everyone has the capacity to re-connect with nature. The results of this Biophilic relationship include a stunning explosion of creativity, and heightened ability for ecological problem solving in real life scenarios. Biophilic Design is not merely a catchphrase, but can be a key in determining the future of humanity.”*

To create a thriving future for our cities and our planet, we must reimagine urban spaces as places where nature is not an afterthought but a core feature. By embracing Biophilic Design and cultivating a connection to nature in children, we plant the seeds for a generation equipped to solve problems in cooperation with the environment.

“If we see ourselves as separate from the rest of nature, it becomes very difficult to solve problems in ways that benefit anything but ourselves. This can be reversed, and Biophilic Design is a good tool to make it happen. Biophilic Design encourages us to mend our relationships with nature, to see ourselves again as ecological beings, and thus, to find proper solutions in which we cooperate together with nature rather than alienate ourselves from nature.” Lydon adds.

Reconnecting children with nature in our cities is not just an investment in their creativity, health, and sense of belonging – it is an investment in the future of our communities and our planet. By embracing Biophilic Design, we can create urban spaces that inspire wonder, foster resilience, and teach ecological responsibility from an early age. Every park, tree, and natural element we integrate into our built environments is a step toward raising a generation that sees nature not as something separate, but as something essential to who we are. Let us reimagine our cities as places where children can grow up surrounded

by beauty and possibility – where they can dream, learn, and thrive in harmony with the world around them.

Patrick M. Lydon, Director of City as Nature, creative urban ecology studio based in Daejeon, Korea,
www.cityasnature.org

Ella Woodward is a Development Manager at nationwide placemaker, Muse
<https://www.new-bailey.com/eden>

Dr Katherine Loflin, founder of The City Doctor, based in New York City
www.city-doctor.com



Nature's Classroom: How Cities Can Reconnect Children with the Wild

“Urban landscapes have long catered to adults, but what about children’s innate connection to nature? From biophilic school design to green play spaces and tree-lined streets, creating a seamless link to nature in cities could transform how the next generation experiences and values the natural world.”

Shona Hatton

Biophilic design is not a modern invention but so much of what we do focuses on adults and workforces and the settings that they spend time in. Much has been written about the benefits of health and wellbeing in healthcare settings linked to our connection to nature, and now we have social prescribing using the benefits of nature to bring about mental health benefits, but what about our children, their education about nature, from home to school? In 2024 the UK completed its first biophilic school but surely this sector lags way behind others and isn’t it about more than just the site of the school or college?

In its fullest sense we would argue that biophilic design cannot act in isolation and that the experiences we have in childhood, into our youth can shape our experiences and expectations into adulthood.

So to design cities to support children’s connection to nature we have to start to connect to nature through landscape, public realm, architecture and interior architecture design from the home to inside nurseries, pre-schools, schools and colleges in our cities and towns.





Cities and towns and biophilic design, can only really connect children to nature if we take a truly holistic approach to create a seamless link of experiences to nature, in whatever form we can.

So how should we connect children to nature in cities and towns?

From transporting children to ecological driven spaces, green play spaces, forests and wetlands, through design that can replicate the places on earth that they may never be able to get to. Places that allow them to touch nature – dipping ponds, rock gardens, wildflower meadows – creating the incidental and purposeful oasis in cities specifically for the enjoyment of nature.

[Camley Street Natural Park | London Wildlife Trust](#)

But also, nature should be an inherent part of our cities and towns, so that children subconsciously as well as consciously connect with it. Nature should be integrated into their daily lives through green tree lined walks, wild meadow seating areas, nature-based play areas.

[About Edinburgh Living Landscape – Edinburgh Living Landscapes](#)

Routes that they walk can become nature driven, green streetscapes.

[Grey to Green – Sheffield](#)

Classrooms can move outdoors so children can learn in direct contact with nature.

[Tilbury Douglas successfully completes UK's first biophilic primary school – St Mary's Catholic Voluntary Academy in Derby – Tilbury Douglas](#)

Educating the community and families on the small interventions that can make a big nature difference – such as bird and bat boxes.

Design can reflect the natural curves and feel of nature, ([Panyaden School / 24H > architecture | ArchDaily](#)) but it has to be both purposeful and incidental, accessible and welcoming .

To preserve nature, we need to connect with it, to connect with it we need to experience it, and the earlier the better.

Nature is for everyone, it's never too late to connect, but by starting children's connections with nature early on and targeting cities and towns, only then can we build strong relationships with the natural world, seek to preserve and protect it and hopefully help to stem the mental health crisis in our children and young people.

[NHS England » One in five children and young people had a probable mental disorder in 2023.](#)

Shona Hatton, Director, Influence Landscape Planning & Design

<https://www.influence.co.uk>

BOOK REVIEWS

Journal of Biophilic Design

BOOK REVIEWS

A Home for all SEASONS

Kay Prestney and Becca Cherry

Kay Prestney and Becca Cherry Living guided by the seasons might be an ambition for many of us, but where do we start? I have to say, this book by interior designer, stylist and writer Kay Prestney and photographer, designer and writer Becca Cherry is so incredibly beautifully curated and lavishly illustrated that you'll be well on your way to knowing what to include, embrace, swap and change to help you live alongside nature's seasonal heartbeat.

Each section embraces a new season. We start the year with examples of gentle warm spring palettes, learn how to bring in patterns and materials which reflect the light, how fabrics and wallpaper can help create the mood.

Kay and Cherry also take us on a journey throughout the year looking at accessories and style tips which will not fail to enhance your home. The words are inspiring and practical, but the photography takes you directly into dream homes and spaces which you also follow throughout the seasons. Designing with nature is at the heart of everything they do, and the winter advice conjures those lush, sweet-smelling memories of pine needles and cosy accents of reds and greens while also suggesting unusual ideas, and things which I'd forgotten about. Narcissi bulbs forced into winter flowering in the home, twisting hold man's beard with twigs for a lovely winter wreath.



The book exquisitely celebrates all the beauty of the changing seasons and reminds us also that every season has beauty and its own unique inspiration. I think the main thing which excites me about this stunning book is that it rekindles the love of the changing year, it helps excite us to look for the wonder in the changing light, the scents of nature, the joy nature gives us every day of the whole year, whether that is in the brightest sunniest of summers or the coldest, wettest winters. By changing your home to reflect the season will help reconnect you to the best of what nature gives us so freely, colour, light, texture, scent and sound.

I really can't recommend this book enough.

Reviewed by our editor,
Dr Vanessa Champion

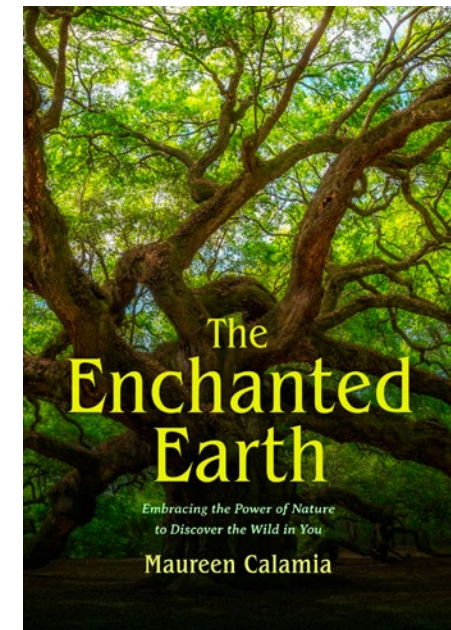
The Enchanted Earth *Embracing the Power of Nature to Discover the Wild in You*

Maureen Calamia

When Maureen dropped me a line to interview me for her new book, I was excited, not least because I always love chatting with Maureen, I invariably come away fired up with reminders that I need to keep connecting myself to those wild places I love: the mountains, the wild sea, the crazy rain and feel that feral connection which it is so easy to forget when we are going about our day to day business, staring at our computers or commuting with our earphones in and shutting out the external world.

The book's blurb promises to help "deepen your relationship with nature", and it does that. Not through prescriptive dos and don'ts but rather through a beautiful series of conversations with some amazing people. These are all nestled within pages of guidance and gentle ideas. On the chapter on "How Nature Speaks to Us", Maureen explores the language of metaphors and symbols. "How does she stir emotion and meaning?" She goes on to describe how nature speaks to us in a symbolic language, not just with our ears and eyes, but also something else, and the whole book helps us retune our "frequencies, like a radio dial to hear the sound".

There are conversations with Janine Benyus, Oliver Heath, Nicole Craanen, Sally Augustin, Sumita Singha and many more leaders who are contributing to change and reconnection to nature in our built environment. I think of the (many!) gifts which Maureen has is that



ability to listen. To really listen. She knows how to ask those questions. And just like her own professional work with nature, she creates space for each of the people she has interviewed in this book to "be", to express their memories, feelings, and thoughts.

I am going to end my review, by highlighting one of the many inspiring quotes she has also thoughtfully chosen to include. This one from Albert Einstein: "the most beautiful thing we can experience is the mysterious. It is the source of all true art and all science." And I think it is "awe" that mysterious, curious feeling we get when we are at one with nature, when our exterior aligns perfectly with our inner heartbeat, when something we see, hear or feel creates such a lift in us that it is hard to express, but we know it has changed us, even if just for a while. Maureen's book is just that, it is a beautiful gift that accompanies us in our own journey exploring our living world and our place in it.

Reviewed by our editor,
Dr Vanessa Champion

FINAL WORD

Dr Vanessa Champion
Editor

I absolutely love this issue. I suppose maybe because I still feel that childlike feeling of fun and awe I my heart when I'm out in nature.

I still can't help but stand and stare at a little acorn sitting growing on an oak tree branch, or marvel at the curling hairy fingers of a young fern about to fill the

forest with all the other ferns with tender arms of fractals and lime green.

There are so many examples of great design for children, including spaces where kids can't get out, or need special care. Plus, the issue is full of reminders why nature is good for us. Connecting children to nature at an early age is so important.

It is why we are campaigning for more green spaces in cities, towns, everywhere.

Access to nature should be a human right, we are nature, and we must never forget that when we are designing the new hospital, shopping arcade or school. Cutting ourselves off from nature is where it's all gone wrong.

From the industrial revolution you could argue, we have increasingly shut ourselves inside white walls and cold grey environments.

Our Journal and the whole Biophilic Design movement aims to reverse this

trend, to reconnect us back to our rightful place alongside all life on this amazingly beautiful and inspiring planet that we are part of.

Thank you for taking the time to read this issue, and to be part of something which is so beautiful and nurturing, for our cities, schools, healthcare, towns, planet and each other.

We offer a network if you'd like to join and boost the movement, we would love you to join us.

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