

# How to design an ADHD-friendly home

Many living spaces can be overwhelming for the neurodiverse. Now architects are creating calm, thoughtful retreats that have their needs in mind. By Francesca Specter



Maia Lemlij, an architect, has a new awareness of neurodiverse design after her ADHD diagnosis

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When Maia Lemlij stumbled upon a newspaper article about attention deficit hyperactivity disorder (ADHD) in early 2020, she found herself identifying with every symptom. It led the architect, then 40, to seek a diagnosis — something she describes as “the best thing I’ve ever done”. It has also influenced her design ethos irrevocably.

Now studying for an MSc in applied neuroscience, Lemlij — a founding partner at XUL Architecture in northwest London — has become fascinated with the emerging discipline of neuroarchitecture, a term used to describe the application of interior design and architecture through a neuroscientific lens.

Her newfound awareness has informed everything from the dimmable ceiling lights with warm white bulbs — which she’s integrated into her own home — to the approach she adopts when it comes to working with her clients: asking whether they hate strong smells, for instance, or perhaps visual clutter is their enemy? The result is a home that should feel as good as it looks, designed for a “lived experience”.

Sensory considerations have long been neglected in traditional home design, Lemlij believes. Typically, a client will approach her with a Pinterest board brimming with inspiration, then mention they have a child with autism, for example, but only weeks into the process. Considerations such as lighting or soundproofing, which are crucial for

those with ADHD or other neurodiverse conditions, are often “an afterthought”, she says. Meanwhile, interiors trends such as open-plan living can prove taxing for those with ADHD who crave quiet, private spaces where they can retreat and focus.

Diagnoses for ADHD have increased almost twentyfold in adults since 2000, according to NHS data. Some 5 per cent of children and 3–4 per cent of adults in the UK are thought to have the condition. Architects and interior designers are increasingly being asked to cater for such conditions.

A 2020 white paper titled “Design for the Mind”, produced by the global manufacturer Forbo Flooring, looked at how interiors could be adapted to neurodivergence. TikTok is catching on, with content creators such as the New York-based Katie Bowen (who has about 430,000 followers) specialising in ADHD-friendly tips.

There is no one-size-fits-all approach to designing homes with neurodivergence in mind, though. While reducing potential distractions is a good rule of thumb, Lemlij notes how individual sensitivities vary. For instance, she has a particular aversion to cooking smells, a chronic issue in her open-plan home. However, there is no conclusive evidence that having adult ADHD correlates with a heightened awareness of odours. Indeed, one research study concluded there was no link.

Yet there are notable trends:

## Lighting

Lighting should be at the forefront of any ADHD-informed design. Those with the condition are twice as likely to report photophobia (sensitivity to

bright light) as those without it. Some no-nos are more obvious, like bright, fluorescent spotlights.

Too much natural light can prove overwhelming, particularly in the middle of the day. This means overhead skylights can create a “greenhouse effect” that feels particularly uncomfortable, Lemlij says. Sliding doors or extra-large windows may have a similar effect. One way to get around this is built-in blinds, ideally on timers — “if you have ADHD, you may forget to pull them up or down”.

As a guiding principle, Lemlij recommends “warmer lighting at sunrise, then cooler ‘blue’ light in the morning and daytime for working, and warmer lighting towards the evening, mimicking

“Open-plan living can prove taxing for those with ADHD who crave quiet, private spaces

a natural sunset.” For children and adults with ADHD who experience sleep problems (about three quarters do), the right lighting can help to support the body’s internal clock.

The gold standard is human-centric lighting (HCL), also known as circadian rhythm lighting. It is a household system that “controls the temperature and intensity of lighting throughout the day, mimicking nature”. The global HCL market is projected to grow in value from \$2.55 billion (£2 billion) in 2023 to \$12.95 billion by 2030.

Bespoke HCL can be costly, however. A cheaper solution is to simply vary your lighting sources. Lemlij suggests a

mixture of ceiling lights, wall lights, pendant lights and task lights. “That gives you flexibility to change ambience throughout the day and make sure the lighting works with what you are doing,” she says. Lemlij says she has had clients spend hundreds of pounds on chandeliers and pendant lights, but then not consider which lightbulbs to put into them. As she stresses, the light colour and temperature are key.

## Colour

Biophilic design, which seeks to bring the occupants of a house closer to nature, is a staple in neuroarchitecture, and it’s no different for ADHD-friendly aesthetics. Studies have linked time spent in green spaces with lowered ADHD symptoms, including better impulse control and concentration. Other studies have linked biophilic design with improved test scores in children with ADHD.

You don’t have to have literal greenery in the house to reap these rewards. An artificial devil’s ivy hanging plant or leaf-printed wallpaper, for example, can have the same effects (although busy patterns may prove too distracting for some people with ADHD). “It doesn’t matter if it’s artificial or real — your brain processes it in the same way,” Lemlij says.

Another consideration is the use of colour, particularly in wall paint choices. While there are few definitive studies on the relationship between ADHD and specific colours, it’s generally thought that bright colours can be “overwhelming”, Lemlij notes. Colour psychologists have found that “neutral colours and muted shades of blue, green and beiges have a calming effect”. These

tones may be a good choice in a home office or anywhere else where focus is needed, such as a reading nook.

Although white may seem like a calm colour, a study conducted in classrooms found it to be monotonous and distracting. “The problem is not just the white but the fact it can be quite reflective,” Lemlij says. Such a finding is at odds with conventional design wisdom. “As an architect, I was trained to love white,” she says — therein lies one of the tensions between traditional architecture and a neuroarchitectural approach.

## Storage

There’s a stark difference between the uncluttered, minimalist aesthetic seen in the pages of architectural magazines and the useful storage solutions that may benefit someone with ADHD.

For the latter, the saying “a place for everything and everything in its place” is helpful. Ask yourself practical questions: what balance do you need between shallow drawers (for smaller items such as jewellery, scarves and belts) versus deeper drawers? Do you fold your clothes or hang most of them? Getting storage right can be a soothing balm for the ADHD brain.

Make these spaces easily accessible, Lemlij says. “If you make putting things away a painful experience, it’s not going to happen.” She and her husband are in the process of designing tailored joinery for their home with storage space for shoes, coats, school bags and arts and crafts materials.

Like many people with ADHD, Lemlij gets overwhelmed by clutter in her home. Even a kettle out of place or a packed bookshelf in her line of sight can

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## i Need to know

Five design questions to ask from an ADHD perspective:

- What sensory distractions are you particularly sensitive to: sound, smell, light?
- What clutter do you tend to accumulate in your daily life?
- What does a typical day in your life look like, and how will your chosen designs help or hinder your activities?
- Who, if anyone, is sharing your space, and what kind of distraction might they create?
- What colours, textures or images do you find most calming?

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be distracting. The solution is to streamline what’s visible. For instance, Lemlij’s joiner will add a custom-made wall unit to both organise and break up the family home’s open-plan layout.

Lemlij’s renovation plans include building an office in the garden. Its integrated kitchenette can be hidden behind sliding pocket doors fitted into the wall cavity.

A similar principle applies to bookshelves. While proudly displaying your book collection (“bookshelf wealth”) is back in fashion, it could prove overwhelming for people with ADHD. Instead, Lemlij recommends concealing shelves in nooks and other less visible places, “so they don’t see them when you don’t need them”.

## Furniture

One consideration to note is postural sway: a tendency towards poorer coordination observed among those with ADHD. Lemlij has a “permanent bruise” from bumping into a sharp-cornered table in her office. “We’re refurbishing and getting rid of it”, she adds.

An ADHD-friendly design might integrate furniture with rounded corners as part of an uncluttered layout, to allow for an easy flow of movement.

## Flooring

Herringbone and parquet designs may not be the best for those who get visually overwhelmed easily. Consider cleaner patterns instead: large format tiles or wider planks.

Acoustics are key for those who are sound-sensitive. There is only “minimal provision” for reducing floor noise in typical building regulations. However, if you’re sensitive to the sound of footsteps, you could consider carpeting or an acoustic underlay. To minimise the noise of doors closing, simple soundproofing measures like felt pads or foam strips can be used.

ADHD-informed design may feel niche but this emerging perspective can offer something useful to us all, whether you consider yourself neurotypical or otherwise. “We’re all sensitive to things like light, smell and sound,” Lemlij says. “It’s just that those with conditions like ADHD may be to a greater degree.” As modern life becomes ever more distracting, it’s a lens we could all use.





Bringing nature into a home is an important principle of neuroarchitecture that Lightwell House follows **MATT CLAYTON**



Lightwell House a renovation and conversion in Belsize Park northwest London by XUL Architecture **MATT CLAYTON**