

YOUR Autism

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MAGAZINE

**HOW WILL THE CARE
ACT AFFECT ME?**

Our expert on the
key changes

*"I learn because
I'm alive"*

Exploring new
ideas and skills
in adulthood

**AUTISM-
FRIENDLY
SPACES**

How good design
can change lives



**Sara and David's
extraordinary
family**

Living with autism
and cerebral palsy



Designs for living

How a space feels, sounds, looks, smells and functions can be incredibly influential on how many people with autism experience the world. We asked some experts why getting architectural and interior design right is so important.

DR MAGDA MOSTAFA is a world-leading expert on designing built environments for autism. A special needs design associate at Progressive Architects, she developed the first ever design framework on the subject. We last interviewed her ten years ago, so wanted to ask her how things have moved on since then.

“The concept of sensory environment is still central to the process of autism-friendly design. Discussion continues in autism literature about how sensory perception links to behaviour. This feeds into the ongoing conversations around how to create environments for people with autism in the design world.

“Some issues have become more central in the debate, such

as generalising skills outside of customised environments. Also, alternative approaches argue for the need for immersion in a sensory-filled environment, rather than a sensory-mitigated one.

“In the last decade, the main shift in attitudes I’ve seen relate to a general rise in awareness. When I first began studying autism in 2002, I always had to preface every conversation with a definition of what autism is, but in general people are now better informed. It seems to me a growing population of individuals and families with autism have gained a voice. Organizations like the NAS are central to this shift, and to expanding the conversation about specialist design beyond just schools and learning environments into homes and workplaces as well.

“Legislation also has an effect. Attention towards the importance of autism-specific design grows as health insurance and education policies worldwide expand to include autism within their requisite coverage.

“There is still a lack of awareness about how much environment can affect people with autism, and architects are often unaware of the need to bring in specialists. In addition, because autism is an extremely complex condition which affects each person differently, autism-friendly design requires a conceptual framework to be interpreted rather than a set of hard-and-fast rules, which is what architects are used to when designing for people with disabilities.

“I have always believed in the power of architecture to shift people’s lives, to provide their basic needs, to make them interact differently with one another. Few user groups are in more need of the possibilities offered by effective architecture than those with challenges and special needs, and no group among those can benefit more from the sensory input that the built environment provides, than those with autism.” →



“I have always believed in the power of architecture to shift people’s lives”
— *Dr Magda Mostafa*

Andrew with his daughter, Amy



Autism-friendly design at the New Struan School in Scotland

ANDREW LESTER led the design team for New Struan School – a purpose-built school for children with autism in Scotland. He is also father to Amy (37), who has autism. He tells us about the design process.

“When Amy was six, I remember reading *Autistic children: A guide for parents and professionals* by the late Dr Lorna Wing, at the recommendation of a consultant psychologist. In the characteristics that were described, I saw my daughter jumping out of every page. Amy had already started at Struan House School by then – but it confirmed for us that she was in the right place.

“I had been advising on property matters for the Scottish Society for Autistic Children, with which I had become very involved. That was when I became very interested in the idea of autism-friendly design.

“The architectural firm I worked for designed buildings that – by law – had to be accessible and easy to use for people with physical disabilities. So I thought, why not make buildings accessible and easy to use for those on the spectrum, too?

“I was asked to lead the design team at my firm to look at building a new school for Struan House School. At the time, it was very unusual to have the opportunity to design a school like this from scratch. We were starting with a blank canvas.

“As a parent, I had an insight into autism and how it affected at least one person – Amy. Many of her behaviours were ‘classic’ and so when I was thinking about important factors in the design – such as clarity, light,

➔ **DR MOSTAFA'S**

ASPECTSS™ Design Index sets out her framework for autism-friendly design. They can be applied on a smaller scale at home, as well as by professionals.

ACOUSTICS

Control acoustics to minimize background noise, echo and reverberation to suit the individual and level of focus required. Use sound to aid transition.

SPATIAL SEQUENCING

Design spaces in a logical order based on use to support routine and predictability. Use one-way circulation so people can move between activities as seamlessly as possible with minimal distraction.

ESCAPE SPACE

Provide space for respite from the overstimulation of the environment. This might be a small, partitioned area or crawl space in a quiet section of a room or building. Make the sensory environment neutral and customisable.

COMPARTMENTALIZATION

Organise a space or building into compartments with clear functions and sensory qualities which help define the use. Separate spaces using furniture, floor covering, floor level or lighting.

TRANSITIONS

Using transition zones helps the individual recalibrate their senses as they move from one level of stimulus to the next. These spaces may be anything from a distinct node that indicates a shift, to a full sensory room.

SENSORY ZONING

Organise spaces according to their sensory quality. This means grouping spaces into ‘high-stimulus’ and ‘low-stimulus’ areas with transition zones aiding the shift from one zone to the next.

SAFETY

Safety is especially key for people who may have an altered sense of their environment. Alterations might include using hot water safety fittings and avoiding sharp edges and corners.

“When I was thinking about important factors in the design, I was thinking about how Amy would react.”
— *Andrew Lester*

ability to see what is coming up, space, clear lines of movement – I was thinking about how Amy would react. I also knew about the need for robust but friendly materials, good acoustic control, indirect lighting and safe heating systems.

“I worked very closely with the staff at Struan. We spent many hours working out what the difficulties were for the children at the school and how we could resolve them through design, organisation of the spaces and attention to detail. I also visited other schools which showed me what contributed to an autism-friendly environment and also what got in the way.

“The biggest challenge was deciding if certain approaches to design would work. For example, the bright atrium, the open-plan resource centre off the internal ‘street’, the clear glass panels in secure partitions which would allow pupils vision but no access and the flexible lighting. We had no benchmark and weren’t sure they were right – but I am pleased to say that in the end they all worked really well.

“We were nervous about how the pupils would react. I remember on the day it opened, I stood as inconspicuously as possible in a corner and watched the students arrive. They came in the front door and made their way to their classes. Within half-an-hour the place was silent. The pupils were working and everyone was happy. I was so pleased to see even difficult pupils moving around the school as if they had been there forever.

“I am not an expert and have learned lessons from New Struan but I still think that we have a long way to go. Too many autism-specific buildings are being designed with no knowledge of the condition. Only by improving the environment will people with autism have a greater chance of coping with the world that they often find confusing.” ●

INTERIOR DESIGN

As well as a building’s architecture, thoughtful design inside is key to completing autism-friendly rooms and buildings. Interior designer Kelly Barker, who has a particular interest in autism, explains the main things to think about.

“Creating autism-friendly spaces doesn’t have to be expensive – the important thing is to tailor the environment to meet the specific needs of the individual by understanding how their autism affects them.

“The texture, colour and designs of different materials and fabrics you use in a space can have a sensory impact on individuals, both visual and tactile. Too much patterning or complexity in textile designs can be distracting and over-stimulating.

“In colour schemes, a variety of colours can be great but it’s important to think about brightness and how the colours are interacting with light sources in the room. Muting bright colours can help create a calmer environment.

“Lighting is also very important. Direct, fluorescent lighting can be problematic for individuals with

hyper-sensitivity, as it can distort vision and cause headaches and other issues. Where lighting is too severe, a simple solution is to add diffusers over the light source or to use controllable dimmers.

“It’s good to use natural light where possible, but think about glare and how the light may be bouncing around the room as a result of things like shiny surfaces on furniture.

“Finally, sensory areas can be designed using LED strip lighting around the walls and in voids. It’s easy to change the colour and you can buy them from any good lighting shop. Lava lamps can be a cheaper alternative to bubble tubes and provide a similar sensory experience.”



Kelly works with schools and services to improve interiors for people with autism.

→ Find out more

- Find out more about the ASPECTS™© Design Index at www.autism.archi, and Progressive Architects at www.progressive.archi.
- Dr Mostafa will be speaking at our first ever conference on design in November. To register your interest, go to www.autism.org.uk/conferences/design2015.
- Kelly Barker is the founder of Just Living Interiors. Find out more about her autism-related work at justlivinginteriors.co.uk/what-i-do/design-for-autism.
- We are currently advising the architects of a new set of purpose-built autism centres at mainstream schools, funded by the Cullum Family Trust. Find out more at www.autism.org.uk/cullum-autism-centres.